ORDINARY MEETING AGENDA

Friday 13 December 2019

commencing at 9:30am

Quilpie Shire Council Boardroom
50 Brolga Street Quilpie

Ordinary Meeting of Council

6 December 2019

The Mayor and Council Members
Quilpie Shire Council
QUILPIE QLD 4480

Dear Members

Notice is hereby given that a Pre Meeting Briefing will be held in the Council Boardroom, on Friday, 13 December 2019**,** commencing at ***8:30am*****.**

Notice is also hereby given that an Ordinary Meeting of the Quilpie Shire Council will be held at the Council Chambers, on Friday, 13 December 2019**,** commencing at ***9:30am*****.**

The agenda for the ordinary meeting is attached for your information

Yours faithfully

Dave Burges
Chief Executive Officer

ORDINARY MEETING OF COUNCIL AGENDA

Friday 13 December 2019
Quilpie Shire Council Boardroom

ORDER OF PROCEEDINGS

Order of Proceedings

1 OPENING OF MEETING

2 ATTENDANCE

3 APOLOGIES

4 CONDOLENCES

5 DECLARATIONS OF INTEREST

6 RECEIVING AND CONFIRMATION OF MINUTES

6.1 (12/19) – Ordinary Meeting of Quilpie Shire Council held Friday 15 November 2019

IX: 188311

Author: Chief Executive Officer, Dave Burges

Minutes of the Ordinary Meeting of Quilpie Shire Council held in the Council Boardroom, 50 Brolga Street Quilpie on Friday, 15 November 2019.

Attachment:

Minutes of the Ordinary Meeting of Quilpie Shire Council held on Friday, 15 November 2019

Recommendation:

That the minutes of the Ordinary Meeting on Quilpie Shire Council held on Friday, 15 November 2019 are taken as read and confirmed as an accurate record of proceedings.

Ordinary Meeting of Council

MINUTES

Friday 15 November 2019

Quilpie Shire Council Boardroom
50 Brolga Street, Quilpie Qld 4480

ORDINARY MEETING OF COUNCIL

Friday 15 November 2019

Quilpie Shire Council Boardroom

MINUTES

1 OPENING OF MEETING

The Mayor declared the meeting open at 9.17am.

2 PRESENT

Cr Stuart Mackenzie (Mayor)

Cr Jenny Hewson (Deputy Mayor)

Cr Bob Hall

Cr Roger Volz

Cr Bruce Paulsen

Mrs Lisa Hamlyn (Director of Corporate and Community Services)

In attendance: Mrs Maree Radnedge (Minutes Secretary)

3 APOLOGIES

Mr Dave Burges (Chief Executive Officer)

4 CONDOLENCES

Council noted the recent passing of Marie Mead and Marie Dare and expressed their condolences to their families.

5 DECLARATIONS OF INTEREST

Division 5A of the Local Government Act 2009 (the Act) requires Councillors to declare a Material Personal Interest or a Conflict of Interest should either apply regarding a matter that is before a Council meeting (refer Sections 175C and 175E of the Act). The Declaration should be made at the commencement of the meeting and prior to the matter being considered and voted upon by Council.

MATERIAL PERSONAL INTEREST DECLARED

Cr Mackenzie declared he has a material personal interest (as defined by section 175B of the *Local Government Act 2009*) in Late items:

- 17.2 Eromanga Natural History Museum Stage 2 Material Change of Use;
- 17.3 RFQ34 1920 Eromanga Natural History Museum Stage 2A Bulk Earthworks;
- 17.6 RADF Round 1; and
- 17.7 Tender T17 18-19 Eromanga Natural History Museum Stage 2A as follows:

Cr Mackenzie is Chair of the Outback Gondwana Foundation which operates the Eromanga Natural History Museum and Cr Mackenzie's wife is the Collections Manager of the Eromanga Natural History Museum. The Eromanga Natural History Museum stands to gain a financial benefit depending on the outcome of Council's consideration of these matters.

Cr Mackenzie advised that in accordance with legislative requirements he will leave the meeting while the matters are discussed and voted on.

6 RECEIVING AND CONFIRMATION OF MINUTES

6.1 (11/19) – Ordinary Meeting of Quilpie Shire Council held Friday 11 October 2019

Minutes of the Ordinary Meeting of Quilpie Shire Council held in the Council Boardroom, 50 Brolga Street Quilpie on Friday, 11 October 2019.

Resolution No: (01-11-19)

Moved by: ***Cr Jenny Hewson***

Seconded by: ***Cr Bruce Paulsen***

That the minutes of the Ordinary Meeting of Quilpie Shire Council held on Friday, 11 October 2019 are taken as read and confirmed as an accurate record of proceedings.

5/0

6.2 (11/19) – Special Meeting of Quilpie Shire Council held Wednesday 30 October 2019

Minutes of the Special Meeting of Quilpie Shire Council held in the Council Boardroom, 50 Brolga Street Quilpie on Wednesday, 30 October 2019.

Resolution No: (02-11-19)

Moved by: ***Cr Jenny Hewson***

Seconded by: ***Cr Roger Volz***

That the minutes of the Special Meeting on Quilpie Shire Council held on Wednesday, 30 October 2019 are taken as read and confirmed as an accurate record of proceedings.

5/0

6.3 (11/19) – Special Meeting of Quilpie Shire Council held Tuesday 5 November 2019

Minutes of the Special Meeting of Quilpie Shire Council held in the Council Boardroom, 50 Brolga Street Quilpie on Tuesday, 5 November 2019.

Resolution No: (03-11-19)

Moved by: ***Cr Bruce Paulsen***

Seconded by: ***Cr Jenny Hewson***

That the minutes of the Special Meeting on Quilpie Shire Council held on Tuesday, 5 November 2019 are taken as read and confirmed as an accurate record of proceedings.

5/0

7 ITEMS FROM PREVIOUS MEETINGS

Nil.

8 MAYORAL REPORT

Mayor Mackenzie provided a verbal update on activities he has undertaken since the October 2019 Ordinary meeting of Council. Cr Mackenzie attended and participated in a range of meetings during the month.

In addition to attending the Local Government Association of Queensland (LGAQ) Conference in Cairns, Cr Mackenzie also attended the Council of Mayors meeting.

The Mayor participated in a teleconference with Crs Hewson and Volz, the CEO and Drought Commissioner, Mr Vaughan Johnson regarding the rail service to Quilpie. Mr Johnson has been tasked to do a review of the cattle train operations.

In addition to attending meetings such as the South West Regional Economic Development Group (SWRED), SWRED Tourism Committee, Outback Queensland Tourism Authority (OQTA) and the South West Local Government Association (SWLGA), the Mayor was also invited by Santos to speak at the Friends of Resources dinner at Parliament House.

Cr Mackenzie participated in a meeting with the Chair of the North West Regional Road and Transport Group, Mr John Wharton and Chair of the Central West Regional Road and Transport Group, Mr Bruce Scott.

The Mayor also participated in a teleconference with Senator Gerard Rennick regarding Airport funding.

Council received visits during this month from the Office of the Queensland Chief Entrepreneur and Queensland's Chief Entrepreneur, Leanne Kemp; and Johnathan Thurston and the Johnathan Thurston Academy.

9 COUNCILLOR PORTFOLIO REPORTS

Councillors provided a brief overview of activities they have undertaken since the October Ordinary Meeting of Council.

All Councillors attended Special Meetings of Council held on 30 October and 05 November.

Councillors Hewson, Paulsen, Hall and Volz all attended a Special meeting of Council on 14 November.

Crs Mackenzie, Hewson and Volz attended the LGAQ Conference in Cairns with CEO, Dave Burges.

Crs Mackenzie, Paulsen, Hall and Volz also attended the presentation by Queensland Chief Entrepreneur, Leanne Kemp.

Cr Hall attended the Australian Economic Development Conference in Adelaide where he represented Vital Places in association with the Quilpie Wellspring project. Cr Hall also met with Jocelyn Wallace in relation to aboriginal affairs.

Cr Paulsen attended a meeting with Arthur Eustace-Earle from the Queensland Rugby League in relation to the 2020 Intrust Super Cup Country Week Game.

In addition, Cr Volz participated in a teleconference of the South West Regional Waste Group.

Councillors acknowledged that there has been a variety of events within the community during the past month such as the Foxy Hornbags – Kath and Kim Tribute Show, visit from the JT Academy, Remembrance Day and the St. Finbarr's School Fete. Councillors commended staff and members of the community who were responsible for organizing the events and would like to extend an offer of thanks to everyone involved in making the events so successful.

ADJOURNMENT

The meeting adjourned for morning tea at 11.05am and resumed at 11.15am

10 STATUS REPORTS

10.1 (11/19) – Engineering Services Status Reports

Noted.

10.2 (11/19) – Corporate and Community Services Status Reports

Noted.

10.3 (11/19) – Financial Services Status Report

Noted.

10.4 (11/19) – Governance Status Reports

Noted.

11 ENGINEERING SERVICES

11.1 (11/19) - Continuation of TIDS Program: Quilpie-Adavale Red Road

Council is a member of the South West Regional Roads and Transport Group. Council has committed Transport Infrastructure Development Scheme funding to the sealing of sections of the Quilpie-Adavale Red Road in the present 4 year program.

Council has been asked by the Technical Group Coordinator to provide the future year four projects which will occur in the 2023-2024 financial year.

Resolution No: (04-11-19)

Moved by: ***Cr Jenny Hewson***

Seconded by: ***Cr Roger Volz***

That Council continue the sealing of the Quilpie-Adavale Red Road during the 2023-2024 Financial year.

5/0

12 CORPORATE AND COMMUNITY SERVICES

12.1 (11/19) – Quilpie Library Outreach Service to Eromanga

Librarian, Janet Hennessy has requested Council consideration of expanding the Library Service to include a Mobile Outreach Service to the Eromanga community. It is proposed that the service would be provided by existing library staff at the Eromanga Shire Hall every four (4) to six (6) weeks.

Resolution No: (05-11-19)

Moved by: ***Cr Bruce Paulsen***

Seconded by: ***Cr Jenny Hewson***

That Council approves the proposal for Quilpie Shire Council Library staff to provide a library outreach service to the Eromanga Community on a trial basis.

5/0

13 FINANCE

13.1 (11/19) – Outstanding Debtor Invoices

Council has sent several letters to two (2) debtors requesting payment of outstanding invoices for the November/December 2018 Baiting Program totaling $1,757.62. To date, Council has received no response from the debtors and the invoices remain outstanding.

Resolution No: (06-11-19)

Moved by: ***Cr Bob Hall***

Seconded by: ***Cr Roger Volz***

That Council commence legal action for the recovery of outstanding debtor accounts as follows:

Invoice Number	***Date of Invoice***	***Description***	***Amount Outstanding***
110965	*26/02/2019*	*Baiting Program Nov/Dec 2018*	*$1,017.62*
110946	*26/02/2019*	*Baiting Program Nov/Dec 2018*	*$740.00*

5/0

13.2 (11/19) – Financial Services Report for Month Ending 31 October 2019

The Finance report for the period ending 31 October 2019 was presented to Council for consideration.

Resolution No: (07-11-19)

Moved by: ***Cr Bob Hall***

Seconded by: ***Cr Bruce Paulsen***

That Council receives the Finance Report for the period ending 31 October 2019.

5/0

14 GOVERNANCE

14.1 (11/19) Human Rights Policy

The Human Rights Act 2019 commenced on 01 July 2019, including the renaming of the Anti-Discrimination Commission to the Queensland Human Rights Commission. By letter dated 18 July 2019, Queensland Human Rights Commissioner, Mr. Scott McDougall has written to Council outlining initial preparations to be undertake prior to the commencement of Council obligations that come into effect on 01 January 2020.

In recognition of Council's commitment to meeting the requirements of the Human Rights Act 2019, a Human Rights Policy has been developed.

Resolution No: (08-11-19)

Moved by: ***Cr Bruce Paulsen***

Seconded by: ***Cr Jenny Hewson***

That Council adopts G.23 Human Rights Policy as presented in item 14.1 of the accompanying agenda.

5/0

15 CONFIDENTIAL ITEMS

Resolution No: (09-11-19)

Moved by: ***Cr Jenny Hewson***

Seconded by: ***Cr Bruce Paulsen***

That Council enters into closed session under s275 of the Local Government Regulation 2012 at 11.47am to discuss the following matters:

- *The appointment, dismissal or discipline of employees.*

5/0

Resolution No: (10-11-19)

Moved by: ***Cr Bob Hall***

Seconded by: ***Cr Jenny Hewson***

That Council moves out of closed session and resumes the Ordinary Meeting at 12.02pm.

5/0

15.1 (11/19) – Staffing Matter

The fixed term employment contract of Council's National Disability Insurance Scheme (NDIS) Coordinator is due to expire on Friday 20 December 2019.

Resolution No: (11-11-19)

Moved by: ***Cr Jenny Hewson***

Seconded by: ***Cr Roger Volz***

That Council continue to fund the role of National Disability Insurance Scheme Coordinator from general revenue for a further period of two (2) years; and

That Council offer the current incumbent of the National Disability Insurance Scheme Coordinator role, an extension of employment contract for the fixed term period 20 December 2019 to 18 December 2021.

5/0

16 LATE CONFIDENTIAL ITEMS

Nil

17 LATE ITEMS

17.1 (11/19) – John Waugh Park Irrigation System

Council were presented with an overview of the management and maintenance of the Cold Water Irrigation System that services the John Waugh Park facility, Bicentennial Park and the Street Scape irrigation.

ATTENDANCE

Council's Director of Engineering, Mr Peter See attended the meeting at 12.33pm to join discussions regarding the Cold Water Irrigation System.

Noted.

ATTENDANCE

Mr See left the meeting at 1.11pm

MATERIAL PERSONAL INTEREST DECLARED

Cr Mackenzie declared he has a material personal interest (as defined by section 175B of the *Local Government Act 2009*) in the following items:

- 17.2 Eromanga Natural History Museum Stage 2 Material Change of Use;
- 17.3 RFQ34 1920 Eromanga Natural History Museum Stage 2A – Bulk Earthworks;
- 17.6 RADF Round 1; and
- 17.7 Tender T17 18-19 Eromanga Natural History Museum Stage 2A.

Cr Mackenzie is Chair of the Outback Gondwana Foundation which operates the Eromanga Natural History Museum and Cr Mackenzie's wife is the Collections Manager of the Eromanga Natural History Museum. The Eromanga Natural History Museum stands to gain a financial benefit depending on the outcome of Council's consideration of these matters.

Cr Mackenzie advised that in accordance with legislative requirements he will leave the meeting while the matters are discussed and voted on.

ATTENDANCE

Cr Mackenzie left the meeting at 1.12pm and Cr Hewson assumed the role of Chair.

17.2 (11/19) – Application for Material Change of Use Lot 14 SP253475

Quilpie Shire Council have submitted a Development Application for a Material Change of Use on land located south west of Eromanga in the rural zone. The intended use is for a natural history museum.

Resolution No: (12-11-19)

Moved by: ***Cr Bruce Paulsen***

Seconded by: ***Cr Roger Volz***

That the Development Application for a Material Change of Use on land described as Lot 14 SP253475 be approved in accordance with the plans submitted as part of the application and as detailed in the attached Planning Report as the proposal generally complies with the outcomes for a Material Change of Use in the Rural Zone of the Quilpie Shire Town Planning Scheme 2018 and that the approval be subject to the following conditions:-

Quilpie Shire Council Conditions:

1. *This approval is for a Material Change of Use and will lapse if the use is not commenced within two (2) years from the date of approval.*
2. *All outstanding rates and charges, if any are to be paid in full.*
3. *The premises are connected to an on-site sewerage system in accordance with the Plumbing and Wastewater Code and any applicable standards. The applicant is to ensure all environmental licences are obtained if required. Copies of all licences are to be provided to Council upon request.*
4. *The premises are to be connected to a suitable water supply system.*
5. *Stormwater is collected and discharged in accordance with the latest edition of the Queensland Urban Drainage Manual.*
6. *The site is connected to the reticulated electricity supply.*
7. *Vehicle parking and service vehicle parking areas are to be constructed in accordance with AS2890.1 Parking Facilities; and Austroads AP34/95 – Design Vehicles and Turning Path Templates; and The Access to Premises Standard' (Vol 1 of the National Construction Code) https://legislation.gov.au/Details/F2011C002014.*
8. *Buildings and structures for ancillary uses and activities shall not exceed 10% gross floor area of the primary use on the site.*
9. *The internal entrance and exit roads shall be constructed to an all-weather standard.*
10. *The applicant should satisfy themselves that all requirements of the Building Act 1975 and the Building and Other Legislation Bill 2009 are complied with in full.*

Referral Agency Conditions:

Nil

Notes

This approval in no way removes the duty of care responsibility of the applicant under the Aboriginal Cultural Heritage Act 2003. Pursuant to Section 23(1) of the Aboriginal Cultural Heritage Act 2003, a person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage (the "cultural heritage duty of care").

4/0

17.3 (11/19) – RFQ34 1920 Eromanga Natural History Museum Stage 2A – Bulk Earthworks

A tender has been accepted for construction of Stage 2A of the ENHM. The bulk earthworks and building pad are not included in the builder's scope of work and will be managed by Council.

Quotations for the bulk earthworks were called via VendorPanel with a closing date of Friday 08 November 2019.

Resolution No: (13-11-19)

Moved by: ***Cr Bruce Paulsen***

Seconded by: ***Cr Roger Volz***

That Council accepts the quotation from Ralph Walker Trust for RFQ34 1920 Eromanga Natural History Museum Stage 2A Bulk Earthworks for the amount of $224,370.00 including GST.

4/0

17.6 (11/19) – RADF Round 1

The Queensland Government, through Arts Queensland, provides Regional Arts Development Funds (RADF) to Councils. Councils also provide financial and in-kind support to RADF delivery as local projects, initiatives and grants programs.

Round 1 was advertised and the RADF Committee met on Tuesday 12 November 2019 to review the applications that were received.

Resolution No: (14-11-19)

Moved by: ***Cr Roger Volz***

Seconded by: ***Cr Bruce Paulsen***

That Council approve the following applications for Round 1, 2019-2020:

Organisation	***Project***	***Amount (Exc GST)***
Quilpie Cultural Society	*2020 Workshops*	*15,402.00*
St Finbarr's Parents Association	*Memphis Moovers*	*3,851.25*
Quilpie Shire Council	*arTour Western Touring Circuit Performances 2020*	*6,630.00*
Total		***$25,883.25***

4/0

17.7 (11/19) – Tender T17 18-19 Eromanga Natural History Museum Stage 2A

At the Special Meeting held 30 October 2019, Tender T17 18-19 was awarded to Rosecove Ptd Ltd for the amount of $4,412,100 (Resolution 04S-10-19). Rosecove have since withdrawn their tender.

Resolution No: (15-11-19)

Moved by: ***Cr Bob Hall***

Seconded by: ***Cr Roger Volz***

That Council accepts the tender from New State Builders for a price of $5,050,089 including GST for Tender T17 18-19.

4/0

ATTENDANCE

Cr Mackenzie returned to the meeting at 1.32pm and resumed the position of Chair.

17.4 (11/19) – Community Assistance Application – Ben McKellar

A Community Assistance Application has been received from Muriel McKellar and the Southwest Qld Emus Inc in regard to the Player Sponsor Program for the proposed England / Cook Island Tour in October 2020. The request is for financial assistance / contribution toward Ben McKellar attending and participating in the Southwest Qld Emus England / Cook Island Tour in October 2020.

Resolution No: (16-11-19)

Moved by: ***Cr Roger Volz***

Seconded by: ***Cr Bob Hall***

That Council does not approve the request received from Muriel McKellar and the Southwest Qld Emus Inc to provide financial assistance toward Ben McKellar participating in the Southwest Qld Emus England / Cook Island Tour in October 2020.

5/0

17.5 (11/19) – Contractor Works Awarded and Proposed

At the October 2019 Ordinary Meeting, Council awarded four packages of flood damage restoration works. As has been discussed and agreed at Council, additional works would be awarded to contractors to make best use of budgeted funds to undertake additional road maintenance and resheeting works.

Resolution No: (17-11-19)

Moved by: ***Cr Bob Hall***

Seconded by: ***Cr Jenny Hewson***

That Council award the following works under the budgeted road resheeting program allocation:

Flood damage package A	*Tolbra Earthmovers & Haulage*	*Flood damage supplementary works at various locations*	*$257,278.00 excl GST*

Flood damage package B	*SC & KG Bowen*	*Flood damage supplementary works at various locations*	*$106,802.62 excl GST*
Flood damage package C	*SL & SA Travers*	*Flood damage supplementary works at various locations*	*$117,847.27 excl GST*
Flood damage package D	*Adavale Plant Hire*	*Flood damage supplementary works at various locations*	*$10,716.00 excl GST*
Other works	*APV Contracting*	*Various roadworks and locations*	*$177,690.00 excl GST*

5/0

18 GENERAL BUSINESS

18.1 (11/19) – Offer to purchase 22 Boobook Place, Quilpie

By email received on Tuesday 05 November, the owner of Lot 22 Boobook Place has requested that Council consider buying the vacant block of land back off them, as they are not in a position to progress with the block of land.

Resolution No: (18-11-19)

Moved by: ***Cr Roger Volz***

Seconded by: ***Cr Jenny Hewson***

That Council does not accept the offer to purchase 22 Boobook Place from the existing owner.

5/0

Councillors were invited to raise any items for discussion or consideration. A number of matters were raised for the attention of the Chief Executive Officer. In addition, decisions were made on the following items:

18.2 (11/19) – Regional Recycling Transport Assistance Package

The Queensland government have announced grants of up to $250,000 for transport costs associated with recycling under the Regional Recycling Transport Assistance Package (RRTAP). Applications under this program close on 29 November 2019.

The South West Regional Waste Group has received a proposal from the Australian Tyre Processors Pty Ltd for the processing and collection of unused tyres. The South West Regional Waste Group is seeking support from Council to collaborate with Bulloo, Paroo and Murweh Shire Councils in submitting a grant application under the RRTAP funding program for transport costs associated with the disposal of unused tyres; and to commit Council funds to cover the cost of processing the tyres.

Resolution No: (19-11-19)

Moved by: ***Cr Roger Volz***

Seconded by: ***Cr Jenny Hewson***

That Council does support the South West Regional Waste Group in collaborating with Bulloo, Paroo and Murweh Shire Councils in submitting a grant application under the Regional Recycling Transport Assistance Package (RRTAP) for transport costs associated with the disposal of unused tyres up to 150 tonne from the Quilpie Shire Landfill sites.

5/0

18.3 (11/19) – Quilpie Airport Refueling Facility

Council reviewed the retail charge out price for Avgas fuel at the Quilpie Airport.

Resolution No: (20-11-19)

Moved by: ***Cr Roger Volz***

Seconded by: ***Cr Jenny Hewson***

That Council charge a retail price for Avgas fuel at the Quilpie Airport at 120% of the purchase price. With a review to be undertaken in six (6) months.

5/0

18.4 (11/19) – Roads to Recovery (R2R) Funding Program

On 6 November 2019 the Government announced $138.9 million additional Roads to Recovery (R2R) funding in the 2020 calendar year for Local Government areas eligible for the Drought Communities Programme Extension.

The R2R program supports the maintenance of the nation's local road infrastructure asset.

Resolution No: (21-11-19)

Moved by: ***Cr Jenny Hewson***

Seconded by: ***Cr Bob Hall***

That Council write a letter to Deputy Prime Minister Hon. Michael McCormack MP thanking the Federal Government for the Roads to Recovery Funding Program and provide a brief summary on how Council is utilizing the funds. The Hon. David Littleproud MP will also be provided with a copy of the letter.

5/0

19 MEETING DATES

The next Ordinary Meeting of Quilpie Shire Council will take place on Friday 13 December 2019 in the Quilpie Shire Council Boardroom commencing at 9.30am.

There being no further business the Mayor declared the meeting closed at 3.14pm.

I hereby certify that the foregoing is a true record of the Minutes of the Proceedings of the Ordinary Meeting held on the Friday, 15 November 2019.

Submitted to the Ordinary Meeting of Council held on the Friday, 13 December 2019.

Cr Stuart Mackenzie — Date

Mayor of Quilpie Shire Council

Order of Proceedings

7 ITEMS ARISING FROM PREVIOUS MEETINGS

8 MAYORAL REPORT

9 COUNCILLOR PORTFOLIO REPORTS

10 STATUS REPORTS

10.1 (12/19) – Engineering Services Status Reports

10.2 (12/19) – Corporate and Community Services Status Reports

10.3 (12/19) – Financial Services Status Reports

10.4 (12/19) – Governance Status Reports

11 ENGINEERING SERVICES

11.1 (12/19) Depot Energy Review

IX: 188229

Author: Director of Engineering Services, Mr Peter See

PURPOSE:

An energy audit report was carried out by a consultant for the Quilpie Depot. The purpose of this report is for Council to receive the report and to endorse calling tenders for the installation of solar panels.

POLICY/LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

Council's Procurement Policy

CORPORATE PLAN:

5.1.8 Increase energy efficiency and the use of alternative energy within Council and undertake a feasibility study into geothermal energy options.

RECOMMENDATION:

That Council receives the report from Hum Energy Group Pty Ltd and that Council call tenders for the supply and installation of solar panels at the Quilpie Depot.

BACKGROUND:

Hum Energy Group was engaged by Council to carry out a Basic Energy Audit on the Quilpie Depot building with the main intention of reviewing current electricity usage and identifying any obvious energy cost saving opportunities.

DISCUSSION:

The final report is attached for Council's information.

The findings are as follows as extracted from the Executive Summary:

The key audit findings were $19,000 per year in approx. electricity cost savings, which represents more than a 50% reduction. The recommended energy saving measures have a strong business case with approx. $65,000 in capital costs, a simple project ROI of ~31% and simple payback of 3.3 years.

The energy saving measures identified and recommended to be implemented are:

#	Energy Saving Measure	Energy Savings (kWh/year)	Capital Cost ($)	Savings ($/year)	Simple ROI (%)	Payback (Yrs.)
1.	Install 70 kW Solar System	73,900	$63,000	$11,400	18%	5.5
2.	Install Energy Monitoring	6,300	$1,000	$1,800	180%	0.6
3.	Reclassify Site to small market	0	$500	$6,600	1320%	0.1
	TOTAL	**80,200**	**$64,500**	**$19,800**	**31%**	**3.3**

It was noted that the appropriate electricity tariff was 44 or 50 and that as Council was already using Tariff 44 there was no need to change.

With regard to the potential use of solar the consultant provided the following comments:

"Energy modelling showed that a solar system between 39 and 70 kW would be the most appropriate given the site's energy consumption. Systems 100 kW or bigger are too large because they will produce high amounts of wasted solar energy because they are not eligible for feed in tariffs in the Ergon.

What is important to note is that adding solar can reduce the sites grid electricity consumption below the 100,000 kWh/year threshold and presents the opportunity to have the site reclassified as a Small Business post solar installation which would reduce energy tariffs."

The final recommendation is to install energy monitoring equipment to monitor waste energy such as air-conditioning and lighting left on after work hours and to then take action to eliminate these issues.

FINANCIAL:

Council's budget has an allocation of $120,000.00 in the 2019-2020 budget. Based on the results of the report Council endorsement is sought to call tenders for the supply and installation of solar panels to the depot.

CONSULTATION:

Technical Officer Jeff Turner and Sean Rice of the Proterra Group have worked together on this project with Ben Humphries from the Hum Energy Group.

ATTACHMENTS:

Attachment A: Energy audit report from Hum Energy:

Title: Energy Audit Report

Site: Quilpie Regional Council

Document Control

Report for:

Entity/Client	Quilpie Shire Council
Site	Lot 0, Diamantina Development Rd, Quilpie QLD 4480
Address	Lot 1, 9 Anzac Dr, Quilpie QLD 4480
Contact Details	Jack Barnes 07 4656 0582 Jeff Turner JeffT@quilpie.qld.gov.au ph07 4656 0563 m0408 989 326

Document Details

Date	14/10/2019
Document Name	Energy Audit Report
Reference	PO: 123248
Revision	1.0
Description	Draft for Client Review
Confidentiality	Commercial in Confidence

Revision Table

Date	Version	Author	Approver	Initial
14/10/2019	1.0	Ben Humphreys	Ben Humphreys	

Company Details

Humenergy Group Pty Ltd
ABN: 15 601 324 387
PO Box 10443
Suite 30301 27 Garden St
Southport BC, QLD 4215

www.humenergy.com.au info@humenergy.com.au

Contents

1 Executive Summary

Humenergy Group was engaged by the Quilpie Shire Council to carry out a Basic Energy Audit on the Quilpie Shire Council Works Depot building with the main intentions of reviewing current electricity usage and identifying any obvious energy cost saving opportunities.

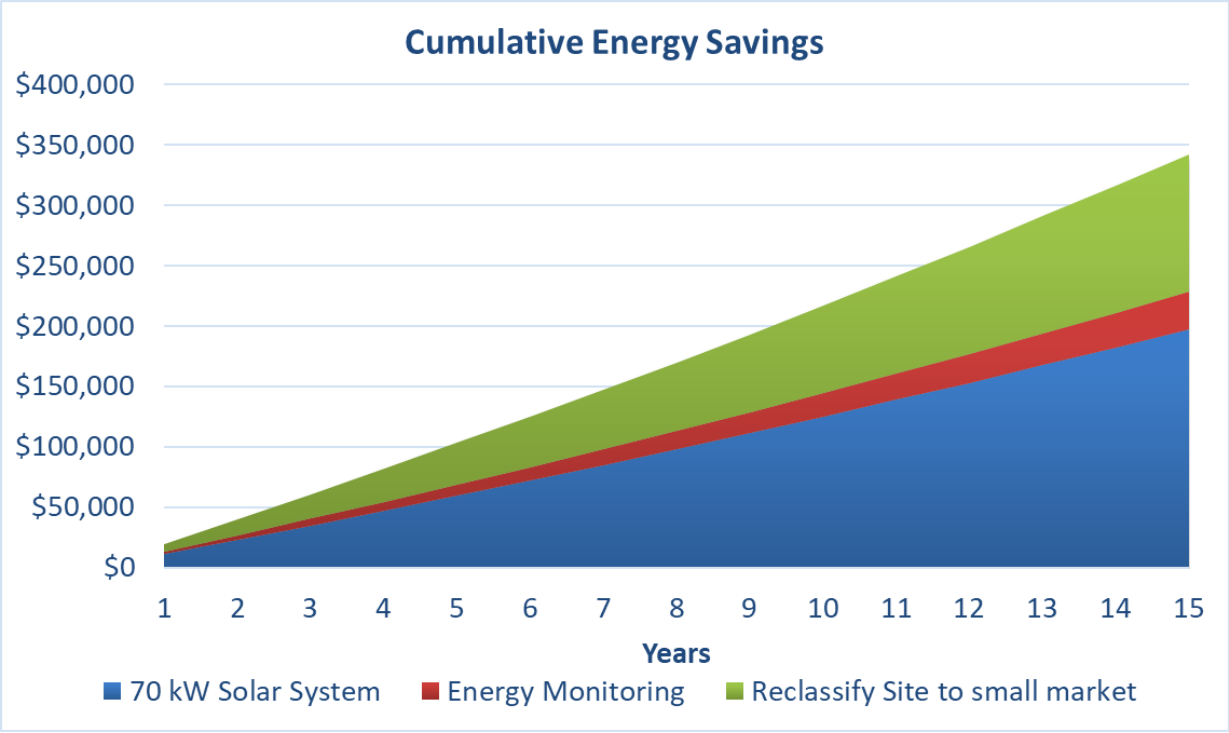
The building has the following key characteristics:

- Relatively new, 3-4 years in age
- Total building area of ~2,135m^2, consisting of 635m2 office plus ~1,500m2 workshop
- Electricity usage of 126,000 kWh per year, Electricity costs of $36,000 per year
- Energy intensity of 59 kWh/m^2/year, Bundled unit energy cost of 29.6c/kWh

The key audit findings were $19,000 per year in approx. electricity cost savings, which represents more than a 50% reduction. The recommended energy saving measures have a strong business case with approx. $65,000 in capital costs, a simple project ROI of ~31% and simple payback of 3.3 years.

The energy saving measures identified and recommended to be implemented are:

#	Energy Saving Measure	Energy Savings (kWh/year)	Capital Cost ($)	Savings ($/year)	Simple ROI (%)	Payback (Yrs)
1.	Install 70 kW Solar System	73,900	$63,000	$11,400	18%	5.5
2.	Install Energy Monitoring	6,300	$1,000	$1,800	180%	0.6
3.	Reclassify Site to small market	0	$500	$6,600	1320%	0.1
	TOTAL	80,200	$64,500	$19,800	31%	3.3



2 Introduction

Humenergy Group was engaged by the Quilpie Shire Council to Carry out Desktop Basic Energy Audit on the Quilpie Shire Council Depot and Office building. This is a summary report of the energy audit findings.

The audit was limited to electricity and included the following:

- Review electricity bill(s)
- Estimate energy breakdown
- Energy procurement optimisation
- Identify potential energy saving measures
- Estimate costs and returns for energy savings measures
- Rank identified energy saving measures
- Recommendations and next steps

3 Site Overview

The energy audit was carried out on the Quilpie Shire Council building with the following key characteristics:

- Total building area of ~2,135m^2, consisting of 635m2 office plus ~1,500m2 workshop
- Electricity usage of 126,000 kWh per year, Electricity costs of $36,000 per year
- Located in Quilpie QLD, Ergon Energy Network
- Energy intensity of 59 kWh/m^2/year
- Bundled unit energy cost of 29.6c/kWh

4 Background - Energy Audit Overview

An energy audit is basically a review of a facility or business' energy use with the intention of identifying energy cost savings. Energy audits are also being increasingly used to reduce greenhouse gas emissions and to increase sustainability by reducing waste.

The energy audit is a well-established process as shown in Figure 1. Each level of an energy audit increases in cost, but typically delivers greater energy savings. It is recommended practice to work through the levels as it identifies the "low hanging fruit" for the lowest possible cost, and provides justification for progressing with the more detailed and costly next energy audit stage only if warranted.

The energy audit process is considered an iterative process in order to achieve continuous improvement, ensure implemented measures are delivering savings, and to keep pace with changing technology and energy costs. AS/NZS 3598:2000 Energy Audits recommends:

1. "A Level 1 audit should be undertaken each year as part of the review of an energy management program", and
2. "Also, an appropriate higher level of audit should be undertaken every 3 to 5 years or whenever there is a significant change in the scale of operation or manner of undertaking the operation"

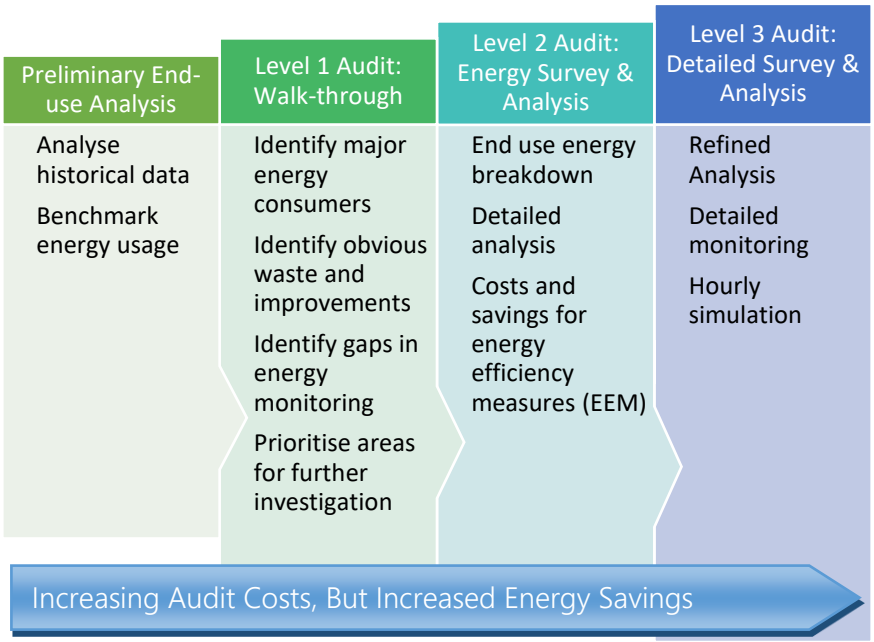


Figure 1 Overview of the different stages of the energy audit process (Source: adapted from ASHRAE [American Society of Heating, Refrigerating and Air-Conditioning Engineers])

5 Review of Electricity Bills

The past 2 years of electricity bills were analysed with the following key observations:

- Annual electricity usage is currently ~126,000 kWh per annum
- Daily average usage is 356 kWh/day
- This ranges from 300 kWh/day during winter to 400 kWh/day during winter
- Peak demand ranges from ~30 kW in winter to ~50 kW in summer.
- Annual electricity costs are currently ~$40,000
- This level of consumption (>100,000 kWh/annum) classifies the site as Large Business with regard to Ergon Energy. Small business sites have lower energy tariffs.
- The site is currently on Tariff 44, which includes the following charges (ex GST):
    - Energy charges 12.54 c/kWh
    - Peak Demand Charges $36.288/kW/month for excess kW over 30kW
    - Fixed Charges $46.27229/day
- The site tariff structure was changed from Tariff 20L (37.595c/kWh plus 76.858c/day) from the 8 Nov 2018 to the current Tariff 44 Structure. This resulted in a 21% reduction in the bundled unit energy cost from ~38c/kWh down to ~30c/kWh.

Table 1 Summary of electricity use and costs

Start Date	End Date	Energy Use kWh/year	Total Cost $/year ex GST	Unit Energy Cost $/kWh ex GST	Energy % of Cost	Peak Demand % of Cost	Fixed Cost % of Cost
9/08/2017	8/08/2018	106,811	$40,610	$0.3802	99.27%	0.00%	0.69%
8/08/2018	1/08/2019	125,523	$39,296	$0.3131	60.01%	5.70%	32.06%

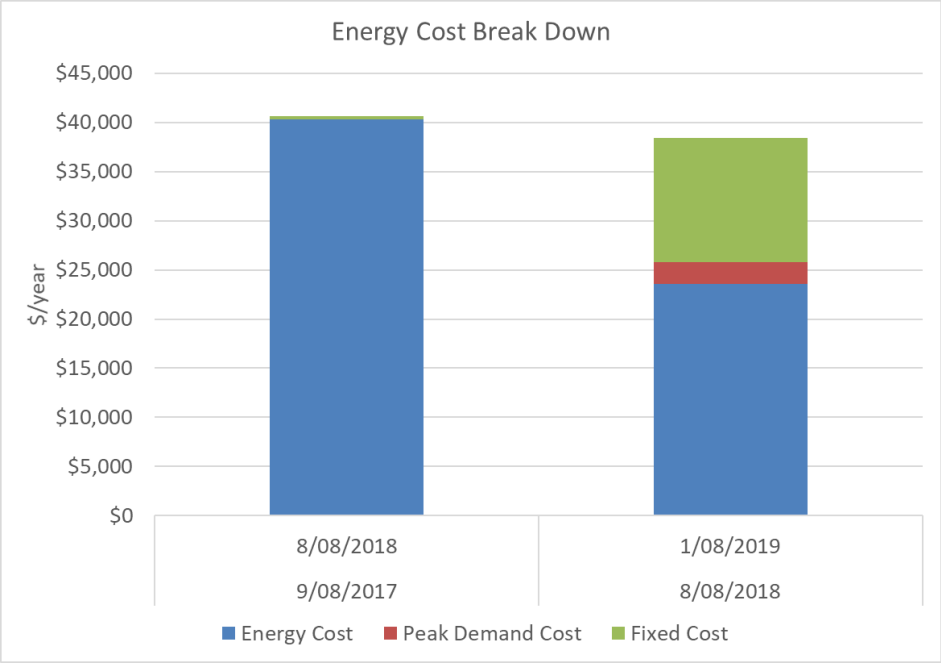


Figure 2 Annual Energy Cost Breakdown

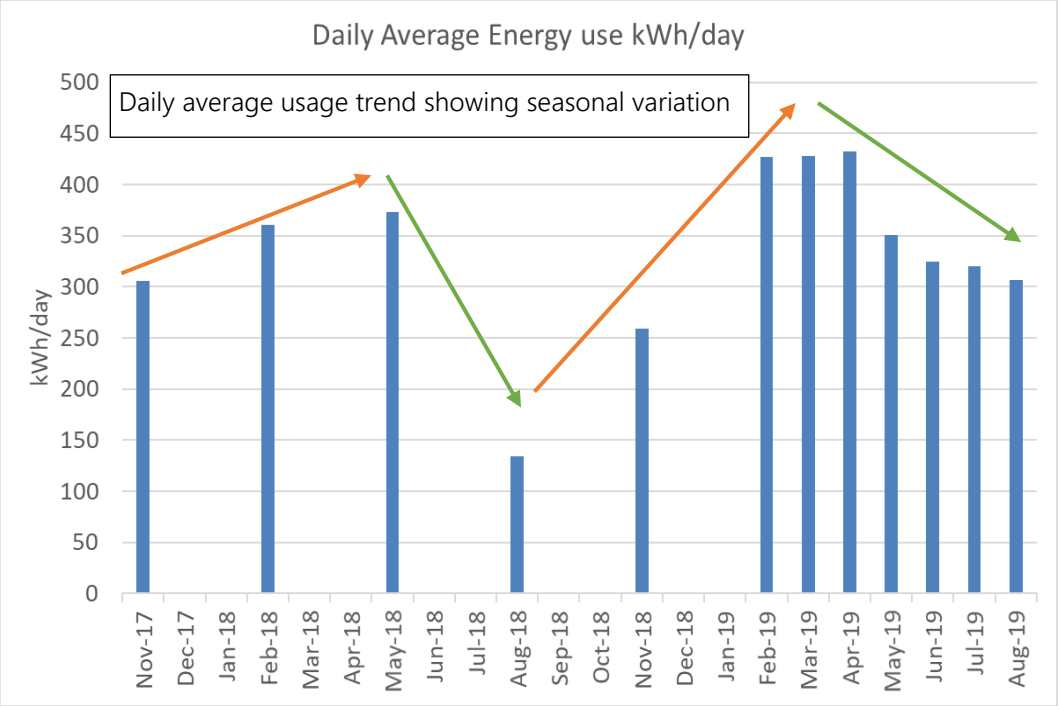


Figure 3 Seasonal Daily Average Usage

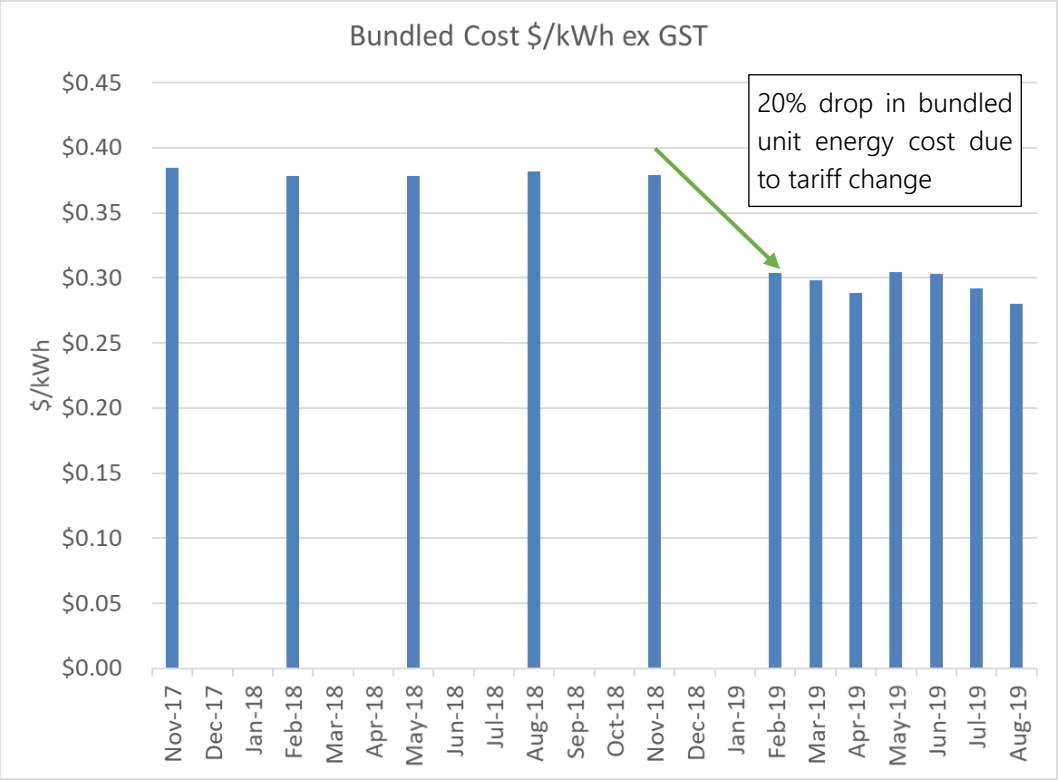


Figure 4 Bundled Unit Cost $/kWh

6 Energy Use Breakdown

The sites energy use breakdown by main function was estimated using light and equipment counts provided, and reference data from other sites.

It is important to note that this information is should be treated as indicative only as it is effectively based on educated guesses. It should not be reproduced or used for any decision making purpose.

Table 2 Estimated Energy Use Breakdown

#	Category	Annual Energy Use (kWh/annum)	Comments
1	Lighting	25,000	Estimated from Light Count
2	Heating & Cooling	42,000	Estimated from Equip Count
3	Workshop Equipment	40,000	Guess 110 kWh/day based on other business usage data
4	Appliances	12,500	Guess @ 10% of total
5	Miscellaneous	6,500	Balance
	Total	126,000	

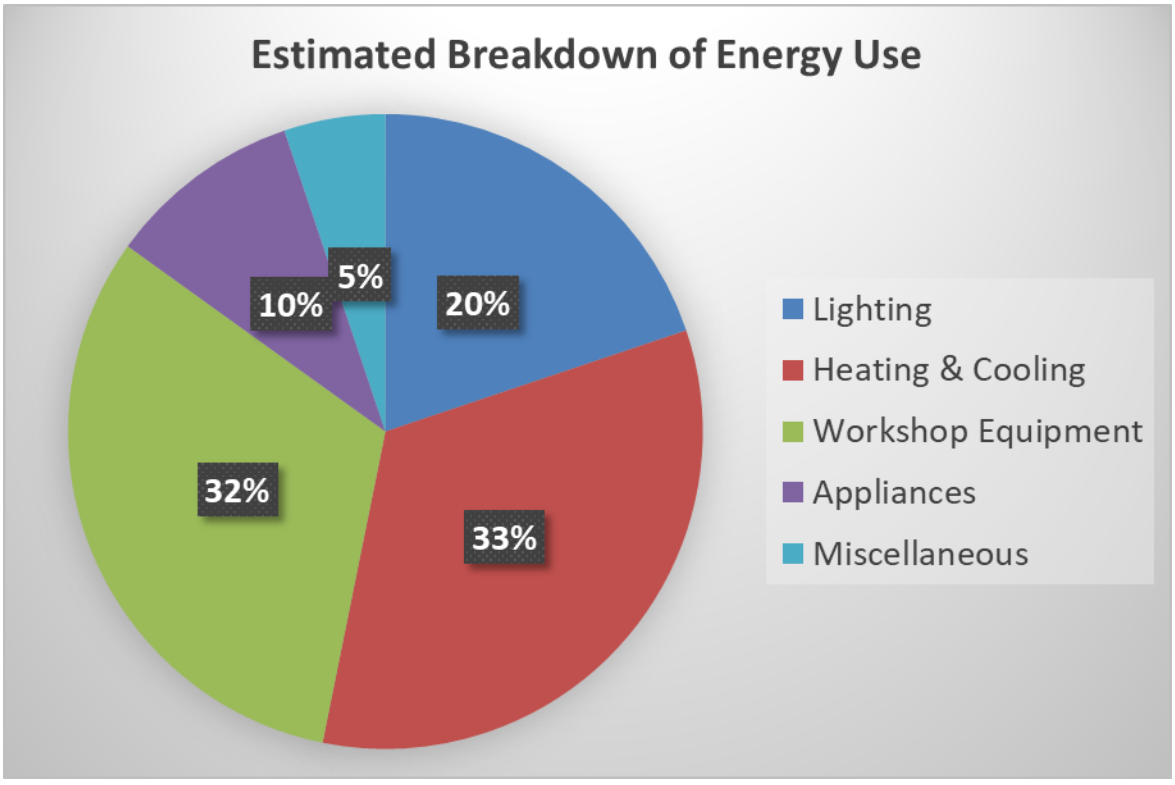


Figure 5 Estimated Energy Use Breakdown

7 Energy Procurement Optimisation

A tariff optimisation modelling was carried to determine the most cost-effective tariff option for the site. The results determined that Tariff 44 and Tariff 50 were the lowest cost options (see Table 3).

As the site is already on Tariff 44, there is no reason to change.

Table 3 Tariff Optimisation

Parameter Unit	Units	Tariff 20L	Tariff 22L	Tariff 44	Tariff 50
Total Site Electricity Consumption	kWh	126,000	126,000	126,000	126,000
Variable Cost	$pa	$47,342	$52,995	$15,791	$17,566
Peak Demand Cost	$pa	$0	$0	$5,975	$6,768
Fixed Cost	$pa	$281	$674	$16,889	$13,238
Electricity Bill Pre Solar	$pa	$47,622	$53,669	$38,656	$37,573

Table 4 Ergon Large Business Tariff Options

Item	Units	Tariff 20L	Tariff 22L	Tariff 44	Tariff 50
Peak Tariff	$/kWh	$0.376	$0.498200	$0.1254	$0.1218
Off peak Tariff	$/kWh	$0.376	$0.175430	$0.1254	$0.1466
Peak Demand Cost	$/kW			$36.288	
Fixed Daily Charges	$/day	$0.7686	$1.8472	$46.2723	$36.2693
Summer Demand Charge	$/kW				$66.777
Winter Demand Charge	$/kW				$11.562
Summer Demand Charge Threshold	kW			30	20
Winter Demand Charge Threshold	kW			30	40

8 Identification of obvious opportunities for energy cost savings

8.1 Solar

8.1.1 Solar Energy Modelling

Energy modelling showed that a solar system between 39 and 70 kW would be the most appropriate given the site's energy consumption. Systems 100 kW or bigger are too large because they will produce high amounts of wasted solar energy because they are not eligible for feedin tariffs in the Ergon.

What is important to note is that adding solar can reduce the sites grid electricity consumption below the 100,000 kWh/year threshold and presents the opportunity to have the site reclassified as a Small Business post solar installation which would reduce energy tariffs.

Table 5 Solar Sizing Comparison

Parameter Unit	Units	Current	39 kW	70 kW	100 kW
Site Elec Use - Pre Solar	kWh/yr	126,000	126,000	126,000	126,000
Solar Size	kW		39	70	100
Solar Generation	kWh/yr		59,800	107,300	153,300
Solar Exported	kWh/yr		5,200	33,400	72,000
Solar Export/Excess %	%		9%	31%	47%
Site Grid Use - Post Solar	kWh/yr	126,000	71,400	52,100	44,700
Energy Use Reduction	%	0.00%	43.33%	58.65%	64.52%

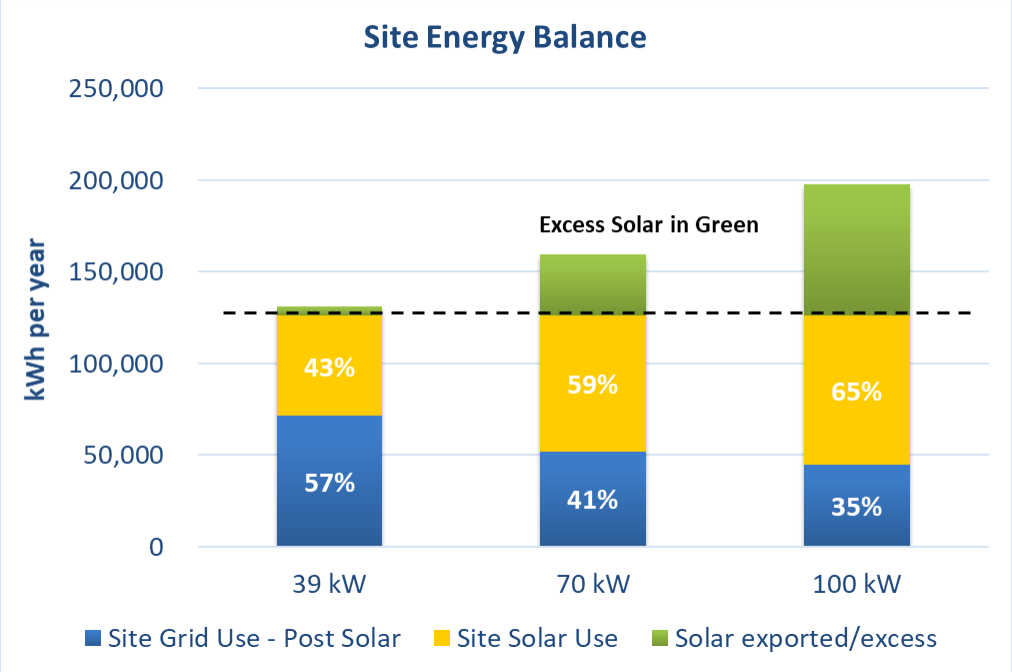


Figure 6 Solar Sizing Comparison Graph

8.1.2 Solar Preliminary Business Case

The preliminary business case (See Error! Reference source not found.) under existing Tariff 44 structure shows that a solar system sized between 39 and 70 kW would achieve cost savings of between $9,000 and $11,400 per year, and reduce energy costs by up to 32%. A 100 kW system is probably too big as the simple return on investment is <15%.

