



# **INFRASTRUCTURE COMMITTEE MEETING**

## **MINUTES**

**1 NOVEMBER 2022**

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**REPORT OF THE INFRASTRUCTURE COMMITTEE MEETING  
HELD AT COUNCIL CHAMBERS, 232 BOLSOVER STREET, ROCKHAMPTON  
ON TUESDAY, 1 NOVEMBER 2022 COMMENCING AT 9:03AM**

## **1 OPENING**

1.1 Acknowledgement of Country

## **2 PRESENT**

Members Present:

Deputy Mayor, Councillor N K Fisher (Chairperson)  
Councillor S Latcham  
Councillor C E Smith  
Councillor C R Rutherford  
Councillor M D Wickerson  
Councillor D Kirkland  
Councillor G D Mathers (via video-link)

In Attendance:

Mr E Pardon – Chief Executive Officer  
Mr P Kofod – General Manager Regional Services (Executive Officer)  
Mr R Cheesman – Deputy Chief Executive Officer (via video-link)  
Ms A Cutler – General Manager Community Services (via video-link)  
Mr D Morrison – Manager Workforce and Governance (via video-link)  
Ms M Taylor – Chief Financial Officer (via video-link)  
Mr A Russell – Executive Manager Strategy and Planning  
Mr M O’Keeffe – Manager Rockhampton Regional Waste and Recycling  
Mr M Crow – Manager Infrastructure Planning  
Mr A Collins – Manager Project Delivery  
Mr J Gwydir – Manager Civil Operations  
Mr S Harvey – Coordinator Infrastructure Planning  
Ms G Parsons – Coordinator Waste and Recycling Facilities  
Ms G Dwyer – Senior Communications Officer (via video-link)  
Ms S Michaels – Senior Communications Officer (via video-link)  
Ms P Brown – (CQG Consulting)  
Ms K Walsh – Committee Support Officer

## **3 APOLOGIES AND LEAVE OF ABSENCE**

The Mayor, Councillor Tony Williams tendered his apology and was not in attendance.

## 4 CONFIRMATION OF MINUTES OF PREVIOUS MEETING

### COMMITTEE RESOLUTION

THAT the minutes of the Infrastructure Committee of 4 October 2022 be confirmed.

**Moved by:** Councillor Smith  
**Seconded by:** Councillor Latcham  
**MOTION CARRIED**

## 5 DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA

Councillor Ellen Smith informed the meeting:

“I have a prescribed conflict of interest in **Item 10.4 – Project Delivery Capital Project Report October 2022 - Mount Morgan Water Supply Pipeline Project**. This prescribed conflict of interest arises as my nephew Adam John McEvoy is a partner in MTC Industries which has a contract with Fitzroy River Water to cart potable drinking water to Mount Morgan. My brother John James McEvoy is employed by MTC Industries to drive the water tanker.

In relation to the proposed water pipeline to Mount Morgan, the alignment goes along Kabra Road where my brother owns a property at 248 Kabra Road. The proposed alignment also goes along Moonmera Road where my sister and brother-in-law Trish and Don McKinnon own a property on the corner of Moonmera and Poison Creek Roads.

I will deal with the conflict by leaving the room and staying away from the place where the meeting is being held when this matter is being discussed and voted on.”

## 6 BUSINESS OUTSTANDING

### 6.1 LIFTING MATTERS FROM THE TABLE

**File No:** 10097  
**Authorising Officer:** Peter Kofod - General Manager Regional Services  
**Author:** Peter Kofod - General Manager Regional Services

---

#### SUMMARY

*Items laid on the table require a report to be lifted from the table before being dealt with. This report is designed to lift the reports that have been laid on the table at previous Infrastructure Committee Meetings.*

#### COMMITTEE RESOLUTION

THAT the following matter be lifted from the table and dealt with accordingly:

- Quay Street Traffic Configuration

**Moved by:** Councillor Smith  
**Seconded by:** Councillor Wickerson

**MOTION CARRIED**

**7 PUBLIC FORUMS/DEPUTATIONS**

Nil

**8 PRESENTATION OF PETITIONS**

Nil

**9 COUNCILLOR/DELEGATE REPORTS**

Nil

## 10 OFFICERS' REPORTS

### 10.1 ENVIRONMENTAL DATA MONITORING REVIEW AND CONCEPTUAL SITE MODEL FOR LAKES CREEK ROAD LANDFILL

**File No:** 6210  
**Authorising Officer:** Peter Kofod - General Manager Regional Services  
**Author:** Michael O'Keeffe - Manager Rockhampton Regional Waste and Recycling

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#### SUMMARY

*The purpose of this report is to inform Council on the Environmental Data Monitoring Review and Conceptual Site Model for Lakes Creek Road Landfill.*

10:02AM Chief Executive Officer left the meeting room.  
10:06AM Chief Executive Officer returned to the meeting room.

#### COMMITTEE RESOLUTION

THAT the Environmental Data Monitoring Review and Conceptual Site Model for Lakes Creek Road Landfill Report be received.

