INFRASTRUCTURE COMMITTEE MEETING

AGENDA

15 MARCH 2022

Your attendance is required at an Infrastructure Committee meeting to be held in the Council Chambers, 232 Bolsover Street, Rockhampton on 15 March 2022 for transaction of the enclosed business.

Meeting to commence no sooner than 15 minutes after the conclusion of the Communities Committee meeting.

In line with section 277E of the Local Government Regulation 2012, it has been determined that it is not practicable for the public to attend Council meetings in person at the current time. Until further notice, Council meetings will instead be livestreamed online.

CHIEF EXECUTIVE OFFICER
10 March 2022

Next Meeting Date: 19.04.22

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.

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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 G D Mathers
Councillor C E Smith
Councillor C R Rutherford
Councillor M D Wickerson
Councillor D Kirkland

In Attendance:

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

3 APOLOGIES AND LEAVE OF ABSENCE

4 DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA

5 BUSINESS OUTSTANDING

Nil

6 PUBLIC FORUMS/DEPUTATIONS

Nil

7 OFFICERS' REPORTS

7.1 CAPITAL PROJECT REPORT FEBRUARY 2022

File No:	**7028**
Attachments:	**1. Capital Project Dashboard Report Feb 22⇩**
Authorising Officer:	**Peter Kofod - General Manager Regional Services**
Author:	**Andrew Collins - Manager Project Delivery**

SUMMARY

Monthly status reports on all projects currently managed by the Project Delivery unit.

OFFICER'S RECOMMENDATION

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

COMMENTARY

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 February 2022.

- Hail Damage Insurance Claim
- Mount Morgan Water Security
- Alliance Maintenance Facility
- RMoA / Cultural Precinct
- Botanic Gardens & Zoo Redevelopment
- Glenmore Water Treatment Plant Upgrade
- Gracemere Sewage Treatment Plant Upgrade
- Glenmore Water Treatment Solar Farm
- Hockey Redevelopment (Flood mitigation works)
- Mount Morgan Pool
- North Rockhampton Sewage Treatment Plant Upgrade
- Riverbank Boardwalk
- Rockhampton Airport Security and Screening Upgrade / Solar
- Rockhampton Airport Parking

CAPITAL PROJECT REPORT FEBRUARY 2022

Capital Project Dashboard Report Feb 22

Meeting Date: 15 March 2022

Attachment No: 1

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

Scope

***Deliver** the annual capital works program, achieving a capital program within 95% of the budget.*

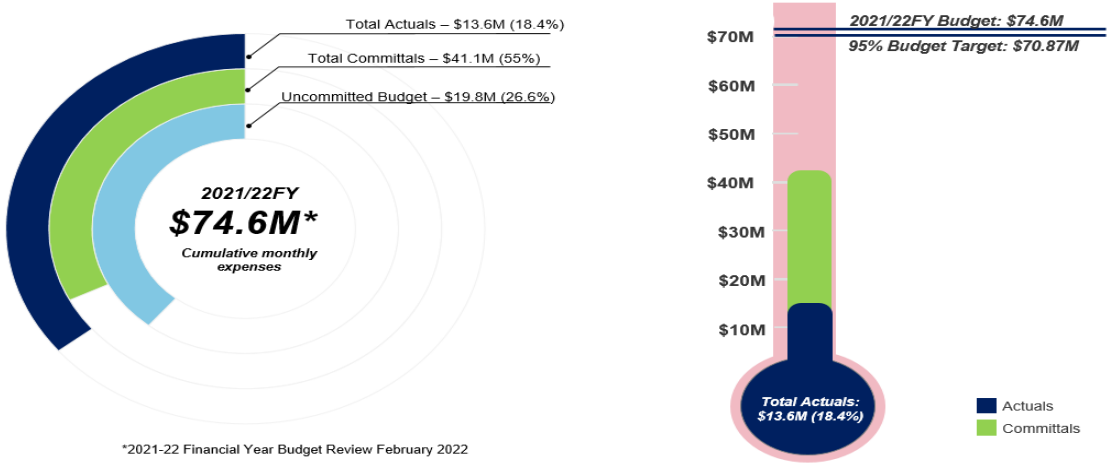
***Ensure** the delivery of infrastructure projects meet objectives set out in the 2021/22 Operational Plan.*

Traffic Light Reporting

Item	Last Month	This Month	Comments
Scope	A	A	Additional scope in Airport for Solar system. Scope for East Street links creeped.
Budget	G	G	No current budget issues. Wates water strategy to be implemented.
Schedule	R	R	Glenmore Solar Farm, contract termination has impacted project delivery times.

2021/22FY Summary

2021/22 Monthly Status Reporting



Status Overview

Key Milestones & Deliverables This Month (February)

- **RMoA Cultural Precinct Activation Works**
  RMoA opened to the public East Street Links stage 1 works complete.
- **Mt Morgan Water Security**
  Preliminary Evaluation Option assessment completed.
- **Alliance Maintenance Facility**
  Civil contract works underway. Site drain diverted. Building platform complete. Hangar contractor commenced.
- **GWTP Solar Farm**
  Landscape buffer works complete. Civil site formation works complete
- **Botanic Gardens & Zoo Redevelopment**
  Design development in progress. Tender awarded for playground.
- **North Rockhampton Sewage Treatment Plant**
  Post tender contract negotiations.

Three Month Horizon

March	April	May
• **Mt Morgan Water Security** Business Case commence. • **Alliance Maintenance Facility** Greater site works underway (apron / bay 8). • **North Rockhampton Sewage Treatment Plant** Award of contract / Approvals submitted. • **Hail Damage Insurance Claim** Work commence on Depot. Tenders called for next lot. • **Glenmore Water Treatment Plant** Site works underway. • **Botanic Gardens & Zoo Redevelopment** Design development continues. Playground design development	• **Riverbank Boardwalk** Construction to commence post Rocky Nats. • **Alliance Maintenance Facility** Greater site works continue • **North Rockhampton Sewage Treatment Plant** Site establishment • **Mt Morgan Pool** Design procurement • **GWTP Solar Farm** Civil works completed • **Mt Morgan Water Security** Business Case completed (end of month)	• **Mt Morgan Pool** Award tender. Commence design development. • **Glenmore Water Treatment Plant** Main switch room commenced. • **Riverbank Boardwalk** Construction continuing • **Alliance Maintenance Facility** Site civil and Hangar works continue

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

Project Name	Current Status	Monthly Update			
		Scope	Budget	Schedule	
Hail Damage Insurance Claim	Construction	G	G	G	Tender 14824 has been advertised for Dooley Street Depot Roof replacements which include the Face shed, shed 16, Main administration building, Recycle Shed and Truck Shed, this closed on the 2nd February 2022 and is awarded. Works to commence late March. Tender 14824 has been advertised for North Rockhampton Library, Elfin House Childcare centre & Victoria Park Shade structures and closes early 10th March 2022. 152 Lakes Creek Road landfill site will be advertised of tender on 12th March and will close 6th of April. Continued scoping and tendering will be carried out to deliver program.
Mt Morgan Water Security	Business Case	G	G	G	Preliminary Evaluation (PE) has been completed and submitted to council. Report has been compiled for the March infrastructure Committee meeting. Compilation of the Business Case continues.
Alliance Maintenance Facility	Construction	G	G	G	Site works well underway with the completion of diversion drain and building platform. Hangar construction contractor for Alliance Airlines established on site. Works on airside civil works underway. Mile stone 1 report submitted to funding body for Councils first claim.
Rockhampton Museum of Art /Cultural Precinct Activation Works (East Street Links, Quay Lane Reconstruction)	Design & Construction	A	G	A	Rockhampton Museum of Art has now been officially opened. Opening ceremony occurred on the 25th February 2022 Work to open the East Street links as a pedestrian thoroughfare has been completed. There is further work to expand the smart streets lighting and CCTV through the site, which will happen in the next few months along with some rendering treatment to walls. We will also complete a paved threshold in a section of Quay Lane directly behind RMoA, which will complete an accessible link through to East Street. The current building support structures (braces and stays) have been designed by the projects engineer however are temporary in nature. We are unable to further progress any other structural / architectural frame treatment in the link as previously planned until we can confirm the extent of work the neighbouring property (Old Chemist warehouse site) is planning to carry out.

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

Project Name	Current Status	Monthly Update			
		Scope	Budget	Schedule	
Botanic Gardens & Zoo Redevelopment	Design	G	G	G	Package 2 Visitor Hub: Project on-track. Activities completed within the month include technical team, site visit, technical workshop, detail site survey, utility services location and geotechnical investigations. Package 3 Playground: Project on-track. Report delivered to council re: option consideration. Contract awarded and pre-start meeting conducted. Design development underway.
Glenmore Water Treatment Plant Upgrade	Design & Construction	G	G	G	Contractor progressing towards 100% design. Site establishment commenced in February 2022 with works on site scheduled for March 2022.
Gracemere Sewage Treatment Plant Upgrade	Strategic Assessment	G	G	G	A review and strategy update is current being undertaken on the Gracemere Sewage Treatment Plant.
Glenmore Water Treatment Solar Farm	Design & Construction	G	G	R	The current contract for the Design and Construction of the solar farm has been terminated. Council now working through the termination contractual process and delivery strategy. Revegetation works for buffer zone completed. A report has been delivered to Council, re procurement strategy to complete the works. A Civil Works Package has been awarded to prepare the site for the solar panel installation [80% complete]
Hockey Redevelopment (Flood Mitigation Works, Defect Works)	Construction	G	G	A	**Flood Mitigation Works** Works is scheduled to be completed late February 2022 now due to delays of supply of flood pumps. All earth works and associated infrastructure works are completed and site has been handed over to Rockhampton Hockey. Pumps installation is the only outstanding works. **Field Surface Defects** Work is complete. Defects to newly laid turf noted and being monitored. Turf needs to be played on to bed turf in.
Mt Morgan Pool	Preliminary Evaluation	G	G	G	

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

Project Name	Current Status	Monthly Update			
		Scope	Budget	Schedule	
					$4.5M approved grant from Resources Community Infrastructure Fund. Funding agreement still to be received. Design Brief for traditional design then construct delivery has been developed. D&C procurement may be required to meet grant requirement to begin construction within 6 months of award. Early closure of the pool may be required to meet funding obligations.
North Rockhampton Sewage Treatment Plant Upgrade	Construction	G	G	A	Land acquisition from Rockhampton Jockey Club - RRC is awaiting Minister's approval [QLD Office of Racing] to lift the covenant. Project development and environmental approvals currently under assessment. Construction Tenders have closed. Council have resolved to implement waste water strategy. Contract for the NRSTP to be awarded early March 2022
Riverbank Boardwalk	Construction	G	G	G	Contract awarded, works Scheduled to start on 27th April 2022, post Rocky Nats and completed in September in time for the various festivals from this date.
Rockhampton Airport Security and Screening Upgrade / Solar	Design & Construction	A	G	G	$40,500 Transferred to Airport budget for purchase of UV cleaning module for x-ray lanes. Project on-track. Defect rectification ongoing Scope increased to include design of solar system for terminal and application to ergon for connection approval for Airport and tenant's solar applications.
Rockhampton Airport Parking	Design & Construction	G	G	G	Contract Awarded to equipment supplier 1 Feb 2022, design development underway. Total package includes operational services. Post tender negotiations regarding ccard processing provider ongoing.

7.2 QUEENSLAND GOVERNMENT WASTE LEVY UPDATE

File No: 7927

Attachments: 1. DES Media Release - Recycling and Jobs Fund⇩

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 update Council on known and unknown changes associated with the Queensland Government Waste Levy.

RECOMMENDATION

THAT the Queensland Government Waste Levy Update report be received.

BACKGROUND

The Queensland Government re-introduced a waste levy, which commenced on 1 July 2019, imposing a fee payable to the Queensland Government on every tonne of waste disposed to landfill.

The waste levy fee commenced at $75 per tonne, with an annualised increase of $5 per tonne over the first three years.

A review of the waste levy regulation was to occur prior to 30 June 2022 to set the waste levy beyond the first three years.

When the Queensland Government re-introduced the waste levy, there was a commitment made that it would have no direct impact on households. To achieve this commitment, the Queensland Government provided Councils which dispose of household waste to landfill, with an annual advance payment to offset the monthly waste levy payment from Council to the Queensland Government.

The advance payment received and waste levy payments made to the Queensland Government are presented below.

FY	MSW Advance Payment ($)	MSW Levy Expense ($)	Surplus / (Deficit) ($)
2019-20	2,187,325	1,893,654	293,671
2020-21	2,128,126	2,107,428	20,698
2021-22	2,343,243	2,436,988 *	(93,745)

* This is an estimated amount based on actuals for the first six months. The deficit for the 2021-22 year is also based upon this amount.
Note that the early surplus is being used to support our kerbside organics trial. The more recent deficit is a direct hit to the RRWR operating budget.

COMMENTARY

On 11 December 2021, the Queensland Government released the following information regarding the future of the waste levy.

New Levy Zone (from 1 July 2022);

- **Metro Zone;** (SEQ LGAs)
- **Regional Zone;** (includes; Cairns, Townsville, Mackay, Rockhampton, Gladstone, Bundaberg and Fraser Coast)

Levy Rates Increase (from 1 July 2022);

- **Metro Zone;** increasing by $10 per tonne per year, until the amount reaches $145 per tonne by 1 July 2027. Increase will then be by CPI each year.
- **Regional Zone;** increasing by CPI each year.

Changes to Advance Payment (from 1 July 2023), note that advance payment will stay at 105% for the 22/23FY;

- **Metro Zone** (**plus** Cairns, Townsville, Mackay, **Rockhampton**, Gladstone, Bundaberg, Fraser Coast); advance payments reducing each year (refer below) until it reaches 20% in year 2030/31.
    - 2022/23 – 105%
    - 2023/24 – 95%
    - 2024/25 – 85%
    - 2025/26 – 70%
    - 2026/27 – 60%
    - 2027/28 – 50%
    - 2028/29 – 40%
    - 2029/30 – 30%
    - 2030/31 – 20%
- **Regional Zone;** retain advance payment at 105%.

The reduction in the advance payment will have a significant impact to our domestic Fees and Charges and also our Utility Charge. This impact will be modelled to accurately understand.

The high level impact is presented below.

FY	Forecast MSW Tonnes (t)	MSW Levy Expenses ($)	MSW Advance Payment ($)	Net MSW Levy Liability Payable ($)	Impact of Reduced Advance Payment ($)
2022-23	28,980	2,512,534	(2,612,040)	(99,506)	
2023-24	29,269	2,588,412	(2,434,645)	153,767	256,278
2024-25	29,562	2,666,582	(2,244,153)	422,429	528,036
2025-26	29,858	2,747,113	(1,903,940)	843,173	951,970
2026-27	30,156	2,830,076	(1,681,233)	1,148,843	1,260,925
2027-28	30,458	2,915,544	(1,443,339)	1,472,205	1,587,673
2028-29	30,762	3,003,594	(1,189,542)	1,814,052	1,933,006
2029-30	31,070	3,094,302	(919,100)	2,175,202	2,297,749
2030-31	31,381	3,187,750	(631,238)	2,556,512	2,682,760
Total Impact					**11,498,396**

Note that this high level impact is based on an assumed CPI increase of 2% and that the Queensland Government is yet to confirm what CPI percentage will be used for the waste levy increase. Note that if the CPI increase is 4% this high level impact will increase from $11.5m at 2% increase to $13.1m over the eight years to 2030.

Changes to Waste Levy Exemptions;

- **Clean Earth** levy exemption removed from 1 July 2023. There is currently a general exemption (exemptions not by application) for clean earth to go into landfill.

  We use clean earth to cover our waste each day for environmental and health reasons

  In the last FY we used 24,866 tonnes. If levy applied to this clean earth our liability could be in the order of $2.2Mpa.

- **Operational Purposes** special exemption (exemptions by application) rules are still to be reviewed with changes to be in place by 1 July 2023.

  We use this special exemption for materials we need to use to build wet access, roads, drainage, etc (crushed concrete, asphalt, etc) within the landfill.

  In the last FY we used 5,026 tonnes. If waste levy is applied to this Operational Purpose material our liability could be in the order of $450Kpa.

- **Other** special exemption (exemptions by application) includes the exemption our Material Recycling Facility (MRF) operator applies for, which reduces the waste levy liability of residual waste disposal by 50%. This rule is still to be reviewed with changes to be in place by 1 July 2023. If waste levy is applied to this MRF residual waste our liability could be in the order of $45Kpa.

CONCLUSION

The waste levy is a significant driver for the Queensland Government to achieve its zero waste target by 2050.

It is of great importance for Council to continue to pursue its own Waste Strategy. Key actions that RRWR is currently working on are as follows;

- Kerbside Organics Trial
- CQROC Regional Waste Management and Infrastructure Plan
- Recycle Right Education Campaign for Kerbside Comingled Collections
- Review Council's Waste Strategy 2020-2030 later in 2022.

QUEENSLAND GOVERNMENT WASTE LEVY UPDATE

DES Media Release – Recycling and Jobs Fund

Meeting Date: 15 March 2022

Attachment No: 1

Department of Environment and Science

Media release

$2.1 billion package to deliver a Queensland recycling revolution

11 December 2021

$2.1 billion package to deliver a Queensland recycling revolution

The Palaszczuk Government is fast-tracking Queensland's transition to a zero-waste society through a new $2.1 billion waste package, including a $1.1 billion Recycling and Jobs Fund.

Environment Minister Meaghan Scanlon said the fund will support increased household recycling, help build new resource recovery infrastructure, and create more jobs in more industries.

"This is the largest investment in waste management and recycling in Queensland's history," Minister Scanlon said.

"It will accelerate job growth in the regions, build new recycling and remanufacturing infrastructure across Queensland and better protect our parks, waterways and the Great Barrier Reef from plastic pollution.

"The package also includes $1 billion in municipal solid waste (MSW) rebates for councils to continue offsetting the cost of the waste levy on household bins. This is a phased, sustainable 10-year transition to help households reduce their waste and increase recycling.

"We commenced the scheme in 2019 and remain the only state in Australia to provide this rebate.

"We have set ambitious targets for recycling because we want to see 80 per cent of all waste streams diverted from landfill by 2030.

"Our recovery rate currently sits at 54 per cent, so the next decade will be critical to our success.

"Queensland's recycling and resource recovery industries contribute $1.5 billion to the state economy each year and already support almost 12,000 jobs.

"We want to see even more jobs for Queenslanders and the $1.1 billion Recycling and Jobs Fund sends a strong signal that Queensland welcomes investment in innovative, job-creating businesses."

Minister Scanlon said the fund will offer co-investment opportunities for councils and industry to leverage this new money to help transform Queensland's approach to waste management and resource recovery.

"The Government will invest in waste avoidance and behaviour change initiatives, recycling and remanufacturing facilities, collection infrastructure such as green bins, organics processing and

Queensland Government

other initiatives to unlock jobs in recycling and reduce the amount of rubbish going to landfill," Minister Scanlon said

"We know we need ambitious targets and as the largest package of its type in Australia, we want to set the benchmark and are committed to achieving all the benefits that Queenslanders expect to see from our resource recovery industry."

The massive funding injection follows a review of existing waste levy arrangements.

"The Queensland Government has been consulting with the Local Government Association of Queensland and the Council of Mayors (South East Queensland) to determine a pathway that both protects households while also increasing recycling rates and reducing the amount of waste going into landfill," Minister Scanlon said

"This pathway includes a commitment to continue the advance payments to councils at 105 per cent for another financial year before those payments begin to taper as industry gears up to help Queenslanders divert more rubbish away from the red lid bin.

"The advance payments will taper off over 10 years, reducing to a final 20 per cent in ongoing payments to cover rubbish that we expect will still have to go to landfill.

"As the funding tapers off, councils will also be given access to other funding streams to help foster new waste industries in their local communities through the Recycling and Jobs Fund."

The Fund is designed to maximise co-investment from industry, local councils and the Commonwealth, and will deliver strategic investment in diverse and innovative resource recovery technologies and markets to generate lasting economic benefits for the state.

"The waste levy only applies to rubbish sent to landfill and by prioritising waste avoidance and resource recovery efforts, over time, we expect to see a permanent reduction in landfill disposal," Minister Scanlon said.

"We know the levy works – since it was introduced, we have seen interstate waste decrease by more than 60 per cent and 75 per cent of construction and demolition waste being recycled.

"With the 2032 Olympic and Paralympic Games in front of us, today's announcement is the first step in ensuring we showcase Queensland as a clean and sustainable global destination."

Future waste reforms will see:

1. $1.1 billion Recycling and Jobs Fund to be invested over the next 10 years
2. $1 billion in annual MSW rebate which is broken down as follows:
    - Annual Payments to councils will remain at 105% in 2022-23
    - From 1 July 2023, annual payments will gradually taper from 105% to 20% over 10 years for 19 councils (metro zone councils and seven of the largest regional zone councils).
    - Annual payments will be maintained at 100% for the remaining eligible councils.

Department of Environment and Science

3. From 2022-23, an increase in the annual levy rate by $10 per tonne in 12 Southeast Queensland council areas until 2027–28, then in line with CPI, ensuring it is comparable to NSW to maintain disincentives to interstate waste dumping.
4. From 2022-23, an increase in the annual levy rate by CPI in the remaining 27 regional council areas in the levy zone.
5. 38 council areas currently outside the levy zone will remain outside the levy zone.
6. Removing the Clean Earth exception in 2023-24, in line with arrangements in other states/territories.

Queensland's *Waste Management and Resource Recovery Strategy* and levy arrangements will be reviewed again in 2025.

For more information: www.qld.gov.au/waste-disposal-levy

ENDS

Media Contact: Sue Lappeman - sue.lappeman@ministerial.qld.gov.au or 0418 792 406.

Queensland Government

7.3 WASTE EDUCATION PLAN 2022

File No:	**13511**
Attachments:	**1. 2022 Waste Education Plan⇩**
Authorising Officer:	**Peter Kofod - General Manager Regional Services**
Author:	**Michael O'Keeffe - Manager Rockhampton Regional Waste and Recycling**

SUMMARY

The Waste Education Plan outlines Rockhampton Regional Waste & Recycling's education priorities for the calendar year 2022.

The purpose of this plan is to establish:

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

OFFICER'S RECOMMENDATION

THAT the Waste Education Plan 2022 report be received.

WASTE EDUCATION PLAN 2022

2022 Waste Education Plan

Meeting Date: 15 March 2022

Attachment No: 1

Waste Education PLAN

2022

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

Rockhampton Regional Council

1 Scope & Purpose

This plan outlines RRWR's education priorities for the calendar year 2022.

The purpose of this plan is to establish:

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

2 Strategic Context

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.

The RRWR Strategy & Education team has also set its own priorities for 2022, which has identified eight priority projects, four of which (1, 2, 6 and 7) require direct educational input:

1. **FOGO Trial –** complete the trial, including undertaking a behaviour change research program to inform best fit educational strategies, and to complete a business case recommendation for a community wide roll-out
2. **Kerbside "Recycle Right" Campaign** – for the purpose of establishing some immediate performance improvements, an on-ground campaign will be delivered targeting increase diversion and reduce contamination
3. **RRWR Financial Reporting Suite** - external consultants are to be engaged (ITQ closes 19th January) to prepare a suite of long term financial modelling tools

4. **RRWR Strategic Reporting –** providing an internally managed but structured data management and reporting framework to better monitor and manage critical waste outcomes
5. **Waste Strategy Review –** under the Waste and Recycling Act 2011 it is a requirement that this document be reviewed on a 3-year cycle
6. **Recycling Hero School Program** - maintain current seven active schools and aim to commence delivery in further 1-3 schools this year
7. **Community Engagement & Events**:
    - Clean Up Australia Day (March 2022)
    - Teacher Professional Development Events x 2 (March and September 2022)
    - CQMA Taste of the World Festival will host event waste management pilot to be jointly implemented by Plastic Free CQ and RRWR (May 2022)
    - National Recycling Week (Nov 2022)
8. **Upcycle Village Project** – in partnership with Multicultural Australia, the Upcycle Village site will undergo a refurbished and a pilot furniture restore project will take occupancy during 2022 to help establish the concept

3 Waste Education Implementation Plan

3.1 Schools 'Recycling Hero' Program

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
- selection and deployment of on-site waste management infrastructure
- pre and post waste auditing and evaluation to measure performance

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

As at January 2022, there are seven schools actively enrolled in the program:

- St Mary's State School
- Park Avenue State School
- Rockhampton Grammar School
- St Joseph's Catholic Primary School (Park Avenue)
- Stanwell State School
- St Peters Catholic Primary School (Allenstown)
- Flexible Learning Centre (Allenstown)

The priorities activities for 2022 will include:

- Successfully maintain program in each of the currently enrolled schools
- Increase total portfolio to between 8-10 active schools
- Ongoing delivery of free bus tours of Lakes Creek Road Waste Management Facility to local school groups

- Recruitment of a panel of external facilitators
- RRWR staff to undertake waste audit training to establish standard practices for use in school audits, community audit events, and internal staff facility audits.
- Undertake survey across wider school community to establish a measure of impact for the schools program

3.2 Kerbside "Recycle Right" Campaign

Ongoing results at the kerbside continue to be disappointing, with resource loss in the general waste bin and contamination in the commingled bin both continuing to be a significant issue. A short but highly visible campaign is therefore planned for March to May, tackling one key issue each month. The campaign content and structure will utilise, under licence, the existing "Recycle Right" campaign developed by NE Waste in NSW.

Priority activities for this year will include:

- Deliver a whole of community "Recycle Right" campaign aimed at reducing contamination and increasing kerbside diversion rates
- Deliver a Bin health Check Program to evaluate the impact of the above campaign
- Support the review and update of the existing bin sticker, letter & educational visit procedure by the Collections team

3.3 FOGO Trial Behaviour Change Program

The FOGO Trial will be completed at end of September 2022, by which time a business case will have been prepared making recommendation for a whole of community organic solution at the kerbside. This recommendation will include proposed education and communications required to maintain the level of participation and minimise the level of contamination. The FOGO trial will provide the platform to develop and test out these education strategies.

The priority educational activities for 2022 in terms of the FOGO Trial are therefore:

- Undertake a behaviour change research exercise using trial participants, formulate and test out various educational interventions
- Assist in the development and delivery of a bin health check program to directly monitor the effectiveness of each intervention being tested
- Evaluate the value of undertaking a trial of the Love Food Hate Waste campaign as an adjuncts to the FOGO trial (as requested by DES)

The table below is given to draw out the different approaches between the kerbside Recycle Right campaign and the FOGO Trial behaviour change program.

Project Phase	Behaviour Change Research Program	Campaign Testing & Formulation	Campaign Delivery	Monitoring & Performance Measurement
Primary Activities	*Engaging with target audience to fully understand barriers to change*	*Testing different strategies at localised level; planning for full campaign roll-out*	*Delivering the communications and education campaign*	*Using compositional waste audits and bin inspection programs to evaluate impact of strategies*
Lead Resource	RRWR	RRWR + Marketing Support	RRWR + Marketing Support	RRWR + Audit Providers
FOGO Trial	Yes	Yes		Yes
Kerbside Recycle		Yes	Yes	Yes

3.4 Community Engagement & Events

Direct delivery of educational activities continue to be the primary vehicle by which RRWR can effectively engage and educate target audiences on matters of waste management.

3.4.1 Clean Up Australia Day (March)

This annual event occurs nation-wide and inspires communities to clean up public places and conserve the environment by picking up rubbish. Council has a strong tradition of hosting this event, presenting opportunities to develop and strengthen partnerships with a wide range of proactive local groups and individuals.

3.4.2 Teacher Professional Development Events (March & October)

Established in 2021 by the RRWR Waste Education Officer, this is a whole of Council event that is hosted twice yearly, with the aim of presenting to education professionals working in our region the range of activities that various Council teams can offer. Teams typically proactive in this event are RRWR, Local Laws, ESS, FRW and others.

3.4.3 CQMA CAMS Program Workshops/International Compost Awareness Week (May)

In 2022, RRWR will be partnering with CQ Multicultural Association (CQMA) to deliver engagement activities as part of their Community Action for Multicultural Society (CAMS) program. This program offers RRWR significant access to the multicultural community:

- Two bus tours and workshop events to be held at Lakes Creek Road Waste Management Facility
- Use the CQMA Taste of the World Festival to be held in May 2022 as a pilot event to test out various event waste management best practices. This activity will be undertaken in partnership with Plastic Free CQ as well as CQMA.

3.4.4 National Recycling Week (November)

Activity to be confirmed

3.5 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, etc.

4 Measuring Success

The outcome measures for this plan largely mirror those given 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.

Waste Education Action Plan 2022

TASK TITLE	LEAD PERSON	Measure	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			2022											
Recycling Hero School Program														
Recruitment of facilitators panel of providers	Kelly	-												
Compositional audit training – using external consultant to train internal staff	Kelly	-												
Surveying – school community survey to evaluate program impact	Kelly	# people reached												
Program delivery – content development, delivery, evaluation and reporting	Kelly	% waste reduction												
School recruitment and sales pipeline management	Kelly	# active schools												
Kerbside Recycle Right Campaign														
Campaign planning & design	Kelly	-												
Campaign delivery	Kelly	% awareness												
Bin sticker program – review, revision and re-training of drivers/team	Kelly	# interventions												
FOGO Trial														
Behaviour change project – to research and test range of education strategies	George	# focus group members												
Trial monitoring & evaluation – bin health check program, surveying and audits	George	% contamination												
Engagement & Events														
Clean Up Australia Day	Kelly	# participants												
PD Teacher Events (x2)	Kelly	# attendees												
CQMA CAMS Program – 2 x workshops/bus tours	Kelly	# participants												
Event waste management pilot - Taste of World Festival	George	% diversion												
National Recycling Week – activities to be confirmed	Kelly	tbc												

7.4 QUEENSLAND ORGANICS STRATEGY 2022–2032

File No:	**13511**
Attachments:	**1. Queensland Organics Strategy 2022-2032⇩** **2. Queensland Organics Action Plan⇩**
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 update Council on the Queensland Government Organics Strategy and Organics Action Plan released in February 2022.

OFFICER'S RECOMMENDATION

THAT the Queensland Organics Strategy 2022-2032 report be received

BACKGROUND

The Queensland Government released the Queensland's Waste Management and Resource Recovery Strategy in July 2019, with the following targets for 2050;

- 25% reduction in household waste
- 90% of waste is recovered and does not go to landfill
- 75% recycling rates across all waste types

Council adopted the Waste Strategy 2020-2030 in December 2019, setting a vision to live in a community without waste, whereby we will become a "zero-waste" community by 2050, diverting 90% of waste from landfill.

On 4 October 2021, Council commenced a 12 month trial to test the viability of a Food Organics and Garden Organics (FOGO) kerbside service here in our region.

COMMENTARY

In February 2022, the Queensland Government released the following two documents;

- Queensland Organics Strategy 2022-2032
- Queensland Organics Action Plan 2022-2032

These documents are attached with this report.

While these documents contain a significant amount of relevant information that will impact on our Council, some of the highlights are:

1. The Organics Strategy identifies priority actions from avoidance through to improved end-use management
2. Key objective for Queensland is by 2030, Queensland will:
    a. halve the amount of food waste generated
    b. divert 80 per cent of organic material generated from landfill
    c. achieve a minimum organics recycling rate of 70 per cent
3. Four themes / strategies to achieve outcomes:
    a. education and behaviour change
    b. infrastructure and services
    c. market and product development
    d. data, regulation and enforcement

4. The Organics Strategy states, “It is important to note that implementing this Action Plan is a shared responsibility across Commonwealth, State, Local Government, industry, and the community. Everyone has a part to play to support delivery on the targets set out in the Organics Strategy.”

5. Numerous references to Queensland Government funded trials, including $770,000 FOGO Kerbside Collection Trials 2021-2022 in Townsville, **Rockhampton** and Lockyer Valley local government areas.

6. Develop and promote education messaging based on this research. (Strategic reference A1)

7. Lead by example at government sponsored events. To promote Love Food Hate Waste avoidance messaging and implement these behaviours and actions at relevant government sponsored events. (Strategic reference A10)

8. Review fit-for purpose solutions. Regional Waste Management Plans to recommend improved organics management solutions and timing by 30 June 2023. (Strategic reference D1)

9. Implement new household collection options which are consistent from the start. (Strategic reference D2)

10. Make the input clear. Develop consistent education materials (including initially focusing on contamination in the red and yellow bins) and prioritising key behaviours to change that can be delivered state-wide. (Strategic reference D3)

11. Lead by example at government-run events. Where processing facilities enable, Queensland Government and local government to provide a segregated organics collection system at government events. (Strategic reference D4)

12. Set a clear end goal. If appropriate, following consultation the Queensland Government to implement a staged organics landfill ban through regulation to drive increased organics diversion rates. (Strategic reference D6)

13. Build for the future. Local governments review planning instruments against Regional Waste Management Plans to ensure that they support solutions that help increase their regional’s current and future capacity to process organic waste. (Strategic reference R3)

14. Increase processing capacity. Regional Waste Management Plans to identify infrastructure needs. (Strategic reference R4)

15. Buy back products. Use government purchasing power at state and local level to increase the uptake of high-quality, recycling organic waste content in government projects to help transform the supply market. (Strategic reference R5)

CONCLUSION

The Queensland Organics Strategy 2022-2032 and Queensland Organics Action Plan 2022-2032 are important documents that will steer Rockhampton Regional Council in the coming years, to achieve our strategic targets.

It is importance to note that these documents will impact on a number of Council Units, including, however, possibly not limited to, the following:

- Rockhampton Regional Waste and Recycling
- Finance
- Strategy and Planning
- Parks
- Environmental Sustainability
- Advance Rockhampton & Events
- Procurement and Logistics

Council will also need to position itself at the forefront of advocacy efforts in order to ensure that sufficient financial resources are made available to implement this ambitious plan.

QUEENSLAND ORGANICS STRATEGY 2022–2032

Queensland Organics Strategy 2022-2032

Meeting Date: 15 March 2022

Attachment No: 1

Queensland Organics Strategy

2022–2032

A strategy to improve the management of organic materials along the organics supply and consumption chain

Queensland Government

Prepared by: Office of Resource Recovery, Department of Environment and Science

The Department of Environment and Science acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and custodians of the land. We recognise their connection to land, sea and community, and pay our respects to Elders past, present and emerging.

The department is committed to respecting, protecting and promoting human rights, and our obligations under the Human Rights Act 2019.

Accessibility
If you need to access this document in a language other than English, please call the Translating and Interpreting Service (TIS National) on 131 450 and ask them to telephone Library Services on +61 7 3170 5470.

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February 2022

Minister's foreword

The Queensland Government is committed to reducing waste, increasing recycling and growing jobs in our transition to a circular economy.

Our action includes reintroducing a waste levy, banning a range of single-use plastic items and introducing a container refund scheme. Through the $1.1 billion Recycling and Jobs Fund (Fund) we are investing at record levels to help shift Queensland away from a 'take-make-dispose' approach to using resources more efficiently and keeping them in the economy for as long as possible.

Events over the last couple of years have placed, and will continue to place, unprecedented pressures on our communities, businesses and regions. There has also been a fundamental change in the value we place on having a safe and healthy environment. This includes making more conscious choices about the things we buy, reducing food waste, minimising packaging and using single-use plastics.

Queensland's Waste Management and Resource Recovery Strategy (Waste Strategy) outlines how we can reduce the amount of waste that is produced and improve recycling and recovery efforts, so that as little waste as possible ends up in landfill. Improving how we manage organic materials is one of the foundation measures identified in the Waste Strategy.

We all generate organic material as part of our everyday lives. Whether it is green waste from the garden, food waste from our kitchens, restaurants, cafes and food processing businesses, biosolids from our wastewater treatment and organic material from agriculture, it all adds up. In 2018–19, 42.9 million tonnes of organic material were generated in Australia which presents significant opportunity to improve how we manage this.

Organic waste is one of the main types of waste sent to landfill and makes up around half of what Queenslanders throw away in their rubbish bin each week. When it breaks down in a typical landfill it releases methane, a greenhouse gas with an estimated global warming potential of between 28 and 36 times that of carbon dioxide.

The Queensland Organics Strategy 2022–2032 (Organics Strategy) outlines the actions we will take over the next decade to avoid the generation of organic waste in the first place and improve the end-use management of the material that can't be avoided. The Fund provides a ten year commitment to support the transformation needed to maximise the value we draw from organic material, allowing for sustained growth and job creation in the organics reprocessing industry across the state.

The Organics Strategy will also help us contribute to the end-of-decade national commitment of halving food waste and the amount of organic waste going to landfill.

Now is the time to re-think how we view organic 'waste' and we all have a part to play.

Together, we can transform organic material into a valuable resource that helps build economic recovery, provides opportunities for new markets, creates jobs for Queenslanders, reduces emissions and protects our unique environment.

Meaghan Scanlon MP
Minister for the Environment and the Great Barrier Reef
Minister for Science and Youth Affairs

Stakeholder's Advisory Group acknowledgement

The Queensland Organics Stakeholder Advisory Group (Advisory Group) was established to work alongside the Queensland Government in developing a Queensland Organics Strategy. The groups' membership (Appendix 1) includes peak bodies representing the agriculture, retail and hospitality, environment, community, resource recovery and local government sectors, as well as utilities and food rescue businesses. The Queensland Government thanks those representatives who have generously given their time and expertise to help shape this Organics Strategy and its supporting Organics Action Plan.

Members of the Advisory Group have provided independent advice to government in relation to:

- impacts that the policy settings and actions proposed will have on the sectors they represent
- challenges facing each sector in increasing waste avoidance and diverting organic waste in Queensland
- existing initiatives and the opportunities to value-add to current practices
- opportunities for infrastructure investment and market growth.

The assistance of Advisory Group members, including reviewing draft materials, facilitating meetings and workshops with members and sectors, and their critical insights has been invaluable. Their efforts and time involved in participating in the intensive workshops organised to inform the Organics Action Plan is gratefully appreciated.

The Advisory Group has demonstrated the benefits of a network where there is shared information and responsibility between government, industry, and community. This collaborative approach sets the framework for continued and productive partnerships that will see sustainable long-term delivery of the Organics Action Plan and targets in this Organics Strategy.

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Fast facts

The total estimated greenhouse gas savings from recycling organic waste in Queensland in 2018–19 was 564,708 tonnes of carbon dioxide. This is equivalent to planting 844,096 trees or taking 130,392 cars off the road each year.

In 2020, more than one in three Australians experienced food insecurity, significantly increased as a result of the COVID-19 pandemic increasing the demand for food relief.

Australian households spend between $2,000–$2,500 per year on food that is wasted.

Food and garden organic material makes up approximately 50% of the contents of an average household's general waste bin.

In Queensland, approximately 1.8 million tonnes of food waste was generated in 2016–17, with a third of this coming from households.

In 2018–19, the Australian organics recycling industry created over 4,800 direct jobs and contributed $724 million in industry 'value add' to the Australian economy.

One tonne of composted garden organics can sequester approximately 0.5 tonnes of Co2e (CO_2 equivalent) when applied to the land.

Creating healthy soils through the application of composted organics helps reduce water, fertiliser and pesticide use and nutrient leaching, while protecting aquatic environments.

Introduction

The *Queensland Organics Strategy 2022–2032* (the Organics Strategy) reflects the priorities of Queensland's *Waste Management and Resource Recovery Strategy* (Waste Strategy). It also considers community, business and industry concern about the amount of organic material that is generated and disposed to landfill, as well as the social, economic, and environmental impacts that this waste creates.

The establishment of the $2.1 billion Recycling and Jobs Fund demonstrates the Queensland Government's long-term commitment to driving significant waste reforms in Queensland. This includes support for activities identified in this Organics Strategy that reduce the generation of organic wastes, such as food waste, increase the diversion of materials from landfill, and facilitate the economic and market opportunities presented through improved value-adding and enhanced recovery, reprocessing and recycling. The Queensland Government is also supporting Regional Organisations of Councils to develop Regional Waste Management Plans. These plans will identify regional behaviour change and infrastructure needs and priorities for co-investment by all levels of government and industry.

Implementing the Organics Strategy will strengthen and transform the organics supply chain across Queensland, accelerate job growth and invest resources in the circular economy. Key actions will help to retain the value of materials in the economy for as long as possible. Together with other policy settings including the waste levy, Queensland will have the certainty needed for critical infrastructure investment decisions, particularly in regional areas, and the opportunity to create new or expanded economic and market developments.

The steps we take now to improve organics management will also directly support the commitment to a carbon positive and sustainable Brisbane 2032 Olympic and Paralympic Games. With a clear target to achieve zero net emissions by 2050 and an interim emissions reductions target of at least 30 per cent below 2005 levels by 2030, the Queensland Government recognises the important role that this Organics Strategy will play in supporting these targets. Considerable investment will be required by all levels of government and the private sector to get us to where we want to be. We will continue to work with key stakeholders to implement the actions to ensure effective long-term and sustainable change.

The problem and opportunities

Organic matter contributes significantly to the waste stream. There are potential adverse environmental, social, and economic impacts associated with poor management and disposal of organic waste, including:

- a loss of value when materials are sent to landfill that could otherwise be processed, creating economic value and jobs
- contribution to greenhouse gas emissions
- odour impacts from sites
- contamination of waterways.

Although organic waste is often seen as a naturally produced waste, when disposed of to landfill it breaks down anaerobically and releases methane. Methane is a greenhouse gas with a global warming potential around 28 times that of carbon dioxide over a 100-year period.

Far from being a waste, organic materials are a valuable resource that can be used for a variety of purposes, including:

- reducing food insecurity
- production of animal feed to meet the demands of a growing population,
- the manufacture of compost to improve soil structure, carbon content and moisture retention
- as a feedstock for the biomanufacturing and biotechnologies sectors to create bioproducts, bioenergy and biofuels.

Improving the management of organic materials will deliver major social, environmental and economic benefits for our communities.

With more than one in five Australians experiencing food insecurity in 2018–19, there is an urgent need to improve and increase the diversion of edible food to people in need. The COVID-19 pandemic has seen food rescue organisations reporting a significant increase in requests for support. In 2019, 15 per cent of Australians experiencing food insecurity were seeking food relief at least once a week. In 2020, this has more than doubled to 31 per cent.

In 2020, the Queensland Government provided over $900,000 to six organisations through the Food Rescue Grant Program, for infrastructure, equipment and operational costs to divert additional food from landfill and redistribute it to Queenslanders in need. This will help to rescue the equivalent of 3.3 million meals over the lifetime of the program.

The indirect impacts associated with organic waste include the loss of the resources used to create it. This includes farming efforts, production costs, land, water and nutrients, as well as energy and fuel for the transportation and supply of the product.

An estimated 50 percent of a household's general waste bin is made up of organic material. While the majority is garden organics, the Fight Food Waste Cooperative Research Centre estimates that the food waste component adds up to an average of $965 per person, per year. Most food waste is avoidable, and there are clear actions that every Queenslander can take to reduce these costs for households.

The Australian Organics Recycling Association (AORA) report, *The Economic Contribution of the Australian Organics Recycling Industry*, released in March 2020 identified that in 2018–19, the Australian organics recycling industry created over 4,800 direct jobs with around one job being supported for every 1,550 tonnes of organic material that was recycled. It also found that the organic recycling industry contributed $724 million in industry value add to the Australian economy.

During 2018–19, Queensland recycled 1.18 million tonnes of organic material and supported over 720 Queensland jobs. With this Organics Strategy setting the framework to significantly increase our recycling industry, the potential for job and economic growth is an opportunity that can be realised across the state.

The size of the problem

Organic material is one of the main wastes sent to landfill across Australia.

In 2016–17, Australia generated significant volumes of organic waste, with almost a quarter being food waste.

Table 1: Volumes of organic waste generated and disposed of to landfill across Australia (National Waste Report 2020, National Food Waste Baseline).

	Waste generated (Tonnes)	Disposed to landfill (Tonnes)	Disposed to landfill (Percent)
All organic waste	42.9 million	6.87 million	16.01 %
Food waste	7.3 million	3.2 million	43.84 %

Agricultural organic waste such as livestock manure and bagasse are managed onsite and used as a resource to improve soil nutrients and health. Similarly, other organic waste streams could be reused in line with the waste and resource management hierarchy to deliver multiple benefits.

The National Food Waste Strategy Feasibility Study revised the Australian food waste baseline to 7.6 million tonnes generated nationally.

What is organic waste?

Organic waste

Organic waste is a broad category of waste derived from material that was once living, excluding petroleum-based materials. This includes food (domestic and commercial), garden, biosolids, food processing wastes and agricultural by-products.

While the Organics Strategy covers the spectrum of organics, the organic waste stream can be categorised into 'core organic' wastes, which are often disposed to landfill, and 'non-core' wastes, which are a by-product of another process and often sustainably managed and utilised on-site, including in agricultural systems.

In the *National Waste Report 2018*, the data recorded for organic waste covered:

- core organic waste—domestic and commercial food wastes, garden organics and timber
- non-core organic agriculture waste—including manure, sugarcane bagasse, cotton gin trash
- non-core organic fisheries waste—including bycatch, offal, shells
- organic wastes reported within the hazardous waste material category—biosolids, grease trap sludge and waste from abattoirs and tanneries.

Food waste

Food waste is a significant component of the organic waste stream, and targets have been set specifically to address it.

The *National Food Waste Strategy* adopts a broad and inclusive definition of 'food waste' that covers:

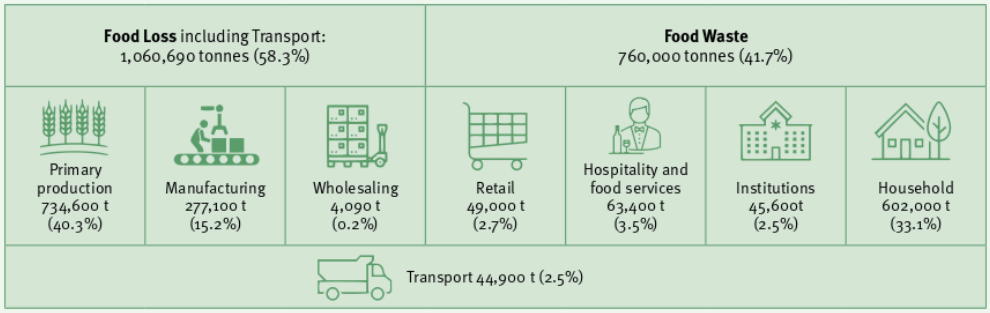
- solid or liquid food that is intended for human consumption and is generated across the entire supply and consumption chain
- food that does not reach the consumer or reaches the consumer but is thrown away. This includes edible food, the parts of the food that can be consumed but are disposed of, and inedible food, the parts of food that are not consumed because they are either unable to be consumed or are considered undesirable (such as seeds, bones, coffee grounds, skins, or peels)
- food that is imported into, and disposed of, in Australia
- food that is produced or manufactured for export but does not leave Australia.

