MARSDEN JACOB ASSOCIATES

economics
public policy
markets
strategy

Review of proposed prices for Central Coast Council trade waste and miscellaneous services

A Marsden Jacob Report

I

Prepared for IPART
February 2019

Marsden Jacob Associates
ABN 66 663 324 657
ACN 072 233 204

economists@marsdenjacob.com.au

Contact:
Rob Nolan | Marsden Jacob Associates |rnolan@marsdenjacob.com.au | 03 9882 1600

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.

www.marsdenjacob.com.au

Contents

Executive summary

This report outlines our assessment of Central Coast Council'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 Central Coast Council 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 to:

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

Trade waste review key findings and recommendations

This report presents the findings of our review of trade waste prices included in the Council's 2019 price submission to IPART. In its submission, the Council has sought to align and consolidate the pricing structures of Gosford Council and Wyong Council. In relation to trade waste pricing, the Council has proposed Administrative Charges, Volumetric Charges and Mass Based Charges. The Council has used existing datasets and accounted for the processes of the two former Councils as far as possible to prepare its submission.

We consider that Council's approach to trade waste pricing has not fully met IPART's expectations in the application of its pricing principles. Proposed charges:

- do not appear to be based on the capacity of treatment systems to accept and manage sewage
- cannot be proven to cover efficient costs, other than fixed and administration fees which appear (with two small exceptions) to be robustly justified
- do not distinguish between sewerage catchments, despite sewerage catchments managed by Council being different in scale and nature, and differences in the quality of sewage in each catchment
- rely heavily on NSW Government Best Practice "default" values which, while being transparent, cannot be proven to reflect the true costs incurred in managing trade waste in the Central Coast Council region.

Notwithstanding the above findings, proposed administrative charges are justified, apart from annual fees for Category 1 and Category S customers, which we recommend should be slightly reduced.

In the absence of robust analysis of flow and loads, we recommend that Council's volumetric and mass-based charges (which reflect NSW Government Best Practice) remain as proposed. We recommend that the Council establish improved datasets to better understand trade waste flows and loads (and domestic flow and loads) to ensure prices are cost reflective and Council are recouping the actual cost associated with servicing its trade waste customers. This information can assist Council to improve Asset Management practices (Planning / Operations and Maintenance) for networks and treatment plants, reduce cross subsidies to domestic customers, allow better control over discharge licence obligations, improve customer outcomes through lower odour and uncontrolled spills from the sewerage system, and Council deliver more effective trade waste services (including catchment specific pricing, if found to be appropriate).

Our recommendations should not create significant additional costs for Council as we recommend using improved Category 3 datasets, and assumptions on flow and load from other trade waste categories to build better flow and load models for sewerage catchments.

We recommend some adjustments to the Council's trade waste revenues to account for customer growth, usage growth, minor amendments to annual trade waste fees and to correct an error identified in Council's original proposal to IPART. Proposed revenues and recommended adjusted revenues are noted below.

Table 1: Proposed and recommended forecast trade waste revenue, $million $2018-19

Annual Trade waste Charges Revenue	2019-20	2020-21	2021-22	2022-23
Price submission proposed revenue – $million	$2.68	$2.68	$2.68	$2.68
Recommended revenue – $million	$2.68	$2.73	$2.78	$2.84

Miscellaneous charges review key findings and recommendations

In this report we have assessed the Council's forecast miscellaneous charges for the 2019 price determination period. Our review included a detailed assessment of the Council's 10 major miscellaneous charges, which make up approximately 95 per cent of total their annual projected revenue.

As part of this review the Council revised their annual forecast from $2.8 million to $4.12 million per annum over the next regulatory period. This change was due to the inclusion of revenue from several services that did not form part of its original price submission forecast.

Based on our assessment of the Council's amended forecasts for miscellaneous charges we consider its approach to developing unit costs and demand forecasts for each service to be broadly consistent with IPART's pricing principles.

We note that further consideration should be given to including an allocation for overheads in each miscellaneous charge in future price determinations. While we have not factored overheads into our recommended forecast, we consider that the inclusion of overheads in the Council's miscellaneous charges would reflect the full efficient costs to deliver those services.

Table 2: Proposed and recommended forecast revenue from miscellaneous charges, $million $2018-19

Forecast revenue	2019-20	2020-21	2021-22	2022-23
Price submission proposed revenue – $million	$2.81	$2.81	$2.81	$2.81
Recommended revenue – $million	$4.12	$4.12	$4.12	$4.12

1. Introduction

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

IPART is currently undertaking a review of the maximum prices that Central Coast Council (the Council) can charge for their water-related services. IPART will be making a determination on 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 Central Coast Council, however they can be significant for a small number of customers.

1.1 Scope and approach for the review

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 were forecast to materially change. This included detailed technical assessment of the treatable loads (Volume, BOD, TSS, SS) seen and expected at each treatment plant in the Wyong and Gosford systems, and 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).
- Comparison of proposed trade waste prices with those levied by similarly sized water utilities in Victoria and South Australia which have similar sewerage catchments. This was completed through a rapid review of published data, one-on-one discussions with responsible officers in these water utilities, and discussion with the appropriate economic regulator in each State. Differences between our expected costs and those proposed were explored.
- 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 were efficient and directly related to the delivery of the service, and did 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 significant price shocks are avoided
- For Central Coast Council, an assessment of whether there were location-based differences in costs that would justify differences in prices between the Gosford and Wyong areas.
- An assessment of the reasonableness for prices the utilities propose to discontinue
- A review of any previous relevant IPART decisions on trade waste and miscellaneous prices.

2. Trade Waste Review

The Council is proposing alignment of administrative, liquid trade waste and mass based charges between the former Wyong and Gosford Councils.

2.1 Price submission proposal for trade waste charges

The Council is proposing alignment of trade waste charges between the two former Council (Wyong and Gosford) across:

- Administrative charges. This includes application fees, annual liquid trade waste fee for each category and common reinspection fees
- Liquid trade waste usage charges
- Mass based charges.

In the Council's price submission proposal, it stated that liquid trade waste pricing is based on several factors which can vary over time. These include:

- treatment plant operating costs
- capital costs of the sewage treatment plants
- load-based licensing (LBL) fees imposed by the Environment Protection Authority, and
- administration costs.

The additional costs associated with managing higher than domestic strength discharge from liquid trade waste and tankered customers are recovered via fixed and variable fee components.

Broadly, the fixed charges (dollars per year) recover costs such as labour directly employed to monitor and manage the scheme. The variable charges (dollars per kilogram or kilolitre) for high strength sewerage and specific constituents (e.g. Biochemical Oxygen Demand, Total Suspended Solids, Ammonia) recover costs based on the cost of treating the additional load and flow discharged by trade waste customers.

The Council forecast annual trade waste revenue of $2.96 million in its price submission. During our review the Council identified an error with its original forecasts, and proposed to revise its annual trade waste revenue forecast to $2.68 million. This revision was due to double-counting of annual charge revenues from the southern region.

Table 3: Central Coast Council forecast revenue from trade waste charges, $million 2018-19

	2018-19	2019-20	2020-21	2021-22	2022-23
Forecast revenue– Price submission	2.43	2.96	2.96	2.96	2.96
Forecast revenue – revised	2.43	2.68	2.68	2.68	2.68

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 the Council'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.

We assessed Fixed and Variable charges by:

Fixed Charges

- Reviewing the Council's justification for each fixed fee, including an assessment of whether the Council's time/cost estimates for each process were reasonable and justified.

Variable Charges

- Preparing a mass balance assessment of flows and loads in each of the Council's catchments
- Identifying flows and loads from Domestic, Commercial, and Trade waste Customer Groups
- Allocating (operational) transfer and treatment costs, and long run marginal costs appropriately to each customer group
- Comparing per kL (volumetric) and per kg (mass based) cost recovery requirements against the charges proposed by Central Coast Council.

We then review the Council's charges in comparison to other water utilities (to the extent that each sewerage catchment is unique in its customer and asset base), to illustrate whether the Council's charges were in keeping with other systems in Australia.

2.3 Pricing principles for trade waste charges

In proposing trade waste prices, Central Coast Council 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.
- 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.
- Where 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.

In its price submission Central Coast Council agrees with the pricing principles proposed by IPART with the specific exception of point 3 "Prices should vary to reflect differences in the cost of treating waste to the required standards at different locations". Council did not agree with this principle because:

- Council stated that to be able to vary liquid trade waste charges according to the treatment location, they would need to accurately determine the treatment cost (potentially as a short run marginal cost (SRMC)) within each of eight catchments/STP sites.
- The high volume of shared resources within Council's treatment network would make it difficult to accurately determine the treatment cost. Further, the six catchments/STPs in the former Wyong area share one of two common outfall locations. A catchment based price would likely vary over time as the network and/or treatment plant is augmented. Council maintained price variations may be difficult to justify to customers who cannot vary the location of their businesses. Council maintained this could especially be the case if residential growth was driving the additional treatment costs.

During our review, the Council expressed that view that it does not support a price per catchment approach because:

- Catchment costs are dominated by domestic discharges
- A single charge minimises administrative effort, and can reduce the expense and effort associated with extensive catchment sampling.

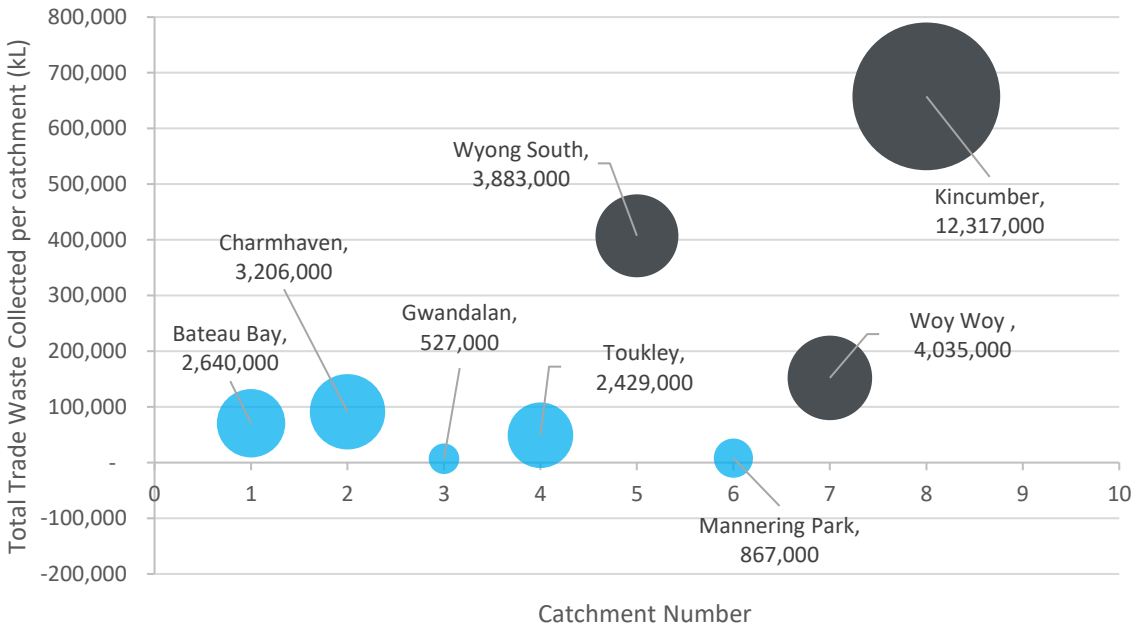
Our review identified important characteristics of Council's catchments and trade waste management program. These characteristics have informed our assessment of Council's response to location specific pricing:

- The catchments managed by the Council vary significantly in size, ranging from approximately 527kL p.a. for the Gwandalan system up to 12,317kL p.a. for the Kincumber system. Trade waste flows in these systems vary markedly, along with customer numbers by trade waste categories.
- Treatment systems vary in sophistication and capacity between the Council catchments.

