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Review of Essential Water's proposed prices for trade waste and miscellaneous services

A Marsden Jacob Report

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Prepared for IPART
February 2019

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About Us

Established in 1996, Marsden Jacob Associates has grown to be Australia's leading dedicated natural resource economics, policy and strategy advisory. We employ talented economists and policy advisors who specialise in solving practical, real world problems relating to water, energy, environment, natural resources, agriculture, earth resources, public policy and transport. We work with a wide range of cross-disciplinary partner firms to deliver best project outcomes for our clients.

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Contents

Executive summary

This report outlines our assessment of Essential Water's trade waste and miscellaneous services prices and revenue forecasts for the 2019 price determination period. Our work supports IPART's review of the maximum prices Essential Water can charge for water-related services. IPART will be making a determination of these prices for a period of up to five years starting 1 July 2019.

Marsden Jacob Associates, partnering with Inside Infrastructure, was engaged to undertake a review of prices and revenue for trade waste and miscellaneous services for the 2019 price determination period. The key objectives of this review were separated into the following tasks:

- Review Essential Water's proposed trade waste prices and (1) recommend prices to apply from 1 July 2019 and (2) advise on the amount of revenue that is expected to be generated from the proposed trade waste prices over the 2019 determination period.
- Review Essential Water's proposed miscellaneous and ancillary prices and (1) recommend prices to apply from 1 July 2019 and (2) advise on the amount of revenue that is expected to be generated.

Trade waste review key findings and recommendations

Our review finds Essential Water's approach to trade waste pricing does not explicitly reference IPART's pricing principles. Prices and proposed charges to trade waste customers:

- do not appear to be based on the capacity of trade waste systems to transport, treat and dispose of waste
- may under-recover the true cost of handling the trade waste
- cannot be shown to reflect different costs to manage waste in different catchments
- cannot be shown to be transparent or accurate. Particularly, not all trade waste customers are charged to treat their waste. Further, the charges proposed do not appear to reflect Short or Long Run Marginal Treatment Cost for the network and treatment assets.

We recognise economic conditions in the catchments managed by Essential Water may make the application of IPART's principles difficult. Subject to the expectations of stakeholders and customers, we suggest that Essential Water establish a transition plan to gradually shift the recovery of trade waste costs from water and sewerage customers onto trade waste customers. A transition would include:

- application of the default volumetric prices recommended by the Department of Primary Industries (Liquid Trade waste Regulation Guidelines 2009) for Category 2 and 3 customers, phased in over a 10-year period. This would reduce the impact of sudden price changes on trade waste customers and domestic customers
- collection of trade waste quality data from Category 3 customers over a 3 year period, to support the calculation of mass based charges
- application of either calculated or default prices for trade waste from 2028 onwards.

Miscellaneous charges review key findings and recommendations

Essential Water currently collects approximately $0.109 million in miscellaneous charges per annum. We focused our assessment on Essential Water's major miscellaneous charges, being:

- conveyancing certificates with meter reads
- drainage diagrams
- personal service of final warning notice for late payment prior to restriction.

Based on our assessment we are not recommending any changes from Essential Water's proposed unit prices and revenue forecasts. While some of Essential Water's actual costs to deliver the services are higher than its proposed prices, we consider Essential Water's proposed unit prices better reflect an efficient cost to deliver the services and are more consistent with IPART's pricing principles.

Proposed prices rather than actual costs for conveyancing certificates and drainage diagrams are also more comparable with the current charges for similar services provided by other water businesses. We also consider that Essential Water should review its current practices for final warning notices to ensure its processes for managing its late paying customers and bad debts are efficient.

1. Introduction

Marsden Jacob was engaged by IPART to review Essential Water's trade waste and miscellaneous services forecasts for the 2019 determination period.

IPART is currently undertaking a review of the maximum prices that Essential Water can charge for their water-related services. IPART will be making a determination of these prices for a period up to five years starting 1 July 2019.

