

Draft Report

SEQ Price Monitoring for 2013-15 Part B - Redland Water

January 2014

The QCA wishes to acknowledge the contribution of the following staff to this report:

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This report is a draft only and is subject to revision. Public involvement is an important element of the decision-making processes of the Queensland Competition Authority (QCA). Therefore submissions are invited from interested parties. The QCA will take account of all submissions received.

Written submissions should be sent to the address below. While the QCA does not necessarily require submissions in any particular format, it would be appreciated if two printed copies are provided together with an electronic version on disk (Microsoft Word format) or by e-mail. Submissions, comments or inquiries regarding this paper should be directed to:

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The closing date for submissions is 28 February 2014.

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1 INTRODUCTION

1.1 Background

This is the fourth price monitoring review of monopoly distribution and retail water and sewerage activities in south-east Queensland (SEQ) by the Queensland Competition Authority (QCA).

1.2 Ministerial Direction

Under the Ministerial Direction (**Appendix A**), the QCA must investigate the monopoly distribution and retail water and sewerage activities of Unitywater, Queensland Urban Utilities, Logan City Council, Redland City Council and Gold Coast City Council for the period 1 July 2013 to 30 June 2015. In doing so, the QCA must:

- (a) monitor the change in prices of distribution and retail water and sewerage services for residential and non-residential customers
- (b) monitor water and sewerage revenues against the maximum allowable revenue (MAR) based on the total prudent and efficient costs of carrying on the activity
- (c) advise a benchmark Weighted Average Cost of Capital (WACC) and monitor the WACCs applied by the entities against the benchmark WACC
- (d) provide information to customers about the costs and other factors underlying the provisions of water and sewerage services including distinguishing between bulk and distribution/retail costs.

1.3 Scope of review

There are some changes in the scope of the review compared to previous years, arising from the Ministerial Direction. In contrast with previous reviews, there is a two year review period of 2013-15 (instead of one year), there is no legislated Consumer Price Index (CPI) cap which requires separate reporting against capped and non-capped services (as in 2011-12 and 2012-13), and there is a specific requirement to sample six capital expenditure items per entity and review policies and procedures.

Further, the water businesses of Logan City Council, Redland City Council and Gold Coast City Council are now included in the review (these were excluded in 2012-13, following their de-amalgamation from Allconnex Water on 1 July 2012).

A key focus of the review remains the prudence and efficiency of costs (the MAR) and whether there is evidence of an exercise of market power in comparing revenues and MARs. The QCA's benchmark WACC is used to calculate the MAR. The provision of information to customers about costs also continues from previous years.

1.4 Structure of report

This report is one of five entity-specific reports that form Part B. An overview of the price monitoring review and the key findings for all entities forms Part A.

The structure of each Part B report largely follows that of the Direction. Information on prices and bills (chapter 2) and demand (chapter 3) are followed by a review of capital and operating

costs (chapters 4 and 5) which form the MAR (chapter 6). A comparison of revenues and MARs (chapter 7) informs whether there is evidence of an exercise of market power. Data on costs, revenues and prices is summarised (chapter 8) followed by key findings (chapter 9).

1.5 Redland Water's water and sewerage services

Background

In the QCA's first two price monitoring reviews of monopoly distribution and retail water and sewerage activities in SEQ, Redland City Council's water and sewerage functions were undertaken by Allconnex. As with Unitywater and QUU, Allconnex commenced operation as a distributor-retailer on 1 July 2010.

In April 2011, the State Government announced that SEQ councils wishing to return to their previous structure would be able to do that, and those that wish to retain the distributor-retailer entities could also do so.¹

Subsequently, Gold Coast City Council voted to leave Allconnex and manage its own distribution and retail services. This meant Allconnex was no longer viable for Redland and Logan City Councils, which also voted to withdraw in August 2011.²

The *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009* (Qld) (DR Act) provides that the Gold Coast, Logan and Redland City Councils' water and sewerage businesses be established as commercial business units (CBUs) under the *Local Government Act 2009* (Qld) (LGA).³ As per the *Local Government Regulation 2012* (Qld) (LGR), CBUs conduct business in accordance with the 'key principles of commercialisation'.⁴ Briefly, these include clarity of objectives, management autonomy and authority, accountability for performance, and competitive neutrality.⁵

The LGR imposes specific financial planning and accountability obligations on local governments,⁶ of which some are directly relevant to Redland Water. For example:

- (a) Redland City Council's budget for each financial year must include financial statements (including balance sheet, cash flow, and income and expenditure) for the budget year and the next two financial years. The statement of income and expenditure must include the estimated costs of the activities of the council's CBUs⁷
- (b) Redland City Council must prepare an annual operational plan (AOP) for each financial year. The AOP must include, among other things, an annual performance plan (APP) for each CBU of the local government⁸
- (c) Redland City Council's annual report for a financial year must contain an annual operations report (AOR) for each CBU.⁹

¹ The Hon Anna Bligh, Premier and Minister for Reconstruction, Media release 7 April 2011 'Premier says enough is enough - water blame game ends'.

² Redland City Council, 'SEQ water reform' (<http://www.redland.qld.gov.au>).

³ DR Act, s 92AJ.

⁴ LGR, ss 27-28.

⁵ LGR, s 28.

⁶ LGR, ch 5.

⁷ LGR, s 169.

⁸ LGR, ss 174-175.

⁹ LGR, s 190(1)(c).

Redland Water's services

Redland Water recommenced operations as Redland City Council's water and sewerage CBU on 1 July 2012. Its primary functions are to provide its customers with safe, reliable and high quality water services, as well as to collect and treat wastewater. Redland Water is also responsible for charging customers for water and wastewater services.

Redland Water's core products and services include:

- (a) drinking water supply to around 60,000 properties via a network of reservoirs, pump stations and mains
- (b) recycled water supply from the Cleveland, Capalaba and Victoria Point Sewage Treatment Plants (STPs)
- (c) wastewater collection and treatment from almost 50,000 properties via a network of pump stations and mains
- (d) trade waste management.¹⁰

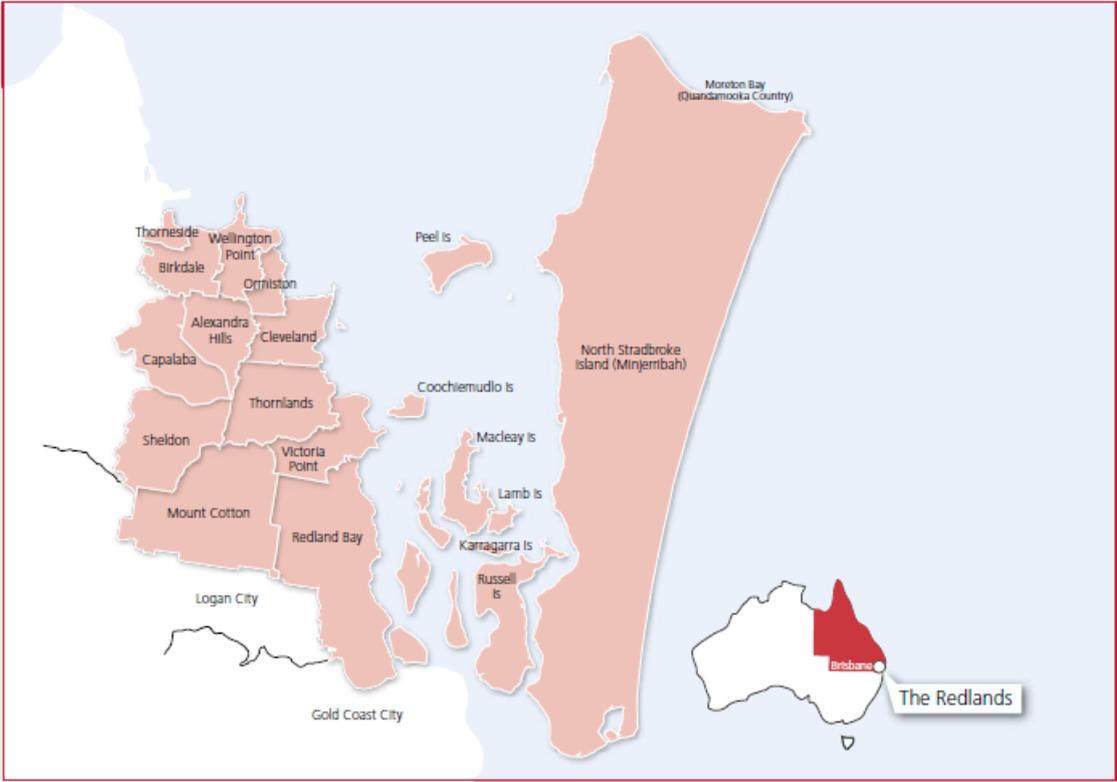
Table 1 Redland Water Service and Asset Base

	<i>Total</i>
Population	145,336 ^(a)
Residential Water Connections	58,182 ^(b)
Non-residential water connections	1,594 ^(b)
Water reservoirs	6
Water supply network (km)	1,250
Sewerage network (km)	1,145
Sewage treatment plants	7

Note: (a) RCC Annual Report (RCC 2013a), (b) RW pricing model. Source: SKM (2013a).

¹⁰ RW supporting information (2013).

Figure 1 Area serviced by Redland Water



Source: RCC (2013a).

2 PRICES AND BILLS

2.1 Scope of review

Under the Ministerial Direction, the QCA must monitor the change in prices of distribution and retail water and sewerage services for residential and non-residential customers.

The change in residential bills is also monitored, as in previous years, as this shows the net impact of changes in all the components of the residential bill. The residential bill is a focus as the SEQ entities derive the majority of their revenues from residential customers.

As noted in chapter 1, there are some differences to our previous reviews. These derive from changes in the Direction and consultation with stakeholders to clarify our reporting.

For price monitoring in 2013-15, there is no legislated CPI cap which requires separate reporting for capped and non-capped services.¹¹

The comparison of Redland Water's average price (based on its revenues) with the QCA's full cost recovery average price (based on its MAR) is now reported in chapter 7, as this contains the comparison of entity revenues and the QCA's MAR. Both of these comparisons inform our finding of whether there is an exercise of monopoly power (chapter 7).

2.2 Changes in prices

Change in prices in 2013-14

In June 2013, Redland City Council announced changes to residential and non-residential water and sewerage charges in 2013-14, comprised of:

- (a) a 2.1% increase in water access charges and 18.4% average increase in volumetric charges (of which 16.6% is due to bulk water volumetric charges)
- (b) a 13.2% (\$97) fall in the sewerage access charge.¹²

As a result, Council announced that the residential bill in 2013-14 for a household using 200 kilolitres (kl) per year will be \$8 lower than in 2012-13.

The QCA can confirm that Redland Water's prices reflect the announced changes, as noted in **Appendix B** and below. Further, these prices reflect Redland Water's ten-year cost recovery and pricing model, in which the net present value of revenues equals the net present value of costs over ten years. These prices also reflect assumptions about CPI price rises from 2012-13 (for water access charges and trade waste charges) and from 2013-14 (for average volumetric water charges and sewerage fixed access charges). Redland Water's approach to cost recovery and pricing are addressed further in chapter 7.

¹¹ In 2011-12 and 2012-13, a CPI price cap was applied to retail and distribution water and sewerage prices for specified customers, under the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009* (Qld). The specified customers include residential and small business customers and any other customer who passed on charges to either of those groups. The March to March Brisbane All Groups CPI for the preceding year was used, so in 2011-12 the CPI cap was 3.6% and in 2012-13 the CPI cap was 1.3%. The CPI cap no longer applies.

¹² RCC 2013b, p.10.

The QCA notes that the 2.1% increase in water access charges aligns with CPI,¹³ while the other changes in prices in 2013-14 are driven by the assumptions in the Redland Water pricing model. While a legislated CPI cap no longer applies, CPI provides a broad benchmark against which changes in prices can be compared. As a result, price increases that exceed CPI require further explanation. The QCA's review of the prudence and efficiency of underlying costs is detailed further below.

A detailed assessment of the level and structure of Redland Water's prices is beyond the scope of this review, which primarily focuses on a comparison of revenues and costs (the MAR). The QCA has commenced a separate investigation of pricing principles.¹⁴ The pricing principles investigation will involve the release of position papers for consultation and is to be finalised in September 2014.

Change in prices in 2014-15

As part of price monitoring for 2013-15, the QCA requested information on 2014-15 prices.

However, Redland Water has not published prices for 2014-15. In its 2013-15 price monitoring submission, Redland Water provided a target revenue forecast for 2014-15 on an organisation-wide basis rather than a revenue forecast based on individual prices.

As Redland Water has not published its prices for 2014-15, the QCA cannot monitor the (specific) changes in the residential and non-residential prices in that year. The Redland Water pricing model includes forecast indicative prices that are subject to change and these are addressed in chapter 7.

The QCA has used Redland Water's forecast revenue for 2014-15 for the other aspects of its review (chapter 7).

2.3 Residential bills

Customers should be clearly notified of the likely increase in bills by their retail water provider. The increase in each component of the bill and the overall increase to be faced by customers should be notified, with any updates being provided in a consistent and timely manner.

As noted above, Redland City Council announced changes in water and sewerage prices such that the residential bill in 2013-14 for a household using 200kl per year would be \$8 lower than in 2012-13.

However, the QCA notes that residential bills will increase in 2013-14 (see **Appendix C**). For example, the QCA estimates that residential bills for a household using 200kl of water a year will increase by 5.3% (\$72).¹⁵

The increase calculated by the QCA is due to the removal of the State Government bulk water rebate. The State Government provided a one-off \$80 bulk water rebate to residential customers in 2012-13.¹⁶ This rebate no longer applies.

¹³ March to March Brisbane All Groups for the preceding year.

¹⁴ More information is available from the QCA's website: <http://www.qca.org.au/water/SEQLTRGPP/>

¹⁵ As in previous years price monitoring reports, the residential bills in the QCA's analysis are calculated on the basis of 200kl of water use per year. The adoption of a standard usage allows for a focus on the price differences across SEQ and 200kl is the standard usage adopted for national performance reporting purposes (NWC 2010). Redland Water also adopted an average use of 200kl.

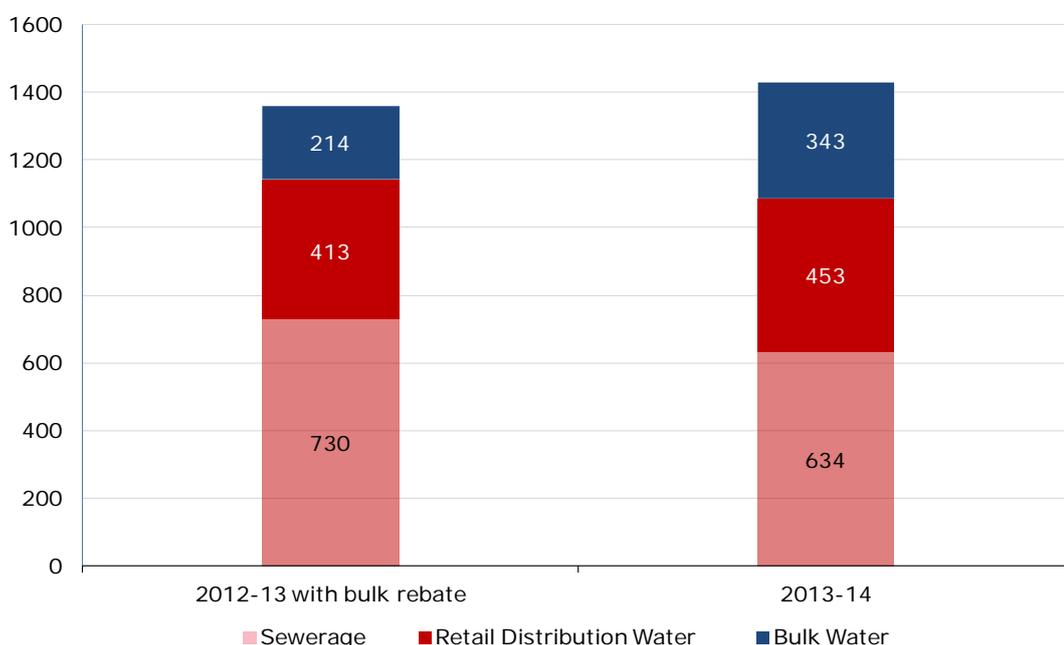
Redland Water excluded the bulk water rebate from its residential bill calculations as it is outside its control. The QCA has included the rebate as it affects the bill paid by residential customers.

While retail water entities do not control government rebates, the QCA is concerned that excluding rebates in the information provided to customers means there is a lack of clarity and transparency about increases in bills in 2013-14.

The QCA recommends that retail water providers provide their customers with comprehensive information that identifies the increase in each component of the bill and the overall (net) increase, with any updates being provided in a consistent and timely manner.

As noted above, the Redland Water has not released its prices for 2014-15, so the QCA cannot report on the changes in prices and residential bills in 2014-15.

Chart 1 Residential bills (\$)



Note: Assumes 200kl of water per year and based on one pedestal (where relevant). The bulk water rebate was a one-off \$80 deduction to the residential bill in 2013. Source: See Appendix C for detailed data.

2.4 Other bills

In its submission, the Queensland Council of Social Service (QCOSS 2013) noted that the QCA fact sheets released in previous reviews have improved the transparency and understanding of the impact of prices on water bills. QCOSS recommended that price monitoring for 2013-15 could be expanded to show the impact of prices on different levels of usage and household type.

As noted above, for price monitoring purposes, the QCA has continued to compare standard bills for residential customers, as this allows for a focus on key price differences across SEQ and as 200kl is the standard usage adopted for national performance reporting purposes. The QCA

¹⁶ Queensland Government Bulk Water Rebate: <http://www.dews.qld.gov.au/policies-initiatives/water-sector-reform/queensland-government-bulk-water-rebate>.

does not have information on the distribution of levels of usage across household types, as that is contained in detailed billing data that is not collected under price monitoring.

However, it is recognised that customers may benefit from more information, if appropriately packaged and targeted. The QCA therefore recommends that, going forward, Redland Water should consult with QCOSS and other stakeholders (including through its customer and community reference group as noted below) about the release of information about bill increases for different levels of usage and customer type.

2.5 Hardship and stakeholder engagement

QCOSS (2013) also recommended that price monitoring for 2013-15 should monitor the entities' policies in relation to hardship and stakeholder engagement. Further (and possibly separate to price monitoring) QCOSS recommended the QCA could be tasked to collect and publish statistics on incidence and trends in hardship, complaints and disconnections (as it currently does for electricity).

Redland Water's website states that customers that cannot pay their bills should contact council as soon as possible to discuss payment options.¹⁷

In its Annual Performance Plan for 2013-14, Redland Water stated that it will collect community feedback and participate in community consultations. Feedback from surveys and consultation will be used to gauge acceptance of service levels. Customer feedback may be collected through some or all of the following forms:

- (a) recording unsolicited complaints and comments
- (b) management or staff attendance at community consultation sessions
- (c) formal surveys by a third party consultant or formal surveys by in-house staff as part of council process (RW 2013a).

The QCA is developing best practice guidelines on customer engagement as part of its review of the long term framework for economic regulation. Performance reporting is also part of that review. The Department of Energy and Water Supply (DEWS) is undertaking a review of the Water and Sewerage Services Code for Small Customers in South East Queensland and will consider the water businesses' current policies (including hardship) in relation to supporting customers.

¹⁷ <http://www.redland.qld.gov.au/EnvironmentWaste/Water/Pages/Water-Billing.aspx>

3 DEMAND

3.1 Introduction

The cost of providing water and sewerage services is affected by the quality and the quantity of the services provided. For the purposes of the current review, the QCA has accepted the current standards of service.

Estimates of demand for water and sewerage have a direct impact on the prudence and efficiency of operating and capital expenditure on water and sewerage activities, as well as on the prices paid.

3.2 Water

Residential and non-residential

Redland Water forecast residential and non-residential water volumes for 2013-15 by multiplying connections by consumption (in litres) per connection.

The QCA notes that Redland Water's methodology is relatively unsophisticated but appropriate for its intended purpose.

Connections

Redland Water forecast residential water connections for 2013-14 (and subsequent years) by applying a growth rate to connections in 2012-13 sourced from its billing system. Redland Water's connections data for residential and non-residential sectors are grouped further into consumption bands, allowing for a more specific consumption forecast. Redland Water applied a growth rate of 0.5% per annum for the residential sector, 0.1% for the non-residential sector and 0.2% for council-owned connections.

The QCA notes that the growth rate assumed by Redland Water (0.5% for residential and 0.1% for non-residential sector) is much lower than that forecasted by the OESR (1.7%). Since its 2011-12 review, the QCA has adopted the OESR's low growth series, as OESR provides the State's official population forecasts and had advised the use of low growth for forecasting in the short term.

