



**muswellbrook
shire council**

Muswellbrook Shire Council
INFRASTRUCTURE COMMITTEE
MEETING

BUSINESS PAPER
30 MAY 2018



INFRASTRUCTURE COMMITTEE MEETING, 30 MAY 2018

MUSWELLBROOK SHIRE COUNCIL

P.O Box 122
MUSWELLBROOK
21 May, 2018

Councillors,

You are hereby requested to attend the Infrastructure Committee Meeting to be held in the COUNCILLORS ROOM, Administration Centre, Muswellbrook on **30 May, 2018** commencing at 4.30pm.

Derek Finnigan
DIRECTOR - COMMUNITY INFRASTRUCTURE

Order of Business

ITEM	SUBJECT	PAGE NO
1	APOLOGIES AND LEAVE OF ABSENCE	4
2	CONFIRMATION OF MINUTES OF PREVIOUS MEETING	4
3	DISCLOSURE OF ANY PECUNIARY AND NON-PECUNIARY INTEREST	8
4	BUSINESS ARISING	8
5	BUSINESS	9
5.1	2017-2018 Q3 CI CAPITAL WORKS STATUS REPORT	9
5.2	WASTE COMPLIANCE REPORT	18
5.3	JAN - MAR 2018 INFRASTRUCTURE REPORT FOR WATER AND WASTEWATER SERVICES	26
6	DATE OF NEXT MEETING	33
	27 June 2018	
7	CLOSURE	33



**MUSWELLBROOK SHIRE COUNCIL
INFRASTRUCTURE COMMITTEE MEETING**

AGENDA
WEDNESDAY 30 MAY 2018

1 APOLOGIES AND LEAVE OF ABSENCE

Moved: _____ **Seconded:** _____

2 CONFIRMATION OF MINUTES OF PREVIOUS MEETING

RECOMMENDATION

That the Minutes of the Infrastructure Committee held on **18 April 2018**, a copy of which has been distributed to all members, be taken as read and confirmed as a true record.

Moved: _____ **Seconded:** _____

PRESENT: Cr R. Scholes (Chair), Cr M. Rush, Cr J. Foy, Cr M. Green and Cr S. Ward.

IN ATTENDANCE: Ms F. Plesman (Acting General Manager), Mr D. Finnigan (Interim Director, Community Infrastructure), Ms C. O'Brien (Acting Director, Planning, Community & Corporate Services), Mr P. Redan (Executive Manager, Water and Waste), Ms G. Bobsien (Executive Manager – Economic Development & Innovation), Mr P. Ball (Acting Manager, Muswellbrook Works), Mr E. Ediriwickrama (Manager, Roads & Drainage), Mr P. Higgins (Manager, Technical Services), Ms N. Cowley (Manager, Corporate Services), Mr J. Brown (Executive Services Co-Ordinator), Mrs M. Sandell-Hay (PA to General Manager).

1 APOLOGIES AND LEAVE OF ABSENCE

MOVED by Crs Rush and Green that:

The apologies for inability to attend the meeting submitted by Cr S. Bailey, Cr M. Bowditch, Cr. J. Eades, Cr J. Ledlin, Cr G. McNeill, Cr S. Reynolds and Cr. B. Woodruff, be ACCEPTED and the necessary Leave of Absence be GRANTED.

2 CONFIRMATION OF MINUTES OF PREVIOUS MEETING

MOVED by Crs Rush and Green that:

The Minutes of the Infrastructure Committee held on 28 March 2018, a copy of which has been distributed to all members, be taken as read and confirmed as a true record.

3 DISCLOSURE OF ANY PECUNIARY AND NON-PECUNIARY INTEREST

Nil

4 BUSINESS ARISING

Nil

5 BUSINESS

5.1 DESIGN AND COST ESTIMATES FOR CAPITAL PROJECTS

MOVED by Crs Ward and Rush that:

Council

1. Endorse the concept design for Wilkins Street Upgrade project:
2. Note the preliminary cost estimates for the project designed.

5.2 PARKS FUNDING TRANSFERS REQUESTED THROUGH MARCH 2018 BUDGET REVIEW

MOVED by Crs Green and Foy that:

The information contained in the report be NOTED.

5.3 PERFORMANCE REVIEW OF COUNCIL'S STREET SWEEPING CONTRACT FOR THE THIRD QUARTER OF 2017-2018

MOVED by Crs Green and Foy that:

The information contained in this report be noted and that this matter only be reported to Council if there are significant issues.

6 ADJOURNMENT INTO CLOSED COMMITTEE

MOVED by Crs Green and Foy that:

The Committee adjourn into Closed Session and members of the press and public be excluded from the meeting of the Closed Session, and access to the correspondence and reports relating to the items considered during the course of the Closed Session be withheld unless declassified by separate resolution. This action is taken in accordance with Section 10A(2) of the Local Government Act, 1993 as the items listed come within the following provisions:

S.1 TENDER 2017-2018-0303 KERBSIDE WASTE SERVICES

Item S.1 is classified CONFIDENTIAL under the provisions of Section 10A(2)(c) of the local government act 1993, as it deals with information that would, if disclosed, confer a commercial advantage on a person with whom the council is conducting (or proposes to conduct) business, and the Committee considers that discussion of the matter in an open meeting would be, on balance, contrary to the public interest.

7 CLOSED COMMITTEE

S.1 TENDER 2017-2018-0303 KERBSIDE WASTE SERVICES

MOVED by Crs Green and Foy that:

The Committee note the information contained in the report and that a further report will be submitted to the May Ordinary Council Meeting.

8 RESUMPTION OF OPEN COMMITTEE

MOVED by Crs Foy and Green that:

The meeting return to Open Committee.

9 DATE OF NEXT MEETING

30 May 2018

10 CLOSURE

The meeting was declared closed at 5.10 pm.

.....

Ms F. Plesman

General Manager

.....

Cr R. Scholes

Chairperson

3 DISCLOSURE OF ANY PECUNIARY AND NON-PECUNIARY INTEREST

Section 451 of the Local Government Act requires that if a councillor or member of a council or committee has a pecuniary interest in any matter before the council or committee, he/she must disclose the nature of the interest to the meeting as soon as practicable and must not be present at, or in sight of, the meeting, when the matter is being discussed, considered or voted on.

A pecuniary interest is an interest that a person has in a matter because of a reasonable likelihood or expectation of financial gain or loss (see sections 442 and 443 of the Local Government Act).

A non-pecuniary interest can arise as a result of a private or personal interest which does not involve a financial gain or loss to the councillor or staff member (eg friendship, membership of an association, or involvement or interest in an activity). A councillor must disclose the nature of the interest to the meeting as soon as practicable.

Council's Model Code of Conduct now recognises two forms of non-pecuniary conflict of interests:

- Significant
- Less than significant

A Councillor must make an assessment of the circumstances and determine if the conflict is significant.

If a Councillor determines that a non-pecuniary conflict of interests is less than significant and does not require further action, they must provide an explanation of why it is considered that the conflict does not require further action in the circumstances.

If the Councillor has disclosed the existence of a significant non-pecuniary conflict of interests at a meeting they must not be present at, or in sight of, the meeting, when the matter is being discussed, considered or voted on.

4 BUSINESS ARISING

5 BUSINESS

5.1 2017-2018 Q3 CI CAPITAL WORKS STATUS REPORT

Attachments:	A. 2017-2018 CI Capital Works - Hybrid
Responsible Officer:	Derek Finnigan - Interim Director - Community Infrastructure
Author:	Regina Connon - Business Systems & Plant Co-Ordinator
Community Plan Issue:	<i>Our community's infrastructure is planned well, is safe and reliable and provides required levels of service</i>
Community Plan Goal:	<i>Improve and maintain civic precincts.</i>
Community Plan Strategy:	<i>Deliver the capital program substantially on time, on budget and in accordance with relevant design and construction standards.</i>

PURPOSE

This report presents in tabular form the status of 2017-2018 Q3 Community Infrastructure Capital Works Status report updated to 31 March 2018.

OFFICER'S RECOMMENDATION

Council note the information contained in the 2017-2018 Q3 Community Infrastructure Capital Works Status Report updated to 31 March 2018.

Moved: _____ Seconded: _____

BACKGROUND

This report is updated by Community Infrastructure Section Managers on a monthly basis and reported quarterly to the Infrastructure Committee.

REPORT

Please refer to the attached report.

OPERATIONAL PLAN IMPLICATIONS

The submission of this report complies with the following sections of the 2017-2018 Operational Plan; 19.1.1, 19.3.1, 19.3.3, 19.3.5, 19.4.1, 20.1.1, 20.1.2, 20.1.3, 20.1.12, 21.1.1, 21.1.3.