This definition excludes food that is produced or manufactured in Australia which is exported and becomes waste in another country. It also acknowledges that there are opportunities across the entire fresh and processed food systems to achieve improved environmental, economic, and social outcomes.

The loss of edible food and inedible food parts at the point of retail or consumer use is typically considered 'food waste'. Food that is lost along the production and supply chain before reaching the retail stage is generally referred to as 'food loss'.

Although the Organics Strategy scope covers all organic waste streams, a number of actions are targeted to food waste generated from retail businesses through to households. This waste is often avoidable, generates cumulative emissions, water, and cost impacts from across the entire supply chain, and the majority of food waste is currently disposed of to landfill in Queensland. Furthermore, successful programs to avoid food waste reduce the impost on organics processing infrastructure thereby reducing the amount required to build and operate organics processing infrastructure. Preventing food waste can also deliver major savings to households and businesses.

Figure 1: Food waste production and supply chain.
Data source: Arcadis for the Australian Government (2019), National Food Waste Baseline: Final Assessment Report.



Queensland's Organics Strategy

Our vision—Achieving social, economic, and environmental benefits by harnessing the value from organic materials to the greatest possible extent.

The Waste Strategy has a vision for Queensland to become a zero-waste society by transitioning to a circular economy where the value of waste is retained in the economy for as long as possible.

The improved management of organic waste is a priority action area due to the significant contribution of organic waste to the waste stream, and the social, economic, and environmental benefits from improved management.

The Organics Strategy sets the framework for managing organic materials in Queensland and helping to drive the transition to a circular economy. It identifies actions and provides greater policy and investment certainty to industry. In doing so, it will support greater investment and job creation in Queensland.

As a first priority, the Organics Strategy supports the avoidance of organic waste. Where organic waste cannot be avoided its transformation into higher order, value-add products, and the growth of the organics recycling industry in Queensland is preferred over energy-from-waste and landfill.

The Organics Strategy identifies priority actions from avoidance through to improved end-use management. The actions support the Queensland Government's national commitments to implement the *National Food Waste Strategy* target to halve food waste by 2030 and implement actions in the *National Waste Policy Action Plan* to halve the amount of organic waste going to landfill by 2030.

The Queensland Government is committed to driving significant changes for this valuable resource in Queensland. Over the next 10 years the $2.1 billion Recycling and Jobs Fund will provide the necessary funding to support increased household recycling, help build new resource recovery infrastructure and create more jobs, including in the improved management of organic materials under this Organics Strategy.

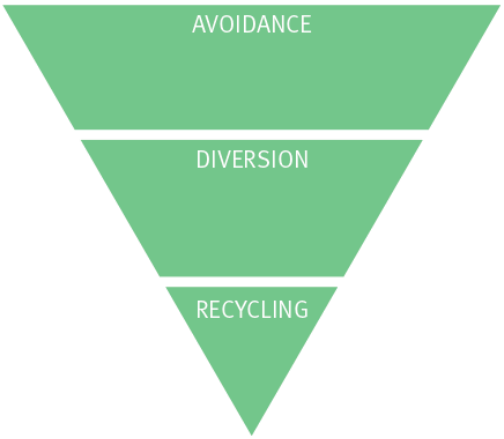
Key objectives for Queensland

By 2030, Queensland will:

1. halve the amount of food waste generated
2. divert 80 per cent of the organic material generated from landfill
3. achieve a minimum organics recycling rate of 70 per cent.

These three key objectives will position Queensland to achieve the targets that have been set at a national and state level for organics.

The waste and resource management hierarchy guides the Organics Strategy and how the objectives will be achieved—through actions that avoid the generation of organic waste, actions that divert organic material being disposed to landfill, and actions that improve the recycling of organic material.



These objectives will be achieved through:

AVOIDANCE

- developing and promoting educational materials to households, businesses, institutions, and events to reduce food waste
- continuing regular research to understand food waste behaviours and segments in Queensland
- commencing education for future generations
- researching food waste hotspots and solutions collaborating directly with industry to create sector action plans
- finding end-markets for produce of all shapes and sizes
- increasing food rescue capacity and connections
- providing tailored advice to businesses of all sizes

LANDFILL DIVERSION

- assessing the feasibility of a landfill disposal ban for organic waste streams
- reviewing and implementing household solutions that are fit-for-purpose
- making the inputs clear for new household kerbside services
- providing segregated organics collection services at government events
- implementing new collection options for businesses and institutions

RECYCLING

- developing partnerships to better understand end-market needs
- share data to understand investment requirements
- ensuring long-term planning of regional waste infrastructure needs
- increasing market demand
- reviewing regulatory barriers to manage risks with market expansion
- aligning data collection and reporting
- developing new and updated infrastructure to increase processing capacity
- providing clarity and confidence to end-markets
- ensuring we are delivering best practice operations in Queensland.

The outcomes of the Organics Strategy aim to:

- reduce organic waste generation, food loss, food waste and associated resource losses in food production and transport to consumers
- improve food security through increased and effective redistribution of food to Queenslanders in need
- assist businesses and households to reduce costs through organic waste avoidance
- produce high-value end-use products and markets
- increase organic processing capacity
- increase economic opportunity, infrastructure, investment and employment through end-use product and market development and services for organic recycling
- improve soil structure and health, promoting food production and food nutrient quality
- reduce reliance on artificial fertilisers and improved water quality and aquatic environments
- reduce greenhouse gas emissions and climate change impacts.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Queensland targets

By 2030, Queensland will:

1. halve the amount of food waste generated
2. divert 80 per cent of the organic material generated from landfill
3. achieve a minimum organics recycling rate of 70 per cent.

These objectives were derived directly from targets that have already been committed to at national and state levels.

National waste targets

National Food Waste Strategy target

Align with the national target to halve the amount of food waste generated collectively across Queensland.

The *National Food Waste Strategy* sets a 50 per cent reduction target by 2030 against 2016–17 baseline figures, by promoting food waste avoidance measures.

Table 2. Estimated Queensland figures of food loss and waste (National Food Waste Baseline Final Assessment Report 2019)

Sector	Primary production	Manufacturing	Wholesale	Retail	Hospitality	Institutions	Households
Total food waste (tonnes)	734,600	277,100	4,090	49,000	63,400	45,600	602,000

In the short-term, this Organics Strategy prioritises food waste produced from retail through to consumer sources. This waste has accrued emission, water and cost impacts from across the entire supply chain and is currently often disposed to landfill in Queensland.

National Waste Policy Action Plan target

Align with the national target to halve the amount of organic waste sent to landfill by 2030.

The *National Waste Policy Action Plan* sets a 50 per cent reduction to landfill target for organic waste by 2030 in order to implement the 2018 *National Waste Policy*.

Halving organic waste sent to landfill in Australia, would achieve 2.7 million tonnes less of organic waste to landfill every year.

Queensland waste targets

Waste Strategy interim targets

15 per cent reduction in household waste

The Waste Strategy's household municipal solid waste (MSW) waste reduction target is calculated per-capita. With food and garden waste contributing approximately 50 per cent of an average household's general waste bin, actions reducing food waste, and diverting food and garden organic waste from landfill will contributes toward achieving the target.

Table 3. Queensland waste reduction targets for households (per capita) (Waste Strategy)

Stream	Baseline (2018)	Target 2025	Target 2030
MSW	0.54t	10%	15%

80 per cent of waste is recovered and does not go to landfill

In 2017–18, more than 50 per cent of Queensland's waste was sent to landfill. The Waste Strategy targets reflect overall diversion rates for all material diverted from landfill, and actions specifically diverting organic material will contribute to this target.

Table 4. Queensland waste diversion from landfill targets (recovery rate as a percentage of total waste generated) (Waste Strategy)

Stream	Baseline (2018)	Target 2025	Target 2030
MSW	32.4%	55%	70%
C&I	47.3%	65%	80%
C&D	50.9%	75%	85%
Overall	45.4%	65%	80%

65 per cent recycling rates across all waste types

The recycling rate will be calculated as a percentage of total waste generated. Although the overall interim recycling rate target for Queensland is 65 per cent, an ambitious 70 per cent recycling rate objective has been set to recognise the national industry targets of a 95 per cent recycling rate for organics. It is estimated that achieving a 70 per cent recycling rate for organic waste would result in an additional 597 full time employees in the organics recycling industry across Queensland.

The percentages in the following table relate to waste that is reported as recycled or reused and excludes materials from which energy is recovered. Recovering fuels or energy from waste may be suitable for waste that cannot be recycled.

Table 5. Queensland recycling rates (as a percentage of total waste generated) (Waste Strategy)

Stream	Baseline (2018)	Target 2025	Target 2030
MSW	31.1%	50%	60%
C&I	46.5%	55%	60%
C&D	50.9%	75%	80%
Overall	44.9%	60%	65%


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Core principles

The Organics Strategy aligns with the strategic priorities set out in the Waste Strategy. The strategic priorities are identified to help drive a fundamental shift in the way waste and materials are managed in Queensland and support the transition to a zero-waste society.

STRATEGIC PRIORITY 1

Reduce the impact of waste on the environment and communities

By ensuring organic waste is avoided and reused to the greatest potential reduces disposal to landfill and a reduction in greenhouse gas emissions. A healthy environment supports our economy and contributes to our general health and wellbeing, now and for future generations.

STRATEGIC PRIORITY 2

Transition to a circular economy for waste

Transitioning to a circular economy encourages the community, business and industry to manage organic material in order to retain its value in the economy for as long as possible, ultimately transitioning to a zero-waste society. Value can be gained from material otherwise destined for landfill where there are increased options for avoidance, reuse, recycling and recovery of resources.

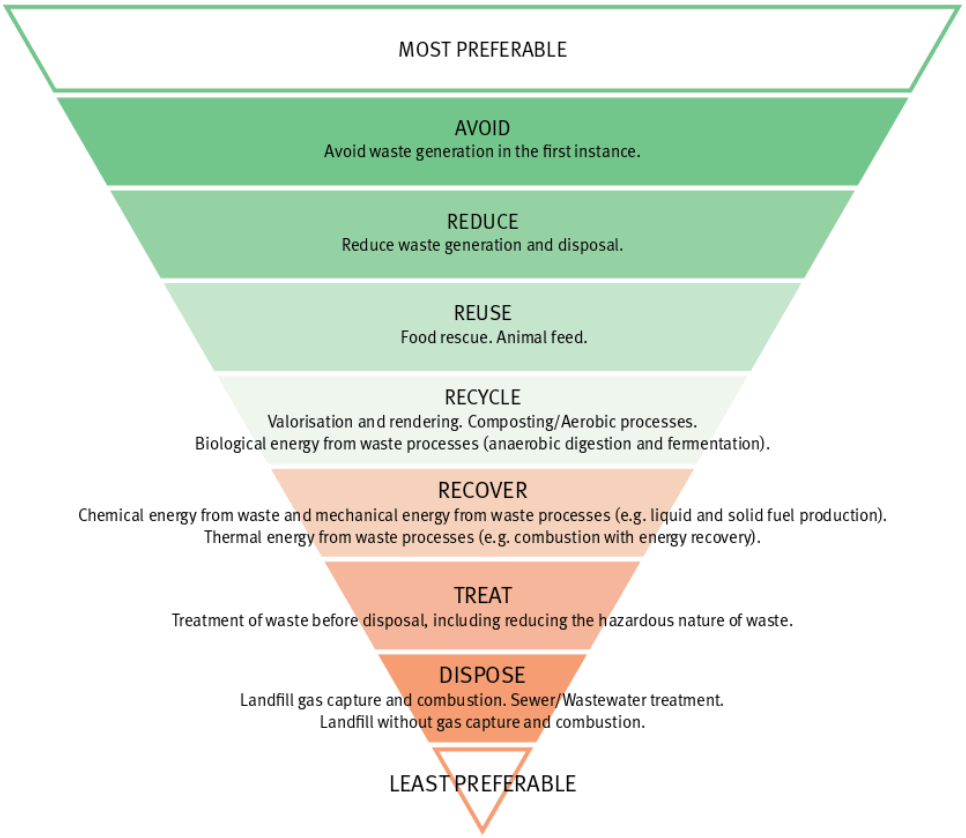
STRATEGIC PRIORITY 3

Build economic opportunity

Organic materials provide opportunity to identify new and higher-value products and commercial opportunities for Queensland businesses and industry. The organic resource recovery sector is an important contributor to the Queensland economy already. However, there is further potential to grow this and other sectors to ensure Queensland becomes competitive for organic processing and develops viable markets. Building economic opportunity creates new jobs, provides upskilling opportunities for the workforce, builds infrastructure capacity and markets in regional areas, and contributes to sustainable and long-term growth in Queensland.

The Organics Strategy is guided by the waste and resource management hierarchy as required by Queensland's *Waste Reduction and Recycling Act 2011*. The hierarchy highlights that waste should be avoided and reduced as first priority, after which options for reuse and recycling should be explored.

Figure 2: Waste and resource management hierarchy

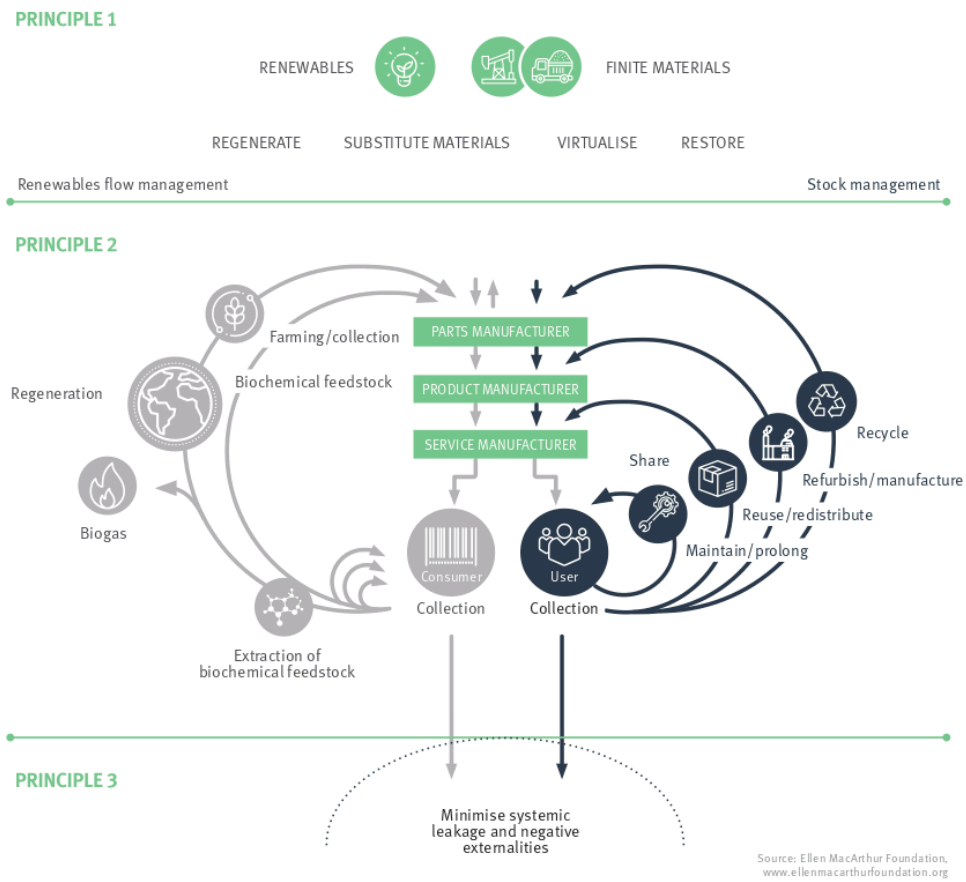


Actions that avoid, reduce, reuse and recycle materials align with the circular economy approach to prevent, capture and use waste at its highest value. A circular economy is based on the principles of designing out waste, keeping products and materials in use, and regenerating natural systems.

Globally, governments and businesses are moving towards a circular economy model. Adopting circular economy principles presents opportunities for industry and government to alter the way a substantive part of the economy operates, while creating jobs, growth and improved environmental sustainability.

Shifting away from the linear 'take-make-use-dispose' model will deliver benefits through reduced waste and improved resource efficiency, create new economies, and building long-term market, environmental and economic resilience.

Figure 3: Circular economy principals.



Roles and responsibilities

The actions are identified for delivery in partnership, between local, state and federal governments, working with industry, businesses, and the community, to ensure organic material is being managed in a coordinated and integrated manner.

The Queensland Government acknowledges that it will play an important role in encouraging, facilitating and enabling improved organics management across the state, and is committed to ensuring that the policy and regulatory settings support this improved management.

Themes

Four themes were identified through targeted consultation and engagement with stakeholders during development of the draft Organics Strategy. Strong action under each theme is required for the Organics Strategy's vision to be realised.

Actions addressing these themes are outlined in this strategy, however individual actions are grouped by the three key objectives of this Organics Strategy (Avoidance, Diversion, or Recycling) providing clear identification of the outcome and in line with the waste and resource management hierarchy rather than by theme.

Education and behaviour change

A comprehensive and coordinated education program is important to drive awareness, knowledge and behaviour change for improved organic material management across all sectors.

An education program needs to address the waste management hierarchy to promote avoidance behaviours in the first instance. It will also be vital in helping businesses and consumers to understand organic waste collection services so that they can help minimise contamination and support the development of new high-quality markets and products.

Realising the value of organic material and understanding the impacts of and benefits that each sector can contribute, (from at-home or community composting initiatives to clean stream feedstocks through kerbside collection services), is critical to ensuring the success of the Organics Strategy.

Action 2.13 of the *National Waste Policy Action Plan* seeks national alignment of community education efforts to reduce food waste maximising impact and reducing confusion. Consistent education campaigns have had a proven impact on food waste behaviours in other jurisdictions, with *Love Food Hate Waste* in the United Kingdom recording that 76 per cent of people who had seen one of their campaigns stating that they did something different as a result of the campaign.

Infrastructure and services

AORA released the Australian Organics Recycling Industry Capacity Assessment: 2020–21 which identified that Queensland does not currently have the capacity to meet a 70 per cent organic material recycling rate.

The Queensland Waste and Resource Recovery Infrastructure Report further identified that five of the eight Queensland regions have insufficient, or potentially insufficient, organic waste processing capacity to meet waste and resource recovery infrastructure needs from 2020 to 2050.

Therefore, strategically located infrastructure and services are required to increase Queensland's capacity to collect and process organic material, capitalise on integrated solutions, and produce high-value products where they can be used. With state and local governments, industry and community working collaboratively, the infrastructure and service needs can be delivered. For example, ensuring site locations and activities have considered suitable land zoning with adequate services (power, sewerage, water, and internet connectivity) and other infrastructure for current and future innovative technologies to maximise the benefits of organic recycling.

Market and product development

Consistent policy and regulation, partnerships and collaboration, and a sound knowledge platform, will drive innovation, investment, information sharing and the uptake of new opportunities in Queensland. Product design and end markets are needed to ensure the benefits of avoidance and recycling of organic waste are realised, and to ensure that organic waste is not stockpiled or disposed to landfill.

Research to develop new and innovative products is required to identify solutions to existing organic loss and waste challenges. As an example, beer products are being developed using recovered yeast from stale bread.

Effective markets require partnerships between waste generators and processors to ensure products meet end-user specifications and deliver the highest value products in line with the waste hierarchy.

Data, regulation and enforcement

Clear policy direction and legislative frameworks with reasonable regulation and enforcement will be required to provide certainty, and consistency for industries to promote investment in Queensland. Effective, accessible data and regional waste management and infrastructure planning will assist in identifying opportunities for regional specific needs for organics recycling markets and products.

A transparent and educational approach delivered through collaborations seeking to:

- provide appropriate land planning and environmental regulations suitable for organics recycling activities
- encourage best practice processes
- improve processing technologies
- align infrastructure and regulation that supports and delivers fit-for-purpose products.

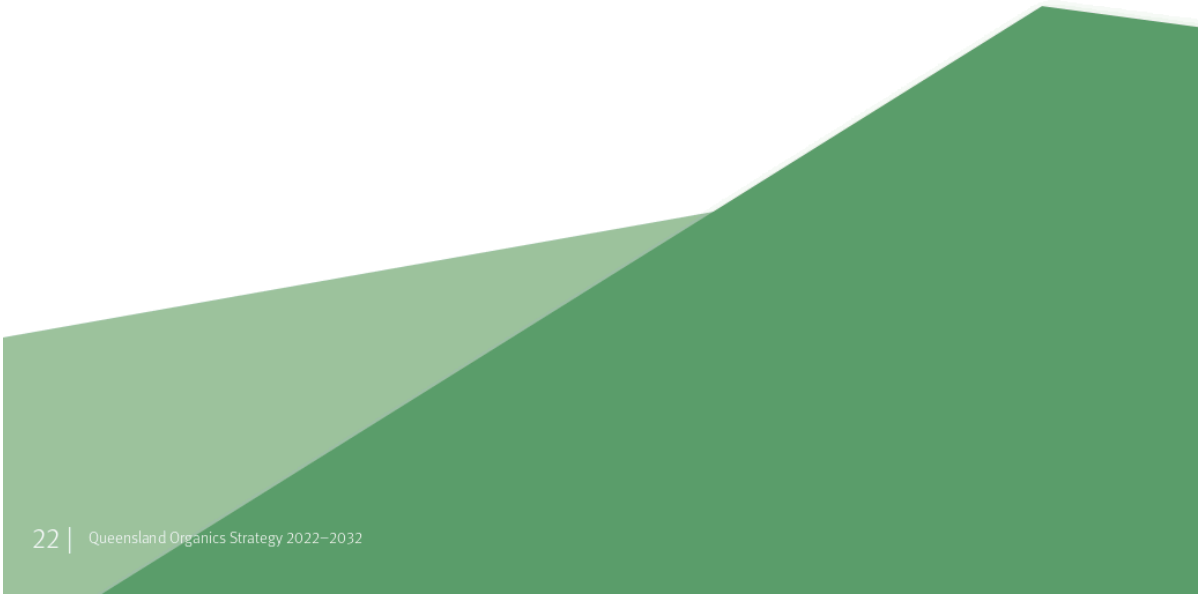
Compostable packaging and products

Compostable packaging and products present significant challenges to improving the management of organic material. As the Queensland organics recycling industry matures, solutions and processes are expected to develop introducing source separation processes, technological processes or closed systems which could accept compostable products.

Compostable packaging and products are largely being used to replace many single-use items. These compostable single-use items may be more appropriately replaced with a reusable product.

The presence of compostable products and the inability to differentiate compostable products certified to the Australian Standards and non-compostable items present significant contamination risks. Additionally, the rate of decomposition for compostable packaging and associated materials (such as substitutes for single use plastic cutlery) is often markedly different than it is for organic food or organic waste. This potentially results in a need to process these materials separately from other organic materials.

The Queensland Government doesn't promote the inclusion of compostable packaging and products through organics collection systems. However, we continue to work with the Commonwealth and other jurisdictions to appropriately consider the role of and address issues with compostable packaging and products.

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Actions for delivery—Avoidance

OBJECTIVE	HALVE THE AMOUNT OF FOOD WASTE GENERATED
Scope	**Avoid the generation of food waste from households**
	Actions
A1	**Develop and promote educational messaging based on research** The Queensland Government will develop and actively promote household education and awareness tools to empower Queenslanders to practice food waste avoidance behaviours. These materials will be based on research, including findings from the Fight Food Waste Cooperative Research Centre (CRC). Membership in the *Love Food Hate Waste* network will ensure that Queensland is supporting national action to align community education efforts to reduce food waste, ultimately maximising impact and reducing confusion. A range of digital mediums will be used to raise awareness of these education tools and support behaviour change. The Queensland Government will also work with local governments to develop education and behaviour change toolkits that can be implemented by local governments across Queensland.
A2	**Understand food waste behaviours and segments in Queensland** The Queensland Government supports the Fight Food Waste CRC project and other research to design effective interventions to reduce household food waste. The Queensland Government will continue to monitor commonly wasted food groups and food waste behaviours in Queensland to ensure educational materials address key issues.
A3	**Commence education for future generations** Sustainability is a cross curriculum priority in the Australian Curriculum and concepts of waste management are developed through key subjects. The Queensland Government will continue to apply research findings to the development of food waste education resources for use in Queensland schools.

OBJECTIVE	HALVE THE AMOUNT OF FOOD WASTE GENERATED
Scope	**Avoid the generation of food loss and waste from:** • **primary production** • **manufacturing** • **wholesaling** • **retail** • **hospitality and food services** • **institutions.**
	Actions
A4	**Research food waste hotspots and solutions** The Queensland Government will continue to work with research agencies such as the Fight Food Waste CRC to engage with industry and consumers to reduce food loss and waste across the supply chain. The Queensland Government is supporting the Fight Food Waste CRC: • project to undertake whole-of-supply chain mapping to identify and prioritising food waste hotspots in the meat value chain and support stakeholders across the chain to trial and embed solutions reducing food loss and waste • SME Solutions Centre to identify valuable products in food and agricultural waste streams and transform them into new commercial opportunities. The Queensland Government will continue to support research opportunities across the supply chain including the role that retail, and hospitality produce specifications have on the generation of food waste.
A5	**Collaborate directly with industry to create sector action plans** The Queensland Government will support Stop Food Waste Australia to develop a sector action plan for horticulture. Horticulture is Queensland's second largest primary industry, and grows approximately one-third of the nation's produce. This makes us well-placed to use this expertise to lead the development of this action plan. This work will complement the work already being undertaken by Stop Food Waste Australia and other jurisdictions in developing action plans for other sectors and ensure that we are collaborating and using shared resources effectively.
A6	**Find solutions for produce of all shapes and sizes** Build on existing work to explore options to update produce specifications and consumer acceptance of imperfect produce. Further identify and develop markets where product appearance is irrelevant.
A7	**Increase food rescue capacity** In 2021, the Queensland Government provided $905,622 in grant funding to six food rescue organisations for infrastructure, equipment, and operational costs to increase their collection and distribution capacity and divert additional high-quality surplus food from landfill and redistribute it to Queenslanders in need. The Queensland Government will review the outcomes of the grant program to identify options and opportunities for further food waste avoidance.
A8	**Increase connections between food rescue, businesses and recipients** The Queensland Government will continue to explore opportunities to better connect businesses with food rescue organisations to continue to increase the diversion of surplus edible food. This may include the promotion of platforms to better connect businesses with food rescue organisations and supporting the Fight Food Waste CRC and Stop Food Waste Australia to identify financial instruments that could encourage greater participation in food donation programs.
A9	**Provide advice to businesses of all sizes** Small to medium businesses in Queensland can register with the free Chamber of Commerce & Industry Queensland ecoBiz program to help them save money and increase efficiencies with tailored advice on how to save on their waste, energy and water bills. Businesses who grow, make, and sell our food can sign up to the Australian Food Pact to make a multi-year commitment to develop solutions to make our food system more sustainable, resilient and circular. Stop Food Waste Australia will work with participating organisations to develop tailored plans which help them achieve their food waste goals.
A10	**Roll-out food waste avoidance educational materials for businesses and institutions** *Love Food Hate Waste* materials developed for businesses and institutions will allow for consistent messaging to be provided to Queenslanders in different settings, to maximise the overall effectiveness of these educational materials and enable these facilities to demonstrate food waste avoidance behaviours and encourage their customers to reduce food waste.
A11	**Lead by example at government sponsored events** Queensland Government and local governments to promote *Love Food Hate Waste* food waste avoidance messaging and implement these behaviours and actions at relevant government sponsored events.

Actions for delivery—Landfill diversion

OBJECTIVE	80 PER CENT OF THE ORGANIC MATERIAL GENERATED IS DIVERTED FROM LANDFILL
Scope	**Diverting household organic material from landfill**
	Actions
D1	**Review solutions fit-for-purpose** Local governments to conduct a business case to identify the best fit-for-purpose option to improve household organic waste management in their local government area. This may be an organics kerbside service for households for: • Food Organics (FO) • Vegetable Organics (VO) • Garden Organics (GO) • Food Organics and Garden Organics (FOGO). Or small-scale solutions to process organics, such as: • aggregating organics through mechanisms such as community composting hubs • encouraging home-based approaches for organics processing, including composting, worm farms, bokashi etc. Queensland Government will provide support to inform this decision through: • the Resource and Waste Collection Options Tool to compare potential household waste and recycling collections systems against current systems to develop options for detailed analysis • the findings from the Queensland Government funded trials, including the $770,000 FOGO Kerbside Collection Trials 2021-22 in Townsville, Rockhampton and Lockyer Valley local government areas, plus an extra $90,000 allocated to ensure consistent auditing across the program • the findings from Queensland Government-supported research into onsite processing and collection options for multi-unit dwellings (MUDs) • development of case studies of organic waste management options for households.
D2	**Implement new household collection options which are consistent from the start** Local governments to use the findings of their business case to implement solutions to improve household organic waste management in their local government areas. The Queensland Government will provide support throughout the life of the Organics Strategy to ensure that all councils are provided an opportunity to better manage this material in a way that is fit-for-purpose for their communities. Queensland Government support will require local governments to: • implement education and behaviour change messaging to minimise contamination • for consistency, implement bin lid colour harmonisation to avoid household and collection confusion where kerbside collections are provided • understand and enforce contamination levels to provide confidence to end-markets • incorporate sufficient data collection and auditing processes to monitor uptake and contamination. Local governments are also encouraged to support longer-term supply contracts to provide the organics recycling industry with certainty for investment.
D3	**Make the inputs clear** Develop, implement and align household education and behaviour change tools in partnership with local government and industry to minimise contamination across all household kerbside bins, to maximise organic material being captured in the organics bin and minimise contamination.

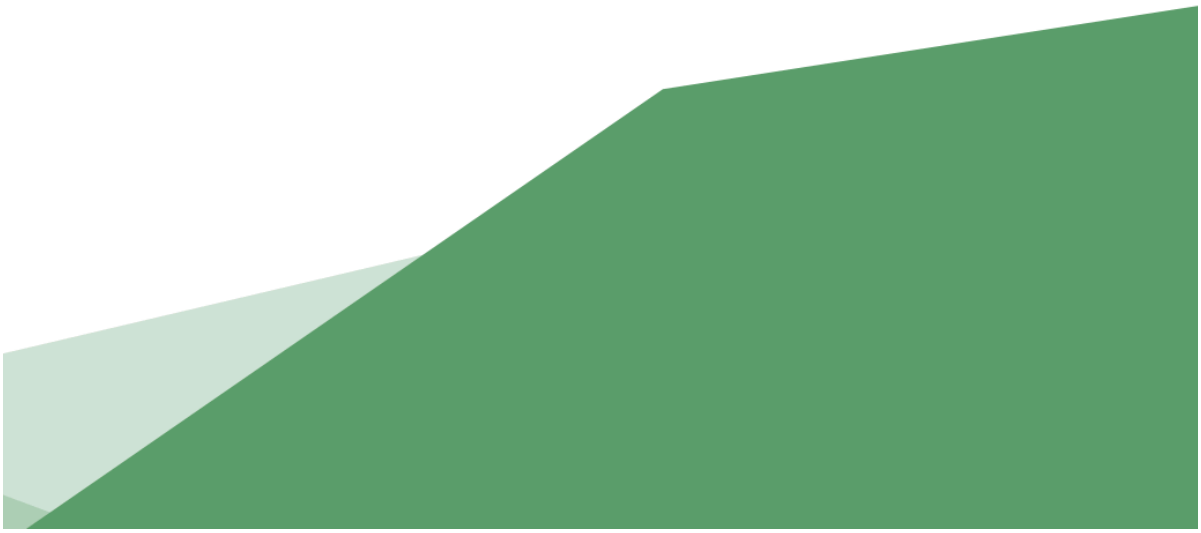
OBJECTIVE	80 PER CENT OF THE ORGANIC MATERIAL GENERATED IS DIVERTED FROM LANDFILL
Scope	**Avoid and divert remaining organic material from landfill**
	Actions
D4	**Lead by example at government-run events** Where processing facilities exist, Queensland Government and local government to provide a segregated organics collection systems at government-run events.
D5	**Implement new collection options** Business and institutions to explore options to divert their remaining organics from landfill. This may include: • collecting source separated organic waste through a separate service • contributing to local composting hubs depending on the quantity and composition of their waste streams • facilitating onsite organic waste processing. The Queensland Government will continue to explore options to support sectors to collect and process their waste. In 2021, the Queensland Government provided grants of up to $2,500 for Queensland schools to purchase equipment to deliver organics avoidance and resource recovery projects.
D6	**Set a clear end goal** As part of a broader project assessing options and the feasibility of landfill disposal bans, include an assessment of options for banning organics from landfill.

CASE STUDY

The Organic Waste Smart Schools Program (the Program) offered Queensland State Schools the opportunity to apply for funding for infrastructure and equipment for organic waste and resource recovery projects that contributed to the Program objectives:

- improve organic waste outcomes in Queensland schools
- improve understanding of organic waste reduction concepts in Queensland schools.

One North Queensland school has an existing agricultural plot to grow tropical crops. Students and teachers are already aware of the value of compost but send any spoil or green waste offsite for composting for it to be returned. Funding allowed for large composting bays to be established on-site eliminating the need for transport and giving the school complete control over the input into the compost, which they then use on their food crops.



Actions for delivery—Recycling

OBJECTIVE	ACHIEVE A MINIMUM 70 PER CENT RECYCLING RATE FOR ORGANICS
Scope	**Develop partnerships to understand end-market needs**
	Actions
R1	**Understand consumer needs** Develop key partnerships between the organics recycling industry and end users that enable feedstock production to create products that meet specifications and market demand.
Scope	**Inform new investment**
	Actions
R2	**Share current data to inform investment needs** Support the development and use of a central knowledge hub for organic material resources for Queensland. This hub should provide static guidance on organic waste recycling and use, as well as interactive elements to help inform business and investment decisions by: • displaying flows of organic and timber waste across Queensland • display current infrastructure capacity across Queensland regions • quantify the benefit of using compost on land • promote opportunities to connect stakeholders to allow for material exchange to match supply and demand. The Queensland Government will explore options to support research and development opportunities through this hub to test novel and innovative recycled products.
R3	**Build for the future** Local governments review planning instruments against Regional Waste Management Plans to ensure that they support solutions that help increase their region's current and future capacity to process organics waste.
Scope	**Develop and support new infrastructure**
R4	**Increase processing capacity** Queensland Government, local governments, and industry to coordinate investment to support new and upgraded integrated infrastructure solutions to increase processing capacity and improve the quality, safety, and consistency of recycled organic material. This infrastructure should be strategically coordinated to: • leverage existing opportunities under the national Food Waste for Healthy Soils fund • collaborate with councils to create economies of scale and meet multiple infrastructure needs, including mobile infrastructure to suit location and feedstock composition • co-locate organics recovery with other industries such as food processing or agriculture to combine organics streams and produce higher-value products • be in regions identified as having insufficient processing capacity in the Queensland Waste and Resource Recovery Infrastructure Report • support the expansion of valorisation infrastructure to collect and transform inedible by-products into valuable new products • support the bioenergy and biochemical industries to increase their processing capacity in Queensland, including putrescible organic waste streams, while ensuring environmental and social impacts are mitigated appropriately • ensure it is suited to the location, based on considerations around feedstock and proximity to markets and sensitive receiving environments. The planning for this infrastructure should commence in the short-term to allow larger-scale infrastructure to be built in the medium-term. All infrastructure plans that use food waste as a feedstock should be developed against the target of halving the generation of food waste by 2030.

Scope	Increase market demand
	Actions
R5	**Buy back products** Use government purchasing power at state and local levels to increase the uptake of high-quality, recycled organic waste content in government projects to help transform the supply market.
R6	**Support local businesses** Encourage Queensland businesses to adopt and publish sustainable procurement policies that include the use of recycled organic waste content.
R7	**Leverage the carbon market** Monitor implementation and uptake of emissions reduction fund methodologies in Queensland to help inform the prioritisation and development of new methodologies nationally.
Scope	**Ensure clear quality controls**
	Actions
R8	**Manage risks with market expansion** Queensland Government to review the policy and regulatory frameworks to reduce regulatory barriers and ensure they: • provide for the use of emerging technology for processing organics • provide clear guidance to inform the expansion of organics collection services in Queensland • support the expansion of viable and sustainable markets for products and outputs arising from the recovery of organics streams • facilitate the development of biomanufacturing, bioenergy and biochemical processing. The outcome of this review will need to provide clear guidance to the community and industry while ensuring adequate risk management and high-quality end products.
R9	**Align data collection and reporting** Queensland Government, local governments, and industry to explore how to better align data collection and reporting systems across state and local government to national classifications and definitions to improve sharing of information. This will not only ensure effective compliance operations but can be used to evaluate program effectiveness and inform future decision making.
R10	**Provide clarity and confidence to end-markets** Support the national review of the Australian Standard for Composting (AS4454) in 2022 to ensure thresholds and contaminant testing is current and helps improve processing to provide fit-for-purpose outputs. Support consideration of updated national and industry specifications for organic waste products to improve industry and customer certainty.
R11	**Ensure we are delivering best practice** The Queensland Government will implement the best practice environmental management guideline and model operating conditions for composting to ensure transparency and consistency for industry.
Scope	**Monitor implementation**
	Actions
M1	**Continue engagement throughout the Organics Strategy** Develop a stakeholder engagement and communications plan to define stakeholders, strategies, and mechanisms to deliver the Organics Strategy actions.


Tilly!
30 | Queensland Organics Strategy

Next steps

This Organics Strategy provides the overarching framework and actions for improved management of organic material in Queensland.

A supporting Organics Action plan has been developed with key stakeholder partners to ensure actions are coordinated, achievable, sequenced and funded.

This Organics Strategy is just one of several actions and programs to improve waste avoidance, recycling performance and management under the Waste Strategy. Implementing this Organics Strategy is within the context of the full suite of programs, projects, activities, and reviews underway and those that are scheduled to occur. Initiatives that have already been delivered include *Respecting Country, A sustainable waste strategy for First Nations communities*, which will help strengthen and re-frame the relationship with Aboriginal and Torres Strait Islander Queenslanders.

Measuring our progress

The implementation of actions under this Organics Strategy and its action plan will be monitored, evaluated and reviewed to assess progress against the set targets and allow for adjustment prior to 2030 if required.

The Waste Strategy and supporting legislation is subject to regular reviews to measure the performance against the objectives and ensuring it remains appropriate to achieving the outcomes and continues to set achievable targets. This Organics Strategy will be reviewed in line with the Waste Strategy, every three years.

The Organics Action Plan reviews provide opportunities to adjust actions and delivery as required as concurrent related work progresses. An example of this is the Regional Waste Management Plans, which are being developed with the Region of Councils and will identify specific needs for each region. The Action Plan can also be adjusted to incorporate the planning requirements for the Queensland 2032 Olympics and Paralympic Games, and requirements arising from COVID-19 impacts on supply chains and workforces.

Drivers for action

Global

On 25 September 2015, Australia was one of 193 United Nation members to adopt the United Nations Sustainable Development Goals (UN SDGs). The UN SDGs are the blueprint to achieving a more sustainable future.

SDG 12 marks global action on reducing food waste by ensuring sustainable consumption and production patterns. There are 11 targets contributing to SDG 12, with SDG 12.3 directly addressing food waste and loss.

UN SDG 12.3

By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

Countries are working to implement initiatives to reduce food waste and loss across the production and supply chain to support this target. Action to better use organic materials also has the potential to support other UN SDGs, including:

- **SDG 2:** end hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- **SDG 8:** promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all.
- **SDG 9:** build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.
- **SDG 13**: take urgent action to combat climate change and its impact.

National

The *National Food Waste Strategy* requires a 50 per cent reduction in food waste by 2030 by every Australian state and territory to align with UN SDG 12.3.

In 2018, the Fight Food Waste CRC commenced with a $30 million grant from the then federal Department of Industry, Innovation and Science CRC Program.

The Fight Food Waste CRC aims to unite science and industry to:

- reduce food waste throughout the supply chain
- transform unavoidable waste into innovative products
- engage with industry and consumers to deliver behavioural change.

Further national action being undertaken to specifically address food waste include:

- release of the national food waste baseline to monitor and track progress toward the national target
- the revised national food waste baseline set for Australia at 7.6 million tonnes of food waste generated annually across all sectors
- the establishment of Stop Food Waste Australia in 2021, with funding support from federal, Queensland and other state governments, industry and the food rescue sector
- diverting more food to the food rescue sector
- support for education campaigns
- research and technological improvements to improve agricultural efficiency and innovation, waste treatment infrastructure, and ways to create value from food waste.

Strategy 12 of the 2018 *National Waste Policy* signals the need to reduce organic waste, including garden and food waste, by avoiding their generation and supporting diversion away from landfill into soils and other uses, supported by appropriate infrastructure.

The *National Waste Policy* was supported by the *National Waste Policy Action Plan 2019* which set national targets, including to:

- reduce total waste generated in Australia by 10 per cent per person by 2030
- achieve an 80 per cent average resource recovery rate by 2030
- significantly increase the use of recycled content by government and industry
- halve the amount of organic waste sent to landfill by 2030
- make comprehensive, economy-wide and timely data publicly available to support better consumer, investment and policy decisions.

Target for 2030

By halving organic waste to landfill, 3.3 million tonnes less organic waste would go to landfill every year in Australia.

The *National Waste Report 2020* identified a two per cent reduction in the estimated organics waste disposed to landfill across Australia in 2018-19, compared to the 2016-17 figures.

The *National Soil Strategy* sets how Australia will value, manage and improve its soil for the next 20 years. These actions will ensure that soil continues to contribute to agricultural productivity, environmental sustainability, and economic growth.

A $67 million Food Waste for Healthy Soil Fund was established by the Commonwealth Department of Agriculture, Water and the Environment to support the diversion of household and commercial FO and GO from landfill to soil via the expansion of existing FOGO processing infrastructure and capacity. To leverage this funding and support Queensland programs, the Queensland Government is investing up to $11 million for the Queensland Food Waste for Healthy Soils Program.

Queensland

The Waste Strategy, released in July 2019, provides the framework for Queensland to become a zero-waste society, where waste is avoided, reused and recycled to the greatest possible extent, using the principles of a circular economy to retain the value of material for as long as possible. The Waste Strategy sets long-term targets for improved recycling and resource recovery rates by 2050.

Waste Strategy targets for 2050

- 25% reduction in household waste
- 90% of waste is recovered and does not go to landfill
- 75% recycling rates across all waste types

The Queensland Government has already supported actions to reduce generation of organic waste and divert organic material from landfill including:

Research, development and education

- Providing seed funding to the Centre for Recycling of Organic Waste and Nutrients (CROWN) to promote research, training, and extension capabilities in segregating, collecting, processing, and utilising organic waste materials and imbedded nutrients.
- Supporting the Centre for Organic Research and Education (CORE) to:
  - develop the *Guidelines for Establishing and Operating an Urban Agriculture Enterprise in Queensland*
  - deliver the annual International Compost Awareness Week and National Organics Week campaigns since 2015
- Supporting partnerships in the delivery of commercial food and organic waste collection and composting trials with the City of Gold Coast and Clubs Queensland.

Queensland Resource Recovery Industries

- Supporting the move to a circular economy through the development of the *Queensland Resource Recovery Industries 10-Year Roadmap and Action Plan* which sets a framework to accelerate this transition and develop Queensland's resource recovery industries.
- Delivering the Resource Recovery Industry Development Program to fund projects and initiatives that divert waste from landfill, reduce stockpiling and create jobs.

Queensland Biofutures expansion

- Releasing the *Queensland Biofutures 10-Year Roadmap and Action Plan*, which includes:
  - setting the pathway to establish Queensland as a world leading sustainable biomanufacturing and biotechnology region
  - the Queensland Government working with research institutions and across sectors, including the agriculture and waste industries, to develop a strong biofutures sector to attract international investment and create regional, high-value and knowledge-intensive jobs
  - the $5 million Queensland Waste to Biofutures Fund that provides support for the development of Queensland-based pilot and demonstration or commercially scalable projects that use conventional waste streams or biomass to produce bioenergy, biofuels and high value bioproducts
  - $1 million investment towards a business case to establish Queensland's first Future Food BioHub in Mackay, for advanced biomanufacturing creating plant-based alternatives that are healthy, sustainable and generate local employment
  - delivery of a Queensland biomass data and mapping dashboard
    - delivered in partnership with the Australian Biomass for Bioenergy Assessment, the biomass data and mapping tool provides a snapshot of data on forestry, cropping, urban waste, intensive livestock, food processing and horticulture
    - the dashboard enables better links between biomass suppliers and end users to retain the value from organic material destined for landfill or other low value uses.

