2018/19 to 2023/24 Network Service Plan

Burdekin Haughton Distribution Service Contract

31 July 2018

Final

Contents

Our plan for Burdekin Haughton

We're focused on reliability, efficiency and safety, ensuring through ongoing consultation that the Burdekin Haughton Distribution Service Contract continues to meet the needs and expectations of our diverse customer base.

In this Network Service Plan (NSP) we outline a range of proposed immediate refurbishment and longer-term improvement projects, and provide a detailed breakdown of anticipated costs for review.

Our focus during the 2018/19 to 2023/24 NSP period will be on maintaining an efficient and reliable water supply and continuing safe operations. Customers will also see improved transparency, openness to working together, a focus on efficiency gains, and more appropriate risk sharing, which hopefully results in lower costs.

It is important to us that our customers are consulted in making important decisions. We welcome and encourage your feedback on this NSP, and look forward to working with you to deliver the programs of work.

Travis Richards

General Manager North

1. Introduction

A Network Service Plan details a range of proposed immediate and longer-term improvement projects, and provides a detailed breakdown of anticipated costs for review.

NSPs are an important part of our asset management framework, feeding into our strategic asset management and corporate strategic plans, as illustrated in ***Appendix 1***.

The purpose of this year's NSP is twofold:

1. to consult with customers on routine and non-routine expenditure throughout the coming financial year
2. to present to customers SunWater's projected efficient costs for the six year period from 2018/19 to 2023/24.

In particular, the NSP covers:

- past performance for routine and non-routine expenditure
- forecast routine and non-routine expenditure for 2018/19 to 2023/24.

In this NSP, the focus of consultation was the draft budget figures for 2018/19 and thereafter. We have retained prior year actual results in ***Appendix 2*** for reference, as requested by customers.

Input from customers is a valuable part of SunWater's planning processes and ensures that we invest in areas which support the services we provide to customers. Figure 1 below shows how SunWater and customers work together in relation to NSPs. SunWater has consulted with the Burdekin River Irrigation Area Board (BRIA) on the draft NSP and feedback from BRIA has been considered and incorporated where appropriate.

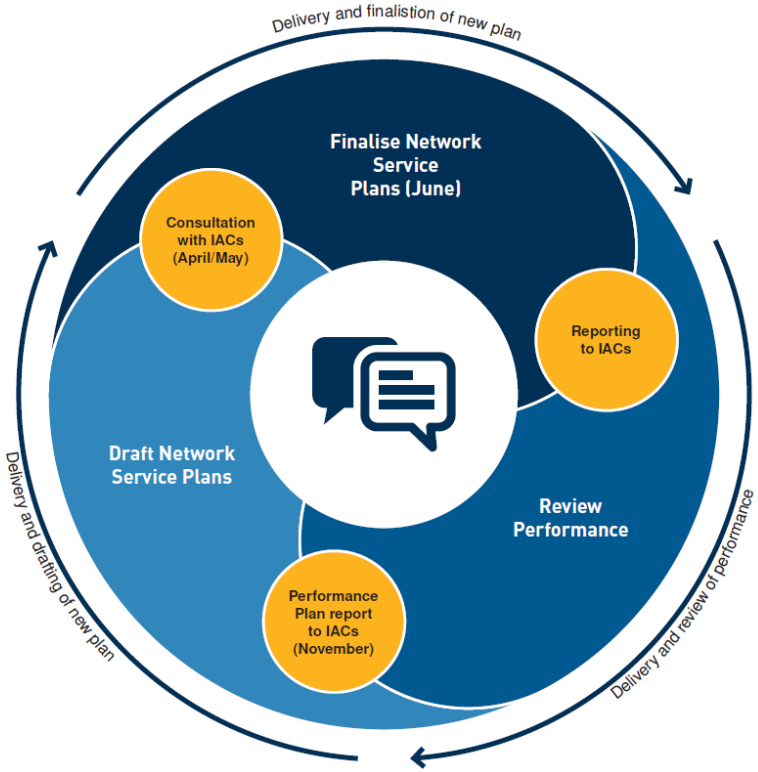
To have your say and shape future NSPs, please contact us via email or post:

Email: nspfeedback@sunwater.com.au

Post: NSP Feedback
PO Box 15536 City East
Brisbane Qld 4002

We consider and respond to all submissions, publishing all responses on our website.

Figure 1: Customer consultation and Network Service Plans



2. Delivering services to customers

At SunWater we are committed to working collaboratively with our customers to deliver value and fit-for-purpose water solutions. SunWater's Customer Service Commitment can be viewed at: www.sunwater.com.au

2.1 Our customers

The customers in this Service Contract primarily produce sugar cane, high value crops and sandalwood. Water is also supplied to industrial users and the Townsville City Council.

The water entitlements for each customer segment are shown in Table 1.

Table 1: Water entitlement and usage data[1]

Customer Segment	Total Water Entitlements (ML)	High Priority Water Entitlements (ML)	Medium Priority Water Entitlements (ML)	Water Deliveries 2016/17 (ML)
Irrigation	635,213	0	635,213	502,176
Urban	10,537	10,537	0	7822
Industrial	20,820	19,779	1041	1543
SunWater (excluding distribution loss)	206,279	53,422	152,857	0
SunWater distribution loss	206,737	16,260	190,477	69,718
Other	6	0	6	50
Total	**1,079,592**	**99,998**	**979,594**	**581,309**

1. This table presents water entitlements and usage data for the bulk water supply scheme, the distribution system, Burdekin Town Water and Burdekin Moranbah Pipeline. Customers have expressed a preference for data to be presented in this manner.

The 2018/19 charges and cost per megalitre are shown in Table 2. The Burdekin Haughton Distribution Service Contract does not fully recover irrigation's share of costs. For the full suite of charges that apply, refer to SunWater's website.

Table 2: Irrigation charges for 2018/19[1]

Product	Charge type	2018/19 ($/ML)	Cost ($/ML)[2]	Subsidy ($/ML)
Medium Priority Allocation Charge – Channel Distribution	Channel Distribution – Part C (fixed charge based upon entitlement)	38.15	43.65	5.50
Medium Priority Allocation Water – Channel Distribution	Channel Distribution – Part D (variable charge based upon usage)	28.88	46.46	17.58

1. This table includes distribution charges only. For river charges (Part A and Part B) please refer to the Bulk Water Service Contract NSP.
2. Costs reflect lower bound cost recovery ie recovery of future replacement and ongoing maintenance and operations. Charges do not allow for any returns on existing assets.

2.2 Service targets

SunWater and customers have agreed Water Supply Arrangements and Service Targets for the Burdekin Haughton Distribution Service Contract.

Table 3 below sets out our performance in 2016/17 against the service targets for: issuing notification of planned shutdowns; the duration of unplanned shutdowns; and the frequency of interruptions to supply.

The identified exception to our service targets in 2016/17 relates to repairs made to a concrete channel in September 2016, which led to an unplanned shutdown which lasted 56 hours.

In addition, SunWater will be setting targets for the time it takes to resolve complaints and will be able to report our performance against these targets in future NSPs.

Table 3: Service targets and performance

Service target		Target	Number of exceptions 2016/17
Planned shutdowns – notification	For shutdowns planned to exceed 2 weeks	8 weeks	0
	For shutdowns planned to exceed 3 days	2 weeks	0
	For shutdowns planned to be less than 3 days	5 days	0
Unplanned shutdowns – duration[1]	Unplanned shutdowns during Peak Demand Period	48 hours	1
	Unplanned shutdowns outside Peak Demand Period	5 working days	
Maximum number of interruptions[2]	Planned or unplanned interruptions per water year	10	0

1. This is the number of times that the unplanned shutdown has exceeded the shortest of the peak/off peak periods.
2. This is the total number of distribution customers in the scheme that have been interrupted in excess of the target.

2.3 Key infrastructure

Table 4 lists the key infrastructure used to deliver distribution services to our customers in Burdekin Haughton. We also maintain a large network of channels and a balancing storage.

Table 4: Key infrastructure

Asset	Description	Capacity
Val Bird Weir	Stepped sheet piling	615 ML
Clare A pump station	4 pumps	166 ML/day
Clare B pump station	4 pumps	122 ML/day
Clare B8 Relift pump station	2 pumps	21 ML/day
Dalbeg A pump station	3 pumps	74 ML/day
Dalbeg B pump station	2 pumps	74 ML/day
Dalbeg Relift pump station	2 pumps	18 ML/day
Millaroo A pump station	4 pumps	180 ML/day
Millaroo B pump station	3 pumps	111 ML/day
Millaroo Relift pump station	2 pumps	34 ML/day
Elliot pump station	3 pumps	3800 ML/day
Tom Fenwick pump station	Consists 5 pump stations	605 ML/day (pump station 1) 1209 ML/day (pump stations 2 & 3) 1209 ML/day (pump stations 4 & 5)

3. Financial summary – revenue and expenditure

All financial figures in this report are presented in nominal dollars.

A high-level summary of the budgeted financial performance of the Burdekin Haughton Distribution Service Contract is presented in Table 5.

The revenue SunWater receives from urban and industrial customers is agreed by term contract. The revenue we receive from irrigation customers is determined by the Queensland Government based on recommendations made by the Queensland Competition Authority (QCA) as part of its review of irrigation charges and is intended to allow SunWater to recover its prudent and efficient costs of operating the Service Contract.

SunWater anticipates an increase in revenue for the Burdekin Haughton Distribution Service Contract in 2018/19, which is expected to lead to a reduction in the Community Service Obligation.