Trade waste prices are levied on commercial and industrial customers for wastewater in which the concentrations of pollutants exceed a domestic equivalent. Miscellaneous and ancillary prices are one-off prices levied on a small number of customers. Revenue collected from these charges account for a small proportion of revenue for Essential Water, however they can be significant by a small number of customers.

1.1 Approach for the review

In order to provide recommendations on the overall reasonableness of proposed prices for trade waste and miscellaneous and ancillary services, in this review we undertook:

- A review of the reasonableness of the proposed prices in meeting IPART's pricing principles for each business, including an assessment of the efficiency, cost reflectivity, equity, transparency and simplicity of the proposed prices.
- A detailed bottom-up assessment of proposed trade waste prices for each business, particularly where prices are forecast to materially change. This included a detailed technical assessment of the treatable loads, an assessment of the long and short run marginal costs associated with treating this trade waste load (including whether proposed upgrades are technically appropriate and prudent/efficient, and considering condition/maintenance requirements for the plants).
- A detailed bottom-up assessment of proposed major miscellaneous prices where significant changes are proposed. This included an assessment to ensure that the base costs, including the allocation of overheads, and direct material costs are efficient and are directly related to the delivery of the service and do not include additional profit margins
- An assessment of the appropriateness of the revenue forecast to be recovered for each service, including assessment of demand projections over the 5-year period
- Assessment of customer impacts to ensure any significant price shocks are being avoided
- An assessment of the reasonableness for any prices the utilities propose to discontinue
- A review of any previous relevant IPART decisions on trade waste and miscellaneous prices.

2. Trade Waste Review

Essential Water proposes to increase the current level of trade waste charges by the change in annual sewerage service charges over the determination period. This approach assumes that the costs of providing trade waste services will change in line with other sewer services.

2.1 Price submission proposal for trade waste charges

Essential Water is responsible for the supply of trade waste services to 272[1] trade waste customers across its service area. Currently, Essential Water pass on a fixed trade waste charge to two mines only (Perilya Ltd. and CBH Ltd.). Essential Water do not currently have a pricing structure in place for other trade waste customers. Essential Water in its submission did not detail how the current trade waste 'flat fee' is determined.

Essential Water is forecasting annual trade waste revenue of $2k to $2.5k. This is a marginal increase on 2018-19 projections, outlined in the table below.

Table 1– Essential Water forecast revenue from trade waste charges, $'000,2018-19

	2018-19	2019-20	2020-21	2021-22	2022-23
Forecast revenue $'000	2.1	2.2	2.3	2.4	2.5

2.2 Scope and approach to the review

The intent of our review was to provide commentary on the reasonableness of fixed and variable charges proposed to be levied on Essential Water's trade waste customers. We reviewed charges against IPART's pricing principles including an assessment of the efficiency, cost reflectivity, equity, transparency and simplicity of the proposed prices.

2.3 Pricing principles for trade waste charges

In proposing trade waste prices, Essential Water is required to apply IPART's trade waste pricing principles.

Box 1: IPART's trade waste pricing principles

Applying appropriate pricing principles to trade waste requires that:

- Standards for acceptance should be based on the capacity of current systems to transport, treat and dispose of the waste, having regard to the health and safety of wastewater workers.
- Trade waste prices should cover the efficient costs to the water supplier of handling the waste, including an allocation for corporate overheads.
- Prices should vary to reflect differences in the cost of treating waste to the required standards at particular locations.

[1] 2007/08 data

- Water suppliers should set prices and standards in a manner that is transparent and accurate. The method of measurement should be reliable and the basis for setting prices should reflect costs incurred, as far as possible.
- When environmental reasons are made for variations from the above pricing principles then sufficient evidence needs to be available to justify these variations. The basis for calculating greater price above the cost of service, where environmental justifications exist, should also be supported by sufficient evidence.