STATUS OF COMMUNITY INFRASTRUCTURE 2017-2018 CAPITAL WORKS AS AT 31 March 2018

Project	Project Stage Investigation (I) Design (D)/ Construction (C)	Budget for Project	PLANNED START	PLANNED COMPLETION	PLANNED COMPLETION (EXTENDED)	ACTUAL START	ACTUAL COMPLETION	STATUS as of 31 March 2018
Roads Capital Works								
Denman Gateway Project Stage 2 [3550.4261]	D	\$200,000	Sep-17	Jun-18		Oct-17		Survey is completed. A consultant has been engaged to undertake the design. It is expected to complete the design by end of June 2018.
Safety Device Renewal Program [3590.4145]	C	\$148,591	Sep-17	Jun-18		Sep-17		A report was submitted to August Infrastructure Committee on identifying priorities. Installation of guard rails on Hebden Road is completed
Kerb & Gutter Renewal [3560.4065]	C	\$125,000	Sep-17	Jun-18		Sep-17	Dec-17	A report was submitted to August Infrastructure Committee on identifying priorities. Identified works on Adam St, Towarri St and King St has been completed
Footpath Renewal [3500.4072]	C	\$156,000	Sep-17	Jun-18		Mar-18		A report was submitted to August Infrastructure Committee on identifying priorities. Identified footpath repairs on Mussel St, Skellatar Stock Route, Palace St and Turtle St is completed
Sandy Hollow Town Centre Project	C	\$80,000	Feb-18	Apr-18				Construction of the footpath from hotel to school is in progress and expected to be complete in mid April.
New Footpaths [3500.4073]	C	\$100,000	Oct-17	Jun-18		Oct-17	Feb-18	A report was submitted to August Infrastructure Committee on identifying priorities. Construction of New footpaths on Skellatar St and Brook St has been completed
Urban Road Renewal [3500.4050]	C	\$562,000	Feb-18	Jun-18		Mar-18		Rehabilitation of the failed section of Humphries St is in progress and planned to be completed by April 2018.
Rural Road Renewal Program [3502.4125]	C	\$450,000						No plans to undertake any work until the status of R4R funding is known
Carpark Renewal [3580.4234]	C	\$103,000	TBA	TBA				Available funds are insufficient to undertake the renew the carpark adjacent to Campbell's Corner carpark.
Heavy Patching Program [3500.4035.504]	C	\$442,000	Sep-17	Jun-18		Sep-17		A report was submitted to August Infrastructure Committee on identifying priorities. Identified HP works on Adam St, Ironbark Rd and Towarri St are completed. Further heavy patching works on various locations are planned to be undertaken in the 4th quarter.

STATUS OF COMMUNITY INFRASTRUCTURE 2017-2018 CAPITAL WORKS AS AT 31 March 2018

Project	Project Stage Investigation (I) Design (D)/ Construction (C)	Budget for Project	PLANNED START	PLANNED COMPLETION	PLANNED COMPLETION (EXTENDED)	ACTUAL START	ACTUAL COMPLETION	STATUS as of 31 March 2018
Drainage Devices Program [3540.4065]	D/C	\$160,000	Mar-18	Jun-18				A contractor has been engaged to undertake the modification to the damaged grate at Karoola Park
CBD Stage 6	C	\$1,000,000	Jul-17	Oct-17		Jul-17	Oct-17	Stage 6 works are completed.
Road Rehabilitation (R4R - Round 3)		\$4,200,000	July '15	Apr-17	Sep-17	Sep-15	Sep-17	R4R round 3 program is completed
Remove underground fuel tanks from Works Depot	D/C	\$200,000	Mar-18	Jun-18		May-18		Work has commenced on the 7th May 2018 and right on target for completion at the end of financial year 17/18.
Rural Road Regravelling Program [3500.4055]	C	\$328,000	Feb-18	Jun-18		Jan-18		Works are currently in progress.
Regional Road Renewal Program [3502.4135]	C	\$70,000	Mar-18	Jun-18		Mar-18	Mar-18	Rehabilitation project nominated for Dingo Gully, Bylong Valley Way. The project has been completed.
Road Resealing Program [3500.4030]	C	\$1,167,000	Nov-17	Apr-18		Oct-17		Work is in progress. Stage 1 of the program is completed. Stage 2 works have commence, and are scheduled for completion during April.
WASTE MANAGEMENT								
WATER								
Reservoir Renewal and Replacements [5310.4321]	I/D	\$600,000	Jul-17	Jul-19		Jul-17		A service provider has performed a preliminary inspection /investigation of the reservoir to better scope the necessary refurbishment work. This has been performed on Common Res 4 & 5 and Sandy Hollow reservoirs. Additional investigations have been undertaken on the internal condition of the reservoirs and roof structures. Due to the condition assessment, more work will be required that was unexpected and therefore the refurbishment work will not be performed in the winter months this year and will now be performed in the winter months of June and July 2019. Pipework and valve configuration at the common reservoir site will be established in the near future and proper planning for the shutting down of the reservoir undertaken prior to performing the refurbishment work.

STATUS OF COMMUNITY INFRASTRUCTURE 2017-2018 CAPITAL WORKS AS AT 31 March 2018

Project	Project Stage Investigation (I) Design (D)/ Construction (C)	Budget for Project	PLANNED START	PLANNED COMPLETION	PLANNED COMPLETION (EXTENDED)	ACTUAL START	ACTUAL COMPLETION	STATUS as of 31 March 2018
Integrated Water Cycle Management Planning [5310.4325]	I	\$14,477	Feb-16	Apr-17	Jul-18	Feb-16		Six scenarios have been developed, financial modelling has been performed, triple bottom line assessment completed, with the most promising scenario (Scenario 4), being business as usual with some augmentation and application for an additional high security water licence to secure future requirements. The next phase is to obtain concurrence from the Project reference group (PRG) and adoption by Council of the IWCM Strategy, TAMP and financial Plan. The development of a new Strategic Business plan is only required in 2021. The draft report is currently being prepared for provision to the PRG for concurrence and the TAMP is in final draft format. The financial plan will be reviewed to match recently altered Delivery Plan changes.
Renewable Energy Target Works [5310.4326]	C	\$475,000	Jul-17	Jun-18		May-18		Muswellbrook Water Treatment Plant solar project (28 kW) contractor appointed, works to be completed by 30 June 2018. Major works (i.e. 100 kW ground mounted solar system) unable to progress as rezoning of property to south of Muswellbrook WTP has not occurred.
South Muswellbrook Reservoir [5310.4542]	I/D	\$96,668	Jul-17	Jun-18		Jul-17		The detailed design for the pipeline, pump station and associated works for the alternative pipeline route are underway and nearing finalisation. Electrical design and communication with Ausgrid is underway. Easement plans have been developed for all the pipeline routes to enable discussions with land owners for possible easement creation. This will be assessed against the final design of the pipelines prior to further processing. Preliminary easement drawings of the reservoir site and pipelines on MBK Coal property have been provided for discussion with property owner.
Denman Water Treatment Works [5310.4559]	D/C	\$354,224	Jul-17	Jun-18		Jul-17		Works have been identified for execution at the Denman WTP as follows: Replacement of the Ultra filtration membranes Contract has been awarded, work to commence April 2018 and will be completed in May 2018. Installation of additional online monitoring equipment, required by Dept. Health. Procurement is in progress.
Muswellbrook Water Treatment Plant Replacements [5310.4560]	D/C	\$857,207	Jul-17	Jun-18		Jul-17		Contracts for Electrical upgrades on both raw water and clear water pump stations have been approved by Council. Preliminary work has commenced, and new panels are being manufactured. Chemical dosing infrastructure and other renewals are being implemented as part of the "System Plant Asset Renewals" program and are already achieving improved performance.

STATUS OF COMMUNITY INFRASTRUCTURE 2017-2018 CAPITAL WORKS AS AT 31 March 2018

Project	Project Stage Investigation (I) Design (D)/ Construction (C)	Budget for Project	PLANNED START	PLANNED COMPLETION	PLANNED COMPLETION (EXTENDED)	ACTUAL START	ACTUAL COMPLETION	STATUS as of 31 March 2018
Sandy Hollow Water Supply	I/D/C	\$250,000	Jul-17	Jun-18		Jul-17		There has been a sustained improvement in water quality e.g. a significant improvement in the turbidity, however hardness remains an aesthetic challenge. Other shortfalls in the treatment plant are being identified for further consideration and rectification. It is proposed that the plant will become fully automated. The IWCM process is underway, and we anticipate providing community guidance on preferred options for future water supply.
Sandy Hollow Reservoir Repairs [5310.4574]	I/D/C	\$100,000	Jul-17	Jun-18	Aug-19	Jul-17		Refurbishment work is required on the reservoirs in Sandy Hollow. This is to be further assessed and a scope of works developed. Condition report has been completed and Scope of work being developed estimated work to be performed in period May to August 2019.
Reticulation - Muswellbrook - Capital [5320.4340]	I/D/C	\$1,300,000	Jul-17	Jun-18		Jul-17		Water mains as identified in the Total Asset Management Plan have been prioritised for replacement over the next five years. Old water mains in Bridge Street and William Street are planned for refurbishment and replacement, work on Bridge street commenced in March 2018. Design work will be let for other water mains prior to construction. Condition assessment on priority pipelines will be performed. Rail crossings in 2 locations are scheduled to begin construction shortly and will be completed in 2018/19 financial year. The Water Mains in Ogilvie Street are being replaced as an integrated project with the Community Infrastructure as part of the Denman Town Centre works. The timing is dependent on Master Plan scheduling.
Replacement of Water Meters Programme [5320.4376]	I/D/C	\$70,000	Jul-17	Jun-18		Jul-17		A replacement program has been developed to replace water meters older than 10 years. Meters are being progressively replaced through the remainder of the year.
Asset Management System Development [5340.4399]	I/D	\$120,000	Jul-17	Jun-18		Jul-17		The Total Asset Management Plan for water and waste water has been integrated into one document and is in final draft form. The Civica Asset Management System installation has commenced expertise will be required to migrate information from its current form into the new CMMS. The Roads section is almost complete in Civica and the Wastewater asset upload has been provided to Civica, 3 sites have been loaded, remainder to be completed in the coming weeks. Water Asset upload information has been copied and is to be loaded by Council. Completion within Enterprise Asset Management Plan schedule.