The bigger opportunity is to use solar to reduce the site's consumption below the Large Business threshold, then annual cost savings could increase to between $13,700 and $18,100, and energy costs reduced by up to 50%. See Table 7

Table 6 Solar Sizing Comparison under Large Business Tariff 44

Parameter Unit	Units	Current	39 kW	70 kW	100 kW
Electricity Bill Pre Solar	$/year	$36,165	$36,165	$36,165	$36,165
Solar Savings - Energy Use Reduction	$/year		$6,800	$9,300	$10,200
Solar Savings - Feedin Tariff Value	$/year		$400	$0	$0
Solar Savings - Peak Demand Reduction	$/year		$1,800	$2,100	$2,300
Total Value From Solar	$/year	$0	$9,000	$11,400	$12,500
Electricity Bill Post Solar	$/year	$36,165	$27,165	$24,765	$23,665
Bundled Unit Energy Cost Post Solar	$/kWh	$0.2870	$0.2156	$0.1965	$0.1878
Reduction in Elec Costs	%	0%	25%	32%	35%
Approx. 15 Yr Savings @ 2%pa Escalation	$	$0	$156,000	$197,000	$216,000
Capital Cost (Preliminary Estimate)	$		$35,100	$63,000	$90,000
ROI	%		25.6%	18.1%	13.9%
Payback	Years		3.9	5.5	7.2

Table 7 Solar Sizing Comparison under Small Business Tariff 20

Parameter Unit	Units	Current	39 kW	70 kW	100 kW
Solar Savings - Energy Use Reduction	$/year		$13,300	$18,100	$19,900
Solar Savings - Feedin Tariff Value	$/year		$400	$0	$0
Solar Savings - Peak Demand Reduction	$/year		$0	$0	$0
Total Value From Solar	$/year	$0	$13,700	$18,100	$19,900
Electricity Bill Post Solar	$/year	$36,165	$22,465	$18,065	$16,265
Bundled Unit Energy Cost Post Solar	$/kWh	$0.2870	$0.1783	$0.1434	$0.1291
Reduction in Elec Costs	%	0%	38%	50%	55%
Approx. 15 Yr Savings @ 2%pa Escalation	$	$0	$237,000	$313,000	$345,000
Capital Cost (Preliminary Estimate)	$		$35,100	$63,000	$90,000
ROI	%		39.0%	28.7%	22.1%
Payback	Years		2.6	3.5	4.5

8.1.3 Solar space availability

There is sufficient roof area available to install a solar system up to ~160kW. Shown below are 352 x 405W commercial solar panels, which equates to 142.56kW.

Figure 7 Roof area capacity for solar

8.2 Lighting

The lights installed on site were taken from electrical drawings supplied, and the energy consumption used by lighting was estimated using a best guess approach.

There is no obvious opportunity to retrofit existing lighting for more energy efficient lighting because the age of the building is quite new (3-4 years old) and the majority of the lights are already LED. We would recommend this be reviewed in 3-5 years as lighting technology improves and the existing lights deteriorate with age.

Table 8 Lighting Count

#	Light Type	Light Count	Wattage per Tube	Total Wattage	Hours per normal day	Guess - Total Light Usage as % of time	Total Energy kWh
1	Gamma Illumination 1196-4K-10W Recessed	8	10	80	8	50%	117
2	LED-S0606S2-056W-NW LED Panel Light	57	56	3,192	8	50%	4,660
3	XHB3-S-LED-12-450CW LED High Bay Lights	26	192	4,992	10	70%	12,755
4	Pierlite REFLE1200K 35W	6	35	210	8	50%	307
5	Pierlite REFLE6004K 35W	6	35	210	8	50%	307
6	Pierlite ETT228D4 Troffer	2	56	112	8	50%	164
7	Security Lights - Double	11	250	2,750	10	50%	5,019
8	Security Lights - Single	6	150	900	10	50%	1,643
	Totals	**122**		**12,446**			**24,970**

8.3 Equipment

There is no obvious opportunity to reduce energy costs by replacing equipment because the age of the building is quite new, and equipment would have been designed and specified in accordance with modern energy efficiency standards.

8.4 Energy Monitoring

It is considered good energy management practice to install energy monitoring equipment so that trends, improvements, and changes can be accurately identified, analysed and reported on. The data is also important for the following reasons:

- Providing Information – data is required for implementing more complex solutions such as smart control in the future to further reduce energy consumption and costs
- Identifying energy waste – enable the ability to identify and act on energy waste in particular in buildings and part-time use facilities
- Reporting and benchmarking – provides information to track progress, benchmark against industry standards, and reporting
- Tracking progress against meeting reduction targets

There is often significant opportunity to reduce energy costs via reductions in energy waste. Energy waste is things like leaving air conditioners or lighting on over a weekend in an office building. As shown in Figure 8, energy waste in buildings consumes a significant amount of energy.

As an approximate guide, a 3-10% reduction in costs through reducing energy waste is likely to be readily achievable. This would equate to an annual saving of $1,000 to $3,600 per year for the assets included in the audit.

Site energy consumption monitoring can typically be provided as part of any quality commercial solar installation for little to no extra cost. It is recommended that to use this approach for any energy monitoring solution.

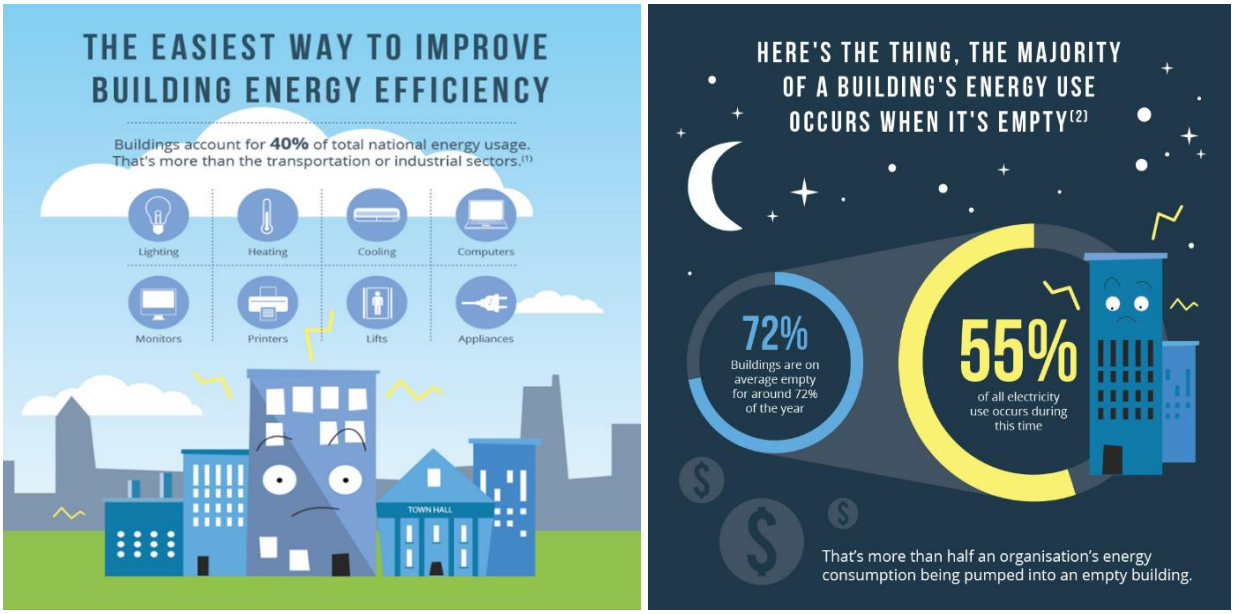


Figure 8 Infographics depicting energy waste in buildings (http://greensense.com.au)

9 Summary

Energy saving measures recommended to be implemented:

- Install ~70kW solar system
- Install energy monitoring as part of solar project
- Reclassify site as small market customer. Typically, this is possible after ~12 months of energy consumption below the threshold.

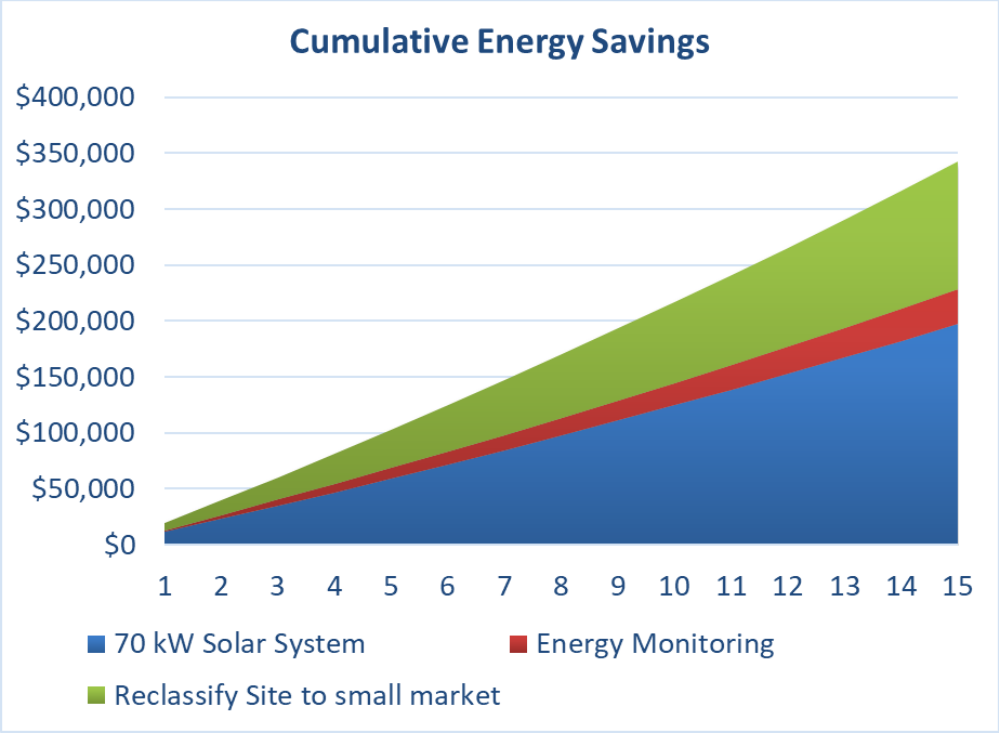
Potential energy saving measures recommended to be Investigated in the future:

- Lighting upgrade in 3-5 years
- Equipment performance

Recommended energy costs savings identified were in the order of $19,000 per year, or more than a 50% reduction compared to current energy costs of $36,000 per year. The estimated total cost of implementing the recommendations is circa $65,000. The estimated project simple ROI is ~31%, or simple payback is 3.3 years. The project would save approx. $350,000 over the next 15 years.

Table 9 Energy savings measures identified

Energy Saving Measure	Energy Savings (kWh/year)	Capital Cost ($)	Savings ($/year)	Simple ROI (%)	Payback (Yrs)
Install 70 kW Solar System	73,900	$63,000	$11,400	18%	5.5
Install Energy Monitoring	6,300	$1,000	$1,800	180%	0.6
Reclassify Site to small market	0	$500	$6,600	1320%	0.1
TOTAL	80,200	$64,500	$19,800	31%	3.3



11.2 (12/19) Site Development Plan: Quilpie Waste Facility

IX: 188229

Author: Director of Engineering Services, Mr Peter See

PURPOSE:

This report is to present the final report and the report recommendations for the future development of the Quilpie Waste Facility.

POLICY/LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

Environmental Protection Act 1994

Council's Procurement Policy

CORPORATE PLAN:

3.1.4 Lobby for and actively participate in the development of a coordinated regional waste management strategy with neighboring Council's.

3.1.6 Develop strategies to promote waste minimization and recycling within our communities.

RECOMMENDATION:

That Council receive the report and consider the construction of a transfer station subject to suitable funding being sourced.

BACKGROUND:

Council currently uses a small Sumitomo Excavator and a Caterpillar Drott Loader at the Waste Facility.

The Excavator was purchased in July 2011 and has relatively small work hours (1481 hours to date). The Drott was purchased second hand in November 2015 for $52,946.46 and has been problematic since purchase. It has not been operational since 10 August 2019 but will be back in service by 27 November. The Drott requires approximately a further $20,000 to repair the track rollers and frame as the frame is bent.

The current financial book value of the Drott is $38,110.54 however a quote has been obtained from the Caterpillar dealer that it is only valued at $27,500 as a trade-in.

DISCUSSION: PROTERRA GROUP REPORT

Proterra Group has reviewed the current operations of the Quilpie Waste Management Facility. The site development plan has been compiled to address a range of ongoing issues with the present arrangements at the site.

As part of the review, an assessment of the lifespan of the facility has been carried out. The anticipated remaining lifespan is 56 years at present waste disposal rates. The proposed site development plan is attached to this report (Attachment 2). The proposed arrangements are conceptual at present and will require detailed design work if Council proceeds further.

It is recommended in the report that access to the full area of the waste facility is restricted to the public. This could be achieved by providing a bin transfer station at the entrance to the facility. The proposed type of bin facility is shown on page 27 of the Proterra Group report. The proposed restricted access to the waste facility for the public is shown on drawing number 19-768-Q-06 which has been included separately as Attachment 1.

The full list of recommendations is shown in section 4, page 34 of the report.

The recommendations include:

- Restriction of opening hours.
- Carry out detailed design for the waste transfer station and fencing with a view to securing funding.
- Consolidation of existing landfill cells to a single cell.
- Continual construction of a bund wall around the waste facility to dispose of tyres (and to aid windblown litter control).
- Amendment of the land parcel to reflect Council's Environmental Authority.
- Procurement/relocation of a front wheel loader to the site.
- Investigate purchasing waste compaction plant.
- Design the new landfill cell design.

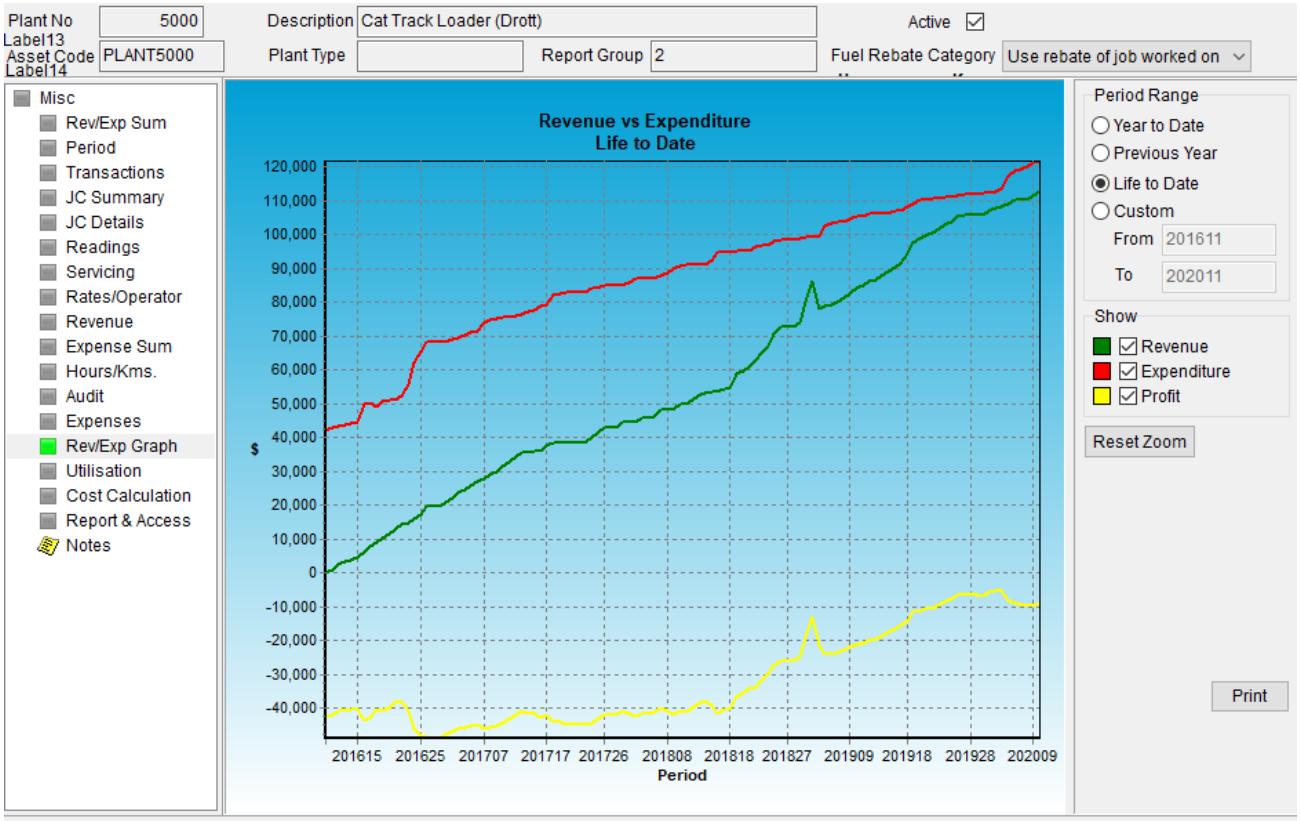
Some initial work has commenced on the tyre bund wall. The cost using existing staff and plant is approximately $15,000 per annum based on the early works to date however this cost is met by the current budget for the waste facility.

The photograph below shows the construction.

DISCUSSION: PLANT ISSUES

The recommendations of the Proterra Group report include the purchase of a loader and consideration of a waste compactor. Council currently operates a Komatsu front end loader for road construction and maintenance works. The loader is considered to be somewhat under powered for this work however it manages the work. A possibility is to transfer the Komatsu loader to the waste facility and to modify it to enable it to pick up transfer bins with detachable forks. Komatsu have provided an indication that should Council proceed to purchase a more powerful loader from Komatsu, then they would carry out the conversion of the existing loader to a tool carrier configuration at no additional cost. If the work was done independent of a Komatsu purchase then the conversion cost is estimated to be $35,000.

A more powerful loader can then be considered by Council to be placed into the Works Department, the existing Drott could be sold independently or used as a trade in. The expected current value is $ 27,500.00 including GST. The graph following shows the costs of the Drott.



A Drott has caterpillar tracks which essentially provide very limited compaction of waste. A wheel type loader is a compromise between moving waste and compaction of the waste

An indicative cost of a new larger loader is $446,000 excluding GST

FINANCIAL:

Council will need to consider funding in future budget deliberations to enable many of the recommendations to proceed.

CONSULTATION:

Consultation has occurred with Council staff. It is recommended that consultation be carried out with the Quilpie Community with regard to the recommendations made.

ATTACHMENTS:

Attachment 1: Quilpie Waste Facility Site Development Plan

Attachment 2: Area maps

PROTERRA GROUP

SITE DEVELOPMENT PLAN

QUILPIE WASTE FACILITY

QUILPIE SHIRE COUNCIL

AMENDMENT, DISTRIBUTION and APPROVAL

ISSUE	AUTHOR	REVIEWER	APPROVED FOR ISSUE		
			NAME	SIGNATURE	DATE
1	Michael Shellshear	Sean Rice	Michael Shellshear		30/10/2019

Disclaimer

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Proterra Group Pty Ltd

31 Glasser Street (PO Box 1273) Goondiwindi QLD 4390

2 Aubigny Street (PO Box 208) Toowoomba QLD 4350

E: admin@proterragroup.com.au

W: www.proterragroup.com.au

ABN: 82 626 886 771

TABLE OF CONTENTS

1 INTRODUCTION

The Quilpie Shire Council (QSC) has engaged Proterra Group to review the current operations of the Quilpie Waste Management Facility (QWMF).

Currently, the QWMF includes a landfill that operates within the 50-2,000 tonne/annum threshold. As the population within the region remains stable, increased waste volumes are not expected, and the current licence is adequate for the expected population growth. The purpose of this document is to address QSC concerns with ongoing issues by recommending improved design and operations of the site. This plan will help ensure QSC operates within the conditions of its Environmental Authority (EA) and all relevant legislation.

This Site Development Plan (SDP) will also assesses the lifespan of the QWMF. The plan will estimate the remaining airspace/landfill life and propose a conceptual landfilling plan. It is important to note that the proposed landfill filling plan is conceptual and provides an initial concept for the proposed plan only.

2 BACKGROUND

2.1 SITE HISTORY

The QWMF has been in operation since at least 1956 and along with the smaller Eromanga and Adavale waste facilities, they service an area of 67,482 sq km. The local industry within the shire is predominantly agriculture with large sheep and cattle operations throughout the region. The resources sector also contributes to the local economy with large opal deposits and extensive operations of gas and oil throughout the region.

The QWMF was designed to service the general waste generated by the Quilpie community and is therefore considered principally as a municipal solid waste (MSW) landfill, rather than being designed for acceptance of industrial or specialised wastes. The local township has a population of approximately 595 people, with kerbside waste collected on a weekly basis for residents and biweekly for local businesses.

The QWMF is open 24 hours per day, seven days per week. The facility is staffed for approximately 15-20 hours per week at varying times.

2.2 SITE LOCATION

The QWMF is located on Cemetery Road, approximately 2km North West of the Quilpie township. The Waste Facility property description is Lot 4 SP292581 and has a total area of approximately 31.18 Ha.

The facility is located at MGA94 coordinates – Easting 225,114.44m / Northing 7,055,010.48m.

There are Queensland Government survey references:

- Mark No. 177621 located approx. 800m to the east of the site.

The underlying natural topography of the waste management facility is gradual slopes to the east and west from a central ridge running in a north-south direction through the site.

Associated soils are very shallow to shallow, stony, red to brown clay – loams to light clays. Stone cover is derived from erosion of the tertiary surface resulting in superficial cover of quaternary deposits.

The QWMF is surrounded by the Quilpie Common (Reserve Land) managed by the QSC for grazing.

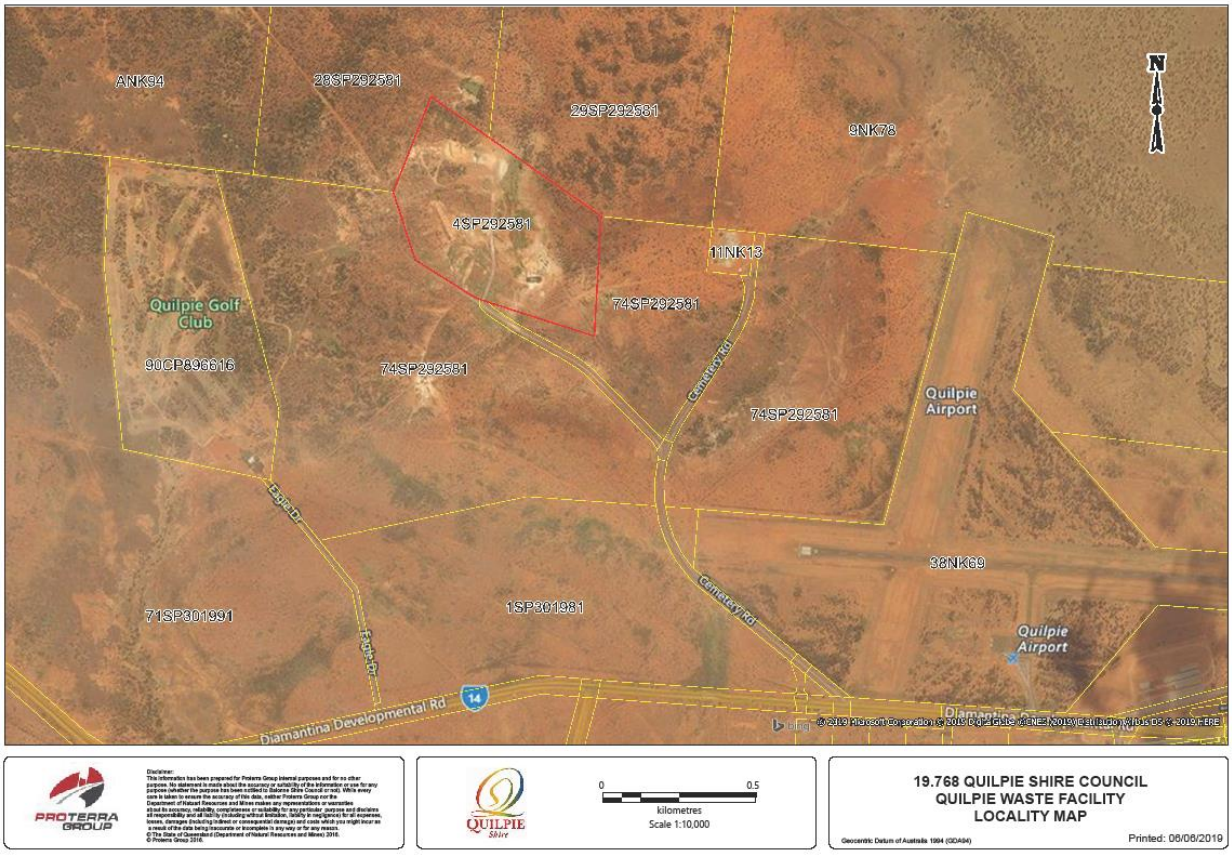


Figure 2-1 Locality Map - Quilpie Waste Facility

2.3 CLIMATE DATA

An understanding of localised climate data is integral to the responsible operation of any waste management and landfilling operation. The nearest climate data collection location to the QWMF is the Quilpie Airport, which is approximately 1 km away. The Australian Bureau of Meteorology collects climatic data for the Quilpie area and the collection location is detailed in Table 2-1. Considering the short distance between the climatic data station and the waste facility, meteorological data collected at the Quilpie Airport could reasonably be considered as representative of that at the QWMF.

Table 2-1 Site Details for the Australian BoM climate data station, Quilpie Airport

Site Name		Quilpie Airport	
Site Number		045015	
Commenced		1917	
Latitude:	26.61° S	UTM Easting	226,841.14
Longitude:	144.26° E	UTM Northing	7,083,618.59
Elevation		199.6m	
Operational Status		Open	

Located in southwest Queensland, Quilpie generally experiences hot summers and warm, dry winters. Quilpie has a mean maximum temperature of 37C in January and a mean minimum temperature of 6.1C in winter.

Of most relevance in relation to this SDP is the rainfall data for this location. The Quilpie Shire is situated in a semi-arid environment where the annual mean rainfall is approximately 350.1mm. Rainfall in Quilpie region is summer dominant. Mean rainfall for the years 1917 to 2019 is presented in Figure 2-2.

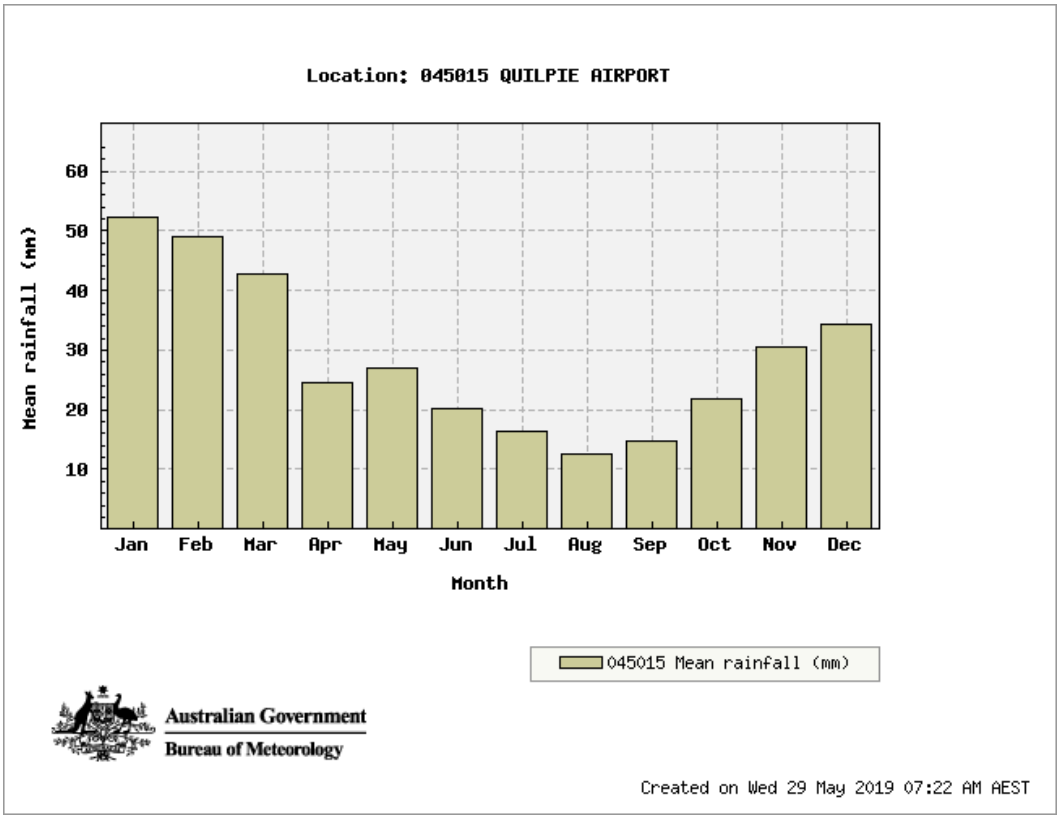


Figure 2-2 Mean rainfall 1917-2019, Quilpie Airport

Rainfall exceedance per year (EY) and annual exceedance probability (AEP) are represented graphically in Figure 2-3.

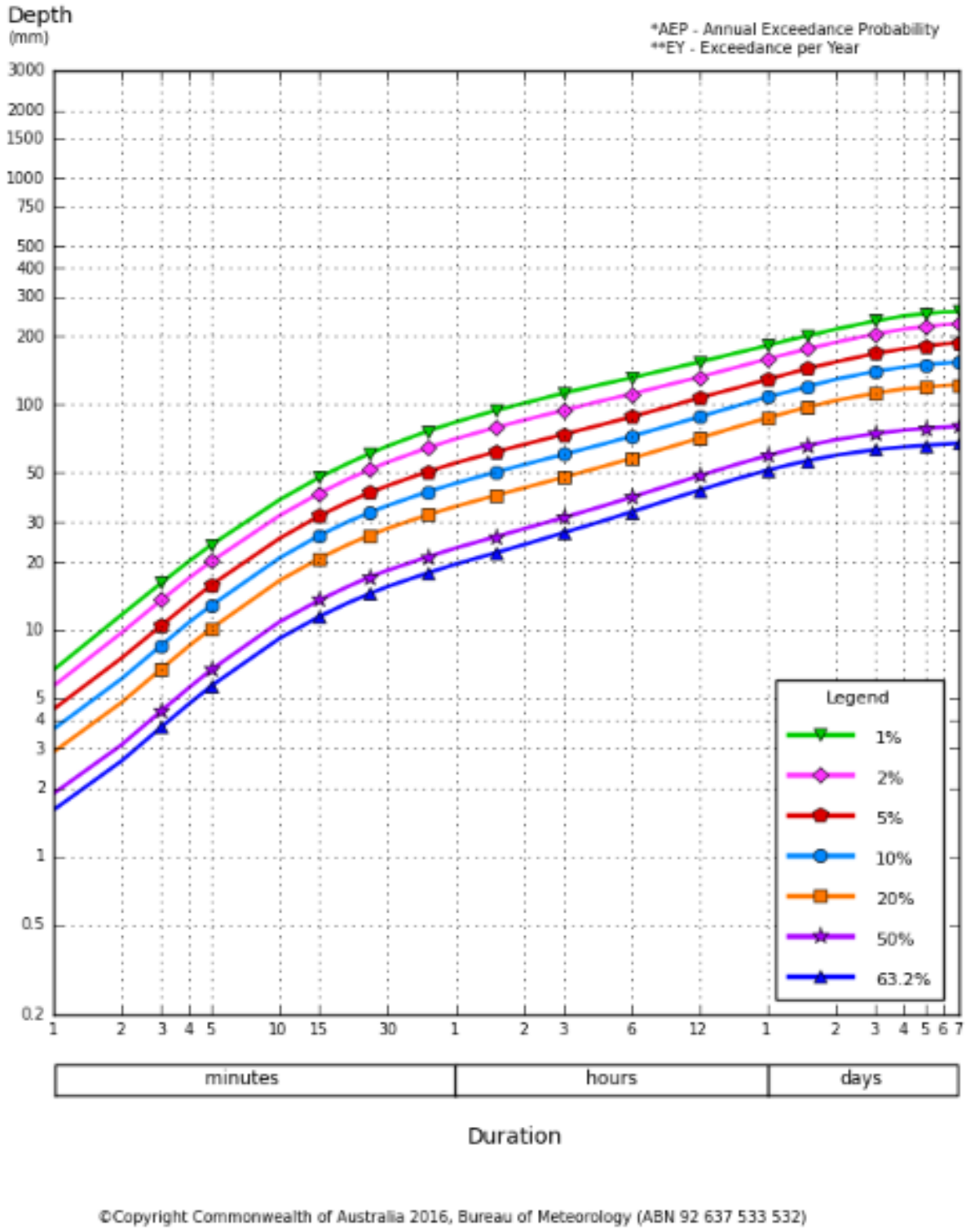


Figure 2-3 Mean rainfall 1917-2019, Quilpie Airport

2.4 SITE ECOSYSTEM

The site has been used for waste disposal for many years, hence the project is not expected to have any significant impact on fauna habitat.

The activity is not expected to have any significant impact on aquatic ecology.

Feral animals (dogs, cats, rats etc) and scavengers (ibis, crows etc) are likely to be attracted by site activities.

2.4.1 Regulated Vegetation

The regulated vegetation mapping and report for lot 4 SP292581 shows that 31.1ha out of the total 31.15ha is class B remnant vegetation with the remainder being class X (no category). Using the site as a waste facility would not qualify as a valid activity included as exempt clearing work under the Planning Regulation 2017 and the Vegetation Management Act 1999. QSC should address this issue and seek to amend the vegetation mapping noting that much of the site has been cleared and operating as a waste facility for many years. Refer to table 2-2 below for regional ecosystems represented within the waste facility site and Figure 2-4 for regulated vegetation mapping.

Table 2-2 Table Regional ecosystems present on Lot 4 SP292581

Regional Ecosystem	VMA Status	Category	Area	Short Description
6.9.4	Least Concern	B	16.46	Acacia cambagei, Senna spp.,Sida platycalyx tall open shrubland on undulating mantled pediments and scarp retreat zones
6.7.14	Least Concern	B	5.31	Acacia clivicola +/- Eucalyptus spp. Open shrubland on crests and tops residuals
6.7.9	Least Concern	B	2.27	Acacia aneura +/- A.clivicola +/- Eremophila latrobei opens shrubland on residuals
6.7.12	Least Concern	B	7.06	Acacia aneura +/- Eucalptus populnea +/- E. melanophloia +/_ Eremophila gilesii subsp. Gilesii tall shrubland on residuals
Non - rem	None	X	0.05	None

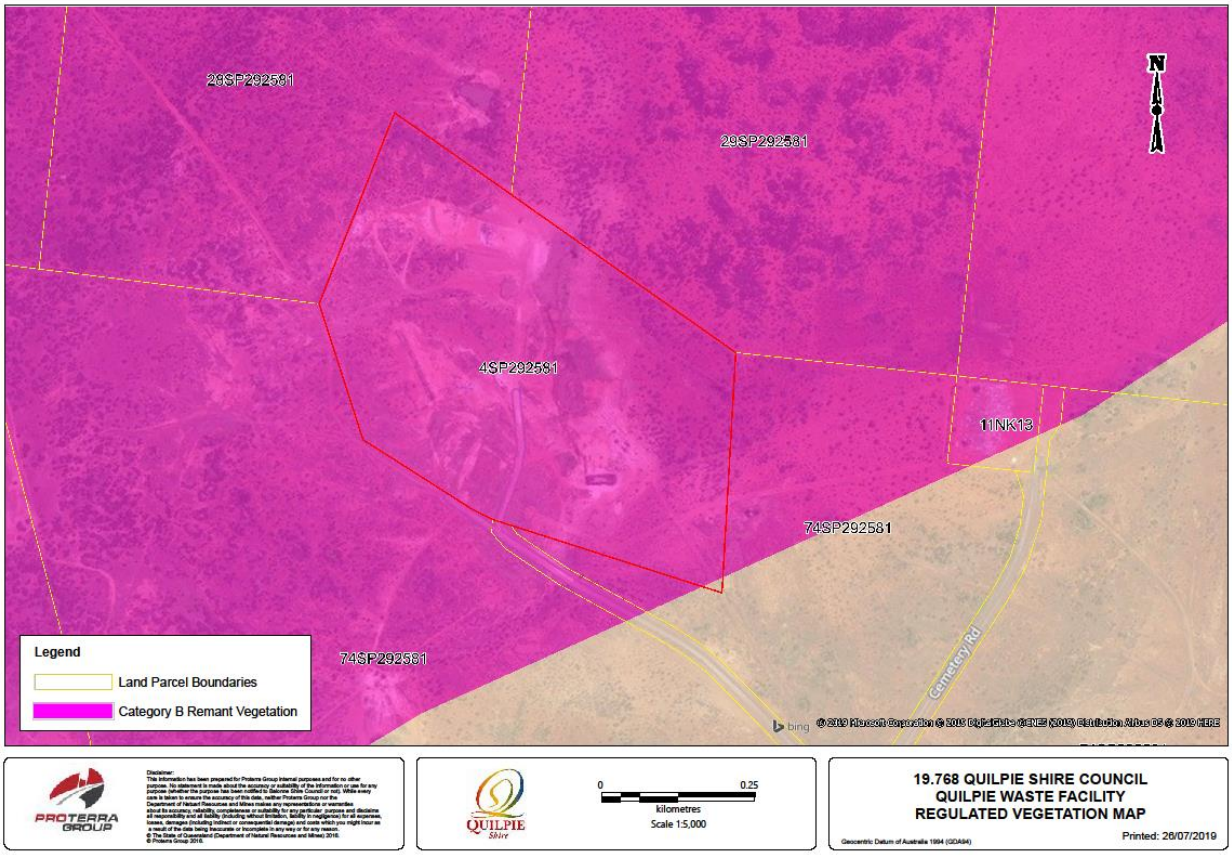


Figure 2-4 Regulated Vegetation Map for Lot 4 SP292581

2.5 RELEVANT WASTE LEGESLATION AND GUIDELINES

Approval and operation of Quilpie Waste Facility is subject to, and potentially subject to a range of Queensland Acts and legislation including:

- Planning Act 2016
- Planning and Environmental Court Rules 2010
- Planning Regulation 2017
- Environmental Protection Act 1994
- Environmental Protection Regulation 2008
- Environmental Protection (Air) Policy 2008
- Environmental Protection (Noise) Policy 2008
- Environmental Protection (Water) Policy 2009
- Waste Reduction and Recycling Act 2011
- Waste Reduction and Recycling Regulation 2011

- Petroleum and Gas Act (Production and Safety) Act 2004
- Petroleum and Gas Act (Production and Safety) Regulation 2004.
- Aboriginal Cultural Heritage Act 2003
- Nature Conservation Act 1992
- Nature Conservation (Wildlife) Regulation 2006
- Vegetation Management Act 1999
- Water Act 2000
- Work Health and Safety Act 2011
- Work Health and Safety and Other Legislation Amendment Act 2017
- Work Health and Safety Regulation 2011
- Queensland Waste Avoidance and Resources Productivity Strategy (2014 – 2024)

From an environmental management perspective, the primary legislation governing operation of the QWMF are the:

- Environmental Protection Act 1994
- Environmental Protection Regulation 2008
- Waste Reduction and Recycling Act 2011.

The landfilling activity conducted at the QWMF Facility is defined as a prescribed environmentally relevant activity (ERA) under section 19 of the Environmental Protection Act 1994 (EP Act). The tonnage of waste landfilled annually sits within 50-2,000 tonnes and the facility is therefore operated under "ERA60 – Threshold 2(a) waste disposal 50 tonnes to 2,000 tonnes". Specifically, ERA 60 Threshold 2 (a) is defined as:

"Waste disposal - operating a facility for disposing of, in a year, 50t to 2,000t of only general waste that is no more than 10% of the total amount of waste received at the facility of – if the facility is in a scheduled area – no more than 5t of untreated clinical waste":

2.5.1 Environmental Authority

Section 426 of the EP Act requires that an ERA may only be conducted under the approval of an environmental authority (EA). QSC operates the QWMF under Authority No. EPPR00904813. This Authority is an amalgamated authority approving all QSC ERAs, including other waste management facilities, sewage treatment plants and quarries. The Authority contains both general and site-specific conditions for the operation of the waste management facility. General conditions are those that relate to a few facilities operated by QSC, while site specific conditions are those that specifically relate to the QWMF.

2.6 EXISTING WASTE MANAGEMENT OPERATIONS AND PROCESSES

The QWMF accepts a range of municipal solid waste (MSW) types. A minor amount of regulated waste may be deposited at the site. Wastes that are managed at the facility are either separated/sorted for reuse/recycling or disposed of in landfill. Wastes that are accepted and managed at the facility are included in table 2-2 below.

Table 2-3 QWMF Waste Streams and Management Methods

Waste Type	Disposal Method
MSW from kerbside collection "wheelie bins"	Landfilled – General waste cell
General MSW deliver to facility by residents "self-haul"	Landfilled – General waste cell
Greenwaste	Landfilled – Greenwaste area
Construction and Demolition waste	Landfilled – C&D Area
Clean Fill (Soil)	Stockpiled for use as waste cover
Timber	Landfilled – Timber Area
Waste Oil	Held on site for collection by recycling contractor
Scrap Steel	Stockpiled on site for collection by recycling contractor
Whitegoods	Stockpiled on site for collection by recycling contractor
Batteries	Stockpiled on site for collection by recycling contractor
Dead Animals	Not currently accepted inside waste facility
Asbestos (Regulated Waste)	Landfilled – Asbestos Area
Tyres (Regulated Waste)	Landfilled – Tyre Area

QSC places a high priority upon waste separation to ensure waste is only landfilled as a last resort. The current practice of separating wastes that are ultimately going to be landfilled in separate cells is a practice that could be leading to operational inefficiencies.

Figure 2-4 below shows the current layout of the Quilpie waste facility.

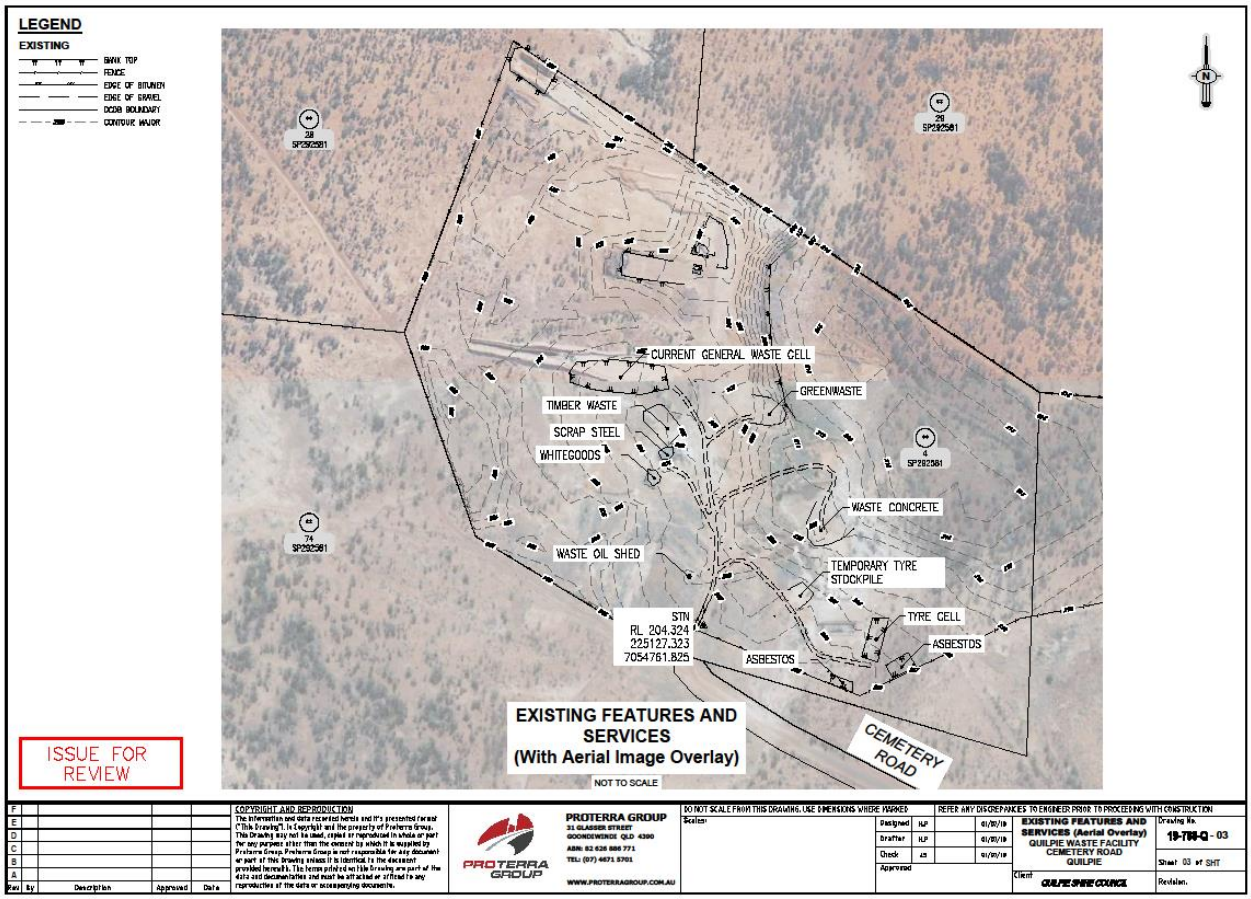


Figure 2-5 Existing Site Plan - Quilpie Waste Facility

2.6.1 Existing Waste Filling Processes

Landfilling operations at the facility are currently conducted using the "trench" method, however historically above ground landfilling by the "area" method has been carried out.

General waste is initially deposited below the existing ground level in a trench or pit typically 10-20 metres wide and approximately 2-3 metres deep. Waste is covered with stockpiled spoil from the pit using a tracked loader. Limited (if any) compaction of the waste is carried out prior to the application of cover.

Historically, the facility has had waste deposited in various areas of the facility with limited design or documented plans for the location of future landfill cells. Current operations for the general waste cell are in the centre and western side of the facility. There are also numerous other active landfilling areas in operation including those for tyres, asbestos, timber, greenwaste, construction and demolition waste.

The area of historic landfilling appears to have been generally capped. The area has a capping layer constructed primarily of gravelly clays excavated from future waste pits. The capped areas have been graded to divert stormwater from the surface of the capped cells. The nature of the capping material has effectively prevented stormwater infiltration to the former waste cells but has not encouraged the growth of vegetation and some

erosion is evident. Figure 2-5 below shows areas of historical landfilling and virgin land with the potential to be utilised for future landfill cells.

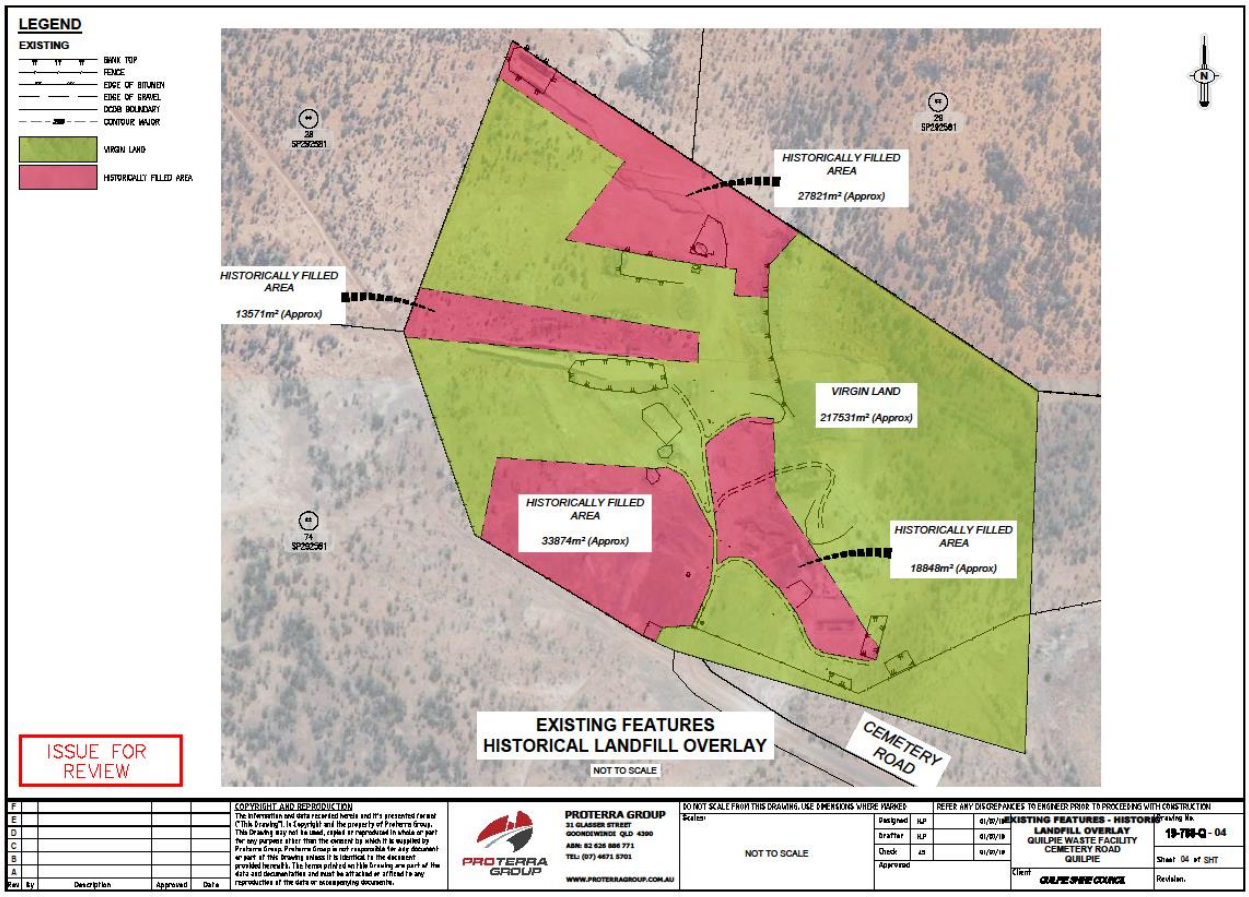


Figure 2-6 Quilpie Waste Facility – Historically Filled Areas

2.6.2 Leachate Collection and Disposal

Leachate is not currently managed on the site.

2.6.3 Concerns with Current Operations

Current operations are currently raising concerns for Council in the following areas:

- Work Health and Safety issues associated with public accessing the landfill face including interaction between QSC plant and the public;
- Poor compaction of waste;
- Excessive volumes of cover material;
- Unauthorised access due to unstaffed site leading to:
    - Inappropriate disposal of regulated waste;
    - Disposal of waste in incorrect areas;
    - Potential lightening of fires; and

  - Scavenging;
- Windblown litter leaving the site due to 24-hour access to the site;
- Fires and smoke hazards; and
- Hazardous waste disposal without councils Knowledge;

3 ONGOING WASTE MANAGEMENT OPERATIONS AND PROCESSES

3.1 PROPOSED WASTE MANAGEMENT OPERATIONS AND SERVICES

It is proposed that waste management operations can be significantly improved at the QWMF with the implementation of new practices to build upon and improve the current operations. This section will also analyse the feasibility of restricting public access to the landfill face and providing a transfer station for general waste inside the facility.

3.2 ASSESSMENT OF REMAINING AIRSPACE AND PROJECTED LIFE

The QWMF has been in operation for many years and has consumed only a small percentage of the available landfill footprint and airspace both below and above the natural ground surface. As the site is very large (even compared to centres with much greater populations), it is considered unnecessary to accurately estimate the remaining airspace or lifespan of the entire facility. It is envisaged that the projected remaining life of the current QWMF will be in excess of 100 years, providing landfilling practices are optimised in accordance with the recommendations of this plan. An estimate of the available airspace and life of future landfill stages will be included in this section.

3.2.1 Landfill Footprint

Determining the areas of the facility to be used for landfilling operations is one of the most important steps in waste facility design, as this step will set the scene for all following management processes and potential impact of the landfill on the surrounding receiving environment.

As with any example of a continuing landfill, the existing historic landfill operations were a significant factor in determining the areas to be landfilled during ongoing operations.

Assessment of the current areas of landfilling operation and historic landfilling areas at the QWMF has identified that the most appropriate areas for continued and future landfilling operations are to the north and south of the current general waste cell, avoiding the zones previously filled.

It is proposed that the existing current operational landfilling area in the central area of the facility continue to be used as the active operational landfilling area until it reaches capacity, then progressing to the future landfill stages as shown below in Figure 3-1.