**Moved by:** Councillor Latcham  
**Seconded by:** Councillor Mathers  
**MOTION CARRIED UNANIMOUSLY**

***Meeting Adjourned*****COMMITTEE RESOLUTION**

10:13AM

That the meeting be adjourned until 10:25AM.

**Moved by: Councillor Latcham****MOTION CARRIED*****Meeting Resumed*****COMMITTEE RESOLUTION**

10:28AM

That the meeting be resumed.

**Moved by: Councillor Fisher****MOTION CARRIED**

## Members Present:

Deputy Mayor, Councillor N K Fisher (Chairperson)  
Councillor S Latcham  
Councillor C E Smith  
Councillor C R Rutherford  
Councillor M D Wickerson  
Councillor D Kirkland  
Councillor G D Mathers (via video-link)

## In Attendance:

Mr E Pardon – Chief Executive Officer  
Mr P Kofod – General Manager Regional Services (Executive Officer)  
Mr R Cheesman – Deputy Chief Executive Officer (via video-link)  
Ms A Cutler – General Manager Community Services (via video-link)  
Mr D Morrison – Manager Workforce and Governance (via video-link)  
Ms M Taylor – Chief Financial Officer (via video-link)  
Mr A Russell – Executive Manager Strategy and Planning  
Mr M O’Keeffe – Manager Rockhampton Regional Waste and Recycling  
Mr M Crow – Manager Infrastructure Planning  
Mr A Collins – Manager Project Delivery  
Mr J Gwydir – Manager Civil Operations  
Mr S Harvey – Coordinator Infrastructure Planning  
Mr A Whitby – Coordinator Assets and GIS  
Mr B Cagney – Senior Assets Engineer  
Ms G Parsons – Coordinator Waste and Recycling Facilities  
Mr G Dwyer – Senior Communications Officer (via video-link)  
Ms S Michaels – Senior Communications Officer (via video-link)  
Ms K Walsh – Committee Support Officer



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**10.2 QUAY STREET TRAFFIC CONFIGURATION**

**File No:** 5252  
**Authorising Officer:** Martin Crow - Manager Infrastructure Planning  
Peter Kofod - General Manager Regional Services  
**Author:** Stuart Harvey - Coordinator Infrastructure Planning  
**Previous Items:** 10.4 - Quay Street Traffic Configuration - Infrastructure Committee Meeting - 04 Oct 2022 9:00am

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**SUMMARY**

*Following on from the preliminary investigation completed in November 2017, an investigation into the impacts of permanently changing Quay Street to one way traffic configuration, as opposed to two way vehicle flow, has been undertaken. The results of this investigation are included for Council's consideration.*

THAT Council retain the section of Quay Street between William and Fitzroy Street as one way.

**Moved by:** Councillor Smith  
**Seconded by:** Councillor Rutherford

***Suspension of Standing Orders*****COMMITTEE RESOLUTION**

10:45AM

That pursuant to s7.8 Council Meeting Procedures the provisions of the Rockhampton Regional Council Meeting Procedures be suspended to allow adequate time for informal discussion on Item 10.2 – Quay Street Traffic Configuration prior to entering into formal debate.

**Moved by:** Councillor Fisher

**MOTION CARRIED**

***Resumption of Standing Orders*****COMMITTEE RESOLUTION**

11:24AM

That pursuant to s7.8 Council Meeting Procedures the provisions of the Rockhampton Regional Council Meeting Procedures be resumed.

**Moved by:** Councillor Kirkland

**MOTION CARRIED**

**COMMITTEE RESOLUTION**

THAT the matter lay on the table pending further information on the shared zone within the current configuration and speed environment.

**Moved by:** Councillor Smith

**MOTION CARRIED**

Councillor Kirkland and Councillor Mathers recorded their vote against the motion.

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**10.3 GRACEMERE WASTE TRANSFER STATION OPERATING HOURS REVIEW**

**File No:** 7284  
**Authorising Officer:** Peter Kofod - General Manager Regional Services  
**Author:** Michael O'Keeffe - Manager Rockhampton Regional Waste and Recycling

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**SUMMARY**

*The purpose of this report is to present the findings of the Gracemere Waste Transfer Station operating hours review. The key objective of this review is to address concerns raised by customers to ensure the operating hours of the Waste Transfer Station meet the needs of the community.*

**COMMITTEE RESOLUTION**

THAT Council resolves to maintain the current operating hours for the Gracemere Waste Transfer Station.

**Moved by:** Councillor Latcham

**Seconded by:** Councillor Kirkland

**MOTION CARRIED**

Councillor Smith recorded her vote against the motion.

**10.4 PROJECT DELIVERY CAPITAL PROJECT REPORT OCTOBER 2022**

Councillor Smith, having earlier informed the meeting of a prescribed conflict of interest and her decision to not participate in the decision, will leave the meeting room if the matter of the *Mount Morgan Water Supply Pipeline Project* is discussed.

**File No:** 7028  
**Authorising Officer:** Peter Kofod - General Manager Regional Services  
**Author:** Andrew Collins - Manager Project Delivery

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**SUMMARY**

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

**COMMITTEE RESOLUTION**

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

**Moved by:** Councillor Latcham  
**Seconded by:** Councillor Rutherford

**MOTION CARRIED**

Councillors Latcham, Rutherford, Fisher, Smith, Wickerson, Kirkland and Mathers voted in the affirmative.

