



**Burdekin River Irrigation Area Irrigators Ltd (BRIA)**

**Submission to the QCA**

**29th February 2024**

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## Abbreviations and Acronyms

<b>Term</b>	<b>Definition</b>
<b>AER</b>	Australian Energy Regulator
<b>BHWSS</b>	Burdekin Haughton Water Supply Scheme
<b>BRIA</b>	Burdekin River Irrigation Area – Original name of the BHWSS scheme and abbreviation for BRIA Irrigators Ltd
<b>Capex</b>	Capital Expenditure
<b>CPI</b>	Consumer Price Index
<b>CSO</b>	Community Service Obligation
<b>DIP</b>	Dam Improvement Program
<b>ECPT</b>	Electricity Cost Pass Through
<b>GBGA</b>	Giru Benefited Groundwater Area
<b>HBS</b>	Haughton Balancing Storage
<b>HMC</b>	Haughton Main Channel
<b>H P</b>	High Priority
<b>ML</b>	Megalitre
<b>M P</b>	Medium Priority
<b>Opex</b>	Operational Expenditure
<b>QCA</b>	Queensland Competition Authority
<b>RAB</b>	Regulated Asset Base
<b>RBA</b>	Reserve Bank of Australia
<b>WACC</b>	Weighted Average Cost of Capital
<b>WAE</b>	Water Access Entitlement
<b>WSS</b>	Water Supply Scheme
<b>Zone A</b>	Water Management Area which includes customers above the GBGA

## **EXECUTIVE SUMMARY**

This submission has been prepared by BRIA Irrigators Ltd (BRIA) on behalf of irrigation distribution customers in SunWater's Burdekin Haughton Water Supply Scheme (BHWSS). The submission is in response to SunWater's Irrigation Pricing Proposal July 2025 to 30 June 2029, which was submitted to the Queensland Competition Authority (QCA) in November 2023.

The Treasurers Referral to the QCA directs the Authority to consider the need to balance the legitimate commercial interests of the businesses with the interest of their customers, and in this regard, BRIA advises the Authority that BHWSS customers' capacity to pay is limited to irrigation charges that only recover the prudent and efficient operational, maintenance, renewal and administration costs incurred by SunWater. Where customers are transitioning to cost reflective prices, increases should be limited to the Authority's estimate of inflation plus \$2.54 per ML.

BHWSS customers do not have the capacity to pay for dam safety upgrades or a rate of return as a component of their water charges. BRIA is opposed to SunWater's proposed recovery of renewals expenditure via a Regulated Asset Base (RAB) methodology and associated tax allowance. This approach includes a rate of return on renewals which will increase charges to above lower bound. Additional concerns with SunWater's consultation and voting process in relation to the RAB are detailed in the body of our submission.

BRIA does not agree with the calculation of distribution losses and usage in the BHWSS contained in SunWater's submission and proposes that the QCA calculate the losses based on actual diversion, usage and loss figures provided separately by SunWater.

BRIA continues to support the QCA's recommendation in the 2020-24 Price Review that the Giru Benefited Groundwater Area (GBGA) tariff group transition to the Burdekin Channel tariff. We note that SunWater does not propose any changes to the way costs are assigned and cost reflective prices are calculated in the Burdekin Distribution Service and does not have any information that would support the QCA rescinding the findings it made during the 2020 Review.

SunWater's proposed base year costs of \$4.89 million which is 41% higher than the QCA's allowance after adjustment for actual inflation appears to be excessive and requires investigation by the QCA. BRIA while supportive in principle of the electricity cost pass-through (ECPT) has raised concerns with SunWater that there will be an adverse impact on Giru Benefited Groundwater Area customers and has suggested an alternative methodology for SunWater and the QCA's consideration.

BRIA does not support the recovery of SunWater’s increased insurance costs during the 2020-2024 Price Path as a component of 2025-2029 water charges and suggest that insurance costs should be treated in the same manner as our proposed electricity cost pass-through.

We also question whether it is prudent for SunWater to spend \$42.4 million to upgrade their billing and accounting system or to spend significant amounts on Burdekin Dam improvements which may be superfluous, or duplication given the proposed raising of the dam wall by 2 metres.