We note that in its price submission Essential Water does not refer to the pricing principles proposed by IPART. Rather, it references the Department of Primary Industries (Liquid Trade waste Regulation Guidelines 2009) pricing approach, and considers its prices to be "efficient".

Our observations of Essential Water's dataset are that there is little information on trade waste discharges in the business generally. There was no discussion in their pricing submission which illustrated transparent, efficient, simple, equity or cost reflectivity of pricing.

We conclude that Essential Water has not explicitly applied IPART pricing principles in its submission.

2.4 Assessment of liquid trade waste charges

Essential Water currently applies trade waste charges to two of its 272[2] trade waste customers. Essential Water provided no evidence of its approach to charging current or proposed "fixed" charges for liquid trade waste charges, including annual fees, application fees, reinspection fees and usage charges. Similarly, it was unclear how volume or load based prices were calculated or applied.

Given the very low recovery of revenues from trade waste customers, we sought to determine the extent to which Essential Water may be under-recovering revenues from this customer group, and the possible volumetric and mass based charges which Essential Water could employ were it to seek to apply charges to its trade waste customer base.

Our approach was to establish:

- an accurate mass balance of flows and loads for treatable pollutants and assign these flows and loads to non-trade waste and trade waste customer groups
- how the costs for sewage transfer and treatment can be assigned on a flow and load basis. This cost should include operations and maintenance costs, as well as a proportionate share of the depreciation of network and treatment assets
- application of this analysis on the calculation of mass-based charges and volumetric charges.

As noted earlier, Essential Water has a limited dataset, which made the above approach difficult to implement. To fill the data gaps, we made assumptions in our analysis with the intent of establishing a reasonable assessment of a volumetric and mass based charges that could be levied by Essential Water. The following scenario was tested:

- volumetric charge: The share of network and treatment costs for trade waste customers was assumed to be proportional to flow. Trade waste flow and load are considered in aggregate. No distinction is made between trade waste customer categories.
- mass based charges: The whole of network flow and treatment costs was considered. No distinction is made between trade waste customer categories.

[2] 2007/08 data

2.4.1 Assessment of volumetric based trade waste charges

Our analysis illustrated that approximately 13 per cent of flows in Essential Water's sewerage catchments may be trade waste related. Consequently, the mass balance analysis showed that the share of total transfer and treatment cost that should be borne by trade waste customers was significant, and could range between:

- $370k per annum based on flow and load allocation, and
- $534k per annum based only on flow allocation.

The volume of trade waste assumed to be produced by trade waste customers implies that Essential Water could levy a volumetric charge on all trade waste customers of between $2.09/kL and $3.01/kL.

We note that the accuracy of this analysis is constrained by the quantity and quality of information held by Essential Water. Given the limitations of the analysis, we do not consider it appropriate that Essential Water attempt to apply a calculated volumetric charge at present. Rather, we recommend Essential Water consider the application of default charges listed in Department of Primary Industries (Liquid Trade waste Regulation Guidelines 2009), which would result in charges comparable with other water corporations in New South Wales.

2.4.2 Assessment of mass based trade waste charges

Information on trade waste quality in the various categories of trade waste customers was limited. Consequently, we have calculated the mass-based charges for all trade waste customers, regardless of category.

Our analysis shows the mass-based charges that could be levied by Essential Water are:

- Biological Oxygen Demand (BOD): $2.92/kg,
- Total Suspended Solids (TSS): $1.64/kg, and
- Total Kjeldahl Nitrogen (TKN): $8.40/kg

We reviewed other water businesses' trade waste mass based prices to benchmark the above results. This included: Sydney Water, Hunter Water, City West Water, Yarra Valley Water and South East Water. The range of their current charges is noted below:

- BOD: $0.85/kg to $15.06/kg
- TSS: $0.49/kg to $15.06/kg
- TKN: $1.42/kg to $2.06/kg

As per our analysis of volumetric charges, the limitations of existing datasets introduce significant uncertainties in the true cost of sewage treatment within Essential Water.