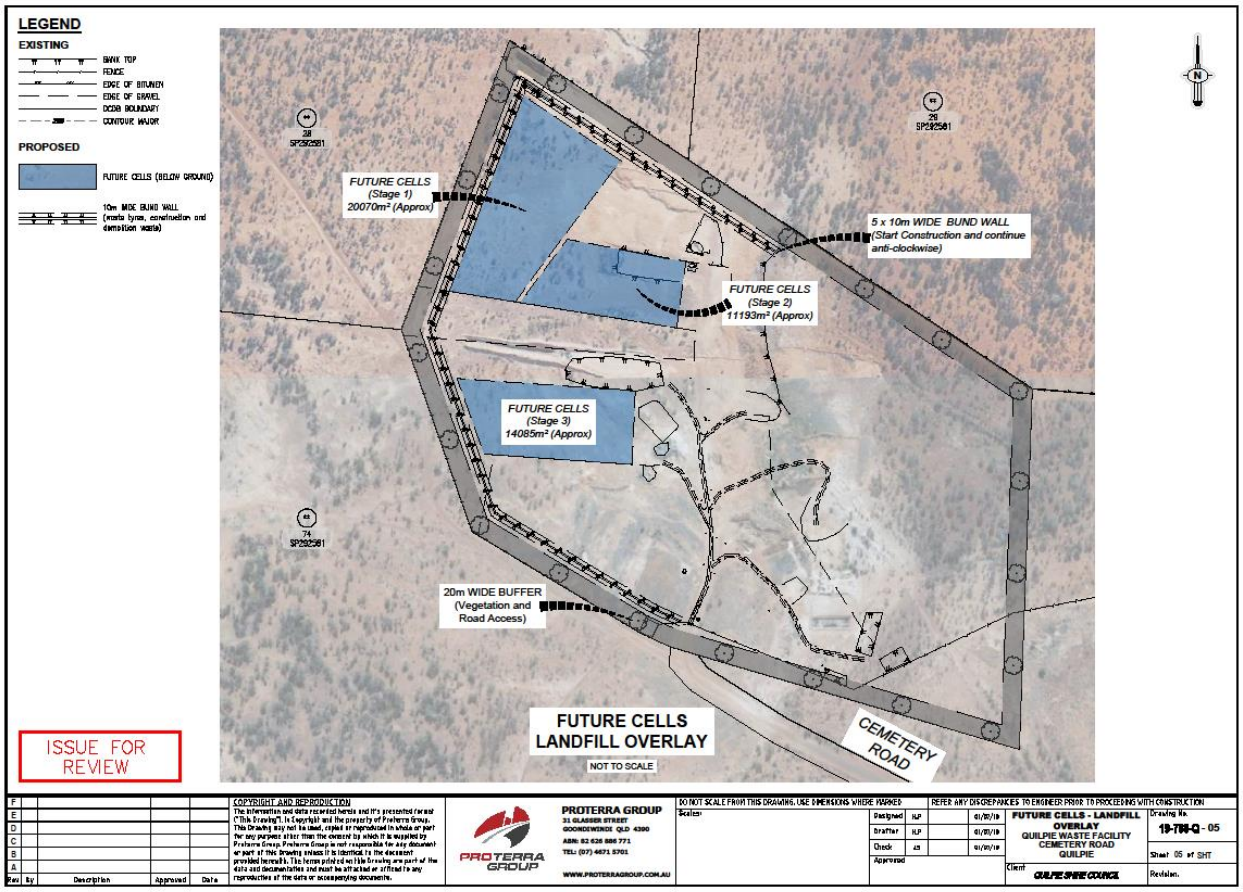


Figure 3-1 Quilpie Waste Facility – Proposed Future Landfilling Areas

3.2.2 Landfilling Methods

There are a range of landfilling methods currently practised by waste management operators, however the most common methods can be generally classified into three categories:

- Area method;
- Trench method; and
- Depression method

Each of these methods is introduced below.

3.2.2.1 Area Method

The filling operation usually is started by building an earthen levee against which wastes are placed in thin layers and compacted.

The length of the unloading area varies with the site conditions and the size of the operation. The width over which the wastes are compacted varies depending on the terrain.

A completed lift, including the cover material, is called a cell. Successive lifts are placed on top of one another until the final grade in the ultimate development plan is reached. The

length of the unloading area used each day shall be such that the final height of the fill is reached at the end of each day's operation.

If a small amount of usable cover material is available at the disposal site, the ramp variation of the area method is often used. In this method, solid wastes are placed and compacted as described for the area method and are partially or wholly covered with earth scraped from the base of the ramp. Additional soil must be hauled in, as in the area method.

Because of increasing costs and the problems associated with obtaining usable cover material, the use of the ramp method must be based on a detailed economic feasibility study.

3.2.2.2 Trench Method

The trench (or ditch) method is used in flat regions and consists of periodically digging trenches 2 or 3 m in depth with an excavator or tracked dozers. The soil taken out is stockpiled for later use as covering material for a subsequent trench.

Wastes are placed in the trench, and then spread, compacted and covered with soil. The trench method of landfilling is ideally suited to areas where an adequate quantity of cover material is available at the site and where the water table is not near the surface.

The operation continues until the desired height is reached. The length of trench used each day shall be such that the final height of fill is reached at the end of each day's operation. The length also shall be sufficient to avoid costly delays for collection vehicles waiting to unload. Cover material is obtained by excavating an adjacent trench or continuing the trench that is being filled. The trench method, however, is not readily amenable to the proposed requirements for installation of liners and leachate collection and treatment systems.

Care must be taken when it rains because the water may flood the trenches. Therefore, canals and/or exclusion bunds must be built on the perimeter to collect and divert the water and to provide internal drainage. In extreme cases, it may be necessary to pump out the accumulated water. The sidewall of the ditches need to keep the slope of the excavated soil. Trench excavation requires favourable conditions regarding water table depth and adequate soil.

Lands with a high water table or very close to the surface are not suitable because groundwater could be contaminated. Rocky soil is not adequate since excavation is very difficult.

3.2.2.3 Depression Method

At locations where natural or artificial depressions exist, it is often possible to use them effectively for landfilling operations. Gullies, ravines, dry borrow pits, and quarries have all been used for this purpose. The techniques to place and compact solid wastes in depression landfills vary with the geometry of the site, the characteristics of the cover material, the hydrology and geology of the site, and the access to the site.

If a gully floor is reasonably flat, the first fill in a gully site may be carried out using the trench method operation discussed previously. Once filling in the flat area has been completed, filling starts at the head end of the depression and ends at the mouth. Wastes are usually

deposited on the gully floor and from there are pushed up against the gully face at a slope of about two to one. In this way, a high degree of compaction can be achieved.

Pit and quarry landfill sites are always lower than the surrounding terrain, so control of surface drainage is often the critical factor in the development of such sites.

Borrow pits and quarries usually do not have suitable soil or geological properties for landfilling because they display high permeability and fracturing. As with gully sites, pit and quarry sites are filled in multiple lifts, and the method of operation is essentially the same. A key to the successful use of pits or quarries is the availability of adequate cover material to cover the individual lifts as they are completed and to provide a final cover over the entire landfill when the final height is reached. Because of settlement, it is usually desirable to fill pit and quarry sites to a level slightly above that of the surrounding terrain.

The depression method is also not readily amenable to liners and leachate collection systems.

3.2.3 Proposed Landfilling Method for Quilpie Waste Management Facility

Historically, the trench method has been used for landfilling at the QWMF. The area method has been used for a short period of time with limited success due to issues with windblown litter. Due to the historical methods employed and the large area of virgin land remaining within the site, it is proposed that the trench method be continued at the facility with improvements to the design and operation of the landfill cells.

In using the trench method, the landfilling operations will need to comply with any relevant EA conditions, and should adhere to the "Guideline - Landfill siting, design, operation and rehabilitation" (the guideline), produced by the Department of Environment and Science, State of Queensland. This SDP has been developed to comply with version 4.00 of the "Guideline - Landfill siting, design, operation and rehabilitation", 23 November 2018.

QSC's EA does not include any key constraints relating to the dimensions to be used in landfilling operations. In this case the guideline will be used as the basis to provide design parameters for future landfill cells. The guideline will be adapted to take into account the remote nature of the site and the resources (plant and personnel) available to the QSC.

Table 3-1 Key Dimensional Constraints Proposed for Quilpie Landfilling

Element	Guideline Requirement	QSC Considerations
Tipping Face Size	Keep covering waste to maintain the active tipping area at less than 30 metres x 30 metres.	30m x 30m may be too large for volume of waste received. Size may need to be reduced.
Lift Height	Place wastes at the base of each lift and compact wastes in layers of less than 2 metres.	Achievable constraint

Batter Slopes (Earth and Waste)	Avoid unconfined waste slopes with gradients steeper than 2 horizontal to 1 vertical unit.	Achievable constraint
Waste Cover	Use 0.3 metres of soil, where soil is used as cover.	Achievable constraint. May be substituted or used in conjunction with steel landfill covers on face to reduce earthworks.

3.2.4 Airspace Calculation

The remaining airspace in the entire Quilpie Waste Management Facility that is available for landfill waste disposal will not be calculated due to the size of the facility. This plan will focus on providing an estimation of the airspace available for each of the proposed future landfill stages rather than the facility as a whole.

3.2.4.1 Annual Waste Disposal

Identification of the annual waste volume that will need to be disposed of at the QWMF has been calculated by identifying the following variables:

- Estimated tonnage of waste received for landfilling at the QWMF annually; and
- Compaction rate of waste and conversion from tonnage to volume.

3.2.4.2 Tonnage of waste received annually

Estimating waste quantities likely to be received at the QWMF is hampered by the lack of reliable waste data. The site does not currently have a weighbridge and records of waste deposited at the facility are not kept. Estimates will be made based on the population directly accessing the facility and comparing to other centres. For the purposes of the waste volume calculations, a Quilpie population of 595 residents has been assumed based on 2016 census data. No growth has been applied to the Quilpie population and waste volumes over the design life of the future landfill stages. There may be opportunities to reduce landfilling rates over time by implementing recycling and waste diversion initiatives, however it is not considered a priority given Quilpie's remote location and the associated costs of processing and transporting recovered recyclables.

Table 3-2 Estimate Waste Volumes

Waste Stream	Estimate Waste Volume (Tonnes / year)
Kerbside Collection	495
Commercial	420
Roadside Bins	170
Self-Haul	265
TOTAL	**1,350**

3.2.4.3 Compaction of waste and conversion from tonnage to volume

Landfilled waste disposed of at QWMF is not compacted using specialised landfill plant. Currently waste is pushed from the tipping face into the trench using a tracked loader and only minor compaction of the waste is achieved prior to the application of cover material. By compacting landfilled waste, QSC will be achieving considerably higher waste densities in comparison to uncompacted waste, or waste that is compacted by using more basic plant such as a tracked loader or backhoe loader.

QSC does not currently have any specific figures for the specific level of compaction that is being achieved. Commonly accepted compaction rates can be used in this type of circumstance in lieu of site-specific compaction rates. A "rule of thumb" that can be applied to compaction rates is:

- Landfill disposing of < 50,000 tonnes/year = 650 kg/m3
- Landfill disposing of > 50,000 tonnes/year = 850 kg/m3

It is unlikely that the compaction rates at the Quilpie Waste Management Facility would reach the levels for even the smaller landfill category above due to the type of plant utilised and the high volume of cover material used. For the calculations in this plan a compaction rate of 500 kg/m3 has been adopted.

3.2.4.4 Calculated annual waste disposal and projected landfill life

Using the estimated annual tonnage of waste for landfilling received at the QWMF and the compaction rate for waste achieved at the facility, the annual volume of waste to be landfilled can be calculated by dividing the annual tonnage by the compaction rate:

Annual volume of waste for landfilling = Annual tonnage of waste/Compaction rate

= 1,350 / 0.500

= 2,700 m^3

To ensure the SDP is developed using conservative figures, the annual volume was rounded up to 3,000 m^3.

The calculated annual volume of waste for landfilling at the facility can then be considered in relation to the total calculated airspace of the proposed filling plan to identify the projected life expectancy for each proposed landfill stage:

Life expectancy (per stage) = Airspace (per stage) / annual volume

Table 3-3 summarises the project lifespan of each proposed landfill stage.

Table 3-3 Projected Lifespan of Future Landfill Stages

Landfill Stage	Estimate Volume (m^3) (from concept design)	Estimate Tonnage (Tonnes)	Projected Lifespan (years)
1	75,480	37,740	25.16
2	41,428	20,714	13.80
3	52,308	26,154	17.44
TOTAL	**286,104**	**143,052**	**56.40**

The calculated life expectancy of the next landfill stages of the QWMF using the proposed filling plan is based on the current waste volumes. It must be noted that this calculation does not account for increases or reductions in waste generation. Many variables will determine the ultimate lifespan of the future cells including but not limited to:

- Variances between actual and estimated waste volumes used in this plan;
- Population growth rates above or below those used in this plan;
- Adoption of recycling programs by Council;
- Future waste compaction rates achieved; and
- Future waste covering methods.

3.3 ASSESSMENT OF REQUIRMENT FOR WASTE TRANSFER STATION

This section of this SDP will explore the feasibility of restricting public access to the landfill tipping face and constructing a waste transfer station within the facility for "self-haul" domestic general waste.

3.3.1 Benefits of Transfer Stations

For many years, local authorities and waste facility operators have constructed and operated waste transfer stations at both landfill and non-landfill sites. On sites that incorporate a landfill, waste is usually collected in skips or large bins and transported a short distance within the site to the landfill face. On sites without a landfill, waste is again collected by truck and hauled a longer distance off-site to a large regional landfill.

In the case of the QWMF, the principal requirement for a waste transfer station will be to restrict public assess to the landfill face. The major benefits of transfer station operation include:

- Reduced landfill fire risk;
- Reduced windblown litter – less uncovered / uncompacted waste at landfill face;
- Reduced WH&S risk and potential for injury
    - Public interaction with landfill plant;
    - Persons scavenging in landfill.
- Reduced risk to public vehicles – tyre punctures etc.

3.3.2 Types of Transfer Stations

There are two common types of transfer stations currently operated in Australia; roll-on roll-off (RORO) bins and flat floor.

3.3.2.1 Roll-On Roll-Off (RORO) Transfer Stations

RORO bin transfer stations typically involve waste facility users dropping waste from a raised platform into large skip bins located at a lower level. The bins are then loaded onto a specialist RORO truck by a hook lift arm mechanism and transported to the landfill. The size and number of bins is selected to suit the volume of waste disposed and the frequency at which they are emptied. Common bins sizes are 15m^3, 30m^3 and 60m^3, however custom sizes can be supplied. This style of transfer station is scalable to any sized waste facility and has historically been the most popular option amongst waste facility operators. In very small facilities the RORO style bin can be substituted for a front-lift skip bin ranging in size from 1.5m^3 to 4.5m^3 capacity. These bins are emptied with a front-lift compactor truck commonly used for commercial garbage collection.

Figure 3-2 RORO Bin Transfer Station in Saw-Tooth Configuration

3.3.3 Flat Floor Transfer Stations

Flat floor transfer stations, sometimes called 'push pits' have gained popularity in recent times. This type of transfer station usually includes a push pit configuration whereby customers deposit waste over a low height wall onto a long concrete floor. A wheel loader or backhoe is used to push waste along the pit to one end where it is loaded into a RORO bin or directly into a truck for transport. Waste can be compacted in the bin or truck using the loader bucket. Flat floor transfer stations began operating in large waste facilities but have successfully been scaled down to operate on small sites.

Figure 3-3 Example of Flat Floor Transfer Station

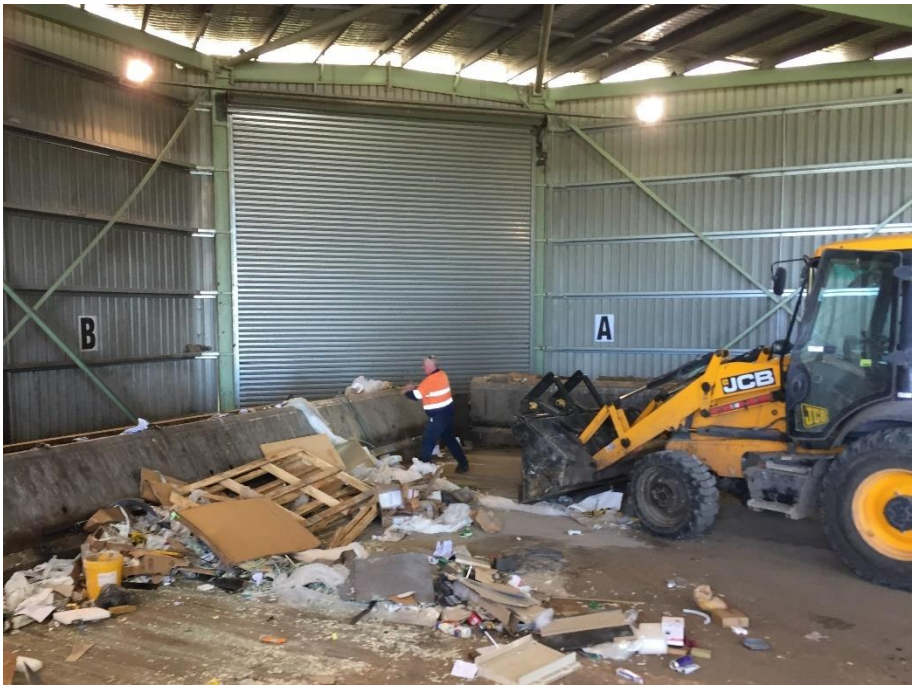


Figure 3-4 Loading Waste into RORO Bins at end of Push Pit on Flat Floor Transfer Station

3.3.4 Transfer Station Comparison

The strengths and weakness of each style of transfer station listed below in Table 3-3.

Table 3-4 Strengths and Weaknesses - RORO vs Flat Floor Transfer Stations

Transfer Station Type	Strengths	Weaknesses
RORO Bins	• 1 person and 1 item of plant (RORO truck) required to empty • Difficult for public to enter and scavenge • Bins walls act as a wind break to reduce windblown litter • Bins can be fitted with lids to close when at capacity	• WH&S risk of falling from height into bins • Difficult for waste facility operators to remove recyclable objects incorrectly disposed of in bins • Loads can be light if no loader available to compact waste in bins
Flat Floor (Push Pit)	• Reduced WH&S risks • Waste can be compacted into trucks/bins using loader • Easier to segregate waste and remove recyclable objects	• Usually requires 2 persons and 2 items of plant to empty • Easier to enter waste and scavenge (unmanned sites) • Needs to be well fenced or inside shed to reduce windblown litter

3.3.5 Requirement for Transfer Station at QWMF

It is recommended that QSC implement a transfer station at the QWMF to improve waste practices and reduce Council's exposure to environmental, health and safety risks. After discussing various options for a waste transfer station with QSC staff, Proterra Group recommends implementing a small waste transfer station comprised of a series of front-lift skip bins with a minimum capacity of 4.5m^3 each. To avoid the purchase of a specialist front-lift compacting truck which would receive very little use in Quilpie, it is proposed that that bins are transported from the transfer station and emptied at the landfill face using a wheel loader equipped with lifting forks. The proposed plant and equipment requirements for the QWMF are discussed in more detail in the section below. Figure 3-5 and 3-6 below show an example of a small transfer station design that could be implemented at the QWMF.

Figure 3-5 Transfer station proposed for QWMF comprised of front lift skip bins and litter fencing

Figure 3-6 Rear view proposed transfer station bins being emptied by loader

3.4 PROPOSED PLANT AND EQUIPMENT

3.4.1 Waste and Earthmoving Equipment

As discussed above, it is proposed that QSC utilise a wheel loader for moving transfer station bins to the landfill face. The loader could also be used for other operations on site including pushing up recoverable resource stockpiles and shifting earth / waste cover material to the landfill face. The proposed wheel loader would include tool carrier capabilities and include both lifting forks for the transfer station bins and a 4-in-1 bucket. Proterra Group recommends a loader equivalent to a Catapiller 938M be investigated. Smaller machines may also be feasible. A larger unit will offer Council the flexibility to use the loader for other Council activities including loading trucks at gravel pits and stockpile sites when it is not required at the waste facility. These machines can also be equipped with specialist equipment for waste operations including guards and solid tyres. A brochure including the specifications for small wheel loaders (waste handler) is included as appendix C.

Figure 3-7 Caterpillar 930M Wheel Loader with Waste Handler Accessories

3.4.2 Waste Compaction Equipment

Whilst wheel loaders are versatile machines for moving waste and earth within the site, they are not effective at providing compaction of waste in a landfill cell. This is achieved at most sites using specialist waste compactors or tracked loaders in very small facilities. As Council already uses a tracked loader at the site, it may be capable of some compaction in the landfill cell. The existing tracked loader is however very small and not equipped with waste guards so compacting waste in the landfill may not be practical with this machine. An option QSC may wish to explore is purchasing a small waste compactor. As these machines are costly and would receive little use at the QWMF, consideration may be given to procuring a second-hand waste compactor. This would be considered a secondary priority to sourcing a wheel loader.

Figure 3-8 Caterpillar 816K Waste Compactor

3.5 WASTE FACILITY OPENING HOURS

QSC may wish to consider restricting the opening hours of the waste facility and including a staff member on-site to manage the facility. Typical duties of staff members at facilities of this size include:

- Meeting and directing public to waste disposal areas;
- Estimating and recording load volume and waste type delivered to facility (where no weighbridge);
- Separating recoverable items from landfill (e.g. scrap metal);
- Transporting and emptying transfer station bins at landfill cell;
- Pushing up and compacting landfill and stockpiles;
- Covering completed landfill cells;
- Collecting windblown litter from around site; and
- Monitoring for compliance with EA conditions and site rules.

3.5.1 Option 1 – Open 6 days per week - Staffed Full-Time

Staffing the facility full-time and restricting opening hours will increase the operating costs of the facility, but significantly improves operations and the overall amenity of the site. The operating hours would be subject to QSC's operational budget and ratepayer expectations. Proterra Group are able to share our experiences with implementing restricted opening hours at waste facilities and the processes for educating waste facility users about changed arrangements. It would be envisaged that only one (1) waste facility operator would be required on-site at any time and the facility could be closed at least one day per week (usually a week day). Depending on the available budget, QSC may need to consider closing the facility for more than one day per week or reducing the opening hours each day.

3.5.2 Option 2 – Open 24 Hours / 7 days per week - Staffed Part-Time

The above scenario considered in Option 1 is considered current best practice for rural waste facility operating hours. Owing to Quilpie's remote location, low population and small operating budget, a variation of the operating model above may be considered to reduce costs. This option would include leaving the fenced transfer station and resource recovery areas open 24 hours per day and operating the landfill cell/s only on certain days. Based on the current operations, the site should be staffed for a minimum of 3 x 8 hours days per week. Staff duties under this arrangement would be similar to those for the previous option. The same level of monitoring, record keeping and compliance activities will be not be possible when unsupervised public access to the facility is permitted. This option opens Council to greater risks and may not eliminate all the issues Council currently experiences with illegal dumping and lighting of fires.

3.6 COST ESTIMATE FOR CURRENT OPERATIONS

QSC's waste operations budget for the QWMF is currently $150,000 per annum. It is understood that this operations budget also includes the cost of constructing new landfill cells and other minor improvements around the site. Table 3-5 provides a current summary of QSC's operating budget for the QWMF.

Table 3-5 Current Operating Budget for QWMF

Item	Cost
Staff Wages - Payroll	$50,000.00
Plant	$80,000.00
Creditors (Materials Contractors)	$20,000.00
TOTAL	**$150,000.00**

3.7 COST ESTIMATE FOR ONGOING OPERATIONS

The cost of ongoing operations (excluding capital works upgrades) will be dependent upon a range of factors including:

- Nature of supervision of the waste management facility;
- Proposed hours of operations;
- Type and number of plant based at the facility; and
- Labour costs for QSC or contractor staff engaged at the facility.

For the purposes of the ongoing cost calculation, the two operating scenarios described in section 3.5 above have been costed. For both options the proposed plant at the facility is assumed to be a second-hand waste compactor (Caterpillar 812/826 or equivalent) and a new Caterpillar 938M wheel loader.

Table 3-6 Option 1 Annual Operating Cost - Open 6 days per week - Staffed Full-Time

Item	Description	Unit	Qty	Rate	Cost
1	Wages	52	Weeks	$,979.31	$102,924.02
2	Additional Wages to cover Leave Periods	8	Weeks	$2,544.89	$20,359.11
3	Staff Training (First Aid, WHS, Plant Operator tickets etc)	1	Item	$1,522.50	$1,522.50
4	Fire Fighting Trailer	1	Item	$7,612.50	$7,612.50
5	Miscellaneous Hand Tools	1	Item	$964.25	$964.25
6	Onsite Operators Vehicle	1	Item	$10,150.00	$10,150.00
7	Smart Phone for Operator	1	Item	$609.00	$609.00
8	Uniforms, PPE etc	1	Item	$761.25	$761.25
9	Public Liability Insurance for a Waste Facility (Specific for Waste)	1	Item	$1,116.50	$1,116.50
10	Diesel Fuel for Machines	8500	L	$1.52	$12,941.25
11	Supply of Excavator (Intermittent Use)	1	Item	$5,075.00	$5,075.00
12	Supply of Tipping Truck (Intermittent Use)	1	Item	$5,075.00	$5,075.00
13	Management and Travel for inspections	1	Item	$5,075.00	$5,075.00
14	Supply of Gurney, Air Compressor, Ride on mower and miscellaneous	1	Item	$2,030.00	$2,030.00
15	Supply Used Cat 816/826 Compactor	1	Item	$71,050.00	$71,050.00
16	Supply New Cat 938M Wheel Loader	1	Item	$60,000.00	$60,000.00
17	Overheads (18%)	1	Item	$55,307.77	$55,307.77
				Total (Excl. GST)	**$362,573.15**

Table 3-7 Option 2 Annual Operating Cost - Open 24 Hours / 7 days per week - Staffed Part-Time

Item	Description	Unit	Qty	Rate	Cost
1	Wages	52	Weeks	$,979.31	$42,875.16
2	Additional Wages to cover Leave Periods	8	Weeks	$2,544.89	$0.00
3	Staff Training (First Aid, WHS, Plant Operator tickets etc)	1	Item	$1,522.50	$1,522.50
4	Fire Fighting Trailer	1	Item	$7,612.50	$7,612.50
5	Miscellaneous Hand Tools	1	Item	$964.25	$964.25
6	Onsite Operators Vehicle	1	Item	$10,150.00	$10,150.00
7	Smart Phone for Operator	1	Item	$609.00	$609.00
8	Uniforms, PPE etc	1	Item	$761.25	$761.25
9	Public Liability Insurance for a Waste Facility (Specific for Waste)	1	Item	$1,116.50	$1,116.50
10	Diesel Fuel for Machines	8500	L	$1.52	$12,941.25
11	Supply of Excavator (Intermittent Use)	1	Item	$5,075.00	$5,075.00
12	Supply of Tipping Truck (Intermittent Use)	1	Item	$5,075.00	$5,075.00
13	Management and Travel for inspections	1	Item	$5,075.00	$5,075.00
14	Supply of Gurney, Air Compressor, Ride on mower and miscellaneous	1	Item	$2,030.00	$2,030.00
15	Supply Used Cat 816/826 Compactor	1	Item	$71,050.00	$71,050.00
16	Supply New Cat 938M Wheel Loader	1	Item	$60,000.00	$60,000.00
17	Overheads (18%)	1	Item	$55,307.77	$55,307.77
				Total (Excl. GST)	**$267,691.74**

3.8 COST ESTIMATE FOR PROPOSED CAPITAL UPGRADES

In addition to the operating improvements, this plan also recommends several capital upgrades including a waste transfer station, resource recovery areas, fencing and staged construction of future landfill cells. Budget estimates for these items have been prepared and included in table 3-8.

Table 3-8 Cost Estimates for Capital Upgrade Projects at QWMF

Item	Description	Unit	Qty	Rate	Cost
1	Design and Construction of Waste Transfer Station (6 x 4.5m^3 bins)	Each	1	$90,000.00	$90,000.00
2	Construction of Resource Recovery Stockpile Pad/s	Each	1	$10,000	$10,000.00
3	Litter/Security Fencing of Transfer Station and Resource Recovery Area	m	600	$95.00	$57,000.00
4	Landfill Cell Construction (Stage 1)	m^3	75,480	$5.00	$377,400.00
5	Landfill Cell Construction (Stage 2)	m^3	41,428	$5.00	$207,140
6	Landfill Cell Construction (Stage 3)	m^3	52,305	$5.00	$261,525.00
				Total (Excl. GST)	**$1,003,065.00**

4 RECOMMENDATIONS

Proterra group recommends the following items are further investigated and implemented at the QWMF to ensure compliance with legislation, reduce Council's exposure to risk and to reduce resident complaints. The recommendations listed below in table 4-1 are listed in order of priority from most to least important.

Table 4-1 QWMF Site Development Recommendations

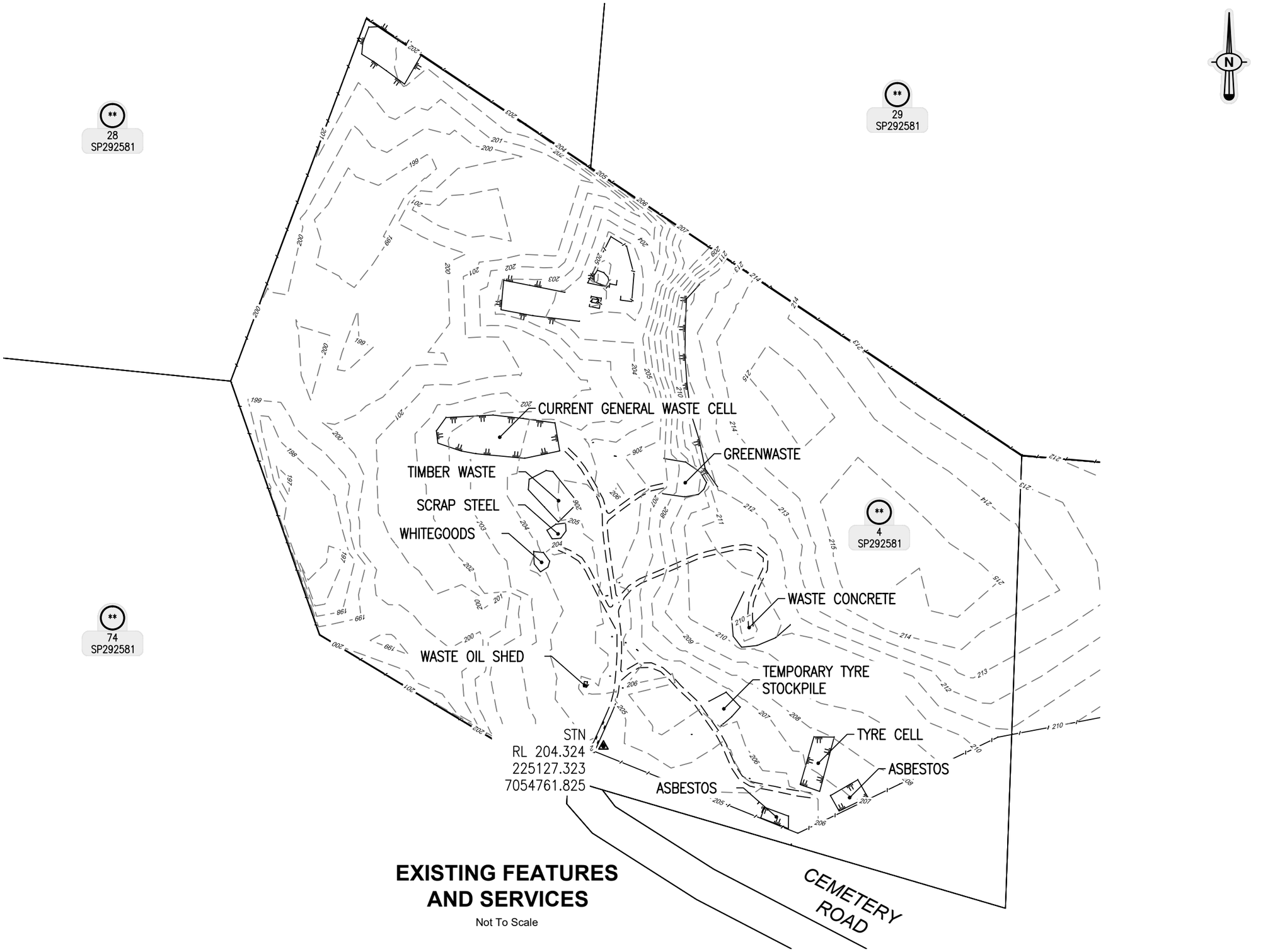
Priority	Action	Timeframe
1	Restrict opening hours and staff facility during opening hours (subject to budget)	As soon as practicable
2	Proceed to detailed design for waste transfer station and fencing. Secure funding for construction	As soon as practicable
3	Consolidate existing landfill cells to one main landfill cell	As existing cells reach capacity
4	Construct bund wall around boundary with waste tyres covered in earth	Ongoing – Begin as soon as practicable
5	Amend land parcel for QWMF listed on Environmental Authority.	2019/2020
6	Make application to DNRME to amend remnant vegetation mapping for lot 4 SP292581	2019/2020
7	Design and Construct Transfer Station	2020/2121
8	Procure Wheel Loader	2020/2021
9	Investigate options for procuring waste compaction plant	2021/2022
10	Excavate new landfill cell – Stage 1 of concept design	2021/2022

APPENDIX A: CONCEPT DESIGN DRAWINGS

LEGEND

EXISTING

- BANK TOP
- FENCE
- EDGE OF BITUMEN
- EDGE OF GRAVEL
- DCDB BOUNDARY
- 200 CONTOUR MAJOR



EXISTING FEATURES AND SERVICES

Not To Scale

ISSUE FOR REVIEW

Rev	By	Description	Approved	Date
F				
E				
D				
C				
B				
A	j.s	Bund Wall section added		10-08-2019

PROTERRA GROUP
31 GLASSER STREET
GOONDIWINDI QLD 4390
ABN: 82 626 886 771
TEL: (07) 4671 5701
WWW.PROTERRAGROUP.COM.AU

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Scales: NOT TO SCALE

Designed	H.P		01/07/19
Drafter	H.P		01/07/19
Check	J.S		01/07/19
Approved			

EXISTING FEATURES AND SERVICES
QUILPIE WASTE FACILITY
CEMETERY ROAD
QUILPIE

Client: *QUILPIE SHIRE COUNCIL*

Drawing No. 19-768-Q - 02

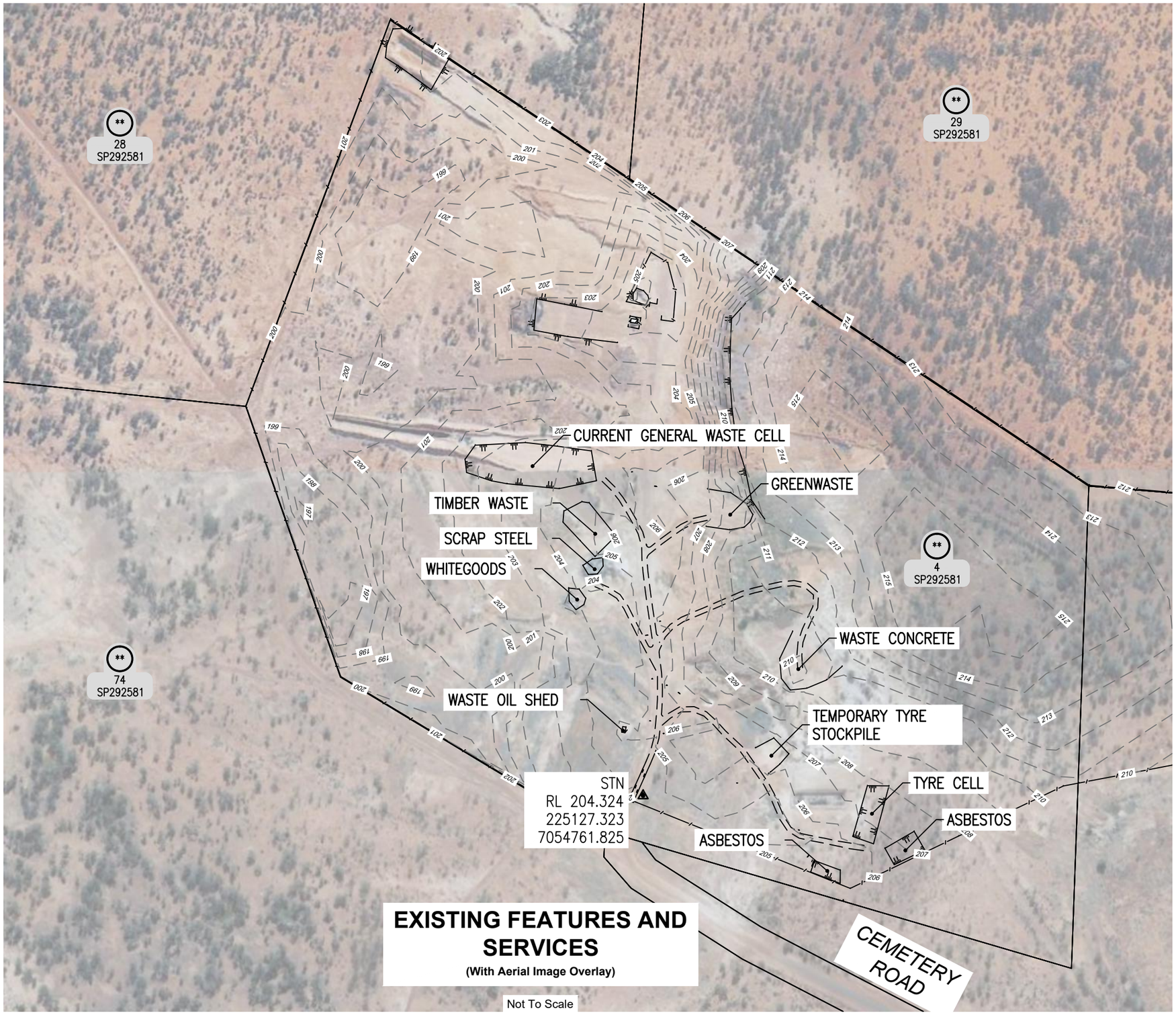
Sheet 02 of SHT

Revision: A

LEGEND

EXISTING

- BANK TOP
- FENCE
- EDGE OF BITUMEN
- EDGE OF GRAVEL
- DCDB BOUNDARY
- CONTOUR MAJOR (200)



EXISTING FEATURES AND SERVICES

(With Aerial Image Overlay)

Not To Scale

ISSUE FOR REVIEW

Rev	By	Description	Approved	Date
F				
E				
D				
C				
B				
A	j.s	Bund Wall section added		10-09-2019

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GOONDIWINDI QLD 4390
ABN: 82 626 886 771
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Drafter	H.P		01/07/19
Check	J.S		01/07/19
Approved			

EXISTING FEATURES AND SERVICES (Aerial Overlay)
QUILPIE WASTE FACILITY
CEMETERY ROAD
QUILPIE

Client: QUILPIE SHIRE COUNCIL

Drawing No. 19-768-Q - 03

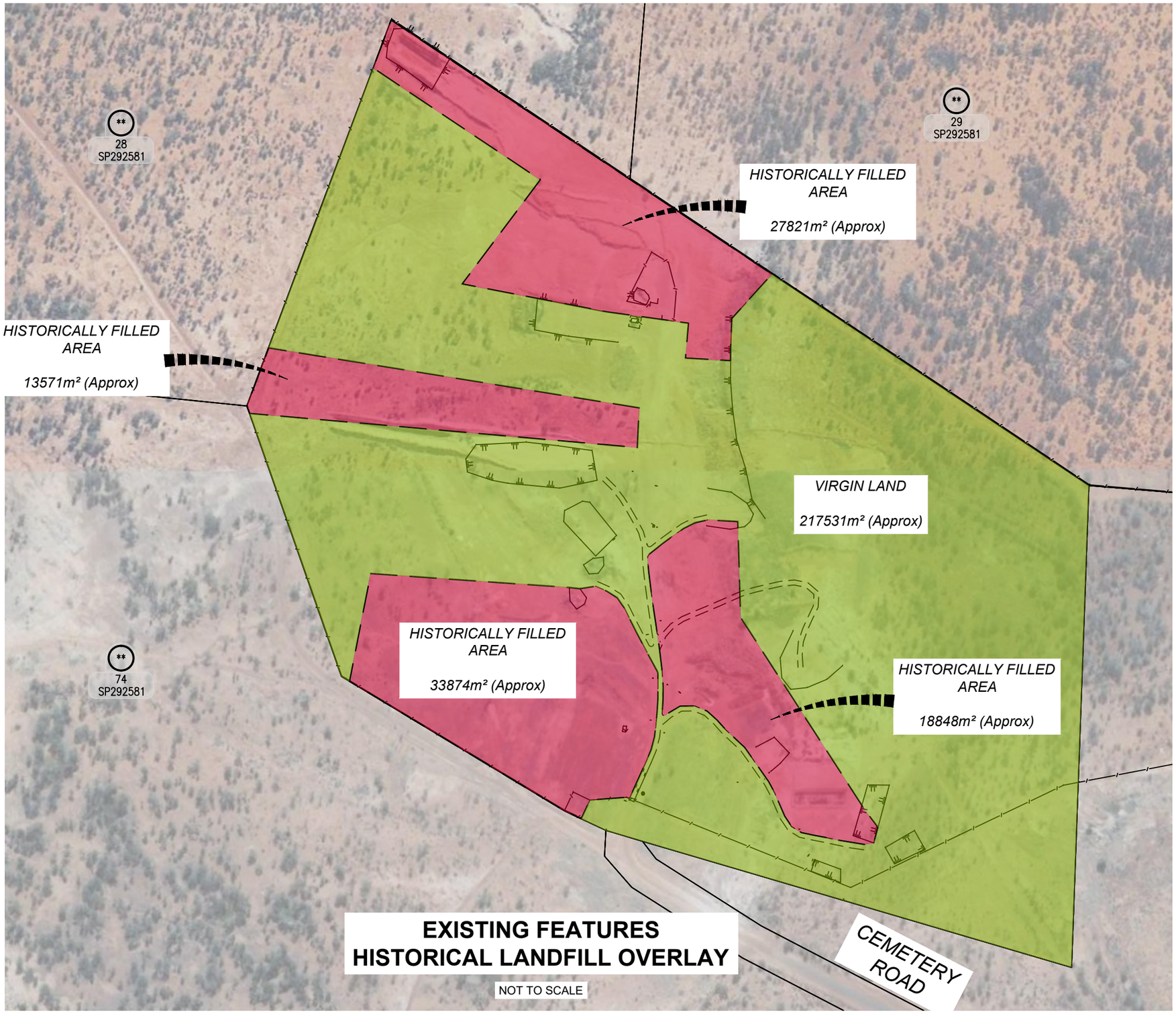
Sheet 03 of SHT

Revision. A

LEGEND

EXISTING

- BANK TOP
- FENCE
- EDGE OF BITUMEN
- EDGE OF GRAVEL
- DCDB BOUNDARY
- CONTOUR MAJOR (200)
- VIRGIN LAND
- HISTORICALLY FILLED AREA



EXISTING FEATURES
HISTORICAL LANDFILL OVERLAY

NOT TO SCALE

ISSUE FOR REVIEW

Rev	By	Description	Approved	Date
F				
E				
D				
C				
B				
A	j.s	Bund Wall section added		10-08-2019

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Check	J.S		01/07/19
Approved			

EXISTING FEATURES HISTORIC LANDFILL OVERLAY
QUILPIE WASTE FACILITY
CEMETERY ROAD
QUILPIE

Client: QUILPIE SHIRE COUNCIL

Drawing No. 19-768-Q - 04

Sheet 04 of SHT

Revision. A

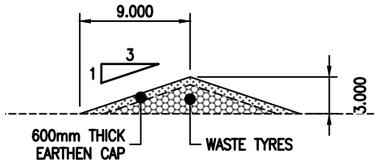
LEGEND

EXISTING

- BANK TOP
- FENCE
- EDGE OF BITUMEN
- EDGE OF GRAVEL
- DCDB BOUNDARY
- CONTOUR MAJOR (200)

PROPOSED

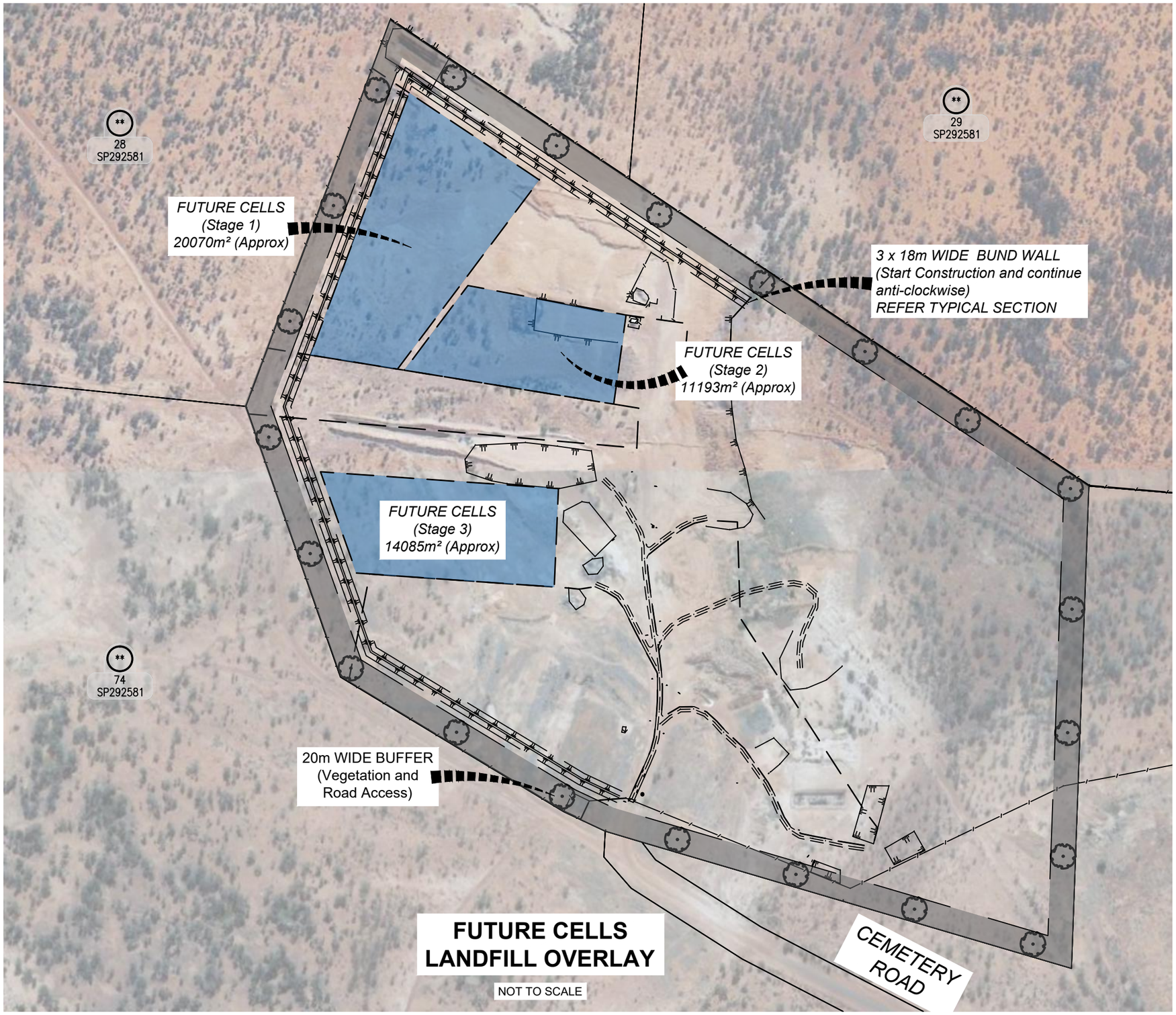
- FUTURE CELLS (BELOW GROUND)
- 18m WIDE BUND WALL (waste tyres, construction and demolition waste)



TYPICAL SECTION BUND WALL

SCALE: A

ISSUE FOR REVIEW



FUTURE CELLS LANDFILL OVERLAY

NOT TO SCALE

Rev	By	Description	Approved	Date
F				
E				
D				
C				
B				
A	j.s	Bund Wall section added		10-09-2019

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Scales: A 0m 2.5 5 7.5 10 1:500 AT A3

Designed	H.P		01/07/19
Drafter	H.P		01/07/19
Check	J.S		01/07/19
Approved			

FUTURE CELLS LANDFILL OVERLAY
QUILPIE WASTE FACILITY
CEMETERY ROAD
QUILPIE

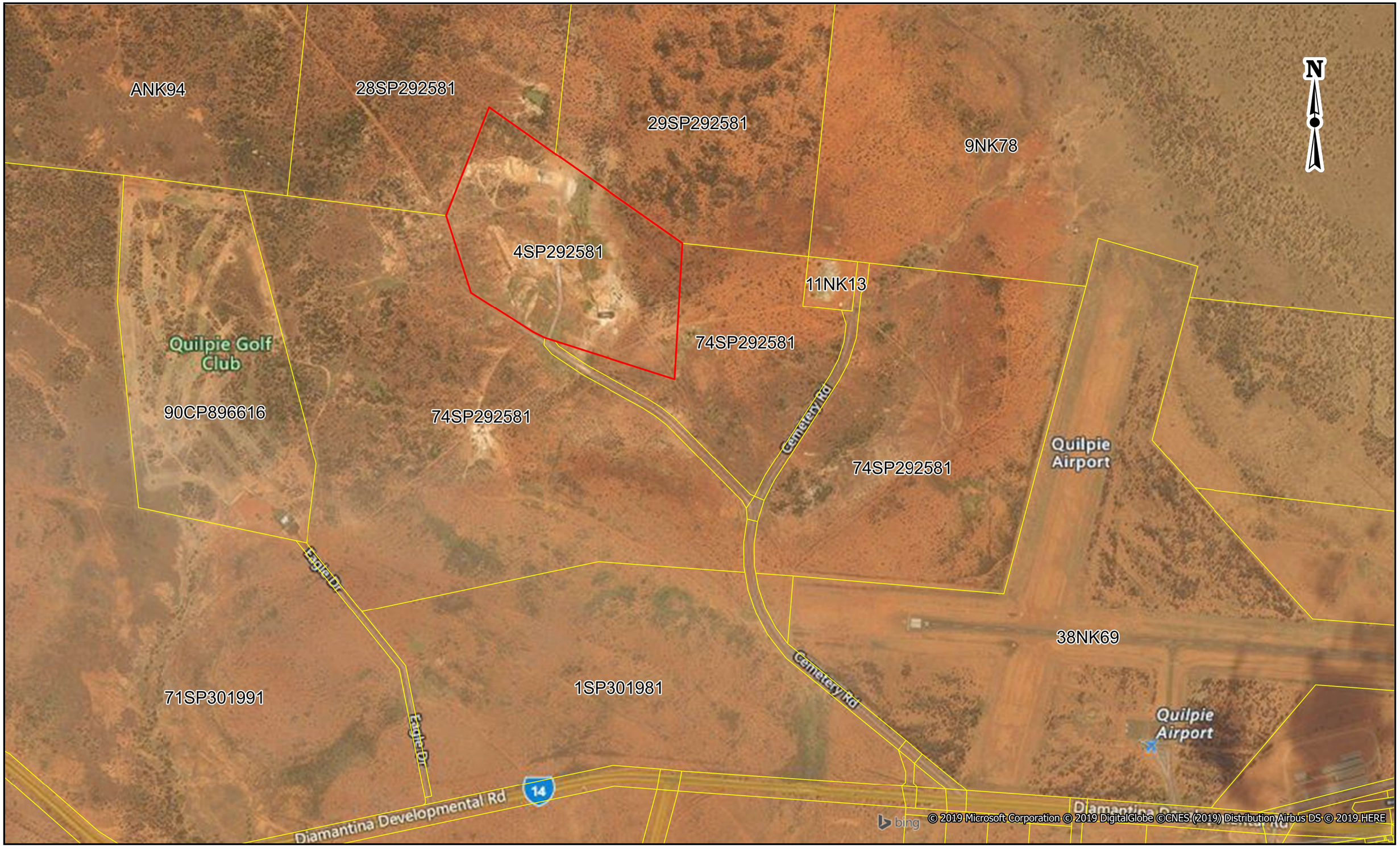
Client: QUILPIE SHIRE COUNCIL

Drawing No. 19-768-Q - 05

Sheet 05 of SHT

Revision. A

APPENDIX B: SITE MAPPING



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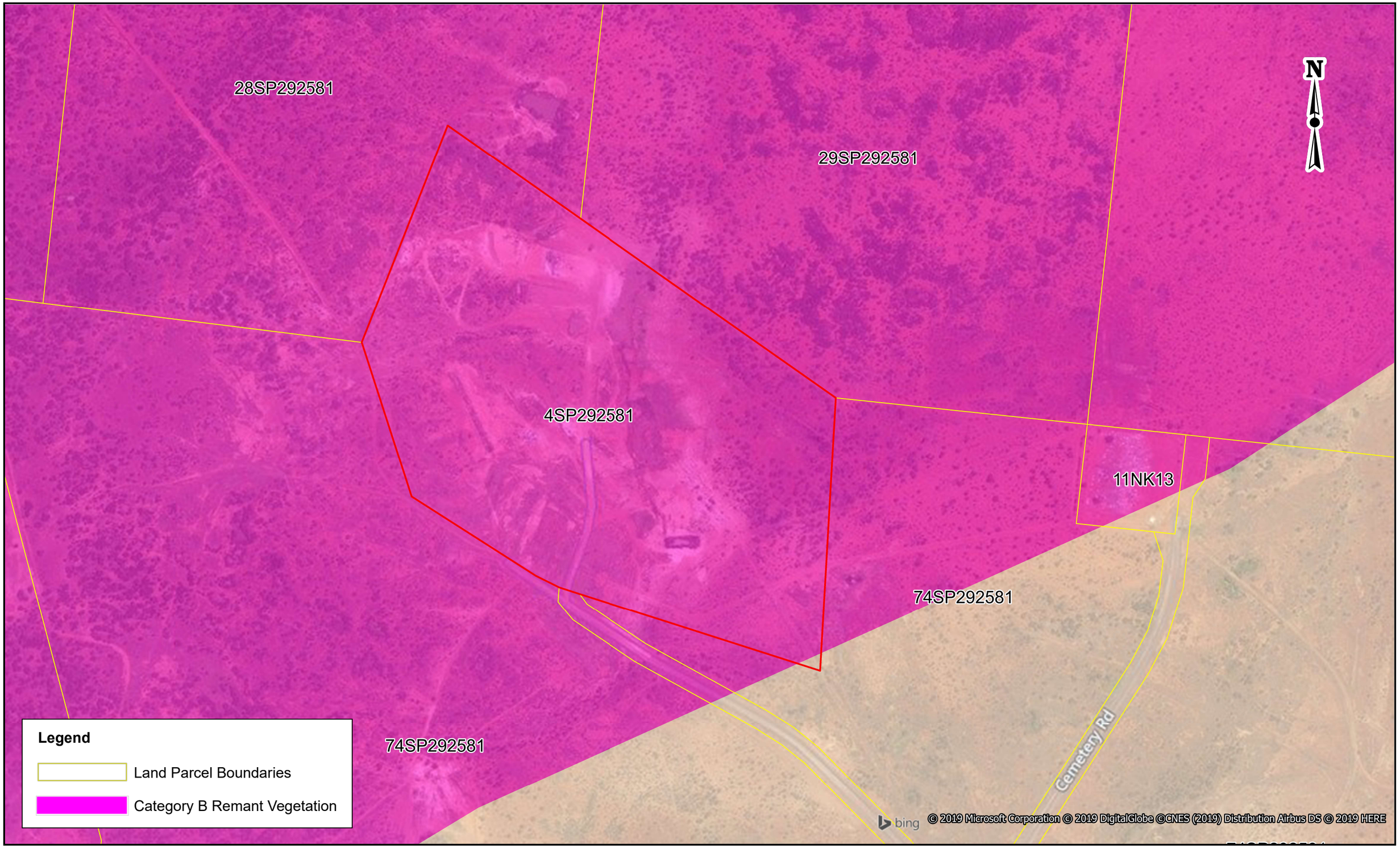
QUILPIE Shire

0 0.5
kilometres
Scale 1:10,000

19.768 QUILPIE SHIRE COUNCIL
QUILPIE WASTE FACILITY
LOCALITY MAP

Geocentric Datum of Australia 1994 (GDA94)

Printed: 06/06/2019



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QUILPIE Shire

0 0.25
kilometres
Scale 1:5,000

19.768 QUILPIE SHIRE COUNCIL
QUILPIE WASTE FACILITY
REGULATED VEGETATION MAP

Printed: 26/07/2019

Geocentric Datum of Australia 1994 (GDA94)

APPENDIX C: CATERPILLAR WASTE HANDLER BROCHURE

Small Wheel Loaders

Waste Handler Arrangements

	926M Waste Handler	930M Waste Handler	938M Waste Handler
Engine Model*	Cat® C7.1 ACERT™	Cat C7.1 ACERT	Cat C7.1 ACERT
Maximum Rated Gross Power:			
ISO 14396	114 kW (153 hp)	122 kW (164 hp)	140 kW (188 hp)
ISO 14396 (DIN)	114 kW (155 hp)	122 kW (166 hp)	140 kW (190 hp)
Bucket Capacity	3.0-5.0 m^3 (3.9-6.5 yd^3)	3.0-5.0 m^3 (3.9-6.5 yd^3)	3.0-5.0 m^3 (3.9-6.5 yd^3)
Full Turn Tip Load	7376 kg (16,257 lb)	8241 kg (18,163 lb)	9843 kg (21,720 lb)
Operating Weight	14 175 kg (31,240 lb)	15 153 kg (33,396 lb)	17 493 kg (38,555 lb)

*Engine meets U.S. EPA Tier 4 Final/EU Stage V emissions standards.

