Central Coast Council

Submission to IPART on prices for water, sewerage and stormwater drainage services from 1 July 2019

7 September 2018

Central Coast Council
Submission to IPART
Review of Prices for Water, Sewerage and Stormwater Drainage Services
Central Coast Council - Price Path from 1 July 2019 - 30 June 2023

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1 Executive summary

This is Central Coast Council's first pricing submission since the amalgamation of the Gosford City and Wyong Shire Local Government Areas on 12 May 2016.

Historically, IPART reviewed the former Gosford City and Wyong Shire Councils' operations and prices at the *same* time but issued separate determinations for each.

This resulted in a common water usage charge across both former local government areas (LGA) however all other charges were set separately resulting in variances between the prices for residents and businesses in the two former LGAs.

The 2016 amalgamation provided Council with the opportunity to review and consolidate the way daily operations are carried out, assets are managed and expenditure prioritised in the future and to identify savings, introduce efficiencies and develop plans – especially those to be ready for further expected large scale population growth.

This price submission outlines Council's proposal to harmonise the prices it charges for delivering water, sewerage and stormwater drainage to ensure the costs of delivering these services is consistent across the Central Coast LGA.

This is in line with results of Council's recent community survey that showed most customers indicated the water (74%), sewerage (73%) and stormwater drainage (65%) service charges should be consistent.

Once this has been achieved, Council proposes to limit increases in bills for the determination period to the rate of inflation only.

This price submission also proposes that IPART determine Council's charges for a four year period from 1 July 2019 to 30 June 2023. This will allow Council and its community to plan for the future.

1.1 Council's proposed residential pricing

Council's proposed prices will affect residential customers in different ways depending on how much water they use, whether they own a house or an apartment or are eligible for a pensioner concession.

As a result of Council's proposal, its typical residential customers will see their total water; sewerage and stormwater drainage bills reduce as at 1 July 2019.

To achieve this, Council is proposing the:

- water usage price for the Central Coast be reduced to $2.20 per thousand litres (kL)
- water service charge be reduced to $113.20 per year
- stormwater drainage charge reduced to $110.77 per year.

The annual sewerage service charge is proposed to be set at $538.70. This is a reduction in costs for residents in the former Gosford LGA and an increase in the costs for residents in the former Wyong LGA. The increase in the annual sewerage service charge will be offset by the savings in the annual water service and stormwater drainage charges, ensuring the typical residential bill will still decrease for customers in the former Wyong LGA.

Council has proposed changes to the way the stormwater drainage charges are implemented. Under this proposal, all rateable properties will pay for stormwater drainage, as the whole community benefits from stormwater drainage infrastructure. The implications of these changes on residential and non-residential customers are detailed in Section 1.3.

Table 1 below compares the current bill with the proposed 2019-20 bills for typical residential customers.

Table 1: Current and proposed typical residential bills:

Assumptions **3 bedroom house** **1x20mm meter** **Annual metered water usage of 150kL***	**Current charge 2018/2019 Former Wyong LGA $**	**Current charge 2018/2019 Former Gosford LGA $**	**Proposed 2019/2020 Central Coast Council LGA $**
Water service	164.63	197.81	113.20
Sewerage service	483.28	672.66	538.70
Stormwater drainage	128.32	124.64	110.77
Total Annual Charges #	776.23	995.11	762.67
Water usage*	343.50	343.50	330.00
Total bill	$1,119.73	$1,338.61	$1,092.67

*kL = kilolitre = thousand litres
maximum annual charges for 2018-19

1.2 Proposed non-residential pricing

Council has proposed to change the pricing structure for non-residential customers by basing the water and sewerage service charges on a 20mm meter scale equivalent rather than the current 25mm meter.

For non-residential customers, Council is proposing that the:

- water usage price be reduced to $2.20 per thousand litres (kL)
- sewerage usage charge be reduced to $0.40 per kL
- sewerage discharge volume to be reduced from 150.0 to 112.5kL per year which reduces the implicit volume used to calculate sewerage usage.
- water service charges be determined according to the size of the water meter
- sewerage service charges will be determined according to the size of the water meter, the extent of the variation to the service charge for customers will depend on which former LGA they are based in
- stormwater drainage charges be based on land size for non-residential customers.

The impacts on non-residential customers of these proposals will be different depending on how much water they use, whether they are connected to the sewerage network, the size of their property and whether they use trade waste services.

Overall, non-residential customers across both former LGAs will see a reduction in their:
- water service charge
- sewerage usage charge
- implicit volume used to calculate sewerage usage
- water usage charge.

Non-residential customers in the former Gosford LGA will also see a reduction in their sewerage service charge, while this will increase for customers in the former Wyong LGA. This increase may be offset by the reductions in the charges above, reducing the impact on the total bill.

Full details of other prices Council is proposing to charge its customers are detailed throughout this submission.

1.3 Stormwater drainage charges

The method of applying stormwater drainage charges was raised by IPART in its June 2018 Issues Paper.

Stormwater drainage charges, as regulated by IPART, allows Council to recover the costs of providing trunk drainage such as stormwater pipes and pits, open channels, culverts, levees and detention basins – infrastructure that all members of the community benefit from.

Road infrastructure, such as kerb and guttering is not included in this.

This price submission proposes stormwater drainage charges for:
- residential properties - pay a reduced standard price
- residential multi-premises customers – pay a reduced standard price
- non-residential customers – pay an area-based (land-size) price
- non-residential low impact price available on application to Council (refer to section 10.6.4 for definition on low impact properties).

This proposal is consistent with most recent Hunter Water and Sydney Water stormwater drainage determinations by IPART and with the recommended model by IPART.

The move to area-based (land size) charging for stormwater drainage will mean changes for Council's non-residential customers.

Former Wyong LGA non-residential customers stormwater drainage charge is currently levied based on the size of their water meter. Under Council's proposal, the charges will be based on the size of their property. On average, prices will decrease. However approximately 400 customers will receive an increase in price, if IPART determines pricing as Council proposes.

Non-residential customers in the former Gosford LGA are currently charged a flat rate for stormwater drainage. The proposed changes will see approximately 2,500 customers receive a reduction in charges. However a further 2,000 customers will receive an increase.
A small number of these customers may see an increase in these prices.

In addition, Council proposes all rateable properties will pay for stormwater drainage, as the whole community benefits from the drainage network.

Currently there are two prescribed drainage areas. The former Gosford drainage area covers the whole of the former Gosford LGA, while the drainage area for the former Wyong LGA essentially includes all properties east of the M1.

To enable the proposed change, Council will need to apply to the NSW Minster for Water to have the whole of the Central Coast LGA declared a Drainage Area under the *Water Management Act 2000*. This will include an application for all properties west of the M1 in the former Wyong LGA. This proposal would see all customers in the former Wyong LGA that are not included in the current designated Drainage Area required to pay the proposed stormwater drainage charge. This will only come into effect if the entire LGA is declared a Drainage Area.

Until this time, the current prescribed drainage areas will remain in place.
Table 2: in Section 1.5 below outlines the current and proposed stormwater drainage service charges for all customers.

1.4 Trade Waste and other miscellaneous charges

IPART asked Council to undertake a review of its liquid trade waste charges. The review involved moving towards alignment of the former Wyong and Gosford LGAs application fees, annual trade waste fee and re-inspection fee.

Council's proposal rationalises liquid trade waste charges of the former Wyong LGA and Gosford LGAs. Fees are calculated using Council's operating costs and the time allocated to perform the service.

Council is also proposing to align the two former Councils' septic waste disposal charges and their categories. For details of these categories refer to Appendix 4.4.

As a result, it is proposed that customers in the former Gosford LGA Category 4 will align with former Wyong LGA Category S and will be charged under the Central Coast LGA Category S.

For example, it is proposed that the following customers will receive a reduction in their annual charges:

- Category 2 customers in the former Wyong LGA
- Category 3 customers in the former Gosford LGA.

The following customers will receive a price increase in the annual charges:

- Category 1 customers across both LGAs
- Category 2 customers in the former Gosford LGA
- Category 3 customers in the former Wyong LGA
- Category S customers in the former Wyong LGA.

A summary of these charges are available in below in Section 1.5.

Full details of all proposed trade waste charges are available in Appendix 4.4.

Council has also reviewed the water and sewerage miscellaneous service charges and is proposing a restructure of the fees and charges based on the marginal cost only.

Council proposes that only labour plus on costs be charged - with the exception where quotes are required, inspections are based on a linear meter basis (at a minimum charge of 90 minutes) or meter workshop testing.

Council also proposes that sewer junction "cut ins" be removed from a Council-offered monopoly service and become a contestable charge.

These proposals will cover costs of services where one area may be outsourced, processes currently misaligned, services not previously offered in one of the previous LGAs and the service offered was previously by quote for connections.

1.5 Summary of proposed charges

Table 2 below outlines the major price categories for Council's water, sewerage and stormwater drainage services, the current prices for both former LGA's and Council's proposed prices for the Central Coast LGA from 1 July 2019.

Full details of other prices Council charges its customers is detailed throughout this submission.

Table 2: Proposed charges ($2018-19)

Charge description	Unit of measure	Former Wyong LGA 2018-19 $	Former Gosford LGA 2018-19 $	Proposed Central Coast LGA 2019-20 $
		[current][b]	[current][b]	
Water				
Usage				
Residential and non-residential	kL	2.29	2.29	2.20
Service				

Charge description	Unit of measure	Former Wyong LGA 2018-19 $	Former Gosford LGA 2018-19 $	Proposed Central Coast LGA 2019-20 $
Residential				
Houses, flats and units	dwelling	164.63	197.81	113.20
Non-Residential				
20mm	meter	146.01	N/A	113.20
25mm	meter	228.15	276.05	176.87
40mm	meter	584.09	706.68	452.79
80mm	meter	2,336.34	2,826.71	1,811.17
Other (meters 25mm and greater not shown above)	20mm equivalent[c]	See note c below		
Sewerage				
Usage				
Non-residential[d]	kL	0.83	0.83	0.40
Service				
Residential				
Houses, flats and units	dwelling	483.28	672.66	538.70
Non-residential				
20mm	meter	284.15	987.09	538.70
25mm	meter	443.99	1,542.33	816.41
40mm	meter	1,136.61	3,948.37	2,019.80
80mm	meter	4,546.43	15,793.47	7,944.21
Other (meters 25mm and greater not shown above)	25mm equivalent[c]	See note c below		
Stormwater drainage				
Residential properties				
Houses	dwelling	128.32	124.64	110.77
Strata/flat/multi premise	dwelling	96.24	124.64	83.08
Non-residential properties			124.64	
20mm		128.32		
25mm		200.50		
40mm		513.28		
50mm		802.01		
80mm		2053.14		
100mm		3208.03		
150mm		7218.05		
200mm		12832.09		
Low impact	dwelling			110.77

Charge description	Unit of measure	Former Wyong LGA 2018-19 $	Former Gosford LGA 2018-19 $	Proposed Central Coast LGA 2019-20 $
Small (<1,000m^2)	dwelling			110.77
Medium (1,001 - 10,000m^2)	dwelling			276.93
Large (10,001 - 45,000m^2)	dwelling			1,716.96
Very Large (>45,000m^2)	dwelling			5,427.81
Trade waste				
Annual fee				
Category 1	occupancy	91.29	73.52	100.16
Category 2	occupancy	365.16	234.44	346.04
Category 3	occupancy	613.39	1,968.86	1,337.60
Category S (Category 4 in previous Gosford LGA)	occupancy	99.09	-	165.93

Notes:

a The amounts shown in the table are in $2018-19 terms and are proposed to change in line with actual inflation in future years.

b Prices for 2018-19 are provided for comparative purposes only. Prices published on Council's websites prevail where there is a difference.

c This is the charge for a 20 mm meter equivalent. Customers with larger meters will pay a multiple of this charge depending on the size of the water meter. Charges for larger meters can be calculated as the charge shown in the table multiplied by (meter size)^2 / 400. A full list of meter sizes and proposed charges are available in Appendix 11

d This charge only applies for the imputed volume of sewage discharged in excess of the discharge allowance. In 2019-20 the discharge allowance is proposed to be 112.5kL per annum.

1.6 Other key issues raised by IPART

Retirement villages

IPART asked Council to consider the method retirement villages are charged for water, sewerage and stormwater drainage services. Non-strata villages have one or more common water meters, therefore homes within the villages are not individually metered.

Council proposes that retirement villages be charged based on the meter size for the future determination period. Under this model retirement villages will generally have significantly lower prices than individual dwellings and units outside of these villages.

Recycled water

Council has not included recycled water pricing as part of its current submission, instead Council will make comment as part of IPART's current review into regulating recycled water prices for all metropolitan water utilities.

Water Industry Competition Act (WICA)

Council does not favour separate "wholesale" or "retail-minus" price determination for WICA schemes.

This creates additional administrative burden and separate conditions for just these one or two schemes. Council favours continuing its transparent approach of treating these schemes as large meter customers.

Bulk water

The nature of the agreement between Council and Hunter Water is to provide support to each other's customers in times of constrained supply.

Given the arrangement is not for commercial gain, Council proposes that the bulk water service price be set at the 2018/19 price allowed for in the Hunter Water 2016 price determination $0.70/kL.

1.7 Investing for the future

The Central Coast is expected to have nearly 10,000 more homes by 2023. Because of population increase forecasts, Council expects water demand to increase by more than 500 million litres (ML) between the years 2019 and 2023. This will also place bigger demand on sewerage services.

In April and May 2018, Council asked customers what they valued most about their water, sewerage and stormwater drainage services. The top three values for the Central Coast community were:

- Reliable - Water is safe to drink and available when required; sewerage system and stormwater system is reliable
- Value for Money – There is balance between the service Council provides and the charges paid
- Efficient – Services operate efficiently.

With these values in mind, Council's operations over the determination period will focus on the following key strategies:

- provision of better response time management and service delivery with the introduction of a 24x7 water operations centre
- improved asset monitoring and performance using new technologies
- improved water quality through the development of a program that measures compliance with key performance indicators
- enhanced monitoring of reticulation mains and reservoirs
- a change in the type of chemicals to treat the water to reduce chlorine residuals

- enhanced waterway health by the use of technology to enable early detection of sewerage chokes and overflows
- working to improve the development application process to protect our water supply catchments
- increase renewals of key infrastructure.

1.8 Forecast operating and capital costs

Council has forecast its operating expenditure by criticality reviewing expenditure over the current determination and adopting a first principles budget build approach for its current operating requirements for each of its water, sewerage and stormwater drainage businesses.

Council's common cost drivers are:
- service levels
- responding changes to regulation and legislation
- population growth
- system performance
- opportunity for improvement
- impact of the additional operation expenses related to the capital works programs particularly the upgrade to the Gosford CBD.

Council's forecast operational expenditure is outlined in the Table 3 below.

Table 3: Forecast operational expenditure ($2018/19)

	2019/20 $000	2020/21 $000	2021/22 $000	2022/23 $000	4 year Total $000	2023/24 Forecast $000
Water	45,176	44,845	44,326	44,564	1,78,911	43,829
Sewerage	46,865	46,695	46,652	46,658	186,870	46,242
Stormwater Drainage	10,985	11,045	10,985	11,045	44,060	11,065
TOTAL	103,026	102,585	101,963	102,267	409,841	101,136

Some of the key capital works programs to support the infrastructure network include:
- building the Mardi to Warnervale water transfer pipeline
- upgrades of various sewerage pumping stations
- Charmhaven Sewage Treatment Plant augmentation
- Gosford CBD sewerage system reinforcement works
- improvement works on Mangrove Creek Dam, including upgrades to the spillway to allow the dam to be filled
- increase in water and sewerage mains renewals.

Council's forecast capital expenditure is outlined in the Table 4 below.

Table 4: Forecast capital expenditure ($2018/19)

	2019/20 $000	2020/21 $000	2021/22 $000	2022/23 $000	4 year Total $000	2023/24 Forecast $000
Water	21,662	69,662	46,217	23,329	160,870	8,742
Sewerage	39,796	34,394	41,884	36,537	152,611	34,714
Stormwater Drainage	10,385	10,435	10,635	10,700	42,155	10,230
Total	$71,843	$114,491	$98,736	$70,566	355,636	$53,686

A full list of our proposed capital works is available in Council's submission.

As a result of IPART's 2013 determinations, Council (since its formation on 12 May 2016 and the two former Councils before that) has over the past five years collected approximately $90 million for operational and capital works it has not spent.

The main factors for this include increased revenue due to higher water use by the community, delayed operational projects such as sludge removal from Council's treatment plants and delays in large infrastructure programs such as the Mardi to Warnervale pipeline.

Council proposes that this money is allocated to deliver a program of upgrades to the water, sewerage and stormwater drainage networks throughout the LGA. To address the infrastructure backlog, this will include increased water mains renewal program and additional upgrades to its sewerage system.

This revenue would also be applied to the operational expenditure for a water operations centre. The operations centre will function 24 hours a day, 7 days per week providing improved customer response and service levels.

These activities will realise delivery of assets and services consistent with the purpose of collection of the funds and in line with the expectations of the community. Revenue variance amounts attributed to water, sewerage or stormwater drainage will only be used in the same specific area which generated the revenue.

1.9 Service levels

Over the current determination period, the two former Councils have performed better than the national median for large utilities with greater than 100,000 customers for average frequency of unplanned interruptions and water main breaks.

While a number of other measures were below the national median, Council and the two former Councils met the targets set for these measure as part of the current determination.

With this in mind, Council proposes to improve on the following output measures by reducing:

- water quality complaints per 1000 from 9.9 to 9.0
- average frequency of unplanned interruptions per 1000 properties from 151.8 to 136
- water main breaks per 100km from 23.7 to 20.0
- sewerage overflows per 100km main from 32.6 to 32.0

The proposed measures are a subset of the total number of indicators presented in the National Performance Report (NPR) indicators and can be benchmarked against similar sized utilities. The measures chosen are a combination of customer service, asset performance and environmental performance indicators.

The capital investments and proposed pricing models within this submission are designed to ensure Council can meet these adjusted targets.

1.10 Community engagement

In the development of its submission, Council sought a range of views and perspectives from the Central Coast community. A variety of opportunities and techniques were used to encourage participation, increase awareness and understanding, including pop up events, a survey and four workshops.

More than 133,000 customers were reached through the communication and engagement channels and more than 2,600 actively participated.

Customers said prices should be consistent across the Central Coast LGA. Reliability of the services and value for money is also important to customers.

Council has responded by proposing to align prices, equitably distribute costs and proposing key operations strategies and capital works programs to meet the needs of its customers, while also reducing the cost of a typical residential bill.

1.11 Council's financial position

The objective of the financeability test is to assess the short term financial sustainability of Central Coast Council water, sewer and stormwater drainage.

Adopting IPART's financeability test as set out in the paper Financeability tests in price regulation (December 2013) Council's key financial ratios based upon the pricing proposal areas follows:

Year	2018-19	2019-20	2020-21	2021-22	2022-23
1. Funds from operations interest Cover	3.77	3.83	4.47	4.6	3.95
2. Debt / Regulatory Asset Base	35.0%	32.3%	30.9%	28.8%	26.7%
3. Funds from operation to debt	19.4%	20.3%	23.8%	25.6%	21.3%

Adopting the credit rating criteria as set out in IPART's financeability test, Council's price regulated business water, sewerage and stormwater drainage has an investment credit rating over the proposed price path (thus ensuring the financial sustainability to continue the provision of high quality service levels to customers and the wider community).

1.12 Quality assurance

IPART's *Guidelines for Water Agencies Submissions* December 2017 require that the submission information returns and other materials provided by Council be subject to an external quality assurance check (QA). Council engaged an external consultant to perform a QA to check for completeness against the IPART submission guidelines and consistency between this submission and Council's modelling inputs and data provided in the 2017-18 Annual Information Return and the Special Information Return.

2 Central Coast Council's role and functions

2.1 Council's role

Central Coast Council was proclaimed on 12 May 2016, the result of the amalgamation of the former Wyong Shire and Gosford City LGAs.

Council is responsible for providing a range of services including water supply, sewerage and stormwater drainage services to the local community.

Figure 1 provides a snapshot of the water and wastewater integrated network. Council's water delivery process includes managing its catchments, water treatment plants, bulk delivery and reticulation systems. The wastewater network transfers sewerage to inland treatment plants, treated effluent to ocean outfalls and to recycling schemes.

The Council service area stretches over 14 delivery districts from Summerland Point in the north to Mooney Mooney in the south; from the Tasman Sea in the east to bordering on Wisemans Ferry to the west.

Council delivers its water supply and sewerage services by its Water and Sewer department. Stormwater drainage works are delivered by its Roads, Transport and Drainage department.

Legislatively, Council is a "Water Supply Authority" under S285 of the *Water Management Act, 2000* in respect of the following functions:

- harvesting, collection, treatment and delivery of drinking water in accordance with Guidelines set by the National Health and Medical Research Council
- collection, transport, treatment, recycling or discharging of sewage effluent in accordance with the Environmental Protection Licences ("EPL") set by the NSW Environment Protection Authority ("EPA").

Four basic business products of Council's Water and Sewer functions are:

- harvesting raw water - catchment, storage, treatment
- providing drinking water - treating water delivered to customers
- collecting sewerage - transport, treatment and discharge
- recycling treated water – advanced sewage treatment and reuse.

Stormwater drainage services are delivered with the primary objective of preventing or minimising the impact on people's lives, properties and infrastructure by larger storm events and minimising disturbance from minor events. Council operates and maintains its stormwater drainage network to achieve the following strategic objectives:

- convey stormwater flows through a system of natural and built infrastructure
- demonstrate responsible and sustainable management of stormwater drainage assets
- develop an integrated stormwater drainage asset management system
- improve understanding of service level standards and options
- minimise adverse impacts and / or the risks of asset failure
- achieve savings by optimising whole of life costs
- support long term financial planning.

Figure 1: Central Coast Council's water and sewerage operations

2.2 Operations

Council's Water and Sewer network is managed within an LGA comprising about 1,680 square kilometres servicing a population of approximately 330,000.

In 2017-18 there were 141,000 billed end users connected to the water supply system and 139,000 to the sewerage system.

Council's Water and Sewer network supplies an average of 80 megalitres (ML) of drinking water each day to residential, commercial and industrial customers.

2.2.1 Water supply

Water supply is delivered through 2,270km of mains, three water treatment plants, 71 reservoir structures and 42 raw water pumping stations. Raw water denotes water taken from the source that has not yet been treated. A summary of Central Coast Council's water assets is provided in Table 5.

Table 5: Central Coast Council water assets

Water Assets	Amount
Reticulation Water Mains	1,911 km
Recycled Water Mains	28 km
Trunk Water Mains	260 km
Raw Water Mains	57 km
Bore Water Mains	14 km
Reservoir Structures	71
Water treatment plants	3
Dams	4
River Intakes	3
Groundwater Systems	5
Water Boreholes	34
Raw Water Pump Stations	8
Potable Water Pump Stations	42
Tunnels	12 km

Major bulk water storages, treatment facilities, pumping stations, and reservoirs and associated transfer systems were the subject of a joint agreement between the former councils. After the amalgamation, no significant operational changes have been necessary to

ensure continued effective management of the catchment and headworks components of the water supply.

Since previous arrangements also facilitated bulk water transfers between the former Wyong and Gosford local government areas, the water supply operations of Council were already interlinked.

Bulk raw water for the Central Coast is harvested from Wyong River, Ourimbah Creek, Mooney Creek, Mangrove Creek and a number of groundwater aquifers.

Mangrove Creek Dam is the major raw water storage and has a capacity of 190,000ML. Storage is supplemented by Mooney and Mardi Dams, with capacities of 4,600ML and 7,400ML respectively.

Three water treatment plants provide filtered drinking water treated to Australian Drinking Water Guideline standards. Somersby and Mardi Water Treatment Plants (WTPs) are conventional media filtration based water treatment plants; Woy Woy WTP is a membrane based filtration plant tailored to its bore water source.

Somersby and Mardi WTPs have similar capacities (140ML and 160ML per day respectively), whilst Woy Woy WTP, with a capacity of 5ML per day, is used only as required.

An agreement is in place with Sydney Water to supply approximately 67ML per annum of potable water to residents in the Mooney Mooney area network. (This area is not connected to the other Central Coast Council water networks).

An agreement also exists with Hunter Water Corporation, to enable the transfer of treated water (in either direction) between Council's and Hunter Water's reticulation systems. The inter-connection is known as the Hunter Link. Actual day to day transfer rates are dependent on relative storage levels in each system and on operational needs. The agreement expires in 2026.

2.2.2 Sewerage

Sewage is collected through 2,490km of reticulation pipes and 324 pumping stations. Treatment is undertaken at one of eight treatment plants. The bulk of sewage undergoes secondary treatment and is discharged into the ocean at Winnie Bay, Norah Head, or Wonga Point outfalls. An overview of Central Coast Council sewerage assets is provided in Table 6.

The balance of the sewage undergoes treatment to tertiary standard and is reticulated as recycled water to school ovals, parks, used on site at the treatment plant or on golf courses (via a commercial agreement) for beneficial non-potable reuse.

Table 6: Central Coast Council sewerage assets

Sewer Assets	Amount
Gravity Sewerage Mains	2,240 km
Sewerage Rising Mains	250 km
Effluent Disposal Mains	61 km
Sewerage Pump Stations	324
Vacuum Systems	6
Sewage Treatment Plants	8
Ocean Outfalls	3
Tunnels	6

The former Wyong and Gosford LGAs sewerage systems were developed as stand-alone systems, with no linkages to each other or the Hunter. The one exception is at Mooney Mooney where untreated sewage is passed to the Sydney Water-owned Brooklyn Treatment Plant.

2.2.3 Stormwater Drainage

Stormwater Drainage network spans more than 1,250 km of infrastructure over 29 urban catchments (23 Gosford and 6 Wyong) and also some large rural catchments. An overview of Council's stormwater drainage assets is provided in Table 7.

Table 7: Stormwater drainage assets

Stormwater Drainage Assets	Amount
Stormwater Drainage Pipes	1,051 km
Culverts	56.1 km
Open Channels	141.6 km
Pits	41,027
Headwalls	10,879
Gross Pollutant Traps	437
Flood Gates	48
Basins	115
Levees	11
Hydrometric Stations	62

Much of the urban area is managed by a constructed infrastructure network.

Revenue funds the operation, maintenance, renewal and new stormwater drainage infrastructure such as stormwater drainage pipes, open channels, culverts, pits and headwalls, levees, detention basins etc. for the safe and efficient disposal of stormwater runoff and flooding, minimising risks to people's life, properties and infrastructure.

2.2.4 Organisational structure

Following the amalgamation an extensive review of Council's organisational structure was undertaken and the structure as of August 2018 is provided in Figure 2.

This review identified a more suitable structure for the combined Water and Sewer business at a senior level, and a more logical way to combine the functions of the business within four complementary units. The financial expenditure structure is in section 5.3.

The Water and Sewer department operates under the direction of a Senior Manager within the Assets, Infrastructure and Business directorate.

The Roads, Transport and Drainage business unit operates under the direction of a Senior Manager, also within the Assets, Infrastructure and Business directorate.

Business support services such as Information Technology, Financial Services and Human Resources will continue to be provided under the direction of the relevant Central Coast Council department.

