



Promoting Effective Sustainable  
Catchment Management

4 November, 2019

Flavio Menezes,  
Chair Queensland Competition Authority,  
GPO Box 2257 BRISBANE QLD 4001

Dear Mr Menezes,

RESPONSE SUBMISSION FOR CENTRAL BRISBANE WATER SUPPLY SCHEME

This submission is prepared by Mid- Brisbane River Irrigators (MBRI). This submission responds to the QCA's draft report in respect to the Central Brisbane River Water Supply Scheme and represents the position of MBRI in respect to the matters contained in section 6.4 of the "Draft report Rural Irrigation price review 2020-24, Part C: Seqwater".

Regards,

Tom Wilkinson,  
Chairman,  
Mid-Brisbane River Irrigators



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## SUMMARY

### Introduction

The MBRI accepts the pricing principle of paying for a service. The corollary to this is that where there is no service, there should be no fee.

### Information available to Make a Decision

SLR have confirmed that there is no definable service provided by the dams to the irrigators. While this proposition was rejected by Water Solutions in their report, the Water Solutions report focusses on sharing the costs of the assets.

As such the only available report to the QCA is the SLR Report which is conclusive in that there is no service. Accordingly the QCA is bound to determine that the irrigation water is excluded from the services provided by the dam.

In those circumstances while the Seqwater and irrigator assets are in the same system accessing yield from the system according to the water sharing rules, the irrigator take is not derived from the Seqwater works.

### Lawful Decision

There is no authority under the QCA Act to:

- Nominate a charge where there is no service
- Nominate a tax to be imposed
- Recommend to the State that a charge be authorised or tax should be imposed, separate to the licence fee payable under the *Water Act 2000*

Under normal pricing principles and in accordance with the QCA Act a charge cannot be made, because the nexus between the irrigator take and the Seqwater assets:

- Is that:
  - o they are in the same system
  - o irrigator take is confined by the urban demand through the system with:
    - irrigators being subject to Seqwater actions
  - o they are covered by the same water management regulatory scheme which;
    - requires Seqwater to meet the requirements of the take by water allocation holders
    - allows the State to limit the take of irrigators (directly – restriction or indirectly – lower Operating Level)
- Is not that they are dependent on the Seqwater infrastructure to access the yield (model level) or extract the water (instantaneous)

### Alternative End Points

The QCA had no basis for the 2013 Pricing Decision. It is clear that the HUF approach was flawed. Accordingly picking any number under the HUF approach was without base and without justification.

Water Solutions have confirmed that:

- the IQQM modelling by the State for the WRP preserved the status quo, namely that the pre dam and post dams modelling undertaken by the QWC at the development of Wivenhoe Dam is reflected in the IQQM model that underpins the WRP.

- even within the flawed approach there is no net benefit once detriment and benefit to irrigators is considered

Separate to this the Water Solutions report in its approach, tenor and assumptions:

- are inconsistent with the requirements of the Referral Notice
- demonstrates prejudice and bias
- canvasses issues that are clearly irrelevant

The Water Solutions report is also deeply flawed, in that it provided no substantive response to the pre-Dam and Post Dam assessment of service, but argues that the SLR report is a flawed approach to allocation of costs, based on apportionment of water allocation. It is superfluous for Seqwater or SLR to respond to Water Solutions report, where Water Solutions have chosen to direct their efforts to a different question.

## Conclusion

Accordingly the QCA only has one report that addresses the question of whether the infrastructure owned by Seqwater provides a service, namely the SLR Report. In those circumstances the QCA is required to accept the SLR Report submitted by Seqwater.

The only lawful conclusion is that irrigators do not receive a service and therefore are outside the charging regime for the system. While this might be uncomfortable for the QCA or not politically acceptable, these are not relevant considerations.

Any other decision would result on a “fee for no service” contrary to the only expert report that addresses the issue.

This would maintain the position that existed before the 2013 flawed decision and reflect the authority of the QCA.

## HISTORY OF WATER IN QUEENSLAND

### Who owns the water in a watercourse?

No one; – The right to control use and flow vests in the State section 4.1 Water Resources Act 1989 (and preceding Water Act 1926 and prior enactments) and the Water Act 2000 (Water Laws). Accordingly the water rights system is about access to water and not ownership. The corollary is that water is available at no charge, where works are authorised.

Over time the State has charged a licence fee as an administrative fee. The State was not empowered to charge for water where there was no service, as this would be a tax. This became most evident in underground aquifers, where the State was required to prove there was a benefit to bore licensees, from the releases from storage assets, before the State would charge the holder of the bore licence.

Accordingly there is nothing unusual in seeking evidence of benefit (or service) as a pre-requisite to recovering costs associated with the assets.

### How is water accessed?

Under the Water Laws, the State had the right to determine the manner of control (dam, weir, barrage) the manner of access (pump station, pump, diversion weir, bore) and the purpose (urban, industrial, irrigation, stock and domestic).

For the irrigators from the Brisbane and Stanley Rivers this was administered by the State on the basis of access (direct/indirect) to the watercourse. Under the water Resources Act, this was known as a Part 4 Licence.

For Brisbane City and other Local Governments, these entities were issued with authorities under Part 4, until the Wivenhoe Dam and Somerset Dams were transferred to SEQWater. At the time of transfer, Mt Crosby Weir and associated pumping works were retained by the Brisbane City Council and other assets retained by the relevant Local Authority in the system.

The dam assets were transferred to the SEQ Water Board.

Esk and Lowood local communities had their own pumping assets and were extracting their allowable water using these assets. These Councils also paid no charges to SEQ Water Board, as they were using their own assets to access the yield under their own water authorisations.