Consequently, we do not consider it appropriate that Essential Water attempt to apply calculated mass-based charges at present. Rather, we recommend Essential Water consider the application of default charges listed in Department of Primary Industries (Liquid Trade waste Regulation Guidelines 2009), which would result in charges comparable with other water corporations in New South Wales.

We note that our analysis of volumetric and mass-based charges is sensitive to the following assumptions used to generate load and flow balances. In order of priority from most sensitive to least, we note the following:

- Assumed domestic sewage quality (treatable pollutants): We have assumed concentrations of BOD (60g/p/d), TSS (60g/p/d), which are reasonable assumptions of domestic sewage used throughout Australia. We note that reducing assumed loadings of domestic discharge to the lower end of normal Australian sewage quality (BOD of 50g/p/d, TSS of 60g/p/d) significantly increases the share of load assumed to be produced from trade waste dischargers, and therefore the calculated mass-based charges.

- The share of Sewage Treatment Plant costs for the volumetric charge was assumed as 10% flow related, 30% BOD related, 30% TSS related, and 30% TKN related. As these shares vary the assumed allocation of cost between trade waste customers and non-trade waste customers will vary.
- The share of Sewage Treatment Plant costs for the mass-based charges was assumed as 33% BOD reduction, 33% TSS removal, and 33% TKN reduction. As these shares vary the assumed allocation of cost between trade waste customers and non-trade waste customers will also vary.
- Sewer related corporate overheads and the depreciation of total sewage asset value for 2017/18 have been distributed across sewer pumping stations, sewer reticulation assets and sewer treatment proportional to their operational expenditure. We acknowledge that actual depreciation of treatment assets is likely to be different to our assumptions.
- We calculated trade waste discharge volumes based on the 2007/08 dataset and assumed trade waste discharge factors. Where necessary we have assumed average trade waste discharge factors to those trade waste customers which do not have one specified.
- We calculated total catchment flows using average dry weather flow data provided by Essential Water.
- We note that no Biosolids costs are specified as these by-products of sewage treatment are stockpiled on site.

2.4.3 Proposed Charges in Future Years of the Pricing Period

Essential Water's proposed approach is to escalate prices for trade waste in line with standard availability charges.

We do not consider that there is robust justification for this approach given the uncertainty of how the current prices and charges are applied, but consider that the impact of this approach has negligible effect on proposed prices. An alternative approach which demonstrated projections of future flows and loads would be a more robust method of forecasting future costs.

2.5 Overall recommendations for trade waste prices and revenue forecasts

Essential Water's approach to trade waste pricing does not explicitly reference IPART's pricing principles. Prices and proposed charges to trade waste customers:

- do not appear to be based on the capacity of trade waste systems to transport, treat and dispose of waste
- may under-recover the true cost of handling the trade waste
- cannot be shown to reflect different costs to manage waste in different catchments
- cannot be shown to be transparent or accurate. Particularly, not all trade waste customers are charged to treat their waste. Further, the charges proposed do not appear to reflect the short or long run marginal treatment cost for the network and treatment assets.

We recognise that Essential Water's datasets are limited, and that economic conditions may make the application of trade waste pricing difficult. However, when compared against IPART's principles, there appears to be misalignment between regulatory expectations and current practice.

We note that the magnitude of the misalignment (likely under-recovering between $370k and $534k per annum) is such that the employment of resources to better understand trade waste discharge and apply trade waste charges could be funded by additional revenues received from trade waste customers. Improved trade waste management practice could also assist Essential Water's efficient pricing of services and improve planning practices in the business.

Subject to the expectations of stakeholders and customers, particularly taking into account the ability of trade waste customers to pay, we suggest that Essential Water establish a transition plan to gradually recover an increasing share of trade waste costs from trade waste customers. Initially, this approach could utilise the default volumetric prices

recommended by the Department of Primary Industries (Liquid Trade Waste Regulation Guidelines 2009), and be capped to only recoup the revenues allowed under the transition plan.