Councillor Smith remained in the meeting room as the matter of *Mount Morgan Water Supply Pipeline Project* was not discussed.

**10.5 ADDITION OF ROAD TO ROAD REGISTER - NINE MILE ROAD ADJUSTMENT**

**File No:** 6833  
**Authorising Officer:** Peter Kofod - General Manager Regional Services  
**Author:** John Gwydir - Manager Civil Operations

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**SUMMARY**

*Council recently decided at its meeting of 16 August 2022 to add a number of roads to Council's Road Register and maintenance program. This report seeks to add a small section which was omitted from that report.*

**COMMITTEE RESOLUTION**

THAT Council assumes responsibility for the opening and maintenance of the 145 metre segment of road identified in Attachment 1 off Nine Mile Road, Mount Morgan.

**Moved by:** Councillor Smith  
**Seconded by:** Councillor Rutherford

**MOTION CARRIED UNANIMOUSLY**

**10.6 ASSET MANAGEMENT PLAN - UNSEALED ROADS**

**File No:** 5960  
**Authorising Officer:** Martin Crow - Manager Infrastructure Planning  
Peter Kofod - General Manager Regional Services  
**Author:** Andrew Whitby - Coordinator Assets and GIS

---

**SUMMARY**

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

**COMMITTEE RESOLUTION**

THAT the matter be referred to the next available Briefing Session.

**Moved by:** Councillor Rutherford

**Seconded by:** Councillor Mathers

**MOTION CARRIED**

**10.7 QRA FUNDING APPLICATIONS**

**File No:** 12534  
**Authorising Officer:** Martin Crow - Manager Infrastructure Planning  
Peter Kofod - General Manager Regional Services  
**Author:** Stuart Harvey - Coordinator Infrastructure Planning

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**SUMMARY**

*The Queensland Reconstruction Authority have released a Floodplain Risk Management Program Funding for Councils. Council officers wish to submit several applications for funding, and these are presented to Council for their information and endorsement.*

12:05PM Chief Executive Officer left the meeting room.  
12:08PM Chief Executive Officer returned to the meeting room.

**COMMITTEE RESOLUTION**

THAT Council endorse the following prioritised applications for funding under the Queensland Reconstruction Authority Flood Risk Management Program:

1. West Rockhampton and Wandal Floodplain Risk Management Study
2. Splitters Creek Floodplain Risk Management Study
3. Gracemere Creeks Local Catchment Flood Model Update
4. Flood Forecasting Software Module

**Moved by:** Councillor Smith  
**Seconded by:** Councillor Rutherford  
**MOTION CARRIED**

**11 NOTICES OF MOTION**

Nil

**12 QUESTIONS ON NOTICE**

Nil

**13 URGENT BUSINESS\QUESTIONS**

**14 CLOSURE OF MEETING**

There being no further business the meeting closed at 12:25pm.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
CHAIRPERSON

\_\_\_\_\_  
DATE





**MEETING  
ATTACHMENTS**

**1 NOVEMBER 2022**

## **ANNEXURE A**

Documents presented to Councillors for their reference during the Infrastructure Committee meeting when dealing with:

**Item 10.1 – Environmental Data Monitoring Review and Conceptual Site Model for Lakes Creek Road Landfill**



**Consulting**

# **Environmental Data Monitoring Review and Conceptual Site Model for Lakes Creek Road Landfill**

Rockhampton Regional Council – Infrastructure Committee Meeting  
1 November 2022

# Investigation Scope

- Review of environmental monitoring data for the Lakes Creek Road Landfill (LCRL)
- Determine suitability of monitoring program for identifying potential risks to sensitive receptors to inform the detailed design for LCRL expansion
- Develop Preliminary Conceptual Site Model (CSM)
- Assess the risk to sensitive receptors



**Legend**

- Site Boundary
- Cadastral Boundaries

N


Scale 1:5,000 (A3)

0 50 100 200

Metres

Coordinate System: GDA2020 MGA Zone 56

**Figure 1.1**  
Rockhampton Regional Council  
Lakes Creek Road Landfill  
Site Locality



180 Quay Street, Rockhampton Q 4700  
PO Box 8384, Allenstown 4700  
Ph: +61 7 4922 9252 Fax: +61 7 4922 0196

**Project No: 22037**  
**Map No: 22037-01**  
**Revision: Rev B**  
**19 September 2022**

Layer Credits- Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community; OSpatial - Cadastral Boundaries, Roads.



Layer Credits - : QSpatial - Imagery, Cadastral Boundaries, Roads; CQG - Imagery, Site locations.

**Legend**

- Cadastral Boundaries
- Site Boundary
- Current expansion area - Stage 2
- Former landfill cell - Stage 1

N

Scale 1:5,000 (A3)

0 50 100 200

Metres

Coordinate System: GDA2020 MGA Zone 56

Figure 1.3  
Rockhampton Regional Council  
Lakes Creek Road Landfill  
Site Layout

**CQG** Consulting

189 Quay Street, Rockhampton Q.4700  
PO Box 6384, Allentown 4700  
Ph: +61 7 4922 2532 Fax: +61 7 49220195

Project No: 22037  
Map No: 22037-04  
Revision: Rev E  
18 October 2022

# Regulatory Context

Site is licensed to operate in accordance with environmental authority (EA) EPPR00626313 issued under the *Environmental Protection Act 1994* (EP Act).