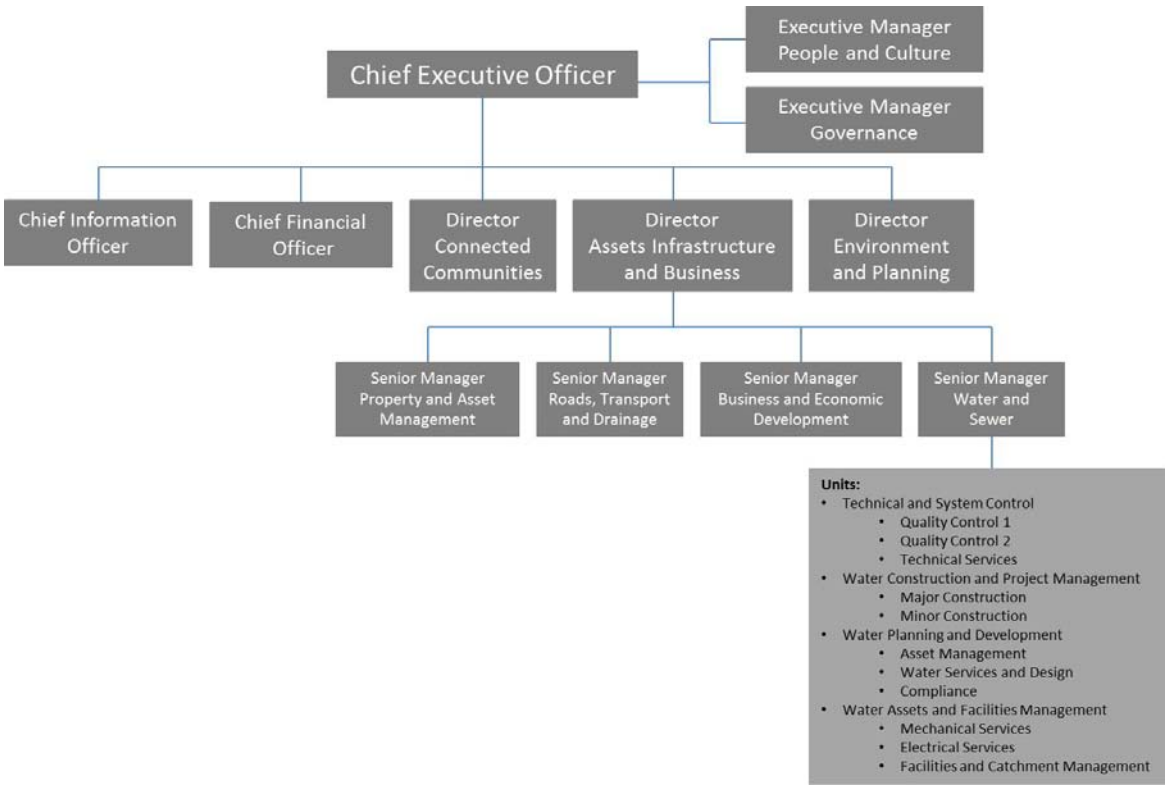

Figure 2: Central Coast Council organisation structure

2.2.5 Billing

Under the 2013 IPART determination, former Gosford Council customers are billed twice a year whereas former Wyong Council customers are billed four times a year. In both cases:

- residential customers currently pay a fixed service charge and variable usage charge for water and a fixed service charge only for sewerage services. Currently all residential customers also pay a fixed drainage charge.
- non-residential customers currently pay a fixed service charge and a usage charge for both water and sewerage services. Currently Gosford non-residential customers pay a fixed rate for stormwater drainage whilst Wyong customers pay a charge based on the size of their water meter.

2.2.6 Water service charge

The water service charge varies only according to meter size.

- most domestic customers have a standard 20 mm diameter meter and therefore pay a uniform charge (however, this charge varies within the two former LGAs)
- non-residential customers with larger meters, mainly commercial and industrial, pay higher service charges.

2.2.7 Water usage charge

The water usage charge is applied to the total volume of water used. Usage charges are per thousand litres of water used. The usage charge is currently the same throughout the Central Coast LGA.

2.2.8 Sewerage service charge

Sewerage services are fixed charges to meet the capital and operational costs of the sewerage system. For residential customers this is the only sewerage charge paid for the use of the sewerage system.

2.2.9 Sewerage usage charge

Sewerage usage charges are applied to non-residential customers. They are based on water usage volume and how much is likely to be sent to the sewer. This 'discharge factor' calculation depends on the nature of the business. Commercial buildings (e.g. offices) would discharge most of the water used to the sewer, whilst businesses such as a nursery would use most of the water on site and have less discharge to the sewer.

2.2.10 Stormwater drainage charge

Under IPART's 2013 pricing determination the stormwater drainage charge is set differently between the former Gosford and Wyong LGAs. In both of these LGAs, residential customers are charged a flat rate. For non-residential customers, former Wyong LGA bases the charge relative to the size of the customer's water meter, whereas former Gosford LGA are charged a flat rate.

Customers in the former Gosford LGA are charged as part of their Council rates bill, whereas customers within the former Wyong LGA are billed with their water bill (for details on current pricing refer to Appendix 4.3).

2.3 Regulatory environment

2.3.1 Overview of regulation

Council's Water and Sewer operations are regulated through a range of legislative and other controls.

The current regulatory framework can be grouped into the categories presented in Figure 3 (some legislation is relevant to more than one category and is presented in its dominant category).

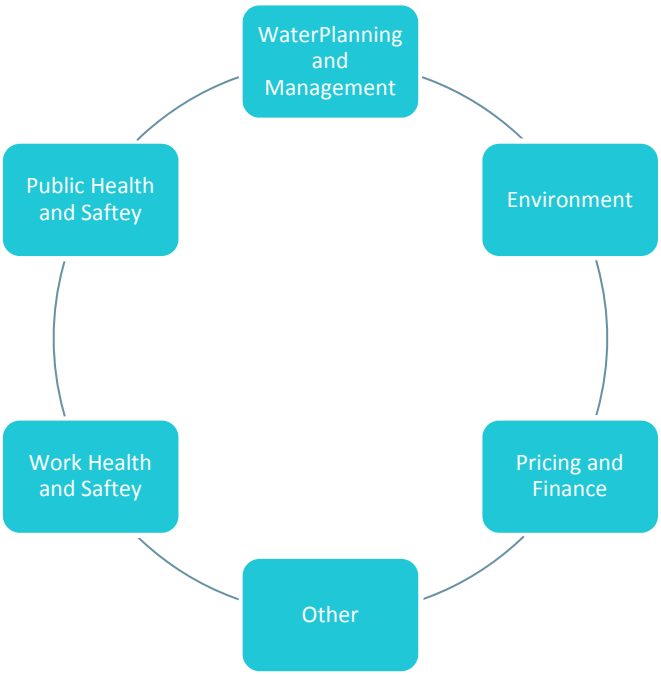

Figure 3: Regulatory categories

The relevant agency responsible for the administration of each is presented in Table 8.

The regulatory framework for Council's Water and Sewer business includes:

- Local Government Act 1993
- Water Management Act 2000
- Public Health Act 2010
- Public Health Regulation 2012
- Independent Pricing and Regulatory Tribunal Act 1992
- Fluoridation of Public Water Supplies Act 1957
- Protection of the Environment Operations Act 1997
- Protection of the Environment Administration Act 1991
- Environmental Planning and Assessment Act 1979
- Public Finance and Audit Act 1983

- Food Act 2003
- Dams Safety Act 1978
- Work Health and Safety Act 2011
- Water Act 2007 (Cth)
- Competition and Consumer Act 2010 (Cth)
- Australian Drinking Water Guidelines (Industry Guideline)
- NSW Government "Best Practice" Guidelines for Water Utilities (Industry Guideline)
- Fluoridation Code of Practice (NSW Health Guideline).

Table 8: Current regulatory framework for Central Coast Council's water business

Category	Description
Water Planning and Management	**Water Management Act 2000** The former Gosford City and Wyong Shire Councils are listed in Schedule 3 of the Water Management Act as water supply authorities. Continued under Central Coast Council, it provides authorisation to perform these functions and to levy service charges As a local water utility (without an operating licence), the Council must comply with the Best Practice Guidelines for Water and Sewerage and annually report performance to the NSW Department of Industry. Administered by: NSW Department of Industry – Water under the Minister for Primary Industries. **Water Act 2007 (Cth)** Council is required to provide water data to the Bureau of Meteorology (BOM) in accordance with the proscribed timeframes and formats. Administered by: Bureau of Meteorology
Environment	**Protection of the Environment Operations Act 1997** Council is broadly required to take all practicable measures to prevent harm to the environment. An Environment Protection Licence (EPL) is required to operate components of its sewerage system. Administered by: Environment Protection Authority **Environmental Planning and Assessment Act 1979** Council is required to assess the environmental impacts of its activities and mitigate these appropriately. Development consent may be required for some works depending on their nature and location. Administered by: Department of Planning and Environment under the Minister for Planning

Category	Description
Pricing and Finance	**Independent Pricing and Regulatory Tribunal Act 1992** The prices that Council can charge for water, sewerage and stormwater drainage services are statutorily determined by IPART. The Council cannot charge any more than the price determined by IPART. Council cannot charge a price less than that determined by IPART without the approval of the Treasurer. Administered by: Independent Pricing and Regulatory Tribunal (IPART). **Public Finance and Audit Act 1993** The Audit Office conducts financial and performance audits, principally under the Public Finance and Audit Act 1983[4] and the Corporations Act 2001,[5] and examines allegations of serious and substantial waste of public money under the Public Interest Disclosures Act 1994.[6] **Local Government Act 1993** Council is required to prepare and maintain accounting records in accordance with Australian Standards and requirements of the Acts. Administered by: NSW Audit Office under the Treasurer
Public Health and Safety	**Public Health Act 1991** Council is obliged to follow advice issued by the Chief Health Officer regarding drinking water safety. Administered by: NSW Health under the Minister for Health **Fluoridation of Public Water Supplies Act 1957** Council adds fluoride to the water supply in accordance with the Act and Regulation and the Fluoridation Code of Practice. Administered by: NSW Health under the Minister for Health **Food Act 2003** Council must not sell food (water) known (or ought to reasonably be known) to be unsafe. Administered by: NSW Food Authority under the Minister for Primary Industries **Dams Safety Act 1978** Council is required to ensure the safety of its dams. Administered by: Dams Safety Commission under the Minister for Primary Industries
Work Health and Safety	**Work Health and Safety Regulation 2017** Council is required to secure and promote the health, safety and wellbeing of staff.

Category	Description
	Administered by: SafeWork NSW under Minister for Finance and Services
Other	**Competition and Consumer Act 2010** The Council must not engage in any misleading or deceptive conduct Administered by: Australian Competition and Consumer Commission
Australian Accounting Standard	**Australian Accounting Standard AASB116**

(Note: This is an overview of key legislation. It is not a comprehensive list of all relevant legislation).

2.3.2 Changes to legislation

This section provides a summary of upcoming legislative changes and proposed guideline amendments that have occurred over the existing pricing determination period. The regulatory changes and reviews will have various impacts on operations of the Water and Sewer business, as well as the community.

Draft Water Management (General) Regulation 2017

The draft Water Management (General) Regulation 2017 was prepared for public consultation and exhibition on 7 August 2017.

Council provided feedback on the regulation detailing its concern about the proposed changes to:

- Clause 198 (approval of service charge determination)
- Clause 199 and 200 (strategic business and integrated water management)
- Clause 142 (water restrictions)
- Division 6 (special areas of operation of Essential Energy)
- Part 9 (Water Supply Authorities).

However, this appears not to have been incorporated in the content of the current draft.

Status of Central Coast Water Corporation (CCWC)

During the 2013 pricing period, it was the intention of the former Wyong and Gosford Councils to progressively transfer staff and functions to the Central Coast Water Corporation (CCWC) with the aim of the CCWC being the deliverer of water and sewerage functions from 1 July 2017.

Council is a single water supply authority, with integrated decision making now in place.

The CCWC Board is not operational. No directors have been appointed since the tenure expired of the independent directors.

Whilst the Central Coast Water Corporation Act is still in force, no Water Supply Authority functions were ever transferred to CCWC.

Water Planning

The Water Sharing Plan for the Jilliby Jilliby Creek Water Source 2003 and Water Sharing Plan for the Ourimbah Creek Water Source 2003 have been repealed. Components of these plans were consolidated into the new Water Sharing Plan for the Central Coast Unregulated Water Sources 2009.

Further legislative change occurred during the 2013 pricing determination period including the development of the:

- Water Sharing Plan for the North Coast Coastal Sands Groundwater Sources 2016
- Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016.

Health Based Targets

It is anticipated that during the 2019 determination period, the concept of health based targets (HBT) will be incorporated into Australian Drinking Water Guidelines' Microbial Quality of Drinking Water.

This approach defines a tolerably low level of microbial risk for drinking water and then details how this target helps define performance targets. Such targets can reduce this risk to a level low enough to be considered acceptable - and hence safe - acknowledging it is impossible to have a zero health risk.

Council is, at the time of writing this submission, awaiting the outcome of the Water Research Australia Project *"Guide to Sanitary Surveys and Operational Monitoring in Catchments"* before commencing sanitary surveys. The final guidance from this conducted research will shape the way Council conducts future inspections and adopts a best practice management approach.

Dams Safety Act, 2015

Central Coast Council's dams are operated and managed in accordance with the Dams Safety Act, 1978.

In 2013 the NSW Government initiated a review of the Dams Safety Act 1978 and the Dams Safety Committee established under the Act the Dam Safety Act 2015 received assent on 28 September 2015, but is largely not in force. Following consultation, Clause 5 of Schedule 2 of the 2015 Act has commenced.

As there are no regulations developed for the Dams Safety Act 2015, the Dams Safety Act 1978 together with the existing Dams Safety Committee and associated mechanisms are at the time of writing this submission still in place.

The Department of Industry advises that the current Dams Safety Committee will be dissolved in June 2019. Priority has therefore been placed on the establishment of the necessary regulations to enable the Dams Safety Act 2015 to commence in full from July 2019.

Plumbing and Drainage Act 2011

The Plumbing and Drainage Act 2011 established a single scheme of regulation for on-site plumbing and drainage work and provides that the Department of Fair Trading is the NSW Plumbing Regulator.

This Act allows the Department to delegate its plumbing functions back to local councils, or any other body or person that it considers has the necessary skills, knowledge or experience to exercise the function.

On 4 December 2012, former Gosford Council accepted the delegation and sub delegations from the Department and nominated staff to be appointed as enforcement officers for the purpose of the Plumbing and Drainage Act. Council is currently reviewing these delegations.

Liquid Trade Waste Guidelines

The Department of Industry Water branch is at the time of writing this submission reviewing the Liquid Trade Waste Regulation Guidelines 2009. Council provided written feedback on 1 August 2016 and has been a part of an ongoing consultative working group. The proposed changes are not anticipated to have a significant impact on customers. There has been no indication on the release date of the new guidelines.

Biosolids Guidelines

The NSW Environment Protection Authority is reviewing its 1997 guidelines on the use and disposal of biosolids products. The guidelines are designed to assist water utilities and those involved in end-use of biosolids products, by defining a set of principles and requirements focusing on best practise reuse options to maximise economic and environmental outcomes.

Council has not, at the time of writing this submission, been advised of a timeframe around the review. It is uncertain as to whether the review will define process upgrades for sewerage treatment, transport and reuse options.

Critical Assets Infrastructure

The Security of Critical of Infrastructure Act 2018 (Cth) commenced on 11 July 2018. The ACT establishes a confidential register of operational information and control information regarding critical infrastructure assets in the water, electricity, gas and ports industries.

Council will be required to define "critical water assets" and must provide an initial report within six months of the commencement of the Act with clear operational information.

2.3.3 Environmental regulation

The operation of Council's water supply and sewerage system is subject to the *Protection of the Environment Operations Act, 1997 (POEO Act)*. The Act imposes significant obligations on Council.

The most significant area of impact is that of Environmental Protection Licences (EPL) issued under the Act. EPLs regulate pollution generating activities. EPLs are designed to address matters of quality and quantity in respect of discharge from sewerage treatment plants and specify operational controls and performance monitoring/reporting.

Council holds the following EPLs for water supply and sewer operations:

- EPL 2647 for the Toukley Sewage Treatment System
- EPL 1942 for the Bateau Bay Sewage Treatment System
- EPL 1802 for Kincumber Sewerage Treatment System
- EPL 12170 for Waters of Mangrove Creek Dam and Mooney Dam
- EPL 12633 for Mooney Mooney and Cheero Point Sewerage Scheme.

For operational purposes the most significant EPL's are 2647 and 1942. Each controls the operation of its respective sewerage system and specifies sewage effluent quality objectives, operating criteria and performance objectives. This includes all components of reticulation, pumping stations, rising mains, odour control facilities, treatment plants, effluent disposal mains and ocean outfalls.

Council submits an annual information return for each EPL, reporting against the conditions set. EPA undertakes reviews periodically.

2.3.4 Surface and groundwater regulation

Extraction of water from the environment in NSW is primarily regulated by the Water Management Act 2000 (NSW) ('the WM Act').

Under the WM Act, water cannot be extracted from a groundwater or surface water source without a water access licence issued by the NSW Department of Industry - Water. A water access licence specifies where source water is to be taken, how much water can be taken, and when water can be taken. These conditions are based on a number of considerations at the location of water extraction, including environmental impacts, stream flows, impacts on aquatic life, fish migration, etc.

Council holds 35 water access licences to extract groundwater for town water purposes, and an additional 161 water access licences to monitor the impacts of this groundwater extraction on the condition of the aquifer.

In addition, Council holds four water access licences to extract surface water for town water purposes from Wyong River, Ourimbah Creek, Mangrove Creek, and Mooney Mooney Creek.

Where a water access licence specifies an annual limit for the volume of water extracted at the source water location, Council is required to report the volume extracted annually to Department of Industry – Water. The report ensures compliance with the volumetric limit, and allows the Department to invoice for the volume of water extracted.

2.3.5 Drinking water regulation

The *Public Health Act 2010* makes it an offence to supply any person with drinking water that is not fit for human consumption. In addition, the *Food Act, 2003* prohibits the sale of food (water, in this case) known, or ought reasonably to be known, to be unsafe.

Compliance standards are set by the National Health and Medical Research Council's Australian Drinking Water Guidelines 2011.

In delivering drinking water, Council:

- performs regular sampling and testing of its supply system
- adds fluoride to the water supply in accordance with *the Fluoridation of Public Water Supplies Act, 1957* (NSW) and the Fluoridation Code of Practice.

Council has implemented a structured risk-based approach to drinking water management.

2.3.6 Strategic planning

Council's Water and Sewer Strategic Business Plan was adopted by Council on 28 May 2018. It was prepared in line with the *NSW Government's Best Practice Guidelines for Water and Sewerage*.

As this Strategic Business Plan is intended to provide a general overview of Council's Water and Sewer business, there are a number of separate detailed support documents, including:

- Central Coast Council Community Strategic Plan 2030
- Central Coast Resourcing Strategy 2018
- WaterPlan 2050
- Development Servicing Plans.

WaterPlan 2050 is the long term strategic water supply strategy for the Central Coast and, at the time of writing this submission, is being updated. WaterPlan 2050 identifies three key action areas:

- enhancing the existing supply system
- using water efficiently
- accessing additional sources of water.

The Council also has a number of Development Servicing Plans (DSPs) for water and sewerage services. These plans identify infrastructure required to service new development and the associated costs.

2.4 Amalgamation

One of the challenges for Council's water, sewer and stormwater drainage operations resulting from the 2016 amalgamation has been the alignment of processes as performed by the two former Councils.

Priority has been given to changing business models, processes and budgets in response to the organisation's structure. The following activities have been addressed:

- water and sewer civil electrical and mechanical field operation
- water and sewage treatment plant operations
- water and sewer development applications
- dispatch processes
- after hours response
- Water and Sewer Supervisory Control and Data Acquisition networked communication (SCADA)
- consolidation of the water, sewerage and stormwater drainage asset classes
- drinking water management system
- key performance data alignment
- pay rates and conditions
- financial management
- water and sewer laboratory sampling and testing regime
- preventative works program
- inspections
- water and sewer life cycle management
- alignment of water and sewer knowledge base
- common reporting
- asset management plans
- strategic management plans.

2.5 Growth

The Central Coast LGA is located in a fast growing corridor, between Sydney and Newcastle. The Central Coast Regional Plan 2036 forecasts that the population will grow to 415,000 by 2036. This is a 24 percent increase on the 2016 population.

The forecast growth in total population, together with the associated forecast growth in dwellings connected to Council's water supply is provided in Figure 4.

Council has identified a range of key capital works to support the growing community, which is outlined later in this submission.

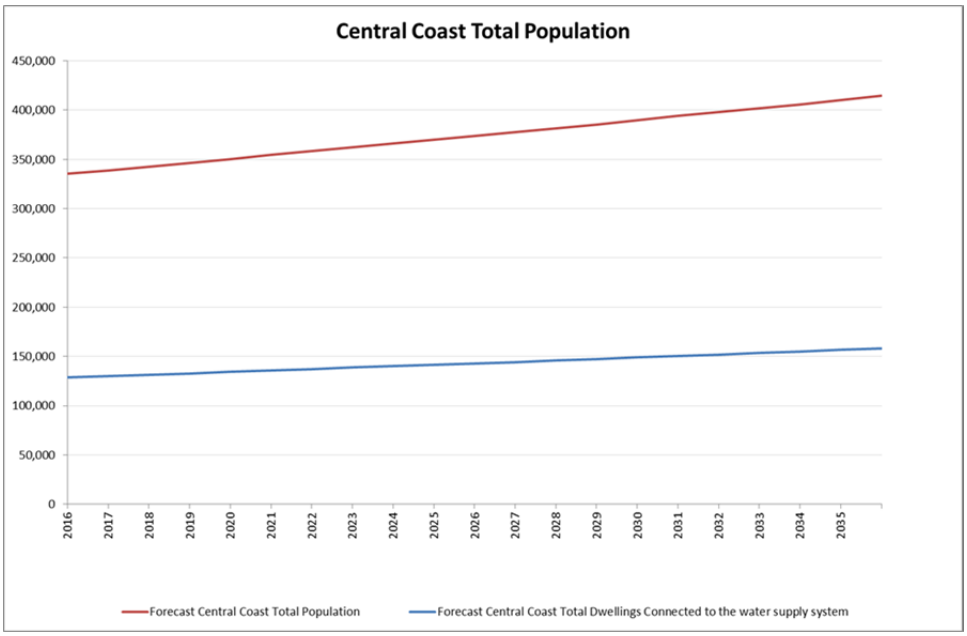

Figure 4: Central Coast LGA - population/household growth profiles

2.6 Water Industry Competition Act (WICA)

The Water Industry Competition Act 2006 seeks to:

- encourage competition in relation to the supply of water and the provision of sewerage services
- develop infrastructure for the production and reticulation of recycled water.

This Act has had minimal impact on Council. Local impacts have been restricted to the planned provision of a bulk water supply to a private company providing water supply to a large development at Catherine Hill Bay (Solo Water) and short term water supply to a proposed development at Narara.

Of concern to Council is the "retailer of last resort" provision in the legislation. Council's view is it could put a public water agency, such as Council, in a position of having to take over water supply and sewerage services where private providers fail. The protections afforded to public agencies are ambiguous, having never been tested.

The Act also provides for a prospective private entrant to negotiate terms and conditions of access to the infrastructure (and products) of an existing public water agency.

2.7 Technology and information systems

Technology and information systems continue to develop and offer opportunities in the context of an operating utility business.

The amalgamation has necessitated a change to all of our business operating systems. This includes:

- procurement

- human resources
- time sheeting application
- laboratory database
- asset management system
- customer relationship management
- customer billing and property (includes all applications for requested services)
- Enterprise Document Management System (EDMS)
- alignment of the Geospatial database

3 Customer issues

In 2017, Central Coast Council implemented a new customer relationship management system.

Called the *Customer Experience System*, Council now has the ability to capture and triage reports more efficiently. A Water and Sewer dispatch centre has been established, improving response times to incidents, accurate prioritising, data collection and regulatory reporting.

A complaints management framework has been established specific to Water and Sewer and includes a resolutions team. Using social media and the internet has allowed Council to reach a wider audience to communicate system outages, pollution incidents and water quality alerts.

The most significant customer issues since the 2013 determination period have been:
- discoloured water
- sewage odours
- pricing differentials (especially in relation to retirement villages)
- Wallarah 2 coal mine
- fluoride
- taste (chlorine)
- water security
- water main breaks
- response time, and
- follow up work.

For stormwater drainage the customer issues have focussed on:
- investigation of property flooding in upgrade/development of infrastructure
- street flooding causing local issues and deterioration to adjacent asset base
- safety issues due to inappropriate street drainage (deep and wide dish drains)
- subsidence in road reserve and easements due to defects in stormwater drainage pipes
- investigation and maintenance due to localised blockages in the stormwater drainage network.

3.1 Pricing differentials in service area (2013 – 2019)

Under the current pricing determination, former Gosford and former Wyong's water, sewerage and stormwater drainage service charges are different. So are trade waste and service fees and charges. Water and sewerage usage charges and the sales to Hunter Water are, aligned.

Table 9 below lists the 2013 Determination variances between the former Council's. Since the amalgamation, prices have been held at 2016-17 prices due to the Council's request to defer the lodgement of the pricing submission.

Table 9: Comparison of charges for water, sewerage and stormwater drainage services ($)

Description of Service	2016-18 Former Wyong LGA $	2016-18 Former Gosford LGA $
Water		
Water Service Charge - Metered Residential or Non-residential with 20mm meter	164.63	197.81
Water Service Charge - Multi Premises	164.63	No equivalent
Water Service Charge - Unmetered Properties	577.49	No equivalent
Water Service Charge - Metered Non-residential with 25mm meter	228.15	276.05
Water Service Charge - Metered Non-residential with 40mm meter	584.09	706.68
Water Service Charge - Metered Non-residential with 50mm meter	912.63	1,104.18
Water Service Charge - Metered Non-residential with 80mm meter	2,336.34	2,826.71
Water Service Charge - Metered Non-residential with 100mm meter	3,650.54	4,416.74
Water Service Charge - Metered Non-residential with 150mm meter	8,213.7	9,937.65
Water Service Charge - Metered Non-residential with 200m meter	14,602.14	17,666.93
Water Usage (per kilolitre)	2.29	2.29
Sales to Hunter Water Corporation (per kilolitre)	0.66	0.66
Sewerage		
Sewerage Service Charge – Metered Residential or Non-residential with 20mm meter	483.28	672.66
Sewerage Service Charge – Multi Premises	483.28	No equivalent
Sewerage Service Charge – Metered Non-residential with 25mm meter	443.99	1,542.33
Sewerage Service Charge – Metered Non-residential with 40mm meter	1,136.61	3,948.37
Sewerage Service Charge – Metered Non-residential with 50mm meter	1,775.95	6,169.32
Sewerage Service Charge – Metered Non-residential with 80mm meter	4,546.43	15,793.47
Sewerage Service Charge – Metered Non-residential with 100mm meter	7,103.8	24,677.3
Sewerage Service Charge - Metered Non-residential with 150mm meter	15,983.55	55,523.92

Description of Service	2016-18 Former Wyong LGA $	2016-18 Former Gosford LGA $
Sewerage Service Charge - Metered Non-residential with 200mm meter	28,415.2	98,709.2
Sewerage Usage (per kilolitre)	0.83	0.83
Drainage		
Drainage Service Charge - Metered Residential	128.32	No equivalent
Stormwater Drainage Charge	No equivalent	124.64
Drainage Service Charge - Multi Premises	96.24	No equivalent
Drainage Service Charge - Metered Non-residential with 25mm meter	200.5	No equivalent
Drainage Service Charge - Metered Non-residential with 40mm meter	513.28	No equivalent
Drainage Service Charge - Metered Non-residential with 50mm meter	802	No equivalent
Drainage Service Charge - Metered Non-residential with 80mm meter	2,053.14	No equivalent
Drainage Service Charge - Metered Non-residential with 100mm meter	3,208.03	No equivalent
Drainage Service Charge - Metered Non-residential with 150mm meter	7,218.05	No equivalent
Drainage Service Charge - Metered Non-residential with 200mm meter	12,832.09	No equivalent

3.2 Typical customer bills - comparison

The following table shows a typical bill for residents of the former Gosford and Wyong Councils. This is based on consuming 160kL a year and paying no property based value charges.

Table 10 also indicates a customer bill comparison in relation to Hunter Water and Sydney Water.