Making Your Choice Easy

Application Specific Configuration
Maximize productivity while keeping operating costs low. Cat Waste Handlers are built for the most demanding environments with a range of options to protect both you and the machine.

Efficiently Powerful
Experience Hybrid like, industry leading, fuel efficiency with an intelligent hydrostatic power train. For your highest production work, a new Performance Mode will allow you to boost the power and hydraulic speed in all ranges to get the job done even quicker.

Work Made Easy
Move more with Caterpillar's patented quick loading Performance Series buckets and optimized Z-bar linkage. Multi-function work has never been easier with dedicated pumps and a flow sharing implement valve.

Enjoy All Day Comfort
Have a seat in the M Series Small Wheel Loader and enjoy whisper quiet sound levels, all around visibility and seat mounted joystick controls. The large spacious cab combined with Caterpillar's exclusive hydraulic cylinder dampening make this the most comfortable seat on your job site.

Contents

Environmental and customer friendly – up to 95% recyclable content by weight

The Cat 926M, 930M and 938M Waste Handlers set a new standard for productivity, fuel efficiency and comfort.

A high torque, low speed C7.1 ACERT engine works in concert with an intelligent hystat power train to deliver fuel efficiency as standard. A complete range of guarding and debris management solutions are available to meet the needs of the most demanding environments. Extremely low sound levels, large spacious cab and intuitive controls keep you working comfortably all day and even all night! Experience the new industry benchmark.

Application Specific Configuration

Maximize performance and productivity while minimizing operating costs.

Guard Your Investment

Choose from a complete range of optional guarding to protect your machine from the harsh environment of a waste handling application. The machine guarding is purpose built to protect the machine's major components and systems to keep you on the job and maximize production rates.

Breathe Clean

Maximize your engine life and extend filter cleaning intervals with a turbine pre-cleaner. Keep cool with a reversing fan to purge the single plane, widely spaced core cooling package and brush-less sealed alternator. Breath clean with a powered RESPA system for the operator environment designed to eliminate 90% of the particulate in the air and filter the remaining 10%.

Maximize Tire Life

Fine tune your wheel torque to match the underfoot conditions and maximize performance while extending tire life. Cat Waste Handlers feature wheel torque adjustments through an exclusive Rimpull Control feature designed to keep your operating costs low.

Customize Your Experience

Make it yours.

Work as one with your machine by customizing the controls.

Flexible Power Train

A smooth, step-less electronically controlled hydrostatic transmission provides adjustable power to the ground with excellent groundspeed control and customizable feel.

- **Select your Power Train Mode:**
  - Torque Converter (TC) for smooth rollout.
  - Hystat for aggressive engine braking.
  - Default mode which blends the best of Hystat and Torque Converter characteristics.
- **Reduce tire wear** using Rimpull control which enables you to match available tractive power to underfoot conditions.
- **Set Directional Shift Response,** soft and smooth for material handling applications or sharp for aggressive operation.

Adjustable Electro Hydraulic Controls

Easily customize the hydraulic performance through touch screen display to optimize your efficiency.

- **Optimize hydraulic modulation** with Fine Mode control when working with forks.
- **Quicker Hydraulic response** for fine grading at speed and quick functions through Lift and Tilt response settings.
- **Fully adjustable ride control** activation speed along with 3rd function auxiliary flow for powering a roll out bucket.

Operator Profiles and Coded Start

- The M Series Wheel Loaders will remember you and your personal settings with unique operator codes to make this machine truly yours and keep it secure on the job site.

Efficiently Powerful

Experience hybrid-like fuel efficiency with more power when you need it.

Power on Demand

A choice of Power Modes allows you to choose between maximum fuel efficiency or boosted power along with hydraulic speed to get your work done even quicker.

Standard Power Mode

- Saves up to 10% fuel compared to previous K Series models while running at an efficient 1,600 rpm.
- Recommended for load and carry to maximize fuel efficiency.
- Power-by-range logic increases power in speed Range 4 automatically to maximize travel speed and grade climbing performance.
- Reduces cab sound levels down to a whisper quiet 64 dB(A) typical.

Performance Power Mode

- Enabled at the push of a button (HP+).
- Boosts engine power by up to 10% in all speed ranges.
- Boosts engine speed by over 12%.
- Increases hydraulic cycle times and productivity.

Six Cylinders of Efficient Power

The Cat C7.1 ACERT engine provides more efficient, quieter operation while delivering superior performance and durability through a high torque, low speed design. The engine meets U.S. EPA Tier 4 Final and EU Stage IV emission standards with a Clean Emissions Module that is designed to manage itself so you can concentrate on your work.

- **No downtime for regeneration** with a passive low temperature system that keeps you on the job.
- **Fit for Life Diesel Particulate Filter** that is designed to exceed the engine overhaul life.
- **Extended fluid fill intervals** with minimal use of Diesel Exhaust Fluid (DEF) with up to four fuel tank fills per DEF fill.
- **Configurable auto idle shut down** based on time and ambient temperature to further reduce fuel burn and keep operating costs low.
- **Spark arrester performance as standard** – Meets the performance requirements of EN 1834-1.2000 (section 6.4.2 Visual Test)

Power to the Ground

Lock up and go with fully locking front differential axles that can be engaged on the move at full torque with the pull of a trigger on the seat mounted joystick. Maximize your traction with optional Limited Slip Differential on the rear axle to keep you climbing.

Independent service brakes on front and rear axles provide robust stopping performance while a push button electronic park brake allows you to safely secure the machine with ease.

Work Made Easy

Getting the job done.

Optimized Z-bar Linkage

The Caterpillar patented optimized Z-bar linkage combines the digging efficiency of a traditional Z-bar with integrated tool carrier capabilities for great performance and versatility.

- **Perfect Parallelism** functionality available in Fork Mode gives truly predictable performance while high tilt forces throughout the working range help you safely and confidently handle loads with precise control.
- **Visibility** to bucket corners and fork tips at ground level remain excellent while sight lines at maximum lift are improved with a Generation II lift arm design.

Quick Loading, Performance Series Buckets

Performance Series Buckets deliver up to 10% higher fill factors and better material retention for significant productivity and fuel efficiency improvements. The buckets feature a longer floor to take a bigger bite of the pile, an open throat to heap higher and curved side bars to help with material retention. This optimized shape is echoed across the General Purpose, Light Material, and High Dump bucket families.

Smooth and Predictable Multi-Function Performance

M Series machines feature an electro-hydraulic control system that is governed by the Intelligent Power Management system for peak efficiency. The load-sensing, variable flow system senses work demand and adjusts flow and pressure to match the operators request.

- **Multi-Function without compromise** through Caterpillar's exclusive dedicated hydraulic systems featuring three pumps.
  - 1st pump for Intelligent Hydrostatic drive
  - 2nd pump for implements
  - 3rd pump for steering system

Drive, Lift and Steer simultaneously with smooth predictable control. The M Series simply does what you ask it to.

- **Programmable in-cab kick-outs** are easy to set on the go for tilt, lower and lift. This feature is ideal for applications where the work cycle is repeatable allowing you to quickly return to programed set points such as ground and level.
- **Fine tune hydro-mechanical performance** with fully adjustable 3rd function flow through the touch screen display (when equipped) for a perfect marriage between machine and attachments.

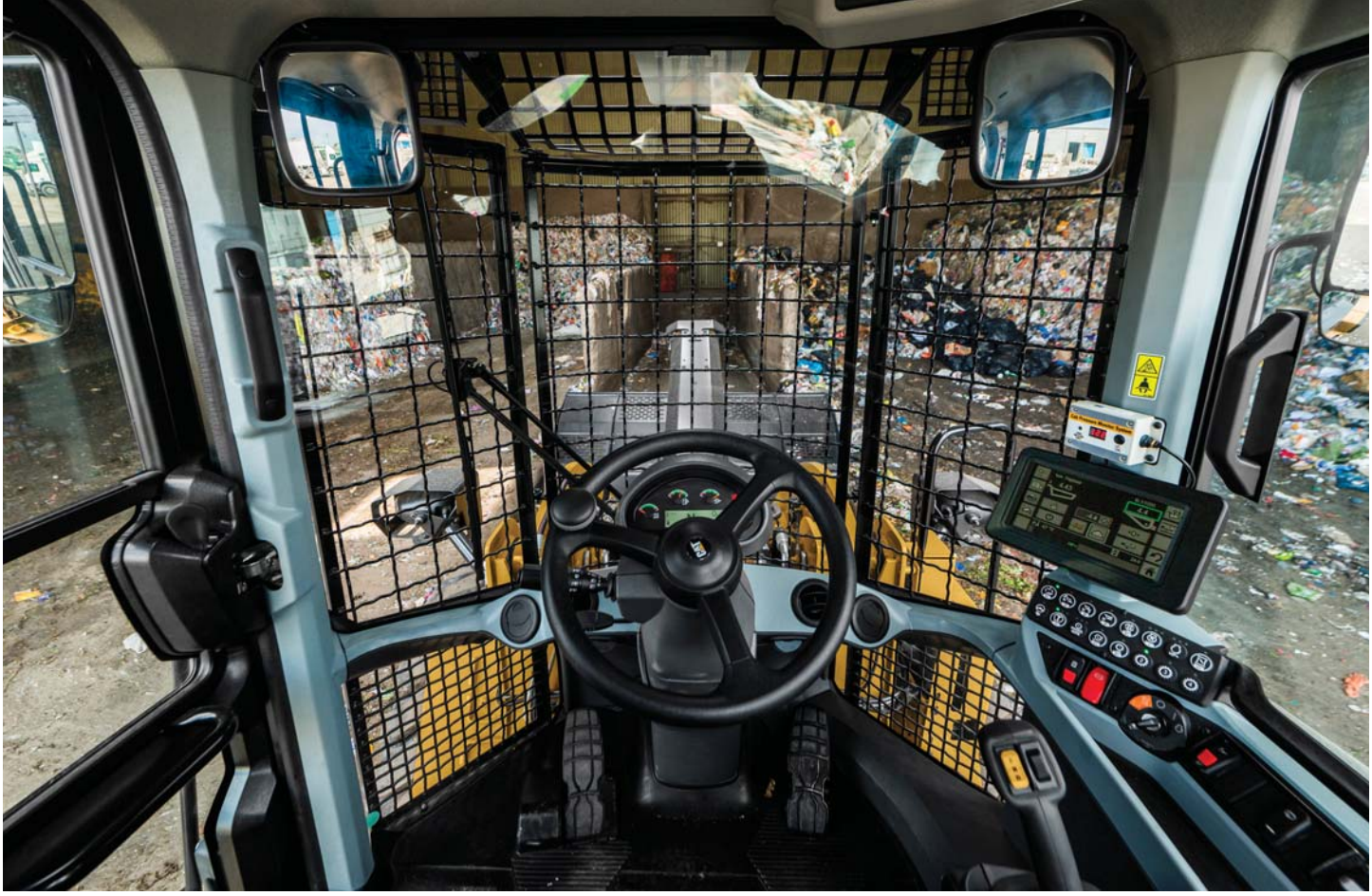
Enjoy All Day Comfort

Best seat on the job site.

Have a Seat and Experience:

- **Seat-mounted controls** featuring a low effort joystick for lift and tilt functions along with integrated Forward/Neutral/Reverse switch, differential lock trigger and optional third and fourth auxiliary functions.
- **Superior all around visibility** with single piece front windshield, new parabolic external mirrors, redesigned Generation II linkage and clean hydraulic lines routing.
- **Automatic climate control** with heated rear glass and external mirrors for a quick defrost.
- **Fully adjustable controls** including steering column, joystick and seat suspension.
- **Information at a glance** with large primary LCD display and optional full color touch screen display.
- **An extra eye on the job site** with optional integrated rear object detection and optional* rearview camera.
- **A heated and cooled seat** option for added comfort in a wide range of climates.

**Standard in Europe.*



An easy day at work with:

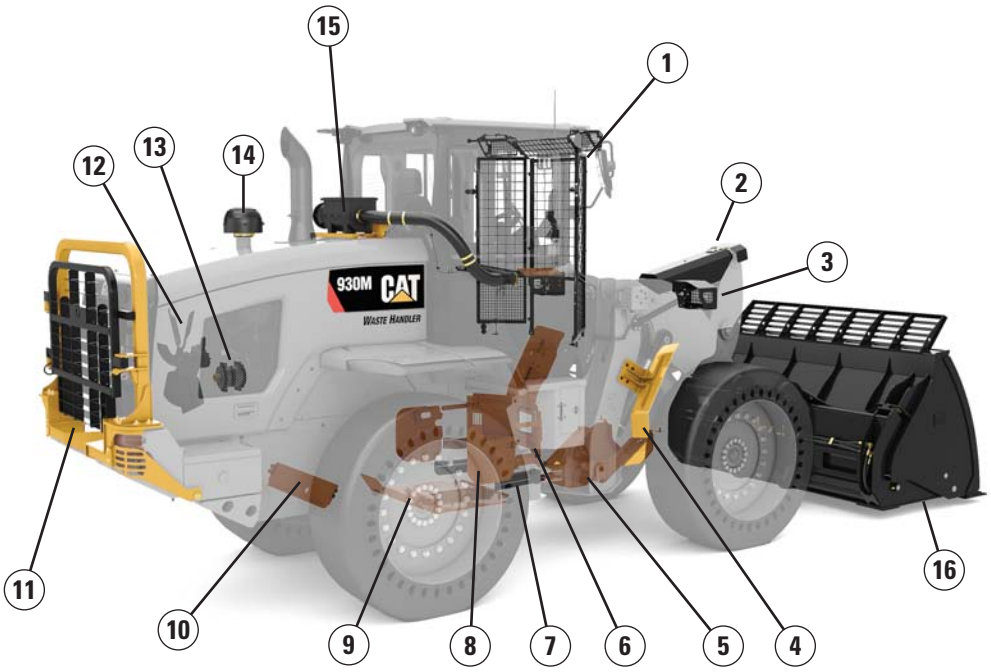
- **A spacious, safe, quiet operator environment** featuring ergonomic controls, seat belt notification and optional Bluetooth™ radio with integrated microphone plus an auxiliary port.
- **Easy access to vital machine parameters** with the optional touch screen display that works in conjunction with the standard soft touch panel to allow real time adjustments to machine features and an integrated help button with over 25 languages.
- **Comfortable soft stops** at cylinder end stroke conditions and programmable kickout points with Caterpillar's exclusive electro-hydraulic cylinder snubbing.
- **An even smoother ride** with optional Ride Control when working unloaded and loaded with excellent material retention.
- **Early starts and late finishes** are made easier with optional LED lighting package that includes engine compartment lighting to illuminate the way for checking oil, and coolant level along with refueling the machine in dark conditions.

Configured for Success

Ready to work for you.

The Way You Want It

A complete range of optional equipment and work tools gives you the versatility to configure a Waste Handler to be successful in your business. Get with your Caterpillar dealer to configure yours.



Guards:

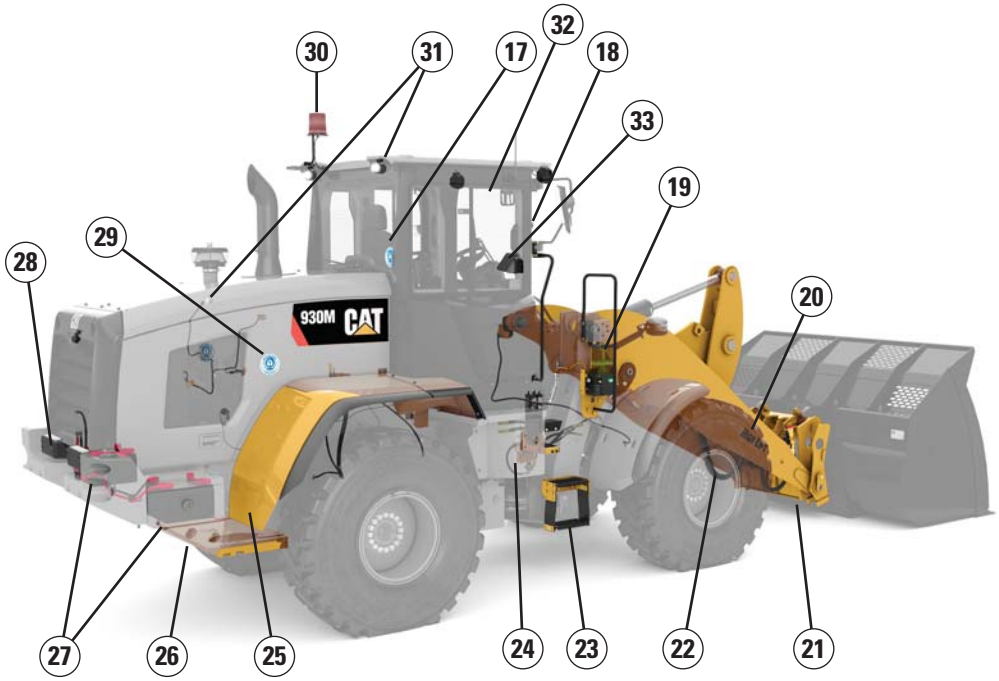
1) Windshield
2) Tilt cylinder
3) Lights
4) Fender deflectors
5) Drive shaft
6) Hitch
7) Steering cylinders
8) Side power train
9) Lower power train
10) Crank case
11) Rear radiator (930/938 only)

Debris Packages:

12) Reversing fan
13) Sealed alternator
14) Turbine precleaner
15) RESPA precleaner

Work Tools

16) Full range of tools



Operator Environment:

17) Seat, deluxe or premium
18) Deluxe cab (with touch screen display)

Other Options:

19) Autolube
20) High lift linkage
21) Coupler: Fusion™ and ISO 23727
22) Auxiliary hydraulics: 3rd and 4th
23) Window washing access
24) Ride control
25) Fenders: extended and full coverage
26) Counterweights
27) Cold start package
28) Rear object detection
29) Blue Angel certification
30) Beacon
31) LED auxiliary lights
32) CPM – Cat Production Measurement
33) TPM – Tire Pressure Monitoring

Serviceability

Schedule your downtime to maximize your up time.

Get up and running quickly with ground level, daily service access and optional engine compartment lighting. Three large service doors can be opened and closed in any order to give full access to filters and service points. Extended service intervals on hydraulic and power train filters reduce service time and maximize uptime. Additional service features include:

- **Product Link™ PRO standard** with a trial subscription to VisionLink®.
- **Maintenance reminders** through touch screen display at scheduled intervals.
- **Fit for Life Diesel Particulate Filter** that is designed to exceed the engine overhaul life.
- **Quick fuel filter service** with Caterpillar's exclusive electric fuel priming pump.
- **Jump start studs** as standard equipment.
- **Extended cleanouts** with single plane cooling system and wide spaced six fins per inch coolers as standard.
- **Integrated Autolube** (optional) with adjustable greasing frequency.

Customer Support

Unmatched service makes the difference.

Renowned Cat Dealer Support

Rely on your Cat dealer to help you every step of the way with new or used machine sales, rental or rebuild options to meet your business needs.

Maximize your machine uptime with unsurpassed worldwide parts availability, trained technicians and customer support agreements.

Let us earn your business. Experience an M Series Small Wheel Loader and join the Caterpillar family.

Small Wheel Loaders Waste Handler Specifications

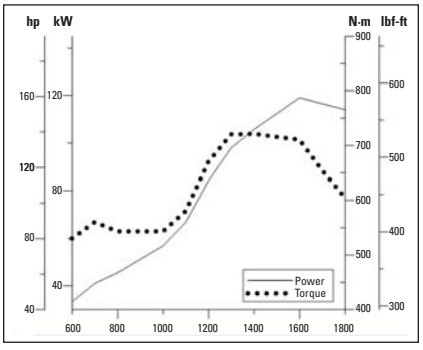
Engine

Cat C7.1 ACERT	926M				930M				938M			
Power Mode	**Performance (HP+) Range 1-4**		**Standard Range 1-3***		**Performance (HP+) Range 1-4**		**Standard Range 1-3***		**Performance (HP+) Range 1-4**		**Standard Range 1-3***	
Maximum Rated Gross Power	**kW**	**hp**	**kW**	**hp**	**kW**	**hp**	**kW**	**hp**	**kW**	**hp**	**kW**	**hp**
Maximum Engine Speed	1,800 rpm		1,600 rpm		1,800 rpm		1,600 rpm		1,800 rpm		1,600 rpm	
ISO 14396	114	153	109	146	122	164	119	160	140	188	129	173
ISO 14396 (DIN)	114	155	109	148	122	166	119	162	140	190	129	175
Rated Net Power	1,800 rpm		1,600 rpm		1,800 rpm		1,600 rpm		1,800 rpm		1,600 rpm	
SAE J1349 at Minimum Fan Speed	110	148	105	141	117	157	115	154	136	182	125	168
ISO 9249 (1977)/EEC 80/1269 at Minimum Fan Speed	111	149	106	142	119	160	116	156	137	184	126	169
ISO 9249 (DIN) at Minimum Fan Speed	111	151	106	144	119	162	116	158	137	186	126	171
Maximum Gross Torque	**N·m**	**lbf-ft**	**N·m**	**lbf-ft**	**N·m**	**lbf-ft**	**N·m**	**lbf-ft**	**N·m**	**lbf-ft**	**N·m**	**lbf-ft**
ISO 14396	721	531	721	531	804	592	804	592	879	648	879	648
Maximum Net Torque												
SAE J1349	694	511	694	511	768	566	768	566	843	621	843	621
ISO 9249 (1977)/EEC 80/1269	702	517	702	517	776	572	776	572	852	628	852	628
Displacement	7.01 L		427 in^3		7.01 L		427 in^3		7.01 L		427 in^3	
Bore	105 mm		4 in		105 mm		4 in		105 mm		4 in	
Stroke	135 mm		5 in		135 mm		5 in		135 mm		5 in	

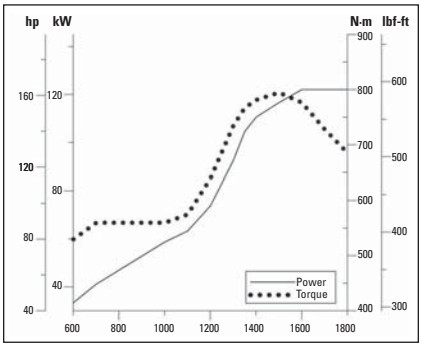
* Range 4 power and torque is equal to Performance Mode with Caterpillar Power by Range technology.
- Net power ratings are tested at the reference conditions for the specified standard and denote power available at the flywheel when the engine is equipped with alternator, air cleaner, emission components and fan at specified speed.
- No derating required up to 3000 m (10,000 ft) altitude. Auto derate protects hydraulic and transmission systems.
- The Cat C7.1 ACERT engine meets Tier 4 Final/Stage IV emission standards.
- Spark arrester performance as standard – Meets the performance requirements of EN 1834-1.2000 (section 6.4.2 Visual Test).

Engine Torque

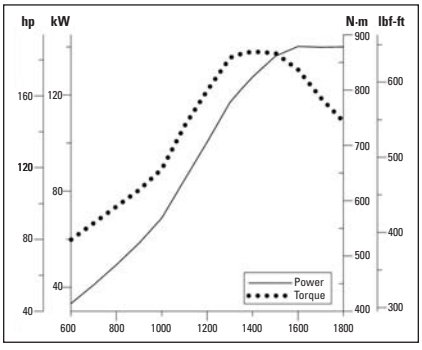
926M



930M



938M



Cab

- ROPS: ISO 3471: 2008, FOPS: ISO 3449: 2005 LEVEL II
- Declared Sound Levels
  – Operator Sound Pressure Level (ISO 6396:2008): 68 dB(A)*
  – Exterior Sound Power Level (ISO 6395:2008): 101 dB(A)*

* Measurements were conducted at 70% of maximum engine cooling fan speed. Sound level may vary at different engine cooling fan speeds. The cab was properly installed and maintained. The measurements were conducted with the cab doors and the cab windows closed.
– The Blue Angel environmental label is an optional attachment for Europe only.

Loader Hydraulic System

- Implement system uses a dedicated load sensing variable displacement pump with dual double acting lift cylinders and a single double acting tilt cylinder.
- Flow values listed are for a machine running in Performance Power Mode (1,800 rpm).

* 3rd function flow is fully adjustable from 20% to 100% of maximum flow through the touch screen display when equipped.

	926M		930M		938M	
Maximum Flow – Implement Pump	150 L/min	40 gal/min	190 L/min	50 gal/min	190 L/min	50 gal/min
3rd Function Maximum Flow*	150 L/min	40 gal/min	190 L/min	50 gal/min	190 L/min	50 gal/min
Maximum Working Pressure – Implement Pump	26 000 kPa	3,771 psi	25 000 kPa	3,626 psi	28 000 kPa	4,061 psi
Relief Pressure – Tilt Cylinder	28 000 kPa	4,061 psi	28 000 kPa	4,061 psi	30 000 kPa	4,351 psi
3rd Function Maximum Working Pressure	26 000 kPa	3,771 psi	25 000 kPa	3,626 psi	28 000 kPa	4,061 psi
3rd Function Relief Pressure	28 000 kPa	4,061 psi	28 000 kPa	4,061 psi	30 000 kPa	4,351 psi
Lift Cylinder: Double Acting						
Bore Diameter	110 mm	4.3 in	120 mm	4.7 in	120 mm	4.7 in
Rod Diameter	60 mm	2.4 in	65 mm	2.6 in	65 mm	2.6 in
Stroke	728 mm	28.7 in	728 mm	28.7 in	789 mm	31.1 in
Tilt Cylinder: Double Acting						
Bore Diameter	130 mm	5.1 in	150 mm	5.9 in	150 mm	5.9 in
Rod Diameter	70 mm	2.8 in	90 mm	3.5 in	90 mm	3.5 in
Stroke	555 mm	21.9 in	555 mm	21.9 in	555 mm	21.9 in
Cycle Times: Performance (HP+) at 1,800 rpm/ Standard Power Mode at 1,600 rpm						
Raise (Ground Level to Maximum Lift)	5.5/6.2 seconds		5.1/5.7 seconds		5.5/6.2 seconds	
Dump (at Maximum Lift Height)	1.5/1.7 seconds		1.5/1.7 seconds		1.5/1.7 seconds	
Float Down (Maximum Lift to Ground Level)	2.6/2.6 seconds		2.7/2.7 seconds		2.7/2.7 seconds	
Total Cycle Time	9.6/10.5 seconds		9.3/10.1 seconds		9.7/10.6 seconds	

Steering

- Steering system uses a dedicated load sensing variable displacement pump with dual double acting cylinders.
- Flow values listed are for a machine running in Performance Power Mode (1,800 rpm).

	926M		930M		938M	
Steering Cylinder: Double Acting						
Bore Diameter	70 mm	2.8 in	70 mm	2.8 in	80 mm	3.1 in
Rod Diameter	40 mm	1.6 in	40 mm	1.6 in	50 mm	2 in
Stroke	438 mm	17.2 in	438 mm	17.2 in	399 mm	15.7 in
Maximum Flow – Steering Pump	130 L/min	34 gal/min	130 L/min	34 gal/min	130 L/min	34 gal/min
Maximum Working Pressure – Steering Pump	24 130 kPa	3,500 psi	24 130 kPa	3,500 psi	24 130 kPa	3,500 psi
Maximum Steering Torque						
0° (Straight Machine)	50 375 N·m	37,155 lbf-ft	50 375 N·m	37,155 lbf-ft	57 630 N·m	42,506 lbf-ft
40° (Full Turn)	37 620 N·m	27,747 lbf-ft	37 620 N·m	27,747 lbf-ft	42 570 N·m	31,398 lbf-ft
Steering Cycle Times (Full Left to Full Right)						
Minimum RPM: Pump Flow Limited	2.8 seconds		2.8 seconds		3.1 seconds	
Maximum RPM: 90 rpm Steering Wheel Speed	2.4 seconds		2.4 seconds		2.3 seconds	

Small Wheel Loaders Waste Handler Specifications

Transmission

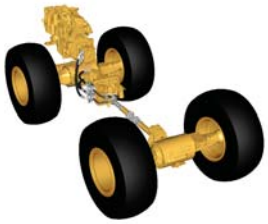
* Creeper control allows maximum speed range adjustability from 1 km/h (0.6 mph) to 13 km/h (8 mph) in Range 1 through the touch screen display when equipped. Factory default is 7 km/h (4.4 mph).

	926M		930M		938M	
Forward and Reverse						
Range 1*	1-13 km/h	0.6-8 mph	1-13 km/h	0.6-8 mph	1-13 km/h	0.6-8 mph
Range 2	13 km/h	8 mph	13 km/h	8 mph	13 km/h	8 mph
Range 3	27 km/h	17 mph	27 km/h	17 mph	27 km/h	17 mph
Range 4	40 km/h	25 mph	40 km/h	25 mph	40 km/h	25 mph

Service Refill Capacities

	926M		930M		938M	
Fuel Tank	195 L	51.5 gal	195 L	51.5 gal	195 L	51.5 gal
Diesel Exhaust Fluid (DEF) Tank	19 L	5.0 gal	19 L	5.0 gal	19 L	5.0 gal
Cooling System	30 L	7.9 gal	30 L	7.9 gal	32 L	8.5 gal
Engine Crankcase	20 L	5.3 gal	20 L	5.3 gal	20 L	5.3 gal
Transmission (Gear Box)	8.5 L	2.2 gal	8.5 L	2.2 gal	11 L	2.9 gal
Axles						
Front	21 L	5.5 gal	26 L	6.9 gal	35 L	9.2 gal
Rear	21 L	5.5 gal	25 L	6.6 gal	35 L	9.2 gal
Hydraulic System (Including Tank)	160 L	42.3 gal	165 L	43.6 gal	170 L	44.9 gal
Hydraulic Tank	90 L	23.8 gal	90 L	23.8 gal	90 L	23.8 gal

Power Train



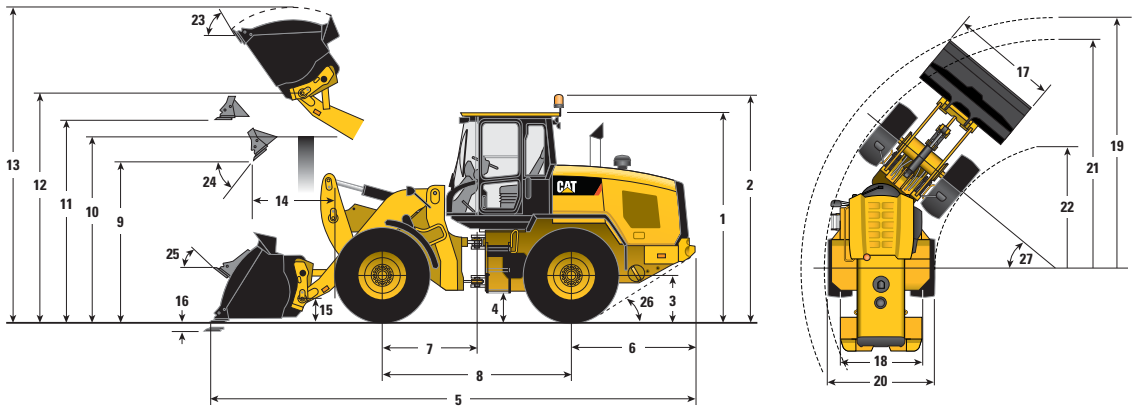
- Power train is governed by the Caterpillar exclusive Intelligent Power Management system to deliver peak performance and efficiency.
- Offset rims available to meet European roading requirements.

*Differential front locking axle can be engaged on the go at full torque to 10 km/h (6.2 mph) on the 926M/930M and up to 20 km/h (12.4 mph) on the 938M.

	926M	930M	938M
Front Axle	Fixed	Fixed	Fixed
Traction Aid*	Locking differential (standard)	Locking differential (standard)	Locking differential (standard)
Rear Axle	Oscillating	Oscillating	Oscillating
Oscillation Angle by Tire Size			
17.5 R25	± 13.5 degrees	—	—
20.5 R25, 550/65, 600/65, 650/65	± 10.5 degrees	± 10.5 degrees	± 10.5 degrees
23.5 R25	—	—	± 7 degrees
Traction Aid (optional)	Limited slip differential	Limited slip differential	Limited slip differential
Brakes			
Service	Inboard wet disc	Inboard wet disc	Outboard wet disc
Park	Spring applied hydraulically released	Spring applied hydraulically released	Spring applied hydraulically released

Dimensions with Bucket

All dimensions are approximate. Dimensions will vary with bucket, and tire choice. Refer to Operating Specifications with Buckets.



*Vary with bucket.
**Vary with tire.

		Standard Lift						High Lift					
		926M		930M		938M		926M HL		930M HL		938M HL	
		mm	ft/in	mm	ft/in	mm	ft/in	mm	ft/in	mm	ft/in	mm	ft/in
**	1 Height: Ground to Cab	3375	11'0"	3375	11'0"	3375	11'0"	3375	11'0"	3375	11'0"	3375	11'0"
**	2 Height: Ground to Beacon	3742	12'3"	3742	12'3"	3742	12'3"	3742	12'3"	3742	12'3"	3742	12'3"
**	3 Height: Ground Axle Center	720	2'4"	720	2'4"	720	2'4"	720	2'4"	720	2'4"	720	2'4"
**	4 Height: Ground Clearance	432	1'5"	432	1'5"	421	1'4"	432	1'5"	432	1'5"	421	1'4"
*	5 Length: Overall	7645	25'0"	7754	25'5"	7987	26'2"	8294	27'2"	8556	28'0"	8735	28'7"
	6 Length: Rear Axle to Bumper	1986	6'6"	1993	6'6"	1968	6'5"	1986	6'6"	1993	6'6"	1968	6'5"
	7 Length: Hitch to Front Axle	1500	4'11"	1500	4'11"	1525	5'0"	1500	4'11"	1500	4'11"	1525	5'0"
	8 Length: Wheel Base	3000	9'10"	3000	9'10"	3050	10'0"	3000	9'10"	3000	9'10"	3050	10'0"
*	9 Clearance: Bucket at 45°	2707	8'10"	2635	8'7"	2569	8'5"	3212	10'6"	3242	10'7"	3168	10'4"
**	10 Clearance: Load Over Height	3365	11'0"	3366	11'0"	3389	11'1"	3585	11'9"	3575	11'8"	3596	11'9"
**	11 Clearance: Level Bucket	3615	11'10"	3615	11'10"	3676	12'0"	4108	13'5"	4208	13'9"	4257	13'11"
**	12 Height: Bucket Pin	3942	12'11"	3942	12'11"	4004	13'1"	4435	14'6"	4535	14'10"	4585	15'0"
**	13 Height: Overall	5239	17'2"	5344	17'6"	5574	18'3"	5732	18'9"	5937	19'5"	6155	20'2"
*	14 Reach: Bucket at 45°	1073	3'6"	1146	3'9"	1309	4'3"	1329	4'4"	1487	4'10"	1603	5'3"
	15 Carry Height: Bucket Pin	464	1'6"	464	1'6"	477	1'6"	650	2'1"	690	2'3"	688	2'3"
**	16 Dig Depth	65	0'2.5"	65	0'2.5"	66	0'2.5"	100	0'3.9"	100	0'3.9"	100	0'3.9"
	17 Width: Bucket	2750	9'0"	2750	9'0"	2750	9'0"	2750	9'0"	2750	9'0"	2750	9'0"
	18 Width: Tread Center	1930	6'3"	1930	6'3"	2083	6'10"	1930	6'3"	1930	6'3"	2083	6'10"
	19 Turning Radius: Over Bucket	6077	19'11"	6108	20'0"	6240	20'5"	6392	20'11"	6496	21'3"	6611	21'8"
	20 Width: Over Tires	2540	8'4"	2540	8'4"	2540	8'4"	2540	8'4"	2540	8'4"	2540	8'4"
	21 Turning Radius: Outside of Tires	5402	17'8"	5402	17'8"	5546	18'2"	5402	17'8"	5402	17'8"	5546	18'2"
	22 Turning Radius: Inside of Tires	2851	9'4"	2851	9'4"	2843	9'3"	2851	9'4"	2851	9'4"	2843	9'3"
	23 Rack Angle at Full Lift	54°		54°		54°		51°		53°		53°	
	24 Dump Angle at Full Lift	45°		45°		46°		44°		44°		44°	
	25 Rack Angle at Carry	44°		44°		45°		48°		50°		49°	
	26 Departure Angle	33°		33°		33°		33°		33°		33°	
	27 Articulation Angle	40°		40°		40°		40°		40°		40°	
		kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
	Operating Weight	14 057	30,981	15 087	33,251	17 493	38,555	14 335	31,594	15 319	33,763	17 391	38,330

*Dimensions listed are for a machine configured with Fusion Light Material buckets, bolt-on cutting edges, heavy counterweight (except 938M HL), waste guarding, 80 kg (176 lb) operator, and Michelin 20.5 R25 (L-5) XMINE D2 tires.

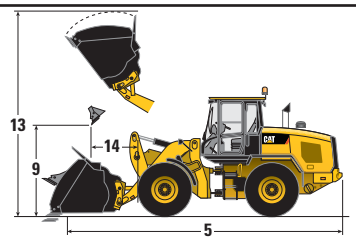
Supplemental Operating Data – Tires on Standard Lift Linkage Machine

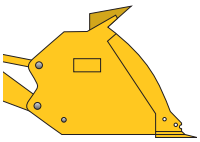
	L3		Solid Tires			
	20.5 R25 XHA2		New		Worn	
Base Tire: 20.5 R25 L5	mm	in	mm	in	mm	in
Vertical Heights	–35	–1.4	24	0.9	–125.5	–4.9
Reach: Bucket at 45°	+22	+0.9	–1	0	+171	+6.7
	kg	lb	kg	lb	kg	lb
Tipping Load – Straight	–384	–847	+555	+1,223	–453	–998
Tipping Load – Full Turn	–336	–740	+506	+1,115	–375	–826
Operating Weight	–605	–1,334	+1480	+3,261	–108	–238

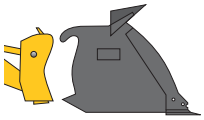
Supplemental Operating Data – Tires on High Lift Linkage Machine

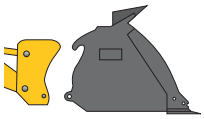
	L3		Solid Tires			
	20.5 R25 XHA2		New		Worn	
Base Tire: 20.5 R25 L5	mm	in	mm	in	mm	in
Vertical Heights	–35	–1.4	24	0.9	–125.5	–4.9
Reach: Bucket at 45°	+22	+0.9	–1	0	+171	+6.7
	kg	lb	kg	lb	kg	lb
Tipping Load – Straight	–298	–657	+431	+949	–351	–773
Tipping Load – Full Turn	–260	–574	+393	+866	–291	–641
Operating Weight	–605	–1,334	+1480	+3,261	–108	–238

Operating Specifications with Light Material Buckets









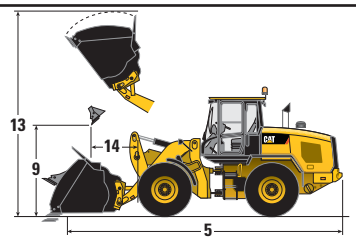
926M Waste Handler Standard Lift		Pin On		Fusion		ISO 23727	
Rated Capacity	m^3	3.5	4.2	3.5	4.2	3.5	4.2
	yd^3	4.6	5.5	4.6	5.5	4.6	5.5
Width: Bucket	mm	2750	2750	2750	2750	2750	2750
	ft/in	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"
Nominal Material Density	kg/m^3	922	743	878	707	840	673
120% Fill Factor	lb/yd^3	1,546	1,251	1,473	1,191	1,408	1,133
9 Clearance: Full Lift 45° Dump	mm	2666	2545	2635	2515	2562	2442
	ft/in	8'8"	8'4"	8'7"	8'3"	8'4"	8'0"
14 Reach: Full Lift 45° Dump	mm	1117	1237	1146	1266	1184	1305
	ft/in	3'7"	4'0"	3'9"	4'1"	3'10"	4'3"
5 Length: Overall	mm	7705	7875	7747	7917	7847	8017
	ft/in	25'3"	25'10"	25'5"	25'11"	25'8"	26'3"
13 Height: Overall	mm	5319	5480	5344	5506	5420	5587
	ft/in	17'5"	17'11"	17'6"	18'0"	17'9"	18'3"
Tipping Load – Straight ISO 14397-1*	kg	9051	8777	8660	8393	8283	7995
	lb	19,947	19,345	19,085	18,498	18,254	17,621
Tipping Load – Full Turn ISO 14397-1*	kg	7745	7494	7376	7132	7053	6787
	lb	17,070	16,516	16,257	15,717	15,545	14,957
Breakout Force	kg	7866	6877	7585	6649	7075	5945
	lb	17,336	15,156	16,718	14,654	15,593	13,102
Operating Weight	kg	13 812	13 941	14 175	14 304	14 095	14 258
	lb	30,440	30,726	31,240	31,526	31,065	31,424
926M Waste Handler High Lift		**Pin On**		**Fusion**		**ISO 23727**	
Rated Capacity	m^3	3.5	4.2	3.5	4.2	3.5	4.2
	yd^3	4.6	5.5	4.6	5.5	4.6	5.5
Width: Bucket	mm	2750	2750	2750	2750	2750	2750
	ft/in	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"
Nominal Material Density	kg/m^3	691	556	650	522	628	501
120% Fill Factor	lb/yd^3	1,159	935	1,091	878	1,053	843
9 Clearance: Full Lift 45° Dump	mm	3172	3053	3142	3023	3069	2951
	ft/in	10'4"	10'0"	10'3"	9'11"	10'0"	9'8"
14 Reach: Full Lift 45° Dump	mm	1373	1496	1403	1525	1443	1565
	ft/in	4'6"	4'10"	4'7"	5'0"	4'8"	5'1"
5 Length: Overall	mm	8354	8524	8396	8566	8490	8660
	ft/in	27'4"	27'11"	27'6"	28'1"	27'10"	28'4"
13 Height: Overall	mm	5812	5973	5837	5999	5913	6080
	ft/in	19'0"	19'7"	19'1"	19'8"	19'4"	19'11"
Tipping Load – Straight ISO 14397-1*	kg	6849	6627	6489	6271	6266	6022
	lb	15,096	14,605	14,300	13,821	13,811	13,272
Tipping Load – Full Turn ISO 14397-1*	kg	5807	5601	5463	5261	5277	5048
	lb	12,799	12,343	12,041	11,596	11,629	11,124
Breakout Force	kg	7457	6512	7188	6294	6702	5624
	lb	16,434	14,353	15,841	13,871	14,771	12,395
Operating Weight	kg	14 090	14 220	14 453	14 583	14 373	14 536
	lb	31,054	31,340	31,854	32,140	31,678	32,038

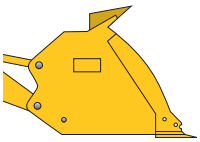
*Full compliance to ISO 14397-1 (2007) Section 1 thru 6, which requires 2% verification between calculation and testing.

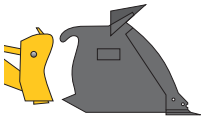
Note: Dimensions listed are for a machine configured with, optional counterweights, waste guarding, 80 kg (176 lb) operator, and Michelin 20.5 R25 (L-5) XMINE D2 tires.

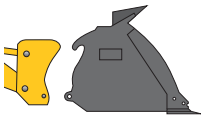
Light Material Buckets

Operating Specifications with Light Material Buckets







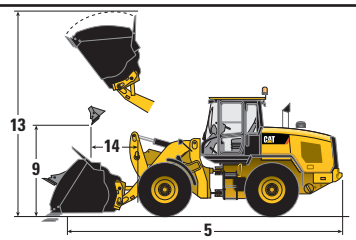


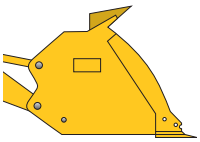
930M Waste Handler Standard Lift		Pin On		Fusion		ISO 23727	
Rated Capacity	m^3	3.8	5.0	3.8	5.0	3.5	5.0
	yd^3	5	6.5	5	6.5	4.6	6.5
Width: Bucket	mm	2750	2750	2750	2750	2750	2750
	ft/in	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"
Nominal Material Density	kg/m^3	945	705	904	674	954	642
120% Fill Factor	lb/yd^3	1,583	1,195	1,514	1,142	1,600	1,089
9 Clearance: Full Lift 45° Dump	mm	2608	2545	2578	2515	2562	2392
	ft/in	8'6"	8'4"	8'5"	8'3"	8'4"	7'10"
14 Reach: Full Lift 45° Dump	mm	1174	1237	1203	1266	1184	1356
	ft/in	3'10"	4'0"	3'11"	4'1"	3'10"	4'5"
5 Length: Overall	mm	7794	7882	7836	7924	7854	8096
	ft/in	25'6"	25'10"	25'8"	25'11"	25'9"	26'6"
13 Height: Overall	mm	5391	5760	5418	5787	5420	5875
	ft/in	17'8"	18'10"	17'9"	18'11"	17'9"	19'3"
Tipping Load – Straight ISO 14397-1*	kg	10 124	9953	9722	9554	9446	9121
	lb	22,313	21,936	21,427	21,057	20,819	20,102
Tipping Load – Full Turn ISO 14397-1*	kg	8619	8457	8241	8082	8014	7710
	lb	18,995	18,639	18,163	17,813	17,663	16,992
Breakout Force	kg	10 109	8942	9763	8659	9270	7789
	lb	22,281	19,707	21,517	19,083	20,430	17,167
Operating Weight	kg	14 790	14 934	15 153	15 294	15 007	15 230
	lb	32,596	32,913	33,396	33,708	33,075	33,567
930M Waste Handler High Lift		**Pin On**		**Fusion**		**ISO 23727**	
Rated Capacity	m^3	3.8	5.0	3.8	5.0	3.5	5.0
	yd^3	5	6.5	5	6.5	4.6	6.5
Width: Bucket	mm	2750	2750	2750	2750	2750	2750
	ft/in	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"
Nominal Material Density	kg/m^3	674	500	636	472	681	455
120% Fill Factor	lb/yd^3	1,129	848	1,066	800	1,142	771
9 Clearance: Full Lift 45° Dump	mm	3215	3154	3186	3124	3170	3002
	ft/in	10'6"	10'4"	10'5"	10'2"	10'4"	9'10"
14 Reach: Full Lift 45° Dump	mm	1517	1580	1546	1610	1527	1701
	ft/in	4'11"	5'2"	5'0"	5'3"	5'0"	5'6"
5 Length: Overall	mm	8595	8684	8637	8726	8650	8892
	ft/in	28'2"	28'5"	28'4"	28'7"	28'4"	29'2"
13 Height: Overall	mm	5984	6352	6010	6380	6013	6468
	ft/in	19'7"	20'10"	19'8"	20'11"	19'8"	21'2"
Tipping Load – Straight ISO 14397-1*	kg	7304	7152	6941	6792	6831	6555
	lb	16,098	15,763	15,298	14,969	15,054	14,446
Tipping Load – Full Turn ISO 14397-1*	kg	6149	6003	5803	5660	5721	5459
	lb	13,552	13,230	12,790	12,474	12,608	12,032
Breakout Force	kg	9855	8714	9515	8436	9033	7586
	lb	21,720	19,204	20,971	18,593	19,908	16,718
Operating Weight	kg	15 022	15 166	15 385	15 526	15 239	15 462
	lb	33,108	33,425	33,908	34,219	33,587	34,078

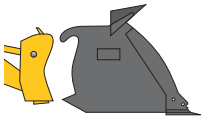
*Full compliance to ISO 14397-1 (2007) Section 1 thru 6, which requires 2% verification between calculation and testing.

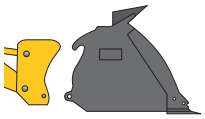
Note: Dimensions listed are for a machine configured with, optional counterweights, waste guarding, 80 kg (176 lb) operator, and Michelin 20.5 R25 (L-5) XMINE D2 tires.

Operating Specifications with Light Material Buckets









938M Waste Handler Standard Lift		Pin On		Fusion		ISO 23727	
Rated Capacity	m^3	4.2	5.0	4.2	5.0	4.2	5.0
	yd^3	5.5	6.5	5.5	6.5	5.5	6.5
Width: Bucket	mm	2750	2750	2750	2750	2750	2750
	ft/in	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"
Nominal Material Density	kg/m^3	1022	858	977	818	940	788
120% Fill Factor	lb/yd^3	1,720	1,455	1,644	1,386	1,581	1335
9 Clearance: Full Lift 45° Dump	mm	2606	2606	2569	2569	2503	2452
	ft/in	8'6"	8'6"	8'5"	8'5"	8'2"	8'0"
14 Reach: Full Lift 45° Dump	mm	1273	1273	1309	1309	1340	1391
	ft/in	4'2"	4'2"	4'3"	4'3"	4'4"	4'6"
5 Length: Overall	mm	7935	7935	7987	7987	8077	8149
	ft/in	26'0"	26'0"	26'2"	26'2"	26'5"	26'8"
13 Height: Overall	mm	5542	5821	5574	5855	5649	5937
	ft/in	18'2"	19'1"	18'3"	19'2"	18'6"	19'5"
Tipping Load – Straight ISO 14397-1*	kg	12 132	12 132	11 638	11 609	11 197	11 183
	lb	26,738	26,739	25,650	25,585	24,679	24,647
Tipping Load – Full Turn ISO 14397-1*	kg	10 303	10 300	9843	9811	9470	9452
	lb	22,708	22,701	21,695	21,624	20,872	20,833
Breakout Force	kg	10 302	10 264	9915	9860	9001	8956
	lb	22,706	22,622	21,851	21,731	19,839	19,739
Operating Weight	kg	17 083	17 130	17 493	17 571	17 389	17 448
	lb	37,650	37,754	38,555	38,725	38,324	38,456
938M Waste Handler High Lift		**Pin On**		**Fusion**		**ISO 23727**	
Rated Capacity	m^3	4.2	5.0	4.2	5.0	4.2	5.0
	yd^3	5.5	6.5	5.5	6.5	5.5	6.5
Width: Bucket	mm	2750	2750	2750	2750	2750	2750
	ft/in	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"
Nominal Material Density	kg/m^3	715	599	674	562	656	548
120% Fill Factor	lb/yd^3	1,203	1,015	1,135	953	1,103	929
9 Clearance: Full Lift 45° Dump	mm	3205	3205	3168	3168	3103	3054
	ft/in	10'6"	10'6"	10'4"	10'4"	10'2"	10'0"
14 Reach: Full Lift 45° Dump	mm	1566	1566	1603	1603	1636	1688
	ft/in	5'1"	5'1"	5'3"	5'3"	5'4"	5'6"
5 Length: Overall	mm	8683	8683	8735	8735	8819	8891
	ft/in	28'5"	28'5"	28'7"	28'7"	28'11"	29'2"
13 Height: Overall	mm	6122	6402	6155	6436	6230	6518
	ft/in	20'1"	21'0"	20'2"	21'1"	20'5"	21'4"
Tipping Load – Straight ISO 14397-1*	kg	8555	8539	8125	8079	7898	7867
	lb	18,855	18,819	17,906	17,806	17,407	17,339
Tipping Load – Full Turn ISO 14397-1*	kg	7203	7185	6795	6749	6608	6576
	lb	15,875	15,835	14,977	14,874	14,564	14,493
Breakout Force	kg	9894	9856	9519	9464	8640	8594
	lb	21,806	21,721	20,979	20,858	19,041	18,942
Operating Weight	kg	16 981	17 028	17 391	17 469	17 287	17 346
	lb	37,426	37,529	38,330	38,501	38,099	38,231

*Full compliance to ISO 14397-1 (2007) Section 1 thru 6, which requires 2% verification between calculation and testing.