### What is the volume that can be taken?

By granting access to an entity for the purpose(s) and authorising the asset to be used to take water, under the Water Laws, a volume was specified. The volume represented the maximum take for an entity for the specified manner of access. In some cases this extraction rate may have been expressed by volume or by area, however at all times the limit was by the authorised works.

### Two System Solution – No State Works

In a non-SunWater system there was a different mode of operation, namely the State administered process where the volume allowed to be taken being the maximum volume, limited to the approved works and the limit on the rate of take for the approved works. This included the water available for stock and domestic purposes.

Historically the maximum take was formulaic based. Prior to the Water Act 2000 reforms, the maximum take was expressed as a ML and the rate of extraction for irrigation water tended to be limited by the approved pumping asset.

At this point the maximum take was associated with nominated works. In setting a maximum take, the State was obliged to consider the impact on other users. In other words, whether the next grant of a maximum volume to a new user would impact on the existing maximum take by all users.

Under this scenario it was the assets of those parties authorised to take, that recorded the available extraction of yield from the system. This was always less than the achievable extraction from the system, given that the system had not been developed.

### Two System Solution – State Works

Where the system was not part of State run system (now SunWater, was State Water Projects, Primary Industries Corporation, Irrigation and Water Supply Commissioner, etc), the system was administered by the State through the issuing of licences.

In a SunWater system prior to the Water Act 2000, this take was manifest in a number of ways in other systems, with:

- The maximum take expressed as a "nominal allocation" which conferred no right to take water in a water year
- The maximum volume expressed as an "announced allocation" which allowed the extraction of water up to the announced volume in a water year.

- The announced volume being allowed to be taken limited to the approved works and the limit on the rate of take for the approved works

### System Water

Water availability was understood at the historic performance level for the whole of the nominated system.

Overall annual water take was understood against the historic performance.

The understanding meant that a theoretical maximum take was set at system and subsystem levels.

The theoretical maximum take (based on historic performance) was referenced in determining whether the “next” right should be granted and the maximum take for that right, under that part of the Water Resources Act.

In a system where there was co-existing rights such as the Brisbane and Stanley River, each group had their rights and extraction rates set through the approvals process. The assets operated independently of each so far as yield was concerned,

Each group and entity within the group has access to the yield of the system. The capital cost of that access was the investment in infrastructure by the respective entity, with the State approving the maximum take per annum.

### What does the volume represent?

Under the Water Laws there was always a requirement, that for a new user, an assessment was made of the impact on the existing maximum take by all users. For all relevant systems in Queensland there was a theoretical assessment as what that total maximum take was from the system.

The maximum take from the system was always a function of the assets in the system. Where there was merely pumping equipment the likelihood of obtaining the maximum volume, across the year was part of the total maximum take from the system.

The addition of additional in stream assets into the system, was subject to the same assessment, on whether the new in stream asset would impact on the existing maximum take by all users. This was the assessment made for Somerset Dam and Mt Crosby Weir and the pumping assets of the relevant Local Governments and the irrigation users.

### The Decision to build Wivenhoe Dam

The decision by the State to build Wivenhoe Dam had a number of elements and a number of consequences. It is clear that Wivenhoe Dam (as well as Somerset Dam) were built for urban water purposes. Unlike the other dams in south east Queensland that were built for urban and for irrigator purposes. QCA can check the reports for the dams in SEQ such as Moogerah, Maroon, etc to confirm this.

So at this point the dams were built for wholly urban water demand. At this point in time the charging regime for the SEQ Water Board reflected the purpose and the beneficiaries of the infrastructure.

Irrigators on the Brisbane System and other in stream asset owners (Esk Shire) were “ring fenced” from the SEQ Water Board charges because the assets were not built for them and they were not of the urban customer.



Given the purpose of building the assets owned by Seqwater in this system is for urban water, compared with other Seqwater systems where the assets were built for urban and for irrigation, it is unclear on what basis QCA considers irrigators can be made to pay for services for assets that were not built to provide a service to irrigation users in the system.

#### Side Step of Water Laws for Asset Approval and Water Take

Given the Co-ordinator General controlled the construction, the Water Law was not relied upon. Accordingly, the statutory processes for approval and issuing an approval for the Dam were not required. Wivenhoe Dam was constructed specifically for urban users to access more water.

At this point all entities with assets in the system were using their own assets to access their maximum take.

Government undertook modelling at the time to assure the government of the maximum take available from the system, having regard to the existing users, the existing works, existing maximum volumes and the proposed operation of Wivenhoe and Somerset Dams.

#### Post issue of a maximum take to the new entity

After Wivenhoe Dam was constructed, the existing users in the system remained with their maximum take. Specifically the State did not set new conditions on the licence, change extraction rates, alter the access to the yield or change the maximum volume.

#### Converted from a No State Works System to a State Works System

A number of assets [Somerset Dam – BCC; Wivenhoe Dam – Co-ordinator General] in the current system were grouped together under a new entity and moved to a new entity that managed those assets. North Pine Dam was also “folded” into the new entity.

#### Transformation from co-existing model

The nature of Wivenhoe Dam was to dominate the flow of water at the model level, annual level, and instantaneous level. Under previous scenarios, such as low system flows or local freshes, water was extracted by parties in the system given the system hydraulics and hydrology.

