



# Final Service and Performance Plan

## 2022/23

Burdekin Haughton Bulk Water Service Contract


4 August 2022

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# At a glance

## Our performance in 2020/21

 **Operating costs:**  
\$3.98 million (28.0% more than QCA target)


Key drivers of cost variance:

- removal of some wastewater from the sewage plant pond. This was significantly reduced from the previous years with the implementation of an irrigation field; however, some additional removal was required due to wet weather
- higher insurance costs.


 **Annuity-funded costs:**  
\$1.78 million (100.4% more than QCA target)

Key drivers of cost variance:

- replacement of the lighting and power system to both the upper and lower galleries
- the refurbishment of the fixed wheel gate at Burdekin Falls Dam, which was brought forward to facilitate the refurbishment of penstock liners
- repairs to the dam wall access road due to poor condition. Sunwater took advantage of plant and equipment already mobilised at the site for other work.


 **Total water deliveries:**  
537,521 ML

Water delivered to irrigators: 456,484 ML

 **Service targets: Met**


No exceptions

## Outlook for 2022/23

 **Forecast operating costs:**  
\$3.49 million

Significant areas of expenditure budgeted:

- insurance (\$1.45 million)
- operations (\$1.18 million)
- preventative maintenance (\$0.42 million)
- corrective maintenance (\$0.36 million).

 **Forecast annuity-funded costs:**  
\$6.38 million

Key projects planned:

- downstream protection works and flip bucket repairs at Clare Weir (\$5.19 million)
- clean and renew spillway apron and gallery foundation drainage system at Burdekin Falls Dam (\$0.48 million)
- continue refurbishing the hydraulic system and cylinders at Clare Weir (\$0.42 million).

# Introduction

This Service and Performance Plan (S&PP) details a range of proposed scheme activities and projects and presents a breakdown of anticipated costs for review. It also sets out Sunwater’s actual costs for 2020/21.

The purpose of this year’s S&PP for the Burdekin Haughton Bulk Water Service Contract is to:

- present to customers Sunwater’s projected costs<sup>1</sup> for the upcoming five-year period, i.e. 2022/23 to 2026/27
- consult with our customers on forecast operating and annuity-funded costs for 2022/23 and the forward program of works
- examine Sunwater’s performance in 2020/21 against cost and service targets.

Our focus during 2022/23 will be on ensuring dam safety compliance is maintained and that any identified refurbishment and corrective works identified through our annual and five yearly comprehensive inspections and all operational activities are implemented safely, timely and efficiently. We are also continuing to implement an efficient and effective maintenance program, with a focus on ensuring the storage assets continue to perform reliably. For example, we will refurbish downstream protection works and carry out flip bucket repairs at Clare Weir.

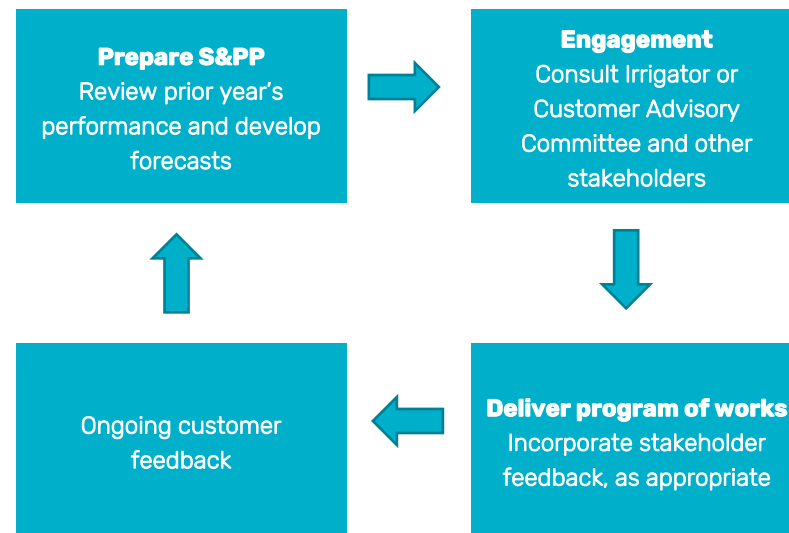
In addition to this S&PP, Sunwater has published an information sheet which explains the types of costs we incur in delivering water to our customers and how those costs are allocated to service contracts. The information sheet is available at:

[www.sunwater.com.au/customer/products-and-services/service-and-performance-plans/](http://www.sunwater.com.au/customer/products-and-services/service-and-performance-plans/)

<sup>1</sup> All financial figures reported in this document are in nominal dollars, i.e. dollars of the day. Figures may not sum due to rounding.

Input from customers is a valuable part of Sunwater’s planning process and ensures that we invest in areas which support the services we provide to customers. Figure 1 outlines how Sunwater and customers work together in relation to S&PPs.

Figure 1: Customer consultation and S&PPs



We welcome and encourage your feedback on this S&PP. To have your say and shape future S&PPs, please contact us via email or post:

Email: [sppfeedback@sunwater.com.au](mailto:sppfeedback@sunwater.com.au)

Post: S&PP Feedback  
PO Box 15536  
City East Qld 4002

# Delivering services to our customers

At Sunwater we are committed to working collaboratively with our customers to deliver value and fit-for-purpose water solutions.

## Our customers

Our customers in this service contract include the Sunwater distribution scheme, the Lower Burdekin Water north and south regions, and riparian users adjacent to the Burdekin River. Water is also supplied for some industrial uses and to the towns of Clare, Millaroo and Dalbeg.

The water allocations for each customer segment are included in Table 1, together with water deliveries in 2020/21. Historical total water usage is available in **Appendix 1**.

Table 1: Water allocations and usage data<sup>1</sup>

Customer segment	Total water allocations (ML)	High priority water allocations (ML)	Medium priority water allocations (ML)	Total water deliveries 2020/21 (ML)
Irrigation	646,613	0	646,613	456,484
Urban	10,538	10,538	0	919
Industrial	21,871	20,824	1047	11,212
Sunwater (excl. distribution losses)	193,833	52,376	141,457	0
Sunwater distribution losses	206,737	16,260	190,477	68,906
<b>Total</b>	<b>1,079,592</b>	<b>99,998</b>	<b>979,594</b>	<b>537,521</b>

1. Includes the bulk water supply scheme, the distribution system, Burdekin Town Water and Burdekin Moranbah Pipeline.

## Irrigation charges

The 2022/23 charges and cost per megalitre are shown in Table 2.