Note: Dimensions listed are for a machine configured with, optional counterweights, waste guarding, 80 kg (176 lb) operator, and Michelin 20.5 R25 (L-5) XMINE D2 tires.

Light Material Buckets

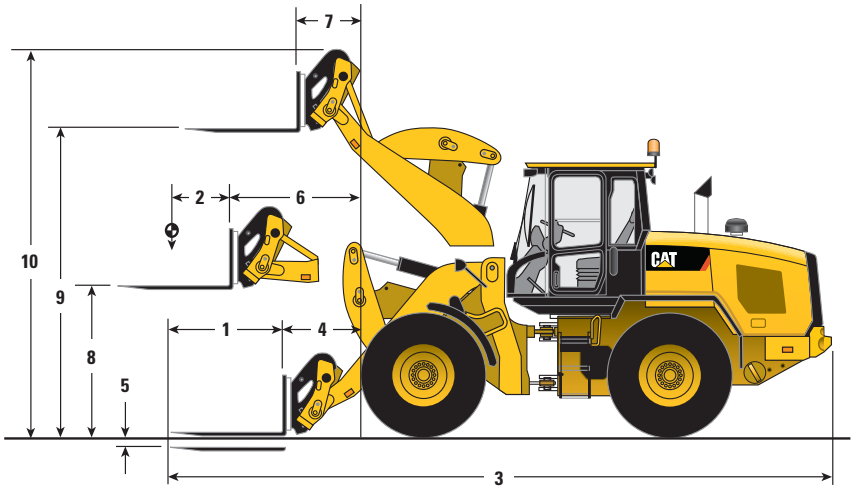
Bucket Selection for Light Material Buckets – Standard Lift

Material Type					Mixed Plastics	Semi Compacted MSW	Mixed, Semi Comp. Paper	Organic Yard Waste	MSW with Light C&D	Glass – Bottles and Jars	Organic Food Scraps	Organic – Mulch Wet	C&D – Bricks, Loose	MSW – Compacted	Glass – Semi Crushed	C&D – Mixed	C&D – Concrete Pieces	Fertilizer – Mixed	Loose Metal Scrap	Shredded Steel	Batteries		Tip Load Full Turn*	
Fill Factor %					120%	120%	120%	115%	120%	110%	115%	115%	110%	120%	115%	110%	110%	115%	105%	110%	110%	105%		
		m^3	yd^3	Counter-weight	kg/m^3	380	500	620	740	860	980	1100	1220	1340	1460	1580										kg	lb
				lb/yd^3	(640)	(843)	(1,045)	(1,247)	(1,449)	(1,651)	(1,854)	(2,056)	(2,258)	(2,460)	(2,662)											
926M	Pin On	3.1	(4.1)	Log/Agg								115%	110%	105%	100%										8308	(18,316)
				Heavy								115%	110%	105%	100%										7891	(17,395)
		4.1	(5.4)	Log/Agg						115%	110%	105%	100%												7903	(17,422)
				Heavy						115%	110%	105%	100%												7494	(16,521)
		5.0	(6.5)	Log/Agg					115%	110%	105%	100%													7864	(17,336)
				Heavy					115%	110%	105%	100%													7454	(16,433)
	Fusion	3.1	(4.1)	Log/Agg														115%	110%	105%	100%				7959	(17,546)
				Heavy													115%	110%	105%	100%					7547	(16,637)
		4.1	(5.4)	Log/Agg						115%	110%	105%	100%												7535	(16,612)
				Heavy						115%	110%	105%	100%												7132	(15,722)
		5.0	(6.5)	Log/Agg					115%	110%	105%	100%													7496	(16,526)
				Heavy					115%	110%	105%	100%													7092	(15,634)
930M	Pin On	3.1	(4.1)	Log/Agg															115%	110%	105%	100%			9332	(20,572)
				Heavy															115%	110%	105%	100%			8914	(19,651)
				Standard									115%	110%	105%	100%									8412	(18,544)
		4.1	(5.4)	Log/Agg							115%	110%	105%	100%											8904	(19,629)
				Heavy							115%	110%	105%	100%											8495	(18,728)
				Standard						115%	110%	105%	100%												8004	(17,645)
		5.0	(6.5)	Log/Agg							115%	110%	105%	100%											8867	(19,547)
				Heavy							115%	110%	105%	100%											8457	(18,644)
				Standard					115%	110%	105%	100%													7965	(17,559)
	Fusion	3.1	(4.1)	Log/Agg															115%	110%	105%	100%			8969	(19,773)
				Heavy															115%	110%	105%	100%			8557	(18,864)
		4.1	(5.4)	Log/Agg							115%	110%	105%	100%											8524	(18,791)
				Heavy							115%	110%	105%	100%											8120	(17,901)
		5.0	(6.5)	Log/Agg							115%	110%	105%	100%											8487	(18,710)
				Heavy							115%	105%	100%												8082	(17,818)
938M	Pin On	3.5	(4.6)	Log/Agg																115%	110%	105%	100%		11 006	(24,264)
				Heavy																115%	110%	105%	100%		10 604	(23,377)
				Standard															115%	110%	105%	100%			10 109	(22,287)
		4.1	(5.4)	Log/Agg														115%	110%	105%	100%				10 700	(23,589)
				Heavy													115%	110%	105%	100%					10 303	(22,714)
				Standard													115%	110%	105%	100%					9816	(21,639)
		5.0	(6.5)	Log/Agg													115%	110%	105%	100%					10 698	(23,584)
				Heavy													115%	110%	105%	100%					10 300	(22,708)
				Standard												115%	110%	105%	100%						9812	(21,631)
	Fusion	3.5	(4.6)	Log/Agg																115%	110%	105%	100%		10 519	(23,189)
				Heavy																115%	110%	105%	100%		10 122	(22,315)
		4.1	(5.4)	Log/Agg														115%	110%	105%	100%				10 234	(22,562)
				Heavy													115%	110%	105%	100%					9843	(21,701)
		5.0	(6.5)	Log/Agg												115%	110%	105%	100%						10 203	(22,493)
				Heavy												115%	110%	105%	100%						9811	(21,630)

Bucket Selection for Light Material Buckets – High Lift

Material Type					Mixed Plastics	Semi Compacted MSW	Mixed, Semi Comp. Paper	Organic Yard Waste	MSW with light C&D	Glass – Bottles and Jars	Organic Food Scraps	Organic – Mulch Wet	C&D – Bricks, Loose	MSW – Compacted	Glass – Semi Crushed	C&D – Mixed	C&D – Concrete Pieces	Fertilizer – Mixed	Loose Metal Scrap	Shredded Steel	Batteries		Tip Load Full Turn*	
Fill Factor %					120%	120%	120%	115%	120%	110%	115%	115%	110%	120%	115%	110%	110%	115%	105%	110%	110%	105%			
		m^3	yd^3	Counter-weight	kg/m^3 lb/yd^3	350 (590)	425 (716)	500 (843)	575 (969)	650 (1,095)	725 (1,222)	800 (1,348)	875 (1,474)	950 (1,601)	1025 (1,727)	1100 (1,854)	kg	lb
926M	Pin On	3.1	(4.1)	Log/Agg	Not Available													
				Heavy								115%	110%	105%	100%			
		4.1	(5.4)	Log/Agg	Not Available													
				Heavy					115%	110%	105%	100%						
		5.0	(6.5)	Log/Agg	Not Available													
				Heavy				115%	110%	105%	100%							
	Fusion	3.1	(4.1)	Log/Agg	Not Available													
				Heavy								115%	110%	105%	100%			
		4.1	(5.4)	Log/Agg	Not Available													
				Heavy					115%	110%	105%	100%						
		5.0	(6.5)	Log/Agg	Not Available													
				Heavy				115%	110%	105%	100%							
926M																	kg	lb
	Pin On	3.1	(4.1)	Log/Agg	Not Available													
				Heavy								115%	110%	105%	100%		5931	(13,076)
		4.1	(5.4)	Log/Agg	Not Available													
				Heavy					115%	110%	105%	100%					5601	(12,347)
		5.0	(6.5)	Log/Agg	Not Available													
				Heavy				115%	110%	105%	100%						5547	(12,229)
	Fusion	3.1	(4.1)	Log/Agg	Not Available													
				Heavy								115%	110%	105%	100%		5614	(12,376)
		4.1	(5.4)	Log/Agg	Not Available													
				Heavy					115%	110%	105%	100%					5261	(11,599)
		5.0	(6.5)	Log/Agg	Not Available													
				Heavy				115%	110%	105%	100%						5209	(11,484)
930M																	kg	lb
	Pin On	3.1	(4.1)	Log/Agg	Not Available													
				Heavy								115%	110%	105%	100%		6378	(14,060)
				Standard								115%	110%	105%	100%		5990	(13,206)
		4.1	(5.4)	Log/Agg	Not Available													
				Heavy						115%	110%	105%	100%				6052	(13,342)
				Standard					115%	110%	105%	100%					5671	(12,501)
		5.0	(6.5)	Log/Agg	Not Available													
				Heavy					115%	110%	105%	100%					6003	(13,234)
				Standard				115%	110%	105%	100%						5621	(12,392)
	Fusion	3.1	(4.1)	Log/Agg	Not Available													
				Heavy								115%	110%	105%	100%		6056	(13,351)
		4.1	(5.4)	Log/Agg	Not Available													
				Heavy						115%	110%	105%	100%				5708	(12,584)
		5.0	(6.5)	Log/Agg	Not Available													
				Heavy					115%	110%	105%	100%					5660	(12,478)
938M																	kg	lb
	Pin On	3.5	(4.6)	Log/Agg	Not Available													
				Heavy	Not Available													
				Standard									115%	110%	105%	100%	7433	(16,387)
		4.1	(5.4)	Log/Agg	Not Available													
				Heavy	Not Available													
				Standard							115%	110%	105%	100%			7203	(15,879)
		5.0	(6.5)	Log/Agg	Not Available													
				Heavy	Not Available													
				Standard						115%	110%	105%	100%				7185	(15,839)
	Fusion	3.5	(4.6)	Heavy	Not Available													
				Standard								115%	110%	105%	100%		7008	(15,449)
		4.1	(5.4)	Heavy	Not Available													
				Standard							115%	110%	105%	100%			6795	(14,981)
		5.0	(6.5)	Heavy	Not Available													
				Standard						115%	110%	105%	100%				6749	(14,878)

Operating Specifications with Fusion Construction Forks



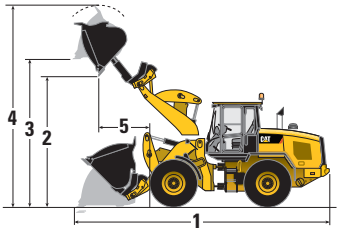
	Standard Lift						High Lift					
	926M		930M		938M		926M HL		930M HL		938M HL	
	mm	ft/in	mm	ft/in	mm	ft/in	mm	ft/in	mm	ft/in	mm	ft/in
1 Fork Tine Length	1524	5'0"	1524	5'0"	1524	5'0"	1524	5'0"	1524	5'0"	1524	5'0"
2 Load Center	762	2'6"	762	2'6"	762	2'6"	762	2'6"	762	2'6"	762	2'6"
3 Length: Overall	8269	27'1"	8276	27'1"	8338	27'4"	8914	29'2"	9073	29'9"	9082	29'9"
4 Reach: Ground	994	3'3"	994	3'3"	1031	3'4"	1639	5'4"	1791	5'10"	1775	5'9"
5 Dig Depth	85	3.4"	85	3.4"	84	3.3"	–120	–4.7"	–120	–4.7"	–118	–4.7"
6 Reach: Level Arm	1605	5'3"	1605	5'3"	1654	5'5"	2128	6'11"	2258	7'4"	2261	7'5"
7 Reach: Full Lift	803	2'7"	803	2'7"	851	2'9"	1040	3'4"	1124	3'8"	1117	3'7"
8 Clearance: Level Arm	1764	5'9"	1764	5'9"	1801	5'10"	1764	5'9"	1764	5'9"	1801	5'10"
9 Clearance: Full Lift	3665	12'0"	3665	12'0"	3728	12'2"	4158	13'7"	4258	13'11"	4309	14'1"
10 Height: Overall	4970	16'3"	4970	16'3"	5033	16'6"	5463	17'11"	5563	18'3"	0	0'0"
	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
Tipping Load – Straight: ISO 14397-1*	6392	14,088	7262	16,006	8759	19,305	5150	11,351	5606	12,356	6593	14,530
Tipping Load – Full Turn: ISO 14397-1*	5469	12,053	6187	13,636	7447	16,412	4366	9,622	4725	10,413	5559	12,251
Operating Weight	13 813	30,444	14 726	32,455	17 002	37,472	14 092	31,057	14 958	32,966	16 900	37,247
Rated Load (% of Full Turn Tip):												
50% of tip: SAE J1197**	2734	6,026	3094	6,818	3723	8,206	2183	4,811	2363	5,206	2779	6,125
60% of tip: Rough Terrain EN474-3**	3281	7,231	3712	8,182	4468	9,847	2620	5,773	2835	6,248	3335	7,351
80% of tip: Firm and level EN474-3**	4375	9,642	4950	10,909	5957	13,129	3493	7,697	3780	8,331	4447	9,801

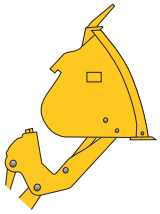
*Full compliance to ISO 14397-1 (2007) Section 1 thru 6, which requires 2% verification between calculation and testing.

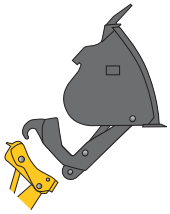
**Full compliance to EN474-3 and SAEJ1197.

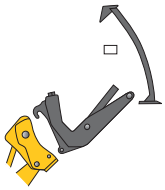
Note: Dimensions listed are for a machine configured with, optional counterweights, waste guarding, 80 kg (176 lb) operator, and Michelin 20.5 R25 (L-5) XMINE D2 tires.

Operating Specifications with High Dump Buckets









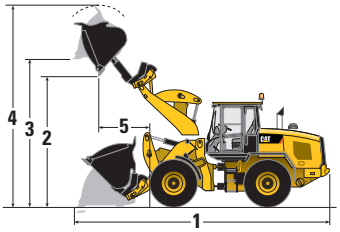
926M Standard Lift		Pin On		Fusion		ISO 23727	
Rated Capacity	m^3	3.0	4.1	3.0	4.1	3.0	4.1
	yd^3	4	5.4	3.9	5.4	3.9	5.4
Bucket Width	mm	2528	3032	2528	3032	2528	3032
	ft/in	8'3"	9'11"	8'3"	9'11"	8'3"	9'11"
Nominal Material Density	kg/m^3	936	641	931	618	864	584
120% Fill Factor	lb/yd^3	1561	1073	1578	1034	1465	978
1 Length: Overall	mm	7878	7955	7884	8027	8147	8225
	ft/in	25'10"	26'1"	25'10"	26'4"	26'8"	26'11"
2 Dump Clearance: Full Lift Rolled Out	mm	4287	4228	4310	4309	4434	4501
	ft/in	14'0"	13'10"	14'1"	14'1"	14'6"	14'9"
3 Clearance: Level bucket	mm	4627	4612	4641	4682	4786	4869
	ft/in	15'2"	15'1"	15'2"	15'4"	15'8"	15'11"
4 Height: Overall	mm	6290	6333	6303	6403	6448	6570
	ft/in	20'7"	20'9"	20'8"	21'0"	21'1"	21'6"
5 Reach: Full Lift Rolled Out	mm	1404	1433	1399	1468	1591	1572
	ft/in	4'7"	4'8"	4'7"	4'9"	5'2"	5'1"
Tipping Load – Straight ISO 14397-1*	kg	8014	7502	7925	7268	7373	6884
	lb	17,662	16,535	17,465	16,018	16,250	15,172
Tipping Load – Full Turn ISO 14397-1*	kg	6801	6308	6701	6082	6223	5750
	lb	14,989	13,901	14,769	13,405	13,715	12,673
Breakout Force	kg	6526	5999	6704	5854	5485	5007
	lb	14,382	13,221	14,776	12,901	12,089	11,036
Operating Weight	kg	14 250	14 679	14 554	14 974	14 513	14 932
	lb	31,407	32,352	32,076	33,001	31,986	32,910
926M High Lift		**Pin On**		**Fusion**		**ISO 23727**	
Rated Capacity	m^3	3.0	4.1	3.0	4.1	3.0	4.1
	yd^3	4	5.4	3.9	5.4	3.9	5.4
Bucket Width	mm	2528	3032	2528	3032	2528	3032
	ft/in	8'3"	9'11"	8'3"	9'11"	8'3"	9'11"
Nominal Material Density	kg/m^3	696	467	682	443	639	422
120% Fill Factor	lb/yd^3	1162	781	1156	742	1083	706
1 Length: Overall	mm	8530	8605	8533	8673	8797	8872
	ft/in	27'11"	28'2"	27'11"	28'5"	28'10"	29'1"
2 Dump Clearance: Full Lift Rolled Out	mm	4727	4666	4750	4746	4865	4932
	ft/in	15'6"	15'3"	15'7"	15'6"	15'11"	16'2"
3 Clearance: Level Bucket	mm	5077	5062	5092	5132	5225	5313
	ft/in	16'7"	16'7"	16'8"	16'10"	17'1"	17'5"
4 Height: Overall	mm	6740	6783	6754	6852	6888	7014
	ft/in	22'1"	22'3"	22'1"	22'5"	22'7"	23'0"
5 Reach: Full Lift Rolled Out	mm	1656	1682	1652	1721	1850	1834
	ft/in	5'5"	5'6"	5'5"	5'7"	6'0"	6'0"
Tipping Load – Straight ISO 14397-1*	kg	6037	5555	5892	5317	5535	5070
	lb	13,306	12,242	12,986	11,719	12,199	11,173
Tipping Load – Full Turn ISO 14397-1*	kg	5060	4592	4909	4363	4601	4150
	lb	11,151	10,120	10,819	9,615	10,141	9,146
Breakout Force	kg	6147	5634	6339	5520	5185	4719
	lb	13,548	12,418	13,971	12,167	11,426	10,400
Operating Weight	kg	14 529	14 957	14 832	15 252	14 791	15 210
	lb	32,021	32,965	32,690	33,615	32,600	33,523

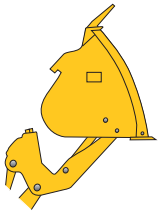
*Full compliance to ISO 14397-1 (2007) Section 1 thru 6, which requires 2% verification between calculation and testing.

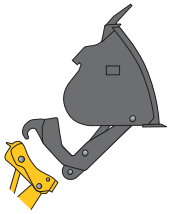
Note: Dimensions listed are for a machine configured with, optional counterweights, waste guarding, 80 kg (176 lb) operator, and Michelin 20.5 R25 (L-5) XMINE D2 tires.

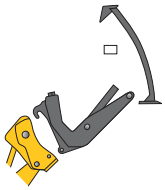
High Dump Buckets

Operating Specifications with High Dump Buckets







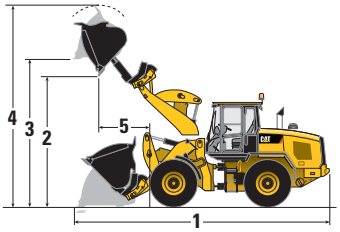


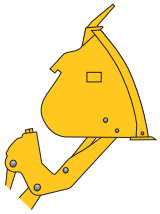
930M Standard Lift		Pin On		Fusion		ISO 23727	
Rated Capacity	m^3	3.5	5.0	3.5	5.0	3.5	5.0
	yd^3	4.6	6.5	4.6	6.5	4.6	6.5
Bucket Width	mm	2728	3032	2728	3032	2728	3032
	ft/in	8'11"	9'11"	8'11"	9'11"	8'11"	9'11"
Nominal Material Density	kg/m^3	914	585	886	573	840	543
120% Fill Factor	lb/yd^3	1533	992	1485	971	1409	920
1 Length: Overall	mm	7885	8082	7957	8154	8154	8352
	ft/in	25'10"	26'6"	26'1"	26'9"	26'9"	27'4"
2 Dump Clearance: Full Lift Rolled Out	mm	4287	4134	4367	4218	4558	4411
	ft/in	14'0"	13'6"	14'3"	13'10"	14'11"	14'5"
3 Clearance: Level bucket	mm	4627	4467	4644	4682	4884	4869
	ft/in	15'2"	14'7"	15'2"	15'4"	16'0"	15'11"
4 Height: Overall	mm	6333	6330	6350	6545	6590	6732
	ft/in	20'9"	20'9"	20'9"	21'5"	21'7"	22'1"
5 Reach: Full Lift Rolled Out	mm	1404	1507	1436	1547	1539	1652
	ft/in	4'7"	4'11"	4'8"	5'0"	5'0"	5'5"
Tipping Load – Straight ISO 14397-1*	kg	9091	8394	8842	8246	8400	7827
	lb	20,037	18,501	19,486	18,173	18,513	17,249
Tipping Load – Full Turn ISO 14397-1*	kg	7679	7025	7440	6872	7059	6511
	lb	16,923	15,482	16,396	15,146	15,557	14,350
Breakout Force	kg	8540	7313	8347	7164	7239	6232
	lb	18,822	16,118	18,395	15,788	15,954	13,735
Operating Weight	kg	15 254	15 694	15 555	15 985	15 514	15 944
	lb	33,619	34,588	34,283	35,231	34,193	35,140
930M High Lift		**Pin On**		**Fusion**		**ISO 23727**	
Rated Capacity	m^3	3.5	5.0	3.5	5.0	3.5	5.0
	yd^3	4.6	6.5	4.6	6.5	4.6	6.5
Bucket Width	mm	2728	3032	2728	3032	2728	3032
	ft/in	8'11"	9'11"	8'11"	9'11"	8'11"	9'11"
Nominal Material Density	kg/m^3	646	405	617	390	591	373
120% Fill Factor	lb/yd^3	1083	687	1035	661	992	632
1 Length: Overall	mm	8691	8885	8759	8952	8957	9151
	ft/in	28'6"	29'1"	28'8"	29'4"	29'4"	30'0"
2 Dump Clearance: Full Lift Rolled Out	mm	4856	4700	4935	4783	5124	4974
	ft/in	15'11"	15'5"	16'2"	15'8"	16'9"	16'3"
3 Clearance: Level Bucket	mm	5200	5047	5217	5255	5454	5439
	ft/in	17'0"	16'6"	17'1"	17'2"	17'10"	17'10"
4 Height: Overall	mm	6906	6910	6923	7118	7160	7302
	ft/in	22'7"	22'8"	22'8"	23'4"	23'5"	23'11"
5 Reach: Full Lift Rolled Out	mm	1731	1831	1766	1872	1873	1982
	ft/in	5'8"	6'0"	5'9"	6'1"	6'1"	6'6"
Tipping Load – Straight ISO 14397-1*	kg	6521	5930	6272	5743	6018	5501
	lb	14,371	13,070	13,822	12,656	13,264	12,124
Tipping Load – Full Turn ISO 14397-1*	kg	5425	4864	5184	4676	4968	4470
	lb	11,955	10,720	11,425	10,305	10,949	9,852
Breakout Force	kg	8317	7110	8129	6967	7049	6060
	lb	18,331	15,670	17,915	15,355	15,535	13,355
Operating Weight	kg	15 486	15 926	15 787	16 218	15 746	16 176
	lb	34,130	35,100	34,795	35,743	34,705	35,651

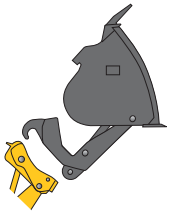
*Full compliance to ISO 14397-1 (2007) Section 1 thru 6, which requires 2% verification between calculation and testing.

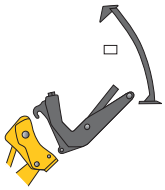
Note: Dimensions listed are for a machine configured with, optional counterweights, waste guarding, 80 kg (176 lb) operator, and Michelin 20.5 R25 (L-5) XMINE D2 tires.

Operating Specifications with High Dump Buckets







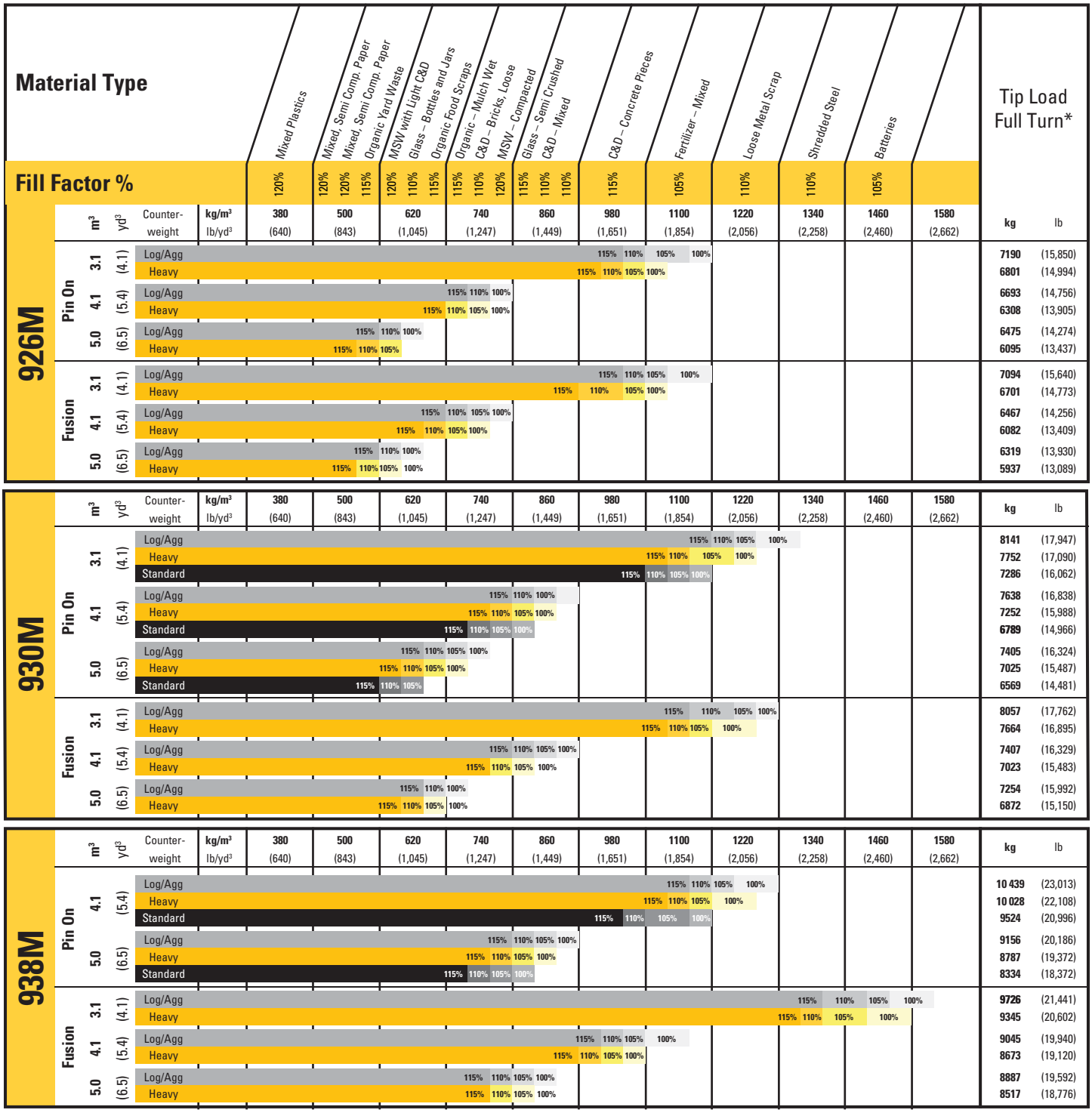


938M Standard Lift		Pin On		Fusion		ISO 23727	
Rated Capacity	m^3	4.1	5.0	4.1	5.0	4.1	5.0
	yd^3	5.4	6.5	5.4	6.5	5.4	6.5
Bucket Width	mm	3030	3032	3032	3032	3032	3032
	ft/in	9'11"	9'11"	9'11"	9'11"	9'11"	9'11"
Nominal Material Density	kg/m^3	1019	732	881	710	845	681
120% Fill Factor	lb/yd^3	1705	1241	1475	1203	1414	1154
1 Length: Overall	mm	8015	8135	8098	8217	8285	8405
	ft/in	26'3"	26'8"	26'6"	26'11"	27'2"	27'6"
2 Dump Clearance: Full Lift Rolled Out	mm	4299	4206	4389	4299	4574	4485
	ft/in	14'1"	13'9"	14'4"	14'1"	15'0"	14'8"
3 Clearance: Level bucket	mm	4682	4682	4760	4760	4939	4939
	ft/in	15'4"	15'4"	15'7"	15'7"	16'2"	16'2"
4 Height: Overall	mm	6402	6545	6481	6623	6640	6802
	ft/in	21'0"	21'5"	21'3"	21'8"	21'9"	22'3"
5 Reach: Full Lift Rolled Out	mm	1468	1543	1509	1588	1605	1685
	ft/in	4'9"	5'0"	4'11"	5'2"	5'3"	5'6"
Tipping Load – Straight ISO 14397-1*	kg	11 907	10 471	10 367	10 199	9941	9787
	lb	26,242	23,078	22,848	22,479	21,909	21,570
Tipping Load – Full Turn ISO 14397-1*	kg	10 028	8787	8673	8517	8312	8168
	lb	22,102	19,367	19,115	18,770	18,319	18,001
Breakout Force	kg	9512	8490	8935	8226	7828	7244
	lb	20,965	18,711	19,693	18,130	17,253	15,965
Operating Weight	kg	17 750	17 849	18 163	18 262	18 063	18 162
	lb	39,120	39,339	40,030	40,249	39,809	40,029
938M High Lift		**Pin On**		**Fusion**		**ISO 23727**	
Rated Capacity	m^3	4.1	5.0	4.1	5.0	4.1	5.0
	yd^3	5.4	6.5	5.4	6.5	5.4	6.5
Bucket Width	mm	3030	3032	3032	3032	3032	3032
	ft/in	9'11"	9'11"	9'11"	9'11"	9'11"	9'11"
Nominal Material Density	kg/m^3	688	501	594	476	575	461
120% Fill Factor	lb/yd^3	1151	850	995	808	963	782
1 Length: Overall	mm	8764	8884	8842	8962	9031	9151
	ft/in	28'9"	29'1"	29'0"	29'4"	29'7"	30'0"
2 Dump Clearance: Full Lift Rolled Out	mm	4846	4750	4934	4841	5116	5025
	ft/in	15'10"	15'7"	16'2"	15'10"	16'9"	16'5"
3 Clearance: Level Bucket	mm	5235	5235	5313	5313	5490	5490
	ft/in	17'2"	17'2"	17'5"	17'5"	18'0"	18'0"
4 Height: Overall	mm	6956	7099	7034	7176	7190	7353
	ft/in	22'9"	23'3"	23'0"	23'6"	23'7"	24'1"
5 Reach: Full Lift Rolled Out	mm	1743	1815	1786	1863	1888	1966
	ft/in	5'8"	5'11"	5'10"	6'1"	6'2"	6'5"
Tipping Load – Straight ISO 14397-1*	kg	8142	7278	7113	6973	6887	6754
	lb	17,944	16,040	15,677	15,368	15,179	14,886
Tipping Load – Full Turn ISO 14397-1*	kg	6767	6018	5849	5717	5662	5536
	lb	14,913	13,263	12,891	12,600	12,479	12,202
Breakout Force	kg	9257	8115	8563	7878	7503	6938
	lb	20,401	17,886	18,872	17,363	16,536	15,290
Operating Weight	kg	17 648	17 747	18 061	18 160	17 961	18 060
	lb	38,895	39,114	39,805	40,024	39,585	39,804

*Full compliance to ISO 14397-1 (2007) Section 1 thru 6, which requires 2% verification between calculation and testing.

Note: Dimensions listed are for a machine configured with, optional counterweights, waste guarding, 80 kg (176 lb) operator, and Michelin 20.5 R25 (L-5) XMINE D2 tires.

Bucket Selection for High Dump Buckets – Standard Lift



Bucket Selection for High Dump Buckets – High Lift

Material Type					Mixed Plastics	Semi Compacted MSW	Mixed, Semi Comp. Paper	Organic Yard Waste	MSW with Light C&D	Glass – Bottles and Jars	Organic Food Scraps	Organic – Mulch Wet	C&D – Bricks, Loose	MSW – Compacted	Glass – Semi Crushed	C&D – Mixed	C&D – Concrete Pieces	Fertilizer – Mixed	Loose Metal Scrap	Shredded Steel	Batteries		Tip Load Full Turn*	
Fill Factor %					120%	120%	120%	115%	120%	110%	115%	115%	110%	120%	115%	110%	110%	115%	105%	110%	110%	105%			
		m^3	yd^3	Counter-weight	kg/m^3	350	425	500	575	650	725	800	875	950	1025	1100									
					lb/yd^3	(590)	(716)	(843)	(969)	(1,095)	(1,222)	(1,348)	(1,474)	(1,601)	(1,727)	(1,854)								kg	lb
926M	Pin On	3.1	(4.1)	Log/Agg							115%	110%	105%	100%										5376	(11,852)
				Heavy							115%	110%	105%	100%										5060	(11,154)
		4.1	(5.4)	Log/Agg				115%	110%	105%	100%													4907	(10,817)
				Heavy				115%	110%	105%	100%													4592	(10,123)
		5.0	(6.5)	Log/Agg			115%	110%	105%	100%														4730	(10,427)
				Heavy			115%	110%	105%	100%														4419	(9,743)
	Fusion	3.1	(4.1)	Log/Agg							115%	110%	105%	100%										5229	(11,527)
				Heavy							115%	110%	105%	100%										4909	(10,822)
		4.1	(5.4)	Log/Agg				115%	110%	105%	100%													4676	(10,309)
				Heavy				115%	110%	105%	100%													4363	(9,617)
		5.0	(6.5)	Log/Agg			115%	110%	105%	100%														4543	(10,016)
				Heavy		115%	110%	105%	100%															4232	(9,329)
930M	Pin On	3.1	(4.1)	Log/Agg	Not Available																				
				Heavy							115%	110%	105%	100%										5502	(12,130)
				Standard							115%	110%	105%	100%										5136	(11,322)
		4.1	(5.4)	Log/Agg	Not Available																				
				Heavy					115%	110%	105%	100%												5035	(11,100)
				Standard				115%	110%	105%	100%													4671	(10,297)
		5.0	(6.5)	Log/Agg	Not Available																				
				Heavy			115%	110%	105%	100%														4864	(10,723)
				Standard		115%	110%	105%	100%															4504	(9,930)
	Fusion	3.1	(4.1)	Log/Agg	Not Available																				
				Heavy							115%	110%	105%	100%										5349	(11,793)
		4.1	(5.4)	Log/Agg	Not Available																				
				Heavy					115%	110%	105%	100%												4803	(10,589)
		5.0	(6.5)	Log/Agg	Not Available																				
				Heavy			115%	110%	105%	100%														4676	(10,308)
938M	Pin On	4.1	(5.4)	Log/Agg	Not Available																				
				Heavy	Not Available																				
				Standard							115%	110%	105%	100%										6767	(14,917)
		5.0	(6.5)	Log/Agg	Not Available																				
				Heavy	Not Available																				
				Standard					115%	110%	105%	100%												6018	(13,267)
	Fusion	3.1	(4.1)	Heavy	Not Available																				
				Standard									115%	110%	105%	100%								6414	(14,140)
		4.1	(5.4)	Heavy	Not Available																				
				Standard						115%	110%	105%	100%											5849	(12,895)
		5.0	(6.5)	Heavy	Not Available																				
				Standard				115%	110%	105%	100%													5717	(12,603)

Optional Equipment

	926M				930M				938M			
	Operating weight		Tipping load – full turn with 3.0 m³ (3.9 yd³) Light Material Fusion bucket		Operating weight		Tipping load – full turn with 3.5 m³ (4.6 yd³) Light Material Fusion bucket		Operating weight		Tipping load – full turn with 4.2 m³ (5.5 yd³) Light Material Fusion bucket	
	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
Change with options removed:												
Counterweight, heavy group*	0	0	0	0	–320	–705	–492	–1,084	–320	–705	–480	–1,057
Guard, crankcase	–11	–23	–13	–28	–11	–23	–13	–29	–11	–24	–14	–30
Guard, power train lower	–77	–170	–66	–145	–77	–170	–67	–147	–68	–150	–59	–130
Guard, driveshaft	–44	–96	–11	–24	–44	–96	–11	–24	–45	–100	–12	–27
Guard, front window	–34	–74	–17	–37	–34	–74	–18	–39	–34	–74	–18	–39
Guard, power train side	–11	–24	–10	–22	–11	–24	–9	–19	–11	–24	–10	–22
Roading fenders	–18	–38	–22	–48	–18	–38	–23	–50	–18	–38	–23	–50
Secondary steer	–69	–151	–70	–154	–69	–151	–72	–158	–69	–151	–71	–156
Ride control	–49	–107	–25	–55	–49	–107	–26	–57	–49	–107	–26	–57
Guard, hitch	–22	–48	–14	–30	–22	–48	–14	–30	–22	–48	–14	–30
Guard, steering cylinder	–15	–33	–10	–22	–15	–33	–10	–22	–18	–39	–12	–26
Change with options added:												
Guard, rear waste gate	NA	NA	NA	NA	+264	+581	+456	+1,005	+284	+625	+478	+1,053
Guard, tilt cylinder	+47	+103	–3	–6	+48	+105	–3	–6	+48	+105	–4	–8

*Not compatible with solid tires.

Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

POWER TRAIN

- Axle seal guards
- Auto idle shut down feature
- Cat C7.1 ACERT engine
  - Power Modes (Standard and Performance)
  - Power by Range (High Power in Range 4)
  - Turbocharged and aftercooled
  - Filtered crankcase breather
  - Diesel particulate filter (Fit for Life)
- Coolant protection to –34° C (–29° F)
- Differential lock in front axle
- Dry type air cleaner
- Enclosed wet disc full hydraulic brakes
- Fuel priming pump, automatic
- Fuel water separator
- Hydraulically driven demand cooling fan
- Intelligent hydrostatic transmission
  - Power train modes
  - Directional shift aggressiveness
  - Rimpull control, adjust wheel torque
  - Creeper control, adjust ground speed
- Lubed for life driveshafts
- Parking brake, electric
- Wide spaced six fins per inch cooling package
- S·O·S℠ sampling ports
- Throttle lock and maximum speed limiter

HYDRAULICS

- Automatic lift, lower and tilt kickouts
- Bucket and Fork Modes, adjustable in-cab
- Cylinder damping at kickout and end stops
- Fine Mode control in Fork Mode
- Hydraulic response setting
- Load sensing hydraulics and steering
- Seat-mounted hydraulic joystick controls

ELECTRICAL

- Alternator, 115-amp, heavy duty
- 12V power supply in cab (2)
- Batteries, 1,000 CCA (2) 24 volt system
- Back-up alarm
- Emergency shutdown switch
- Heavy duty gear reduction starter
- Product Link PRO with trial subscription
- Remote jump start post
- Resettable main and critical function breakers

OPERATOR ENVIRONMENT

- 75 mm (3 in) retractable seat belt, with audible alarm and indicator
- Automatic temperature control
- Binder storage net
- Cab, enclosed and pressurized
- Cup holders
- External heated mirrors with lower parabolic
- Ground level cab door release
- Gauges
  - Digital hour meter, odometer, tachometer, ground speed and direction indicator
  - Engine coolant temperature gauge
  - Fuel and Diesel Exhaust Fluid level
  - Hydraulic oil temperature gauge
- Hydraulic control lockout
- Interior cab lighting, door and dome
- Interior rearview mirrors (2)
- Lunch box storage
- Operator warning system indicators
- Radio ready speakers
- Rear window defrost, electric
- Seat-mounted controls, adjustable
- Sliding glass on the side windows
- Column mounted multi function control – lights, wipers, turn signal
- Suspension seat, fabric
- Tilt and telescopic steering wheel
- Wet arm wiper/washer, front and rear

OTHER STANDARD EQUIPMENT

- Large-access enclosure doors
- Parallel lift loader linkage
- Recovery hitch with pin
- Remote mounted lubrication points
- Lockable compartments and enclosures

EU STANDARD EQUIPMENT

- Cab, deluxe
- Camera, rearview

Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

- Antifreeze/coolant, extended-life
- Auto lube, integrated in touch screen display
- Auxiliary flow, third and fourth function
- Axles, differential, limited slip, rear
- Axles, elevated breathers
- Beacon light, strobe
- Cab, deluxe (standard in Europe):
  - Automatic blower control
  - Electrically adjustable heated mirrors (2)
  - LED interior lighting
  - Touch screen display
- Ride control adjustable speed activation
- Preventative maintenance reminders
- Integrated help function (22 languages available)
- Sunscreen, front and rear
- Camera, rearview (standard in Europe)
- Cat Production Measurement (CPM) – fully integrated scale system, with optional printer that can print up to three copies of the weigh ticket
- Cold start package:
  - Ether starting aid, block heater and additional batteries 1,000 CCA (four in total)
- Coupler, (Fusion and ISO 23727)
- Debris packages
  - Low – standard six fins per inch package
  - Medium – reversing fan and Syklone precleaner
  - High – adds a sealed alternator to medium package
- Fenders (extended cover and full coverage)
- Guards
  - Power train, (lower, side, driveshaft and crankcase)
  - Windshield and lights
  - Cylinders, tilt and steering
- Lights, auxiliary, halogen or LED with engine compartment lights
- Rear Object Detection
- Radio packages:
  - Radio ready with Bluetooth
  - Radio, AM/FM with Bluetooth and clock
  - Radio, AM/FM with CD player deluxe, weatherband, Bluetooth and clock
- Seats:
  - Deluxe seat – fully adjustable fabric air suspension seat with high seat backrest
  - Premium seat – fully adjustable leather and fabric air suspension with high backrest and air lumbar support. Heated and cooled bottom cushion and backrest.
- Steering:
  - Dual mode and Secondary
- Tires:
  - Bias ply, 17.5, 20.5-25
  - Radial, 17.5, 20.5, 23.5, 550/65, 600/65, 650/65 R25
- Tire Pressure Monitoring (TPM) – fully integrated system with high and low pressure alerts
- Toolbox – 0.03 m^3 (1.2 ft^3) of undercab storage
- Work tools

Notes

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at **www.cat.com**

AEHQ7877-01 (04-2017)
Replaces AEHQ7877

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

Strategic Decision Report

Engineering Services

11.3 (12/19) Quilpie Sewage Treatment Plan Process and Capacity Review

IX: 188531

Author: Director of Engineering Services, Mr Peter See

PURPOSE:

This report is to provide Council with a briefing as to the results of a process and capability review of the Quilpie Sewage Treatment Plant.

POLICY/LEGISLATION:

Local Government Act 2009

Environmental Protection Act 1994

CORPORATE PLAN:

4.1.10 Plan for the replacement of the Quilpie Sewerage Treatment Plant.

RECOMMENDATION:

That Council receive the report and that Council begin methodically monitoring the inflow volumes and the pH of the sewage entering the plant.

BACKGROUND:

By letter of 12 March 2019, the Department of Environment and Science notified Council that they are investigating the operation of the Quilpie Sewage Treatment Plant (STP) in relation to the following Environmental Authority requirements:

- The pH of the released contaminants to waters must be 6.5 to 8.5; and
- The total quantity of contaminants released from the facility during any dry weather day must not exceed 700 cubic metres and during a wet weather day must not exceed 3500 cubic metres. Council has been requested to provide details of the total peak design capacity of the STP.

DISCUSSION:

Council commissioned MJM Environmental Pty Ltd to carry out an assessment of the Quilpie Sewage Treatment Plant. The assessment was to determine the hydraulic capacity to treat all sewage received. The study found that there is sufficient capacity to cater for the current and anticipated need.

The study also found that the effluent quality (treated water) indicated that the plant has sufficient capacity to service the present needs. It was observed however that faecal coliforms and pH exceed the quality targets. The reports recommends that the target for faecal coliforms be adjusted as it is thought that aquatic life in the final ponds may be contributing to the results.

The pH of the treated wastewater will always be higher due to the drinking water pH of 8.5. The consultant has recommended that the raw sewage (inflow) be monitored by a structured program. Once sufficient data is collected, Council may be able to negotiate a revised standard with the Department of Environment and Science.

A further recommendation is that site specific standard operating procedures be developed to optimize the operation of the plant.

FINANCIAL:

The cost of a flow meter and monitoring of the pH can be borne by the current operating budget.

CONSULTATION:

Water and Sewerage staff were involved in the assessment by the consultant.

ATTACHMENTS:

- Draft Quilpie STP Process and Capacity Review.
- Quilpie STP Process Assessment

Quilpie Shire Council

Quilpie STP Process and Capacity Review

29 October 2019

Office 1, Level 2 • 335 Wharf Road • Newcastle NSW 2300 • Telephone 02 4926 4222 • Facsimile 02 4929 4944 • ABN 21 089 600 019 • ACN 089 600 019

Executive Summary

The Quilpie Sewage Treatment Plant constructed in the 1930's is based on a combination of primary treatment process followed by further lagoon treatment. Treated effluent from the plant is discharged into a drainage channel which flows into Pinkilla Creek.

The plant services a catchment with an equivalent population of approximately 880 EP.

The plant has a hydraulic capacity of approximately 1,100 EP which is influenced by the flow contribution. Based on the assumed flow contribution of 240 L/EP/day the plant has sufficient hydraulic capacity to treat all flows from the catchment. This flow contribution should be verified by measuring the plants flows.

Based on discussions with operations staff the existing plant also has sufficient solids handling capacity to match the existing population. However, the current operation of the plant relies on operator attendance 7 days per week.

The effluent quality observed at the plant supports the position that the plant has sufficient capacity to service the existing catchment. Excursions in effluent quality do occur beyond the current effluent quality targets for both faecal coliforms and pH.

The excursions in faecal coliform limits are most likely a result of aquatic life in and around the final ponds leading to sample contamination. A more suitable approach would be to target a 90th percentile limit of 1000 cfu/100mL.

The pH of the treated effluent is also consistently above the maximum pH range. This is due to the elevated pH of the potable bore water supply therefore the pH of the raw sewage is expected to be above 8.5. This means that the pH of the treated effluent will always be higher than the target limits without implementing pH correction. It is recommended that the elevated pH in the raw sewage is verified through a structured monitoring program. If the monitoring reveals that the pH into the plant is approaching 8.5 then Council should attempt to negotiate a revised limit with the Regulatory Authority (Department of Environment and Heritage Protection).

An options assessment of acid dosing of the STP effluent with sulphuric acid was completed with a budget capital cost estimate of $126,755 excluding GST with an annual operating cost $21,983 excluding GST.

It is recommended that QSC consider developing site specific Standard Operating Procedures (SOPs) and an Operations and Maintenance Manual to ensure that the plant is operated under optimised conditions and plant operators have clear guidance on how to troubleshoot process problems at the plant.

Quilpie Shire Council

Quilpie STP Process and Capacity Review

Draft Report

29 October 2019

MJM Environmental Pty Ltd

ABN 21 089 600 019

Office 1, Level 2

355 Wharf Road

Newcastle, NSW, 2300

Telephone: 02 4926 4222

Facsimile: 02 4929 4944

E-mail: artur@mjmenvironmental.com.au

Document Control						
Revision	Description	Author	Approved for Issue			
			Name	Position	Signature	Date
0	Draft	J. Watts	A. Majerowski	Principal Process Engineer		29/10/2019

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Glossary

Key Term – Acronym	Definition
ADWF	Average Dry Weather Flow is the average total daily flow into a wastewater facility from domestic and industrial sources.
Bacteria	Prokaryotic single celled organisms.
BOD	Biological Oxygen Demand or Biochemical Oxygen Demand is used interchangeably and represents the amount of dissolved oxygen needed by aerobic biological organisms to break down organic material present in a given water sample at certain temperature over a specific time period (usually 5 days BOD_5).
CFU	Colony Forming Unit – a unit of bacteriological enumeration
Ct	Ct is defined as the free chlorine in mg/L multiplied by contact time in minutes.
Drinking water	Water intended primarily for human consumption (but excluding bottled water, for the purposes of this document).
EP	Equivalent Persons is a term used in wastewater treatment to define the total pollution produced during 24 hours by industrial facilities or a sewerage catchment as a ratio to the pollution load in a household produced by one person.
Escherichia coli: (E. coli)	Bacterium found in the gut, used as an indicator of faecal contamination of water.
HRT	The Hydraulic Retention Time is used interchangeably with residence time is the average time a liquid (or a contaminant in the liquid) spends in a tank. When applied to wastewater it is the average time a soluble contaminant spends in a constructed tank.
PDWF	Peak Dry Weather Flow is defined as the most likely peak sewage flow into the plant in a normal dry weather day. It exhibits a normal diurnal profile related to water usage for toilets showers, washing and other household activities. It is typically expressed as a ratio to the ADWF.
PWWF	Peak Wet Weather Flow is the peak total daily flow observed (or predicted) into the plant.
Sewerage	Sewerage is the system, i.e. the network of pipes and pump stations, by which wastewater is collected and drained away from sources to the central location for treatment and disposal.
Sewage	Sewage is the waste matter create by households or industries that is transported through the sewerage system.
STP	Sewage Treatment Plant is the facility that provides treatment of sewage prior to discharge or reuse.
Sludge Age	Used interchangeably with SRT. Represents the average time (expressed in days) sludge is retained in the activated sludge process.
SRT	Sludge Retention Time is the average time (expressed in days) sludge is retained in a wastewater treatment process. This term is used interchangeably with Sludge Age.
SS	Suspended Solids refers to small solid particles which remain in suspension in water as a colloid or due to the motion of the water. It is used as an indication of water quality.

1 Introduction

The Quilpie Sewage Treatment Plant (STP) off Sommerfield Road was first constructed in the 1930's. Sewer flows are pumped from the catchment to the plant from one of two pump stations. A new subdivision has been recently constructed in the Quilpie township area, however there are only 2 houses occupied in this area so the flows from this catchment are at this stage relatively insignificant. Therefore, most of the flow to the plant is delivered from the main pump station (Pump Station No. 6).

The plant is based on primary treatment using an Imhoff Tank followed by a series of sedimentation tanks, coupled with a number of oxidation ponds. The plant has three sludge drying beds with supernatant directed to the first oxidation pond.

Treated effluent flows through the oxidation ponds and overflows via a 100mm outlet pipe to a discharge channel. This channel travels approximately 1300 m and the effluent then discharges into Pinkilla Creek.

A new storage lagoon has been created on the site that is designed to receive effluent pump out from nearby mining camps. Typically, these mining camp treatment units produce high quality effluent that is not discharged to the environment but instead is tankered to the Quilpie STP for storage. Over time the effluent evaporates leaving behind any residual solids. The industrial effluent pond is approximately 3.5 ML. It is not currently being used.

2 Plant Loadings

2.1 Treatment Plant Flow

Flows to the STP are not currently measured. Therefore, to estimate flows the town's population has been used to estimate the anticipated flows to the treatment plant. The following services are connected to the sewerage reticulation network:

- 315 domestic connections
- A 9 bed hospital
- 2 regional schools total student population of 86
- A motel, 2 hotels and a caravan park with an average occupancy equivalent to 44 connections
- A service station with an apron area of 245 m^2.

Based on the census data from 2016 the average occupancy of dwellings is equivalent to 2.2 EP/ET. Therefore, the connected tenements are equivalent to 400 with a connection population of approximately 880 EP.

Anecdotally the flow contribution per EP may be higher than other typical municipal catchments. In Quilpie the potable water is sourced directly from an artesian aquifer. Therefore, in winter periods users run the shower water for a sustained period of time until heated water is received. Coupled with this there is no 'user pays' system in place for the supply of potable water. As a result, water discharge to sewer may be higher than other typical regional areas but pollutant loading is likely to remain consistent.

A sensitivity analysis has been undertaken on the flow contribution per EP to understand the impacts of a higher flow loading on the plant inflows. The projected flows are illustrated on the figure below and would range between 194 kL/day at 220 L/EP/day up to 308 kL/day at 350 L/EP/day.