Table 10: Water and sewerage typical residential bill (assumed water consumption is 160kl in real $)

Component charges	2013	2014	2015	2016	2017	2018	2019	2020
Sydney Water								
Water Service Charge	135.12	125.12	115.19	103.10	89.95	91.75	93.58	95.46
Water usage charge	2.13 340.80	2.18 348.80	2.25 360.00	2.28 364.80	2.00 320.00	2.04 326.40	2.08 332.80	2.12 339.20
Sewerage service charge	555.08	574.63	596.12	609.42	583.60	595.27	607.18	619.32

Component charges	2013	2014	2015	2016	2017	2018	2019	2020
Average residential bill	1,031.00	1,048.55	1,071.31	1,077.32	993.55	1,013.56	1,033.56	1,053.98
Hunter Water								
Water Service Charge	18.92	17.02	17.51	17.76	25.69	51.07	74.97	101.00
Water usage charge	2.08 332.80	2.13 340.80	2.19 350.40	2.22 355.20	2.25 360.00	2.30 368.00	2.34 374.40	2.39 382.40
Sewerage service charge	555.23	569.11	585.61	593.81	604.33	618.36	635.53	652.62
Environmental improvement charge	35.89	36.79	37.86	38.39	38.87	39.65	40.44	41.25
Average residential bill	942.84	963.72	991.38	1,005.16	1,028.89	1,077.08	1,125.34	1,177.27
Former Gosford LGA								
Water Service Charge	99.28	125.81	149.77	173.56	197.81	197.81	197.81	First year of CCC pricing determination
Water usage charge	2.12 339.20	2.17 347.20	2.23 356.80	2.26 361.60	2.29 366.40	2.29 366.40	2.29 366.40	
Sewerage service charge	534.82	576.00	612.28	641.14	672.66	672.66	672.66	
Average residential bill	973.30	1049.01	1118.86	1176.28	1236.54	1236.54	1236.54	
Former Wyong LGA								
Water Service Charge	167.35	169.50	172.33	166.87	164.63	164.63	164.63	First year of CCC pricing determination
Water usage charge	2.12 339.20	2.17 347.20	2.23 356.80	2.26 361.60	2.29 366.40	2.29 366.40	2.29 366.40	
Sewerage service charge	463.44	457.62	470.75	477.03	483.28	483.28	483.28	
Average residential bill	969.99	974.32	999.88	1,005.50	1,014.31	1,014.31	1,014.31	
Stormwater drainage charge								
Wyong - Access	89.77	98.62	108.76	118.14	128.32	128.32	128.32	
Gosford - Access	82.52	91.92	102.78	113.20	124.64	124.64	124.64	

3.3 Pensioner rebates

Council provides rebates to eligible pensioners and it is included as part of the bills issued. The frequency and charges included in bills issued by Council differs between the former LGA's as indicated below. Council plans to align the billing frequency within the next pricing determination period.

Table 11 below shows the current rebates.

Table 11: Pension rebates

Pension rebates		Annual rebate
Water billing		
Sewerage	50% rebate to a max of	87.50
Water	50% rebate to a max of	87.50
Total rebate		$175.00

- *Note stormwater drainage does not attract pensioner rebates*

Council provides customers with hardship assistance and personalised payment plans for customers who are experiencing financial difficulties paying their bills. Further information can be found on Council's website: http://www.centralcoast.nsw.gov.au/residents/property/pay-rates-and–water-bills/rebates-and-hardship-assistance.

3.4 Retirement villages

Under the current pricing determination, retirement villages are charged as non-residential properties using "meter based charging".

There is no provision under the Water Management Act 2000 or Regulations to provide a pensioner concession to a retirement village resident – ref to Cl 211 of the regulations. https://www.legislation.nsw.gov.au/#/view/regulation/2011/469/part9/div8/subdiv2/212

3.4.1 Senior Internal Ombudsman

The Office of the Senior Internal Ombudsman (IO) may investigate complaints made by residents, staff, Councillors, other interested people or organisations. Other complaints will be investigated by Council's relevant senior staff members. Often the IO may come across issues within Council which require investigation without there being a formal complaint. The Chief Executive Officer, the Independent Commission Against Corruption, (ICAC), the NSW Ombudsman, a Member of Parliament or a Councillor may also refer a matter to the Internal Ombudsman for investigation.

The IO will accept anonymous complaints, but there may be an issue as to how much weight can be placed on the information provided.

The former Wyong Council decided not to continue its membership to the Energy and Water Ombudsman NSW (EWON) on 11 September 2013. The former Gosford Council's membership was discontinued on the 17 August 2016.

In alignment with the rest of Council, it was mandated that Council's Water and Sewer will use its IO framework.

3.4.2 Exemptions

The *Water Management (General) Regulations 2018* define service charges to include both access and usage charges. It is common terminology of many in the industry (including IPART) to refer to service charges as being only the availability / access component and not water usage.

Until the 2017-18 financial year, the former councils interpreted the requirements of the Act and associated Regulation in relation to exempt properties differently.

Council addresses this matter further in section 10.4 of this submission.

4 Current performance (2013–2018)

4.1 Highlights

Since the amalgamation, Council has undergone significant change, including:
- establishment of a new organisational structure
- merging businesses into one structure
- aligning financial structures
- establishing new budget forecasts, and
- aligning technology to administer the business.

Significant changes to the water, sewerage and stormwater drainage businesses have been:
- combining areas of operations
- aligning asset categories
- aligning fixed asset registers
- synergising internal processes
- aligning to the new organisation structure.

4.1.1 Council's Water and Sewer business operations

Council has improved operations at both its treatment plants and networks as well as implementing a Drinking Water Management System that, to safeguard operations, will focus on enhanced monitoring at critical control points.

In addition, the following operational processes have been implemented:
- established a water quality management group
- established a complaints resolution framework
- improved data collection systems
- automated water and sewer diagrams (dial before you dig)
- established a dispatch centre for civil works
- improved water mains flushing programs, focusing on areas of the network (end of line) that experience periods of water quality issues due to location and flow
- better management of chlorine residual within the system by
    - water age using modelling techniques and inline monitoring
    - cleaning programs, mixing and chlorine monitoring at reservoirs
    - cleaning and monitoring of chlorine levels and water quality incidents in the distribution system
    - including chlorine injection [1] in maintenance contracts
- refurbishing Avoca Heights water pump station and reservoir
- removing pumping dependency and using the pressure relief valve following the updates of the high lift pump station.[2]

[1] Chlorine injection Chlorine is injected with a pump (commonly known as a chemical injection pump, a chemical feed pump or a chemical dosing pump) into the water between the well and the bladder (or pressure) tank.
[2] Pumps that discharge treated water into arterial mains are called high-lift pumps. These operate under higher pressures

- programs to manage the sewerage system, enhancing pump station operations to inhibit overflows during storm events
- Supervisory Control and Data acquisition (SCADA) operations updated in relation to prioritising alarms to better comply with regulatory standards
- installing new SCADA sensors within the network to identify potential blockages and chokes
- changing processes at Mardi Water Treatment Plant for water quality improvements
- better organic removal from enhanced coagulation processes
- initiating an odour control strategy, the process reviewed the whole system, performed monitoring and sampling and provided solutions for decommissioning odour control facilities deemed not to be effective
- reducing chemical costs for the former Wyong Council area due to process improvements and better contract management capabilities
- retiring sewerage infrastructure assets for Wyong South Pump Station 11 (WS11) and Bateau Bay Pump Station 05 (BB05) upon the capitalisation of new assets
- partially outsourcing treatment plant grounds maintenance
- reducing waste charges ($200k per annum,) for grit and screening
- saving energy through improvements in waste water treatment aeration and sludge pumping
- installing additional pipework to improve reliability of treatment plant operations at Kincumber Sewerage Treatment Plant
- upgrading security at treatment plants
- better monitoring of biosolids from Kincumber to disposal location
- upgrading sediment tank, filter and chemical dosing to improve water quality and reliability at Somersby.

4.1.2 Water and Sewer Capital Works (2013-2019)

In summary
Water capital expenditure – former Wyong Council

Most capital expenditure was applied to either asset service reliability projects within the former Wyong LGA network or water projects under the Joint Water Supply agreement.

Key programs of work undertaken during the determination period included:
- replacement of corroded fittings/tapping bands and of non-operational valves ($1.2M)
- programmed water meter replacements ($1.1M)
- upgrade/renewal of Supervisory Control And Data Acquisition (SCADA) and communications infrastructure ($1.7M)
- investigation and design phase of the Mardi to Warnervale Pipeline project, which included hydraulic modelling, route assessment and full detail design ($1.5M).

During the determination period, the former Wyong Council also completed two water quality strategies aimed at identifying capital and operational solutions to address water quality risks. These led to the development of the concept design for a major upgrade to Mardi Water Treatment Plant which, at the time of writing this submission, is in the pre-

construction phase. Construction is expected to be completed within the 2019 price determination period.

Joint Water Supply

Major Joint Water Supply projects undertaken:
- upgrade of high voltage electricals at Mooney Mooney ($8.9M) and at Mangrove Mountain ($6.4M)
- Somersby Water Treatment Plant upgrades and renewals ($6M).

Water capital expenditure – former Gosford City Council

The capital works program was attributed to addressing mandatory standards through replacing or renewing existing assets.

Key works undertaken during the determination period were:
- water main renewals ($5.4M)
- water reservoir refurbishment ($2.6M)
- renewal of SCADA and communication infrastructure ($1.9M) and
- Woy Woy pressure reducing valve upgrade ($2.4M).

Sewer capital expenditure – former Wyong Shire Council

Sewer capital expenditure was generally divided evenly between asset service reliability drivers and growth driven projects, with a small percentage applied to achieving mandatory standards.

Key projects undertaken during the determination period included:
- upgrades to Sewerage Pumping Stations (SPS) in Wyong South 11 (WS11) ($3.4M), Toukley (TO08) ($1.4M) and Toukley (TO06) ($1.4M) rising main
- a major capacity upgrade to Wyong South Sewage Treatment Plant (STP) ($15.6M), with numerous smaller scale projects undertaken at the other six northern STPs ($2.3M)
- significant renewal programs, including delivery of a trenchless sewer rehabilitation program ($4.9M), and
- multiple site Sewerage Pump Station mechanical and electrical renewals ($3.3M).

The 2013 pricing submission identified a number of sites to be addressed as part of the former Wyong Council's major SPS upgrade/refurbishment program. The number was reduced due to the complexity of undertaking major works at some brownfield sites.

The former Wyong Council undertook three separate SPS options assessment/concept design/detail design contract packages (covering 15 sites) which impacted the timing for the delivery phase and increased the required scope of works to be addressed at construction.

Plant capacity strategies were completed for Bateau Bay and Charmhaven STPs and have identified the preferred upgrade path for the two sites. Capital expenditure estimates are included in this 2019 price submission.

Sewer capital expenditure – former Gosford City Council

Replacement or renewal of existing assets to mandatory standards has accounted for 75% of sewer capital expenditure and 54% of the work.

Key projects included:
- the Minor Sewage Pump Station Renewal Program ($13.3M)
- low pressure sewerage system at Cockle Bay ($10.3M)
- Kincumber STP digesters ($10.3M)
- upgrades to high voltage electricals at Kincumber and Woy Woy STPs ($8.4M).

For details of these projects refer to section 6.2.

4.2 Service levels

Service standards have been determined with reference to:
- compliance with appropriate regulated health, environmental and operational guidelines/standards
- NSW Department of Industry "Best Practice Management of Water Supply and Sewerage Guidelines"
- benchmarking across industry through annual performance monitoring and reporting process as required under the National Water Initiative
- former Gosford Council's "Water and Sewer Master Plan 2051".

4.3 Performance against service levels

During the 2013 determination period, Council continued to maintain and improve its performance against a number of key external measures.

The *National Performance Report for Urban Water Utilities* issued by the Commonwealth Bureau of Meteorology and the *NSW Water Supply and Sewerage Performance Monitoring Report* issued by the NSW Department of Industry are benchmarking tools.

The 2016-17 National Performance Report showed improved performance by Council for reduced frequency of unplanned interruptions to water services, water main breaks for the same period identified and sewer main breaks and chokes. The frequency of water quality complaints for the same period shows improved results, but remains above the national median for major utilities in the same group.

Areas targeted for further improvement include reducing the frequency of sewer main breaks and chokes and sewage overflows. Whilst the service level indicators for sewer main breaks and chokes and sewer overflows show improvement over the current determination period, there has been a slight decline in this performance since 2016/17. This slight decline is thought to be due to a reduction in the previous high levels of sewer relining. Since the main cause of these incidents is the ingress of tree roots into sewerage network pipes, the decline in the rate of sewer relining works has seen a slight increase in breaks/chokes and associated overflows.

Council has since implemented an upgraded sewerage mains relining contract that will allow for an increase in the rate of relining and an improvement in the targeting of these works.

The recent increase in the number of overflows reported to the EPA is a result of internal procedural changes inherited from the former Councils, and adopting a broad interpretation of statutory reporting obligation, so that more marginal incidents are now reported.

As part of Council's plans to maintain and improve these and other service levels, the forecast operating and capital programs include spending dedicated to:

- Gosford CBD sewerage reinforcements
- water and sewerage trunk main and tunnel renewals
- water and sewerage mains renewals program
- water pump station mechanical/electrical renewals
- upgraded sewer mains rehabilitation program
- reservoir upgrades
- sewerage pump station valve renewals
- sewer odour control and upgrade program
- sewerage pump station overflow monitoring program.

Appendix 1 provides a summary of the comparison between actual performance and the performance output measures contained within the 2013 Determination.

4.4 Regulatory performance

4.4.1 Drinking water quality regulation and performance

The Australian Drinking Water Guidelines, 2011 provides a framework for the management of water supplies from the catchment to the tap and set health-related and aesthetic limits.

There are broadly two groups of health-related aspects - microbiological and chemical/physical aspects.

Council's drinking water is subjected to regular monitoring and testing across the supply system. The regime is as defined by the NSW Health's Drinking Water Monitoring Program. During the current IPART pricing determination period, Council has produced and maintained high standards of drinking water quality. Table 12 identifies Council's compliance performance.

Table 12: Performance against water quality indicators

Indicator	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Microbiological compliance – 100% of routine water quality samples comply with a ADWG for E.coli	Achieved	Achieved	Achieved	Achieved	Achieved	Not Achieved**
Chemical compliance - 100% of routine water quality samples that comply with the ADWG for key chemical parameters	Achieved	Achieved	Achieved	Not Achieved*	Achieved	Achieved

* Target not achieved at Saratoga site 334 on 1/7/2015. One water sample found to have a nickel level greater than the guideline value of 0.02 mg/L. Investigations found the nickel came from the tap fitting at the sampling point. The tap fitting has since been replaced and subsequent results have been below the guideline value.

**There was a positive E.coli. detection at site 204 (Gwandalan) on 17/4/2018. Council performed repeat sampling and onsite monitoring at site 204, surrounding sites within the distribution system and reservoirs. Repeat samples came back with no E.coli. detected. The likely cause of the E.coli. result was contamination during sampling.

4.4.2 Drinking water requirements

One of Council's improved organisational focuses has been placed on development of the former Councils' Drinking Water Management System.

The amalgamation of the two council's programs is aimed to be completed early 2018-19 and will provide the following benefits:

- aligned drinking water quality risk management practices
- greater efficiency in managing drinking water quality risks, and
- improved communication regarding drinking water quality risk management.

It is anticipated that during the 2019 determination period, the concept of health based targets (HBT) will be incorporated into Australian Drinking Water Guidelines' Microbial Quality of Drinking Water.

Council is, at the time of writing this submission, awaiting the outcome of the Water Research Australia Project *"Guide to Sanitary Surveys and Operational Monitoring in Catchments"* before commencing sanitary surveys. The final guidance from this conducted research will shape the way Council conducts future inspections and adopts a best practice management approach.

Compliance with concentration and load limits

Council must provide annual returns to the NSW EPA for each of the EPLs it holds. Each return must include information about actions taken to mitigate the effects of these incidents.

During the 2013 pricing determination period (2013 to 2017), Council has implemented strategies to ensure compliance with flow monitoring requirements, pollution response plans, incident reporting, discharge quality and load limits. The concentration and load limit performance history of EPL 1802, 1942 and 2647 is summarised:

Kincumber Sewage Treatment System EPL 1802

- Nitrogen load limit breaches were reported in 2013, 2014, 2015 and 2016. At the end of 2015, aeration tank upgrades (fine bubble diffused air) were completed at Kincumber STP to improve nitrogen removal (denitrification) and reduce energy consumption.

Bateau Bay Treatment System EPL 1942

- In 2016 there were Total Suspended Solids (TSS) and Total Nitrogen (TN) load limit breaches. Council submitted an application to EPA to increase load limits. Licence variation was issued in 1 August 2017 to reflect increases in load limits and total suspended solids.

Toukley Sewage Treatment System EPL 2647

- In 2015 the total suspended solids (TSS) load discharged was greater than the limit. The load discharge was less than 3% of the limit. There was no material impact on the receiving environment.
- Since the 2013 IPART determination Wyong South STP has undergone significant upgrades to increase the rated capacity from 48,000 to 60,000 equivalent people (EP). The works included renewal of aging civil and electrical assets, in addition to an upgrade of odour control for the inlet works.

4.4.3 Compliance with other regulatory requirements

Pollution Reduction Programs

The EPA imposes pollution reduction programs (PRPs) as conditions to EPLs achieve improved environmental outcomes in a negotiated timeframe. Table 13 shows the following completed PRPs during the 2013 IPART determination period:

Table 13: Pollution reduction programs

EPL no	Pollution Reduction Program	Date completed
1802	PRP 3 – Upgrade Works	30/3/2013 – 31/11/2015
	PRP 4 – Odour Assessment and Report	31/5/2015
	PRP 5 – Odour Source and Identification and Schedule of Works	18/12/2015
	PRP 6 – Odour Control and Investigations at Vents near the STP	31/08/2016 - 31/12/2017
2647	U1 - Noise Shields or Bunds for INP Compliance	30/09/2017 - 31/12/2017

PRP 3 – Upgrade works
Former Gosford Council completed upgrade works to Kincumber and Woy Woy STPs focussing on the inlet works and the handling and treatment of sludge.

PRP 4 – Odour assessment and report
An odour assessment of Kincumber STP was undertaken which identified the PRP3 measures had significantly reduced odours. A report detailing the findings and recommendations was submitted to the EPA by the former Gosford Council in 2015.

PRP 5 – Odour source and identification and schedule of works
Former Gosford Council investigated odours from sewer vents near the Kincumber STP and found the Empire Bay Drive and Doyle Street vents to be the sources.

PRP 6 – Odour control and investigations at vents
Former Gosford Council designed and installed an odour treatment unit at Empire Bay Drive vent; modified chemical dosing units at sewer pump stations Daleys Point 1 (DP1), Hardys Bay 3 (HB3), Hardys Bay 5 (HB5) and Bensville 1 (B1); monitored dissolved sulphide and hydrogen sulphide concentrations at key points in sewers and vent stacks at Empire Bay Drive and Doyle Street; undertook two community surveys of residents near the Doyle Street vent to gauge level of impact; and submitted a report to EPA detailing the outcomes. Council undertook additional monitoring and surveys to better understand the outcome of additional chemical dosing controls, and impact on neighbouring customers.

U1 - Noise shields or bunds for industrial noise policy compliance
Former Wyong Council constructed and installed trial noise mitigation measures for Aerator 1 at Charmhaven STP in late 2017. An acoustic consultant report was completed and provided to the EPA.

4.5 Overview of customer complaints

Since implementation of the Customer Experience System (CX) in 2017, Council is now capturing and prioritising complaints more efficiently. The use of social media has allowed Council to engage a wider audience to communicate system outages, pollution incidents and water quality alerts.

Council acknowledges that due to the available data in relation to complaints that are managed outside the Water & Sewer business unit pertaining to billing, faulty meters etc. data is not available, nor reliable enough for inclusion in this submission. The current process does not offer uniform measurements in relation to standards.

Currently the NSW Performance Report does not contain billing data from Council. System upgrades (i.e. Customer Experience) will capture this reporting requirement for future determinations and regulatory reporting requirements.

The most significant categories of complaints over the 2013 determination period were discoloured water and sewage odours.

Discoloured Water

In comparing trends in discoloured water complaints per 1000 properties, Figure 5 shows the ratio of complaints was lower for the 2016-17 reporting year than in previous year. Former Gosford and Wyong Councils recorded a peak in discoloured water complaints in 2012/13 and 2015/16 respectively; a contributor to the level of complaints experienced in these periods was the high concentration of Manganese in the raw water source. The quality of the raw water supplied is heavily influenced by rainfall. After rainfall events the increased stream flows allow opportunity for increased raw water extractions. This can result in significant increases and "spikes" in Turbidity, Colour and Dissolved Organic Carbon (DOC) in the raw water supplied to water treatment plants and storage.

In response to regulatory requirements and community needs, Council commissioned several studies into different aspects of water quality in the entire water supply system on the Central Coast. This included a 'catchment to tap' risk assessment conducted in 2013/14 and a study of water quality variation across the distribution network in 2015/16. Along with the results of internal investigations, this work resulted in the implementation of various operational and monitoring programs, water planning initiatives and capital works projects to continue to improve the water quality in the short and long term. Some of these initiatives include an upgrade to instrumentation across the network and improvements in Chlorine dosing control. Operational efficiencies have also been realised via the decommissioning of some reservoirs and water pump stations.

The key long term initiative is the planned Mardi Water Treatment Plant upgrade project outlined in the proposed capex program as well as a Water Mains Renewal Program that will target works that deliver water quality improvements.

Operational expenditure has also been allowed enabling Council to maintain current programs for water main flushing.

Sewage Odours

In 2016-17 Council was below the IPART target for odour complaints, (Figure 6). However these figures are higher than the State and National medians.

Since 2013, odour assessments, investigations, plant upgrades and odour control measures have been undertaken as part of the Kincumber STP PRP. Council undertook additional monitoring and surveys to better understand the outcome of additional chemical dosing controls, and impact on neighbouring customers to achieve improved environmental outcomes. This has resulted in the installation of odour filtration units in various locations with further works proposed in the capital works plan.

There has been a trend of odour complaints in recent years from properties neighbouring Bateau Bay STP. Council is planning refurbishment works to commence in 2019 on the primary sediment tanks to improve this issue.

Council is committed to monitoring odours in the network and in response to customer complaints, has been undertaking odour monitoring at sewerage pumping stations.

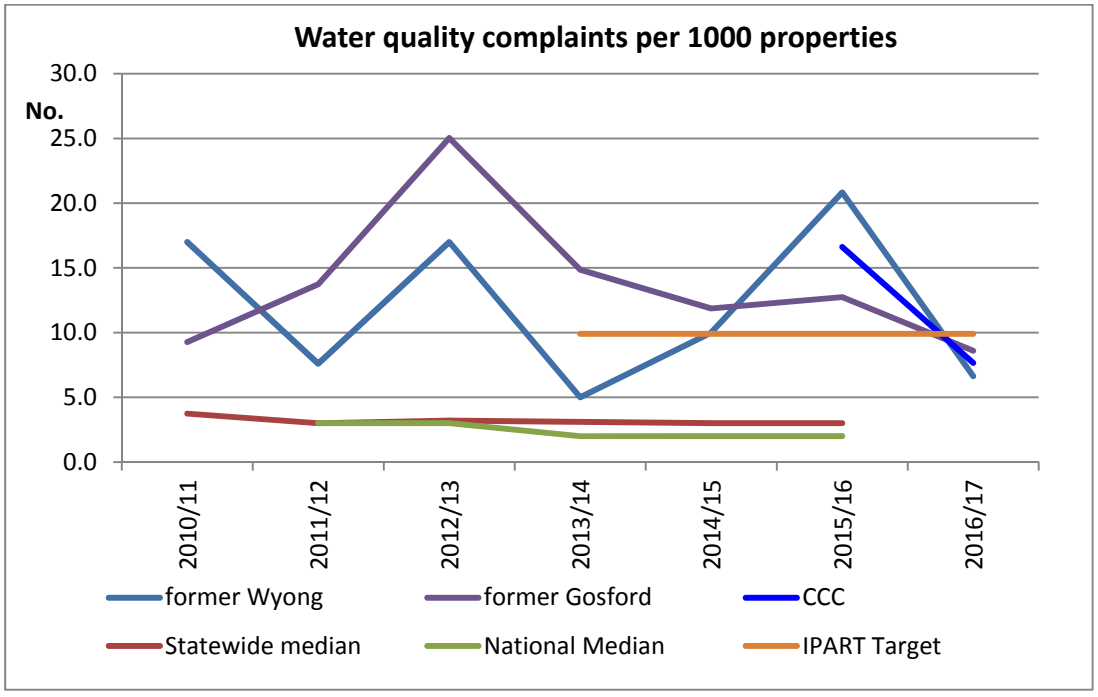

Figure 5: Water quality complaints per 1000 properties

State median results will be available in the DOI Water published 2016/17 and 2017/18 - *NSW Water Supply and sewerage performance monitoring reports.*

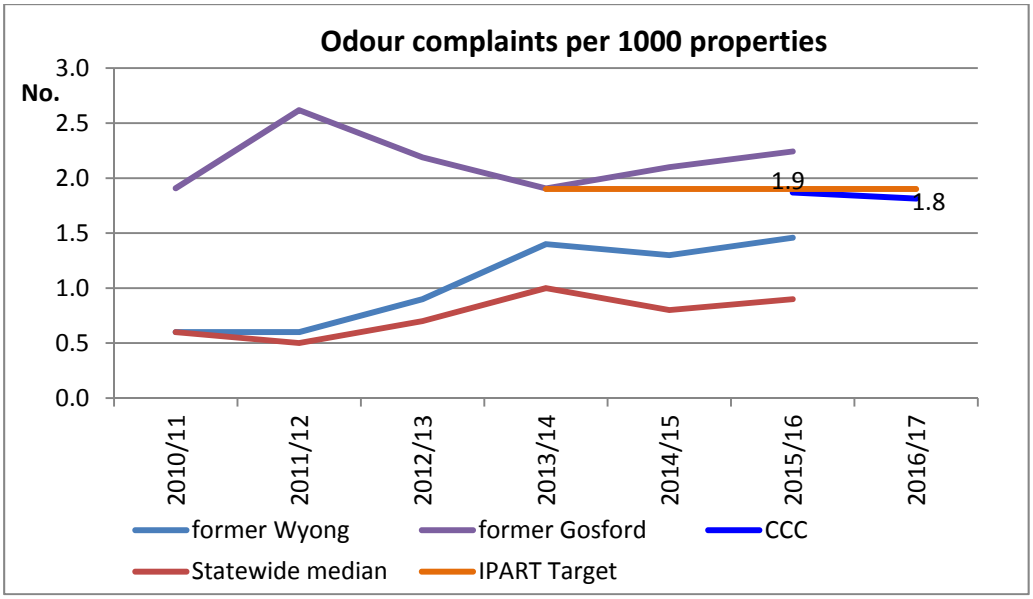

Figure 6: Odour complaints per 1000 properties

State median results will be available in the DOI Water published 2016/17 and 2017/18 - *NSW Water Supply and sewerage performance monitoring reports.*

4.6 Customer connections

Council provides water and sewerage services to approximately 330,000 people.