Table 2: Irrigation charges for 2022/23<sup>1</sup>

Tariff group	Product	2022/23 (\$/ML) <sup>2</sup>	QCA cost-reflective (\$/ML) <sup>3</sup>
Burdekin River	Allocation Charge – Part A	10.80	4.01
	Allocation Water – Part B	0.29	0.35
Burdekin Channel	Allocation Charge – Part A	3.33	4.01
	Allocation Water – Part B	0.29	0.35
Giru Groundwater Area	Allocation Charge – Part A	3.33	4.01
	Allocation Water – Part B	0.29	0.35
Glady's Lagoon – Up to natural yield	Allocation Charge – Part A	0.00	0.00
	Allocation Water – Part B	0.00	0.00
Glady's Lagoon – Other than from natural yield	Allocation Charge – Part A	3.33	4.01
	Allocation Water – Part B	0.29	0.35

1. This table includes bulk water charges only. For distribution charges, please refer to the Distribution Service Contract S&PP.
2. Includes the Queensland Government's 15 per cent discount for irrigation customers. Refer to [www.rdmw.qld.gov.au](http://www.rdmw.qld.gov.au) for more information.
3. Is the cost-reflective price determined by the Queensland Competition Authority (QCA) in its 2020–2024 irrigation price investigation. Costs reflect lower bound cost recovery, i.e. recovery of future replacement and ongoing maintenance and operations. Charges do not allow for any returns on existing assets.

For more information on Sunwater's fees and charges, refer to:

[www.sunwater.com.au/customer/fees-and-charges/](http://www.sunwater.com.au/customer/fees-and-charges/)

## Service targets

Sunwater and customers have agreed Water Supply Arrangements and Service Targets for the Burdekin Haughton Bulk Water Service Contract. Table 3 below sets out our recent performance against selected service targets for this scheme.

Table 3: Scheme service targets and performance

Service target		Target	Number of exceptions		
			2018/19	2019/20	2020/21
Planned shutdowns – notification	For shutdowns planned to exceed 2 weeks	8 weeks	0	0	0
	For shutdowns planned to exceed 3 days	2 weeks	0	0	0
	For shutdowns planned to be less than 3 days	5 days	0	0	0
Unplanned shutdowns – duration <sup>1</sup>	Unplanned shutdowns during Peak Demand Period	48 hours	0	0	0
	Unplanned shutdowns outside Peak Demand Period	5 working days			
Maximum number of interruptions <sup>2</sup>	Planned or unplanned interruptions per water year	10	0	0	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 bulk customers in the scheme that have been interrupted in excess of the target.

In addition, Sunwater has company-wide customer interactions service targets. Our performance in 2020/21 against these service targets is shown in Table 4.

Table 4: Customer interactions service targets and performance

Service target	Target	2020/21
Telephone answering <sup>1</sup>	80.00%	90.93%
Requests actioned within Service Level Agreement (SLA) timeframes <sup>2</sup>	> 95.00%	99.14%

1. This target measures the percentage of 13 15 89 calls that are answered within 60 seconds.
2. the percentage of email or workflow requests (such as property transfers and temporary transfers) to the Customer Support team that are completed within the agreed SLAs. The SLA timeframes range between two and 10 business days, depending on the request.

## Key infrastructure

Table 5 lists the key infrastructure used to deliver bulk water services to our customers in Burdekin Haughton.

Table 5: Key infrastructure

Asset	Description	Total storage capacity (ML)
Burdekin Falls Dam	Mass concrete main wall with ogee crest spillway. Includes three saddle dams. Classified as a referable dam under the <i>Water Supply (Safety and Reliability) Act 2008</i> .	1,860,000
Clare Weir	Mass concrete weir with tilting gates and fish transfer system.	15,900
Gorge Weir	Mass concrete structure, with a drop board section.	9095
Blue Valley Weir	Concreted rock wall, with timber drop board outlet works.	3820

# Financial summary—Revenue and expenditure

A high-level summary of the budgeted financial performance of the Burdekin Haughton Bulk Water Service Contract is presented in Table 6.

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 QCA as part of its review of irrigation prices.

In 2022/23, Sunwater expects to spend \$501 million across all parts of our business, i.e. regulated and non-regulated. A breakdown of the forecast total cost pool at the direct and non-direct cost level is shown in Figure 2, together with the percentage of these costs allocated to the Burdekin Haughton Bulk Water Service Contract. Details on the planned spend for this scheme are outlined on subsequent pages of this S&PP.

Figure 2: Total Sunwater cost pools and allocation to scheme—2022/23 forecast (\$M)

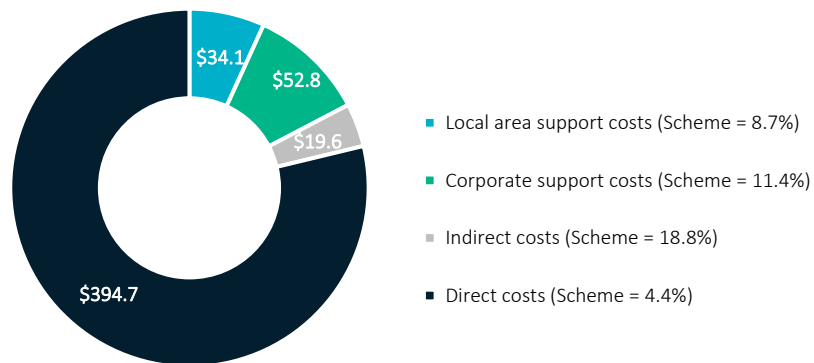


Table 6: Service contract financial summary

Burdekin Haughton Bulk Water Service Contract	2018/19 Sunwater / QCA Actual \$'000	2019/20 Actual \$'000	2020/21 Actual \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000
Revenue					
Irrigation	1579.9	1544.1	1622.7	1566.0	1429.6
Community Service Obligation	318.0	318.0	769.6	-	-
Industrial <sup>1</sup>	54.9	56.2	58.2	59.0	59.0
Urban <sup>1</sup>	-	-	65.7	96.3	96.3
Revenue transfers <sup>2</sup>	3641.7	3667.8	3699.4	4065.3	4225.3
Drainage	-	-	-	-	-
Other	44.0	64.5	93.6	64.5	64.5
<b>Revenue total</b>	<b>5638.6</b>	<b>5650.6</b>	<b>6309.2</b>	<b>5851.2</b>	<b>5874.8</b>
Less – Operating expenditure	3661.4	4083.5	4624.8	4021.0	4004.4
Less					
Annuity-funded	897.2	2059.8	1783.5	843.9	6380.3
Non-annuity funded <sup>3</sup>	2667.7	4767.6	3336.7	14,534.8	19,499.8
<b>Surplus (deficit)</b>	<b>(1587.7)</b>	<b>(5260.3)</b>	<b>(3435.9)</b>	<b>(13,548.6)</b>	<b>(24,009.7)</b>