STATUS OF COMMUNITY INFRASTRUCTURE 2017-2018 CAPITAL WORKS AS AT 31 March 2018

Project	Project Stage Investigation (I) Design (D)/ Construction (C)	Budget for Project	PLANNED START	PLANNED COMPLETION	PLANNED COMPLETION (EXTENDED)	ACTUAL START	ACTUAL COMPLETION	STATUS as of 31 March 2018
System Plant Asset Renewals [5340.4400]	I/D/C	\$1,281,000	Jul-17	Jun-18		Jul-17		Based of the condition assessments performed on water assets a number of asset components having a condition rating of 4 (Poor) and 5 (very poor) on have been prioritised for replacement. This work is a mammoth task and currently being executed on water and waste water infrastructure i.e. Treatment Works, Reservoirs, Pumping Stations, Mains and telemetry equipment. A panel of service providers for utilisation on this project has been approved by Council and is being utilised where appropriate. Work has been completed on the Ferric Sulphate dosing pipework at the MSC WTW. Electrical upgrades and other refurbishment works on the MBK WTW's Lime Silo and dosing pumps, and Denman WTW's compressors and electrics are currently underway. Work is progressing well. New Chemical unloading area bund has been installed at Scott Street, work is progressing on the chemical dosing area upgrades. Lime room ventilation has been improved.
SEWERAGE								
Reticulation - Muswellbrook - Capital [6310.4340] & Denman [6320.4342]	I/C	\$717,500	Jul-17	Jun-18		Jul-17		Programmed for the year is the relining of prioritised sewer mains. Work rescheduled due to challenges with Bridge Street Water Main, now scheduled March to June 2018 with an existing multiyear contract. Repairs on sewer mains and raising of manholes is underway. Contractor is starting work on Sewer relining week of 14/5/2018.
CCTV Inspection of Mains [6310.4457]	I/C	\$41,451	Jul-17	Jun-18		Jul-17		Funding is available to perform minimal CCTV inspections as areas previously inaccessible become accessible. This will eventuate as maintenance holes are raised.
Muswellbrook Effluent Re-use [6310.4464]	I/D/C	\$36,967	Jul-17	Jun-18		Jul-17		Recommendations of the reuse options study to be implemented. Irrigation construction progress inhibited by Golf Club management issues.
Upgrade Pump Station 5 [6310.4467] & Pump Station Upgrades [6310.4478]	I/D/C	\$269,120	Jul-17	Jun-18		Jul-17		Remaining work on SPS 5 now complete. Other work on sewer pump stations will be performed as part of the assets renewal program.

STATUS OF COMMUNITY INFRASTRUCTURE 2017-2018 CAPITAL WORKS AS AT 31 March 2018

Project	Project Stage Investigation (I) Design (D)/ Construction (C)	Budget for Project	PLANNED START	PLANNED COMPLETION	PLANNED COMPLETION (EXTENDED)	ACTUAL START	ACTUAL COMPLETION	STATUS as of 31 March 2018
Muswellbrook Recycle Water Treatment Works [6310.4469]	D	\$2,170,000	Jul-16	Dec-18		Jul-16		The contract with Aurecon Australasia and NSW PWA has progressed as follows: Milestone 1 – Pond 1 design, 100%, tender 100% and construction 100% Milestone 2 – RWTW Final Concept Design 100% Milestone 3 – RWTW Detail Design and Specification 99% Milestone 4 – Alternate power supply 80% Milestone 5 – EOI / ETI / Tender 100% Milestone 6 - Professional services during Construction phase 45%
Construction - RWTW [6310.4472]	C	\$23,850,000	May-17	Dec-18		May-17		The Contract for the construction of the new RWTW has been awarded and the contractor has established on site. Progress on the contract milestones are: 1. Preparation and submission of complying Contractor's management Plans and construction approvals 100% 2. Construction of the RWTW to completion of wet commissioning 45% 3. Completion of process commissioning and Acceptance Testing Not started 4. Decommissioning and Demolition of existing Muswellbrook STP Not started
Denman Treatment Plant Upgrade [6310.4473]	I/D/C	\$1,742,500	Jul-17	Jun-18	Jun-19	Jul-17		Desludging contractor mobilised to site 28/3/2018, works scheduled to be complete 30 June.. The works also include the upgrade of the inlet works and sludge drying facility, for which the design still needs to be performed. The renewal and upgrading of electrical work will be performed to also incorporate the installation of a UV disinfection system in 2018/19. Investigation being performed on mechanical dewatering, trial to be performed mid 2018.
Asset Management Planning [6340.4474]	I/D	\$102,500	Jul-17	Jun-18		Jul-17		The installation of the Civica Asset Management Modules has commenced and will require expertise to migrate information from its current form into the new CMMS.

STATUS OF COMMUNITY INFRASTRUCTURE 2017-2018 CAPITAL WORKS AS AT 31 March 2018

Project	Project Stage Investigation (I) Design (D)/ Construction (C)	Budget for Project	PLANNED START	PLANNED COMPLETION	PLANNED COMPLETION (EXTENDED)	ACTUAL START	ACTUAL COMPLETION	STATUS as of 31 March 2018
Transportation System Improvements [6340.4485]	I/D	\$307,500	Jul-17	Jun-18	Jun-19	Sep-17		This is a multiyear project based on the evaluation of the Muswellbrook Sewer transportation and storage study performed for the delivery of waste water to the new RWTW. It also interfaces with the design of the intelligent pumping system as referred to elsewhere. Report to be submitted to Council meeting on 10 April recommending the award of a contract for the detailed design work.
Access & Security Improvements [6340.4475]	I/C	\$20,500	Jul-17	Jun-18		Jul-17		Security and access improvements to all water and sewer sites have been completed, including the installation of CCTV cameras and fob access to various sites. Further improvements will be identified and be actioned by 30 June 2018. May 2018 - Work is currently underway on Access Alarms for the Muswellbrook Reservoirs
System Plant Asset Renewals [6340.4488]	I/D/C	\$272,500	Jul-17	Jun-18	Jun-19	Jul-17		Funding has been budgeted to focus on reducing this renewals backlog over the next 5 years. Base of the condition assessments performed on sewer assets a number of asset components having a condition rating of 4 (Poor) and 5 (very poor) on have been prioritised for replacement. This work is a mammoth task and currently being executed on water and waste water infrastructure. i.e. Pumping Stations and other infrastructure. A panel of service providers for utilisation on this project has been approved by Council and is being utilised where appropriate. Work is progressing well.
Technical Services								

STATUS OF COMMUNITY INFRASTRUCTURE 2017-2018 CAPITAL WORKS AS AT 31 March 2018

Project	Project Stage Investigation (I) Design (D)/ Construction (C)	Budget for Project	PLANNED START	PLANNED COMPLETION	PLANNED COMPLETION (EXTENDED)	ACTUAL START	ACTUAL COMPLETION	STATUS as of 31 March 2018
Showground Intersections [3910.5856.504]	I	\$300,000	TBA	TBA (Requires sale of showground and progress to acquire new site)				RMS approval of concept plans for Thompson Street signals has been achieved. Final design has stalled as it is not considered worthwhile at this time to dig up existing services to confirm their location. A design at 80% with contingencies is considered satisfactory to be "Shovel Ready". Woollybutt Way roundabout design is complete and available.

5.2 WASTE COMPLIANCE REPORT

Attachments:	Nil
Responsible Officer:	Derek Finnigan - Director - Community Infrastructure
Author:	Joann Polsen - Senior Technical Officer Waste
Community Plan Issue:	<i>Provide community infrastructure and services that supports and improves community connectivity, access and wellbeing</i>
Community Plan Goal:	<i>That our community infrastructure is appropriate, sustainable and well maintained</i>
Community Plan Strategy:	<i>Provide a long term safe, secure, efficient and effective kerbside waste and recycling service for customers</i>

PURPOSE

- To inform Council of contractor J. R. Richards' compliance with Key Performance Indicators (KPI's) within the Collection of Waste and Recoverable Resources (Contract No. 4/2005) as extended.
- To inform Council of Waste Management's continued compliance with monthly NSW Waste and Environment Levy reports and payments under S88 of the Protection of the Environment Operations Act 1997.

OFFICER'S RECOMMENDATION

The information contained in this report be noted.

Moved: _____ Seconded: _____

REPORT

J. R. Richards & Sons, as service provider of the Collection of Waste and Recoverable Resources (Contract No. 4/2005) as extended, are required to comply with Key Performance Indicators (KPI's) regarding Mobile Garbage Bin (MGB) repairs, replacement, removal of services, provision of new services and returning to collect any missed services. Additionally, transfer bins from the transfer station areas at Denman and Muswellbrook are picked up and taken to the Muswellbrook landfill within 4 hours of the request by Council staff at these facilities.

J. R. Richards provide a monthly report on their compliance against the contract KPI's to council staff, along with a Health, Safety and Environmental report.

Table 1 details the relevant contract KPI's, the level of compliance for each month reported, as well as details on the number of new services, replacements and missed collections for the reporting period.

Table 1: Contract 4/2005 Key Performance Indicators, numbers of new services, bin replacements and missed collections.

Key Performance Indicator	Compliant? Y/N (Number of services or bins)								
	July 17	Aug 17	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18
New Services: Within 72 hours of notification of new services, the Contractor must provide the new service with the required set of MGB's.	Y (2)	Y (3)	Y (4)	Y (5)	Y (8)	Y (4)	Y (4)	Y (3)	Y (3)
Bin Replacements: Within 72 hours of notification	Y (40)	Y (15)	Y (33)	Y (27)	Y (33)	Y (32)	Y (34)	Y (40)	Y (35)
Removed services: Within 72 hours of notification	(0)	(0)	(0)	(0)	(1)	(0)	(2)	(1)	(0)
Collection Service is only rendered inside the approved collection times and days (weekdays, 6am to 6pm)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Missed Services: A collection service is provided to all missed services within 24 hours of notification from Council.	Y (22)	Y (14)	Y (14)	Y (12)	Y (13)	Y (35)	Y (15)	Y (18)	Y (18)
The Wheel-out, Wheel-back policy is implemented on the first collection service immediately following notification from Council of eligible premises.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A contract meeting is held once per month between Council's representatives and J.R. Richards representatives.	Y	Y	Y	Y	Y	Y	Y	Y	Y

The monthly J. R. Richard's Health, Safety and Environmental Reports to Council indicate that there have been five workplace safety incidents this financial year (Table 2). These were;

- August 2017 – a waste collection vehicle made contact with a water meter assembly, causing damage to the tap. Council was advised and Water Operators attended to effect repairs. J R Richards disciplined the driver.
- October 2017 – a waste collection vehicle, while reversing from a laneway, made contact with a power pole. J R Richards cautioned the driver to be more alert to surroundings and to use mirrors.
- November 2017 – a waste collection vehicle's visor was damaged due to contact with a tree branch overhanging the street – the driver was cautioned. In a separate incident, a waste collection vehicle's lifting arm has contacted a parked car. Repairs were arranged for the vehicle and J R Richards disciplined the driver of the collection vehicle.
- March 2018 – a resident alleged damage to their fence was a result of an impact by a waste collection vehicle. J R Richards organised repairs as a gesture of goodwill, but found no evidence of the driver being at fault.