#### Setting a maximum take

The need for the documentation of the authority to take remained, and this was addressed through separate legislative means. The new law that set up SEQ Water Board did a number of things, including:

- Fixing the maximum take for the system. The original arrangement allowed the new entity to take a maximum volume from both North Pine and Brisbane Systems. The specific provision then required the take from Brisbane System to be reduced on a one for one basis for water taken from the North Pine System.  
At this stage theoretically SEQ Water Board could have extracted 345,000 ML from Brisbane System, provided no water was taken from North Pine System.
- Allowing the other entities in the system to continue to divert water under their State issued authorities. This included Lowood and Esk Local Governments, Glamorgan Vale Water Supply Board and irrigators.
- Acknowledging that the State could continue to issue and administer water licences

### Recovery of costs of the State

While the State had funded the construction of Wivenhoe Dam, the new entity was allowed to recover the capital and operating costs from the user group that benefitted from the new arrangements. The new law:

- Set out the process that required the new entity to only recover its costs from nominated urban entities.
- As a consequence, excluded the remaining then current user groups from the costs and the charges of new entity

In summary the costs fell to the beneficiaries of the dams, with the non-beneficiaries were excluded from the costs. This recognised a number of issues including:

- The assets held by the new entity related to the extra volume from the yield of the system to be accessed for the nominated urban group
- The then current policy of assessing the next user for their “incremental impact” on the system and confining them to the benefit of the incremental impact

At this point, all users were co-existing on the basis that:

- The new entity was providing water services for a charge
- Pre-existing users restricted to accessing water using their approved works, up to their maximum take, including Brisbane City Council at Mount Crosby Weir
- The new entity operating exclusively under its enactment
- All other entities being administered by the State under the Water Resources Act

It is well known that Somerset Dam and Mount Crosby Weir were built by Brisbane City Council to access yield for urban purposes. Some of this take was made available to other local authorities and for industrial users. References can be provided if required.

It is also well known that Wivenhoe Dam was built for urban water supply. In summary, after Wivenhoe Dam was built:

- urban water costs were aligned to the Somerset and Wivenhoe Dams under the SEQ Water Board, for the nominated local governments
- other urban water costs borne by the respective local government that built their own assets (pump station, weirs [Mount Crosby], dams [Lake Manchester] etc), were not required to contribute to SEQ Water Board’s costs
- irrigators water costs were borne by the irrigator, based on the allowed works under the “water licence”, but no charges for any infrastructure built by other parties

At this point there is no basis for cost allocation of the Somerset and Wivenhoe Dams to the irrigators. This was confirmed in the structure of the SEQWater legislation.

Since that date there has been no new Seqwater infrastructure built in the system to benefit irrigators.

The QCA and their consultants have not identified any change in assets.

The QCA and their consultants have not identified any change in assets for the benefit of irrigator users.

The QCA and their consultants have not identified any change in assets in the system that have provided access to more yield for irrigators.

This will be the third time that the QCA has fundamentally failed in the requirement of the directive from the State. The bias and prejudice of the QCA remains unexplained.

Neither the QCA nor their consultants have provided any justification for the original position that the irrigators benefit from the regulated assets of Seqwater. (The QCA repeating past failures from the prior false and flawed assessments is not a basis for or reference point for the current review. MBRI has consistently and persistently made this point to the QCA and this has been consistently and persistently ignored (and not addressed) by the QCA and their consultants).

By the time of the restructure of water assets in South East Queensland, all irrigators had been issued with “water licences” and installed relevant works (expended costs) to access the yield set aside for irrigators from the system.

### How is yield assessed?

While the terminology and approach may have changed over time, the concepts have remained the same. The models used have altered over time, giving different numbers. The State has also chosen to alter the take under the relevant models.

Long periods of low flow have occurred, with Seqwater extractions lowering the storage levels over these extended periods. The State has exercised its rights under the Water Laws to prevent irrigators from accessing water.

None of this changes the cost of works paid by the irrigators for their access to the yield. In that context the concession by MBRI to the SLR Report, was despite irrigators having incurred their own costs for their own works.

However despite this the SLR Report demonstrated no benefit from the assets of Seqwater.

### How is yield determined?

The system has a yield, and various instruments are issued to allow parties to install works.

The model has a number of issues, which while not mentioned in the SLR Report are raised here for completeness. These are also raised here given the deficits in the Water Solutions Report. In particular while the Water Solution Report is based on a fundamental flaw in its approach, but even within its own approach the Water Solutions report is flawed.

Specifically at the lower volumes allocated to irrigators, the data, data recording and models break down to the point where they become unreliable. The following issues are relevant in reference to IQQM modelling and the use by relevant parties in developing models, specifically the model limits include:

- accuracy of historical ratings cannot be guaranteed
- it is generally not feasible to try and reconstruct historical conditions to confirm or derive historical ratings
- variation is usually greatest in the lower gauge range
- model calibration is dependent upon rainfall records and assumed losses, which are rarely of sufficient quality to exactly match records
- interchange between water tables and stream flow levels

- the influence and uncertainty of rainfall records and assumed losses have the greatest effect for small flows

Accordingly, Water Solutions, when engaged on determining allocation between irrigators and non-irrigators are dealing with access to water in the system at an instantaneous basis. At the lower flow levels, it is likely that the small volumes to be extracted by irrigators (determined by their authorised works – pump size) will not be represented.

In addition at these low flow levels under current asset configuration and current water operating rules, means that any perceived benefit will be lost. Specifically:

- the decision by the State to impose a lower Operating Level for Wivenhoe Dam has reduced the volume that can be accessed over time. In other words this will result in a lower dam volume, artificially lowering the annual allocation in the current and future years. This will also bring forward a State intervention (as set out in the next paragraph)
- the ability to impose water restrictions at the lower water storage level, means that the WASO's supposedly allocated to irrigation, will be illusory. In other words the IQQM modelling of the "entitlements" will not be near accurate, whether under normal conditions or as accelerated by the reduced Operating Level

### How is yield allocated?

The yield was allocated when SEQ Water Board was established based on an assessment made by the State at that time. That allocation was made law with provision for water users and for the environment (SEQ Water Board Act 1979).