The QCA accepts that a departure from official growth forecasts may be justified where more recent data indicates previous estimates were incorrect or there is a structural change so that previous forecasts are no longer relevant. As Redland Water did not provide justification to its lower growth rate, the QCA has applied the OESR's low growth rate. However, the QCA accepts Redland Water's forecast of 0.2% growth in council-owned water connections as this is based on council information relating to its own properties.

Table 2 Growth rates comparisons

	2013-14	2014-15
Redland - residential	0.5%	0.5%
Redland - non-residential	0.1%	0.1%
OESR	1.7%	1.7%

Source: RW supporting information, QCA calculations.

Table 3 Residential and non-residential water connections

	2012-13	2013-14				2014-15			
		Redland Water		QCA		Redland Water		QCA	
		Growth Rate	#	Growth Rate	#	Growth Rate	#	Growth Rate	#
Residential	58,181	0.5%	58,466	1.7%	59,170	0.5%	58,751	1.7%	60,176
Non-residential	1,044	0.1%	1,045	1.7%	1,062	0.1%	1,046	1.7%	1,080
Council	550	0.2%	551	0.2%	551	0.2%	552	0.2%	552
Total	59,775	0.5%	60,062	1.7%	60,791	0.5%	60,349	1.7%	61,825

Source: RW supporting information, QCA calculations.

Consumption per connection

Redland Water maintains data on connections by consumption bands for both residential and non-residential sectors. Redland Water's base average consumption is the result of dividing total consumption in 2012-13 by the number of connections. Redland Water stated that based on historical data, it has applied a no growth assumption to the average consumption of residential sector in 2014-15.

In response to a QCA query, Redland Water subsequently clarified that the forecast water volumes for 2013-14 and 2014-15 were originally based on estimated actuals for 2012-13. However, the 2012-13 volumes in the information templates provided for price monitoring purposes were subsequently updated to reflect higher actual meter reads. This results in the forecasts for 2013-14 and 2014-15 showing an apparent decline.

Table 4 Redland Water forecast water volume

	2012-13	2013-14		2014-15	
		Growth Rate		Growth Rate	
Average consumption (kilo litres per connection per annum)					
Residential	194	-11%	173	0%	173
Non-residential and council	939	-15%	797	0%	797
Water Demand (ML)					
Residential	11,315	-10.6%	10,115	0.5%	10,165
Non-residential and council	1,496	-15.0%	1,272	0.2%	1,274
Standpipes	334	-38.3%	206	0.0%	206
Total	13,145	-11.8%	11,593	0.4%	11,645

Source: RW supporting information.

In relation to data issues, the QCA notes that its price monitoring reviews are intended to be based on the information available at the time of pricing. This approach was communicated to entities in workshops in early 2013 and in the Information Requirements for 2013-15. However, Redland Water has populated the template with updated actual 2012-13 data, available after

2013-14 prices were set. As the QCA can only conduct its review on the information available it has therefore used the data in the templates provided for its review of demand.

In 2012-13 review, SKM confirmed its view that rebound will occur over a four to five year period and settle at around the 200 l/p/d voluntary target for SEQ residential sector as a whole (SKM 2013b). The QCA accepted SKM's approach.

Recent data highlights that SEQ residents have continued to maintain water consumption below the residential water use voluntary target of 200 l/p/d (Target 200). In 2011-12, average daily residential water use in SEQ residential sector was 185 l/p/d (QWC 2012).

As a result, the 'most likely' demand scenario in the SEQ Water Strategy Annual Report 2012 (QWC 2012) assumed that average consumption will rebound over the five years from 2012 to 185 l/p/d for SEQ residential sector as a whole.

To arrive at the base [2012-13] residential average consumption (l/p/d), the QCA used Redland Water's total residential volume, total residential connections and an assumption on occupancy rate. The QCA then estimated average residential consumption for each entity by assuming a rebound to a whole-of-SEQ residential sector forecast of 185 l/p/d in 2016-17. As in previous reviews, the QCA recommends that price elasticity should be explicitly included in demand forecasting once the estimated level of rebound is achieved.

Following this approach, the QCA's estimate of average consumption in 2013-14 and 2014-15 for the residential sector is 209.5 and 210.1 l/p/d, respectively. The QCA applied this average consumption to its estimate of connections and occupancy rate to arrive at water demand.

In relation to non-residential demand, in previous reviews, the QCA noted that the impact of restrictions on non-residential sector's demand largely resulted in investments in water saving technology or fittings rather than reductions in discretionary water use but accepted that some rebound can be expected for the non-residential sector.

Supporting information submitted to the QCA indicates Redland Water assumed consistent rates of growth to both average residential and non-residential consumption. The QCA has accepted this assumption.

The QCA's estimate of water demand is provided below.

Table 5 QCA forecast water volume

	2012-13	2013-14		2014-15	
		Growth Rate		Growth Rate	
Average consumption (litres per person per day)					
Residential	208.9	0.3%	209.5	0.3%	210.1
Average consumption (kilo litres per connection per annum)					
Non-residential and council	939	0.3%	941	0.3%	941
Residential Connected Population					
Residential average occupancy rate	2.55	-0.4%	2.54	0%	2.54
Residential connected population	148,362	1.3%	150,292	1.7%	152,847
Water Demand (ML)					
Residential	11,315	1.6%	11,495	2.0%	11,723
Non-residential and council	1,496	1.5%	1,518	1.5%	1,540
Standpipes	334	-38.3%	206	0.0%	206
Total	13,145	0.6%	13,219	1.9%	13,470

Source: RW supporting information, QCA calculations.

Non-revenue water

Redland estimated non-revenue water (losses) to be around 2.5% in 2013-14. In discussions with the QCA, Redland advised that its low loss factor reflects its newer infrastructure.

The QCA accepts Redland Water's proposed loss factor and has applied it to estimate non-revenue water.

Table 6 Losses

	2012-13	2013-14		2014-15	
		RW	QCA	RW	QCA
Loss %					
Total	na	2.5%	2.5%	2.5%	2.5%
Non-revenue Water (ML)					
Total	na	290	330	291	337

Note: na - not available. Source: RW supporting information, QCA calculations.

3.3 Bulk Water Forecasts

Bulk water demand forecasts are the sum of residential, non-residential and non-revenue water. The QCA's forecasts of bulk water are 14% higher than Redland Water's in 2013-14 and 16% higher in 2014-15, arising from the use of higher 2012-13 actual data, QCA's higher residential and non-residential connections and growth in average consumption.

Table 7 Bulk water forecasts (ML)

	2012-13	2013-14		2014-15	
		RW	QCA	RW	QCA
Total	13,145*	11,883	13,549	11,936	13,806

Note: * RW did not provide information on its non-revenue water in 2012-13. Source: RW (2013b), RW supporting information, QCA calculations.

3.4 Sewerage

Residential and non-residential

Redland Water only charges a fixed fee for connection to its sewerage network. Fixed sewerage charges are based on units – there are 25 units in a standard residential connection. As for water, Redland Water forecast residential wastewater connections for 2013-14 (and subsequent years) by applying a growth rate to connections (units) in 2012-13 sourced from its billing system.

Redland Water's assumed growth rates are presented in the table below. Redland Water did not separately identify council-owned sewerage connections.

As for water, Redland Water did not provide sufficient historical data to justify its lower growth rate. Therefore, the QCA has applied the OESR's low growth rate to estimate sewerage connections.

Table 8 Residential and non-residential sewerage units ('000)

	2012-13	2013-14				2014-15			
		Redland		QCA		Redland		QCA	
		Gth Rate	#						
Res	1,403.3	1.2%	1,419.7	1.7%	1,427.1	0.5%	1,426.9	1.7%	1,451.4
Non-res	13.7	0.5%	13.7	1.7%	13.9	0.5%	13.8	1.7%	14.1
Total	1,416.9	1.2%	1,433.4	1.7%	1,441.0	0.5%	1,440.7	1.7%	1,465.5

Note: 25 units per standard residential connection. Gth = growth. Source: RW supporting information, QCA calculations.

3.5 Trade waste

Redland Water applies both fixed and volumetric charges for disposal and treatment of trade waste. As for water, Redland forecast trade waste connections for 2013-14 (and subsequent years) by applying a growth rate to connections in 2012-13 sourced from its billing system. Redland Water forecast connections growth of 9% in 2013-14 with no growth thereafter.

The QCA notes that trade waste is an very small (1.4%) portion of Redland Water's total revenue and has accepted Redland Water's forecast of trade waste connections and volumes.

Table 9 Trade waste connections and volume forecasts

	2012-13	2013-14		2014-15	
		Growth	#	Growth	#
Connections (no.)	730	9.0%	796	0.0%	796
Volumes (ML)	438,655	-12.6%	383,474	0.2%	384,310

Source: RW (2013b).

3.6 Demand for capital planning

Redland's submission

Redland briefed the QCA on the process of estimating long-term demand for capital planning purposes, which involves the use of population and employment projections and land use data sourced from Redland City Council's planning models. Redland Water's capital planning standard employs the parameters set out in the SEQ Water Supply and Sewerage Design and Construction Code (Design and Construction Code).

QCA Analysis

Given available information, the QCA considers Redland Water's methodology to forecast demand for pricing purpose for 2013-15 is reasonable. Nevertheless, the QCA has 14-16% higher bulk water estimates due to higher (actual) 2012-13 base data as well as higher connections growth and average consumption.

As in the previous price reviews, the QCA recommends that price elasticity should be explicitly included in demand forecasting once the estimated level of rebound is achieved. As stated in previous years, it is considered appropriate to develop and compare different approaches to demand forecasting for future use in SEQ and in doing so be cognisant of their benefits and costs.

4 CAPITAL COSTS

4.1 Introduction

The costs of providing water and sewerage activities include bulk, distribution and retail costs. Distribution and retail costs include capital costs (see below) and operating costs (chapter 5).

Capital costs are the costs of infrastructure and other assets used to deliver services. A key input is the Regulatory Asset Base (RAB). The Ministerial Direction sets out the principles for rolling forward the RAB over time.

Capital costs comprise depreciation (return of capital) and an allowance for the cost of debt and a return for the risks involved (return on capital). Consistent with the Direction, the QCA uses straight-line depreciation and a benchmark WACC of 6.57%.

4.2 Regulatory Asset Base

Under the Ministerial Direction, the QCA must roll forward the RAB for each individual council based on their agreed disaggregation of the total Allconnex RAB as at 1 July 2010 and subsequent capital expenditure incurred to 1 July 2013.

4.3 Regulatory Asset Base at 1 July 2010

Redland Water adopted a starting RAB based on the value of assets transferred to Allconnex on 1 July 2010.

The QCA has not been able to identify an agreed disaggregation of the asset base as at 1 July 2010 by individual council. The QCA notes however that in response to a request from Allconnex, the QCA provided estimates by district, product and asset class as at 30 June 2010. The QCA has therefore established its MAR on this basis.

The QCA RAB value as at 1 July 2010 is \$24.99 million lower than Redland Water's submitted value as at 1 July 2010, as shown below.

Table 10 RAB as at 1 July 2010 (\$m)

	<i>Water</i>	<i>Sewerage</i>	<i>RAB</i>
Redland ^(a)	188.54	263.72	452.26
QCA ^(b)	189.68	237.59	427.27

Source: (a) RW (2013b), (b) QCA calculations.

4.4 Capital expenditure in 2010-13

Under previous Ministerial Directions, the QCA reviewed the prudence and efficiency of Allconnex's forecast capital expenditure for Redland in 2010-11 and 2011-12. Redland Water was not subject to price monitoring in 2012-13.

Capital expenditure in the Redland area for 2010-13 is shown in Table 11 below.

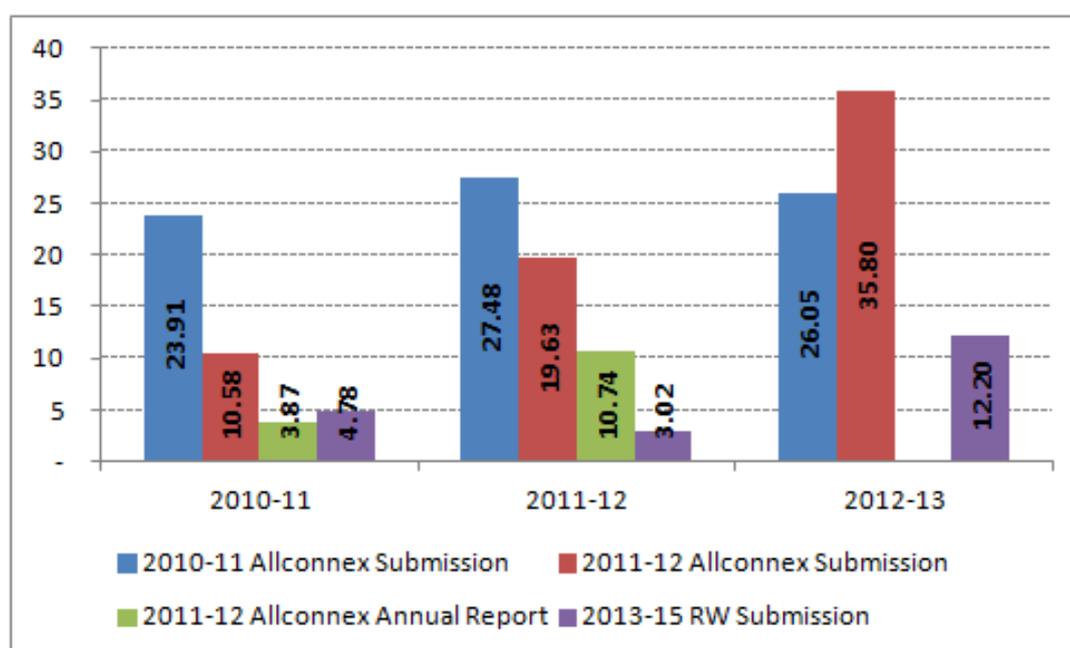
Table 11 Redland Water capital expenditure 2010-13 (\$m)

<i>Council</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>
Redland	4.78	3.02	12.20

Source: RW (2013b).

The QCA considers that capital expenditure for 2010-12 should be based on the audited actual capital expenditure in the Allconnex Annual Report for July 2011 - September 2012 (Allconnex 2012). As the disaggregated actual data underpinning the Allconnex Annual Report was not available, the QCA has disaggregated actual data on the basis of the disaggregation of forecasts in Allconnex's most recent data template to the QCA.

Changes in Redland Water's capital expenditure forecasts since 2010-11 are shown in Figure 2 below.

Figure 2 Capital expenditure estimates in submissions (\$m)

Note: Contributed assets are the only capital expenditure in the Allconnex Annual Report that was commissioned in 2010-11 (\$3.87m) and 2011-12 (\$10.74m). Source: Allconnex (2010), Allconnex (2011), Allconnex (2012), RW (2013b).

4.5 Capital expenditure in 2013-15

Ministerial Direction

The Ministerial Direction for 2013-15 price monitoring requires the QCA to assess capital expenditure for 2013-15 based on:

- a view of the prudence and efficiency of capital expenditure, focussing on any areas of significant cost increase and identifying the reasons why
- the existence of robust policies and procedures having regard to good industry practice, as well as compliance, using a sample of six capital expenditure projects
- the robustness of the capital expenditure program planning and delivery processes and procedures in an overall sense and identify any areas for improvement.

The Ministerial Direction requires the QCA to review the prudence and efficiency of capital expenditure not more than once during the 2013-15 monitoring period. Only expenditure found to be prudent and efficient can be included in the RAB.

Redland Water's forecast capital expenditure for 2013-15

Redland Water's forecast capital expenditure for water and sewerage, and by driver, are in Table 12 and Table 13.

Table 12 Redland Water capital expenditure 2013 to 2015 (\$m)

	2013-14	2014-15	Total
Water	3.34	3.52	6.87
Sewerage	10.23	12.05	22.28
Total	13.57	15.58	29.15

Note: Contributed, donated and gifted assets are nil in both years. Source: RW (2013b).

Table 13 Redland Water forecast capital expenditure 2013 to 2015 (drivers) (\$m)

Capital expenditure driver	2013-14	2014-15	Total
Growth	4.56	4.73	9.29
Renewal	9.01	10.84	19.85
Improvement	0.00	0.00	0.00
Compliance	0.00	0.00	0.00
Contributed Assets	0.00	0.00	0.00
Total	13.57	15.58	29.15

Source: RW (2013b).

QCA's approach

The QCA has considered the prudence and efficiency of Redland Water's forecast capital expenditure for 2013-15 in accordance with the Ministerial Direction.

The QCA's assessment focuses on:

- (a) a detailed review of the prudence and efficiency of a sample of six capital expenditure projects and their compliance with capital policies and procedures
- (b) a review of the robustness of capital policies and procedures relating to planning and delivery having regard to good industry practice.

The QCA appointed SKM to assist in its assessment. The terms of reference for SKM's review were consistent with the Direction and circulated to entities prior to the commencement of the review. SKM provided a copy of its draft report to the entities for comment and their responses were taken into account in SKM's final report.

SKM's final report is a detailed review of the sampled projects and capital policies and procedures and is available on the QCA's website. Key issues from the SKM review that underpin the QCA's findings are summarised below.

Prudency and efficiency criteria

The criteria and processes for determining the prudency and efficiency of capital expenditure projects are defined in the Information Requirements for 2013-15. In summary, to establish:

- (a) prudency, an entity must demonstrate that there is a need for the expenditure, typically by reference to an analysis of its driver/s (that is, growth, renewal, improvement and compliance)
- (b) efficiency, information is required on the scope and standard of the works and the corresponding cost and timing of works. This should be linked, where relevant, to the underlying cost components such as unit rates, on-costs and contingencies and supporting materials such as consultant reports. Information is also required on expenditure approval policies and procedures.

The QCA requires capital expenditure to be included in the RAB only when it is commissioned, and contributes productive capacity to the system. SKM reviewed the compliance of the sampled projects against Redland City Council's and Redland Water's policies and procedures and SKM's view of good industry practice for the development of capital projects, including project prioritisation, a defined review and approvals process, and appropriate documentation.

Sample selection

The Ministerial Direction required a sample of six capital expenditure projects be selected for detailed review. Given Redland Water has a 10 year price path, the QCA selected the six largest projects (by dollar value) over the period 2013-23, excluding those that had been reviewed previously by the QCA and found to be prudent and efficient.

The sample of Redland Water projects reviewed in detail is shown in Table 14 below. Redland Water's sample accounted for 48.3% of its incurred capital expenditure for 2013-15, excluding contributed assets. SKM reviewed the capital expenditure on an as-incurred basis, as this reveals the annual expenditure stream over the life of the project.

Table 14 Redland Water capital expenditure projects reviewed (\$m)

<i>Project</i>	<i>Driver</i>	<i>Commissioned in 2013-15¹⁸</i>	<i>As Incurred in 2013-15</i>
1. Point Lookout STP	Compliance	0.005	7.50 ¹⁹
2. Sewerage Pump Station # 6	Growth / Renewals ²⁰	0.40	3.93
3. Benfer Rd DMA Network Upgrade	Renewals	6.35	0.19
4. Redland Mainland WSS Network Upgrade	Renewals	2.30	1.09
5. Pumps	Renewals	0.11	0.73
6. Meter Replacement Program	Renewals	7.60	0.62
Total sampled expenditure		16.76	14.07
Total capital expenditure		29.15	29.15

Note: Table may not add due to rounding. Source: RW (2013b).

4.6 Prudency and efficiency of sampled projects

4.6.1 Point Lookout STP

Background

Point Lookout is on the north-eastern tip of North Stradbroke Island in Moreton Bay. Sewerage treatment at Point Lookout is provided by three independent package treatment plants. The plants have a combined rated capacity of about 1,750 equivalent persons (EP) and produce relatively low quality effluent.

During peak holiday periods the connected EP exceeds the allowable Development Approval of 4,000 EP (regulated by the Department of Environment and Heritage Protection (DEHP)). Based on town planning, the population is estimated to be 2,600 EP, increasing to 6,300 EP during peak holiday periods. Further, the plants are more than 20 years old, have reached the end of their economic life, and are in poor condition. Redland Water has given commitment to the Department of Environment and Heritage Protection (DEHP) that it will undertake a plant upgrade to remedy current deficiencies.

Following an extensive options analysis, the preferred conveyance and treatment scheme involves:

- (a) a new STP, with two 3,800 EP modules, on the existing site at Tramican Street
- (b) membrane bioreactor treatment process

¹⁸ Data sourced from pasted values in the Total Expenditure as Commissioned column of RW's information return (RW 2013b).

¹⁹ At the RW price monitoring meeting (October 2013), RW advised SKM and the QCA that the expenditure profile in its information return was incorrect: expenditure in 2014-15 is budgeted for \$14.5m, not \$7.5m as per the information return (SKM 2013b). In July 2013, RW included expenditure of \$15m for 2013-15 in the 'RCC 10 Year Capital Programme' provided to the QCA for selection of projects for prudency and efficiency review.