EA includes monitoring requirements for:

- Groundwater (GW);
- Surface water (SW);
- Leachate (also specific requirements under Trade Waste Permit); and
- Landfill gas (LFG) (methane).

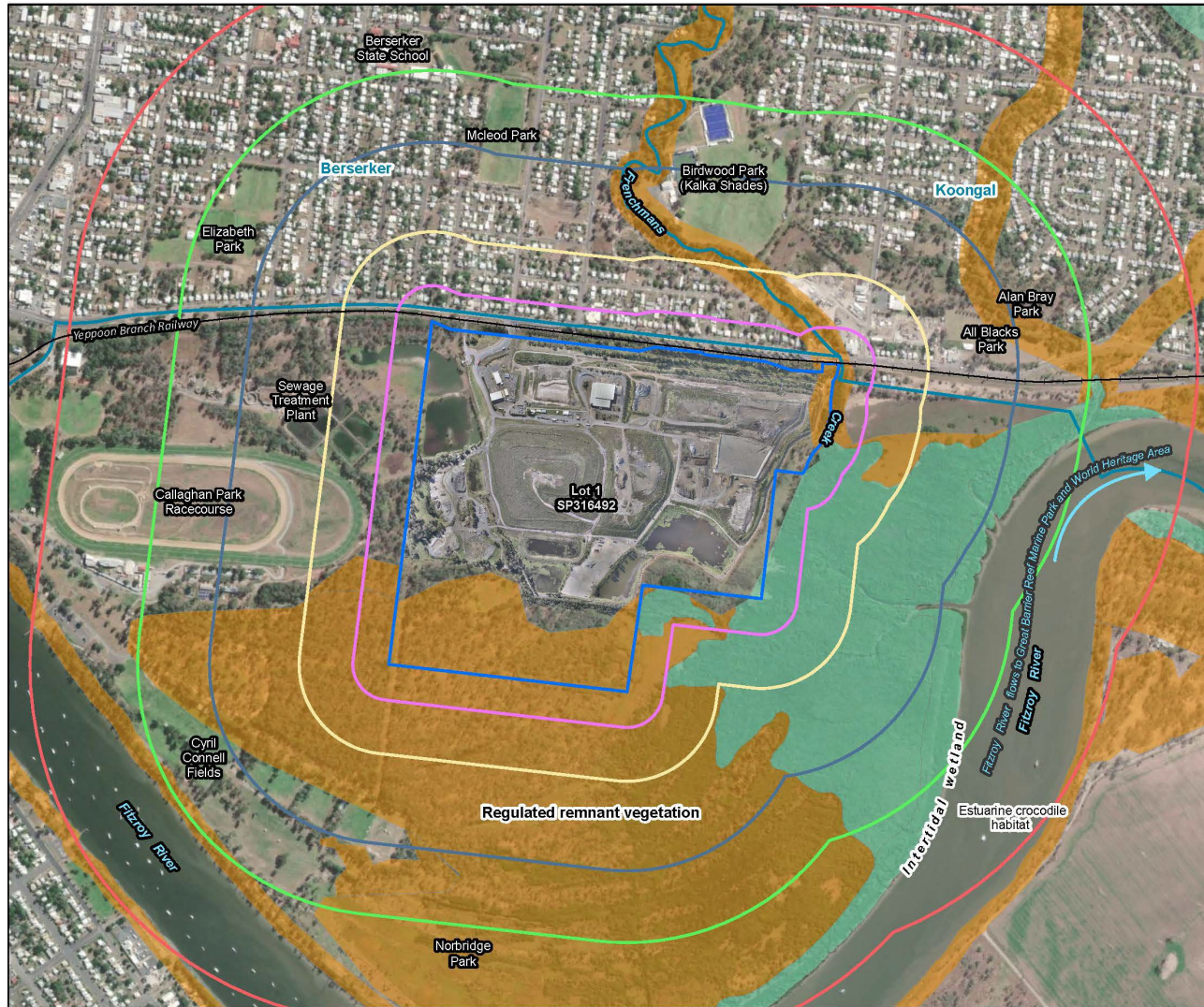
EP Act includes the general environmental duty to avoid environmental harm unless all reasonable and practicable measures taken to prevent or minimise the harm

# Desktop Assessment

- Climate
- Surrounding land uses and sensitive environmental values
- Geology and soils
- Hydrogeology (GW)
- LCRL development and operations including stormwater, leachate and LFG management

Reviewed historic LCRL data and reports prepared by CQG and others





Layer Credits- Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community; OSpatial - Cadastral Boundaries, Railway, Regulated vegetation, Suburbs; CQG - Receptor offsets.