Queensland's zero net emissions future

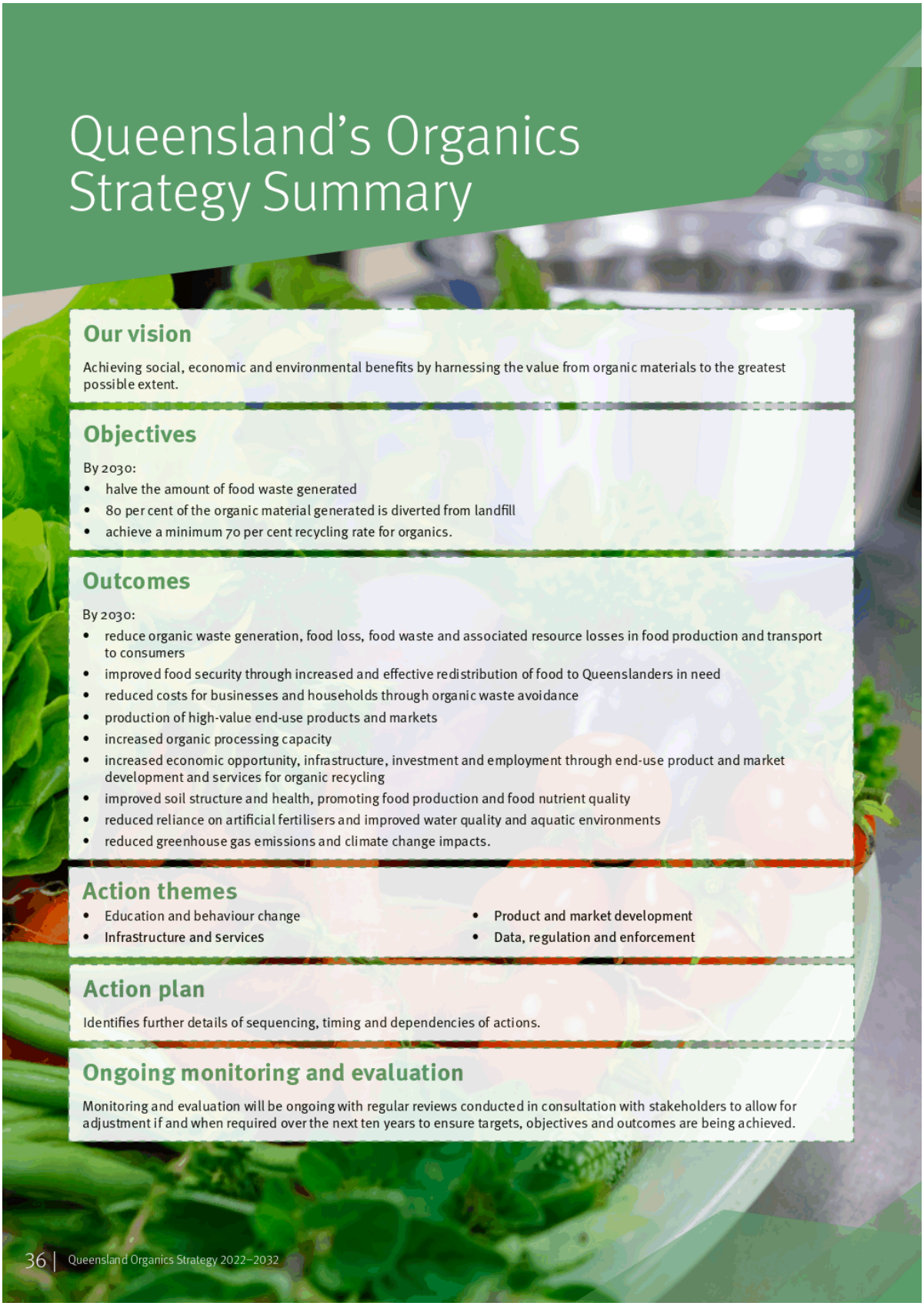
The Queensland Government has already supported actions to reduce the generation of organic waste and divert organic material from landfill by:

- setting climate targets to reduce emissions and create jobs:
  - Achieving zero net emissions by 2050
  - An interim target to reduce emissions by at least 30 per cent below 2005 levels by 2030
  - 50 per cent of Queensland's energy generation coming from renewable sources by 2030
- creating the Climate Action Plan and Queensland Climate Adaption Strategy to ensure Queensland meets its targets and is ready to harness the opportunities and manage the risks from a changing climate
- invested over $6 billion in climate action since 2015, including a $2 billion Queensland Renewable Energy and Hydrogen Jobs Fund from 2021
- funding has supported sectoral and regional initiatives that help to reduce emissions and value organic resources, including innovative circular economy initiatives.

Examples include providing seed funding for the Australian-first Circular Economy Lab, the $1.9 million Communities in Transition Pilot Program, and our partnership with the Chamber of Commerce and Industry to support small and medium enterprises.

Agriculture and food industry development

- Releasing a future-focused Agribusiness and Food Strategy which:
  - positions the agribusiness and food sector to emerge from COVID-19 and establish a strong foundation for the future
  - anticipates future changes in the way we grow, produce, harvest, distribute and consume food, fibre, fuel, and other primary products. The strategy identifies opportunities to boost productivity, develop new value-added and globally competitive products for expanding markets, support rural communities, and jobs within the regions and businesses across the value chain.
- Releasing the *Queensland Agriculture and Food Research, Development and Extension 10-Year Roadmap and Action Plan* (RD&E Action Plan) which includes:
  - setting the vision for Queensland's internationally recognised agriculture and food research, development and extension to underpin a productive, profitable and sustainable sector
  - supporting the existing sector to grow and develop new business, the RD&E Action Plan highlights the importance of exploring research, development and extension opportunities related to agriculture and food waste minimisation and utilisation
  - the Queensland Government undertakes research and development, commercialisation and investment attraction in digital technologies and management systems. This is to retain quality and minimise waste, including remote sensing, blockchain, packaging, storage, and innovative processing methods and novel products that use timber and agricultural by-products
  - value-adding opportunities for agricultural and food by-products, waste and surplus production due to its continuing to be a major focus for Queensland to grow the value of the sector.
- Establishing partnerships with research corporations, industry and government:
  - to fund circular economy projects, including trials in Goondiwindi for cotton textile waste returned to crops to improve soil health
  - develop a textile waste action plan to address the growing challenge of textile waste being disposed to landfill.



Queensland's Organics Strategy Summary

Our vision

Achieving social, economic and environmental benefits by harnessing the value from organic materials to the greatest possible extent.

Objectives

By 2030:

- halve the amount of food waste generated
- 80 per cent of the organic material generated is diverted from landfill
- achieve a minimum 70 per cent recycling rate for organics.

Outcomes

By 2030:

- reduce organic waste generation, food loss, food waste and associated resource losses in food production and transport to consumers
- improved food security through increased and effective redistribution of food to Queenslanders in need
- reduced costs for businesses and households through organic waste avoidance
- production of high-value end-use products and markets
- increased organic processing capacity
- increased economic opportunity, infrastructure, investment and employment through end-use product and market development and services for organic recycling
- improved soil structure and health, promoting food production and food nutrient quality
- reduced reliance on artificial fertilisers and improved water quality and aquatic environments
- reduced greenhouse gas emissions and climate change impacts.

Action themes

- Education and behaviour change
- Infrastructure and services
- Product and market development
- Data, regulation and enforcement

Action plan

Identifies further details of sequencing, timing and dependencies of actions.

Ongoing monitoring and evaluation

Monitoring and evaluation will be ongoing with regular reviews conducted in consultation with stakeholders to allow for adjustment if and when required over the next ten years to ensure targets, objectives and outcomes are being achieved.

Glossary

Bagasse—fibrous waste remaining when sugarcane stalks are crushed to extract juice.

Biosolids—organic solids derived from biological wastewater treatment processes that are in a state where they can be used as nutrients and soil conditioning agents, as a source of energy or for some other use. Sewage treatment plants are the main source of biosolids in Queensland.

Circular economy—an alternative to the traditional 'linear' economy based on the 'take-make-use-dispose system', in which products and materials keep circulating within the economy at their highest value for as long as possible, through reuse, recycling, remanufacturing, delivering products as services and sharing.

Commercial and industrial waste (C&I)—produced by business and commerce, and includes waste from schools, restaurants, offices, retail and wholesale businesses, and manufacturing industries.

Construction and demolition waste (C&D)—includes waste generated from building, repairing, altering or demolishing infrastructure for roads, bridges, tunnels, sewerage, water, electricity, telecommunications, airports, docks or rail.

Compost—a product created by the breakdown of organic matter by bacteria and other mico-organisms into a nutrient-rich natural fertiliser.

Compost hub—a central location where community members can compost their waste, for example, a community garden.

Compostable products—products that meet Australian Standard 4,736 or Australian Standard 5,810, or products made entirely out of materials that will disintegrate into natural elements within a home or commercial composting environment as specified by the relevant Australian Standard.

Contamination—any material found in a bin that is not accepted by an organic processing facility.

Core waste—waste generally managed by the waste and resource recovery sector, comprising solid non—hazardous waste and hazardous waste including liquids. It is generated in the municipal, construction and demolition, and commercial and industrial sectors, and includes biosolids but generally excludes primary production.

Cotton gin trash—a by-product created in the cotton ginning process.

Disposal—the process of getting rid of wastes by landfilling or incineration without energy recovery. It is the least acceptable option under the waste management and resource recovery hierarchy.

Energy recovery—involves the conversion of waste materials into useable heat, electricity or fuel through processes such as combustion, gasification, pyrolisation and anaerobic digestion.

FO—food organics collection.

Food hub—food producers or another organisation which aggregates, distributes and markets food products directly to the consumer.

FOGO—food organics and garden organics collection.

Garden waste—includes grass clippings, tree, bush and shrub trimmings, branches and other similar material resulting from domestic or commercial gardening, landscaping or maintenance activities.

GO—garden organics collection.

Kerbside collection—the collection of household waste left at the kerbside for collection by local government collection services.

Municipal solid waste (MSW)—waste generated by households and waste collected by or for a local government. It includes waste generated from street sweepings, public rubbish bins, maintaining a public place and collection of large items from domestic premises by a kerbside collection service.

Organic processing—involves the recovery of putrescible wastes through activities such as anaerobic digestion, mulching, composting or vermiculture.

Putrescible—solid waste which contains organic matter capable of being decomposed micro-organisms.

Recycling—is the process of extracting materials found in waste and converting them into useful products.

Recovered material—waste that has been diverted from landfill, including material that has been recycled, reprocessed or stockpiled for future use.

Recovery rate—the proportion of a waste stream that is recovered.

VO—vegetable organics collection.

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Queensland Government (2020), *Recycling and waste in Queensland 2019*

Appendix 1—Queensland Organics Stakeholder Advisory Group members

Queensland Organics Stakeholder Advisory Group members

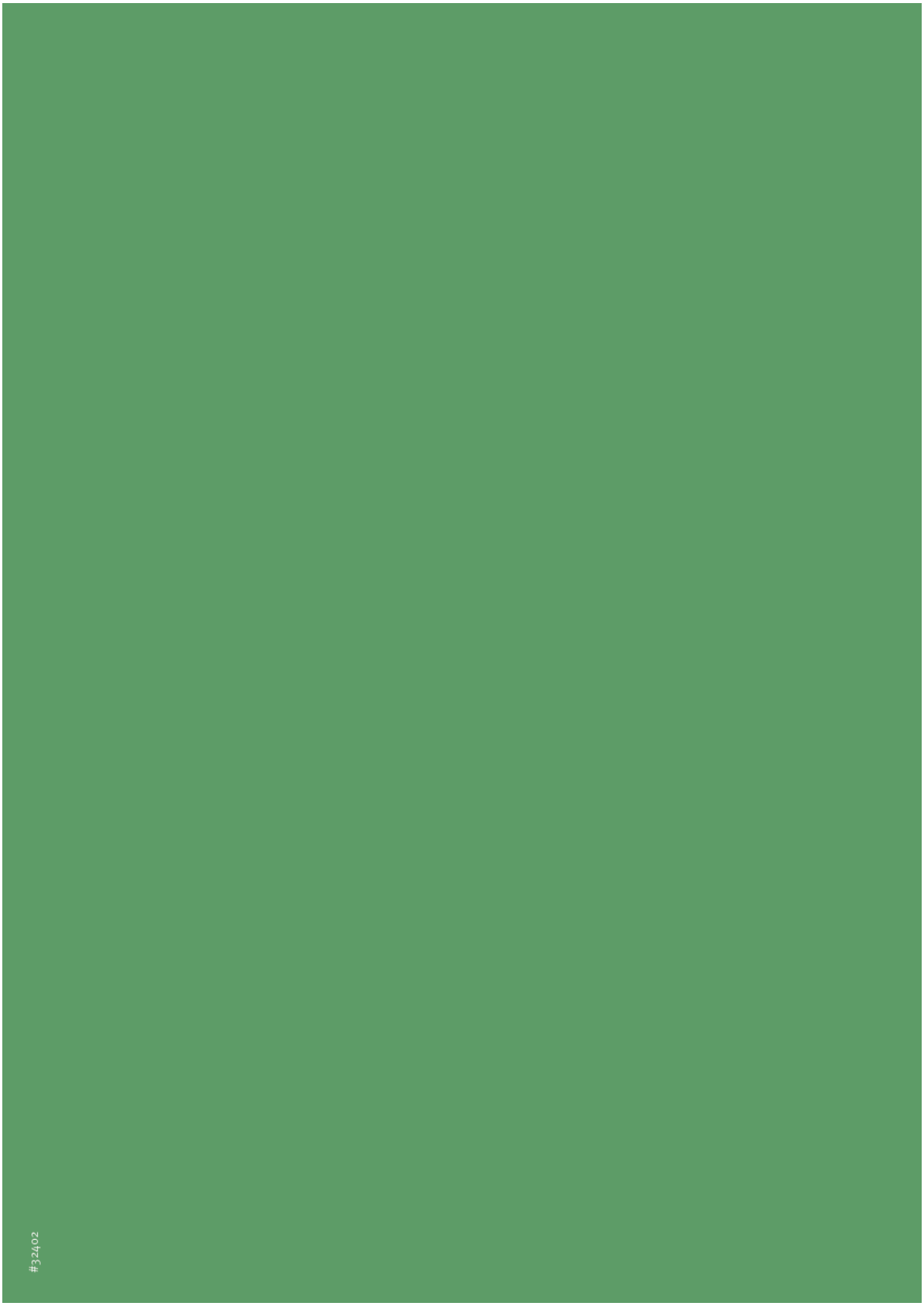
Members meet regularly to promote organics management action within their sector and collaborate with representatives from other sectors.

Peak bodies

- Australian Council of Recycling
- Australian Organic Recyclers Association
- Australian Packaging Covenant Organisation
- Boomerang Alliance
- Local Government Association of Queensland
- National Retail Association
- Queensland Farmers' Federation
- Waste Management & Resource Recovery Association Australia
- Waste Recycling Industry Association Queensland.

Key business members

- Foodbank Queensland
- Urban Utilities
- OzHarvest.


#32402

QUEENSLAND ORGANICS STRATEGY 2022–2032

Queensland Organics Action Plan

Meeting Date: 15 March 2022

Attachment No: 2

Queensland Organics Action Plan

2022–2032

Queensland Government

Prepared by: Office of Resource Recovery, Department of Environment and Science

The Department of Environment and Science acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and custodians of the land. We recognise their connection to land, sea and community, and pay our respects to Elders past, present and emerging.

The department is committed to respecting, protecting and promoting human rights, and our obligations under the Human Rights Act 2019.

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#32402 | February 2022

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Rationale

The *Queensland Organics Action Plan 2022–2032* (Organics Action Plan) specifies the approach, timeline, and responsibilities for the delivery of actions to achieve the objectives and outcomes of the *Queensland Organics Strategy 2022–2032* (Organics Strategy) that it supports.

Delivery of this Organics Action Plan will be monitored and evaluated in line with Queensland's *Waste Management and Resource Recovery Strategy* (Waste Strategy) to ensure we are on track to meet the 2030 targets set out in the Organics Strategy.

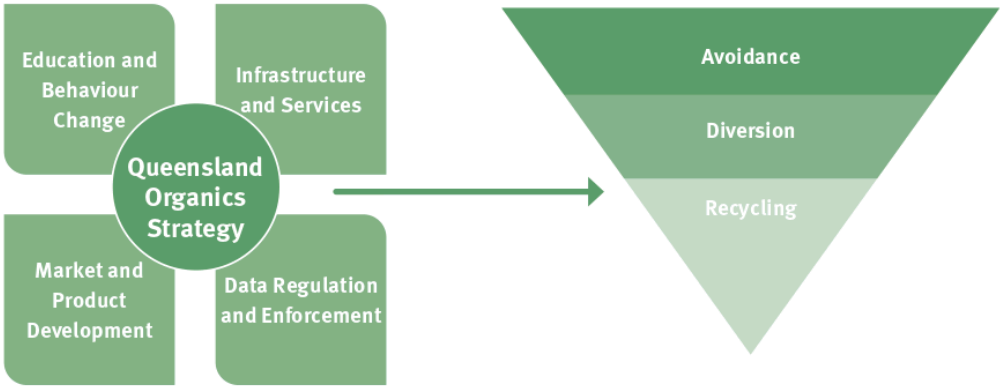
Future delivery phases will be developed following the first review of the Organics Action Plan and the progress made toward the set targets.

Themes/strategies to achieve outcomes

Four themes of Education and Behaviour Change, Infrastructure and Services, Market and Product Development, and Data, Regulation and Enforcement were identified through targeted consultation and engagement with stakeholders during the development of the Draft Organics Strategy. Strong action under each theme is required for the Organics Strategy's vision to be realised.

It is important to note that implementing this Action Plan is a shared responsibility across Commonwealth, State, Local Government, industry, and the community. Everyone has a part to play to support delivery on the targets set out in the Organics Strategy.

Through further extensive consultation in the development of the Organics Action Plan, actions have been grouped by the three key objectives of the Organics Strategy (Avoidance, Diversion or Recycling) providing clear identification of the outcome and aligning with the waste and resource management hierarchy rather than by theme.



Performance measures

Performance measures have been identified for individual actions to enable effective monitoring of work in delivering against the stated targets and objectives. Monitoring of these will occur continually and adjustments made as required.

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Action for delivery—Avoidance

Objective: Halve the amount of food waste generated

Scope: Avoid the generation of food waste from households

Strategy reference: A1
Responsibilities: **Lead:** Queensland Government
Support: Local governments

Action: **Develop and promote educational messaging based on this research**

The Queensland Government will develop and actively promote *Love Food Hate Waste* household education and awareness tools to empower Queenslanders to practice food waste avoidance behaviours.

These materials will be based on research, including findings from the Fight Food Waste Cooperative Research Centre (CRC).

Membership in the *Love Food Hate Waste* network will ensure that Queensland is supporting national action to align community education efforts to reduce food waste. This will maximise impact and reduce confusion. A range of digital mediums will be used to raise awareness of these education tools and support behaviour change.

The Queensland Government will also work with local governments to develop education and behaviour change toolkits that can be implemented by local governments across Queensland.

This will be staged to progressively work with those with capacity to adopt the materials early and lessons applied for others in the future.

Key steps and interdependencies	Performance measures	ST	MT	LT
Develop materials from the findings of the Fight Food Waste CRC and proven strategies implemented by the *Love Food Hate Waste* international network. Launch webpage with state-wide materials. Develop and actively promote multi-media resources to support general behaviour change across the state. Conduct baseline and follow-up audits to measure program efficacy. Provide *Love Food Hate Waste* materials to Queensland councils which have dedicated education officers working with councils to deliver the message. Queensland Government to work with industry and key agencies to ensure that materials are culturally and linguistically effective.	State-wide education materials on the website available by 30 March 2022. Conduct population awareness and kerbside bins audits in 2022 to gain a baseline and enable tracking of progress toward targets. 50 per cent of the Queensland population is aware of avoidance messages by 30 June 2023. 10 per cent reduction in household food waste in the kerbside red-lid bin by 2025.* * identified from audit data of participating councils	✓	✓	✓

ST = Short term 2022–2023
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LT = Long term 2026+

Strategy reference: A2
Responsibilities: **Lead:** Queensland Government and the Fight Food Waste CRC
Support: Industry and commercial sector

Action: **Understand food waste behaviours and segments in Queensland**

The Queensland Government supports the Fight Food Waste CRC project to design effective interventions to reduce household food waste.

The Queensland Government will continue to monitor commonly wasted food groups and food waste behaviours in Queensland to ensure educational materials address key issues.

Key steps and interdependencies	Performance measures	ST	MT	LT
Review project findings addressing food types being wasted, behaviours contributing to food waste, and demographic segments. Continue surveys in Queensland in line with the Fight Food Waste CRC baseline to monitor changes to food waste behaviours and food groups. Design effective interventions for state-wide and targeted *Love Food Hate Waste* messaging.	Key food groups and food waste behaviours change over time due to *Love Food Hate Waste* messaging being recognised and adopted by the community.	✓	✓	✓

Strategy reference: A3
Responsibilities: **Lead:** Queensland Government
Support: Local government and industry

Action: **Commence education for future generations**

Sustainability is a cross curriculum priority in the Australian Curriculum and concepts of waste management are developed through key subjects. The Queensland Government will continue to apply research findings to the development of food waste education resources for use in Queensland schools.

Key steps and interdependencies	Performance measures	ST	MT	LT
Collaboration between the Department of Environment and Science and the Department of Education, key education organisations and professional education associations to ensure communications are customised to audiences. (e.g. professional associations, Health and Wellbeing Queensland, EcoMarines, COEX Wave of Change) to develop and deliver educational materials for schools. Work with the Department of Education, TAFE and industry education schemes, such as VET to identify where there may be opportunities in the educational curriculum to include actions for organic waste avoidance programs, such as horticulture and hospitality industries. Facilitate education programs, delivery and school sustainability plans and school curriculum. Provide *Love Food Hate Waste* materials for students to use at home to connect in parents.	Materials developed and delivery of these commenced to a minimum of 50 schools by the end of 2022, with an annual increase in participating schools observed. Conduct annual surveys and bin audits in participating schools to measure awareness, behaviour change and track improved performance. 80 per cent of Queensland schools using food waste education resources by 2030.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Objective: Halve the amount of food waste generated

Scope: Avoid the generation of food waste from:

- primary production
- transportation
- manufacturing
- wholesaling
- retail
- hospitality and food services
- institutions

Strategy reference: A4
Responsibilities: **Lead:** Queensland Government, industry, Fight Food Waste CRC and other research bodies/jurisdictions

Action: **Research food waste hotspots and solutions**

Queensland Government to continue to work with research agencies, such as the Fight Food Waste CRC, to engage with industry and consumers to reduce food loss and waste across the supply chain.

The Queensland Government is supporting the Fight Food Waste CRC with:

- a project to undertake whole-of-supply chain mapping to identify and prioritise food waste hotspots in the meat value chain and support stakeholders across the chain to trial and embed solutions reducing food loss and waste.
- the SME Solutions Centre to identify valuable products in food and agricultural waste streams and transform them into new commercial opportunities.

The Queensland Government will continue to support research opportunities across the supply chain, including the role that retail and hospitality produce specifications have on the generation of food waste.

Key steps and interdependencies	Performance measures	ST	MT	LT
Continue supporting Fight Food Waste CRC projects and prioritise the projects with the greatest benefit to Queensland. Identify further research opportunities across broader organic waste streams. Understand lessons from other jurisdictions and map end-user needs to prioritise uses, identify streams (commercial/domestic), locations, and intervention points in line with the waste hierarchy. Prioritise valorisation opportunities. Test the authorising and regulatory environment is right to promote (facilitate) product and market development. Achieve highest beneficial reuse for current organics in line with the waste and resource recovery heirarchy.	Most financially valuable parts of the supply chain are prioritised first. Regular and consistent engagement mechanisms agreed between government and industry. Recovered organic materials being used for their highest value in line with the waste hierarchy by 2030.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: A5
Responsibilities: **Lead:** Stop Food Waste Australia and industry
Support: Queensland Government

Action: **Collaborate directly with industry to create sector action plans**

The Queensland Government will support Stop Food Waste Australia to develop a sector action plan for horticulture.

Horticulture is Queensland's second largest primary industry growing approximately one-third of the nation's produce. This makes us well-placed to use this expertise to lead the development of this particular action plan.

This work will complement the work already being undertaken by Stop Food Waste Australia and other jurisdictions in developing action plans for other sectors and ensure that we are collaborating and using shared resources effectively.

Key steps and interdependencies	Performance measures	ST	MT	LT
Engage with Stop Food Waste Australia and horticulture peak bodies to commence development of the action plan. Industry to own the action plan and be accountable for the delivery, monitoring and measuring performance against these.	Action plans developed and voluntary implementation commenced by industry by 2025.	✓	✓	✓

Strategy reference: A6
Responsibilities: **Lead:** Retail and hospitality industry and the agricultural sector
Support: Queensland Government

Action: **Find solutions for produce of all shapes and sizes**

Build on existing work to explore options to update produce specifications and consumer acceptance of imperfect produce. Further identify and develop markets where product appearance is irrelevant.

Key steps and interdependencies	Performance measures	ST	MT	LT
Explore the impact of retail and hospitality specifications through A4. Identify and develop necessary markets where product appearance is irrelevant (e.g. canning, freezing, juicing, supplement and vitamin manufacturing). Industry to help identify opportunities for alternative markets. Clarify produce specification with retail industry and investigate the potential for alternative arrangements (e.g. whole crop purchase/update product specifications/ broadening varieties to increase the consumption of food produced).	Increased alternative arrangements exist by 2025 which decreases food loss. Alternative markets are developed by 2030.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: A7
Responsibilities: **Lead:** Food rescue organisatons
Support: Queensland Government

Action: **Increase food rescue capacity**

In 2021, the Queensland Government provided $905,622 in grant funding to six food rescue organisations for infrastructure, equipment and operational costs to increase their collection and distribution capacity and divert additional high-quality surplus food from landfill and redistribute it to Queenslanders in need.

The Queensland Government will review the outcomes of the grant program to identify options and opportunities for further food waste avoidance.

Key steps and interdependencies	Performance measures	ST	MT	LT
The Queensland Government will review the outcomes of the grant program to assess future need.	Grant program outcomes are reviewed by 2023. Learnings from the program achieve further diversion of organics materials.	✓		

Strategy reference: A8
Responsibilities: **Lead:** Hospitality and retail sector and primary producers
Support: Queensland Government, local governments, Fight Food Waste CRC and Stop Food Waste Australia

Action: **Increase connections between food rescue, businesses and recipients**

The Queensland Government will continue to explore opportunities to better connect businesses with food rescue organisations to continue to increase the diversion of surplus edible food.

This may include the promotion of platforms to better connect businesses with food rescue organisations and supporting the Fight Food Waste CRC and Stop Food Waste Australia to identify financial instruments that could encourage greater participation in food donation programs.

Key steps and interdependencies	Performance measures	ST	MT	LT
The Queensland Government will continue to explore opportunities to better connect businesses with food rescue organisations. Support the Fight Food Waste CRC and Stop Food Waste Australia projects to identify financial instruments that could encourage greater participation in food donation programs. Identify options to increase use of Y Waste and similar platforms to connect businesses with food rescue organisations and recipients.	Findings from the Fight Food Waste CRC Y Waste app pilot reviewed by the end of 2022 to assess how the learnings could be applied in Queensland.		✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: A9
Responsibilities: **Lead:** CCIQ, industry
Support: Queensland Government and Local governments

Action: **Provide advice to businesses of all sizes**

Small to medium businesses in Queensland can register with the free Chamber of Commerce and Industry Queensland ecoBiz program to help them save money and increase efficiencies with tailored advice on how to save on their waste, energy and water bills.

Businesses who grow, make, and sell food can sign up to the Australian Food Pact to make a multi-year commitment to develop solutions to make our food system more sustainable, resilient and circular. Stop Food Waste Australia will work with participating organisations to develop tailored plans which help them achieve their food waste goals.

Key steps and interdependencies	Performance measures	ST	MT	LT
Expand CCIQ waste reduction advice to include specific advice on organic waste avoidance. Investigate the program's current reach. Identify key industries and businesses that send the highest quantities of organic waste to landfill in Queensland. Target engagement with these industries and businesses and work with them to review their processes. Engage with Stadiums Queensland on food waste avoidance education at major sporting events in preparation for the 2032 Olympic and Paralympic Games. Peak bodies to encourage members to commit to voluntary measures and identify promotional benefits to drive continued engagement and action.	EcoBiz performance measures mirrored. Following expansion of ecoBiz advice, have 10 per cent of relevant existing businesses already registered with ecoBiz to take up organics advice. Maintain an increase in the number of businesses engaged with ecoBiz organics advice each year. EcoBiz and similar programs engaging with businesses to measure and report on volumes of waste avoided to determine efficacy of engagement programs. The Australian Food Pact has been signed by up to: • two of the four major supermarkets by 2023 • all four major supermarkets by 2025. Major supermarkets demonstrate a reduction of organic waste generated (tonnes). Peak bodies to report the number of businesses pledging voluntary commitments.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: A10
Responsibilities: **Lead:** Queensland Government and industry
Support: Boomerang Alliance

Action: **Rollout food waste avoidance educational materials for businesses and institutions**

Love Food Hate Waste materials developed for businesses and institutions will allow for consistent messaging to be provided to Queenslanders in different settings, to maximise the overall effectiveness of these educational materials and enable these facilities to demonstrate food waste avoidance behaviours and encourage their customers to reduce food waste.

Key steps and interdependencies	Performance measures	ST	MT	LT
Develop materials from the findings of the Fight Food Waste CRC and proven strategies implemented by the *Love Food Hate Waste* International network. Launch webpage with state-wide materials. Develop a consistent system to measure progress. Industry and business peak bodies develop case studies relevant to their representative members to highlight food waste volumes that are avoided.	State-wide education materials on the website available by 30 June 2022. Annual uptake of businesses and institutions promoting these resources.	✓	✓	✓

Strategy reference: A11
Responsibilities: **Lead:** Queensland Government and Local governments
Support: Industry

Action: **Lead by example at government events**

Queensland Government and local governments to promote *Love Food Hate Waste* avoidance messaging and implement these behaviours and actions at relevant government sponsored events.

Key steps and interdependencies	Performance measures	ST	MT	LT
Incorporate requirements for food waste avoidance messaging in the Queensland Events Guide. Engage with Stadiums Queensland early in preparation for the 2032 Olympic and Paralympic Games	Queensland Events Guide reviewed to include content on food waste avoidance education by June 2022. Food waste avoidance messaging in place at all Queensland Government events and institutions in locations with existing processing capacity by July 2023, and for rest of Queensland by December 2025.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Action for delivery—Landfill diversion

Objective: Divert 80 per cent of the organic material generated from landfill

Scope: Diverting household organic material from landfill

Strategy reference: D1
Responsibilities: **Lead:** Local governments
Support: Queensland Government

Action: **Review fit-for-purpose solutions**

Local governments to conduct a business case to identify the best fit-for-purpose option to improve household organic waste management in their local government area.

This may be an organics kerbside service for households for:
- Food Organics (FO)
- Vegetable Organics (VO)
- Garden Organics (GO)
- Food Organics and Garden Organics (FOGO)

Or small-scale solutions to process organics, for example:
- aggregating organics through mechanisms such as community composting hubs
- encouraging home-based approaches for organics processing, including composting, worm farms, bokashi etc.

The Queensland Government will provide support to inform this decision through:
- the Resource and Waste Collection Options Tool to compare potential household waste and recycling collections systems against current systems to develop options for detailed analysis
- the findings from the Queensland Government funded trials, including the $770,000 FOGO Kerbside Collection Trials 2021–22 in Townsville, Rockhampton and Lockyer Valley local government areas, plus an extra $90,000 allocated to ensure consistent auditing across the program
- the findings from Queensland Government-supported research into onsite processing and collection options for multi-unit dwellings (MUDs)
- development of case studies of organic waste management options for households.

Key steps and interdependencies	Performance measures	ST	MT	LT
Undertake research and trials for collection and processing household organic waste from a range of environments, (e.g. high rainfall, rural/metro, FO/VO/GO, MUDs) with funding support for Councils to deliver. Establish a representative council group and leverage existing groups to share outcomes and learnings, including business cases. Finalise FOGO grant program and assess outcomes to provide guidance and case studies for other local governments. Requirement for improved organics management across all of Queensland with Councils to determine most appropriate services for their needs. Organics services being delivered to be identified through regional waste management and resource recovery plans. Queensland and local governments to assess these initiatives and develop guidance material (including business cases and feasibility studies for other councils). Considerations required to ensure opportunities exist for smaller and remote local governments/regions, (e.g. community gardens, island communities and include other inputs (e.g. mining camps/defence facilities)).	Funding for additional council trials which build on and augment information from current trials in 2022. Regional Waste Management Plans to recommend improved organics management solutions and timing by 30 June 2023. 75 per cent of councils within the levy zone have business cases for their solutions completed by 30 June 2023.	✓		

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: D2
Responsibilities: **Lead:** Local governments
Support: Queensland Government and industry

Action: **Implement new household collection options which are consistent from the start**

Local governments to use the findings of their business case to implement solutions to improve household organic waste management in their local government areas.

Queensland Government will provide support throughout the life of the Organics Strategy to ensure that all councils are provided an opportunity to better manage this material in a way that is fit-for-purpose for their communities. Queensland Government support will require local governments to:

- implement education and behaviour change messaging to minimise contamination
- for consistency, implement bin lid colour harmonisation to avoid household and collection confusion where kerbside collections are provided
- understand and enforce contamination levels to provide confidence to end-markets
- incorporate sufficient data collection and auditing processes to monitor uptake and contamination.

Local governments are also encouraged to support longer-term supply contracts to provide the organics recycling industry with certainty for investment.

Key steps and interdependencies	Performance measures	ST	MT	LT
Explore funding options for local governments to commence planning in the coming years, including understanding the requirements to implement improved organics services. Link funding prioritisation and needs to the development of Regional Waste Management and Resource Recovery Plans. Commitment from 77 councils to identify and implement fit-for-purpose organics management systems to meet their needs. Conduct consultation with commercial providers to adopt Australian standard colours for new bin lids. Investigate requirements to align organics processing technology with policy and communication of accepted materials in collection services.	Improved organics management services in place across Queensland by 2026 in SEQ and major regional council areas. 80 per cent household participation in services after three years of commencing. Positive satisfaction rating with their service. All councils that provide an organics collection service to adopt the Australian standard bin lid colour prior to education commencing. Demonstrated increase in the volume of organics captured and re-processed over time.		✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: D3
Responsibilities: **Lead:** Queensland Government and local governments

Action: **Make the inputs clear**

Develop, implement, and align household education and behaviour change tools in partnership with local government and industry to minimise contamination across all household kerbside bins, to maximise organic material being captured in the organics bin and minimise contamination.

Key steps and interdependencies	Performance measures	ST	MT	LT
Develop consistent education materials (including initially focusing on contamination in the red and yellow bins) and prioritising key behaviours to change that can be delivered state-wide. Prioritising materials and messages on behaviours to change in line with the waste hierarchy. Develop/adopt consistent labelling and communication language/messages. Utilise research findings of contamination in organics collection services to agree on clear guidance on what can be put in green bins, to deliver consistent and clear information, regardless of services provided by individual local governments.	Survey of both population awareness and kerbside bins audits conducted in 2022 to gain a baseline and enable tracking of progress toward targets. By 2025: • 65 per cent of households have organics capture services. 2030 targets of: • 80 per cent of households have organics capture services. • 90 per cent capture rates of organic material, with separate capture rates for Food and Garden Organics comprised of: — 50 per cent capture of food organics — 90 per cent of garden organics — <1 per cent contamination rate.	✓	✓	✓

Scope: Avoid and divert remaining organic material from landfill

Strategy reference: D4
Responsibilities: **Lead:** Queensland Government and local governments
Support: Industry

Action: **Lead by example at government events**

Where processing facilities enable, Queensland Government and local government to provide a segregated organics collection system at government events.

Key steps and interdependencies	Performance measures	ST	MT	LT
Incorporate requirements for improved organics management as a requirement in the Queensland Events Guide. Implement source segregation at government events and facilities, with suppliers required to address these requirements.	Queensland Events Guide reviewed to include content on improved organics management by 30 June 2022. Organics collection systems in place at all government events in locations with existing processing capacity by July 2023, and for rest of Queensland by December 2025.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: D5
Responsibilities: **Lead:** Industry
Support: Queensland Government and local governments

Action: **Implement new collection options**

Business and institutions to explore options to divert their remaining organics from landfill. This may include:

- collecting source separated organic waste through a separate service
- contributing to local composting hubs depending on the quantity and composition of their waste streams
- facilitating onsite organic waste processing.

The Queensland Government will continue to explore options to support sectors to collect and process their waste. In 2021, the Queensland Government provided grants of up to $2,500 for Queensland schools to purchase equipment, (such as new or additional organic waste processing systems, including compost bins, tumblers, compost bays, in ground and above ground worm farms and also chickens and goats) to deliver organics avoidance and resource recovery projects.

Key steps and interdependencies	Performance measures	ST	MT	LT
Investigate options for grant programs for small scale infrastructure for the commercial sector and institutions. Develop case studies from funded trials. Publish case studies on a central hub when developed. Provide access to education materials and existing programs (e.g. ecoBiz and Compost Connect Program).	Case studies documented by 2023. Businesses utilise materials and programs. Data available to identify businesses with organics management services.	✓	✓	✓

Strategy reference: D6
Responsibilities: **Lead:** Queensland Government
Support: Industry and Local governments

Action: **Set a clear end goal**

As part of a broader project assessing options and the feasibility of landfill disposal bans, include an assessment of options for banning organics from landfill.

If appropriate, following consultation the Queensland Government to implement a staged organics landfill disposal ban through regulation to drive increased organics diversion rates.

Key steps and interdependencies	Performance measures	ST	MT	LT
Commence consultation with industry and local government to inform a feasibility study and options analysis, focusing on specific organic waste streams. Align proposed bans with ERA and EoW code review. Consider as part of the Waste Strategy review by 30 June 2022. Support the planning and development of appropriate collection systems, infrastructure, processing capacities and options, including a focus on clean and viable feedstock supply. Identify incentivisation options prior to ban implementation.	Feasibility assessment completed by 31 December 2022. If feasible and subject to Cabinet consideration and parliamentary processes commence landfill ban specified (targeted) organics streams in South East Queensland by the middle of the decade.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Action for delivery—Recycling

Objective: Achieve a minimum 70% recycling rate for organics

Scope: Develop partnerships to understand end-market needs

Strategy reference: R1
Responsibilities: **Lead:** Queensland Government, industry and local governments

Action: **Understand consumer needs**

Develop key partnerships between the organics recycling industry and end users that enable feedstock production to create products that meet specifications and market demand.

Key markets identified are:
- Agriculture
- Government (state and local)
- Urban amenity (excluding government procurement)
- Mine rehabilitation

Key steps and interdependencies	Performance measures	ST	MT	LT
Deliver workshops to identify requirements and education and broaden target audience to all key end-users. Product specifications to address feedstock contamination, establishing these from experience of other jurisdictions. Establish discussions and workshops between the organics recycling industry and government procurement officers, and other businesses to promote procurement of recycled organic waste products. Update the appropriate policy processes following the findings of the workshop and endorsement of the Queensland Government Procurement Committee.	By end of 2022 working groups held with AORA and key end markets to identify potential demand, product specifications and identify increased demand targets required to support recycling targets. Queensland requirements advocated nationally for end-user product specification and certification system for priority end products.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Scope: Inform new investment

Strategy reference: R2
Responsibilities: **Lead:** Queensland Government
Support: Researchers, industry and Local governments

Action: **Share current data to inform investment needs**

Support the development and use of a central knowledge hub for organic material resources for Queensland.

This hub should house not only static guidance on organic waste recycling and use, but interactive elements to help inform business and investment decisions by:

- displaying flows of organic and timber waste across Queensland
- display current infrastructure capacity across Queensland regions
- quantify the benefit of using compost on land
- promote opportunities to connect stakeholders to allow for material exchange to match supply and demand.

The Queensland Government will explore options to support research and development opportunities through this hub to test novel and innovative recycled products.

Key steps and interdependencies	Performance measures	ST	MT	LT
Facilitate identification of collaboration options across the organic waste research groups, with a potential to build on previous projects (e.g. Australian Biomass Bioenergy Assessment (ABBA) or the Organics Material Flow Analysis (MFA) projects). Assess the requirements for determining the timeframes and process for regularly updating the material flow analyses and infrastructure report.	Development of a hub by 30 March 2023, with content provided by, and maintained by users approximately biannually.	✓	✓	✓

Strategy reference: R3
Responsibilities: **Lead:** Local governments
Support: Queensland Government

Action: **Build for the future**

Local governments review planning instruments against Regional Waste Management Plans to ensure that they support solutions that help increase their region's current and future capacity to process organics waste.

Key steps and interdependencies	Performance measures	ST	MT	LT
Undertake consultation to identify issues and solutions to planning and infrastructure plans.	Local government planning instruments reviewed within two years of Regional Waste Management Plans being developed.	✓		

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Scope: Develop and support new infrastructure

Strategy reference: R4
Responsibilities: **Lead:** Industry
Support: Queensland Government and Local governments

Action: **Increase processing capacity**

Queensland Government, local governments, Federal Government and industry to coordinate investment to support new and upgraded integrated infrastructure solutions to increase processing capacity and improve the quality, safety, and consistency of recycled organic material.

This infrastructure should be strategically coordinated to:

- leverage existing opportunities under the national Food Waste for Healthy Soils fund
- collaborate across councils to create economies of scale and meet multiple infrastructure needs, including mobile infrastructure to suit location and feedstock composition
- co-locate organics recovery with other industries such as food processing or agriculture to combine organics streams and produce higher-value products
- be in regions identified as having insufficient processing capacity in the Queensland Waste and Resource Recovery Infrastructure Report
- support the expansion of valorisation infrastructure to collect and transform inedible by-products into valuable new products
- support the bioenergy and biochemical industries to increase their processing capacity in Queensland, including putrescible organic waste streams, while ensuring environmental and social impacts are mitigated appropriately
- ensure it is suited to the location, based on considerations around feedstock and proximity to markets and sensitive receiving environments.

The planning for this infrastructure should commence in the short-term to allow larger-scale infrastructure to be built in the medium-term. All infrastructure plans that use food waste as a feedstock should be developed against the target of halving the generation of food waste by 2030.

Key steps and interdependencies	Performance measures	ST	MT	LT
Undertake consultation and utilise existing data to identify needs and locations for infrastructure. Planning considerations identifies site location appropriate for use/zoning and distance from markets. Conduct trials to understand requirements from different pathways. Develop case studies to demonstrate good practices and develop guidelines for other businesses, utilising other jurisdictions. Identify funding opportunities for building medium-term infrastructure. Infrastructure established enabling aggregation opportunities and processing points. All tiers of government and industry conduct analysis and commit to funding pathways and partnerships to strategically establish infrastructure. Local and Queensland Government commit to using products from these facilities through procurement contracts. Investigate biohub infrastructure development to maximise agricultural and industrial feedstocks.	Regional plans identify infrastructure needs, locations and benefits delivered and demonstrate learnings from trials/representative groups. Processing infrastructure within reasonable proximity to markets to offset transport emissions. Diversion rates from landfill increase. Councils have uptake through procurement contracts. Increasing volume (as a percentage) of material purchased by local and state governments. Trials completed on a range of C&I businesses, with a focus on institutions by 30 March 2023.		✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Scope: Increase market demand

Strategy reference: R5
Responsibilities: **Lead:** Queensland Government and Local governments

Action: **Buy back products**

Use government purchasing power at state and local levels to increase the uptake of high-quality, recycled organic waste content in government projects to help transform the supply market.

Key steps and interdependencies	Performance measures	ST	MT	LT
Following the workshops with industry (R1), explore opportunities to increase the uptake of recycled organic waste content. Consultation with the Queensland Government Procurement Committee to determine the investigation scope, timeframes and process, acknowledging the 2032 Olympics and Paralympic Games as a driver for procurement enhancement. Consultation with local governments through LGAQ and Region of Councils (ROCs) on procurement and other identified policy mechanisms (e.g. as part of regional waste management and resource recovery plan development, to enhance alignment between state and local policies).	Where endorsed by the Queensland Government Procurement Committee, identified procurement or other policy mechanisms are implemented by 31 December 2024 to improve recycled organics content and pursue other innovative business models.		✓	✓

Strategy reference: R6
Responsibilities: **Lead:** Industry and Queensland Government

Action: **Support local businesses**

Encourage Queensland businesses to adopt and publish sustainable procurement policies that include the use of recycled organic waste content.

Key steps and interdependencies	Performance measures	ST	MT	LT
Following workshops/discussions (R1), encourage businesses to publish sustainable procurement policies which educate consumers on their buying choices. Identify target audiences and promote benefits to businesses, prioritising larger business then medium businesses. Work with other Queensland Government departments to build capacity within Government to support and drive this action.	10 per cent of businesses adopt and promote sustainable procurement policies with an annual increase in the number of businesses participating. Publish case studies of business practices and benefits.		✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: R7
Responsibilities: **Lead:** Federal Government, Queensland Government and industry

Action: **Leverage the carbon market**

Monitor the implementation and uptake of emissions reduction fund methodologies in Queensland to help inform the prioritisation and development of new methodologies nationally.

Key steps and interdependencies	Performance measures	ST	MT	LT
Queensland Government to monitor the implementation and uptake of existing emissions reduction fund methodologies in Queensland. Participate in the yearly prioritisation and development of new methodologies nationally.	Increase in uptake of the methodologies.	✓	✓	✓

Scope: Ensure clear quality controls

Strategy reference: R8
Responsibilities: **Lead:** Queensland Government
Support: Local governments and industry

Action: **Manage risks with market expansion**

Queensland Government to review the policy and regulatory frameworks to reduce regulatory barriers and ensure they:

- provide for the use of emerging technology for processing organics
- provide clear guidance to inform the expansion of organics collection services in Queensland
- support the expansion of viable and sustainable markets for products and outputs arising from the recovery of organics streams
- facilitate the development of biomanufacturing, bioenergy and biochemical processing.

The outcome of this review will need to provide clear guidance to the community and industry while ensuring adequate risk management and high-quality end products.

Key steps and interdependencies	Performance measures	ST	MT	LT
Commence a review to: • understand the barriers to implementation • regulatory requirements and economics required to establish and operate • feedstock source and market outputs. As part of broader review processes of the Queensland Waste Strategy and legislation, explore required regulatory amendments to provide safe, appropriate guidance for all other activities. Framework to consider building waste, and appropriateness and economically viable for regions. Organics stakeholder groups continue to receive updates/consultation opportunities through the Department of Environment and Science.	Reviews to commence in early 2022 with timing linked to education actions. Frameworks are adopted, accepted and enacted (e.g. council and commercial contracts). Regulatory environment enables investment in new and emerging technology. Economic and technological measures for success are identified and agreed. Investment in biotech processing results in processes established and operating in Queensland and less organics sent to landfill. Sufficient volume and quality of feedstocks exist to operate processes.	✓	✓	

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: R9
Responsibilities: **Lead:** Queensland Government and local governments
Suppport: Industry

Action: **Align data collection and reporting**

Queensland Government, local governments, and industry to explore how to better align data collection and reporting systems across state and local government to national classifications and definitions to improve sharing of information.

This will not only ensure effective compliance operations but can be used to evaluate program effectiveness and inform future decision making.

Key steps and interdependencies	Performance measures	ST	MT	LT
Complete an analysis into current data capture and potential amendments, including lessons from other jurisdictions. Establish data baselines to measure improved data collection and reporting. Link data requirements back to regulatory requirements to ensure improved data standards. Investigate data requirements and standards being linked to contracts and contract management requirements. Identify sectors with effective systems and apply these lessons where appropriate.	Data collection and reporting is published in accordance with the Queensland Government Open Data Policy. Through the open data portal, measure data use. Data sets aligned and consistent by 2023, and report standards established by 2024.	✓	✓	✓

Strategy reference: R10
Responsibilities: **Lead:** Federal Government, Queensland Government and industry
Support: Local governments

Action: **Provide clarity and confidence to end-markets**

Support the national review of the Australian Standard for Composting (AS4454) in 2022 to ensure thresholds and contaminant testing is current and helps improve processing to provide fit-for-purpose outputs.

Support consideration of updated national and industry specifications for organic waste products to improve industry and customer certainty.