²⁰ Growth 50%; renewals 50% (RW 2013b).

- (c) continuing to use the existing effluent management scheme, which involves disposal of effluent via infiltration lagoons.

Redland Water submitted that the expenditure incurred on the project would be \$7.50 million in 2013-15.

Prudence

Redland Water identified compliance as the driver of the project.

SKM considered that growth and compliance are the appropriate drivers for the project, that an appropriate options evaluation process has been undertaken, and the scope of work appropriate for the purpose described.

SKM noted - based on the 'Point Lookout Sewerage Scheme Upgrading Review' (September 2013) - that the proposed start-up of the plant is not until May 2016, which is outside the review period.

SKM found the project to be prudent.

Efficiency

The works will be constructed in accordance with the Redlands Planning Scheme requirements and the Design and Construction Code and/or Water Services Association of Australia (WSAA) standards as they apply. SKM concluded that the standards were appropriate for the locality and circumstances of the plant (e.g., larger emergency storage as operational staff will not be permanently based on the island).

SKM considered the \$18.9 million cost estimate in the 'Point Lookout Sewerage Scheme Upgrading Review' report to be in line with, but on the low side of, current market costs for similar sized facilities.²¹

SKM found the project to be efficient.

Policies and procedures

SKM found that Redland Water did not apply a standardised approach to cost estimating for this project or implement a toll gate / gateway review process.

Conclusion

Table 15 below shows the expenditure profile for the Point Lookout STP, with costs removed from the RAB as the project will be commissioned after the review period.

Table 15 Point Lookout STP (\$m)

	<i>Previous years</i>	<i>2013-14</i>	<i>2014-15</i>	<i>Total</i>
Redland Proposed ^(a)	0.00	0.50	7.00	7.50
QCA Adjustment	0.00	-0.50	-7.00	-7.50
QCA Recommended	0.00	0.00	0.00	0.00

Note: (a) as per RW information return. Capital expenditure as incurred. Source: SKM (2013a).

²¹ SKM referenced the Sarina Water Recycling Facility (\$25m; 8,000 EP) and the Maleny STP (\$19m; 9,000 EP) (SKM 2013a).

4.6.2 Sewerage Pump Station # 6

Background

Sewerage Pump Station # 6 (SPS6) is located at the Cleveland Showgrounds and is one of two major collection points for sewage treated at Cleveland STP. Sewerage is pumped to the STP via a 450 diameter asbestos concrete (AC) rising main with the assistance of booster pump station SPS128.

SPS6 and the associated rising main do not have sufficient capacity to deliver ultimate flows to Cleveland STP. In order to cope with future flows, upgrade of SPS6 and the associated rising main is required.

Construction of the new rising main was completed around two years ago; the main cannot be commissioned until the new pump station is constructed. Once completed, the project will deliver an upgraded pump station which will enable the sewerage system to cater for increasing loads from the upstream catchment with minimisation of overflows. The new pumps will replace the aging existing pumps, provide greater reliability and improved operator working conditions and safety.

Redland Water submitted that the expenditure incurred on the project would be \$3.93 million in 2013-15.

Prudence

Redland Water nominated growth (50%) and renewals (50%) as the drivers of this project. SKM agreed that growth and renewals are appropriate drivers for the project as the pump station is under capacity for peak wet weather flows and population growth in the catchment will further exacerbate the situation.

SKM found the project to be prudent.

Efficiency

SKM considered that the average dry weather flow (ADWF) of 230 l/EP/day adopted in the basis of design is excessive when compared to the 200 l/EP/d specified in the Design and Construction Code. However, given the 'Basis of Design Report' was prepared in August 2009, SKM accepted the higher standard and recommended that the revised ADWF be adopted in all future investigations.

SKM found the project to be efficient.

Policies and Procedures

SKM found that Redland Water did not apply a standardised approach to cost estimating for this project or implement a toll gate / gateway review process.

Conclusion

Table 16 below shows the expenditure profile for SPS6.

Table 16 Sewerage Pump Station # 6 (\$m)

	<i>Previous years</i>	<i>2013-14</i>	<i>2014-15</i>	<i>Total</i>
Redland Proposed	0.00	3.93	0.00	3.93
SKM Adjustment	0.00	0.00	0.00	0.00
QCA Recommended	0.00	3.93	0.00	3.93

Note: Capital expenditure as-incurred. Source: SKM (2013a).

4.6.3 Benfer Rd DMA Network Upgrade

Background

Augmentation of the trunk mains in the Benfer Road District Meter Area (DMA) is required in order to maintain 'Redland City Council's Peak Hour and Fire Flow Desired Standards of Service' (DSS).

Proposed works to be completed in 2013-15 are:

- (a) Giles Road to Double Jump Road augmentation (1,187 metres of 375mm diameter water main)
- (b) Masters Avenue augmentation to start of Coochie submarine pipeline (196 metres of 200mm diameter water main).

Redland Water submitted that the expenditure incurred on the project would be \$0.19 million in 2013-15. Redland Water has planned further expenditure of \$3.57 million from 2015-23 on the project.²²

Prudence

Redland Water nominated renewals as the project driver.

SKM considered that, based on the forecast population growth in the Victoria Point area in the council's Priority Infrastructure Plan, growth was a more appropriate driver.

SKM considered that an appropriate:

- (a) methodology had been used for identifying sections of the water supply network needing augmentation
- (b) options evaluation process had been undertaken and the scope of work is appropriate for the purpose described.

SKM found the project to be prudent.

Efficiency

SKM was satisfied that an appropriate range of options were selected and adequately reviewed and that the scope of works is appropriate to meet the project need

SKM also considered that the development of cost estimates from unit rates and recently completed projects was acceptable. SKM concluded the cost estimate for the project to be to be efficient.

However, SKM considered that the scope of work would not be completed within the review period.

Policies and procedures

SKM found that Redland Water did not apply a standardised approach to cost estimating for this project or implement a toll gate / gateway review process, and there was no evidence of an implementation strategy.

Conclusion

On the basis of SKM's advice, the QCA considers that the costs of this project should be deferred, as shown in Table 17 below.

²² RW supporting information (2013).

Table 17 Benfer Road DMA Network Upgrade (\$m)

	<i>Previous years</i>	<i>2013-14</i>	<i>2014-15</i>	<i>Total</i>
Redland Proposed	0.00	0.19	0.00	0.19
SKM Adjustment	0.00	-0.19	0.00	-0.19
QCA Recommended	0.00	0.00	0.00	0.00

Note: Capital expenditure as-incurred. Source: SKM (2013a).

4.6.4 Redland Mainland WSS Network Upgrade

Background

Allconnex's 'Water Supply Network Master Plan Northern District' (May 2011) identified the need for water supply network upgrades at various locations in the Redland Mainland Water Supply Scheme.²³ The upgrades are necessary to maintain Redland Water's DSS²⁴.

In October 2013, Redland Water advised that the council's water supply network model was being reviewed and that sections of network which failed the fire flow and peak hour pressure requirements of the Design and Construction Code were being identified.

The works to be completed in 2013-14 are:

- (a) Cumberland Drive Alexandra Hills High Level Zone (HLZ) extension (30 metres of 150mm diameter water main)
- (b) Merriot Court Alexandra Hills HLZ extension (36 metres of 100mm diameter water main).

The works to be completed in 2014-15 are:

- (a) Banfield Lane project (246 metres of 150mm diameter water main)
- (b) Ney Road to Tipuana Street fire flow augmentation (522 metres of 150mm diameter water main)
- (c) Redland Hospital augmentation (872 metres of 150mm diameter water main)
- (d) Mount Cotton Infrastructure Charges Schedule (ICS) Zone Connection
- (e) Alexandra Hills ICS Zone 150mm valve
- (f) Alexandra Hills ICS Zone 200mm valve.

Redland Water submitted that the expenditure (as-incurred) on the project would be \$1.09 million in 2013-15. A further \$0.20 million was incurred in 2012-13 and \$2.14 million is forecasted from 2015-23 on the project.²⁵

Prudency

Redland Water nominated renewals as the project driver for the project. SKM considered that growth and renewal were the appropriate drivers given that sections of the network are not meeting fire flow provision and peak hour pressures required under the Design and Construction Code.

²³ Refer to SKM (2013a), section F.4 for details of specific locations where fire flow provision and peak hour pressures in the water supply network can be improved.

²⁴ As per the Planning Guidelines for Water Supply and Sewerage (DEWS 2013c).

²⁵ RW supporting information (2013).

SKM considered that an appropriate methodology had been used for the identification of sections of the water network requiring augmentation and development of the scope of works. As such, SKM concluded that the project was prudent.

Efficiency

SKM found that the use of the selected standards was appropriate for the project.

SKM believed that the use of the escalated values from the 'Gold Coast Water Unit Rates Report' (December 2008) was appropriate, provided they are reviewed against actual costs as projects are completed to track alignment with market conditions.

SKM concluded the cost estimate for the works to be completed in 2013-14 and 2014-15 to be efficient.

Policies and Procedures

SKM found that Redland Water did not apply a standardised approach to cost estimating for this project or implement a toll gate / gateway review process, and there was no evidence of an implementation strategy.

Conclusion

Table 18 below shows the expenditure profile for the Redland Mainland WSS Network Upgrade.

Table 18 Redland Mainland WSS Network Upgrade (\$m)

	<i>Previous years</i>	<i>2013-14</i>	<i>2014-15</i>	<i>Total</i>
Redland Proposed	0.20	0.81	0.28	1.29
SKM Adjustment	0.00	0.00	0.00	0.00
QCA Recommended	0.20	0.81	0.28	1.29

Note: Capital expenditure as-incurred in the year before commissioning. Source: SKM (2013a).

4.6.5 Pumps

Background

The pumps project involves the replacement of sewerage pumps due to age, condition and obsolescence.

In 2013-14, the pumps in six SPSs were to be replaced. Five replacements were driven by condition review (SPS21, 49, 62, 67 and 100) and one by age (SPS134).

The pumps program for 2014-15 will include approximately 24 pumps, of various sizes, which are over 25 years old. SKM considered that the replacement of pumps in keeping with an industry standard operating life of 15 years is acceptable and prudent.

Redland Water submitted that the expenditure (as-incurred) on the project would be \$0.73 million in 2013-15. The annual budget is set according to overall Redland City Council budget considerations and historical expenditure. Redland Water has forecasted further expenditure of \$3.38 million from 2015-23 on the program.²⁶

²⁶ RW supporting information (2013).

Prudency

Redland Water nominated renewals as the project driver for the project. SKM agreed with Redland Water that renewal was the appropriate driver for the project as the majority of the pumps have reached the end of their useful life and failure to replace could result in environmental licence non-compliances²⁷ as well as uneconomic maintenance costs.

SKM concluded that the proposed programs were prudent, with minor exceptions (replacement of two pumps at the same time where one is still within the 15 year operating life, or pumps where refurbishment options may be preferable to full replacement). SKM did not identify any revisions to the project budget for the review period associated with these exceptions.

Efficiency

SKM considered that the use of quotes and tenders and unit rates from recent similar projects was an appropriate process for the development of forward budgets.

SKM recommended that Redland Water investigate potential cost savings associated with the bulk purchase of pumps and the costs associated with storage and inventory to determine if efficiency gains can be made.

SKM found the project to be efficient.

Policies and Procedures

SKM found that Redland Water did not apply a standardised approach to cost estimating for this project, or prepare a summary document, and there was no evidence of an implementation strategy. SKM reported partial use of a toll gate/gateway review process.

In response, Redland Water advised that:

- (a) the cost estimation for the entire pump fleet equated to a standard cost estimation across all its pumping assets
- (b) a summary document was unnecessary as the program is not a major project; further, Redland Water disagreed with the requirement due to the [small] size of the organisation and the nature of the program
- (c) a gateway process on the occurrence of infield pump failure would not be prudent or efficient due to the low dollar value associated with each purchase. There is a gateway review process at the engineering level at the design / replacement stage as errors can occur at a technical level but this is captured in the counter-sign off of the needs specification. [Redland Water] operations must seek design office approval on all pump purchases.

In response, the QCA notes that a summary document can facilitate internal and external review and reduce compliance costs. This requirement applies equally to all entities under the Ministerial Direction. All five entities subject to price monitoring review are SEQ service providers under the DR Act. Further, a summary document can usefully crystallise the internal knowledge in a smaller organisation.

SKM accepted that the counter-sign off of the needs specification is appropriate for individual pumps; however, SKM recommended that the overall budget for this rolling program be incorporated into a gateway review process.

²⁷ Environmental licences are regulated by DEHP.

Conclusion

Table 19 below shows the expenditure profile for the Pumps project.

Table 19 Pumps (\$m)

	<i>Previous years</i>	<i>2013-14</i>	<i>2014-15</i>	<i>Total</i>
Redland Proposed	0.00	0.36	0.37	0.73
SKM Adjustment	0.00	0.00	0.00	0.00
QCA Recommended	0.00	0.36	0.37	0.73

Note: Capital expenditure as-incurred. Source: SKM (2013a).

4.6.6 Meter Replacement Program

Background

Redland City Council owns and maintains over 51,000 residential and non-residential water meters.

The Meter Replacement Program is a long term program to maintain an accurate meter fleet. Meters are replaced through an annual rolling program to maintain an age of 10 years for all meters. The priorities for meter replacement are:

- (a) stopped and damaged meters
- (b) meters older than 10 years with more consumption recorded than set in the consumption replacement criteria table
- (c) meters older than 10 years with less consumption recorded than set in the consumption replacement criteria table
- (d) meters of any age with more consumption recorded than set in the consumption replacement criteria table.

Implementation of a water meter replacement strategy will aid the prevention, detection and recovery of water losses. The replacement program will continually replace old and high usage meters which generally lose accuracy over time and usage, resulting in under-registration of the actual volume passed through the meter resulting in revenue loss for Redland Water.

Table 20 below shows the number of meters, by size, Redland City Council will replace during the review period.

Table 20 Water meter replacement in 2013-15

<i>Meter size</i>	<i>Number of meters to be replaced</i>		
	<i>2013-14</i>	<i>2014-15</i>	<i>Total</i>
20 mm	4,687	5,000	9,687
25 mm	120	100	220
32 mm	90	75	165
40 mm	48	30	78
50 mm	61	49	110
80 mm	11	7	18
100 mm	26	26	52
150 mm	1	0	1
Total	5,044	5,287	10,331

Source: SKM (2013a).

Table 21 below shows the age profile of the 20mm meters.

Table 21 Number of 20mm water meters to be replaced by age

<i>1-5 years old</i>	<i>6-9 years old</i>	<i>10-15 years old</i>	<i>Over 16 years old</i>	<i>Total</i>
29,167	17,439	3,646	27	50,279

Source: SKM (2013a).

Redland Water submitted that the expenditure (as-incurred) on the project would be \$0.62 million in 2013-15. Redland Water has forecasted further expenditure of \$2.90 million from 2015-23 on the program.²⁸ The Meter Replacement Program is being managed by Redland City Council, not Redland Water; no costs have been allocated from the council to the CBU for the program.²⁹

Prudency

Redland Water nominated renewals as the project driver for the program. SKM identified compliance as a secondary driver, noting that the *National Measurement Act 1960* (Cth) states that utility meters used for trade must be verified in terms of accuracy of measurements in accordance with relevant standards (AS3565.1-2010 and AS3565.4-2007).³⁰

SKM also noted the DR Act requires each SEQ service provider to take reasonable steps to ensure each meter recording each of its customers' water consumption is read at least once each year.³¹

Based on comparison of the age of the 20mm meters and the number of meters proposed to be replaced in the 2013-14 and 2014-15 programs, SKM did not consider that all of the 20mm

²⁸ RW supporting information (2013).

²⁹ RW supporting information (2013).

³⁰ AS3565.1-2010: Meters for cold and heated and non-drinking water supplies - Technical requirements; AS3565.4-2007: Meters for Water Supply - In-service compliance testing.

³¹ Section 99AG.

meters in the program will reach the age replacement, consumption or Australian Standard triggers during the review period. As such, SKM:

- (a) concluded that the proposed scope of was not prudent
- (b) recommended that a lower number of meters be replaced
- (c) calculated that 5,631 meters will be 10 years or older within the review period and require replacement.

Efficiency

SKM considered that the standards used for this project are appropriate.

On the basis of the information provided, SKM was unable to comment on the appropriateness of the tendering process.

Policies and Procedures

SKM found that Redland Water did not apply a standardised approach to cost estimating for this project or prepare a summary document, and did not implement a toll gate / gateway review process.

Conclusion

Despite SKM's conclusion that a lower number of meters need to be replaced, having regard to the low unit rates used by the council for the meter replacement, SKM concluded the project was efficient.

SKM concluded Table 22 below shows the expenditure profile for the Meter Replacement Program.

Table 22 Meter Replacement Program (\$m)

	<i>Previous years</i>	<i>2013-14</i>	<i>2014-15</i>	<i>Total</i>
Redland Proposed	0.32	0.31	0.32	0.94
SKM Adjustment	0.00	0.00	0.00	0.00
QCA Recommended	0.32	0.31	0.32	0.94

Note: Capital expenditure as-incurred. Source: SKM (2013a).

4.7 Adjustments to sampled projects

On the basis of SKM's detailed review of six sampled projects, the QCA has reduced 2013-15 expenditure in respect of two projects, as per Table 23 below. The overall reduction of \$7.69 million (54.7% of the sampled expenditure) is largely due to a deferral of \$7.50 million for the Point Lookout STP.

Table 23 Review of Capital Expenditure for 2013-15 (\$m)

<i>Project</i>	<i>SKM Assessment</i>			<i>Expenditure*</i>		
	<i>Prudent</i>	<i>Efficient</i>	<i>Comment</i>	<i>RW</i>	<i>SKM</i>	<i>QCA</i>
1. Point Lookout STP	Yes	Yes	Prudent and efficient; project due for completion after 2013-15.	7.50	-7.50	0.00
2. Sewerage Pump Station # 6	Yes	Yes	Prudent and efficient.	3.93	0.00	3.93
3. Benfer Rd DMA Network Upgrade	Yes	No	Prudent and efficient; project due for completion after 2013-15.	0.19	-0.19	0.00
4. Redland Mainland WSS Network Upgrade	Yes	Yes	Prudent and efficient.	1.09	0.00	1.09
5. Pumps	Yes	Yes	Prudent and efficient.	0.73	0.00	0.73
6. Meter Replacement Program	No	Yes	Partially prudent; not all meters will require replacement due to age. Efficient due to the low unit rates used.	0.62	0.00	0.62
Total				14.07	-7.69	6.37

* Excludes expenditure on projects incurred before 1 July 2013. Source: SKM (2013a). Table may not add due to rounding.

Due to the unique nature of the adjustments made above, SKM did not consider the findings from the adjusted projects could be extrapolated to other projects.

To translate the as-incurred adjustments of Redland Water's capital projects into as-commissioned adjustments, the QCA relied on Redland Water's data template. However, the template contained hard coded values, rather than formulae, in the capital expenditure worksheet, so it was not possible for the QCA to calculate the commissioned value of the adjustments to the program. Given the overall reduction was \$7.69 million, the QCA does not consider this issue to have had a material impact on Redland Water's MAR.

4.8 Policies and procedures

Capital expenditure planning from 2010 to 2012

In the 2010-11 and 2011-12 reviews, the QCA reported on Allconnex's approach to capital planning. Table 24 below summarises the QCA's key findings from these reports.

Table 24 Allconnex's capital planning - 2010 to 2012

Year	QCA's capital planning findings
2010-11	<p>Allconnex advised that its initial submission was premised on a consolidation of its participating councils' capital expenditure forecasts for 2010-11 (totalling \$485.4m). Subsequently, Allconnex undertook a comprehensive review of the capital program based on prudence and efficiency principles and deferred or removed approximately \$168m in capital expenditure for 2010-11 (bringing total capital expenditure to \$314.9m after a QCA adjustment of \$2.5m was applied).</p> <p>The \$168m saving was part of a \$500m capital expenditure saving identified by Allconnex for its first five years of [planned] operation.</p> <p>In its draft report, the QCA made a number of recommendations for project selection and prioritisation across the three council districts; in particular, the QCA encouraged Allconnex to take into account a regional perspective when developing future capital works programs. Allconnex supported the QCA's recommendations on its capital planning process.</p>
2011-12	<p>Allconnex submitted that actual capital expenditure for 2010-11 was \$217.5m. Allconnex identified the re-scoping of two major projects as having a significant impact on its original 2010-11 capital expenditure estimates: (a) the Stapylton STP construction was deferred, saving \$60m over five years; and (b) the Merrimac West Wastewater Upgrade was found to cost \$126m more than an alternative pump station option.</p> <p>Allconnex noted that: (a) around 70% of its planned capital expenditure over the next three years was growth related; and (b) the timing of these developments and supporting infrastructure would play a significant part in infrastructure planning.</p> <p>Allconnex identified council Total Water Cycle Management (TWCM) plans³² as being a key input into its planning process, citing for example the significant cost associated with Redland City Council's aspiration to sewer existing non-sewered areas such as the Southern Moreton Bay Islands and their mainland counterparts.</p> <p>Allconnex forecasted its 2011-12 capital expenditure to be \$182.97m, a decrease of \$344.53m on the forecast of \$527.50m provided in 2010-11.</p> <p>Allconnex also provided an update on improvements to its capital planning processes.</p>

Source: QCA (2011), QCA (2012a).