While the allocation at that time was based on modelling and understanding at that time, the allocation between irrigators and their assets and non-irrigators and their assets was quite clear. This is reflected in the listed allocations of Local Governments, Water Boards and irrigators and those that were set as no charge.

The only change since then has been the transfer of some Local Government assets (in stream and off stream) to SEQWater with the consequential change on costs and charges.

### QCA Approach

Throughout all discussion with the QCA and with all material published by QCA and their consultants, the starting point is apportioning costs amongst all users in the system, rather than all parties for whom the assets were built and/or for all parties that are served by those assets.

This flawed approach assumes that the yield is derived from the assets.

The Water Solutions report does not provide a strong contender to link irrigation use water allocation requiring the dams to be in the system. At best the Water Solutions report focuses on a "swings and roundabout" during the operation of the dams. ie: based on the operating arrangements and system rules for urban demand, irrigators receive a somewhat indiscernible benefit across the year. This issue will be dealt with when the discussing the Water Solutions Report in detail.

### 2013 Decision

The yield is from the system, with the user's assets giving access to the yield. In this way the QCA side stepped the requirements of the direction the Ministers' Referral Notice published on 6 January 2012 under Section 23 the QCA Act.

“1.5 The Authority is to have regard to the level of service provided by Seqwater to its customers of the water supply scheme, including for capital expenditure on existing assets or for the construction of new assets.”

In the original decision 2013, the QCA identified that the HUF approach and the Seqwater calculation did not make sense. Having come to this conclusion, rather than seek a proper modelling solution that was as directed by the State, the QCA chose a number, along the scale of the HUF calculation.

There were three numbers in the original QCA review:

- 69% - Parsons Brinkerhoff
- 2.1% - Parson Brinkerhoff
- 1.6% - QCA – it is noted that there was no report ever published by the QCA to justify this number. While it is acknowledged that the QCA attempted to address the obvious deficits with the SunWater HUF, the QCA approach was flawed.

While the QCA may have been well intentioned in an attempt to make some concession to the irrigators, the consequences are:

- the decision to use the number 1.6%, was without base
- the QCA has admitted that the proposed approach by Seqwater was not correct
- that in effect the QCA had no real basis to form a view that there was a benefit or what that benefit was

Should the QCA assessment be in error, MBRI request that the QCA make public its rationale and the supporting expert opinion that was relied upon by the QCA in making the 2013 recommendation.

The approach by the QCA has become deeply problematic as:

- it has anchored people with a view that there must be a charge, when this is not correct
- set a number that people will be disinclined to vary too much from, hence why Water Solutions has moved from 1.6% to 1.12%
- people might consider that a reduction by 0.48% is good, when the answer is 0.00%
- the reality is any charge is beyond the service provided

## Current Assessment

The QCA also seems intent on ignoring this past flaw and seeks to ignore the current requirements under the Referral and Direction Notice of 29 October 2018.

A (1.2) The monopoly business activities are:

- the bulk water storage and water distribution undertaken by SunWater; and
- the bulk water supply undertaken by Seqwater, to the extent those activities are: undertaken for an irrigation service as defined in the Water Act 2001;  
**irrigation service** means the supply of water or drainage services for irrigation of crops or pastures for commercial gain.

C (1.5) Where the Authority considers that it has been demonstrated that customers have agreed to the costs and/or prices proposed by the businesses and the Authority considers that the proposed prices are in line with the requirements of this Notice, the Authority must have regard to these agreements in recommending appropriate prices.”

Even though the approach is flawed, even within this flawed approach, this approach of the QCA process is flawed.

The QCA has received numerous reports and advice on allocation of costs against “water allocations” in the system. Curiously the QCA and their various consultants have provided a range of “charging” numbers, for the split between irrigator and non-irrigator water. Given the diversity of the approaches, none seem to provide a meaningful number

There is no basis for the 2013 QCA decision and no authority vested in the QCA to make arbitrary decisions under the QCA Act. In the absence of publishing this independent material it is clear that the QCA ignored its own requirements. In the absence of access to a report (if any) the MBRI consider that the QCA has just “made it up”. The use of a made up number (unsupported by a consultant’s report) as the basis for current and future pricing raises a number of issues with the QCA, including:

- 1.6% is not a valid starting point for this review
- why 1.6% was chosen, given the obvious issue with the values being returned. These issues should have led to a fundamental reappraisal of the QCA and Seqwater approach
- there being no valid assessment of the level of service made at the time

There are different numbers in the Water Solutions Report:

- five times better performance
- 3x better performance
- Substantial margin
- 1.12%

The Water Solutions report is an interesting attempt, but fails on a number of issues. Primarily the issues raised are within the operation of the system and assuming the irrigation allocation derives a benefit from the assets and are:

- Based on a myopic view,
- Full of personal views that are unsubstantiated,
- Contains assumptions that are not supported by the material provided,
- On the margins and within the variability of the system and the margin for error within the modelling and the data used in the model

Unfortunately Water Solutions failed to mention any of the limits to the data, the modelling and the results. Accordingly a reader of the Water Solutions report might be mistaken into the belief that it is an accurate representation of the present or future.

Any of these reports can only be based on historic information and therefore only guide past performance. Any assessment is on how the system may have worked in the past. The lack of identification of the issue mentioned, means that all of the data, graphs and commentary are subject to margins for error, subjective assessment and interpretation.