- Forecast revenues for industrial and urban customers are based on current contractual arrangements.
- Revenue transfers represent the cost of bulk water supplies delivered through the distribution system and the Burdekin Moranbah pipeline. The revenue accrues to the distribution system and pipeline system before it is transferred to the Bulk Water Service Contract as a contribution to the cost of the bulk water service.
- This is expenditure which has not been funded by irrigation customers. An example of this in the Burdekin Haughton Bulk Water Service Contract is the Dam Improvement Program and recreational facility projects from 2020/21.

## Cost of delivering services—Operating expenditure

Operating expenditure includes funds for: operations activities, i.e. operations, electricity, and insurance; preventative maintenance; and corrective maintenance.

Table 7 sets out actual and forecast operating expenditure for the Burdekin Haughton Bulk Water Service Contract. For a more detailed breakdown by cost category, refer to **Appendix 2**.

### Our performance in 2020/21

In 2020/21, operating costs were more than the QCA's recommended cost target. Sunwater was required to remove some wastewater from the sewage plant pond. This was significantly reduced from the previous years with the implementation of an irrigation field; however, additional removal was required due to wet weather. Insurance costs were also higher.

Recreational facility costs were influenced by the costs of managing the dispersal of a large flying fox colony, including engagement with Ecosure and the Department of Environment and Science, tree removal and clean-up.

Table 7: Operating expenditure<sup>1</sup>

Burdekin Haughton Bulk Water Service Contract	2018/19	2019/20	2020/21		2021/22		2022/23		2023/24	2024/25	2025/26	2026/27	
	Sunwater Actual \$'000	Sunwater Actual \$'000	QCA Target \$'000 <sup>2</sup>	Sunwater Actual \$'000	Variance \$'000	Sunwater Forecast \$'000	QCA Target \$'000 <sup>2</sup>	Sunwater Forecast \$'000	QCA Target \$'000 <sup>2</sup>	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
Operations	2220.0	2543.3	2466.3	2883.0	416.7	2689.1	2502.8	2714.6	2561.1	2749.9	2903.5	3066.1	3249.2
Electricity	5.4	13.5	128.9	98.9	(30.0)	74.0	116.6	87.0	118.2	89.4	91.9	94.4	97.0
Insurance	773.7	886.2	974.5	1181.2	206.7	1570.0	994.0	1446.6	1016.9	1560.7	1683.8	1816.6	1959.9
Operations	1440.9	1643.6	1362.9	1602.9	240.0	1045.1	1392.2	1181.0	1426.0	1099.8	1127.9	1155.2	1192.3
Preventative maintenance	518.2	530.2	387.8	634.9	247.1	459.3	396.1	416.0	405.7	429.3	441.0	451.8	467.2
Corrective maintenance	923.2	1010.0	259.0	465.7	206.7	381.1	264.4	362.9	270.8	373.9	384.2	394.0	406.4
<b>Operating costs total</b>	<b>3661.4</b>	<b>4083.5</b>	<b>3113.1</b>	<b>3983.6</b>	<b>870.5</b>	<b>3529.5</b>	<b>3163.4</b>	<b>3493.5</b>	<b>3237.6</b>	<b>3553.1</b>	<b>3728.7</b>	<b>3911.9</b>	<b>4122.8</b>
Recreational facility costs <sup>3</sup>				641.3		491.4		510.8		496.0	509.1	521.5	538.5
<b>Operating costs total (incl. recreational facility costs)</b>	<b>3661.4</b>	<b>4083.5</b>		<b>4624.8</b>		<b>4021.0</b>		<b>4004.4</b>		<b>4049.1</b>	<b>4237.8</b>	<b>4433.4</b>	<b>4661.2</b>

1. Sunwater's 2022/23 to 2026/27 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. Reflects the QCA's 2020–2024 irrigation price investigation final recommendations. Excludes recreational facility costs.
3. From 1 July 2020, irrigation customers no longer contribute towards the cost of operating and maintaining recreational facilities. Forecast costs have been separately identified for transparency.

## Outlook for 2022/23

### Operations

Burdekin Haughton Bulk Water Service Contract's total operations budget in 2022/23 is 6.0 per cent above the QCA's recommended cost target, due to higher insurance costs (see below). Our forecast operations and electricity costs are lower than the QCA's cost targets.

### Insurance

Insurance is one of Sunwater's largest expenditure items. 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.

Our insurance broker has indicated that prior to the early 2022 flood events, premium increases were trending downwards from a peak in late 2020 (with some exceptions). However, with another significant natural disaster in Australia, this is now likely to change. Insurance premiums in 2022/23 are therefore expected to be higher than the QCA's recommended allowance and historical costs.

### Preventative maintenance

The forecast preventative maintenance costs for the Burdekin Haughton Bulk Water Service Contract are expected to broadly in line with the QCA's recommended cost target (2.5 per cent above).

### Corrective maintenance

In 2022/23, Sunwater anticipates spending \$362.9k on corrective maintenance in the Burdekin Haughton Bulk Water Service Contract. While this is 34.0 per cent above the QCA's recommended cost target, the additional corrective maintenance (break down works) is mainly due to ageing assets.



## Cost of delivering services—Annuity and non-annuity funded expenditure

Annuity-funded expenditure include funds for preventative and corrective maintenance, as well as large, one-off operations activities. Preventative maintenance activities monitor the asset condition and inform when an asset needs to be refurbished or replaced under the corrective maintenance program.