The significant differences in characteristics between catchments and treatment processes raises the risk that a single (variable) volumetric or mass-based charge across all trade waste customers of a given category creates cross-subsidies across catchments and trade waste dischargers.

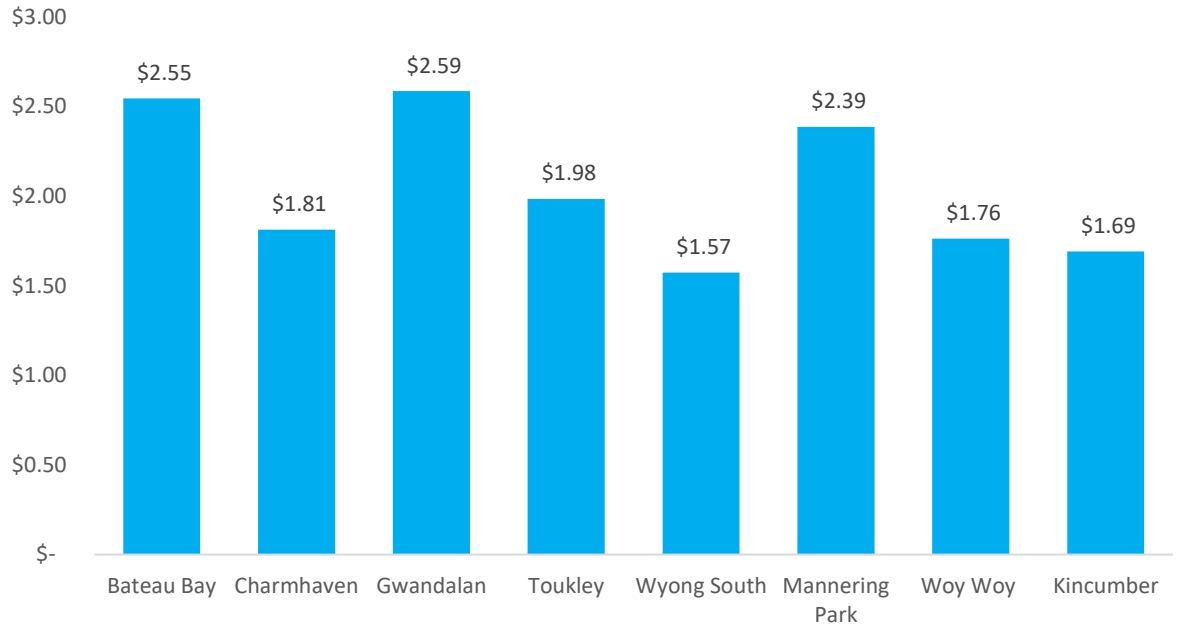
We illustrate the differences between catchments below. Figure 1 shows how the trade waste discharges and total sewage flows vary across the Central Coast Council region. Data labels in Figure 1 show to total sewage flows per catchment. Catchments shaded in grey accept relatively higher volumes and / or higher proportions of trade waste than Central Coast Council's other catchments.

Figure 1: Central Coast Council trade waste catchments – annual volumes (kL)



The differences in costs between catchments are evident on a simple $/kL comparison. Figure 2 compares Network and Sewage Treatment Plant Operating and Depreciation costs against total flows in the catchment.

Figure 2: Central Coast Council sewage catchment management costs ($/kL)



Our review of Council's datasets on trade waste discharge show they are generally sparse. Councils datasets have low accuracy of data at a catchment level.

For instance, of 24 Category 3 trade waste customers, historical data is only available for nine customers. Council datasets do not include information about where these nine customers discharge their trade waste.

Similarly, our review found no comprehensive information is available on the load quality of Category 2 trade waste dischargers (either measured or assumed by customer type), albeit the catchment for each of these customers is known. We also found an inconsistency in Category 1 customer number data.

2.3.1 Recommendations on Application of Pricing Principles

Hunter Water and Sydney Water apply trade waste pricing by catchment for major industrial customers. Differential pricing reflects differences in their efficient costs of servicing each catchment.

We note that applying differential pricing between catchments would impose an administrative burden on Central Coast Council which may be significant. That said, uniform pricing will create cross-subsidies in the Central Coast Council region. These cross-subsidies will result in inefficient prices that lack transparency. We recommend:

- That the uniform pricing proposed by the Council is accepted for this price determination, but that the Council actively pursue a more rigorous approach to better inform its next pricing submission to IPART.

  Council's approach in the next price determination should be structured to understand the extent to which trade waste management costs vary across catchments and how prices should vary on a location basis. Central Coast Council should focus on those catchments which may have material differences in trade waste discharge compared to other catchments. Our review suggests these catchments are likely to be Wyong South, Kincumber and Woy Woy.

  We recognise that intensive monitoring for Category 1, 2, and S customers could be expensive and time-consuming. We suggest that Council use assumed waste qualities used by other water utilities in New South Wales, such as Sydney Water, or elsewhere in Australia to reduce costs.

  Council already monitors several Category 3 customers, and Council has indicated that monitoring is being extended to all customers in this category. This programme will have the benefit of establishing the true cost of treating trade waste in each catchment. This evidence base can be used to confirm the extent of cross-subsidies across catchments and identify trade waste dischargers under-reporting their load and / or flow profile. The evidence base can also be used to inform Council's Asset Management processes, including capacity upgrade planning, operations optimisation, and maintenance planning.

- That, subject to the findings of the above analysis and for administrative simplicity, catchments are categorised into those which are, and are not, subject to significant trade waste loads. Customers in catchments without significant trade waste loads could receive a non-location specific default charge. Customers in catchments with significant trade waste loads could receive a charge reflective of the true cost of trade waste management.

2.4 Assessment of liquid trade waste charges

2.4.1 Proposed liquid trade waste charges

Table 4 outlines the current and proposed charges for liquid trade waste charges, including annual fees, application fees, reinspection fees and usage charges.

Table 4: Current and proposed Liquid Trade Waste annual, application and inspection charges

Charge	Current Wyong	Current Gosford	Proposed prices 2019-2023
Category 1			
Application fee	$52.19	$126.63	$95.33
Annual fee	$91.29	$73.52	$100.16
Category 2			
Application fee	$66.43	$211.27	$120.68
Annual fee	$365.16	$234.44	$346.04
Category 3			
Application	$1,018.90	$495.09	$2,173.60
Annual	$613.39	$1,968.86	$1,337.60
Category S			
Application fee	$221.85	None	$165.93
Annual fee	$99.09	None	$165.93
Re-inspection fee			
(All trade waste customers)	$85.60	$118.31	$110.42

Table 5: Current and proposed liquid trade waste usage charges

Charge Type	Current charge per kL	Proposed charge 2019-23 plus annual CPI increase each year per kL
Compliant	$1.71	$1.75
Non-compliant	$14.59	$14.94
Septage and septic effluent discharge charge	$17.12	$17.54
Septic effluent unable to discharge onsite	$1.71	$1.75

2.4.2 Assessment of Fixed Charges

The following discussion outlines our comments on proposed application and annual fixed charges.

Table 6: Trade fixed charges – our assessment

Trade waste Category	Proposed Charges	Recommendation
1	Category 1 application charges are applied based on the time taken for a trade waste officer to travel to site, inspect premises and process an application. An annual fee covers a visit to site, inspection and associated administration activities.	**Application Charges** The time taken to process the application is reasonable when considering the work required to process a Category 1 application. We recommend that the application charges be accepted.

Trade waste Category	Proposed Charges	Recommendation
	The revised charges will impose slight increase on Category 1 applications for former Wyong Council customers, and a slight increase to annual fees for former Gosford Council customers. The increase is not considered to be significant for a commercial customer.	**Annual Charges** We recommend that annual charges are reduced to account for 15 minutes of a trade waste officer's time for administration (reduced from the proposed 20mins). This change would reduce Annual Fees for Category 1 from $100.16 to $95.34. This recommendation is on the observation that an annual "roll-over" of a TW licence should require relatively less administration to complete (certainly less than the initial application). The hourly rate and overhead rates listed are reflective of the Council's approved cost structure.
2	Category 2 application charges are applied based on the time taken to travel to a premises, inspect premises, and to then process the trade waste application. An annual fee covers two trips to site each year, associated inspection and collection/review of sample data. The revised charges will impose slight increase on Category 1 applications for Wyong based customers (less than $60), and a slight increase to annual fees for former Wyong Council customers (approximately $100). This is not considered to be significant for a commercial customer.	We recommend that IPART accept the proposed charges. **Application Charges** The time taken to process a Category 2 application is reasonable when considering the work required to process the application. The hourly rate and overhead rates listed are reflective of the Council's approved cost structure. **Annual Charges** The time and assumed sampling cost on an annual basis is reasonable when compared to the application charges.
3	Category 3 charges are applied based on the time taken for a supervisor to travel to a premises, inspect them, take samples (as appropriate) and then process the trade waste application. An annual fee covers two trips to site each year, and associated inspection and monthly administration costs. Increases in Application and Annual fees are significant for both Gosford and Wyong customers. However, Category 3 customers are large industrial clients which warrant the expense of detailed assessment of their premises, and careful assessment of effluent quality.	We recommend that IPART accept the proposed charges. **Application Charges** We recognise that an application for a Category 3 discharger is a rare event. Each event can require considerable efforts to review. Each event is unique in its complexity and difficulty. The Council's processing time (22 hours, or approximately 3 person days) is viewed as appropriate given the need to conduct sampling (when necessary), assess sample data, develop sampling regimes, consider network and treatment implications and capacity, complete DoI-Water application review and approval process and establish record management systems. While considered reasonable in quantum, Central Coast Council could provide no evidence to support the estimated processing time. An alternative approach (charging a per-hour fee) is possible but is unlikely to deliver value:

Trade waste Category	Proposed Charges	Recommendation
		• Infrequent application would make the process difficult to administer • Development of a quotation will add time (and expense), and will suffer inaccuracies due to the low frequency of application • A quotation will generate uncertainty and time delays for customers. **Annual Charges** • The annual fee levied on Category 3 trade waste customers appears reasonable.
S	Category S application fees are applied on the basis of the time taken to travel to site, inspect processes, and update administration, as per the process adopted for the former Wyong Council. Category S annual fees are the same as the initial application fee. The Category S charges were previously part of miscellaneous fees and charges, but are now classified as trade waste charges. Notwithstanding the reclassification, the service provided by Council has not changed. Application fees and annual fees will be newly applied to former Gosford Council customers. These charges are valid given the significant risk that septic and septage discharges have on Central Coast Council's treatment assets.	**Application Charges** The proposed time taken to process an application is reasonable when considering the work required to process a Category S application. The hourly rate and overhead rates listed are reflective of the Council's approved cost structure. We note that new customers in Gosford will commence paying an application charge. We consider that levying a charge to cover the cost of receiving and processing an application is appropriate **Annual Charges** It is reasonable for Council to levy a charge covering annual activities to monitor and review septic and septage customers. However, we recommend that annual charges are reduced to account for 0.5 hours of administration. This change would reduce Annual Fees for Category S from $165.94 to $150.86. We recommend this on the basis that an annual "roll-over" of a TW licence should require relatively less administration to complete (certainly less than the initial application). We note that around 50 former Wyong customers and 8 Gosford Customers will receive higher annual charges. Typically, septic and septage discharge is managed by commercial businesses, where the impact of increased charges is unlikely to be problematic. However, the increase in prices may fall upon domestic customers in some instances. Council should employ hardship policies to manage increased costs to domestic customers after advising those customers of any changes.
All trade waste customers	A Reinspection Fee is applied in the event that a trade waste officer is required to revisit a trade waste discharger. The Reinspection Fee applies to all 3 trade waste customers.	We recommend that the charges are accepted. Central Coast should gather evidence of costs incurred to support future pricing submissions. The proposed travel, inspection and administration charges appear reasonable. Central Coast has

Trade waste Category	Proposed Charges	Recommendation
		provided commentary that the re-inspection focuses on the non-compliant issue detected and is similar in all cases. Therefore a separate fee for each category is not appropriate. Council also note that a re-inspection has only ever been issued for Category 2 customers. While the time allowances appear reasonable given the work involved in planning and conducting a reinspection, no evidence was provided to support the proposed time allowances

2.4.3 Assessment of volumetric based trade waste charges

Central Coast Council has based its volumetric charges for Category 2 customers on the default prices recommended by the Department of Primary Industries (Liquid Trade Waste Regulation Guidelines 2009), noting indexation of the volumetric charge from 2009.