### SunWater Approach

This first misstep was using the SunWater approach, despite no SunWater system being configured like the Brisbane System, including:

- dominance of urban water by volume over irrigation water by volume, and the consequences for annual extraction and hypersensitivity, when dealing with the upper end values.

- difference in water sharing rules.
- different announced allocation rule (albeit an announced allocation rule that met the Water Resource Plan requirements and IQQM WASO and EFO requirements)

Other distinguishing issues in the system include

- the limits of permitted irrigator infrastructure limiting the instantaneous rate of take
- the dominance of WEFOs being met by the system below Wivenhoe (Lockyer, Bremmer, Oxley systems)
- the capacity of the State to intervene on behalf of urban water users, in ways that impact on water available to irrigators, including:
  - o reduced Operating Level
  - o State powers under the Water Act
  - o the strategic reserve of 10,000 ML

Water Solutions references some of the issues, without expressing an understanding on how that might affect the outcome. Certainly, when presenting the outputs in their report, Water Solutions do not connect the limitations to those outputs.

### Seqwater Approach

As indicated elsewhere, in the interests of resolving the central question of whether the water to be extracted by irrigators under their water allocation is a service derived from the assets built by Seqwater's predecessor, MBRI allowed Seqwater and SLR to proceed to investigate the issue.

While we appreciated the efforts of Seqwater to address our concerns, MBRI also had to compromise on the approach of the SLR report. MBRI considers that MBRI has been more than fair and reasonable by conceding a range of issues to Seqwater and SLR to enable a report to be prepared.

MBRI remains of the view that those concessions allowed Seqwater to develop the "most favourable" outcome to Seqwater. In other words, there were a number of factors and concerns that would provide stronger evidence that irrigators do not derive a benefit.

Even with those concessions, the SLR report concluded that Seqwater assets did not provide a benefit.

Accordingly, MBRI considers that had those concessions not been granted that the SLR report would have shown that irrigators in fact were worse off. Curiously the Water Solutions report confirms the views of MBRI that irrigators under some conditions are worse off, even within the "shared costs" model.

### Model Deficits

As indicated previously there are a number of issues with the modelling. This has a number of implications for whether the model can be relied upon or provides a useful outcome to support the Water Solutions observations. In addition the model and the use of the model by Water Solutions :

- does not consider the capacity of the State to intervene on behalf of urban water users, in ways that impact on water available to irrigators, including:
  - o reduced operating level
  - o State powers under the Water Act
  - o the strategic reserve of 10,000 ML

- does not exclude stock and domestic water and other water not in use for irrigation purposes, as required by the Referral Notice.

### Water Solutions Approach

This response will deal with the various numbers and propositions raised by Water Solutions. The bizarre aspect to the Water Solutions report, is the numerous attempts to arrive at reliable answer, based on unsatisfactory data. However, the QCA are still confident that they have identified a number that is relevant and included in the draft Report.

To assume or to feel something is not a basis for meeting the requirement that a fee can be charged for a non- service. It is not the basis for water charges and has been shown to fail the “pub” test for banking charges without service.

### Water Solutions - Commentary

The starting point for this consultant whether as part of their own volition or at the request of QCA is a HUF. So the starting point is not Yield Access but Headworks Access.

As indicated previously at all times the access to yield provided by the respective assets rested with the respective parties. This was the case before Wivenhoe Dam was built, after Wivenhoe Dam was built and after the reforms to water supply in South East Queensland.

The changes to modelling and system outcomes are choices of the State not of the irrigators. Should the State have been more conservative on urban water allocations, then under the flawed Water Solutions approach, the outcome would have shown a benefit. Similarly had the State been prepared to accept a greater annual take for urban water use, then the Water Solutions outcome would have shown a detriment.

Accordingly the reason why the Water Solutions approach is flawed, is because the report is extracting from the WRP and IQQM the decisions of the State on WASO for urban use and system EFOs requirements.

The reason why the irrigator reliability is so high, is a direct function of the State decision on number of water allocations issued for urban and the desired WASO. All that Water Solutions have done is peer reviewed the Department’s IQQM modelling underpinning the WRP and come to the view that the Department’s modelling of the system was accurate.

No QCA or QCA consultant has been able to articulate what asset change has occurred in the system that has or was designed to benefit irrigators, or provides a benefit that irrigators did not already have before the assets were built.

While the QCA might point to the ending of the law that precluded Seqwater from charging irrigation users for water, this did not change the underlying pricing principles requiring there to be a benefit or service provided by those assets. This having been recognised in the preceding pricing structure for water allocation holders in the system.

Accordingly the Water Solutions report is based on a false premise, namely:

“The second of the three tasks in this project is to provide advice related to the appropriate HUF to apply to irrigators (medium priority WAE) in the Central Brisbane River WSS.”.

Specifically Water Solutions stated their task as:



“Advice was requested on whether or not the conclusions from this study provide an appropriate means of comparing benefit of the water storage assets between high and medium priority water allocation entitlements (WAE) in this scheme and, if not, recommendations for an alternative suitable methodology.”

On that basis the QCA has another report that does not answer the question of whether Seqwater can charge a fee for no service. QCA have obtained another report that sets out sharing between water allocation holder in the system, based on water infrastructure of Seqwater, rather than based on the accessible yield in the system relevant to the assets.

Of course if you assume the water allocations in a system are derived from infrastructure in the system, you will find a benefit derived from those assets.

If you ask the question, is the water set aside for irrigation dependent on the infrastructure, in the Brisbane System the answer is “no”.

### Permissible QCA recommendation

Under normal conditions the QCA only has one report that addresses the issue, namely the SLR report. On that basis the QCA is bound to accept the recommendation of the ONLY report that deals with the issue, namely SLR and the finding that there was no discernible benefit.