**Legend**

- Lakes Creek Road Landfill
- Rail\_network
- Suburbs

**Extent offset**

- 100m
- 250m
- 500m
- 700m
- 1km

**Vegetation Mapping**

- Non-remnant / regrowth
- Of Concern - Dominant
- Not Of Concern

N

Scale 1:10,000 (A3)

0 50 100 200 300 400 500

Metres

Coordinate System: GDA2020 MGA Zone 56

**Figure 2.2**

Rockhampton Regional Council

Lakes Creek Road Landfill

Sensitive Receptors

100 Quay Street, Rockhampton Q.4700  
 PO Box 6584, Allensmore 4709  
 Ph: +61 7 4922 9252 Fax: +61 7 49220196

Project No: 22037  
 Map No: 22037-10  
 Revision: Rev 0  
 13 July 2022



Layer Credits: ; QSpatial - Cadastral Boundaries, Roads; CQG - Monitoring Bores.

**Legend**

- Cadastral Boundaries
- Site Boundary

**Monitoring Locations**

- Methane
- Groundwater
- ⊗ Groundwater (discontinued)
- Groundwater - Methane
- Leachate - Methane
- Leachate Monitoring
- Surface Water
- Dust Monitoring

N

Scale 1:5,500 (A3)

0 50 100 200

Metres

Coordinate System: GDA2020 MGA Zone 56

Figure 5.1  
Rockhampton Regional Council  
Lakes Creek Road Landfill  
Environmental Monitoring Locations

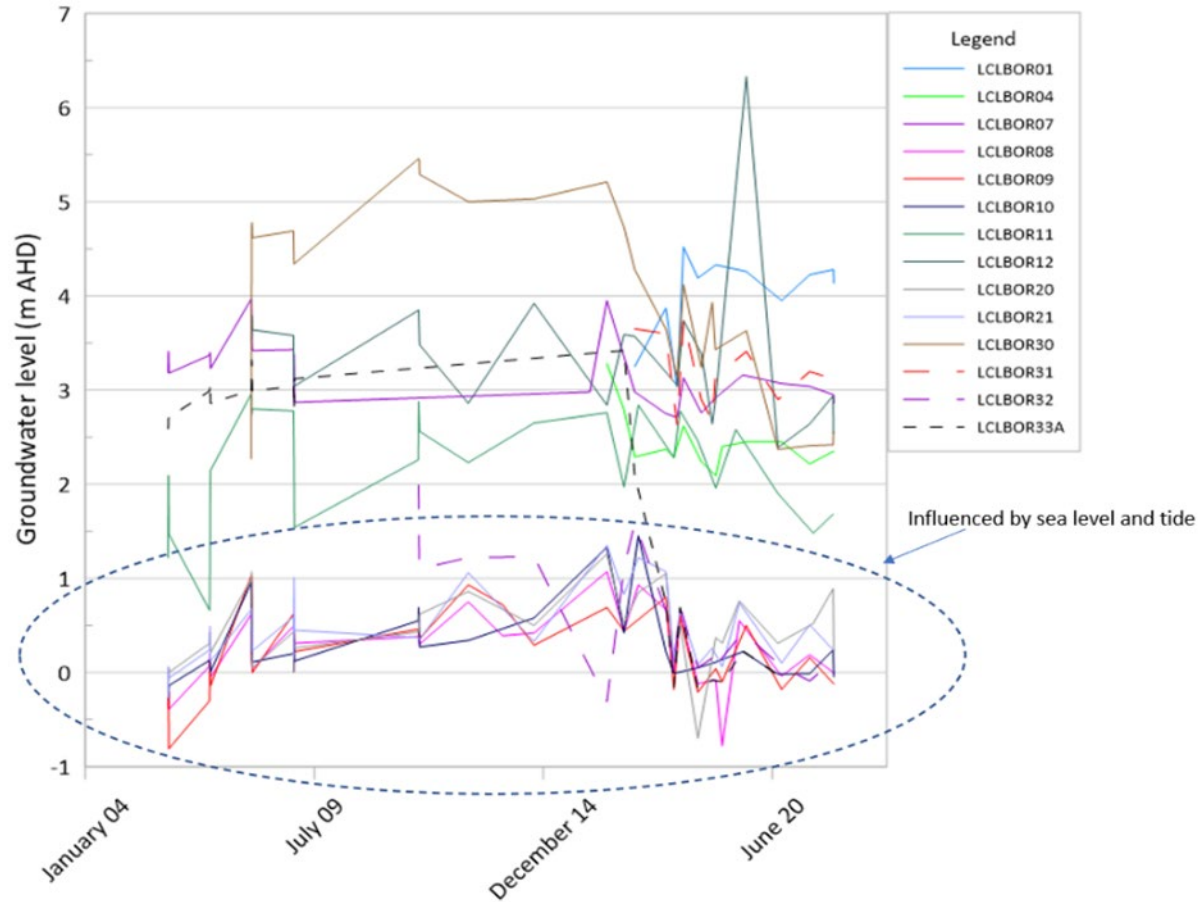
80 Quay Street, Rockhampton Q 4700  
PO Box 5384, Allenstown 4700  
Ph: +61 7 4922 9952 Fax: +61 7 49220195