The former Wyong and Gosford Councils levied this charge similarly on their respective Category 2 customers. Hence, there are only minor proposed changes that would be applied to each Category 2 customer now serviced by Central Coast Council.

Category 2 customers (and the revenue received from them), are the major component of the Council's trade waste revenue base.

To assess compliant volumetric charges (and mass-based charges, see Section 3.4.4 below) we:

- Established an accurate mass balance of flows and (particularly) loads for treatable pollutants. We then assigned these flows and loads to non-trade waste (domestic and commercial) and trade waste customer groups.
- Established how the costs for sewage transfer and treatment could be assigned on a flow and load basis. Relevant cost include Operations and Maintenance costs, and a proportionate share of network and treatment asset depreciation.
- Established volumetric (and mass based) charges to recoup the efficient cost of trade waste transfer and treatment.

As noted earlier, the Council has a sparse dataset, which made the above approach difficult to implement. To fill the data gaps, we made a series of assumptions in our analysis with the intent of establishing a reasonable "range" of volumetric charges that could be levied. These assumptions created two scenarios:

Scenario	Description
1	The share of network and treatment costs for Category 2 and 3 customers was assumed to be proportional to flow from these two customer groups. Category 2 and 3 customers were combined in this scenario given the uncertainty regarding the true load and flow from Category 3 customers (data from only 9 of 24 customers was available). Volumetric charges were then calculated.
2	As per Scenario 1, except that assumed loads and flows from Category 3 customers were removed from the analysis. This was achieved by extrapolating loading of Category 3 customers from known customer sample data. Volumetric charges were then calculated for Category 2 customers. We tested two scenarios to demonstrate the sensitivity of the assumptions relating to domestic sewage quality: Scenario 2a: We assumed concentrations of BOD (50g/p/d) and TSS (60g/p/d) to calculate domestic load. This is at the lower end of domestic sewage quality in Australia. Scenario 2b: We assumed concentrations of BOD (60g/p/d) and TSS (70g/p/d) to calculate domestic load. This is at the upper end of domestic sewage quality in Australia.

The volumetric charges calculated from the mass balance analysis were:

- Scenario 1: Volumetric charges from $1.09/kL (excluding depreciation) to $1.83/kL (including depreciation)
- Scenario 2a: Volumetric charges from $3.68/kL (excluding depreciation) to $6.33/kL (including depreciation).
- Scenario 2b: Volumetric charges from $1.55/kL (excluding depreciation) to $2.63/kL (including depreciation).

The analysis suggests that the Council's proposed charge of $1.75/kL (default NSW Government price adjusted for CPI but excluding depreciation) is within the range of charges that can be calculated for its sewerage systems, but could be significantly higher. Some of the factors / assumption which influenced our analysis included:

- The assumed loading provided by domestic and commercial premises is highly sensitive to:
    a. The calculation of Equivalent Persons in each catchment: Our assumptions were drawn from household size numbers from the 2016 Census
    b. Domestic sewage quality (treatable pollutants): We have provided two calculations under scenario 2 to show the impact of assumed concentrations of Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS[1]). We note that Total Kjeldahl Nitrogen (TKN) was not used to calculate treatment costs as Central Coast Council does not have a complete dataset regarding Nitrogen loading in all of its catchments.

       We also 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 their volumetric charge. The assumed concentrations we have used in our assessment are typical sewage quality parameters used in the industry.
- We have assumed a linear depreciation of total asset value for each sewage treatment plant for its remaining life. We made this assumption for simplicity, and in keeping with the uncertainty in other areas of our analysis. We acknowledge that actual depreciation of treatment assets is likely to be different to our assumptions. As a result we have provided our analysis with and without depreciation. Furthermore, we have not considered future capital costs in our analysis as it was unclear how those costs would be applied to the tradewaste stream.
- The share of Sewage Treatment Plant Costs (assumed as 33.3% flow related, 33.3% BOD related, and 33.3% TSS related) will not be the same for all plants within Central Coast Council's area given the different age and process types in place.

Given the difficulty in generating a verifiable flow and load mass balance model for Central Coast Council, we recommend that the Council's pricing for compliant Category 2 discharge (as proposed, and reflective of New South Wales Government Best Practice) is adopted in the absence of a robust calculated volumetric charge. This is an undesirable situation which does not effectively meet IPART's pricing principles.

We also note that the Council proposed to levy a "Non-Compliant" charge (where a Category 2 trade waste customer does not meet pre-treatment requirements). There is justification for additional charges to be levied on customers which fail to adequately control their discharge to the sewer.

Uncontrolled discharges can lead to sewer blockages/spills and impact sewerage treatment processes. Central Coast Council proposed to levy $14.94/kL (with reference to the NSW Government Best Practice Guidelines). No other justification was provided for this charge, which may link the effect of non-compliant practice to actual costs observed in the sewerage network or treatment plants. As per compliant volumetric charges (above), data gaps prevent a robust calculation of this charge. In the absence of any alternative, the proposed "default" charges proposed by the NSW Best Practice Guidelines should be accepted by IPART.

2.5 Assessment of Mass Based Prices

Mass Based Charges are typically imposed to achieve two goals:

- To recoup the cost of treatment, or

—

[1] Concentrations of BOD and TSS are noted in GHD's Feb 2018 Capacity Review of Charmhaven STP.

- To send a price signal to reduce pollution caused by untreatable pollutants.

Table 7 includes the Council's current and proposed charges for mass-based trade waste charges.

Table 7: Current and proposed Mass based Trade waste usage charges

Mass based charges (category 3 only)	Current charge	Proposed charge
Substance discharge per KG		
Biochemical Oxygen Demand	$0.76	$0.77
Suspended Solids	$0.97	$0.099
Total oil and grease	$1.36	$1.39
Ammonia	$0.76	$0.77
pH	$0.42	$0.42
Total Kjeldahl Nitrogen	$0.18	$0.18
Total Phosphorus	$1.46	$1.49
Total Dissolved Solids	$0.04	$0.05
Sulphate (as SO4)	$0.14	$0.15
Aluminium	$0.71	$0.72
Arsenic	$71.53	$73.29
Barium	$35.78	$36.66
Boron	$0.71	$0.72
Bromine	$14.59	$14.94
Cadmium	$331.15	$339.34
Chloride	No Charge	No Charge
Chlorinated hydrocarbons	$35.78	$36.06
Chlorinated Phenolics	$1,457.09	$1,493.18
Chlorine	$1.46	$1.53
Chromium	$23.84	$24.42
Cobalt	$14.59	$14.94
Copper	$14.59	$14.94
Cyanide	$71.53	$73.29
Fluoride	$3.56	$3.64
Formaldehyde	$1.46	$1.53
Herbicides/defoliants	$715.31	$733.02
Iron	$1.46	$1.50
Lead	$35.78	$36.66
Lithium	$7.17	$7.34
Manganese	$7.17	$7.34
Mercaptans	$77.03	$78.93
Mercury	$2,384.35	$2,443.41
Methylene Blue active substances (MBAS)	$0.71	$0.72
Molybdenum	$0.71	$0.72
Nickel	$23.84	$24.42
Organoarsenic Compounds	$715.31	$733.02
Pesticides General (excludes organochlorins and organophosphates)	$715.31	$730.02

Mass based charges (category 3 only)	Current charge	Proposed charge
Petroleum hydrocarbons (non-chlorinated)	$2.40	$2.30
Phenolic compounds (non-chlorinated)	$7.17	$7.34
Polynuclear hydrocarbons	$14.57	$14.93
Selenium	$50.32	$51.56
Silver	$1.42	$1.44
Sulphide	$1.46	$1.48
Sulphite	$1.46	$1.48
Thiosulphate	$0.27	$0.27
Tin	$7.17	$7.34
Uranium	$7.17	$7.90
Zinc	$14.59	$14.93

Central Coast Council proposes to levy mass-based charges on a selection of treatable and non-treatable pollutants.

All of the Council's treatment plants are (to varying degrees) capable of treating the "treatable" pollutants: BOD, Suspended Solids, Nitrogen (in various forms), oils and greases and pH. Other pollutants (such as Phosphorus, Total Dissolved Solids (salts), organic chemicals and metals) are not readily treatable given the technology in place at the Council's treatment plants.

Treatable Pollutants

Of pollutants classified as treatable, Council has complete datasets on BOD, TSS and Ammonia (NH4). Partial datasets were provided for Nitrogen, COD and Alkalinity. We note that the catchments where Nitrogen and COD data was not provided accounted for over 50% of the total network discharge.

Notwithstanding the limited data set available, we have reviewed Central Coast Council's proposed mass-based charges. At a network level our analysis shows the mass-based prices that could be charged to trade waste customers (for treatable pollutants) were:

- BOD Reduction: Mass based charges from $0.82/kg (excluding depreciation) to $1.42/kg (including depreciation) (Central Coast's proposed pricing is $0.77/kg), and
- TSS Removal: Mass based charges from $0.52/kg (excluding depreciation) to $0.91/kg (including depreciation) (Central Coast's proposed pricing is $0.99/kg).
- NH4 Reduction: Mass based charges from $4.41/kg (excluding depreciation) to $7.66/kg (including depreciation) (Central Coast's proposed pricing is $0.77/kg).

In addition to the assumptions noted above for the volumetric charge, our analysis is sensitive to the following assumption:

- The share of Sewage Treatment Plant costs for the mass based charges was assumed as 33% BOD reduction, 33% TSS removal, and 33% NH4 reduction. As these shares vary (and other treatable pollutants are considered) the assumed allocation of cost between trade waste customers and non-trade waste customers will also vary.

Central Coast Council also applies an excess mass-based charge on some treatable pollutants. This charge is levied to protect the sewage treatment plant and/or network from excessive concentrations or flows which may disrupt treatment processes. Information provided to date has not demonstrated that default excess charges levied by Central Coast Council are based on the treatment capacity of each treatment plant. They are again based on default values taken from NSW Government Best Practice Guidelines.

In considering these default charges, we note that there is an error, confirmed with the Council, in the proposed charges for Suspended Solids which should be $0.99 rather than $0.099.

Given the difficulty in generating a verifiable mass balance model, we recommend that the Council's "default" pricing for mass based charges (as proposed) be adopted in the absence of robust calculated charges. This is an undesirable situation which does not effectively meet IPART's pricing principles.