The speed of this transition would need to be carefully considered, but we suggest a 10-year transition period is reasonable given the current status of trade waste management and economic conditions in the region. Furthermore, the implementation of the transition would need to be carefully designed, and make use of accurate data on actual flows discharged from trade waste customers. In time, as datasets improve on the volume and quality of trade waste, Essential Water could more confidently apply calculated volumetric and mass-based charges to ensure that the businesses which produce waste pay their fair share of the full efficient cost of its transfer and treatment.

The following table outlines a possible transition to cost recovery of $370,000 of trade waste costs over a 10-year period. This could be recovered through default charges (NSW Government Best Practice Guideline 2009) levied on assumed discharges for each trade waste category.

Table 2 – Possible transition path to recovery of trade waste costs, $'000,2018-19

	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29
Essential Water Forecast revenue $'000	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3	3.1
Possible transition Path $'000	37	74	111	148	185	222	259	296	333	370

Note: This is an example only and further work is required on the total trade waste costs to be recovered and the transition path.

3. Miscellaneous charges review

Based on our assessment of Essential Water's proposed miscellaneous and ancillary charges for the 2019 determination period, we are not recommending any changes from Essential Water's proposed forecasts.

3.1 Overview of proposed miscellaneous charges

Essential Water currently collects approximately $0.109 million in miscellaneous charges per annum. Revenue from Essential Water's miscellaneous charges is largely made up from three charges:

- conveyancing certificates with meter reads
- drainage diagrams
- personal service of final warning notice for late payment prior to restriction.

The table below shows Essential Water's proposed revenue from miscellaneous charges over the next regulatory period.

Table 3: Essential Water forecast revenue from miscellaneous charges, $million 2018-19

	2018-19	2019-20	2020-21	2021-22	2022-23
Conveyancing Certificate – full certificate with meter read	0.053	0.053	0.053	0.053	0.053
Drainage Diagram	0.016	0.016	0.016	0.016	0.016
Personal service of final warning notice	0.020	0.020	0.020	0.020	0.020
Other charges	0.020	0.020	0.020	0.020	0.020
Total Forecast revenue	0.109	0.109	0.109	0.109	0.109

3.2 Approach to review

IPART requires water businesses to set miscellaneous charges to the following principles:

Box 2: IPART's Miscellaneous and Ancillary Services Pricing Principles

1. **Charges shall be cost-reflective.**
The maximum charge should be set to reflect the full efficient cost of service delivery to customers in accordance with the formula below:

Miscellaneous charge = base cost + direct material cost

Where
Base cost = [direct cost of labour (including on costs) + transport + equipment] + overhead costs
Direct material cost = cost of materials used in the service
Charges should reflect efficient costs.

Charges should not include any allowance for a profit margin, any costs already recovered through maximum prices, or any other costs unrelated to the delivery of the service.

2. **Changes to charges**
On request, the business should be able to provide an estimate for the expected net revenue impact of a proposed price change.

3. **Efficiency**
The business should continue to pursue efficiency gains in service provision. The business should be continuously reviewing the manner of service delivery to ensure it is least cost, and that it meets the needs of customers.

4. **Customer impacts**
When the business proposes significant price changes and/or new charges, the business should undertake a customer impact analysis. A customer impact analysis should detail at least:

- the current cost of the service
- the proposed cost of the service
- the number of customers who use the service on average each year, and
- the type of customer who will be affected eg, residential, industrial, commercial customers.

Changes in the cost of service provision can be passed through to customers. However, the level and allocation of costs across customers may be monitored by the Tribunal as part of its price review process to avoid price shocks. The business should have regard to the impact of any changes on vulnerable customer groups, for example low income families, and ensure that customer impacts are not unreasonable.