In 2018/19, SunWater's projected routine expenditure to operate the Burdekin Haughton Distribution Service Contract will increase, largely due to a reallocation of overheads. Non-routine expenditure on projects within the Service Contract will reduce in 2018/19, with a focus on projects that improve efficiency and performance, and allow us to deliver the best possible service to our customers. This will continue to be our focus throughout the upcoming price path period.

Further detail on the planned spend and annuity revenue is outlined on subsequent pages of this NSP and a further breakdown of expenditure by type can be found in ***Appendix 2***.

Table 5: Service contract financial summary[1]

Burdekin Haughton Service Contract	2014/15 Actual $'000	2015/16 Actual $'000	2016/17 Actual $'000	2017/18 Estimate $'000	2018/19 Forecast $'000
Revenue					
Irrigation	17,305.6	17,307.6	16,092.8	18,011.4	18,787.0
Community Service Obligation	2414.4	1789.7	1211.9	602.9	1.7
Industrial[2]	111.9	100.7	158.8	73.0	74.8
Urban[2]	707.7	761.0	1236.8	796.2	816.1
Revenue transfers[3]	(1428.2)	(1458.9)	(1440.6)	(1352.9)	(1385.9)
Drainage	682.2	703.5	735.6	762.5	781.5
Other	65.0	26.7	59.9	27.4	27.9
Insurance proceeds – flood	-	-	-	-	-
Revenue Total	**19,858.6**	**19,230.2**	**18,055.2**	**18,920.4**	**19,103.1**
Less – Routine expenditure	(16,901.6)	(16,116.4)	(14,700.7)	(17,236.9)	(19,051.4)
Less – Non-routine expenditure					
Annuity funded	(1137.9)	(1324.8)	(1767.2)	(2249.4)	(2017.0)
Non annuity funded[4]	(1.2)	-	(1.9)	-	-
Surplus (deficit)	**1818.0**	**1789.1**	**1585.5**	**(566.0)**	**(1965.3)**

1. Totals may not add due to rounding.
2. Forecast revenues for industrial and urban customers are based on current contractual arrangements.
3. Revenue transfers represent the cost of bulk water supplies delivered through the distribution system(s). The revenue accrues to the distribution system before it is transferred to the Bulk Water Service Contract as a contribution to the cost of the bulk water service. The QCA established the transfer cost for irrigation supplies at the cost reflective bulk water tariff.
4. This is expenditure which has not been funded by irrigation customers.

As part of our commitment to transparency, Figure 2 and Figure 3 show a high-level breakdown of total Service Contract costs. The item 'Annuity Contribution' refers to the annualised renewals annuity component of the Service Contract's total costs.

Figure 2: Breakdown of total service contract costs – 2018/19 forecast

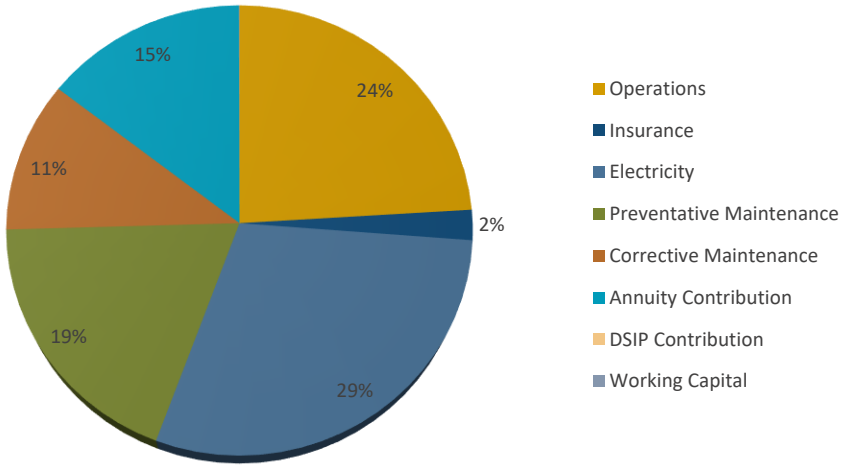
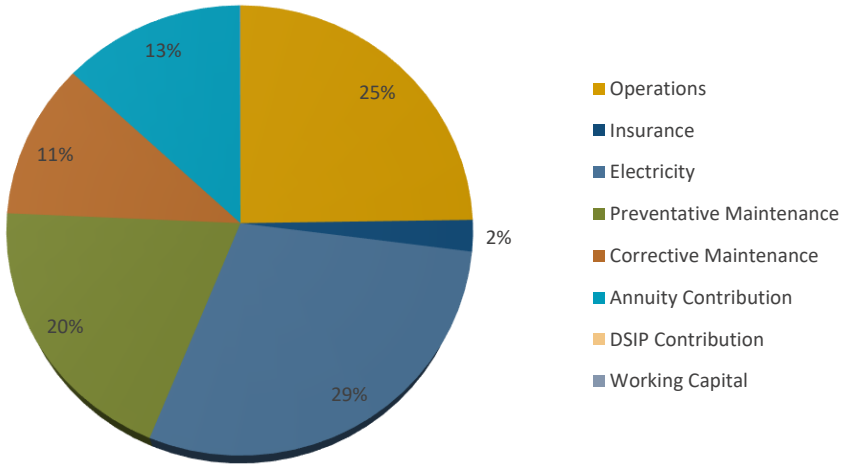


Figure 3: Breakdown of total service contract costs – 2019/20 to 2023/24 forecasts



4. Cost of delivering services – routine expenditure

Routine (or annual) expenditure includes funds for operations activities (operations, electricity and insurance), preventative maintenance and corrective maintenance.

SunWater has budgeted an increase in Burdekin Haughton Distribution Service Contract's routine operating expenditure in 2018/19 (refer to Table 6). SunWater's proposed budgets for routine operating expenditure for 2019/20 to 2023/24 are also presented in this table.

From 2019/20, SunWater has built into forecast costs an efficiency saving of 0.2 per cent every year (cumulative).

Following consultation with customers on the draft NSPs and a further review of potential savings in non-direct costs, SunWater has included an additional one-off reduction in routine non-direct expenditure from 2019/20 onwards comprising: an 8.00 per cent reduction in corporate support costs, a 1.00 per cent reduction in local area support costs and a 2.36 per cent reduction in indirect costs.

The data presented in Table 6 includes direct expenses and a share of local area support costs, indirect costs and corporate support costs. For a more detailed breakdown and explanation of these costs, refer to ***Appendix 2***.

Table 6: Routine operating expenditure[1,2]

Burdekin Haughton Service Contract	2016/17			2017/18[3]		2018/19[3]		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual $'000	QCA Recommended $'000	Variance $'000	SunWater Estimate $'000	2016/17 QCA Recommended (adjusted) $'000	SunWater Forecast $'000	2016/17 QCA Recommended (adjusted) $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000
Electricity	4809.7	6058.3	(1248.6)	6892.5	6209.8	6563.8	6365.0	6550.6	6517.9	6733.0	6908.0	6776.8
Insurance	495.6	414.7	80.9	495.6	425.0	482.5	435.6	493.6	504.9	516.5	528.4	540.6
Operations	3887.3	4222.9	(335.7)	4314.6	4328.5	5362.5	4436.7	5401.0	5544.0	5690.7	5841.4	5996.1
Operations Total	**9192.6**	**10,695.9**	**(1503.3)**	**11,702.7**	**10,963.3**	**12,408.7**	**11,237.4**	**12,445.3**	**12,566.8**	**12,940.2**	**13,277.8**	**13,313.4**
Preventative maintenance	3628.4	3581.8	46.6	3750.2	3671.4	4218.5	3763.2	4277.2	4385.3	4496.2	4609.9	4726.6
Corrective maintenance	1879.7	1577.2	302.6	1784.1	1616.6	2424.1	1657.0	2446.9	2510.7	2576.2	2643.4	2712.4
Routine Total	**14,700.7**	**15,854.9**	**(1154.2)**	**17,236.9**	**16,251.3**	**19,051.4**	**16,657.6**	**19,169.3**	**19,462.8**	**20,012.7**	**20,531.2**	**20,752.4**

1. Totals may not add due to rounding.
2. SunWater's 2019/20 to 2023/24 budget figures are draft as at the time of consultation. These figures will not be locked down until late in the financial year prior.
3. For 2017/18 and 2018/19 SunWater has included and reported against the 2016/17 QCA recommended costs adjusted for inflation which was assumed to be 2.5%.

4.1 Operations

Burdekin Haughton Distribution Service Contract's total operations budget in 2018/19 is aligned with the QCA's recommended costs (adjusted for inflation). For further detail on what is included in operations expenditure, refer to ***Appendix 3***.

Electricity

One of the key challenges for SunWater is managing the cost of electricity. SunWater is therefore targeting several initiatives over the next 24 months to help manage these costs, including:

- annual tariff reviews to match electricity usage with the best electricity tariff
- testing the contestable market for potential savings
- ensuring our assets are operating as efficiently as possible
- operational management of usage to reduce the impact of demand charges.

Insurance

Insurance is one of SunWater's largest expenditure items and these costs have increased significantly in recent years due to multiple flood events in Queensland and global insurable events impacting premiums. Although SunWater is subject to market forces in the pricing of insurance premiums, we have also been actively managing insurance premium costs by reviewing coverage levels and policy specifications including deductibles to ensure that our insurance coverage is appropriate and reflective of the risks faced by our business.

Although insurance premiums are forecast to increase globally in 2018/19, SunWater is forecasting a small reduction in our insurance costs in 2018/19 compared to the 2017/18 budget as a result of the review of our insurance coverage. As flagged in the draft NSPs, SunWater is considering self-insurance in the distribution schemes in order to achieve further cost savings. However, given the potential consequences for customers should an event occur, SunWater will undertake more detailed consultation with customers before making such a significant change to policy coverage.