Capital expenditure planning from 2013 to 2015

The assessment of capital expenditure during the price monitoring period also takes into account the robustness of the capital expenditure program planning and delivery processes and procedures in an overall sense, and identifying any areas for improvement. This review is conducted with respect to good industry practice.

SKM reviewed whether Redland Water's policies and procedures reflect good industry practice, drawing on the following criteria:

- (a) a standardised approach to cost estimating including whether a summary document had been prepared to facilitate review and reporting
- (b) a gateway review process
- (c) detailed analysis of options for major projects
- (d) only commissioned capital expenditure is included in the RAB
- (e) compliance with legislation and corporate plans
- (f) consideration of efficiency from a regional perspectives

³² The Environmental Protection (Water) Policy 2009 (Qld) (EPP Water) previously required GCCC, LCC and RCC to prepare TWCM plans by 1 July 2015. RCC's TWCM plan was published in February 2013 (RCC 2013c).

- (g) whether the asset management system is consistent with Publicly Available Specification 55 - Asset Management (PAS-55)³³ or similar
- (h) procurement and other delivery processes.

SKM's review is summarised below.

Standardised approach to cost estimating

Redland Water bases its cost estimating on unit rates provided in appropriate consultants' reports, which were detailed for the three service areas of water supply, wastewater collection and wastewater treatment. For water supply, section 25 of Allconnex's 'Water Supply Network Master Plan Northern District' (May 2011) sets out a standardised approach to cost estimating for this scope of work.

However, no existing procedural document was provided by Redland Water which sets out its requirement to use a standardised approach to cost estimating across the CBU. As such, SKM considered that Redland Water's cost estimating systems were not in keeping with good practice.

Gateway review

Redland City Council has introduced a Portfolio Management Office (PMO) to improve governance in the delivery of operating and capital programs across the council, including Redland Water capital projects. Operational and capital and programs and projects require the development of a 'Project Brief' and 'Financial Summary' for submission to the PMO.

Section 2 of the 'PMO1033 Project Plan' document described three phases of a council project as being planning, execution and end project stage. SKM considered that this "simple phasing" did not meet the requirements of a toll-gate or gateway review process at relevant approval stages that is compliant with good industry practice (SKM 2013a).

SKM noted that the overall process contained a benefits realisation assessment ('PMO1036 (F) Benefits Realisation Plan' and 'PMO1022 Post Implementation Review') which is consistent with good industry practice.

Detailed analysis of options for major projects

Section 2.3 of the PMO project brief requires assessment of at least three options: the preferred option; a minimal approach option; and the 'do-nothing' option. Each option is required to be analysed for risks, benefits, cost, community impact and perception. SKM concluded that this section of the process was consistent with good industry practice.

Only includes only commissioned capital expenditure from 1 July 2010 in the RAB

SKM required information relating to 2010-13 expenditure and the year completed and commissioned to make a determination as to whether the RAB only includes commissioned capital expenditure from 1 July 2010.

As noted above, the QCA has adopted data from the Allconnex Annual Report to populate capital expenditure on an as-commissioned basis from 2010-12.

Compliance

SKM's review of key Redland City Council and Redland Water documents governing major capital expenditure for their compliance with legislation is shown in **Appendix D**.

³³ PAS-55 is published by the British Standards Institution.

From its review, SKM considered that the capital expenditure policies and procedures supplied were not consistent with good industry practice as there was no connection between Redland City Council's draft 'Programme and Project Management Framework' (and associated documents) and the Redland Water's Netserv Plan Part B.

The Water Netserv Plan Part A and Part B documents were updated in June 2013. Redland Water also referred Part A to the water supply regulator (in DEWS) for comment as part of its consultation process.³⁴ The council has not yet endorsed its plan, nor submitted it to the Planning Minister for endorsement, pending advice from DEWS that legislative amendments to the requirements for inclusion in Water Netserv Plans may be made.³⁵

Considers regional perspective

SKM noted that the DR Act requires SEQ service providers to prepare Water Netserv Plans by 1 March 2014³⁶. An entity's Water Netserv Plan must indicate how the entity plans to achieve effective outcomes for the provision of water and sewerage services in the entity's area and the SEQ region.

Further, the Bulk Water Supply Code (DEWS 2013a) also includes provisions for co-ordinated water system planning between the bulk and distribution sectors in SEQ to achieve infrastructure planning (including water quality improvements) on a best value for money basis.

Redland Water advised that it is an active participant in the Strategy and Planning Committee for SEQ formed under the Bulk Water Supply Code.

However, none of the procedural documents reviewed by SKM included provisions to address regional requirements at key decision points. Hence, SKM concluded Redland Water's process did not comply with the regional perspective requirement.

In response, Redland Water stated:

- (a) it would incorporate consideration of regional perspectives into major business cases where appropriate. Redland City Council is part of the regional partnership with Seqwater and the other SEQ service providers. Further, Redland City Council was instrumental in ensuring that there was a regional cooperation aspect embedded in the Bulk Water Supply Code
- (b) much of its infrastructure has no regional context due to Redland's geographical location. The regional issues that are directly relevant to Redland Water are the effectiveness of disinfection of bulk water and possible opportunities for discharge of effluent in the Logan area.

The QCA considers that the realisation of benefits due to a regional perspective should be captured and reported, to demonstrate regional efficiencies are being pursued and achieved.

Asset management system

Redland City Council capital infrastructure projects are firstly documented and rationalised in the appropriate Asset and Service Management Plans (ASMP). ASMPs are prepared to meet council's asset management planning obligations under the LGA³⁷. The ASMP provides the

³⁴ DR Act, s 99BS.

³⁵ RW supporting information (2013).

³⁶ Section 99BJ.

³⁷ Section 104(5)(a)(ii).

overarching strategy for the asset class and considers renewal, upgrade and expansion expenditure and prioritises the projects within the asset class.

The council's asset management process is based on the International Infrastructure Management Manual (IIMM).³⁸ The IIMM provides Queensland councils with a basis for asset management planning including a road map for preparing an asset management plan (DLGP 2011). The council will assess current practice within this framework for future iterations of the plans.

To meet its long term asset management planning obligations under the LGA and LGR, the council is also developing the 'Long Term Asset Management Plan 2014/15' (LTAMP). The LTAMP collates the findings and actions from the ASMPs to present a consistent and corporate picture of the asset base and its requirements. The LTAMP has a 10 year horizon and provides direct input to council's capital expenditure program.

SKM considered good industry practice for asset management is specified by PAS-55³⁹. Based on the documentation it reviewed, SKM reviewed Redland Water's asset management system against PAS-55. SKM identified a range of issues with Redland Water's asset management system; for example, coverage of various requirements was found to be 'too preliminary' to comply with good industry practice, documentation requirements were not addressed or referenced adequately, and management review was not addressed. Accordingly, SKM concluded that Redland Water's asset management system was not in keeping with good industry practice and was not robust.

SKM also reported, however, that Redland City Council's 'Enterprise Asset and Services Management Strategy' (March 2011) has a comprehensive program of (30) planned improvements to asset management processes.⁴⁰ The improvement opportunities align with the Asset Planning and Management sub-framework of the National Framework for Local Government Financial Sustainability, endorsed by the Local Government and Planning Ministers' Council (LGPMC) in 2009.⁴¹

Procurement

Redland Water advised that it follows the procurement requirements in the LGR.⁴²

Redland City Council has developed a draft procurement policy, draft procurement manual and draft procurement controls manual. SKM reported that these documents were, at the time of review, in draft form and are all subject to internal review with any identified issues to be addressed in 2014.

SKM concluded that, if the above-mentioned draft documents comply with good practice, the council's procurement practices are, or will be, adequate and consistent with good industry practice and the requirements of the LGR. However, SKM stated that it had not sighted these documents.⁴³

³⁸ The IIMM is published by the Institute of Public Works Engineering Australia (IPWEA).

³⁹ PAS-55 is published by the British Standards Institution.

⁴⁰ Refer to SKM (2013a), section 3.3.4.

⁴¹ RW supporting information (2013).

⁴² Section 198 and ch 6.

⁴³ The QCA notes that the council's Corporate Procurement Policy (POL-3043), approved June 2013, is available on the council's website (<http://www.redland.qld.gov.au>).

Summary of findings on policies and procedures

The QCA notes that SKM found that Redland Water's capital planning policies and procedures were not always consistent with good industry practice but Redland Water was generally aware of, and plans to address, these issues.

For example, SKM identified a range of issues in Redland Water's asset management system, as coverage of various requirements was too preliminary to be consistent with good industry practice, documentation and compliance requirements were not addressed or referenced adequately, and management review was not addressed. However, SKM noted Redland Water is developing a comprehensive program of planned improvements to asset management processes.

SKM did not quantify any savings arising from its review of policies and procedures. The QCA notes that this is typical of such reviews which do not readily lend themselves to quantification.

4.9 Summary of adjustments for 2013-15

The effects of the QCA adjustments to capital expenditure are shown below.

Table 25 Redland Water's and QCA's capital expenditure as-commissioned (\$m)

	2013-14	2014-15
Redland Water's proposed capital expenditure	13.57	15.58
QCA adjustments to sampled capital expenditure	-0.50	-7.19
Total capital expenditure	13.07	8.39

Source: QCA calculations.

4.10 Contributed, Donated and Gifted Assets

Under the Ministerial Direction, the QCA must accept that, in setting prices entities may have applied a revenue offset approach to account for capital contributions received. This approach is to remain in effect until such time as the entity nominates, through their price monitoring returns, to adopt the asset offset method. Where a change in methodology is adopted, the RAB is not to be adjusted retrospectively.

Under legislation, a maximum charge applies for capital contributions (for water, sewerage, transport and public parks). For example, the cap for a three-bedroom dwelling is \$28,000 (DSDIP 2013). The maximum charge remains in place while a review of infrastructure planning and charging is underway by the Department of State Development, Infrastructure and Planning (DSDIP 2013).

Under the price monitoring framework, the QCA assesses whether the methodology adopted by the entities to forecast contributed assets and capital contributions is reasonable in the circumstances.

Redland Water's submission

Redland Water's contributed assets and capital contributions are shown in Table 26 below. Redland Water's pricing model indicated that it adopted the asset offset approach for contributed assets and the revenue offset approach for capital contributions.

Table 26 Redland Water contributed assets and capital contributions (\$m)

	2010-11	2011-12	2012-13	2013-14	2014-15
Contributed Assets	0.00	0.00	6.28	3.00	3.00
Capital Contributions	3.64	1.82	4.44	2.35	2.35
Total	3.64	1.82	10.71	5.35	5.35

Source: RW (2013b).

QCA's analysis

The QCA accepts Redland Water's forecasts of contributed assets and capital contributions from 2012-13, but has used the actual data for 2010-11 and 2011-12 from Allconnex's 2011-12 Annual Report rather than forecasts. As a result the QCA's estimate of contributed assets and capital contributions is \$14.06 million higher over the 2010-12 period. The QCA has reflects Allconnex's asset offset approach to the treatment of contributed assets and capital contributions over this period.

The QCA has accepted Redland Water's approach to the treatment of contributed assets and capital contributions from 2012-13.

Table 27: Revised contributed assets and capital contributions (\$m)

	2010-11	2011-12	2012-13	2013-14	2014-15
Contributed Assets	3.87	10.74	6.28	3.00	3.00
Capital Contributions	2.33	2.58	4.44	2.35	2.35
Total	6.20	13.32	10.71	5.35	5.35

Source: Allconnex (2012), RW (2013b).

4.11 Return on assets

The Ministerial Direction required the QCA to advise a benchmark WACC by 31 January 2013. The QCA is also required to monitor the WACCs applied by the entities against the benchmark WACC.

By 31 January 2013, the QCA advised a WACC benchmark of 6.57% (post-tax nominal) for 2013-15. The benchmark WACC and supporting information were also published on the QCA website. In doing so, the QCA noted that it had applied its (then) current methodology to calculate the benchmark WACC. Further, that the benchmark WACC is used to calculate the MAR in the QCA's price monitoring reports. However, the entities retain control over their actual WACC assumptions and prices during the monitoring period.

Redland Water adopted the benchmark WACC of 6.57%.

To ensure that the total return on capital is equivalent to WACC, there needs to be an adjustment to avoid double-counting of inflationary gain. This is a standard adjustment made by the QCA under its nominal framework.⁴⁴ To estimate inflation, the Ministerial Direction

⁴⁴ This issue arises as the nominal WACC is applied to a nominal RAB and is explained on page 197 of the Dalrymple Bay Coast Terminal Draft Access Undertaking (QCA 2004).

requires the QCA to use the annual March to March ABS CPI (all groups, Brisbane).⁴⁵ Redland Water's pricing model adopts the same inflation estimates with the exception of 2013-14, where it has adopted 2.1% compared to the QCA's 2.5%.

Redland Water's estimate of the return on capital resulting from the 6.57% WACC and its estimate of the RAB is compared with the QCA's estimate in the tables below.

Table 28 Return on capital (\$m)

	2013-14				2014-15			
	Water		Sewerage		Water		Sewerage	
	RW	QCA	RW	QCA	RW	QCA	RW	QCA
Gross return on capital	11.9	12.6	19.7	17.8	12.0	12.7	20.4	18.0
Less indexation	-3.7	-4.8	-6.0	-6.8	-4.5	-4.8	-7.5	-6.8
Return on capital	8.2	7.8	13.7	11.0	7.5	7.9	12.9	11.1

Source: RW (2013b), QCA calculations.

4.12 RAB roll forward

In accordance with the Ministerial Direction and normal regulatory practice, the initial RAB is rolled forward to account for capital expenditure, inflationary gain, depreciation (return of capital) and disposals. In calculating regulatory depreciation, the QCA is required to take into account the existing useful lives attaching to the individual assets or relevant asset classes.

Redland Water's submission

As noted previously, Redland Water provided a starting RAB value as at 1 July 2010 consistent with the value of assets transferred to Allconnex RAB as at 1 July 2010. However, the Redland Water pricing model adopts a starting RAB as at 1 July 2013, as noted in the tables below.

Table 29 Redland Water asset base roll forward - water (\$m)

	2010-11	2011-12	2012-13	2013-14	2014-15
Opening RAB	-	-	-	180.1	181.9
Net additions	-	-	-	2.3	2.1
Indexation	-	-	-	3.7	4.5
Depreciation	-	-	-	-4.3	-4.4
Closing RAB	-	-	-	181.9	184.1

Source: RW pricing model.

⁴⁵ As per the Information Requirements for 2013-15, the indexation is 3.6% for 2010-11, 1.3% for 2011-12, 2.1% for 2012-13, and 2.5% for 2013-15.

Table 30 Redland Water asset base roll forward - sewerage (\$m)

	2010-11	2011-12	2012-13	2013-14	2014-15
Opening RAB	-	-	-	292.5	305.5
Net additions	-	-	-	15.4	10.8
Indexation	-	-	-	6.0	7.5
Depreciation	-	-	-	-8.5	-8.9
Closing RAB	-	-	-	305.5	314.9

Source: RW pricing model.

QCA Analysis

As noted previously, the QCA considers that the starting RAB value as at 1 July 2010 should reflect the final Allconnex RAB as at 1 July 2010 as previously advised by the QCA. Capital expenditure data for 2010-12 should reflect actual data in the Allconnex Annual Report. The QCA has therefore adopted this position in its RAB roll-forward.

The QCA applied straight-line depreciation in 2013-15 and the indexation as set out in the Information Requirements for 2013-15. For mains assets, Redland Water submitted an asset life range of between 50 and 90 years for water mains and 40 and 100 years for sewer mains. For other asset classes, Redland Water submitted a point estimate. For modelling purposes, the QCA has adopted the mid-point (70 years) of Redland Water's submitted ranges for mains assets. Since Redland did not provide the asset lives for trade waste assets, the QCA has assumed the same asset lives for trade waste as for wastewater.

The QCA starting RAB for 2013-15 is higher than Redland Water's for water assets and lower for sewerage assets. The difference arises due to the use of the QCA RAB as at 1 July 2010 and the use of actual data for 2010-12 from the most recent Allconnex Annual Report.

Table 31 QCA asset base roll forward - water (\$m)

	2010-11	2011-12	2012-13	2013-14	2014-15
Opening RAB	191.56	192.15	190.24	191.05	192.25
Capex	1.53	4.48	3.40	3.34	3.33
Indexation	6.88	2.49	4.00	4.80	4.83
Depreciation	-5.67	-3.53	-4.09	-5.44	-6.20
Disposals	0.00	0.00	0.00	0.00	0.00
Capital contributions	-2.16	-5.35	-2.50	-1.50	-1.50
Closing RAB	192.15	190.24	191.05	192.25	192.71

Source: QCA calculations.

Table 32 QCA asset base roll forward - sewerage (\$m)

	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>	<i>2014-15</i>
Opening RAB	267.00	266.55	263.15	266.63	271.82
Capex	2.33	6.26	8.80	9.73	5.05
Indexation	9.58	3.46	5.58	6.77	6.84
Depreciation	-8.33	-5.15	-7.06	-9.81	-10.46
Disposals	0.00	0.00	-0.06	0.00	0.00
Capital contributions	-4.04	-7.97	-3.78	-1.50	-1.50
Closing RAB	266.55	263.15	266.63	271.82	271.75

Source: QCA calculations.

4.13 Capital Costs

A comparison of Redland Water and QCA capital costs is provided in the table below.

Table 33 Comparison of Redland Water and QCA Capital Costs (\$m)

	<i>2013-14</i>				<i>2014-15</i>			
	<i>Water</i>		<i>Sewerage</i>		<i>Water</i>		<i>Sewerage</i>	
	<i>RW</i>	<i>QCA</i>	<i>RW</i>	<i>QCA</i>	<i>RW</i>	<i>QCA</i>	<i>RW</i>	<i>QCA</i>
Gross return on capital	11.9	12.6	19.7	17.8	12.0	12.7	20.4	18.0
Indexation	-3.7	-4.8	-6.0	-6.8	-4.5	-4.8	-7.5	-6.8
Net return on capital	8.2	7.8	13.7	11.0	7.5	7.9	12.9	11.1
Return of capital	4.3	5.4	8.5	9.8	4.4	6.2	8.9	10.5
Total capital costs	12.5	13.3	22.2	20.8	11.9	14.1	21.8	21.6

5 OPERATING COSTS

Under the Ministerial Direction, the QCA is required to inform customers of the costs and other factors underlying water and sewerage services, including distinguishing between bulk and distribution/retail costs. Bulk water costs are treated as a pass-through item.

Further, the QCA is required to review the prudence and efficiency of Redland Water's operating costs and its policies and procedures. The Ministerial Direction requires a focus on areas of significant cost increase, and specifically refers to the operating cost categories of materials and services, employees, corporate costs and electricity.

5.1 QCA's approach

The QCA considered the prudence and efficiency of Redland Water's forecast operating costs for 2013-15 in accordance with the Ministerial Direction.