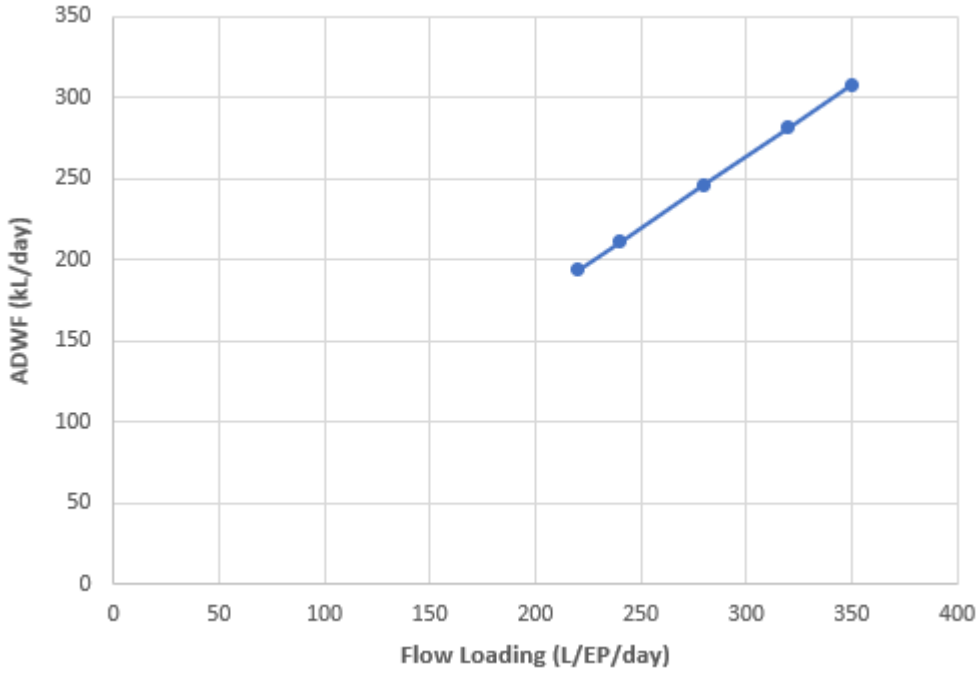


Figure 1: Relationship Between Flow Loading and Expected ADWF to the Quilpie STP.

The catchment is relatively small and it is expected that the flow follows a traditional diurnal flow profile with a sharp morning peak. Small catchments typically experience a high peaking factor and based on experience it is anticipated that the peaking factor would be approaching 2.3 times ADWF. The dry weather hydraulic capacity of the plant has been assessed using this peaking factor.

The climate in the Quilpie Region is characterised by higher temperatures (average annual temperature above 22^{O}C) and low rainfall of less than 400 mm average annual rainfall. This climate result in limited wet weather impacts on the treatment plant. It is anticipated that there are rarely events that would discharge up to 5 times ADWF with wet weather events.

2.2 Treatment Plant Loadings

Limited information is available on the raw sewage characteristics at the Quilpie STP. However, there are no trade waste or industrial discharges in the catchment and therefore the sewage would be consistent with typical municipal sewage loadings. Based on typical municipal sewage characteristics the following loadings have been adopted.

Table 1: Summary of the Pollutant Loadings and Pollutant Concentrations for the Quilpie STP at Different Flow Loadings.

Description	Pollutant Loading	Concentration				
		220 L/EP/day	240 L/EP/day	280 L/EP/day	320 L/EP/day	350 L/EP/day
Biochemical Oxygen Demand (BOD_5)	60 g/EP/day	273 mg/L	250 mg/L	214 mg/L	188 mg/L	171 mg/L
Total Suspended Solids	55 g/EP/day	250 mg/L	229 mg/L	196 mg/L	172 mg/L	157 mg/L
Total Nitrogen	14.4 g/EP/day	65.5 mg/L	60.0 mg/L	51.4 mg/L	45.0 mg/L	41.1 mg/L
Ammonia	0.75 TN	49.1 mg/L	45.0 mg/L	38.6 mg/L	33.8 mg/L	30.9 mg/L
Total Phosphorus	2.4 g/EP/day	10.9 mg/L	10.0 mg/L	8.6 mg/L	7.5 mg/L	6.9 mg/L

These loadings have been used to assess the biological and solids handling capacity of the Quilpie STP.

3 Effluent Quality

3.1 Current Discharge Limits

The discharge of treated effluent from the Quilpie STP is license under Environmental Authority Permit EPPR00904813. The required effluent quality for discharge to the environment via Release Point 1 is summarised below in Table 2.

Table 2: Summary of the Effluent Quality Limits in the Discharge License from the Quilpie STP.

Assessable Pollutant	Units	Release Limit	Limit Type
pH	pH units	6.5 – 8.5	range
Faecal Coliforms	cfu/100mL	1000	maximum

The treated effluent is discharged into a channel. This channel then travels approximately 1300 m where it then discharges into Pinkilla Creek. The monitoring point is at the outlet of the final maturation pond at the back of the Quilpie STP.

3.2 Current Effluent Quality

Effluent quality discharged from the Quilpie STP is monitored irregularly (typically every 3 to 6 months). A summary of the effluent quality results for the period from August 2007 to February 2019 is presented below in Table 3.

Table 3: Summary of the Effluent Quality Discharged from the Quilpie STP.

Assessable Pollutant	Units	Number of Samples	Average	Minimum	Maximum
pH	pH units	34	9.34	8.29	10.20
Total Suspended Solids (TSS)	mg/L	34	94	5	268
Nitrates (NOx)	mg/L	34	0.05	0.01	1.76
Total Nitrogen (TN)	mg/L	34	9.5	1.2	13.6
Total Phosphorus (TP)	mg/L	34	2.4	0.9	3.7
Dissolved Oxygen (DO)	mg/L	34	4.4	0.1	9.9
Biochemical Oxygen Demand (BOD_5)	mg/L	34	25	6	64
Total Dissolved Solids (TDS)	mg/L	16	859	656	1,340
Faecal Coliforms	cfu/100mL	31	600	2	14,000

3.3 Faecal Coliforms

Based on operational data it is clear that from time to time the level of faecal coliforms in the treated effluent being discharged to the environment exceeds the maximum levels included in the discharge license. In most instances the level of coliforms is consistently below 1,000 cfu/100mL, however from time to time there are excursions above this level. This is evident in the chart below which shows occasional spikes in the faecal coliform levels above 1,000 cfu/100mL.

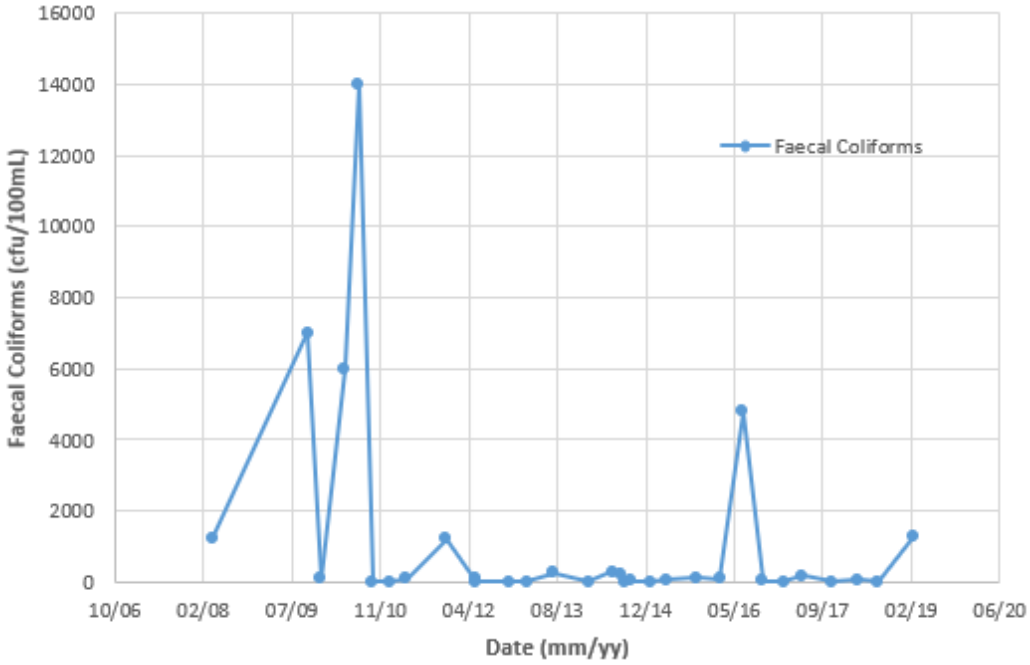


Figure 2: Historic Treated Effluent Faecal Coliform Concentrations for the Quilpie STP.

There is evidence of bird and other aquatic life in and around the maturation ponds so it is reasonable to expect that periodically the samples could be contaminated leading to higher results. With aquatic life in the maturation ponds it is difficult to satisfy a maximum faecal coliform limit as the occurrence of natural contamination will always present a risk.

3.4 pH Limits

The treated effluent pH is consistently outside the limits in the license and this is one of the main issues with the performance of the plant. The pH of the effluent follows a typical annual profile with high pH levels in the warmer summer months and lower pH levels in the winter months as illustrated below in Figure 3.

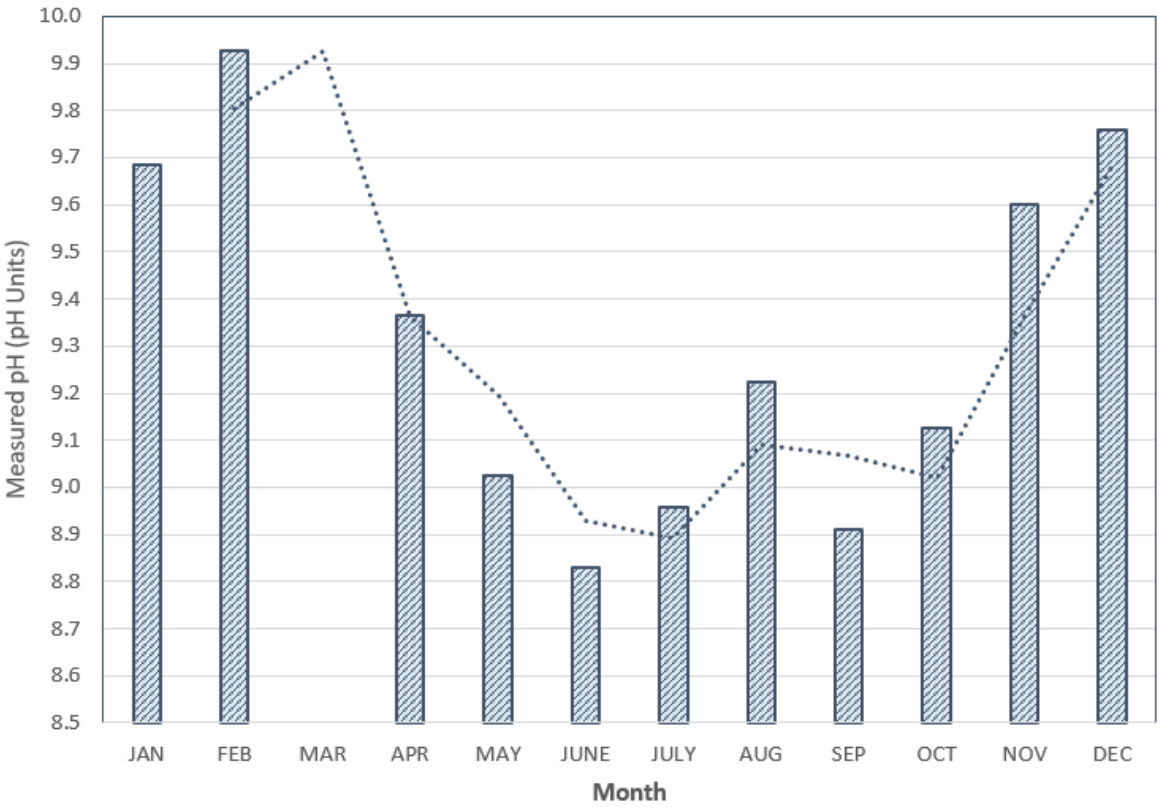


Figure 3: Average Effluent pH in the Discharge from the Ponds at the Quilpie STP.

The primary reason for the pH variations the ponds are due to the presence of algae. Oxidation ponds rely on the presence of algae for the reduction of biological contaminants. When plants or algae are growing rapidly more carbon dioxide is removed each day by photosynthesis than is added each night by respiration. As a result, pH may rise to abnormally high levels during the afternoon and may even remain high through the night. This condition generally persists during the summer periods due to higher temperatures.

Based on experience at other facilities with maturation ponds they also follow a typical annual profile with higher pH levels in the warmer summer months. A review of historic data from plants including Cessnock STP, West Kempsey STP and Longford STP reveal that typical pH increases from 7.2 up to 9.0 in the summer months. Operational data from other similar plants shows that pH levels above 8.5 do not occur for sustained periods of time as experienced at plant.

A review of the potable water pH levels reveals that the drinking water pH typically ranges between a narrow band of 8.3 to 8.6 with an average of 8.5. Potable water is sourced from artesian groundwater bores and supplied directly into the drinking water network. This pH is above typical domestic water supplies and as a result it is expected that the pH into the Quilpie STP is also above typical municipal values.

Based on the elevated pH of the potable water source it is not possible for the Quilpie STP to achieve a treated effluent pH value between 6.5 and 8.5. Under most circumstances the inlet pH to the STP is expected to be above 8.5 before treatment. As the treated effluent moves through the maturation ponds an increase consistent with other wastewater treatment plants in the order of 1.5 to 2.0 pH units is expected to be observed. Therefore, the natural pH range of the treated effluent would be from 8.5 to 10.5.

4 Review of Quilpie Sewage Treatment Plant

4.1 Major Assets

Quilpie STP is based on a primary treatment process followed by a series of oxidation ponds. The flow is screened prior to treatment to protect downstream equipment. A full process flow diagram is attached in Appendix A. The key assets at the Quilpie STP are summarised in the table below.

Table 4: Summary of the Key Assets at the Quilpie STP.

Item	No.	Details
Flow Measurement	1	Parshall Flume, 70 mm throat width (not active)
Screening	4	20 mm manually raked bar screens
Imhoff Tank	1	Octagonally shaped 6tf (1.8 m weir length) surface area approximately 15.5 m^2.
Primary Sedimentation	5	Rectangular primary sedimentation tanks 6m long by 3m long operating in series. (18m2 each) approximately 3.5 m deep with manually operated sludge draw off.
Primary Sludge Pump	1	Southern Cross dry mounted centrifugal pump estimated capacity 3 L/s to 5 L/s.
Drying Beds	3	Approximately 5 m long by 2.5 m wide
Oxidation Ponds	2	Pond 1 – 4.0 ML (estimated based on surface area only) Pond 2 – 4.0 ML
Maturation Ponds	2	Pond 3 – 3.1 ML (estimated based on surface area only) Pond 4 – 3.1 ML
Reuse Pump (not used)	1	Estimated capacity between 10 to 15 L/s
Industrial Effluent Pond	1	Earthen Storage Pond approximately 3.5 ML

An assessment of each major process unit has been undertaken and is presented below.

4.2 Inlet Works

The inlet works at the Quilpie STP consists of a series of manually raked screens and a fume. The flume is not currently active (i.e. no level measurement installed) and has a throat width of 70 mm. This flume is the most significant restriction in the current inlet works and with clean screens would limit the hydraulic capacity of the inlet works.

Table 5: Key Design Attributes and Capacity of the Inlet Works.

Characteristic	Unit	Comment
Channel Width	800mm	Measured on site
Number of Screens	Up to 5	Manually raked/cleaned
Screen Aperture	20 mm	Based on site observations
Flume Throat Width	50mm	Measured on site
Capacity	40 L/s	Peak capacity limited by flume capacity
	2800 EP	Assuming 5 times ADWF from catchment during peak wet weather events

4.3 Imhoff Tank

The Imhoff tank is a chamber that is used to remove settleable solids from raw sewage by settling. The system also provides anaerobic digestion of the settled sludge. It consists of an upper chamber in which the sedimentation takes place. The settled solids slide down inclined bottom slopes into a lower chamber in which the sludge is collected and digested. The lower chamber has external vents or shafts that allow biogas to be vented. Typically, the digestion of solids in the tank requires a minimum of 60 days detention to ensure it is sufficiently stabilised for drying on drying beds.

The Imhoff Tank at the Quilpie STP is an octagonal shape with a surface area of approximately 15.5 m^2. The dry weather hydraulic capacity of the Imhoff tank is limited to a maximum rise rate of 40m/day. During wet weather peaks up to 100 m/day are acceptable however the performance is reduced.

Table 6: Key Design Attributes and Capacity of the Imhoff Tank.

Characteristic	Unit	Comment
Surface Area	15.5 m^2	Based on 6ft side length in octagon shape
Depth	7 m	Depth was assumed based on experience
Maximum Rise Rate	40 m/day	At peak dry weather flow
Hydraulic Capacity	7.2 L/s	Hydraulic capacity under peak dry weather conditions.
	1120 EP	Based on PDWF to ADWF of 2.3 and flow loading of 240 L/EP/day
Digester Volume	63 kL	Estimated based on surface area and assumed depth.
Minimum SRT for anaerobic sludge	60 days	Minimum SRT for stabilisation at average temperature of 22°C
Sludge Digestion Capacity	42 kg/day	Based on primary sludge at 4% solids and VSS/TSS ratio of 0.80
	970 EP	Based on 40 g TSS per EP after 40% VSS destruction

The hydraulic capacity of the Imhoff tank is limited to 1120 EP at 240 L/EP/day. At high flow loadings per EP the capacity of the Imhoff Tank will be reduced. The sludge digestion capacity of the Imhoff Tank is limited to 970 EP, however the volume of the base of the Imhoff Tank has not been accurately determined so the sludge handling capacity of this system is likely to be an underestimate and it is more likely to be similar to the hydraulic capacity of the order 1100 EP. It should be noted that the sludge handling capacity is not influenced by the flow loading so at higher flow loadings (i.e. up to 350 L/EP/day) the sludge handling capacity would remain unchanged.

4.4 Primary Sedimentation

The objective of primary sedimentation (also known as primary treatment) is the removal of settleable organic solids and floating organic material in order to reduce the suspended solids load. The performance of the primary sedimentation tanks varies with both overflow rate and detention time. The process can achieve up to 70% removal of TSS and up to 45 % removal of BOD under ideal conditions.

The settled primary sludge solids, which are highly putrescible, must be continuously removed from the bottom of the sedimentation tank and stabilized, usually by anaerobic digestion. At the Quilpie STP the sedimentation process removes particulate matter from the raw sewage stream that is not captured by the Imhoff Tank. The sludge is withdrawn from the base of the sedimentation tanks and is returned to the Imhoff Tank for anerobic stabilisation.

Typical design criteria for the primary sedimentation process is a maximum dry weather overflow rate of 40 m/day and a minimum HRT of no less than 2.5 hours.

Table 7: Key Design Attributes and Capacity of the Imhoff Tank.

Characteristic	Unit	Comment
Surface Area (per Unit) Total Surface Area (5 tanks)	18 m^2 90 m^2	Based on 20ft side length and 10 ft width
Depth	3.5 m	Depth was estimated from photographs of empty structure
Maximum Rise Rate	40 m/day	At peak dry weather flow
Minimum HRT Required	2.5 hours	At peak dry weather flow
Hydraulic Capacity	8.3 L/s (overflow) 7.0 L/s (HRT)	Hydraulic capacity under peak dry weather flow conditions
	1300 EP (overflow rate) 1100 EP (HRT)	Based on PDWF to ADWF of 2.3 and flow loading of 240 L/EP/day

The hydraulic capacity of the primary sedimentation tanks is limited to 1100 EP based on the minimum HRT at peak dry weather flow. The hydraulic capacity would reduce as the flow loading per EP increases. This HRT is relatively conservative given there are 5 sedimentation tanks configured in series.

This process removes the particulate material but needs to be coupled with another purification process to remove soluble impurities. In this case the downstream oxidation ponds provide removal of the soluble biodegradable organics.

4.5 Oxidation Ponds

Oxidation ponds which are also called lagoons or stabilization ponds are large shallow ponds designed to treat wastewater through the interaction of sunlight, bacteria, and algae. Algae grow using energy from the sun and carbon dioxide and inorganic compounds released by bacteria in water.

Oxidation ponds involve natural treatment processes which takes time because removal rates are slow. In most ponds both bacteria and algae are needed in order to maximize the decomposition of organic matter and the removal of other pollutants. Algae produce oxygen (photosynthesis) and also consume oxygen (respiration), but they leave an excess of oxygen that can then be used by aerobic bacteria for respiration and for the processes of oxidation of the organic matter in the wastewater.

The sludge comprising the sediment layer in the pond undergoes anaerobic digestion and may accumulate for several years without needing removal.

Table 8: Key Design Attributes and Capacity of the Oxidation Ponds.

Characteristic	Unit	Comment
Surface Area (per pond) Total Surface Area (2 ponds)	3800 m^2 7600 m^2	Based on aerial measurements
Average Depth	1.2 m	Based on estimates from the operation staff
Volume (each)	4.0 ML	Estimated volume of each pond
Minimum HRT Required	20 days	Total preferred HRT with all ponds online
Hydraulic Capacity	4.6 L/s	At average dry weather flow
	1650 EP	ADWF at flow loading of 240 L/EP/day
Biological Loading	200 g BOD/Ha/day	Maximum loading rate of oxidation pond at average temperature of 22 °C
Biological Capacity	4000 EP	Based on 60 g BOD/EP/day

4.6 Maturation Ponds

Some additional removal of organic matter and other pollutants is achieved in the maturation ponds. These ponds are included in the treatment process to achieve higher level of pathogen removal. They are usually used after secondary treatment processes to polish the effluent.

Maturation ponds must be shallow (around 1.0 m depth or less) with a great surface area so that more oxygen can dissolve into the water giving the bacteria enough oxygen to properly function. Shallow ponds benefit from high photosynthetic activity arising from the penetration of solar radiation. The pH values are high because of intense photosynthesis, and ultraviolet radiation penetration takes place in the upper layers. Both of these factors promote the removal of pathogenic bacteria and viruses. Given the high surface area of the maturation ponds, protozoan cysts and helminth eggs are also removed with sedimentation as the main mechanism.

Sludge accumulation is very low in maturation ponds and they seldom need to be cleaned. However, from time to time due to long periods of gentle wave action the banks need to be restabilised.

Very high pathogen removal efficiencies may be achieved, depending on several factors including temperature, hydraulic retention time, the number of ponds in the series, the presence of baffles and the depth of ponds.

Table 9: Key Design Attributes and Capacity of the Maturation Ponds.

Characteristic	Unit	Comment
Surface Area (per pond) Total Surface Area (2 ponds)	3300 m^2 6600 m^2	Based on aerial measurements
Average Depth	1.2 m	Based on estimates from the operation staff
Volume (each)	3.1 ML	Estimated volume of each pond
Minimum HRT Required	20 days	Total preferred HRT with all ponds online
Hydraulic Capacity	3.6 L/s	At average dry weather flow
	1300 EP	ADWF at flow loading of 240 L/EP/day

4.7 Sludge Drying Beds

Sludge drying beds are used for drying and stabilising wastewater sludge. Water is removed from the sludge drying beds by evaporation. The sludge must be adequately stabilised prior to discharge to the drying beds to avoid nuisance odours. The sludge drying bed has a base of sand with an underlying network of pipes (usually PVC) to allow free water (supernatant) to drain from the bed. The supernatant is generally collected and retuned back to the process for subsequent treatment. At Quilpie STP the supernatant is sent to the downstream oxidation ponds for treatment to prevent pumping back to the head of the works.

The sludge is placed on the bed in layers approximately 200 to 300 mm deep and allowed to drain and dry. Sludge cake (dried sludge) is them removed manually by shovelling into wheel-barrows and disposed of on site. The drying period is 10–15 days and the moisture content of the resulting cake is generally in the order of 60 – 70% solids by weight. The sludge loading rate is 100–300 kg dry solids/ m^2/year for uncovered beds.

Table 10: Key Design Attributes and Capacity of the Sludge Drying Beds.

Characteristic	Unit	Comment
Surface Area (per bed) Total Surface Area (3 beds)	12.5 m^2 37.5 m^2	Based on direct measurement
Solids Drying Capacity	30.8 kg/day	Based on 300 kg/m^2/year
	770 EP	Based on 40 g TSS per EP after 40% VSS destruction

There are a large number of variables that influence the capacity of the sludge drying beds. If the concentration of sludge in the Imhoff Tank can be sustained above 4% solids, then the capacity of the sludge drying beds may be higher, up to 950 EP capacity but the sludge would need to be removed routinely every 2 weeks to achieve this capacity. Further monitoring of the sludge concentration achieved from the Imhoff Tank can be undertaken to refine this capacity. It may also mean that sludge may be taken off the beds whilst still moist.

4.8 Operational Systems and Documentation

At the time of the plant review there was limited operational data for the plant. It is recommended that QSC consider developing site specific Standard Operating Procedures (SOPs) and an Operations and Maintenance Manual to ensure that the plant is operated under optimised conditions and plant operators have clear guidance on how to troubleshoot process problems at the plant.

4.9 Summary of Plant Capacity

At a flow loading of 240 L/EP/day the plant has a capacity of approximately 1,100 EP. The capacity of the plant at a fowl loading of 240 L/EP/day is summarised below in Table 11.

Table 11: Summary of the Individual Plant Process Units at 240 L/EP/day.

Process Unit	Capacity	Comment
Inlet Works	2,880 EP	Assuming 5 times ADFWF from catchment
Imhoff Tank	1,130 EP	-
Sedimentation Tanks	1,100 EP	-
Oxidation Ponds	1,650 EP	-
Maturation Ponds	1,300 EP	-
Digestion	950 EP	Based on assumed pollutant loading of 60 g BDO/EP/day.
Sludge Drying Beds	770 to 950 EP	Depends heavily on sludge thickness and frequency of cake removal.

The hydraulic capacity of the plant is affected by the flow loading contributed by an EP. An assessment of the hydraulic capacity of the plant has also been determined at each of the alternate flow loading scenarios. This has been illustrated in Figure 4 below.

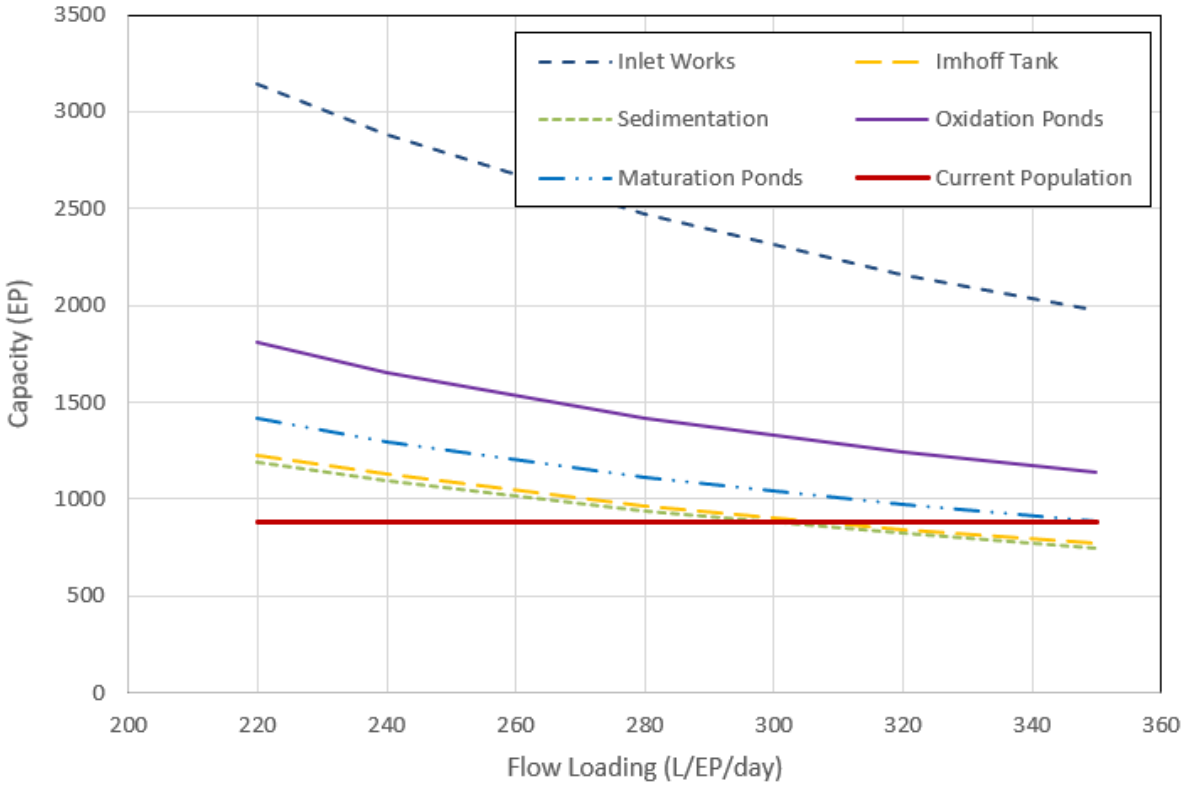


Figure 4: Hydraulic Capacity of Individual Process Units at Different Flow Loadings

Figure 4 shows that if the flow loading increases to above 300 L/EP/day then the hydraulic capacity of the Imhoff Tank and Sedimentation Tanks will approach their hydraulic capacity limit. However, this capacity limit is also based on an assumed diurnal peak of 2.3 times ADWF which is conservative. As the flow loading increases then above 300 L/EP/day the diurnal peaking factor is also anticipated to be lower. Therefore, it is envisaged that the Imhoff Tank and Sedimentation Tanks will perform at acceptable levels up to a flow loading approaching 330 L/EP/day.

At this stage Quilpie STP has sufficient hydraulic capacity for the connected population which was estimated to be 880 EP.

As the plant is manned 7 days per week the sludge drying beds are most likely operated at the upper end of their capacity limit to match the current population load. Therefore, based on this manning the existing plant has sufficient solids handling capacity to match the existing connected population.

5 Assessment of pH Correction Options

The issue relating to elevated pH in the treated effluent is due to initially higher groundwater pH followed algal activity in the maturation ponds which further increases the effluent pH.

The short-list of options to address the elevated effluent pH issues includes the following:

- Negotiate a revised limit with the Regulatory Authority (Department of Environment and Heritage Protection);
- Provide treated effluent pH control using an acid dosing system.
- Provide bore water pH control using an acid dosing system.

The option to negotiate a revised limit with the regulatory authority is technically feasible in particular if council consider the option to reinstate effluent reuse. It is recommended that council undertake the negotiations with the regulatory authority before any consideration is given to the provision of pH correction at the STP.

The option to provide an acid dosing at the STP would include the following process units and equipment:

- Chemical concrete unloading and transfer bund;
- Storage tank;
- Chemical dosing skid consisting of duty/standby dosing pumps with a dosing range of 25-250 mg/L of as supplied acid and proportional dosing of acid based on flow;
- Chemical dosing pipework and dosing point;
- Flow measurement;
- Local control panel (LCP);
- Chemical storage shed.

The recommended acid type for pH correction is hydrochloric acid or sulphuric acid with both acids being Class 8 dangerous goods.

The acid would be delivered in IBC's and transferred to the storage tank.

Liquid acid would be dosed using corrosion resistant dosing pumps and dosing lines. A calibration tube would be provided to calibrate the acid dosing pumps and verify chemical dose rates.

The acid would be dosed into the treated effluent prior to entering the discharge channel. In order to achieve optimum performance a flow signal from the channel would provide the capability for proportional dosing under all flow conditions. A v-notch weir or similar flow measuring device would provide feedback to allow the flow paced dosing to occur.

A preliminary budget capital and operating cost estimate for an acid dosing system to treat effluent is presented in Table 12.

Table 12: Summary of the Acid Dosing System Capital and Operating Costs

Process Unit/Item	Cost (Ex GST)
CAPITAL COST ESTIMATE	
Concrete Chemical Unloading Bund	$25,000
Chemical Storage Tank, Chemical Dosing Skid, Dosing Pipework	$30,000
Flow Measurement	$5,000
Shed and Bunding to House Storage Tank and Dosing Skid	$15,000
Site Service including Power and Service Water	$5,500
Commissioning	$3,500
Site Establishment, Design, Project Management and 20% Contingency	$42,755
TOTAL CAPITAL COST (Ex GST)	**$126,755**
ANNUAL OPERATING COSTS	
Sulphuric Acid including Delivery to Quilpie of 1000L IBC's	$14,116
Labour including time to transfer acid from IBC to storage tank (0.25 hours per day @ $45/h)	$4,106
Power	$1,226
Annual Maintenance Cost (Assumed 2% of Capital Cost)	$2,535
TOTAL OPERATING COST (Ex GST)	**$21,983**

The option to correct bore water pH would provide the benefit of controlling effluent pH whilst also achieving improved pH control in the potable water. The process equipment required for the acid dosing would be the same as for the effluent pH acid dosing system. In order to justify this option further pH monitoring of drinking water and effluent pH is required to verify that the process will work under all operating scenarios throughout the year.

A preliminary budget cost estimate for an acid dosing system to treat a single bore would be similar to the effluent pH correction dosing system with a budget capital cost estimate of $126,755 excluding GST and approximately similar operating cost of $21,983 excluding GST.

It is recommended that QSC negotiate a revised limit with the Regulatory Authority (Department of Environment and Heritage Protection) prior to considering the option of providing pH control using an acid dosing system for either STP effluent or the potable water.

6 Conclusion & Recommendations

The existing plant has both sufficient hydraulic capacity and solids handling capacity to treat the current loads from the connected catchment. However, this depends on the flow loading to the plant which should be verified by measurement. As a minimum it is recommended that flow measurement is installed to measure flow to the plant. This may involve installing a level measuring device on the existing inlet works flume or installing an electromagnetic flow meter on the primary rising main into the plant.

The rated capacity of the existing plant is in the order of 770 to 950 EP with the capacity of the plant being limited by the solids handing capacity of the sludge drying beds and the digestion capacity of the Imhoff Tank.

The review of the plant identified that under some cases, during the cooler months, if unusually high rainfall events are experienced the capacity of the sludge drying beds may be limited. The operations staff should continue to monitor when the sludge being removed from the drying beds is moist and this should be used as a trigger point to initiate the construction of a new dry bed cell.

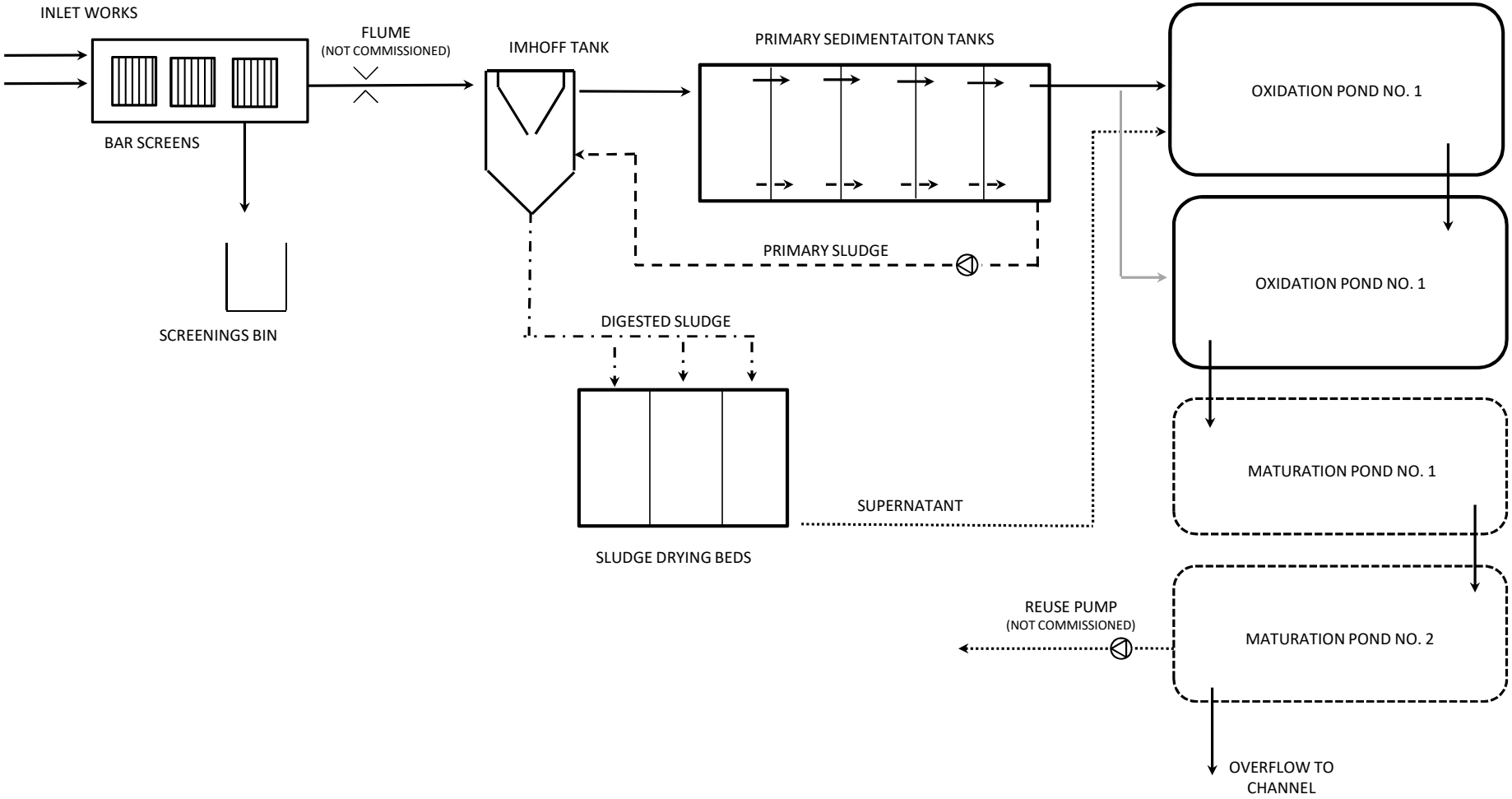
Based on a review of the current effluent quality the plant is not satisfying the environmental discharge limits. Without further disinfection there is no guarantee that with aquatic life in the ponds that a maximum limit of 1000 cfu /100 mL can be achieved at all times. A more suitable approach would be to target a 90th percentile limit of 1000 cfu/100mL.

The pH of the treated effluent is also consistently above the maximum pH range. This is due to the elevated pH of the potable bore water supply therefore the pH of the raw sewage is expected to be above 8.5. This means that the pH of the treated effluent will always be higher than the target limits without implementing pH correction. It is recommended that the elevated pH in the raw sewage is verified through a structured monitoring program. If the monitoring reveals that the pH into the plant is approaching 8.5 then Council should attempt to negotiate a revised limit with the Regulatory Authority (Department of Environment and Heritage Protection).

An options assessment of acid dosing of effluent with sulphuric acid determined a budget capital cost estimate of $126,755 excluding GST with an annual operating cost $21,983 excluding GST.

It is recommended that QSC consider developing site specific Standard Operating Procedures (SOPs) and an Operations and Maintenance Manual to ensure that the plant is operated under optimised conditions and plant operators have clear guidance on how to troubleshoot process problems at the plant.

Appendix A – Process Flow Diagram



NOT TO SCALE

No.			
A			Capacity review purposes only

OPERATED BY: QUILPIE Shire

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDACNE WITH THE MJM ENVIRONMENTAL QUALITY ASSURANCE SYSTEM TO ISO9001-2004

DESIGNED		CHECKED	
DRAWN		CHECKED	
APPROVED		DATE	13/10/2019

DESIGNED BY: MJM ENVIRONMENTAL PTY LTD

QUILPIE SEWAGE TREATMENT PLANT

PROCESS FLOW DIAGRAM

CAPACITY REVIEW | | A

MJM ENVIRONMENTAL PTY LTD

DOCUMENT REVIEW COMMENT REGISTER

Project Number: 478 - 2018
Project Name: QSC Quilpie STP Process and Capacity Assessment
Document: Quilpie STP Process and Capacity Review Report (Draft)

Document Review Comments

Reviewer	Page	Paragraph	Comment	Response

11.4 (12/19) Requests for Replacement of Utilities (Q31,Q32)

IX: 188154

Author: Director of Engineering Services, Mr Peter See

PURPOSE:

This report is to consider a change to the specification of two utilities, and to approve the purchase of two utilities.

POLICY/LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

Council's Procurement Policy

CORPORATE PLAN:

1.2.8 Continue to develop and implement long term Asset Management planning.

RECOMMENDATION:

That Council receive the report and:

- Approve that the specification for utilities for the Road Construction and Maintenance Supervisor and the Pest and Livestock Management Coordinator to be for a Landcruiser V8 or equivalent.
- Accept the tenders from O'Brien Toyota for two Landcruiser V8 utilities for a total cost of $123,368.00

BACKGROUND:

Not applicable

DISCUSSION:

Proposed change of specification

Requests for tenders have been called for the replacement of the utilities driven currently by the Road Construction and Maintenance Supervisor and the Pest and Livestock Management Coordinator.

Both officers currently operate 4WD utilities which are currently a Toyota Hilux and a Ford ranger respectively.

Both utilities as used presently are at the limit of their capabilities with regard to gross vehicle mass (GVM) and gross combination mass (GCM). Both vehicles are required to regularly tow trailers (Fuel & Canam trailer) to work sites. Both vehicles carry toolboxes and other equipment as needed. The GCM and GVM of the vehicles as well as the proposed Landcruiser utilities are shown in the following table:

Utility Type	GVM	GCM	Towing Capacity	Rated Fuel Consumption	Ground Clearance
Toyota Hilux	3000kg	5650kg	2800kg	8.6ltr/100km	279mm
Ford Ranger	3200kg	6000kg	3500kg	8.7ltr/100km	232mm
Toyota V8 Landcruiser	3400kg	6900kg	3500kg	10.7ltr/100km	235mm

The Toyota Landcruiser has more GVM and GCM capacity and therefore will provide better capability for cartage of items and towing. The Landcruiser uses more fuel in a standard rated comparison however, it is thought that the fuel consumptions will be similar based on how the utilities currently operate. The standard rated comparison is for normal operation without towing.

The averaged trade-in prices from all dealers received by the requests for tenders were $17,432.50 for the Toyota Hilux and $16,166.67 for the Ford Ranger. Research on a major plant clearing website indicates an average purchase price for a 2013 Landcruiser utility of $43,639.00. This can be interpreted as an indication of likely trade/sale price of a Landcruiser utility.

This indicates a much better trade-in price can be anticipated when compared to the Ford ranger and Toyota Hilux. Using the same process for the current vehicles determined values of $22,875.00 for the Hilux and $23,750.00 for the Ranger. These prices represent 31% more than trade for the Hilux and 46% more than the trade for the Ranger.

Based on this work, the expected trade for a 2013 Landcruiser could be expected to be between $29,589.00and $33,312.00. These figures represent a much better end of life return for the changeover of the Landcruiser, which offsets the initial higher purchase cost of the Landcruiser to replace the present vehicles.

Based on the higher gross combination mass, higher gross vehicle mass and a better towing ability it is thought that the Landcruiser will be a better vehicle for the daily use of the officers. The higher expected resale/trade-in will help to offset the initial higher purchase cost.

It is recommended that Council approve that the specification for the utilities for the Road Construction and Maintenance Supervisor and the Pest and Livestock Management Coordinator be for a Landcruiser V8 utility or equivalent.

Requests for Quotations Q31, Q32

Requests for tenders were invited for supply and delivery of 2019 4WD utilities with trade and/or supply, and delivery of a 2019 Landcruiser utility. The closing of the tenders was on 08 November 2019 at 2:00pm, Tenders were received from South West Ford (Charleville), Black Toyota (Roma) and O'Brien Toyota (Thargomindah), and the tenders are summarised as follows:

Q31 – 4WD EXTRA CAB UTE **Toyota Hilux Replacement**

South West Ford: Ford Ranger XL Super Cab 3.2lt: $53,894 or $35,994 (with trade)

6 – 8 Weeks Delivery

Offer on Trade Vehicle: $18,000

Black Toyota Roma: Ute – Manual: $55,887.11 or $38,637.11 (with trade)

Ute – Automatic: $57,887.11 or $40,657.11 (with trade)

4 – 6 Weeks Delivery

Toyota Landcruiser GXL: $82,551.88 or $65,301.88 (with trade)

4 – 8 Weeks Delivery

Offer on Trade Vehicle: $17,250

O'Brien Toyota: New 4WD Ute: $55,000 or $43,000 (with trade)

Toyota Landcruiser XL: $74,434 or $62,434 (with trade)

6 – 8 Weeks Delivery

Offer on Trade Vehicle: $12,000

Q32 – 4WD EXTRA CAB UTE **Ford Ranger Replacement**

South West Ford: Ford Ranger XL Super Cab 3.2lt: $52,794 or $32,794 (with trade)

6 – 8 Weeks Delivery

Offer on Trade Vehicle: $20,000

Black Toyota Roma: Ute Manual: $55,887.11 or $40,887.11 (with trade)

Ute Automatic: $57,887.11 or $42,887.11 (with trade)

Toyota Landcruiser GXL: $82,551.88 or $67,551.88 (with trade)

4 – 6 Weeks Delivery

Offer on Trade Vehicle: $15,000

O'Brien Toyota: New 4WD Ute: $55,000 or $41,500 (with trade)

Toyota Landcruiser GX: $74,434 or $60,934 (with trade)

6 – 8 Weeks Delivery

Offer on Trade Vehicle: $13,500

Based on Council's views on the proposed change of specification, it is recommended that council accept the offer of:

OPTION 1. Toyota Landcruiser GX

O'Brien Toyota, Thargomindah f**or tenders Q31 and Q32 for a total cost of $123,368.00 including trade-ins and inclusive of GST**.

OPTION 2. Ford Ranger XL Super Cab

South West Ford, Charleville f**or a total cost of $68,788 with trade-in included** and **inclusive of GST.**

FINANCIAL:

The amended 2019/2020 budget has a total budget of $107,000.00 allocated for the two utilities.

CONSULTATION:

The operators of both vehicles have been consulted with by the Fleet and Workshop Manager Mr. Jeremy Grimm.

ATTACHMENTS:

N/A

12 CORPORATE AND COMMUNITY SERVICES

12.1 (12/19) – SWHHS Request to Vary Lease Agreement

IX: 188775

Author: Manager of Corporate and Community Services, Lisa Hamlyn

PURPOSE:

The purpose of this report is for Council to consider a request for a variation to the lease agreement with South West Hospital and Health Service (SWHHS) for the property located 65-67 Galah Street, Quilpie.

POLICY:

Not Applicable

CORPORATE PLAN:

Social - Health & Wellbeing

6.1.1 Actively identify and implement initiatives that support, retain and attract families to the shire.

6.2.3 Actively lobby for health, education and other services including the expansion of telehealth services available.

RECOMMENDATION:

That Council approves / does not approve the request received from South West Hospital & Health Service to review the current rental amount within the Residential Lease Agreement and decrease it by $100 per week.

BACKGROUND:

Council entered into a Residential Lease Agreement with South West Hospital & Health Service in April 2013 for the house located at 65-67 Galah Street Quilpie. SWHHS sought this property to utilize as a Doctor's residence. Historically, the Term of Lease has been 2 years with an option of a further 2 years upon expiry. The agreed rental amount has been $500 / week since 2014.

Council performs all maintenance required on the house. SWHHS are responsible for the electricity, telephone and gas.

DISCUSSION:

The Residential Lease Agreement for 65-67 Galah Street Quilpie between Council and South West Hospital & Health Service expired on 21 October 2019. Correspondence was received from Chris Small, Director of Strategy, Performance and Government - SWHHS during the month requesting Council's consideration of a rent reduction of $100 per week to reflect the current market decrease.

Until such time as Council accepts this offer or otherwise, SWHHS will continue to remit the current rental amount.

FINANCIAL:

12.1.1 $500 / week revenue

CONSULTATION:

Accommodation Officer – South West Hospital & Health Service

ATTACHMENTS:

Attachment A – Incoming Correspondence

Queensland Government

Enquiries to: Lindsay McCay
Telephone: 07 4505 1504
Facsimile: 07 4505 1550
Our Ref: 65 – 67 Galah Street

SOUTH WEST HOSPITAL AND HEALTH SERVICE

Attn: Lisa Hamlyn
Quilpie Shire Council
Po Box 57
Quilpie Qld 4480

Re: Residential Lease
65 – 67 Galah Street Quilpie

Dear Lisa,

I understand the lease for 65 – 67 Galah Street, Quilpie is due for renewal. I also acknowledge that the South West Hospital and Health Service, Accommodation Coordinator has confirmed that the Quilpie Shire Council wishes to renew the lease for a further 24 months.

After reviewing the current rental market, the SWHHS wishes to ask for a rent reduction of $100.00 per week, to reflect the current market decrease.

As we are currently on a periodic lease, the SWHHS will continue to pay the current rental rate, until the Quilpie Shire Council reviews this offer with acceptance or refusal.

If you wish to accept this offer, could you please sign the below section to notify us of your acceptance.

Should you have any queries or wish to discuss this further, please don't hesitate to contact Lindsay McCay, SWHHS Accommodation Officer on 4505 1522.

Yours sincerely,

Chris Small
Executive Director Strategy, Performance and Governance
South West Hospital and Health Service
25/11/2019

Quilpie Shire Council accepts the South West Hospital and Health Services offer to reduce the current rental rate to $400.00 per week for lease at 65 – 67 Galah Street, Quilpie for a further 24 months:

Name: _____

Position: _____

Signature: _____

Office
South West Hospital & Health Service
44-46 Bungil St
ROMA QLD 4455

Postal
P.O. Box 1006
ROMA QLD 4455

Phone
(07) 4505 1504

Fax
(07) 4505 1550

13 FINANCE

13.1 (12/19) – Request for Rates Recovery Action and Allowance of Discount

IX: 188778

Author: Alisha Moody, Rates and Information Technology Officer

PURPOSE:

The purpose of this report is to obtain Council's direction in regards to writing off unrecovered rates and consideration of allowing discount.

LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

13.1.1 F.10 Recovery of Rates & Charges and General Debt Policy

F.10-B Recovery (Rates & Charges) Procedure

CORPORATE PLAN:

N/A

RECOMMENDATION:

1. *That Council write off the $16.44 off assessment 00844-52000-000.*
2. *That Council allow/ not allow discount of $28.98 on assessment 00077-00000-000.*

BACKGROUND:

1. The rates for the assessment 00844-52000-000 are for Mining Lease 60040 are outstanding from the rates period 1st January 2015 to 30 June 2015. The lease expired on 1 July 2015 and they have not been charged rates since. The $16.44 is the 'discount' component as payment was received 7 April 2015 and rates were due 27 March 2015.
2. The ratepayer requested the discount be reconsidered for assessment 00077-0000-000. Payment was received by Council on 11 October 2019. Rates were due for the period on 2 October 2019. The ratepayer requests the discount be allowed as the bank cheque was drawn before the due date and they have never been late for a payment since 2005. Administration does not keep records of the date a cheque is drawn.

DISCUSSION:

Not applicable

FINANCIAL:

1. Recovering the outstanding amount would cost more than writing off.
2. The discount amounts to $28.98

CONSULTATION:

Not applicable

ATTACHMENTS:

Not applicable

Strategic Decision Report

Financial Services

13.2 (12/19) – Finance Report Period Ending 30 November 2019

IX: 188747

Author: Manager of Financial Services, Arminda David

PURPOSE:

The purpose of this report is to present Council with the monthly financial report.

POLICY:

Local Government Regulation 2012

CORPORATE PLAN:

2.2.1 Ensure Council's financial sustainability through responsible management and planning of finances and assets.

RECOMMENDATION:

That Council receive the finance report as at 30 November 2019.

BACKGROUND:

Section 204 of the Local Government Regulation 2012 requires a financial report to be presented at a meeting of Council each month. The report must state the progress that has been made in relation to Council's budget for the period of the financial year up to a day as near as practicable to the end of the month before the meeting is held.