Our review has focused on whether Essential Water's proposed miscellaneous charges meet IPART's pricing principles. This has included an assessment of the efficiency, cost reflectivity, equity, transparency and simplicity of the proposed prices. Our assessment included a review of:

- forecast revenue to ensure it aligns with overall miscellaneous revenue forecasts included in Essential Water's price submission
- unit rates of the top 10 miscellaneous charges by testing appropriateness of the assumptions in each
- whether the proposed charges are within range of current charges applied by other water businesses for similar services businesses
- demand projections against historical trends.

3.3 Review of major miscellaneous charges

To assist with our review Essential Water provided a breakdown of total revenue being forecast for miscellaneous charges and a further detailed breakdown for the major charges including:

- breakdown of base costs, separately identifying:
    - direct cost of labour plus oncosts, as well as time required to complete the service
    - transport
    - equipment
    - overhead costs.
- a breakdown of direct material costs – including quantity and units rates applied

- forecast quantity of charges for each year of the regulatory period.

The following outlines our review of Essential Water's three major miscellaneous charges, which makeup approximately 82 per cent of its projected annual miscellaneous charge revenue of $0.109 million.

3.3.1 Conveyancing Certificate - Full Certificate with Meter Read

This charge relates to the recovery of costs associated with a Conveyancing Certificate. This task normally involves receiving written request from Solicitors/Conveyancers, mortgagees and or other third parties for a Certificate Part 2 - Water Rates to be provided for the proof of amount owing for all water, sewer and consumption on a property for the process of sale, probates and transfers.

Proposed Forecasts

The following table provides a breakdown of forecast unit prices, quantities and total revenue for conveyancing certificates – full certificate with meter reads.

Table 4: Conveyancing Certificate - Full Certificate with Meter Read Forecast revenue, $2018-19

	2018-19	2019-20	2020-21	2021-22	2022-23
Unit price	$73.85	$73.85	$73.85	$73.85	$73.85
Quantity	716	716	716	716	716
Total Revenue	$52,877	$52,877	$52,877	$52,877	$52,877

As part of this review, Essential Water was requested to provide the breakdown of the unit cost to deliver the service as outlined in the table below. The breakdown provided proposed that the costs to deliver the service being significantly above the proposed unit price.

Table 5: Conveyancing Certificate - Full Certificate with Meter Read unit cost

Component	Unit Cost
Labour – Field (including on-costs)	$38.41
Labour – Admin (including on-costs)	$69.03
Vehicle	$19.21
Overheads + administration + profit margin	$39.97
Total	$166.62

Our Assessment

The following tables outlines our assessment of Essential Water's proposed forecasts for the Conveyancing Certificate – full meter read charge against IPART's pricing principles.

Table 6: Conveyancing Certificate - Full Certificate with Meter Read- Marsden Jacob assessment

Component	Assessment

Unit rate	• In calculating its direct unit costs Essential Water used hourly labour rates of $49.56 for field workers and $44.53 plus oncosts for administration staff, based on current staff rates. Essential Water applied an overhead rate of 18 per cent plus administration, and an allowance for profit of 4.5 per cent (equivalent to the WACC). We consider these assumptions to be reasonable except for the inclusion of a profit margin which is not allowed under IPART's pricing principles.
	• When assessing the length of time required to deliver the service we note that the unit cost of $166.62 is significantly higher than current prices of similar services provided other water agencies. We note that other businesses do not appear to include a meter read:
	  • Hunter Water's current charges for conveyancing certificate (in person) is $39.00
	  • Central Coast Council is proposing charges for a conveyancing certificate of $26.56
	  • South East Water currently charge $31.61 for its information statements
	  • City West Water currently charges $51.30 for its standard information statements.
	• We consider that Essential Water's proposed unit price of $73.85, while higher is more within the range of the charges applied other businesses than its current estimated cost to deliver the service. We therefore consider the proposed price better reflects the cost to deliver the service.

Volumes and total revenue	Essential Water has maintained its forecast consistent with historical volumes. Given minimal change in customer activity is expected in the area, we consider this approach to be reasonable.
Customer impacts	Given that no change to the current charges is recommended there will be no impacts on customers from forecast prices.