Customer metering remains a key issue in the BHWSS. The variation in usage across sections of the BHWSS cannot be accounted for by seasonal or alternative cropping variations and results in inequitable allocation of costs across BHWSS customers and loss of revenue for SunWater. BRIA suggests SunWater’s Smart Meter Program should be brought forward to 2025-2026 and 2026-2027.

Consistent with our submission to the 2020 Review BRIA supports the QCA recommendation that SunWater accurately establish the efficient cost of drainage maintenance and that charges should only increase by inflation each year.

SunWater is funding and implementing a Rising Groundwater Mitigation Project in sections of the BHWSS and although costs associated with the project may not need to be addressed in this review, BRIA has pre-empted potential issues regarding cost recovery of capital and operational costs via future water charges and included them for the QCA’s consideration in this submission.

## 1. CAPACITY TO PAY

Irrigated sugar cane production dominates irrigation demand in the BHWSS, and water and drainage charges paid to SunWater remain cane producers second highest input cost, constituting 18%-20% of total production costs.

BRIA submits that BHWSS customers' capacity to pay is limited to charges that only recover prudent and efficient operational, maintenance, renewal and administration (lower bound) costs incurred by SunWater. Increases in charges for Giru Benefited Groundwater Area customers who are transitioning to cost reflective channel charges should be limited to the QCA's estimate of inflation plus \$2.54 per ML.

BRIA does not support SunWater's proposed recovery of renewals expenditure via a regulated asset base methodology with only 19% of BHWSS customers agreeing to shift to a RAB methodology.

Among other concerns with a RAB, BRIA believes that the WACC and tax allowance applicable if a RAB approach is adopted together with a rate of return on renewals would increase water charges to above lower bound and beyond customers capacity to pay.

The QCA estimated in the 2020 review that dam safety upgrades due to be commissioned in 2024-25 would increase cost-reflective fixed prices for river only customers by \$9.36/ ML and \$11.57/ML for BHWSS channel distribution customers. BRIA submits that customers do not have the capacity to pay these additional charges.

## 2. ENTITLEMENTS AND USAGE

SunWater has increased distribution efficiency significantly during the last 7 years. Scheme efficiency for the period 2006 to 2016 averaged 65.5%, with distribution losses averaging 120,000\* ml (34.5%) annually.

Considering that efficiency for the period 2016 to 2023 has improved to 82.75 % and losses reduced to 58,000\* ml (17.25%), BRIA believes that the 130,546 ML losses attributed to the BHWSS distribution system is excessive as it amounts to 39% of average annual diversion. We believe that SunWater will achieve even greater efficiencies as they implement the Smart Meter program and suggest that the loss allocation attributed to the distribution scheme should be reduced to the average of the last seven years. \*SunWater Data.

SunWater currently has no incentive to reduce the loss allocation, as there is no market for this additional water however there is no justification for leaving this cost burden on irrigators when it is not being utilised.

SunWater’s calculation of long-term average annual usage in the distribution scheme at 336,827ml/year or 62.2% of applicable WAE for irrigation pricing purposes provides a misleading result, when long-term (17 yr.) irrigation usage averages 248,488\*ml/year or 76.6% of actual irrigation WAE.

The methodology applied by SunWater calculates 20-year average usage (336,827 ML) at 62.2% of applicable distribution system WAE (541,737 ML) by adding H P and M P distribution customer entitlements (335,000 ML) to total loss entitlements (206,737ML).

High Priority entitlements (10,605 ML) should not be included in the calculation and H.P. losses should not be recovered from medium priority customers in a scheme that is as reliable as the BHWSS as it is highly unlikely that HP entitlement will be needed to fill the channel system.

BRIA submits that the correct calculation used for irrigation pricing purposes should be the 7- year average usage (278,008\*ML) as 85.7% of irrigation customers’ entitlements (324,395ML). The loss figure used should be the actual 7-year average annual distribution losses (57,987\*ML) and calculated as 7-year average annual diversions (335,995\*ML) minus customers 7-year average annual metered usage (278,008\*ML).

Time Frame	Average Diversions*	Average Usage/Year*	Percentage WAE.	Average Losses*
20 Year as Proposed	-----	336,827ml	62.2	206,737ml
17 Year Actual	342,906ml	248,488ml	76.6	94,418ml
10 Year Actual	347,744ml	284,976ml	87.8	62,768ml
7 Year Actual	335,995ml	278,008ml	85.7	57,987ml

\*SunWater Data

BRIA questions why SunWater’s methodology is currently used to determine price. We have focused on ensuring that costs are correctly allocated into fixed and variable categories during previous price reviews, and as a result SunWater should not under or over recover revenue irrespective of quantity of water sold.