Total connections as at 30 June 2018 for Central Coast Council were:

Table 14: Summary of connections (combined as at 2018)

	Dwellings/meters (billed end user)	Properties	Classification
Water	131,896	111,480	Residential
	9,808	3,334	Non-residential
Sewerage	129,218	108,748	Residential
	9,680	3,206	Non-residential
Stormwater drainage	131,857	-	Residential
	6,263	-	Non-residential

Table 15: Water service connections - residential (combined as at 2018)

Meter size	2015	2016	2017	2018	2019 forecast
20mm (standalone)	108,652	105,904	105971	109,294	110,533
20mm (common meter)	1,462	4,388	4,944	1,277	1,291
20mm (billed as 20mm unmetered)	-	-	-	-	-
25mm	1,171	1,525	1,528	1,545	1,563
30mm	-	-	-	-	-
32mm	120	424	422	416	421
40mm	492	720	724	733	741
50mm	317	483	484	495	501
65mm	7	18	20	21	21
80mm	78	88	90	93	94
100mm	41	34	33	34	34
150mm	4	-	-	-	-

Table 16: Water service connections - non-residential (combined as at 2018)

Meter size	2015	2016	2017	2018	2019 forecast
20mm Standalone	1,657	1,474	1,468	1,634	1,653
20mm (common or multi meter)	1,519	739	823	639	646
20mm (billed as 20mm unmetered)	-	-	-	-	-
20mm (billed as 20mm exempt	-	13	12	-	-
25mm	1,009	1,002	1,077	1,089	1,101
30mm	-	-	-	-	-
32mm	327	365	356	361	365
40mm	674	711	750	748	756
50mm	532	570	604	615	622
65mm	11	18	18	20	20
80mm	145	151	161	164	166
100mm	119	129	143	147	149
150mm	16	20	19	18	18
200mm	1	1	2	2	2
250mm	2	2	2	2	2
600mm	1	1	1		1

Table 17: Sewerage connections - residential (combined as at 2018)

Meter size	2015	2016	2017	2018	2019 forecast
20mm Standalone	105,431	101,757	102,314	106,659	107,868
20mm (common meter)	8,550	4,949	5,535	1,875	1,896
25mm	947	1,828	1,845	2,502	2,530
30mm	-	-	-	-	-
32mm	117	1,309	1,311	1,290	1,305
40mm	1,750	3,459	3,497	3,789	3,832
50mm	2,093	5,186	5,291	5,692	5,757
65mm	7	429	439	491	497
80mm	1,250	2,044	2,080	2,706	2,737
100mm	656	1,327	1,358	1,408	1,424
150mm	4	-	-	-	-

Table 18: Sewerage connections - non-residential (combined as at 2018)

Meter size	2015	2016	2017	2018	2019 forecast
20mm Standalone	1,577	1,452	1,441	1,673	1,692
20mm (common meter or multi meters)	1,221	295	307	271	274
20mm (billed as 20mm exempt)	-	7	6	-	-
25mm	874	762	766	1,042	1,054
30mm	-	-	-	-	-
32mm	319	281	277	350	354
40mm	598	631	644	738	746
50mm	464	468	477	600	607
65mm	11	18	18	20	20
80mm	119	108	109	159	161
100mm	102	102	105	147	149
150mm	15	14	13	15	15
200mm	1	1	1	1	1
250mm	1	1	1	1	1

4.6.1 Forecast connections compared to actual connections

For the 2013 determination period, the total number of customer connections was generally in line with the IPART adopted forecasts.

4.7 Revenue and sales compared to IPART forecasts

Actual water sales (shown in Table 19) for the 2013 determination period were higher than expected mainly due to a higher population than forecast and a change in customer behaviours arising from the 2008-2012 drought.

To a lesser extent, Liquid trade waste revenue was a result of higher than anticipated larger commercial business users.

The amalgamation of the former Gosford and Wyong LGAs and the resulting dissolution of the two former Councils on 12 May 2016, introduced an unusual statutory period where the 2015/16 financial year represented a 10.5 month period for the former Councils and 2016/17 a 13.5 month period for Central Coast Council. These unusual statutory reporting periods, resulted in lower sales in the 2015/16 financial year for the former Councils and higher sales in the 2016/17 financial year for Central Coast Council.

4.7.1 Water sales

Population figures produced by the Australian Bureau of Statistics (ABS) based on the 2016 census data estimated that the population was higher than the forecasts included in the 2013 determination. The population forecasts in that determination were prepared in 2012, at that time the 2011 census data was not available. This meant that the forecasts relied on base information from the 2006 review.

Table 19: Actual sales versus IPART Determination (ML)

Year	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 forecast
Determination – former Wyong LGA	12,029	12,220	12,411	12,418	12,418	12,418
Determination – former Gosford LGA	12,349	12,595	12,841	12,830	12,830	12,830
Determination - Total	24,378	24,815	25,252	25,248	25,248	25,248
Actual sales – former Wyong LGA	12,543	12,240	11,136	14,769	14,127	13,222
Actual sales – former Gosford LGA	13,458	13,475	11,697	15,903	14,581	13,793
Actual sales - Total	26,001	25,715	22,833	30,672	28,707	27,015
Price per kL	2.17	2.23	2.26	2.29	2.29	2.29

4.7.2 Total revenue (2018/19)

Over the 2013 IPART determination period, Council's combined actual revenue for water, sewerage and stormwater drainage totalled $1,096M compared to IPART's forecast revenue of $1,040.8M (This includes the figures forecast for 2018/19).

This represents an overall increase in revenue received of $55.3M or 5.0% above the revenue determination.

Table 20: Historical regulated revenue breakdown ($'000 nominal and 2018-19)

Historical Regulated Revenue								
					Drafted Unaudited Actuals	Budget		
IPART's Determination	13/14 $nominal	14/15 $nominal	15/16 $nominal	16/17 $nominal	17/18 $nominal	18/19 $nominal	Total $nominal	Total ($2018/ 19)
Water	72,330	75,742	78,640	81,495	81,495	81,495	471,197	501,604
Sewerage	73,275	76,390	79,326	83,187	83,187	83,187	478,552	509,401
Stormwater drainage	12,488	13,760	15,060	16,581	16,581	16,581	91,051	96,827
Total Determination	158,093	165,892	173,026	181,263	181,263	181,263	1,040,800	1,107,831
Actual								
Water	76,960	79,829	65,335	100,870	92,548	88,186	503,728	529,268
Sewerage	73,275	78,225	70,576	98,149	87,247	88,869	496,341	521,492
Stormwater drainage	12,993	14,529	13,824	19,613	17,624	17,446	96,029	100,793
Total	163,228	172,583	149,735	218,632	197,419	194,501	1,096,098	1,151,553
Difference	5,135	6,691	-23,291	37,369	16,156	13,238	55,298	43,721
% difference	3.2%	4.0%	-13.5%	20.6%	8.9%	7.3%	5.2%	3.9%

*Any discrepancies in totals are due to rounding

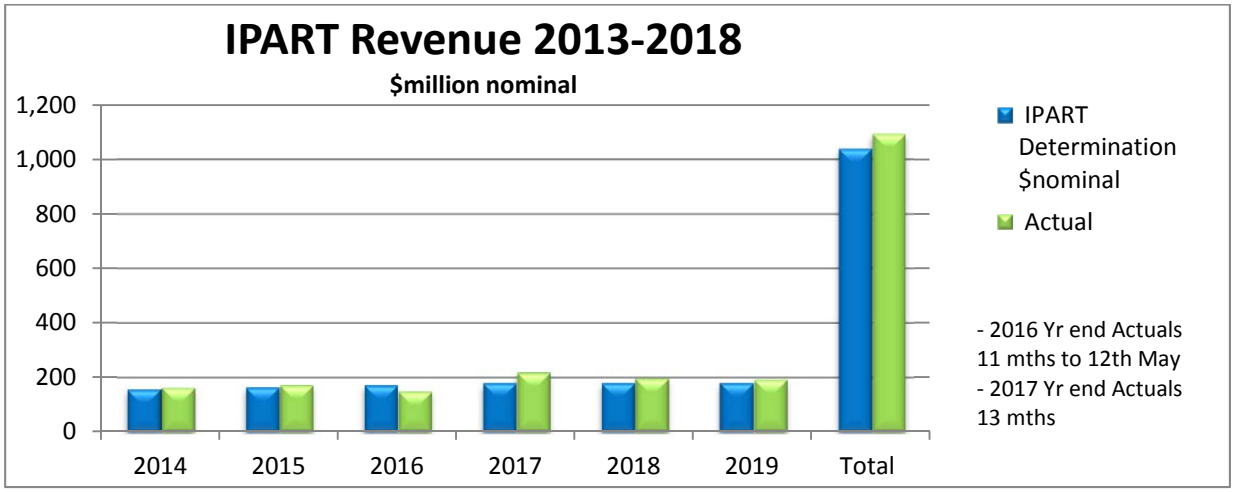

Figure 7: Revenue – IPART determination versus Actual

4.8 Revenue - Water

Total water revenue over the 2013-2018 determination period forecast was $503.7M, compared to IPART's determination of $471.2M. An increase in revenue of $32.5M or 6.4% over the determination.

4.8.1 Service charges

The revenue received from service charges remained steady with no unexpected increase in revenue.

4.8.2 Water usage

Water usage is affected by a number of variables including: weather conditions, water restrictions, evolving changes in water efficiency of appliances, demand management programs, customer behaviour, population, demographic changes, economic activity, development patterns and development requirements.

The variability in water demand on the Central Coast water supply system can be observed in Figure 8 below.

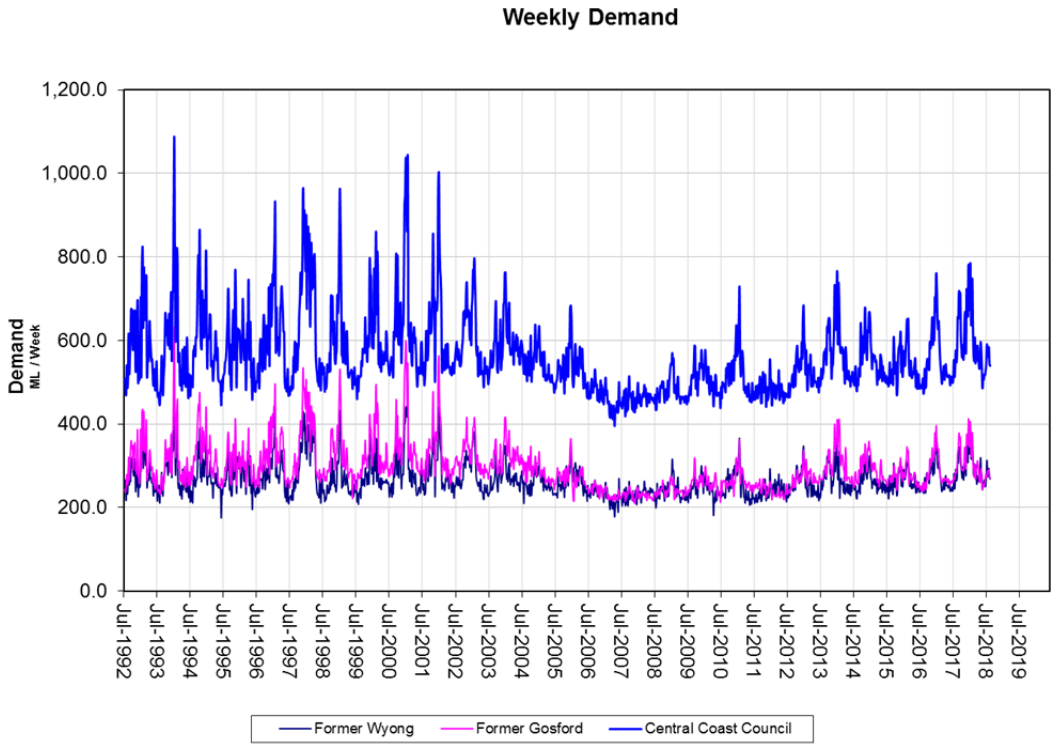

Figure 8: Water demand variability

Significant reductions in demand occurred during the period from early 2002 to mid-2007 when water restrictions were imposed. Demand began to rise from mid-2007 with the gradual removal of water restrictions. Those restrictions were completely removed in mid-2012.

Water usage was the main contributor to the additional revenue. This was due to the following:

Cause	Affect
Increase in water sales due to the relaxation of drought restrictions. This caused an unpredictability of water sales	Referenced above
Winding back of "water wise" messaging to the community	The relaxation of the water restrictions meant that customers were using more water than the restrictions imposed
Dry conditions experienced in 2017/2018	The recent dry spell experienced and the absence of water restrictions resulted in customers using more water
Population growth greater than expected	The underestimation of the population growth resulted in more people using more water
More accurate consumption readings resulting from the rollout of approximately 28,000 new meters across the LGA	The meter replacement project meant more accurate consumption figures. Therefore our ability to track consumption was enhanced.

4.9 Revenue - Sewerage

Sewerage revenue over the 2013 determination period was more than expected. Actual revenue totalled $496.3M (nominal) against the IPART forecast over the same period of $478.6M (nominal) - an increase in revenue of $17.8M or 3.7% over the determination.

4.9.1 Service charges

The revenue received from service charges remained steady with no unexpected increase in revenue.

4.9.2 Sewerage usage

The increase in sewerage usage was directly linked to the increase in water usage and an increase in commercial enterprises with large water meters. The remainder can be attributed to an increase in trade waste and fees and charges.

Cause	Affect
Increase in usage charges from higher water sales	There is a 1:1 relationship with an increase in water usage to an increase in sewer usage
Greater population than expected	The underestimation of the population growth resulted in more people using more water therefore creating more waste
Increased urban development – commercial large development	There was an increase in large commercial businesses e.g. (for privacy not listed here) therefore the usage of the system was higher than anticipated. This also lead to an increase in our trade waste charges.
Winding back of waterwise messaging to the community	A change in customer behaviours and the use of more water.

4.9.3 Revenue - Stormwater drainage

Stormwater drainage revenue remained steady with the actual revenue received during the 2013 determination period totalling $96.0M against IPART's determination of $91.1M. This revenue represented a total increase of $5.0M or 5.5%

4.10 Revenue Variance

As a result of IPART's 2013 determinations, Council (since its formation on 12 May 2016 and the two former Councils before that) has over the past five years collected approximately $90 million for operational and capital works it has not spent.

The main factors for this include increased revenue due to higher water use by the community, delayed operational projects such as sludge removal from Council's treatment plants and delays in large infrastructure programs such as the Mardi to Warnervale pipeline.

Council proposes that this money is allocated to deliver a program of upgrades to the water, sewerage and stormwater drainage networks throughout the LGA. To address the infrastructure backlog, this will include increased water mains renewal program and additional upgrades to its sewerage system.

This revenue would also be applied to the operational expenditure for a water operations centre. The operations centre will function 24 hours a day, 7 days per week providing improved customer response and service levels.

These activities will realise delivery of assets and services consistent with the purpose of collection of the funds and in line with the expectations of the community. Revenue variance amounts attributed to water, sewerage or stormwater drainage will only be used in the same specific area which generated the revenue.

This Council submission also proposes a reduction in most water, sewerage and stormwater drainage pricing.

5 Current determination operating expenditure

Over the 2013 determination period up to 2018 Central Coast's water, sewerage and stormwater drainage operating expenditure totalled $451M against the IPART determination of $498M. This represented an operating expenditure variance of $47M (nominal) less than forecast. This represents a 9.2% variance over the period.

Table 21: OPEX water, sewerage, stormwater drainage ($000 nominal and 2018-19)

Historical Regulated Operational Expenditure								
					Draft Unaudited Actuals	Budget		
IPART's Determination	13/14 $nominal	14/15 $nominal	15/16 $nominal	16/17 $nominal	17/18 $nominal	18/19 $nominal	Total $nominal	Total $2013-18
Water	43,966	43,624	45,055	45,664	46,725	47,871	272,905	287,232
Sewerage	42,529	43,475	44,906	45,762	46,825	47,974	271,471	285,645
Stormwater drainage	9,702	9,848	10,031	10,285	10,524	10,782	61,172	64,373
Total Determination	96,197	96,947	99,992	101,711	104,074	106,627	605,548	637,250
Actual								
Water	42,475	41,125	33,924	46,276	40,047	43,629	247,476	260,454
Sewerage	43,791	42,365	32,202	45,531	39,199	43,766	246,854	259,880
Stormwater drainage	10,150	9,772	6,778	8,979	9,244	10,603	55,526	58,422
Total	96,416	93,262	72,904	100,786	88,490	97,998	549,856	578,756
Difference	219	(3,685)	(27,088)	(925)	(15,584)	(8,629)	(55,692)	(58494)
% difference	0.2%	-3.8%	-27.1%	-0.9%	-15.0%	-8.1%	-9.2%	-92%

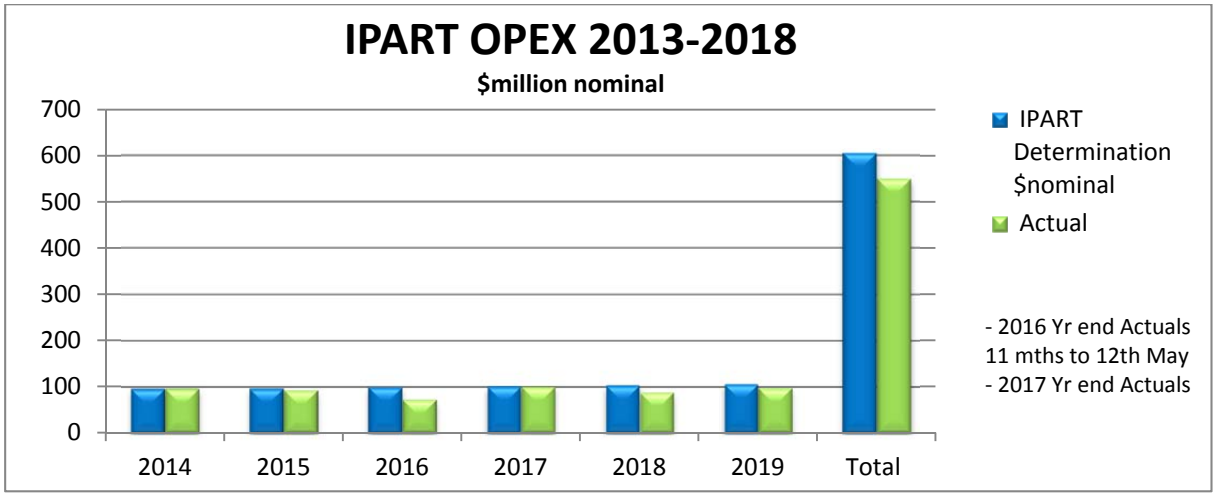

Figure 9: Total opex – IPART determination versus Actual

For detailed operational expenses against categories refer to Appendix 3.

The following highlights where the greatest variances were experienced and the key drivers for operational cost forecasts.

Labour

- Former Wyong Shire Council – the introduction of "Wyong Water" [3] saw a reduction in staff by 28 full time employees. The implementation of a dispatch area also reduced overtime. This was part of a 2015 business process improvement initiative with the objective to improve business efficiencies.
- Former Gosford City Council had a business restructure in 2015 prior to the amalgamation. This resulted in a change to staff responsibilities and numbers within Water and Sewer department of that Council.

Hire Services and contracts

- Sewer sludge removal contract – From 2012 to 2014 the sewer sludge was stockpiling to consolidate and reduce volumes on site prior to landfill
- Water sludge removal contract - In 2015, the former Gosford Council implemented discharge of water treatment plant sludge direct to sewer, eliminating sludge accumulation on site. Disposal through the sewage system is significantly cheaper than landfill disposal
- Mardi sludge dewatering contract – The delay resulted in an underspend during the current period, this cost will be now be incurred in the new determination period. The sludge and biosolids management issues outlined above are the key drivers of the hire services and contracts
- Bushfire and boundary clearing – Delayed for the Water and Sewer owned assets including land, roads, dams, treatment plants, reservoirs and pump stations
- Benthic study consultancy appointment – Deferred ocean outfalls (study of organisms)
- Hawkesbury Bridge painting – Council was initially advised by Roads and Maritime Services (RMS) that funding would be required for Hawkesbury River Bridge painting. Bridge painting commenced in 2018. To the time of writing this submission an expense has not been incurred.

Materials

- Reduction in chemical costs through the establishment of new contracts led to an underspend in materials.

5.1 Cost characterisation between former Councils

The former Councils' allocated operational costs into different accounts. A challenge for Council has been to identify and resolve these differences so that a singular allocation method applies.

[3] Wyong water was an initiative established by the former Wyong Council during this determination to create better business efficiencies.

Table 22: Cost allocation differences between previous LGAs

Cost	Cost allocated to	Former LGA
Chemicals	Materials	former Wyong
	Materials	former Gosford
	Contracts and Hire	former Gosford
Training	Labour	former Wyong
	Other	former Gosford
Workers compensation	Labour	former Wyong
	Other	former Gosford
Internal tipping	Contracts and hire	former Wyong
	Internal tipping	former Gosford

5.2 Corporate Overheads for Support Services

Corporate Overheads for Support Services refers to the costs associated with running the Council but not directly producing or treating water. Total corporate Overheads for support service expenses are allocated to the Water, Sewer and Stormwater Drainage departments, based on the operating expenditure, as a percentage of Council's total operational expenditure (council wide). It includes items such as:

- organisational development
- information technology
- customer contact services
- human resource management
- finance management
- risk management
- internal auditing
- legal services
- councillor governance
- building improvement, and
- Workcover self-insurers licence.

5.3 Allocation of operating costs to activities

Council established a new general ledger format and reporting hierarchy with the implementation of the new Enterprise Resource Planning application which included financial systems to meet the reporting needs for Central Coast Council. The reporting hierarchy enables reporting at a department, unit, section and product/service level. Costs are split between operational and capital expenditure and grouped based on expenditure type to allow analysis of expenditure (for example labour, plant, contracts, materials and internal costs such as internal tipping) and reporting in accordance with Council's legislative requirements including the Office of Local Government (OLG) Code of Accounting Practice and Financial Reporting

The Water, Sewer and Stormwater Drainage businesses have created units and sections to operate, maintain and manage assets (operating expenditure) and construct or purchase assets (capital expenditure) in accordance with Council's Asset Management Strategy, Policy and Plans.

Budgets are prepared each year to reflect the costs of operating, maintaining, managing, constructing and purchasing assets and these costs are allocated to appropriate cost centres. Costs incurred are allocated to these cost centres which enables analysis of costs against budgets as one performance measure. Review of actual costs to budgets is performed monthly with forecasts prepared and presented to Council quarterly.

Water and Sewer

Council's Water and Sewer department has divided its business units into four principal areas shown in Table 23. Common activities are:

- operations
- civil
- electrical
- mechanical
- Electrical and technical (ETEK)
- Supervisory Control And Data Acquisition (SCADA)
- sludge management
- compliance
- grounds and property maintenance
- sampling and testing
- lifecycle management
- headworks planning
- asset inspection
- administration
- liquid trade waste
- laboratory.

Table 23: Water and Sewer Business Cost Centres

Unit	Product	Cost Centre
Water		
Assets and Facilities Management	Water treatment plants	Somersby Mardi Woy Woy
	Water treatment non potable	Terrigal CBD Graeme Park Hylton Moore
	Dams	Mangrove Upper Mooney Lower Mooney Mardi
	Raw water pump stations	Mangrove Creek Weir Mooney Dam Wyong River Mardi to Mangrove Wyong River Mardi Dam to Mardi TP WPS
	Weirs	Mangrove Creek Weir Wyong Weir Ourimbah Weir Ourimbah Salt barrage
	Catchments	MCD Mardi MM
	Raw Water mains	Somersby Mardi Boomerang Creek Tunnel Bore Water Mains
	Bores (all except Woy Woy) Woy Woy bore	Bores
Technical Services and Systems Control	Potable Mains	Northern Coastal Southern Coastal Plateau Gosford Woy Woy Kanwal Tuggerah
	Reservoir	As above
	Re-Chlorination Stations	As above
	Treated external	Mooney Mooney Hunter Water

Unit	Product	Cost Centre
Construction and Project Management	Major Construction Minor Construction	Administration
Planning and Design	Cost Estimation	Administration
Sewer		
Assets and Facilities Management	Sewage Treatment Plants	Kincumber Woy Woy Bateau Bay Toukley Brooklyn Wyong South Charmhaven Gwandalan Mannering Park
Technical Services and Systems Control	Sewer Effluent mains (excluding the effluent disposal main pump station as well as raw water stations.	As above
	Sewage Pump stations	Charmhaven Mannering Park Toukley Gwandalan Bateau Bay Wyong South Wyong South Low pressure Wyong South Vacuum Private Woy Woy Kincumber St Hubert's Vacuum West Gosford Vacuum Saratoga Davistown 6 vacuum Mooney Low Pressure Cockle bay Low pressure
	Sewer Pressure mains	Same as Sewage treatment Plants
	Sewer mains	Same as Sewage Pump stations
	Recycled Water main	Bateau Bay Toukley Kincumber Woy Woy

Stormwater Drainage

Stormwater drainage services are delivered by Council's Roads, Transport and Drainage Department. Common activities are:

- open channels
- table drains
- hydrometric stations
- pipes and box culverts
- drainage structure.

Table 24: Drainage Business Cost Centres

Unit	Cost Centre Description	Activity	Natural Account Description
Roads Maintenance and Asset Evaluation	Drainage Maintenance - Local Roads (North)	Maintenance - Drainage Structures	Internal Expense - Plant and Fleet Hire
			Materials
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Open Channels	Internal Expense - Plant and Fleet Hire
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Table Drains	Internal Expense - Plant and Fleet Hire
			Materials
			Internal Expense - Tipping Fees
	Drainage Maintenance - Local Roads (South)	Maintenance - Drainage Structures	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Open Channels	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Table Drains	Internal Expense - Plant and Fleet Hire

Unit	Cost Centre Description	Activity	Natural Account Description
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Wetland Sensitive Urban Design Devices (WSUD)	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Corporate Activity	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Pipes and Box Culverts	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
	Drainage Maintenance - Local Roads - Rural	Maintenance - Drainage Structures	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Open Channels	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Table Drains	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other

Unit	Cost Centre Description	Activity	Natural Account Description
			External Plant Hire
			Internal Expense - Tipping Fees
		Pipes and Box Culverts	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
	Regional Roads - Rural Drainage	Maintenance - Drainage Structures	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Open Channels	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Table Drains	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
	Regional Roads - Urban Drainage	Maintenance - Drainage Structures	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Open Channels	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other

Unit	Cost Centre Description	Activity	Natural Account Description
			External Plant Hire
			Internal Expense - Tipping Fees
		Maintenance - Table Drains	Internal Expense - Plant and Fleet Hire
			Materials
			Contracts – Other
			External Plant Hire
			Internal Expense - Tipping Fees
	Drainage South Management	No Activity	Contracts – Other
Roads Asset Planning and Design	Drainage	No Activity	Consultants
	Drainage Assets	No Activity	
			Contracts – Other

5.4 Ring fenced expenditure

There has been no "ring fenced" expenditure in the current 2013 determination. The CCWC has not operated. The total cost to Water and Sewer was $374,000 (in the 2009 determination) which came from the operational budget. Other costs regarding the establishment of the Joint Services Bureau to provide shared services to the former Councils and were borne by the General Fund.

5.5 Unregulated expenditure

Council has separately identified and reported amounts representing recycled water in accordance with IPART's requirements. Recycled Water is classified as a non-regulated activity and as such is outside the current determination.

Since 2004, and as a response to the drought, Council constructed and operates recycled water facilities at its sewage treatments plants.

Charges for recycled water are negotiated in written commercial agreements between Council and the customer.

6 Current determination capital expenditure

Following IPART's 2013 determination, both former councils continued to deliver the proposed capital programs within the expenditure targets. Both were operating under different capital prioritisation and gateway approval processes. In summary:

Table 25: Historical regulated capital expenditure ($000 nominal)

2013 Determinations (4 years)						Additional Year forecast		
	13/14 $nominal	14/15 $nominal	15/16 $nominal	16/17 $nominal	4 year Total $nominal	17/18 $nominal	18/19 $nominal	6 year nominal Total
Water	16,012	21,961	14,550	37,222	89,745	8,746	15,145	113,636
Sewerage	63,816	43,332	24,179	20,064	151,391	12,814	21,497	185,702
Stormwater drainage	12,012	12,347	9,254	12,274	45,887	9,405	9,800	65,092
Total Determination	91,840	77,640	47,983	69,560	287,023	30,965	46,442	264,430
Actual	Actuals for the 4 year 2013 Determinations					Draft unaudited Actuals	Forecast	
Water	18,287	11,857	8,406	19,011	57,561	9,801	16,924	84,286
Sewerage	33,517	37,848	36,276	29,440	137,081	13,483	20,349	170,913
Stormwater drainage	13,946	8,300	6,809	10,719	39,773	8,134	9,800	57,707
Total	65,750	58,005	51,491	59,170	234,415	31,418	47,073	312,906
Difference	(-26,090)	(-19,635)	(3,508)	(-10,390)	(-52,608)	(453)	631	(51,524)
% difference	-28.4%	-25.3%	7.3%	-14.9%	-18.3%	1.5%	1.4%	-12%

*Note: The IPART determination was forecast to 16/17 only. The 17/18 and 18/19 are outside this period. The included actual expenditure is compared with the forecast as comparison of the expenditure during these two additional years.