4.2 Preventative maintenance

Preventative maintenance underpins the ongoing operational performance and service capacity of Burdekin Haughton Distribution Service Contract's physical assets.

Preventative maintenance is cyclical in nature with a typical interval of 12 months or less, however, the intervals can be longer. Burdekin Haughton Distribution Service Contract's preventative maintenance for 2018/19 is budgeted to be 12.10 per cent above the QCA's recommended costs (adjusted for inflation). This variance is largely attributed to higher material costs related to chemical use and overheads.

For more information on what is included as preventative maintenance, refer to ***Appendix 3***.

4.3 Corrective maintenance

Corrective maintenance is identified in several ways including:

- through the performance of preventative maintenance
- operation of assets and equipment
- operational inspections where defects are identified
- through continuous monitoring by control systems, hazard inspections, safety audits and from incident and accident investigation outcomes.

Corrective maintenance includes activities to correct unexpected failures or to return an asset to an acceptable level of performance or condition. While these are difficult to forecast with accuracy, history has shown that such events can be expected and need to be factored into expenditure forecasts. SunWater conducts two types of corrective maintenance: scheduled and emergency.

Corrective maintenance expenditure forecasts include provision for labour, materials and plant hire, but do not include costs of damage arising from major unexpected events, such as floods. These costs are categorised as non-routine corrective maintenance, which is discussed in the following section.

Burdekin Haughton Distribution Service Contract's corrective maintenance for 2018/19 is budgeted to be 46.30 per cent above the QCA's recommended costs

(adjusted for inflation). This variance is attributed to higher labour and contractor costs, and overheads. The increased labour cost for corrective maintenance is related to a regional focus on allocating costs to the correct work function and relying more on labour resources than contractors than in previous years.

Scheduled corrective maintenance

Scheduled corrective maintenance is maintenance that can be planned and scheduled. For a list of what this typically includes, refer to ***Appendix 3***. This work is managed on a risk and priority basis with as much forward planning as possible to cater for pricing cycles.

Emergency corrective maintenance

Emergency corrective maintenance (or breakdown maintenance) includes works required to restore system supply and capacity or equipment operation after an unplanned event. It is carried out immediately to restore normal operation or supply to customers or to meet regulatory obligations (eg rectify a safety hazard). For a list of what this typically includes, refer to ***Appendix 3***.

5. Cost of delivering services – non-routine expenditure

SunWater's approach to managing non-routine expenditure is underpinned by the concept of 'optimised life cycle cost', which seeks to optimise capital outlays and ongoing maintenance spend.

SunWater has developed a whole of life strategy around the replacement and maintenance of its asset portfolio which is based on the concept of optimised life. The key drivers in this approach are the risk and condition of each asset. The current condition of an asset drives an estimate of the future work required to ensure an asset continues to be able to provide the required level of service into the future. SunWater maintains a program of asset inspections and condition assessments which continually updates our knowledge of asset condition. This information feeds into the annual review of the renewals program. Items requiring immediate maintenance or replacement are included in the budget for the following year.

Non-routine expenditure is funded via an annuity. This expenditure could be capital or operating expenditure. The annuity approach acknowledges a long-term view of renewals spend and seeks to reduce the burden on future generations of water users.

The QCA applied a 20 year planning period for the purpose of calculating the 2012/13 to 2016/17 renewals annuity. For 2018/19 to 2023/24, SunWater is proposing to adopt a 30 year planning period. BRIA endorsed this proposal during consultation in June 2018. Our forecast annuity funded non-routine expenditure presented in Table 7 and elsewhere in this NSP reflects this proposal.

While the immediate program for the 2018/19 budget is well defined, estimates become more uncertain further into the planning timeline. As such, the program of works is not a specific forecast of when individual projects are expected to be executed, but rather a portfolio-level estimate based on the best-available risk and condition information for the Service Contract as a whole.

At SunWater, we focus on ensuring our assets are maintained to the required standard at the lowest cost. Our review of the renewals profiles also extends to considering the key asset replacement assumptions so that the profile better reflects likely spend each year and moves away from assuming assets are replaced at end of standard life, based on their replacement costs.

Table 7 sets out our non-routine annuity and non-annuity funded expenditure. The non-routine program for the Burdekin Haughton Distribution Service Contract is consistent and focuses on:

- pump and motor inspections and refurbishments
- regulator gate maintenance/refurbishments
- meter replacements
- telemetry/communications upgrades.

Details of the major non-routine projects planned for the period from 2018/19 to 2023/24 are set out in ***Appendix 4***.

Table 7: Non-routine expenditure[1]

Burdekin Haughton Service Contract	2016/17			2017/18[2]		2018/19[2]		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual $'000	QCA Recommended $'000	Variance $'000	SunWater Estimate $'000	QCA Forecast $'000	SunWater Forecast $'000	QCA Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000
Annuity funded												
Operations	2.0	-	2.0	-	-	-	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Corrective maintenance (flood)	94.7	-	94.7	-	-	-	-	-	-	-	-	-
Renewals	1670.4	3541.1	(1870.7)	2249.4	1903.8	2017.0	2602.4	1758.1	2018.8	2212.1	1965.4	2027.4
Non-routine total	**1767.2**	**3541.1**	**(1774.0)**	**2249.4**	**1903.8**	**2017.0**	**2602.4**	**1758.1**	**2018.8**	**2212.1**	**1965.4**	**2027.4**
Non annuity funded												
Other	**1.9**			**-**		**-**		**-**	**-**	**-**	**-**	**-**

1. Totals may not add due to rounding.
2. The QCA Forecast for 2017/18 and 2018/19 are based upon the modelling undertaken by the QCA as part of the 2012 irrigation pricing review.

6. Annuity balance

Annuities are managed by SunWater on behalf of each Service Contract. They allow for customer charges to reflect a constant amount necessary to recoup the costs of refurbishment/rehabilitation of the assets over a pre-determined period of time. The forecast annuity balances, and the impacts of budgeted non-routine spend, are shown in Table 8 below.

The QCA and SunWater closing balances will differ due to differences in the expenditure profile allowed by the QCA in 2012 and actual expenditure incurred by SunWater between 2012/13 and 2018/19. Mobilisation of skilled service agents, the complexity of large plant and equipment, and the frequency of high flows in the Burdekin River expose this Service Contract to increased non-routine expenditure.

Repairs following flood events in 2010/11, 2011/12 and 2016/17 (approximately $600,000) and interest/financing costs have also impacted the closing balances.

Table 8: Annuity balance[1]

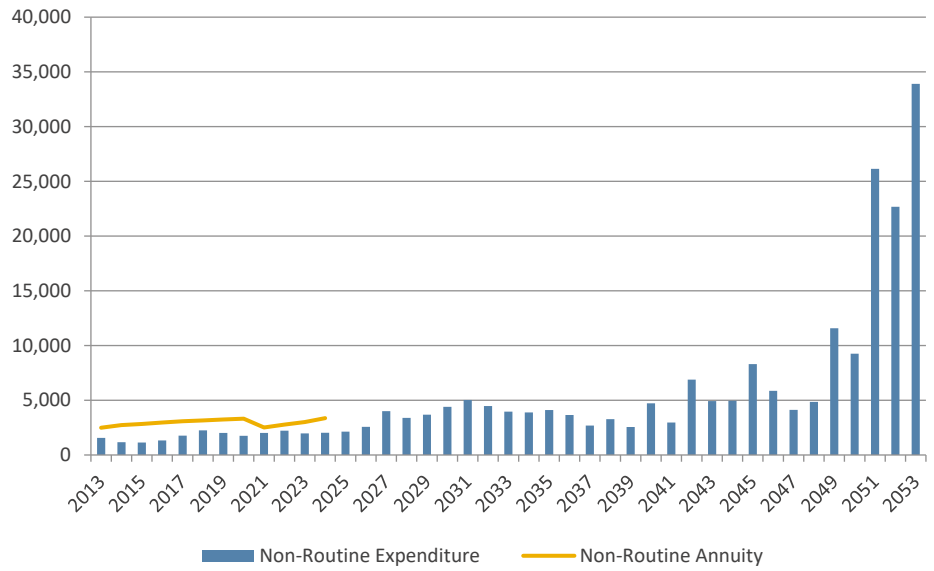
Burdekin Haughton Service Contract	2016/17 Actual $'000	2017/18 Estimate $'000	2018/19 Forecast $'000	2019/20 Forecast $'000	2020/21 Forecast $'000	2021/22 Forecast $'000	2022/23 Forecast $'000	2023/24 Forecast $'000
Annuity								
Opening balance[2]	(1378.4)	(165.0)	734.2	2012.1	4818.6	5587.5	6477.8	7903.1
Spend	(1767.2)	(2249.4)	(2017.0)	(1758.1)	(2018.8)	(2212.1)	(1965.4)	(2027.4)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution[3]	3083.8	3160.9	3239.9	3320.9	2508.9	2779.0	3015.8	3365.2
Interest/financing costs	(103.2)	(12.4)	55.0	150.7	278.8	323.3	374.9	457.3
SunWater – Closing Balance	**(165.0)**	**734.2**	**2012.1**	**3725.6**	**5587.5**	**6477.8**	**7903.1**	**9698.2**
QCA – Closing Balance	**1651.7**	**3032.5**	**3897.2**					
Difference	(1816.6)	(2298.4)	(1885.1)					

1. Totals may not add due to rounding.
2. The difference in the closing balance for 2019/20 and the opening balance for 2020/21 relates primarily to expenditure incurred prior to the start of the 2012 price path. For example, flood repairs associated with an insurance claim that were still outstanding in 2012. These amounts have been carried forward to 2020/21 so that they can be considered as part of the QCA's review of expenditure for the new irrigation price path.
3. The annuity contribution is included in the prices paid by customers. It was set by the QCA for 2012/13 to 2016/17 and is rolled forward with CPI for 2017/18, 2018/19 and 2019/20. Thereafter the annuity contribution is based upon SunWater's forecast and will be included as part of SunWater's submission to the QCA for the upcoming price review.