**BRIA recommend that the QCA discards SunWater’s calculation for the purpose of determining water charges in the BHWSS.**

## 2.1 Metering

BRIA suggests that the actual demand and usage figures in the BHWSS could be underestimated and losses over-estimated because of inefficient metering in some sections of the scheme.

Seven- year average irrigation use in the channel distribution system is 278,008 ml or 85.7% of WAE, with some sections of the BHWSS consistently utilising 85%-90% of their WAE while others use only 45%-70% of their entitlement. This variation cannot be attributed to different cropping or seasonal variability.

**BRIA recommends that SunWater bring their Smart Meter Program forward to 2025-2026 with a focus on those sections of the BHWSS with lower utilisation of their WAE.**

## 3. TARRIFF GROUPS IN THE BHWSS

### 3.1 Giru Benefited Groundwater Area Zone A

BRIA supports the QCA's recommendation in the 2020-24 Price Review that the Giru Benefited Groundwater Area (GBGA) Tariff Group customers transition to the Burdekin Channel tariff provided that increases to GBGA customers are limited to the QCA's estimate of inflation plus \$2.54/ML.

We note that SunWater does not have any information that would support the QCA rescinding the findings it made during the 2020 Review and does not propose any changes to the way costs are assigned and cost reflective prices are calculated in the Burdekin distribution service. BRIA shares SunWater's concerns regarding creating another tariff group within the BHWSS.

BRIA is aware that some GBGA customers have concerns with transitioning to the Burdekin Channel tariff and believe that they are entitled to retain discounted charges because of un-supplemented yield from the Haughton River and a lower standard of service than channel tariff customers.

BRIA's objective is to ensure that the GBGA tariff allows SunWater to fully recover the prudent and efficient costs it incurs to provide water to GBGA customers, without increasing lower bound targets and charges for remaining BHWSS customers.

SunWater has little incentive to fully recover efficient costs from GBGA customers while any under recovery of costs from that section of the scheme are absorbed in total BHWSS costs and recovered from BHWSS channel customers.



### **3.2 BRIA's position regarding a discounted GBGA tariff**

BRIA and BHWSS channel customers do not accept a discounted GBGA-Zone A tariff that is predicated on 49% of metered use being un-supplemented yield that attracts no charge. We acknowledge that the Haughton River provides some un-supplemented yield as does any water course, however hydrological estimates of total available yield aren't of any value for the purpose of determining whether water charges should be discounted, as it is only the volume of un-supplemented yield that is utilised that is relevant. A discounted tariff in recognition of utilised yield may be negated by GBGA customers having to pay all costs associated with Haughton River infrastructure.

When GBGA customers were fully utilising groundwater and the inflatable bag on the Val Bird weir provided extra storage capacity there was an additional volume of un-supplemented yield available. This is no longer the case and SunWater data (20 year) clearly indicates that on average more than 90% of GBGA-Zone A annual usage is provided by releases of channel water from the HBS.

It is disingenuous to claim that diversion and usage data provided by SunWater are incorrect. SunWater's business model relies on accurate metering of all diversions and usage in the BHWSS and are the basis for calculating customers' water charges.

QCA appointed consultants Water Solutions to verify SunWater's data in the 2020 review, and they concluded that diversion and usage data provided by SunWater was acceptable and that there did not appear to be a strong case for differential pricing in the GBGA.

**BRIA submits that the volume of un-supplemented yield being utilised should be calculated as GBGA-Zone A customers' metered usage minus SunWater's metered releases of channel water from the Haughton Balancing Storage to the Haughton River.**

### **3.3 Service levels**

Customers in the Clare, Millaroo and Dalbeg sections of the BHWSS had entitlements called water rights thirty- five years before the construction of the Burdekin Dam. They do not receive any recognition for their pre-existing entitlement and have always been required to pay the full channel charge.

Following construction of the Burdekin Dam and expansion of the irrigation area, new channel customers level of service was obtained by contributing to the capital cost of the scheme by paying an allocation charge at the time of purchase. Less than 50% of channel customers farms are gravity fed with the majority incurring re-lift pumping costs.