Based on the assessment above we consider that while Essential Water's proposed unit price is below the estimated costs to deliver the service, it better reflects an efficient cost to deliver the service. Additionally the proposed price is more in the range of other businesses' current charges for a similar service. We also consider that Essential Water's revenue forecasts for this service are consistent with historical levels, reflect an efficient allocation of costs and are therefore consistent with IPART's pricing principles for miscellaneous charges.

3.3.2 Drainage Diagram

This charge relates to the recovery of costs associated with producing a drainage diagram. This task normally involves:

- processing customer request through Autocad to produce a diagram of Sanitary Drainage/Sewerage Infrastructure to scale.
- carrying out a check against Essential Water's sewer network to ensure the diagram is correct
- emailing a pdf version and forward hard copy via mail to the customer
- updating Essential Water history cards with new information for that location.

- invoicing the customer through the Solicitor Database.

Proposed Forecasts

The following table provides a breakdown of forecast unit prices, quantities and total revenue from charges for the provision of drainage diagrams.

Table 7: Drainage Diagram Forecast Revenue, $2018-19

	2018-19	2019-20	2020-21	2021-22	2022-23
Unit price	$21.65	$21.65	$21.65	$21.65	$21.65
Quantity	736	736	736	736	736
Total Revenue	$15,934	$15,934	$15,934	$15,934	$15,934

As part of this review, Essential Water was requested to provide a breakdown of the unit cost to deliver the service, which is outlined in the table below. The breakdown provided shows that the current costs to deliver the service being significantly above the proposed price.

Table 8: Drainage Diagram Unit costs, $2018-19

Component	Unit Cost
Labour – Field (including on-costs)	$57.62
Overheads + administration	$18.66
Total	$76.27

Our assessment

The following tables outlines our assessment of Essential Water's proposed forecasts for drainage diagrams.

Table 9: Drainage Diagram – Marsden Jacob assessment

Component	Assessment

Unit rate	• In calculating its direct costs Essential Water used hourly labour rates of $49.56 plus oncosts for field workers, based on current staff rates, which we consider is reasonable. In its estimate of unit costs Essential Water applied an overhead rate of 18% plus administration, and an allowance for profit of 4.5% (equivalent to the WACC). We consider these assumptions to be reasonable except for the inclusion of a profit margin which is not allowed under IPART's pricing principles
	• However when assessing the length of time required to deliver the service, we note that Essential Water's unit cost is significantly higher than current prices of similar services provided other water agencies:
	  • Hunter Water's service location diagrams current charges range from $17 to $28.
	  • Central Coast Council is proposing charges for service location diagrams ranging from $21.25 to $30.81
	  • Sydney Water's current charge for service location print of $28.48
	  • South East Water's Sewer Location Plan of $28.17.

Component	Assessment
	• Given this we consider Essential Water's proposed unit price to be more consistent with the efficient cost to deliver the service, rather than its actual unit cost.
Volumes and total revenue	Essential Water has maintained its forecast volumes consistent with historical levels. Given minimal change in customer activity is expected in the area, we consider this approach to be reasonable.
Customer impacts	Given that no change to the current charges there will be no impacts on customers from forecast prices.

Based on the assessment above we consider that the Essential Water's proposed unit price is consistent with the efficient cost to deliver the service, and comparable with current charges applied by other businesses. We also consider its forecast revenue to be reasonable and consistent with IPART's pricing principles.

3.3.3 Personal Service of Final warning notice

Personal Service of Final Warning notices charges are a final warning delivered to customers prior to restriction of their water service. The charge is intended to recover some of the cost associated with a Customer Service Officer manually preparing letters for customers that have not responded to attempts to contact them. Letters are then given to a Field Officer to deliver the notices and once the notices are delivered, they are returned to the Customer Service Officer who then manually enters notes on the accounts recording the details of the letter delivery. The fee is then manually entered onto the customer's account.