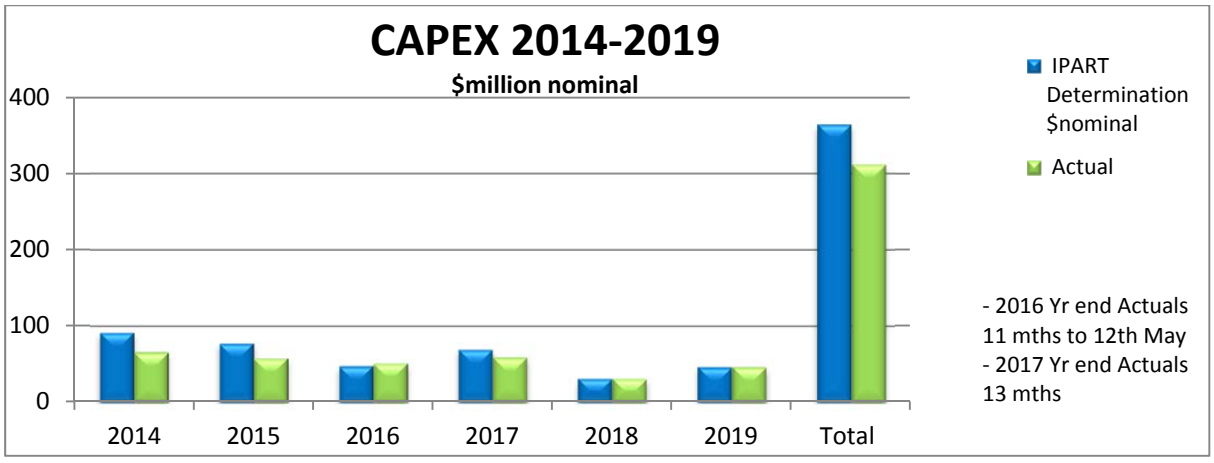

Figure 10: Total capex – IPART determination versus Actual

*Note: The IPART determination was forecast to 16/17 only. The 17/18 and 18/19 are additional to this period so forecast spend shown above is set as the actual spend amount. It would not be possible to reconcile the actual spend to the forecast expenditure for 2016/17 despite this being the value included in the revenue forecast.

Former Wyong Shire Council

During part of the determination period, the former Wyong Council implemented a two stage business case approach for capital works approvals. Annual preparation of the capital works program included a review by the then elected Councillors and the senior management team assessed alignment of the capital program to community expectations.

In addition, the then Water and Sewer business unit developed a capital review team comprising managers within the planning and operations units to assess new funding proposals for prudency and efficiency.

During this same period, that Water and Sewer business unit updated its capital works prioritisation process to include an assessment of projects based on a Risk of Deferral approach. In response to program slippage or project budget escalations, quarterly capital budget reviews were used to bring forward or defer existing and/or new capital projects to achieve the overall program objectives.

Former Gosford City Council

The former Gosford Council had a Project Management Framework which was rolled out at the commencement of the 2013 determination period. Its prioritisation process assessed the business risk and risk to the community if the project was to be deferred. The approval process consisted of a Capital Investment Committee (CIC) responsible for:

- ensuring that project objectives support and align with corporate objectives
- prioritising projects in line with corporate objectives
- approving programs and project budget allocation
- monitoring project governance
- reviewing and approving significant project risk mitigation strategies
- reviewing and approving project variances
- strategic monitoring of program and project budgets.

The framework also contained a project-specific Project Review Team (PRT) responsible for undertaking technical reviews. The PRT consisted of relevant staff from Water and Sewer Operations, Asset Management Planning, Project Delivery, Asset Planning and technical specialists.

This tactical-level review was designed to consider:

- technical specifications
- stakeholder identification and consultation
- proposed delivery mechanisms
- project risks and potential solutions
- alternative options.

6.1 Water capital expenditure

Former Wyong Shire Council

The majority of water capital expenditure by the former Wyong Council was attributed to either asset service reliability projects within the former Wyong network or contribution to projects under the Joint Water Supply agreement delivered within the former Gosford City Council area. There were also some "growth driven" projects carried out to facilitate development of the Warnervale Town Centre (Nikko Road Water Pump Station) as well as the investigation and design phases of the Mardi to Warnervale Pipeline, however these only represented approximately 15% of water capital expenditure over the determination period.

Key programs of work undertaken during the determination period included the replacement of corroded fittings/tapping bands and the replacement of non-operational valves ($1.2M), programmed water meter replacements ($1.1M) and upgrade/renewal of the Council's SCADA and communications infrastructure ($1.7M). The Mardi to Warnervale Pipeline project commenced and proceeded through the investigation and design phase which included hydraulic modelling, route assessment and full detail design ($1.5M).

Major Joint Water Supply projects undertaken by the former Gosford Council which the former Wyong Council contributed to, included major upgrades to high voltage electrical assets at Mooney Mooney and Mangrove raw water pumping stations to address reliability and safety deficiencies. Upgrades to improve asset reliability and water quality were also undertaken at Somersby Water Treatment Plant following a review of condition and performance of various treatment units at the plant.

The main individual contributors to variances within the former Wyong water supply capital program ($32.5M) were:

- The timing of delivery of the Mardi to Warnervale Pipeline (M2WP) ($1.59M spent compared to $26.8M allowed in the predicted water fund capital expenditure)
- Limited implementation of short term capital works from the Council's Water Quality Strategy ($0.6M spent compared to $3.2M allowed)
- Elimination of proposed water treatment plant sludge disposal system in favour of sludge lagoon modifications and periodic dewatering which will be implemented as part of major upgrades to Mardi Water Treatment Plant ($0 spent compared to $1.1M allowed)
- The elimination of a cost sharing arrangement between the Council Road Authority and the Water and Sewer Business for asset relocations required as part of road projects. ($0 spent compared to $2.15M allowed)
- Reduction in water meter renewal expenditure following implementation of a major renewal contract in 2013/14 targeting water meters with efficient return on investment. Additional renewals were deferred until a suitable strategy was developed for age based renewal of remaining meter fleet. ($1.15M spent compared to $2.6M allowed).

Former Gosford City Council

The main contributor to variances within the former Gosford Council's water supply operations was an organisational restructure which occurred in the 2014-15 financial year. This resulted in projects that were initially scheduled for construction in 2014-15 being delayed, with the majority of construction commencing in the 2016-17 financial year.

The water reticulation upgrade of Gosford CBD ($3.7M allowed to $200k spent) was also delayed due to a change in the development control conditions on building height and population density. This change required a review and detailed modelling to ensure the required increased capacity was addressed.

6.2 Sewer capital expenditure

Former Wyong Shire Council

Sewer Capex expenditure was generally divided evenly between asset service reliability drivers and growth driven projects, with a small percentage (less than 5%) attributable to mandatory standard drivers.

Key projects undertaken during part of the determination period by the former Wyong Council included the delivery of upgrades to Sewerage Pumping Stations (SPS) Wyong South 11 (WS11) ($3.3M), Toukley 08 (TO08) ($1.4M) and Toukley 06 (TO06) ($1.4M) rising main. Wyong South Sewage Treatment Plant (STP) underwent a major capacity upgrade ($15.6M), with numerous smaller scale projects undertaken at the other six STPs ($2.3M). Significant renewal programs undertaken over the determination period included the delivery of a trenchless sewer rehabilitation program ($4.9M) and multiple site SPS mechanical and electrical renewals ($3.3M).

The phased sewer expenditure over that part of the determination period was impacted by the timing of the delivery of the Wyong South STP Upgrade and the construction phase of a number of major sewage pumping station upgrades.

Variances between allowed and actual expenditure for the main asset classes and drivers are outlined in the Annual Information Return. The net result over the determination period was an underspend of approximately $3.5M, with approximately $46.9M spent compared to an allowed expenditure of $50.4M.

Former Gosford City Council

The delivery of sewer projects was not as adversely impacted as its water construction projects as the majority of minor projects were designed prior to 2014-2015.

Major delays included the deferment of the Digester Co-Generation Unit ($1.9M) and in the Septicity Control Optimisation project ($5.2M) due to a need for investigation into odour management.

6.3 Water and sewer capital expenditure performance between 2013-2018

Water capital expenditure 2013/14 - former Wyong Council

Total water capital expenditure for the year was $8.7M compared to a forecast spend of $7.0M. Key project progress:

- approximately $4.5M of water expenditure was for Joint Water Supply Projects
- approximately $0.97M to complete a major water meter renewal contract
- upgrade works were completed at Ourimbah Water Pumping Station No.17
- major components of the Mardi Dam Contingency works completed.

Water capital expenditure 2013/14 - former Gosford City Council

Total water capital expenditure for the year was $9.6M compared to a forecast spend of $9.0M. Key project progress:

- approximately $3.2M was spent on Joint Water projects at the Somersby WTP
- $0.4M was spent on the completion of Davistown pressure control
- $.27M of purchases for SCADA and communications equipment renewal.

Sewer capital expenditure 2013/14 – former Wyong Council

Total sewer capital expenditure for the year was $5.9M compared to a forecast spend of $15.7M. Key project progress:

- trenchless sewer rehabilitation ($1.3M)
- upgrades to Toukley 19 (TO19) sewer rising main completed at a cost of $0.7M
- design finalised for upgrade of Wyong South Sewage Treatment Plant and an Expressions of Interest (EOI) phase completed to shortlist tenderers
- detailed design package commenced for five major sewage pumping station upgrades at WS11, BB05, BB06, WS29, WS30
- tender awarded for package of investigation/options analysis, concept and detail design of major SPS upgrades at Toukley Nos 1, 6, 9, 17, 19, 22 and 27 (TO01, TO06, TO09, TO17, TO19, TO22 and TO27).

The staging of delivery of the upgrade to Wyong South STP and several major SPS upgrades resulted in a shift of construction phase expenditure from the first two years of the determination to the last two years of the determination.

Sewer capital expenditure 2013/14 – former Gosford City Council

Total sewer capital expenditure for the year was $27.66M compared to a forecast spend of $48.2M. Key project progress:

- construction commenced on SPS Avoca Beach 1, with expenditure of $4.5M
- staged construction of the digesters at Kincumber STP at a cost of $3.9M
- construction commenced on the Avoca Drive reticulation system with approximately $2.9M spent
- high Voltage works planning and design phase of $1M.

Water capital expenditure 2014/15 – former Wyong Council

Total water capital expenditure for the year was $5.7M compared to a forecast spend of $9.8M. Key project progress:

- approximately $3.1M for Joint Water Supply Projects
- approximately $0.6M was spent on the replacement of a number of non-operational valves within the distribution network
- a hydraulic modelling and pipeline concepts study for the M2WP was completed confirming the pipeline diameter and route selection and progressing into detail design
- contract awarded to undertake Mardi WTP investigation and options analysis to determine strategy for major upgrade.

Construction phase activities related to Council's water quality strategy were deferred to allow initial completion of a 'Catchment to Tap' risk assessment (a Drinking Water Quality Management System requirement) prior to detailed water quality planning studies for the treatment and distribution systems. Improvements to sludge management at Mardi WTP were deferred to ensure the solution complemented the upgrade strategy.

Water capital expenditure 2014/15 – former Gosford City Council

Total water capital expenditure for the year was $6.3M compared to a forecast spend of $6.1M. Key project progress:

- significant progress on the Joint Water high voltage upgrades at Mooney Mooney and Mangrove Mountain ($1.6M)
- $1M was invested in the replacement of critical water mains.

A key project at Woy Woy pressure reduction valve (PRV) was expected to commence construction in 2014-15 but was delayed due to the restructure and specialised staff movements. Key Joint Water Supply projects were also delayed for the same reason.

Sewer capital expenditure 2014/15 – former Wyong Council

Total sewer capital expenditure for the year was $9.8M compared to a forecast spend of $16.2M. Key project progress:

- trenchless sewer rehabilitation and works continued with approximately $1.8M spent
- tender awarded for upgrade of Wyong South STP and the commencement of site works - approximately $2.4M
- construction of upgrade to TO06 rising main completed with approximately $1.2M spent
- commencement of construction of upgrades to SPS TO08
- completion of investigation and design package for major upgrades to five SPS sites
- mechanical and electrical SPS site upgrades (separate to major site upgrades) ramped up with an expenditure of approximately $1M in 2014-15. Tenders were called for a period submersible sewage pump supply contract during 2014-15 to streamline procurement.

Sewer capital expenditure 2014/15 – former Gosford City Council

Total sewer capital expenditure for the year was $28.3M compared to a forecast spend of $27.12M. Key project progress:

- staged construction of the digesters at Kincumber STP underway with expenditure $5M
- North Avoca rising main projects commenced construction ($2.2M)
- significant progress on the Kincumber STP high voltage upgrades cost $2M
- $1.3M was spent on the Gravity Mains Program
- $4M was allocated to SPS renewals.

Water capital expenditure 2015/16 (10.5 months) – former Wyong Council

Total water capital expenditure for the reporting period was $3.3M compared to a forecast spend of $6.6M. Key project progress:

- approximately $1.3M for Joint Water Supply Projects
- prepaid services undertaken for developers increased from $0.5M in 2014-15 to $0.7M in 2015-16
- contract awarded for the detail design, environmental impact assessment and technical specifications for the M2WP.

Similar to 2014-15 there were a number of detailed planning studies being undertaken to properly identify and scope the most appropriate capital solutions to address water quality issues, resulting in the deferral of construction of these assets.
The M2WP has now commenced detailed design following the completion of additional planning studies to confirm pipeline sizing - however the allowed capital expenditure forecast for this project had assumed final preconstruction/procurement activities would be occurring in 2014-15. Other programs readied were:

- Mardi WTP investigation and options analysis completed and contract awarded for concept design of major augmentation
- contract awarded to determine capital works required for distribution network water quality strategy and to ensure these complement the preferred treatment strategy.

Water capital expenditure 2015/16 (10.5 months) – former Gosford City Council

Total water capital expenditure for the reporting period $5.09M compared to a forecast spend of $7.95M. Key project progress:

- $1.3M was invested into the replacement of critical water mains
- commencement of three major reservoir refurbishments
- commencement of the powder activated carbon plant at Somersby WTP
- Mooney Mangrove high voltage works continued with $900k expended.

Construction of Woy Woy PRV was delayed due to the unavailability of specialised resourcing.

Sewer capital expenditure 2015/16 (10.5 months) – former Wyong Council

Total sewer capital expenditure for the reporting period was $16.5M compared to a forecast spend of $8.8M. Key project progress:

- trenchless sewer rehabilitation and works continued with approximately $1M spent
- significant progress made on the construction of Wyong South STP upgrade with approximately $8.5M spent
- construction of upgrade to SPS TO08 and the new TO08A completed at a cost of approximately $0.8M. Commencement of construction of major upgrades to SPS WS11.

Multiple major sewer construction projects are now underway, reversing trends from 2013-14 and 2014-15.

Sewer capital expenditure 2015/16 (10.5 months) – former Gosford City Council

Total sewer capital expenditure for the reporting period was $19.8M compared to a forecast spend of $15.3M. Key project progress:

- renewal of priority electrical sewerage pumping stations continued expending $1.25M
- major construction contract for Cockle Bay Towns Sewerage Scheme was awarded with $5M spent
- significant progress was made on the high voltage upgrades at Kincumber STP with $2.2M in works undertaken
- $1.6M was invested into the renewal and rehabilitation of critical and ageing gravity sewer mains
- minor sewerage pump station program expended $2.3M.

Water capital expenditure 2016/17 (13.5 months) – former Wyong Council LGA

2016/17 was the first statutory reporting period covering 13.5 months to 30 June for the newly formed Central Coast Council. Due to the timing of the proclamation to amalgamated the former Council's (12 May 2016) there was insufficient time for a budget to be developed for Central Coast Council within the legislative framework (budget development, 28 day public exhibition, consideration of submissions and adoption of a budget before 1 July 2016). A decision was made that both former Council's planned capital programs for the 2016/17 financial year would be carried out.

The first consolidated Central Coast-wide prioritised capital works budget was developed for the 2017-18 financial year.

Total water capital expenditure for the reporting period was $4M compared to a forecast spend of $29.9M. Key project progress:

- significant progress on the detail design, environmental impact assessment and technical specifications for the M2WP, including final land acquisitions
- completion of concept design of major augmentation to Mardi WTP including obtaining in-principle support from NSW Office of Water
- completion of distribution system water quality strategy and commencement of its operational and capital improvement works

- the scope of prepaid services undertaken for developers increased again from $0.7M in 2015-16 to $0.9M.

Significant underspend relative to allowed expenditure occurred during 2016-17 as the M2WP project had, when preparing the pricing submission, been forecast to undertake the majority of its construction phase during 2016-17.

Water capital expenditure 2016/17 (13.5 months) – former Gosford LGA

Total water capital expenditure for the reporting period year was $15.06M compared to a forecast spend of $7.35M. Key project progress:

- Mooney Mangrove high voltage works continued (approximately $3.6M)
- construction commenced on the Woy Woy pressure reduction valve duplication with a major contract awarded for $2M
- $2.2M was spent on Somersby WTP in a combination of major and minor projects
- $2.5M was invested into the replacement of critical water mains
- $1.6M was spent on refurbishment and improvement to water reservoirs.

Sewer capital expenditure 2016/17 (13.5 months) – former Wyong LGA

Total forecasted sewer capital expenditure for the year was $12M compared to a forecast spend of $6.2M. Key project progress:

- Four year trenchless sewer rehabilitation contract finished with approximately $0.8M spent. Higher than forecasted expenditure for gravity sewerage main inspection and renewal was sustained through the determination to bring down the 'sewer main breaks and chokes' and 'total sewer overflows' levels of service which were tracking above the IPART target for the initial years of the determination.
- practical completion granted for major upgrades to Wyong South STP with an annual spend of approximately $4.2M
- completion of construction at SPS WS11 with approximately $2M spent during the financial year
- continued mechanical and electrical upgrades to SPS sites (approximately $1M).

Multiple major sewer construction projects were continued in the year, bringing total sewer expenditure for the price path within 7% of the allowed target.

Sewer capital expenditure 2016-17 (13.5 months) – former Gosford LGA

Total forecasted sewer capital expenditure for the reporting period was $17.44M compared to a forecast spend of $13.83M. Key project progress:

- Cockle Bay Towns Sewerage Scheme reached Practical Completion in December 2016 at a budgeted $4.4M
- significant progress was made on the high voltage upgrades at Woy Woy STP with $1.6M in works undertaken
- $1.4M was spent on reducing septicity and odour-related issues within the sewerage reticulation system

- major sewerage pump station program expended $2M in renewals
- $1.6M was contributed to the dewatering system at Kincumber STP.

Water capital expenditure 2017/18 – Central Coast Council

Total forecasted water capital expenditure for the year was $9.80M compared to a forecast spend of $8.74M. Key project progress:

- Mardi Warnervale Trunk Main Preconstruction expended a further $.9 in planning and design costs
- $.7M was invested into the replacement of critical information communication and technology Equipment
- Region Wide - Water Mains Renewal Program expended $.9M with a major multi-year contract awarded for the value of $15M
- construction continued on the Woy Woy pressure reduction valve duplication spending $.8M
- $1.2M was spent at Somersby and Mardi Water Treatment plants with a combination of major and minor projects undertaken.

Sewer capital expenditure 2017-18 – Central Coast Council

Total forecasted sewer capital expenditure for the year was $13.48M compared to a forecast spend of $12.81M. Key project progress:

- Kincumber Sewerage Treatment Plant, Thickener installation reached practical completion in December 2017 with an annual spend of $1.05M
- $1.2M was invested into the replacement of critical electrical components at Sewer Pump Stations across the region.
- $.9M was spent on reducing septicity and odour-related issues within the sewerage reticulation system
- Woy Woy Sewer Treatment Plant Internal reuse pump station and pipework reached practical completion with $.7M in works undertaken
- major 4 year contract was awarded for the relining of sewer mains valued at $11M.

Water capital expenditure 2018-19 – Central Coast Council

Total water capital forecast expenditure for the year is $17.29M. Key project progress:

- Mardi Water treatment Plant upgrade $0.7M
- Region wide reservoir refurbishment $1.35M
- Region wide - Water Mains Renewal Program $1.5M.

Sewer capital expenditure 2018-19 – Central Coast Council

Total sewer capital forecast expenditure for the year is $19.39M. Key project progress:

- Woy Woy Major sewer pump station upgrade $2.8M
- Sewer Odour control upgrades $1.5M
- South Tacoma low pressure sewer installation $3.5M.

6.4 Stormwater drainage capital expenditure performance between 2013-2018

Stormwater drainage capital expenditure 2013/14 - former Wyong Council

- Total stormwater drainage capital expenditure for the year was $8.3M compared to a forecast spend of $8.3M
- Major projects included were Wyong CBD Drainage Upgrade ($3.1M), Warnervale Culvert Upgrade ($1.8M), Greencare Avenue Drainage Upgrade, Minnesota Road Drainage Upgrade, Darri Road Drainage upgrade, Thompson Road Drainage Upgrade, Buff Point Avenue Drainage, Goorama Avenue Drainage and network rehabilitations across the council area.

Stormwater drainage capital expenditure 2013/14 - former Gosford Council

- Total stormwater drainage capital expenditure for the year was $5.6M compared to a forecast spend of $3.3M
- Major projects included were Riveria Catchment Drainage Upgrade ($0.9M), Terrigal CBD Urban Flood Mitigation ($0.7M), Baloo Road Culvert Upgrade ($0.7M), Pomona Road Drainage Upgrade and the Jolah Road Drainage Upgrade
- To support efficient project delivery, some stages of work were brought forward from future years.

Stormwater drainage capital expenditure 2014/15 - former Wyong Council

- Total stormwater drainage capital expenditure for the year was $6.5 M compared to a forecast spend of $8.4M.
- Major projects included were Wyong CBD Drainage Upgrade ($2.5M), Panorama Avenue and Hobson Avenue Drainage Upgrade ($1M), Darri Road Drainage Upgrade ($1M), Bay Road Drainage Upgrade ($0.7M), Asthon Avenue Drainage Upgrade, Goorama Avenue Drainage and network rehabilitation across the council area
- A number of stormwater renewals were unable to proceed resulting in an under expenditure in 2014-15.

Stormwater drainage capital expenditure 2014/15 - former Gosford Council

- Total stormwater drainage capital expenditure for the year was $1.7M compared to a forecast spend of $3.4M.
- Major projects included were Mudflat Creek Channel Upgrade ($0.5 M), Minor Drainage Upgrade Program ($0.4M) and the Kincumber Catchment Drainage upgrade
- To support efficient project delivery, some stages of work were completed in prior years of the determination.

Stormwater drainage capital expenditure 2015/16 (10.5 months) - former Wyong LGA

- Total stormwater drainage capital expenditure for the reporting period was $4.8M compared to a forecast spend of $5.8M.
- Major projects included were Wyong CBD Drainage Upgrade ($1.6M), Goorama Avenue Drainage Upgrade ($1M), Jilliby Road culverts, Hume Boulevard Drainage Upgrade, Bald Street Drainage Upgrade, Lakeside Parade Drainage Upgrade and network rehabilitation across the council area.

- The Porters Creek Harvesting Scheme did not proceed as planned. Council is investigating options which will consider alternate strategies to deliver the outcomes.

Stormwater drainage capital expenditure 2015/16 (10.5 months) - former Gosford Council

- Total stormwater drainage capital expenditure for the reporting period was $1.9M compared to a forecast spend of $3M
- Major projects included were Terrigal CBD Urban Flood Mitigation ($0.5M), Avoca Beach Drainage Upgrade ($0.4M), Mudflat Creek channel upgrade ($0.4M), Copacabana Trunk Drainage Upgrade and the Riveria Catchment drainage upgrade followed by various council wide drainage upgrades and renewals
- To support efficient project delivery, some stages of work were brought forward from other years.

Stormwater drainage capital expenditure 2016/17(13.5 months) - Central Coast Council

- Total stormwater drainage capital expenditure for the reporting period was $10.7M compared to a forecast spend of $11.6M
- Major projects included were Audie Parade Drainage Upgrade ($1.3M), Blenheim Avenue Drainage Upgrade ($0.9M), Kincumber Catchment Drainage Upgrade ($0.5M), Wells Street Culvert Upgrade ($0.5 M), Jarrah Drive Drainage Upgrade ($0.5M), Flood Levee at Pearl Beach, Copacabana Drainage Upgrade ($0.35 M) and the Mudflat Creek channel upgrade ($0.3M), Norton Avenue Drainage Upgrade, Lakeside Parade Drainage Upgrade, Hutton Road Drainage Upgrade, Gosford Avenue Drainage Upgrade and network rehabilitation across the council area
- The Porters Creek Harvesting Scheme did not proceed as planned. Council is investigating options which will consider alternative strategies to deliver the outcomes.

Stormwater drainage capital expenditure 2016-17 (13.5 months) - Central Coast Council

- Total stormwater drainage capital expenditure for the reporting period was $8.1M
- Major projects included were Audie Parade Drainage Upgrade ($1.2M), Chain Valley Bay Culvert Upgrade ($1.0M), Lake Road Drainage Upgrade ($0.7M), Blenheim Avenue Drainage Upgrade ($0.7M), Wells Street Culvert Upgrade ($0.5M), Tumbi Creek Road Drainage Upgrade ($0.5M), Elouera Ave Drainage Upgrade ($0.5M), Jarrah Drive Drainage Upgrade ($0.3M), Avoca Bowl Drainage Upgrade ($0.3M), Shepard Street Drainage Upgrade ($0.4M) and network rehabilitation across the council area

6.5 Performance against IPART output measures

Capital works output measures established in IPART's 2013 determination are provided below.

Table 26: List of former Gosford and former Wyong Council's Joint Water Supply projects ($M 2016/17)

Description	Forecast over determination period	Actual cumulative 2016-17
1. Major water pump station renewals	2.0	6.5
2. Somersby Water Treatment Plant Capital Works Plan	4.2	6.2
3. Gosford Council's share of Wyong Joint Water Scheme Program Budget	6.2	2.0

1. The high voltage power supply assets at Mangrove Creek and Mooney Mooney water pumping stations were at the end of their service lives. The equipment was no longer supported by suppliers and exposed Council personnel to risk of injury during operation and maintenance. It also posed a risk of power outages and/or equipment failures to the raw water supply. The project is now complete.

2. There are several minor projects being completed at Somersby WTP. At the time of writing this submission, all projects are in progress.

3. Following the original 2013 determination, IPART reduced the amount forecast for Gosford's share of the Joint Water Supply Program Budget to $3.9M.