Non-Treatable Pollutants

Our review of the Council's approach to non-treatable pollutant charges has not revealed a justification for the inclusion of a given parameter nor the effectiveness of the price signal proposed.

Typically, non-treatable pollutant charges are levied to provide a clear signal to dischargers to reduce pollution. The (limited) data on Category 3 trade waste discharges available suggests that the non-treatable excess mass-based pollutant charges, when applied, may not provide a strong price signal to cease or limit discharge of each non-treatable pollutant. This is illustrated by the continual excess charges being levied, particularly on TDS (salt) on several larger trade waste customers.

Notwithstanding the absence of data justifying a non-treatable pollutant's inclusion on the mass-based charge list, we do not recommend that any pollutants be removed from the list of mass based charges. Rather, we recommend that the Council, when levying a charge noted on the list, clearly specifies to its customers why the charge is being levied, and how it affects Central Coast Council's ability to meet its discharge licence agreements or other end product quality specifications.

2.6 Assessment of Septic and Septage Charges

We note the proposed increases to Septic and Septage Trade Waste Usage Charges. As per Application and Annual Charges, Council has sought to align charges to the Best Practice Guidelines from two different pricing arrangements applied by the former Wyong and Gosford Councils.

Table 8: Proposed Septic and Septage charges and customer affected

Council Area	17/18 Charge	Proposed Charge	Number of customers affected
Wyong	(Septic and Septage) $17.12/kL	(Septic) $1.75 (Septage) $17.54	8
Gosford	(Septic) $1.71/kL (Septage) $14.58/kL	As above	8

Central Coast Council's basis for its proposed charges appears sound. As above, prices cannot however be justified through a robust mass balance or via analysis of the Council's treatment costs.

Septic charges are levied at the same rate as Category 2 trade waste volumetric discharge. The quality of septic discharge is difficult to discern accurately but can reasonably be assumed to be of a poorer quality than domestic wastewater, and hence the application of Category 2 charges appears reasonable.

Septage discharges are levied at (approximately) 10 times the price of septic discharge given their typically higher load and potential impact on sewage treatment processes. We note that septage discharges can be up to 50 times stronger than typical domestic sewage in some parameters, and hence a higher charge could be warranted if Council had more accurate datasets.

We note that the per kL septic and septage discharge fees are typically applied to commercial businesses. The increase in septage discharge charges to 8 former Gosford Council customers may require these businesses to pass on higher costs to their customers. While some former Gosford Council customers will receive higher charges, some customers of the former Wyong Council will receive lower charges due to the application of a septic discharge rate separate to septage discharge (previously the charges were combined). The change in pricing is considered to be acceptable given the small expected increase in revenue from the changed pricing arrangement (a total of $1,787.84 per annum in total to be distributed across all 16 customers).

2.7 Overall Recommendations for Trade Waste prices

The Council's approach to trade waste pricing has not fully met IPART's pricing principles. Proposed charges:

- do not appear to be based on the capacity of treatment systems to accept and manage sewage

- cannot be proven to cover efficient costs, other than application and annual charges for all trade waste categories which appear (with two small exceptions) to be robustly justified
- do not distinguish between sewerage catchments, despite sewerage catchments managed by Central Coast Council being different in scale and nature, and the quality of sewage in each catchment being quite different
- rely heavily on NSW Government Best Practice "default" values which, while being transparent, cannot be proven to reflect the true costs incurred in managing trade waste in the Central Coast Council region.

It is important that Central Coast Council continue to apply trade waste charges to allow the Council to recoup costs incurred in managing trade waste, and provide a price signal to reduce pollution caused by so- called untreatable pollutants. The application of default prices for many proposed charges is a reasonable approximation of the true cost of managing trade waste, but prices could be more cost reflective if Council established improved datasets, as below.

It is reasonable to assume that the Council could, with a dedicated focus and some time, meet IPART's expectations regarding trade waste pricing. Suggested actions include:

- capturing Category 3 trade waste flows and loads in each catchment such that it is possible to identify the contribution that this customer group makes to the sewage quality in each catchment. Central Coast Council has indicated that it is already starting to record the missing flows and loads from Category 3 customers formerly managed by Gosford Council.
- establishing an estimate of the flow and load from Category 2 customers. Central Coast note that they will be able to capture estimated flow for Category 2 customers, but anticipate the capture of load data could involve a significant cost due to extensive sampling. We agree that extensive monitoring of Category 2 customers will be expensive and time consuming. We suggest that Central Coast avoid the cost of extensive sampling by obtaining assumed discharge qualities from other water utilities in New South Wales or elsewhere in Australia and use this to model flows and loads from this customer category.
- confirming domestic and non-trade waste discharge quality, and use this and the above data on Category 2 and 3 dischargers to develop a robust mass balance of its sewage catchments. This is advisable as part of a prudent approach to capacity upgrade planning at Central Coast Council's STPs, particularly given the dominance of domestic discharge on total loads entering Central Coast Council's STPs.
- break down its network and treatment cost base such that it is clearer how costs can be applied to different treatable pollutants in different catchments.

Over the next 12 to 24 months Central Coast Council should build a more accurate dataset to enable a more accurate, verifiable, approach to trade waste pricing than is currently possible.

This should not involve significant additional sampling efforts, nor involve additional internal resources to model the systems beyond those necessary to effectively plan and operate Central Coast Council's sewerage system. This is particularly the case given our recommendation to source assumed discharge concentrations for Category 2 customers from other water utilities in New South Wales.

As such, the initiative should not require additional resources beyond those already employed/engaged by Council. The actions recommended above would benefit the Council beyond the Pricing Submission process. A better appreciation of trade waste loading and management can improve Asset Management practices (Planning / Operations and Maintenance) for networks and treatment plants, reduce cross subsidies to domestic customers, allow better control over discharge licence obligations, and improve customer outcomes through lower odour and uncontrolled spills from the sewerage system.

We recommend that:

- The Council's proposed use of the default NSW Government pricing settings (Liquid Trade Waste Regulation Guidelines 2009, with appropriate indexation) for volumetric and mass-based charges be accepted
- The Council's proposed fixed charges and revenues to Category 1, 2, 3, and S customer groups be adopted (with amendment to Category 1 and Category S annual charges)
- The Council use revised revenue forecasts over the pricing review period
- IPART require Central Coast Council to improve its trade waste management practice (as described above) to better inform future price submissions and meet IPART trade waste pricing principles.

2.7.1 Recommended Changes to Prices and revenue

Based on our assessment above the table below summaries our recommended revisions to trade waste prices.

Table 9: Revised Prices for Central Coast Council

Application and Annual Charges	Proposed prices 2019-2023	Recommended Prices 2019-2023
Category 1		
Application fee	$95.33	$95.33
Annual fee	$100.16	$95.34
Category 2		
Application fee	$120.68	$120.68
Annual fee	$346.04	$346.04
Category 3		
Application	$2,173.60	$2,173.60
Annual	$1,337.60	$1,337.60
Category S		
Application fee	$165.93	$165.93
Annual fee	$165.93	$150.86
Re-inspection fee		
(All trade waste customers)	$110.42	$110.42

Charge Type (Usage Charge)	Proposed Prices 2019-23	Recommended Prices 2019-2023
Compliant	$1.75	$1.75
Non-compliant	$14.94	$14.94
Septage and septic effluent discharge charge	$17.54	$17.54
Septic effluent unable to discharge onsite	$1.75	$1.75

Mass based charges (category 3 only)	Proposed Prices 2019-2023	Recommended Prices 2019-2023
Substance discharge per KG		
Biochemical Oxygen Demand	$0.77	$0.77
Suspended Solids	$0.099	$0.99
Total oil and grease	$1.39	$1.39
Ammonia	$0.77	$0.77
pH	$0.42	$0.42
Total Kjeldahl Nitrogen	$0.18	$0.18
Total Phosphorus	$1.49	$1.49
Total Dissolved Solids	$0.05	$0.05
Sulphate (as SO4)	$0.15	$0.15
Aluminium	$0.72	$0.72
Arsenic	$73.29	$73.29
Barium	$36.66	$36.66
Boron	$0.72	$0.72
Bromine	$14.94	$14.94
Cadmium	$339.34	$339.34
Chloride	No Charge	No Charge
Chlorinated hydrocarbons	$36.06	$36.06
Chlorinated Phenolics	$1,493.18	$1,493.18

Mass based charges (category 3 only)	Proposed Prices 2019-2023	Recommended Prices 2019-2023
Chlorine	$1.53	$1.53
Chromium	$24.42	$24.42
Cobalt	$14.94	$14.94
Copper	$14.94	$14.94
Cyanide	$73.29	$73.29
Fluoride	$3.64	$3.64
Formaldehyde	$1.53	$1.53
Herbicides/defoliants	$733.02	$733.02
Iron	$1.50	$1.50
Lead	$36.66	$36.66
Lithium	$7.34	$7.34
Manganese	$7.34	$7.34
Mercaptans	$78.93	$78.93
Mercury	$2,443.41	$2,443.41
Methylene Blue active substances (MBAS)	$0.72	$0.72
Molybdenum	$0.72	$0.72
Nickel	$24.42	$24.42
Organoarsenic Compounds	$733.02	$733.02
Pesticides General (excludes organochlorins and organophosphates)	$730.02	$730.02
Petroleum hydrocarbons (non-chlorinated)	$2.30	$2.30
Phenolic compounds (non-chlorinated)	$7.34	$7.34
Polynuclear hydrocarbons	$14.93	$14.93
Selenium	$51.56	$51.56
Silver	$1.44	$1.44
Sulphide	$1.48	$1.48
Sulphite	$1.48	$1.48
Thiosulphate	$0.27	$0.27
Tin	$7.34	$7.34
Uranium	$7.90	$7.90
Zinc	$14.93	$14.93

In addition to these price changes, we note that the Council's forecast revenue does not account for the growth of trade waste customer numbers or growth in production/volume of trade waste. We believe this is too simplified and recommend adjustments to revenue from trade waste annual and volumetric charges based on expected trade waste customer and population growth over the regulatory period. These changes include:

- annual trade waste fees account for trade waste customer growth as identified by the number of trade waste application fees per year
- trade waste usage fees account for population growth. Predicted annual population growth of 1.1 per cent was provided. This figure also aligns with recent average population growth for Wyong and Gosford from the Australian Bureau of Statistics (Catalogue 3218).

Our recommended revised revenue forecasts are provided in Table 9 below, which account for:

- Trade waste customer growth over the regulatory period
- Growth in trade waste volume over the period (equal to population growth of 1.1 per cent)
- Recommended revised prices (as above).
- Central Coast Water's identified errors in its original submission.

Table 10: Recommended trade waste revenue, $million, $2018-19

Revised Annual Trade waste Charges	2019-20	2020-21	2021-22	2022-23
Application fee				
Category 1	$0.004	$0.004	$0.004	$0.004
Category 2	$0.007	$0.007	$0.007	$0.007
Category 3	$0.004	$0.004	$0.004	$0.004
Category S	$0.001	$0.001	$0.001	$0.001
Total	$0.017	$0.017	$0.017	$0.017
Annual Trade Waste Fee				
Category 1	$0.034	$0.038	$0.043	$0.047
Category 2	$0.424	$0.444	$0.465	$0.486
Category 3	$0.035	$0.037	$0.040	$0.043
Category S	$0.010	$0.011	$0.012	$0.014
Total	$0.502	$0.531	$0.560	$0.589
Trade Waste Usage Charge				
Category 1	$0.000	$0.000	$0.000	$0.000
Category 2	$1.981	$2.002	$2.024	$2.047
Category 3	$0.152	$0.153	$0.155	$0.157
Category S	$0.029	$0.030	$0.030	$0.030
Total	$2.161	$2.185	$2.209	$2.234
Re-Inspection Fee				
Category – all trade waste customers	$0.001	$0.001	$0.001	$0.001
Total	$0.001	$0.001	$0.001	$0.001
Recommended Total Trade Waste Revenue	**$2.682**	**$2.735**	**$2.788**	**$2.841**
Central Coast proposed trade waste Revenue	**$2.677**	**$2.677**	**$2.677**	**$2.677**

3. Miscellaneous charges review

To develop its proposed prices for miscellaneous charges for the 2019 determination period Council undertook a detailed review of the water and sewerage miscellaneous service charges. On the basis of this review, Council has proposed a restructure of miscellaneous fees and charges.