6.1 Overview of annuity-funded, non-routine projects to 2052/53

The estimated renewals expenditure out to 2052/53 is shown in Figure 4 below.

Figure 4: Annuity expenditure to 2052/53 ($'000)



The renewals annuity presented above is calculated over a 30 year planning period, with projects forecast to occur up to 2052/53 affecting the renewals annuity. The greater the value of the project, the more significant impact upon the renewals annuity.

6.2 Options assessment

SunWater is committed to maintaining assets that are fit for service with the lowest possible lifecycle cost.

In response to a recommendation from the QCA in 2012, SunWater has been preparing options analyses for all material renewals projects within the planning period. SunWater now has the benefit of learnings, having applied this approach for number of years, and has reflected and considered whether it is the most efficient approach or whether there is another way to approach this which provides customers with reassurance that SunWater's renewals expenditure is prudent and justified.

Following consultation with the BRIA and Irrigator Advisory Committees, SunWater has decided to implement a new procedure for options assessments.

SunWater will continue to prepare an options analysis and supporting investigation where:

- there is no obvious solution
- the current maintenance strategy is changing
- technology has changed significantly, or
- there is a high risk in the project execution.

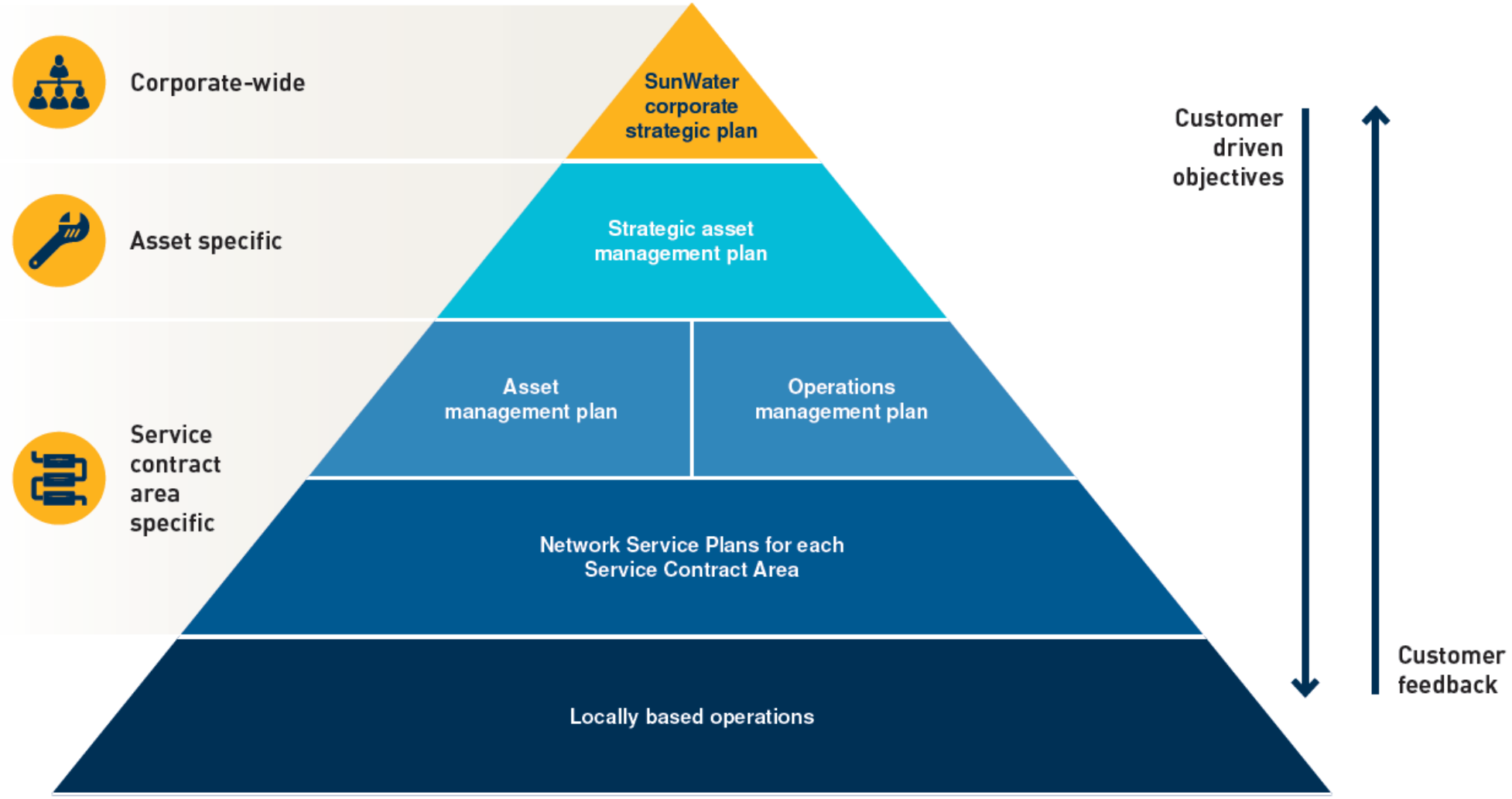
For less complex (more routine) renewals projects with fewer practical outcomes, SunWater will use its engineering knowledge and experience to determine the optimum solution.

This approach takes the emphasis off the value of the renewals project and focuses on solutions and risk. It ensures that SunWater invests resources appropriately in those projects that would benefit from an options analysis.

SunWater will transition to this new approach, given options analyses have already been prepared for the 2018/19 material renewals projects. In the future, the Network Service Plans will identify renewals projects that we expect to prepare an options analysis for under the new approach. Customers will be able to provide feedback through the consultation process.

Appendix 1: SunWater's asset management framework

Figure 5: SunWater's asset management framework



Appendix 2: Total expenditure by expense type

Table 9: Expenditure for activity by type[1]