Table 27: List of former Gosford Council projects ($M 2016/17)

Description	Forecast over determination period	Actual cumulative to 2016/17	Drivers
1. Water main renewal program	5.5	5.6	Existing mandatory standards
2. Woy Woy PRV facility upgrade	2.3	2.4	Existing mandatory standards
3. Water meter replacement program	1.3	0.9	Existing mandatory standards
4. Davistown trunk main renewal	1.1	1.1	Existing mandatory standards
5. Information communications technology renewal	1.9	1.9	Existing mandatory standards

Description	Forecast over determination period	Actual cumulative to 2016/17	Drivers
6. Major SPS renewal program	2.3	2.8	Existing mandatory standards
7. Non-major SPS renewal program	18.6	16.2	Existing mandatory standards
8. Septicity control optimisation	5.3	2.3	Existing mandatory standards
9. Kincumber STP digesters	5.1	10.7	Existing mandatory standards
10. Cockle Bay towns sewerage project	14.0	10.4	Government programs
11. Sewerage gravity mains renewal program	8.9	4.4	Existing mandatory standards
12. Sewerage rising mains renewal program	2.3	4.5	Existing mandatory standards
13. North Avoca major rising main valve replacement	1.1	2.4	Existing mandatory standards
14. Avoca sewerage pump station upgrade	1.2	5.2	Existing mandatory standards
15. Developer servicing works - redevelopment	1.4	1.2	Existing mandatory standards
16. Developer servicing works - Gosford CBD	3.0	1.6	Existing mandatory standards
17. High voltage switchboard renewal - KSTP C1	6.5	5.7	Existing mandatory standards
18. High voltage switchboard renewal - WWSTP	2.6	2.9	Existing mandatory standards
19. Digester cogeneration unit	2.0	0.1	Business efficiency
20. DAF system improvement at Kincumber STP	1.3	0.5	Existing mandatory standards
21. Riviera catchment trunk stormwater drainage	1.1	1.0	Existing mandatory standards

Description	Forecast over determination period	Actual cumulative to 2016/17	Drivers
22. Minor stormwater drainage improvements program	1.6	1.8	Existing mandatory standards
23. Kincumber urban flood mitigation	1.5	0.7	Existing mandatory standards

Comments (referencing the project numbers from the Table 27 above):

1. Annual Water Main Renewal Program for the four years (2013-17) was developed for the IPART CAPEX budget. All identified renewals have been completed with a further package released for 2017-18 which is underway at the time of writing this submission.

2. Woy Woy PRV has reached practical completion and is at the time of writing this submission undergoing commissioning.

3. The water meter replacement program for the 2016/17 financial year is complete. The project saw the replacement of 3,258 domestic meters in the former Gosford LGA.

4. The trunk main construction, 100mm rider main and trunk main connections are complete and the main is in service.

5. The Water and Sewer ICT budget will replace the Water and Sewer network routers and switches that support Council's telemetry backbone and plant network. It is planned to have the satellite equipment removed from Mooney Mooney WPS by running a fibre network from the Somersby balance tanks down to Mooney Mooney WPS.

6. SPS WYOMJ refurbishment involved replacing the existing internal pipework, fittings, installation of new pumps, a flow meter pit and of new electrical SCA equipment. The design work was completed in 2015-2016. Construction was commenced in 2015-2016 and is complete. SPS Woy Woy Major will be constructed in stages, with stage 1, at the time of writing this submission, in the tendering phase.

7. All funds allocated in program budgets for year 2015/16 financial year on SPS S2 decommissioning were spent. Construction of a new SPS WG16, SPS N2 refurbishment, and a new SPS G8. The SPS S2 decommissioning is, at the time of writing this submission, near completion. A new SPS WG16, refurbishment of SPS N2, a new SPS G8 and storage chamber have all been completed.

8. The first 12 month gas and liquid monitoring has now been completed. Construction of first three CDUs (C8, C19 and WG2) is complete and on-line. The construction of next four CDUs (FB1, KA3, N23 and SD5) is now complete. Design of next seven CDUs (GP5, G6, WWB3, WW13B, WW3A, E4 and P1) is near completion and with tender awarded in July 2018.

9. Due to the "unknown" condition of the plant and equipment and the inability to internally inspect components of the asset, it was decided to adopt three separate delivery contracts. The original IPART estimate was based on a "single" contract delivery program. It was subsequently determined that this was impractical and imposed a significant risk. The impacts of latent conditions potentially led to scope creep that could have significantly increased the project budget from the initially estimated $4M to a revised "final" budget of $10M. These changes were necessary to ensure that the refurbishment works were not unduly compromised and the final works would provide reliable operations into the foreseeable future.

10. Construction of the Cockle Bay Towns Sewerage Project was completed in November 2016. The scheme is predominantly a pressure sewer with pockets of gravity reticulation feeding through a sewage pumping station. Over 70% of property owners originally elected to connect to the scheme upon availability. The project aims to have a positive impact on environmental and health for the community.

11. This program comprises a wide range of planned and unplanned sewer gravity main replacements, renewals and rehabilitation projects together with operational improvement such as the sewage flow gauging and hydraulic model calibration. Additional funding was utilised for the critical failure at Killcare Carrier common rising main which included a partial replacement and associated works carried out between 2014 and 2016.

12. This program comprises planned and unplanned sewer rising mains and critical valves replacements, renewals and rehabilitation. All planned projects are completed. Two major rising main failures requiring urgent repair works were identified during the 2013 IPART period and needed additional funding from the "Sewer Gravity Mains Renewal Program". These projects included the Killcare Carrier Common Rising Main partial replacement with a horizontal directional drilled section and associated odour control unit extraction fan and scour valve completed in 2016. C10 rising main section failure under Terrigal Lagoon included rehabilitation of the mains using high density polyethelene slip lining techniques, this project is completed.

13. Construction is completed.

14. Construction is completed. Major unforeseeable environmental, customer property and access issues were encountered. These factors contributed major costs of this project.

15. This program comprises various projects required to service new development.

16. The DSP prepared in 2012 included a list of sewer augmentations and reinforcements to service the development planned in the Gosford CBD for the next 30 years. Some of these works have been completed and some are, at the time of writing this submission, underway including the partial augmentation of the branch main along the CBD. The proposed works are being reviewed taking into consideration critical changes in planning around the CBD which will allow large developments to take place in the short and medium term.

17. The high voltage program at Kincumber STP was completed in July 2016. The $380K budget overspend primarily relates to minor project scope changes due to site constraints.

    During the tender evaluation period a need for a new power supply was identified for the new weigh station and the general lagoon area. Due to its distance from existing substations, the most effective way to provide power to this area was via high voltage cables. This work involved the installation of new high voltage cables from substation 1 to the lagoon area and then to substation 2. It also involved the installation of an 11/0.4kV transformer and circuit breaker housed in a kiosk together with associated cables and protection and control equipment. The works not only provided power to the lagoon area but also improved the security of power supply to the STP with the creation of a "HV ring main".

18. The Woy Woy STP HV project was completed in November 2016.

19. Following an extensive feasibility review of the Kincumber STP cogeneration project, a decision was made to defer its construction until the 2019 IPART price determination.

    From a financial perspective, the base case scenario did not provide a clear financial argument for its construction at this stage. However, many of the proposed planned plant improvements would provide a positive net present value. A decision was made to monitor the evolution of these factors in the near future and postpone construction. These factors include:

    a. Extra gas is likely to be achieved as a result of the sludge thickening project
    b. The spot price of Large-scale Generation Certificates (LGC) is improving

20. The Dissolved Air Flotation system improvement at Kincumber STP involves two contracts. The contract for the design and construction of the thickener replacement was awarded in February 2017. By the end of June 2017, design was complete and site work commenced. The associated thickener building modifications contract was awarded in August 2017 and all works are expected to be completed by December 2018.

21. The trunk main construction is completed

22. This program comprises various minor works to address localised flooding issues.

23. The trunk main construction is complete. Retarding basis works have been delayed subject to land acquisition.

Table 28: List of former Wyong Council projects ($M 2016)

Description	Allowed over determination period	Actual cumulative 2016-17	Drivers
1. Mardi WTP Sludge Disposal System	1.1	0	Asset Service Reliability – Development of a system to manage sludge disposal at the WTP.
2. Work from Water Quality Strategy	3.2	0.58	Mandatory Standards – Works required to ensure compliance with water quality targets at Mardi WTP and within the network.
3. Curtain in Mardi Dam	2.2	0	Mandatory Standards – Works required to manage water quality within Mardi Dam
4. SPS WS11 Refurbishment	1.7	3.37	Asset Service Reliability – Works required to renew aging assets and improve operation of the pumping station.
5. SPS Safety Improvements	2.2	0.68	Mandatory Standards – Works required to minimise manual handling risks.
6. Wyong South STP Upgrade	13.4	15.87	Growth – Works required to increase capacity of the treatment plant.
7. Wyong CBD	1.5	4.81	Mandatory Standards – works required to manage CDB trunk drainage
8. Darri Road	2.7	1.36	Mandatory Standards – works required to provide drainage network capacity
9. Porters Creek Stormwater Harvesting Scheme	9.9	0.21	Project deferred to allow investigation of further options

Comments:

1. This project was deferred to ensure a solution complemented the Water Quality Strategy which has since been completed. Upgrades to the sludge lagoons and new operating regime will instead be implemented as part of the major upgrade to Mardi WTP, with concept design now completed and construction of the sludge lagoon modifications will commence in late 2018. The proposed sludge disposal system was

also found to have an unacceptable reduction in yield to the water supply system as sludge lagoon supernatant is currently returned to Mardi Dam.

2. Completion of the treatment and distribution network water quality strategies occurred in 2015-16 and 2016-17. Projects in 2016-17 included the specification and design of a mixer for Tuggerah 2 Reservoir, instrumentation upgrades at Mardi WTP, commencement of installation of water quality monitoring stations within the network and automation of key valves for high pressure mode operation. Implementation of these projects will contribute to the minimisation of water quality risks and complement the major upgrade to Mardi Water Treatment Plant which will address current key water quality risks associated with high dissolved organic carbon from Wyong River source water, rapid mixing within Mardi Dam and increased transfer of river water under high flow conditions in Wyong River.

3. Project removed from determination when hydrodynamic modelling results obtained for Mardi Dam indicated the project would not have the desired effect and did not represent prudent expenditure.

4. Construction and site commissioning completed in 2016-17. Scope of work and cost required to upgrade the major sewage pumping station site was greater than estimated. The business case for a total project cost of $4.8M was approved in 2014 following the completion of detail design. The key business case objectives have now been achieved including:
    - provision of adequate emergency storage volume
    - renewal of aged and corroded assets (civil, mechanical and electrical)
    - provision of sufficient control volume for submersible pump operation
    - provision of a suitable flow relief structure
    - improved gas phase odour management at the site.

5. Installation of aluminium lids now complete, replacing concrete gatic lids at sewage pumping station sites to reduce WHS manual handling risks. Decision made to not replace internal ladder and platform structures in SPS wet wells in light of current confined space entry processes.

6. Main site works complete. Final cost greater than allowed for in determination as the cost estimate which supported the pricing submission was prepared at preliminary design stage. The business case for total project cost of $15.2M was approved in 2013 following the completion of detail design. The key business case objectives have now been achieved including:
    - Increase in rated capacity of the plant from 48,000 EP to 60,000 EP to support growth within the catchment and provide operational flexibility for the management of loads from major trade waste customers within the catchment.
    - Renewal of various civil, mechanical and electrical assets including the provision of a new inlet works, new electrical switchroom and new decanters for two of the four aeration tanks.

7. Project completed additional expenditure required to ensure flood free access through the CBD and to support emergency services.
8. Trunk main construction completed
9. Project removed from determination when further analysis indicated that the project would not deliver the desired outcomes and did not represent prudent expenditure.

6.6 Implementation of the 2013 IPART determination

The former Councils and Central Coast Council have implemented the current determination since it came into effect on 1 July 2013. The former Councils and Central Coast Council implemented the annual charges to prices required by the determination each year on 1 July, as detailed in the tables below. An updated price schedule has been provided to IPART for review. IPART has not reported any issues with the implementation or annual updating of the determination.

Table 29: 2013 IPART determination annual prices – Wyong $

	Final Determination				Actuals			
	2014	2015	2016	2017	2014	2015	2016	2017
Water usage charge	2.17	2.23	2.26	2.29	2.17	2.23	2.26	2.29
Water service charge	169.50	172.33	166.87	164.63	169.50	172.33	166.87	164.63
Sewerage usage charge	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Sewerage service charge	457.62	470.75	477.03	483.28	457.62	470.75	477.03	483.28
Drainage charge	98.62	108.76	118.14	128.32	98.62	108.76	118.14	128.32

Table 30:2013 IPART determination annual prices – Gosford $

	Final Determination				Actuals			
	2014	2015	2016	2017	2014	2015	2016	2017
Water usage charge	125.81	149.77	173.56	197.81	125.81	149.77	173.56	197.81
Water service charge	2.17	2.23	2.26	2.29	2.17	2.23	2.26	2.29
Sewerage usage charge	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Sewerage service charge	575.98	512.29	641.15	672.66	575.98	612.29	641.15	672.66
Drainage charge	91.92	102.79	113.22	124.64	91.92	102.79	113.22	124.64

7 Council's strategic focus for the future price determination period

7.1 Price period

Council proposes a determination period of four years - from 1 July 2019 to 30 June 2023.

Council believes this is an appropriate length of time as it provides a suitable balance between certainty for customers and provision of reasonable cost forecasts. This will allow Council and the community to plan for the future.

A four year period is expected to maintain alignment with Hunter Water Corporation, allowing joint consideration of pricing interdependencies between the adjoining regions.

7.2 Operating strategy

Optimising the operations of the water sewer and drainage operations of the two predecessor councils has taken longer than anticipated and is only in 2018 beginning to achieve improved outcomes. The next price path will see a number of strategic initiatives come to fruition with the associated service and financial benefits. These strategies include:

Procurement and capital delivery

On 25 June 2018, the Council adopted a Delivery Program and Operational Plan as well as a Resourcing Strategy.

WaterPlan 2050

WaterPlan 2050 is the long term water supply strategy for the Central Coast and is, at the time of writing this submission, being reviewed. WaterPlan 2050 identifies key action areas of:

- enhancing the existing water supply system
- using water efficiently
- accessing additional sources of water.

Planning for the next evolution of the Integrated Water Resources Plan (the current equivalent known as WaterPlan 2050) is progressing.

Due to the linkage of the Hunter and Central Coast urban water systems and the potential for inter-regional solutions, water planning activities for the two regions are being coordinated. Where appropriate, it is proposed some elements will be undertaken jointly. Whilst the associated water planning activity relevant to the Central Coast is the next evolution of the Lower Hunter Water Plan being prepared by DPI Water (proposed completion June 2020), other water planning activities to be integrated include:

- a replacement Water Sharing Plan for the Central Coast Unregulated Water Sources (proposed completion 2019)

- a Greater Hunter Regional Strategy (Water Resource strategy including Upper Hunter water security).

Discussions were held on 17 January 2017 with DPI Water (Urban Water Branch and Lower Hunter Water Team). It was agreed in principle that the proposed Central Coast Integrated Water Resource Plan in conjunction with the IPART Pricing Submission, together with appropriate supporting documentation, would be accepted in lieu of a separate Integrated Water Cycle Management (IWCM) report.

A key driver was recognition that it will minimise duplication and associated costs whilst still achieving the overall intent and purpose of an IWCM. This approach is being formalised by incorporating appropriate clauses into the tri-party agreement.

Gosford CBD

Council is investing in the growth of the Central Coast via a commitment to undertake major water infrastructure upgrades in and around the Gosford CBD. These will address performance requirements for better pressure management, reservoir storage and mains velocity. Further details on this major project can be found in sections 8.5.7 and 8.5.12.

Asset management

Council will continue to build upon the asset management improvements that have been made to date. The asset management improvement program will involve:

- condition assessment for each asset class
- enhanced maintenance programs
- development and refinement of a risk/criticality assessment program for each asset class
- improved capital project delivery management, including governance processes, gateway reviews and capital works process
- development and implementation of a framework for consistent business cases, project tracking and project reporting
- continued integration of Asset Management Information Systems (AMIS).

Council's Asset Management Plan framework will identify the following key elements:

- levels of service – specifying the services and standards to be achieved
- future demand – how this will impact and how this is to be met
- life cycle management
- financial summary – what funds are to be sourced
- asset management practices
- monitoring – how the plan will ensure it is meeting Council's objectives
- asset management improvement plan.

With the establishment of Council, a series of short term (one year) and longer term (four year) actions have been identified to improve asset management practices.

One year actions

- Implement a robust risk and criticality analysis framework to better inform asset management decisions and support future price submission to IPART.
- Undertake regular system performance monitoring to allow hydraulic models to be calibrated. Enhance and further develop hydraulic models to assist in the planning and operation of systems.

Four year actions

- Develop a comprehensive asset management plan, including maintenance procedures, for each asset class
- Optimise preventative and breakdown maintenance
- Develop plans for each sewage treatment plant and effluent discharge system to ensure regulatory compliance and enable the expected long term loadings to be met. This will include identification of triggers to allow plant upgrades to be completed in a timely manner
- Develop a master plan for each major sewerage catchment to ensure regulatory compliance and enable the expected long term loadings to be met. This will include identification of triggers to allow upgrades to be completed in a timely manner and the management of system inflow and infiltration
- Develop a master plan for the drinking water supply network to ensure regulatory compliance and to enable the expected long term demand to be met. This will include identification of triggers to allow upgrades to be completed in a timely manner
- Develop a better understanding of water system leakage rates and trends and determine an appropriate economic level of leakage as an aspirational objective
- Enhance the use of SCADA as an asset management tool (in addition to its principal function) and provide staff training for those uses
- Incorporate fault reporting and response into the asset management systems
- Rationalise disparate data management systems into the corporate system.

Workforce management

Council was formed as a result of the amalgamation of the Wyong Shire and Gosford City Councils LGA's on 12 May 2016.

The Local Government Act 1993 provides specific protections for non-senior staff who had their employment transferred from a former Council to the new Council. Some of these additional protections end on the 11 May 2019.

The Council's organisation structure was approved in June 2017 and the Water and Sewer is managed by a senior manager. The structure was adopted following statutory consultation.

As outlined in Figure 2, Section 2.2.4, the Water and Sewer department comprises four business units each by a Unit Manager

Input to Council's Community Strategic Plan

The first Central Coast Community Strategic Plan (CSP) was adopted in May 2018. The water, sewer and drainage business contributes to the achievement of the following focus areas:

- a growing and competitive region - facilitated via the timely and efficient planning of new and upgraded water and sewer services
- environmental resources for the future - facilitated via the prudent management of our water catchment and resources, sound environmental management and compliance of licensed sewage discharge
- delivering essential infrastructure - through the continuous and efficient provision of water and sewer services, and the appropriate growth of these services.

These focus areas also demonstrate our support of the United Nations Sustainable Development Goal 6 – Clean Water and Sanitation.

Input to Council's Delivery Program and Operational Plan

Water and Sewer projects make up a significant portion of the adopted Delivery Program and Operational Plan.

The 2018-19 Operational Plan lists the water, sewerage and drainage projects that will be active during the year. Proposed capital expenditure programs for 2019-20 to 2022-23 are discussed in section 8.5 of this submission.

Council's Water and Sewer Business Operations

Operations over the future determination will focus on the following key strategies:

- provision of better response time management and service delivery with the introduction of a 24x7 water operations centre to manage all scheduled and issues
- improved asset monitoring and performance using new technologies. enhanced integration will be achieved by a new asset management system with work order, fault, materials and financial tracking capabilities
- improved water quality through the development of a program that measures compliance with key performance indicators
- the introduction of chlorination stations (north)
- enhanced monitoring of reticulation mains and reservoirs
- application of enhanced chlorinate/chemicals in the treatment of water
- more effective monitoring of poorly performing assets and a change in the type of chemicals to treat the water to reduce chlorine residuals
- enhanced waterway health by the use of technology to enable early detection of sewerage chokes and overflows. in the catchment, working with the development application process and restricting types of industry that may pose a threat.

7.3 Pricing strategy

This submission proposes harmonisation of all prices for Council's water, sewer and drainage services. Council is of the firm belief that harmonising prices will assist in an improvement in service levels and greater water security for all.

Council's pricing strategy has been targeted to provide a reduction in overall costs to the vast majority of residents and customers. However Council recognises that this may still result in higher prices for some customers.

In addition, this submission addresses the pricing matters raised by IPART in its Issues Paper.

8 Forecasts for next determination period (2019-2023)

8.1 Service levels

The results of the *It's time to talk water, sewerage and stormwater prices* survey conducted earlier in 2018 indicate customers value reliability the most in relation to their water, sewerage and stormwater drainage services. Overall customer satisfaction for water and sewerage services is positive. Customers are more satisfied with current sewerage services than water services.

Results of the survey identified that reliability was the more valued than value for money. Customer perception regarding whether they received value for money for their services was relatively neutral, with sewerage being slightly positive, water being slightly negative, and stormwater being slightly more negative than water.

With these results in mind, against the National Performance Report (NPR) indicators, Council proposes to improve on the following output measures by reducing:

- water quality complaints per 1000 from 9.9 to 9.0
- average frequency of unplanned interruptions per 1000 properties from 151.8 to 136.
- water main breaks per 100km from 23.7 to 20
- sewer overflows per 100km main from 32.6 to 32.

The proposed measures are a subset of the total number of indicators presented in the NPR and can be benchmarked against similar sized utilities. The measures chosen are a combination of customer service, asset performance and environmental performance indicators.

The basis for the proposed measures is included in the comments in Table 31. The main capital works projects that will be undertaken in the future determination that will assist in meeting or enhancing the proposed service levels are:

- discoloured water
  - water mains renewals project
  - water reservoir renewals/upgrades
- water quality
  - water treatment plant renewals/upgrades
- sewerage chokes
  - sewerage mains renewal project
- sewerage chokes & overflows
  - sewerage main relining
- odour
  - sewage treatment plant renewals/upgrades.

Table 31: Proposed target output measures for the determination period

NPR Indicator	Output or activity measure	Target indicator of activity by 2022/23	Comments
Water			
C9	Water quality complaints per 1000 properties	9	Our aim is to maintain the current level of service. A minor improvement (decrease from 9.9) in this target is proposed to reflect improved performance in 2017/18.
C17	Average frequency of unplanned interruptions per 1000 properties	136	Our aim is to maintain the current level of service and still accommodate an expected increase in the accuracy of reporting. The target remains in line with Master Plan 2050
A8	Water main breaks per 100km main	20	Our aim is to maintain a level of service in line with the national median for similar sized utilities. An improvement (or decrease from 23) in this target is proposed to reflect community expectation and improved recent performance. The target is in line with the 2016/17 national median for large water utilities and Council's Master Plan 2050
	Compliance with Australian Drinking Water Guidelines – microbial guideline values	100%	Nationally recognised indicator of safe water quality
	Compliance with Australian Drinking Water Guidelines – chemical guideline values	100%	Nationally recognised indicator of safe and aesthetically appropriate water quality
Wastewater			
	Sewer overflows per 100 km main	32	Our aim is to maintain the current level of service. This is consistent with recent performance.

NPR Indicator	Output or activity measure	Target indicator of activity by 2022/23	Comments
E13	Sewer overflows reported to the environmental regulator per 100km main	1.6	Target is to maintain current level of service
C11	Sewer odour complaints per 1000 properties	1.9	Target is to maintain current level of service
A14	Sewer main breaks and chokes per 100km main	35.6	Target is to maintain current level of service. This is consistent with recent performance.
E7 (Part of)	Compliance with EPL concentration and load limits	Yes	Indicator of regulatory compliance, specifically effluent quality

Comments:

1. The process to calculate number of property shut downs needs improvement. More reporting will result in an increased number of unplanned interruptions reported.

2. The proposed increase in spending for water main breaks is to address current issues and maintain the level of service.

3. Improvements to reporting will potentially increase the number of sewer overflows reported. Proposed spending in this area is to address known issues and maintain or improve the level of service.

With the exception of sewerage breaks and chokes and compliance with EPL concentration load limits the 2016/17 performance results show that Council did achieve target output measures in Appendix G of the 2012 pricing submission.

Council did not meet target over the current determination for compliances with EPL concentration and load limits. Council has however implemented a detailed raw sewerage characterisation program to ensure consistency in achieving the Nitrogen mass load target in the future.

Over the current determination period Council has performed better than the national median for large utilities with greater than 100,000 customers for average frequency of unplanned interruptions and water main breaks.

Services delivered by Council that did not meet the national median for large utilities are on track to meet the IPART targets set for the 2013 determination period.

The most important priority for customers is that water is safe to drink, available when required, and the sewerage system and stormwater drainage is reliable. This is supported by 65% of customers surveyed.

Proposed output measures for these areas are to maintain the current levels of service with slight improvements while working towards more accurate reporting.
Council is unable to propose a target for minimum water pressure. Collecting this information is at this stage cost prohibitive.

8.2 Forecast operating costs

Council has forecast its operating expenditure by criticality reviewing expenditure over the current determination.

Forecast operational budgets for the adopted amalgamated water, sewer and stormwater drainage businesses were prepared for each business unit (refer Table 32 for the cost centre allocation and unit groupings). The business units and a summary of their areas of responsibility are outlined below.

Whilst each unit has its own functions with specific cost requirements and cost centres, each unit budget was considered with close reference to the following common cost drivers:

- service levels – influences the maintenance and renewal operational expenditures
- changes to laws –influences operational costs associated with water production water sampling, monitoring, compliance and adherence to environmental regulations
- predicted population growth – influences the additional demand placed on the system and requirements for network expansion
- system performance – identifies poor performance and areas for improvement
- impact of the additional operation expenses related to the capital works programs particularly the upgrade to the Gosford CBD.

Table 32: Units with products and services and main functions

Unit	Products/Services managed	Main functions
Asset & Facilities Management	Treatment plants, dams raw water pump stations, weirs, catchments, raw water mains, bores, sewer treatment plants, effluent mains, treatment plant sewer pump stations.	Catchment & production of water, treatment of water, treatment of sewerage
Technical Service & Technical Control	Potable water mains, reservoirs, re-chlorination stations, network pump stations, sewer pressure mains, vacuum systems.	Monitoring and distribution of water & the distribution of sewerage
Construction & Project Management	External connections and related service	Major construction Minor Construction
Planning & Design	Development Assessments Trade Waste	Planning and design of Project and growth assets. Compliance activities
Roads Maintenance & Asset Evaluation	Drainage structures, open channels, table drains	
Roads Asset Planning & Design	Drainage Assets	Planning & design

The 2017/18 financial year budget was developed using the "zero-based budgeting" approach during Council's administration period. The 2018/19 budgeting process continued with the zero-based budgeting and was the first complete budget development process undertaken by the Council after administration.

Council's Finance Department provides each Unit Manager for the above Units with templates to prepare a budget for all costs (operational, capital expenditure and revenue) based on the cost centres created for each Unit and a common accounts structure to enable collation of costs for analysis. The budget templates provide Unit Managers with historical budget and actual costs for reference. Each of the managers work with their team to develop a budget to cover the responsibilities of their Unit. Strategic objectives are also considered to ensure necessary improvements and changes are taken into consideration. These budgets are then consolidated with any total business costs and financial budget components (such as depreciation and a portion of organisational support costs which are allocated to the business units as an overhead).

The finance templates provide Unit Managers with historical budget and actual account costs for reference. This historical information is important data when preparing budgets. Strategic objectives are also considered in to ensure necessary improvements and changes are taken into consideration.

The harmonisation of internal charges needed to be completed in areas such as:

- labour and employee costs
- hire and contracts
- materials
- support services overheads
- plant and fleet.

For the major items such as chemicals, hire and contracts, tipping fees and electricity a review of the costs in the previous two LGA areas was undertaken prior to combining the costs.

The significant first principles budgeting effort employed in many areas also ensures that budgets for 2018/19 and beyond are based on the actual needs of Council, rather than historical costs incurred on the basis of the former Councils. For example, labour costs have been prepared with reference to the new amalgamated structure and built up from the individual costs for each employee. This is especially important given that the 2018/19 budget year forms the basis of the forecast operational expenditure in the four year determination period.

To ensure that budgets are tailored to the specific annual requirements, the forward annual forecast for each cost centre and account budget is reviewed to ensure any known factor that will lead to either a temporary or permanent shift in costs is taken into consideration. One off changes to expenditure for any costs may result in an upward or downward step change in costs for one or more years. Budgeting assumptions and justification for any changes must be noted by the unit managers to ensure the adoption of any variations will be approved.