Project No: 22037  
Map No: 22037-09  
Revision: Rev 0  
22 August 2022

# Groundwater (GW) Data Overview

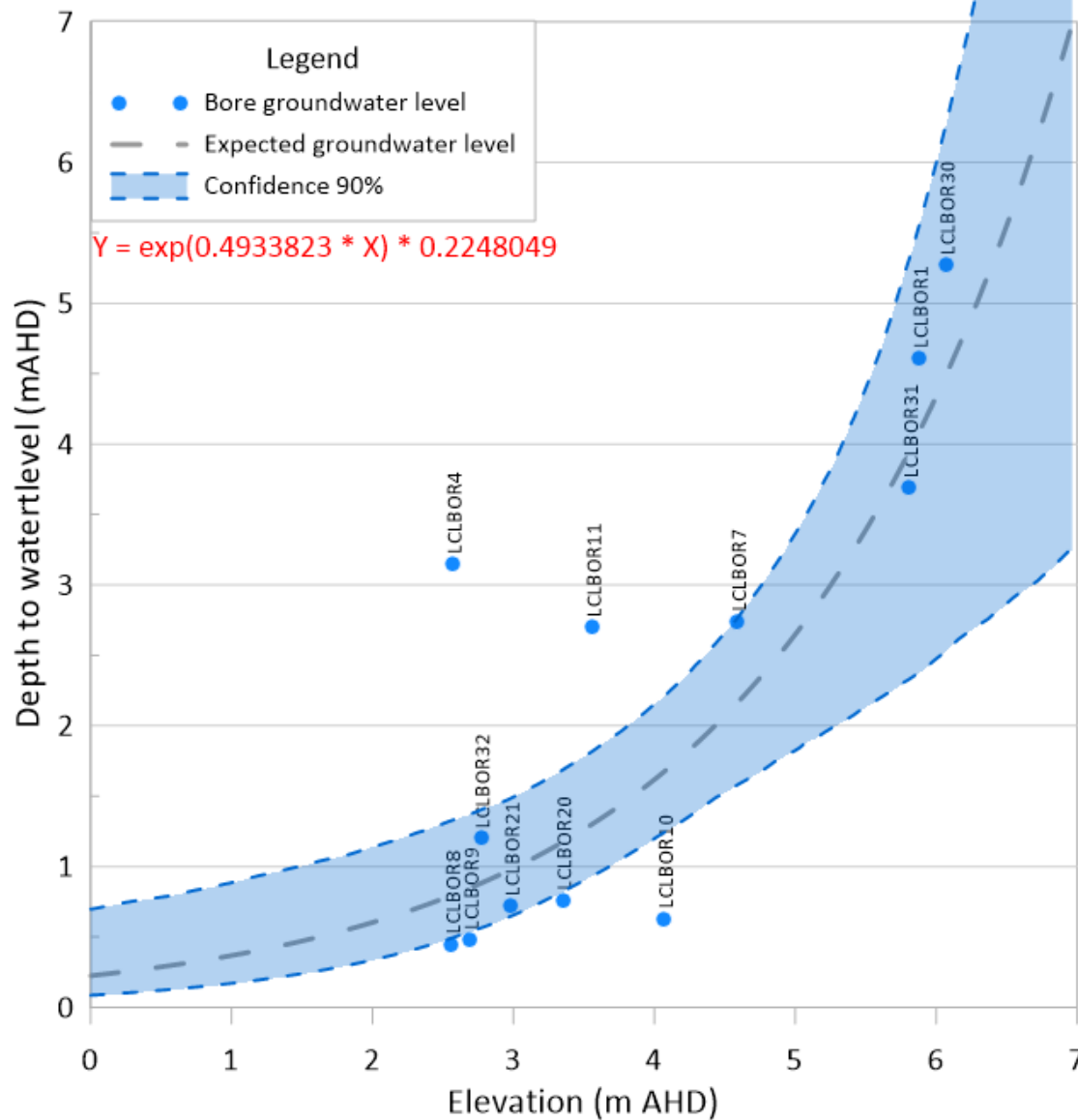
- GW common contaminant pathway at landfills
- Historic data does not indicate a GW contamination plume at LCRL, but gaps in data identified
- Onsite bores do not interact with basement aquifer – no need for such a bore identified
- South-west bores influenced by tides – difficult to interpret GW data – some risk leachate could mobilise from low elevation unlined sections of LCRL as tidal waters raise GW

# All-Time Series Groundwater Level Monitoring Data



# GW Data Gaps

- Potential interaction between leachate, surface water (incl Frenchman's Creek) and GW – correlation of parameters required / additional bores required in network
- Historic understanding that GW flows to south-west, however, current network gaps to north, north-east and west – additional bores required in network
- Hydraulic conductivity has been estimated based on assumed aquifer – additional understanding of bores required



Groundwater level vs ground surface LCRL

# GW Monitoring Recommendations

- Align parameters with leachate including adding formaldehyde to GW suite and major ions to the leachate suite
- Consider adding PFAS across all water monitoring suites (noting PFAS NEMP current V2 and upcoming V3 recommendations)
- Reduce number of tidally influenced GW bores in south-west from full suite of analysis (retain *insitu* analysis)
- Install three new GW bores (with two upgradient and one of these adjacent to Frenchman's Creek) and recommence sampling of an existing downstream bore (requires repair / replacement)
- Once bores installed collect consistent contextual data (i.e., survey elevations, hydraulic conductivity testing and camera inspection of stratigraphy and screen location)



Layer Credits : OSpatial - Cadastral Boundaries, Roads; COG - Monitoring Locations.