Burdekin Haughton Service Contract	2014/15			2015/16			2016/17			2017/18		2018/19		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual $'000	QCA Recommended $'000	Variance $'000	SunWater Actual $'000	QCA Recommended $'000	Variance $'000	SunWater Actual $'000	QCA Recommended $'000	Variance $'000	SunWater Estimate $'000	2016/17 QCA Recommended (Adjusted) $'000	SunWater Forecast $'000	2016/17 QCA Recommended (Adjusted) $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000
Routine spend																		
Operations																		
Labour	1261.5	1351.9	(90.4)	1161.9	1395.2	(233.4)	1189.4	1439.8	(250.4)	1409.0	1475.8	1419.8	1512.7	1461.2	1503.8	1547.6	1592.7	1639.2
Contractors	41.8	22.9	18.9	2.2	23.7	(21.5)	58.0	24.1	33.9	25.0	24.7	25.0	25.3	25.6	26.2	26.8	27.5	28.2
Materials	37.8	22.9	14.9	35.0	23.7	11.4	40.8	24.1	16.7	37.0	24.7	37.0	25.3	37.9	38.7	39.6	40.5	41.5
Electricity	5991.9	5242.6	749.3	5769.1	5662.0	107.1	4809.7	6058.3	(1248.6)	6892.5	6209.8	6563.8	6365.0	6550.6	6517.9	6733.0	6908.0	6776.8
Insurance	584.6	400.8	183.8	545.2	407.7	137.5	495.6	414.7	80.9	495.6	425.0	482.5	435.6	493.6	504.9	516.5	528.4	540.6
Other	775.4	606.8	168.7	765.8	617.7	148.1	635.8	628.2	7.6	794.0	643.9	703.0	660.0	719.2	735.7	752.6	769.9	787.7
Local area support costs	929.0	-	929.0	994.3	-	994.3	1018.7	-	1018.7	1099.0	-	1743.8	-	1771.9	1818.1	1865.5	1914.1	1964.0
Corporate support costs	510.2	1375.7	(865.5)	391.4	1352.5	(961.1)	393.4	1382.1	(988.7)	663.1	1416.7	922.9	1452.1	873.1	895.9	919.2	943.2	967.8
Indirect costs	764.0	820.1	(56.1)	639.4	819.3	(179.9)	551.1	724.6	(173.5)	287.4	742.7	511.0	761.3	512.2	525.6	539.3	553.4	567.8
Preventative maintenance																		
Labour	557.6	707.7	(150.1)	581.5	730.3	(148.8)	654.4	753.7	(99.3)	652.4	772.5	654.5	791.8	673.6	693.2	713.4	734.2	755.6
Contractors	837.2	1005.8	(168.6)	709.3	1038.0	(328.7)	969.1	1055.7	(86.6)	924.2	1082.1	950.2	1109.2	973.1	996.5	1020.5	1045.1	1070.3
Materials	928.5	476.1	452.3	1183.5	491.4	692.1	653.0	499.8	153.2	1110.0	512.3	903.0	525.1	923.8	945.0	966.8	989.0	1011.7
Other	50.3	155.1	(104.8)	49.3	160.0	(110.7)	212.1	162.8	49.3	42.0	166.8	212.0	171.0	216.9	221.9	227.0	232.2	237.5
Local area support costs	413.8	-	413.8	499.5	-	499.5	562.0	-	562.0	508.9	-	837.8	-	851.2	873.4	896.2	919.6	943.5
Corporate support costs	283.1	778.2	(495.1)	259.8	768.8	(509.0)	274.7	785.9	(511.1)	379.6	805.5	425.4	825.6	402.5	413.0	423.7	434.8	446.1
Indirect costs	334.8	382.3	(47.5)	319.1	379.3	(60.3)	303.2	324.0	(20.8)	133.1	332.1	235.6	340.4	236.1	242.3	248.6	255.1	261.7
Corrective maintenance																		
Labour	588.0	398.6	189.4	526.7	411.4	115.4	484.2	424.5	59.7	487.0	435.1	553.0	446.0	569.1	585.7	602.8	620.3	638.4
Contractors	560.6	78.8	481.7	464.0	81.4	382.6	166.0	82.8	83.2	220.0	84.8	175.0	87.0	179.2	183.5	187.9	192.5	197.1
Materials	304.9	229.3	75.5	202.6	236.7	(34.1)	190.8	240.7	(49.9)	200.0	246.7	220.0	252.9	225.1	230.2	235.5	240.9	246.5
Other	109.5	216.0	(106.6)	88.2	222.9	(134.7)	234.3	226.7	7.5	162.9	232.4	209.9	238.2	214.7	219.7	224.7	229.9	235.2
Local area support costs	437.4	-	437.4	452.4	-	452.4	415.7	-	415.7	379.9	-	707.8	-	719.2	737.9	757.2	776.9	797.2
Corporate support costs	250.4	417.0	(166.6)	185.1	410.9	(225.8)	164.9	419.9	(255.0)	235.0	430.4	359.4	441.2	340.1	348.9	358.0	367.4	376.9
Indirect costs	349.3	215.3	134.0	291.0	213.7	77.3	224.0	182.5	41.4	99.3	187.1	199.0	191.8	199.5	204.7	210.0	215.5	221.1
Routine total	16,901.6	14,904.2	1997.4	16,116.4	15,446.5	669.8	14,700.7	15,854.9	(1154.2)	17,236.9	16,251.3	19,051.4	16,657.6	19,169.3	19,462.8	20,012.7	20,531.2	20,752.4
Non-routine spend																		
Labour	114.2	90.5	23.7	112.1	197.4	(85.3)	168.5	646.7	(478.2)	200.8	337.0	193.4	460.6	226.8	151.4	212.2	111.4	306.5
Contractors	659.5	123.6	535.9	846.9	295.0	551.9	1006.1	728.4	277.8	966.5	384.1	475.1	525.1	438.4	1300.3	657.1	647.3	581.7
Materials	108.1	82.9	25.2	91.9	203.0	(111.0)	202.1	691.4	(489.3)	704.3	371.9	897.6	508.4	617.9	235.4	896.1	961.2	395.4
Other	21.1	48.9	(27.8)	38.2	107.2	(69.0)	56.3	370.7	(314.4)	11.2	194.1	34.0	265.3	4.2	11.8	4.7	14.0	112.0
Local area support costs	87.6	117.7	(30.1)	94.8	251.5	(156.6)	142.8	787.8	(645.0)	156.6	428.6	221.5	585.9	191.9	128.5	178.6	94.7	259.1
Corporate support costs	77.8	-	77.8	79.7	-	79.7	109.7	-	109.7	169.0	-	125.7	-	188.2	125.6	176.1	92.5	254.4
Indirect costs	69.4	56.2	13.2	61.2	119.5	(58.4)	81.6	316.1	(234.6)	41.0	188.1	69.6	257.1	90.7	65.7	87.3	44.3	118.2
Non-routine total	1137.9	519.9	617.9	1324.8	1173.5	151.3	1767.2	3541.1	(1774.0)	2249.4	1903.8	2017.0	2602.4	1758.1	2018.8	2212.1	1965.4	2027.4
Total spend	**18,039.4**	**15,424.1**	**2615.3**	**17,441.1**	**16,620.0**	**821.1**	**16,467.9**	**19,396.0**	**(2928.2)**	**19,486.3**	**18,155.0**	**21,068.4**	**19,260.0**	**20,927.4**	**21,481.6**	**22,224.8**	**22,496.6**	**22,779.8**

1. Totals may not add due to rounding.

Direct costs

Direct costs are those costs which are able to be directly attributable to either an asset or a service contract eg maintenance or insurance of an asset or the electricity and other operations costs for a service contract.

Local area support costs

Local area support costs are spread across service contracts managed in each locality. They are costs which support local people doing their jobs eg regional accommodation costs, local administration support and training.

In 2018/19 the Burdekin Haughton Distribution Service Contract is allocated 15.618 per cent of the forecast total local area support costs. Forecast local overheads in 2018/19 are higher than previous years and now more closely reflect actual local overheads in each region rather than local overheads averaged across SunWater.

Indirect costs

Indirect cost pools capture costs such as billing and customer support, irrigation pricing regulation and asset management (including dam safety, asset systems, channels and drainage) that have not been directly charged. They also include flood room operations, the Inspector-General Emergency Management emergency management program, water planning, hydrographic services, and environmental support costs. Indirect costs are based on a user pays approach eg service contracts without a dam or weir are not apportioned dam safety costs.

In 2018/19 the Burdekin Haughton Distribution Service Contract is allocated 5.366 per cent of the forecast total indirect costs.

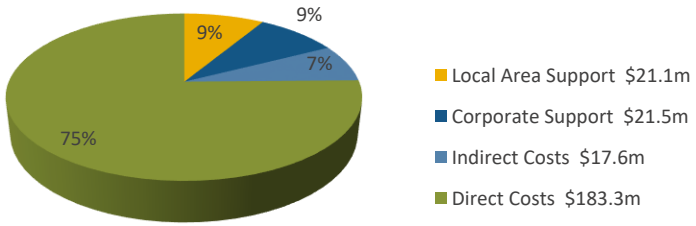
Corporate support costs

Corporate support costs are more generic than indirect costs and local area support costs, and are spread across all service contacts based on direct labour. They include the cost of human resources and payroll, information and communications technology, corporate communications, legal, property, finance, and internal audit, plus the costs of the Chief Executive Officer, Chief Financial Officer and the SunWater Board, where these costs are not directly charged to activities within service contracts.

In 2017/18 SunWater completed a corporate restructure which resulted in a net reduction of 20 positions from the business and a reduction in total corporate overhead costs. Despite this, corporate overheads allocated to each service contract have increased since 2017/18. Contributing factors to the increase are: the transfer of St George and potential transfer of Dawson distribution schemes to locally managed entities and less charging of labour to direct costs.

In 2018/19 the Burdekin Haughton Distribution Service Contract is allocated 7.941 per cent of the forecast total corporate support costs.

Figure 6: Total SunWater cost pools – 2018/19 forecast



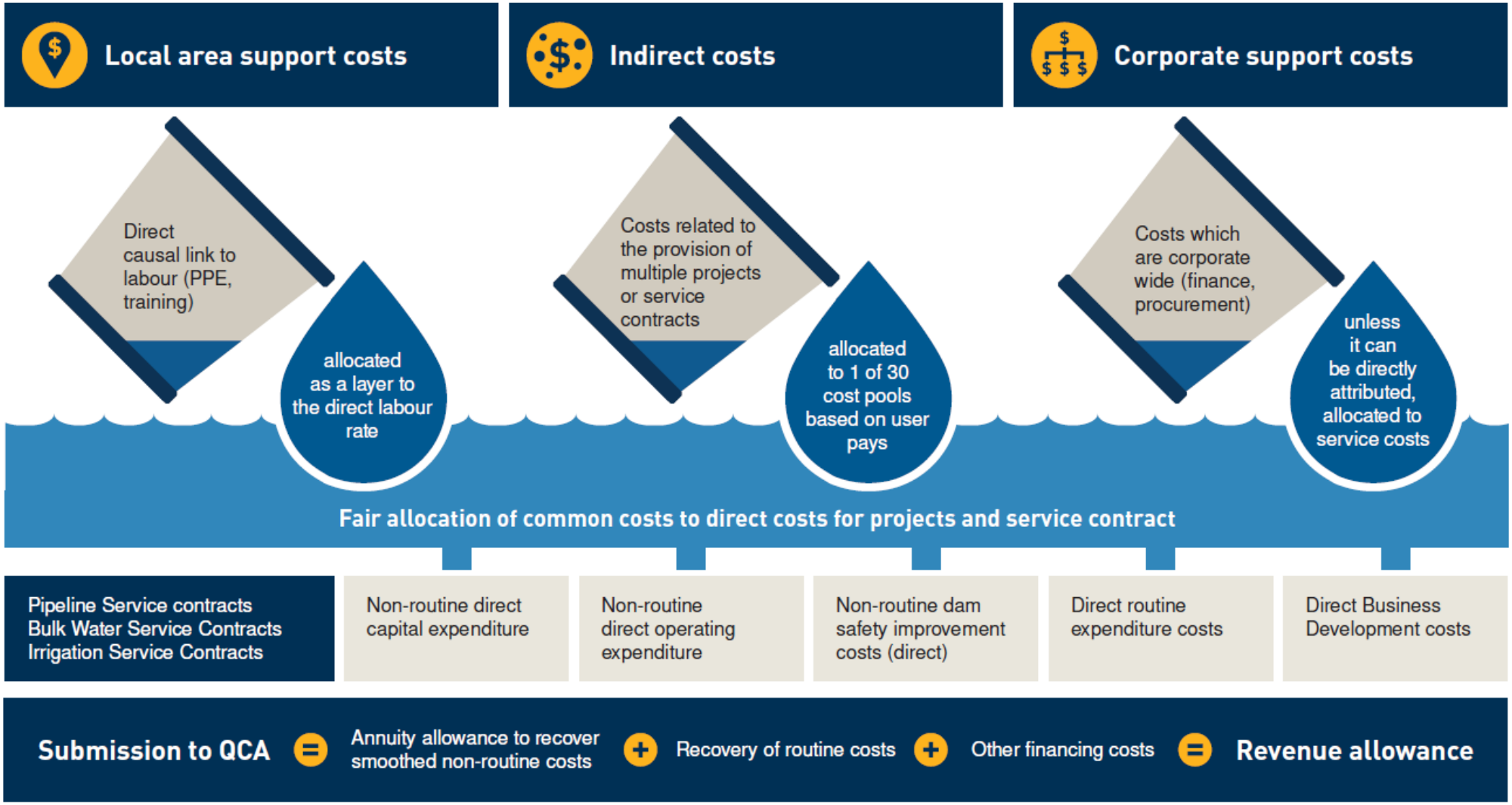
In the 2012 irrigation pricing review, the QCA reviewed and accepted SunWater's methodology for recovering local area support costs, indirect costs and corporate support costs. In 2018 we reviewed the cost allocation methodology and made changes to increase the transparency of local overhead costs and the allocation of corporate support costs to direct expenses. We also:

- removed the cascading of corporate overheads into indirect costs
- made the local overhead rate specific to each region
- simplified the cost drivers to labour only, removing the 5 per cent on direct cash costs excluding labour and electricity.