The QCA's assessment focussed on:

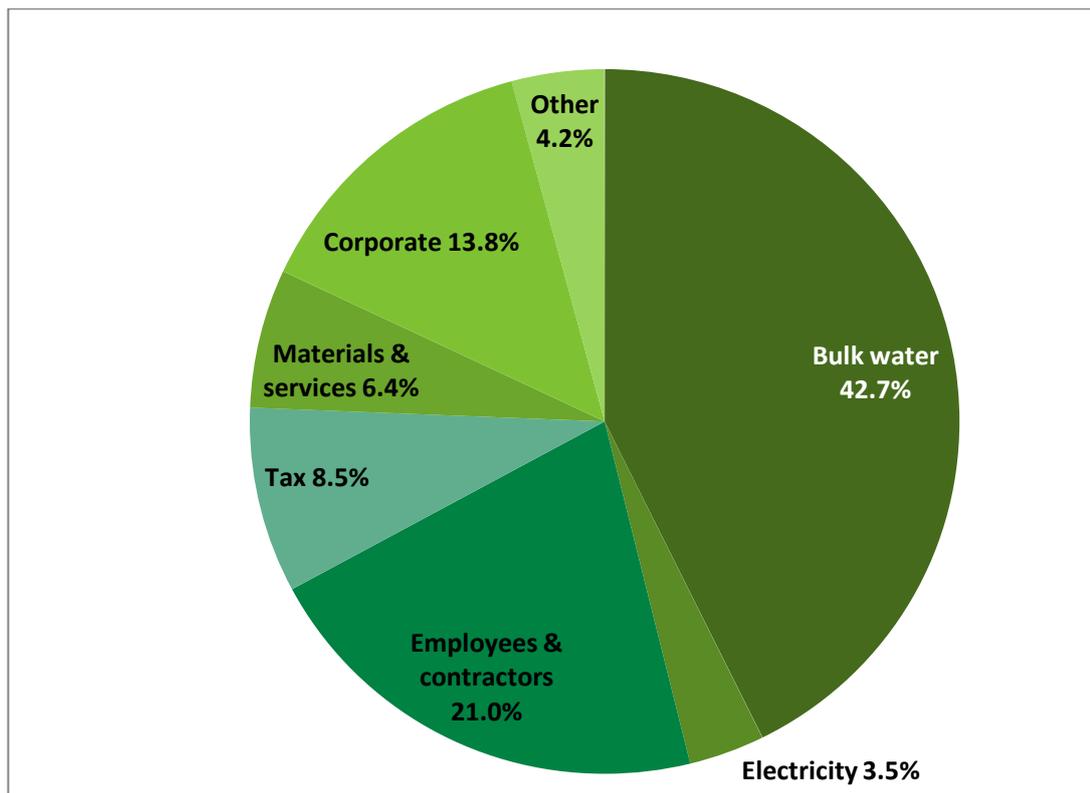
- (a) identifying the bulk and distribution/retail components of operating costs and the reasons for cost increases
- (b) high-level benchmarking of operating costs
- (c) a review of Redland Water's policies and procedures against good industry practice
- (d) the treatment of bulk water costs as a pass-through item
- (e) the prudence and efficiency of materials and services, employees (and contractors), corporate costs and electricity.

The QCA appointed SKM to assist in its assessment of operating and capital expenditure. As noted in the previous chapter, the terms of reference for SKM's review were consistent with the Direction and circulated to entities prior to the commencement of the review. SKM provided a copy of its draft report to the entities for comment and their responses were taken into account in SKM's final report.

SKM's final report is a detailed review of the operating costs and policies and procedures and is available on the QCA's website. Key issues from the SKM review that underpin the QCA's findings are summarised below.

5.2 Total operating costs

Redland Water submitted operating costs of \$48.4 million in 2013-14 and \$51.7 million in 2014-15. Over 40% of Redland Water's forecast operating costs over the 2013-15 period is the cost of purchasing bulk water from Seqwater (Figure 3).

Figure 3 Redland Water's operating costs 2013-15 (\$m)

Source: RW (2013b).

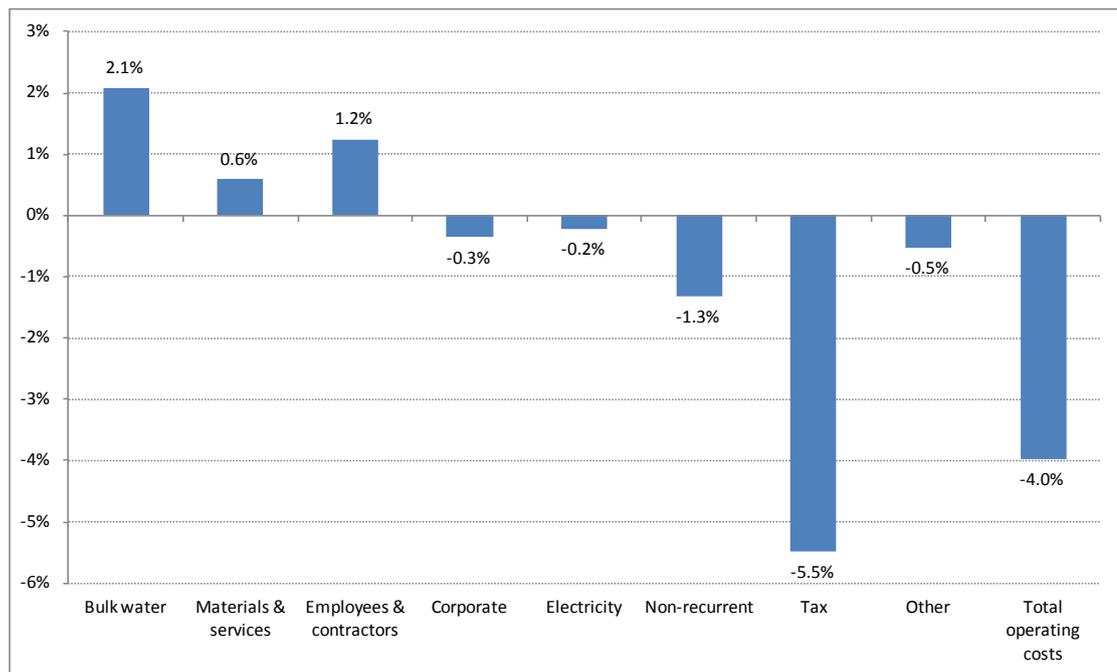
Table 34 shows Redland Water's detailed operating cost forecast.

Table 34 Redland Water's forecast operating costs (\$m)

	2012-13	2013-14	2014-15
Bulk water	18.9	19.9	22.8
Materials & services	2.9	3.2	3.2
Employees & contractors	9.8	10.4	10.6
Corporate costs	6.7	6.6	7.2
Electricity	1.8	1.7	1.8
Non recurrent costs	0.7	-	-
Tax	7.3	4.6	4.0
Other	2.4	2.1	2.1
Total operating costs	50.4	48.4	51.7

Note: excludes unregulated services. Source: RW (2013b).

Redland Water's 2013-14 operating costs fell slightly from 2012-13, as cost increases in bulk water and employee costs were more than offset by falling tax expense (Figure 4). The QCA notes that estimates of tax expense are dependent on other expense and revenue items. If tax expense is excluded, Redland Water's 2013-14 operating expenditure is 1.8% higher than 2012-13.

Figure 4 Contributions to change in operating costs 2013-14

Source: RW (2013b).

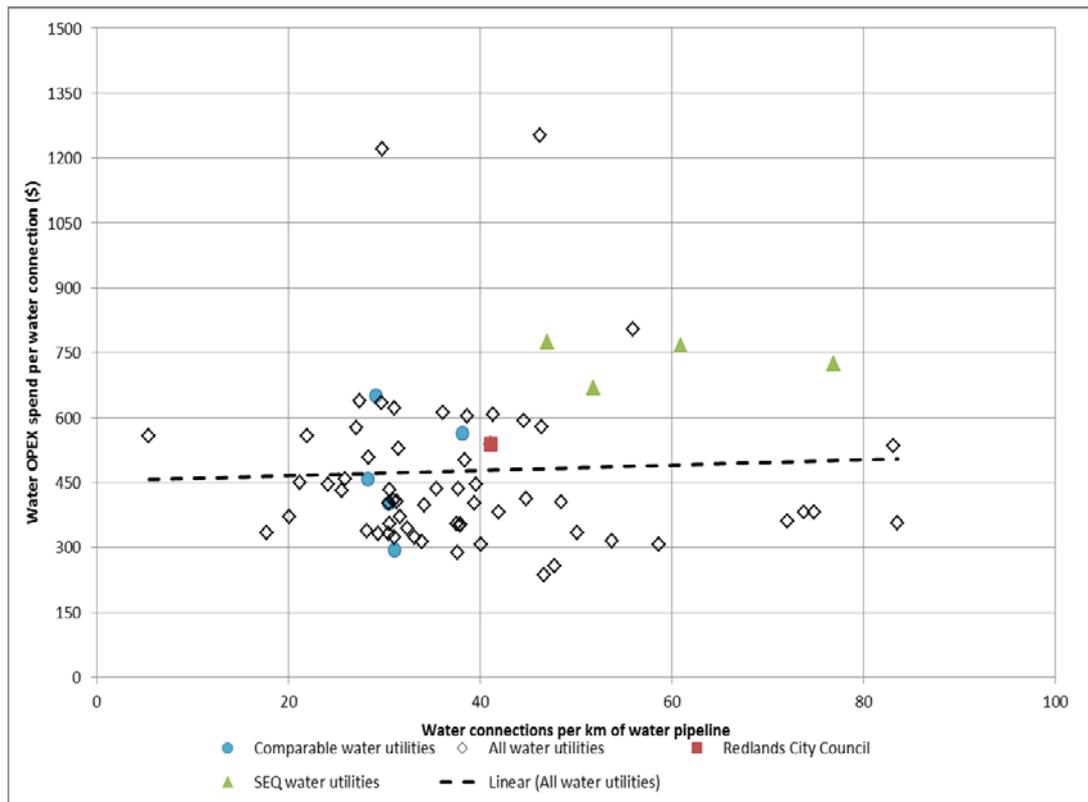
The QCA has adopted Redland Water's submission to undertake a detailed review of operating costs. However, it is noted that these costs are \$2.7 million lower over 2013-15 than the operating costs included in Redland Water's 10-year pricing model. The primary reason for the difference is a lower tax estimate (-\$2.5 million).

5.3 Benchmarking

SKM (2013a) conducted high-level benchmarking of Redland Water's operating expenditure against other Australia water entities. SKM's analysis highlights five entities that were the most comparable to Redland Water.

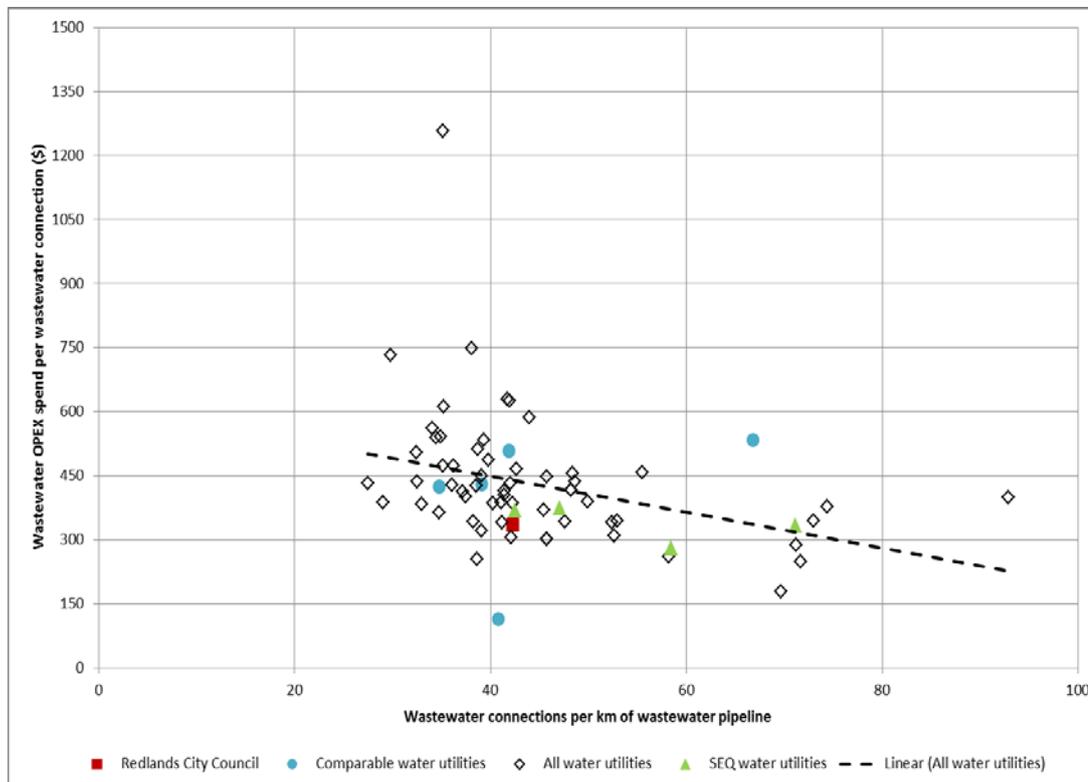
SKM concluded that Redland Water's water operating expenditure is slightly above the Australian benchmark for water utilities whilst considerably lower than other SEQ water utilities. However, the wastewater operating expenditure of Redland Water is below Australian benchmarks and is comparable to other SEQ water utilities (Figure 5 and Figure 6).

Figure 5 Water operating cost benchmarking



Source: SKM (2013a).

Figure 6 Sewerage operating cost benchmarking



Source: SKM (2013a).

5.4 Policies and planning

SKM (2013a) found a number of areas where Redland Water's policies and procedures for operating costs are not consistent with good industry practice. These include lack of documentation of compliance processes, not taking a regional perspective to operating expenditure decisions and inadequate asset management and procurement processes (Table 35 below).

Table 35 Assessment of Redland Water's operating costs policies

<i>Policy</i>	<i>SKM assessment</i>	<i>Possible areas for improvement</i>
Legislative compliance	Not consistent with good industry practice.	Redland Water should develop a clear and transparent compliance register.
Regional perspective	Not consistent with good industry practice. SKM reviewed a number of procedural documents none of which had explicit provisions to address the requirement for a regional perspective.	Redland Water should consider documenting a regional strategy for service delivery across its region.
Asset management	Not consistent with SKM's view of good industry practice.	The QCA notes that Redland Water is currently undertaking a number of asset management improvement activities.
Procurement	Not consistent with good industry practice.	Finalise its draft procurement policy, draft procurement manual and draft procurement controls manual. Ensure that these manuals comply with good industry practice (e.g. allow for post-implementation benefits realisation reviews of projects) and the requirements of the Local Government Regulation 2012.
Budget formation	Consistent with good industry practice.	Benchmark controllable operating expenditure against similar entities Establish savings options through review of business operating processes for improvements in operating efficiency Develop and document formal budget preparation procedures Implement robust capital works selection and gateway decision making process to help target infrastructure that require higher benchmark operation and maintenance expenditure

Source: SKM (2013a).

The QCA notes SKM's findings and recommends that Redland Water put in place policies and procedures to achieve good industry practice in the above areas.

Bulk water

The Ministerial Direction requires the QCA to allow Redland Water to treat bulk water costs as a 'cost-pass-through' item. To this end, the QCA has reviewed Redland Water's tariffs (**Appendix B**) against those charged by Seqwater. Redland Water has correctly passed through the bulk water price to customers for 2013-14.

The QCA has also reviewed Redland Water's bulk water demand (Chapter 3). The QCA's forecasts of bulk water are higher than Redland's, arising from the use of higher 2012-13 actual

data, higher residential and non-residential connections and some growth in average consumption. The QCA has made a corresponding adjustment to bulk water costs (Table 36). The bulk water costs are then passed-through into the MAR.

Table 36 Bulk water costs

	2013-14	2014-15
Redland Water bulk water cost (\$m)	19.9	22.8
Redland Water bulk water demand (ML)	11,883	11,936
QCA bulk water demand (ML)	13,549	13,806
Bulk water price (\$/kl)	1.72	1.96
QCA revised bulk water cost (\$m)	23.3	27.1
Variance (\$m)	+ 3.36	+4.24

Source: RW (2013b), DEWS (2013b).

5.5 Prudency and efficiency of non-bulk operating costs

Consistent with the Ministerial Direction, the QCA has reviewed the prudency and efficiency of materials and services, employees (and contractors), corporate costs and electricity. These represent 78% of Redland Water's non-bulk operating costs in 2013-15 (Table 37).

Table 37 Redland Water non-bulk operating costs sampled for review (\$m)

Cost	2012-13	2013-14	2014-15
Materials & services	2.91	3.20	3.19
Employees & contractors	9.76	10.38	10.63
Corporate costs	6.74	6.56	7.23
Electricity	1.82	1.72	1.75
Total sample	21.23	21.86	22.80
Total non-bulk operating costs	31.58	28.53	28.89

Source: RW (2013b), SKM (2013a).

The QCA's review considers whether each sampled expenditure item is:

- (a) prudent - required to meet Redland Water's legal and regulatory obligations or its contracts with customers and
- (b) efficient - undertaken in a least-cost manner over the life of the relevant assets and is consistent with relevant benchmarks.

Materials and services

Redland Water initially forecast a 41.1% increase in materials and services costs in 2013-14, but subsequently re-submitted a revised forecast of \$3.2 million, a 10.1% increase from 2012-13. Materials and services costs are expected to decline slightly (0.5%) in 2014-15.

SKM noted a number of reasons for the variation in costs in 2013-14, including:

- (a) cost items like Plant Hire and Traffic Control are determined the expected works to be carried out in the distribution network
- (b) software support costs have increased due to new water planning software that has recently been installed and payment for new sewerage modelling licences
- (c) printing and publication costs have increased as additional publications are planned to inform customers of changes that have or will be occurring to their water services
- (d) the costs of new premises at Toondah Harbour had previously been charged generally to Council but in 2013-14 are charged directly to Redland Water
- (e) training, conferences and seminar costs increased due to the need to comply with Council's budget guidelines, which were not necessarily complied with in 2012-13.

SKM agreed with Redland Water's approach to base the 2013-14 budget on expected work requirements especially since the 2012-13 expenditure data is unreliable and therefore cannot be used as a base cost from which to extrapolate future costs. Given that a more rigorous budgeting approach appears to have been implemented in 2013-14 SKM was of the view that the proposed 2013-14 budget is efficient.

In 2014-15, SKM noted that Redland Water had not given any reason for the 0.5% decline in costs, and noted that it was inconsistent with Redland Water's pricing model, which included a cost escalation factor of 3%. SKM recommended an escalation factor of 2.5%, in line with the RBA's inflation target, resulting in a \$0.1m upward revision in forecast costs.

The QCA accepts SKM's findings for 2013-14, but has proceeded on the basis of Redland Water's lower inadequately justified estimate for 2014-15 noting this is to Redland's account (Table 38).

SKM noted that fleet costs and parks related expenses should be included in direct operating costs, rather than Redland Water's classification of corporate costs. The QCA has therefore added these costs to materials and services, an increase of \$645,000 in 2013-14 and \$665,000 in 2014-15.

Table 38 Revised Redland Water materials and services costs (\$m)

	2012-13	2013-14	2014-15
Water	1.23	1.35	0.97
Sewerage	1.68	2.50	2.88
QCA total	2.91	3.85	3.85
Redland Water total	2.91	3.20	3.19
Variance	-	0.65	0.67

Source: RW (2013b).

Employee and contractor costs

Redland Water (2013b) has budgeted for employee expenses of \$5.9 million in 2013-14, rising to \$6.0 million in 2014-15. Contractor expenses are also forecast to rise from \$4.5 million to \$4.6 million, largely due to an increase in water services.

Redland Water's employee costs do not include staff employed by the Redland City Council that may provide corporate services to the water and sewerage business. The allocation of costs for

such corporate services is governed by Service Level Agreements (SLA) with Council and is accounted for under Corporate Costs.

In reviewing employee costs, SKM noted that 2013-15 employee costs submitted to the QCA were \$4.6 million lower than the employee costs used by Redland Water to calculate prices. The issue of data consistency is discussed further in chapter 7.

Full-time equivalent positions

When Redland City Council resumed responsibility for water and sewerage services from Allconnex, a total of 84 staff returned from Allconnex. This resulted in 12 available vacancies as Redland City Council had a budget for 96 water and sewerage staff.

Redland Water conducted a resources needs assessment and concluded that 100 FTEs were required in 2013-14 to manage and operate the water and wastewater businesses. Redland Water has budgeted for 100.5 FTEs in 2014-15, reflecting growth in connections of 0.5%.

SKM considered that the direct link between community growth and FTE requirements is tenuous, but accepted that some staff increases may be justified if the size of the network grows.

SKM did not recommend any adjustments to Redland Water's FTE forecasts. The QCA accepts SKM's conclusion.

Vacancies

A vacancy factor of 1.7% or \$102,700 for 2013-14 was also factored into the budget in accordance with Council guidelines. SKM noted that Redland Water had indicated that the vacancy adjustment had since increased to 2.6% (an additional \$55,000) and that more savings are expected later in the year. SKM recommended a likely vacancy factor of 4% or \$245,000, resulting in a reduction to 2013-14 employee costs of \$142,300.

The QCA accepts SKM's recommendation.

Employee cost escalation

Redland Water has escalated employee costs by 2.5% in 2013-14 and 2014-15, as per the provisions of its Certified Agreement. In addition, it applied an additional 0.25% increase for the legislated increase in the superannuation guarantee from 9.0% to 9.25% in 2013-14.

The QCA notes that this increase of 2.75% is lower than long term averages of the wage price index (Table 39).

Table 39 Wage price index

<i>Wage price index</i>	<i>Compound Average Annual Growth Rate (March 2003-March 2013)</i>
All Industries (Queensland)	3.9%
Electricity, gas, water and waste services (Australia)	4.2%
Construction (Australia)	4.2%

Source: ABS (2013).

SKM considered that the proposed 2.75% increase is reasonable in that it reflects general market conditions as well as the provisions provided by its Certified Agreements with staff. However, SKM recommended that Redland Water's 2014-15 employee expenses be escalated

by a further 0.25%, as Redland Water did not account for the increase in superannuation guarantee from 9.25% to 9.5%.