Table 2: J. R. Richard's Health, Safety and Environmental reporting.

Issues Reported	July 17	Aug 17	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18
Workplace Health & Safety	0	1	0	1	2	0	0	0	1
Environmental	0	0	0	0	0	0	0	0	0
Site meeting	Y	Y	Y	Y	Y	Y	Y	Y	Y

NSW Waste and Environment Levy compliance

The Protection of the Environment Operations Act (1997) requires certain licensed waste facilities in NSW to pay a contribution for each tonne of waste received at the facility. Occupiers who pay the waste levy under section 88 of the POEO Act are required to submit a *Waste Contribution Monthly Report* (WCMR) to the EPA every month.

WCMR's and the subsequent waste levy payments are prepared and submitted by Council staff to comply with NSW EPA deadlines. Table 3 shows the total incoming waste received, the outgoing recoverable waste from the Muswellbrook Waste & Recycling Facility, and the amount of NSW Waste & Environment levy paid this financial year.

Table 3: Tonnage of materials over the weighbridge at Muswellbrook Waste & Recycling Facility.

	July 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18
Incoming waste tonnes:									
Total received	2466	2063	1582	1848	1885	1649	1671	1925	2468
Outgoing (recovered) tonnes:									
Total removed	412	153	17	213	105	89	27	121	39
NSW Waste & Environment Levy:									
Monthly Levy payment (\$)	162,000	149,000	123,000	130,000	142,000	124,000	130,000	142,000	193,000

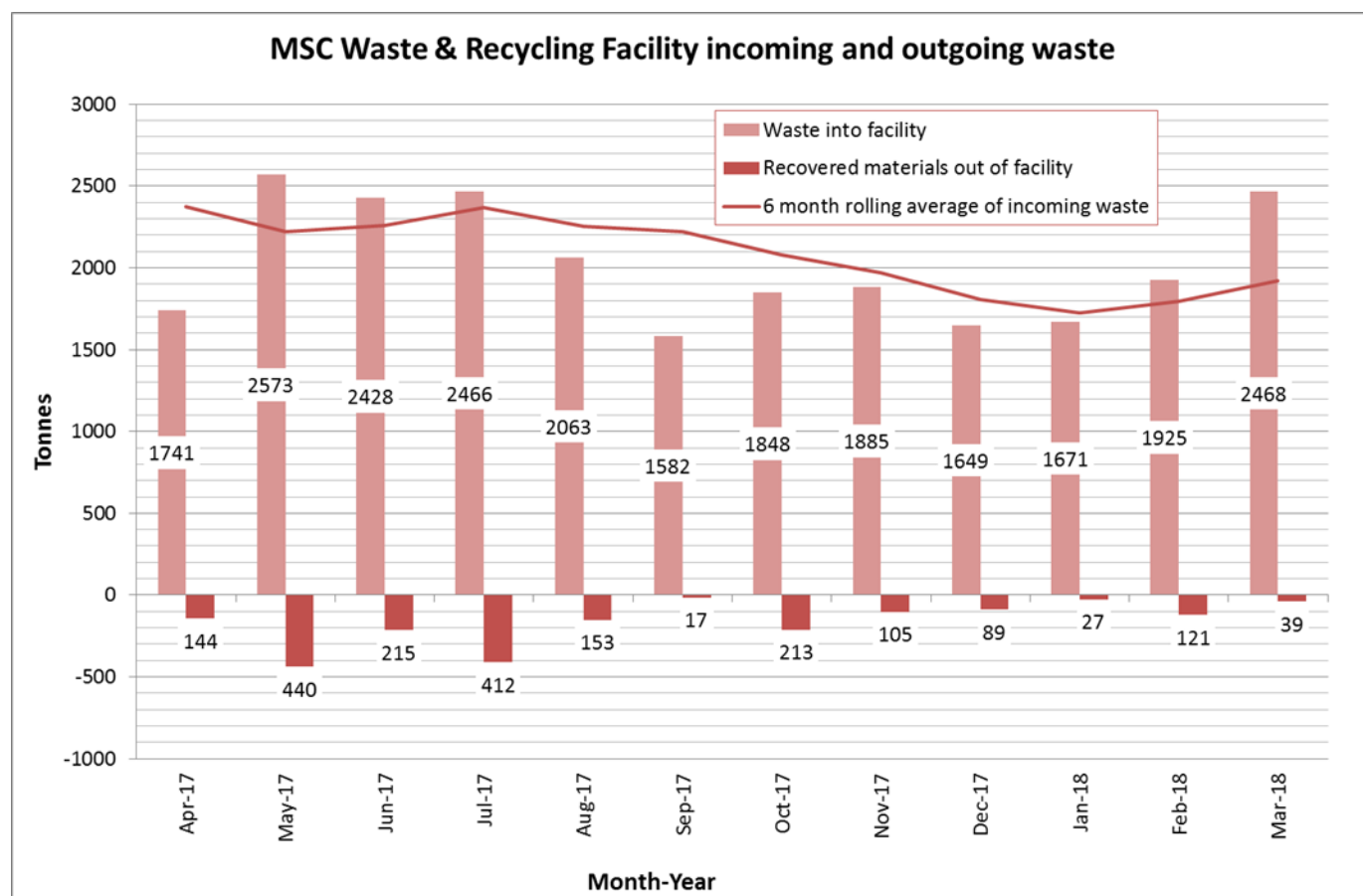
Muswellbrook Shire was included in the Regional Regulated Area in 2009/10, becoming liable to collect and pay a levy rate of \$10 per tonne of waste received at its licenced waste facility. After 2009/10, the waste levy increased at a rate of \$10 + CPI each year until in 2015/16 it reached \$76.70 per tonne.

For 2016/17 the formula for the annual levy increase was amended in the Waste Regulation, with the levy increasing annually in line with CPI. Currently the 2017/18 levy is \$79.60, and the forecast 2018/19 rate is \$81.30 – however this rate is yet to be formally announced by the NSW Environment Protection Authority.

Figure 1 displays the tonnage of waste moving into or out of the Muswellbrook Waste & Recycle Facility by month, year to date, supplemented with a rolling 6-month average of incoming waste to indicate the overall waste disposal trend.

Figures reported to the Infrastructure Committee in October 2017 for April, May and June 2017 have been updated in this report, following a waste levy audit Council staff participated in with EPA's data unit.

Figure 1: Muswellbrook Waste & Recycle Facility incoming and outgoing waste per month.



As per the relevant regulations, all incoming wastes received at the Muswellbrook Facility are coded into three broad categories:

- Municipal;
- Commercial & Industrial; or
- Construction & Demolition.

For the purposes of statutory reporting and levy calculation, wastes generated by Council's business operations are categorised as Municipal waste. The Municipal category also includes the domestic kerbside bin collections as well as self-haul waste from residents.

Figure 2 illustrates the past 12 months of waste received at Muswellbrook categorised by source. Spikes in the Municipal category in May, June, July 2017 and March 2018 reflect the delivery of aggregate recovered from Council's road maintenance and construction activities and stockpiled at the waste facility for future reuse.

Figure 2: Waste tonnage delivered to Muswellbrook Waste & Recycle Facility categorised by source.