Forecast figures contained in this NSP reflect this change in approach.

Figure 7 below illustrates the allocation of costs associated with providing services.

Figure 7: How are SunWater's costs allocated to each service contract?



Appendix 3: Routine expenditure

Operations

Operations expenditure includes day-to-day costs associated with management of the Service Contract, water delivery and meeting compliance obligations. Specific activities include the direct and non-direct costs of:

- scheduling and delivering water, including processing water orders, releasing water, operating pump stations, regulating and monitoring channel flows, and monitoring customer deliveries
- emergency responses for channel overflows and other emergency events
- meter reading
- administration of water accounts, billing and receipting payments
- customer management, including enquiries, complaints and maintaining the customer service help desk
- Service Contract management, including licences and permits, rates, land management, planning and reporting
- insurance
- monitoring the security of infrastructure and unauthorised access
- managing engagement associated with the Service Contract
- managing enquiries from adjoining landholders and developers that require input from and negotiations with SunWater's property and legal sections.

Preventative maintenance

Preventative maintenance for the Burdekin Haughton Distribution Service Contract includes:

- Condition monitoring — the inspection, testing or measurement of physical assets to report and record condition and performance to determine maintenance requirements. Condition monitoring is carried out on electrical, mechanical and civil assets, including weirs, pump stations (pumps, electrical motors, valves, switchboards and associated equipment), channels (regulator gates, civil works, signs, structures, etc.), drains (civil works, structures etc.), pipelines (valves, air valves, scours easements etc.) and other infrastructure.
- Servicing — planned maintenance activities carried out routinely on physical assets including valves, gauging stations, cranes, sump pumps and associated equipment.
- Weed control — management of weeds, including:
  - slashing channels and drains
  - Acrolein treatment of channels
  - Copper Sulphate treatment
  - spraying and other activities to control nuisance and noxious weeds.

Scheduled corrective maintenance

Scheduled corrective maintenance varies by asset type and typically includes:

- Channels:
  - de-silting channels and catch drains
  - erosion control and repairing rock protection works
  - repairing fencing, concrete structures, regulator gates, and control valves.
- Drains:
  - de-silting drains
  - erosion control and repairing rock protection works
  - repairing fencing and concrete structures
  - reactive spraying of weeds due to outbreaks.
- Pipelines:
  - repairing pipe breaks, air and scour valves and concrete structures
  - erosion control and repairing rock protection works.

- Service Contract roads:
  - repairing pot holes and grading roads
  - repairing, replacing, and painting guide posts and signs.
- Pump stations:
  - repairing pumps, motors, concrete structures and control buildings
  - de-silting intake structures.
- Storages (balancing storages and weirs):
  - repairing control gates, valves and concrete structures
  - repairing walls, embankments and spillways.
- Meters:
  - repairing customer meters.

Emergency corrective maintenance

Emergency corrective maintenance typically includes the repair or correction of faults in pump stations, channels or pipelines. It also includes responding to theft or vandalism associated with Service Contract assets.

Appendix 4: Non-routine projects for 2018/19 to 2023/24

Non-routine projects are asset-related projects required to support service delivery which are undertaken less frequently than annually.

Table 10: Non-routine projects (or planning items) 2018/19 to 2023/24

Year	Work Items	Work Description	Budget ($'000)
2018/19	Clare B pump station – Switchboard and cables replacement	Works based on a completed condition assessment (GHD) and standard asset lives. The project is subject to electrical testing and reports. The replacement strategy will be reviewed and potentially reflect a replacement of critical and failure prone switchboard and control system components with new equipment (rather than complete replacement of all equipment). Budget and timing may be adjusted accordingly.	506
	Clare B pump station – Pump unit No. 4 replacement	Carried forward project to replace a failed FLYGT submersible pump with a PLEUGER pump and pipe arrangement. Works based on a completed options analysis and will improve facility priming and pumping capability and reliability.	190
	Various channels – Regulating gate refurbishments	Barratta main channel, Channel Ba5, Dalbeg main channel and Haughton main channel regulating gate refurbishments. Gates to be blasted, painted, fitted with seals/bearing and anodes, and recommissioned. Works based on the Float Regulator Gate Strategy to retain gate condition in perpetuity.	184
	Dalbeg A & B pump station – Bulk water flow meter replacements	Works based on standard asset service life and assessed condition. Meters being replaced to improve accuracy and reporting, scheme delivery efficiency and compliance with SunWater's standards and Australian Standard (AS) 4747.	151
	Meter replacements	Staged upgrade of Millaroo (4), Clare (1) and Giru Benefitted Area (2) customer metering fleet to improve metering accuracy, scheme delivery efficiency and compliance with SunWater's standards and AS4747.	119
	Dalbeg A pump station – Refurbish pump, motor and suction main pipework	The pump and motor (unit 3) works are based on standard refurbishment periods to retain asset performance and serviceability. The suction main pipework involves repairing support and fixings of the exposed pipe and is based on condition assessment data.	109
	Tom Fenwick pump station 4_5 – Pump unit 5 and motor 6 refurbishment	Works based on standard asset refurbishment period, equipment type history and condition monitoring data. Works to reinstate motor to as-new condition and retain facility serviceability. The options analysis for unit 4_5 pump and gearbox is also scheduled for 2018/19.	81

Year	Work Items	Work Description	Budget ($'000)
	Haughton and Barratta main channels – Regulating gate control equipment replacements	The replacement of regulating gate control equipment such as radios and remote transmission units (RTUs) based on standard service lives. The works will ensure continued surveillance capability of channel flow and scheme efficiency.	73
	Millaroo A pump station – Replace sump pump and refurbish surge vessel 2 and discharge valve 1	The replacement of sump pump 2 is based on standard service life, and the surge vessel and discharge valve is based on refurbishment periods and condition.	69
	Haughton main channel – Replace vertical slide gates	Works based on asset age and condition. Batescrew type slide gates have reached the end of service life due to corrosion and will be replaced either like-for-like or modern equivalent to ensure continuing function.	68
	Millaroo B pump station – Replace pump unit 2	The replacement of the submersible pump/motor unit is based on service life, run hours and general condition. The replacement unit will be either like-for-like or modern equivalent to achieve least whole-of-life cost.	51
	Other works	The balance of the 2018/19 program consists of smaller pump station pump and valve refurbishments, slide gate refurbishments, screen and fixings replacements, and asset replacement options analyses.	416
	2018/19 Total		**2017**
2019/20	Tom Fenwick pump station 4_5 – Pump unit 5 and gear box 4 and 5 refurbishment	Works based on standard asset refurbishment period, equipment type history and condition monitoring data. Works to reinstate pump and gearboxes to as-new condition and retain facility serviceability. Scope and timing of works subject to options analysis scheduled in 2018/19.	292
	Clare B pump station – Pump unit 1 and 2 replacement	Project to replace unserviceable FLYGT submersible pumps with modern equivalents. Works will be based on the options analysis completed in 2018/19 and will improve facility primary pumping capability and reliability.	211
	Clare B pump station – Switchboard and control system replacement	Stage 2 of works based on prior year's review of testing and agreed strategy. Budget and timing may be amended pending the final strategy. The scope of works is envisaged as installation and commissioning of specific equipment (rather than whole of system) to retain serviceability and component supportability.	214
	Regulating gate refurbishments – Various	Barratta main channel, Channel Ba5 and Channel Ba8 regulating gate refurbishments. Gates to be blasted, painted, fitted with seals/bearing and anodes, and recommissioned. Works based on the Float Regulator Gate Strategy to retain gate condition in perpetuity.	125