Non-annuity funded expenditure largely relates to Sunwater’s Dam Improvement Program and recreational facility costs.

Table 8 outlines our annuity and non-annuity funded expenditure for this service contract.

Table 8: Annuity and non-annuity funded expenditure<sup>1,2</sup>

Burdekin Houghton Bulk Water Service Contract	2018/19	2019/20	2020/21		Variance \$'000	2021/22		2022/23		2023/24	2024/25	2025/26	2026/27
	Sunwater / QCA Actual \$'000 <sup>3</sup>	Sunwater Actual \$'000	QCA Target \$'000 <sup>4</sup>	Sunwater Actual \$'000		Sunwater Forecast \$'000	QCA Target \$'000 <sup>4</sup>	Sunwater Forecast \$'000	QCA Target \$'000 <sup>4</sup>	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
<b>Annuity-funded</b>													
Operations	-	16.3	-	-	-	-	-	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
Planned corrective maintenance	897.2	2043.6	889.8	1783.5	893.7	843.9	832.0	6380.3	664.6	1358.6	1578.0	1690.5	3163.6
Unplanned corrective maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Annuity-funded total</b>	<b>897.2</b>	<b>2059.8</b>	<b>889.8</b>	<b>1783.5</b>	<b>893.7</b>	<b>843.9</b>	<b>832.0</b>	<b>6380.3</b>	<b>664.6</b>	<b>1358.6</b>	<b>1578.0</b>	<b>1690.5</b>	<b>3163.6</b>
<b>Non-annuity funded</b>													
Dam Improvement Program	2667.7	4767.6		2624.8		13,719.8		19,499.8		211,041.0	211,279.2	127,280.5	72,429.6
Recreational facility projects				712.0		815.0		-		141.3	202.5	1527.5	577.6
Metered offtakes and dividend reinvestment	-	-		-		-		-		-	-	-	-
<b>Non-annuity total</b>	<b>2667.7</b>	<b>4767.6</b>		<b>3336.7</b>		<b>14,534.8</b>		<b>19,499.8</b>		<b>211,182.3</b>	<b>211,481.7</b>	<b>128,808.0</b>	<b>73,007.3</b>

1. Sunwater’s 2022/23 to 2026/27 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. Forecast annuity-funded costs from 2020/21 exclude recreational facility projects.
3. The annuity-funded spend for 2018/19 reflects the QCA’s 2020–2024 irrigation price investigation final recommendations, which included adjustments to Sunwater’s actual costs.
4. Reflects the QCA’s 2020–2024 irrigation price investigation final recommendations.

## Our performance in 2020/21

### Performance against the QCA target

Sunwater updates our program of works based on our whole-of-life replacement and maintenance strategy, which looks at the risk and condition of each asset and uses this information to estimate the future work required to ensure the asset will continue to provide the required level of service into the future. Other factors such as changes in project delivery timing (e.g. due to weather) may also affect the program of works.

These factors mean the actual program of works delivered in any given year will differ to the program assessed by the QCA. At a project level, cost variances may also occur due to changes in the scope of work and cost inputs.

In 2020/21, total annuity-funded costs were higher than the QCA's recommended cost target. This was primarily driven by the gallery lighting upgrade, as well as various projects that were not part of the program of works assessed by the QCA, including:

- refurbishing the fixed wheel gate at Burdekin Falls Dam (\$106.9k), which was brought forward to facilitate the refurbishment of penstock liners
- repairs to the dam wall access road due to poor condition (\$118.0k). Sunwater took advantage of plant and equipment already mobilised at the site for other work.
- transformer rectification works (\$60.0k)
- an arc flash analysis (\$56.1k).

The scope of works to replace the main wall lighting and power at Burdekin Falls Dam was significantly greater than originally planned. Sunwater identified in 2019/20 the main bus-duct running throughout the galleries was failing insulation resistance testing to the point it was de-energised and tagged out of service – leaving both the upper and lower gallery without power and lighting. Given the age and condition of the

bus-duct, repair to meet current standards was not possible. As a result, Sunwater undertook a full electrical condition audit and then detailed design to determine the most efficient way to reinstate lighting and power to the upper and lower galleries, as well as emergency lighting and the uninterruptible power supply. The existing bus-duct and lighting had to be removed and replaced with new cabling and lighting throughout.

### Project level cost variances

**Appendix 3** provides a comparison of the annuity-funded projects planned for 2020/21 and the actual projects undertaken, together with justification for the variances.

## Outlook

Details of the major annuity-funded projects planned for the 2022/23 to 2026/27 period are set out in **Appendix 4**. In 2022/23, Sunwater plans to refurbish downstream protection works, carry out flip bucket repairs, and continue hydraulic system and cylinder refurbishments at Clare Weir.

## Asset management and planning improvements

In its final report for the 2020–2024 irrigation price investigation, the QCA identified several potential improvements to Sunwater's asset management and planning framework. It suggested Sunwater should:

- improve our predictive maintenance and asset condition reporting arrangements to better inform the timing of asset replacement
- review our cost estimation approach and ensure that asset values are based on modern equivalent replacement values where appropriate
- develop transparent guidelines for options analyses.<sup>2</sup>

Sunwater acknowledges there is room for improvement in our asset management system and is working on several initiatives to address these potential improvements, as outlined below.

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<sup>2</sup> See pages 58 to 60, [www.qca.org.au/wp-content/uploads/2020/02/irrigation-price-review-part-b-sunwater-final-report.pdf](http://www.qca.org.au/wp-content/uploads/2020/02/irrigation-price-review-part-b-sunwater-final-report.pdf)

## **Predictive maintenance and asset condition reporting**

A focus during 2022/23 and beyond is to better leverage data to make more informed decisions and to ensure operations and maintenance activities are implemented safely, timely and efficiently.

To achieve this, Sunwater has invested in a new Enterprise Asset Management system (SAP). The new system and other IT infrastructure changes, such as a mobility solution that enables near real-time data to be loaded into the system and data automation initiatives, have presented a significant opportunity to transition to a data driven decision-making business.