A description of some of the step changes and other issues in various cost categories for the forecast operational expenditure in the determination period are discussed below.

Given the issues in the former councils noted in section 5.1, the key driver to forecast labour costs had been to establish the new organisational structures for the combined water, sewer and drainage business units. This has been carried out through 2017/18 and will be firmly established during 2018/19.

Within each determination period, there is always the risk of asset failures requiring immediate attention or regulatory changes that place additional burden on the operational budget. This may result in an under recovery of revenue to meet these costs. The forecast operational expenditure does not include any contingency to address these matters. However as with the Efficiency Carryover Mechanism recommended by IPART (where efficiencies can be carried forward to the next determination) any additional revenue required to meet unexpected operational costs will be proposed in the subsequent determination.

Further discussion on the key issues and operational cost drivers over the forecast period is outlined in the discussion by cost category below.

Council's operating costs for the four years 2019/20 to 2022/23 is projected in the table below:

Table 33: Forecast OPEX ($000 18/19)

	2019/20	2020/21	2021/22	2022/23	4 year Total	2023/24 forecast
Water	45,176	44,845	44,326	44,564	178,911	43,829
Sewer	46,865	46,695	46,652	46,658	186,870	46,242
Drainage	10,985	11,045	10,985	11,045	44,060	11,065
TOTAL	103,026	102,585	101,963	102,267	409,841	101,136

A comparison of these operating costs compared to those that IPART determined in the 2013 price determination as follows:

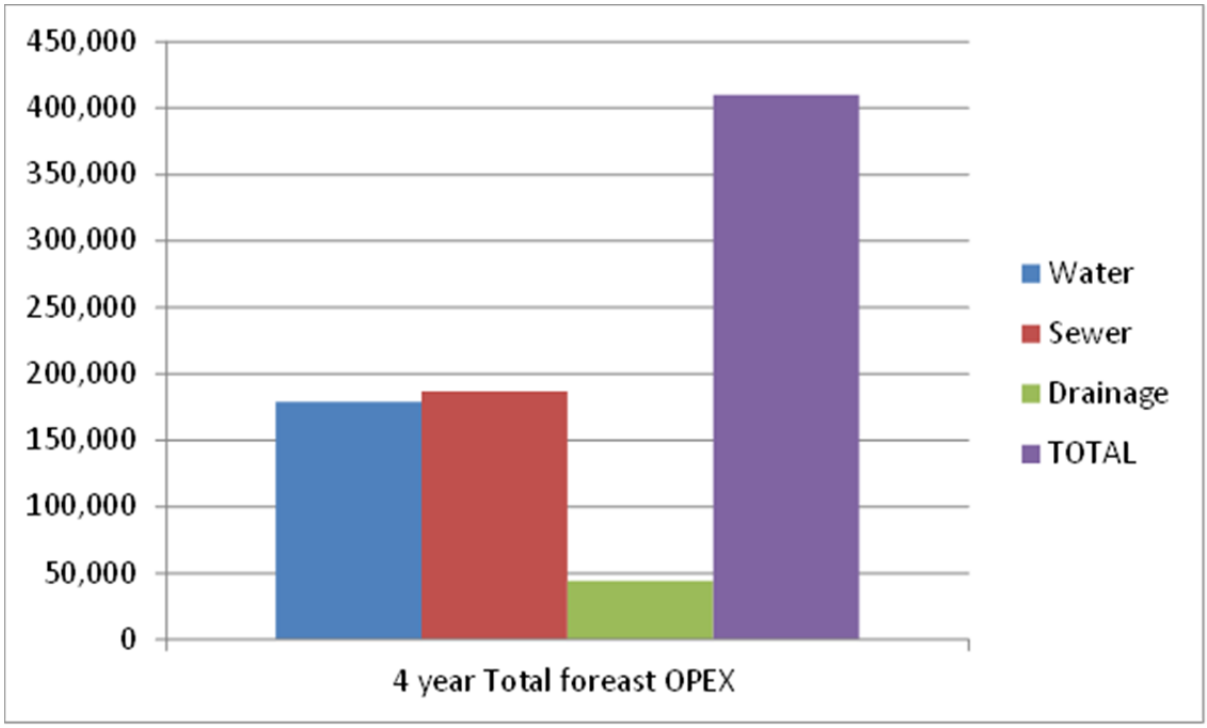

Figure 11: Operational expenditure forecast ($000 – 18/19)

In real terms Council's aggregate operating costs for Water and Sewer operations have reduced from the level set in 2013.

This is predominantly a reflection of the efficiencies implemented post 12 May 2016. Council presents its forecast operating costs for each of water, sewer and drainage under two structures.

Functions undertaken

The functions under which costs are established vary by service as follows:

Table 34: Water operating functions

Water	Sewer	Drainage
Reticulation	Collection and transportation	Single operating function
Storage	Treatment	
Treatment	Administration	
Administration		

Category of the cost

The major categories of costs under which operating costs are recorded and managed are:

Table 35: Cost categories

Category	Description	Key Forecast Drivers
Labour	Council's internal staff	Forecasting costs based on amalgamated Council organisation structure
Labour on-costs	The on-costs associated with Council's staff including superannuation, long service leave, annual leave and sick leave	Forecasting costs based on amalgamated Council organisation structure and harmonised employee policies
Consultants	External expertise engaged by Council where appropriate to supplement internal staff	One off consulting projects such as Integrated Water Resource Planning and investigations into possible expansion of serviced areas
Hire and contracts	Provision of services to Council where it has been substantiated that it is more efficient to use external organisations or where temporary assistance is required to supplement Council's internal resources	Potential changes in sludge and biosolids management practices. Items listed under the Contracts heading in section 8.2.1 below
Materials	Primarily chemicals required	Chemical market changes. Changes to water chlorination options and potential savings from Mardi WTP upgrade
Energy	Energy for infrastructure e.g. pump stations, treatment plants	Uncertain market conditions. Potential for price increases
Licence fees	Regulatory licence fees e.g. water licences	General market forces
Bulk water Purchases (water only)	Council sources treated water from Hunter Water under water security sharing arrangements and from Sydney Water to supply to customers in the Mooney Mooney and Cheero Point where this is the most efficient supply option	Transfers to Hunter are assumed to be net zero value. Sydney Water pricing similar to Central Coast price

Category	Description	Key Forecast Drivers
Other	**Minor other needs**	**n/a**
Corporate overheads for support services	Council operates a shared support services structure whereby services common across all of Council's operations are provide from a centrally controlled unit. Examples of these services are finance, people and culture and information technology	Revised approach under the amalgamated Council (as described below)
Advertising, phone, insurance	Expenses associated with these activities	General market forces
Road opening fees	The cost to roads and drainage for footpath and road reconstruction post invasive water and sewer works	General market forces
Plant and fleet	Fleet is the cost of hire of small plant, car, operator	Revised Plant & Fleet requirements under amalgamated Council

These categories are broadly similar to those adopted by the former Councils with the exception of fleet.

An outcome of the Council amalgamation and associated restructure, the way some services are delivered has changed, in particular:

Plant and Fleet

The Plant and Fleet business provides a range of small and large plant, mobility solutions, asset management and maintenance services for Council and other external agencies.

The unit operates on a zero net budget and customer fees are calculated in order to cover costs.

All assets provided to the customer business units (including the Water and Sewer Units and the Roads, Transport and Drainage Units) are as an internal fully maintained operating lease, as well as the cost of fuel. For small plant hire the cost of fuel is not included in the hourly, daily or monthly lease fee.

Wet hire customer units may be assigned Council or contractor equipment depending on availability. Council wet hired trucks and plant include the asset and labour cost, however the contractor cost depends upon agreed rates.

The Plant and Fleet Unit's internal fees are applied consistently to each internal Unit and include:

- scheduled maintenance
- rectification work where the item is damaged

- asset modifications may requested by the business unit or
- end of lease unfair wear and tear.

As part of the organisation restructure, plant and fleet requirements and staff vehicle policies have been reviewed to ensure they are efficient and support the business.

Support Services Overheads

Organisational support services functions are shared across the whole of council. Council has two types of overheads – direct and support services.

Council's budgets have been prepared using zero based budgeting technique which includes both direct and support services overheads. Council prepares a quarterly forecast based on the latest information.

Direct overheads are within each department/service area and relate to the management of services within the department/service area. Direct overheads are allocated with the department/service area based on the time and effort the management team spend in supporting each service within their department/service area.

Council's support services overheads encompass the cost for Council's support services which are provided to the organisation as a whole and include the following:

- CEO's Office
- Governance - Legal Services, Internal Audit, Internal Ombudsman, Government Information Public Access (GIPA), Councillor Support, Insurance and Risk, Procurement and Stores and Project Management
- People & Culture - Talent Acquisition, Payroll, Workforce Health and Safety, Learning and Development and HR Business Partners
- Information Management and Technology – Digital Information Services, Technology and Customer Service, Architecture Design and Planning, Application Support, Project Services and Business Partnering
- Finance – Financial Performance and Partnering, Assets, Systems, Revenue, Water Billing, Credit Management, Accounts Payable and Treasury and Taxation
- Connected Communities - Community Engagement, Communications and Corporate Strategy.

Costs for festivals and events such as New Year's Day and Australia Day celebrations are not included as part of support services.

Support service costs are treated as overheads and are allocated across services and service areas based on operating expenditure.

Council's actual allocation of support services is performed monthly and is based on operating expenditure.

The overall monthly actual organisational operating expenditure is used to calculate the overheads allocated on a monthly basis. That is for support services the operating

expenditure incurred during the month is allocated out across services and service areas. The operating expenditure for Council's services and service areas (excluding support services) is used as the basis for the allocation. For example if the overall support services operating expenditure for the month is $6.8m and the overall operating expenditure for overhead allocation is $31.4m then the operating expenditure from the each of the water, sewer and drainage funds is taken as a % over the overall operating expenditure for overhead allocation as a % and is applied to the overall support services operating expenditure for the month. In this example $2.3m of the $6.8m is allocated to water, sewer and drainage.

Monthly Operating Expenditure	$38,234,226
Less Monthly Support Services Costs	$(6,836,059)
Monthly Operating Expenditure for Overhead Allocation	$31,398,167

	Monthly Operating Expenditure	**% of Total**	**Monthly Overheads Allocated**
Water Fund	$4,508,646	14.4%	$981,630
Sewer Fund	$4,192,503	13.4%	$912,798
Drainage Fund	$1,635,475	5.2%	$356,078
	$10,336,623	32.9%	$2,250,506

Energy costs

Energy costs are a significant component of operating costs for water, sewerage and drainage functions. At this point of time there is a high degree of uncertainty around the future level of costs that will be incurred for all Australians and Australian businesses.

Council's current supply contracts are in two major categories:

- two large market contracts – former Wyong Council to expire on 31/12/2018 and former Gosford Council to expire on 31/12/2019.
- one small market contract due to expire 30/06/2019.

It has therefore been necessary to predict the costs associated with the new contracts. The electricity cost forecast produces estimated monthly costs for all National Meter Identifiers (NMIs) by multiplying quantity data by tariffs for each individual building block component. Because of the quantity, water and sewerage electricity is purchased through the large market system.

Key sources of data:

- Large market and street light retail electricity tariffs are estimated based on the forecast information in the AEMO *"Retail electricity price history and projected trends"* report published 21 September 2017 (AEMO, 2017).

- Network costs, larger renewable energy target (LRET) component, Small Renewable Energy Scheme (SRES), Market system operator charges components have all been drawn from the Jacobs report (2017).
- ESS component was calculated by using information from the NSW Government's 2015 report Review of the Energy Saving Scheme (NSW Government, 2015).

An overview of the key elements of the categories of the material direct costs of water, sewer and drainage are as follows:

Table 36: OPEX key elements

	Water	Sewer	Drainage
Labour and associated on costs	135 FTEs compared to historical (as at June 2018)	141 FTEs compared to historical (as at June 2018)	33 FTEs compared to historical (as at June 2018)
Consultants	Key contracts overall step change	Key contracts overall step change	Key contracts overall step change
Hire and Contracts	Overall step change	Overall step change	Overall step change
Materials	Chemical price and quantity overall step change		
Energy	See commentary above		No material costs
Bulk Water Purchases (water only)	For purchases of bulk water from Hunter Water and Sydney Water – the forecast quantities are based upon their respective 2016 price submissions, the price is as agreed to by IPART in its price determination for these businesses (Council has no information that supersedes this information).		

As a business, Council is subject to typical external economic pressures on its operating costs across all aspects of its price regulated businesses. The key pressures are detailed under each of the water, sewerage and stormwater drainage sections below. Despite these pressures Council has contained its operating costs below the level allowed for by IPART in the price for 2016/17.

As part of its operating cost forecast framework Council carefully considered where efficiencies could be achieved over the proposed four year price period. However the organisational and operational changes that have resulted from establishing Central Coast Council plus the recent appointment of a new Chief Executive Officer are still to be fully bedded down. As a result of these changes identifying key areas of efficiency over the next few years is very difficult.

However, operating costs for each of water, sewerage and stormwater drainage are below the comparable 2016/17 costs in 2018/19 terms.

8.2.1 Forecast operating costs - Water

Council's forecast operating costs for water for the proposed four year price period are as follows:

Table 37: Central Coast Council forecast operating costs

Cost categories	2019/20
Storage, abstraction	8.3%
Purchase of bulk water / water expense	0.8%
Treatment	25.8%
Reticulation	46.1%
Allocated Support Services Overheads	19.0%

Table 38: Forecast OPEX for water ($000 2018/19)

Water ($'000)	2019-20	2020-21	2021-22	2022-23
Labour	12,297	12,361	12,349	12,336
Oncosts	1,748	1,748	1,748	1,748
Consultants	3,040	2,614	1,500	1,517
Hire and Contracts	4,430	4,576	4,657	4,747
Materials	5,357	5,461	5,709	5,698
Energy	4,891	4,573	4,766	4,878
Licence Fees	734	835	920	962
Bulk Water Purchases	342	342	342	342
Other	868	870	870	870
Support Service Overheads	8,602	8,602	8,602	8,602
Advertising, phone, insurance	12	7	7	7
Road Opening Fees	110	110	110	110
Plant and Fleet	2,745	2,745	2,745	2,745
Total water	45,176	44,845	44,326	44,564

Water quality

The maintenance of water quality is of paramount importance to Council. Council is continuing its proactive water mains cleaning program in an effort to further reduce water quality complaints.

Council has commenced the implementation of an enhanced chlorination strategy to reduce chlorine residuals throughout the water reticulation system, in accordance with NSW Health expectations and to maintain compliance with the Australian Drinking Water Guidelines.

Environmental issues

Changed legislation has stipulated that chlorinated water discharged from operational procedures, such as water main flushing and reservoir cleaning work, be de-chlorinated before being released into the drainage or sewerage system. Water resulting from high turbidity often is tankered away and disposed of at the treatment plants.
This has changed operational procedures and an additional cost of purchasing dechlorinating tablets.

Chemicals

Improved contract conditions and the type chemicals used will see a reduction in chemical costs. These reductions include:

- use of calcium Hypochlorite briquette
- dosing Tuggerah 2 Reservoir - Cost of liquid chlorine gas for future Tuggerah 2 dosing strategy to maintain chlorine levels in the system
- Mardi Water Treatment Plant – Change in flocculant from Alum to Ferric Chloride.

Labour

Post the 2016 Council amalgamation and the new organisation structure, there is a slight sift upwards in relation to engaging full time employees. This is a result of reviewing operations, providing consistent pay scales and changes in the monitoring and dispatch areas of the water and sewer business.

IT Licensing

Council uses proprietary software to assist it to carry out its specialist work in the water and sewerage system. This submission predicts expected increases in licence fees during the determination period. It is expected that licence fees will increase over the determination period for:

- engineering specification system implementation using GISSA Australia and WaEx data transition to the AMS using Open Spatial.
- implementation of an Engineering Drawing Management system (cloud based for all assets accessible from desktop and field computers). The system commenced as a capital project but there will be monthly fees incurred starting from mid-2021 (as an operational expense)

- risk assessment software - ATRISK per user licence (one user)
- scheduling software for the Operations Centre
- leak detection software.

Contracts

Ongoing contracts estimates include:

- SafeGroup Annual SCADA Support -In the last few years a significant amount of budget for automation has come from capital works programs through treatment plant and pump station upgrades. The SCADA upgrades have been a requirement of these programs and hence capitalised. The focus for the future budget is on operations and provision of technical support to operate, maintain, standardise and merge the two separate SCADA system domains.
- water main leak detection costs estimated at- $350/km for 2,000km per year during the price path
- maintenance of temporary chlorine analysers
- maintenance costs for in-line water network real-time water quality analysers
- Mangrove WPS RM inspection - budget based on non-destructive inspections
- water trunk main inspections - destructive and non- destructive condition assessments in critical water mains
- Upper Mooney Dam Water Pump Station Rising Main inspection - budget based on non-destructive inspections
- odour and corrosion and WSU research - inflow / infiltration program including: Smoke testing and CCTV inspections
- engineering drawing digitization. Based on Water and Sewer engineering drawing digitation of former Gosford (~30,000 x $2 / drawing = $60,000 + hard copies and register QC/QA ~$50,000); and Wyong (~25,000 x $2 / drawing = $50,000 + hard copies and register QA/QC ~$50,000) it is expected to by some $210,000
- external lab analysis required to meet operating licence and guideline conditions
- asbestos disposal in two depots
- choke bins -$132.84 per service, a weekly service for Erina and Charmhaven depots.

Consultants

- Council will need to secure specialist consultant services to assist in the Central Coast Integrated Water Resources planning. This project is essential for Council to fulfill its obligations under the DoI-Water regulations. Council is working together with Hunter Water and DoI-Water in development of the Lower Hunter Water Plan (LHWP). As this plan is developed Council will need to engage specialist consultants to develop its Integrated Water Resources Plan that aligns with the LHWP. This is a periodic expenditure with the major impact on opex in 2019/20.

8.2.2 Forecast operating costs - Sewerage

Council's forecast operating costs for sewerage for the proposed four year price period are as follows:

Table 39 Forecast OPEX for sewerage ($000 2018/19)

Sewer ($'000)	2019-20	2020-21	2021-22	2022-23
Labour	13,572	13,637	13,624	13,612
Oncosts	1,840	1,840	1,840	1,840
Consultants	1,170	978	1,090	1,203
Hire and Contracts	7,596	7,613	7,528	7,312
Materials	3,391	3,431	3,431	3,431
Energy	6,187	6,030	5,985	6,065
Licence Fees	446	507	514	556
Other	955	958	938	938
Support Services Overheads	8,757	8,757	8,757	8,757
Advertising, phone, insurance	8	3	3	3
Road Opening Fees	69	69	69	69
Plant and Fleet	2,873	2,873	2,873	2,873
Total Sewer	46,865	46,695	46,652	46,658

Sewerage operating costs by function across the 2019/20 to 2022/23 period are forecast to be:

Table 40: Central Coast Council sewerage forcast operating costs

Function	Percentage total
Collection/transportation	30.4%
Treatment	50.9%
Support Services Overheads	18.7%

Contracts

Contracts expected for the determination period include:

- SafeGroup Annual Scada Support - In the last few years a significant amount of budget for automation has come from capital works programs at sewer treatment plant and pump station upgrades. SCADA upgrades have been a requirement of these programs and hence capitalised. The focus for the new OPEX budget is on operations and provision of technical support to operate, maintain, standardise and merge the two separate SCADA system domains
- engineering drawing digitisation Water and Sewer engineering drawing digitation. Based on frequencies for former Gosford and Wyong estimated at $210,000
- external lab analysis required to meet operating licence and guideline conditions
- choke bins -$132.84 per service, a weekly service for Erina and Charmhaven depots

- additional sludge lagoon dewatering at northern plants to maintain processes for EPA licence
- sludge management.

Services for the removal and beneficial reuse of biosolids from two of Council's sewage treatment plants have been sourced from the market through a competitive tender process. The costs of biosolids disposal increased significantly due to changed location of suitable disposal sites and longer haulage distances

Licence

Ageing sewer mains has necessitated additional infiltration inspections using smoke testing

Sampling

24x7 environmental monitoring and sampling in response to all sewer overflows to ensure environmental safety, required response and compliance.

Energy

The impacts of energy costs are explained in Section 8.2 above.

8.2.3 Forecast operating costs – Drainage

Council's forecast operating costs for the provision of drainage services over the proposed four year price period are as follows:

Table 41: Forecast OPEX for drainage ($000 2018/19)

Drainage	2019-20	2020-21	2021-22	2022-23
Labour	2,295	2,295	2,295	2,295
Oncosts	214	214	214	214
Consultants	915	975	915	975
Hire and Contracts	3,186	3,186	3,186	3,186
Materials	509	509	509	509
Energy	-	-	-	-
Licence Fees	60	60	60	60
Bulk Water Purchases	-	-	-	-
Other	42	42	42	42
Support Services Overheads	2,985	2,985	2,985	2,985
Rental Accommodation	-	-	-	-
Advertising, phone, insurance	5	5	5	5
Road Opening Fees	-	-	-	-
Loss on disposal of assets				
Plant and Fleet	773	773	773	773
Total	10,985	11,045	10,985	11,045

8.3 Operational Efficiency Initiatives

Within the proposed four year determination capex plan, there are 33 projects comprising a total of $8.897M that are driven by business efficiency objectives. The resulting efficiencies are included in the forecast operating of the relevant service (water, sewerage or stormwater drainage).

The proposed $1.24M project to upgrade the lime clarification system at Somersby WTP will result in lower chemical costs at this plant. Along with improved contract conditions and minor changes in chlorine dosing chemicals, Council is forecasting a reduction in chemical costs. The Mardi WTP upgrade project whilst not specifically designed to reduce chemical costs should result in savings due to the change from Alum to Ferric Chloride as the primary coagulant.

An upgrade to the Upper Mooney Dam water pump station capacity is forecast to reduce the pumping costs per kL of raw water from this source, providing minor savings in energy costs post 2023. During the determination period, Council will also commence investigation into the feasibility of an energy cogeneration process at the Kincumber STP. This would deliver energy and environmental benefits but only in the following determination period.

A saving in network maintenance costs will be achieved via the $2.15M project to replace the troublesome Tacoma South vacuum sewer network with a new low pressure sewerage system. Further spending to refurbish problem sewer pump stations such as Avoca No.7 and improved water pressure and leak management initiatives will lead to savings in network maintenance costs.

Approximately $2.63M of capital spending is being proposed for projects which will improve water and sewer system monitoring and operational activities. These projects include various instrumentation installations and mobile computing tools for staff. These will combine with our proposed new Operations Centre to improve the efficiency of both water and sewer network operations.

To further support both operational and project staff to better manage system information, $520K has been proposed to upgrade engineering drawing management, as constructed drawing certification and engineering specification documentation. A new works scheduling software system is also planned. These system improvements will increase operational efficiencies and streamline project planning by ensuring fast access to accurate, consistent technical information.

However, perhaps the most valuable efficiency initiative will result from labour savings borne out by the Council amalgamation process. Whilst the initial amalgamation of the water business and staff restructuring has been challenging, efficiencies of scale are beginning to be realised and labour costs are forecast to remain stable over the determination period despite continued growth in the region. An important driver in maintaining or reducing price impacts on the community is to deliver the increased volume of services without commensurate increase in costs. In this way, real increases in the cost per resident can be avoided.

Current projects to service growth and maintain capacity and compliance in the treatment and distribution network may add to operational costs. For example, growth in the water and sewer network and treatment plant projects such as the Charmhaven STP, Bateau Bay STP and Mardi WTP upgrades may increase the total costs for expenditure such as power, chemicals and maintenance. However the expenditure per unit of water or sewage capacity should decrease as the increased scale creates efficiency gains.

8.4 Forecast operating costs – Recycled Water

Recycled water operating costs for the 2019/20 to 2022/23 period are forecast to be $236K per annum. This is a very minor cost in relation to total operational expenditure.
The majority (74%) of this recycled water expenditure is attributed to labour that is required to directly operate and maintain the recycled water production, treatment and reticulation systems. These labour costs are calculated by a direct assessment of the required labour hours dedicated to recycled water.

The majority of the remaining recycled water opex costs are made up of materials used in operations and maintenance activities

Actual costs can then be reconciled via the actual time and materials that staff directly charge to the recycled water activities during the year. Recent historical cost reconciliation shows some variation from the anticipated costs in recent years however, this has been attributed to changes in cost allocation procedures during the Council amalgamation, which have been resolved for the 2018/19 year

8.5 Forecast capital investment

8.5.1 Introduction

Council supplies water, sewerage and drainage services to approximately 330,000 people across the Central Coast LGA.

On the 25 June 2018, Council adopted its (10 year) Resourcing Strategy which includes a long term financial plan (LTFP). The LTFP 2018-19 to 2027-28 reflects Council's desire and capacity to deliver the strategies, initiatives, works and programs identified in its adopted Community Strategic Plan (CSP), the (four year) Delivery Program and annual operational plan (Strategic Plan). This is required by the NSW Government's Integrated Planning and Reporting (IP&R) Framework. In order to achieve the community's long term aspirations as identified in the CSP, Council needs to assess its current and forecasted capacity and resources (money, people and assets) to execute this plan.

For additional detail refer the link in Appendix 10.

Uncertainty of major Asset failure during a determination period is always a risk to the business. Any Asset failure requiring immediate attention where funding was not included in the revenue requirements of water, sewer and stormwater drainage would be completed as needed. Depending on budget status at the time, existing projects may then need to be

reprioritised using an updated risk rating. Any adjustment required in the revenue would be adjusted in the following determination with appropriate adjustments made to the Regulatory Asset Base that would be rolled forward to the next determination.

8.5.2 Major components of forecast capital investment

Central Coast Council is proposing to manage capital works portfolio with a focus on providing prudent and efficient delivery of projects to maintain water and sewerage services to the community and to cater for significant forecast population growth.

The water and sewer capital works divides the asset classes into 12 distinct groups:

- network assets
- groundwater assets
- water headworks assets
- water mains
- water meters
- water pump stations
- water reservoirs
- water treatment plants
- sewer mains
- low pressure and vacuum sewerage systems
- sewage pump stations
- sewage treatment plants.

Appendix 6 includes a summary of all projects above $1M proposed for the IPART 2020-23 period, and includes a summary of those projects below $1M.

8.5.3 Deliverability

The adopted program for capital works during the four year price period represents a significant increase when compared with the historical spending levels of the former Gosford and Wyong Councils.

On an annualised basis that spending will be approximately $35M per annum higher over the 2019 determination period when compared with the spending by the former Council's since the 2013 determination. Some of this discrepancy can be attributed to the strategic deferment of the Mardi to Warnervale Pipeline project.

Council acknowledges that during the period leading up to and following the amalgamation of the two Councils project planning and delivery capability was adversely affected. This is especially so for the 2016/17 and 2017/18 years.

There was a reduction in the capability to implement project design and execute asset renewal and construction. Staff numbers reduced due to operational changes necessitated by the amalgamation.

When Council's organisation structure was finalised in 2017/18, project planning and delivery staff, resources and systems have gradually been re-established and improved. This will continue during 2018/19.

Council now has a specialist asset engineering team dedicated to project planning and a Construction and Project Management Unit to deliver both minor and major construction projects either with in-house staff or via the engagement of specialist contractors. A Council-wide Project and Procurement team has also been established and can be engaged by the water, sewerage and drainage businesses to deliver capital projects where suitable.

Council's Roads, Transport and Drainage business has the capacity to deliver drainage projects in-house or manage external specialists to deliver more complex projects.

Council's treatment operations and network operations teams have also been upskilled with staff capable of contributing to the advice, scoping and execution of capital projects.
These measures provide Council with the necessary ability to deliver a greater value of projects in the next four to five years. This increased delivery is necessary to keep pace with the needs of our growing region and the community expectation to maintain or improve service levels, especially in key areas such as a reduction in water main break frequency.