Year	Work Items	Work Description	Budget ($'000)
	Meter replacements	Staged upgrade of Giru Benefitted Area customer metering fleet (16) to improve metering accuracy, scheme delivery efficiency and compliance with SunWater's standards and AS4747.	126
	Clare A pump station – Replace pump units 3 and 4	The works are based on least whole-of-life cost strategy (options analysis 2016) where unit replacement is no less costly than refurbishment. The current KSB Ajax submersibles will be retained as spares pending condition and repair costs.	91
	Haughton and Barratta main channel – Refurbish or replace slide gates	Works are based on service or refurbishment life and asset to be refurbished or replaced pending as-found condition and replacement costings. Asset function and service life to be restored under this project.	82
	Millaroo Relift pump station – Programmable Logic Controller (PLC) and Supervisory Control and Data Acquisition (SCADA) replacement	Pump station control system replacement project, following 2019 scoping and procurement activities. These works will replace the existing equipment and systems to ensure continued communications and control of the pump station.	72
	Options analyses	Dalbeg B and Elliot pump station pump replacements and Clare system channel lining options analyses to confirm the most prudent and efficient asset options.	46
	Elliot pump station – Refurbish pump unit 2	Pump works based on standard refurbishment period. Works to be considered with options analysis scheduled for same year (2020) to consider the least whole-of-life cost strategy.	40
	Tom Fenwick 1 pump station – Replace surge suppressor	Replacement of pump motor 2 surge suppressor (ZORC) is based on standard asset life. This equipment provides electrical surge suppression for the High Voltage (HV) motor windings and long-term reliability of the asset.	40
	Other works	The balance of the 2019/20 program consists of Batescrew and slide gate replacements, smaller pump station pump, motor and valve refurbishments, air vent/valve and signage refurbishments/replacements, minor metalworks, and SCADA/PLC equipment replacements.	419
	2019/20 Total		**1758**
2020/21	Clare, Millaroo, Dalbeg and Haughton concrete lining refurbishment	Works based on the 30 Year Irrigation Strategy for concrete lined channels (Item 2.0), reflecting staged sectional refurbishment of channel lining by condition. Priority areas and scope of works subject to the 2019/20 options analysis which covers all Burdekin Haughton distribution system concrete lined channel assets.	790

Year	Work Items	Work Description	Budget ($'000)
	Tom Fenwick pump station 2_3 – Pump unit 2, gear box 1 and pump unit 3 refurbishments	Works based on standard asset refurbishment period, equipment type history and condition monitoring data. Works to reinstate pump and gearboxes to as-new condition and retain facility serviceability. Scope and timing of works subject to the options analysis scheduled in 2018/19.	206
	Fencing refurbishment – Various	Refurbishment of fencing in the Clare, Millaroo, Dalbeg, Elliot, Barratta and Haughton sections. Works based on the 30 Year Irrigation Strategy for fencing assets (Item 12.0), reflecting staged sectional refurbishment of channel fencing by condition. Priority areas and scope of works subject to condition and risk assessment completed as part of these works.	94
	Meter replacements	Staged upgrade of Giru Benefitted Area customer metering fleet (24) to improve metering accuracy, scheme delivery efficiency and compliance with SunWater's standards and AS4747.	209
	Clare A and Dalbeg B pump station – PLC/SCADA replacements	Works based on standard asset life, equipment obsolescence and assessed condition (GHD 2016). Project includes the specifying, procurement, supply, installation and commissioning of equipment to ensure continued reliable communications and control.	149
	Road refurbishment – Various	Refurbishment of roads in the Clare, Millaroo, Dalbeg, Elliot, Barratta and Haughton sections. Works based on the 30 Year Irrigation Strategy for roads assets (Item 11.0), reflecting staged sectional refurbishment of channel roads by condition. Priority areas and scope of works subject to condition and risk assessment competed as part of these works.	112
	Elliot, Barratta and Clare channels – Regulating gate refurbishments	Gates to be blasted, painted, fitted with seals/bearing and anodes, and recommissioned. Works based on the Float Regulator Gate Strategy to retain gate condition in perpetuity.	77
	Barratta main and lateral channels – Replace vertical slide gates	Works based on standard replacement lives and condition. Replacement gates to be like-for-like or modern equivalent subject to least whole-of-life cost. Works to reinstate isolation function and service life.	52
	Other works	The balance of the 2020/21 program consists of Dalbeg A pump station suction main works and a range of small pump, valve and screen works.	330
	2020/21 Total		**2019**

Year	Work Items	Work Description	Budget ($'000)
2021/22	Clare and Millaroo concrete lining refurbishment	Works based on the 30 Year Irrigation Strategy for concrete lined channels (Item 2.0), reflecting staged sectional refurbishment of channel lining by condition. Priority areas and scope of works subject to the 2019/20 options analysis.	418
	Meter replacements	Staged upgrade of Clare (4), Barratta (3) and Dalbeg (7) customer metering fleet to improve metering accuracy, scheme delivery efficiency and compliance with SunWater's standards and AS4747.	356
	Dalbeg B pump station – Pump unit 1 and 2 and reflux valve replacement	Works based on standard asset life but subject to the options analysis scheduled in 2019/20. It is intended to replace the existing submersible units with modern equivalents to maintain facility function and reinstate asset life.	242
	Regulating gate refurbishments – Various	Barratta Channel Ba1, Channel Ba5 and Channel Ba8 regulating gate refurbishments. Gates to be blasted, painted, fitted with seals/bearing and anodes, and recommissioned. Works based on the Float Regulator Gate Strategy to retain gate condition in perpetuity.	217
	Elliot pump station – Pump unit 1 replacement	Works based on standard asset life but subject to renewed assessed condition prior to work being committed. Subject to condition, it is intended to replace the existing submersible unit with a modern equivalent to maintain facility capacity and reinstate asset life.	163
	Elliot pump station – Switchboard No. 2 replacement	Works based on assessed condition (GHD 2016). Project timing and scope is subject to reassessment prior to commencement. An electrical and control systems options analysis (scheduled in 2021/22) will include the review of the switchboard No. 2 replacement.	106
	Elliot pump station – Replace bulk flow meters	Meter replacement based on standard service life. Pump station meter replacements to improve accuracy, scheme delivery efficiency and compliance with SunWater's standards and AS4747.	101
	Millaroo B pump station – Refurbish pump and non-return valves	Pump unit 3 and non-return valves 1, 2, 3 refurbishments are based on standard periods. Works are to reinstate as-new function and maximise asset life.	100
	Clare A pump station – Refurbish pump and replace non-return valves	Pump unit 1 refurbishment based on standard period, non-return valves have reached the end of service life and are due for replacement. Works will be coordinated to minimise supply disruptions.	71

Year	Work Items	Work Description	Budget ($'000)
	Tom Fenwick pump station – Replace sump pumps and surge suppression units	Replacement of pump motor surge suppressors (ZORC) and station sump pumps are based on standard asset life. ZORCs provide electrical surge suppression for the HV motor windings and long-term reliability of the asset. Sump pump replacement to reinstate function and asset life.	70
	Millaroo Relift pump station – Replace pump priming system	Priming system replacement based on standard asset life. Assets to be re-condition assessed before confirming replacement time, scope and costings.	59
	Other works	The balance of the 2021/22 program consists of third-party hoist and crane inspections, asset replacement options analyses and smaller pump, valve, gate and screen works.	309
	2021/22 Total		**2212**
2022/23	Clare A pump station – Electrical cable (pump feeders and related) replacement	Works based on asset ages and condition assessment (GHD 2016). Project budget, timing and scope will be subject to an options analysis scheduled for 2021/22. The works are intended to reduce operating risks associated with aged cables and reinstate asset service life.	406
	Elliot pump station – Switchboard and supply panel (SWB1), PLC/SCADA control system, and light and power replacements	Works based on asset service life and assessed condition (GHD 2016). Project timing and scope is subject to reassessment prior to commencement. An electrical and control systems options analysis (scheduled in 2021/22) will include the review of the SWB1 and related asset replacements.	324
	Barratta main channel – Regulating gate control system replacements	Replacement of the control systems for Barratta main channel regulating gates. Works are based on standard asset life (exceeded) and assessed condition (SunWater 2014). The scope of works includes design, procurement and installation of replacement gate control system equipment and hardware. Condition to be reassessed and timing, scope and budget reviewed prior to commencement.	326
	Meter replacements	Staged upgrade of Clare customer metering fleet (6) to improve metering accuracy, scheme delivery efficiency and compliance with SunWater's standards and AS4747.	177
	Elliot pump station – Pump unit 2 replacement	Works based on standard asset life but subject to renewed assessed condition prior to work being committed. Subject to condition, it is intended to replace the existing submersible unit with a modern equivalent to maintain facility capacity and reinstate asset life.	161

Year	Work Items	Work Description	Budget ($'000)
	Tom Fenwick pump station – Station ventilation replacement	Replacement of station 2/3 ventilation system will be informed by the 2022 options analysis. Works scope, scheduling and costings will be subject to the options analysis recommendations.	160
	Tom Fenwick pump station – Refurbish pump unit 2 reduction gearbox	Gear box refurbishment based on standard period. Works to dismantle and overhaul reduction gearbox to ensure continued reliable service and maximise asset life.	104
	Other works	The balance of the 2022/23 program consists of third-party hoist and crane inspections, radio/RTU replacements, vacuum pump refurbishments at Clare B pump station and smaller civil, mechanical and electrical works.	307
	2022/23 Total		**1965**
2023/24	Haughton main channel – Batescrew gate replacements (34)	Works based on standard asset life. Condition assessment data is aged due to access and will need to be updated to confirm project timing and scope. The gates deteriorate due to corrosion and decay rates are well established. Replacement gate type to be considered for least whole-of-life cost prior to project commencing.	304
	Haughton main channel headworks – Radial gate refurbishments	Refurbishment of left and right gates. Works are based on standard refurbishment periods for gate assets and assessed condition (SunWater 2016). Though hoist operated gates, the general refurbishment tasks align with the Float Regulator Gate Strategy. Gates to be blasted, painted, and fitted with seals, bearings and anodes to maintain asset in perpetuity.	237
	Dalbeg B pump station – Electrical supply cable replacement	Works based on standard asset life only (condition assessment data inadequate). Project progression will be subject to reassessment of condition to confirm timing, scope, budget and likely an options analysis pending revised replacement costs.	213
	Meter replacements	Staged upgrade of Clare Channel B8 customer metering fleet (3) to improve metering accuracy, scheme delivery efficiency and compliance with SunWater's standards and AS4747.	200
	Millaroo A pump station – Control system replacement	The pump station control system equipment though operating reliably is beyond its standard service life. The replacement project will utilise the findings from a scheduled (2019) options analysis to cost effectively upgrade the equipment to retain station operability and control.	186