GBGA customers were not required to pay an allocation charge for their entitlements.

BHWSS channel distribution customers will not support a discounted tariff in the GBGA unless :

- SunWater recovers from GBGA customers, the full channel tariff for every megalitre diverted from the Haughton Balancing Storage (HBS) to GBGA-Zone A. This will require SunWater to accurately meter diversions at the HBS and to only release sufficient water to provide customers orders.
- SunWater recovers from GBGA customers the full operational, maintenance and renewal costs of all assets associated with diversions to the Haughton River, including the HBS outlet and meter, the Val Bird and Giru Weirs and re-lift pumps.
- The overflow from the HBS into the river is raised so that there are no involuntary releases into the Haughton River. A safety overflow was installed on the eastern side of the HBS during construction making provision of an additional safety overflow into the river unnecessary.

**CONCLUSION: While ever the Zone A-GBGA tariff is discounted from the channel tariff, BHWSS channel customers will not accept any costs associated with supplying water to Zone A-GBGA customers being included in total BHWSS costs and recovered from other customers.**

### **3.4 Gladys Lagoon**

SunWater is considering lowering the level of Gladys Lagoon as one of the initiatives for their Groundwater Project and this will reduce the amount of system yield which is currently determined at 360 ML.

Consistent with our approach to the GBGA-Zone A tariff, BRIA recommends that as the un-supplemented yield from Gladys Lagoon will vary from year to year, the customers in this tariff group should pay the Burdekin channel tariff for all metered releases from the Haughton main channel into the lagoon. Any usage above this is deemed system yield and does not attract a charge. There is no SunWater infrastructure in Gladys Lagoon and only a meter outlet on the Haughton main channel involved in this supply.

In practice, the un-supplemented yield utilised by the customer would be determined by subtracting SunWater's metered releases into the lagoon from the customer's total metered usage and not attract a charge. Customers should be required to order water and SunWater should only release sufficient water to meet orders.

## 4. OPERATING EXPENDITURE

SunWater's proposed base year (2022-23) costs of \$ 4.89 million is 41% higher than the QCA's allowance for that year after adjustment for actual inflation and appears to be excessive. BRIA believes it warrants investigation by the Authority.

BRIA does not believe that the abnormal spike in costs and services experienced during the pandemic should be used as the base to project future operating expenditure and we are aware that many costs are now trending downwards as is the Reserve Banks forecast for inflation.

SunWater is proposing to increase water charges by 2.78% per annum over the life of the price path. BRIA suggests that increases should be limited to 2.5%/year which is mid-range of the reserve bank target.

SunWater is also proposing to apportion water charges (electricity inclusive) at 71.8% Fixed and 28.2% Volumetric compared to the QCA's 66.4% Fixed and 33.6% Volumetric in the 2020-24 price path. BRIA ask the QCA to determine whether this is justified.

Considerable effort has been made during previous pricing reviews to ensure that costs are allocated to the appropriate categories as inflated fixed costs remove incentive for efficiency gains by SunWater and lower volumetric costs remove the incentive for customers to invest in on farm water use efficiency.

### 4.1 Regulated Asset Base

BHWSS customers are opposed to changing from a renewal's annuity to a Regulated Asset Base and voted accordingly in SunWater's Go Vote with only 19% voting in favour of a RAB.

The Burdekin Scheme constitutes 40% of SunWater's WAE and together with Bundaberg 14% WAE and Pioneer River 3%, totalling 57% WAE and all voted against a RAB, however SunWater chose to determine the result based on the majority of schemes supporting a RAB, despite them representing only 43% of WAE.

BRIA believes that a commercial precedent was established by the Queensland Government during Local Management deliberations when customer voting was on a per megalitre of WAE basis. The fact that SunWater apportions the QCA Pricing Review on a scheme WAE basis, suggests changed standards and a desire to achieve a pre-determined outcome.

Our investigations uncovered a report by SAHA that was commissioned for the 2011-2016 Review which states under:

Key Lessons from Regulatory Decisions - P. 54

**8.31 A renewal annuity approach applies best where there is a dominance of renewable long-life assets such as dams and earthen channels and/or where the expected asset life is greater than that of its components.**

Local Government Authorities are required by Government to operate a sinking fund, or renewals annuity type fund to ensure that they have sufficient funds to continue providing for their community as assets wear out and we are surprised that Government doesn't require the same of SunWater.