In addition it is not for the MBRI to prove a proposition, when SLR have already provided the relevant information and recommendation. Given the Water Solutions report answers a different and irrelevant question it would seem to be excluded from the consideration by the QCA.

The alternative would be for the QCA to just “make up” another number and thereby direct Seqwater to charge a fee to irrigators for no service.

While the temptation is to assume that if there are instream assets everyone must benefit from the assets, this is not the case for water. Starting from this assumption confuses how yield is accessed with how other economic concepts such as access regimes.

### 3.1 Introduction

Unfortunately even within the flawed premise, the consultant has operated under a number of flawed premises. These will be dealt with below using the same headings used by the consultant.

As pointed out in the report, “Seqwater’s submission is that the MP HUF for this scheme is effectively 0%.”. As indicated previously the formation of this view by Seqwater is based on Seqwater adopting the most favourable parameters and tolerances for Seqwater’s modelling and assessment. I.e: MBRI has participated in the report and was aware that MBRI made numerous express and implied concessions in favour of Seqwater. The modelling still shows “effectively 0%”. From MBRI perspective at the model level, given the concession, MBRI is actually worse off.

From an operational basis and given decisions by the State, MBRI are in a worse condition with the Seqwater assets in the system.

### 3.2 Appropriateness of the Scenarios as a Basis for Assessing Relative Benefits

Paragraph 1 – lists a number of issues inconsistent with the concept of “grossed up” numbers used in modelling

Paragraph 2 – Acknowledges that HUF did not work for Brisbane Scheme, however that did not stop the QCA and the consultant being anchored by the HUF. It seems rather perverse that, given the HUF answer did not make sense, the QCA used the HUF as a reference point.

As indicated Brisbane System is very different for a range of reasons, however despite this QCA and their consultants have pushed on. It is unclear how much of a “warning of irrelevance” was required at this stage for the QCA and their consultants that accepted statewide approaches did not work in Brisbane System.

In addition SLR accepted that the HUF calculation did not work and looked for reasons why it did not make sense. What SLR decided was that HUF was predicated on their being a benefit from the assets in the system. In the rest of the State, the predominance of irrigation water demand from the systems, would seem more suitable.

Given the preponderance of evidence that HUF was not working, SLR was able to consider what might be the reason why the models and HUF calculations were providing illogical responses. In that context is reasonable to ask would irrigation water users be able to access their yield under two scenarios – with no assets and with assets.

Can the QCA prove that irrigation users receive a benefit from the system that they would not already have?

In particular why Water Solutions decided to shift between:

- model scale
- model scale on past tense
- temporal time scales of shorter periods
- current instantaneous rates
- past instantaneous rates
- future tense (WASOs and EFOs) (and non-binding performance targets)

This inability to stay in the correct “tense” undermine much of the observations, including the anecdotal or assumed practices.

### 3.2.1 Historical Conditions

Water allocations are the package modelled by the IQQM and documented in the WRP at the relevant point in time. This modelled and documented state of the system was made into law. It is highly appropriate to use the IQQM that was used to model the water allocations at the time of conversion of the system. Further the presentation of the modelling data as predevelopment and post development is common practice. After all that is how WASOs and EFOs are derived.

Paragraph 3 – diversion authority. Under the SLR model, the use of the highest extraction number is in favour of Seqwater. The rest of this paragraph is better described as “filler”. “the WAE are now volume based, separated from land, and able to be traded to other users under the rules presented in the Moreton Water Management Protocol” are irrelevant to the question being put. Inclusion of this material shows bias on the part of Water Solutions, as the decisions by the State in the development of the WRP are neutral to the answer.

Paragraph 4 seeks to confuse benefit from the system under the modelling (SLR); to a “point in time benefit” between specific years. Inclusion of this material shows bias on the part of Water Solutions.

Paragraph 5 seeks to confuse the yield that can be accessed from the system, given the range of assets from the system; with the assets that might be built in the system. Inclusion of this material shows bias on the part of Water Solutions.

Paragraph 6 – Water Solutions is now grasping at straws. Focussing on year to year, the Water Solutions approach has attempted to describe the issue as requiring SLR to prove for every year there was a benefit. It is unclear why Water Solutions has elected to ignore IQQM modelling that is used to set Operating Rules as not being relevant to determine whether irrigators would have been able to access their water.

Specifically what SLR did was (to the benefit of Seqwater) assume maximum take of all water entitlements in all water years. Based on that maximum water take by urban water users, would there be any difference to irrigator maximum take. The firm answer was no improved take.

The statement “So it is clear that the case in the Central Brisbane Benefits Study is not an accurate representation of historical conditions.” Is not an answer to the questions. This basis for rejecting the SLR model shows bias on the part of Water Solutions.

The Water Solutions report is also “not an accurate representation of historical conditions”, so that Water Solutions report has not advanced the question.

The Water Solutions report does nothing to counter the superiority of the approach of SLR. The remainder of the Water Solutions commentary and observations are merely a peer review of the development of the IQQM. Given how good the Department is in developing the IQQM, it is no surprise that the peer review by Water Solutions confirms the quality of the Department’s work.

Unfortunately, if the Water Solutions report is answering a different question, then that is of no relevance to the threshold question of whether the dams provide a service.

### 3.2.2 Environmental Release Rules to Meet EFOs

The Water Resource Plan is the current water allocation and includes the WASOs and EFOs based on the current water allocations, to preserve those rights against erosion by future water allocations. For the Brisbane System, this includes the strategic reserve.