Year	Work Items	Work Description	Budget ($'000)
	Millaroo main channel – High-density polyethylene channel lining replacement	Works based on standard asset life. Project progression will be subject to condition reassessment and an options analysis to confirm the timing, scope, prudency and efficiency of undertaking the works.	121
	Burdekin SCADA distribution system and Mt Dalrymple repeater refurbishment/replacement	Works based on electronic equipment standard life (not condition assessed) and subject to technology compatibility and obsolescence issues. Review will be conducted prior to works commencing to confirm equipment specifications and costs.	99
	Regulating gate refurbishments – Various	Barratta Channel Ba5, Dalbeg main channel and Millaroo main channel regulating gate refurbishments. Gates to be blasted, painted, fitted with seals/bearing and anodes, and recommissioned. Works based on the Float Regulator Gate Strategy to retain gate condition in perpetuity.	99
	Haughton main channel – Control system/equipment replacement	Regulating gate control system replacements (8 sites) are based on standard equipment service lives. Control equipment requires periodic replacement/upgrade to ensure forward compatibility, reliability and technical support.	85
	Millaroo Channel 2 – Control equipment and hoist refurbishment	Regulating gate control equipment and hoist arrangement refurbishments (3 sites) are based on standard refurbishment periods. The hoist equipment requires periodic overhaul to ensure reliability. The control equipment will be refurbished (or component replaced as required) as part of the works on each gate.	75
	Millaroo A, Tom Fenwick 1 and Dalbeg A pump stations – Crane inspections	Third-party crane inspections at pump stations are scheduled according to AS2550 and related internal SunWater standards to ensure continued safe operation and code compliance.	57
	Other works	The balance of the 2023/24 program consists of minor pump station pump, valve and motor refurbishments, and smaller mechanical/civil and electrical works.	351
	2023/24 Total		**2027**

Contact us

To have your say and shape future NSPs, please contact us via email or post:

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We consider and respond to all submissions, publishing all responses on our website.

Addendum to the 2018/19 to 2023/24 Network Service Plan

Burdekin Haughton Distribution Service Contract

6 November 2018

Final

Contents

How to read this addendum

Several changes have been made to our forecast costs since we published our 2019 Network Service Plan for the Burdekin Haughton Distribution Service Contract in July 2018. We have therefore prepared this addendum to aid our customers' understanding of the changes and to assist the Queensland Competition Authority (QCA) in their review.

We have:

- updated for 2017/18 actual expenditure. This has positively impacted the annuity balances for this service contract going forward, when compared to the 2019 Network Service Plan.
- revised market parameters, such as escalators and the Weighted Average Cost of Capital, for the latest available information
- used the scheme's 15-year average water usage over the 2002/03 to 2016/17 period to determine the Part D cost per megalitre.

Note:

- All financial figures contained in this addendum are nominal dollars.
- Totals may not add due to rounding.

Table 1: Irrigation charges for 2018/19[1] – Restatement of Table 2 from the 2019 Network Service Plan

Product	Charge type	2018/19 ($/ML)	Cost ($/ML)[2]	Subsidy ($/ML)
Medium Priority Allocation Charge – Channel Distribution	Channel Distribution – Part C (fixed charge based upon entitlement)	38.15	42.85	4.70
Medium Priority Allocation Water – Channel Distribution	Channel Distribution – Part D (variable charge based upon usage)	28.88	35.54	6.66

1. This table includes distribution charges only. For river charges (Part A and Part B) please refer to the Addendum to the Bulk Water Service Contract NSP.
2. Costs reflect lower bound cost recovery, ie recovery of future replacement and ongoing maintenance and operations. Charges do not allow for any returns on existing assets.

Table 2: Routine operating expenditure[1] – Restatement of Table 6 from the 2019 Network Service Plan

	2016/17			2017/18[2]		2018/19[2]		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual $'000	QCA Recommended $'000	Variance $'000	SunWater Actual $'000	2016/17 QCA Recommended (adjusted) $'000	SunWater Forecast $'000	2016/17 QCA Recommended (adjusted) $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000	SunWater Forecast $'000
Electricity	4809.7	6058.3	(1248.6)	6032.5	6209.8	6563.8	6365.0	6109.4	5969.6	6178.7	6725.0	6681.5
Insurance	495.6	414.7	80.9	467.8	425.0	482.5	435.6	492.4	503.7	515.3	527.1	539.2
Operations	3887.3	4222.9	(335.7)	4661.3	4328.5	5362.5	4436.7	5391.7	5530.9	5673.7	5817.4	5964.6
Operations Total	**9192.6**	**10,695.9**	**(1503.3)**	**11,161.7**	**10,963.3**	**12,408.7**	**11,237.4**	**11,993.5**	**12,004.2**	**12,367.7**	**13,069.5**	**13,185.4**
Preventative maintenance	3628.4	3581.8	46.6	3008.7	3671.4	4218.5	3763.2	4268.8	4374.9	4483.6	4593.6	4706.3
Corrective maintenance	1879.7	1577.2	302.6	2436.4	1616.6	2424.1	1657.0	2442.4	2504.8	2568.7	2633.0	2699.1
Routine Total	**14,700.7**	**15,854.9**	**(1154.2)**	**16,606.7**	**16,251.3**	**19,051.4**	**16,657.6**	**18,704.7**	**18,883.8**	**19,420.0**	**20,296.1**	**20,590.7**

1. SunWater's 2019/20 to 2023/24 budget figures are draft as at the time of consultation. These figures will not be locked down until late in the financial year prior.
2. For 2017/18 and 2018/19 SunWater has included and reported against the 2016/17 QCA recommended costs adjusted for inflation which was assumed to be 2.5%.

Table 3: Annuity balance – Restatement of Table 8 from the 2019 Network Service Plan

	2016/17 Actual $'000	2017/18 Actual $'000	2018/19 Forecast $'000	2019/20 Forecast $'000	2020/21 Forecast $'000	2021/22 Forecast $'000	2022/23 Forecast $'000	2023/24 Forecast $'000
Annuity								
Opening balance[1]	(1378.4)	(165.0)	966.3	2261.6	5078.8	5847.9	6736.7	8159.4
Spend	(1767.2)	(2017.3)	(2017.0)	(1758.1)	(2018.8)	(2212.1)	(1965.4)	(2027.4)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution[2]	3083.8	3160.9	3239.9	3312.8	2491.0	2759.0	2994.2	3340.8
Interest/financing costs	(103.2)	(12.4)	72.4	169.4	296.9	341.9	393.9	477.1
SunWater – Closing balance	**(165.0)**	**966.3**	**2261.6**	**3985.8**	**5847.9**	**6736.7**	**8159.4**	**9949.9**
QCA – Closing balance	**1651.7**	**3032.5**	**3897.2**					
Difference	(1816.6)	(2066.2)	(1635.5)					

1. The difference in the closing balance for 2019/20 and the opening balance for 2020/21 relates primarily to expenditure incurred prior to the start of the 2012 price path. Table 4 provides further details.
2. The annuity contribution is included in the prices paid by customers. It was set by the QCA for 2012/13 to 2016/17 and is rolled forward with the Consumer Price Index (CPI) for 2017/18, 2018/19 and 2019/20. Thereafter the annuity contribution is based on SunWater's forecast.

Table 4: Adjustments to 2020/21 opening annuity balance

Adjustment	$'000
Actual spend adjustment	(113)
Annuity income difference	793
Intersafe project spend adjustment	(3)
Interest difference	(79)
Alignment to previously reported data	0
Interest	495
Total	**1093**

Table 5: Cost building blocks and notional cost allocations

	2018/19 Forecast $'000	2019/20 Forecast $'000	2020/21 Forecast $'000	2021/22 Forecast $'000	2022/23 Forecast $'000	2023/24 Forecast $'000
Cost building blocks						
Routine costs	19,051.4	18,704.7	18,883.8	19,420.0	20,296.1	20,590.7
Non-routine costs (Annuity contribution)	3239.9	3312.8	2491.0	2759.0	2994.2	3340.8
Dam improvement program	-	-	-	-	-	-
Working capital	14.5	14.3	-	-	-	-
Revenue offsets	(811.4)	(831.7)	(852.5)	(873.8)	(895.7)	(918.1)
Transfers (Distribution losses)	766.0	696.8	945.2	966.9	990.3	1028.1
Total costs	**22,260.4**	**21,896.9**	**21,467.4**	**22,272.1**	**23,384.9**	**24,041.6**
Notional cost allocations						
Irrigation customers	21,282.0	20,928.5	20,518.5	21,287.1	22,354.5	22,977.9
Urban/Industrial customers	976.3	966.4	947.0	983.0	1028.3	1061.5
SunWater	2.0	2.0	1.9	2.0	2.1	2.2
Total costs	**22,260.4**	**21,896.9**	**21,467.4**	**22,272.1**	**23,384.9**	**24,041.6**

Table 6: Historical actual water usage

Year	Usage (ML)
2002/03	451,329
2003/04	423,490
2004/05	468,139
2005/06	351,522
2006/07	357,846
2007/08	301,778
2008/09	254,326
2009/10	373,939
2010/11	112,222
2011/12	263,367
2012/13	308,545
2013/14	444,302
2014/15	476,610
2015/16	396,575
2016/17	329,411
15-year average	**354,227**