**Legend**

- Cadastral Boundaries
- Site Boundary
- Monitoring bore not required (influenced by sea level)
- Likely groundwater flow direction (based on available info)
- New Groundwater Monitoring Bore
- Reinstate Groundwater Monitoring

**Groundwater Monitoring Locations**

- Current

N

Scale 1:5,000 (A3)

0 50 100 200

Metres

Coordinate System: GDA2020 MGA Zone 56

Figure 5.5

Rockhampton Regional Council

Lakes Creek Road Landfill

Groundwater Monitoring Bores

Current and Recommended

**CQG** Consulting

180 Quay Street, Rockhampton Q 4700  
PO Box 628, Allenstown 4700  
Ph: +61 7 4602 6592 Fax: +61 7 46220195

**Project No: 22037**  
**Map No: 22037-06**  
**Revision: Rev0**  
**22 August 2022**



# Surface Water (SW) Data Overview

- No release of SW from LCRL ponds since 2017 due to improved site management
- No data downstream of C&D waste area (Pond F)
- Limited data on water quality in receiving environment (Frenchman's Creek and Fitzroy River)

# SW Data Gaps & Recommendations

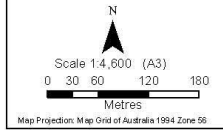
- Align parameters with leachate including adding formaldehyde to SW suite and major ions to the leachate suite
- Add Pond F (and discharge when possible) to SW monitoring locations
- Contractor to implement sediment and erosion controls (and an acid sulfate soil management plan if excavating below 5 mAHD) and associated monitoring during construction of new cells

# Landfill Gas (LFG) Data Overview

- Monitoring conducted onsite in building, services pits and at boundaries, but no dedicated LFG monitoring wells
- Gas levels in service pits found to exceed standards at times
- Migration pathways for LFG are likely associated with more permeable geological structures and below ground services
- Nearby creeks and Fitzroy River present natural barriers to gas migration



- Legend**
- Gas Monitoring Locations
  - Cadastral Boundaries



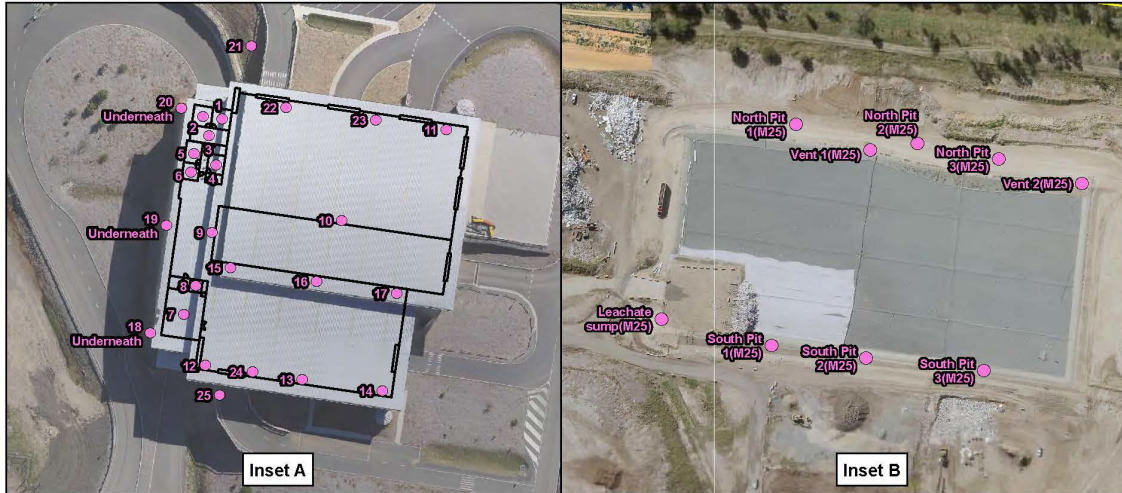
RRC

**Gas Monitoring Locations  
Lakes Creek Road Landfill  
(Map 1 of 2)**

Project no: 17013

139 Quay Street, Rockhampton QLD 4700  
PO Box 6334, Alkin Street 4700  
Ph: +61 7 4922 9252 Fax: +61 7 4922 9195

2 August 2021



**Legend**

- Gas Monitoring Locations
- ▭ Cadastral Boundaries

N  
▲  
Not to Scale  
(A3)

Map Projection: Map Grid of Australia 1994 Zone 56



RRC

Gas Monitoring Locations  
Lakes Creek Road Landfill  
(Map 2 of 2)

Project no: 17013

**CQG Consulting**

189 Quay Street, Rockhampton Q. 4700  
PO Box 5184, Ayrton QLD 4700  
Ph: +61 7 4622 9252 Fax: +61 7 4622 0195

25 November 2019

# LFG Data gaps

- Limited data for methane in GW and no volatile organic compound (VOC) data for gas
- No data on potential migration towards residents on Lakes Creek Road
- Monitoring for gases has not been conducted under a worst-case barometric pressure

# LFG monitoring recommendations

- Install four dedicated LFG monitoring bores on the northern side of LCRL > 20 m from buried waste area and include in quarterly monitoring (noting worst case barometric pressure over sampling event)
- Conduct methane monitoring in GW
- Monitor VOCs within enclosed structures / buildings



Layer Credits - OSpatial - Cadastral Boundaries, Roads; CQG - LFG Well locations.