DISCUSSION:

Not applicable

FINANCIAL:

As per attached documentation

CONSULTATION:

Not applicable

ATTACHMENTS:

Financial Report

Statement of Comprehensive Income

For the month ending 30 November 2019

42% of year elapsed

	2019 Actual	Amend 18/19	
REVENUE			
Recurrent revenue			
Rates, levies and charges	2,617,248	4,993,304	52%
Fees and charges	21,025	50,900	41%
Rental income	118,395	300,000	39%
Interest received	117,061	366,928	32%
Sales revenue	2,183,539	4,029,798	54%
Other income	9,820	33,591	29%
Grants, subsidies, contributions and donations	1,978,840	10,166,386	19%
Total recurrent revenue	7,045,929	19,940,907	35%
Capital revenue			
Grants, subsidies, contributions and donations	887,696	4,417,070	20%
Gain or loss on disposal	0	0	
Total capital revenue	887,696	4,417,070	20%
TOTAL REVENUE	**7,933,625**	**24,357,977**	33%
EXPENSES			
Recurrent Expenses			
Employee benefits	-2,390,670	-8,313,744	29%
Materials and services	-2,360,840	-8,856,820	27%
Finance costs	-7,274	-19,500	37%
Depreciation and amortisation	-2,993,176	-7,204,752	42%
TOTAL RECURRENT EXPENSES	**-7,751,960**	**-24,394,816**	**32%**
OTHER COMPREHENSIVE INCOME			
Gain on revaluation	-63,183	25,000	
NET OPERATING SURPLUS	**118,482**	**-11,839**	**-1001%**

Statement of Financial Position

For the month ending 30 November 2019

42% of year elapsed

	2019 Actual	Amend 19/20
ASSETS		
Current Assets		
Cash and cash equivalents	26,936,734	21,666,631
Trade and other receivables	1,487,910	3,498,220
Inventories	562,172	365,838
Other financial assets	0	74,852
Total current assets	**28,986,816**	**25,605,541**
Non-current Assets		
Receivables	81,485	52,424
Property, plant and equipment	197,382,343	185,875,671
Capital works in progress	5,772,099	2,525,129
Total non-current assets	**203,235,927**	**188,453,224**
TOTAL ASSETS	**232,222,743**	**214,058,765**
LIABILITIES		
Current Liabilities		
Trade and other payables	1,575,598	1,211,985
Provisions	425,596	507,716
Other	-33,848	-21,528
Total current liabilities	**1,967,346**	**1,698,173**
Non-current Liabilities		
Provisions	175,883	44,908
Total non-current liabilities	**175,883**	**44,908**
TOTAL LIABILITIES	**2,143,229**	**1,743,081**
NET COMMUNITY ASSETS	**230,079,514**	**212,315,684**
EQUITY		
Community Equity		
Shire capital	75,540,157	91,132,027
Asset revaluation surplus	138,457,408	107,745,258
Current Surplus	118,482	-11,839
Accumulated Surplus	13,468,005	10,954,776
Other reserves	2,495,462	2,495,462
TOTAL COMMUNITY EQUITY	**230,079,514**	**212,315,684**

Statement of Cash Flow

For the month ending 30 November 2019

42% of year elapsed

		2019 Actual	Amend 19/20
Cash flows from operating activities:			
Receipts from customers		6,132,247	13,872,279
Payments to suppliers and employees		(4,977,928)	(17,091,493)
Interest received		117,061	366,928
Rental income		118,395	300,000
Non-capital grants and contributions		1,420,067	5,301,700
		2,809,842	**2,749,414**
Cash flows from investing activities:			
Movement in loans		0	3,826
Payments for property, plant and equipment		(1,342,959)	(10,174,018)
Proceeds from sale of property, plant and equipment		(63,183)	25,000
Grants, subsidies, contributions and donations		887,696	4,417,070
		(518,446)	**(5,728,122)**
Cash flows from financing activities			
		-	-
Net increase (decrease) in cash held		**2,291,396**	**(2,978,708)**
	0	**24,645,339**	**24,645,339**
	0	**26,936,734**	**21,666,631**

Revenue and Expenditure Report

For the month ending 30 November 2019

42% of year elapsed

		2019 Actual	Amend 19/20	2019 Actual	Amend 19/20	
1000-0001	**CORPORATE GOVERNANCE**					
1000-0002	EXECUTIVE SERVICES					
1000-2000	Executive Services Salaries - CEO			99,674	230,000	43%
1000-2020	Executive CEO Expenses			18,968	40,000	47%
1000-2030	Executive Services - HR Salaries			50,554	160,000	32%
1000-2040	Executive Services - HR Expenses			11,144		
1000-0002	**EXECUTIVE SERVICES TOTAL**	**0**	**0**	**180,340**	**430,000**	42%
1100-0002	COUNCILLORS EXPENSES					
1100-2000	Councillor Wages			138,020	290,000	48%
1100-2001	Councillor Remuneration - Meetings			22,624	55,000	41%
1100-2020	Councillors Allowances & Expenditure			7,671	12,000	64%
1100-2030	Councillor Professional Dev Training			0	5,000	0%
1100-2040	Councillors Conferences & Deputation			13,614	20,000	68%
1100-2050	Election Expenses			0	15,000	0%
1100-2060	Meeting Expenses			1,114	3,500	32%
1100-0002	**COUNCILLORS EXPENSES TOTAL**	**0**	**0**	**183,043**	**400,500**	46%
1000-0001	**CORPORATE GOVERNANCE TOTAL**	**-**	**-**	**363,383**	**830,500**	44%
2000-0001	**ADMINISTRATION AND FINANCE**					
2100-0002	**ADMINISTRATION & FINANCE**					
2100-1500	Office Rental					
2100-2000	Administration Salaries			448,318	1,130,000	40%
2100-2020	Consultants			0	15,000	0%
2100-2070	Staff Training & Development			48,777	125,000	39%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
2100-2080	Recruitment Expenses				0		
2100-2090	Council Gym Membership Program-20%				124		
2100-2110	Advertising				2,606	15,000	17%
2100-2120	Audit Fees				2,123	60,000	4%
2100-2130	Bank Charges				2,163	5,500	39%
2100-2180	Computer Services				112,850	200,000	56%
2100-2185	Fringe Benefits Tax				4,484	15,000	30%
2100-2220	Shire Office Operating Expenses				26,700	65,000	41%
2100-2230	Insurance				107,999	125,000	86%
2100-2270	Legal Expenses				17,060	30,000	57%
2100-2280	Postage				1,674	6,000	28%
2100-2290	Printing & Stationery				8,062	30,000	27%
2100-2330	Shire Office Repairs & Maintenance				2,200	20,000	11%
2100-2340	Subscriptions				55,551	65,000	85%
2100-2350	Administration Telephone & Fax				11,170	30,000	37%
2100-2370	Valuation Fees Rates				8,674	12,000	72%
2100-2500	Valuation of Assets				0	10,000	0%
2100-2510	Asset Management Expenses				0	30,000	0%
2100-2600	Depn General Admin				23,143	58,209	40%
2100-2991	Odd Cents Rounding Expense				0	0	
2101-1510	LGGSP -Asset Management Project	46,200	46,200	100%	0		
2100-2510	LGGSP - Asset Management Project Expenses				7,232	45,000	16%
2100-0002	**ADMINISTRATION & FINANCE TOTAL**	**46,200**	**46,200**	100%	**890,912**	**2,091,709**	43%
2110-0002	**STORES**						
2110-1550	Auction Sales						
2110-2220	Stores Operating Expenses				74,985	180,000	42%
2110-2225	Stores Write -Offs				0	0	
2110-2240	Stores Adjustment				-22,547	-5,000	451%
2110-2250	Auction Expenses				0	0	

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
2110-2540	Freight				2,962	5,000	59%
2110-2815	Stores Oncosts Recoveries				-44,898	-100,000	45%
2110-2880	Oncost Recoveries - Freight				0	0	
2110-0002	**STORES TOTAL**	**0**	**0**		**10,503**	**80,000**	13%
2200-0002	**RATES & CHARGES**						
2210-0003	Rates Cat 1 Quilpie						
2210-1000	Cat 1 Rates	58,303	118,221	49%			
2210-1005	Cat 1 Interest on Rates	247	487	51%			
2210-1080	Cat 1 Discount	-4,631	-9,206	50%			
2210-1085	Cat 1 Pensioner Rebate	-1,967	-4,380	45%			
2210-1090	Cat 1 Writeoff and Refund	0	0				
2210-0003	**Rates Cat 1 Quilpie TOTAL**	**51,952**	**105,122**	49%	**0**	**0**	
2212-0003	Rates Cat 2 - Eromanga						
2212-1000	Cat 2 Rates	6,561	12,327	53%			
2212-1005	Cat 2 Interest on rates	41	284	15%			
2212-1080	Cat 2 Discount	-328	-712	46%			
2212-1085	Cat 2 Pensioner Rebate	-182	-544	34%			
2212-1090	Cat 2 Writeoff and Refund	0	0				
2212-0003	**Rates Cat 2 - Eromanga TOTAL**	**6,091**	**11,355**	54%	**0**	**0**	
2214-0003	Rates Cat 3 Other Rural Towns						
2214-1000	Cat 3 Rates	10,281	22,623	45%			
2214-1005	Cat 3 Interest on Rates	278	807	34%			
2214-1080	Cat 3 Discount	-935	-1,570	60%			
2214-1085	Cat 3 Pensioner Rebate	-495	-1,073	46%			
2214-1090	Cat 3 Writeoff and Refund	-22	-22				
2214-0003	**Rates Cat 3 Other Rural Towns TOTAL**	**9,107**	**20,765**	44%	**0**	**0**	

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20
2216-0003	Rates Cat 4 Mining Tenements					
2216-1000	Cat 4 Rates	17,206.26	34,782	49%		
2216-1005	Cat 4 Interest on Rates	159	371	43%		
2216-1080	Cat 4 Discount	-1,018	-2,534	40%		
2216-1085	Cat 4 Pensioner Rebate	-266	-266	100%		
2216-1090	Cat 4 Writeoff and Refund	0	0			
2216-0003	**Rates Cat 4 Mining Tenements TOTAL**	**16,081**	**32,353**	50%	**0**	**0**
2220-0003	Rates Cat 6 - Rural <7$/ha					
2220-1000	Cat 6 Rates	293,351	557,023	53%		
2220-1005	Cat 6 Interest on Rates	765	202	379%		
2220-1080	Cat 6 Discount	-5,042	-28,465	18%		
2220-1085	Cat 6 Pensioner Rebate	0	0			
2220-1090	Cat 6 Writeoff and Refund	-60	-60	100%		
2220-0003	**Rates Cat 6 - Rural <7$/ha TOTAL**	**289,014**	**528,700**	55%	**0**	**0**
2222-0003	Rates Cat 7 - Commercial & Industrial					
2222-1000	Cat 7 Rates	16,842	34,359	49%		
2222-1005	Cat 7 Interest on Rates	13	8			
2222-1080	Cat 7 Discount	-1,401	-2,981	47%		
2222-1085	Cat 7 Pensioner Rebate	0	0			
2222-1090	Cat 7 Writeoff and Refund	0	0			
2222-0003	**Rates Cat 7 - Commercial & Industrial**	**15,454**	**31,386**	49%	**0**	**0**
2224-0003	Rates Cat 8 - Rural 7-10$/ha					
2224-1000	Cat 8 Rates	310,372	598,839	52%		
2224-1005	Cat 8 Interest on Rates	415	815	51%		
2224-1080	Cat 8 Discount	-4,506	-38,814	12%		
2224-1085	Cat 8 Pensioner Rebate	-225	-450	50%		

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20
2224-1090	Cat 8 Writeoff and Refund	-15	-16	95%		
2224-0003	**Rates Cat 8 - Rural 7-10$/ha TOTAL**	**306,040**	**560,374**	55%	**0**	**0**
2226-0003	Rates Cat 9 - Rural > 10$/ha					
2226-1000	Cat 9 Rates	161,232	307,677	52%		
2226-1005	Cat 9 Interest on Rates	987	2,895	34%		
2226-1080	Cat 9 Discount	-3,132	-15,471	20%		
2226-1090	Write off and Refund	-63	-63	100%		
2226-0003	**Rates Cat 9 - Rural > 10$/ha TOTAL**	**159,023**	**295,038**	54%	**0**	**0**
2228-0003	Rates Cat 10 - Pumps, Bores & Telec					
2228-1000	Cat 10 Rates	5,477	10,373	53%		
2228-1005	Cat 10 Interest on Rates	1	-1	-51%		
2228-1080	Cat 10 Discount	-425	-595	71%		
2228-0003	**Rates Cat 10 - Pumps, Bores & Telec TOTAL**	**5,052**	**9,777**	52%	**0**	**0**
2230-0003	Rates Cat 11-Mine&Oil Prod <5000ha					
2230-1000	Cat 11 Rates	547,445	1,037,704	53%		
2230-1005	Cat 11 Interest on Rates	400	398	101%		
2230-1080	Cat 11 Discount	-44,335	-95,939	46%		
2230-1090	Writeoff and Refund	-199	-199	100%		
2230-0003	**Rates Cat 11-Mine&Oil Prod <5000ha TOTAL**	**503,311**	**941,964**	53%	**0**	**0**
2232-0003	Rates Cat 12 - Oil Prod 5000-10000ha					
2232-1000	Cat 12 Rates	428,660	816,424	53%		
2232-1005	Cat 12 Interest on Rates	2,021	2,008	101%		
2232-1080	Cat 12 Discount	-23,786	-52,182	46%		
2232-1090	Writeoff and Refund	-1,004	-1,004	100%		
2232-0003	**Rates Cat 12 - Oil Prod 5000-10000ha TOTAL**	**405,891**	**765,246**	53%	**0**	**0**

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20
2234-0003	Rates Cat 13 -Oil Prod 10000-25000ha					
2234-1000	Cat 13 Rates	355,557	696,700	51%		
2234-1005	Cat 13 Interest on Rates	0	0			
2234-1080	Cat 13 Discount	-35,556	-69,670	51%		
2234-0003	**Rates Cat 13 -Oil Prod 10000-25000ha TOTAL**	**320,002**	**627,030**	51%	**0**	**0**
2236-0003	Rates Cat 14 -Oil Prod 25000-50000ha					
2236-1000	Cat 14 Rates	208,116	395,509	53%		
2236-1005	Cat 14 Interest on Rates	0	0			
2236-1080	Cat 14 Discount	-20,812	-39,551	53%		
2236-0003	**Rates Cat 14 -Oil Prod 25000-50000ha TOTAL**	**187,304**	**355,958**	53%	**0**	**0**
2240-0003	Rates Cat 16 - Oil Distillation/Refi					
2240-1000	Cat 16 Rates	28,366	88,517	32%		
2240-1005	Cat 16 Interest on Rates	0				
2240-1080	Cat 16 Discount	0	-8,852	0%		
2240-0003	**Rates Cat 16 - Oil Distillation/Refi TO**	**28,366**	**79,665**	36%	**0**	**0**
2200-0002	**RATES & CHARGES TOTAL**	**2,302,691**	**4,364,733**	53%	**0**	**0**
			-			
2295-0002	**GRANTS**					
2295-1100	FAGS General Component	948,178	3,800,000	25%		
2295-1130	FAGS Identified Road Component	316,173	1,200,000	26%		
2295-0002	**GRANTS TOTAL**	**1,264,351**	**5,000,000**	25%	**0**	**0**
2300-0002	**OTHER REVENUE**					
2300-1500	Administration Fees (GST Applies)	797	1,000	80%		
2300-1510	Admin Fees (GST Exempt)	1,172	2,000	59%		
2300-1530	W4Q3 2019-21 various projects	0	65,000			

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
2300-1601	Fire Levy Commission	1,920	3,000	64%			
2300-1800	Bank Interest Received	2,710	6,000	45%			
2300-1810	Investment Interest	107,700	350,000	31%			
2300-1990	Miscellaneous Income	0	500	0%			
2300-1995	Misc Income GST Free	437	500	87%			
2310-1300	Quilpie Club Lease - Beneficial Ent	0	0				
2300-2130	Investment Admin & Fees Charges	0			5,111	14,000	37%
2310-1300	Quilpie Club Rent	0	3,500	0%			
2310-2300	Quilpie Club - Beneficial Enterprise		0		260	130	200%
2300-0002	**OTHER REVENUE TOTAL**	**114,736**	**431,500**	27%	**5,371**	**14,130**	38%
2400-0002	**EMPLOYEE ONCOSTS**						
2400-2010	Expense Annual Leave				273,503	706,670	39%
2400-2011	Expense Long Service Leave				32,176	83,677	38%
2400-2012	Expense Sick Leave				50,712	151,268	34%
2400-2013	Expense Public Holiday				39,582	150,000	26%
2400-2015	Expense Bereavement Leave				234	4,360	5%
2400-2016	Expense Domestic Violence Leave				0	1,908	0%
2400-2020	Expense Maternity Leave				0	3,380	0%
2400-2060	Expense Super Contributions -9%				15,401	157,300	10%
2400-2065	Expense Super Contributions-12%				203,600	354,000	58%
2400-2230	Expense Workers Compensation				44,342	90,000	49%
2400-2315	Expense Employee Relocation				0	3,000	0%
2400-2410	Expense WH&S				62,688	150,000	42%
2400-2821	Recovery Annual Leave				-195,718	-435,000	45%
2400-2822	Recovery Sick Leave				-50,803	-113,000	45%
2400-2823	Recovery LSL				-43,545	-96,500	45%
2400-2824	Recovery Public Holidays				-66,495	-148,000	45%
2400-2825	Recovery Superannuation				-222,926	-490,000	45%
2400-2826	Recovery Workers Comp				-32,824	-72,700	45%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
2400-2827	Recovery Training				-72,574	-161,000	45%
2400-2828	Recovery WH&S				-91,442	-203,000	45%
2400-2829	Recovery Contractors				-62,709	-168,000	37%
2400-2830	Recovery Office Equipment				-24,881	-53,400	47%
2400-2831	Recovery Administration				-45,896	-100,500	46%
2400-0002	**EMPLOYEE ONCOSTS TOTAL**	**0**	**0**		**-187,576**	**-185,537**	101%
2000-0001	**ADMINISTRATION AND FINANCE TOTAL**	**3,727,978**	**9,842,433**	38%	**719,210**	**2,000,302**	36%
3000-0001	**INFRASTRUCTURE**						
3000-0002	**ENGINEERING ADMIN & SUPERVISION**						
3000-1100	Apprentice Incentive Payments	24,500	8,000	306%			
3000-2029	Engineering O/C Recover Supervision				-94,852	-242,529	39%
3000-2030	Engineering O/C Recover Plant				-9,285	-18,759	49%
3000-2040	Engineering O/C Recover FP & LT				-25,926	-53,473	48%
3000-2050	Engineering O/C Recover Wet Weather				-13,970	-35,532	39%
3000-2060	Wet Weather Wages Expense				5,813	8,000	73%
3000-2080	Purchase equip-cameras, data loggers				2,035	1,195	170%
3000-2220	Engineering Management Expenses				22,571	35,000	64%
3000-2420	Quality Assurance Expenses				23,177	60,000	39%
3000-2985	Engineering Consultants				0	30,000	0%
3000-2990	Works Supervision				227,182	560,000	41%
3000-0002	**ENGINEERING ADMIN & SUPERVISION TOTAL**	**24,500**	**8,000**	306%	**136,744**	**343,902**	40%
3100-0003	**WATER - QUILPIE**						
3100-1000	Quilpie Water Charges	117,617	234,325	50%			
3100-1005	Quilpie Water Charges Interest	324	617	52%			
3100-1020	Quilpie Other Water Revenue	0	0				
3100-1080	Quilpie Water Discount	-10,067	-20,278	50%			

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
3100-1085	Quilpie Water Pensioner Rebate	-2,054	-4,426	46%			
3100-1090	Quilpie Water Writeoff and Refund	0	0				
3100-1500	Quilpie Water Connections	0	0				
3100-1510	LGGSP-Bore replacement	224,730	749,100	30%			
3100-2200	Drinking Water Quality Plan	0	0		0	0	
3100-2220	Quilpie Water Operations	0	0		41,997	130,000	32%
3100-2600	Depn Quilpie Water	0	0		35,878	123,564	29%
3101-1150	LGGSP - Quilpie Water Main Upgrade	212,966	212,970				
3100-0003	**WATER - QUILPIE TOTAL**	**543,516**	**1,172,308**	46%	**77,875**	**253,564**	31%
3110-0003	**WATER - EROMANGA**						
3110-1000	Eromanga Water Charges	8,953	18,486	48%			
3110-1005	Eromanga Water Charges Interest	43	194	22%			
3110-1020	Eromanga Other Water Revenue	0	19,691	0%			
3110-1080	Eromanga Water Discount	-613	-1,286	48%			
3110-1085	Eromanga Water Pensioner Rebate	-223	-666	33%			
3110-2220	Eromanga Water Operations				17,891	90,000	20%
3110-2230	Quilpie Water Operations-Expenses				9,394		
3110-2600	Depn Eromanga Water				48,247	114,313	42%
3110-0003	**WATER - EROMANGA TOTAL**	**8,160**	**36,419**	22%	**75,532**	**204,313**	37%
3120-0003	**WATER - ADAVALE**						
3120-1000	Adavale Water Charges	7,690	15,306	50%			
3120-1005	Adavale Water Charges Interest	111	214	52%			
3120-1080	Adavale Water Discount	-754	-1,187	64%			
3120-1085	Adavale Water Pensioner Remissions	-582	-1,274	46%			
3120-1090	Adavale Water Chgs Writeoff & Refund	-11	-12	95%			
3120-2220	Adavale Water Operations	0			9,458	10,000	95%
3120-2600	Depn Adavale Water	0			6,476	15,568	42%
3120-0003	**WATER - ADAVALE TOTAL**	**6,453**	**13,047**	49%	**15,934**	**25,568**	62%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
3130-0003	**WATER - CHEEPIE**						
3130-2220	Cheepie Water Operations				0	2,000	0%
3130-2600	Depn Cheepie Water				412	987	42%
3130-0003	**WATER - CHEEPIE TOTAL**	**0**	**0**		**412**	**2,987**	14%
3140-0003	**Water - TOOMPINE**						
3140-2220	Toompine Water Operations				430	2,000	21%
3140-2600	Water Depreciation-Toompine				839	1,429	
3140-0003	**Water - TOOMPINE TOTAL**	**0**	**0**		**1,269**	**3,429**	37%
3100-0002	**WATER TOTAL**	**558,130**	**1,221,774**	46%	**171,022**	**489,861**	35%
3200-0002	**SEWERAGE**						
3200-0003	**QUILPIE SEWERAGE**						
3200-1000	Sewerage Charges	92,146	183,585	50%			
3200-1005	Sewerage Charges Interest	342	649	53%			
3200-1080	Sewerage Discount	-7,899	-15,901	50%			
3200-1085	Sewerage Pensioner Remission	-141	-413	34%			
3200-1090	Sewerage Writeoff & Refunds	-2	0	0%			
3200-1500	Sewerage Waste Charge	0	10,000	0%			
3200-2220	Quilpie Sewerage Operations-Wages				33,009	90,000	37%
3200-2600	Depn Quilpie Sewerage				42,556	102,683	41%
3200-0003	**QUILPIE SEWERAGE TOTAL**	**84,445**	**177,920**	47%	**75,565**	**192,683**	39%
3210-0003	**EROMANGA SEWERAGE**						
3210-1000	Eromanga Sewerage Charges	10,274	20,764	49%			
3210-1005	Eromanga Sewerage Charges Interest	61	212	29%			
3210-1080	Eromanga Sewerage Discount	-708	-1,425	50%			
3210-1085	Eromanga Sewerage Pensioner Remissio	-45	-160	28%			

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
3210-1510	Eromanga Septic Tank Charges	0	0				
3210-2220	Eromanga Sewerage Operations				9,245	8,000	116%
3210-2600	Depn Eromanga Sewer				8,714	20,872	42%
3210-0003	**EROMANGA SEWERAGE TOTAL**	**9,583**	**19,391**	49%	**17,959**	**28,872**	62%
3212-0003	**SEWERAGE ADAVALE**						
3212-2600	Depn Adavale Septic System				42		
3212-0003	**SEWERAGE ADAVALE**				**42**	**0**	
3214-0003	**SEWERAGE TOOMPINE**						
3214-2600	Depn Toompine Septic System				42		
3214-0003	**SEWERAGE TOOMPINE**				**42**	**0**	
3200-0002	**SEWERAGE TOTAL**	**94,028**	**197,311**	48%	**93,608**	**221,555**	42%
3300-0002	**INFRASTRUCTURE MAINTENANCE**						
3300-0003	**SHIRE ROADS MAINTENANCE**						
3300-1150	R2R Grant Revenue		300,000	0%			
3300-1170	TIDS Funding Program						
3300-2230	Shire Roads & Drainage Expenses				505,052	750,000	67%
3300-2232	Special Maintenance Netrisk and FD						
3300-2300	Early Flood Warning System				0	0	
3300-2600	Depn Roads & Streets				2,032,542	4,978,425	41%
3300-0003	**SHIRE ROADS MAINTENANCE TOTAL**	**0**	**300,000**	0%	**2,537,594**	**5,728,425**	44%
3303-0003	**SHIRE ROADS - FLOOD DAMAGE 2019**						
3303-1150	FD 2019 Emergent Works	0	70,000		0	0	
3303-1160	FD 2019 Restoration Works	817,133	3,000,000		0	0	

		2019 Actual	Amend 19/20	2019 Actual	Amend 19/20	
3303-1170	FD 2019 Proterra Accommodation	11,850				
3303-2200	FD 2019 Emergent Works	0		34,177	70,000	49%
3303-2210	FD 2019 Restoration Works	0		424,953	3,300,000	13%
3303-2220	FD 2019 Emergent Works			0		
3303-0003	**SHIRE ROADS - FLOOD DAMAGE 2019**	828,982	3,070,000	459,130	3,370,000	
3310-0003	**TOWN STREET & DRAINAGE MAINTENANCE**					
3310-2220	Town Street & Drainage Maintenance			156,963	500,000	31%
3310-2230	Street Lighting			10,356	32,000	32%
3310-2240	Street Cleaning Operations			5,152	30,000	17%
3310-0003	**TOWN STREET & DRAINAGE MAINTENANCE TOTAL**	**0**	**0**	**172,472**	**562,000**	31%
3320-0003	**SOUTH WEST REGIONAL ROAD GROUP**					
3320-1160	SWRRG Contributions	0	0			
3320-2220	South West Regional Road Group Exp			0	0	
3320-2225	Recoverable SWRRG Expenditure			0	0	
3320-0003	**SOUTH WEST REGIONAL ROAD GROUP TOTAL**	**0**	**0**	**0**	**0**	
3330-0003	**DEPOTS & CAMPS**					
3330-1500	Office Rental	0	0			
3330-1510	Camp Accommodation Rent	0	0			
3330-2220	Camps Operations			13,268	60,000	22%
3330-2330	Depots Operations			55,588	130,000	43%
3330-2430	Old Depot Redevelopment			0	0	
3330-2600	Depn Depot & Camp			151,511	216,235	70%
3330-0003	**DEPOTS & CAMPS TOTAL**	**0**	**0**	**220,367**	**406,235**	54%
3340-0003	**WORKSHOP**					
3340-2220	Workshop Operations			12,885	5,000	258%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
3340-2230	Workshop Maintenance & Repairs				49,492	100,000	49%
3340-0003	**WORKSHOP TOTAL**	**0**	**0**		**62,378**	**105,000**	59%
3350-0003	**PLANT & MACHINERY**						
3350-1510	Gain/Loss on Sale/Disposal of Plant	-63,183	25,000				
3350-1520	Gain/Loss on revaluation	0					
3350-1570	Diesel Rebate - ATO	47,563	70,000	68%			
3350-2145	Small Plant Repairs				6,043	20,000	30%
3350-2225	Small Plant Purchases				13,177	20,000	66%
3350-2227	Floating Plant & Loose Tools Expense				0	0	
3350-2229	Plant Operations				241,328	600,000	40%
3350-2330	Plant Repairs & Maintenance				230,203	500,000	46%
3350-2331	Plant Registration				70,865	75,000	94%
3350-2580	Plant Hire				0	0	
3350-2585	Plant Recoveries				-1,413,064	-3,250,000	43%
3350-2600	Depn Plant				210,769	453,539	46%
3350-0003	**PLANT & MACHINERY TOTAL**	**-15,620**	**95,000**	-16%	**-640,679**	**-1,581,461**	41%
3360-0003	**AERODROME**						
3360-1310	Quilpie Refuelling Revenue	90,636	70,000	129%			
3360-2310	Quilpie Refuelling OP & RM				97,459	100,000	97%
3360-2325	Quilpie Aerodrome Operation				15,392	25,000	62%
3360-2330	Quilpie Aerodrome Repairs & Maint				15,802	75,000	21%
3360-2335	Eromanga Aerodrome Operations				0	10,000	0%
3360-2340	Eromanga Aerodrome Repairs & Maint				81	5,000	2%
3360-2350	Adavale Aerodrome Repairs & Maint				0	2,000	0%
3360-2360	Toompine Aerodrome Repairs & Maint				0	2,000	0%
3360-2370	Cheepie Aerodrome Repairs & Maint				0	1,000	0%
3360-2600	Depn Quilpie Aerodrome				44,544	50,943	87%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
3365-2600	Depn Eromanga Aerodrome				9,024	3,737	241%
3360-0003	**AERODROME TOTAL**	**90,636**	**70,000**	129%	**182,301**	**274,680**	66%
3370-0003	**BULLOO PARK**						
3370-1500	Bulloo Park Fees	1,118	3,000	37%			
3370-1510	Bulloo Park - Other Income	0	0				
3370-2220	Bulloo Park Operations				49,450	120,000	41%
3370-2600	Depn Bulloo Park				35,480	90,152	39%
3370-0003	**BULLOO PARK TOTAL**	**1,118**	**3,000**	37%	**84,929**	**210,152**	40%
3371-0003	**BULLOO RIVER WALKWAY**						
3371-2220	Bulloo River Walkway Operations				0	500	0%
3371-0003	**BULLOO RIVER WALKWAY TOTAL**	**0**	**0**		**0**	**500**	
3375-0003	**JOHN WAUGH PARK**						
3375-1500	Footy Facility Grant	0	75,000				
3375-2220	John Waugh Park Operations				25,206	100,000	25%
3375-2600	Depn John Waugh Park				6,720	17,680	38%
3375-0003	**JOHN WAUGH PARK TOTAL**	**0**	**75,000**	0%	**31,926**	**117,680**	27%
3376-0003	**BICENTENNIAL PARK**						
3376-2220	Bicenntennial Park Operations				9,842	20,000	49%
3376-2600	Depn Bicentennial Park				16,001	39,998	40%
3376-0003	**BICENTENNIAL PARK TOTAL**	**0**	**0**		**25,842**	**59,998**	43%
3380-0003	**COUNCIL LAND & BUILDINGS**						
3380-1500	Bulloo Park Fees	-	0				
3380-1501	Profit/(Loss) on Sale of Assets	0	0				
3380-2330	Council Properties Operating Exp				24,613	32,000	77%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
3380-2600	Depn Council Buildings Other				10,892	185,647	6%
3380-0003	**COUNCIL LAND & BUILDINGS TOTAL**	**0**	**0**		**35,505**	**217,647**	16%
3385-0003	**PARKS & GARDENS**						
3385-1500	Barbeque Fees	0	0				
3385-2220	Parks & Gardens Operating Expenses				30,332	120,000	25%
3385-2420	Street Tree Program				0	3,000	
3385-2600	Depn Parks Building				28,649	48,709	59%
3385-0003	**PARKS & GARDENS TOTAL**	**0**	**0**		**58,982**	**171,709**	34%
3390-0003	**PUBLIC TOILETS**						
3390-2220	Public Toilets Operations				14,443	22,500	64%
3390-0003	**PUBLIC TOILETS TOTAL**	**0**	**0**		**14,443**	**22,500**	64%
3300-0002	**INFRASTRUCTURE MAINTENANCE TOTAL**	**905,116**	**3,613,000**	25%	**3,245,190**	**9,665,065**	34%
3400-0002	**BUSINESS OPPORTUNITIES**						
3400-0003	**DMR WORKS**						
3400-1240	MRD Diamantina Dev Rd	0	0				
3400-1272	Quilpie Advale Read Rd TIDS 19/20	558,773	1,471,181	38%			
3400-1274	Quilpie Adavale Red Rd Resheet 19/20		200,000				
3400-1308	Adavale Red Road CN11777	38,182	38,182	100%			
3400-1309	Windorah CN11849		22,727				
3400-1550	MRD RMPC Revenue	0	0				
3400-2225	MRD RMPC Expenses				0	0	
3400-2301	MRD-Diamantina Dev Rd				0	0	
3400-2302	MRD - Qlp/Adv Red Rd				0	0	
3400-2303	MRD Red Rd TCP & TIDS				0	0	
3400-2304	MRD Red Rd TCP				0	0	

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
3400-2306	Quilpie Adavale Red Rd TIDS 18/19				4,607	375	
3400-2308	Adavale Red Road CN11777				26,248	38,182	69%
3400-2309	Windorah CN11849					22,727	
3400-2310	Quilpie Advale Red Rd TIDS 19/20				519,734	2,738,362	
3400-2312	Quilpie Adavle Red Rd Resheet 19/20				0	190,000	
3401-1550	DMR WORKS - MRD RMPC Rev 18/19	1,175,621	743,980	158%			
3401-1562	DMR Works-MRD RMPC Rev 19/20		2,193,505				
3401-2225	DMR WORKS - MRD RMPC Exp 18/19				954,608	742,222	129%
3401-2562	DMR Works-MRD RMPC EXPS 19/20					2,143,505	
3402-1200	MRD West Rd Stg 2	0	0		0	0	
3402-2200	MRD West Rd Stg 2				0	0	
3406-1200	DMR WORKS - Others (Revenue)	40,300	63,909	63%			
3406-2200	DMR WORKS - Others (Expenses)				25,593	63,909	40%
3400-0003	**DMR WORKS TOTAL**	**1,812,876**	**4,733,484**	38%	**1,530,790**	**5,939,282**	26%
3410-0003	**PRIVATE WORKS**						
3410-1500	Private Works Revenue - No GST	2,298	1,000	230%			
3410-1550	Private Works Revenue	7,519	20,000	38%			
3410-2230	Private Works Expenditure				9,019	18,000	50%
3410-0003	**PRIVATE WORKS TOTAL**	**9,818**	**21,000**	47%	**9,019**	**18,000**	50%
3400-0002	**BUSINESS OPPORTUNITIES TOTAL**	**1,822,693**	**4,754,484**	38%	**1,539,808**	**5,957,282**	26%
3000-0001	**INFRASTRUCTURE TOTAL**	**3,404,467**	**9,794,569**	35%	**5,186,373**	**16,677,665**	31%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
4000-0001	**ENVIRONMENT & HEALTH**						
4100-0002	**PLANNING & DEVELOPMENT**						
4100-0003	**TOWN PLANNING - LAND USE & SURVEY**						
4100-1500	Town Planning Fees	0	500	0%			
4100-2220	Town Planning Expenses				0	1,000	0%
4100-2410	Review Planning Scheme				0	0	
4100-0003	**TOWN PLANNING - LAND USE & SURVEY TOTAL**	**0**	**500**	0%	**0**	**1,000**	0%
4150-0003	**BUILDING CONTROLS**						
4150-1500	Building Fees No GST	0	0				
4150-1501	Building Fees - GST Applies	680	5,000	14%			
4151-1505	Swimming Pool Inspection Fees	0	500	0%			
4150-2220	Building Expenses				2,569	60,000	4%
4151-2225	Swimming Pool Inspection Costs				0	500	0%
4150-0003	**BUILDING CONTROLS TOTAL**	**680**	**5,500**	12%	**2,569**	**60,500**	4%
4100-0002	**PLANNING & DEVELOPMENT TOTAL**	**680**	**6,000**	11%	**2,569**	**61,500**	4%
4200-0002	**WASTE MANAGEMENT**						
4200-0003	**GARBAGE COLLECTION**						
4200-1000	Garbage Charges	116,275	231,177	50%			
4200-1005	Garbage Charges - Interest	445.9	768	58%			
4200-1080	Garbage Charges Discount	-9,970	-19,762	50%			
4200-1085	Garbage pensioner Remission	0					
4200-1090	Garbage Charges Writeoff and Refund	-4	-4	100%			
4200-2220	Garbage Operations				43,715	120,000	36%
4200-0003	**GARBAGE COLLECTION TOTAL**	**106,747**	**212,179**	50%	**43,715**	**120,000**	36%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
4250-0003	**LANDFILL OPERATIONS**						
4250-1500	Landfill Fees Revenue	0	0				
4250-2235	Landfill Operations				45,236	150,000	30%
4250-2400	Waste Management Plans					10,000	
4250-2600	Depn Landfill				2,013	4,255	47%
4250-0003	**LANDFILL OPERATIONS TOTAL**	**0**	**0**		**47,249**	**164,255**	29%
4200-0002	**WASTE MANAGEMENT TOTAL**	**106,747**	**212,179**	50%	**90,964**	**284,255**	32%
4300-0002	**PEST MANAGEMENT & ANIMAL CONTROL**						
4300-0003	**PLANT PEST CONTROL**						
4300-1150	Drought Assist Feral Pest Program	0	0				
4300-1200	Land Holder Contribution	0	0				
4300-1500	Com. combating drought-pest weed	0	100,000				
4300-2210	Pest Plant Chemical Subsidy		0		0	0	
4300-2220	Biodiversity Cacti Control Expenses		0		0	0	
4300-2230	WONS Weed Expenses		0		0	0	
4300-2240	TMR Weed Spray Expenses				0	0	
4300-2250	Com. combating drought-pest weed exp				63,005	100,000	63%
4300-2290	Plant Pest Control Expenses				10,902	50,000	22%
4300-0003	**PLANT PEST CONTROL TOTAL**	**0**	**100,000**		**73,907**	**150,000**	49%
4310-0003	**ANIMAL PEST CONTROL**						
4310-2205	Wild Dog Destruction Expenses				0	0	
4310-2235	Wild Dog Coordinator Expenditure				78,226	140,000	56%
4310-2250	Wild Dog Bonus Payments				8,550	25,000	34%
4310-2280	DNR Precept - Barrier Fence				0	115,000	0%
4312-1900	Syndicate Baiting Revenue	0	0		0	0	
4312-2260	Syndicate Baiting Expense				88,187	200,000	44%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
4313-1150	QLD Feral Pest Initiative SWRED	0	0		0	0	
4313-1160	Communities combating drought-fence (income)	0	900,000				
4313-2250	QLD Feral Pest Initiative SWRED				0	0	
4313-2260	Communities combating drought-fence (expense)					900,000	
4315-1010	Wild Dog Levy Revenue	0	0		0	0	
4315-2010	Wild Dog Levy Expenditure				0	0	
4310-0003	**ANIMAL PEST CONTROL TOTAL**	**0**	**900,000**	0%	**174,964**	**1,380,000**	13%
4320-0003	**STOCK ROUTES & RESERVES MANAGEMENT**						
4320-1500	Common Application Fees	1,288	1,500	86%			
4320-1550	Donation Drought Relief	0	0				
4320-1600	Mustering / Supplement Fees	1,638	2,500	66%			
4320-1700	Sale of Stock	0	1,000	0%			
4320-1800	Reserve Fees	0	0				
4320-2200	Common Fence Repairs & Firebreaks				591	25,000	2%
4320-2220	Stock Routes & Reserves Expenses				17,754	70,000	25%
4320-0003	**STOCK ROUTES & RESERVES MANAGEMENT TOTA**	**2,926**	**5,000**	59%	**18,344**	**95,000**	19%
4330-0003	**DOMESTIC ANIMAL CONTROL**						
4330-1300	Animal Write -Off	0	0				
4330-1400	Animal Discounts	-850	-1,500	57%			
4330-1500	Animal Control Fees	6,394	10,000	64%			
4330-1700	Animal Control Fines & Penalties	208	1,000	21%			
4330-2220	Animal Control Expenses				5,255	25,000	21%
4330-0003	**DOMESTIC ANIMAL CONTROL TOTAL**	**5,752**	**9,500**	61%	**5,255**	**25,000**	21%
4300-0002	**PEST MANAGEMENT & ANIMAL CONTROL TOTAL**	**8,677**	**1,014,500**	1%	**272,470**	**1,650,000**	17%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
4500-0002	**ENVIRONMENT & HEALTH**						
4510-0003	**ENVIRONMENTAL PROTECTION**						
4510-2220	Environmental Protection Expenses				5,592	30,000	19%
4510-0003	**ENVIRONMENTAL PROTECTION TOTAL**	**0**	**0**		**5,592**	**30,000**	19%
4520-0003	**HEALTH AUDITING & INSPECTION**						
4520-1400	Health Licenses & Permits Revenue	2,235	2,000	112%			
4520-2230	Health Operations				0	0	
4520-0003	**HEALTH AUDITING & INSPECTION TOTAL**	**2,235**	**2,000**	112%	**0**	**0**	
4500-0002	**ENVIRONMENT & HEALTH TOTAL**	**2,235**	**2,000**	112%	**5,592**	**30,000**	19%
4000-0001	**ENVIRONMENT & HEALTH TOTAL**	**118,340**	**1,234,679**	10%	**371,596**	**2,025,755**	18%
5000-0001	**COMMUNITY SERVICES**						
5100-0002	**COMMUNITY DEVELOPMENT**						
5120-0003	**COMMUNITY FACILITIES SWIMMING POOLS**						
5120-1210	Grant-Swimming Pool Kiosk Extension	0	0				
5120-2220	Quilpie Swimming Pool Operations				57,644	160,000	36%
5120-2330	Quilpie Swimming Pool Repairs & Mtc				19,237	45,000	43%
5120-2600	Depn Swimming Pool Structures				22,394	66,607	34%
5125-2220	Eromanga Swimming Pool Opt & Maint				8,817	25,000	35%
5125-2230	Eromanga Swimming Pool Repairs & Mtc				889	15,000	6%
5125-2600	Depn Eromanga Swimming Pool				1,696	23,796	7%
5120-0003	**COMMUNITY FACILITIES SWIMMING POOLS TOTAL**	**0**	**0**		**110,675**	**335,403**	33%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
5150-0003	**COMMUNITY FACILITIES - SHIRE HALLS**						
5150-1500	Shire Halls - Revenue	841	1,500	56%			
5150-2220	Shire Hall Operations				5,247	25,000	21%
5150-2330	Shire Halls Repairs & Maintenance				48,561	60,000	81%
5150-2331	Shire Halls - Special Maintenance				0	0	
5150-2600	Depn Shire Halls				42,002	98,532	43%
5150-0003	**COMMUNITY FACILITIES - SHIRE HALLS TOTAL**	**841**	**1,500**	56%	**95,810**	**183,532**	52%
5170-0003	**RECREATION FACILITIES**						
5170-1500	Hire Amusement Equipment Fee	0	0				
5170-2220	Recreational Facilities Operating Ex				1,127	5,000	23%
5170-2230	Recreational Facilities Repairs &Mtc				0	2,000	0%
5170-2250	All Sports Building				616	3,000	21%
5170-2330	Adavale Sport & Rec Grounds				715	3,000	24%
5170-2340	Eromanga Rodeo & Race Grounds				-870	5,000	-17%
5170-2600	Depn Recreational Facilities				19,865	37,426	53%
5170-0003	**RECREATION FACILITIES TOTAL**	**0**	**0**		**21,454**	**55,426**	39%
5180-0003	**TOWN DEVELOPMENT TOTAL**						
5180-2820	Town Development - Eromanga				6,637	40,000	17%
5180-2830	Town Development - Adavale				0	30,000	0%
5180-2840	Town Development - Toompine				0	20,000	0%
5180-0003	**TOWN DEVELOPMENT TOTAL**	**0**	**0**		**6,637**	**90,000**	7%
5190-0003	**COMMUNITY DEVELOPMENT**						
5190-1150	Community Bud Income	5,338	9,000	59%			
5190-1200	Grant-Community Celebration	-	-				
5190-2000	Community Development Wages				0	0	
5190-2100	Community Support Activities & Event				6,632	30,000	22%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
5190-2150	Buses Community Support				4,814	20,000	24%
5190-2170	Redevelopment of Old Depot Site				345	50,000	1%
5190-2320	Community Celebrations				1,378	40,000	3%
5190-2500	Council Community Grants				8,804	30,000	29%
5190-2520	Com Grant -Quilpie Kindy Operational				0	20,000	0%
5190-2530	Special Maint - Cultural Society Bld				0	60,000	
5190-2810	Community Dev - Quilpie				0		
5190-2820	Community Dev - Eromanga				0		
5190-2830	Community Dev - Adavale				0		
5190-2840	Quilpie Street Development				2,356	5,000	47%
5191-1100	Community Development Grant	0	0		0	0	
5191-1107	Works for Queensland Grant	0	0			0	
5191-1108	W4Q 2017-2019 Various	110,000	0			0	
5191-2240	Community Development Grant Exp				0		
5192-1102	Grant Community Drought Support	0	0		0	0	
5192-1103	Drought Relief Donation Community	0	0				
5192-2230	Community Drought Support Exp	0			0	0	
5195-1100	Q100 Celebration	408	300			0	
5195-2100	Q100 Celebration	0			0	0	
5196-1100	Paving Project Q100	0	0		0	0	
5197-1100	Empowering Communities Grant	0					
5197-2100	Empowering Communities Grant-Expenses				75,438	2,715	
	COMMUNITY DEVELOPMENT TOTAL	**115,746**	**9,300**	1245%	**99,767**	**257,715**	39%
5100-0002	**COMMUNITY DEVELOPMENT TOTAL**	**116,587**	**10,800**	1080%	**334,343**	**922,076**	36%
5200-0002	**AGED SERVICES**						
5220-1200	Aged Peoples Accommodation Rent	42,874	95,000	45%			
5220-2220	Aged Peoples Accommodation O&M				22,706	70,000	32%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
5220-2600	Depn Aged Accom Building				39,362	126,851	31%
5200-0002	**AGED SERVICES TOTAL**	**42,874**	**95,000**	45%	**62,069**	**196,851**	32%
5225-0002	**HOUSING**						
5225-1200	Rent - Housing	75,521	205,000	37%			
5225-2220	Housing-operating expense				0	1,500	0%
5225-2230	Housing - Repairs & Maintenance				114,290	150,000	76%
5225-2600	Depn Housing				90,231	213,961	42%
5225-0002	**HOUSING TOTAL**	**75,521**	**205,000**	37%	**204,522**	**365,461**	56%
5300-0002	**HEALTH PROMOTION & YOUTH SERVICES**						
5300-0003	**COMMUNITY HEALTH PROMOTIONS**						
5300-1100	Health Promotions Officer Grant Rev	0	125,000	0%			
5300-2000	Health Promotions Officer Wages				0	0	
5300-2020	National Dis. Ins. Scheme Officer				22,488	100,000	22%
5300-2200	Heart of Australia Bus Visit				0	20,000	0%
5300-2240	Health Promotions Officer Activities				45,020	125,000	36%
5300-0003	**COMMUNITY HEALTH PROMOTIONS TOTAL**	**0**	**125,000**	0%	**67,508**	**245,000**	28%
5320-1500	Youth Centre Revenue	0	0				
5320-2240	Youth Centre Operations				0	0	
5320-0003	**YOUTH ACTIVITY CENTRE TOTAL**	**0**	**0**		**0**	**0**	
5300-0002	**HEALTH PROMOTION & YOUTH SERVICES TOTAL**	**118,395**	**425,000**	28%	**334,099**	**807,312**	41%
5500-0002	**TOURISM**						
5510-0003	**ECONOMIC DEVELOPMENT & PROMOTION**						
5510-2000	Economic Development Staff Costs				0	0	
5510-2100	Economic Development				8,926	50,000	18%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
5510-2120	Economic Dev Training & Conferences				1,482	5,000	30%
5510-2130	Restock Opal Fossicking Area				464	15,000	3%
5510-2140	Subscriptions & Memberships				13,818	40,000	35%
5510-2150	South West Regional Economic Develop				0	0	
5510-2170	Quilpie Well Spring				0	0	
5511-1103	RADF Art & Cultural Plan Funding	0	0		33,625	200,000	17%
5511-2145	Art & Cultural Plan				0	0	
5510-0003	**ECONOMIC DEVELOPMENT & PROMOTION TOTAL**	**0**	**0**		**58,315**	**310,000**	19%
5520-0003	**VISITOR INFORMATION CENTRE**						
5520-1500	Visitors Info Centre Sales	4,246	5,000	85%			
5520-1510	VIC Gallery Sales (GST Free)	2,812	100	2812%			
5520-1515	VIC Gallery Sales (GST)	0	0				
5520-1520	Visitors Information Centre Donation	618	400	155%			
5520-1530	Bus Tour Fees	0	400	0%			
5520-2000	VIC - Wages				115,268	215,000	54%
5520-2110	VIC - Exhibitions & Events				2,021	1,500	135%
5520-2120	VIC - Brochures & Advertising				15,531	50,000	31%
5520-2130	VIC - Bus Tour				0	0	
5520-2220	VIC Operating Expenses				17,686	50,000	35%
5520-2230	VIC - Repairs & Maintenance				1,984	5,000	40%
5520-2510	Artist Payments - Sales (GST Excl)				0	0	
5520-2515	Artist Payments - Sales (GST Incl)				0	0	
5520-2600	Depn VIC				16,262	8,048	202%
5521-1500	VIC Outback Mates Sales	-490	-1,000	49%			
5521-2000	VIV Outback Mates Payments				22	22	100%
5522-1500	VIC - Hell Hole Gorge Pass	486	1,000	49%	0	0	
5523-1500	WIFI - Top-Up Revenue	0	0				
5520-0003	**VISITOR INFORMATION CENTRE TOTAL**	**7,673**	**5,900**	130%	**168,774**	**329,570**	51%
5530-0003	**TOURISM EVENTS & ATTRACTIONS**						

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
5530-2100	Major Events Promotion Expense				8,224	15,000	55%
5530-2300	OQTA Events Promotion				0	0	
5531-1200	Tourism Events Fund Raising	0	0				
5531-2200	Tourism Events Expenses				2,889	20,000	14%
5530-0003	**TOURISM EVENTS & ATTRACTIONS TOTAL**	**0**	**0**		**11,113**	**35,000**	32%
5500-0002	**TOURISM TOTAL**	**7,673**	**5,900**	130%	**238,202**	**674,570**	35%
5600-0002	**ARTS & CULTURE**						
5610-0003	**Museums**						
5610-1160	DCP - JWPARK	15000	0				
5610-1170	DCP - ROADWORKS	275000	0				
5610-1180	DCP Exclusion Fence	50000	0				
5610-1200	Grant - Eromanga Nat History Museum	0	600000				
5610-1210	Grant - Eromanga Nat History Museum-BBRF		2200000				
5610-2220	Eromanga Living History Museum O&M		0		3,168	7,000	45%
5610-2230	Museum Operations & Maintenance				0	1,250	0%
5610-2240	Powerhouse Museum Operations				900	2,500	36%
5610-2260	Eromanga Natural History Museum				2,550	20,000	13%
5610-2250	Museums Military History				472	8,000	6%
5610-2600	Depn Museum				19,882	47,578	42%
5610-0003	**Museums TOTAL**	**340,000**	**2,800,000**	12%	**26,972**	**86,328**	31%
5630-0003	**REGIONAL ARTS DEVELOPMENT FUNDING**						
5630-1100	RADF Grant Revenue	30,000	20,000	150%			
5630-1400	RADF Earnback and Refunds	0	0				
5630-2180	RADF Grant Expenditure				1,748	30,000	6%
5630-2200	RADF Meeting and Admin Costs				0	0	
5630-0003	**REGIONAL ARTS DEVELOPMENT FUNDING TOTAL**	**30,000**	**20,000**	150%	**1,748**	**30,000**	6%

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
5600-0002	**ARTS & CULTURE TOTAL**	**370,000**	**2,820,000**	13%	**28,720**	**116,328**	25%
5700-0002	**LIBRARY SERVICES**						
5710-1100	Libraries Operating Grant Revenue	670	1,000	67%			
5710-1120	First Five Grant -Library	1,062	1,000	106%			
5710-1600	Library Fees & Charges Revenue	27	500	5%			
5710-2120	First Five Grant -Library-Exps				886	1,000	89%
5710-1995	Miscellaneous Income -GST Free	0			0	0	
5710-2220	Library Operating Expenses	0			71,744	160,000	45%
5710-2330	Library Repairs & Maintenance Expens	0			0	4,000	0%
5710-2600	Depn Library	0			10,904	26,076	42%
5711-1130	Grant Centrelink Access Point	5,104	5,000	102%			
5711-2240	Centrelink Access Point	0			0	0	
5712-2250	Opal Technology Trendsetters	0			0	0	
5713-2230	Broadband for Seniors Exp		0		0	0	
5714-1120	SLQ - Tech Savvy Regional Grant	0	0				
5714-2220	SLQ - Tech Savvy Regional Grant Exps				0	0	
5700-0002	**LIBRARY SERVICES TOTAL**	**6,863**	**7,500**	92%	**83,534**	**191,076**	44%
5750-0002	**DISASTER MANAGEMENT SERVICES**						
5750-1100	Grant - Get Ready Queensland	0	6,100	0%			
5750-2020	Get Ready Qld Exp				0	6,100	0%
5750-2220	Disaster Management Operations				311	2,000	16%
5750-0002	**DISASTER MANAGEMENT SERVICES TOTAL**	**0**	**6,100**	0%	**311**	**8,100**	4%
5800-0002	**PUBLIC SERVICES**						
5810-0003	**STATE EMERGENCY SERVICES**						
5810-1140	QLD Emergency Services Grant Revenue	0	19,000	0%			
5810-1160	NDRP Flood Warning System Grant	0	150,000				
5810-1180	DVA-A Memorial to Soldier-4AHKPJCO	0	65,000				

		2019 Actual	Amend 19/20		2019 Actual	Amend 19/20	
5810-2220	Emergency Services Operations	0	0		10,432	30,000	35%
5810-2600	Depn S.E.S	0			5,825	4,391	133%
5810-0003	**STATE EMERGENCY SERVICES TOTAL**	**0**	**234,000**	0%	**16,257**	**34,391**	47%
5820-0003	**TELEVISION**						
5820-2220	Satellite TV Operations				0	0	
5820-2230	TV Maintenance & Repairs				55,729	54,700	102%
5820-2600	Depn Satellite TV				9,680	23,157	42%
5820-0003	**TELEVISION TOTAL**	**0**	**0**		**65,410**	**77,857**	84%
5830-0003	**CEMETERIES**						
5830-1500	Burial Fees	139	2,000	7%			
5830-1510	Grave Reservation Fee	0	0				
5830-2220	Cemeteries Operations				9,946	25,000	40%
5830-2230	Cemeteries Maintenance				0	2,500	0%
5830-2600	Depn Cemeteries Building				578	1,384	42%
5830-0003	**CEMETERIES TOTAL**	**139**	**2,000**	7%	**10,524**	**28,884**	36%
5800-0002	**PUBLIC SERVICES TOTAL**	**139**	**236,000**	0%	**176,035**	**340,308**	52%
5000-0001	**COMMUNITY SERVICES TOTAL**	**619,658**	**3,511,300**	18%	**1,111,399**	**2,860,594**	39%
	TOTAL REVENUE AND EXPENDITURE	**7,870,443**	**24,382,977**	32%	**7,751,960**	**24,394,816**	32%
	PROFIT/(LOSS)	**118,483**	**-11,840**	25%			

Balance Sheet

For the month ending 30 November 2019 (42% of year elapsed)