In addition, Sunwater is improving predictive maintenance capability by monitoring asset performance data of critical assets. For example, the preventative maintenance program for pump stations is transitioning to usage-based intervals and energy and condition data is being analysed via remote dashboards. The SAP Analytic Cloud should also allow asset condition data to be trended over time. This will present asset condition decay curves which can be used to predict when an asset should be scheduled for maintenance. The asset data will provide a greater insight to asset performance, condition, and refurbishment and replacement planning.

## **Cost estimation approach**

A change to Sunwater's asset planning cycle in 2019 has improved the near-term cost estimation of annuity funded work. The change targets two years of fully cost-estimated work and has increased the visibility of the forward program.

Sunwater undertook an asset valuation exercise in 2021 to estimate the value of fully replacing high value assets including dams and pipelines using a bottom-up assessment of material line items. This data informs the replacement values underpinning forecast annuity-funded costs outside of the immediate program of works.

## **Options analyses**

Sunwater has implemented improvements to our asset management system with a fit-for-purpose alignment to the ISO55001 asset management standard. Key to the alignment is the simplification of how maintenance work is identified and delivered.

Low value, low complexity work follows a standard work management methodology and is managed at a service contract level. High value, high complexity work is managed at an individual level and is subject to an options analysis. High value, high complexity work will also be assessed against the relevant criteria to determine if it meets Sunwater's project, program, and portfolio management framework (P3MF) for project management guidelines.

Options analyses examine a range of options and assess the shortlisted options against selected criteria, including financial, regulatory, social, and environmental factors.

## 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/replacement of the assets over a pre-determined period of time. The forecast annuity balances, and the impacts of budgeted spend, are shown in Table 9 below.

The QCA and Sunwater closing balances differ due to differences in the expenditure profile allowed by the QCA in its 2020–2024 final recommendations and actual expenditure incurred by Sunwater in 2019/20 and what we expect to spend thereafter.

Table 9: Annuity balance

Burdekin Haughton Bulk Water Service Contract	2018/19 QCA Actual \$'000	2019/20 Actual \$'000	2020/21 Actual \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000	2024/25 Forecast \$'000	2025/26 Forecast \$'000	2026/27 Forecast \$'000
Opening balance <sup>1</sup>	6940.7	7190.0	6311.0	5976.7	6602.0	1798.7	1909.5	2645.0	3351.8
Spend <sup>2</sup>	(897.2)	(2059.8)	(1783.5)	(843.9)	(6380.3)	(1358.6)	(1578.0)	(1690.5)	(3163.6)
Insurance proceeds receipts (if applicable)									
Prior year	-	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-	-
Annuity contribution <sup>3</sup>	626.6	642.3	1173.4	1207.9	1288.3	1390.8	2230.0	2281.7	2311.5
Interest/financing costs	519.9	538.5	275.9	261.3	288.7	78.6	83.5	115.6	146.6
<b>Sunwater – Closing balance</b>	<b>7190.0</b>	<b>6311.0</b>	<b>5976.7</b>	<b>6602.0</b>	<b>1798.7</b>	<b>1909.5</b>	<b>2645.0</b>	<b>3351.8</b>	<b>2646.3</b>
<b>QCA – Closing balance</b>	<b>7190.0</b>	<b>6797.8</b>	<b>7378.6</b>	<b>8077.0</b>	<b>9053.8</b>	<b>9881.9</b>			
Difference	-	(486.8)	(1401.8)	(1475.0)	(7255.2)	(7972.4)			

1. The opening balances for 2018/19 and 2019/20 reflect the QCA's 2020–2024 irrigation price investigation final recommendations.
2. The spend for 2018/19 reflects the QCA's 2020–2024 irrigation price investigation final recommendations, which included adjustments to Sunwater's actual costs. The 2019/20 and 2020/21 spend reflects Sunwater's actual costs. Thereafter, the spend is based on Sunwater's forecasts.
3. The annuity contribution is included in the prices paid by customers. It was set by the QCA from 2012/13 to 2016/17 and was rolled forward with the Consumer Price Index (CPI) for 2017/18, 2018/19 and 2019/20. From 2020/21 to 2023/24, the annuity contribution is based on the QCA's 2020–2024 irrigation price investigation final recommendations. Thereafter, it is based on Sunwater's projections.

# Appendix 1—Historical water usage

The below table contains the scheme’s recent water use, together with the 19-year average for the 2002/03 to 2020/21 period.

Year	Usage (ML)
2010/11	184,950
2011/12	435,031
2012/13	514,753
2013/14	716,982
2014/15	801,910
2015/16	680,578
2016/17	581,308
2017/18	637,316
2018/19	524,103
2019/20	663,465
2020/21	537,521
<b>19-year historical average</b>	<b>597,075</b>