3.1 Overview of proposed miscellaneous charges

The Council undertook a process to review both former Wyong LGA and former Gosford Council miscellaneous charges to:

1. Align the services.

2. Identify services that needed to be added in either former LGA area.

3. Review the costs associated with each offered service.

4. Develop forecast unit costs based on labour, on costs & minimum overheads.

The Council in its price submission supporting information included a forecast revenue from miscellaneous charges of $2.8 million.

Table 11: Central Coast Council forecast revenue from miscellaneous charges – AIR, $ million 2018-19

	2018-19	2019-20	2020-21	2021-22	2022-23
Proposed revenue $million – Central Coast Price submission	$3.03	$2.8	$2.8	$2.8	$2.8

3.2 Approach to our 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 the Council'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 the Council's price submission
- review unit rates of the top 10 miscellaneous charges by testing appropriateness of the assumptions in each
- to test whether the proposed charges are within range of current charges applied by other water businesses for similar services businesses
- review of demand projections against historical trends.

To undertake a detailed assessment for the top 10 miscellaneous charges by forecast revenue collected against IPART's pricing principles, required the Council to provide for each service:

- A breakdown of base costs, separately identifying direct cost of labour plus oncosts; transport; equipment and 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.

We also reviewed any miscellaneous service where Council proposed to charge 'by quote' and sought explanations from Council why it would not be appropriate to set a charge. Additionally, for any significant change in prices over the 2019-23 regulatory period we sought an explanation from the Council for the proposed cost change.

3.3 Proposed labour rates

To develop its miscellaneous charge forecast unit charges, the Council used labour rates and oncosts based on the Council's Unified Salary Scale – 1 July 2018.

We consider these labour rates reflect actual costs incurred by the Council to deliver the services and are reasonable to use for the purposes of setting miscellaneous charges. We have reviewed the application of these labour rates for each of the major miscellaneous charges in the section below.

In terms of benchmark labour unit rates, while we were not able to undertake a water industry comparison, Hays provides benchmark salary rates for the NSW energy industry. We note that the Council's labour rates for each employee type are comparable with the energy industry benchmarks.

Table 12: Hays hourly salary rates – NSW energy sector, excluding on-costs, 2018

Labour type	Range	Hourly Rate
Administration	Low	$18.75

	Average	$28.61
	High	$38.46
Technical specialist	Low	$31.25
	Average	$44.47
	High	$57.69
Engineer	Low	$33.65
	Average	$52.88
	High	$72.12
Field worker	Low	$31.25
	Average	$39.66
	High	$48.08

Source: Hays, The FY18/19 Hays Salary Guide: Salary & Recruitment Trends, 2018

3.4 Review of major miscellaneous charges

To assist with our review, the Council provided a breakdown of total revenue forecasts for miscellaneous charges and a detailed breakdown for the major charges including:

- breakdown of base costs, separately identifying:
    - direct cost of labour plus oncosts, as well as a breakdown of the tasks and time required to complete them. Oncosts also included transport costs as outlined in table 11
    - direct material costs – including quantity and units rates applied.
- forecast quantity of charges for each year of the regulatory period.

The Council elected to not allow for overhead costs in its proposed miscellaneous charges on the basis that it was too difficult to calculate while it was in the process of consolidating its financial systems.

During our review process the Council revised their annual forecast to $4.05 million per annum over the next regulatory period. This change was due to the inclusion of revenue from several services that did not form part of the price submission forecast. These services include annual standpipe hire, provision of service location diagrams and plumbing and drainage inspections. The Council also included updated forecast prices and revenue from water service connection charges greater than 63mm.

Our review of the Council's major miscellaneous charges included a detailed assessment of the Council's 10 major miscellaneous charges. These charges makeup approximately $3.93 million or 95 per cent of total their annual projected revenue of $4.12 million from miscellaneous charges. The following table provides a breakdown of the top 10 miscellaneous charges.

Table 13: Breakdown of proposed revenue from miscellaneous charges, $million, $2018-19

	2019-20	2020-21	2021-22	2022-23
Connection of Water Service	$2.04	$2.04	$2.04	$2.04
Plumbing and Drainage Inspection	$0.38	$0.38	$0.38	$0.38
Water or Sewer Engineering Plan Assessment	$0.27	$0.27	$0.27	$0.27
Conveyancing Certificate - statement of outstanding charges	$0.24	$0.24	$0.24	$0.24
Inspections of new water and sewer assets - including encasements (included per metre charges)	$0.40	$0.40	$0.40	$0.40
Section 307 Certificate:	$0.20	$0.20	$0.20	$0.20
Provision of Service Location Diagrams	$0.15	$0.15	$0.15	$0.15
Property Sewer Line and Drainage Diagram	$0.13	$0.13	$0.13	$0.13
Standpipe hire	$0.08	$0.08	$0.08	$0.08
Water & Sewer Building Plan Assessment	$0.04	$0.04	$0.04	$0.04

	2019-20	2020-21	2021-22	2022-23
Other charges	$0.18	$0.18	$0.18	$0.18
Total - $million	**$4.12**	**4.12**	**4.12**	**4.12**

The following section outlines our assessment of the Council's proposed forecasts for its 10 major miscellaneous charges.

3.4.1 Connection of water services

This charge is related to the connection of water services to new or redeveloped premises or upsize/downsize services to existing premises on application (Charge a). The charge covers administration and system capacity analysis as required. A separate charge is applied if the Council also performs the physical connection, charges b-x.

Proposed forecasts

The following table outlines historical and forecast unit prices and projected annual revenue from each water service connection charge for the next regulatory period.

Table 14: Water Service Connections – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities		Total annual revenue forecast
a) Application for connection of water service (all sizes)	$34.42	$55.00	$61.31	2,099		$128,690
b) Water service connection meter only (20 mm)	$116.57	$417.79	$180.58	830		$149,881
c) Water service connection short & long service (20 mm)	$707.34	$417.79	$1,392.80	772		$1,075,242
d) Water service connection short & long service (25 mm)	$707.34	$417.79	$1,626.30	41		$66,678
e) Water service connection short service (32 mm)	$1,613.40	By quote	$1,955.85	6		$11,735
f) Water service connection long service (32 mm)	$2,144.59	By quote	$2,738.54	6		$16,431
g) Water service connection short service (40 mm)	$1,613.40	By quote	$1,955.85	20		$39,117
h) Water service connection long service (40 mm)	$2,144.59	By quote	$2,738.54	16		$43,817
i) Water service connection short service (50 mm)	$2,302.20	By quote	$2,355.12	20		$47,102
j) Water service connection long service (50 mm)	$2,838.68	By quote	$3,352.04	15		$50,281
k) Water service connection short service (63 mm)	By quote	By quote	$2,355.12	2		$4,710
l) Water service connection long service (63 mm)	By quote	By quote	$3,352.04	3		$10,056
m) Water service connection metered short service (80mm)	By quote	By quote	$7,769.89	3		$23,310
n) Water service connection unmetered short fire service (80mm)	By quote	By quote	$6,850.56	3		$20,552
o) Water service connection long metered service (80mm)	By quote	By quote	$13,304.43	3		$39,913
p) Water service connection unmetered long fire service (80mm)	By quote	By quote	$12,385.10	3		$37,155

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities		Total annual revenue forecast
q) Water service connection metered short service (100mm)	By quote	By quote		$9,073.60	4	$36,294
r) Water service connection unmetered short fire service (100mm)	By quote	By quote		$7,356.86	4	$29,427
s) Water service connection long metered service (100mm)	By quote	By quote		$14,409.49	4	$57,638
t) Water service connection unmetered long fire service (100mm)	By quote	By quote		$13,089.18	4	$52,357
u) Water service connection metered short service (150mm)	By quote	By quote		$9,534.72	2	$19,069
v) Water service connection unmetered short fire service (150mm)	By quote	By quote		$8,334.72	2	$16,669
w) Water service connection long metered service (150mm)	By quote	By quote		$16,572.65	2	$33,145
x) Water service connection unmetered long fire service (150mm)	By quote	By quote		$15,372.65	2	$30,745
Total						$2,040,016

The Council provided a breakdown of the proposed unit charge for each water connections charge. These are shown in the table below.

Table 15: Water Service Connections – Historical unit prices and forecast revenue, $2018-19

	Labour and oncosts	Materials	Equipment - Excavator	Sub-contractor	Total Unit charge
a) Application for connection of water service (all sizes)	$61.31				$61.31
b) Water service connection meter only (20 mm)	$127.73	$52.85			$180.58
c) Water service connection short & long service (20 mm)	$669.30	$363.50	$360		$1,392.80
d) Water service connection short & long service (25 mm)	$669.30	$597.00	$360		$1,626.30
e) Water service connection short service (32 mm)	$751.05	$804.80	$400		$1,955.85
f) Water service connection long service (32 mm)	$1,042.27	$1,136.27	$560		$2,738.54
g) Water service connection short service (40 mm)	$751.05	$804.80	$400		$1,955.85
h) Water service connection long	$1,042.27	$1,136.27	$560		$2,738.54

service (40 mm)					
i) Water service connection short service (50 mm)	$751.05	$1,204.07	$400		$2,355.12
j) Water service connection long service (50 mm)	$1,118.91	$1,673.14	$560		$3,352.04
k) Water service connection short service (63 mm)	$751.05	$1,204.07	$400		$2,355.12
l) Water service connection long service (63 mm)	$1,118.91	$1,673.14	$560		$3,352.04
n) Water service connection unmetered short fire service (80mm)	$1,623.46	$2,193.85	$1,245.42	$2,707.16	$23,310
o) Water service connection long metered service (80mm)	$1,623.46	$1,274.52	$1,245.42	$2,707.16	$20,552
p) Water service connection unmetered long fire service (80mm)	$1,623.46	$3,528.39	$1,245.42	$6,907.16	$39,913
q) Water service connection metered short service (100mm)	$1,623.46	$2,609.06	$1,245.42	$6,907.16	$37,155
r) Water service connection unmetered short fire service (100mm)	$1,460.68	$3,798.72	$1,107.04	$2,707.16	$36,294
s) Water service connection long metered service (100mm)	$1,460.68	$2,081.98	$1,107.04	$2,707.16	$29,427
t) Water service connection unmetered long fire service (100mm)	$1,623.46	$4,633.45	$1,245.42	$6,907.16	$57,638
u) Water service connection metered short service (150mm)	$1,623.46	$3,313.14	$1,245.42	$6,907.16	$52,357
v) Water service connection unmetered short fire service (150mm)	$1,460.68	$4,259.84	$1,107.04	$2,707.16	$19,069
w) Water service connection long metered service (150mm)	$1,460.68	$3,059.84	$1,107.04	$2,707.16	$16,669
x) Water service	$1,623.46	$6,796.61	$1,245.42	$6,907.16	$33,145

connection unmetered long fire service (150mm)	

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts for water service connections charge against IPART's pricing principles.