The QCA accepts SKM's findings.

Contractors

Redland Water is forecasting an 8% increase in contractor expenses in 2013-14 due to the need to re-establish water and wastewater services on their return from Allconnex. While these businesses returned from Allconnex in 2012-13, not all the management and operational systems required came with the businesses or were appropriate for the reduced scale. As a result some \$0.5 million has been budgeted for new contracts for water and \$260,000 for new contracts for sewerage.

In 2014-15, contractor expenses are forecast to increase by Redland Water's CPI estimate of 2.1%.

Given the fairly limited time since the re-establishment of Redland Water, SKM recommended that the proposed increase in contractor expenditure for 2013-14 is reasonable. SKM therefore did not recommend any saving to contractor expenses.

The QCA accepts SKM's findings.

Conclusion

The QCA's adjustments to Redland Water's employee and contractor expenses are detailed in Table 40.

Table 40 Recommended employee and contractor expenses (\$m)

	2012-13	2013-14	2014-15
Water	3.02	3.41	3.50
Sewerage	6.74	6.83	7.00
QCA total	9.76	10.24	10.49
Redland Water submitted	9.76	10.38	10.63
Variance	-	-0.14	-0.13

Source: QCA calculations, RW (2013b), SKM (2013a).

Corporate costs

Corporate costs are general corporate expenditures that cannot be readily allocated to other cost types. Redland Water has budgeted \$6.6 million in corporate costs for 2013-14 (Table 41). This is forecast to increase by 10.2% to \$7.2 million in 2014-15.

The key corporate functions of Redland Water are provided by Redland City Council in accordance with a SLA. Under the SLA, 22% of Redland City Council's operating expenditure has been allocated to Redland Water in 2013-14. This makes up a little over half of Redland Water's total corporate costs.

Table 41 Redland Water 2013-14 corporate costs (\$m)

SLA with Redland City Council	Finance	1.72
	Human Resources	0.26
	IT Expenses	0.90
	Corporate Fleet Expense	0.69
	Marketing and Communication	0.20
	Corporate Asset Management	0.47
	Other	-0.01
	<i>Total</i>	3.40
Internal Corporate Costs	Corporate Employee Costs	2.26
	Corporate Non-employee Costs	0.73
	<i>Total</i>	2.99
Not allocated ⁴⁶		-0.47
Total Corporate Costs		6.56

Source: RW (2013b).

Corporate employee costs

Redland Water budgeted for an increase of \$285,000 in internal corporate costs in 2013-14 due largely to provision for three additional vacancies for its customer contact centre bringing the total number of employees in the customer centre to seven.

SKM considered that, given the size of Redland Water, the extra expenditure on customer centre employees is not efficient when benchmarked against comparable entities in SEQ. SKM has therefore recommended that internal corporate costs should be adjusted downward by \$225,000 in 2013-14 and \$232,000 in 2014-15.

SKM also noted that the cost escalation factor of 3%, used by Redland Water for 2013-14 and 2014-15, is 0.5% more than contained in Redland City Council's certified agreement. SKM recommended that the rate contained in the certified agreement would be more appropriate. This reduces Redland Water's corporate costs by a further \$26,000 in 2013-14 and \$20,000 in 2014-15.

The QCA accepts SKM's recommendations.

⁴⁶ Redland Water amended its corporate costs, as submitted in its information template, in October 2013 and then subsequently reverted to the costs submitted in the information template, for 2013-14, in November 2013. The breakdown in Table 41 reflects the initial amendment which increased corporate costs in 2013-14 by \$472,000.

Corporate non-labour costs

SKM noted that some of the services provided by Redland City Council to Redland Water do not conform to the QCA's definition of corporate services. SKM therefore recommended removing fleet costs not incurred by corporate staff and parks related expenses and including these costs in direct operating costs. This adjustment reduces Redland Water's corporate costs by \$645,000 in 2013-14 and \$665,000 in 2014-15. These costs have instead been included in materials and services (discussed above).

Redland Water advised SKM that it incurred competitive neutrality costs in relation to land tax and a loan guarantee fee paid to Council. SKM determined that these costs are not corporate costs and, accordingly, reduced Redland Water's corporate costs by \$116,000 in 2013-14 and \$119,000 in 2014-15. This was also confirmed by Redland Water in its response to SKM's Draft Report where it noted that these costs have been included under indirect taxes.

The QCA accepts these recommendations. However, the QCA considers that loan guarantee fees are part of capital financing expenses and are appropriately accounted for through the WACC. Accordingly, the QCA has removed \$21,204 from indirect taxes in 2013-14.

Conclusion

In summary, the QCA considers that Redland Water can achieve efficiencies in its corporate costs (Table 42).

Table 42 Adjustments to Redland Water's corporate costs (\$m)

	2013-14	2014-15
Redland Water submission	6.56	6.73
Redland Water revision	-	0.51
Removal of non-corporate fleet and parks expenses	-0.65	-0.67
Reduction of three FTEs in the Customer Contact Centre	-0.23	-0.23
Adjustment to escalation factor	-0.03	-0.02
Adjustment to exclude indirect taxes	-0.12	-0.12
QCA total	5.53	6.20

Source: SKM (2013a).

Electricity

Redland City Council purchases electricity, on behalf of Redland Water, via a single contract with different terms and conditions for large sites (consuming more than 100MWh of electricity per annum) and small sites (consuming less than 100MWh of electricity per annum).

Redland Water submitted that it paid Origin Energy \$1.5 million in electricity costs in 2012-13. Subsequent to submitting its electricity costs for 2012-13, Redland Water undertook an audit of its accounts which found that there were disputed amounts of the order of \$319,000. As Redland Water has been advised that this amount will have to be paid, it has revised its submitted electricity costs for 2012-13 to include this amount.

After considering detailed consumption and cost data for 2012-13, provided by Redland Water, SKM revised Redland Water's electricity costs for 2012-13 to \$1.7m to remove some bills that are due outside of the 2012-13 financial year.

The QCA accepts SKM's adjustment.

Energy use

Redland Water has not taken forecast growth in energy use into account when forecasting electricity costs for 2013-14.

The QCA considers that energy use tends to increase with bulk water volumes (for water services) and sewerage connections (for sewerage services).

The QCA has therefore used its forecast of growth in bulk water services and sewerage connections to forecast Redland Water's energy use. This equates to average growth of 2.4% in 2013-14 and 1.8% in 2014-15.

Energy prices

After revising its electricity costs for 2012-13, Redland Water has forecast prices to decline by 5.8% in 2013-14 and then increase by 2.1% in 2014-15.

The QCA considers that the appropriate price increase to apply to small sites is the QCA's electricity retail tariff determinations (QCA 2012b and 2013b), adjusted for any discount. Accordingly the QCA has applied an increase of 15% to Redland Water's electricity costs in 2013-14 to reflect the increase in electricity prices. This consists of the weighted average of the increase in the service charge (21%), peak variable charge (26%) and off-peak variable charge (3%) as per QCA (2013b).

Savings

Redland Water is in the process of implementing recommendations from its Energy Audit undertaken by Energetics. The resulting annual savings for 2013-14 are estimated to be \$30,000.

The adjustments to Redland Water's electricity costs are summarised in Table 43.

Table 43 Adjustments to Redland Water's electricity costs (\$m)

	2012-13	2013-14	2014-15
Redland Water submission	1.47	1.72	1.75
Redland Water revision	+0.35		
SKM adjustment	-0.12	-0.02	+0.22
Expected savings		-0.03	-0.03
Growth in energy use		+0.04	+0.04
Adjustment to electricity price increase		+0.26	+0.08
QCA total	1.70	1.97	2.06

Source: QCA calculations.

Tax

Redland Water submitted a tax cost of \$4.6 million in 2013-14. The QCA's tax estimate is calculated to be consistent with its estimate of the MAR (chapter 7).

Table 44 Tax (\$m)

	2013-14	2014-15
Redland Water submitted	4.58	3.95
QCA recommended	0.93	1.16
Variance	-3.66	-2.79

Source: QCA calculations.

5.6 Operating costs summary

Across 2013-15, the QCA has adjusted Redland Water's estimates of operating costs for:

- a substantially higher forecast of bulk water demand, arising from the use of higher base (2012-13 actual) data, growth in connections and average consumption (+\$7.6 million)
- an increased allowance for materials and services costs (+\$1.3 million)
- an increased vacancy factor in calculating employee costs (-\$0.3 million)
- reduced corporate employees, a reduced corporate cost escalation factor and exclusion of non-corporate costs (-\$2.1 million)
- the application of demand growth and electricity prices increase to electricity cost estimates (+0.6 million)
- the removal of loan guarantee fees (-\$0.04 million)
- a revised tax estimate (-\$6.5 million).

Overall, this is an increase of \$0.6 million or 0.6% of Redland Water's submitted operating costs. Excluding the revision to bulk water costs (+\$7.6 million), it is a \$7.0 million or 12.1% reduction to submitted non-bulk operating costs. Due to the differences between Redland Water's submission and its pricing model (-\$2.7 million), the QCA's estimate of efficient operating costs is \$2.1 million below that used by Redland Water to calculate prices.

Table 45 Revised operating costs 2013-15 (\$m)

	2013-14	2014-15
Bulk water	23.26	27.09
Materials & services	3.85	3.85
Employees & contractors	10.24	10.49
Corporate costs	5.53	6.20
Electricity	1.97	2.06
Non recurrent costs	-	-
Tax	0.93	1.16
Other	2.07	2.12
Total operating costs	47.85	52.97
Redland Water proposed total	48.44	51.74
Variance	-0.59	+1.23

Note: excludes unregulated services. Source: SKM (2013a), QCA calculations.

6 MAXIMUM ALLOWABLE REVENUES

6.1 Scope of review

The Ministerial Direction requires the QCA to monitor water and sewerage revenues against the MAR based on the total prudent and efficient costs of carrying on the activity including:

- (a) operating and maintenance costs
- (b) capital costs (including return on capital and depreciation) and
- (c) tax payable.

The Direction also requires the QCA to provide information to customers about the costs and other factors underlying the provision of water and sewerage services.

6.2 Costs for 2013-15

The total costs used by Redland Water for pricing purposes were included in Redland Water's pricing model that was provided to the QCA. As noted above, the cost inputs to the pricing model do not match those included in the information templates submitted to the QCA.

As noted in the following chapter, Redland Water adopted a 10 year smoothed model in setting prices. The MARs for 2013-15 from the Redland Water pricing model are reproduced below.

Table 46 Redland Water Costs - Water (\$m)

	2013-14	2014-15
Bulk water	19.9	22.8
Other operating costs	10.1	10.4
Return on capital	8.2	7.5
Return of capital	4.3	4.4
Revenue offset	-3.6	-3.6
Total Costs	38.9	41.5

Source: RW (2013b).

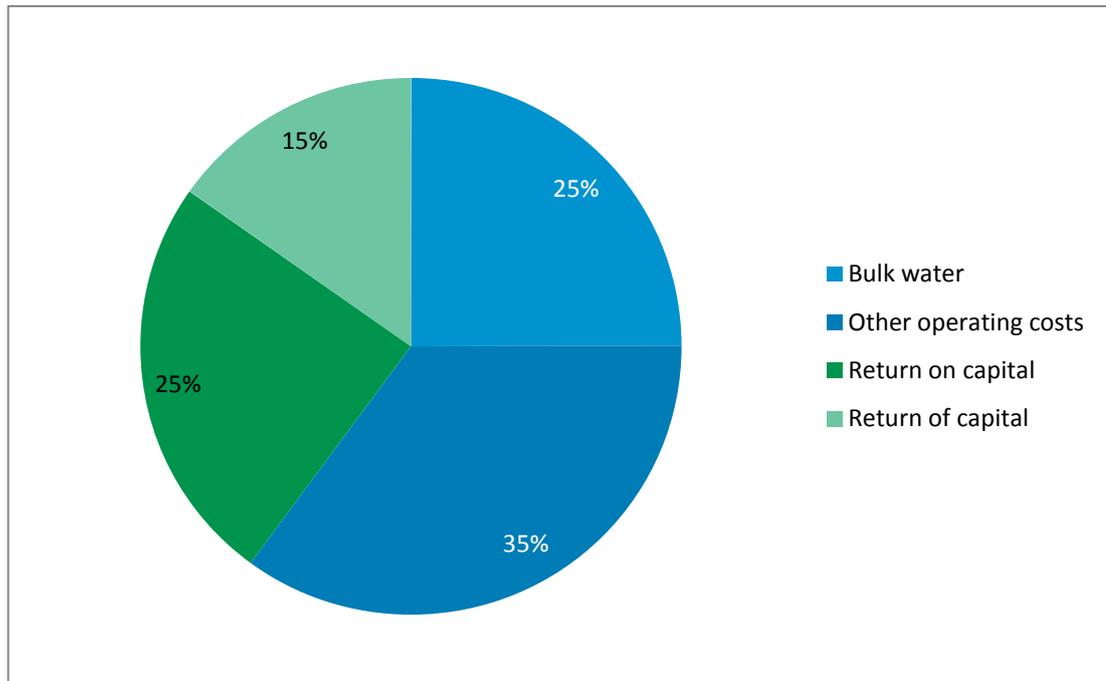
Table 47 Redland Water Costs - Sewerage (\$m)

	2013-14	2014-15
Operating costs	19.6	20.1
Return on capital	13.7	12.9
Return of capital	8.5	8.9
Revenue offset	-4.3	-4.3
Total Costs	37.4	37.6

Source: RW (2013b).

The key components of Redland Water's total costs for 2013-15 are shown in the figure below.

Figure 7 Redland Water total costs for 2013-15



Source: RW (2013b).

Subsequent to the provision of its submission, Redland Water identified that its model did not include the cost of water losses and therefore the MAR was understated.

QCA MAR for 2013-15

Data

The QCA requires the data provided to the QCA for price monitoring to be based on that used to formulate prices. As noted above, there is an inconsistency between Redland Water's pricing model and its price monitoring submission.

The QCA's estimate of MAR is based on the costs included in Redland Water's submission. This is the information provided for price monitoring purposes that has been subject to detailed review. Further, the submission provides information in the format required to link with the QCA MAR model. To establish a MAR for a ten-year period requires all supporting information.

Methodology

The QCA's review of Redland Water's pricing model has identified some issues in its calculation of the components of total costs, including return on and return of capital. For example, depreciation for existing assets was not consistent with straight-line depreciation. Further, the calculation of tax costs does not adjust for imputation, which reduces the effective tax cost. Redland Water has been advised of these issues and is working to resolve them. The QCA has used its own model to calculate the MAR.

QCA MAR

As a result, the MAR is the QCA's estimate of the prudent and efficient costs of carrying on a water and sewerage activity. This reflects the QCA's view of prudent and efficient operating and capital costs (see previous chapters), the asset offset approach to the treatment of capital contributions and the benchmark WACC of 6.57%.

Compared to Redland Water's submission, the QCA has estimated a higher MAR for water and a lower MAR for sewerage.

The differences between Redland Water's submitted costs and the QCA's MAR are detailed in previous chapters. In summary, the key differences are:

- (a) a higher estimate of bulk water demand (+\$7.6 million)
- (b) net reductions to retail-distribution operating costs (-\$9.7 million) arising from:
 - (i) an increased allowance for materials and services costs (+\$1.3 million)
 - (ii) an increased vacancy factor in calculating employee costs (-\$0.3 million)
 - (iii) reduced corporate employees, a reduced corporate cost escalation factor and exclusion of non-corporate costs (-\$2.1 million)
 - (iv) the application of demand growth and electricity prices increase to electricity cost estimates (+0.6 million)
 - (v) the removal of loan guarantee fees (-\$0.04 million)
 - (vi) a revised tax estimate (-\$6.5 million)
 - (vii) a lower estimate of operating costs included in Redland's submission relative to its 10-year pricing model, largely due to tax (-\$2.7 million)
- (c) a lower estimate of return on capital due to differences in modelling methodology, inconsistency between Redland Water's pricing model and regulatory submission, the QCA's revised RAB values and capital expenditure savings (-\$4.6 million)
- (d) a higher estimate of return of capital, due to differences in modelling methodology and inconsistency between Redland Water's pricing model and regulatory submission (+\$5.8 million)
- (e) a lower estimate of revenue offset, due to inconsistency between Redland Water's pricing model and regulatory submission (+\$11.0 million).

Table 48 QCA MAR - Water (\$m)

	2013-14	2014-15
Bulk water	23.3	27.1
Other operating costs	7.7	8.1
Return on capital	7.8	7.9
Return of capital	5.4	6.2
Revenue offset (cash contributions)	-0.6	-0.6
Total Costs	43.7	48.7

Source: QCA calculations.

Table 49 QCA MAR - Sewerage (\$m)

	2013-14	2014-15
Other operating costs	16.9	17.8
Return on capital	11.0	11.1
Return of capital	9.8	10.5
Revenue offset (cash contributions)	-1.8	-1.8
Total Costs	35.9	37.6

Source: QCA calculations.

7 COMPARING REVENUES WITH MAR

Under the Ministerial Direction, the QCA must monitor water and sewerage revenues against the MAR based on the total prudent and efficient costs of carrying on the activity.

7.1 Redland Water Submission

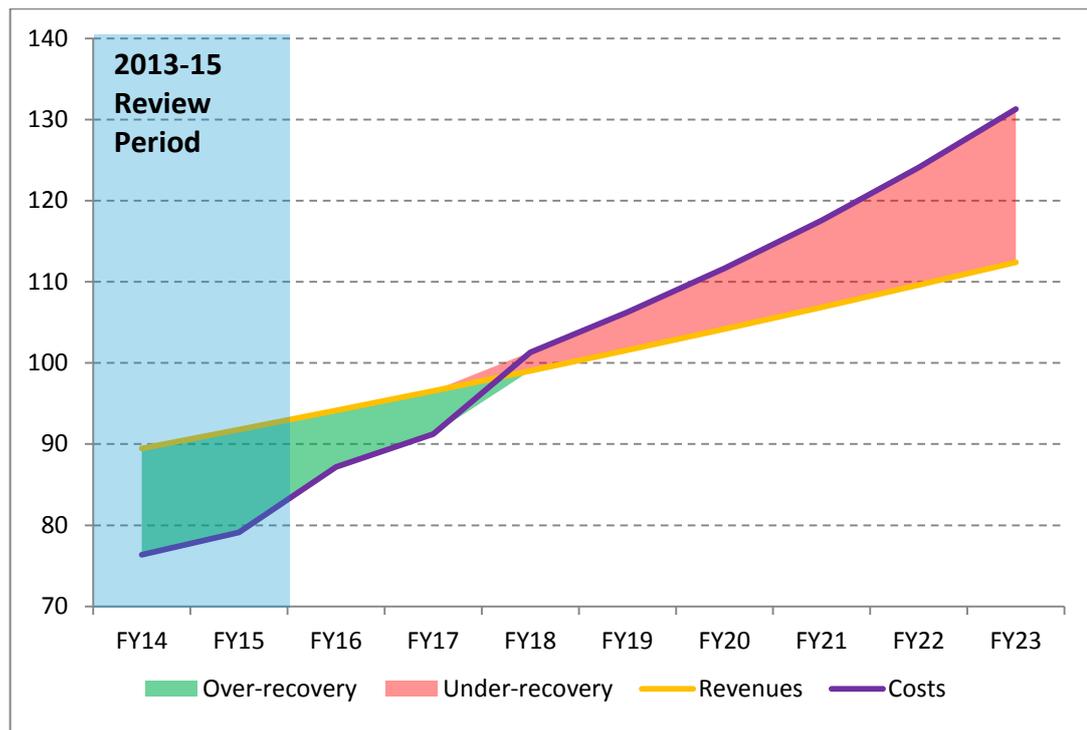
In setting prices and revenues for 2013-14, Redland Water sought to minimise price shocks for the community and smooth total utility charges over the forecast period, noting that:

- (a) bulk water prices from Seqwater are expected to increase above CPI from 2013-14, with the annual increase peaking at 31% in 2017-18. Redland Water noted that this projected price increase will negatively impact its residents (particularly retirees which comprise a significant portion of the Redland community) and a smoothed approach was adopted to avoid this price shock over 10 years
- (b) an increase in water charges in 2013-14 was offset by a fall in sewerage charges, without negatively impacting overall cash flow
- (c) Redland has lower bills than Logan and Gold Coast for a 200kl water user.

In seeking to minimise price shocks, Redland Water established prices on the basis of the net present value of costs and revenues over 10 years. That is, cost recovery was sought over a 10-year period. Redland Water also intended to achieve specific pricing outcomes, such that:

- (a) from 2012-13, the fixed water charge and trade waste charges increase by 2.1% each year
- (b) from 2013-14, the average variable water charge (bulk plus retail-distribution) increases by 2.1% each year
- (c) from 2013-14, the sewerage access charge increases by 2.1%.

As a result, the pricing model indicates that Redland Water's forecast revenues exceed its costs until 2016-17, after which costs are expected to exceed revenues (see figure below).