Key steps and interdependencies	Performance measures	ST	MT	LT
Queensland Government to continue supporting the national review through collaboration with local governments and industry. Standards and specifications to provide options for regional needs and localised solutions and tools. Product certification to address purpose and product variations. Standards clearly communicated to drive markets.	Market needs are reflected in national standards and specifications. Standards and specifications are accepted by industry and end-users utilise these as part of their purchasing decisions. Specifications developed for a range of common purposes, (e.g. roads, industrial landscaping, gardens, parks, agriculture) which identify acceptable contamination rates.	✓	✓	

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Strategy reference: R11
Responsibilities: **Lead:** Queensland Government, local governments and industry

Action: **Ensure we are delivering best practice that is fit for purpose**

Queensland Government to implement best practice environmental management guidelines and model operating conditions for composting to ensure transparency and consistency for industry.

Key steps and interdependencies	Performance measures	ST	MT	LT
Ongoing review of the guidelines to ensure they are meeting evolving needs. Continue implementation with local governments and industry and address regional needs for investment and development. Encourage businesses to adopt the guidelines. Review Environmentally Relevant Activities (ERAs) and environmental authorities for current requirements.	Guidelines are adopted in 2022. Guidelines achieve objectives and high-quality organics materials are produced. Queensland guidelines are consistent with other jurisdictions and Queensland products are competitive nationally. Organic products meet standards. Composting processes are efficient.	✓	✓	✓

ST = Short term 2022–2023
MT = Medium term 2024–2026
LT = Long term 2026+

Scope: Monitor implementation

Strategy reference: M1
Responsibilities: **Lead:** Queensland Government

Action: **Continue engagement throughout the Organics Strategy**

Develop a stakeholder engagement and communications plan to define stakeholders, strategies, and mechanisms to deliver the Organics Strategy actions.

Key steps and interdependencies	Performance measures	ST	MT	LT
Engage with key stakeholders in the development of the plan to ensure it delivers the requirements and is achievable. Continue to review and refine the plan as behaviour change occurs along the delivery of the Organics Action Plan.	Develop an engagement and communications plan by 30 June 2022 to address all strategies to maintain focus and efficacy of each. Bi-annual review of the currency of the engagement and communications plan.	✓	✓	✓

Actions summary

2025 interim targets

10% reduction in household waste

65% diverted from landfill

60% recycling rate

2030 targets

15% reduction in household waste

80% diverted from landfill

70% recycling rate

Halve the amount of food waste generated

Timeline: Action delivery

Short-term (two years)		Medium-term (three years)	Long-term (five years)
2022	2023	2024–26	2027–32
Establish a stakeholder engagement and communication plan. (M1)	Ongoing monitoring of implementation. (M1, R9)	Ongoing monitoring of implementation. (M1, R9)	Ongoing monitoring of implementation and adjustment where required. (M1, R9)
Obtain baseline data and align data collection and reporting. (A2, R9)	Share data to inform investment needs. (R2)	Share data to inform investment needs. (A2,R2)	Continue to update and share data to inform investment needs. (A2,R2)
Conduct research and develop action plans with solutions for key sectors. (A4, A5, A6)		Monitor action plan delivery. (A4, A5, A6)	Monitor action plan delivery and shift focus from waste going to landfill to all organic material. (A4, A5, A6)
Assess and increase food rescue capacity. (A7)		Increase connections with food rescue organisations and recipients. (A8)	Continue to increase connections with food rescue organisations and recipients. (A8)
Develop and commence waste avoidance education. (A1, A3, A10, A11)		Continue broader roll-out of waste avoidance education. (A1, A3, A10, A11)	Continue broader roll-out of waste avoidance education. (A1, A3, A10, A11)
Assess the feasibility of a landfill disposal ban. (D6)	Regulatory amendments and industry engagement. (D6, R8, R11)	Commence a staged roll-out of a landfill disposal ban. (D6, R8, R11)	Continue staged roll-out of a landfill disposal ban. (D6, R11)
Conduct trials and provide advice and resources to businesses and events. (A9, D4, D5)		Broader roll-out of commercial organic waste collection. (A9, D4, D5)	Continue broader roll-out of commercial organic waste collection. (A9, D4, D5)
Develop regional waste management plans for infrastructure upgrades and development. (R3)		Increase infrastructure processing capacity. (R4)	Continue to increase infrastructure processing capacity. (R4)
Conduct trials and share resources across councils to inform the development of businesses cases for household organic waste solutions. (D1)	Prepare for new household organics waste solutions. (D3)	Broader roll-out of new household organic waste solutions. (D2, D3)	Continue broader roll-out of new household organic waste solutions. (D2, D3)
Understand end-market needs. (R1, R7, R10)		Increase market demand. (R1, R5. R6, R7. R10)	Continue to increase market demand. (R1, R5, R6, R7)

Glossary

Bagasse—fibrous waste remaining when sugarcane stalks are crushed to extract juice.

Biosolids—organic solids derived from biological wastewater treatment processes that are in a state where they can be used as nutrients and soil conditioning agents, a source of energy or for some other use. Sewage treatment plants are the main source of biosolids in Queensland.

Circular economy—an alternative to the traditional 'linear' economy based on the 'take-make-use-dispose system', in which products and materials keep circulating within the economy at their highest value for as long as possible, through reuse, recycling, remanufacturing, delivering products as services and sharing.

Commercial and industrial waste (C&I)—produced by business and commerce, and includes waste from schools, restaurants, offices, retail and wholesale businesses, and manufacturing industries.

Construction and demolition waste (C&D)—includes waste generated from building, repairing, altering or demolishing infrastructure for roads, bridges, tunnels, sewerage, water, electricity, telecommunications, airports, docks or rail.

Compost—a product created by the breakdown of organic matter by bacteria and other mico-organisms into a nutrient-rich natural fertiliser.

Compost hub—a central location where community members can compost their waste, for example, a community garden.

Compostable products—products that meet Australian Standard 4736 or Australian Standard 5810, or products made entirely out of materials that will disintegrate into natural elements within a home or commercial composting environment as specified by the relevant Australian Standard.

Contamination—any material found in a bin that is not accepted by an organic processing facility.

Core waste—waste generally managed by the waste and resource recovery sector, comprising solid non—hazardous waste and hazardous waste including liquids. It is generated in the municipal, construction and demolition, and commercial and industrial sectors, and includes biosolids but generally excludes primary production.

Cotton gin trash—a by-product created in the cotton ginning process.

Disposal—the process of getting rid of wastes by landfilling or incineration without energy recovery. It is the least acceptable option under the waste management and resource recovery hierarchy.

Energy recovery—involves the conversion of waste materials into useable heat, electricity or fuel through processes such as combustion, gasification, pyrolisation and anaerobic digestion.

FO—food organics collection.

Food hub—food producers or another organisation which aggregates, distributes and markets food products directly to the consumer.

FOGO—food organics and garden organics collection.

Food loss—food that is lost along the production and supply chain before reaching the retail stage.

Food waste—edible food and inedible food parts at the point of retail or consumer use that is not eaten.

Garden waste—includes grass clippings, tree, bush and shrub trimmings, branches and other similar material resulting from domestic or commercial gardening, landscaping or maintenance activities.

GO—garden organics collection.

Kerbside collection—the collection of household waste left at the kerbside for collection by local government collection services.

Municipal solid waste (MSW)—waste generated by households and waste collected by or for a local government. It includes waste generated from street sweepings, public rubbish bins, maintaining a public place and collection of large items from domestic premises by a kerbside collection service.

Organic processing—involves the recovery of putrescible wastes through activities such as anaerobic digestion, mulching, composting or vermiculture.

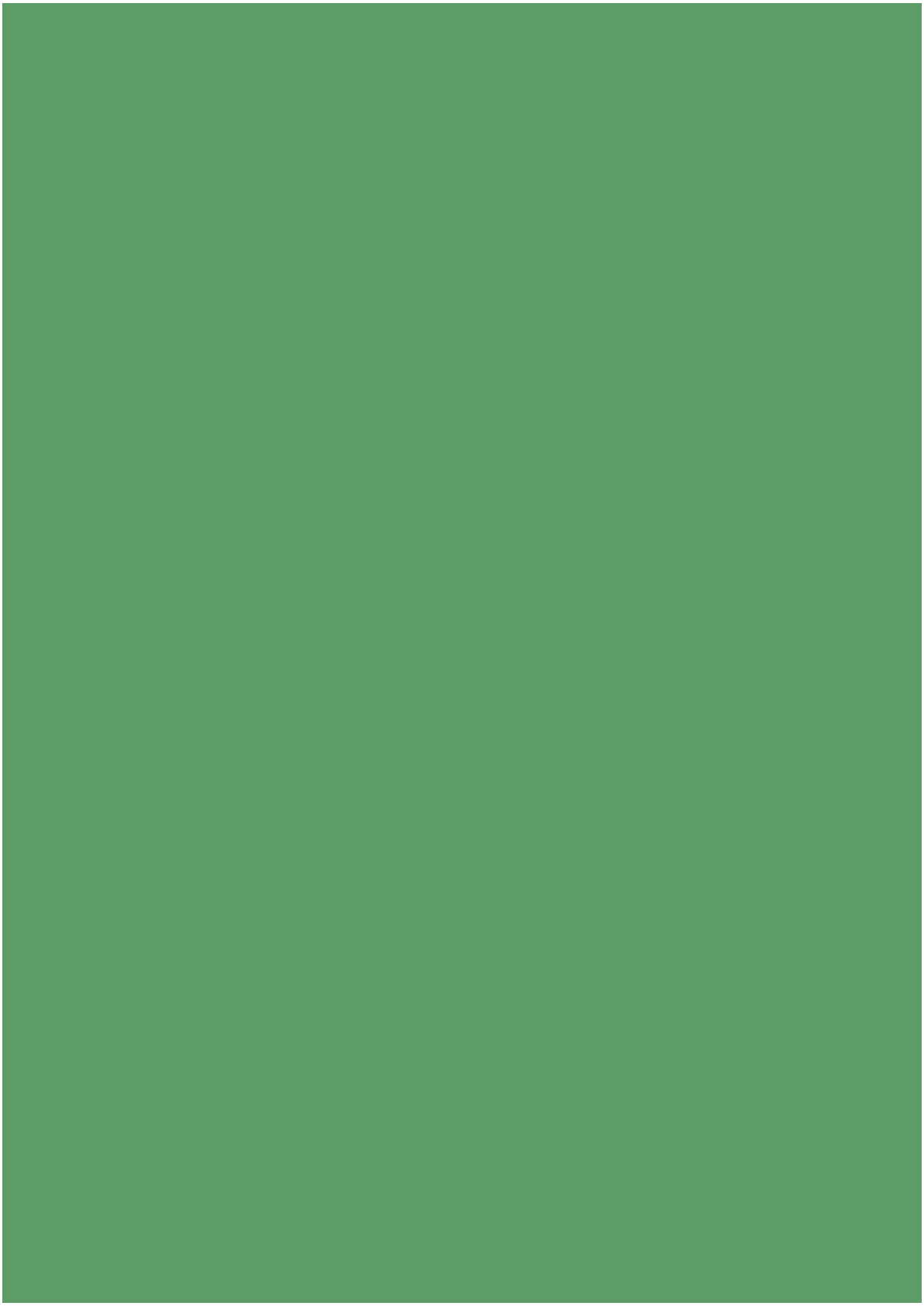
Putrescible—solid waste which contains organic matter capable of being decomposed micro-organisms.

Recycling—the process of extracting materials found in waste and converting them into useful products.

Recovered material—waste that has been diverted from landfill, including material that has been recycled, reprocessed or stockpiled for future use.

Recovery rate—the proportion of a waste stream that is recovered.

VO—vegetable organics collection.



7.5 GRACEMERE WASTE TRANSFER STATION OPERATING HOURS REVIEW

File No: 7284

Attachments: 1. Proposed Operating Hours Options for Survey⇩

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 present a case for a review and survey to be undertaken regarding the operating hours of the Gracemere Waste Transfer Station. The key objective is to address some concerns raised by customers to ensure the operating hours of the Waste Transfer Station meet the needs of the community.

OFFICER'S RECOMMENDATION

THAT Council resolve to undertake the following;

1. Undertake consultation with the community by way of survey providing a number of options of operating hours for the Waste Transfer Station;
2. Undertake a review of the operating hours including survey results, facility patronage and consultation with key stakeholders; and
3. RRWR to provide Council review outcomes and proposal to maintain/change the current operating hours.

BACKGROUND

During the 2020/2021 budget process, a number of operational areas were nominated for review with operational savings to be generated. Within Rockhampton Regional Waste & Recycling (RRWR), the operation of the Waste Transfer Stations (WTS) were reviewed to ensure that the level of service provided was supported by the level of patronage at the WTSs.

On 8 December 2020, Council made Resolution to amend Gracemere and Mount Morgan WTS operating hours, reducing the hours by 22.5 hours and 26 hours a week respectively. This resolution took effect 1 February 2021. The operation of Council's regional WTSs are under contract and this reduction of hours saved Council approximately $115,000.00 per annum in contractor fees.

Over the past 11 months, Council has received 8 complaints/enquiries regarding the change of hours to Gracemere WTS including an enquiry received from the Gracemere Community Voice Association Inc. requesting a reassessment of the WTS hours on behalf of its members. The current operating hours and annual financial status for Gracemere WTS is as follows:

Gracemere Waste Transfer Station Operating Hours							
Operating Hours	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**	**Sun**
	9am – 3pm	**9am – 3pm**	**9am – 3pm**	**9am – 3pm**	**9am – 3pm**	**9am – 5pm**	**9am – 3pm**
Hours / Day	**6**	**6**	**6**	**6**	**6**	**8**	**6**
Hours / Week	**44**						
Cost / Year	**$180,648**						

COMMENTARY

To ensure the operating hours of the Gracemere WTS reflect the needs of the community a survey is proposed providing options for operational hours. The options proposed will not significantly increase the total operating hours, or therefore change the operating cost, however will change the times the facility is open. These Options are presented below;

Option 1: Status Quo – current operational hours of service remain unchanged.

Option 2: Reduced days of operation:

Monday, Wednesday, Friday 7am – 5pm

Saturday 7am – 3pm

Sunday 7am – 1pm

Option 3: Alternating early and late hours

Monday, Wednesday, Friday 7am – 1pm

Tuesday, Thursday 11am – 5pm

Saturday 7am – 3pm

Sunday 7am – 1pm

Option 4: Reduced Weekend Hours

Monday – Friday 9am – 5pm

Saturday – Sunday 9am – 12pm

As part of the review the current number of transactions per hour of each day will be considered and key Contractors operating and servicing the WTS will be consulted.

BUDGET IMPLICATIONS

The estimated annualised cost associated with each of the Options are presented below;

Option	Hours / Week	Cost / Year
Option 1	44	$180,648.00
Option 2	44	$180,648.00
Option 3	44	$180,648.00
Option 4	46	$188,859.27

LEGAL IMPLICATIONS

Nil

CONSULTATION EXTERNAL/INTERNAL

Consultation has been undertaken with the service provider to advise of proposed survey and review. A survey will be developed and undertaken throughout the community through a number of different methods.

CORPORATE/OPERATIONAL PLAN

The key objectives of RRWR are to deliver commercially viable waste and recycling services that satisfy adopted customer service standards.

Action 1.1.12 of Operational Plan 2021-2022 states, 'Deliver waste and recycling services in accordance with Rockhampton Regional Waste and Recycling 2021-2022 Performance Plan'.

CONCLUSION

The survey will be undertaken throughout April 2022 for 28 days. The review will encompass the results of the survey, facility patronage and consultation with key stakeholders. RRWR will provide Council with a summary of the review and a recommendation to either change or maintain the current operational hours.

GRACEMERE WASTE TRANSFER STATION OPERATING HOURS REVIEW

Proposed Operating Hours Options for Survey

Meeting Date: 15 March 2022

Attachment No: 1

Proposed Operating Hours Options for Survey

Option 1 - Current Hours	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
TIME	GM	GM	GM	GM	GM	GM	GM
7:00am - 8:00am							
8:00am - 9:00am							
9:00am - 10:00am							
10:00am - 11:00am							
11:00am - 12:00pm							
12:00pm - 1:00pm							
1:00pm - 2:00pm							
2:00pm - 3:00pm							
3:00pm - 4:00pm							
4:00pm - 5:00pm							
5:00pm - 6:00pm							
Current Hours / Day	6	6	6	6	6	8	6
Total Hours							44

Option 2 - Decreased Days	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
TIME	GM	GM	GM	GM	GM	GM	GM
7:00am - 8:00am							
8:00am - 9:00am							
9:00am - 10:00am							
10:00am - 11:00am							
11:00am - 12:00pm							
12:00pm - 1:00pm							
1:00pm - 2:00pm							
2:00pm - 3:00pm							
3:00pm - 4:00pm							
4:00pm - 5:00pm							
5:00pm - 6:00pm							
Current Hours / Day	10		10		10	8	6
Total Hours							44

Option 3 - Early & Late Days	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
TIME	GM	GM	GM	GM	GM	GM	GM
7:00am - 8:00am							
8:00am - 9:00am							
9:00am - 10:00am							
10:00am - 11:00am							
11:00am - 12:00pm							
12:00pm - 1:00pm							
1:00pm - 2:00pm							
2:00pm - 3:00pm							
3:00pm - 4:00pm							
4:00pm - 5:00pm							
5:00pm - 6:00pm							
Current Hours / Day	6	6	6	6	6	8	6
Total Hours							44

Option 4 - Reduced Weekend Hours	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
TIME	GM	GM	GM	GM	GM	GM	GM
7:00am - 8:00am							
8:00am - 9:00am							
9:00am - 10:00am							
10:00am - 11:00am							
11:00am - 12:00pm							
12:00pm - 1:00pm							
1:00pm - 2:00pm							
2:00pm - 3:00pm							
3:00pm - 4:00pm							
4:00pm - 5:00pm							
5:00pm - 6:00pm							
Current Hours / Day	8	8	8	8	8	3	3
Total Hours							46

7.6 MOUNT MORGAN RAIL TRAIL FEASIBILITY STUDY - CONSULTATION OUTCOMES

File No:	**14498**
Attachments:	**1. Community Consultation Report⇩** **2. Appendix C – Online Survey Results (confidential)** **3. Hardcopy questionnaire submissions (confidential)**
Authorising Officer:	**Stuart Harvey - Coordinator Infrastructure Planning** **Martin Crow - Manager Infrastructure Planning**
Author:	**Jamie Meyer - Infrastructure Planning Engineer**

SUMMARY

Community consultation has been undertaken for the Mount Morgan Rail Trail Feasibility Study. A Consultation Report which summarises the consultation outcomes has been prepared and is attached for Council's information.

RECOMMENDATION

THAT the Mount Morgan Rail Trail Feasibility Study – Consultation Outcomes report be received.

COMMENTARY

Community consultation has been undertaken for the Mount Morgan Rail Trail Feasibility Study.

Consultation was undertaken from 16 August to 3 September 2021 to gauge the level of public, stakeholder and business support and understand any issues that people in the community may have about the project.

Letters were sent to property owners adjacent to the trail and key stakeholders advising them of the consultation.

These stakeholders included:

- Mount Morgan Promotion and Development Inc
- Mount Morgan Leichhardt Hotel
- Rocky Road Runners
- Rockhampton Mountain Bike Club
- Bicentennial National Trail Coordinator
- QLD Access Coordinator for the Australian Trail Horse Riders Association
- Capricornia Bushwalkers
- Cycle4life
- 10,000 Steps

A media release also informed the wider community of the consultation.

Consultation took the form of display stalls at shopping centres, online engagement through the EngageHQ website and stakeholder meetings. The display stalls were held at three (3) shopping centre locations:

- Wednesday 25 August at Stocklands Rockhampton (9am – 12 pm);
- Wednesday 25 August at Gracemere Shopping World (1pm – 4 pm); and

- Thursday 26 August at Mount Morgan IGA (8 am – 12 pm).

Online engagement was open from 16 August to 3 September. A questionnaire was used to gauge the level of community support for the rail trail, who would use it and what for, and what facilities should be incorporated. 113 formal responses to the questionnaire were received.

Council's consultant, Burchills Engineering Solutions, have prepared the attached Community Consultation Report which provides a summary of the consultation outcomes. These outcomes will help Council officers understand the level of support for the rail trail, potential issues, identify potential user groups and inform design requirements and further consultation.

In general, those who were not adjoining landholders were very supportive of the project and said they would use the trail if it were developed. Many of these could see a range of benefits to the region if the trail was developed. However a number of adjoining landholders had concerns with the proposal, raised a number of issues and appeared to be strongly opposed to the proposal.

The outcomes of the community consultation have been incorporated into the preliminary design and feasibility stages of the project which are currently nearing completion. Council will undertake a second round of consultation, informing the residents and wider community of the design progress and seeking comment before finalizing the feasibility study. This second round of consultation is due to occur in the coming month.

BACKGROUND

Council has received funding through the 2020-21 Rail Trail Local Government Grants Program (RTLGG) to undertake a feasibility study for the provision of a multi-use trail along the existing vacant Mount Morgan rail corridor. The rail trail is proposed to begin at the existing Mount Morgan railway station located in Railway Parade, Mount Morgan and finish at Cedric Archer Park, Gracemere.

The proposed rail trail will provide a recreational route for cyclists, walkers and potentially horse riders and cover a distance in excess of 25km. The rail trail provides tourism and recreational benefits by connecting the townships of Mount Morgan and Gracemere. The trail forms part of the Advance Mount Morgan Strategy and will integrate with and provide benefit to other projects at various stages of planning and development.

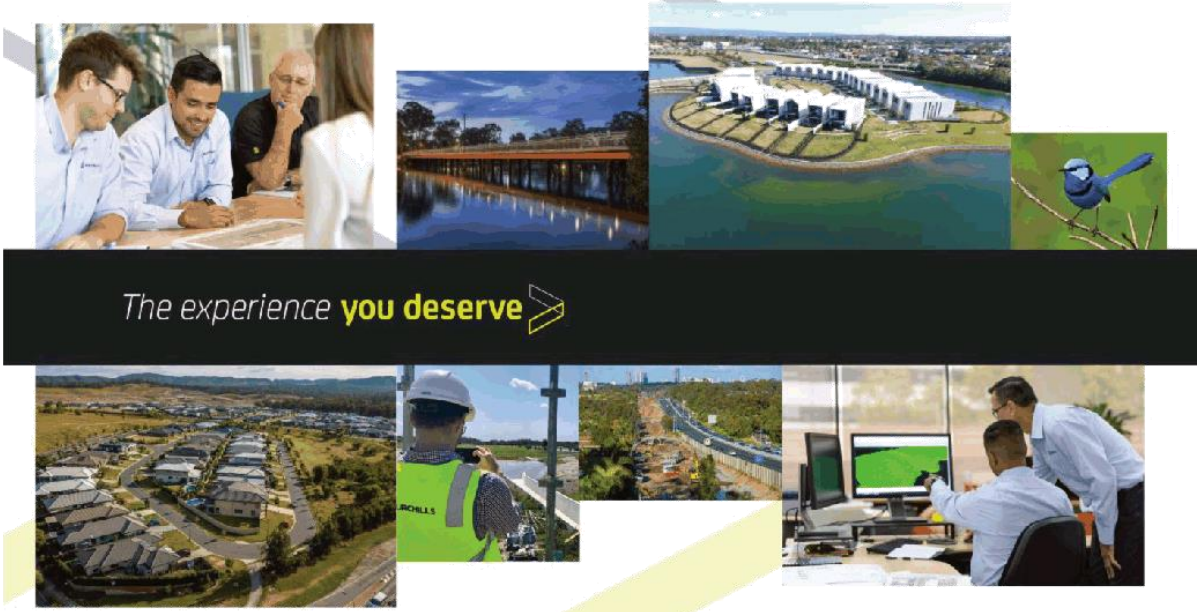
MOUNT MORGAN RAIL TRAIL FEASIBILITY STUDY – CONSULTATION OUTCOMES

Community Consultation Report

Meeting Date: 15 March 2022

Attachment No: 1

BURCHILLS
ENGINEERING SOLUTIONS



Mount Morgan Rail Trail Feasibility Study

Community Consultation Report

Client: Rockhampton Regional Council

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The experience **you deserve**

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1. Introduction

The objective of this report is to collate and summarise the outcomes of the recently completed consultation (August 2021) with key stakeholders and the community in relation to the Mount Morgan Rail Trail currently being investigated by Rockhampton Regional Council (RRC). This consultation is being completed as part of a Feasibility Study being completed by Burchills Engineering Solutions for the Mount Morgan Rail Trail on behalf of RRC.

Gauging the level of public, stakeholder and business support is important. It is also important to elicit any issues that people in the community may have about the project. Community consultation is extremely important in building the community understanding and support vital in delivering such a project.

Clearly, a project such as the Mt Morgan Rail Trail demands extensive consideration of the desires of the 'community' surrounding the corridor, but exactly what is this community, and just whose desires should be considered.

The community is not just the local community, that is, people living and working alongside the railway corridor, but also all of those people living in the wider region encompassing residents of Rockhampton Regional Council. The needs and interests of visitors to the region also need to be considered as these numbers may be significant.

Despite the obvious advantages of a rail trail conversion, there are often opponents to the idea of turning the railway corridor into a multi-use trail. Neighbouring and nearby landowners, some of whom have farmed the publicly owned land for long periods, may be disturbed about the prospect of change to a situation that they have grown accustomed to. It is important to consider the issues that may be raised by adjoining landowners and investigate what options are available for resolving some of these concerns. Adjacent landowners are traditionally – and understandably – apprehensive about trails close to their properties. It is important that these concerns are seriously addressed before any trail conversion takes place. Many landowners resent having things imposed on them or feeling as if they have no say in what is happening around them. Many landowners are resistant to change of any sort, let alone one they perceive will have detrimental impacts on their lifestyle as well as on their farming operations. It needs to be appreciated that opposition will never completely cease – some people will never be convinced, despite a plethora of testimonials (indicating nothing but positive results from the trail) from people in very similar situations.

Conversely, adjacent landowners who understand and support the reasons behind a trail, and who see that the trail is going to be well organised and efficiently managed, will prove to be extremely valuable partners in years to come. Indeed, some of them will take advantage of business opportunities offered by the rail trail project. Some opponents become avid supporters – in the case of the recently-opened Tumbarumba Rosewood Rail Trail in southern NSW, one of the most outspoken adjoining landholders is regularly seen enjoying the rail trail now it is open.

2. Community Consultation Events

Three Open Houses were arranged to discuss the proposed rail trail project with members of the community.

These sessions were held at three (3) shopping centre locations:

- Wednesday 25 August at Stocklands Rockhampton (9am – 12 pm);
- Wednesday 25 August at Gracemere Shopping World (1pm – 4 pm); and
- Thursday 26 August at Mt Morgan IGA (8 am – 12 pm).

Letters were sent from Rockhampton Regional Council to all adjoining landholders notifying them of the project and the Open Houses.

The Open Houses (or 'drop in' sessions) were very "visual" – they included 3 consultation boards highlighting key features of the rail trail (over 3 sections), and a more general consultation board covering information on some facts about rail trails, what makes a trail feasible, and potential user groups, as well as photographs of a number of elements of rail trails from other operating rail trails across Australia and New Zealand. The Open Houses were also designed to show (and discuss) solutions for perceived problems, drawing on successful rail trails elsewhere in Australia and New Zealand. These images helped to explain what a rail trail is, what it may look like, the potential impact on adjoining farms, and the solutions to commonly held issues (Refer Appendix A for the Consultation Boards shown at the consultation events).

There were a number of conversations between Open House attendees and the consultants. The conversations were with both supporters and opponents of the rail trail proposal. Issues and opportunities raised were noted. The responses from each of the shopping centre sessions were as follows:

- Rockhampton. 11 people visited the display. 1 was very supportive, while 9 were supportive or non-committal seeking information. 1 was not supportive.
- Gracemere. 36 people visited the display. 6 were very supportive while 30 were supportive or non-committal seeking information.
- Mt Morgan. 18 people visited the display. 8 were very supportive while 8 were supportive or non-committal seeking information. 2 were not supportive.

A number of meetings with interested parties, stakeholders and adjoining landholders were also held over the three day period from 24 to 26 August. The consultants met with the following advocacy groups in favour of the project in Rockhampton, Gracemere and Mt Morgan:

- Cycle4Life;
- 10,000 Steps;
- Department of Tourism, Sport and Racing;
- Rockhampton Mountain Bike Club; and

- Promote Mt Morgan;

The consultants met with adjoining landholders - individually in Gracemere and as a group at Mt Morgan (it is not appropriate to include individual names). 7 landholders attended the group session in Mt Morgan along with Cr Cherie Rutherford.

Rockhampton Regional Council also provided the opportunity for people to have their say via Council's website through the Engage Rockhampton Region portal. Material was on display from the 16th of August to the 3rd of September providing people 3 weeks to make comment on the proposal primarily using the questionnaire. The material on the RRC website included the 4 consultation boards discussed above as well as an A4 map showing the entire route. 101 responses were received. (Refer Appendix B for the Questionnaire and Appendix C showing the Responses from the online Questionnaire).

The questionnaire was also provided at the Open Houses and at the meetings, and was mailed directly to adjacent landholders when consultation formally opened to allow people to provide written commentary. 12 responses on the actual questionnaire sheets were returned to Rockhampton Regional Council - the majority of respondents provided responses through the Engage Rockhampton Portal. Rockhampton Regional Council also received several written submissions as a result of meeting adjacent landholders in Mt Morgan.

Details of the consultation were posted on Rockhampton Regional Council's Facebook page which generated good discussion, a high engagement rate and 350 positive interactions.

3. Community Consultation Outcomes

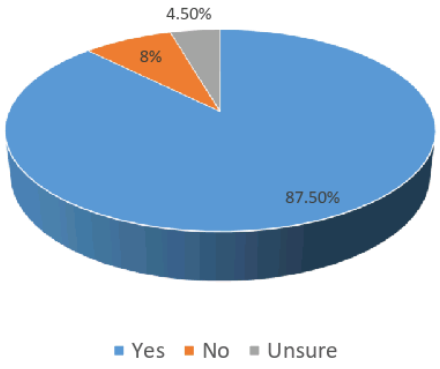
3.1 Questionnaire Results

There were 113 formal responses to the questionnaire. There were also written submissions from landholders tabled at the various meetings with them. Comments made during the Open Houses and meetings were also noted.

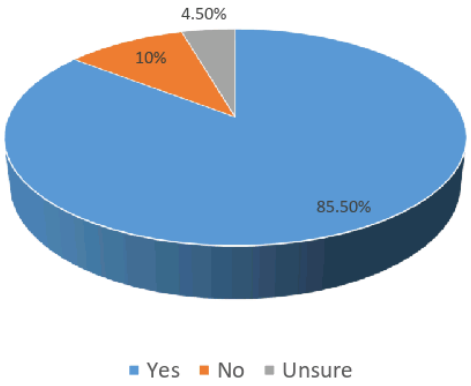
Online responses through the Engage portal mostly provided positive responses while the written submissions generally raised issues of concern.

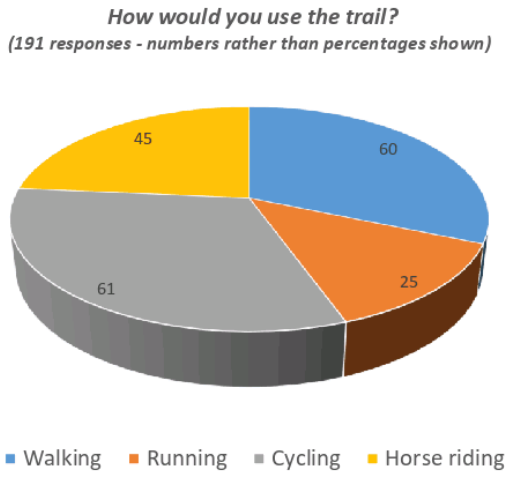
Questions included in the questionnaire and the responses are detailed below.

Would you like to see a multi-use rail trail established between Mt Morgan and Gracemere? (112 responses)

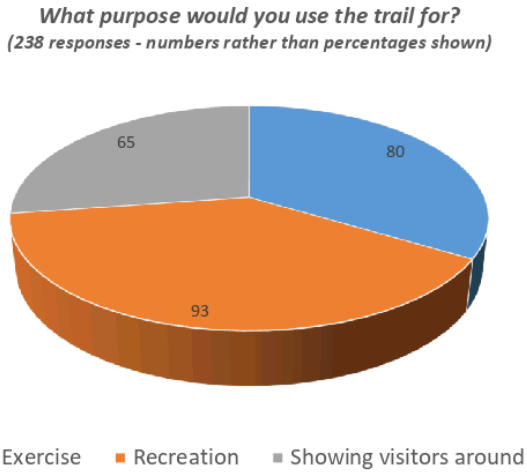


Will you use the trail if it is built? (110 responses)





(Respondents clearly indicated they would use the trail by more than one form of recreation).



(Respondents indicated they would use the trail for more than one purpose).

Four qualitative questions were included:

Do you see any issues that should be considered in the planning of this trail?

This question elicited a variety of responses, mostly singular in nature i.e. one person responded. Responses that occurred more than once covered:

- Landholder engagement and concerns – two respondees suggested consultation and engagement was needed with adjoining landholders, one respondee raised a specific issue with a specific property and one respondee suggested consultation with traditional owners was needed. As noting above, meetings were held with individual landholders as part of the consultation process.
- Four respondees suggested the need to consider the "bigger picture" and suggested working out how to best connect this proposed rail trail into Rockhampton and the coast, linking with the Pineapple Rail Trail at Yeppoon and the Mt Archer mountain bike area. The creation of a Reef to the Mountains" bike experience was advanced.
- Several respondees made suggestions about getting cafes/coffee vans both on to the route and at the trailheads to service people.
- There were in the order of 12 negative comments on a range of issues such as litter, maintenance, arson, interference with landholders practices, trespass and privacy. These are discussed in detail below.
- Two respondees advocated for the return of train services – either normal or tourist.
- Three respondees raised concerns with preventing motor bike and 4 wheel drive access (noting that the trail is designed for non-motorised uses only)
- Most respondees to this question suggested a range of improvements to the trail.

If the trail were to proceed, do you have any suggestions for facilities or embellishments you would like to see for example seats, shelters (respondees were also invited to make suggestions on locations for such embellishments by pinning their suggestions on the trail map – an option only open to online respondees).

There were a large number of suggestions for facilities and embellishments for the trail. Some such as ensuring safe road crossings and installation of directional and management signage are standard recommendations. Table 3.1 is an amalgamation of the most popular suggestions for embellishments (noting that some facilities have been grouped together).

Table 3.1 Most popular facilities and embellishments

Facility/embellishment	Responses
Picnic stops/seats/rest areas/shaded areas	54
Water stations (general)	33
Interpretation signs	25
Toilets (on-trail and/or at trailheads)	22
Lookouts	6
Parking facilities (general) *It is worth noting that the proposal is only to provide parking at developed trailheads to allow people to access the trail. It would be on publicly owned land; no private land would be acquired for such purposes.*	5

Camping (on trail or nearby) *It is worth noting that camping was also raised as a concern by adjoining landholders who were opposed to the provision of camping facilities on the trail.*	3
Bike racks	3
Horse facilities: a number of respondees suggested a range of facilities and design issues for horses	
Providing water for horses	12
Providing hitching rails or yards	11
Float parking	5
Ensuring surface is suitable	5
Ensuring gates are suitable	3

If the trail were to proceed, do you have any suggestions for interpretive signage including suggested locations (respondees were also invited to make suggestions on locations for such embellishments by pinning their suggestions on the trail map – an option only open to online respondees).

Respondees were very supportive of interpretive signage on the trail (this included the 25 responses included as an answer to question on embellishments above). A number of suggestions were made for subjects:

- Indigenous places/connection to country/history – respondees suggested consultation with local indigenous groups for these signs;
- Native flora and fauna;
- European settlement history of the region and the towns and villages;
- Geology;
- Railway history specifically – using old photos and stories of former railway employees who may be around the region;
- Trail profile;
- Points of interest in Mt Morgan; and
- The story of gold discovery and the people involved.

Do you have any general comments?

A number of very specific comments were made under this heading. Some 66 responses were made to this question (out of 113 returned questionnaires). The following is a summary of main comments

- 39 were very supportive of the proposal – that was their main comment.
- 6 raised design issues suggesting embellishments.
- 3 requested consideration of recreation opportunities for motorised recreation – 4WDs and motor bikes.
- 6 raised issues associated with trail management as part of an objection to the proposal.

The questionnaire provides one basis for determining community attitudes and in this, some 87.5% of respondees were in favour. Conversations at the Open Houses was generally in favour of the proposal though no formal records were kept so a number cannot be put on this.

3.2 Stakeholder Meetings

As noted above, a number of meetings with advocacy groups were held. These groups were very supportive of the project and their comments centred around the following key issues:

- Benefits and business opportunities presented by a rail trail such as walking and cycling tour groups, bike rentals, and passenger/bike pick up and drop off ("bike buses" or similar);
- Connections into Rockhampton from Gracemere were discussed. This also included the potential to expand the network connecting to Rockhampton and beyond (as far as the Pineapple Rail Trail);
- One suggestion was bundling up a three day cycling "tour" – the rail trail, the mountain bike riding at Mt Morgan and similar opportunities at Mt Archer;
- Non-quantifiable benefits should also be considered rather than just economic opportunities. This included opportunities for volunteers and school-based activities;
- The rail trail will provide a facility for safe off-road riding. This provision will have a significant positive impact on existing and potential cyclists.
- E-bikes were seen as a positive opportunity for the proposed rail trail;
- Trail design to enable disabled access (to comply with relevant provisions of the *Disability Discrimination Act*) was raised as a possible outcome. Some attendees noted that disabled access might be a design measure worth pursuing particularly in some of the highly interesting locations. This was also raised at the Open Houses and in meetings with adjoining landholders; and
- Discussions about various existing attractions in Mt Morgan and how best to promote these as part of a rail trail package. Local groups have the knowledge about all these attractions.

3.3 Landholder Meetings

As noted above, meetings with adjoining landholders were held (a total of 8 landholders were met with across Gracemere and Mt Morgan). The landholders generally appeared to be opposed to the trail proposal but were prepared to listen to possible solutions drawn from other rail trails in Australia. In addition, 5 adjoining landholders provided responses which opposed the project via the Council's communications portal. These issues were also raised in some questionnaire returns. Many of these issues/concerns are what might be termed generic concerns – they have been raised in association with the many rail trails proposals across Australia. In many cases, satisfactory solutions have been found. It is likely that there are a number of other specific issues and concerns adjoining landholders in particular have that were not raised.

Comments were around a number of key elements within three major headings:

- Farm management and disruption to farming practices;
- Non-farm management issues. These are generally concerns around safety, security, trespass, liability and a range of related issues; and
- Trail management. These are generally concerns around maintenance, and the behaviour of trail users in regard to littering, toileting and other issues.

Table 3.2 presents a range of problems generally raised (where these were raised in the Open Houses and questionnaire returns, they are identified) and some potential generic solutions. The table is provided as guidance; it does not substitute for detailed discussions with adjoining

landholders over problems and specific tailored solutions – this should be part of the next phase of work (preparation of a detailed development plan) if the project proceeds. The table also includes issues not raised at the community events or via submissions - they may be raised as issues in the future if the trail proceeds.

This is not to say that the concerns raised by landowners in this case are not worthy of attention. Many of these concerns are legitimate and warrant careful consideration. This is not then so much a case of people raising unfounded issues – rather, it is a case of people raising issues that need to be resolved.

In addition to this table of 'issues' and 'solutions', the Murray Local Land Service (in NSW) prepared a *Strategic Risk Assessment – Biosecurity Risk Associated with Rail Trails for the 21km Tumbarumba Rosewood Rail Trail* (in 2017). The key biosecurity elements were also included in the *Biosecurity Risk Assessment for the Proposed Tweed Section of the Northern Rivers Rail Trail* prepared in 2019 by the North Coast Local Land Services. This assessment for the Northern Rivers Rail Trail report is attached as Appendix D.

Whilst it has been prepared for a NSW rail trail, many of the issues and solutions are relevant to Queensland.

Table 3.2 Landowner Concerns and Solutions

Impact / Issue / Problem	Solutions Successfully Used Elsewhere / Comments from Experience Elsewhere
Impacts on adjoining landowners' lifestyles	
Crime - Trespassing, vandalism and theft. Landholders often express a range of concerns in regard to the issue of trespassing on to farmland, especially where the railway corridor is remote from farm buildings and public roads. *These issues were raised in 6 submissions, at Open Houses and in individual meetings with landholders. Unfortunately, in at least 2 instances discussed, there is currently a major problem with illegal activity of this type. If the rail trail is not developed, the problems will not go away. A rail trail may help improve the situation with passive policing and easier enforcement.*	**Comments** *Crime* ○ Numerous studies have concluded rail trails do not generate crime. Research and anecdotal evidence suggest conversion of rail trails tends to reduce crime by cleaning up the landscape and attracting people who use the trail for legitimate reasons such as recreation and transport. ○ There have been no reports of trespassing, theft or vandalism on the Murray to the Mountains Rail Trail (Victoria) since the establishment of the trail. Similarly, the Collie to Darkan Rail Trail (Western Australia) has had no incidents of crime. ○ The Clare Valley (South Australia) Riesling Trail has had 2 incidents along the trail in over 25 years of operation. One of these, a burglary, would have occurred regardless of whether the trail existed at the rear of the property. The other, an incident involving an unrestrained dog attacking stock in an adjoining paddock, is one that can be avoided by trail users following trail rules. ○ The Linville-Blackbutt Rail Trail (part of the Brisbane Valley Rail Trail in South East Queensland) had 2 incidents with trail bike access in over 10 years, but these were easily dealt with by the local police. ○ The Rails to Trails Conservancy work in the USA includes dozens of testimonials from law enforcement officers in a number of jurisdictions confirming that the expected/perceived crimes simply do not occur. **Possible solutions** *Crime prevention* ○ Design solutions to minimise theft include installation of security (and additional) fencing and planting. ○ Trail design can eliminate overgrown vegetation and tall shrubs that minimises hiding places and creates long sight lines.

	○ Security lighting at trail heads and parking areas adds security. ○ Emergency vehicle access helps increase user security. ○ Keeping trail corridors clean and well-maintained increases sense of community ownership and 'passive surveillance' reducing minor crime such as litter, graffiti and vandalism. ○ Plantings of tree-lined corridors along parts deemed 'vulnerable' by adjoining landowners could also provide a way of reminding trail users to stay on the trail – these provide a form of visual fence. ○ Many trails have a signposted Code of Conduct as a means of reinforcing what is expected of trail users and highlighting inappropriate behaviour. ○ Prohibiting motor vehicle use (by regulation and design) reduces property crime. Locked management access gates are a proven method of restricting access on to a trail. The Kilkivan Kingaroy Rail Trail reports no issues with motorbike use after a short time (there was some illegal use initially). ○ Volunteer or professional trail patrols ranging from informal monthly clean-ups and maintenance crews to daily patrols. ○ The trail construction would include the provision of appropriate signage and barriers. Signage (and appropriate barriers) would allow enforcement of trespassing rules as well as acting as a physical barrier. ○ Security cameras could be installed – this is an expensive option but has been used on the Kilkivan Kingaroy Rail Trail (Qld).
Loss of privacy for adjoining landowners Often residences have been constructed in close proximity to the railway corridor. Landowners living near to or alongside the proposed rail trail anticipate that noise and reduction of privacy will occur. *This issue was raised in the Open Houses and meetings with adjoining landholders.*	**Possible solutions** ○ Some effective design solutions are possible and have been used to good effect on other rail trail projects. Fencing and security screening are the obvious methods. ○ Re-routing the trail off the formation away from affected residences onto an adjacent road reserve or elsewhere in the rail corridor. ○ Substantial additional vegetation planting to provide a visual barrier between the trail and the residence (while minimising 'hiding' places).

	○ Installation of screen fencing to obscure views of houses from the trail.
Land value devaluation. *This was raised in meetings with landholders.*	**Comment** ○ What empirical evidence exists comes from the USA *(American Trails website)*. The evidence is that rail trails positively add value to properties along their route. Research and anecdotal evidence suggest conversion of rail trails tends to either have a positive impact or a neutral impact on land values. It is positive where land use is changing to more intensive uses (such as from rural production to rural living/rural residential). Single family residential property values along the Little Miami Scenic Trail (Ohio) were positively impacted by proximity to the trail *(Karadeniz 2008)*. Properties along the Minuteman Bikeway and Nashua River Rail Trail (Massachusetts) sell for a higher proportion of the asking price and in about half the time that it took for houses in the general inventory *(Della Penna)*. Properties near, but not immediately adjacent to the Burke Gilman Trail (Seattle) sold for an average premium of 6% while those immediately next to the trail sold for a minimal premium (around 0.5%). Neutral-to-positive expectations for property values were held by 87% of adjacent neighbours to the Luce Line Trail (Minnesota). In the same 1988 study, 56% of farm neighbours held that same view, as did 61% of suburban neighbours *(American Trails website)*. ○ The consultants are not aware of any documented evidence to suggest property values decrease.
Stress and concerns about the impacts of trails on farmers lifestyles and incomes An element of uncertainty in both the short-term (until a decision is made) or the long-term (from rail trail operations). *The latter issue was raised by one adjoining landholder in a submission.*	**Comments** ○ Any change is difficult and causes stress for many people, especially where it is a change to the way people have operated their businesses and lifestyles for many years. ○ All public infrastructure projects create stress and concerns for those who will be negatively affected (or perceive they will be negatively affected). The experience in rail trail projects elsewhere is that the problems that adjoining landholders believe will occur do not occur. They are managed primarily by ongoing consultation and good design. **Possible solutions** ○ Staging of the project so that landholders and the responsible committee can see how sections work and what problems and issues arise and then react accordingly in subsequent stages is one possible way to minimise the concerns of landholders (given that these concerns may be felt differently by different people in different parts of the corridor).

Impacts on farming practices	
Threat of fire Landowners are often concerned about the possibility of increased fire risk along a rail trail with fires spreading unimpeded along the corridor and consider that additional fire protection will be required if the reserve is used for a rail trail. *This was raised in 2 submissions, in the Open Houses and in meetings with landholders. The latter reported current issues with arsonists – if the rail trail does not proceed, the problem will not go away.*	**Possible solutions** ○ Development of an effective fire management plan in close consultation with the local Rural Fire Service. ○ Areas of the trail deemed high fire risk can have more active management controls. ○ Trail closure during periods of fire bans – as occurs on other tracks in high fire areas. The Hume and Hovell Track (in southern NSW) is one example of the use of specific closures. Trails in fire-prone areas can be closed for the duration of the high fire risk season providing this is not a significant length of time. ○ Smoking can be prohibited on the trail. Councils can declare the pubic area a smoke-free zone, just as it can with other public areas. (Note: trail users are usually people interested in healthy pursuits and are therefore predominantly non-smokers). ○ Development of the rail trail has a significant advantage in that it provides easy access for emergency vehicles and other vehicles (such as electricity maintenance vehicles) to locations that may otherwise be difficult to access. This may help address an existing issue with arsonists identified from submissions.
Weed management Who will remove weeds and who will keep them under control is an issue commonly raised. *This was raised in a submission and in meetings with landholders.*	**Possible solutions** ○ Existing weed infestations can be cleaned up during trail construction, thus requiring minimal ongoing weed removal/spraying. ○ Some landholders may currently manage the weeds within the corridor as they are a "threat" to sustainable farming – this is a positive action and their ongoing involvement with weed control should be negotiated if the trail proceeds. Fountain grass was identified as the predominant weed of concern. ○ Preparation of a regularly reviewed Trail Management Plan covering all maintenance issues prepared in advance of construction. ○ Focus of maintenance – erosion, vegetation regrowth, weed control and signage damage. ○ Division of maintenance into regular inspections and simple repairs and once/twice yearly programs undertaking larger jobs such as vegetation control.