Proposed Forecasts

The following provide the breakdown of proposed unit prices, quantities and total revenue forecast for charges related to personal service of final warning notices.

Table 10: Personal Service of final warning notices – Forecast revenue, $2018-19

	2018-19	2019-20	2020-21	2021-22	2022-23
Unit price $	$21.55	$21.55	$21.55	$21.55	$21.55
Quantity	938	938	938	938	938
Total Revenue $	$20,214	$20,214	$20,214	$20,214	$20,214

As part of this review, Essential Water was requested to provide the breakdown of the unit cost to deliver the service as outlined in the table below. The breakdown provided shows that the costs to manage late paying customers being significantly above the current and proposed unit price.

Table 11: Personal Service of final warning notices – Unit costs, $2018-19

Component	Unit Cost
Labour – Field (including on-costs)	$38.41
Labour – Admin (including on-costs)	$22.78
Vehicle	$19.21
Overheads + administration + profit margin	$29.19
Total	$109.59

Our assessment

The following tables outlines our assessment of Essential Water's proposed forecasts for charges related to personal service of final warning notices.

Table 12: Personal Service of final warning notices – our assessment

Component	Assessment
Unit rate	• In calculating its direct costs Essential Water used hourly labour rates of $49.56 for field workers and $44.53 plus oncosts for administration staff, based on current staff rates who undertake the service. Essential Water applied an overhead rate of 18% plus administration, and an allowance for profit of 4.5% (equivalent to the WACC). We consider this to acceptable except for the inclusion of a profit margin is not allowed under IPART's pricing principles • While the costs to manage late paying customers of $109.59 is higher than the proposed price of $21.55, increasing the charge may not assist with debt recovery and may potentially impact on vulnerable customers. We therefore consider that Essential Water should retain its charge at the proposed level rather as a reasonable deterrent for late paying customers • While we understand there are costs to manage late paying customers, the estimated annual operating cost of approximately $100,000 per annum to send and process final warning notices appears high. We consider that Essential Water should review its practice of sending final warning notices to ensure it is cost effective in managing late paying customers and bad debt • The charge is not applied by other businesses, though interest on overdue accounts is currently applied by Victorian water businesses.
Volumes and total revenue	• Essential Water has maintained its forecast consistent with historical volumes. Given minimal change in customer activity is expected in the area, we consider this approach to be reasonable
Customer impacts	• Given that no change to the current charges there will be no impacts on customers from forecast prices.

Based on the assessment above we consider that Essential Water's proposed unit prices are well below the costs to manage the process of warning customers prior to restriction. However, in this instance increasing this charge may impact vulnerable customers and may impact the recovery of overdue accounts. We also note that there does not appear to be other businesses charging individual customers the cost of managing overdue accounts, though water businesses in Victoria currently charge customers interest on overdue accounts.

More broadly, we note that $100,000 per annum to send and process final warning notices appears high. We consider that Essential Water should review its practices to ensure it is managing its late paying customers and bad debts efficiently.

3.4 Overall recommendations for miscellaneous charges

Based on our assessment of Essential Water's proposed miscellaneous charges, including our detailed review of its major miscellaneous charges, we are not recommending any changes from Essential Water's proposed unit prices and revenue forecasts. While some of Essential Water's unit costs to deliver the services are higher than its proposed prices, we consider Essential Water's proposed unit prices better reflect the efficient cost to deliver the services.

Proposed prices rather than unit costs for conveyancing certificates and drainage diagrams are also more comparable with the current charges for similar services provided by other water businesses. We also consider that Essential

Water should review its current practices for final warning notices to ensure it is managing its late paying customers and bad debts efficiently.

Table 13: Recommended forecast revenue from miscellaneous charges by service, $million 2018-19

	2019-20	2020-21	2021-22	2022-23
Water	0.047	0.047	0.047	0.047
Sewerage	0.063	0.063	0.063	0.063
Total Forecast revenue, $million	0.109	0.109	0.109	0.109