		Open		Change			Closing		
		Actual	Budget	Actual	Budget	Var%	Actual	Budget	Var%
0100-0002	CURRENT ASSETS								
0100-3000	Cash at Bank	2,914,575	987,928	647,091	-202,604	-319%	3,561,666	2,711,971	131%
0100-3010	Cash on Hand	300	300	0	0		300	300	100%
0100-3020	NAB Cash Maximiser	3,549,885	1,274,115	1,501,623	1,453,154	103%	5,051,509	5,003,039	101%
0100-3030	Investments	18,180,579	16,768,693	142,680	-4,229,258	-3%	18,323,259	13,951,321	131%
0100-3100	Accounts Receivable - Debtors	1,031,197	3,370,632	-329,718	0		701,480	3,370,632	21%
0100-3101	Adjustment - Acc Receivable Debtors	0	0	0	0		0	0	
0100-3105	Provision for Doubtful Debts	359	-812	0	0		359	-812	-44%
0100-3110	Accrued Revenue	40,339	2,877	-40,091	0		248	2,877	9%
0100-3120	Interest Receivable	0	0	0	0		0	0	
0100-3121	GST Receivable	0	0	0	0		0	0	
0100-3150	Accounts Receivable - Rates	409,474	125,243	369,396	0		778,870	125,243	622%
0100-3151	Adjustment - Acc Receivable Rates	0	0	0	0		0	0	
0100-3170	Government Pensioner Subsidy	127	50	2,739	0		2,866	50	
0100-3200	Pre-paid Expenses	0	74,852	0	0		0	74,852	0%
0100-3400	Stores Stock on Hand	369,267	365,838	192,904	0		562,172	365,838	154%
0100-3410	Manufactured Stores Stock on Hand	0	0	0	0		0	0	
0100-3500	Animals Receivables	1,901	230	2,187	0		4,088	230	1777%
2310-3000	Bowls Club Loan Current	0	0	0	0		0	0	
0100-0002	**CURRENT ASSETS TOTAL**	**26,498,004**	**22,969,946**	**2,488,812**	**-2,978,708**	-84%	**28,986,815**	**25,605,541**	113%
0200-0002	NON-CURRENT ASSETS								
0200-4000	Airports	4,455,014	761,160	0	0		4,455,014	761,160	585%
0200-4100	Airports Accum Depn	-529,669	-349,948	0	-10,202		-529,669	-360,150	147%
0200-4500	WIP Airports	436,464	0	0	0		436,464	0	
0210-4000	Land & Land Improvements	3,069,196	3,017,974	0	195,000		3,069,196	3,212,974	96%
0210-4020	Land & Land Improvements-Transfer	-928,667	0	0	0		-928,667		

		Open		Change			Closing		
		Actual	Budget	Actual	Budget	Var%	Actual	Budget	Var%
0210-4100	Land Improvements Accum Depn	0	0	0	0		0	0	
0210-4200	Land Sales Account	0	278,857	0	0		0	0	
0210-4500	WIP Land Improvements	35,575,931	38,232,575	0	4,448,000		35,575,931	278,857	12758%
0220-4000	Buildings & Other Structures	2,290,172	1,448,968	0	0		2,290,172	42,680,575	5%
0220-4010	Building Revaluation adj	4,981,377	0	0	0		4,981,377	1,448,968	344%
0220-4020	Buildings & Other Structures-transfer	-23,058,710	-12,538,213	-537,491	-544,098		-23,596,201		
0220-4100	Buildings & Structures Accum Depn	8,225,071	0	0	0		8,225,071	-13,082,311	-63%
0220-4110	Accum. Depc'n Reval Bldg & Structure	0	0	0	0		0		
0220-4200	WIP Building Sales Account	1,387,184	660,896	0 321,737	0		1,708,921	0	
0220-4500	WIP Buildings & Structures	5,500,691	4,541,454	0	1,222,000		5,500,691	577,809	952%
0230-4000	Other Assets	-3,035,397	13,179	0	0		-3,035,397	5,763,454	-53%
0230-4010	Other Revaluation Adj	-738,983	-1,132,515	0	0		-738,983	13,179	-5607%
0230-4020	Other Assets-transfer	-619,806	-2,305,439	-35,234	-194,115		-655,040	-1,132,515	58%
0230-4100	Other Assets Accum Depn	0	0	0	0		0	-2,499,554	0%
0230-4500	WIP Other Assets	1,275,213	1,098,166	406,221	145,949		1,681,435	1,244,115	135%
0240-4000	Plant & Equipment	9,724,293	11,610,661	378,447	1,372,700		10,102,740	12,983,361	78%
0240-4100	Plant & Equipment Accum Depn	-4,688,354	-5,065,613	-104,389	-476,425		-4,792,743	-5,542,038	86%
0240-4101	Plant & Equipment Accum Depn	18,088	0	0	0		18,088	0	
0240-4110	Plant Reval Adjustment	0	0	0	0		0	0	
0240-4500	WIP Plant & Equipment Purchases	0	0	14,781	0		14,781	0	
0250-4000	Furniture & Office Equipment	497,511	539,442	0	50,000		497,511	589,442	84%
0250-4020	Furniture & Office Equipment-transfer	150,575	0	0	0		150,575		
0250-4100	Furniture & O/Equip Accum Depn	-303,725	-308,723	-8,909	-29,752		-312,633	-338,475	92%
0250-4500	WIP Furniture & O/Equipment	0	0	0	0		0	0	
0260-4000	Road Infrastructure	174,041,615	174,816,439	0	1,280,000		174,041,615	176,096,439	99%
0260-4010	Roads reval adjust	21,587,248	11,912,580	0	0		21,587,248	11,912,580	181%
0260-4100	Road Infrastructure Accum Depn	-48,521,811	-56,671,642	-2,056,511	-3,748,997		-50,578,322	-60,420,639	84%
0260-4110	Roads revaluation adjust	0	4,314,751	0	0		0	4,314,751	0%
0260-4500	WIP Road Infrastructure	752,312	350,000	49,194	0		801,506	350,000	229%

		Open		Change			Closing		
		Actual	Budget	Actual	Budget	Var%	Actual	Budget	Var%
0270-4000	Water Infrastructure	6,276,256	7,649,634	0	1,448,500		6,276,256	9,098,134	69%
0270-4010	Water Revaluation Adj	5,197,093	104,884	0	0		5,197,093	104,884	4955%
0270-4100	Water Infrastruct Accum Depn	-4,004,294	-2,828,238	-91,852	-77,369		-4,096,146	-2,905,607	141%
0270-4500	WIP Water Infrastructure	979,535	65,879	65,144	0		1,044,679	65,879	1586%
0280-4000	Sewerage Infrastructure	7,300,431	4,498,817	0	20,000		7,300,431	4,518,817	162%
0280-4010	Sewer Revaluation Adj	69,425	69,425	0	0		69,425	69,425	100%
0280-4100	Sewerage Accum Depn	-2,640,935	-1,370,143	-51,354	-41,040		-2,692,289	-1,411,183	191%
0280-4500	WIP Sewerage Infrastructure	84,317	16,600	0	-8,131		84,317	8,469	996%
2310-4000	Bowls Club Loan Non Current	54,174	56,250	0	-3,826		54,174	52,424	103%
2320-4000	Mulga Mates Centre			27,274			27,274		
2330-4000	Gum Membership Program 80%			37			37		
0200-0002	**NON-CURRENT ASSETS TOTAL**	**204,858,835**	**183,488,117**	**-1,622,905**	**5,048,194**	-32%	**203,235,930**	**188,453,224**	108%
	TOTAL ASSETS	**231,356,839**	**206,458,063**	**865,907**	**2,069,486**		**232,222,745**	**214,058,765**	108%
0300-0002	**CURRENT LIABILITIES**								
0300-5100	Accounts Payable - Creditors	0	163,530	181,011			181,011	163,530	111%
0300-5105	Contract Payable - Grants			729,802			729,802		
0300-5110	Accrued Expenses	341,973	429,317	-341,973	0		0	429,317	0%
0300-5130	Accrued TOIL	-3,983	6,681	988	0		-2,994	6,681	-45%
0300-5140	Banked RDO's	6,216	10,104	3,871	0		10,087	10,104	100%
0300-5160	Fire Service Levy Payable	12,656	7,199	41,244	0		53,900	7,199	749%
0300-5200	Prepaid Revenue	0	0	0	0		0	0	
0300-5300	GST Suspense	-17,820	153,467	-2,368	0		-20,188	153,467	-13%
0300-5310	PAYG Suspense	0	0	0	0		0	0	
0300-5400	Payroll Suspense	0	0	-9,329	0		-9,329	0	
0300-5410	Advance Pay Suspense	0	0	0	0		0	0	
0300-5420	Telstra Business Systems	-3,198	-3,198	0	0		-3,198	-3,198	100%
0300-5450	Dishonoured Cheques Susp. (Rates)	-2	-2	0	0		-2	-2	
0300-5460	Debtors/Rates/Animal Refund Susp.	0	1,313	0	0		0	1,313	0%

		Open		Change			Closing		
		Actual	Budget	Actual	Budget	Var%	Actual	Budget	Var%
0300-5470	Dishonoured Cheques - Animals	0	0	0	0		0	0	
0300-5475	Staff Fundraiser Exps	0		-1,705			-1,705		
0300-5480	Suspense - Trust Fund	0	0	1,870	0		1,870	0	
0300-5490	General Suspense	0	28,892	0	0		0	28,892	
0300-5491	Drought Vouchers	0	0	0	0		0	0	
0300-5495	SWRRG Suspense Account	-36,467	-21,528	2,619	0		-33,848	-21,528	
0300-5500	Provision for LSL - Current	403,837	507,716	21,760	0		425,596	507,716	84%
0300-5510	Provision for Annual Leave - Current	516,709	414,682	119,634	0		636,343	414,682	153%
0300-0002	**CURRENT LIABILITIES TOTAL**	**1,219,920**	**1,698,173**	**747,426**	**0**		**1,967,346**	**1,698,173**	116%
0400-0002	**NON-CURRENT LIABILITIES**								
0400-6500	Provision for LSL - Non-current	175,883	44,908	0	0		175,883	44,908	392%
0400-0002	**NON-CURRENT LIABILITIES TOTAL**	**175,883**	**44,908**	**0**	**0**		**175,883**	**44,908**	392%
	TOTAL LIABILITIES	**1,395,803**	**1,743,081**	**747,426**	**0**		**2,143,228**	**1,743,081**	123%
	NETT ASSETS/(LIABILITIES)	**229,961,033**	**204,714,982**	**118,482**	**2,069,486**	**6%**	**230,079,514**	**212,315,684**	**108%**
0500-0002	**EQUITY**								
0500-7000	Shire Capital	75,540,157	83,677,273	0	3,416,558	0%	75,540,157	91,132,027	83%
0500-7100	Accumulated Surplus	19,520,345	12,313,687	0	0		19,520,345	12,313,687	159%
0500-7150	Operating Surplus	0	-157,788	118,482	11,839	1001%	118,482	-11,839	-1001%
0500-7200	Asset Revaluation Reserve	132,405,068	107,745,258	0	0		132,405,068	107,745,258	123%
0500-7420	Approp Revaluation			0			0		
0-7500	RES Grants in advance	2,495,462	2,495,462	0	0		2,495,462	2,495,462	
0550-7440	Approp Capital Grants	0	-1,358,911	0	-1,358,911		0	-1,358,911	
0500-0002	**EQUITY TOTAL**	**229,961,033**	**204,714,982**	**118,482**	**2,069,486**	6%	**230,079,514**	**212,315,684**	108%

14 GOVERNANCE

14.1 (12/19) – Works for Queensland Program Feedback

IX: 188452

Author: Chief Executive Officer, Dave Burges

PURPOSE:

The purpose of this report is for Council to provide feedback to the State Government on the Works for Queensland (W4Q) program.

POLICY/LEGISLATION:

Not applicable

CORPORATE PLAN:

Not applicable

RECOMMENDATION:

For discussion

BACKGROUND:

By letter of 19 November 2019, the Hon Annastacia Palaszczuk MP, Premier of Queensland and Minister for Trade; and the Hon Stirling Hinchliffe MP, Minister for Local Government, Minister for Racing and Minister for Multicultural Affairs, are requesting feedback on the State Government's *Works for Queensland* Program.

DISCUSSION:

A copy of the inwards correspondence is provided as ***Attachment A***.

Some comments in relation to the program from a staff persepective are provided as follows:

Program Objective:

The primary objective of the 2019-21 W4Q program is to support eligible Councils undertake jobcreating and/or job sustaining maintenance and minor infrastructure projects relating to assets owned or controlled by Councils.

As a secondary objective of the 2019-21 W4Q, eligible Councils are encouraged to provide employment opportunities for young (15-24 years) people who are currently not in employment, education or training (NEET).

The program objectives are still relevant.

Unless Council directly employs additional people for projects it is difficult to target the secondary objective of providing employment opportunities for young people. A suggestion may be to allow a very small percentage of the allocation to be used for engaging with young people, developing youth champions or providing young people with assistance (mentoring, tutoring etc) to assit them in gaining employment.

Program Administration:

The administrative burden on Council is relatively modest.

The rolling two year program is advantageous for improved planning and delivery.

Funding Allocation:

The funding allocation is based on a minimum amount of $1.0M and a formula using population and unemployment statistics.

The highest five allocations under the current 2019/21 $200M program are shown below. Quilpie Shire Council's allocation is $1,090,000.

- Townsville City Council $24,500,000
- Cairns Regional Council $$14,450,000
- Fraser Coast Regional Council $13,650,000
- Bundaberg Regional Council $11,610,000
- Mackay Regional Council $9,980,000

This equotes to over 37% of the entire program allocation going to 5 councils, reopresenting 7.7% in terms of the number of Councils.

Of the total eligible councils numbering 65; 39 are allocated less than $2M; 31 are allocated less than $1.5M and 21 are allocated less than or equal to $1.2M.

This results in a massive part of the state that is struggling with sustainability due to very low rates bases not receiving much of the total funding pool.

The funding allocation also does not address unemployment on a percentage basis satisfactorily. Council's current unem[ployment rate is 10.09%[1].

In relation to the original once-off program, the formula may have had merit. However disproportionate allocations such as is currently the case appear to be inequitable for an on-going program.

Eligibility Requirements:

Project eligibility requirements are quite broad and are considered reasonable.

Reporting and Acquittal:

Reporting and acquittal requirements are pragmatic.

Variations:

Councils can vary the amounts between endorsed projects and submit requests for consideration for new projects (with the overall approved funding allocation unchanged). In the writer's experience this process has taken an inordinate length of time to process.

FINANCIAL:

Not applicable

[1] Source: Australian Bureau of Statistics, Labour force survey catalogue number 6202.0, and Department of Employment, Small Area Labour Markets, December 2018. Compiled and presented in economy.id

CONSULTATION:

Not applicable

ATTACHMENTS:

Attachment A: Inwards Correspondence

Premier of Queensland
Minister for Trade

For reply please quote: *ECP/KN – TF/19/11550 – DOC/19/208507 – WR19/38534*

1 William Street Brisbane
PO Box 15185 City East
Queensland 4002 Australia
Telephone +61 7 3719 7000
Email ThePremier@premiers.qld.gov.au
Website www.thepremier.qld.gov.au

19 November 2019

Councillor Stuart Mackenzie
Mayor
Quilpie Shire Council
mayor@quilpie.qld.gov.au

Dear Councillor Mackenzie

We are writing to you about enhancing the Palaszczuk Government's $600 million Works for Queensland (W4Q) Program.

Queensland's Councils have enthusiastically supported W4Q across its first three funding rounds and by July 2021 it is expected that W4Q will have supported, sustained or created more than 21,000 jobs and delivered more than 1800 projects across regional Queensland. This is a fantastic achievement and makes W4Q a great example of two levels of government working together to deliver outcomes for local communities. It is also why your views on the future of W4Q are so important.

The Queensland Government is now seeking input from Councils about the future of W4Q and how it can best support local communities experiencing high unemployment beyond the 2019-21 funding round. Feedback from Councils will be critical in planning the future of W4Q.

We are interested in your Council's views on all elements of the program, including eligibility requirements, program objectives, project scope criteria and program administration. For example, ways that W4Q could not only meet the State's primary objective of stimulating local jobs, but also be utilised to assist with funding strategic infrastructure, such as water and wastewater infrastructure, including works for water security, drought measures and roads.

In particular, your advice about the communities within your local government area that are experiencing high unemployment and would benefit from consideration for possible inclusion in future rounds of W4Q would be appreciated.

Feedback is requested by 19 December 2019, with a copy of your response also provided to the W4Q email at worksforqueensland@dlgrma.qld.gov.au.

The Department of Local Government, Racing and Multicultural Affairs, as the agency with responsibility for administering W4Q on the Queensland Government's behalf, will coordinate the review of Council feedback.

Further information about W4Q is available on the Department of Local Government, Racing and Multicultural Affairs' website at www.dlgrma.qld.gov.au, and click on (1) 'Local government', (2) 'Grants and subsidies', (3) 'Current programs' and then (4) '2019–21 Works for Queensland Program (W4Q)'.

If you require any further information, please contact Ms Kate Adams, Chief of Staff in Minister Hinchliffe's office on telephone (07) 3719 7560.

Yours sincerely

ANNASTACIA PALASZCZUK MP
PREMIER OF QUEENSLAND
MINISTER FOR TRADE

STIRLING HINCHLIFFE MP
Minister for Local Government,
Minister for Racing and
Minister for Multicultural Affairs

14.2 (12/19) – Request for Memorial – Francis Minnett

IX: 188698

Author: Chief Executive Officer, Dave Burges

PURPOSE:

The purpose of this report is for Council to consider a request from Noel Minnett to provide a memorial to the late Francis (Frankie) Minnett.

POLICY/LEGISLATION:

Not applicable

CORPORATE PLAN:

Not applicable

RECOMMENDATION:

That Council consider the request from Noel Minnett to have a memorial to the late Francis Minnett at John Waugh Park in Quilpie.

BACKGROUND:

By letter of 11 November 2019, Mr Noel Minnett has requested Council consider a memorial to the late Francis (Frankie) Minnett.

A copy of the request is provided as ***Attachment A***.

DISCUSSION:

Refer to attachment.

FINANCIAL:

No allocation has been made in the 2019/20 budget.

CONSULTATION:

No consultation has been undertake to date.

ATTACHMENTS:

Attachment A: Inwards Correspondence

11th November 2019

QUILPIE SHIRE COUNCIL
13 NOV 2019

	ACTION	INFO
MAYOR	☐	☐
CRS	☐	☐
CEO	☑	☐
Managers -		
Corporate	☐	☐
Community	☐	☐
Engineering	☐	☐
Finance	☐	☐
	☐	☐
	☐	☐
	☐	☐

N Minnett
12 East Street
CHARLEVILLE QLD 4470
Email: noelminnett@gmail.com

Dave Burgess C.E.O
Quilpie Shire Council

Re: Next Council Meeting

Dear Sir,

Councillors, please find enclosed an Obituary printed by the Western Times, in remembrance of our late brother Francis Minnett, better known as "Frankie" who passed away tragically back in 1963 after being a passenger in a car on the way to a football match held in Charleville.

Frankie lost his life at the prime age of 22 while representing his beloved Quilpie team during the football season. He had become a star member of the team, playing as a winger.

The reason for this letter is to ask the council for some form of recognition to be given to Francis for his remarkable dedication to the Quilpie Rugby League Community and his finest commitment as a player. He was a very popular young man both on and off the playing field, even to the extent of often playing while injured. We are sure the residents of Quilpie and district would applaud such a tribute.

Our family request would be to have his name added to a structure at the newly completed oval as a tribute. If there is something available like the "Frankie Minnett Stand", "The Frankie Minnett Memorial Oval", "The Frankie Minnett Hill", this would be truly memorable and our family would be truly grateful.

There are players who played the game, but Frankie and Peter Nicholson lost their lives doing what they loved best, playing football.

In one of my memories of Frankie when I was young, I saw him come off the field in Quilpie during an A Grade match with a dislocated shoulder. He walked over to the Bowling Club fence because the doctor was playing bowls, the doctor jumped the netting fence and put his shoulder back in, Frankie could have played on, I didn't see the rest of the game, but some memories you never forget.

We as a family, hope you and the council will give our request great consideration.

Thank you for your time.

.....

Noel Minnett
On behalf of The Minnett Family

FRANCIS CHARLES MINNETT

1941 - 1963

OBITUARY

It was with great sorrow that the residents of Quilpie and district heard of the death of Frank Minnett as the result of a car accident on the Quilpie/Charleville Road on 18th May. Frank died in Quilpie Hospital on Monday, 3rd June, without regaining consciousness.

Frances Charles Minnett, aged 22, was born in Quilpie and was the son of Mr. and Mrs. Frank Minnett Snr. He attended the Convent School in Quilpie and excelled at athletics throughout his life.

During 1955/56 he was a student at Nudgee College and sat for Junior in 1956. Whilst at Nudgee he won many penants for athletics and was a member of the Cadet Corps.

He repped for Nudgee in the G.P.S. Sports and excelled as a sprinter. After school he went into business with his father in the firm of Minnett Earth Movers ty. Ltd and later in the family butchery business.

He was one of the most popular young men in Quilpie and a star member of the football team, playing as a winger. He had played for Quilpie every season since leaving school. No one loved the game more than Frank and he was so keen he often played on though injured.

In what proved to be his last game (against Railways of Charleville) he went on the field with his wrist strapped in plaster and played throughout the match with the disability of a bone injury.

This season he was spoken of as the best winger in the South-Western premiership.

A sorrowing family, Mr. and Mrs. F. Minnett, sisters Patricia (Poppy), and Beverley, and brothers Michael, Noel and Robert, mourn his passing.

The sympathy of all is extended to them in their sad loss.

Treasured memories are ours to keep.
Always remembered.....

Strategic / Decision Report

Governance Department

14.3 (12/19) - Request for Assistance – Eromanga Natural History Museum

IX:	188499

Author: CEO, Dave Burges

PURPOSE:

The purpose of this report is for Council to consider a request for assistance from the Eromanga Natural History Museum.

POLICY/LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

CORPORATE PLAN:

6.2.6 Provide community and local organisations with access to grants and funding for community events and celebrations

RECOMMENDATION:

That Council approve / not approve the request for assistance to the value of $10,000 from the Eromanga Natural History Museum for additional development of their website ($5,000) and to update the business case for future stages of development ($5,000) with the funds to be sourced from the Eromanga Community Development Fund.

BACKGROUND:

By letter received 08 November 2019, the Eromanga Natural History Museum is requesting assistance from Council to undertake additional development of their website and to update their business case.

A copy of the correspondence is provided in ***Attachment A.***

DISCUSSION:

In 2018 the ENHM advised that their current website platform was going to no longer exist by early 2020 and as such they were required to develop a new website.

Council approved funding of $10,000 in November 2018 for this new website.

The Eromanga District Community Association (EDCA), have recently advised that they would like to implement a Town Beautification and Development Plan. They believe this will reduce the conflicts around funds within the community and help Council understand the scope of projects and potentially make them shovel ready. EDCA have expressed a desire to work with Council to create this plan. This matter was discussed at their meeting of 28 November 2019 and will be the subject of a separate report.

FINANCIAL:

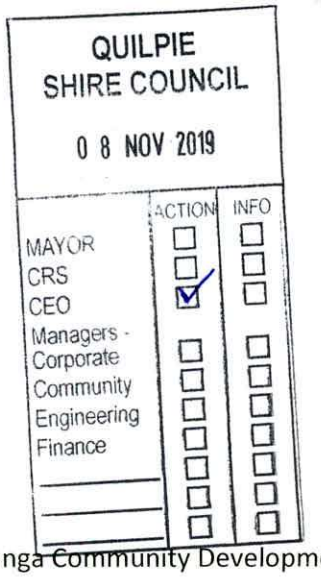
Council has made a provision of $40,000 in the 2019-20 budget for unspecified community projects in Eromanga. At the time writing this report, $6637 of these funds had been expended on the Eromanga common/cemetery fence project.

CONSULTATION:

Not applicable

ATTACHMENTS:

Attachment A: Inwards correspondence



Mr Dave Burgess,
CEO Quilpie Shire Council
50 Brolga Street, Quilpie,
QLD, 4480

Dear Dave,

I am writing this letter to request the allocation of funds from the Eromanga Community Development Fund for the Eromanga Natural History Museum. As you are aware in the past, we have used the funds to better not only our facility but also the wider community. This is observed through the making of a more engaging experience which results in increased visitation to our region and other businesses in Eromanga.

This year, we are continuing to develop and finalise several projects that are currently under development. To complete them, we require additional funding. We request in total $10,000 to be used for assistance with the completion of the following projects:

Eromanga Website Redevelopment - $5,000.00

As the only business in Eromanga with a Website, we believe that many people look to the site for guidance of the local region. As a result, we have included local attractions and have dedicated an entire page to arrive successfully in Eromanga and throughout the Quilpie Shire and SWQ. However, to complete not only this section of the website but also graphics, imagery and mapping, we require financial assistance. The $5,000.00, will create graphics, imagery and mapping, these resources will also be used throughout the museum and future stages.

Business Case Update - $5,000.00

We are now preparing ourselves for the next stage of development, and as a result, our current business case and its projections are now outdated as this is a vital asset for direction for the business, we require it to be updated as the museum grows. It is now due, and we are requesting the use of $5,000.00, which is based on the cost for the previous update.

I appreciate you taking the time to review our request, and if you require any additional information, please do not hesitate to contact me at the museum on 07 4656 4967.

Kindest regards

Corey Richards
Operations and Marketing
Eromanga Natural History Museum
Corey.richards@enhm.com.au | 0746564967

14.4 (12/19) – Drought Community Program - Extension

IX: 188450

Author: Chief Executive Officer, Dave Burges

PURPOSE:

The purpose of this report is for Council to allocate the recently announced Drought Community Programme – Extension. Council's allocation is $1M.

POLICY/LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

CORPORATE PLAN:

Not applicable

RECOMMENDATION:

That Council allocate projects to the value of $1M under the Drought Community Programme – Extension.

BACKGROUND:

On 07 November 2019 the Australian Government committed to provide an additional $1 million each to 122 drought-affected councils and shires under the Drought Community Programme – Extension. The government also committed $1 million each to new drought-affected councils and shires. These measures are designed to provide an immediate economic stimulus to drought-affected communities by investing in projects that support jobs and business income.

Quilpie Shire Council is included as one of the councils announced.

DISCUSSION:

The programme guidleines have not been updated for this latest round of funding however Council is familiar with previous guidelines.

Some Frequently Asked Questions (FAQs) are provided in ***Attachment A***.

FINANCIAL:

No allocation has been made in the 2019/20 budget.

As the works have to be completed in calendar year 2020 a budget amendment will be required with the balance allocated in the 2020/21 budget.

CONSULTATION:

No consultation has been undertake to date.

ATTACHMENTS:

Attachment A: Frequently Asked Questions (FAQs)

Drought Communities Programme - Extension

WHAT TYPES OF LOCAL COMMUNITY INFRASTRUCTURE/FACILITIES/SPACES WILL THE PROGRAMME SUPPORT?

Examples of local community infrastructure/facilities/spaces include:

- bike paths
- skate parks
- foot paths
- streetscapes
- community centres
- health centres
- recreational facilities
- parks
- sporting facilities
- stadiums, arenas
- libraries
- showgrounds
- caravan parks
- men's sheds
- roads.

This list is not exhaustive.

WHAT TYPES OF PROJECTS COULD BE UNDERTAKEN AT THESE LOCAL COMMUNITY INFRASTRUCTURE/FACILITIES/SPACES?

Example activities to repair, maintain, upgrade, construct and fit-out local community infrastructure/facilities/spaces include:

- lighting upgrades or new lighting
- fencing - around facilities, swimming pools
- solar panels
- drainage and watering systems
- amenities - drinking fountains, BBQs areas, park furniture, shelters, footpath renewal
- sport and recreational facilities - tennis courts, gymnasiums, scoreboards, medical equipment, golf clubs
- kitchen upgrades and/or repairs
- power connections at caravan sites
- improved disability access
- purchase of equipment - computers, televisions, furniture, fixture and fittings
- purchase of vehicles and trailers for community transport services, surf lifesaving, medical
- purchase of equipment for local State Emergency Service
- foot path renewal and beautification.

This list is not exhaustive.

Projects are expected to lead to the employment of locals.

WHAT TYPES OF COMMUNITY EVENTS ARE SUPPORTED UNDER THE PROGRAMME?

A community event brings the community together in some way. For this programme the emphasis is around how locals will benefit from the event especially through employment opportunities and supporting mental health.

CAN AN ELIGIBLE COUNCIL WORK TOGETHER WITH ANOTHER ELIGIBLE COUNCIL TO COMPLETE A PROJECT?

Yes. Provided both councils are eligible for the program. Each council would submit a separate application and reference the other council/s in their application. A project could be undertaken in partnership where each council would specify in their application their role in the project and their requested funding. If successful, each council would be contracted separately and required to report on their project.

The guidelines do not allow for joint applications (i.e. one application from multiple councils).

ARE COUNCILS REQUIRED TO FOLLOW STANDARD TENDERING AND PROCUREMENT PROCESSES?

Yes. Councils are required to be compliant with all relevant laws and regulations under this programme.

If the project requires a tender process to be completed, councils must adhere to that process. The timing available for the programme may restrict the types of projects that can be submitted.

CAN COUNCILS REPLENISH WATER TANKS ON PRIVATE PROPERTIES FOR HUMAN CONSUMPTION?

No. Projects under this program are to provide relief and benefits to the wider community, not just individuals. Councils seeking funding for water carting or other water related projects would need to devise a strategy to allow the whole community to benefit - for example, a plan to allow a group of community members to replenish their water tanks.

CAN COUNCILS ESTABLISH NEW AND/OR EXPAND BORE HOLES ON PUBLIC PROPERTIES?

Yes. This activity would be considered eligible. The bores holes would provide a benefit to the local community and locals/contractors can be employment and equipment sourced from local businesses to complete the work. An example would be the construction of a new bore water hole for the local park's amenities block.

CAN COUNCILS USE THE GRANT FUNDING TO REFURBISH AND/OR REVAMP SHOP FRONTS LOCATED IN THE MAIN TOWN CENTRE WITH THE WORK BEING CARRIED OUT BY LOCAL WORKERS?

Yes. This would be eligible. This project would lead to the employment of local people in the area and could encourage more visitors to the town to contribute to the economic activity of the region.

14.5 (12/19) – Council Meeting Dates 2020

IX: 188777

Author: Senior Administration Officer, Nina Burges

PURPOSE:

The purpose of the report is to provide Council with an opportunity to set proposed meeting dates for Ordinary Council meetings in 2020.

POLICY/LEGISLATION:

Local Government Regulation 2012

CORPORATE PLAN:

1.2.2 Maintain a high standard governance framework that supports Council in compliance with legislation.

RECOMMENDATION:

That Council confirm the day and times of Ordinary Meetings of Council for January to December 2020, and advertise accordingly.

BACKGROUND:

Section 277 of the *Local Government Regulation 2012* (*the Regulation*) stipulates how and when Councils must publish a notice of the days and times of Ordinary meetings.

DISCUSSION:

Section 277 of the Regulation states that Council must, at least once in each year, publish a notice of the days and times when:

a) Its ordinary meetings will be held; and (if applicable)
b) The ordinary meetings of its standing committees will be held.

The notice must be displayed in a local newspaper, on Council's website and in the administration office.

Traditionally this term of Council has preferred the second Friday in the month for the holding of Council meetings. Naturally, days and times for holding meetings may also need to be reviewed by the new Council following the elections in March.[2]

Please note also that a request has been received for the February 2020 Council meeting to be held on Friday 21 February 2020 (the third Friday of the month).

[22] CEO comment:

- Friday meetings frequently clash with SWRED, SWRRTG, SWRRTG TC, LGAQ reference group meetings amongst others. In fact, Council meeting dates have been changed five (5) times out of twelve (12) meetings this year.
- The second Friday is often problematic for Finance as reports are required 11 days prior to the meeting to allow review, compilation, printing and distribution 1 week prior to the meeting.
- Some staff will not get to the minutes until the following Monday or Tuesday. This can cause difficulties with recalling information etc accurately.

FINANCIAL:

Not applicable

CONSULTATION:

Not applicable

ATTACHMENTS:

Nil.

Strategic / Decision Report

Governance Department

14.6 (12/19) - Eromanga District Community Association

IX:	188704

Author: CEO, Dave Burges

PURPOSE:

The purpose of this report is for Council to consider various issues put forward by the Eromanga District Community Association (EDCA).

POLICY/LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

CORPORATE PLAN:

6.2.6 Provide community and local organisations with access to grants and funding for community events and celebrations

RECOMMENDATION:

That Council commission the preparation of a masterplan for various streetscape and improvement projects for the town of Eromanga and fund the project from the Eromanga Community Development funds.

BACKGROUND:

Not applicable

DISCUSSION:

The Eromanga District Community Association (EDCA), have requested Council consider various initiatives for the town. These issues were discussed at their recent meeting of 28 November 2019.

Correspondence will be forwarded to Council in due course detailing the requests and priorities however at the time of finalizing this report no details had been provided by EDCA.

A copy of the agenda for the 28 November meeting and the minutes of their previous meeting of 05 November 2019 are provided as ***Attachment A.***

The goal is to have a masterplan with prioritized projects, some of which could be shovel ready to implement as opportunities arise. From discussions at the meeting these priorities will likely include, but not be limited to, the following:

- Upgrade Knot-o-saurus Park including parking and access from the Cooper Development Road. TMR approval will be required for this.
- Town entry signage that makes a positive statement about the town.
- Caravan parking along Berella Street adjacent to Knot-o-saurus Park.
- Improvements to the mainstreet streetscape.
- A maze for children at Knot-o-saurus Park.
- A mural. It may be possible to include this on one wall of the maze.
- Improved play equipment at the hall including softfall.

- A childproof fence along the frontage of the hall (hall access point along the boundary to the Eromanga Living History Museum) to improve safety for children using the facilities.
- A concrete pathway from the pool in Donald Street south to Berella Street and continuing through to Knot-o-saurus Park including a crossing across the creek.

A good starting point might be to use the 2019/20 funding allocation to prepare the masterplan.

FINANCIAL:

Council has made a provision of $40,000 in the 2019-20 budget for unspecified community projects in Eromanga. At the time writing this report, $6,637 of these funds had been expended on the Eromanga common/cemetery fence project.

CONSULTATION:

EDCA have been consulting within the group and have been discussing these issues for some time.

The Mayor and CEO attended the last EDCA meeting.

ATTACHMENTS:

Attachment A: EDCA Meeting Agenda and Minutes

Eromanga District Community Association Agenda

Date: 028/11/2019
Eromanga Living History Centre

Opening
Meeting of the Eromanga District Community Association Agenda was opened at:

Present

Apologies

Minutes previous meeting
Minutes of previous meeting adopted as circularized.

- Minutes 27/05/2019
- Minutes 05/11/2019

Business arising

- Play-ground redevelopment
- Beautification and Development Plan – Options
- Working B on the 7th of December – Status
- Call for action – Request for Wool Memorabilia

Financial Report

- Financial Report from treasurer

Council Report

Stuart Mackenzie to give an overview of Council activities regarding Eromanga

New Business

- Request for Assistance: Alina Graham – Movie Night & Swim costs
- Request for Assistance: Holly Bagshaw – Re: Lifesaving Training Costs


Eromanga District Community Association Inc.

18 Deacon Street

Eromanga Q 4480

General meeting 05/11/19

Meeting held at Living History Centre Eromanga at 5.33pm

Present-

Trish Bennett, Beau Bennett, Laetitia Tasker, Corey Richards, Tanya Hudson, Betty Marchant, Narelle Proud, Tim Proud

Apologies-

Kimberly Smith, Robyn Mackenzie, Fiona Ferguson, Stuart Mackenzie.

Minutes not tabled.

Business arising-

- Tennis Court update- The QSC has approval to procede with the upgrades to the tennis courts. This will include a new fence, the re surfacing of the eastern side court, the maintenance on the grass court, new shed, new toilet, concreting. Moved by Betty, seconded by Trish
- In June, EDCA requested additional information regarding the curb and guttering. Council have asked for Eromanga's preference regarding this. Corey has suggested that we get together and come up with a beautification Master plan for Eromanga to give to Council. Unanomous. Moved by Tanya, seconded by Beau.
- Skate park- Tanya has a quote for package B. It was estimated between 0 to $15,000 plus cement base plus landscaping. This is an estimation for a similar set up to Boulia skate park. In previous meetings, it has been discussed that it be located at Knot-o-saurus park. This is still the preferred position by the community. Also suggested was a cement footpath for access. Moved by Trish, Seconded by Tanya
- Wool exhibit in Living history centre- Karen at VIC in Quilpie is allocating 2 employees to help with cataloguing and setting up exhibits. Corey suggested we have a working bee to start, maybe 07/12/19. All agreed. Trish asked if we can ask again for security cameras for the LHC,

due to the loss of artifacts. The locks are getting changes on office door so it can be an EDCA office.

- Tanya to draft letter for LHC to council for CCTV cameras and Corey to draft letter Economic / beautification letter. Moved Laetitia, seconded Betty

Financial report-

$1415.00 spent at the Corowa Clearance sale

Bank Balance - $15,334.30 plus Kimberly banking

$700.00 cash with Treasurer

$780.00 cash with Treasurer

Kimberly banked $3120.50 BBQ takings and $421.90 donation tin from LHC.

EDCA to pay for BBQ box supplies and New BBQ. Will pay with cash from Treasurer.

Meads $607.00

Butcher paid twice so account now in credit $1000.00

Moved Tanya, seconded Trish

New Business-

- EDCA requested to pay for the hire of the Bus and fuel for school kids for swim club in Quilpie every Wednesday until the end of Term only. The parents were told that they were to agree on a driver and that person had to submit their credentials to council. This has not been done yet. Tanya will bring this back up at the next P&C meeting. All in favour. Moved Beau, Corey seconded.
- EDCA requests that P&C approach IOR to sponsor the town bus for fuel. EDCA happy to pay for HIRE of bus but does not think that we can afford to pay for fuel as well. Tim to approach IOR.
- Tanya requests that someone goes into a Council meeting as Quilpie is having a Christmas party for the Quilpie town funded by Drought money. There is no Christmas party for surrounding communities.
- Town Beautification plan
- Proposed that the park be upgraded. Trish to follow up with quotes.
- Quotes for base of wool press
- Quote for someone to install the wood for wall in LHC.
- When is wool scour coming to town? Community worried a scrap metal person may take it as it is sitting there. Discussion about location of wool scour. What will it sit on? Who's doing it? Beau to chase up cement pricing. Moved Tanya, seconded Laetitia.

Next meeting 7/12/19 at 5pm **Signed President**

Meeting closed at 6.55 pm

14.7 (12/19) – Request for Assistance - Quilpie Golf Club

IX: 188785

Author: Chief Executive Officer, Dave Burges

PURPOSE:

The purpose of this report is to provide Council with details of a request for assistance from the Quilpie Golf Club.

POLICY/LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

C.01 – Community Assistance Policy

CORPORATE PLAN:

6.2.4 Embrace and promote community activities and special occasions

6.2.6 Provide community and local organisations with access to grants and funding for community events and celebrations

RECOMMENDATION:

That Council approve the request for assistance from the Quilpie Golf Club to the amount of $674.

BACKGROUND:

The Quilpie Golf Club has submitted a request under the Community Assistance Program to waive the building application fees for several projects, namely the relocation of an old shed from the former Council depot site and the restumping of the Golf Club building.

Council has previously approved the relocation of the shed from the former depot site.

DISCUSSION:

The building application fee for the construction of a shed is $244 for a registered builder or $300 for an owner builder (Class 10 structure 10m2 to 120m2 GFA).

The building application fee for the demolition and removal has a minimum fee of $374.

Council does not have a fee for restumping. Council's Building certifier considers restumping being "maintenance" (i.e. no approval required) until it reaches the lesser of 40m^2 or 20% of the floor area in a three year period, which in this case it does. This rationale comes from S8 of Schedule 1 of the Building Regulation.

FINANCIAL:

Council has made a provision of $30,000 in the 2019/20 budget for community assistance. At the time of writing this report, $8804 had been expended.

CONSULTATION:

Not applicable.

ATTACHMENTS:

Not applicable

14.8 (12/19) – School Leaver Employment Program

IX: 188743

Author: HR Officer, Maree Radnedge

PURPOSE:

The purpose of this report is for Council to give consideration to the development and implementation of an annual School Leaver Employment Program aimed at assisting with the transition from school to employment for residents of the Shire who identify as having a disability (physical, mental or intellectual) or who have not had the opportunity to obtain a traditional senior education at boarding school.

POLICY/LEGISLATION:

Queensland Local Government Industry (Stream A) Award – State 2017

CORPORATE PLAN:

6.1.6 Actively identify and implement initiatives to keep the youth of our region engaged

RECOMMENDATION:

For Council consideration.

BACKGROUND:

It has been recognized that there is limited support and employment opportunities within the Shire for students with an identified disability after they leave the education system and for those students who have not been able to access a more traditional senior education away from Quilpie. Council is one of the major employers within the Shire and has the resources to assist these students with their transition from school to employment by offering a twelve month employment program.

DISCUSSION:

To follow on from the success of Council's newly appointed National Disability Insurance Scheme Coordinator role, an opportunity has been identified for Council to further support young residents within the Shire who identify as having a disability (physical, mental or intellectual) or who have a significant socio economic disadvantage.

In order to encourage and facilitate the transition from school to employment, it is recommended that Council has the resources to offer an annual School Leaver Employment Program to assist people with a disability or social economic disadvantage during this transition phase and to encourage their integration into the working community.

The program would be aimed specifically at eligible people who have within the last 6 months, left the education system. Each year, the program would be advertised within the community and eligible applicants would be invited to express their interest in participating in the program. The successful applicant as determined by the Chief Executive Officer, would be offered part-time employment for the fixed term of one year with the maximum of 20 hours per week within the Administration department. To be eligible for the School Leaver Employment Program, applicants must:

- Reside within the Shire; and
- Be at least fifteen (15) years of age; and
- Have left the education system in the past six (6) months; and
- Meet the impairment criteria for receipt of a Disability Support Pension; or
- Have a significant socio economic disadvantage that precluded them from attending boarding school; and
- If required, be willing to enter into a Support Wage System Agreement with Council for the duration of the program.

FINANCIAL:

Council may be required to make application under the Department of Employment, Skills, Small and Family Business *Supported Wage System* for the employment of the successful applicant of this proposed program. If required and if approved, the successful applicant would be assessed and a supported wage agreement would be established between the employee and Council determining the applicable percentage of the relevant minimum wage that the applicant would be paid based on their assessed capacity. The following table provides an indication of the weekly cost to Council under an approved supported wage agreement (dependent on the age of the applicant and their assessed capacity):

Age of Applicant and percentage of Level 1, Year 1 Award rate	ASSESSED CAPACITY							
	50%		**60%**		**70%**		**100%**	
	10hrs/ week	20hrs/ week	10hrs/ week	20hrs/ week	10 hrs/ week	20hrs/ week	10hrs/ week	20hrs/ week
Under 18 years (60%)	$84.02	$168.05	$100.83	$201.66	$117.63	$235.27	$168.04	$336.08
18 & under 19 years (70%)	$98.03	$196.06	$117.63	$235.27	$137.24	$274.48	$196.06	$392.12

Please note that the above figures are based on the current wages as stated in the Certified Agreement 2018 and these figures will increase by 2.5% as of 1 July 2020.

In addition to the above costs, Council would also need to allow for the provision of a uniform to the approximate value of $200, consumables and miscellaneous costs associated with employment.

Council may be eligible to receive a Supported Wage System Employer Payment to the value of $1,000, thirteen (13) weeks after signing the initial Supported Wage System Assessment Agreement.

CONSULTATION:

Council's National Disability Insurance Scheme Coordinator has confirmed that there is limited support and employment opportunities for the various residents who have an identified disability, that are now or in the near future, completing their school education.

ATTACHMENTS:

Attachment A: Supported Wage System Information

ATTACHMENT A: EXCERPT FROM AUSTRALIAN GOVERNMENT WEBSITE

The Supported Wage System increases employment opportunities for people with disability through giving employers the opportunity to pay a productivity-based wage to people with disability.

The Supported Wage System is a process that allows employers to pay a productivity-based wage for people with disability that matches an independently assessed productivity rate.

Most Australians with disability participate in the open workforce at full rates of pay. However, some people are unable to find or keep a job at full wage rates due to the effect of disability on their workplace productivity.

To support workers and employers, the Australian Government has in place a system whereby independent assessors are available to conduct workplace productivity assessments for employers who wish to employ people with disability under the Supported Wage System provisions.

A person is eligible to participate in the Supported Wage System if:

- the job under consideration is covered by an industrial instrument or legislative provision which permits employment for productivity wages under the Supported Wage System, and
- the person is an Australian citizen or is a person resident in Australia whose continued presence is not subject to a time limit imposed by Commonwealth law (eg a temporary visa), and
- the person is at least 15 years of age, and
- the person has no outstanding workers' compensation claim against the current employer, and
- the person meets the impairment criteria for receiving the Disability Support Pension.

Employers can apply for the Supported Wage System directly through the Supported Wage Management Unit for their state, or through a Disability Employment Services provider, jobactive provider or Community Development Program provider. You can search for a provider in your area on the jobactive website.

Strategic / Decision Report

Governance Department

14.9 (12/19) – Request for Grid

IX: 188815

Author: Chief Executive Officer, Dave Burges

PURPOSE:

The purpose of this report is to provide information necessary for Council to make a decision in relation to a request for a grid on Boondoon Road.

POLICY/LEGISLATION:

Local Government Act 2009

Local Government Regulation 2012

W.01 Gates and Grids Policy

CORPORATE PLAN:

Not applicable

RECOMMENDATION:

That Council approve / not approve the request from Chris Evans for a grid on Pinkenetta Road.

BACKGROUND:

By letter received 02 December 2019, Mr Andy Purvis is requesting approval to install a grid at the Wild Dog Barrier fence crossing on Boondoon Road. The WDBF gate is located at the end of the Council road and is the entrance to Boondoon.

The adjacent property to the east is Wyrapa.

DISCUSSION:

The proposal is detailed in the following figures.

FIGURE 1: BARRIER FENCE GATE

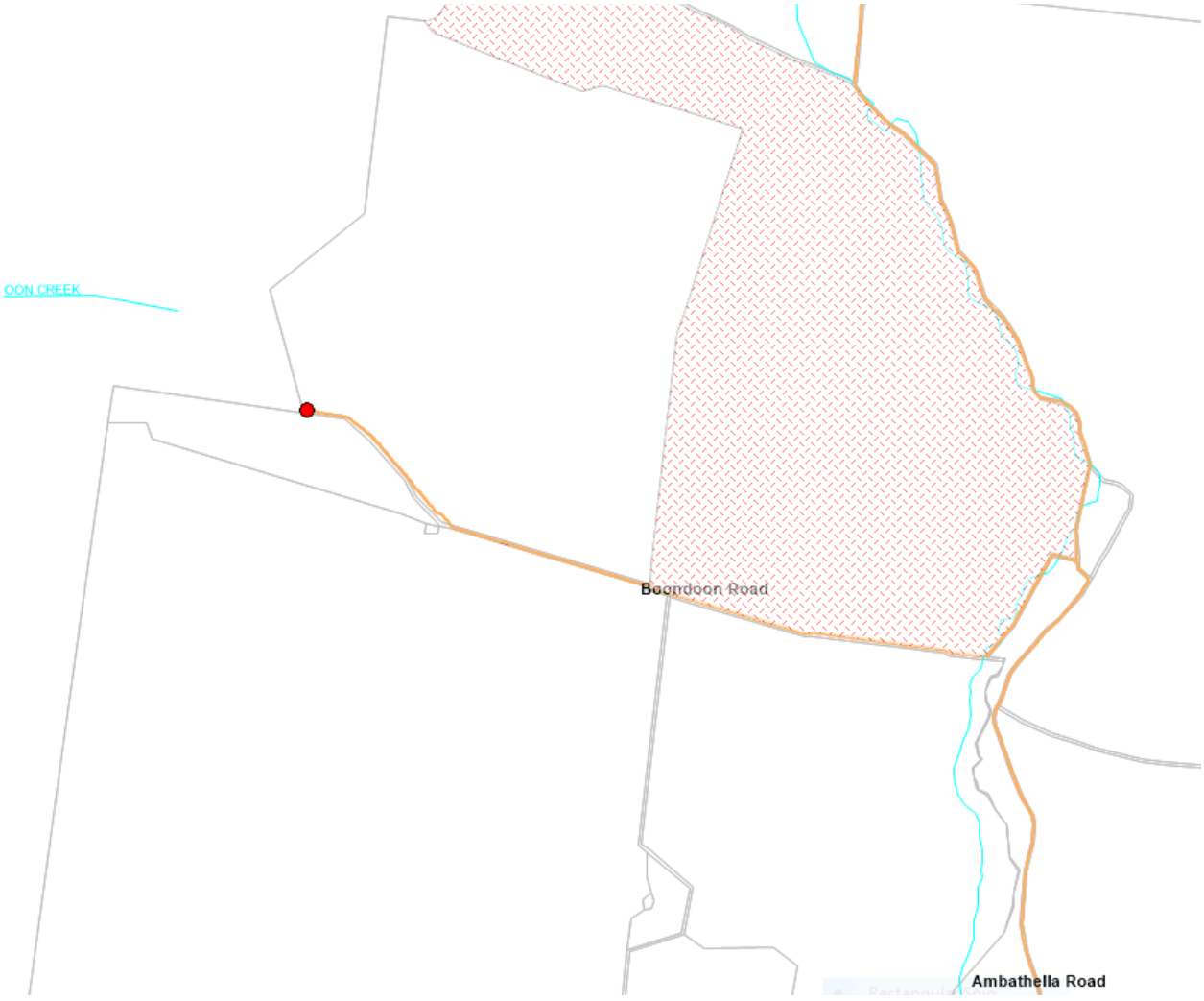


FIGURE 2: BOONDOON ROAD

FIGURE 3: BOONDOON ROAD IMAGERY

An extract from Council's policy W.01 gates and Grids Policy is provided below.

> *Council assumes responsibility for the ownership and maintenance of all grids including associated signage on Council controlled roads.*
>
> *It is Councils aim to reduce the number of grids and gates on Council controlled roads.*
>
> *Any new grids and associated signage to be installed on Council controlled roads shall be purchased by Council at the property owner's expense, be installed at Council's expense and be maintained and replaced as required at Council's expense.*
>
> *A request for a new grid to be installed on Council controlled roads must firstly be approved by Council.*

Contact was made with Dan McDonald of Wyrapa ascertain his views on the request. At the time of finalising this report for inclusion in the agenda, no response had been received.

FINANCIAL:

The short term costs are not excessive however Council will take ownership of the grid and be responsible for ongoing maintenance and renewal.

CONSULTATION:

Not applicable

ATTACHMENTS:

Attachment A: Inwards Correspondence

A R & E L Purvis
Brah-Lim Cattle PTY LTD
" Boondoon ",
1 Boondoon Road,
Charleville. 4470

Ph (07) 46549522 Fax (07) 46549533
Email brahlimcattle@hotmail.com

The CEO
Quilpie Shire Council
PO Box 57,
Quilpie, 4480

Dear Sir,

We purchased Boondoon two years ago and are in the process of developing the property.

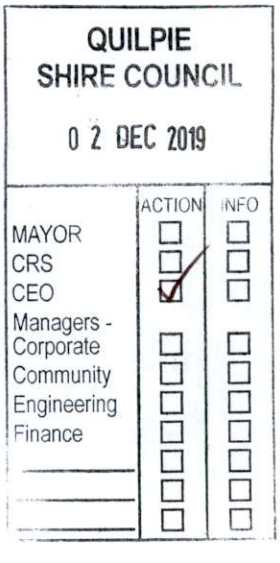
I wish to apply to place a grid alongside the Dog Gate on Boondoon Road. I am experienced with the placement of grids on council roads in the Murweh Shire and expect Quilpie Shire rules to be similar, but of course I will be compliant with Quilpie Shire rules.

The grids and concrete grid buttresses I have are council complient, were constructed by Roma Wire & Steel and are 4 metres wide X 2400mm deep. We have the equipment to place the buttresses and grid, the placement of gravel fill if required and a grader to build the approaches.

I enclose a copy of the letter that I received from Peter Flegg, which will further explain my situation.

I will also be writing to Mr. Dan McDonald, from the neighboring property, proposing that the gate and lane system he has across Boondoon Road, be bypassed with a grid. If he is interested in purchasing one of our grids, we could place it at the same time, when we are placing the above grid in the Dog Fence. So, he may also be applying to Council to install that grid.

Regards,
Andy Purvis



From: FLEGG Peter
Sent: Wednesday, 27 November 2019 7:43 AM
To: brahlimcattle@hotmail.com
Cc: GRAY Paul
Subject: WDBF grid installation Boondoon mail road

Andy,
I have done some ground work for you and it appears that the road leading up to Boondoon is a designated Quilpie Shire Council road.
To install a grid across this road you will have to apply through the QSC. Once their approval is given you will have to talk to Paul Gray, the Wild Dog Barrier Fence Project Manager. Paul will discuss with you the requirements of fence attachments, grid wings and motion detectors.

I hope this helps you along a bit.

Peter Flegg
Senior Operations Officer
Wild Dog Barrier Fence
Quilpie Qld 4480
Office: 46561307
Mob: 0436911526

15 CONFIDENTIAL ITEMS

16 LATE CONFIDENTIAL ITEMS

17 LATE ITEMS

18 GENERAL BUSINESS

19 MEETING DATES