## Appendix 2—Operating and annuity-funded costs by expense type

Burdekin Haughton Bulk Water Service Contract	2018/19	2019/20	2020/21			2021/22		2022/23		2023/24	2024/25	2025/26	2026/27
	Sunwater / QCA Actual \$'000	Sunwater Actual \$'000	QCA Target \$'000	Sunwater Actual \$'000	Variance \$'000	Sunwater Forecast \$'000	QCA Target \$'000	Sunwater Forecast \$'000	QCA Target \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
<b>Operating costs</b>													
Operations	2220.0	2543.3	2466.3	2883.0	416.7	2689.1	2502.8	2714.6	2561.1	2749.9	2903.5	3066.1	3249.2
Labour	370.3	320.5	295.8	313.1	17.3	211.7	302.6	219.8	310.4	226.4	233.2	240.2	247.4
Contractors	61.6	127.8	43.0	104.4	61.5	43.6	43.8	63.5	44.9	65.2	67.0	68.8	70.7
Materials	23.9	38.2	19.4	13.8	(5.7)	15.9	19.8	23.8	20.3	16.3	16.7	17.2	17.7
Electricity	5.4	13.5	128.9	98.9	(30.0)	74.0	116.6	87.0	118.2	89.4	91.9	94.4	97.0
Insurance	773.7	886.2	974.5	1181.2	206.7	1570.0	994.0	1446.6	1016.9	1560.7	1683.8	1816.6	1959.9
Other	93.7	496.6	245.9	434.9	189.0	237.2	250.8	345.4	256.6	243.4	249.9	255.9	262.0
Local area support costs	311.7	198.0	210.2	171.8	(38.5)	138.3	214.7	143.6	219.9	147.9	152.4	157.0	161.7
Corporate support costs	332.7	244.7	228.4	286.8	58.4	201.1	233.3	208.8	239.0	215.1	221.6	228.2	235.0
Indirect costs	247.1	217.7	320.1	278.1	(42.0)	197.3	327.0	176.1	334.9	185.4	187.0	187.9	197.8
Preventative maintenance	518.2	530.2	387.8	634.9	247.1	459.3	396.1	416.0	405.7	429.3	441.0	451.8	467.2
Labour	119.0	140.5	79.9	150.2	70.3	110.8	81.7	105.4	83.8	108.6	111.8	115.2	118.6
Contractors	129.3	71.4	111.0	50.8	(60.2)	79.3	113.3	63.5	116.0	65.2	67.0	68.8	70.7
Materials	5.0	2.4	9.1	5.2	(4.0)	6.3	9.3	7.9	9.5	8.2	8.4	8.6	8.8
Other	11.4	30.3	12.4	73.6	61.2	10.3	12.7	10.3	13.0	10.6	10.9	11.2	11.5
Local area support costs	95.0	84.9	56.8	89.7	33.0	72.0	58.0	68.5	59.4	70.6	72.7	74.9	77.1
Corporate support costs	97.5	106.3	61.7	147.2	85.6	105.3	63.0	100.1	64.5	103.1	106.2	109.4	112.7
Indirect costs	60.9	94.3	56.9	118.2	61.3	75.2	58.1	60.3	59.5	63.1	64.1	63.7	67.7
Corrective maintenance	923.2	1010.0	259.0	465.7	206.7	381.1	264.4	362.9	270.8	373.9	384.2	394.0	406.4
Labour	86.2	102.4	38.6	71.5	32.9	72.2	39.5	57.9	40.5	59.6	61.4	63.3	65.2
Contractors	561.6	636.0	104.5	68.9	(35.5)	111.1	106.6	119.0	109.1	122.3	125.6	129.1	132.6
Materials	41.6	30.3	24.8	43.6	18.8	21.4	25.3	21.4	25.8	22.0	22.6	23.2	23.9
Other	28.8	44.3	6.4	113.4	107.0	11.9	6.5	38.9	6.7	39.9	41.0	42.2	43.3
Local area support costs	75.1	60.0	27.4	41.1	13.7	46.9	28.0	37.6	28.7	38.8	39.9	41.1	42.4
Corporate support costs	77.2	73.2	29.8	70.6	40.8	68.6	30.4	55.0	31.2	56.7	58.4	60.1	61.9
Indirect costs	52.5	63.8	27.5	56.6	29.1	49.0	28.1	33.1	28.8	34.7	35.2	35.0	37.2
<b>Operating costs total</b>	<b>3661.4</b>	<b>4083.5</b>	<b>3113.1</b>	<b>3983.6</b>	<b>870.5</b>	<b>3529.5</b>	<b>3163.4</b>	<b>3493.5</b>	<b>3237.6</b>	<b>3553.1</b>	<b>3728.7</b>	<b>3911.9</b>	<b>4122.8</b>
<b>Annuity-funded costs</b>													
Labour		107.1	47.8	95.8	48.0	97.9	96.5	1068.4	111.3	227.4	264.8	284.9	532.3
Contractors		1567.0	587.8	1178.3	590.4	159.9	157.7	1175.2	122.4	249.5	289.9	311.2	579.9
Materials		151.8	146.2	293.1	146.9	346.7	341.8	1175.2	122.4	249.5	289.9	311.2	579.9
Other		18.0	4.5	9.0	4.5	15.7	15.5	641.0	66.8	136.1	158.1	169.7	316.3
Local area support costs		63.8	23.7	47.5	23.8	64.3	63.4	694.5	72.3	147.8	172.1	185.2	346.0
Corporate support costs		81.9	45.3	90.9	45.5	93.0	91.7	1015.0	105.7	216.0	251.6	270.7	505.7
Indirect costs		70.2	34.4	69.0	34.6	66.4	65.5	611.0	63.7	132.1	151.7	157.6	303.6
<b>Annuity-funded total<sup>1</sup></b>	<b>897.2</b>	<b>2059.8</b>	<b>889.8</b>	<b>1783.5</b>	<b>893.7</b>	<b>843.9</b>	<b>832.0</b>	<b>6380.3</b>	<b>664.6</b>	<b>1358.6</b>	<b>1578.0</b>	<b>1690.5</b>	<b>3163.6</b>
<b>Total costs<sup>2</sup></b>	<b>4558.6</b>	<b>6143.4</b>	<b>4002.9</b>	<b>5767.1</b>	<b>1764.2</b>	<b>4373.5</b>	<b>3995.4</b>	<b>9873.8</b>	<b>3902.2</b>	<b>4911.7</b>	<b>5306.7</b>	<b>5602.3</b>	<b>7286.4</b>

1. The 2018/19 costs reflect the QCA's 2020–24 irrigation price investigation final recommendations, which included adjustments to Sunwater's actual costs. Sunwater has provided cost information at the lowest level of granularity available.
2. Excludes recreational facility costs from 2020/21.

## Appendix 3—Comparison of forecast and actual annuity-funded projects for 2020/21

The below table sets out the major annuity-funded projects planned for the Burdekin Haughton Bulk Water Service Contract in 2020/21<sup>3</sup> and the actual projects undertaken.