We note that the Treasurers letter accompanying the Referral Notice advised transitioning to a RAB was complex and ongoing and further work is required to ensure there are no adverse consequences for both customers and SunWater.

BRIA submits that customers' concerns with the RAB approach have not been adequately addressed by SunWater, which resulted in 57% of SunWater's total WAE voting against the proposal.

Sunwater proposes that:

They will adopt an Australian Energy Regulator (AER) approach which combines a nominal rate of return with an indexed RAB and a negative revenue adjustment, which produces an identical revenue outcome to a real rate of return approach.

"Under a RAB approach, SunWater's revenue comprises an annual return on existing and new renewal capital expenditures and recovery of prudent and efficient opex in the year incurred, through prices." (**SunWater proposal P114- 6.2**). The return will be calculated using a 6.56% WACC which is consistent with a reasonable rate of return.

A tax allowance may be applicable if a RAB approach is used, and tax liabilities, including tax equivalent payment liabilities, are legitimate costs that should be recovered through regulated charges. By contrast, under an annuity approach renewals expenditure is considered operational rather than capital and is deductible for tax purposes. As a result, there is no tax liability that needs to be recovered through regulated charges. The BHWSS has a positive annuity balance of \$ 8.6 million.

All of the above indicate that SunWater is proposing to recover over and above lower bound costs which will result in water charges that exceed BHWSS customers' capacity to pay. A RAB approach would introduce an issue of inter-generational equity with the present generation using and wearing out assets without contributing to depreciation, leaving the next generation to fund refurbishment or replacement. This will inevitably lead to substantial and lumpy price spikes.

**BRIA rejects SunWater's proposal to recover renewals expenditure via a regulated asset base (RAB) methodology and supports the retention of an annuity based approach.**

## 4.2 Electricity Cost Pass Through (ECPT)

The ECPT trial that SunWater has run for the past three years was based on using the QCA published costs for electricity and comparing them to the actual cost incurred. The major caveat on the trial was that no customer would be worse off. That is refunds would be paid by SunWater if revenue for electricity exceeded the cost incurred, but no extra could be charged to customers if SunWater had spent more than had been received.

The trial was in response to concerns with accurately forecasting electricity prices four or five years in advance, and customers' concerns that SunWater was over recovering electricity costs.

Over the past three years the trial has returned substantial amounts to irrigation customers in the BHWSS, specifically \$4.38/ML in 2020-2021, \$9.69/ML in 2021-2022 and \$7.23/ML in 2022-2023 amounting to a total of \$5,372,637 to BHWSS distribution customers over the three-year trial.

The methodology proposed by SunWater in the 2025-2029 Pricing Proposal is not the same as that adopted during the trial, and we believe that it unnecessarily complicates tariffs and billing by adding another two parts, E and F.

BRIA supports SunWater's proposal to recover electricity costs via a pass-through in principle, and it was well supported by 85% of BHWSS customers in voting, however we have subsequently raised concerns with SunWater that in its current form it will have an adverse impact on GBGA customers.

Our concern is that as GBGA customers are currently transitioning to the channel tariff, the Government is providing a CSO to SunWater for the under-recovery of costs in that section of the BHWSS, and that the adoption of the ECPT as proposed by SunWater, would reduce the CSO which would then be paid by GBGA customers.

BRIA has suggested an alternative proposal that would follow the trial methodology but would now include a symmetrical pass-through and request the QCA to consider whether our assumptions are correct and if our proposal detailed below has merit.

The QCA continues to calculate and publish the cost for electricity in the BHWSS for each year of the price path and at the end of each financial year SunWater conducts a reconciliation of actual costs versus revenue received and then apply a symmetrical cost pass through or credit to customers September invoice.

This approach will preserve the current and future CSO from the Queensland Government (avoiding price shocks), neither SunWater or GBGA customers will be disadvantaged financially, and full transparency of electricity costs will be maintained.

**Should the QCA not support BRIA's alternative methodology we will accept SunWater's ECPT proposal as proposed so as not to disadvantage the majority of BHWSS customers.**

## **5. INSURANCE – PROPOSED INSURANCE REVENUE ADJUSTMENT**

BRIA does not support SunWater's proposed insurance revenue adjustment designed to recover cost increases incurred during the 2020-2024 price path by adding them to the 2025-29 price path.