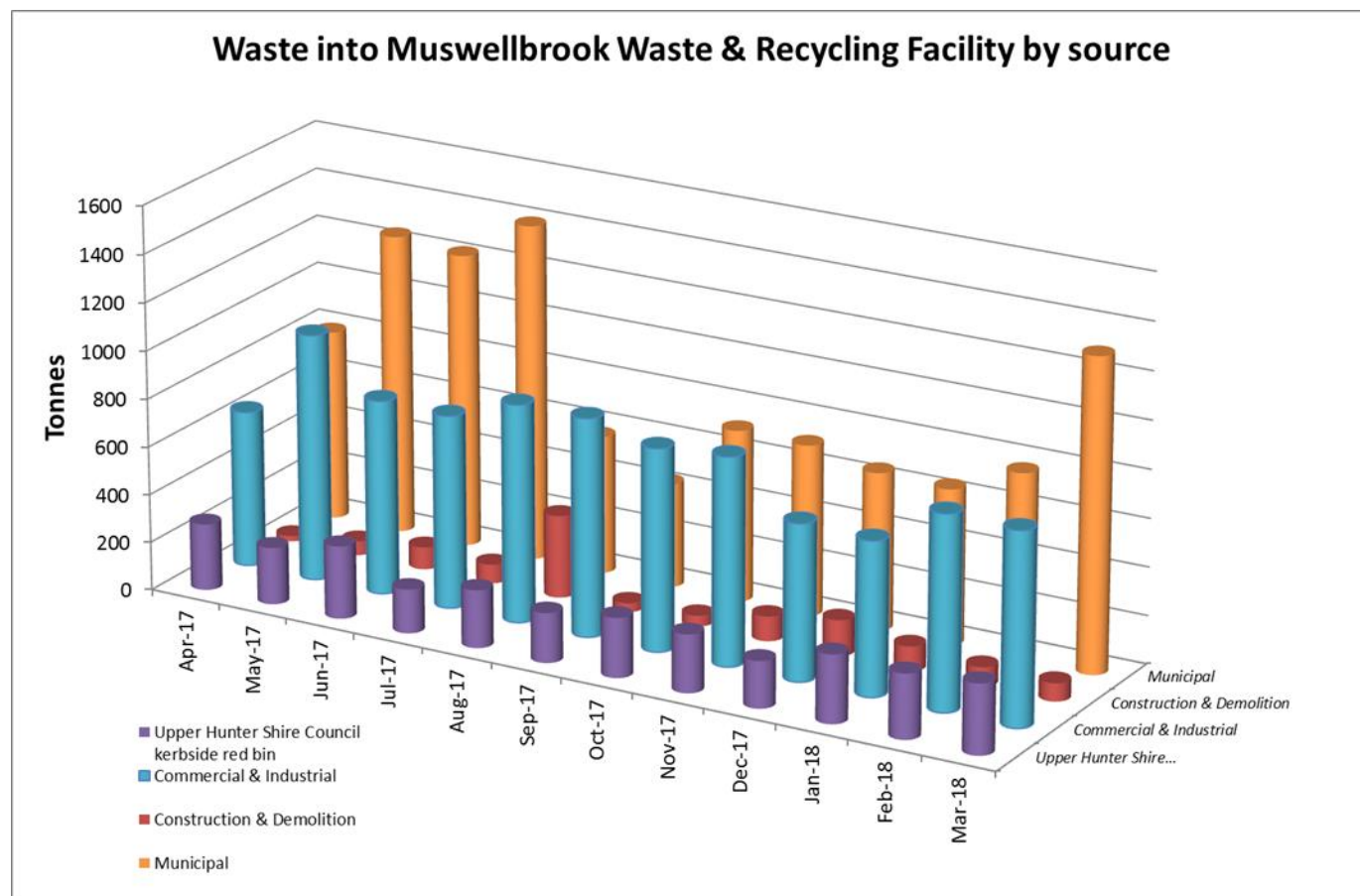


Figure 3: Self haul waste from all sources in detail.

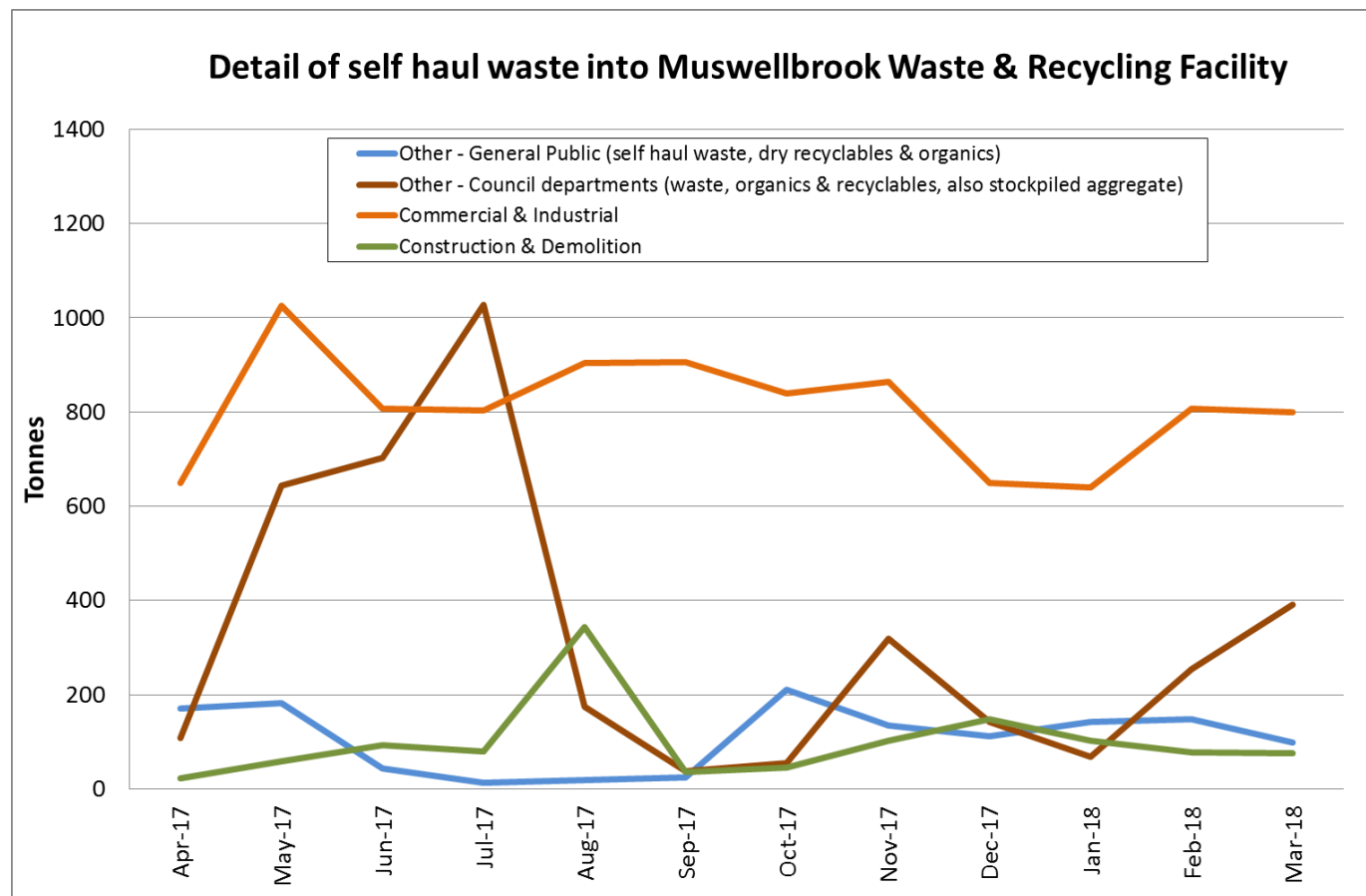
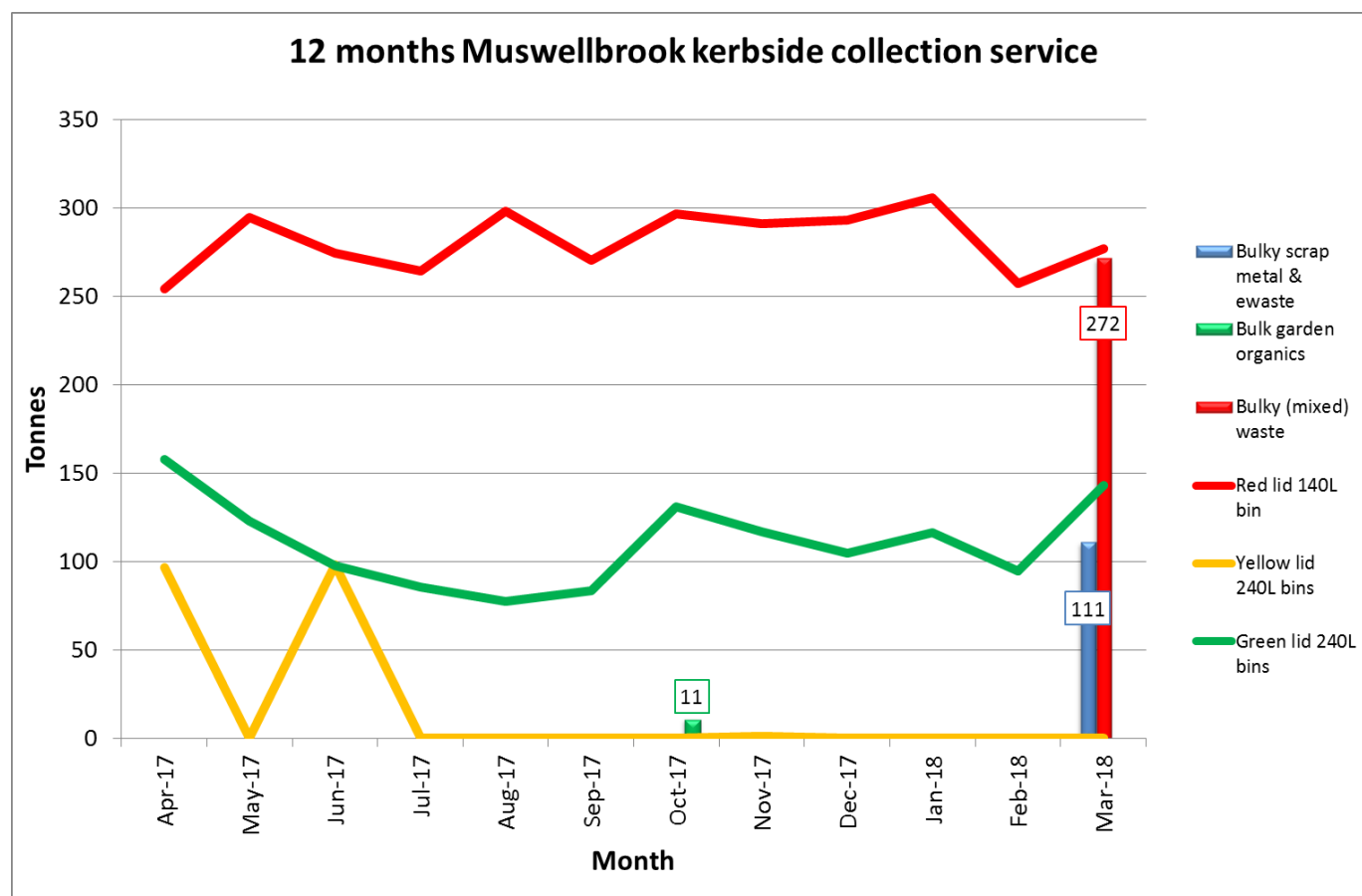


Figure 3 highlights the detail of waste self-hauled to the facility. Tonnages for Construction & Demolition as well as General Public categories remain fairly consistent throughout the year, whereas Commercial & Industrial tonnages have gradually declined. Council departmental waste is highly variable given that most day-to-day waste generated is small in volume. However, aggregate is periodically stockpiled at the Waste & Recycling Facility which results in large spikes in the waste data (e.g. July 2017).