Facility	Activity description	Forecast \$'000	Actual \$'000	Commentary
Burdekin Falls Dam	Replace – upper and lower gallery lighting fixtures, cabling, and distribution boards.	700	732	This project was completed broadly in line with the budget.
Clare Weir	Refurbish – hydraulic system and cylinders (Stage 4 of a multi-year project).	331	301	This project was completed under budget.
Burdekin Falls Dam	Refurbish – three steel penstocks.	180	14	Refurbishment of the penstock liners was deferred because of the identification of and requirement for preceding works to be completed to facilitate the works. Costs were incurred in relation to an inspection that was completed in 2020/21.
Clare Weir	Replace – reinstatement of downstream rock protection assets, replacement of battery charger system, gate control bubbling system and scheduled monolith deformation survey.	124	106	The market value of the procured goods for the battery charger system replacement project were lower than estimated (\$19k less), while the labour hours required to carry out the monolith survey of movement points and asset deformations were less than estimated due to efficiencies being achieved through the bundling of works (\$14k less).  The market value of goods to replace the gate control bubbling system was \$9k more than estimated and the quantity of material (concrete and rock) required to reinstate the left abutment downstream rock protection was greater than anticipated (\$7k more).  Works to reinstate the right abutment downstream shotcrete protection were delivered in line with the budget.
Burdekin Falls Dam	Replace – streetlight poles and lighting fixtures.	125	0	This project was completed in 2019/20.
Burdekin Falls Dam	Refurbish – bulkhead gate coating system, seals and retaining plates.	81	167	Upon inspection and non-destructive testing of the bulkhead, it was deemed to be beyond repair. As a result, a new bulkhead had to be fabricated.
Burdekin Falls Dam	Refurbish – 12 intake structure baulks.	73	49	Work was completed in conjunction with other works, allowing efficiencies to be gained through the sharing of mobilisation and demobilisation costs.
Burdekin Falls Dam	Refurbish – repair and/or reinstate dissipator blocks and impact slab.	72	8	Access is only possible during the annual shutdown, as it requires de-watering the dissipator basin. Sunwater undertook an inspection in 2020/21 to determine the extent of repair required, with works expected to be completed in a future financial year.

<sup>3</sup> Based on information extracted from Sunwater's systems in mid-2020. See the 2021/22 S&PP at [www.sunwater.com.au/schemes/Burdekin-Haughton/](http://www.sunwater.com.au/schemes/Burdekin-Haughton/)

Facility	Activity description	Forecast \$'000	Actual \$'000	Commentary
Burdekin Falls Dam	Replace – main wall distribution board components.	49	2	This work was incorporated into the Burdekin Falls Dam lighting upgrade above.
Clare Weir	Study – failure impact assessment (FIA) based on the 2018 FIA Guidelines update.	40	17	A full FIA was not required. The preliminary FIA was deemed sufficient by the regulator.
Scheme	Study – to determine arc flash risk and classification for all electrical switchboards and distribution boards.	39	56	The market value of procured items (consultancy services) was higher than estimated and the data captured to facilities studies was more involved than estimated.
Multiple	Various projects.	137	36	<p>The cost variances related to the following projects:</p> <ul style="list-style-type: none"> <li>the market value of procured goods and services for the refurbishment of gauging equipment and replacement of a bubbler being \$3k higher than estimated</li> <li>the asset revaluation not being undertaken as part of the annuity-funded program of works (\$30k)</li> <li>the pressure testing of the fire suppression system cylinder being funded by operating costs (\$7k)</li> <li>the labour hours required to refurbish the outlet works bridge joint filler being less than anticipated (\$3k less)</li> </ul> <p>In addition, the service contract's contingency amount of \$68k was not required.</p>
Multiple	Various projects.	0	295	<p>The following works were completed:</p> <ul style="list-style-type: none"> <li>the refurbishment of the fixed wheel gate at Burdekin Falls Dam, which was brought forward to facilitate the refurbishment of penstock liners (\$107k)</li> <li>repairs to the dam wall access road due to poor condition. Sunwater took advantage of plant and equipment already mobilised at the site for other work (\$118k)</li> <li>transformer rectification works (\$60k)</li> <li>a Clare Weir outlet works inspection, which was carried over from 2019/20 because of river levels during the annual shutdown.</li> </ul>
<b>2020/21 Total</b>		<b>1951</b>	<b>1784</b>	



## Appendix 4—Annuity-funded projects for 2022/23 to 2026/27

The below table sets out Sunwater’s currently planned annuity-funded projects for the 2022/23 to 2026/27 period for this scheme. While the immediate program is well defined, estimates become more uncertain further into the planning timeline. Forecasts are likely to change in future S&PPs, reflecting changes in project delivery timing; asset condition and risk updates; outcomes from scheduled asset inspections; and customer feedback.

Year	Facility	Activity description	Forecast \$'000
2022/23	Clare Weir	Refurbish – downstream protection works and flip bucket repairs.	5185
	Burdekin Falls Dam	Refurbish – clean and renew spillway apron and gallery foundation drainage system.	478
	Clare Weir	Refurbish – hydraulic system and cylinders based on known asset condition and age.	418
	Clare Weir	Replace – install new survey points and control stations to monitor weir crest, abutments, and flip bucket elements.	60
	Clare Weir	Replace – CCTV system and upgrade technology and capability.	48
	Burdekin Falls Dam	Study – comprehensive inspection to meet regulatory requirements (2022 inspection carryover budget).	48
	Burdekin Falls Dam	Refurbish – patch paint 12 baulks based on known asset condition and age.	48
	Clare Weir	Study – comprehensive inspection to meet asset management and risk standards (2022 inspection carryover budget).	30
	Gorge Weir	Study – comprehensive inspection to meet asset management, condition, and risk standards.	29
	Scheme	Replace – customer meters to Australian Standard (AS) 4747 to meet regulatory compliance.	19
	Clare Weir	Refurbish – right bank control building light and power services.	17
	<b>2022/23 Total</b>		<b>6380</b>
2023/24	Clare Weir	Refurbish – hydraulic system and cylinders based on known asset condition and age.	431
	Clare Weir	Refurbish – right and left bank access ramp and landing earthworks based on known asset condition and age.	226
	Burdekin Falls Dam	Refurbish – right bank access roads, bitumen repairs and resurfacing.	187
	Burdekin Falls Dam	Replace – lower and upper ventilation fans based on known asset condition and age.	134
	Clare Weir	Refurbish – outlet works hydraulic system power pack based on known asset condition and age.	101
	Clare Weir	Refurbish – fish lock walkways, handrails and grids based on known asset condition and age.	62
	Burdekin Falls Dam	Refurbish – gantry crane long-travel drives and electrical services/controls.	50
	Burdekin Falls Dam	Refurbish – patch paint 12 baulks based on known asset condition and age.	49
	Multiple	There are 10 other annuity-funded projects planned for 2023/24 related to the Burdekin Falls Dam generator room air filter, starter control and fuel level controller replacements; minor hydraulic winch refurbishments at Clare Weir; meter	118