Whilst we acknowledge that this was a genuine under recovery of costs, we point out that had this amount been included in the current price path it would have been recovered by the CSO applying to the transition of prices to lower bound.

We propose that insurance should be treated in the same manner as BRIA's alternative proposal regarding the ECPT, with the QCA estimating the insurance allowance for a given year and SunWater conducting a reconciliation before adjusting the following years price accordingly. This process would require individual schemes cost to be transparent to receive customer support.

## **6. BILLING SYSTEM RENEWAL**

SunWater is proposing to replace its current system as it has reached the end of its useful life and has been made redundant by the vendor.

BRIA does not dispute the need to replace the system but questions the prudence of installing a system with an estimated cost of \$ 38.6 million and with \$ 1.7 million annual running costs. BHWSS customers share of the costs are \$ 3.49 million or \$11,185 per customer.

SunWater are proposing to recover the costs for this new billing system over the next 20 years. BRIA questions this long timeframe for the depreciation of an IT system when the current system it is replacing has been made redundant after only 13 years. Will we still be paying for a system after the end of its useful life.

Consideration should be given to returning the BHWSS accounting and billing system to SunWater's Clare office. Alternatively, BHWSS customers should only contribute the equivalent of what a comparable small business accounting system would cost.

## 7. BURDEKIN FALLS DAM

BRIA questions the replacement of dam wall control equipment expenditure of \$1.885 million in 2026 within this price path and refurbishing foundation drains expenses of \$4.386 million in 2030 just beyond the 2025-2029 price path, as proposed by SunWater (Table 11) in the BHWSS Pricing Proposal Summary. Much of this work may be premature or not required at all considering the proposed raising of the dam wall.

We ask the QCA to investigate whether this expenditure is prudent under the circumstances.

## 8. DRAINAGE CHARGES

The QCA recommendation in the 2020 Review that drainage charges should only increase by the Authority's measure of inflation is supported by BRIA and we recommend that the QCA require SunWater to provide transparency on drainage maintenance expenditure, to ensure that costs are apportioned correctly between drainage charges, diversion licence charges and channel maintenance.

## 9. SUNWATER GROUNDWATER PROJECT

SunWater is currently funding and implementing a rising groundwater mitigation project in the BHWSS which includes a proposal to de-water the aquifer. Costs associated with the establishment and operation of a de-watering project may not need to be addressed during the 2025-29 Price Path and therefore beyond the QCA's current brief.

However, while BRIA welcomes SunWater's initiative, we wish to pre-empt potential issues regarding cost recovery of both capital and operational costs via future water charges and include them for consideration by the QCA in our submission.

The project is currently at the investigation and planning stage, however BRIA is concerned that SunWater may proceed to implement a strategy which has high capital costs and high operating and maintenance costs without adequate consultation with and agreement from customers.

These costs will then be recovered from customers as a component of their water charges and will need to be agreed to prior to SunWater incurring the costs to prevent division and disagreement between customers and with SunWater.

**BRIA requests that the QCA recommend that SunWater consult widely with and obtain agreement from BHWSS customers before proceeding with the implementation of any proposed strategy and subsequent recovery of costs through water charges.**

Suggestions that the fixed or volumetric (variable) component of the channel tariff should be altered to provide an incentive for customers to pump groundwater is not supported by BRIA and we have stressed that fixed and variable costs should be accurately apportioned in other sections of this submission.

There are no charges other than an annual licence fee, levied for groundwater extraction in the BHWSS outside of the GBGA where groundwater is supplemented.

It is the high salinity of the groundwater which is the major disincentive for irrigators utilising groundwater for on-farm irrigation, and altering the fixed or volumetric charge for channel water will not overcome this problem. For those fortunate enough to have good quality groundwater, the reduction in their volumetric charge at actual variable costs while protecting their substantial investment from a rising water table should provide enough incentive.



## **APPENDIX - ZONE A- GBGA HISTORY**

The Giru Benefited Groundwater Area (GBGA) discounted pricing arrangement is not well documented in an agreement or contract between the water provider and the customers, although a range of reports, anecdotal evidence, Water Resource Plans and Resource Operations Plans provide a reasonable overview as to what the arrangement was designed to achieve.