Figure 8 Redland Water's revenue smoothing (\$m)

Source: QCA chart based on data in RW pricing model.

For 2013-14, Redland Water's pricing model estimates:

- (a) water revenue of \$52.0 million is above its total costs of \$38.9 million
- (b) sewerage revenue of \$37.5 million is above its total costs of \$37.4 million and
- (c) as a whole, revenues of \$89.5 million are above total costs of \$76.4 million.

For 2014-15, Redland Water's pricing model estimates:

- (a) water revenue of \$53.3 million is above its total costs of \$41.5 million
- (b) sewerage revenue of \$38.5 million is above its total costs of \$37.6 million and
- (c) as a whole, revenues of \$91.8 million are above total costs of \$79.1 million.

7.2 QCA Analysis

Price smoothing

In previous reviews, the QCA has supported the principle of smoothing prices over more than one year, to develop the entities' abilities to forecast costs and avoid price shocks for users.

The price smoothing approach adopted by Redland Water has reduced the residential bill for a 200kl water user in 2013-14 compared to that of 2012-13 by around \$8 (chapter 2). Some of the benefit of cost reductions has been passed through to current users.

However, there are some issues with Redland Water's approach:

- (a) over 2013-15, Redland Water's forecast revenues exceed its estimated costs. While Redland Water has sought to balance revenues and costs over 10 years, the quantum of the over-recovery in 2013-15 is material.

The QCA notes that over-recovery in any particular year is not necessarily problematic, where there are valid reasons for doing so and a robust proposal for returning over-recovery to customers over the remainder of the pricing period

- (b) while future prices are indicative only, the current pricing model has forecast negative retail-distribution volumetric prices from 2017-18 (Table 50 and Figure 9) which are offset against bulk water charges.

While the total volumetric charge increases, negative retail-distribution volumetric prices imply a rebate for using water and are an anomalous result. Negative prices are not a viable method of returning over-recoveries to users. Future price signals are muted, may result in unsustainable demand and prices may have to rise significantly in the next pricing period.

A preferable approach would involve a positive retail-distribution price for water use at all times. This would involve lower current prices and higher future prices than currently forecast in the Redland Water pricing model.

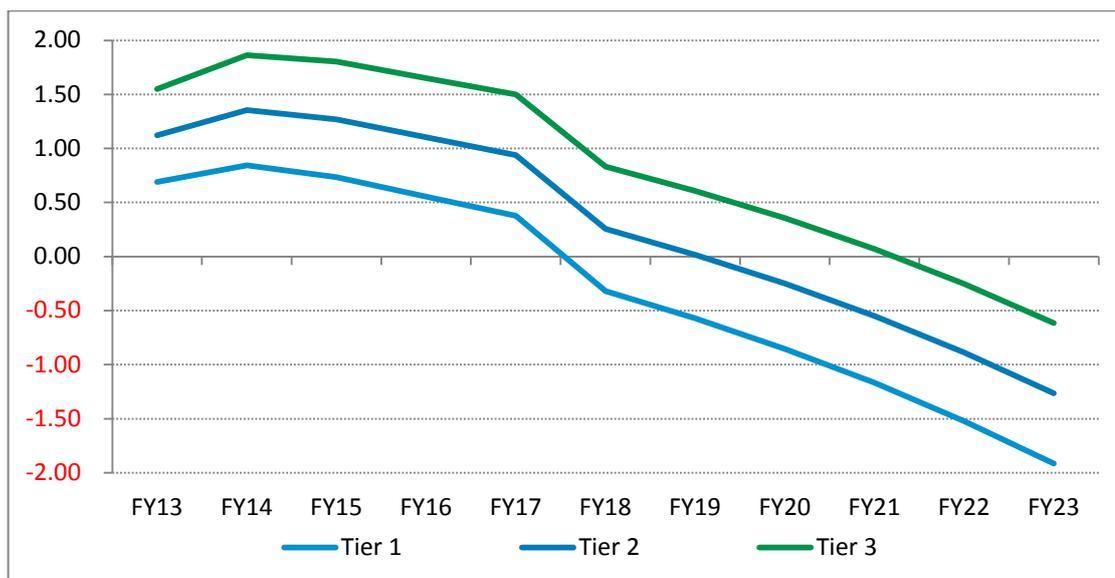
- (c) entities are required to separately identify the bulk water charges in customer bills under the DR Act.⁴⁷ The QCA is seeking advice from DEWS on whether the legislative, policy or contractual framework requires the entities to pass on the bulk water charge to customers in full in the year incurred. That is, whether the total volumetric charge (which includes bulk and retail components) must be at least equal to the bulk water charge. This advice will be taken into account for the Final Report.

Table 50 Volumetric water prices (\$/kl)

	<i>Actual prices</i>		<i>Forecast indicative prices in Redland Water pricing model</i>								
	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>	<i>FY17</i>	<i>FY18</i>	<i>FY19</i>	<i>FY20</i>	<i>FY21</i>	<i>FY22</i>	<i>FY23</i>
Bulk water	1.47	1.72	1.96	2.21	2.45	3.22	3.54	3.89	4.28	4.71	5.18
Tier 1	0.69	0.85	0.73	0.55	0.38	-0.32	-0.57	-0.85	-1.17	-1.52	-1.91
Tier 2	1.12	1.35	1.27	1.10	0.94	0.26	0.02	-0.25	-0.55	-0.89	-1.27
Tier 3	1.55	1.86	1.81	1.65	1.50	0.83	0.61	0.36	0.07	-0.25	-0.62
Average price	2.51	2.98	3.04	3.10	3.17	3.24	3.30	3.37	3.44	3.52	3.59

Note: Prices from 2014-15 are indicative only and subject to change. Average price increases may differ from 2.1% per year from 2013-14 due to rounding. Source: RW (2013b).

⁴⁷ Section 99AV (Matters required to be stated in account) requires that for any account from an SEQ service provider to a customer for water services and wastewater services, the account must state: the bulk water component in the account (s 99AV(1)(d)); an entry called 'distribution and retail' (s 99AV(1)(e)); and the total charge (s 99AV(1)(e)). Section 99AV(4) states that the bulk water component must be included in the account under a separate heading 'State bulk water price'. Section 99AV(5) states that 'bulk water component' in s 99AV means the component of the account that represents the amount of any charge for bulk water services under the Water Supply Act passed on to the customer in the account.

Figure 9 Retail-distribution volumetric water prices (\$/kl)

Note: Prices from 2014-15 are indicative only and subject to change. Source: RW (2013b).

The QCA has advised Redland Water of its concerns.

The QCA has not sought to establish an appropriate price path as:

- (a) the QCA does not set prices
- (b) there are many possible alternative approaches to meet Redland Water's objectives and address the concerns identified by the QCA
- (c) the changes required to address the QCA identified issues with the model relating to data inconsistencies and the calculation of the MAR are yet to be resolved by Redland Water.

The QCA is also unable to offer further detailed advice on the quantum and structure of future tariffs, pending the finalisation of the pricing principles investigation. The QCA will be working with all entities to finalise this investigation in 2014. However, Redland Water should ensure that announced prices in 2014-15 take the above considerations into account.

Comparison of Redland Water revenues and QCA MAR

A comparison of Redland Water's water and sewerage revenue forecasts to the QCA's MAR based on the total prudent and efficient costs of carrying on the activity is shown below.

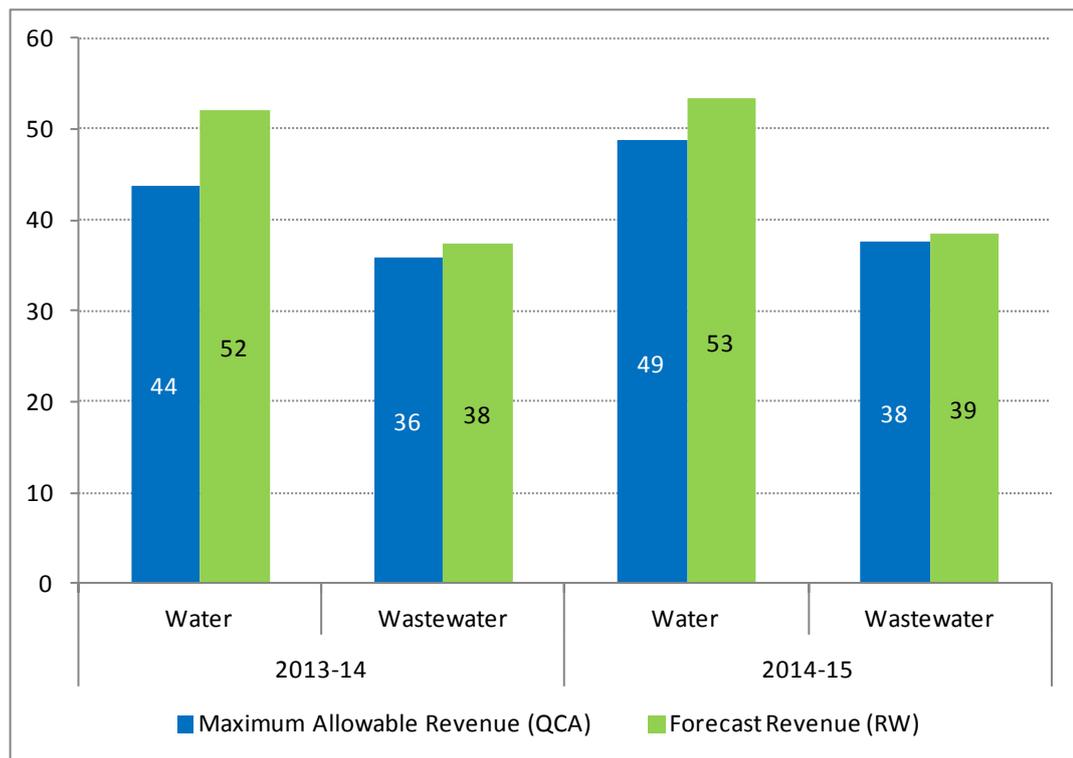
For Redland Water for 2013-14:

- (a) water revenue of \$52.0 million is 19% above the QCA MAR of \$43.7 million
- (b) sewerage revenue of \$37.5 million is 4.4% above the QCA MAR of \$35.9 million
- (c) as a whole, revenues of \$89.5 million are 12.4% above the QCA MAR of \$79.6 million.

For Redland Water for 2014-15:

- (a) water revenue of \$53.3 million is 9.4% above the QCA MAR of \$48.7 million
- (b) sewerage revenue of \$38.5 million is 2.4% above the QCA MAR of \$37.6 million
- (c) as a whole, revenues of \$91.8 million are 6.4% above the QCA MAR of \$86.3 million.

Figure 10 MAR vs revenue (\$m)



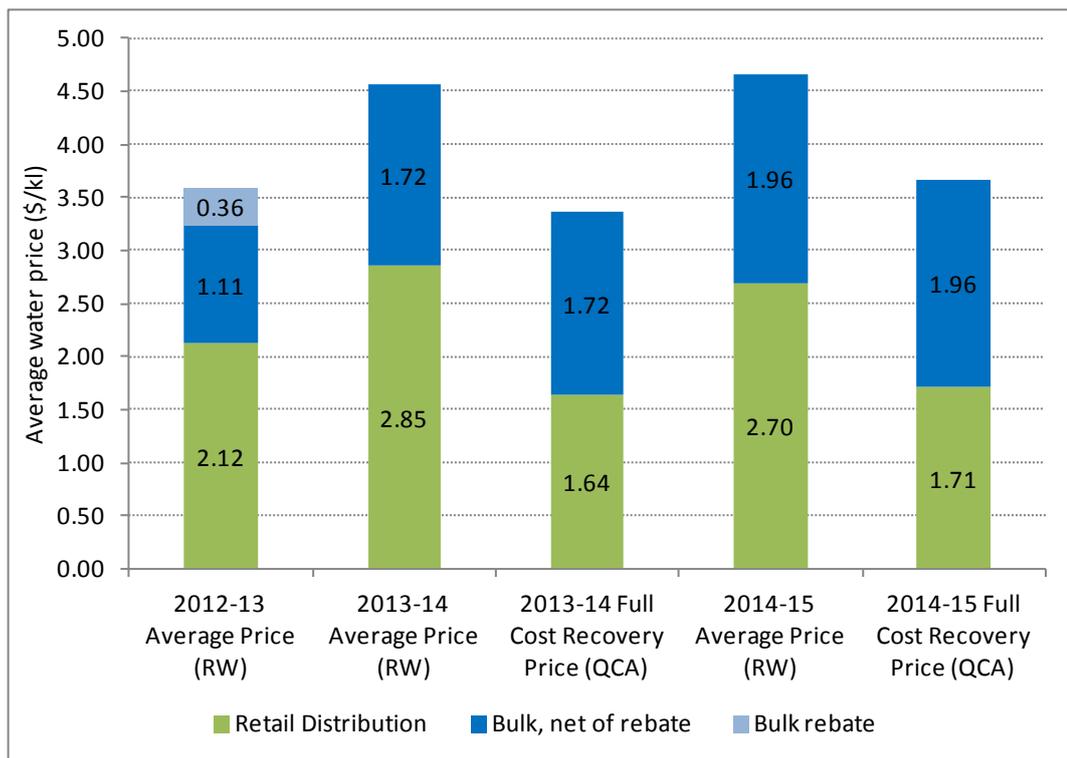
Source: RW (2013b), QCA calculations.

Comparison of average prices

The QCA has also compared Redland Water's revenues and the QCA's costs on a per unit basis using average prices. Average prices are calculated by dividing total revenues by volumes – per kl (for water) and per connection (for sewerage). Average prices provide a broad overview of the average revenue earned per unit across all users.

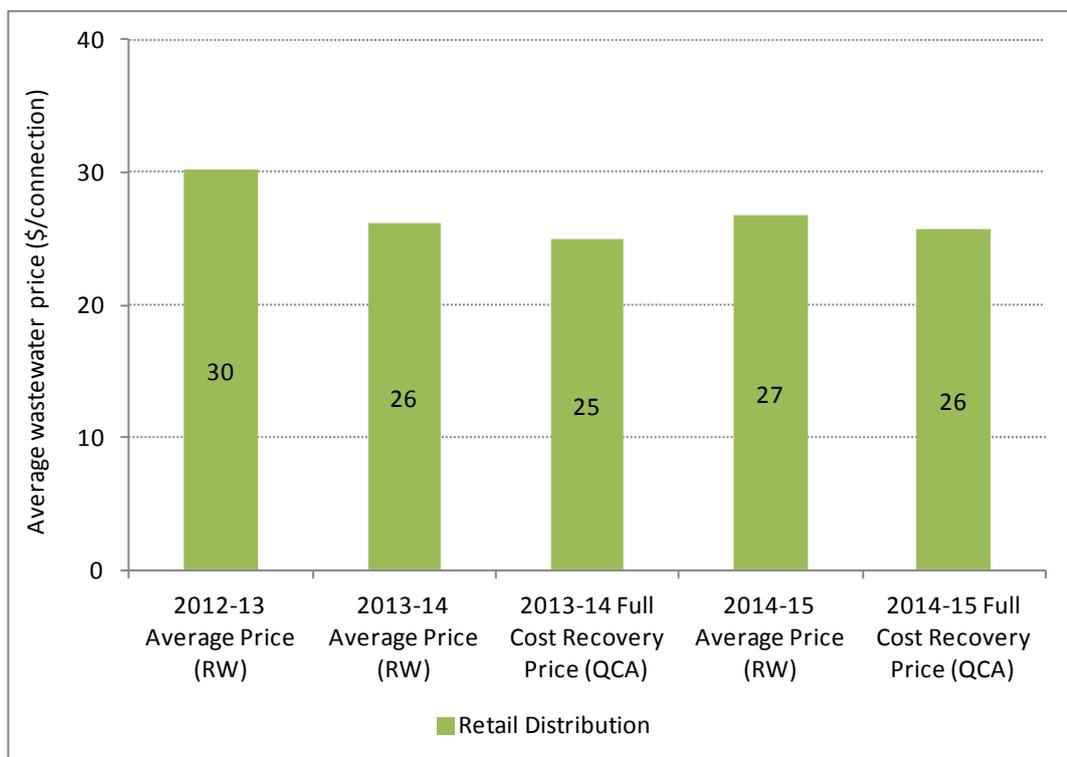
Redland Water's average annual prices are above the prices which would fully recover costs for 2013-14 and 2014-15 (as shown in Figure 11 and Figure 12 below). As stated in previous reports, prices should ideally be set and smoothed over a longer period to avoid large annual variations.

Figure 11 Average water prices



Source: RW (2013b), QCA calculations.

Figure 12 Average sewerage prices



Source: RW (2013b), QCA calculations.

Comparison using consistent demand

The QCA has further supplemented the comparison of revenues and the MAR by using an estimate of revenue that the QCA expects Redland Water to receive. This estimate is based on the QCA's demand figures. The comparison of revenues and costs is then based on a consistent estimate of demand.

Table 51 Further comparison of revenues and QCA MAR (\$m)

	2013-14	2014-15
QCA MAR	79.6	86.3
QCA Expected Revenues	89.1	91.5
Difference	+9.5	+5.2

Source: QCA calculations.

QCA Finding

The QCA notes that Redland Water's revenues exceed the QCA MAR by 9.3% in 2013-15.

The excess of revenues over the QCA MAR follows from Redland Water's approach to price smoothing over 10 years. It is intended to minimise future price shocks for the community. The QCA supports the principle of price smoothing for such a purpose.

However, the QCA has identified a number of concerns with the model applied by Redland Water and negative future retail-distribution pricing. The QCA has sought advice from DEWS on whether the bulk water charge must be passed through to customers in full, in the year in which it is incurred. This advice will be taken into account for the Final Report.

To establish whether there is an exercise of market power it is necessary to establish whether the model recovers only the relevant costs. The model needs to be corrected for identified shortcomings and other forecast costs verified as prudent and efficient. Costs in the template submitted and the 10-year model are materially inconsistent.

Further, although the detailed structure of tariffs has yet to be reviewed as part of the QCA review of pricing principles underway, negative retail-distribution prices are anomalous even if the negative prices are offset against increases in bulk water charges. Such prices will not reflect their underlying future costs and may result in excessive consumption. With negative future prices, the community is paying higher prices in 2013-15 than otherwise.

In view of these concerns, the QCA cannot establish whether there is an exercise of market power.

Prices for 2014-15 are yet to be formally set. Setting 2014-15 prices provides an opportunity for Redland Water to address these concerns and demonstrate that there is no exercise of monopoly power. Redland Water has advised it will take these concerns into account in setting 2014-15 prices.

As for the other SEQ retail-distribution entities, should there be concerns regarding 2014-15 prices, the Government can refer Redland Water to the QCA for more detailed review.

8 COSTS, REVENUES AND PRICES

The reconciliation of costs, revenues and average prices is outlined in Table 52 and Table 53 below.

Table 52 Costs and revenues 2013-15 (\$m)

	2013-14				2014-15			
	Water		Sewerage		Water		Sewerage	
	RW	QCA	RW	QCA	RW	QCA	RW	QCA
Bulk water	19.9	23.3			22.8	27.1		
Other opex	10.1	7.7	19.6	16.9	10.4	8.1	20.1	17.8
Return on capital	8.2	7.8	13.7	11.0	7.5	7.9	12.9	11.1
Return of capital	4.3	5.4	8.5	9.8	4.4	6.2	8.9	10.5
Revenue offset	-3.6	-0.6	-4.3	-1.8	-3.6	-0.6	-4.3	-1.8
Total Costs (MAR)	38.9	43.7	37.4	35.9	41.5	48.7	37.6	37.6
Total Revenues	52.0	52.0	37.5	37.5	53.3	53.3	38.5	38.5
Over/(Under) recovery	+13.1	+8.3	+0.1	+1.6	+11.8	+4.6	+0.9	+0.9

Source: RW (2013b), QCA calculations.

Table 53 Average Prices

	2013-14				2014-15			
	Water		Sewerage		Water		Sewerage	
	RW	QCA	RW	QCA	RW	QCA	RW	QCA
Total Revenues/MAR (\$m)	52.0	43.7	37.5	35.9	53.3	48.7	38.5	37.6
Volume ('000 ML or '000 connections)*	11,387	13,013	1,433	1,441	11,439	13,264	1,441	1,466
Average Price (\$/kl or \$/connection)	4.57	3.36	26.16	24.93	4.66	3.67	26.72	25.66

Note: *excluding standpipes. Source: RW (2013b), QCA calculations.

9 KEY FINDINGS FOR 2013-15

In 2013-14, the retail and distribution component of residential bills decreased by \$8. Redland Water has not announced its prices for 2014-15, and its revenue forecast for 2014-15 reflects a broad organisational target.

Bulk water costs account for 25.0% of Redland Water's total costs of supplying water and sewerage activities in 2013-15. Retail and distribution costs account for the remainder with operating costs comprising 35.1% and capital costs 39.9%.