In other words WASOs and EFOs and the water allocations are the package modelled by the IQQM and documented in the WRP at the relevant point in time. This modelled and documented state of the system was made into law. Any future allocation had to be assessed against how the existing water rights were impacted (WASOs) and environment was impacted (EFOs).

So inherent in the modelling is that WASOs and EFOs are maintained in the system because that is how the Department does this work.

Accordingly, the information under this heading from Water Solutions is baseless. This spurious argument does not invalidate the work of SLR.

### 3.2.3 Water for Other Users and Their Performance (WASOs)

Please see commentary in the previous heading.

Accordingly, the information under this heading from Water Solutions is baseless, and does not invalidate the work of SLR.

What SLR have confirmed is that the modelling undertaken when Wivenhoe was built, namely that the Dams provided no service and therefore there should be no service charge payable by the parties named in the relevant law, including irrigators and Glamorganvale Water Board.

The status quo has not changed since the modelling undertaken for Wivenhoe and the modelling undertaken for the WRP.

### 3.2.4 Use of Ponds

Once again Water Solutions have slipped into the present, whereas the issue in conjecture is about the inability of gauging stations to measure low flow to accurately report what was happening to allow incorporation into the model.

If Water Solutions want out was has changed, they also mark out how the low flows and freshes that would have been available to irrigators would be blocked by the Dams. This and other issues at the operating level (in year, or to instantaneous time spans) are nonsensical considerations, as they relate to operating rules (system or infrastructure) which are highly variable and incapable of measurement and/or have no reliable data.

In other words it is just spurious conjecture to deflect away from the primary issue of service.

The statement of EFOs is also flawed given how the system works, the intervention by the State in preventing extractions at this time under the current laws and the actual system performance.

Accordingly the information under this heading from Water Solutions is baseless and does not invalidate the work of SLR.

### 3.2.5 Rain on Irrigated Areas

Once again Water Solutions have slipped into the present, but let's stay there for the moment. Given the performance of the system at these low flows, the water will generally be available. Given the volumes (at daily rates, capped at the maximum instantaneous limits from the approved works), this argument is irrelevant and within the margin for error across the model period all the way through to a particular day of extraction.

This paragraph also confuses how the model works;

- taking water, even during rainfall is in favour of Seqwater
- at the low flow instantaneous extraction levels (due to limits on irrigator works) the objections are illusory when compared with the low flow of water / water interchange with water mounded adjacent to the watercourse

In particular the observation "The large volume in storage allows this to occur, and the water balance over the year is reasonably reflected in the model. However in the unregulated case the lack of large dam storage means that there are no extended periods of flow from the dam in dry periods, from which the irrigation node can make up for the error in taking flow during high rainfall periods." Is highly presumptuous and shows bias on the part of Water Solutions.

This also ignores the actual actions by irrigators to install on farm works to hold water (dams) to balance extraction and, demand for their own needs.

Given the low daily rate of maximum extraction governed by the approved works of irrigators, it is highly certain that there will be accessible water flows to meet irrigator demands at the maximum instantaneous limits. There is a lack of appreciation by Water Solutions, of the actual operation of the system and farming is clear

The ignorance of the system does not justify dismissing the valid approach of SLR.

### 3.2.6 Flexibility of Extractions

Once again Water Solutions have slipped into the present. Given the commentary on WASOs and EFOs, system performance and system dynamics, the argument by Water Solutions for an alleged marginal benefit is unsustainable. Given the low daily rate of maximum extraction governed by the

approved works of irrigators, it is highly certain that there will be accessible water flows to meet irrigator demands, with or without rainfall in the local area.

The difficulty is that the gauging stations and gauging station data is unlikely to show the relevant flows at this level. Water Solutions would be well aware of the limitations of the in stream data and the disconnect with rainfall at low flows and water interchange in and out of the banks of the watercourse.

It is unclear why Water Solutions were unable to provide a “rounded” view of how the “present” actually works.

The ignorance of the system does not justify dismissing the valid approach of SLR.

### 3.3 Comprehensiveness of Presented Output Statistics

The following is based on a confused understanding of Water Resource Plan and its documentation of water entitlements.

The Water Resource (Moreton) Plan 2007, Explanatory Notes at page 13.

“the allocation framework has been developed in recognition of full utilisation of existing water entitlements and provision of additional allocation to meet future water needs. Any provision of water outside this framework could potentially affect the strategic reserve, existing water users or environmental flows.”

The balance of this heading from the Water Solutions report can be ignored except for Figure 8.4. The choice of deviation of ~1% given the relevant gradient of the curve will always give the desired answer.

The use of the phrase “Dams and weirs do not create water, they create security.” Is flawed and incorrect.

Dams and weirs and irrigator pumps create access to yield. The operation of the storage in a system allows water to be made available in a number of context, including:

- instantaneous (available at a point of extraction)
- released to be stored at a point of extraction for current/future extraction
- retained for future water release at controlled rates:
  - o in the short term
  - o in the next 24 hours
  - o across the remainder of the water year
  - o for future water years

The WRP formalised past water allocation processes to preserve existing entitlements. The WRP documented what was the appropriate volumes for Seqwater for multi-year extraction, while preserving the allocation for irrigators and other system users.

Accordingly errors or variations in the modelling is not a “benefit” from the assets, but more reflective of the nature of the water planning process, including:

- data quality
- modelling limits
- operating assumptions

Trying to upgrade these decisions to a “benefit” demonstrates a determined effort to assert some sort of benefit, rather than understand the system.