Table 16: Water Service Connections – Marsden Jacob assessment

Component	Assessment
Unit rate	• The Council has applied crew member labour rates and oncosts, It also provided a breakdown of the length of time, which depends on the complexity of the job. This is based on the Council's experience in delivering the service. We consider the Council's approach in applying the labour rates and the estimated duration based on historical data to be appropriate. • In our initial review of materials we found a couple of inconsistencies in the how the material costs were being applied across the different connection types. The Council provided an updated forecast which showed an increase material costs. We consider the revised estimates to be reasonable on the basis that they reflect the efficient material cost to deliver the service. • The Council has included hourly rates for excavation hire at $80 per hour based on its experience to deliver the service. We consider this to be reasonable • It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge. • We note there is a significant increase in 20mm and 25mm long and short connections. However, given these prices haven't been reviewed since 2013 and the updated prices better reflect the cost to deliver the service, we consider the revised prices to be appropriate • When compared with similar services provided by other water businesses, the Council's proposed application fee is less than Hunter Water's current charge of $133, though is comparable with South East Water's current 20mm application fee of $56.35. However, costs included in water service connections varies significantly between businesses. Therefore, we haven't made any direction comparisons with other jurisdictions.
Volumes and total revenue	The Council has based its projections of quantities on 2017-18 actual volumes. Given new dwelling projections is forecast to be stable over the period the proposed approach is reasonable. We note that there will be an increase in projected annual revenue from water service connections from approximately $0.8 million in 2017-18 to $2.04 million from water service connection charges. However, given we accept the basis for calculating unit charges, we consider the projected revenue to be reasonable.
Price changes and customer impacts	While most of the water connections unit prices are proposed to remain relatively consistent with historical charges, there is a significant increase in 20mm and 25mm long and short connections. However, given these charges are one-off connection charges and the unit costs reflect the cost to supply the service, it is reasonable to implement prices from 2019-20.

Based on our assessment we consider the Council's proposed unit costs, including its updated forecasts reflect the efficient costs to deliver water service connections. We also note for each charge that it would be reasonable to

include an allowance for overheads under the pricing principles. Additionally, total revenue forecasts amended for updated materials costs, are reasonable and consistent with IPART's pricing principles.

3.4.2 Plumbing and Drainage Inspections

This service is for developments requiring connection to, or alteration to existing connection to Council's sewerage system. The fee represents the base rate for inspection of new property with one WC. Additional increments per WC for each property or complex services are applied under charges b-e.

Proposed forecasts

The following table outlines the Council's historical and forecast unit prices and projected annual revenue from each plumbing and drainage inspections for the next regulatory period.

Table 17: Plumbing and drainage inspections – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities	Total revenue annual forecast
a) New Sewer Connection (including residential single dwelling, unit or villa complex, commercial and industrial)	$164.25	$256.16	$178.27	1,500	$267,398
b) Each additional WC (including residential single dwelling, unit, villa, commercial and industrial)	$47.68	$22.09	$15.09	2,000	$30,170
c) Alterations, Caravans and Mobile Homes	$82.76	$233.54	$163.18	500	$81,590
d) Sewer re-inspection	$60.93	$47.40	$40.80	100	$4,080
e) Rainwater Tank Connection	N/A	$47.40	$66.79	20	$1,336
Total					**$384,573**

The Council provided the breakdown of the proposed unit charge for each plumbing and drainage inspection charge. This breakdown is outlined in the table below.

Table 18: Plumbing and drainage inspections – Breakdown of unit charges, $2018-19

	Labour	Oncost	Total Unit charge
a) New Sewer Connection (including residential single dwelling, unit or villa complex, commercial and industrial)	$116.43	$61.84	$178.27
b) Each additional WC (including residential single dwelling, unit, villa, commercial and industrial)	$9.86	$5.23	$15.09
c) Alterations, Caravans and Mobile Homes	$106.57	$56.61	$163.18
d) Sewer re-inspection	$26.65	$14.15	$40.80
e) Rainwater Tank Connection	$43.62	$23.17	$66.79

Our Assessment

The following tables outlines our assessment of the Council's proposed forecast charges for Plumbing and Drainage Inspections against IPART's pricing principles.

Table 19: Plumbing and Drainage Inspections – Marsden Jacob assessment

Component	Assessment
Unit rate	In developing its charges, the Council has applied the plumbing and drainage inspector labour rate plus oncosts. For each charge the duration varies according to the complexity of the job,

	based on the Council's experience in delivering the services. accept the proposed approach to forecast labour costs. We note that on p.164 of the Council's price submission that it refers lab sampling costs being included in this charge. However we note lab sampling costs are not included in the proposed charge as the service is no longer provided by the Council. It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge. The proposed charge for a single new sewer inspection (charge a) is in the range of current charges for similar services provided by other water businesses. This includes Yarra Valley Water's mandatory sewer inspection fee of $171, City West Water's drainage inspection fee of $129.25 and South East Water's plumbing inspection fee of $161.46.
Volumes and total revenue	Estimated quantities were based on extrapolated data for the number of final inspections in the Wyong area, and discussions with Plumbing and Drainage Inspectors. Given the unavailability of more historical data, the proposed basis for forecasting annual revenue is reasonable.
Customer impacts	Price changes are not proposed to change significantly from current levels.

Based on the assessment above we consider that the Council's proposed unit costs reflect the costs to deliver the service and is comparable to current charges for similar service across provided by other water businesses. We note that it would be consistent with the pricing principles for the Council to include an allowance for overheads in the charge to fully reflect the efficient cost to deliver the service. Additionally, total revenue forecasts are based on reasonable assumptions.

3.4.3 Water or Sewer Engineering planning Assessment

This charge is related to the cost associated with the Council reviewing and approving private developers' proposals for provision of minor sewer adjustment, private internal sewer pump stations/rising mains. Water/sewer main extensions can result from requests by property owners for connection of unserviced properties.

Proposed forecasts

The following table outlines historical and forecast unit prices, and projected annual revenue from water or sewer planning assessments for the next regulatory period.

Table 20: Water or Sewer Engineering planning Assessment – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities	Total revenue annual forecast
a) Small Projects - Relocations, Private SPS and/or development ≤10 lots or extension to properties outside area	$282.34	$294.49	$290.33	515	$149,518
b) Medium Projects > 10 and < 50 lots, and mains relocation	$650.59	$709.46	$692.83	132	$91,454
c) Large Projects ≥ 50 and <150 lots or large or medium density developments	$650.59	$902.09	$884.18	11	$9,726
d) Special Projects (roads & rail or SPS Adjustments, relocations, development water catchment areas, or subdivisions > 150 lots)	$650.59	$3,658.68	$3,035.23	5	$15,176
Total					**$265,874**

The Council provided the breakdown of the proposed unit charge for each type of planning assessment, outlined in the table below.

Table 21: Water or Sewer Engineering Planning Assessment – Breakdown of unit charges, $2018-19

	Labour	Oncost	Total Unit charge
a) Small Projects - Relocations, Private SPS and/or development ≤10 lots or extension to properties outside area	$189.61	$100.72	$290.33
b) Medium Projects > 10 and < 50 lots, and mains relocation	$452.48	$240.35	$692.83
c) Large Projects ≥ 50 and <150 lots or large or medium density developments	$577.45	$306.73	$884.18
d) Special Projects (roads & rail or SPS Adjustments, relocations, development water catchment areas, or subdivisions > 150 lots)	$1,982.28	$1,052.95	$3,035.23

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts against IPART's pricing principles.

Table 22: Water or Sewer Engineering planning Assessment – Marsden Jacob assessment

Component	Assessment
Unit rate	To develop these charges the Council has applied the labour rate and oncost at the engineering officer level and has increased the number of hours according to the complexity of each job, based on the Council's experience in delivering the service. We note that while Wyong currently has flat charges across all planning assessments, we consider the Council's revised approach better reflects increasing cost to deliver the service with more complex jobs. It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge.
Volumes and total revenue	Estimated quantities used to set projected revenue was based on 2017-18 demand. The Council stated it was necessary to use recent data, as previous categories were different between former Gosford and Wyong. We consider this approach to be acceptable, given the lack of available consistent historical data.
Price changes and customer impacts	We note there is a significant increase in charge (d) in the Wyong area. However given the one-off nature of this charge and the reasonable basis for the charge it is reasonable to introduce this charge from year 1.

Based on the assessment above we consider that the Council's proposed unit costs for water or sewer engineering planning assessments reflect efficient costs to deliver the service, noting it would be reasonable for the Council to include an allowance for overheads. We also consider that the revenue forecasts are based on reasonable assumptions of future demand.

3.4.4 Conveyancing certificate - statement of outstanding charges

This charge relates to the statement of outstanding rates and charges at a specific date which is issued to solicitors, conveyancers, and individuals as a requirement for buying and selling property.

Proposed forecasts

The following table outlines the historical and forecast unit prices and projected annual revenue from conveyancing certificates – statement of outstanding charges service for the next regulatory period.

Table 23: Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities	Total revenue annual forecast
Conveyancing certificates – statement of outstanding charges	$19.87	$33.82	$26.56	9000	$239,063

The Council provided the breakdown of the proposed unit charge for conveyancing certificates outlined in the table below.

Table 24: Conveyancing certificate - statement of outstanding charges – Breakdown of unit charges, $2018-19

	Labour	Oncosts	Total Unit charge
Conveyancing certificates – statement of outstanding charges	$14.52	$12.04	$26.56

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts for conveyancing certificate charges against IPART's pricing principles.

Table 25: Conveyancing certificate - statement of outstanding charges – Marsden Jacob assessment

Component	Assessment
Unit rate	The Council has applied a labour rate and oncost at the Administration Officer level, for a duration of 0.4 hours which we consider to reflect the efficient labour cost to deliver the service. It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge. The proposed unit price of $26.56 is comparable with current charges by other water businesses: • Hunter Water currently charges $39 for conveyancing certificate (in person) • South East Water currently charge $31.61 for its information statements • Yarra Valley Water currently charges $21.72 for its information statements.
Volumes and total revenue	Forecast volumes of 9000 is consistent historical levels from 2014-15 to 2017-18, which we consider to be a reasonable basis for estimating revenue for the next regulatory period.
Price change and customer impacts	The proposed price is consistent with historical levels and therefore the price change will not have an impact on customers.

Based on the assessment above we consider that the Council's proposed unit costs for conveyancing certificates reflects the costs to deliver the service and is comparable with other water businesses. We also consider that the revenue forecasts are reasonable assumption of future demand. We note that it would be consistent with the pricing principles for the Council to include an allowance for overheads in the charge to fully reflect the efficient cost to deliver the service.

3.4.5 Inspections of new water and sewer assets - including encasements

This service relates to the inspection of water and sewer works carried out by private developers for compliance with the Council's standards. Should the works not comply with Council standards, a re-inspection is required. Charges include a fixed amount (a), and a charge per metre of main inspected (b) or (c).

Proposed forecasts

The following table outlines the historical and forecast unit prices and projected annual revenue from inspections of new water and sewer assets for the next regulatory period.

Table 26: Inspections of new water and sewer assets - including encasements – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities	Total revenue annual forecast
a) Inspections of new water and sewer assets - including encasements	$102.89	By quote	$118.77	150	$210,141
b) Water & pressure sewer main	$6.10/m	$12.90/m	$6.23/m	12753m	$79,451
c) Gravity sewer main	$8.14/m	$12.90/m	$8.31/m	13583m	$112,875
Total					$402,467

The Council provided the breakdown of the proposed unit charge which is outlined in the table below.