	○ On other rail trail proposals, trialing native grass plantings as part of a weed removal program has been suggested. This potentially reduces weed growth opportunities and potentially reduces slashing requirements as native grasses need slashing far less regularly. This may be an appropriate course to pursue if the trail proceeds.
Weed transfers Trail users bringing in weeds on boots and tyres is an issue commonly raised. *This was raised in a submission and in meetings with landholders.*	**Possible solutions** ○ Signage to indicate wheels and shoes must be clean and free of dirt and vegetable matter before entering the trail. Wash down areas for wheels and footwear at entrances to the trail (for example at road crossings) to encourage "come clean, go clean" can be constructed if noxious weed spread is a high risk. This has worked well in WA for example in controlling the spread of dieback along the Bibbulmun Track (a long distance walking track connecting Perth and Albany)
Interactions between nervous livestock and trail users with dogs Farmers whose properties adjoin the corridor are often concerned at unrestrained dogs being allowed along the proposed rail trail and causing difficulties for their livestock. *This was raised in 4 submissions and in meetings with landholders.*	**Comments** ○ It is well recognised that people walking dogs is a pastime with considerable physical and mental health benefits. On other rail trails, some sections of the trail (notably within the urban areas) permit this activity. **Possible solutions** ○ On other trails, dogs are usually either banned altogether, or trail users are required by regulation to keep their dogs on a lead at all times. The Trail Manager may ultimately decide to allow dogs (on leads) within the 'town' areas of the trail. ○ If the rail trail is declared 'dog free', Council's rangers could issue infringement notices and the offender can be fined.
Interactions between nervous livestock and trail users on horseback Farmers whose properties adjoin the corridor are often concerned at horses being allowed along the proposed rail trail, potentially bringing in weeds via faecal matter and a range of bacterial diseases and causing difficulties for their livestock. *This was raised in 4 submissions and in meetings with landholders*	**Comments** ○ Rail trails around Australia vary on whether they permit horses. Of the trails listed as open on the Rail Trails Australia website, some 75% do not allow horses (for a range of reasons). ○ The debate about whether horses carry weeds and disease in faecal matter has been around for a number of years and is particularly topical in discussions about whether horses are allowed into national parks. There appears to be no agreed consensus (though some national parks managers are permitting horses).

	Possible solutions ○ *No recommendations as to whether horses should be allowed on the trail have been made. The impact on feasibility will be relatively low and it is more properly a decision for the community to make taking into accounts needs and concerns of all relevant groups. There was strong support through the questionnaire process to permit horses on the trail.* ○ If horses are to be allowed, a separate slashed bridle trail should be developed within the corridor.
Interactions between trail users and stock – interference in farming practices. Some landholders were concerned about interference in farm practices by trail users who are not familiar with farming practices e.g. separation of calves and mothers or "spooking" of cattle by passing cyclists, particularly "new" cattle who are not used to people. *This was raised in discussions with adjoining landholders. One specific issue was moving stock along the corridor between paddocks.*	**Comments** ○ This has not been an issue in other rail trails running through grazing country that the consultants are aware of. ○ On many rail trails, signs at trailheads alert users to the fact that the trail passes through farming areas. **Possible solutions** ○ Prevent contact between animals and people by using signage to indicate appropriate behaviour and warn of trespass and biosecurity obligations and risks. Signage to advise of appropriate behaviour when on the trail e.g. not making excessive noise that may frighten stock along the trail. ○ Spring loaded gates and fences can be included across the corridor to allow movement of stock along the corridor from one paddock to another under an access agreement with the landholder. Signage can be used to let trail users know this activity is underway – it may be regular but infrequent.
General biosecurity There are concerns that the use of rail reserve by trail users will increase the risk of contamination of livestock. *This was raised in submissions and meetings with adjoining landholders*	○ Advice obtained by the proponents of the Great Victorian Rail Trail (in central Victoria) from the Department of Primary Industries (Victoria) was that a trail should not jeopardise the landowner's ability to sign the National Vendors Declaration. The rail trail would be considered in the same way as any public thoroughfare would be. Farmers have no control over who uses and what is done on adjoining roads so they have 'no knowledge' unless they are notified (the Declaration specifies that "to the best of a farmers knowledge and from information they have control over that their livestock comply with the conditions on the declaration"). Trail users are no different to road users in that people may trespass onto private land but most are unlikely to cause significant damage, unless there is some malicious intent. Again, the farmer has to have some knowledge of this before the declaration

	is declared false. Cars and particularly tractors moving at high speed would disperse more dirt from roads and tracks than collective effort of numerous bikes (in particular). ○ The NSW Government prepared guidelines for assessing rail trails *(Strategic Risk Assessment: Biosecurity Risks Associated with Rail Trails)* which included an assessment of the risk of trail users introducing exotic animal diseases as an unlikely risk with catastrophic consequences, giving it a high risk rating. The documents suggest that risk treatment options reduce likelihood and result in a low residual risk rating. The document identifies that current national border control and quarantine protocols are in place. Suggested solutions include providing bins which fully contain rubbish (or instructing people not to leave rubbish and why), provide information on the general biosecurity duty to which the general public must adhere, and using signage to prevent contact between people and animals. Information on the trail should also include biosecurity risks and responsibilities including warnings about food scraps, human waste, soil, seeds, organisms and people who have been outside Australia in the last 7 days. The assessment also notes that trespass laws apply. ○ The NSW Government document assesses the risk of trail users introducing non-endemic animal diseases as an unlikely risk with moderate consequences, giving it a medium risk rating. The documents suggest that risk treatment options reduce likelihood and result in a low residual risk rating. Solutions are similar to the risk of introducing exotic animal diseases and also includes signage to indicate wheels and shoes must be clean and free of dirt and vegetable matter before entering the trail. (Such facilities could be included at trailheads). Trailheads could also include wash down areas for bikes, prams, and footwear in high-risk areas. ○ The NSW Government document assesses the risk of trail users spreading established diseases between farms as an unlikely risk with moderate consequences, giving it a medium risk rating. The documents suggest that risk treatment options reduce likelihood and result in a low residual risk rating. Suggested solutions are as above. ○ The NSW Government document also recommends that the trail proponent include in their emergency response plan a provision to close the trail during a disease emergency. ○ Boundary fencing is also critical to biosecurity and is discussed below.

Chemical applications	Comments
Farmers are sometimes concerned about the impacts on users of on-ground spraying with associated spray drift (and their possible exposure to liability).	○ Farmers have the same obligations as any other chemical user in preventing drift and potentially causing damage to adjacent land. ○ For other trails, this has not been an issue. On the Lilydale to Warburton Rail Trail, grapes and flower growers are in very close proximity to the trail – they are in fact tenants renting rail trail land. Spray drift has not been an issue of concern. The same applies to the Riesling Trail (again, most adjoining landowners are grape growers). **Possible solutions** ○ A number of solutions work well in areas where there are less frequent and 'predictable' spraying patterns. ○ Council spraying protocols are followed and these include reducing spray drift, use of low risk chemicals and practices and informing adjacent landholders of planned spray events ○ Landholders follow 'good practice' principles for chemical use including signage where appropriate ○ It is anticipated that heavy use of the trail in the 'rural sections' of a trail would primarily be confined to weekends. Spraying 'rosters' agreed to between farmers and a management body could manage spraying and confine it, as much as possible, to weekdays. It is acknowledged that this is not always possible due to nature of ownership, on-site presence of farm owner/manager, and climatic factors; it is one solution. ○ Notifications on trail literature (permanent and temporary – such as web sites) can spell out issues about spraying and indicate to users what they are likely to encounter at any time on the trail. ○ Whether chemicals used in spraying are of such toxicity that incidental exposure for short periods on a one-off or irregular basis (the likelihood of exposure of trail users) will cause any long-term health effects is unknown.

Fencing of the corridor Farmers often believe that the rail trail project will result in them needing to pay for additional fencing. Farmers often believe fencing will cause problems with farming practices and not fencing will create havoc with livestock / trail user interactions & liability. *This was raised in 1 submission and in meetings with adjoining landholders.*	**Possible solutions** ○ Fencing may be appropriate along railway corridor boundaries in some places and not in other places – this depends on a number of factors. Consultation with each adjoining landowner will be required. ○ The cost of fencing, where required, should be a project cost. Adjoining landowners may wish to receive remuneration should they wish to erect the fencing to their standards (rather than contractors). ○ Vegetation lines may also act as "visual" fences if appropriate. ○ Replacement of fencing over time (as it wears out or gets damaged) would need to be part of the original agreement with adjoining landowners. Landowners in other projects have stated that they would not want to replace a fence that fell down (over time) as they would not originally want the fence and would not need the fence if the rail trail did not proceed.
Splitting of farm paddocks Splitting properties and the resultant impact on farm practices (particularly getting stock to watering points). *This was raised in meetings with adjoining landholders identifying the need for turn-around points for machinery and the need to move stock along the corridor between paddocks.*	**Comments** ○ There will be sections that 'dissect' properties or are used by the adjoining landholder. **Possible solutions** ○ There are several options for dealing with "paddock splitting". They involve providing fenced and gated crossing points for stock and machinery at appropriate locations as determined by the landholder and trail manager. ○ Access licences can be granted by the trail manager with use conditions set to minimise damage to the trail, to manage interactions with trail users, and to maintain farm practices and maintain/develop access. The locations for these should be noted in the trail development planning process as part of field work should the trail proceed. ○ Spring loaded gates and fences can be included across the corridor to allow movement of stock along the corridor from one paddock to another under an access agreement with the landholder. Signage can be used to let trail users know this activity is underway – it may be regular but infrequent.

Construction impacts on livestock Timing of construction may have impacts on landholders use of certain paddocks for livestock at certain times of the livestock management cycle.	**Possible solution** ○ Should the trail proceed, construction timing should be worked out and negotiated between the Project Manager and any relevant landholders to minimise disruption to livestock management.
Contaminated land	**Comments** ○ In 1997, a study was undertaken for the SA Department of Recreation and Sport a health risk assessment of a rail corridor that was proposed for a rail trail. The work was undertaken to address risks to future trail users and construction workers and was carried out in accordance with the approach suggested in relevant guidelines at the time (*Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites*). Notable conclusions were that the indicative level of risk posed to future trail users by soil contamination along the former single track is anticipated to be negligible, that a precautionary approach was suggested for trail construction at former railway sidings due to a potential higher risk, arsenic was unlikely to pose a risk of severe effect from a single exposure to the highest level of contamination anticipated on the site, and construction activities were also unlikely to pose an occupational risk.
Impacts of trail users	
Management of litter and toilet waste *This was raised in 2 submissions, in the Open Houses and in meetings with landholders.*	**Comment** ○ Some landowners whose properties adjoin a former railway corridor expect high levels of litter. ○ It has not been a problem elsewhere. The Lilydale Warburton Rail Trail (Victoria) is kept spotless, with little or no visible signs of litter. The Gippsland Plains Rail Trail was involved with Clean Up Australia Day, but their involvement was curtailed because they effectively had nothing to do. There was no litter to clean up. The Clare Valley Riesling Trail (in SA) is also litter-free. **Possible solutions**

	○ Thoughtful placement of rubbish bins at trailheads on the trail. ○ Regular maintenance patrols by council staff or volunteers, or the trail manager. ○ While installation of composting toilets is one appropriate solution, these are costly and are generally recommended only where there are long stretches between towns. However, there was strong support for the provision of toilets through the questionnaire with 22 responses suggesting toilets were needed along the trail.
Farm safety Adjoining landholders can be concerned that farms are unsafe work places and people are being invited into such unsafe workplaces.	**Possible solutions** ○ Good design and appropriate information (as discussed above) will discourage people from going off the trail onto farm property and thus placing themselves in dangerous work environments or in close proximity to unpredictable livestock. ○ Particular attention to the trail design issues around sites where agricultural buildings are close to the rail trail (some of these solutions are discussed above in the section on crime prevention).
Trail Management issues	
Funding for construction A major concern for opponents to rail trails is "Who is going to pay for trail project?" How will it affect rates? *Some comments in the Open Houses and in written submissions and in meetings with adjoining landholders strongly suggested the money could be better spent on other projects notably supplying water to Mt Morgan.*	**Comment** ○ Many Federal and State Government funding programs are available for tourism/recreation projects such as trails. Rail trails in Queensland are funded by a specific State Government program – this money is not available for other projects. Numerous trails around Australia have been funded by major grants worth hundreds of thousands of dollars. ○ Major companies, such as mining companies, have contributed to trail projects. For example, BHP Billiton has contributed $200,000 towards the Camperdown-Timboon Rail Trail in Victoria. ○ Volunteers and other low cost resources, including low risk prison crews, can be brought into trail construction and maintenance projects. There were some suggestions within the questionnaire responses that this resource be utilised, noting that it had been used successfully on other trail projects on the region.

	○ Entire construction costs for trails are rarely borne by local government, therefore there is reduced impact on ratepayers for construction (even though ratepayers do benefit directly from trails, and indirectly by visitors spending in the community).
Liability – who is liable for the safety of users both on-trail and when they stray off-trail. *This was raised in meetings with adjoining landholders.*	**Comment** ○ In recent years public liability has become a major issue right across the community. Trails are not immune from concerns related to liability, or from the resulting issues. Indeed, liability – who is liable and who will pay – is often raised as a potential 'problem' with rail trail projects. **Possible solutions** ○ Primary project partners must take responsibility and ensure that their role is clear and unambiguous. ○ Management body takes liability responsibility along the full length of the trail regardless of ownership. Farmers do not carry any additional liability. ○ Effective signposting at trailheads and access points indicating trail regulations and trail use rules and user responsibilities. ○ In respect of farmers' general insurance, this has not been an issue in other rail trails. Fire management plans address the possible fire risk increase, while reports of theft of property have been virtually non-existent (as noted above). ○ Courts are increasingly ruling that people are responsible for their own actions, marking a different emphasis to that which occurred in the late 1990s/early 2000s when managing authorities were held responsible for inappropriate behaviour.
Unauthorised trail users There are often concerns over whether motor bikes would use the trail. *This was raised in 2 submissions, in the Open Houses and in meetings with landholders.*	**Comments** ○ Unauthorised access to the trail by users of cars, motor bikes, etc, is often stated as one the major concerns of adjoining landholders (it is also a concern of potential trail users).

Unfortunately, in one instance discussed, there is currently a major problem with illegal activity of this type. If the rail trail is not developed, the problems will not go away. A rail trail may help improve the situation with passive policing and easier enforcement.	**Possible solutions** ○ Prohibit motor vehicle and motor bike use through motor vehicle exclusion barriers and effective signage at each road crossing. Locked management access gates are a proven method of restricting access on to a trail. The Kilkivan Kingaroy Rail Trail reports no issues with motorbike use after a short time (there was some illegal use initially). ○ On the Lilydale Warburton Rail Trail, as with other rail trails in Victoria, a standard gate configuration has been designed for use at all road crossings and trailheads. The design allows unimpeded access by walkers, cyclists, people in wheelchairs, etc. The design is such that motorbikes cannot squeeze past the gate posts of the narrow maze. Access by authorised vehicles, such as management vehicles, adjoining landowners (where needed) and emergency vehicles is gained through an adjoining (locked) management gate. ○ Encourage reporting of vehicle/bike registration numbers of illegal users. Experience on the Murray to the Mountains Rail Trail was that motorbikes tended to use the same sections at the same time – enforcement was therefore relatively easy.
Ongoing maintenance costs Who is responsible, who will pay, what effect will it have on rates? *This was raised in 2 submissions, in the Open Houses and in meetings with landholders.*	**Comment** ○ There are often concerns about the capacity of Council to maintain the trail and how it is going to pay for the maintenance. Maintenance is an ongoing responsibility and necessary for a good trail and the costs do need to be met by an organisation (Council or other community groups) – whether it is in capital or human resources. **Possible solutions** ○ Preparation of a regularly reviewed Trail Management Plan covering all maintenance issues (including fencing) prepared in advance of construction is critical. The plan will provide a clear definition of who is responsible for what. ○ Proper design and construction will minimise ongoing maintenance costs. ○ Focus of maintenance – erosion, vegetation regrowth, weed control and signage damage. ○ A clear definition of who is responsible for what.

	○ Division of maintenance into regular inspections and simple repairs and once/twice yearly programs undertaking larger jobs such as signage repairs, culvert cleaning or vegetation control. ○ Hazard inspection program (to limit liability and to define maintenance activities). ○ Volunteers are one possibility to supplement the maintenance program; however, advice during stakeholder meetings was that one bike group in particular was already very busy with the maintenance it is doing on bike tracks in the region and cannot take on another project.
Responsibility for policing trail Adjoining landowners are often concerned about undesirable people using the trail and causing a nuisance.	**Comment** ○ Rail trails do not attract undesirable people. Adjoining landowners need not be concerned about the typical trail users as they do not cause trouble. They are using the trail for a relaxing and enjoyable outing in an attractive environment, free of motor vehicles. **Possible solutions** ○ Volunteer or professional trail patrols ranging from informal monthly clean-ups and maintenance crews to daily patrols. ○ Preparation of a regularly reviewed Trail Management Plan contains a clear definition of who is responsible for what. ○ Police and/or Council ranger patrols (including on bikes); or by trail manager on regular patrols.

(This table is informed by the consultants' own experiences and also draws upon two NSW Government documents on biosecurity risks associated with rail trails).

3.4 Other Matters Raised

Some other issues that were raised in the community consultation of particular note are:

- There were some concerns that privately owned land was going to be resumed. This is not the case and the proposal will run on publicly owned land – a combination of rail corridor and road reserve. With respect to road reserves, one adjoining landholder was strongly opposed to the use of road reserve as they had an access licence to use it. The road reserve is publicly owned and such licences are issued at the discretion of the Local Government and can be revoked at any time with appropriate notice.
- Use patterns were raised in in submissions, in the Open Houses and in meetings with landholders. There were suggestions that a trail would not be used in summer due to heat and there were questions about how this would affect useage. It is acknowledged that the trail would not be used as much in summer as in winter – the same situation applies to all recreation trails in Central Queensland. This fact also led to many suggesting the need for shade plantings and shade shelters along the trail (and the very necessary need for water facilities).
- Rock falls in cuttings was raised as an issue. Landholders familiar with the corridor indicated that some of the cuttings are likely to be unstable and rock fall may be an issue. At this stage, an allowance could be included in cost estimates for cutting assessment and rock stabilisation. It is not a reason to stop the trail from proceeding.
- There was one comment that advertising this as a rail trail was misleading given that some 40% of it was on road reserve. This is acknowledged. However other rail trails in Australia do deviate from the original rail corridor for various reasons and are still successful.
- The water pipeline to Mt Morgan was discussed at length during Open Houses. A linear corridor such as a rail trail does lend itself to a range of potential future uses – many of which are not excluded by the possibility of the corridor being converted into a recreation trail. This former railway corridor, like so many others around the world, is also ideally suited for the placement of utilities, such as wires, cables and pipes. Data, telephony and energy can and are all carried in pipes alongside or underneath rail trails. Running underneath sections of the Brisbane Valley Rail Trail are pipes for the SEQ Recycled Water Scheme. Provided the intended co-use does not disturb the natural, scenic and historical qualities of the trail, it can be permitted. In other jurisdictions, utilities are charged an annual fee for corridor use.
- There was some discussion in Open Houses and at meetings with landholders about starting the trail at Kabra rather than Gracemere and the benefits it might bring.
- Mobile phone reception was raised as an issue noting it was very limited along the corridor. This is the same situation for many recreation trails across Australia – it has not detracted from their use.
- The presence of a large number of venomous snakes in the region was noted by some adjoining landholders. This is the same situation for many recreation trails across Australia – it has not detracted from their use.

4. Community Consultation Summary and Recommendations

4.1 Consultation summary

It is reasonable to state, based on conversations with Open House attendees, returned questionnaires, and submissions that:

- The adjoining landholders who attended meetings, attended open houses and returned the questionnaire had concerns with the proposal and raised a number of issues. All appeared to be strongly opposed to the proposal; and
- Generally, those who attended open houses and/or returned the questionnaires who were not adjoining landholders were very supportive of the project and said they would use the trail if it were developed. Many of these could see a range of benefits to the region if the trail was developed.

4.2 Recommendations

A number of matters and issues raised through the consultation process need to be taken forward.

Design matters

A number of trail design issues were raised through the consultation process notably around dealing with landholder issues and trail infrastructure. These matters will be included within the feasibility report as part of this project. It is generally a matter of ensuring that the provision of such items is costed within the preliminary cost estimates as part of the feasibility analysis. The precise locations of trail infrastructure embellishments such as lookout platforms and water stations, trail management tools such as chicane gates at road crossings, and infrastructure to deal with landholder issues such as on-trail gates to allow relatively easy movement of livestock from one side of the trail to the other are matters to be taken up in the next stage of trail planning – the detailed trail development planning. This would proceed if Rockhampton Regional Council views the trail favourably and wishes to proceed further. Whilst the location of road crossings is fixed, locations of infrastructure to deal with farm issues depend on on-site discussions with landholders (see notes below). It is sufficient at this stage to ensure that a reasonable amount of funding is included within the trail costs estimates to provide for such infrastructure.

Rockfall

Rockfall in cuttings was raised as an issue. This is worth investigating further as part of the final feasibility study as it potentially poses a manageable risk. A more detailed investigation may be sufficient and it needs to inform the costing of the next phase and possible remediation work as part of the trail construction process if the trail proceeds.

Operation and Maintenance Plan

The project brief requires the preparation of a draft Operation and Maintenance plan highlighting how Council will operate and manage the rail trail corridor and asset. It is appropriate to address a number of issues raised in consultation such as weed management, fire management and the control of dogs within the parameters of such a Plan.

Landholder consultation

Should the trail proceed (in any form), detailed trail development planning is a critical phase of the project (beyond the scope of this project). As noted above, one of the central elements in this phase would be one-on-one consultation with adjoining landholders to determine, in a cooperative manner, solutions to their particular issues. It is time-consuming but absolutely necessary. It is infinitely better to be proceeding with their support (or at least the absence of opposition) than it is to ride 'rough-shod' over these concerns.

Seeking local ideas and advice always helps forge a stronger relationship. Listing concerns and working together to find resolutions is a far more productive approach than creating confrontation.

It is the experience of the consultancy team that landholders will take the time to discuss the potential trail and the problems they envisage. When issues are discussed at the actual site where the perceived problem is, discussion of possible solutions with the landholders often reveals that the problem can be minimised or completely avoided.

Involving landholders in the process, over a period of time, will help avoid feelings of alienation or mistrust. Acknowledgment of the gravity of each issue, and a 'work together' approach is likely to be a good starting point. As with all neighbour issues, involvement over time goes a long way to building trust.

Horse riding on the trail

The consultation process - not unexpectedly - provided two differing opinions on allowing horse riders to use the rail trail. As reported in Table 3.2, rail trails around Australia vary on whether they permit horses. Of the trails listed as open on the Rail Trails Australia website, some 75% do not allow horses (for a range of reasons).

The questionnaire results indicated that 45 responses (out of a total of 191 responses) to the questionnaire would use the trail for horse riding (the third most popular response behind cycling with 61 respondents and walking with 60 respondents). It represents a significant percentage of responses.

On the other side of the argument, farmers whose properties adjoin the corridor are often concerned at horses being allowed along the proposed rail trail, potentially bringing in weeds via faecal matter and a range of bacterial diseases and causing difficulties for their livestock. This opposition or concern was raised in 4 submissions and in meetings with landholders. The other issue that often comes up was the interaction between horses and livestock and horses on the trail and "farm horses". The latter issue was raised in at least one written submission.

Providing infrastructure for horses will add to the cost of the trail but not significantly. Slightly bigger parking areas may be needed, water troughs and hitching rails can be installed at trailheads and

along the trail, and a separate bridle path can be slashed where possible to avoid damage to the trail surface. Watercourse crossings do present some difficulties for horses depending on height and material used but there are relatively low cost options.

The debate about whether horses carry weeds and disease in faecal matter has been around for a number of years and is particularly topical in discussions about whether horses are allowed into national parks. There appears to be no agreed consensus (though some national parks managers are permitting horses). It is therefore not useful for Rockhampton Regional Council nor the consultants to carry out a risk assessment of allowing horses on the trail. As noted in Table 3.2, no recommendations as to whether horses should be allowed on the trail have been made. The impact on feasibility will be relatively low and it is more properly a decision for the community to make taking into accounts needs and concerns of all relevant groups.

Trail benefits

Participants in the consultation process (notably through the stakeholder meetings) raised a number of trail benefits and made a number of suggestions for potential business opportunities such as packaging 3 day bike riding packages. These will be articulated in the Feasibility Study as part of the consideration of the trail benefits.

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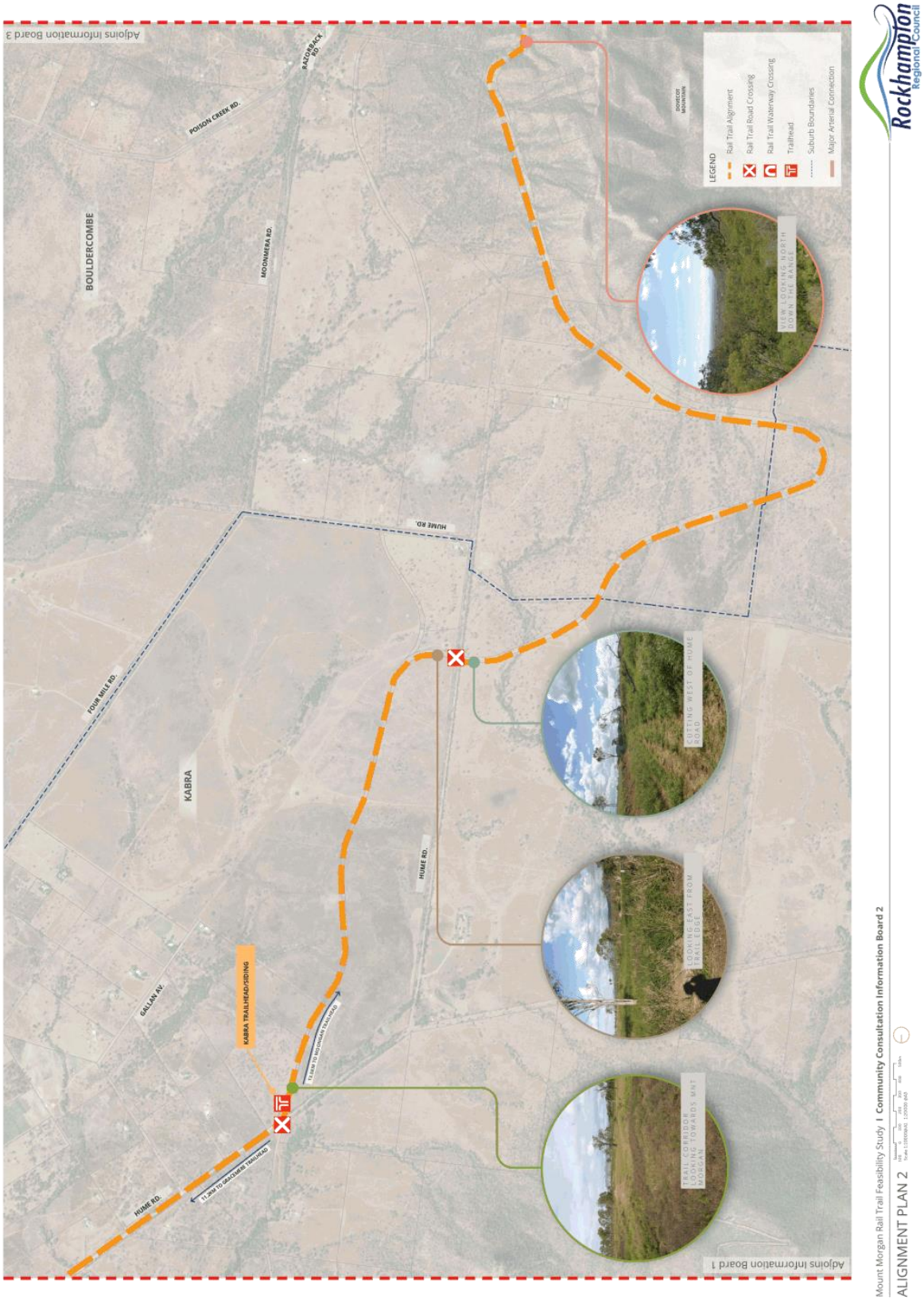
Appendix A – Consultation Boards

Mount Morgan Rail Trail Feasibility Study I **Community Consultation Information Board 1**

ALIGNMENT PLAN 1

Rockhampton Regional Council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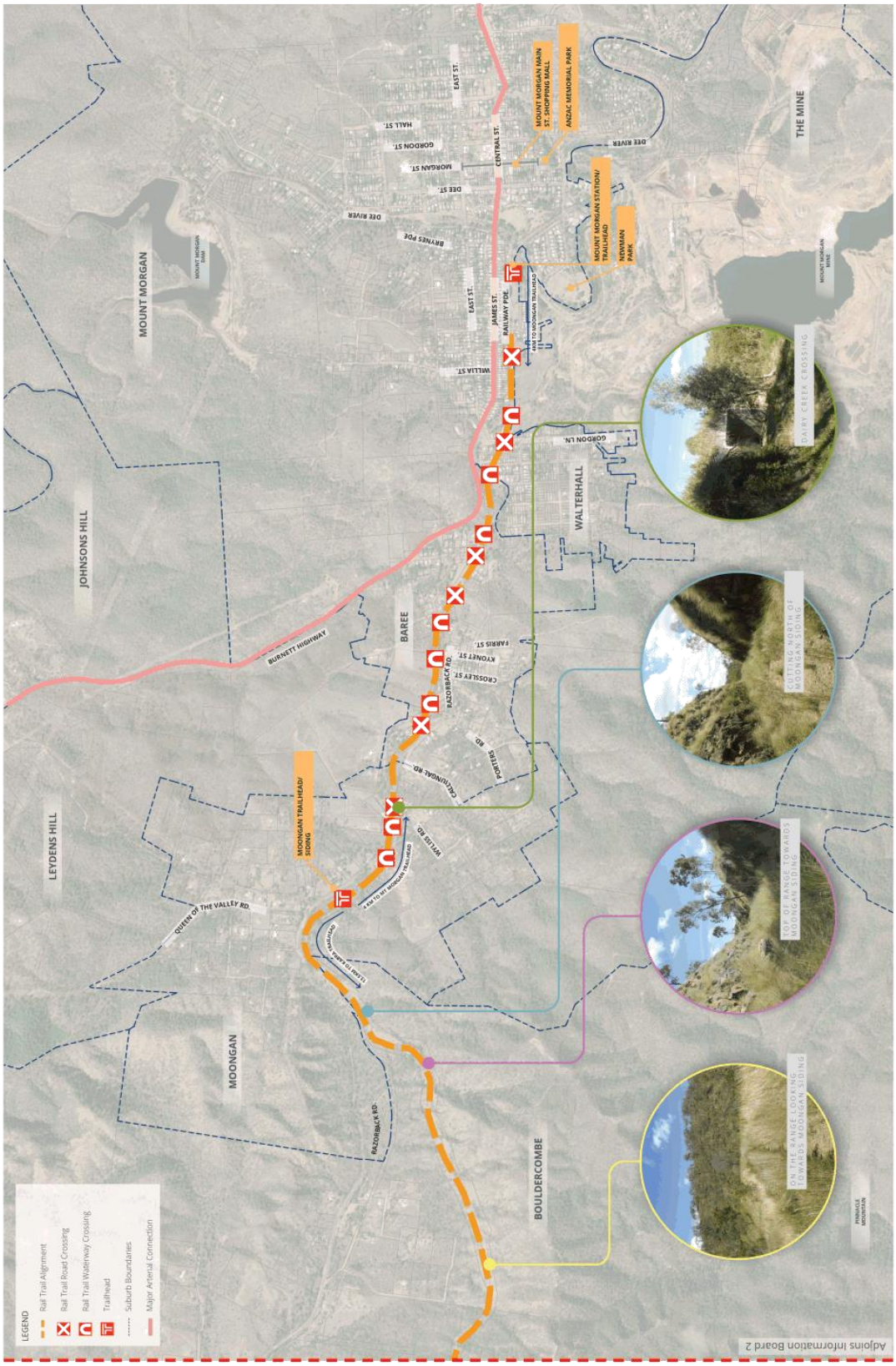
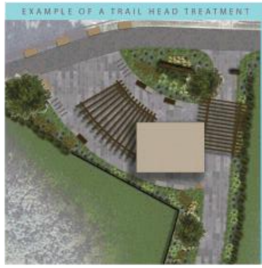
MOONMERA RD.
BOULDERCOMBE
HUME RD.
FOUR MILE RD.
KABRA
HUME RD.
GALLAN AV.
KABRA TRAILHEAD/SIDING
HUME RD.
LEGEND
Rail Trail Alignment
Rail Trail Road Crossing
Rail Trail Waterway Crossing
Trailhead
Suburb Boundaries
Major Arterial Connection
LOOKING NORTH DOWN THE RANGE
CUTTING WEST OF HUME ROAD
LOOKING EAST FROM TRAIL EDGE
TRAIL CORRIDOR LOOKING TOWARDS MT MORGAN
Adjoins Information Board 1
Rockhampton Regional Council
Mount Morgan Rail Trail Feasibility Study | Community Consultation Information Board 2
ALIGNMENT PLAN 2


Rockhampton Regional Council
Mount Morgan Rail Trail Feasibility Study | Community Consultation Information Board 3
ALIGNMENT PLAN 3
Adjoins Information Board 2
LEGEND
Rail Trail Alignment
Rail Trail Road Crossing
Rail Trail Waterway Crossing
Trailhead
Suburb Boundaries
Major Arterial Connection
MOUNT MORGAN
JOHNSONS HILL
LEYDENS HILL
MOONGAN
BOULDERCOMBE
BAREE
WALTERHALL
THE MINE
BURNETT HIGHWAY
QUEEN OF THE VALLEY RD
RAZORBACK RD
CENTRAL ST
EAST ST
JAMES ST
RAILWAY PDE
MOUNT MORGAN MAIN ST. SHOPPING MALL
ANZAC MEMORIAL PARK
MOUNT MORGAN STATION/ TRAILHEAD
MINIMAN PARK
MOONGAN TRAILHEAD/ SIDING
DAIRY CREEK CROSSING
CUTTING NORTH OF MOONGAN SIDING
UP GRANGE TOWARDS MOONGAN SIDING
ON THE RANGE LOOKING TOWARDS MOONGAN SIDING

EXAMPLE OF TYPICAL FINISHES AND TREATMENTS

ARTISTS IMPRESSION

EXAMPLE OF A TRAIL HEAD TREATMENT



Note:
This trail head treatment illustrates how these nodal points are further embellished from the remainder of the corridor to create an entry statement, a sense of arrival / entry to indicate a change in environment. This artist impression is not an example of what will be delivered as part of a project. Treatment typically relates to the context, with more rural Rail Trails having a more natural treatment, while urban Rail Trails reflecting the urban character with concrete finishes and high end treatments.

EXAMPLE OF TYPICAL TRAIL CROSS SECTIONS

RAIL TRAIL FACTS

- Rail trails are not new, USA have over 2,000 rail trails totalling over 20,000 miles (32,000 kilometres). First one developed in the 1960s.
- There are rail trails in the United Kingdom, Canada, New Zealand, Spain, France, Germany, numerous other European countries and other countries around the world.
- Australia already has 100 rail trails (30 in Victoria, 20 in WA, 20 in Tasmania, 15 in Queensland, 8 in SA, 5 in NSW and 2 in NT).
- First rail trail in Australia? .... Railway Reserves Heritage Trail in Mundaring, Western Australia. It was developed over 25 years ago.
- Rail trails are built along publicly owned disused railway corridors.
- Rail trails are for "non-motorised" users cyclists, walkers, runners, parents pushing prams, horse riders (sometimes), people in wheel-chairs, fun runs and triathlons.
- Rail trails offer safe, flat routes away from dangerous roads and provide access into rural areas for people of all abilities.
- They traverse a variety of urban and rural landscapes including farms and paddocks, vineyards, forests and wetlands.

WHO USES RAIL TRAILS

- Predominant user group is cyclists, ranging from elderly people, to baby boomers, young couples, family groups with children, teenagers and young children.
- Walkers and horse riders are also attracted to rail trails, but in far lesser numbers.
- Rail trails appeal to individuals, to couples, and to groups. A significant proportion of trail users on the Otago Central Rail Trail (South Island, New Zealand) are groups (sporting clubs, work groups, service clubs, social clubs, Over 50's clubs & organised tour groups).
- Some use rail trails for team-building, some use it for fitness training, others for a social club outing. Others cycle and walk a rail trail simply for the outstanding beauty and scenery that it provides.
- Users enjoy routes free from motor vehicles, routes that are away from the noise and smell of roads, and away from trucks and cars.
- All railway formations (through cuttings and along embankments) provide a gentle gradient and sweeping bends, suitable for all types of cyclists, walkers and horse riders.
- All rail trails offer safety for users compared with urban shared pathways which have driveways, light poles, blind corners and poor sightlines.
- Many users are attracted because of the railway heritage artefacts that remain (such as station buildings, bridges, signals and other signage, cuttings and embankments).

SURVEY OF RAIL TRAIL USERS

A 1999 survey of users of the Murray to the Mountains Rail Trail in NE Victoria (by Professor Sue Beeton of La Trobe University) revealed that:

- Of the 128 respondents, only 22 identified themselves as living close to the Rail Trail but were all travelling with visitors. Travel companions were evenly spread between travelling with a partner, family or friends, while only a small number of respondents (5%) travelled alone.
- The respondents were predominantly employed in professional and administrative positions (47% and 25% respectively) with 14% retired; however no respondents identified themselves as unemployed.
- Ages were varied, ranging from one year old to 79, with a slight majority of men (53%). The largest group was aged between 41 and 60 years old, however the high representation of riders in the 0-10 age groups illustrates the significance of mixed family groups and the suitability of the Rail Trail for all ages.
- Half of the respondents had past experience in using rail trails and identified the Murray to the Mountains Rail Trail as one they had visited previously. Over half (53%) considered themselves to be frequent riders, cycling more than once a week, but not daily. The next largest group (23%) were regular weekly riders, suggesting that while the trail is being used by people who cycle often, they are primarily recreational cyclists with a quarter not cycling regularly.

Mount Morgan Rail Trail Feasibility Study I **Community Consultation Information Board 4**

EXEMPLAR IMAGERY

Rockhampton Regional Council

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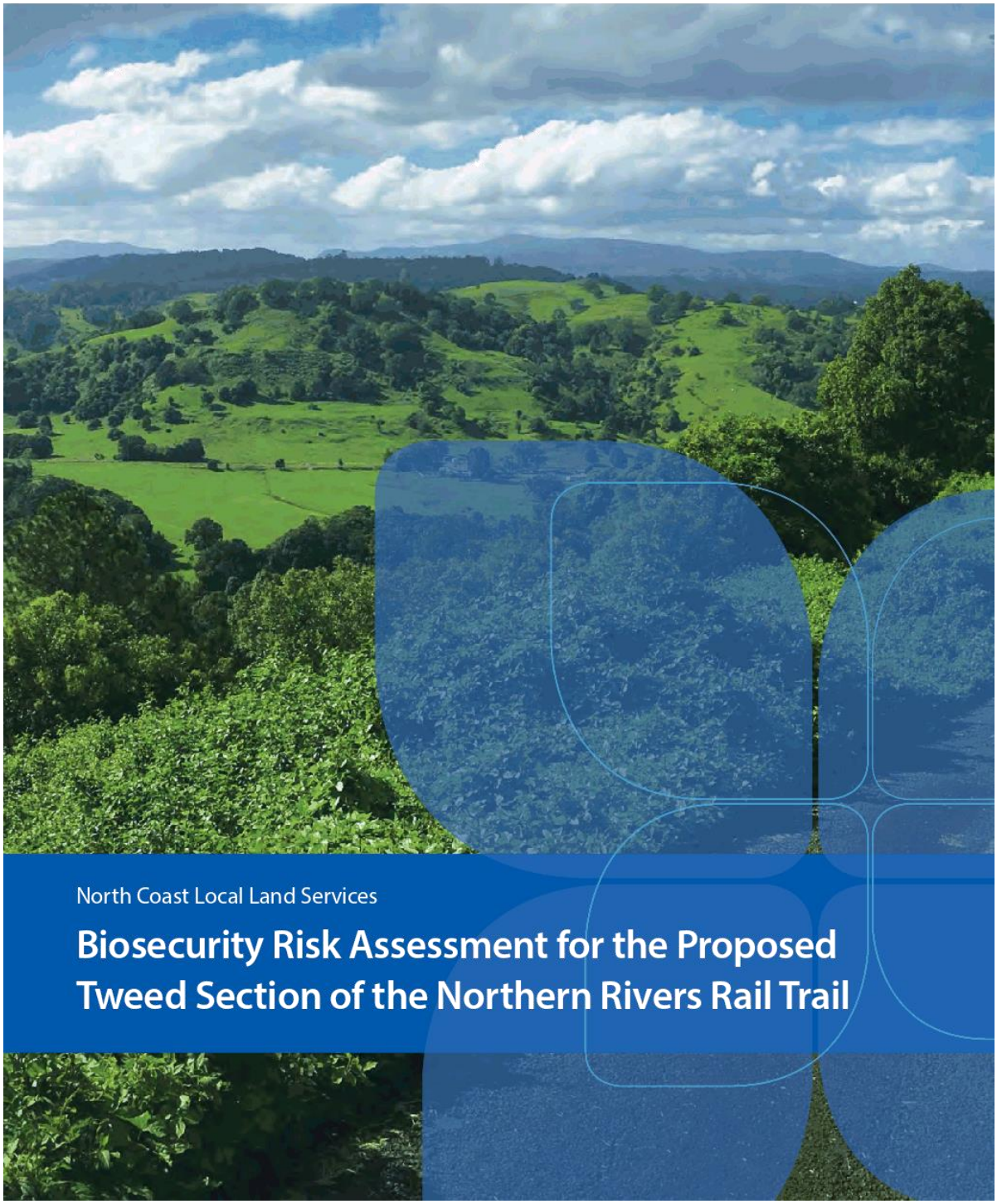
Appendix D – Biosecurity Risk Assessment for the Proposed Tweed Section of the Northern Rivers Rail Trail (NSW North Coast Local Land Service)

NSW GOVERNMENT Local Land Services



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More information
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Contents

Executive Summary

North Coast Local Land Services (North Coast LLS) was engaged by Tweed Shire Council to prepare an independent biosecurity risk assessment for the railway corridor land between Crabbes Creek and Murwillumbah Railway Station, which is proposed for conversion to a shared pedestrian user path (Northern Rivers Rail Trail). Key stakeholders such as local landholders, state government and industry groups were involved in the process.

The risk assessment considered the unique climate, geography, environment, land use and demography of the Tweed, and identified and assessed 51 biosecurity risks and benefits to livestock, companion animals, wildlife, the environment and the people within and adjoining the proposed Rail Trail corridor. Potential risk treatment options (mitigation) were also identified and may be implemented as the basis for a Rail Trail biosecurity response, or as mitigation strategies within a Biosecurity Plan.

Biosecurity is important because the integrity (and ongoing growth) of Australia's domestic and export markets for animals and their products is highly dependent on consumer and market quality assurance. Both real and perceived risks to quality are important. Biosecurity therefore aims to both reduce identified risks and to demonstrate freedom of disease and chemical residues, to assure agricultural markets and to demonstrate to both markets and consumers that livestock are managed in a humane manner.

To be successful, biosecurity measures need to be implemented and practiced at all scales. The aim of border security at a national level is to reduce the risk of the introduction of diseases, parasites, pests and plants considered to be absent from Australia. This national barrier should never be considered absolute, and therefore biosecurity at state, regional and farm scales provide additional barriers to the risk of pests and diseases should they breach national border security and enter the country. People, footwear and clothing, timber and food are examples of possible vectors that breach national barriers, and present as biosecurity risks.

In New South Wales, biosecurity is addressed through the Biosecurity Act 2015. The objective of the Act is to manage biosecurity risks from animal and plant pests and diseases, weeds and contaminants. The Act is based on the principle that biosecurity is a shared responsibility between governments, industries and individuals, landholder, farmers and communities; in essence, everyone is responsible for ensuring that NSW remains biosecure.

It is important to note that all biosecurity risks identified during the assessment undertaken by North Coast LLS in consultation with industry and community exist already within the proposed Rail Trail corridor and across the greater North Coast region. While ten risks may be exacerbated with the implementation of the proposed Rail Trail (i.e. increased risk rating or increase in likelihood of occurrence even after potential treatment), 21 risks will be mitigated i.e. risk rating will either decrease, remain stable or likelihood of occurrence reduced with or without the adoption of potential treatment options compared to pre-existing scores). Only two of 51 risks (L1 and L2) remain with a High risk rating after potential treatment options are implemented. A summary of the biosecurity risks and benefits are summarised in Table 2. Appendix 1 presents each risk in much greater detail.

Some risk mitigation measures will require adoption during construction while others will be ongoing. Compliance by Trail users with some treatments may present significant challenges, in particular those that involve human behavior. Passive surveillance and notification by fellow Trail users and adjoining landholders have the potential to play a significant role in biosecurity compliance.

Introduction

In July 2018, Tweed Shire Council commissioned North Coast Local Land Services (North Coast LLS) to perform an independent biosecurity risk assessment of the proposed Northern Rivers Valley Rail Trail. Specifically, North Coast LLS was tasked to:

1. identify and assess biosecurity risks and benefits to livestock, companion animals, wildlife, the environment and to the people within and adjoining the proposed Rail Trail corridor;
2. analyse diseases, parasites, pests and invasive plant species that could impact on farm productivity, the environment and human health;
3. identify and assess biosecurity risks of the local (the greater Tweed Local Government Area) and national significance (i.e. impact domestic and international trade for livestock and for farm products or pests, diseases and invasive plants that have the potential to spread more widely); and
4. identify risk treatment options to mitigate each risk throughout all phases of the proposed Rail Trail (construction through to opening and ongoing use).