Many of the issues being raised relate to the decisions of the modeller and decision makers, where the adjustments were made in the calibration and the setting of WASO and EFOs. Water Solutions identifying this is merely a commentary on the whether the Department made sufficient allowance for the relevant water entitlements, WASOs and EFOs and other requirements in the system

#### Errors with the interpretation of Figure 8.4

Figure 8.4 has a number of issues including:

- Assumed sensitivity artificially inflates any perceived benefit
- Data values are not correct given limits of the model (data, sub system, models, etc)
- Data values and outputs exclude strategic reserve, that would be interposed between current urban demand and irrigator demand
- The reduced RL means that the starting level and flows need to be reduced. Accordingly to be relevant, the orange curve would need to be shifted to the left /up. Further undermining the case for benefit as proposed by Water Solutions.
- On an adjusted basis it is likely that the restrictions will be introduced earlier for MP
- 3,000 to 4,000 zone (approx.) [0-5 %] is mis-labelled as “no benefit”, when in fact it is a “detriment”. Specifically contrary to past observation by Water Solutions, at the time when irrigator might need the water, they would be precluded from accessing the water. Based on the point above, the “detriment” is likely to be [0-15%]

Given the above observation, the Figure 8.4:

- Inappropriately discounts the loss of benefit to irrigators at lower levels
- Is overly optimistic on benefit in the zone 5,000-5,500 zone (approx.) [5-20 %]. Based on the point above, the “detriment” is likely to be [15-20%]
- Fails to consider the “net effect” (adding detriment and benefit values), which in simplistic terms is around zero. If there was weighting of importance of those values, then the net affect would be that irrigators were worse off because when needed water they get no water or less water.

Given this is obvious in the Figure and in the commentary, the observations and “opinion” is not of relevance.

#### 3.3.7 Predictability and Rate of Change AND 3.3.8 Flood Mitigation

It is interesting that the Water Solutions has roped in a community benefit into the water allocation pricing. This whole segment is wholly outside the QCA’s authority given the referral notice. The QCA and Water Solutions should have excluded the matter from the Water Solutions report.

The inclusion by Water Solutions and the publication by the QCA shows a bias.

For this argument to have any semblance of relevance the consultants would have to identify the other thousands of beneficiaries from the flood mitigation works. All of these non-water entitlement holders who also benefit, would have to pay for the “benefit” of flood mitigation- whether the individual lives in an urban or rural setting.

In addition given how many of the irrigators are on town water, these urban water users would be paying for “flood mitigation” twice.

Based on this logic there would be:

- Non urban water users who benefit without paying, as they are not irrigators
- Urban and Irrigator users who pay twice

Given the evidence in the Commission of inquiry, the ability of the State to flood the lands with impunity, the argument is hollow. It is insulting and inappropriate that this issue should be considered relevant and shows bias on the part of the Consultant and the QCA.

More significantly, given the wording of the Seqwater water contracts and past experience, how would Water Solutions propose to resolve Seqwater paying direct compensation and undertaking rectification, when they get this wrong. Because to date Seqwater has refused to do this.

### 3.4 An Improved Approach

Given that the SLR Report and Water Solutions Report deal with two different issues, is it reasonable for Water Solutions to assert their approach is better? It is like winning a game when there is no opposition on the field, because you are playing a different sport, under different rules, with different scoring system and measure of success, at a different location at a different time.

It is not an improved approach when compared to SLR. It might be an improved approach when compared to the 2013 determination model.

The commentary below is provided for completeness, however given that Water Solution have not addressed the requirement and critiqued the SLR report based on a flawed premise, it is seen as of limited value. This observation applies across 3.4.1 – 3.4.4

It is not clear how making up the number 1.6% means that “..the method used in the 2013 QCA review is considered better than that presented in the Central Brisbane Benefits Study.”.

Referencing 1.6% does not validate that number or any Water Solutions number. Inclusion of much of this material shows bias on the part of Water Solutions.

#### 3.4.1 Previous Approaches

MBRI restates its observations of the 2013 QCA approach

#### 3.4.2 Modified HUF Approach

The two highlighted phrases from the first two paragraphs cannot be reconciled

The QCA have accepted that the HUF approach is an appropriate method to inform the price review, and it has been used in the other schemes examined in this review. It is thus considered that an approach that essentially applies the same “storage volume apportionment to priority groups” is appropriate for the Central Brisbane.

To do this effectively it is necessary to analyse why the standard HUF approach did not work for the Brisbane Scheme.

MBRI restates its observations of the 2013 QCA approach and the derivation of 1.6%

The numbers under the heading MP and HP WAE, are not correct. 7,194 needs to be discounted to match up with the QAC referral notice which is limited to irrigation.

Here also Water Solutions has confused itself. In a “drought”, the watercourse still has flows from upstream freshes that would meet the demand of irrigators having regard to the limits on their instantaneous extractions.

In addition using the phrase “drought” is misleading. While there was reduced water flows into the system, there was also higher water take for urban purposes. The “more rapid decline” in storage levels as an operating decision in the “present” is not a basis for asserting a benefit. In particular irrigator’s rights of extraction were curtailed by the State.

Accordingly if there was a basis for comparing the competing users in the system (which is not accepted), the value 1.12% would be significantly less.

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### 3.4.3 Benchmarking of the Central Brisbane HUF

There are numerous erroneous assumptions here that skew the work in favour of the presumptions by Water Solutions. Given the highly conservative nature of the decisions on the number of urban water allocations, none of the information is surprising, although irrelevant, given Water Solutions is comparing the system based on competing users.

The approach remains flawed and no “benchmarking” can fixed the flawed approach.

We understand this approach is not accepted by SLR.

### 3.4.4 MP1F Factor

We understand this approach is not accepted by SLR.

### 3.4.5 Recommendation

Not accepted given the report is predicated on answering the wrong questions