**Legend**

- Cadastral Boundaries
- Site Boundary
- Recommended LFG well

N

Scale 1:4,750 (A3)

0 50 100 200

Metres

Coordinate System: GDA2020 MGA Zone 56

**Figure 6.1**

**Rockhampton Regional Council**

**Lakes Creek Road Landfill**

**Recommended LFG Monitoring Wells**

Consulting

180 Quay Street, Rockhampton Q 4700  
PO Box 2386, Allentown 4700  
Ph: +61 7 4922 9292 Fax: +61 7 4922 9185

**Project No: 22037**  
**Map No: 22037-13**  
**Revision: Rev 0**  
**22 August 2022**



# Ecology & other

- Receiving environment includes mangrove communities, watercourses and wetlands that flow to Fitzroy River which discharges into the Great Barrier Reef Marine Park – impacts on vegetation health from LCRL over a period of time is unknown
- Blue green algae has been detected in ponds in the past post dry conditions
- Greenwaste could introduce weed seeds and pests
- Extent of waste burial onsite relies on historic records

# Ecology & other monitoring recommendations

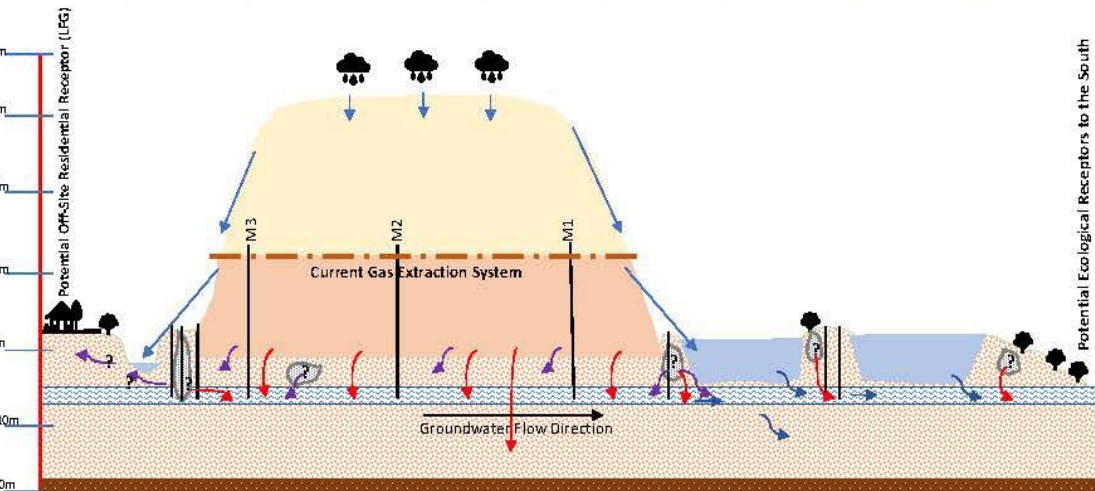
- Undertake a review of historical aerial imagery of vegetation surrounding LCRL
- Conduct visual monitoring for dieback of mangroves every five years, if detected conduct an investigation
- Consider ecological values in the selection of new bore locations
- Where buried waste onsite is detected record findings
- Manage blue green algae onsite if detected and implement measures to ensure risk to human exposure is avoided



Potential Offsite Sensitive Receptors (not shown in Preliminary CSM)



1500 m



- Proposed Stage 2 Waste
- Stage 1 Waste Mass
- Interbedded Alluvial Sediments
- Basement (assumed approx. 20mBGL)
- Onsite Water Bodies
- Groundwater
- Potential Waste Deposits
- Leachate (Potential Exposure Pathway)
- LFG (Potential Exposure Pathway)
- Water Interactions
- Monitoring Wells (not to scale)

Note: Offsite bores not included. Bores to be removed not included.

Not to scale

# Conceptual Site Model (CSM)



**Legend**

- Site Boundary
- Cadastral Boundaries

→ Potential LFG Pathway  
→ Overland Water Flow  
→ Groundwater Flow Direction

N

Scale 1:5,000 (A3)

0 50 100 200  
Metres

Coordinate System: GDA2020 MGA Zone 56

Figure 7.1

Rockhampton Regional Council  
Lakes Creek Road Landfill  
Conceptual Site Model

**CQG** Consulting

180 Quay Street, Rockhampton Q 4700  
PO Box 8384, Allentown 4700  
Ph: +61 7 4922 9200 Fax: +61 7 49220195

Project No: 22037  
Map No: 22037-01  
Revision: Rev A  
8 July 2022

Layer Credits- Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community; ©Spatial - Cadastral Boundaries, Roads.

# Limitations

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