Year	Facility	Activity description	Forecast \$'000
		replacements; outlet works trash screen refurbishments at Clare Weir; supervisory control and data acquisition (SCADA) computer and software replacement at Clare Weir; and other minor works.	
	<b>2023/24 Total</b>		<b>1358</b>
2024/25	Clare Weir	Refurbish – hydraulic system and cylinders based on known asset condition and age.	443
	Burdekin Falls Dam	Replace – left bank saddle dam piezometer network, data capture and telemetry.	397
	Burdekin Falls Dam	Replace – gantry crane cabling based on known asset condition and age.	127
	Burdekin Falls Dam	Refurbish – gantry crane 12.5 tonne crab hoist based on known asset condition and age.	106
	Burdekin Falls Dam	Refurbish – lifting hydraulic rams and seating hydraulic rams based on known asset condition and age.	105
	Burdekin Falls Dam	Refurbish – disk brake arrangement on a gate hoist based on known asset condition and age.	76
	Clare Weir	Replace – gantry crane hydraulic cylinders (CHY 001 to 004).	69
	Burdekin Falls Dam	Refurbish – patch paint 12 baulks based on known asset condition and age.	51
	Gorge Weir	Refurbish – reinstate dental concrete on the downstream left abutment based on known asset condition and age.	40
	Multiple	There are nine other annuity-funded projects planned for 2024/25 related to an underwater inspection of the outlet works at Clare Weir; outlet works pipe refurbishment at Clare Weir; meter replacements; uninterruptible power supply and alarm dialler replacements at the Clare Weir fish lock; backfilling protection works at Clare Weir; gantry crane electrical works at Burdekin Falls Dam; and a SCADA computer and software replacement at the Clare Weir fish lock.	166
		<b>2024/25 Total</b>	
2025/26	Clare Weir	Refurbish – hydraulic system and cylinders based on known asset condition and age.	454
	Burdekin Falls Dam – Mount Graham north saddle dam	Refurbish – crest road regrading and erosion control, downstream and upstream slope protection works and erosion control, and left and right-hand abutment grading and erosion control.	220
	Burdekin Falls Dam – Left bank saddle dam	Refurbish – downstream and upstream slope protection works and erosion control and left and right-hand abutment grading and erosion control.	156
	Burdekin Falls Dam – Mount Graham south saddle dam	Refurbish – downstream and upstream slope protection works and erosion control, and left-hand abutment grading and erosion control.	130
	Burdekin Falls Dam	Refurbish – drainage to the left bank access road and regrade based on known asset condition and age.	119
	Burdekin Falls Dam	Replace – spillway settlement points based on known asset condition and age.	103
	Burdekin Falls Dam	Refurbish – inspect, blast and paint intake structure trash racks based on condition and deck storage rack system.	89
	Clare Weir	Refurbish – crest control hydraulic pipework based on known asset condition and age.	65
	Burdekin Falls Dam	Study – options to define the optimal solution for the dam wall control equipment.	65
	Scheme	Study – asset revaluation to define asset value for insurance purposes and future expenditure profiles.	40
	Clare Weir	Refurbish – gantry crane. Review lifting mechanism, wheel bearings, hydraulics, and diesel engine.	32

Year	Facility	Activity description	Forecast \$'000
	Multiple	There are 27 other annuity-funded projects planned for 2025/26 related to, for example, electrical works at Clare Weir; meter replacements; fish lock level, weir level, tail water level and atmospheric transmitter replacements at Clare Weir; gantry crane and bulkhead gate storage hatch ladders, handrails and platform refurbishments at Burdekin Falls Dam; fencing upgrades at Clare Weir; pressure testing of the fire suppression system cylinder at Burdekin Falls Dam; gantry crane cable, drive unit and fixed wheel gate crane structure refurbishments at Burdekin Falls Dam; intake structure and gate chamber handrails and metal work refurbishments at Burdekin Falls Dam; and control building refurbishment at Clare Weir.	218
	<b>2025/26 Total</b>		<b>1691</b>
2026/27	Burdekin Falls Dam	Replace – main dam wall control equipment and services.	1048
	Clare Weir	Refurbish – hydraulic system and cylinders based on known asset condition and age.	468
	Burdekin Falls Dam	Refurbish – gantry crane overhaul of winches, gearboxes, ropes, and control equipment (subject to condition assessment and previous repair works).	268
	Burdekin Falls Dam	Refurbish – upper and lower gallery main dam lighting systems (subject to condition).	181
	Burdekin Falls Dam	Study – comprehensive inspection to meet regulatory compliance.	158
	Burdekin Falls Dam	Replace – main dam fire protection detectors, panel, sirens and call points, intruder alarm system and auto dialler.	151
	Burdekin Falls Dam	Refurbish – main dam fixed wheel gate switchboard No. 5.	100
	Burdekin Falls Dam	Replace – main dam standby alternator (subject to 2022 replacement item being completed).	90
	Burdekin Falls Dam	Study – 10-yearly crest level survey of left bank and Mount Graham north and south saddle dams.	80
	Burdekin Falls Dam	Refurbish – left and right bank access road minor patching and repairs.	80
	Clare Weir	Refurbish – outlet works delivery pipes and penstocks.	80
	Burdekin Falls Dam	Refurbish – main dam outlet works switchboard No. 6.	68
	Clare Weir	Study – comprehensive inspection to meet asset management, condition, and risk standards.	67
	Burdekin Falls Dam	Refurbish – fixed wheel gate hoist brake drum, gearbox, and couplings.	38
	Multiple	There are 14 other annuity-funded projects planned for 2026/27 related to, for example, meter replacements; pump replacements; clearing out abutment drains; gantry crane works at Clare Weir; and other minor road refurbishments.	287
	<b>2026/27 Total</b>		<b>3164</b>

## Contact us

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

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This Service and Performance Plan has been prepared by Sunwater to provide indicative information to our customers for the purpose of consultation. It contains estimates and forecasts which are based upon a number of assumptions. The actual financial performance of the service contract to which this plan relates, and the operations and activities actually undertaken by Sunwater during the relevant periods, may vary materially from the information contained in this plan. This plan should not be relied upon beyond its purpose as a tool for consultation and you should not rely on the information contained in this plan in making decisions about your circumstances. Sunwater will not be responsible or liable for any loss (including consequential loss), claim or damage (including in tort) that is in any way connected with the use of this plan or the information contained within it.