It should be noted that North Coast LLS does not have or offer a position as to the social, environmental or economic viability of the proposed Rail Trail. The service offered by North Coast LLS was based solely on delivering a risk based approach to mitigating biosecurity concerns raised by the Council, adjoining landholders and other stakeholders. The identification of other non-biosecurity risks such as accidents and safety or the possible impacts of the Trail on farm security, privacy, life style, land values or business, were therefore considered beyond the scope of this work and not assessed.

About Local Land Services (LLS)

LLS is a delivery organisation within the NSW Department of Industry. It is established under the *Local Land Services Act 2013* to provide quality, customer-focused services to landholders and the community across NSW. Local Land Services works with land managers and the community to improve primary production within healthy landscapes and seascapes, assist rural and regional communities to be profitable and sustainable and safeguard agricultural market access.

The specific services that LLS provides are:

- a biosecure NSW
- emergency services (biosecurity and natural disaster related assistance to farmers)
- agricultural productivity
- natural asset protection

These services are delivered directly through 11 regional business units with around 950 staff working from more than 90 locations throughout NSW.

The organisation is governed by the Local Land Services Board which is responsible for its performance across NSW. The State Chair of Local Land Services is responsible for its strategy, governance and organisational oversight and reports directly to the NSW Minister for Primary Industries.

Each regional business unit is governed by a regional Board. Regional Boards set the local strategic direction and have final endorsement on all NSW government plans and strategies relating to the functions of LLS. Regional business units, including North Coast LLS, are led by a General Manager, who reports directly to the Chair of the Regional Board and to the Chief Executive Officer Local Land Services within the NSW Department of Industry.

LLS funding is sourced from a number of avenues, including rates, the Australian Government, NSW Treasury, and other commercial arrangements.

Tweed Local Government Area

While the Tweed Local Government Area (LGA) shares biosecurity risks that are common to other councils along the eastern seaboard, it contains a number of unique features that have the potential to escalate biosecurity threats and impacts if not considered:

Climate

Rainfall is high and predominately summer and autumn dominant. The Tweed Valley is at the interface of temperate and subtropical zones, therefore biosecurity risks need to consider both climatic zones.

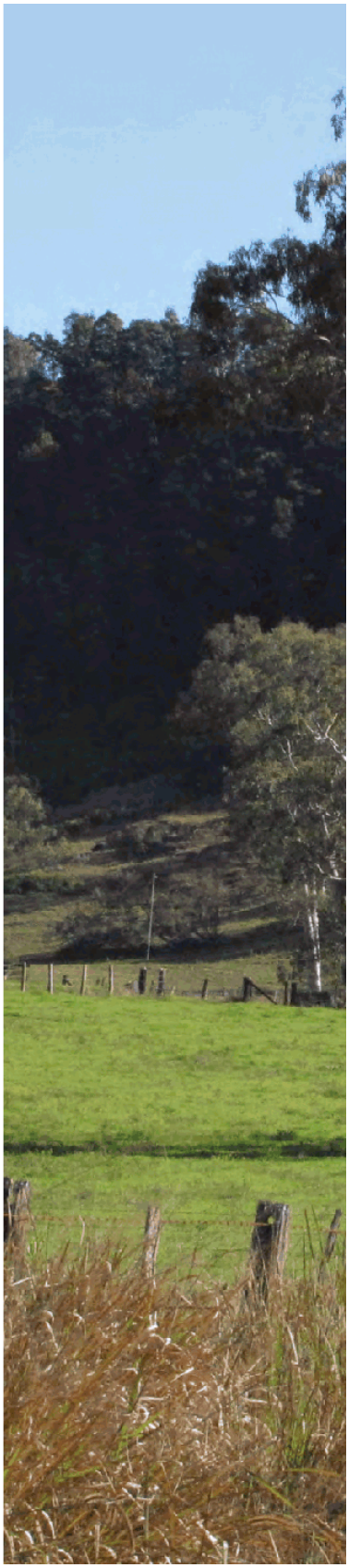
Geography and biodiversity

The Tweed Valley is the remnant of the greater Mount Warning shield volcano. Soils are volcanic in origin, extremely fertile and support fragmented, but nationally and internationally significant native flora and fauna species and ecological communities.

Land use and demography

There are a diverse range of land uses and agricultural enterprises in the Tweed Valley. Between the 1960's and 1980's the area experienced above average rural population growth during a period when small concessional lots were subdivided off from larger rural holdings, creating the smaller lifestyle properties prevalent in the Tweed today. This has resulted in a large and rapid expansion of the urban-rural interface. The Tweed is situated between the large population centre of South East Queensland and Byron Bay, which is a global tourist destination. With significant international destinations to the north and south and with immediate access to the Gold Coast international airport (which is projected to accommodate about 16 million passengers a year by 2032) a large number of international and domestic tourists and visitors come into the region each year.

The following report considers the unique features of the Tweed identified above and outlines the biosecurity threats and mitigation options associated with the proposed Rail Trail.



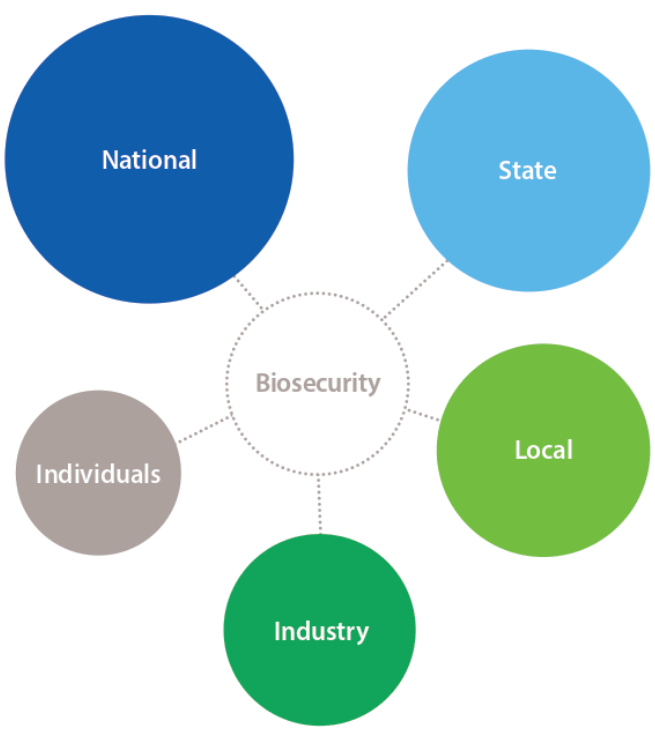
Why is Biosecurity Important?

The integrity (and ongoing growth) of Australia's domestic and export markets for animals and their products is highly dependent on consumer and market quality assurance. Both real and perceived risks to quality are important. Biosecurity aims to both reduce the risk and to demonstrate freedom of disease and chemical residues and to assure markets that livestock are managed in a humane manner.

To be successful, biosecurity measures need to be implemented and practiced at all scales. The aim of border security at a national level is to reduce the risk of the introduction of diseases, parasites, pests and plants considered to be absent from Australia. The term used for these is "exotic". However, this national barrier should never be considered absolute. Biosecurity at state, regional and farm scales therefore provide additional barriers to the risk of exotics should they breach national border security and enter the country. People, footwear and clothing, timber and food are examples of possible vectors that breach national barriers. Examples of exotic diseases that are subject to national biosecurity measures include; foot and mouth disease, BSE ("mad cow disease"), swine fever and avian influenza.

Diseases, parasites, pests and plants present in one area of Australia and not others are known as "endemic". They may be present on some properties and not others in the local area. Regional and farm biosecurity measures aim to minimise the risk of their movement and introduction into new areas within Australia. Possible vectors include livestock, companion animals, wild animals and people. Examples of local endemic risks subject to regional and farm biosecurity measures include cattle tick, tick fevers, bovine Johnes disease (BJD) and tropical soda apple.

A National Biosecurity Scheme – Shared Responsibility



Australian Government
National biosecurity laws
International border security
Risk based standards and regulations
Public education and awareness

State Government
State biosecurity law
Inter-state border security
Education and advice
Industry support and funding

Local Government
Local laws and policies
Land management practice
Assisting landowners and industry

Industry
Abiding by laws and regulations
Industry best practice and standards
Risk based approach
Duty of care to the environment

Individuals
Acknowledging potential risks
Responsibile behaviour & awareness
Abiding by laws and being informed
Duty of care to others

Multiple antimicrobial resistant bacteria pose an emerging risk to both human and animal health. Internationally Australia has a low risk of developing such strains due to our rational use of antimicrobials and high quality of food hygiene. However, people entering Australia from countries with higher risk factors for resistance may carry these strains. Border protection does not prevent entry of these organisms. Direct human contact with animals could result in these strains establishing in animal populations.

Assurance of livestock products being free of chemical residues is also an integral part of biosecurity. Australia has a clean green image for its products and justifiably so. National programs are in place to maintain the assurance to our domestic and export markets. These include freedom of organochlorines and other pesticides, heavy metals and antimicrobials.

Animal welfare is firmly embedded in all aspects of farm biosecurity. The social licence to farm comes with the responsibility to care for livestock. Public perception of what is acceptable welfare varies widely. For example; a high producing dairy cow does not carry the typical muscle mass of a beef cow and could be perceived by some as underweight. When the interface between livestock and the public increases, as it will with the Rail Trail, so will public scrutiny of what is perceived as acceptable.

In 2017, a national program was rolled out to all states to increase farm biosecurity measures and practices. Locally this was driven by North Coast LLS. The adoption rate was high and the majority of north coast livestock producers now have farm biosecurity plans in place. This includes those within and adjoining the proposed Rail Trail.

Legislative Framework

The NSW Biosecurity Act 2015 was introduced on 1st July 2017. The objective of the Act is to manage biosecurity risks from animal and plant pests and diseases, weeds and contaminants. The Act is based on the principle that biosecurity is a shared responsibility between governments, industries and individuals.

This responsibility is met by discharging a General Biosecurity Duty (GBD). This means that people are expected to have a basic level of knowledge about the biosecurity risks they might encounter in their normal work and recreational activities. All community members have a responsibility to consider how actions, or in some cases lack of action, could have a negative impact on another person, business enterprise, animal or the environment. All parties must then take all reasonable and practical measures to prevent, eliminate or minimise the potential impact.

Nationally from 1 October 2017 the Livestock Production Assurance (LPA) program required every LPA accredited producer (landholders who have a Property Identification Code; PIC) to develop a Farm Biosecurity Plan to fulfil their biosecurity requirements. Livestock Production Assurance (LPA) is the Australian livestock industry's on-farm assurance program covering food safety, animal welfare and biosecurity. To improve producer understanding of the plans, North Coast LLS conducted a series of information sessions and workshops in the second half of 2017. Likewise, other primary industries have quality assurance programs in place to ensure that producers meet biosecurity requirements.

Risk Assessment Process

Consultation and engagement

North Coast LLS developed and performed the biosecurity risk assessment in consultation with government, adjoining landholders and representative industry organisations.

North Coast LLS identified ~78 landholders adjoining the proposed Rail Trail corridor and contacted each landholder either in person or by telephone and either emailed or posted to them a copy of the draft Biosecurity Risk Assessment, along with a request for their comment or feedback. In addition, North Coast LLS liaised with the Council to determine significant local industry and/or community stakeholders who it considered would have an interest in biosecurity matters. Table 1 identifies the key stakeholder groups engaged during the risk assessment process and their key areas of concern. A small number of landholders declined to engage with the North Coast LLS in relation to biosecurity matters, or elected to either not respond or comment on the draft biosecurity risk assessment.

All consultation was undertaken by a North Coast LLS District Veterinarian with support from a North Coast LLS Biosecurity Officer, both of whom have significant expertise and skills in animal health and welfare and related animal and plant biosecurity matters. Both officers are Authorised Control Officers under the New South Wales Biosecurity Act 2015.

Table 1 Key Stakeholders and their key areas of concern during the risk assessment

Organisation	Number of representatives consulted	Key areas of concern
Sugar industry	1	Had no significant biosecurity issues for plant disease
Tweed Shire Council	2	Livestock Animal Welfare Horses and dogs using the Trail Horticulture Wildlife and the environment Humans
Tweed Valley Wildlife Carers	1	Risk to wildlife of disturbance or harassment from people and dogs Wildlife risk from dog attack Wildlife risks to people, in particular venomous snakes or Australian Bat Lyssavirus Vegetation changes and impacts on wildlife Changes in fire risks from vegetation changes or people Impacts on wildlife release
NSW Farmers	1	Exotic disease incursion People and food borne risks Weed incursion and spread
Far North Coast Dairy Industry Group	1	Exotic disease incursion People and food borne risks Weed incursion and spread Animal welfare perceptions, harassment and disturbance
Tweed Landcare	1	Funding and priorities for more environmental sensitive areas than rail land Stakeholder Engagement Industry organisations
Tweed Trail Horse Riders	1	Biosecurity risks from humans greater than from animals Horse related biosecurity risks lower than other animal species
Private landholders within and adjoining Rail Trail	59	Livestock Animal Welfare Horses and dogs using the Trail Horticulture Wildlife and the Environment Humans For individual banana and orchard growers: soil borne diseases For individual hydroponics, nursery and small crop growers: soil borne diseases

Risk assessment

The risk assessment was confined to risks associated with land uses immediately within and adjoining the Rail Trail corridor. These include commercial beef, dairy, sugar cane, bananas, citrus, avocadoes, vegetables and nursery production. Non-commercial properties, horse owners, lifestyle blocks with a wide range of animals, and holdings with a focus on environmental preservation and rehabilitation were also included. No risk assessment was made of other land uses and enterprises in the district that are not immediately adjacent, for example, aquaculture.

For the purposes of the risk assessment, livestock included beef cattle, dairy cattle, sheep, goats, pigs and poultry. Ruminants refers specifically to cattle, sheep and goats. Companion animals includes horses and dogs, both working dogs and pet dogs.

The risk rating for each specific risk were determined using the universal risk matrix (Figures 1, 2, 3 and 4). Potential risk treatment options were then identified for all phases of the proposed Rail Trail. A residual risk rating after the adoption of potential risk treatment options was then determined. All biosecurity risk assessments, ratings and treatment options were undertaken by a North Coast LLS District Veterinarian.

Figure 1 Key Steps for Using / Applying Risk Assessment

Step 1	Step 2	Step 3	Step 4	Step 5
Identify Risk	Identify Likelihood	Identify Consequence	Apply Treatment	Evaluate Risk
What is the event or incident? e.g. Risks to glow worms in the rail tunnel	What is the chance or frequency of the risk occuring?	What is the severity or impact of the risk if it did occur?	Are there mitigation treatments that could prevent or reduce the frequency or impact of a risk?	What is the risk after treatment?
Medium (without treatment)	Likely	Minor	Unlikely	Low (with treatment)

Figure 2 Universal Risk Matrix

	Consequence Rating				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
A Almost Certain	Medium	Medium	High	Extreme	Extreme
B Likely	Low	Medium	Medium	High	Extreme
C Possible	Low	Low	Medium	High	High
D Unlikely	Negligible	Low	Medium	Medium	High
E Rare	Negligible	Negligible	Low	Medium	High

Figure 3 Definitions for Likelihood Ratings

Likelihood Rating	Frequency
A Almost Certain	May occur several times over a short period or continuously
B Likely	May occur monthly to several times a year
C Possible	Might occur once in a period of one to three years
D Unlikely	Could occur over time (e.g. every five to ten years)
E Rare	May occur only in exceptional circumstances (e.g. every 10-20 years)

Figure 4 Consequence Ratings and Areas of Impact Definitions

		Areas of Impact			
Rating	Consequence	Animal health and production	Plant health and production	Human health, safety & well being	Economic
1	Insignificant	No loss	No loss	No injuries	No economic loss
2	Minor	Limited illness/ injuries &/or deaths on single enterprise	Limited damage/ loss on single enterprise	Minor injuries; no public health risk; short term wellbeing impact	Few businesses locally affected or single/few properties
3	Moderate	Some illness/ injuries/deaths on multiple properties across a locality	Some damage/ loss on single property – multiple paddocks	Limited public health risk &/or injuries requiring medical & mental health treatment	Widespread industry impact; multiple industries / properties per district
4	Major	Considerable illness/injuries/ deaths on multiple properties across a region	Considerable damage/loss on multiple properties across a region	Major public health risk &/or major injuries/wellbeing impact	High economic / trade risk to region &/or state
5	Catastrophic	Significant illness/ injuries/deaths on multiple regions	Considerable damage/loss across multiple regions	Significant public health risk &/or human deaths/ long lasting wellbeing issues	Major national economic implications

	Areas of Impact				
	Commercial	Environmental	Organisational capability	Political (govt & business sector)	Reputation and image
	No financial loss	No environmental impact	Organisational capability intact, negligible impact on objectives	No political/ organisational impact	No damage to reputation/image
	Low financial loss; single/few properties affected	Minor,/recoverable short-term isolated/localised environmental impact	Local capability affected, minor impact on objectives, easily remedied	Local political / organisational impact	Recoverable / short term local damage to reputation/image
	Medium financial loss; multiple properties per district	Moderate, medium term, medium spread environmental impact	Regional capability affected, some objectives affected	Regional political / organisational impact	Medium term / regional damage to reputation/image
	High financial loss	Serious, long term, widespread environmental impact	State capability affected, important objectives not achieved	State political / organisational impact	Long term/ state damage to agency reputation/image
	Major national financial loss	Irreversible environmental impact	National capability affected, most objectives not achieved	National political / organisational impact	Long term / (inter) national damage to reputation / image irreversibly impacted

Risk Assessment Results

Overview of risks and benefits

The risk assessment analysed both the risks and benefits to biosecurity in connection with the proposed Rail Trail. After 15 years of disuse there are existing biosecurity risks associated with the railway corridor land in its present condition and not currently being open for public use it receives minimal active management. The construction of a shared-user trail offers an opportunity to reduce some of these existing risks.

To keep the assessment of biosecurity risk in this document in context, it is worth noting that many of the Rail Trail biosecurity risks identified are similar or the same as those that currently exist in the north coast region, particularly on the peri-urban fringe where people, livestock and wildlife interface multiple times daily. Examples of this include:

- the corridors created by existing pathways, trails and roads that are used by people, dogs and horses
- recreational areas used by people, dogs and horses such as swimming holes, picnic areas and road side stops
- farm stays and on-farm markets or food hubs
- rural industries such as retail plant nursery or farm-gate produce stalls
- petting parks and wildlife sanctuaries.

Other features of the Trail pose quite unique biosecurity risks:

- The long-term predicted high volume of pedestrian traffic, which may be reached after a few years of establishment
- The close proximity of the proposed Trail alignment to adjoining properties carrying on intensive industries, including dairy, piggery and horticulture and in some instances the immediate proximity to those that are lawfully operating within the railway corridor land.
- The rail tunnel, which is home to a glow worm and microbat colony, is in near proximity to tourism and special event sites, such as North Byron Parklands, which attract a high number of visitors to the area and which would therefore likely lead to higher usage of the Rail Trail at peak times.

Rail car (trains) ceased operation in April 2004 and since then there has been minimal maintenance or active management of the railway corridor land. The degradation of the land and infrastructure and associated trespass has created several significant biosecurity risks. Fences have deteriorated and vegetation regrowth has been significant, particularly of woody weeds, and timber bridges have deteriorated with some bridges burnt by vandals and subsequently demolished. There has been significant unauthorised use of the railway corridor and this is most evident by people trespassing to gain access to the Burringbar railway tunnel, as well as regular trespass for recreational activities such as accessing swimming, picnicking and fishing areas that are located on adjoining private land.

Examples of existing biosecurity risks therefore include:

- Risk of cattle straying: the lack of fence maintenance and loss of fences due to flood events and other occurrences has created opportunities for cattle to stray, increasing the associated biosecurity risks of disease and parasite transmission
- The existing condition of the railway corridor land acting as harbour for vertebrate pest species, including rabbits, wild dogs, foxes and feral cats
- Ideal conditions for harbouring invasive plants: in particular, camphor laurel, privet and giant devils fig
- Trespass: uncontrolled and unlawful use or occupation of the railway corridor land by the general public.

A summary of the identified biosecurity risks is provided in the next section and in Table 2. Appendix 1 explores each individual risk assessment in more depth.

The establishment of the Rail Trail creates an opportunity for the railway corridor to be utilised, managed and monitored more closely, therefore potentially reducing some of the biosecurity risks that are currently present.

While this Biosecurity Risk Assessment has sought to capture the key related biosecurity risks it is by no means an exclusive list and additional risks may present to the Council throughout the detailed design and construction phase, which will need to be recorded and evaluated. Similarly, while mitigation (treatment) measures have been recommended this is by no means a comprehensive list of the possible range or most effective treatments that could potentially be applied to a given risk or groups of risks. Other treatment measures might be identified and assessed during the design and construction phase.

This document establishes a workable baseline for the assessment of those risks and treatments presenting at that time of it being prepared.

Rail Trail Biosecurity Risks and Benefits

Fifty-one biosecurity risks and benefits were identified and assessed during the risk assessment. These have been divided into seven categories:

1 Livestock (L)

2 Animal Welfare (AW)

3 Horses using the Trail (H)

4 Dogs using the Trail (D)

5 Horticulture (HORT)

6 Wildlife and the Environment (W&E)

7 Humans (HU).

Ten risks may be exacerbated with the proposed Rail Trail i.e. even after potential treatment options have been applied, as their risk rating or likelihood of occurrence will increase from their pre-existing rating or likelihood. Four of these relate to the category Wildlife and the Environment (W&E1, W&E2, W&E5, W&E12), two to Animal Welfare (AW2, AW3), two to Human (HU4, HU8), one Livestock (L3) and one Horses using the Trail (H1).

Twenty-one risks will be mitigated, or benefited, from the implementation of the Rail Trail, i.e. their risk rating will either decrease, remain stable or their likelihood of occurrence reduced with or without the adoption of appropriate treatment options compared to their pre-existing ratings and likelihood. Seven of these relate to the category Wildlife and the Environment (W&E3, W&E4, W&E10, W&E11, W&E13, W&E15, W&E16), seven to Livestock (L4 [subject to compliance by Trail users], L5-8, L11, L12), three to Dogs using the Trail (D1, D2, D4, providing wild dog control programs are implemented), three to Human (HU1-3), and one Horticulture (HORT1).

Despite an initial increase in likelihood of occurrence with the proposed Rail Trail, 20 risks will return to their pre-existing risk rating or likelihood of occurrence IF appropriate treatment options are applied. Seven relate to the Livestock category (L1, L2, L9, L10, L13-15), five Wildlife and Environment (W&E6-9, W&E14), three to Human (HU5-7), two to Animal Welfare (AW1, AW4), two to Horticulture (HORT2, HORT3) and one to Dogs using the Trail (D3).

Only two of 51 biosecurity risks (L1 and L2) remain with a High risk rating after treatment options are implemented. Note that this is due to their consequence, as explained below.

Table 2 (page 22) summarises:

- each biosecurity risk and benefit;
- their existing likelihood, consequence, and risk rating;
- the likelihood and risk rating if the Rail Trail goes ahead without any mitigation (treatment) actions;
- the likelihood and risk rating if the Rail Trail goes ahead with recommended mitigation (treatment) actions or with suitable alternative treatments that have the same or higher treatment value.

Note that with all three options, only the likelihood of the risk can change. The consequence stays the same irrespective i.e. the *consequence* of a Foot and Mouth Disease outbreak on the North Coast is catastrophic; this is already the case and will remain so independent of the Rail Trail and any mitigation action. However, the *likelihood* of an outbreak can be significantly reduced by treatment actions. More comprehensive descriptions of each biosecurity risk and associated treatment options are provided in Appendix 1.

Table 2 Summary of Biosecurity risks and benefits of the proposed Rail Trail

Risk		Existing Consequence	Existing Likelihood	Existing Risk Rating	Rail Trail developed: Likelihood without mitigation
Livestock					
Diseases					
L1	Exotic animal diseases introduced by footwear	Catastrophic	Rare	High	Unlikely
L2	Exotic animal diseases introduced by foodstuffs	Catastrophic	Rare	High	Unlikely
L3	Contamination of the environment by human faeces	Minor	Rare	Negligible	Possible
L4	Contamination of the environment by dog or fox faeces	Minor	Unlikely	Low	Possible
L5	Contamination of the environment by cattle faeces	Minor	Likely	Medium	Possible
L6	Endemic diseases of cattle by stray cattle	Minor	Likely	Medium	Possible
L7	Cattle tick and tick fever by stray cattle	Moderate	Likely	Medium	Possible
L8	Cattle tick and tick fever by horses	Moderate	Rare	Low	Possible
L9	Cattle tick and tick fever by clothing or blankets	Moderate	Rare	Low	Unlikely
L10	Exotic animal diseases by wild birds	Major	Rare	Medium	Unlikely
L11	Endemic animal diseases by wild birds	Minor	Rare	Negligible	Unlikely
L12	Poisoning of livestock by plants	Minor	Likely	Medium	Possible
L13	Poisoning of livestock by chemicals	Minor	Rare	Negligible	Unlikely
L14	Chemical residues in livestock	Minor	Rare	Negligible	Unlikely
L15	Introduction of multiple antimicrobial resistant bacteria	Major	Rare	Medium	Possible

	Rail Trail developed: Risk Rating without mitigation	Potential Risk Mitigation Treatments	Rail Trail developed: Likelihood with mitigation actions	Rail Trail developed: Risk Rating AFTER potential mitigation actions
	High	Stock exclusion; Signage; Passive surveillance.	Rare	High
	High	Stock exclusion; Signage; Provision of bins or user waste removal system; Passive surveillance.	Rare	High
	Low	Stock exclusion; Provision of toilet and/or hand wash facilities; Passive surveillance.	Unlikely	Low
	Low	Leash dogs; Dog owners bag and remove faeces; Signage; Passive surveillance.	Rare	Negligible
	Low	Stock exclusion; Passive surveillance.	Unlikely	Low
	Low	Stock exclusion; Passive surveillance.	Unlikely	Low
	Medium	Stock exclusion; Passive surveillance.	Unlikely	Medium
	Medium	Enforce existing regulatory requirement – Treat horses for cattle tick PRIOR to Rail Trail use.	Rare	Low
	Medium	Discourage use or abandonment of blankets and clothing while using Trail; Signage.	Rare	Low
	Medium	Provision of bins or user waste removal system; Signage.	Rare	Medium
	Low	Provision of bins or user waste removal system; Signage.	Rare	Negligible
	Low	Stock exclusion; Scrutinise / select non-poisonous landscaping plants; Ongoing poisonous plant detection and control; Passive surveillance; Signage.	Unlikely	Low
	Low	Stock exclusion; Remove timber; Burning of timber on site is unsuitable; Removal of contaminated soil (if identified) in accordance with NSW guidelines for appropriate treatment of same	Rare	Negligible
	Low	Obtain track treatment history from State Rail Authority; Test soil upon disturbance. Excavate, bury or remove residues; Stock exclusion.	Rare	Negligible
	High	Stock exclusion; Provision of toilet and/or hand wash facilities; Passive surveillance.	Rare	Medium

Table 2 Summary of Biosecurity risks and benefits of the proposed Rail Trail *continued*

Risk	Existing Consequence	Existing Likelihood	Existing Risk Rating	Rail Trail developed: Likelihood without mitigation
Animal Welfare				
AW1 Livestock impacted from domestic dogs, wild dogs or foxes	Moderate	Rare	Low	Likely
AW2 Impacts of Rail Trail on wild dog, fox and rabbit control programs	Moderate	Unlikely	Medium	Likely
AW3 Impacts of Rail Trail on livestock management practices	Moderate	Unlikely	Medium	Likely
AW4 Stress, injury or death of livestock from people	Moderate	Unlikely	Medium	Possible
Horses Using the Trail				
H1 Hendra virus infection to horses	Minor	Rare	Negligible	Unlikely
Dogs Using the Trail				
D1 Risks to domestic dog health from paralysis ticks	Minor	Almost Certain	Medium	Likely
D2 Risks to domestic dog health from venomous snakes	Minor	Likely	Medium	Possible
D3 Risks to domestic dogs from wild dog, fox or rabbit control programs	Moderate	Rare	Low	Likely
D4 Risks to domestic dogs from wild dogs	Minor	Possible	Low	Unlikely
Wildlife and to the Environment				
W&E1 Risks to wildlife from Trail users (people)	Minor	Unlikely	Low	Likely
W&E2 Risks to wildlife from domestic dogs	Minor	Unlikely	Low	Almost Certain
W&E3 Risks to aquatic environment and wildlife	Minor	Likely	Medium	Likely

	Rail Trail developed: Risk Rating without mitigation	Potential Risk Mitigation Treatments	Rail Trail developed: Likelihood with mitigation actions	Rail Trail developed: Risk Rating AFTER potential mitigation actions
	Medium	Leash dogs; Signage; Provision of bins or user waste removal system; Passive surveillance; Wild dog and fox control as required.	Rare	Low
	Medium	Education of users; Signage; Closure of sections of Trail during control programs on or adjacent to the Trail.	Possible	Medium
	Medium	Encourage adjoining landholders to practice sound animal welfare; Adjoining landholders improve security at high risk sites such as dairies and piggeries; Signage; Passive surveillance.	Possible	Medium
	Medium	Adjoining landholders improve security at high risk sites such as dairies and piggeries; Signage; Passive surveillance.	Unlikely	Medium
	Low	Provision of Hendra virus information to horse owners;	Unlikely	Low
	Medium	Leash dogs; Signage; Passive surveillance.	Unlikely	Low
	Low	Leash dogs; Signage; Passive surveillance.	Unlikely	Low
	Medium	Leash dogs; Signage; Passive surveillance.	Rare	Low
	Low	Implement wild dog control measures when required; Leash dogs; Signage; Passive surveillance.	Rare	Negligible
	Medium	Adopt wildlife-friendly Trail designs that maintain or improve wildlife habitat on or adjacent to the Trail; Signage; Passive surveillance.	Possible	Low
	Medium	Adopt wildlife-friendly Trail designs that maintain or improve wildlife habitat on or adjacent to Trail; Leash dogs; Signage; Passive surveillance.	Possible	Low
	Medium	Signage displaying values of environment/wildlife; Leash dogs; Passive surveillance.	Unlikely	Low

Table 2 Summary of Biosecurity risks and benefits of the proposed Rail Trail *continued*

Risk		Existing Consequence	Existing Likelihood	Existing Risk Rating	Rail Trail developed: Likelihood without mitigation
Wildlife and to the Environment *continued*					
W&E4	Risks to amphibians on and near the Trail	Moderate	Likely	Medium	Likely
W&E5	Risk to microbats in the Rail tunnel	Minor	Unlikely	Low	Likely
W&E6	Risk to glow worms in the Rail tunnel	Minor	Unlikely	Low	Likely
W&E7	Risks to wild bird health from increased people	Minor	Unlikely	Low	Likely
W&E8	Risks to wildlife from food waste	Minor	Unlikely	Low	Likely
W&E9	Risks to wildlife from fencing	Minor	Unlikely	Low	Likely
W&E10	Risks for rabbit harbour	Minor	Likely	Medium	Possible
W&E11	Risks for weeds and invasive plant species	Minor	Likely	Medium	Possible
W&E12	Trail impacts on weed control programs	Moderate	Unlikely	Medium	Likely
W&E13	Trail risks to native flora	Minor	Almost Certain	Medium	Possible
W&E14	Introduction and spread of Phytophthora	Minor	Unlikely	Low	Possible
W&E15	Introduction and spread Yellow Crazy Ants and Red Imported Fire Ant	Major	Unlikely	Medium	Possible
W&E16	Fire risks	Major	Likely	High	Possible

	Rail Trail developed: Risk Rating without mitigation	Potential Risk Mitigation Treatments	Rail Trail developed: Likelihood with mitigation actions	Rail Trail developed: Risk Rating AFTER potential mitigation actions
	Medium	Signage displaying values of environment/ wildlife; Leash dogs; Passive surveillance; Practice ChemCert best practice; Adhere to chemical label requirements.	Unlikely	Medium
	Medium	Construct barriers to exclude users or user interface or provide alternative roost sites; Signage; Passive surveillance.	Possible	Low
	Medium	Signage regarding impacts of torch light, physical touching and the use of insect repellents and insecticides; Passive surveillance.	Unlikely	Low
	Medium	Signage; Provision of bins or user waste removal system; Passive surveillance.	Unlikely	Low
	Medium	Signage; Provision of bins or user waste removal system; Passive surveillance.	Unlikely	Low
	Medium	Consider wildlife pathways in Trail design and construction; Passive surveillance.	Unlikely	Low
	Low	Consider rabbit harbour in Trail design and construction; Passive surveillance.	Unlikely	Low
	Low	Select non-invasive landscaping species. Ongoing maintenance and control; Passive surveillance.	Unlikely	Low
	Medium	Practice ChemCert best practice; Adhere to chemical label requirements; Apply chemical during low Trail use periods or scheduled periods of Trail closure; Signage.	Possible	Medium
	Low	Select endemic local native where possible for landscaping; Identify opportunities for rehabilitation, regeneration or habitat creation on Trail land and adjoining holdings; Passive surveillance.	Unlikely	Low
	Low	Adopt hygienic practices; Select local native nursery stock.	Unlikely	Low
	High	Scrutinise sources of soil and landscaping plants; Signage; Passive surveillance.	Rare	Medium
	High	Consider fire risks and fire management needs in Trail design, landscaping and ongoing management;	Unlikely	Medium

Table 2 Summary of Biosecurity risks and benefits of the proposed Rail Trail *continued*

Risk		Existing Consequence	Existing Likelihood	Existing Risk Rating	Rail Trail developed: Likelihood without mitigation
Human					
HU1	Human health risks from paralysis ticks	Moderate	Almost Certain	High	Likely
HU2	Human and animal health risks from venomous snakes	Moderate	Possible	Medium	Unlikely
HU3	Risk to human health from wild dogs	Moderate	Possible	Medium	Unlikely
HU4	Risk to human health from wild mammals and birds	Moderate	Rare	Low	Possible
HU5	Risk to human health from Australian Bat Lyssavirus from microbats in the Rail tunnel	Moderate	Rare	Low	Unlikely
HU6	Risk to human health from bat faeces in Rail tunnel	Moderate	Rare	Low	Unlikely
HU7	Human health risks from domestic dogs using the Trail	Moderate	Rare	Low	Unlikely
HU8	Risk to human health from hendra virus from horses	Moderate	Rare	Low	Unlikely

	Rail Trail developed: Risk Rating without mitigation	Potential Risk Mitigation Treatments	Rail Trail developed: Likelihood with mitigation actions	Rail Trail developed: Risk Rating AFTER potential mitigation actions
	Medium	Signage.	Possible	Medium
	Medium	Signage; Passive surveillance.	Rare	Low
	Medium	Signage; Implement wild dog control measures when required; Passive surveillance.	Rare	Low
	Medium	Signage; Provision of bins or user waste removal system; Passive surveillance.	Unlikely	Medium
	Medium	Construction of barriers or alternative roost sites; Signage; Passive surveillance.	Rare	Low
	Medium	Construction of barriers or alternative roost sites.	Rare	Low
	Medium	Leash dogs; Signage; Passive surveillance.	Rare	Low
	Medium	Provision of Hendra virus information to horse owners	Unlikely	Medium

Appendix

Detailed Rail Trail Biosecurity Risk Assessment Notes

Biosecurity and Livestock

Diseases

L1 Specific risk: Exotic animal diseases introduced by footwear

Risk of Rail Trail compared with existing risk: Risk higher with Trail. Trail will bring larger numbers of public into closer proximity to dairy calf sheds, dairies, pasture cattle and a piggery.

Rationale: Visitors from overseas, or Australians returned from overseas may have been in rural areas in countries that have foot and mouth disease virus. The virus has a long survival time on footwear. Said footwear may not have been disinfected or declared at border. Direct contact to ruminants or pigs from such footwear, from animals sniffing, licking or consuming poses the greatest risk. Risk is higher in those areas where users have higher probability of direct contact, such as trespass into calf rearing sheds, dairies or pig pens. Transmission by indirect means; for example, cattle walking over land on which contaminated footwear has passed, poses a very low risk of virus transmission.

National cost of a small scale 3-month outbreak estimated at $7.1 billion while a 12-month duration large scale outbreak estimated at $16 billion.

Consequences: Catastrophic. Animal health, production and trade consequences. Significant animal illness. Animal deaths from eradication programs. Short and long term impacts on international trade and on producer financial viability.

Risk treatment options and activities to reduce risk:

- Reduce risk of livestock contact with footwear or clothing; stock proof the Trail.
- Appropriate signage to warn Trail users of the risks and penalties associated with trespassing.
- Encourage passive surveillance and notification by other Trail users.
- Active surveillance using cameras.
- Environmental fencing barriers / buffers where practicable.

Existing risk

Likelihood Rating	1	2	3	4	5
A					
B					
C					
D					
E					H

Consequence Rating

Risk trail before treatment

Likelihood Rating	1	2	3	4	5
A					
B					
C					
D					H
E					

Consequence Rating

Risk trail after treatment

Likelihood Rating	1	2	3	4	5
A					
B					
C					
D					
E					H

Consequence Rating

L2 Specific risk: Exotic animal diseases introduced by foodstuffs

Risk of Rail Trail compared with existing risk: Risk is increased with Trail. Trail users foodstuffs may have close proximity to dairy calf sheds, dairies, pasture cattle and a piggery.

Rationale: Human foodstuffs that have not been declared or detected at the border and which are from a country that has exotic diseases may be taken onto the Trail by users. These pose a biosecurity threat should such foodstuff be eaten by or fed to livestock. For these reasons feed bans are in place nationally. Food waste left by Trail users poses a risk. There may be the temptation for Trail users to feed livestock.

Exotic diseases that pose a risk include; foot and mouth disease to ruminants and pigs, "mad cow disease" to cattle and African swine fever to pigs. African swine fever would cause serious production losses to the $1.277 billion Australian pork industry. A single case of mad cow disease has the potential to close Australia's beef exports.

Consequences: Catastrophic. Animal health, production and trade consequences. Significant animal illness. Animal deaths from eradication programs. Short and long term impacts on primary producer financial viability. Short and long term impacts on international trade.

Risk treatment options and activities to reduce risk:

- Reduce risk of livestock contact with foodstuffs; Stock proof the Trail.
- Signage the risks of feeding livestock.
- Reduce risk of food waste left by Trail users. Provision of bins where practicable or alternatively require Trail users to take waste with them. Signage for littering.
- Passive surveillance and notification by other Trail users.

Existing risk

Consequence Rating

Likelihood Rating	1	2	3	4	5
A					
B					
C					
D					
E					H

Risk trail before treatment

Consequence Rating

Likelihood Rating	1	2	3	4	5
A					
B					
C					
D					H
E					

Risk trail after treatment

Consequence Rating

Likelihood Rating	1	2	3	4	5
A					
B					
C					
D					
E					H

L3 Specific risk: Contamination of the environment by human faeces

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to increased numbers of people.

Rationale: Contamination of the environment by Trail users' faeces carries the risk of coliform bacteria, salmonella or beef measles (Cysticercus bovis). Coliforms and salmonella carry the risk of pollution of water, infection in calves and mastitis in dairy cattle. Contamination of pasture with eggs of beef measles can result in condemnation of beef at abattoirs and subsequent medium term trade restrictions for cattle owners.

Consequences: Minor. Limited animal illness or death on a single enterprise.

Risk treatment options and activities to reduce risk:

- Reduce risk of livestock contact with human faeces; Stock proof Trail.
- Where practicable provide toilet and hand-wash facilities.
- Appropriate signage to warn Trail users of the risks and penalties associated with trespassing.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

L4 Specific risk: Contamination of the environment by dog or fox faeces

Risk of Rail Trail compared with existing risk: Risk is increased with Trail for domestic dogs, similarly with other public recreation areas or roadways, as the Trail will lead to a greater number of domestic dogs being brought into the area. Risks of Trail are comparable to domestic dog and livestock interface elsewhere on the north coast. Risks posed by wild dogs and foxes are likely to be lower, as there are likely to be fewer wild dogs and foxes with the trail.

Rationale: Contamination of the environment by dog or fox faeces carries the risk of coliform bacteria, hydatid tapeworm (Echinococcus granulosus) or Neospora. Coliforms pollute water and can cause infection of calves and mastitis in dairy cattle. Hydatids are a common cause of cattle offal condemnation at abattoirs and a significant economic loss to the industry. Neospora shed in the faeces of young dogs is a common cause cattle abortion and stillbirths. Domestic dogs may use the Trail or stray onto adjoining grazing land to defecate. Wild dogs and foxes numbers likely to be lower with Trail. However, wild dogs or foxes may be attracted to Trail from food waste.

Consequences: Minor. Limited animal illness or death on a single enterprise.

Risk treatment options and activities to reduce risk:

- Reduce risk of domestic dog faeces. Require dog owners to remove faeces, signage.
- Reduce straying of domestic dogs. Require dog owners to leash dogs, signage.
- Passive surveillance and notification by other Trail users.

For domestic dogs:

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

L5 Specific risk: Contamination of the environment by cattle faeces

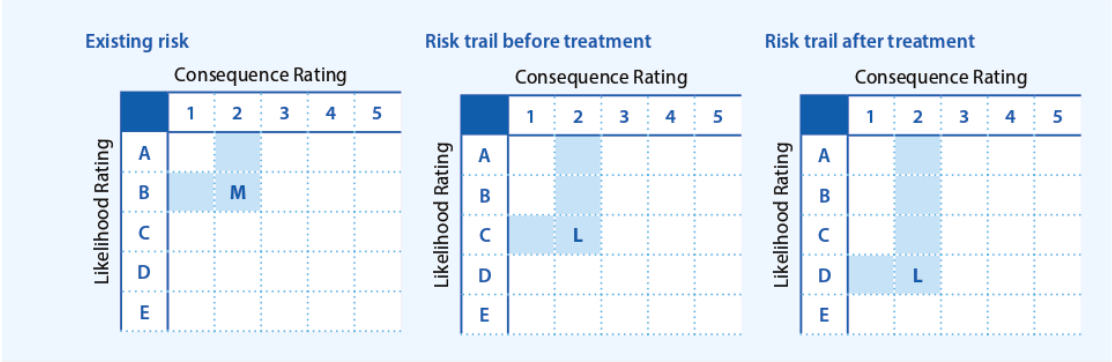
Risk of Rail Trail compared with existing risk: Risk is decreased with Trail. Sections of the rail are currently leased for cattle grazing. The Trail will result in a lower risk of cattle using the rail land.

Rationale: The faeces of straying cattle are a risk of spreading Bovine Johne's disease (BJD), internal parasites and Tropical Soda Apple. Cattle infected with BJD may shed the organism without showing clinical signs. Internal parasites such as worms, including strains resistant to drenches, are also be spread by cattle faeces. Seeds of the weed Tropical Soda Apple can be spread in cattle faeces.

Consequences: Minor. Limited to a single enterprise.

Risk treatment options and activities to reduce risk:

- Reduce risk of cattle straying onto Trail. Stock proof Trail.
- Passive surveillance and notification by Trail users.



L6 Specific risk: Endemic diseases of cattle by stray cattle

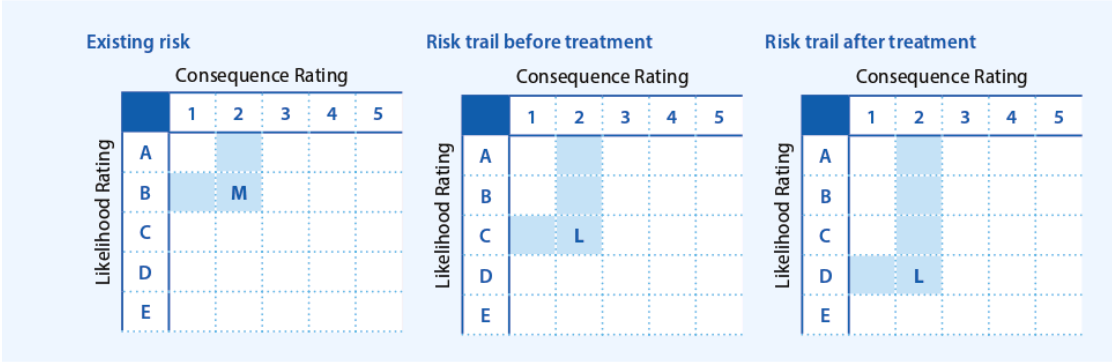
Risk of Rail Trail compared with existing risk: Risk is decreased with Trail. Sections of the rail are currently leased for cattle grazing. The Trail will result in a lower risk of cattle using the rail land.

Rationale: Direct cattle to cattle contact has the potential to spread diseases such as Vibriosis or Pestivirus. Vibriosis is a common cause of infertility and is spread by venereal contact. Pestivirus is a common disease in cattle which causes reduced fertility and production loss.

Consequences: Minor. Limited animal illness or death to single enterprise.

Risk treatment options and activities to reduce risk:

- Reduce risk of cattle straying onto Trail. Stock proof Trail.
- Passive surveillance and notification by Trail users.



L7 Specific risk: Cattle tick and tick fever by stray cattle

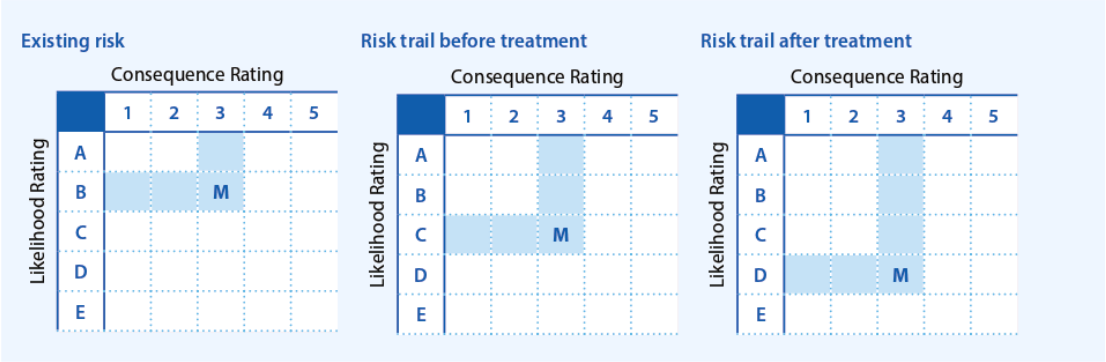
Risk of Rail Trail compared with existing risk: Risk is decreased with the Trail. Sections of the railway corridor are currently leased for cattle grazing. The Trail will result in a lower risk of cattle using the rail land.