Redland Water's revenues lie above the QCA's MAR in both years, largely because Redland Water has smoothed price increases over 10 years. This means that over-recoveries in the 2013-15 period are forecast to be gradually returned to users from 2017-18 onwards.

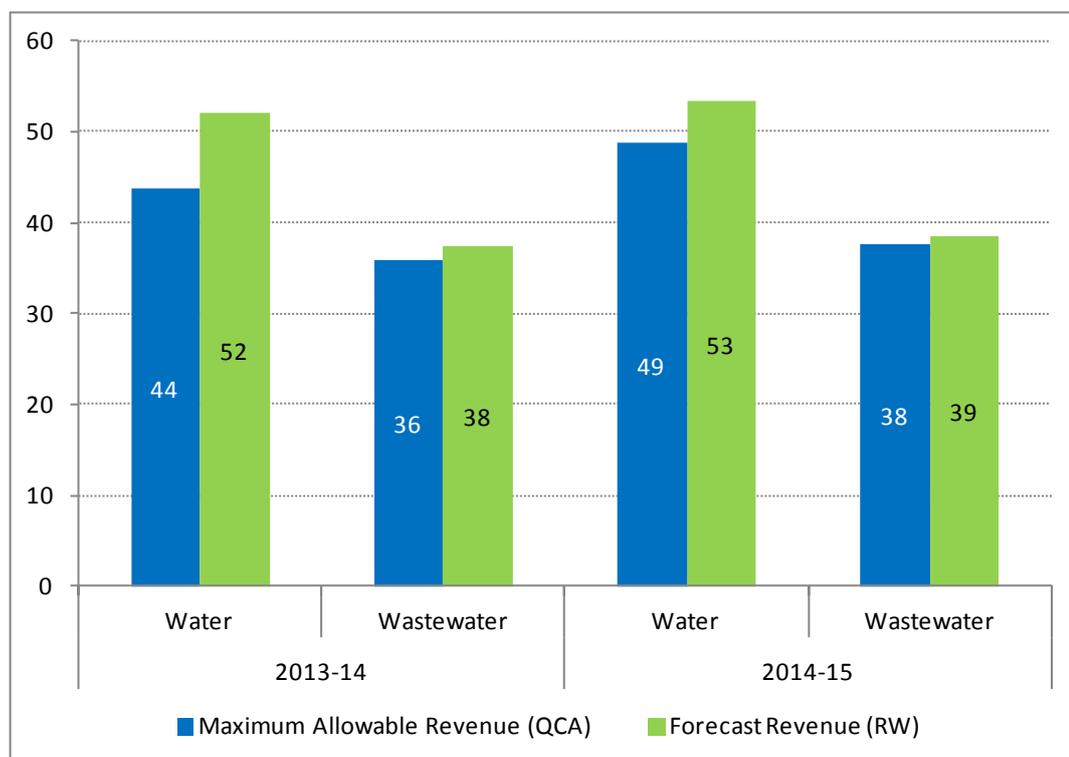
For Redland Water for 2013-14:

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For Redland Water for 2014-15:

- (a) water revenue of \$53.3 million is 9.4% above the QCA MAR of \$48.7million
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- (c) as a whole, revenues of \$91.8 million are 6.4% above the QCA MAR of \$86.3 million.

Figure 13 MAR and revenue (\$m)



Source: RW (2013b), QCA calculations.

The QCA supports the principle of price smoothing. However, the QCA has concerns with the ten-year model applied by Redland Water and the negative retail-distribution prices in future years. The QCA has sought advice from DEWS on whether the bulk water charge must be passed through to customers in full, in the year in which it is incurred. This advice will be taken into account for the Final Report.

In view of these concerns, the QCA cannot establish whether there is an exercise of market power.

Prices for 2014-15 are yet to be formally set. Setting 2014-15 prices provides an opportunity for Redland Water to address these concerns and demonstrate that there is no exercise of monopoly power. Redland Water has advised it will take these concerns into account in setting 2014-15 prices.

As for the other SEQ retail-distribution entities, should there be concerns regarding 2014-15 prices, the Government can refer Redland Water to the QCA for more detailed review.

APPENDIX A: MINISTERIAL DIRECTION



QUEENSLAND COMPETITION AUTHORITY ACT 1997 SECTIONS 23A MINISTERS' REFERRAL NOTICE

Referral

As the responsible Ministers, pursuant to section 23A of the *Queensland Competition Authority Act 1997* (the QCA Act), we refer the monopoly distribution and retail water and sewerage activities (the activities) of the following entities (the entities):

- Northern SEQ Distributor-Retailer (Unitywater);
- Central SEQ Distributor-Retailer (Queensland Urban Utilities);
- Logan City Council;
- Redland City Council; and
- Gold Coast City Council;

to the Queensland Competition Authority (QCA) for a price monitoring investigation for the period from 1 July 2013 to 30 June 2015.

Conduct of the QCA pursuant to this referral

In referring this investigation, we direct the QCA under section 24 of the Act as follows. For each entity, the QCA shall:

- (a) provide information to customers about the costs and other factors underlying the provision of water and sewerage services including distinguishing between bulk and distribution/retail costs to the extent possible;
- (b) allow the entities to treat bulk water costs as a 'cost-pass-through' item;
- (c) monitor the change in prices of distribution and retail water and sewerage services for residential and non-residential customers;
- (d) monitor water and sewerage revenues against the maximum allowable revenue based on the total prudent and efficient costs of carrying on the activity including each of the following:
 - i. the operational and capital expenditure in carrying on the activity;
 - ii. depreciation;
 - iii. return on capital employed; and
 - iv. tax payable.
- (e) in respect of the return on capital:
 - i. advise a benchmark Weighted Average Cost of Capital (WACC) by 31 January 2013; and
 - ii. monitor the WACCs applied by the entities against the benchmark WACC;

- (f) roll forward the regulated asset base (RAB) using the following principles:
- i. the opening RAB for 1 July 2013 to be calculated as:

$$RAB_t = RAB_{t-1} + \text{Capital expenditure}_t - \text{Regulatory Depreciation}_t - \text{Disposal}_t + \text{Indexation}_t$$

where t = year under consideration.
 - ii. for Unitywater and Queensland Urban Utilities:

RAB_{t-1} = the rolled forward RAB for 1 July 2012 as verified by the QCA;
 - iii. for Logan, Redland and Gold Coast City Councils:

RAB_{t-1} = the RAB for each individual council as at 1 July 2013 should reflect their agreed disaggregation of the total Allconnex RAB as at 1 July 2010 and subsequent capital expenditure incurred to 30 June 2013;

for clarity, a revaluation of the initial RAB is not to be considered.
- (g) to assess operating and capital expenditure in (d) above, the QCA is to undertake a review not more than once per entity during the monitoring period based on the following approach:
- i. assess the existence of robust policies and procedures having regard to good industry practice, as well as compliance, using a sample of six capex projects (per entity) and each of the following broad opex headings: employee expenses (including contractors); electricity; other materials and services; corporate overheads;
 - ii. assess the robustness of the capex and opex program planning and delivery processes and procedures in an overall sense and identify any areas for improvement; and
 - iii. form a view on the prudence and efficiency of capital and operating expenditure, focussing on any areas of significant cost increase and identifying the reasons why.
- (h) the QCA is to accept that, in setting prices entities may have applied a revenue offset approach to account for capital contributions received. This approach is to remain in effect until such time as the entity nominates, through their price monitoring returns, to adopt the asset offset method. Where a change in methodology is adopted, the RAB is not to be adjusted retrospectively.
- (i) to assess Regulatory Depreciation in (f) above, the QCA must take into account the regulatory depreciation on the physical assets has been calculated using existing useful lives attaching to the individual assets or relevant asset classes;
- (j) to assess the indexation in (f) above, the QCA must use the annual March to March Australian Bureau of Statistics Consumer Price Index (all groups, Brisbane);
- (k) monitor according to the QCA Final Report on the SEQ Interim Price Monitoring Framework (April 2010) and Information Requirements, except as amended by this referral.

Consultation

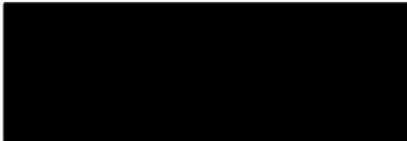
The QCA must undertake an open consultation process with all relevant parties and consider submissions within the timetable for the review and reports. Consistent with section 34 of the QCA Act, all reports and submissions must be published on the QCA website.

Timing

The entities must provide price monitoring information returns in respect of 2013-14 and 2014-15 to the QCA by:

- i. 30 June 2013 for Queensland Urban Utilities and Unitywater; and
- ii. 30 September 2013 for Logan, Redland and Gold Coast City Councils.

The QCA must provide to responsible Ministers and the Minister for Energy and Water Supply a draft report by 31 January 2014 and a final report by 31 March 2014.



TIM NICHOLLS
Treasurer and Minister for Trade



JARROD BLEIJIE
Attorney-General and
Minister for Justice

APPENDIX B: REDLAND WATER SELECTED PRICES

Table 54 Water access charges

Type of Charge	Charge Basis	2012-13	2013-14	% change
Fixed Water access (domestic)	per meter/lot	\$252.25	\$257.55	2.1%
Base rate (caravan parks)	per unit	\$63.05	\$64.39	2.1%
Units, Flats, Guest Houses, Multiple Dwellings – Residential (split by lot entitlement)				
Meter Size				
20mm		\$252.25	\$257.55	2.1%
25mm		\$393.53	\$402.00	2.2%
32mm		\$645.77	\$659.00	2.0%
40mm		\$1,008.99	\$1,030.00	2.1%
50mm		\$1,576.55	\$1,610.00	2.1%
80mm		\$4,035.99	\$4,121.00	2.1%
100mm		\$6,306.25	\$6,439.00	2.1%
150mm		\$14,189.05	\$14,487.00	2.1%
Commercial and Industrial				
Meter Size				
20mm		\$327.93	\$335.00	2.2%
25mm		\$511.57	\$523.00	2.2%
32mm		\$839.49	\$857.00	2.1%
40mm		\$1,311.71	\$1,339.00	2.1%
50mm		\$2,049.54	\$2,093.00	2.1%
80mm		\$5,246.81	\$5,357.00	2.1%
100mm		\$8,198.13	\$8,371.00	2.1%
150mm		\$18,445.80	\$18,833.00	2.1%

Table 55 Water consumption charges

Water consumption charges (\$/kl)				
Residential & Concessional				
- Retail	First 400 litres per day (146kl pa)	\$0.69	\$0.83	20.3%
	401 to 800 litres per day (146 to 292kl pa)	\$1.12	\$1.34	19.6%
	Above 800 litres per day (292kl pa)	\$1.55	\$1.85	19.4%
- Bulk		1.472376	1.717	16.6%
Non residential (commercial or industrial)				
- Retail		\$1.55	\$1.85	19.4%
- Bulk		1.472376	1.717	16.6%
Council				
- Retail		\$1.55	\$1.85	19.4%
- Bulk		1.472376	1.717	16.6%

Table 56 Wastewater, trade waste and recycled water charges

Wastewater charges				
Base rate	Wastewater Fixed Access Charge based on 25 units	\$730.41	\$633.75	-13.2%
Trade Waste charges				
Trade Waste Generator Charge	per annum	\$376.74	\$384.65	2.1%
Trade Waste Discharge - Volume	per kl	\$2.09	\$2.13	1.9%
Trade Waste Discharge - Quantity				
	BOD (\$/kg)	\$1.53	\$1.56	2.0%
	COD (\$/kg)	\$1.53	\$1.56	2.0%
	NFR (\$/kg)	\$0.68	\$0.70	2.9%
	TOG (\$/kg)	-	\$0.70	-
	Phosphorus (\$/kg)	\$6.32	\$6.46	2.2%
	Nitrogen (\$/kg)	\$1.89	\$1.93	2.1%
	Foodwaste disposal units based on power	\$32.61	\$33.29	2.1%
	Constant 'd' for excess strength waste	\$1.20	\$1.00	-16.7%
Recycled Water				
Class B volume charge	per kl	\$1.7213	\$2.20	27.8%

APPENDIX C: RESIDENTIAL BILL CALCULATIONS

Change in Residential Bills – Redland Water vs QCA

	<i>Redland Water (200kl/yr)</i>			<i>QCA (200kl/yr)</i>		
	<i>2012-13</i>	<i>2013-14</i>	<i>%</i>	<i>2012-13</i>	<i>2013-14</i>	<i>%</i>
<i>Redland</i>						
Retail water access	252.25	257.55	2.1%	252.25	257.55	2.1%
Retail water use	161.22	195.54	21.3%	161.22	195.54	21.3%
Retail sewerage access	730.41	633.75	-13.2%	730.41	633.75	-13.2%
Bulk water	294.40	343.40	16.6%	294.40	343.40	16.6%
Bulk water rebate	-	-	-	(80.00)	0	-
Total Bill	\$1,438.28	\$1,430.24	-0.6%	\$1,358.28	\$1,430.24	5.3%

APPENDIX D: REDLAND WATER COMPLIANCE WITH LEGISLATION

Document	SKM Assessment
Redland Water Netserv Plan Part B Overview Document	Section 3.5 requires compliance with <i>Water Supply (Safety and Reliability) Act 2008</i> (Qld) (Water Supply Act) and <i>Public Health Act 2005 Amendment Regulation (No. 1) 2008</i> (Qld) (Public Health Amendment Regulation).
Redland Water Netserv Plan Part B Appendix B – Leakage Management Plan	Specific references to Water Supply Act.
Redland Water Netserv Plan Part B Appendix C – Overflow Management Plan	Specific references to Environmental Protection Regulation 2008 (Qld).
Redland Water Netserv Plan Part B Appendix D – Drinking Water Quality Management Plan	Specific references to Australian Drinking Water Quality Guideline (NHMRC 2011), Drinking Water Quality Management Plan Guideline (DEWS 2010), Water Quality and Reporting Guideline for a Drinking Water Service (DEWS 2010), Draft Drinking Water Quality Management Plan Review and Audit Guideline (DEWS 2012), Bulk Water Supply Code and the Bulk Water Supply Agreement ⁴⁸ .
Redland Water Netserv Plan Part B Appendix E – Total Water Cycle Management Plan	Specific references to EPP Water, Total Water Cycle Management Planning Guideline for South-East Queensland (DERM 2010), DR Act, <i>Sustainable Planning Act 2009</i> (Qld) (SPA), Water Supply Act, <i>Public Health Act 2005</i> (Qld) (PHA), SEQ Regional Plan (DIP 2009), SEQ Infrastructure Plan and Program 2008-2031 (DIP 2008) and the SEQ Water Strategy (QWC 2012).
Redland Water Netserv Plan Part B Appendix F – Ecological Sustainability Plan	Specific references to <i>Environmental Protection Act 1994</i> (Qld) (EP Act) and regulations/policies, <i>National Environment Protection Council (Queensland) Act 1994</i> (Qld), DERM Operational Policy Management- for beneficial reuse of biosolids from sewage treatment plants, National Water Quality Management Strategy, Guidelines for Sewerage Systems Sludge (Biosolids) Management, the New South Wales EPA Environmental Guidelines for the Use and Disposal of Biosolids Products (1997) adopted by DEHP as the Queensland standard, AS4454: Composts, Soil Conditioners and Mulches, Beneficial Reuse Development Approvals, SPA, SEQ Regional Plan, SEQ Infrastructure Plan and Program 2008-2031, SEQ Water Strategy, National Wastewater Source Management Guideline (WSAA 2008), Standard Plumbing and Drainage Regulation 2003 (Qld), ISO14001: Environmental Management Systems, DEHP WWTP Licences (Development Approvals) and Registration Certificate, <i>National Greenhouse and Energy Reporting Act 2007</i> (Cth), <i>Energy Efficiency Opportunities Act 2006</i> (Cth), National Carbon Offset Standard, Securing a Clean Energy Future – The Australian Government’s Climate Change Plan and the <i>Clean Energy Act 2008</i> (Qld) ⁴⁹ .
Redland Water Netserv Plan Part B Appendix G – Trade Waste Management Plan	Specific references to Water Supply Act, EPP Water, DR Act, Waste Reduction and Recycling Bill 2011 (Qld), EP Act and Regulation, SPA, National Wastewater Source Management Guideline and the Standard Plumbing and Drainage Regulation

⁴⁸ Refer to the *Water Act 2000* (Qld), s 360G.

⁴⁹ The QCA notes that the *Clean Energy Act 2008* (Qld) was repealed in September 2013.

Document	SKM Assessment
	2003 (Qld).
Redland Water Netserv Plan Part B Appendix H – Recycled Water Management Plan	Specific references to Water Supply Act, Public Health Amendment Regulation, EP Act, <i>Plumbing and Drainage Act 2002</i> (Qld), PHA and Regulation, <i>Workplace Health and Safety Act 1995</i> (Qld) ⁵⁰ , EPP Water, parts of the Queensland Water Recycling Guidelines (2005), the Public Health Regulation, Recycled Water Management Plan and Validation Guidelines and the Water Quality Guidelines for Recycled Water, Recycled Water Management Plan and Validation Guidelines (DEWS 2008), Recycled Water Management Plan Exemption Guidelines (DEWS 2011), Water Quality Guidelines for Recycled Water Schemes (DEWS 2008), Annual Reporting Guideline for Recycled Water Schemes (DEWS 2010), Recycled Water Management Plan Audit Reporting Guideline (DEWS 2010), Incident Reporting Guidelines for Recycled Water Schemes (DEWS 2011) and the Manual for Recycled Water Agreements in Queensland (EPA 2005).
A sample employee position description	Includes a generic requirement to 'satisfy all relevant statutory obligations'.
Draft Programme and Project Management Framework and associated documents	No specific references to legislation or to the Netserv Plan Part B.

Source: SKM (2013a).

⁵⁰ The QCA notes that the *Workplace Health and Safety Act 1995* (Qld) has been replaced by the *Work Health and Safety Act 2011* (Qld).

GLOSSARY OF ACRONYMS, TERMS AND CONDITIONS

A

ABS	Australian Bureau of Statistics
ADWF	Average Dry Weather Flow
AOP	Annual Operational Plan
AOR	Annual Operations Report
APP	Annual Performance Plan
ASMP	Asset and Service Management Plan

B

C

CBU	Commercial Business Unit
CEO	Chief Executive Officer
CPI	Consumer Price Index

D

DEHP	Department of Environment and Heritage Protection
DERM	Department of Environment and Resource Management
Design and Construction Code	SEQ Water Supply and Sewerage Design and Construction Code
DEWS	Department of Energy and Water Supply
DIP	Department of Infrastructure and Planning
DLGP	Department of Local Government and Planning
DR Act	South-East Queensland Water (Distribution and Retail Restructuring) Act 2009 (Qld)
DSDIP	Department of State Development, Infrastructure and Planning

E

Entity	SEQ service provider as defined by the <i>South-East Queensland Water (Distribution and Retail Restructuring) Act 2009 (Qld)</i>
EP	Equivalent Persons
EPA	Environmental Protection Agency (Queensland or New South Wales)

F

FTE	Full Time Equivalent
FY	Financial Year

G

GCCC	Gold Coast City Council
GCW	Gold Coast Water

H

HLZ	High Level Zone
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I

ICS	Infrastructure Charges Schedule
ICT	Information and Communications Technology

J**K**

kl	Kilolitres
km	Kilometres

L

l/c/d	Litres per connection per day
l/EP/d	Litres per equivalent person per day
LCC	Logan City Council
LGA	<i>Local Government Act 2009 (Qld)</i>
LGPMC	Local Government and Planning Ministers' Council
LGR	Local Government Regulation 2012 (Qld)
l/p/d	Litres per person per day
LTAMP	Long Term Asset Management Plan

M

m	Million
MAR	Maximum Allowable Revenue
MCA	Multi Criteria Analysis
ML	Megalitres
mm	Millimetres

N

N/A	Not Applicable
NHMRC	National Health and Medical Research Council
NPV	Net Present Value
NWC	National Water Commission

O

OESR	Office of Economic and Statistical Research
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P

PMO	Portfolio Management Office
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Q

QCA	Queensland Competition Authority
QCOSS	Queensland Council of Social Service
QUU	Queensland Urban Utilities
QWC	Queensland Water Commission

R

RAB	Regulatory Asset Base
RCC	Redland City Council

S

SEQ	South East Queensland
SEQ Regional Plan	South East Queensland Regional Plan 2009-2031
SKM	Sinclair Knight Merz
SPA	<i>Sustainable Planning Act 2009</i> (Qld)
SPS	Sewerage Pump Station
STP	Sewage Treatment Plant

T**U****V****W**

WACC	Weighted Average Cost of Capital
Water Supply Act	<i>Water Supply (Safety and Reliability) Act 2008</i> (Qld)
WSAA	Water Services Association of Australia

X**Y****Z**

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