Table 27: Inspections of new water and sewer assets - including encasements – Unit costs

	Labour	Oncosts	Total Unit cost
a) Inspections of new water and sewer assets - including encasements	$77.57	$41.20	$118.77
b) Water & pressure sewer main			$6.23/m
c) Gravity sewer main			$8.31/m

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts for water or sewer engineering planning assessments.

Table 28: Water or Sewer Engineering planning Assessment – Marsden Jacob assessment

Component	Assessment
Unit rate	The Council has applied the engineering officer rate and oncosts. It has based the estimated duration of labour required based on its experience to deliver this service. It has also based it per metre charge assessment consistent with current levels. We consider this approach to be reasonable and reflect the efficient cost to deliver the service. It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge.
Volumes and total revenue	The Council has maintained its forecast volumes of inspections and length of water and sewerage assets inspected consistent with 2017-18 actual volumes. We consider this approach to be reasonable, given the lack of available data from prior years.
Price changes and customer impacts	Charges are broadly consistent with current levels in the Wyong area, and per metre rates will be lower for the Gosford area.

Based on the assessment above we consider that the Council's proposed unit costs for water or sewer engineering planning assessments reflect efficient costs to deliver the service, noting it would be reasonable for the Council to

include an allowance for overheads. We also consider that the revenue forecasts are based on reasonable assumptions of future demand.

3.4.6 Section 307 Certificate

This charge is for the provision of a Section 307 Certificate which states that a development complies with the Water Management Act 2000.

Proposed forecasts

The following table outlines the Council's historical and projected unit rates and annual projected revenue from section 307 certificates for the next regulatory period.

Table 29: Section 307 Certificate – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities 2019-2023	Total revenue annual forecast 2019-2023
a) Development without Requirement	N/A	$113.15	$59.39	1,770	$105,111
b) Boundary Realign, Subdivisions or developments involving mains extensions	N/A	$394.31	$323.32	30	$9,700
c) RFB and Dual Occupancies	N/A	$176.56	$145.16	361	$52,404
d) Commercial Buildings, Factories, Torrens Subdivision of Dual Occupancy etc	N/A	$216.21	$178.16	169	$30,108
Total					**$197,323**

The Council provided the breakdown of the proposed unit charge for section 307 certificates, outlined in the table below.

Table 30: Section 307 Certificate – Unit costs, $2018-19

	Labour	Oncosts	Total Unit charge
a) Development without Requirement	$38.79	$20.60	$59.39
b) Boundary Realign, Subdivisions or developments involving mains extensions	$211.16	$112.16	$323.32
c) RFB and Dual Occupancies	$94.80	$50.36	$145.16
d) Commercial Buildings, Factories, Torrens Subdivision of Dual Occupancy etc	$116.35	$61.81	$178.16

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts for section 307 certificates charges against IPART's pricing principles.

Table 31: Section 307 Certificate – Marsden Jacob assessment

Component	Assessment
Unit rate	The Council has forecast labour costs using the engineering officer rates and estimated the duration based on complexity of each of the different type of section 307 certificates. We consider this approach provides a reasonable in estimating the labour costs to deliver the service. It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge.

Volumes and total revenue	The Council has maintained its forecast volumes consistent with 2017-18 actual volumes. We consider this approach to be reasonable.
Customer impacts	Proposed prices are broadly consistent with current Gosford prices, though will be a new charge for the Wyong area. The Council should consider communicating this change with developers.

Based on the assessment above we consider that the Council's proposed unit costs for section 307 certificates reflect efficient costs to deliver the service, noting it would be consistent with the pricing principles for the Council to include an allowance for overheads. We also consider that the revenue forecasts are based on reasonable assumptions for future demand.

3.4.7 Provision of Service location Diagrams

This charge is related to the provision of a service location diagram of sewer and/or water mains in relation to a property's boundaries, or a statement that no sewer main is available, for a contract of sale. The long section charges includes details of depth of service.

Proposed forecasts

The following table outlines the Councils historical unit rates, the projected revenue from provision of service location diagrams for the next regulatory period.

Table 32: Provision of Service Locations Diagrams – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities	Total revenue annual forecast
a) Water and Sewer Location Plans	$19.87	$18.78	$21.25	6,000	$127,500
b) Water and Sewer Location Plans (including long section)			$26.56	1,000	$26,563
Total					**$154,063**

The Council provided the breakdown of the proposed unit charge for each provision of service location diagram charge which is outlined in the table below.

Table 33: Provision of Service Locations Diagrams – Unit costs, $2018-19

	Labour	Oncosts	Total Unit charge
a) Water and Sewer Location Plans	$11.62	$9.63	$21.25
b) Water and Sewer Location Plans (including long section)	$14.52	$12.04	$26.56

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts for service location diagrams.

Table 34: Provision of Service Locations Diagrams – Marsden Jacob assessment

Component	Assessment
Unit rate	The Council has applied the administration office labour rate and estimated a length of time to undertake each of the services, based on its experience with the time required to deliver the service. We consider the approach provides a reasonable basis for estimating the labour costs. The proposed charges are broadly consistent with:

	• Hunter Water's current charges which are between $17.40 (electronically) and $28.10 (in person) for service location diagrams, • Sydney Water's current charge for service location print of $28.48 • South East Water's Sewer Location Plan of $28.17. It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge.
Volumes and total revenue	Estimated quantities are based on records of electronic requests in South, and records of service provision in North. On this basis we consider the volumes and revenue forecasts to be reasonable.
Customer impacts	Prices are broadly consistent with current levels the changes do not result in any adverse customer impacts.

Based on the assessment above we consider that the Council's proposed unit costs for provision of service location diagrams reflect the efficient costs to deliver the service and is comparable with other water businesses. We note that it would be consistent with the pricing principles for the Council to include an allowance for overheads. We also consider that the revenue forecasts are based on reasonable assumptions of future demand.

3.4.8 Property Sewer Line and Drainage Diagram

This service relates to the issuing of a copy of a diagram showing the location of the property service line, building sewer and drainage for a property, including long(itudinal) section if required. Property complex includes the provision of diagrams for property developments over a number of adjacent titles.

Proposed forecasts

The following table outlines the Councils historical unit rates, the projected revenue from provision of service location diagrams for the next regulatory period.

Table 35: Property Sewer Line and Drainage Diagram – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities	Total revenue annual forecast
a) Property Sewer Line and Drainage Diagrams	$19.87	$18.78	$18.06	6,000	$127,500
b) Property Sewer Line and Drainage Diagrams (with long section)			$21.25	1,000	$26,563
c) Property Sewer Line and Drainage Diagrams (property complex)			$30.81	100	$3,081
Total					**$157,144**

The Council provided the breakdown of each of the proposed unit charges which are outlined in the table below.

Table 36: Property Sewer Line and Drainage Diagram – Unit costs, $2018-19

	Labour	Oncosts	Total Unit charge
a) Property Sewer Line and Drainage Diagrams	$9.88	$8.18	$18.06
b) Property Sewer Line and Drainage Diagrams (with long section)	$11.62	$9.63	$21.25
c) Property Sewer Line and Drainage Diagrams (property complex)	$16.85	$13.96	$30.81

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts for property sewer line and drainage diagrams against IPART's pricing principles.

Table 37: Property Sewer Line and Drainage Diagram – Marsden Jacob assessment

Component	Assessment
Unit rate	The Council has applied the administration office labour rate and estimated an average length of time to undertake for each service. We consider this approach to estimating labour costs to be acceptable. It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge. The proposed charges are also comparable with: • Hunter Water's current charges of $25.30 for a property sewerage diagram • South East Water's current charge for an Asset Information plan of $20.27 • Essential Water's proposed charge for a drainage diagram of $21.65.
Volumes and total revenue	The Council has estimated quantities based on records of electronic requests in Gosford, and service data from Wyong. The Council has demonstrated proposed forecasts are consistent with 2017-18 levels which we consider is reasonable.
Customer impacts	Prices are consistent with historical levels therefore the change will not result in any adverse customer impacts.

Based on the assessment above we consider that the Council's proposed unit costs for property sewer line and drainage diagrams reflect efficient costs to deliver the service. The proposed charge is also comparable to current charges of other water businesses. We note it would also be consistent with the pricing principles for the Council to include an allocation of overheads in each charge. We also consider that the revenue forecasts are reasonable.

3.4.9 Standpipe Hire

These fees are for the annual hire of metered standpipe (25 mm or 63 mm) for filling of water tankers from dedicated hydrants and for special readings.

Proposed forecasts

The following table outlines the Councils historical unit rates, the projected forecast rates and revenue from standpipe hire for the next regulatory period.

Table 38: Standpipe Hire – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities 2019-23	Total revenue annual forecast 2019-23
a) 25 mm	$228.16	N/A	$176.87	36	$6,367
b) 63 mm	$1,270.12	N/A	$1,195.65	62	$74,130
c) Standpipe special reading fee	N/A	N/A	$60.13	4	$263
Total					**$80,750**

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts for annual standpipe hire.

Table 39: Standpipe hire – Marsden Jacob assessment

Component	Assessment
Unit rate	Proposed charges for standpipe hire are consistent with proposed water meter size service charges. We consider this to be a reasonable approach on the basis that the Council is providing an equivalent water service to these customers on a temporary

	basis. Additionally, while not an exact comparison, the Council's 25 mm charge of $176.87 is comparable with Hunter Water's current tri-annual charge of $71.10 for a 20mm standpipe hire.
Volumes and total revenue	Estimated quantity based on annual number of standpipes on hire in 17/18 which we consider this to be a reasonable basis for the forecast period.
Customer impacts	Prices are consistent with current standpipe prices in the Wyong area, though this charge will be a new charge for the Gosford area.

We consider the Council's proposal to align unit costs for annual standpipe hire to the proposed service charges is a reasonable approach. Should any material changes be made to service charges during the review process the standpipe hire annual fees should also be adjusted to align with them. Additionally, the proposed revenue forecasts from standpipe hire is reasonable.

3.4.10 Water and Sewer Building Plan Assessment

This fee is charged for the review of building plans with respect to building over and adjacent to sewer and water assets.

Proposed forecasts

The following table outlines the Councils historical unit rates, the projected forecast rates and revenue from Water and Sewer Building Plan Assessments for the next regulatory period.

Table 40: Water and Sewer Building Plan Assessment – Historical unit prices and forecast revenue, $2018-19

	2017-18 price - Wyong	2017-18 price - Gosford	2019-2023 proposed price	Forecast annual quantities 2020-23	Total revenue annual forecast 2020-23
Water and Sewer building plan assessment	N/A	$135.01	$131.97	308	$40,646

The Council provided the breakdown of the proposed unit charge for each water connections charge which is outlined in the table below.

Table 41: Water and Sewer Building Plan Assessment – Unit costs, $2018-19

	Labour	Oncosts	Total Unit charge
Water and Sewer building plan assessment	$86.19	$45.78	$131.97

Our Assessment

The following tables outlines our assessment of the Council's proposed forecasts for water or sewer engineering planning assessments.