Rationale: Cattle tick and the three tick fevers pose one of the greatest biosecurity threats to the beef and dairy industries in the region. Cattle tick and the tick fevers are all notifiable and have legal implications for both the affected land and adjoining holdings. Cattle and deer are the primary hosts for cattle tick. The 3 strains of tick fever require cattle tick for transmission. Cattle straying onto the Trail could pose a cattle tick and tick fever risk to cattle on land adjoining the Trail.

Consequences: Moderate. Cattle illness or death on multiple enterprises.

Risk treatment options and activities to reduce risk:

- Reduce risk of cattle straying onto Trail. Stock proof Trail.
- Passive surveillance and notification by Trail users.



L8 Specific risk: Cattle tick and tick fever by horses

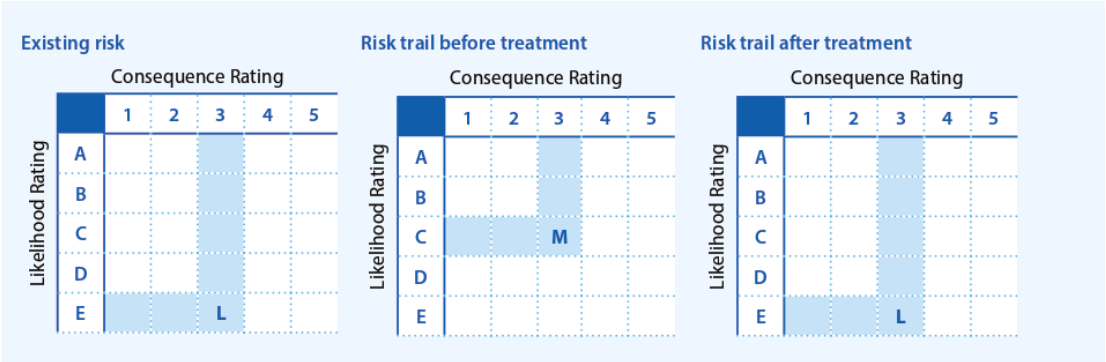
Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to horse movements on Trail. Risk is comparable with other horse movements on the north coast, for example along a rural road.

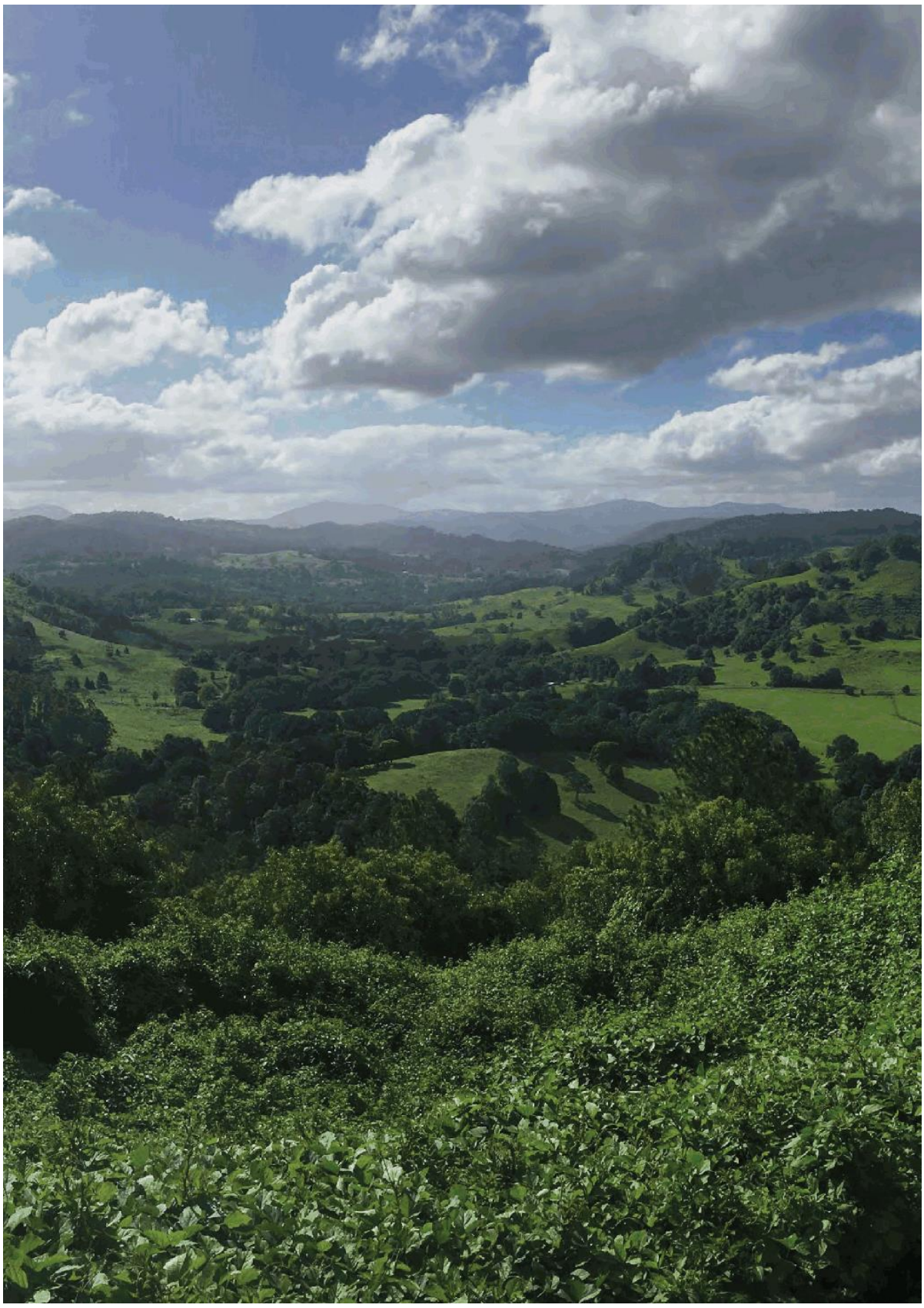
Rationale: Horses are a secondary host for cattle tick; they are not the preferred host but have the potential to carry low numbers of cattle tick. Horses moving from affected properties or from infected areas in Queensland pose the highest risk and for this reason regulatory compliance measures currently exist.

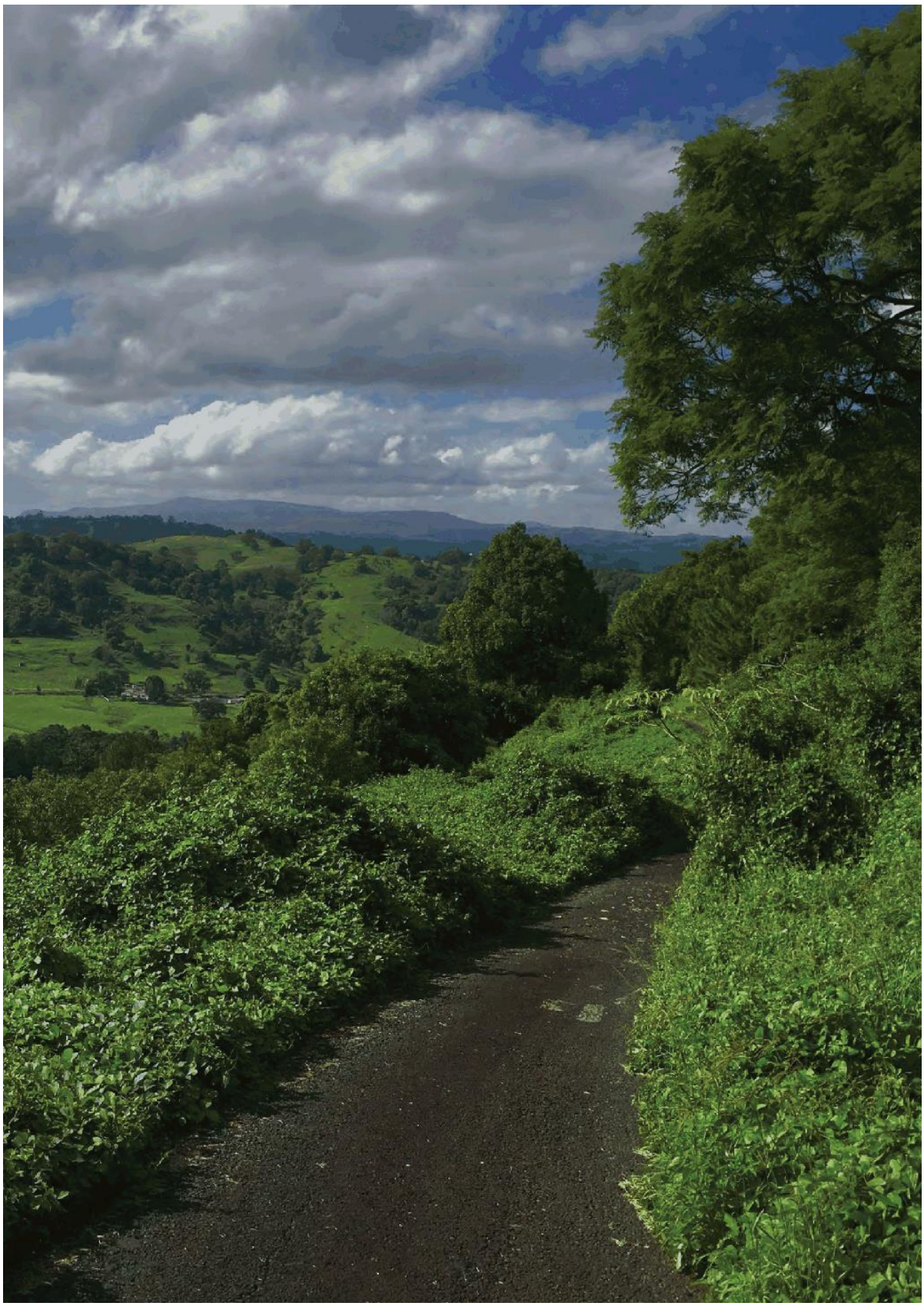
Consequences: Moderate. Cattle illness or death on multiple enterprises.

Risk treatment options and activities to reduce risk:

- Reduce cattle tick risk of horses on Trail. Should horses intended for the Trail be from properties or areas that are infected with cattle tick or have a neighbouring property with infection, they must be treated for cattle tick prior to movement onto the trial. This is an existing regulatory requirement.







L9 Specific risk: Cattle tick and tick fever by clothing or blankets

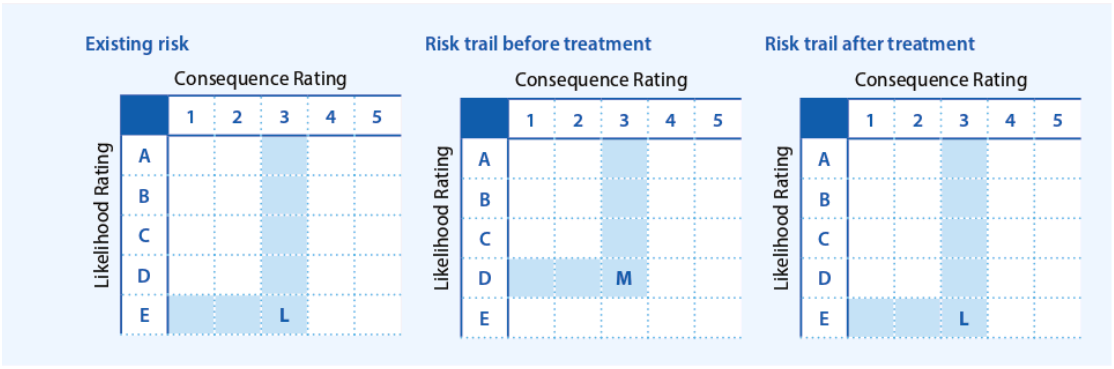
Risk of Rail Trail compared with existing risk: Risk is increased with Trail, but likelihood is considered unlikely. Risk comparable with similar use on or near cattle properties elsewhere on north coast.

Rationale: Inanimate objects that have been in contact with the ground on land infected with cattle tick may be a vector for tick transmission.

Consequences: Moderate. Cattle illness or death on multiple enterprises.

Risk treatment options and activities to reduce risk:

- Reduce risk of blankets or clothing from a cattle tick infected area. Signage to advise Trail users.



L10 Specific risk: Exotic animal diseases by wild birds

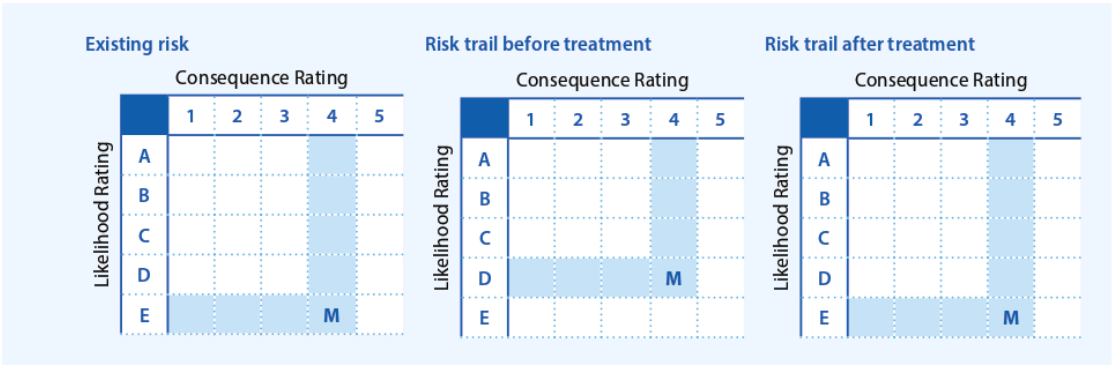
Risk of Rail Trail compared with existing risk: Risk is increased with Trail, as wild birds may be more attracted to the Trail. Risk of Trail is comparable with any properties that have poultry.

Rationale: Some exotic diseases of livestock have wild bird vectors. Avian Influenza is a risk from migratory seabirds and wild ducks. Newcastle disease is a risk from Psittacines (parrots). Both diseases are notifiable. Food waste from Trail users will be an attractant to scavenger species. Trail users may feed wild birds. Free ranging chickens which adjoin the Trail are most at risk.

Consequences: Major. Considerable animal illness or death on multiple properties. High economic and trade risk.

Risk treatment options and activities to reduce risk:

- Reduce risk of wild birds attracted to food waste left by Trail users. Provision of bins. Alternatively require Trail users to take waste with them. Signage for littering.
- Signage to inform Trail users of the problems associated with feeding wild birds.



L11 Specific risk: Endemic animal diseases by wild birds

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, as wild birds may be more attracted to the Trail. Risk of Trail is comparable with any properties that have poultry.

Rationale: Some endemic diseases of livestock have wild bird vectors. Human food waste from Trail users will be an attractant to scavenger species. Trail users may feed wild birds, particularly when picnicking. Ibis, ducks, seagulls and sparrows are examples of waste scavengers and are potential sources of Salmonella in livestock. Cases of Salmonella in cattle, suspected to be from spill-over from wild birds, have been recorded on the north coast.

Consequences: Minor. Limited animal illness or deaths on a single enterprise.

Risk treatment options and activities to reduce risk:

- Reduce risk by reducing numbers of wild birds attracted to Trail. Provide bins to reduce waste which may attract scavenger species. Signage to inform Trail users of the problems associated with feeding wild birds.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		H			

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

L12 Specific risk: Poisoning of livestock by plants

Risk of Rail Trail compared with existing risk: Risk is decreased with Trail, with improvements in vegetation management.

Rationale: The climate and soils of the far north coast have the potential for the growth of a very wide variety of vegetation, including those poisonous to livestock. Poisoning events are usually the result of livestock access to a plant which is novel to them. Grazing behaviour is learnt, so poisoning events often involve multiple casualties. Soil disturbance during the construction of the Trail may encourage the germination of Trema tomentosa (Poison Peach), a rainforest pioneer. Plants introduced for landscaping of the Trail may be poisonous; e.g. Oleander and Mother of Millions. Some toxic plants are bird spread; e.g. Cestrum nocturnum (Night-scented Jasmine) and Cestrum parqui (Green Cestrum).

Consequences: Minor. Limited animal illness or deaths on a single enterprise.

Risk treatment options and activities to reduce risk:

- Reduce the risk livestock contact with toxic plants. Scrutiny of all species used in landscaping for poisoning potential.
- Ongoing vegetation maintenance to identify and control plants with potential for poisoning.
- Promote passive surveillance and notification by other Trail users; e.g. signage to inform Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

L13 Specific risk: Poisoning of livestock by chemicals

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, through risks associated with construction. However, likelihood is unlikely.

Rationale: Ash from burnt Arsenic treated timber is a source of Arsenic poisoning. Cases of poisoning of livestock from burnt railway sleepers and bridge timbers have been documented on the north coast. Arsenic poisoning has also been recorded in cattle on the north coast from access to dip sites and old banana chemical storage sheds.

Consequences: Minor. Limited animal deaths on single enterprise.

Risk treatment options and activities to reduce risk:

- Reduce the risk livestock contact with Arsenic; timber removal and not burnt on site. Remediation for any sites identified as having potential for soil contamination with Arsenic.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Residues and Antimicrobial Resistance

L14 Specific risk: Chemical residues in livestock

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, through risk associated with construction. However likelihood is unlikely.

Rationale: Soil contaminated with persistent chemicals such as OC's (organochlorines) may be unearthed during construction and potentially pose a risk of residue contamination in livestock. OC residues caused disruption of trade for a significant number of cattle holdings on the north coast in the late 1980's and early 1990's.

Consequences: Minor. Few or single businesses affected economically.

Risk treatment options and activities to reduce risk:

- Reduce risk of cattle access to possible soil residues.
- Obtain track treatment history from state Rail.
- Design Trail to minimise soil disturbance.
- Soil excavated or exposed during construction is tested and is removed or treated to make safe.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

L15 Specific risk: Introduction of multiple antimicrobial resistant bacteria

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to increased numbers of people.

Rationale: Australia has much lower levels of antimicrobial resistance (AMR) bacteria than many overseas countries, so people from overseas are a risk of AMR to both people and livestock. AMR are carried on skin, footwear or in the gastrointestinal tract; human faeces is the highest risk. All livestock are at risk, but free range chickens are at higher risk given their propensity to stray and their scavenging habits. Free ranging chickens adjoin the Trail. Livestock access to imported foodstuffs is of much lower risk.

AMR is one of the biggest threats to both human and animal health today. It can lead to antibiotics being ineffective resulting in higher medical costs, longer hospital stays.

Consequences: Major. Major public health risk.

Risk treatment options and activities to reduce risk:

- Reduce risk of livestock contact with human faeces.
- Provide toilet and hand-wash facilities where practicable.
- Stock proof the Trail.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D					
E				M	

Risk trail before treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C				H	
D					
E					

Risk trail after treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D					
E				M	

Animal Welfare

AW1 Specific risk: Livestock impacted from domestic dogs, wild dogs or foxes

Risk of Rail Trail compared with existing risk: Risk is increased with Trail for domestic dogs, as the Trail will result in greater interface between domestic dogs and livestock. However, risks from wild dogs or foxes are likely to be lower with the Trail.

Rationale: Domestic and wild dogs and foxes impact domestic dogs, livestock and wildlife welfare by chasing and harassing, by attacking causing injury or death, or by diseases such as Hydatids and Neospora. Domestic dogs that are not leashed have the greatest risk of impacting livestock. Wild dog and fox numbers on or near Trail likely to be reduced, due reduction in harbour and deterrent effect of increased numbers of people. Wild dogs and foxes may be attracted to the Trail by food waste.

Consequences: Moderate. Some animal injury or death on multiple properties.

Risk treatment options and activities to reduce risk:

- Reduce risk of domestic dogs straying. Require dog owners to leash dogs, signage.
- Reduce risk of food waste left by Trail users. Provision of bins where practicable. Alternatively require Trail users to take waste with them. Signage for littering.
- Passive surveillance and notification by other Trail users.
- Wild dog and fox control as required.

Existing risk

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D					
E			L		

Risk trail before treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B			M		
C					
D					
E					

Risk trail after treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D					
E			L		

AW2 Specific risk: Impacts of Rail Trail on wild dog, fox and rabbit control programs

Risk of Rail Trail compared with existing risk: Trail will reduce wild dog and fox populations. However, control programs on adjoining holdings are at risk of being impacted as a result of the Trail due to some Trail users' perceptions of control programs.

Rationale: Wild dog and fox numbers on or near Trail likely to be reduced, due reduction in harbour and deterrent effect of increased numbers of people.

Rail lines are a harbour for rabbits and control programs are likely to be required. Landholders who adjoin the Trail may also conduct control programs for wild dog, foxes and rabbits as part of their ongoing management of vertebrate pests. Perception of risk of some Trail users' could impact on the use of baits in a control program, including distance restrictions for baiting. Shooting is also used to control pest species. Distance requirements and Trail users' perceptions could impact significantly on landholders' ability to control by this method.

Consequences: Moderate. Multiple properties affected.

Risk treatment options and activities to reduce risk:

- Reduce risk of adverse public perception by education of users; signage.
- Closure of sections of Trail during periods of control programs on or adjacent to the Trail. Not the preferred option.

Existing risk

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D			M		
E					

Risk trail before treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B			M		
C					
D					
E					

Risk trail after treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C			M		
D					
E					

AW3 Specific risk: Impacts of Rail Trail on livestock management practices

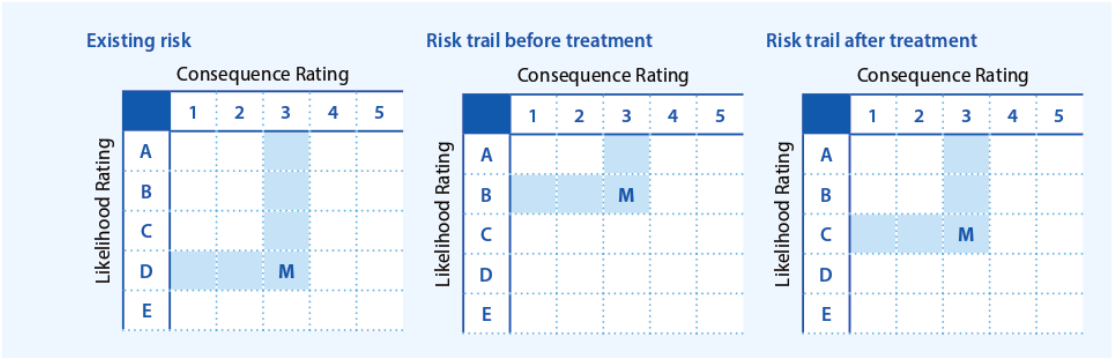
Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to high volume of people traffic and some Trail users' perceptions of animal welfare.

Rationale: There exists a broad diversity of public perceptions of what is acceptable humane treatment of livestock and of body condition. Routine management activities such as mustering, yarding, handling, milking and animal health treatments are perceived as unacceptable by some people. The keeping of pigs and calves in pens or farm dogs in pens or on chains is also viewed as cruelty by some. Body condition of livestock is driven by seasonal conditions, stage of lactation and breed. Dairy cattle are bred to partition fat to milk rather than to body fat and may be perceived as poor condition. Some individual beef cows will lose significant body weight and condition when feeding a calf. Some breeds, such as Jersey and Dexter have small calves which could be interpreted as runts. Certain extremist groups actively seek opportunities to discredit or disrupt the keeping of animals and may trespass to achieve these goals. The Trail will cause increased numbers of people interfacing at close quarters with livestock and is therefore likely to increase these risks.

Consequences: Moderate. Some impact on multiple properties. May have ramifications for industry as a whole.

Risk treatment options and activities to reduce risk:

- Reduce risk of perception. Adjoining landholders to practice sound animal welfare.
- Adjoining landholders may choose to improve security at high risk sites such as dairies and piggeries; e.g. remove from public eye, locks, and surveillance cameras.
- Signage to warn Trail users of biosecurity and trespassing.
- Passive surveillance by fellow Trail users.



AW4 Specific risk: Stress, injury or death of livestock from people

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to the higher number of people using the area for recreation.

Rationale: A small minority of people can be intentionally cruel to animals. Increased numbers of people interfacing with livestock at close quarters as a result of the Trail increases the probability of such individuals committing acts of cruelty.

Consequences: Moderate. Some impact on multiple properties. May have industry implications.

Risk treatment options and activities to reduce risk:

- Adjoining landholders may choose to improve security at high risk sites such as dairies and piggeries; e.g. remove from public eye, locks, and surveillance cameras.
- Signage to warn Trail users of biosecurity and trespassing.
- Passive surveillance by fellow Trail users.

Existing risk

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D			M		
E					

Risk trail before treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B			M		
C					
D					
E					

Risk trail after treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C			M		
D					
E					

Horses Using the Trail

H1 Specific risk: Hendra virus infection to horses

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to increase in numbers of horses using the Trail. However likelihood is unlikely. Trail risk is comparable to any situation on the north coast in which more than one horse is kept.

Rationale: Horses can be infected from Hendra virus from direct contact with flying fox urine (highly improbable with Trail) or from close contact with an infected horse (unlikely on Trail). Hendra virus infection is an uncommon (average 2 cases per year on the north coast). Horses shed the virus for up to 3 days prior to developing clinical signs of Hendra virus infection. Hendra infection in horses is prevented by vaccination. For the majority of public horse events (e.g. racing and many shows) there is no requirement for horses to be vaccinated.

Consequences: Minor. Limited animal illness or death.

Risk treatment options and activities to reduce risk:

- Managed risk to reduce risk of horse to horse spread; allow horses onto Trail, without requirement for vaccination.
- Information to horse owners concerning Hendra virus spread.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Dogs Using the Trail

D1 Specific risk: Risks to domestic dog health from paralysis ticks

Risk of Rail Trail compared with existing risk: Risk is decreased with Trail, due to improved vegetation management with Trail. Trail risk is comparable to any area on the north coast that has vegetation and tick potential.

Rationale: Paralysis tick (Ixodes holocyclus) envenomation is a major cause of sickness and death in dogs on the north coast. Native mammals; e.g. bandicoots are a carriers of paralysis ticks. The Trail has extensive areas of vegetation and tick numbers will be higher in those areas. Tick numbers are likely to decrease on the Trail due vegetation control.

Consequences: Minor. Limited animal illness or death. Paralysis tick prevention and treatment for dogs are available.

Risk treatment options and activities to reduce risk:

- Reduce risk of contact of dogs with ticks. Require dog owners to leash dogs, signage.
- Passive surveillance and notification by fellow Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A		M			
B					
C					
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

D2 Specific risk: Risks to domestic dog health from venomous snakes

Risk of Rail Trail compared with existing risk: Risk is decreased with Trail;built environment changes of the trail provide an area with less suitable environment, particular when combined with increased level of human traffic. Trail risks are comparable with other walking areas near vegetation throughout the north coast.

Rationale: Vegetation on or adjacent to the rail land and the rail substrate are a harbour for snakes. Vegetation management with the Trail development is likely to reduce this harbour. Increased levels of human activity with the Trail is likely to be a deterrent for snakes. Dogs actively seek out and attack snakes and are therefore of higher risk than other animals. Unleashed dogs are more at risk.

Consequences: Minor. Limited animal health risk requiring medical treatment.

Risk treatment options and activities to reduce risk:

- Reduce risk of dog interface with snakes.
- Require dog owners to leash dogs, signage.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

D3 Specific risk: Risks to domestic dogs from wild dog, fox or rabbit control programs

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to increase in domestic dog numbers using the Trail.

Rationale: Baiting may be conducted on the Trail to control wild dogs, foxes or rabbits. Landholders who adjoin the Trail may also conduct baiting programs as part of their ongoing management of vertebrate pests. Domestic dogs that use the Trail may pick up a bait; this risk increases significantly if the dogs are not leashed. Dogs that are not leashed have the potential to stray a considerable distance from the Trail and access bait.

Consequences: Moderate. Risk of some dog illness or deaths on multiple properties.

Risk treatment options and activities to reduce risk:

- Reduce risk of domestic dogs' access to bait.
- Require dog owners to leash dogs, signage.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B			M		
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

D4 Specific risk: Risks to domestic dogs from wild dogs

Risk of Rail Trail compared with existing risk: Risk is decreased with Trail. There will be an increase in domestic dog numbers using the Trail, however wild dog numbers on or near Trail likely to be reduced, due reduction in harbour and deterrent effect of increased numbers of people.

Rationale: Wild dogs actively seek out and attack domestic dogs. Wild dogs also carry disease and parasites transmissible to domestic dogs. These risks increase significantly for domestic dogs that are not leashed. Existing vegetation on or adjacent to the Trail provides harbour for wild dogs. This harbour will be significantly reduced with the Trail.

Consequences: Minor. Limited dog illness or death.

Risk treatment options and activities to reduce risk:

- Reduce risk of domestic dogs' contact with wild dogs. Require dog owners to leash dogs, signage.
- Wild dog control measures when required.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Horticulture

HORT1 Specific risk: Risks to horticulture from spray drift of chemicals

Risk of Rail Trail compared with existing risk: Risk is increased with Trail. Trail risk is comparable to chemical use on roadsides or adjoining holdings.

Rationale: Potential for spray drift or run off from chemicals such as herbicides used during construction or maintenance of the Trail. Horticultural and nursery enterprises adjoin the Trail could have plants affected. Organic farms have quality assurance requirements to maintain their status which could be affected.

Consequences: Minor. Few businesses at risk of economic or commercial loss.

Risk treatment options and activities to reduce risk:

- Reduce risk of chemical spray drift or run off. Consultation with adjoining landholders before chemical use. Observe label requirements.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

HORT2 Specific risk: Risks to horticulture from soil borne pathogens

Risk of Rail Trail compared with existing risk: Risk is increased with Trail. Trail risk comparable with soil movement for other reasons.

Rationale: Horticultural and nursery enterprises that adjoin the Trail could be potentially be impacted by soil borne plant pathogens introduced due to the Trail. This could be during Trail construction or maintenance. Of much lower risk is pathogen introduction through Trail users, dogs or horses. Examples include Phytophora in avocados, Panama Disease in bananas, Fusarium in nursery or hydroponics.

Consequences: Minor. Few businesses at risk of economic or commercial loss.

Risk treatment options and activities to reduce risk:

- Reduce risk of introduction of plant pathogens; scrutiny of soil and nursery stock used in Trail construction and maintenance.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

HORT3 Specific risk: Risks to horticulture from plants used in Trail landscaping

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to landscaping with Trail construction. However, any risks due to existing vegetation will decrease with vegetation changes in Trail construction.

Rationale: Horticultural and nursery enterprises that adjoin the Trail could potentially be impacted by plants used in landscaping that could be vectors for horticultural pests and diseases. E.g. native, ornamental or fruiting trees that are a source of fruit fly, scale or aphids.

Consequences: Minor. Few businesses at risk of economic or commercial loss.

Risk treatment options and activities to reduce risk:

- Reduce risk of introduction of plant which have vector potential; scrutiny of species used in Trail construction and maintenance.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E		N			

Wildlife and the Environment

W&E1 Specific risk: Risks to wildlife from Trail users (people)

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to forecast high volume of people traffic over time.

Rationale: The Trail has the potential to impact a diverse range of wildlife. This may through be through deterrence; e.g. vibration of the pavement, sound and movement of pushbikes, walkers, dogs or horses. The risk is present for nocturnal wildlife due to noise and torchlights. Shy species are more likely to be impacted; e.g. Swamp Wallabies and Pademelons. A proportion of Trail users may actively harass or kill wildlife, particularly reptiles. Of lower risk is disease introduction to wildlife.

Consequences: Minor. Localised environmental impact. May have ramifications for local populations of some species.

Risk treatment options and activities to reduce risk:

- Reduce risk of interface of wildlife with Trail use.
- Trail design to maintain or improve wildlife habitat on or adjacent to the Trail; e.g. vegetation buffers. Signage to encourage respect for wildlife.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail after treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C		L			
D					
E					

W&E2 Specific risk: Risks to wildlife from domestic dogs

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to Trail users introducing dogs to the area.

Rationale: The presence of domestic dogs on the Trail has the potential to impact a diverse range of wildlife, including birds, mammals and reptiles. This may be through be deterrence from their smell, barking or harassment. Dogs not leashed may give chase or attack wildlife. Simply chasing macropods can cause myopathy; a fatal condition. Use of the Trail at night by domestic dogs is likely to impact nocturnal wildlife. Of lower risk is disease introduction to wildlife; e.g. mange from dogs to marsupials.

Consequences: Minor. Localised environmental impact. May have ramifications for local populations of some species.

Risk treatment options and activities to reduce risk:

- Reduce risk of interface of wildlife with domestic dogs.
- Trail design to maintain or improve wildlife habitat on or adjacent to the Trail; e.g. vegetation buffers.
- Reduce risk of domestic dogs straying. Require dog owners to leash dogs, signage.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A		M			
B					
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

W&E3 Specific risk: Risks to aquatic environment and wildlife

Risk of Rail Trail compared with existing risk: Trail risk is lower than existing risk, as some waterways near Trail are currently being used illegally by public. Trail risk comparable to waterways elsewhere in the district.

Rationale: The use of waterways adjoining or close to the Trail for recreational purposes will not be a permitted activity and considered trespass. Activities by Trail users such as swimming, canoeing, picnicking, fishing or use of waterways by domestic dogs have the potential to impact a range of aquatic wildlife. These include platypus, tortoises, fish, waterfowl or amphibians. Risks include disturbance, loss of habitat, reduced water quality and deliberate taking of life (fishing). There is the potential for the introduction of invasive species; e.g. Tilapia, aquatic weeds. Disease introduction and spread is also risk. e.g. Bellingen River Snapping Turtle virus of 2015.

Consequences: Minor. Localised environmental impact. May have ramifications for local populations of some species.

Risk treatment options and activities to reduce risk:

- Reduce risk of illegitimate use of waterways. Signage concerning trespass.
- Reduce risk of domestic dogs straying. Require dog owners to leash dogs, signage.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

W&E4 Specific risk: Risks to amphibians on and near the Trail

Risk of Rail Trail compared with existing risk: Trail risk is lower than existing risk, as some waterways near Trail are currently being used illegally by public. Trail risk comparable to waterways elsewhere in the district.

Rationale: The use of waterways adjoining or close to the Trail for recreational purposes will not be an encouraged activity and in many cases will likely be trespass to private property. Several endangered species of frog are found on the far north coast, including Great Barred frog (Mixophyes fasciolatus). Illegitimate use of waterways may increase the risk to frogs and other amphibians to diseases. Severe Perkinsea infection (SPI) of tadpoles is exotic to Australia and found in North America, where it has caused many mass mortalities. Chytridiomycosis (Amphibian chytrid fungus disease) is endemic to Australia and is still spreading. There is the potential for exposure of amphibians to the harmful effects of sunscreen and insect repellents. Some frog species and their tadpoles may be intentionally killed if mistaken for Cane Toads. Use of herbicides near to waterways for Trail construction and maintenance could also impact on amphibians.

Consequences: Moderate. Medium environmental impact. May have ramifications for local populations of some species in the event of disease introduction.

Risk treatment options and activities to reduce risk:

- Reduce risk of unlawful access or of use of waterways. Signage concerning trespass.
- Passive surveillance and notification by other Trail users.
- Reduce risk of herbicide use near waterways. Compliance with label requirements.

Existing risk

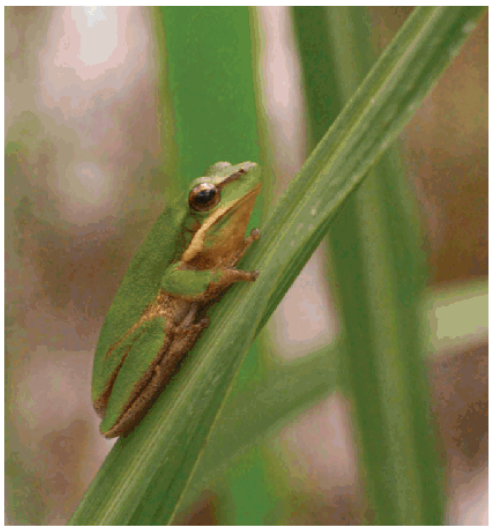
Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B			M		
C					
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B			M		
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D			M		
E					



W&E5 Specific risk: Risk to microbats in the Rail tunnel

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to increase in human movement.

Rationale: the 524 metre long tunnel has had no significant use since rail closure in 2004 and is currently an opportunist roosting site to two species of microbat; the Eastern Horseshoe Bat and Large-footed Myotis. The potential introduction of the exotic fungal disease of microbats; white-nose syndrome has been considered. However, the risk of establishment of the fungus is negligible and not included in the risk assessment; temperatures in the tunnel do not favour the fungus, nor do microbats have a significant winter torpor on the north coast to succumb to the disease. Trail users of the tunnel could cause significant disturbance to the microbats, particularly if intentional. Note, the Council, in connection with its extensive monitoring programme, is due to trail a microbat refuge within the tunnel, which if successful would provide a positive treatment option.

Consequences: Minor. Localised environmental impact. Insectivorous bats are a valuable asset to agriculture from their feeding on pest insects.

Risk treatment options and activities to reduce risk:

- Reduce risk of interface between microbats and Trail users.
- Construction of barriers or alternative roost sites.
- Passive surveillance and notification by other Trail users. Signage.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

W&E6 Specific risk: Risk to glow worms in the Rail tunnel

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to increase in human movement.

Rationale: glow worms occur only in Australia and New Zealand and are a significant tourist attraction where they are found. The use of long term use of glow worm sites for tourism and measures to reduce environmental impacts are well established. e.g. for the Lithgow rail tunnel and Natural Bridge at Springbrook National Park. Potential risks for glow worm decline are direct torch light, physical touching and the use of insect repellents and insecticides.

Consequences: Minor. Localised environmental impact, loss of tourism.

Risk treatment options and activities to reduce risk:

- Reduce risk factors from Trail users; signage regarding torch light, physical touching and the use of insect repellents and insecticides.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

W&E7 Specific risk: Risks to wild bird health from increased people

Risk of Rail Trail compared with existing risk: Risk increased with Trail, due to increased numbers of people and changes in vegetation on the Trail. Trail risks are comparable to many recreational areas and urban environments.

Rationale: Food waste from Trail users will be an attractant to scavenger species. Trail users may feed wild birds. The change in vegetation type with Trail construction may change the number of wild birds and the species mix of birdlife. When wild birds congregate in numbers greater than they would normally in the environment there is the potential for spread of disease. E.g. Psittacine beak and feather disease in the parrot family. Salmonellosis, internal and external parasites in many species. Pigeon Paramyxovirus spread from feral pigeons to local native doves and pigeons. Trichomoniasis spread from feral pigeons to many other species of birds at feeding sites. Human foods and less reliance on natural food sources cause dietary imbalances, metabolic disorders and food dependency. Access to human food creates a change in the wild bird species mix to more dominant species.

Consequences: Minor, Localised environmental impact.

Risk treatment options and activities to reduce risk:

- Reduce risk of food waste left by Trail users. Provision of bins. Alternatively require Trail users to take waste with them. Signage for littering.
- Signage regarding feeding wild birds.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

W&E8 Specific risk: Risks to wildlife from food waste

Risk of Rail Trail compared with existing risk: Risk increased with Trail, due to increased numbers of people. Trail risks are comparable to many recreational areas and urban environments.

Rationale: Wildlife which scavenge human food waste from Trail users are at risk of disease. These include bird to bird diseases listed above. Native mammals that scavenge are at risk of Trichinellosis and Salmonellosis. Human food waste from Trail users will be an attractant to rats and mice. Rodents carry diseases that can infect wildlife. These include Angiostrongylus (rat lungworm), Salmonellosis, Leptospirosis, Borrelia and Encephalomyocaditis virus (EMC).

Consequences: Minor. Localised environmental impact.

Risk treatment options and activities to reduce risk:

- Reduce risk of food waste left by Trail users. Provision of bins. Alternatively require Trail users to take waste with them. Signage for littering.
- Signage regarding feeding wild birds.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

W&E9 Specific risk: Risks to wildlife from fencing

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to fencing as part of Trail construction. Trail risks are comparable to most rural and urban environments. Much of the railway corridor land is already fenced as this was needed to maintain safe operation of the railway and prevent stock from straying from adjoining private properties.

Rationale: A wide variety of species of wildlife have been documented entangled in barb wire fences. Flying nocturnal species, such as bats and owls are considered more at risk than diurnal species. There are human health risks for untrained people handling wildlife, any rescues should be undertaken by those who are trained. Wildlife proof fencing such as mesh fencing can change the normal movement of terrestrial species such as macropods and lead to bottlenecks to movement.

Consequences: Minor. Localised environmental impact.

Risk treatment options and activities to reduce risk:

- Reduce risk of wildlife entanglement and changes to movement flows. Consider in Trail design and construction.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

W&E10 Specific risk: Risks for rabbit harbour

Risk of Rail Trail compared with existing risk: Risk is reduced with Trail. As vegetation is more managed and harbour reduced.

Rationale: Several features of rail lines generally make them favourable for rabbit harbour. Rabbits prefer a site that is flood free. They will burrow extensively under a paved surface. There may be unmanaged vegetation on land adjacent to rail lines. Grass on adjoining grazing land, small holdings and urban yards is a nearby food source to rabbit harbour.

Consequences: Minor. Localised environmental and agricultural impacts.

Risk treatment options and activities to reduce risk:

- Reduce risk of rabbit harbour. Consider in Trail design and construction.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

W&E11 Specific risk: Risks for weeds and invasive plant species

Risk of Rail Trail compared with existing risk: Risk is decreased with Trail, as vegetation will be more managed.

Rationale: Much of the rail land had not had significant weed control since rail closure. The Trail offers an opportunity to significantly reduce the existing weed infestations.

The climate and soils of the far north coast have the potential for the growth of a very wide variety of vegetation, including invasive plant species. These species may be environmental threat to land or waterways, invasive to pastures and crops or toxic to livestock. Endemic species, which are in Australia, but not yet established near the Trail pose the greatest risk. Exotic invasive species may be introduced with landscaping of the Trail. E.g. Singapore Daisy. Faeces from horses or from straying cattle on the Trail have the potential to carry new plant species. E.g. Tropical Soda Apple in cattle faeces. Of much lower risk are weed seeds introduced in footwear or clothing of Trail users or the coats of horses and dogs.

Consequences: Minor. Localised environmental and agricultural impacts.

Risk treatment options and activities to reduce risk:

- Reduce risk of introduction of invasive plant species. Consider in Trail landscaping. Ongoing maintenance to control plants with weed potential.
- Passive surveillance and notification by other Trail users

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B		M			
C					
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C		L			
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

W&E12 Specific risk: Trail impacts on weed control programs

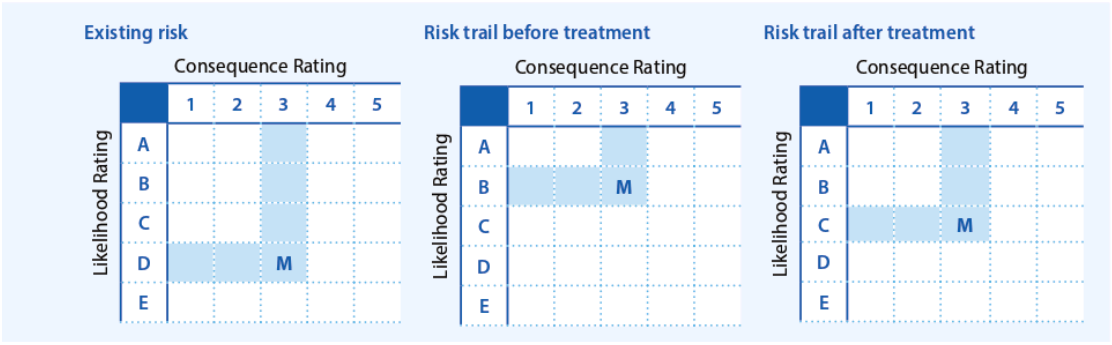
Risk of Rail Trail compared with existing risk: Risk is increased with Trail due to high volume of people traffic and perceptions of some Trail users.

Rationale: Routine use of herbicides and pesticides are required by landholders to control vegetation and for the protection of the environment, crops and pastures. Examples in the Tweed include herbicides for woody weeds such as Groundsel, Camphor Laurel and Privet and for pasture weeds such as Giant Parramatta Grass. Also chemical use for crop protection on sugar cane, horticulture and tree crops. There exists a broad diversity of public perceptions of risk and of what is acceptable agricultural practice. There is the potential for pressure from some Trail users on landholders adjoining the Trail to limit or cease chemical use. This could impact on environmental and agricultural protection. A similar situation may arise in the course of maintenance of the Trail.

Consequences: Moderate. Likely to impact on multiple properties. May have ramifications for industry as a whole.

Risk treatment options and activities to reduce risk:

- Reduce risk of perception; adjoining landholders to use chemicals as per label. Adjoining landholders may choose to use chemical during periods of lower public use of Trail.
- Eliminate public interface with chemical use. Scheduled periods of Trail closure to enable chemical use on the Trail and adjoining landholdings. This is not the preferred option.



W&E13 Specific risk: Trail risks to native flora

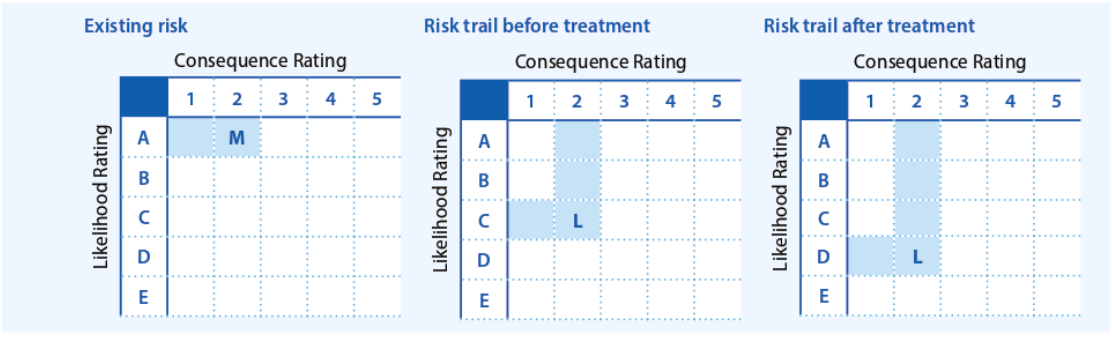
Risk of Rail Trail compared with existing risk: Risk is reduced with Trail, as vegetation will be more managed and under closer observation by public.