Figure 4 displays the kerbside bin collection performance as well as the bulky kerbside collections of garden organics, mixed wastes and metals. Red lid bin collection volumes are relatively consistent across the year whereas the volume of garden organics collected spikes in spring and autumn reflecting strong seasonal influences.

Yellow lid bin tonnages in Figure 4 show the transition, from delivery to the Muswellbrook Waste and Recycling Facility to delivery directly to Gateshead (following the closure of the Muswellbrook MRF in April 2017). Additional movement of kerbside recyclables over the weighbridge in June relate to the finalisation of MRF closure activities.

Figure 4: Overview of kerbside 3-bin system performance.



Figures 5 and 6 show the variation over time of C&D and C&I wastes respectively. The volume of Construction and Demolition waste peaked in 2011/12 at 14,100 tonnes and has declined significantly to approximately 1,000 tonnes per year.

The Commercial and Industrial category (which provides the majority of Council's waste income) has been progressively declining after peaking in 2013/14 at approximately 14,200 tonnes. In 2017/18 the annual total is estimated to be in the vicinity of 10,000 tonnes (Figure 6).

Figure 5: Annual tonnages Construction & Demolition wastes.

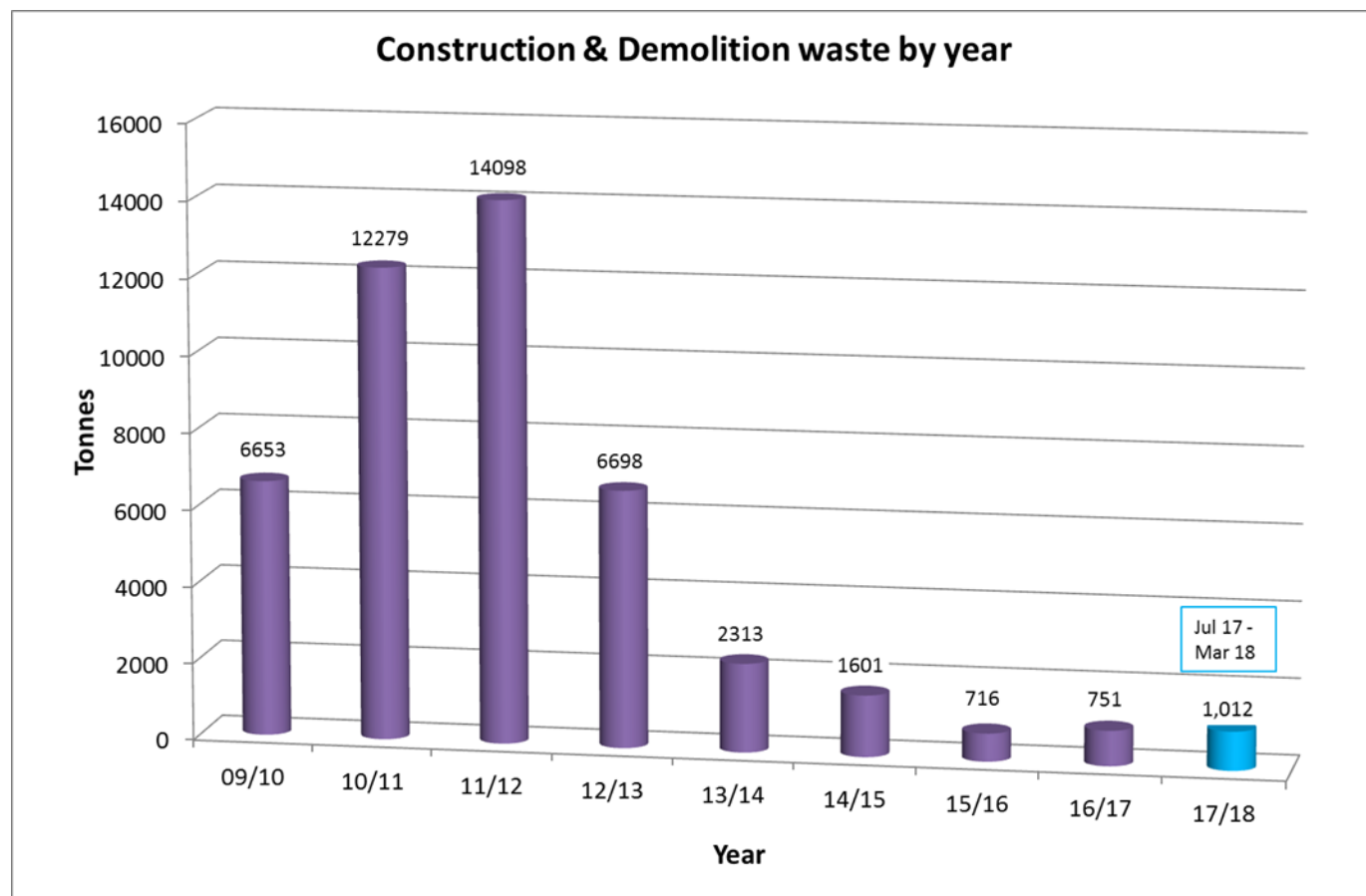
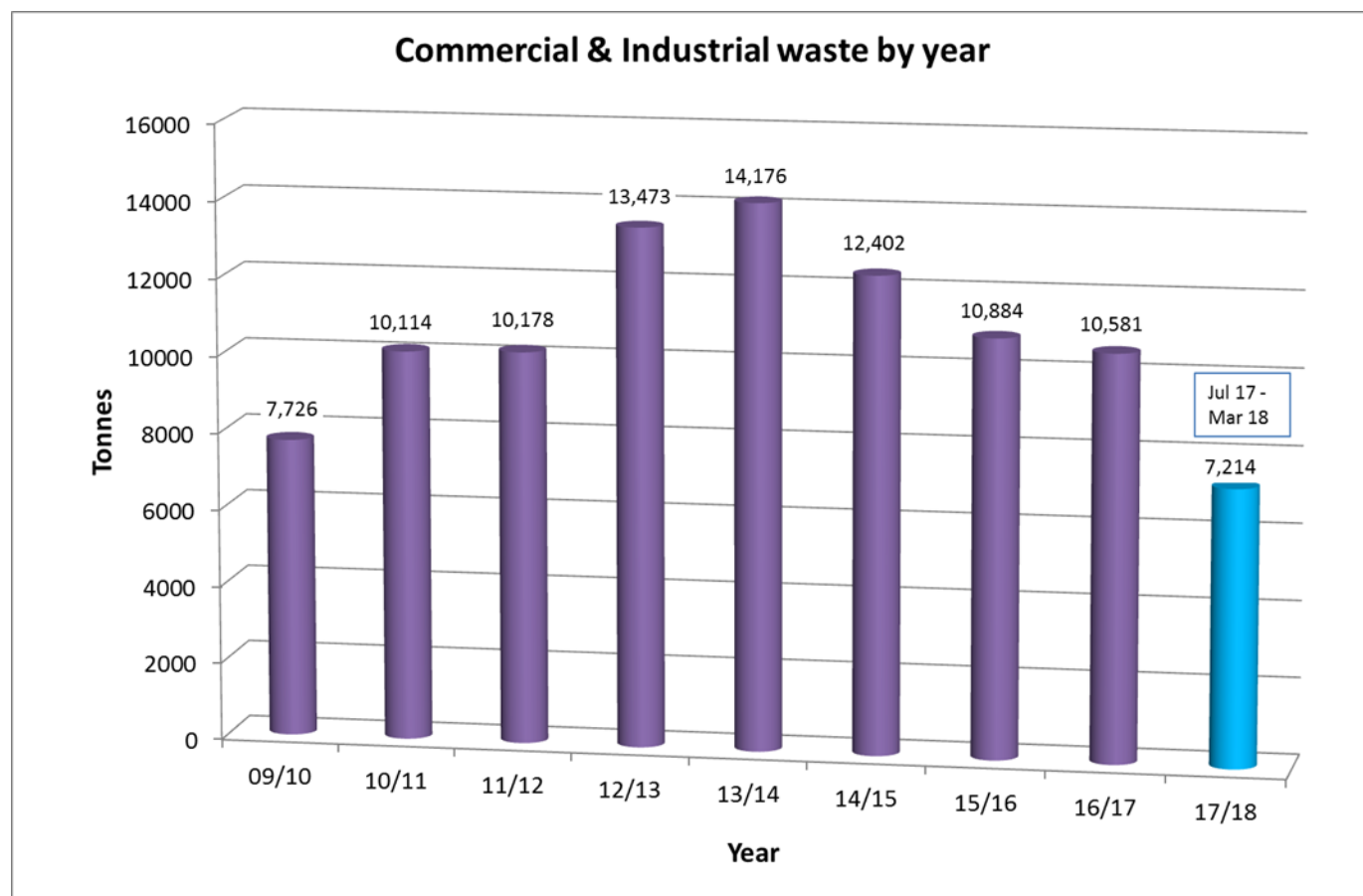


Figure 6: Annual tonnages Commercial & Industrial wastes.