It is a matter of fact that the architects of the GBGA arrangement did not consult with other customers in the scheme, thus denying them the opportunity to raise any concerns with the proposed initiative and potential impacts on channel customers' water charges.

It appears that in or about 1971 the storage capacity of the aquifer underlying the GBGA was estimated to be 13,568 ml/year, and the construction of the Giru Weir in 1977 and the Val Bird Weir in 1983 was designed to increase the estimated yield to 19,700 ml although the maximum annual volume pumped before supplementation with channel water, was 17,914 ml in 1986.

In September 1987 the GBGA was supplemented with channel water pumped from the Burdekin River and delivered via the Haughton Main Channel, and the annual volume used increased to 36,653 ml in 1994.

As the area developed water use requirements increased and it appears that the balance of un-supplemented yield and supplemented channel water settled at 19,700 ml (49%) and 20,550 ml (51%) respectively and this was reflected in the GBGA water charges which were calculated at 51% of the channel tariff.

The supplemented supply from the Haughton Main Channel and a percentage of Haughton River flows from rainfall were captured by the Val Bird Weir which had an inflatable bag 1.8 metres above the current Weir crest and to a lesser extent the Giru Weir.

However, the volume of un-supplemented water able to be utilised decreased when the inflatable bag was removed from the Val Bird Weir due to concerns of salinity and increased flooding on adjacent farms and GBGA customers decommissioned groundwater bores and took surface water. This has had the unintended consequence of causing a high-water table with potential salinity problems.

The strategy of running both Val Bird and Giru Weirs at 40 to 70 cm below the crest as per the Water Plan was amended following requests from GBGA customers and with Val Bird weir now run at full level, the opportunity to capture natural flows is reduced.

A SunWater review of the performance of the system in 2008 indicated that the intended water balance of supplemented (51%) versus un-supplemented (49%) was not being achieved as for the 10- year period 1997- 2007 SunWater was diverting on average 90% of the metered usage in Haughton Zone A.

The QCA in its 2012 Pricing Review recommended that SunWater should investigate the hydrological circumstances of the GBGA to confirm the current cost allocation or negotiate alternative arrangements with the irrigators.

SunWater's subsequent investigation confirmed that for the period 2006 - 2016, channel water diverted from the Haughton Balancing Storage comprised approximately 90% of the metered usage in Haughton Zone A. SunWater data indicates that during the 20 - year period 1998 – 2018, 95% of the metered usage was provided from the HBS.

The 2020 Pricing Review conducted by the QCA made a thorough investigation into concerns expressed by both GBGA customers and Channel customers about pricing arrangements in Haughton Zone A.

These investigations included the QCA appointing consultants Water Solutions to review SunWater's data on volumes of channel water released from the HBS and metered usage of Zone A-GBGA customers. Water Solutions found the data was of sufficient quality and that GBGA irrigators were receiving little contribution from un-supplemented sources and therefore there was not a strong case for differential pricing in the GBGA.

The QCA concluded that the current Water Plan and ROL do not recognise natural flows for the GBGA, and that the system is on average 95% supplemented, potentially reflecting a switch by GBGA customers from naturally replenished ground water to supplemented surface water.

The QCA analysis also indicated that if a separate charge for the GBGA was adopted it would include all the costs associated with the Giru and Val Bird Weirs and Haughton River infrastructure and not shared across the distribution system and would not result in lower charges for GBGA customers.

The QCA's final recommendation in the 2020 Review was that:

- (a) The GBGA be treated as part of the distribution system and that the same price apply across the Burdekin distribution system.
- (b) Annual real price increases are limited to \$2.38 per megalitre(2020-2021 dollars)
- (c) For the next review period, actual usage be compared to releases to the GBGA taking account of additional years of data.

The additional 5 years of data (2018 – 2023) referred to and now available indicate that on average the channel water releases from the HBS constituted 83% of GBGA annual usage during that period, which is well above the 51% required to justify the original GBGA tariff.

Year	Diversion at HBS ML*	Water Usage ML*	Diversion as % Use
2018-2019	29,000	31,229	92%
2019-2020	33,429	36,639	91%
2020-2021	24,420	28,031	87 %
2021-2022	27,249	31,542	86%
2022-2023	9,352	21,342	44%
<b>5 Year Average</b>	<b>24,690</b>	<b>29,756</b>	<b>83%</b>

\*SunWater Data