Table 42: Water and Sewer Building Plan Assessment – Marsden Jacob assessment

Component	Assessment
Unit rate	The Council has applied the engineering officer labour rate and a duration of under 2 hours to undertake the service based on experience. We consider is this approach to the labour cost estimate to be acceptable and reflects the efficient cost to deliver the service. It would also be consistent with the pricing principles for the Council to include an allocation of overheads in the charge. The proposed charge is comparable other businesses current charges including:

	• Hunter Water's current charge $196 for an application to build over or adjacent to sewer assets. • South East Water's current charge $116.79 for its build over easement or sewer application service.
Volumes and total revenue	Estimated quantities are based on 2017-18 volumes. We consider this as a basis for the forecast to be reasonable.
Customer impacts	Prices are consistent with the current charge applied in the Gosford area, though it will be a new charge in the Wyong area. However, this will be a one-off charge paid by builders and developers. The Council should consider communicating this change with the building industry.

Based on the assessment above we consider that the Council's proposed unit costs for Water and Sewer Building Plan Assessments reflect the efficient costs to deliver the service and is comparable with other water businesses. We note that it would also consistent with the pricing principles for the Council to include an allowance for overheads. We also consider that the revenue forecasts are based on reasonable assumptions of future demands.

3.5 Miscellaneous service charged by quote

As previously outlined, as part of its review of miscellaneous charges across the Wyong and Gosford areas, the Council has sought to reduce the number of miscellaneous charges that are set by quote on a case by case basis.

The Council is proposing to charge the following services by quote rather than setting a fee, due to their variability in cost and small number of requests for the services:

- Relocate Existing Stop Valve or Hydrant
- Raise/Lower Manhole – physical adjustment
- Location of water and sewer mains – the Council's proposed charge of $564.70 includes 2 x crew for 2 hours. Where additional plant and equipment costs are required for the service they will charged by quote.

We consider that it is reasonable that these charges remain by quote, given the variability in costs and the small number of expected requests for these services. In estimating by quote charges, we would expect the Council to adopt the same approach it has used to the develop its other miscellaneous charges.

3.6 Miscellaneous services discontinued

The Council is proposing to discontinue offering a number of miscellaneous services. We requested further explanation from the Council, which is outlined in the table below:

Table 43: Discontinued miscellaneous charges

Service	Basis for discontinuing
Water Sample Analysis	The service is no longer offered to customers with private water supplies (i.e water supplies not provided by Council). Customers are now referred to commercial laboratories for this service.
Gosford Water Carter fill charge	Originally proposed as fee-per-fill at automated filling stations that were not developed, and is no longer required
Gosford other liquid wastes transported by disposal	Receipt of other liquid wastes not permitted under the terms of the EPA licence
Wyong sewerage junction cut-ins all sizes	Contestable service to be provided by private contractors. The Council will inspect quality of sewer junction cut-in as part of inspection service
Recoverable works	"Catch-all" category for works by quotation for former Gosford Council.
Concrete encasement of mains	Wyong Council previously listed the service 'by quote'. However, this service is no longer provided by the Council

We consider the reasons outlined by the Council for discontinuing these miscellaneous services as acceptable on the basis that it is more efficient for private operators to deliver the service, or the service is no longer required.

3.7 Overall recommendations for miscellaneous charges

Based on our assessment of the Council's miscellaneous charges, we consider the Council's approach to developing unit costs for each service including its updated forecasts, to be broadly consistent with IPART's pricing principles. Revenue projections have also been based on reasonable assumptions for future demand for miscellaneous services. Original price submission forecasts have been adjusted for:

- inclusion of revenue from a number of services, including annual standpipe hire, provision of service location diagrams, plumbing and drainage inspections, and water service connections for meter sizes greater than 63 mm
- an adjustment to material costs included in water service connection charges.

We note that for future price determination periods forecast quantities and revenue for miscellaneous charges should be based on longer term historical trends rather than just one year of data. We note that the Council chose to not include overheads in each charge as it considered that the business needed to consolidate its financial accounting system, to determine an appropriate allocation of overheads. While we have not factored overheads into our recommended forecast, we consider that the inclusion of overheads in the Council's miscellaneous charges would reflect the full efficient costs to deliver those services. Rather than recommending a level of overheads to apply to miscellaneous charges from 2019-20, we consider that the Council should undertake further work over the next price determination period to determine an appropriate allocation of overheads to miscellaneous charges. The Council should then apply this approach to prices in the following price determination period.

Table 44: Recommended forecast revenue from miscellaneous charges by service type, $million $2018-19

Forecast revenue	2019-20	2020-21	2021-22	2022-23
Central Coast price submission	$2.81	$2.81	$2.81	$2.81
Recommended forecast – water	$2.83	$2.83	$2.83	$2.83
Recommended forecast – sewerage	$0.95	$0.95	$0.95	$0.95
Recommended forecast – drainage	$0.34	$0.34	$0.34	$0.34
Recommended forecast – total	**$4.12**	**$4.12**	**$4.12**	**$4.12**

The following table provides a breakdown of recommended revenue by each individual miscellaneous charge.

Table 45: Breakdown of recommended forecast revenue from miscellaneous charges, $million $2018-19

	Miscellaneous charge	Recommended Price $	Recommended quantities	Recommended Revenue forecast
1	Conveyancing Certificate - statement of outstanding charges	$26.56	9000	$239,063
2	Property Sewer Line and Drainage Diagram			
	a) Property Sewer Line and Drainage Diagrams	$18.06	6000	$108,375
	b) Property Sewer Line and Drainage Diagrams (with long section)	$21.25	1000	$21,250
	c) Property Sewer Line and Drainage Diagrams (property complex)	$30.81	100	$3,081
3	Provision of Service Location Diagrams			
	a) Water and Sewer Location Plans	$21.25	6000	$127,500
	b) Water and Sewer Location Plans (including long section)	$26.56	1000	$26,563
4	Special Meter Reading Statement			
	a) Manual request	$41.38	570	$23,588
	b) Online request	$30.76	50	$1,538

	Miscellaneous charge	Recommended Price $	Recommended quantities	Recommended Revenue forecast
5	Billing Record Search Statement			
	a) up to and including 5 years	$37.19	320	$11,900
	b) up to and including 10 years	$69.06	60	$4,144
	c) beyond 10 years	$100.94	20	$2,019
6	Building over or adjacent to water and sewer advice	$53.82	30	$1,615
7	Water reconnection (business hours only)	$148.17	6	$889
8	Workshop test of meter			
	a) 20 mm to 80 mm	$310.00	6	$1,860
	b) > 80 mm	$480.00	6	$2,880
9	Application for disconnection of water service		91	$26,837
	a) Application	$61.31		
	b) Physical disconnection	$233.60		$70,382
10	Connection of Water Service			
	a) Application for connection of water service (all sizes)	$61.31	2099	$128,690
	b) Water service connection meter only (20 mm)	$180.58	830	$149,881
	c) Water service connection short & long service (20 mm)	$1,392.80	772	$1,075,242
	d) Water service connection short & long service (25 mm)	$1,626.30	41	$66,678
	e) Water service connection short service (32 mm)	$1,955.85	6	$11,735
	f) Water service connection long service (32 mm)	$2,738.54	6	$16,431
	g) Water service connection short service (40 mm)	$1,955.85	20	$39,117
	h) Water service connection long service (40 mm)	$2,738.54	16	$43,817
	i) Water service connection short service (50 mm)	$2,355.12	20	$47,102
	j) Water service connection long service (50 mm)	$3,352.05	15	$50,281
	k) Water service connection short service (63 mm)	$2,355.12	2	$4,710
	l) Water service connection long service (63 mm)	$3,352.05	3	$10,056
	m) Water service connection metered short service (80mm)	$7,769.89	3	$23,310
	n) Water service connection unmetered short fire service (80mm)	$6,850.56	3	$20,552
	o) Water service connection long metered service (80mm)	$13,304.43	3	$39,913
	p) Water service connection unmetered long fire service (80mm)	$12,385.10	3	$37,155
	q) Water service connection metered short service (100mm)	$9,073.60	4	$36,294
	r) Water service connection unmetered short fire service (100mm)	$7,356.86	4	$29,427
	s) Water service connection long	$14,409.49	4	$57,638

	Miscellaneous charge	Recommended Price $	Recommended quantities	Recommended Revenue forecast
	metered service (100mm)			
	t) Water service connection unmetered long fire service (100mm)	$13,089.18	4	$52,357
	u) Water service connection metered short service (150mm)	$9,534.72	2	$19,069
	v) Water service connection unmetered short fire service (150mm)	$8,334.72	2	$16,669
	w) Water service connection long metered service (150mm)	$16,572.65	2	$33,145
	x) Water service connection unmetered long fire service (150mm)	$15,372.65	2	$30,745
11	Standpipe Hire - Security Bond			$18,109
	a) Security Bond (25mm)	$433.35	11	$4,767
	b) Security Bond (63mm)	$833.88	16	$13,342
12	Standpipe Hire - Annual Fee			$80,498
	a) 25 mm	$176.87	36	$6,367
	b) 63 mm	$1,195.65	62	$74,130
	c) Standpipe special reading fee	$60.13	4	$252.52
13	Standpipe Water Usage	$2.20/kL		Included as part of water usage revenue
14	Backflow Prevention Device Application and Initial Registration	$69.98	30	$2,099
15	a) Inspections of new water and sewer assets - including encasements	$118.77	150	$210,141
	b) water & pressure sewer main	$6.23	12753 m/yr	$79,451
	c) gravity sewer main	$8.31	13583 m/yr	$112,875
16	Statement of Available Pressure and Flow	$131.97	100	$13,197
17	Location of water and sewer mains The charge includes 2 crew members for 2 hours. Additional plant and equipment costs are by quote.	$564.70	48	$27,106
18	Plumbing and Drainage Inspection:			
	a) New Sewer Connection (including residential single dwelling, unit or villa complex, commercial and industrial)	$178.27	1500	$267,398
	b) Each additional WC (including residential single dwelling, unit, villa, commercial and industrial)	$15.09	2000	$30,170
	c) Alterations, Caravans and Mobile Homes	$163.18	500	$81,590
	d) Sewer re-inspection	$40.80	100	$4,080
	e) Rainwater Tank Connection	$66.79	20	$1,336
19	Relocate Existing Stop Valve or Hydrant	By quote		By quote
20	Adjust existing service			
	a) 20 mm service	$188.38	207	$38,996
	b) >20 mm	By quote	10	By quote
21	Raise/Lower Manhole		30	$0
	a) Inspection	$55.85		$1,676

	Miscellaneous charge	Recommended Price $	Recommended quantities	Recommended Revenue forecast
	b) Physical adjustment	By quote		
22	Water or Sewer Engineering Plan Assessment:			
	a) Small Projects - Relocations, Private SPS and/or development ≤10 lots or extension to properties outside area	$290.33	515	$149,518
	b) Medium Projects > 10 and < 50 lots, and mains relocation	$692.83	132	$91,454
	c) Large Projects ≥ 50 and <150 lots or large or medium density developments	$884.18	11	$9,726
	d) Special Projects (roads & rail or SPS Adjustments, relocations, development water catchment areas, or subdivisions > 150 lots)	$3,035.23	5	$15,176
23	Section 307 Certificate:			
	a) Development without Requirement	$59.39	1770	$105,111
	b) Boundary Realign, Subdivisions or developments involving mains extensions	$323.32	30	$9,700
	c) RFB and Dual Occupancies	$145.16	361	$52,404
	d) Commercial Buildings, Factories, Torrens Subdivision of Dual Occupancy etc	$178.16	169	$30,108
24	Cancellation of Water and Sewer Applications	$21.25	20	$425
25	Water & Sewer Building Plan Assessment	$131.97	308	$40,646
	Total Revenue			**$4,116,355**