5.3 JAN - MAR 2018 INFRASTRUCTURE REPORT FOR WATER AND WASTEWATER SERVICES

Attachments:	A. Jan-Mar 18 Qtrly Report
Responsible Officer:	Derek Finnigan - Director - Community Infrastructure
Author:	Irene Chetty - Operations & Process Engineer - Water & Waste
Community Plan Issue:	<i>A safe, secure and reliable water supply and sewerage services are provided to all residents that will ensure public health</i>
Community Plan Goal:	<i>Provide safe, secure, efficient and effective water, sewerage and waste services in compliance with regulatory requirements.</i>
Community Plan Strategy:	<i>Ensure substantial achievement of Best Practice Water Supply and Sewerage Guidelines.</i>

PURPOSE

The report summarises the performance of water and wastewater services, including drinking water quality and re-use quality supplied to Council's customers for the period 1 January to 31 March 2018.

OFFICER'S RECOMMENDATION

Council note the content of this report.

Moved: _____ **Seconded:** _____

BACKGROUND

The levels of service performance indicators for water and wastewater services are discussed in this report for the period 01 January to 31 March 2018.

CONSULTATION

Data for this report is extracted from the treatment plant performance monitoring database and services requests; as well as contribution from Water & Wastewater staff, laboratory technician, operators and Council's Rates Department.

CONSULTATION WITH COUNCILLOR SPOKESPERSON

This report will be discussed before the Committee meeting.

REPORT

The attachment summarises the performance for the January to March 2018 on:

- Levels of service performance indicators for water services
- Levels of service performance indicators for wastewater services
- Potable water and wastewater quality
- Water consumption graphs for Muswellbrook Shire Council as accumulated monthly consumptions, 5 year accumulated averages and accumulated monthly allocations.

Discussion

- The dry, hot weather caused an increase of 39% and 48% in peak daily demand above the target of 3,000 litres/ assessment at Denman and Sandy Hollow respectively.
- Drinking water quality at Muswellbrook and Denman remained well within the Australian Drinking Water Guidelines (ADWG, 2011) i.e. 100% compliant in water quality performance. Numerous treatment process improvement projects undertaken in 2017 have contributed to this achievement, such as the Muswellbrook water clarifier upgrade and reinstating of the de-alkaliser (the water softening equipment) in Denman.
- Sandy Hollow drinking water quality is generally satisfactory. Improvement works undertaken at the treatment plant has improved the water quality, with turbidity levels to less than 1 NTU. However the high hardness (which is an aesthetic parameter) of the drinking water at Sandy Hollow is an inherent raw water quality issue. The only solution to the problem is a very costly and totally different treatment process; and this will only improve the drinking water hardness.
- Dirty water complaints in Muswellbrook water supply resulted from main breaks, water service breaks and repairs on old mains. These complaints were resolved after flushing of hydrants.
- Sewer odour complaints in Muswellbrook were overflows from boundary traps and manholes. All of these complaints were attended to and resolved satisfactory.
- Sewer odour complaints at Denman Sewer treatment plant resulted from the failure of the bioreactor decanter gearbox. The failed gearbox prevented effective aeration of the bioreactor and thus resulted in odours emanating from the sewer treatment plant.
- Effluent quality at both Muswellbrook and Denman was unsatisfactory consistent with current treatment capabilities. The high algal growth deteriorated the effluent quality and therefore performance targets were not met. To prevent high algal growth, a nutrient removal process is necessary. High phosphates and nitrates accumulating in the maturation ponds in extreme heat contribute to algal growth, excessive TSS and BOD. High TSS and BOD reduce the effectiveness of chlorine disinfection and therefore impact the E-Coli numbers. A recommended solution for Denman is to replace maturation ponds with closed tanks and introduce UV disinfection, similar to the currently constructed Muswellbrook RWTW.
- Effluent re-used averaged at 90% for both Muswellbrook and Denman
- The hot, dry weather during January to March resulted in high consumption of drinking water with a peak demand of 14.16 ML/d recorded for Muswellbrook, 2.70 ML/d for Denman and 0.27/d ML for Sandy Hollow
- Response and completion times to unplanned system failures in the wastewater services was 100% compliant for January to March 2018 with only three failures in Muswellbrook and none for Denman.
- Whilst response times to unplanned system failures in the water services was meeting the target; the time to complete took longer as there were a notable increase in the number service repairs and main breaks.

OPTIONS

Not applicable

CONCLUSION

Drinking water quality at Muswellbrook, Denman and Sandy Hollow was satisfactory. The effluent quality remains below target, therefore affecting the overall performance of the wastewater performance and compliance. The effluent quality will improve with the cooler weather approaching, commissioning of a new RWTW at Muswellbrook and planned investigations and approved sludge removal activities at Denman STP.

SOCIAL IMPLICATIONS

This report highlights Council's compliance with the stipulated levels of service and statutory requirements such as the Australian Drinking Water Guidelines of 2011, EPA licenses, DOI Water Benchmarking and the contract licensing agreements with Mt Arthur Coal and Muswellbrook & Denman golf courses.

FINANCIAL IMPLICATIONS

Not applicable

POLICY IMPLICATIONS

Not applicable

STATUTORY IMPLICATIONS

Specific statutory regulations, including the Local Government Act, apply.

LEGAL IMPLICATIONS

Council is required to make every effort to ensure compliance.

OPERATIONAL PLAN IMPLICATIONS

The submission of this report complies with the Council's Operational Plan 2017/2018 for the reporting of water and wastewater levels of service, performance indicators and compliance with health guidelines and licence parameters – 20.1.4, 20.1.5 & 20.1.6

RISK MANAGEMENT IMPLICATIONS

The reporting of water and wastewater levels of service and performance indicators for the period January to March 2018 is used as a tool to manage the risk of non-compliance to the regulators.

LEVEL OF SERVICE PERFORMANCE INDICATORS - WATER SERVICES

Period: 1 January - 31 March 2018

Indicator	Description	Report Period	Year to Date	Performance Target
Availability of Supply	Reported Events Outside Standard			
Muswellbrook & Denman	Minimum Pressure kPa (when conveying 0.15 L/s/tenement)			200 kPa
	Maximum Static Pressure			850 kPa
Water Restrictions (2007 Drought Management Plan)				
Muswellbrook				Restrictions result in no more than 20% reduction in consumption, are not required for more than 10% of the time and that the average frequency of restrictions is less than 5 in every 100 years (the level of service)
Denman				
Sandy Hollow				
Peak Daily Demand (litres/assessment including commercial)				(= peak day consumption/no assessments)
Muswellbrook		2754.33		3000 litres/assessment
Denman		4160.25		3000 litres/assessment
Sandy Hollow		4426.23		3000 litres/assessment
Supply Interruptions				
Planned Interruptions to Supply (5 days notice to domestic, commercial & industrial customers)	Number of Interruptions	1.0	7.0	<1/1000 customers/year
	Average time to repair	0.5	5.9	Hours
	Average length of Interruptions			< 2 hours
	Maximum length of interruption			< 4 hours
Average length of interruption is not supplied as current systems do not allow accurate recording -				
Unplanned Interruptions to Supply (due to main replacement - excluding service lines)	Number of Interruptions	0.0	6.0	Mbk - 50, Denman - 10, SH - 2 per year
	Average time to repair	0.0	4.5	Hours
	Average length of Interruptions			< 4 hours
	Number of Residences affected	0	96.0	1/connection/year
Water Quality				
Muswellbrook		Averages		
	Turbidity	0.55	0.48	1 NTU maximum
	pH	7.70	7.86	6.5 - 8.5
	Total Hardness	119.33	145.62	<200 mg/L
	E-Coli	100%	100%	100% Compliance
	Free Available Chlorine	0.98	0.93	0.1 - 1.0mg/l
Denman				
	Turbidity	0.38	0.47	1 NTU maximum
	pH	7.92	7.91	6.5 - 8.5
	Total Hardness	143.48	193.40	<200 mg/L
	E-Coli	100%	100%	100% Compliance
	Free Available Chlorine	1.09	1.05	0.1 - 1.0mg/l
Sandy Hollow				
	Turbidity	0.35	0.62	1 NTU maximum
	pH	7.90	7.80	6.5 - 8.5
	Total Hardness	634.87	605.30	<200 mg/L
	E-Coli	100%	100%	100% Compliance
	Free Available Chlorine	0.99	0.92	0.1 - 1.0mg/l
Service Requests				Leaks 80/year
Muswellbrook	Main Break	15	34	
	Fitting Repair	5	26	
	Service Repair	41	98	
	Service Replacement	1	9	
Meter replacements do not include those replaced during the bill read process				
	Meter replacement	18	113	
Denman	Main Break	5	6	
	Fitting Repair	4	8	
	Service Repair	11	28	
	Service Replacement	0	0	
Meter replacements do not include those replaced during the bill read process				
	Meter replacement	9	20	Meter replacements don't include those completed as a result of the water meter reading process
Sandy Hollow	Main Break	0	0	
	Fitting Repair	0	1	
	Service Repair	0	5	
	Service Replacement	1	1	
Meter replacements do not include those replaced during the bill read process				
	Meter replacement	1	3	Meter replacements don't include those completed as a result of the water meter reading process
Total Service Requests		111	352	
Supply Failure Response Times (unplanned)				
Muswellbrook, Denman & Sandy Hollow	Number where response time <1 hour	96.0	87.0	>95%
(expressed as percentage)	Number where completion time <4 hours	83.0	90.0	>95%
General Complaints (Management)				
Water Quality (Dirty water, taste & odour)				
Muswellbrook		11	30	<1/1000 customers per year
Denman		0	1	
Sandy Hollow		0	2	
Pressure (not related to a main break)				
Muswellbrook		7	22	<10
Denman		2	4	<2
Sandy Hollow		1	6	<2
Other				
Service Provided				
Time to provide an individual connection to water supply in serviced area (90% of time)	New Services	1	5	Number
		0%	60%	Percentage installed within 5 Working Days

■ This Report has been prepared using information available at the time of collation and may not include a complete data set for the report period.