Rationale: Many sections of the rail land are currently not frequented by the public and prone to removal of plants, flowers or seed. E.g. Staghorn ferns and vulnerable rainforest species. There are some sections of the land on and adjacent to the rail that contain a diverse range of native flora. Trail offers the opportunity for rehabilitation, regeneration or habitat creation through plantings. A small proportion of Trail users may vandalise plants; recently planted trees may be of higher risk.

Consequences: Minor. Localised environmental impacts.

Risk treatment options and activities to reduce risk:

- Species selection for clearing and planting to be considered in Trail landscaping design. Identify opportunities for rehabilitation, regeneration or habitat creation on Trail land and adjoining holdings.
- Passive surveillance and notification by other Trail users.



W&E14 Specific risk: Introduction and spread of Phytophthora

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to soil movement and landscaping as part of Trail construction. Trail risks are comparable to many other developments which involve soil movement or landscaping.

Rationale: Phytophthora cinnamomi is an introduced soil borne organism that causes disease and death of a diverse range of native plants (known as "die back"). Native birds and mammals that are dependent on these species for food or shelter are therefore also impacted. The disease also affects some ornamental, horticultural and forestry species, so adjoining landholdings could be at risk. Soil, nursery stock or machinery used during the construction of the Trail have the potential to introduce and spread the disease. Of significantly lower likelihood is soil movement on footwear, horses, prams and bikes etc. on Trail.

Consequences: Minor. Localised environmental impacts.

Risk treatment options and activities to reduce risk:

- Reduce risk of introduction. Consider in Trail design and landscaping.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C			L		
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D		L			
E					

W&E15 Specific risk: Introduction and spread of Yellow Crazy Ants and Red Imported Fire Ant

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to movement of soil, mulch and landscaping plants as part of Trail construction. Trail risks are comparable to many other developments which involve soil or mulch movement or landscaping. Improved surveillance with Trail due to increased opportunity for detection by Trail users.

Rationale: Yellow Crazy Ants (YCA, Anoplolepis gracilipes) and Red Imported Fire Ant (RIFA, Solenopsis invicta) infestations are present in parts of Brisbane. Yellow Crazy Ants are present in Lismore. Soil, mulch, nursery stock or machinery used during the construction of the Trail have the potential to introduce the ants. Both ant species are serious invasive pests affecting people, animals and the environment. Both species are time consuming and expensive to control and eradicate. Both are subject to regulation.

Consequences: Major. Potential for serious environmental impacts.

Risk treatment options and activities to reduce risk:

- Reduce risk of introduction. Consider in Trail design and landscaping. Scrutiny of sources of soil and landscaping plants.
- Passive surveillance and notification by other Trail users. Signage.

Existing risk

Consequence Rating

Likelihood Rating	1	2	3	4	5
A					
B					
C					
D				M	
E					

Risk trail before treatment

Consequence Rating

Likelihood Rating	1	2	3	4	5
A					
B					
C				H	
D					
E					

Risk trail after treatment

Consequence Rating

Likelihood Rating	1	2	3	4	5
A					
B					
C					
D					
E				M	

W&E16 Specific risk: Fire risks

Risk of Rail Trail compared with existing risk: Risk is reduced with Trail, as vegetation will be more managed. Improved surveillance with Trail due to increased opportunity for detection by Trail users.

Rationale: Existing rail land is largely not managed for fire risk. There are several points on the Trail that are of higher fire risk due to vegetation type, aspect and topography. Appropriate design of landscaping and species selection is an opportunity to reduce fire hazards. Increased human presence from Trail use gives opportunity for earlier fire detection. However, inappropriate human activity may increase risk increase with Trail.

Consequences: Major. Serious impacts on the environment, human and livestock safety. Considerable damage or loss to multiple properties.

Risk treatment options and activities to reduce risk:

- Reduce risk of fire hazards. Consider in Trail design, landscaping and ongoing management. Lighting of fires to be illegal on Trail, or alternatively subject to seasonal restrictions and declarations.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B				H	
C					
D					
E					

Risk trail before treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C				H	
D					
E					

Risk trail after treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D				M	
E					

Humans

HU1 Specific risk: Human health risks from paralysis ticks

Risk of Rail Trail compared with existing risk: Risk reduced with Trail, due to improved vegetation management with Trail. Trail risks comparable with other walking areas near vegetation throughout the north coast.

Rationale: Paralysis ticks are important to human health when they attach and feed; from their toxin which can cause an acute life threatening anaphylactic reaction, local reaction, paralysis, the immune disorder mammalian meat allergy and as vectors of the disease caused by Borrelia. Native mammals e.g. Bandicoots are a carrier of paralysis ticks. Paralysis ticks (Ixodes holocyclus) may attach to people on the Trail. Use of repellents reduces risk of tick attachment.

Consequences: Moderate. Limited public health risk requiring medical treatment.

Risk treatment options and activities to reduce risk:

- Reduce risk of human interface with ticks; signage concerning risk and prevention.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A			H		
B					
C					
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B			M		
C					
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C			M		
D					
E					

HU2 Specific risk: Human and animal health risks from venomous snakes

Risk of Rail Trail compared with existing risk: Risk is decreased with Trail, due to reduction in harbour and increased level of human traffic. Trail risks comparable with other walking areas near vegetation throughout the north coast.

Rationale: Vegetation on or adjacent to the rail land and the rail substrate are a harbour for snakes. Vegetation management with the Trail development is likely to reduce this harbour. Increased levels of human activity with the Trail is likely to be a deterrent for snakes. Snakes of any species can cause horses to shy and could therefore place people at risk.

Consequences: Moderate. Limited public health risk requiring medical treatment.

Risk treatment options and activities to reduce risk:

- Reduce risk of human interface with snakes. Signage concerning risk.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C			M		
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D			M		
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

HU3 Specific risk: Risk to human health from wild dogs

Risk of Rail Trail compared with existing risk: Risk is decreased with Trail, due to reduction in harbour and increased level of human traffic. Trail risks comparable with other walking areas near vegetation throughout the north coast.

Rationale: In some sections there is considerable vegetation on or adjacent to the rail land, which can be harbour for wild dogs. Vegetation management with the Trail development is likely to reduce this harbour. Generally, increased levels of human activity are a deterrent to wild dogs. However, in recent years wild dogs have stalked and attacked people on the north coast close to urban areas. The risk increases if wild dogs lose their instinctive fear of humans, in particular from access to food or from being fed. The risk increases if people are accompanied by their dogs, as wild dogs actively seek out domestic dogs. The risk of attack increases in the early morning and after dark.

Consequences: Moderate. Limited public health risk requiring medical treatment.

Risk treatment options and activities to reduce risk:

- Reduce risk of human interface with wild dogs. Signage concerning risk and prevention. Wild dog control measures when required.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C			M		
D					
E					

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D			M		
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

HU4 Specific risk: Risk to human health from wild mammals and birds

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to level of human traffic and possible increase human interface with wildlife. Trail risks are comparable to many recreational areas and urban environments.

Rationale: Some human diseases have wildlife vectors. Any food waste from Trail users will be an attractant to scavenger bird species. Trail users may feed wild birds, particularly when picnicking. Wild birds are a source of lice. Ibis, ducks, seagulls and sparrows are waste scavengers and are potential sources of Salmonella. Wild birds, particularly the parrot group can transmit Psittacosis. The faeces of feral pigeons are a source of Histoplasmosis and Cryptococcal infection.

Food waste is also an attractant to rats and mice. Rodents carry diseases that can infect people. These include Angiostrongylus (rat lungworm), Salmonellosis, Leptospirosis, Borrelia and Encephalomyocaditis virus (EMC).

Consequences: Moderate. Limited public health risk requiring medical treatment.

Risk treatment options and activities to reduce risk:

- Reduce risk of active or passive access to human food; provide bins to reduce waste. Signage regarding feeding wild birds and use of bins.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C			M		
D					
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D			M		
E					

HU5 Specific risk: Risk to human health from Australian Bat Lyssavirus from microbats in the Rail tunnel

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due higher numbers of people entering the tunnel.

Rationale: the 524 metre long tunnel has had no significant use since rail closure in 2004 and is currently an opportunist roosting site to two species of microbat. Australian Bat Lyssavirus (ABLV) has been found in some species of microbat in Australia and all species are considered potential vectors of the virus. Human exposure to ABLV is from bat bites or scratches. ABLV is also found in flying foxes, however the risk of transmission from flying fox to Trail users is considered remote. Compared with rabies in other continents the risk of ABLV to wildlife, domestic animals and humans is extremely low. Public health recommend that only vaccinated people should handle bats.

Note, the Council, in connection with its extensive monitoring programme, is due to trial a microbat refuge within the tunnel, which if successful would provide a positive treatment option.

Consequences: Moderate. Limited human health risk requiring medical treatment when exposed. However, unless treated post exposure, it is a fatal disease.

Risk treatment options and activities to reduce risk:

- Reduce risk of interface between microbats and Trail users. Construction of barriers or alternative roost sites. Signage to warn risk of risks.
- Passive surveillance and notification by other Trail users.

Existing risk

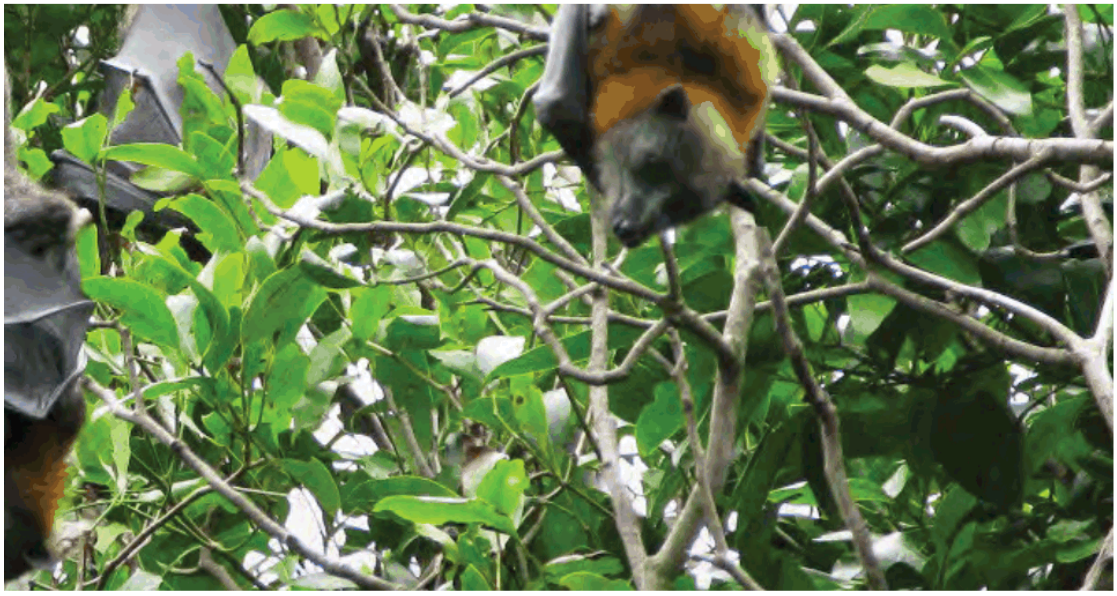
Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D			M		
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		



HU6 Specific risk: Risk to human health from bat faeces in Rail tunnel

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to higher numbers of people entering the tunnel. However likelihood of infection from Trail is unlikely.

Rationale: The faeces of microbats are a potential source of Histoplasmosis and Cryptococcal infection in humans. These diseases can occur in people who frequent caves, particularly those that are poorly ventilated. The tunnel has natural flow through ventilation, so the risk of these diseases from the tunnel is lower than caves.

Consequences: Moderate. Limited human health risk requiring medical treatment when exposed.

Risk treatment options and activities to reduce risk:

- Reduce risk of interface between microbat faeces and Trail users. Construction of barriers or alternative roost sites.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D			M		
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

HU7 Specific risk: Human health risks from domestic dogs using the Trail

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to domestic dogs using the Trail. However the likelihood of human infection on the Trail is unlikely. Risk is comparable to any situation on the north coast in which people have contact with dogs.

Rationale: Handling young dogs can result in dermatomycosis (ringworm) or roundworm infection. Handling dogs infected with hydatids, then eating without washing hands first can result hydatid infection.

Consequences: Moderate. Limited human health risk requiring medical treatment.

Risk treatment options and activities to reduce risk:

- Reduce risk of unwanted dog to human contact. Require dog owners to leash dogs. Signage.
- Passive surveillance and notification by other Trail users.

Existing risk

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

Risk trail before treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D			M		
E					

Risk trail after treatment

Likelihood Rating \ Consequence Rating	1	2	3	4	5
A					
B					
C					
D					
E			L		

HU8 Specific risk: Risk to human health from hendra virus from horses

Risk of Rail Trail compared with existing risk: Risk is increased with Trail, due to horses using the Trail. However likelihood of infection on Trail is rare. Trail risk is comparable to any situation on the north coast in which people have contact with horses.

Rationale: Hendra virus infection in horses is uncommon (average 2 cases per year on the north coast). Cases in humans are rare, with only 7 reported cases in Australia. Horses shed the virus for up to 3 days prior to developing clinical signs of Hendra virus infection. Transmission from horses to humans requires close contact (e.g. broken skin) with blood or body fluids of an infected horse. Such contact is highly unlikely on the Trail, particularly for the non-horse users of the Trail. Post exposure treatment for humans is available. For the majority of public horse events (e.g. racing and many shows) there is no requirement for horses to be vaccinated.

Consequences: Moderate. Limited human health risk requiring medical treatment.

Risk treatment options and activities to reduce risk:

- Manage risk; allow horses onto Trail, without requirement for vaccination. Information to horse owners concerning Hendra virus spread.

Existing risk

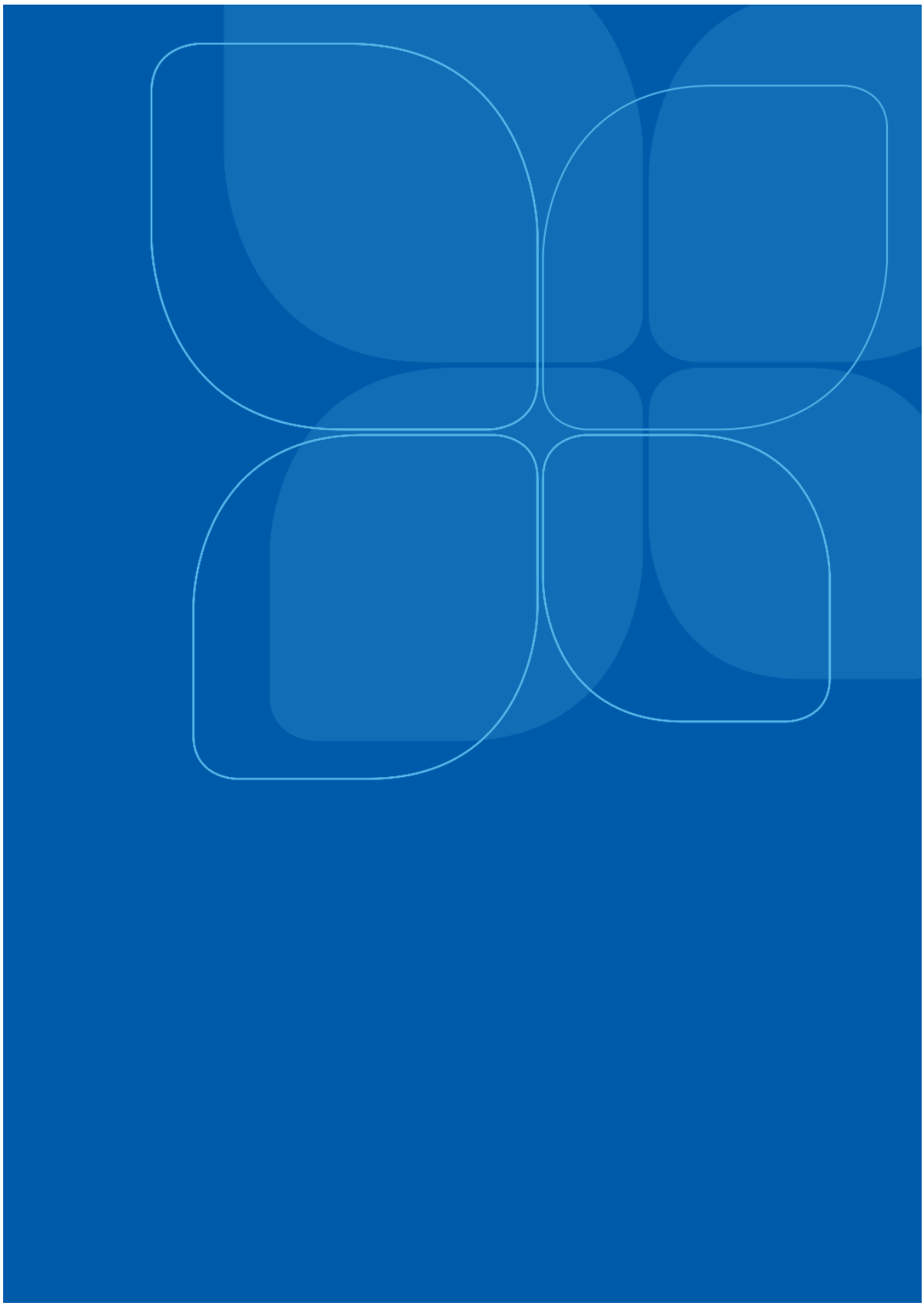
Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D					
E			L		

Risk trail before treatment

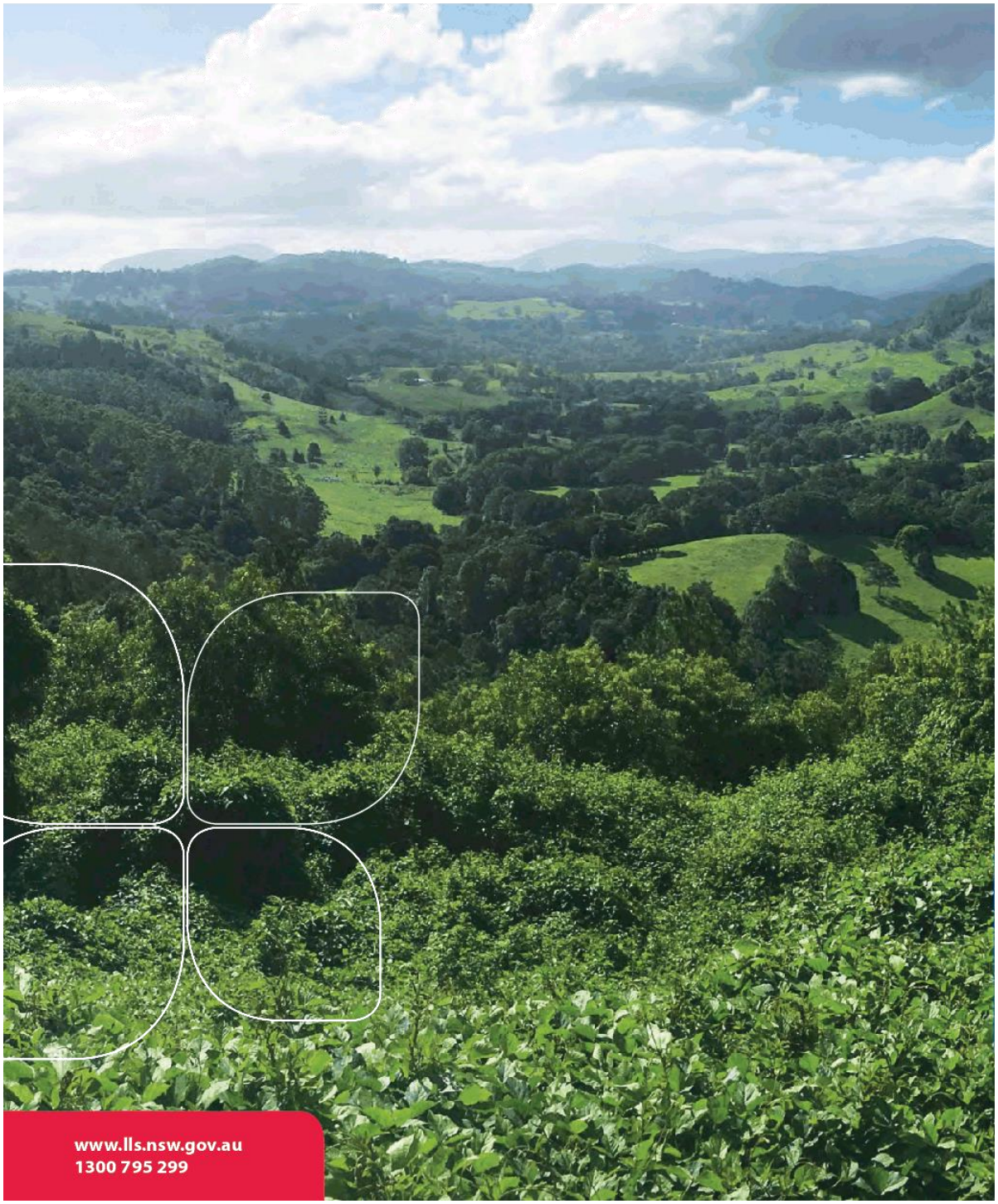
Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D			M		
E					

Risk trail after treatment

Likelihood Rating	Consequence Rating 1	2	3	4	5
A					
B					
C					
D			M		
E					



NSW GOVERNMENT Local Land Services



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7.7 LAND DEALINGS - LOT 305 CP817146

File No:	**2021, 1711**
Attachments:	**1. Lot 305 CP817146⇩**
Authorising Officer:	**Peter Kofod - General Manager Regional Services**
Author:	**Martin Crow - Manager Infrastructure Planning**

SUMMARY

Council have been approached by the Department of Resources to formalise tenure arrangements in relation to the parcel of land that contains the Campbell Street Sewerage Pump Station and is utilised by the Department of Education (Rockhampton State High School) for car parking.

OFFICER'S RECOMMENDATION

THAT Council:

1. Authorise the Chief Executive Officer (Property and Resumptions Officer) to apply to purchase Lot 305 CP817146 (49 Campbell Street, Wandal) from the Department of Resources; and
2. If the application to purchase is successful, authorise the Chief Executive Officer (Manager Infrastructure Planning) to negotiate the terms and conditions to enter into a 20 year lease at market rent with the Department of Education pursuant to section 236(1)(b)(i) of the *Local Government Regulation 2012 f*or the use of available areas within Lot 305 CP817146 for school car parking purposes.

COMMENTARY

As you can see from the attached image, there is significant Council Infrastructure located on this parcel of land. This infrastructure includes:

1. Sewerage Pump Station (SPS) well and building and associated valves;
2. 300mm gravity sewer serving the area to the northwest;
3. 150mm gravity sewer serving the area to the northeast;
4. 150mm gravity sewer serving the area to the west;
5. 150mm rising main (hashed line) connecting the Campbell Street sub-catchment to the downstream gravity network of the South Rockhampton Sewerage Scheme; and
6. 150mm pumped bypass pipe to the east that enables the SPS to be managed during extreme weather events/floods.
7. 600mm stormwater and dual 900mm stormwater drains serving the area to the west.

It is evident that Council use almost the entire parcel of land and on this basis and to best protect Council's interests, it makes sense to apply to purchase the entire parcel of land. A possible alternative of taking of easements doesn't make much sense in this instance as the bulk of the parcel would be impacted and constrained by the easements which would be reflected in the acquisition costs for the easements.

Council's ownership of the parcel of land does not preclude the Rockhampton State High School from utilizing the balance of the parcel of land for parking. This arrangement would need to be formalized such that the formalization and any future expansion of the car parking arrangements do not interfere with Council's access and operational requirements and future expansion plans.

The proposed mechanism to achieve this is a long term lease arrangement between Council and the Department of Education. Section 236(1)(b)(i) of the Local Government Regulation 2012 allows Council to lease land to a government agency without having to tender provided there is a Council Resolution that the lease is granted under this section.

A preliminary valuation has been received from Department of Resources indicating the purchase price is likely to be in the order of $70,000 to $80,000. Council has also arranged for an independent valuation which has indicated a purchase price of $40,000. The Department of Resources may or may not consider Council's valuation and so the actual purchase price will not be known until Council receives a formal offer from the Department of Resources which may be 12 to 18 months from the date Council lodges its purchase application.

Nevertheless the purchase of the parcel of land is sound and the process should be commenced to secure the land for Council and commence discussions with the Department of Education for appropriate arrangements to allow parking for the school on the parcel of land.

BACKGROUND

In July 2021, Council was approached by representatives of the Department of Education enquiring about purchasing a parcel of land next to the Rockhampton State High School in Campbell Street (Lot 305 CP 817146 - 49 Campbell Street, Wandal). This parcel of land is Unallocated State Land, that is owned by the State of Queensland, but has significant Council infrastructure located upon it including the Campbell Street Sewerage Pump Station but is also used extensively by the school for parking. The school are looking to formalize these parking arrangements.

BUDGET IMPLICATIONS

There is currently no specific budget allocated in the Fitzroy River Water capital budget for this land purchase. Sufficient funds based upon the Department of Resources preliminary valuation will need to be included in the 2022/23 FRW capital budget.

LEGISLATIVE CONTEXT

Section 236(1)(b)(i) of the *Local Government Regulation 2012* allows Council to lease land to a government agency without having to tender provided there is a Council Resolution that the lease is granted under this section.

CONCLUSION

Almost the entire Lot 305 CP817146 is used by Council for sewerage and stormwater infrastructure. The entire parcel of land should be purchased by Council to best protect Council's interests.

Council's ownership of the parcel of land does not preclude the Rockhampton State High School from utilizing the significant portions of the parcel of land for parking however this arrangement would need to be formalized through a long term lease arrangement between Council and the Department of Education.

LAND DEALINGS - LOT 305 CP817146

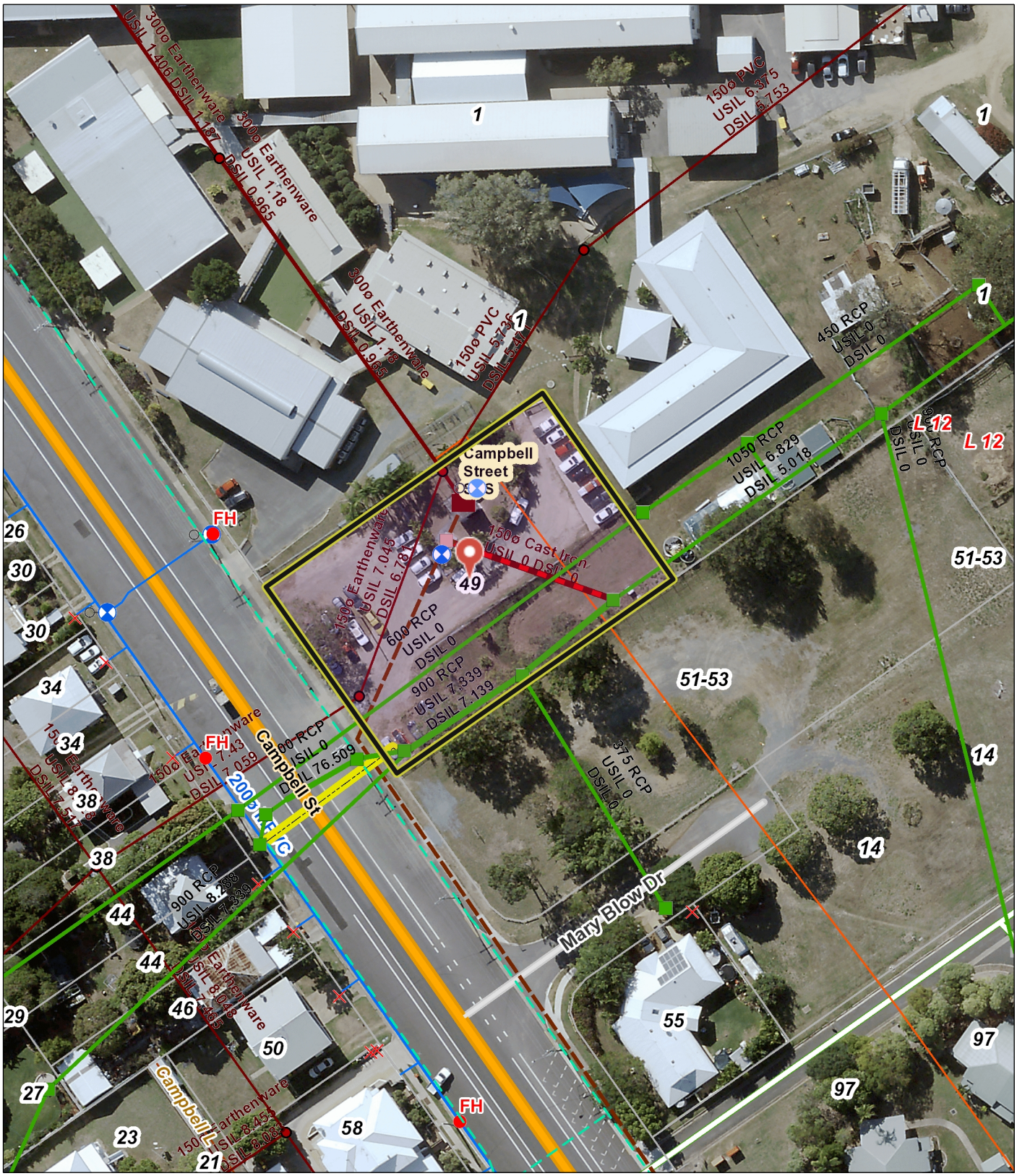
Image - Lot 305 CP817146

Meeting Date: 15 March 2022

Attachment No: 1

Campbell Street SPS

A4 scale at 1: 978
Printed from GeoCortex on 09/03/2022



Legend

Flood Mitigation Devices
Culverts
Headwalls
Stormwater Junctions
Pollution Trap
Subsoil Clean-Out pit
Stormwater Jump ups
Stormwater Main
Connector; Reticulation M...
Culvert Pipe; LinkSlab
Inter-Allotment
Low Flow Pipe
Other
Stormwater Drop Structures
Open Channel
Batter Chute; Open Chann
Bio-Retention Swale
Subsoil Drain
Weirs
Abandoned Junctions
Abandoned Culverts
Abandoned Headwalls
Abandoned Mains
Stormwater Basins
Bio-Retention
Detention/Retention
Culverts Private
Headwalls Private
Stormwater Junctions Private
Pollution Trap Private
Subsoil Clean-Out pit Private
Stormwater Jump Up Private
Stormwater Main Private
Open Channel Private
Subsoil Drain Private
Retention Basins Private
Structures
Unknown
Intake
Pump Station
Treatment Plant
Reservoirs
Hydrants
Water Valves
Other Valve Type
Gate, Sluice, Butterfly
Air Valve
Ball Cock, Stop Cock
Ball Valve
Motor Sluice Valve
Non Return Valve
Pressure Reducing Valve
RPZ Valve
Reflux Valve
Scour Valve
Sluice Bypass Valve
Tap
Water Valve Function
Open - Dialysis
Closed - Zone
Water Valve Op Status
Valve Normally Open
Valve Normally Closed
Water Mains
Other Main Type
Trunk Main
Reticulation Main
Raw Water Main
Scour Line
Water Service
Water Meters
Sampling Points
Abandoned Mains
Private Water Hydrants
Private Water Valves
Private Water Mains
Private Water Abandoned Mains
Sewer Network Structures
Pump Station
Treatment Plant
Sewer Access Chambers
Access Chambers
Roll Over
Lamp Hole | Inspection Op
Overflow Chamber
Sewer Valves
Sewer Jump Ups
Sewer Gravity Mains
Overflow Main
Combined Main
Reticulation Main
Trunk Main
Sewer Rising Mains
Sewer Access Chambers Abandoned
Sewer Mains Abandoned
Sewer Network Structures Private
Pump Station
Treatment Plant
Sewer Access Chambers Private
Sewer Joints Private

GDA2020

Rockhampton Regional Council

7.8 DERBY STREET CYCLE LANES DESIGN

File No:	**1963**
Attachments:	**1. Derby Street Preliminary Design⇩** **2. Draft Letter to Residents⇩** **3. Draft Feedback Form⇩**
Authorising Officer:	**Martin Crow - Manager Infrastructure Planning** **Peter Kofod - General Manager Regional Services**
Author:	**Stuart Harvey - Coordinator Infrastructure Planning**

SUMMARY

Council Officers have developed a concept design for the provision of cycling facilities on Derby Street. This report provides Council with an opportunity to review the concept before community consultation and detailed design is undertaken.

OFFICER'S RECOMMENDATION

THAT Council receive this report and proceed with consultation as outlined in the report.

COMMENTARY

Council has received funding through the Department of Transport and Main Roads 2020-21 Cycle Network Local Government Grants Program to undertake detailed design for the provision of cycling facilities on Derby Street from Canning Street to Denison Street. A concept design has been developed to give the community an opportunity to provide feedback prior to detailed design being undertaken (Refer Attachment 1).

In addition to providing a safer environment for cyclists, the concept also includes changes to the road layout to improve the function and safety of the road corridor for all users. The concept design includes:

- **Single traffic lanes in each direction**

  To allow for the inclusion of cycle lanes and centre median, the section of Derby Street from Canning Street to the Bruce Highway has been reduced to single lanes in each direction. This is not expected to affect the function of this section of road as current and forecast traffic volumes only warrant a single lane.

- **Landscaped concrete centre median**

  The inclusion of a landscaped centre median has a number of benefits. It provides separation and reduces conflict between opposing traffic flows (particularly important as a section of Derby Street is a heavy vehicle route); shelters right-turning vehicles at intersections; provides a pedestrian refuge when crossing the road and improves the visual amenity of the road with landscaping. The centre median will however restrict vehicle turn movements at some side streets and property accesses. This will result in a left turn in and left turn out arrangement. This reduction in vehicle turn movements helps reduce conflict and provides a safer environment for vulnerable users such as cyclists and pedestrians. To compensate, right-turning vehicles will have the opportunity to perform u-turns at most intersections. The landscaped centre median was also a recommended treatment for Derby Street in the CBD Revitalisation Strategy and Streetscape Design Manual.

- **1.5m wide on-road cycle lane each direction with safety buffer**

  The inclusion of cycle lanes ensures that adequate space exists for cyclists to share the road safely and comfortably especially for less confident cyclists. The inclusion of a line marked "safety buffer" between the cycle lanes and traffic lanes provides an added layer of comfort and protection for cyclists.

- **2.5m wide concrete shared path on the northern side of Derby Street**

  The provision of shared path allows both pedestrians and cyclists to safety share the footpath. The shared path provides an alternative to the on-road cycle lanes for vulnerable cyclists such as school children. To achieve a 2.5m width, a number of trees will need to be removed.

- **Parallel parking bays**

  To allow for the inclusion of cycle lanes and centre median, parallel parking bays are proposed. This has resulted in the loss of 23 on-street angle parking bays between George Street and Campbell Street. The inclusion of a two hour limit parking restriction at this location will help ensure regular parking turnover.

- **Traffic signals at Talford Street intersection**

  The installation of traffic signals at this intersection will help improve the safety and performance of the intersection. Signalised pedestrian crossings will provide safe crossings particularly for vulnerable users including school children, the elderly and disabled. Traffic signals will also address some crash types that have occurred at this intersection in the past.

Community consultation is planned to commence Monday 21 March and finish on Sunday 10 April to give the community an opportunity to provide feedback on the concept design prior to undertaking detailed design. Letters will be sent to the property owners immediately adjacent to Derby Street and an online survey will be made available on Council's Engage website for the wider community to respond (Refer Attachment 2 and 3). The Media team will promote the survey through a media release and social media. A draft letter and survey are provided as attachments.

Once submissions have been reviewed and considered, detailed design will commence and is expected to be completed by June 2022.

BACKGROUND

The Cycle Network Local Government Grants Program allows the Queensland Government to work with local governments to deliver best practice, high quality and safe cycling infrastructure and facilities on principal cycle networks across Queensland. Derby Street is classified as a high priority route of the Rockhampton Principle Cycle Network and as such was nominated for a design only funding.

PREVIOUS DECISIONS

On 10 December 2019, Council resolved to submit the detailed design for on-road and off-road cycle facilities on Derby Street, from Canning Street to Denison Street to the 2020/21 round of the Cycle Network Local Government Grants Program.

BUDGET IMPLICATIONS

The proposed project is a design only project and the future construction of the project will be subject to future funding rounds and future budget allocations

RISK ASSESSMENT

There is a risk that the proposed design may not be favourably received by the residents adjacent to the project as there are impacts to on-street parking, and turning movements along Derby Street (as a result of the proposed centre median). Officers have worked to minimize impacts whilst still achieving the objectives of the design.

CORPORATE/OPERATIONAL PLAN

3.1.1 Consult on, advocate, plan, deliver and maintain a range of safe urban and rural public infrastructure appropriate to the Region's needs, both present and into the future

CONCLUSION

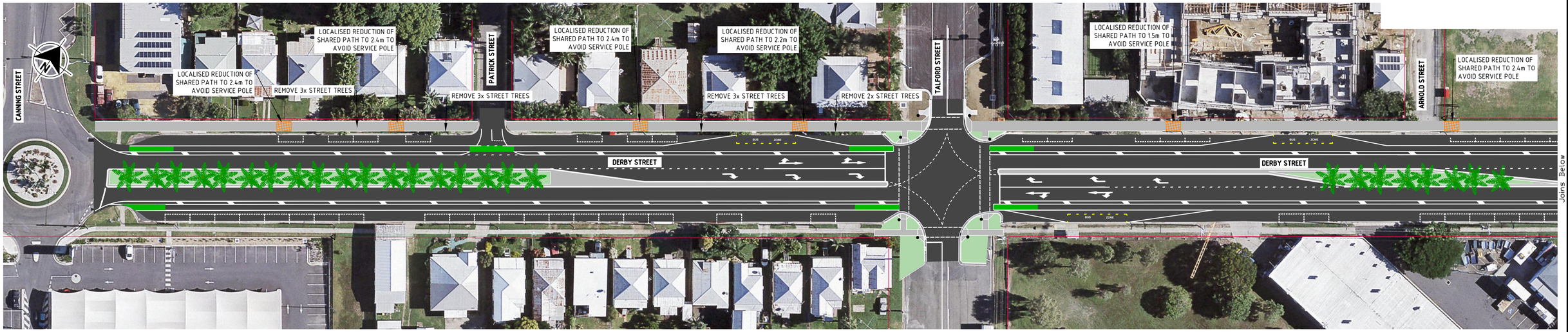
Council officers proposed to undertake community consultation on the proposed design for cycling infrastructure along Derby Street. This report seeks to proceed to consultation with the community.

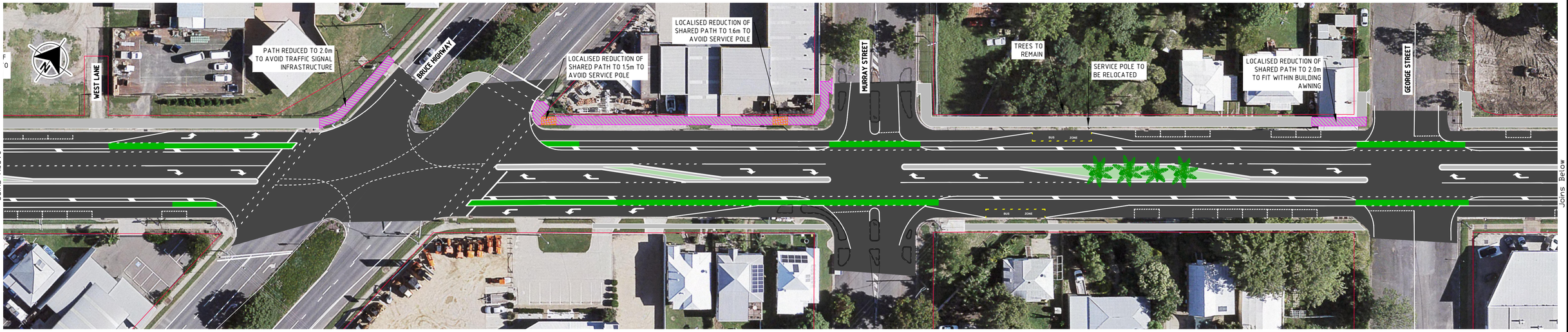
DERBY STREET CYCLE LANES DESIGN

Derby Street Preliminary Design

Meeting Date: 15 March 2022

Attachment No: 1





This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	JM	12.11.21	CONCEPT ISSUE	CB

Scale

SCALE B 0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	J.Merson	CHECKED	C.BROWN
DRAWN	J.Merson	CHECKED	C.BROWN
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

Rockhampton Regional Council

ROCKHAMPTON REGIONAL COUNCIL

DERBY STREET CYCLE WAY
SITE PLAN
OPTION 3

Status: CONCEPT DESIGN

Drg No.: 60654417-SHT-20-3000-C-0001

Rev.: A

DERBY STREET CYCLE LANES DESIGN

Draft Letter to Residents

Meeting Date: 15 March 2022

Attachment No: 2

Rockhampton Office
232 Bolsover St, Rockhampton
Gracemere Office
1 Ranger St, Gracemere
Mount Morgan Office
32 Hall St, Mount Morgan

21 February 2022

Our Ref: 1963
Enquiries: Regional Services
Telephone: 07 4932 9000 or 1300 22 55 77
Fax: 07 4936 8862 or 1300 22 55 79
Email: enquiries@rrc.qld.gov.au

Dear Resident/property owner,

DERBY STREET DESIGN

Rockhampton Regional Council has received funding through the Department of Transport and Main Roads 2020-21 Cycle Network Local Government Grants Program to undertake detailed design for the provision of cycling facilities and road upgrades on Derby Street from Canning Street to Denison Street.

The Cycle Network Local Government Grants Program allows the Queensland Government to work with local governments to deliver best practice, high quality and safe cycling infrastructure and facilities on principal cycle networks across Queensland. Derby Street is classified as a high priority route of the Rockhampton Principle Cycle Network.

A concept design has been included with this letter, and as an adjacent resident or business, we would like to know your thoughts.

In addition to providing a safer environment for cyclists, the concept also includes changes to the road layout to improve the function and safety of the road corridor for all users. The concept design includes:

- **Single traffic lanes in each direction**
  To allow for the inclusion of cycle lanes and centre median, the section of Derby Street from Canning Street to the Bruce Highway has been reduced to single lanes in each direction. This is not expected to affect the function of this section of road as current and forecast traffic volumes only warrant a single lane.

- **Landscaped concrete centre median**
  The inclusion of a landscaped centre median has a number of benefits. It provides separation and reduces conflict between opposing traffic flows (particularly important as a section of Derby Street is a heavy vehicle route); shelters right-turning vehicles at intersections; provides a pedestrian refuge when crossing the road and improves the visual amenity of the road with landscaping. The centre median will however restrict vehicle turn movements at some side streets and property accesses. This will result in a left turn in and left turn out arrangement. This reduction in vehicle turn movements helps reduce conflict and provides a safer environment for vulnerable users such as cyclists and pedestrians. To compensate, right-turning vehicles will have the opportunity to perform u-turns at most intersections. The landscaped centre median was also a recommended treatment for Derby Street in the CBD Revitalisation Strategy and Streetscape Design Manual.

- **1.5m wide on-road cycle lane each direction with safety buffer**
  The inclusion of cycle lanes ensures that adequate space exists for cyclists to share the road safely and comfortably especially for less confident cyclists. The inclusion of a line marked "safety buffer" between the cycle lanes and traffic lanes provides an added layer of comfort and protection for cyclists.
- **2.5m wide concrete shared path on the northern side of Derby Street**
  The provision of shared path allows both pedestrians and cyclists to safety share the footpath. The shared path provides an alternative to the on-road cycle lanes for vulnerable cyclists such as school children. To achieve a 2.5m width, a number of trees will need to be removed.
- **Parallel parking bays**
  To allow for the inclusion of cycle lanes and centre median, parallel parking bays are proposed. This has resulted in the loss of 23 on-street angle parking bays between George Street and Campbell Street. The inclusion of a two hour limit parking restriction at this location will help ensure regular parking turnover.
- **Traffic signals at Talford Street intersection**
  The installation of traffic signals at this intersection will help improve the safety and performance of the intersection. Signalised pedestrian crossings will provide safe crossings particularly for vulnerable users including school children, the elderly and disabled. Traffic signals will also address some crash types that have occurred at this intersection in the past.

To tell us what you think about the concept design, a survey form and reply paid envelope has been included. Alternatively, you can go to Council's engagement website engage.rockhamptonregion.qld.gov.au and provide your response there.

Submissions will close on Sunday 10 April 2022.

Once we have reviewed submissions, detailed design will commence and is expected to be completed by June 2022.

In the meantime, if you have any questions or concerns, please do not hesitate to contact the Council's Infrastructure Planning department on 1300225577 or email InfrastructurePlanning@rrc.qld.gov.au.

Yours faithfully

Stuart Harvey
Coordinator
Infrastructure Planning

DERBY STREET CYCLE LANES DESIGN

Draft Feedback Form

Meeting Date: 15 March 2022

Attachment No: 3

Please provide your street address so we can understand how the changes may affect you

Do you agree that the proposed design will create a safer environment for cyclists and pedestrians?

- ☐ Yes
- ☐ No
- ☐ Unsure

Do you think the proposed design will encourage more walking and cycling?

- ☐ Yes
- ☐ No
- ☐ Unsure

Do you support the following proposed improvements along Derby Street?

Provision of on-road cycle lanes

- ☐ Yes
- ☐ No
- ☐ Unsure

Provision of a shared path on the northern side of Derby Street

- ☐ Yes
- ☐ No
- ☐ Unsure

Provision of landscaped centre median

- ☐ Yes
- ☐ No
- ☐ Unsure

Contact Us

P: 4932 9000 E: enquiries@rrc.qld.gov.au

W: engage.rockhamptonregion.qld.gov.au

If you answered 'No' or 'Unsure' for any of the proposed improvements, please tell us why

Please tell us any other concerns you may have.

Lodge your feedback by Sunday 10 April 2022 via:

Mail address to:
Rockhampton Regional Council
PO Box 1860
ROCKHAMPTON QLD 4700

Rockhampton Regional Council Customer Service Centres:
Gracemere Office, 1 Ranger Street
Mount Morgan Office, 32 Hall Street
Rockhampton Office, 232 Bolsover Street

Online survey at:
engage.rockhamptonregion.qld.gov.au

Email:
enquiries@rrc.qld.gov.au

Privacy Notice: Council deals with personal information in accordance with law, including the *Information Privacy Act 2009*.

Contact Us
P: 4932 9000 E: enquiries@rrc.qld.gov.au
W: engage.rockhamptonregion.qld.gov.au

8 NOTICES OF MOTION

Nil

9 QUESTIONS ON NOTICE

Nil

10 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.

11 CLOSURE OF MEETING