■ Performance Targets are those identified in the current 2005/2006 Strategic Business Plan.

LEVEL OF SERVICE PERFORMANCE INDICATORS - WASTEWATER SERVICES

Period: 1 January - 31 March 2018

Indicator	Description	Report Period	Year to Date	Performance Target
Availability of Service				
Muswellbrook	Average Dry Weather Flow (ADWF)	2.26	2.22	3.6 Ml per day
	Peak Wet Weather Flow (PWWF)	3.69	3.69	18.7 Ml per day
	Rainfall	85.0	201.50	mm
Denman	Average Dry Weather Flow (ADWF)	0.32	0.32	0.3 Ml per day
	Rainfall	103.00	223.00	mm
System Failures (causing overflow)				
Category 1	Failures due to rainfall and deficient design capacity			
Muswellbrook		0	2	2 per year
Denman		0	0	1 per year
Category 2	Failures due to pump or other breakdown			
Muswellbrook		0	0	1 per year
Denman		0	0	1 per year
Category 3	Failures due to blockages			
Muswellbrook	Roots Blocking Sewer	0	1	Muswellbrook - 100/year
	Foreign Objects in Sewer	0	1	
	Broken Sewer Pipe	1	1	
	Blocked Junction	0	0	
	Blocked Boundary	2	4	
	TOTAL	3	7	
Denman	Roots Blocking Sewer	0	0	Denman - 20/year
	Foreign Objects in Sewer	0	0	
	Broken Sewer Pipe	0	0	
	Blocked Junction	0	0	
	Blocked Boundary	0	0	
	TOTAL	0	0	
Response Times (unplanned - to system failures)				
Muswellbrook & Denman	Occasions where response time < 1hr (%)	100.0%	100.0%	> 95%
	Occasions where completion time < 4 hrs (%)	100.0%	100.0%	> 95%
General Complaints (Non Urgent)				
Muswellbrook	Odour complaints(Sewer Treatment Works) for period	0	0	1 per year
	Odour complaints (other) for period	9	17	1 per year
	Odour complaints(Sewer Treatment Works) for period	3	3	1 per year
Denman	Odour complaints (other) for period	1	3	1 per year
Effluent Quality				
		Report Period		
		Min	Max	
Muswellbrook Wastewater	BOD	9.00	29.00	<20 mg/l
Treatment Plant (Golf Course)	SS	38.00	62.00	<30 mg/l
Muswellbrook Wastewater	BOD	10	24	<20 mg/l
Treatment Plant (HVEC)	SS	42	59	<30 mg/l
Denman Wastewater	BOD	2.8	84	20 mg/l
Treatment Plant (Golf Course)	SS	27	300	30 mg/l
Muswellbrook Effluent Reuse (HVEC)	E-Coli	0	34.5	< 150/100mls (Contract)
Muswellbrook Effluent Reuse (Golf Course)	E-Coli	0	276	< 150/100mls
Denman Effluent Reuse (Golf Course)	E-Coli (Reuse Reservoir Outlet)	3	3	

■ This Report has been prepared using information available at the time of collation and may not include a complete data set for the report period.

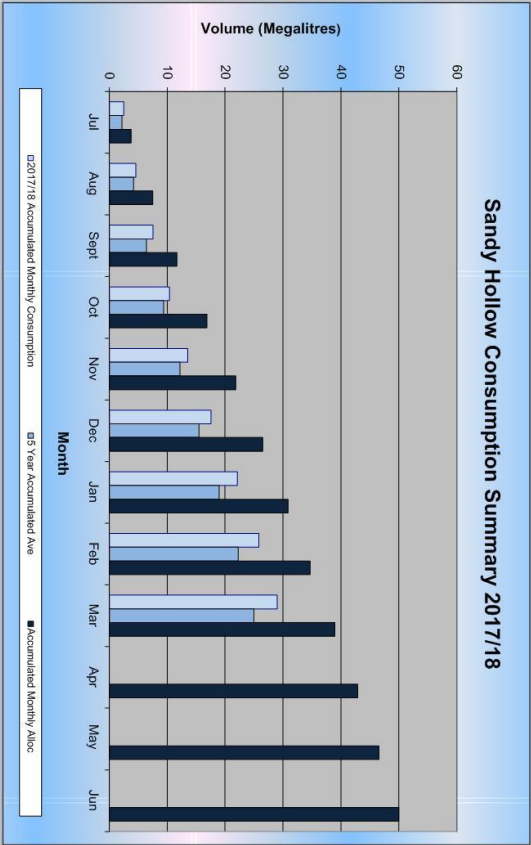
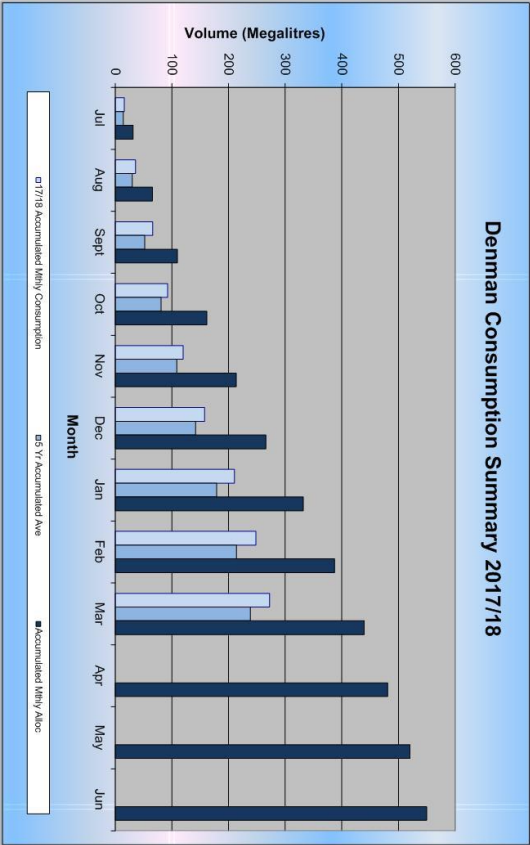
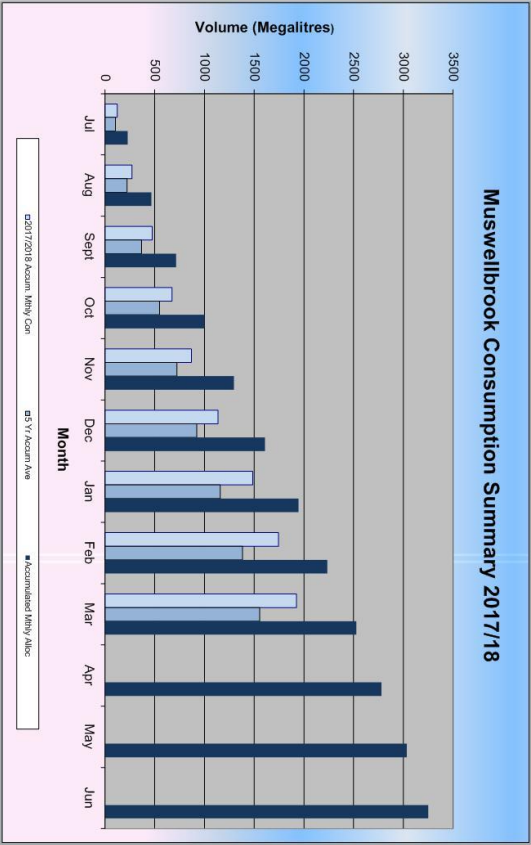
■ Performance Targets are those identified in the current 2005/2006 Strategic Business Plan.

■ Report Period and Year to Date in some cases will be the same due to the commencement of new report year

POTABLE WATER AND WASTEWATER STATISTICS

Period: 1 January to 31 March 2018

WATER	Report Period	5 Year Period Average	5 Year Peak for Period	5 Year Min. for Period	Description
Muswellbrook					
Consumption for Period	788.09	632.45			ML
Annual Consumption to Period End	1925.10	632.45			ML
Maximum Daily Consumption	14.16		15.11		ML
Minimum Daily Consumption	3.76			2.04	ML
Average Daily Consumption	8.77	7.04			ML
Rainfall for Period	85.00	163.80			mm
Yearly Rainfall to Period End	201.50	457.35			mm
Denman					
Consumption for Period	114.52	96.86			ML
Annual Consumption to Period End	272.44	238.78			ML
Maximum Daily Consumption	2.70		2.97		ML
Minimum Daily Consumption	0.15			0.15	ML
Average Daily Consumption	1.28	1.08			ML
Sandy Hollow					
Consumption for Period	11.43	9.48			ML
Annual Consumption to Period End	28.98	24.99			ML
Maximum Daily Consumption	0.27		0.28		ML
Minimum Daily Consumption	0.029			0.017	ML
Average Daily Consumption	0.13	0.11			ML
Muswellbrook					
Raw Sewage (ML)	203.40	204.87	3.69	1.50	Inflows to Wastewater Treatment Plant (ML)
Potable Water to Sewer (%)	25.81	32.39			Potable water consumption to WWTP (%)
Denman					
Raw Sewage (ML)	29.12	33.51	0.70	0.18	Inflows to Wastewater Treatment Plant
Potable Water to Sewer (%)	25.43	34.59			Potable water consumption to WWTP (%)
TREATED EFFLUENT					
Muswellbrook					
Quantity Reused (ML)	184.21	405.81			ML
Percent Effluent Reused	90.57	198.08			Total WWTP inflow for period reused (%)
Effluent discharged to the environment	0.00				ML
Denman					
Quantity Reused (ML)	26.81	37.48			ML
Percent of Effluent Reused	92.07	111.85			Total WWTP inflow for period reused (%)
Effluent discharged to the environment	0.00				ML



6 DATE OF NEXT MEETING

27 June 2018

7 CLOSURE