8.5.4 Overview of forecast capital investment

Overview

Council has framed its capital expenditure program over the proposed four years of the price path in two parts:

- **business as usua**l - reflecting the ongoing capital investment required to maintain service levels and allow for increasing service demands resulting from population increases
- **capital investment specific to the period** – capital investments that are one-offs.

All major projects have an initiation template which describes the major facets of the projects.

Forecast Capital expenditures are currently based on an internal forecasting methodology. The actual cost for the project is defined more accurately prior to final internal approvals when project designs and other details are determined via cost and options analysis. Where available Council uses standard industry rates for forecasting but does not go to the general market to further validate the project cost at the forecasting stage of the budget process

A business case is also required which includes information relative to the:

- strategic objective – purpose, objective, benefits
- regulatory alignment – regulatory requirements
- options – historical renewal forecasts, critical business drivers, forecast, structural defect risk forecast
- business risk – critical success factors, preferred options

- financial aspects – cost certainty (inclusive of known and unknown costs which pose an impact)
- capital expenditure
- operating expenditure
- revenue
- recommendations
- approvals
- variations
- final report.

Further information is available in **Appendix 7.**

A summary of Council's forecast capital expenditure over the proposed four year price path (including a 5th year forecast) is as follows:

Table 42: Forecast Capital Investment for water, sewerage and stormwater drainage ($000 2018/19)

	2019/20	2020/21	2021/22	2022/23	4 year Total	2023/24 Forecast
Water	21,662	69,662	46,217	23,329	160,870	8,742
Sewerage	39,796	34,394	41,884	36,537	152,611	34,714
Stormwater Drainage	10,385	10,435	10,635	10,700	42,155	10,230
Total	71,843	114,491	98,736	70,566	355,636	53,686

Table 43 Capital Investment Business as usual ($000 2018/19)

	2019/2020	2020/2021	2021/2022	2022/2023	Total
Water	11,390	23,346	22,080	18,164	74,980
Sewerage	22,687	18,251	20,327	22,194	83,459
Stormwater Drainage	9,965	9,815	9,915	9,980	39,675
Total	44,042	51,412	52,322	50,338	198,114

Council's proposed capital investment specific to the proposed price period is as follows:

Table 44 Capital investment specific to the proposed period ($000 2018/19)

	2019/2020	2020/2021	2021/2022	2022/2023	Total
Water	10,272	46,316	24,138	5,165	85,891
Sewerage	17,110	16,142	21,557	14,343	69,152
Stormwater Drainage	420	620	720	720	2,478
Total	27,802	63,079	46,415	20,228	157,524

Council's Water, Sewer and Stormwater Drainage Units will focus over this period on capacity building and improving knowledge of the asset base. The strategies to be developed and implemented will improve Council's development and delivery of an optimised capital expenditure program.

Council has a framework for identifying and prioritising capital expenditure with a gateway approval process to ensure efficient and prudent assessment of capital works. This offers flexibility to reprioritise capital projects as needs change. Central Coast Council has multi-criteria risk assessment methodology across all asset classes.

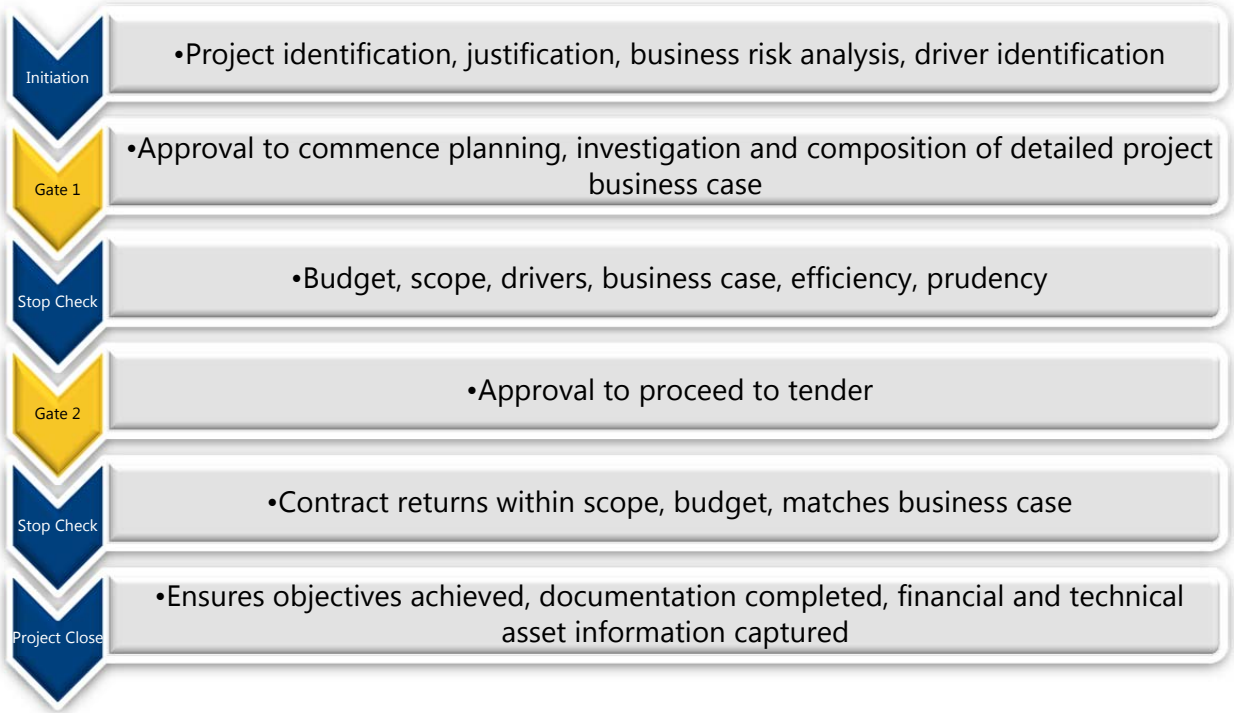

Figure 12: Central Coast Council's capital works gateway approval process

The process presented is consistent with the risk management process as detailed in AS/NZS 4360:2004. This process is illustrated below in **Figure 13:** Risk Management Process

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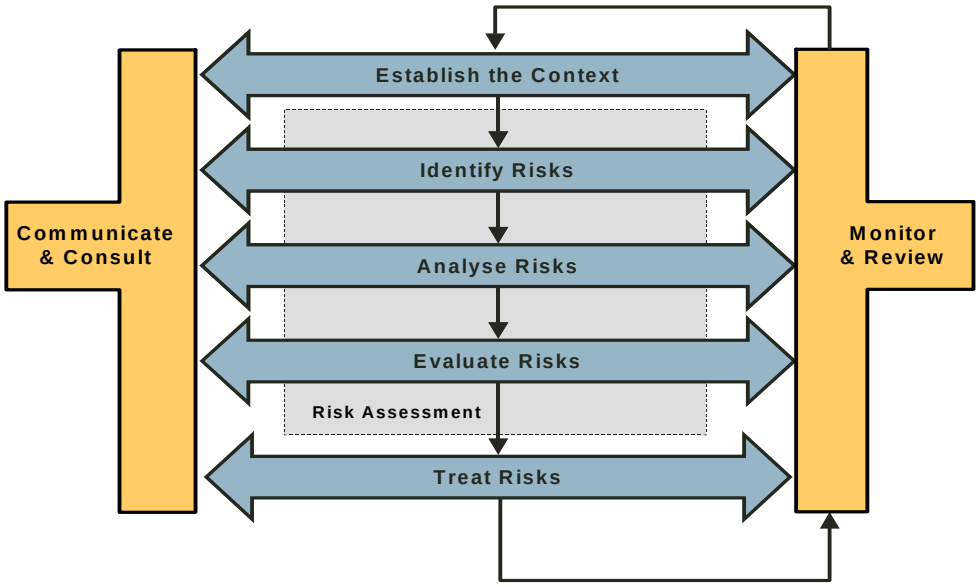


Figure 13: Risk Management Process

Establishing the risk informs management of the consequence and likelihood of failure. The scope of this risk management process involves the identification and evaluation of asset risks that have impacts on:

- legal / regulatory outcomes
- health and safety
- service delivery (includes levels of service)
- community impacts
- environmental damage
- financial loss.

The risk management and reprioritisation process is applied at the asset category level to all capital works projects initiated by the Water and Sewer business. Council's combined asset management plan contains the methodology criticality and risk prioritisation for renewals, upgrades works to new and existing water and sewerage asset classes. The document also summarises procedures for capital and operational works and roles and responsibilities.
A full description of this process is covered in Council Project approval process and project initiation template which can be provided to IPART and its consultants during the review process. These documents are proprietary Council information.

8.5.5 Water - Forecast Capex

Business as usual

Council's business as usual capital investment into water infrastructure is forecast to be invested in the following asset categories

Table 45: Water business as usual – Capital investment by asset type ($000 2018/19)

	2019/2020	2020/2021	2021/2022	2022/2023	Total
Groundwater	0	0	50	150	200
Headworks assets	1,875	3,177	7,524	4,738	17,314
Water Mains	2,568	2,015	1,946	2,175	8,703
Water Meters	1,151	1,151	1,151	1,151	4,603
Water Network assets	309	608	1,034	917	2,867
Water Pump Stations	873	551	885	1,536	3,846
Water Reservoirs	682	2,245	4,085	3,080	10,092
Water Treatment Plants	3,932	13,599	5,405	4,417	27,353
Total	11,390	23,346	22,080	18,164	74,978

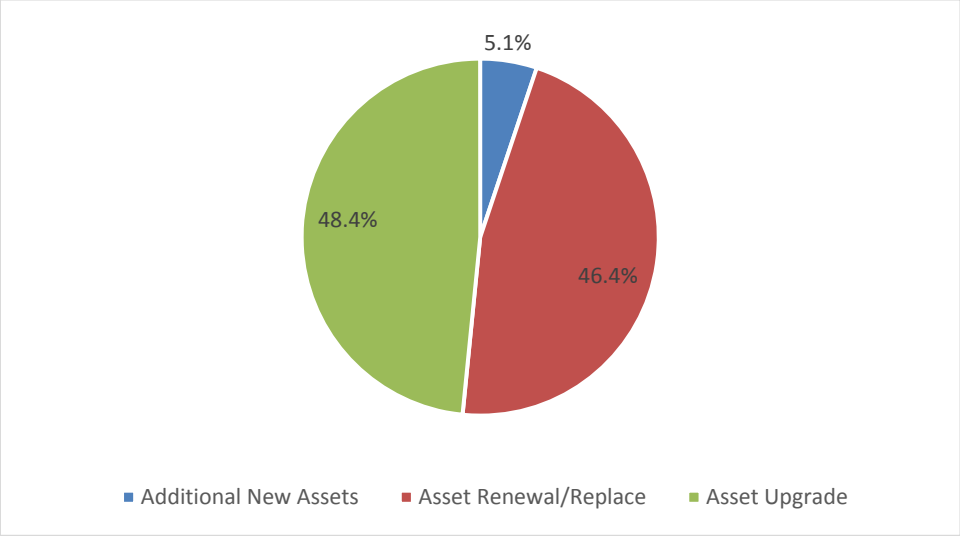


Figure 14: Water business as usual – Capital investment

Figure 14 provides an overview for the capital investment proposed for the determination period.

Capital investment specific to the proposed price determination period

Council is proposing that the revenue variance identified in the water business through the last pricing determination be applied to delivering water specific infrastructure that will benefit the whole community.

Council's capital investment into water infrastructure specific to the forthcoming price period is forecast to be invested in the following asset categories as per Table 46 and Figure 15.

Table 46: Capital investment program specific to the proposed price period ($000 2018/19)

	2019/2020	2020/2021	2021/2022	2022/2023	Total
Water Mains	9,246	45,654	23,389	4,633	82,923
Water Network assets	494	130	217	0	840
Water Pump Stations	266	266	266	266	1,064
Water Treatment Plants	266	266	266	266	1,064
Total	10,272	46,316	24,138	5,165	85,891

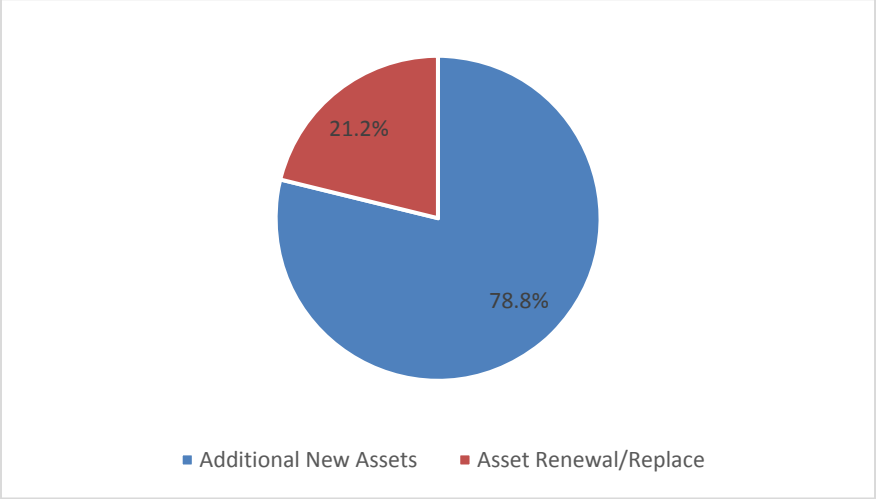


Figure 15: Water capital investment specific to upcoming determination period

8.5.6 Major projects to be delivered over the period

Mangrove Creek Dam Spillway and Dam upgrades

Mangrove Creek Dam is being operated with a lowered operating level so that it can meet dam safety requirements in relation to its acceptable flood capacity.

The overall objective of the project to upgrade the dam spillway is to reduce the risk and provide confidence in securing water by providing the necessary flood capacity. Other work will also be undertaken in conjunction with the upgrade. The total investment over four years will be $6.8m ($18/19).

The works to rectify the flood capacity was proposed in the former Gosford and Wyong Councils' pricing submissions to IPART in September 2012.

On reviewing the Councils' proposal, Oakley Greenwood (an IPART consultant) concluded that the "JWS – Mangrove Creek Dam upgrade (water) for revised Probable Maximum flood (PMF) event should be deferred on the basis that it is not required in the 2013 Determination and Gosford Council can comply with Dam Safety requirements by operating the dam at 80% of full storage level".

IPART agreed with Oakley Greenwood.

The deferral of the Mangrove Creek Dam spillway upgrade was premised on the analysis that the proposed Tillegra Dam would be in place. As Tillegra dam did not proceed, the loss of this potential supply placed Central Coast Council in a position of operating a sub optimally performing dam in a growth region. Also until the storage capacity is reinstated, Central Coast Council has a reduced ability to supply water to Hunter Water under the Hunter /Central Coast pipeline Agreement. It is noted that the agreement and associated water transfer ability is an element of the State Government's Lower Hunter Water Plan 2014. Council is seeking the necessary funds to remedy the situation.

Council regards this need for supply so seriously it has undertaken significant pre-planning and design works, with the construction timed to start in 2019 and completed in 2023. Completion of this project also aligns with community expectation expressed during the consultation starting water supply security should be a priority.

Upper Mooney Dam raw water pump station

Another key project involves increasing the capacity of Upper Mooney Dam raw water pumping station from 30 to 60 ML/d. The upgrade will provide security of supply, enabling maximum yield and simplifying water treatment during average day demand conditions at Somersby water treatment plant. The design component of the project has commenced and is expected that Council will invest approximately $4.7M.

Timing of delivery: Start 2019 Completion 2023

Mardi Water Treatment Plant major upgrades

The plant will undergo major capacity and process upgrades (run as multiple projects) that will secure 160 ML/d of drinking water production to Australian Drinking Water Guideline standards. The increase in capacity will cater for peak day demand for the current state and future growth of the region.

This upgrade, in conjunction with the proposed Mardi to Warnervale pipeline, will assist in honouring the inter region transfer commitments with Hunter Water Corporation and forms part of the State's Lower Hunter Water Plan. The design for this project is well under way with the project due to start in 2018 with completion in 2023.

Reservoir program

Council's program is for proactive renewals of reservoirs based on periodic structural condition assessments of risk and operational performance. It is proposed that Council invests approximately $9M in renewals and upgrades the 2019 determination period. Upgrades include roofing, security, electrical and control equipment, internal and external coatings.

8.5.7 Funding of Water Capital investment

In the normal course Council's proposed capital investment program would be borne by current and future customers via the return on capital and depreciation building blocks. There are three major projects to be delivered the costs of which Council is proposing not be fully borne by customers namely:

There are three major projects to be delivered:
- upgrade to Gosford Central Business District
- Mardi to Warnervale trunk main
- infrastructure renewal program.

Upgrade to Gosford Central Business District

Council is also investing in the growth of the Central Coast by identifying capital works in Gosford CBD and is expecting to undertake major water infrastructure upgrades of the water network in and around the CBD.

These upgrade will address requirements for better pressure management, reservoir storage and mains velocity. The upgrades will be made up of the construction of 7,720m of new water mains, key system valves and major transport infrastructure crossings. The program also considers provision of a higher standard of service on a risk managed basis supporting high density development.

The NSW Department of Planning and Environment has made a commitment to fund the entirety of the upgrades. Council is expected to invest approximately $10.9M over the IPART period

The impact of this is that the capital costs of this program are not included in the prices customers will pay either now or in the future. Operating costs will form part of the Council's submission to IPART in the following price period commencing 1 July 2023. Total forecast cost over the determination period is $10.9M.

Timing of delivery 2022/23.

Mardi to Warnervale trunk main (M2WP)

The proposed 10 km 750 mm diameter trunk main pipeline from Mardi to Warnervale will increase drinking water transfers and honour the Hunter Water Corporation and Central Coast Council water transfer agreement. The pipeline is essential to support the future growth in the northern areas of the Central Coast.

Over the 2013 price period the Councils have committed significant resources and progressed and refined the detailed design, environmental impact assessment and technical specifications for the M2WP. Funds have been expended on land acquisitions.

Timing of delivery: 2021/22

Total project cost $60.5m

Infrastructure renewal program

Council commissioned an independent report on the status of it infrastructure which identified a capital investment backlog in infrastructure renewals.

As has been noted, there was a decline in the capital investment in water infrastructure. In addition Council's water network has been suffering recently from a number of relatively minor failures which reinforces the need to make an investment in infrastructure renewals.

Council's proactive water reticulation and trunk main renewal program region wide assesses mains that have high consequence of failure and high failure rates indicating they are nearing the end of their useful life.

Council is expecting to invest $13.25M over the four years from 2019.

Council has provision for operational flexibility and provide water quality improvements and intends to invest $4M over the period.

8.5.8 Government funding

Council has been successful in obtaining 100% funding for the Gosford CBD infrastructure upgrade.

8.5.9 Revenue variance

Council recognises the significant underspend in its capital works and intends to maximise the 2019 determination to make up the shortfall, using these funds to benefit all customers. Council is proposing that this variance be applied to the following forecast capital investments that benefit all customers:

Mardi to Warnervale trunk main

Council proposes to investment $30M into this investment (approximately 50% of the total investment).

This project will deliver improved water security – the trunk main is two way, allowing water flows from and to Hunter Water and need to be completed to complete Council's contractual obligations to Hunter Water.

Infrastructure renewal program

This capital investment will improve service performance of the water network across the Central Coast and has the potential to reduce future operating maintenance costs.

Should Council's proposal to fund these investments not be acceptable to IPART then:

- the proposed $30m funding currently included in the revenue needs for the Mardi to Warnervale trunk main should be excluded i.e. The capital needs that driver revenue needs increased.
- The infrastructure renewals program will not be undertaken in this period but will be required in future periods the costs of which will result in future increased revenue needs.

A more detailed analysis of the water projects to be undertaken in the period 2019/20 to 2022/23 is set out in Appendix 6.

Impact assessment

A summary of the capital investment levels that will impact price over the proposed four year price period is as follows:

Table 47 Summary of capital investment program for water ($000 2018/19)

	2019/2020	2020/2021	2021/2022	2022/2023	Total
Capital investment					
Business as usual	11,390	23,346	22,080	18,164	74,980
Capital investments specific to the period	10,272	46,316	24,138	5,165	85,891
Total capital investment	21,662	69,662	46,217	23,329	160,871
Contributions					
State Government Grant	1,656	2,848	5,883	483	10,869
Revenue variance funding	6,712	25,023	11,763	4,682	48,179
Total contributions	8,368	27,870	17,645	5,164	59,048
Net capital investment funded via the price	13,294	41,792	28,572	18,164	101,822

This investment of approximately $25M pa is approximately the same as that allowed for in in the prices set in 2014. Council considers that this level of investment combined with constrained operating costs do not impose a socially unacceptable pressure on price

8.5.10 Sewerage - Forecast Capex

Business as usual – capital investment by asset type

Council's business as usual capital investment in sewer infrastructure is proposed to be invested in the following asset categories.

Table 48: Business as usual program for sewerage ($000 2018/19)

	2019/2020	2020/2021	2021/2022	2022/2023	Total
Sewage Treatment Plant	3,070	6,134	9,144	10,371	28,718
Sewerage LPSS - Vacuum systems	1,280	805	455	130	2,670
Sewerage Mains	2,917	2,303	2,209	3,486	10,915
Sewerage Network assets	176	165	493	387	1,221
Sewerage Pump Stations	15,244	8,844	8,025	7,820	39,934
Total	22,687	18,251	20,327	22,194	83,459

Council's four year business as usual capital investment forecast by business driver is as follows

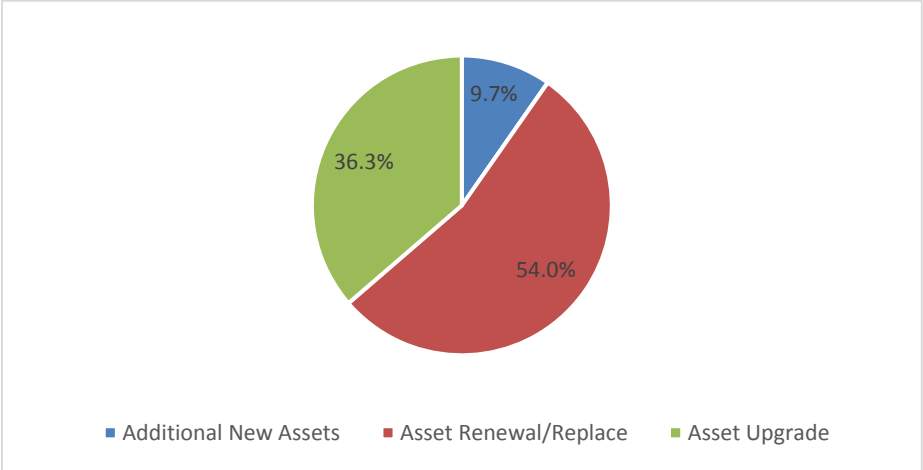


Figure 16: Sewer business as usual – Capital investment by asset type

Capital investment specific to the proposed price determination period

Council is proposing that the revenue variance identified in the sewer business through the last pricing determination be applied to delivering sewerage specific infrastructure that will benefit the whole community.

Council's capital investment into sewerage infrastructure specific to the forthcoming price period is forecast to be invested in the following asset categories as per Table 49 and Figure 17.

Table 49: Drivers of capital investment program over the period ($000 2018/19)

	2019/2020	2020/2021	2021/2022	2022/2023	Total
Sewage Treatment Plant	1,731	1,731	1,731	1,731	6,923
Sewerage Mains	9,664	9,219	13,926	5,571	38,380
Sewerage Network assets	550	550	550	550	2,200
Sewerage Pump Stations	5,165	4,643	5,351	6,492	21,651
Total	17,110	16,143	21,558	14,344	69,155

Council's four year capital investment specific to the proposed price determination period by business driver is as follows:

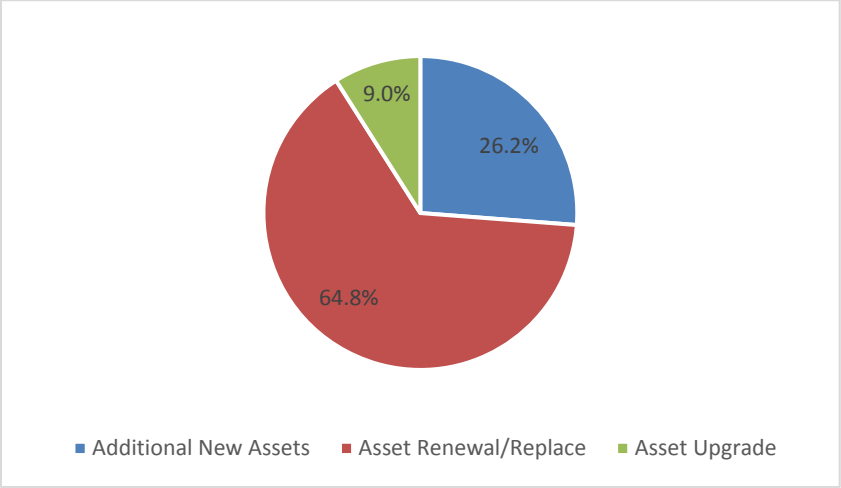


Figure 17: Sewer capital investment specific to upcoming determination period

8.5.11 Major projects to be delivered over the proposed price path

Central Coast Council is planning to upgrade its sewage treatment plants to address both growth and asset and service reliability.

Charmhaven STP

Charmhaven STP has a catchment that includes the majority of the northern greenfield growth areas including Warnervale, Wadalba, Hamlyn Terrace and Woongarah. This project was previously proposed for inclusion in the last determination period (major augmentation including construction of third aeration tank) however at the time the former Wyong Council did not have a sufficiently detailed capacity assessment to support the projects inclusion, and a preliminary analysis based on aerator performance and forecast population increases demonstrated there was scope to defer the proposed works. Since 2012 loads on the plant have continued to increase and a comprehensive process and capacity review was completed. That review has identified that the plant is operating at the limit of its aeration capacity and recommended a staged suite of process upgrades to address risks of non-compliance with current EPA licence requirements, whilst catering for growth in the catchment area. Council will upgrade the treatment plant to mitigate these risks in a staged manner which remains adaptive to future requirements and allows the deferral of the construction of the third aeration tank (significant capital investment).

Proposed works for inclusion in this submission include aeration upgrade and renewal of aeration tank civil structures (including bioselector modifications), covering/coating/ventilation of the existing inlet works, upgrades to incoming flow management and installation of sludge dewatering infrastructure.

Bateau Bay STP

Process improvements are planned to optimise treatment capacity of the existing treatment plant. This interim upgrade is required to minimise the risk of future non-compliance with EPA licence requirements and expand capacity allowing the deferral of the next major

augmentation of the plant until 2025-2030. The Bateau Bay Sewage Treatment Plant was subject to alleged licence breaches with respect to daily volumetric load limits, total annual suspended solids and total nitrogen limits during the last determination period. The plant was required the renewal of a number of mechanical and electrical assets so a detailed condition and capacity assessment was undertaken to determine the most appropriate upgrade plan for the STP and ensure that future renewal expenditure complemented this upgrade plan.

Proposed works as part of this price submission includes, the refurbishment/upgrade of existing primary sedimentation tanks and clarifiers on the site modifications to flow splits across secondary treatment process trains, upgrades to flow measurement and control within the process trains, upgrades to sludge processing at the site, renewal of aging electrical infrastructure and improvements to odour management at the site.

Sewer mains renewals and upgrades

Council intends to invest $11.2M in renewals, upgrades at key additional treatment assets at Kincumber, Woy Woy, Gwandalan, Mannering Park and Toukley sewage treatment plants to improve efficiency of the treatment process. These works include mechanical, electrical, and civil renewals and upgrades to ensure efficient treatment and comply with EPA licences.

Main rehabilitation program

Council bases its region wide proactive sewer gravity and rising main rehabilitation program on the Gravity Sewer Main CCTV Inspection program. Using trenchless techniques the rehabilitation program will reduce or minimise:

- environmental impacts to waterways;
- public health and safety risk,
- critical infrastructure and third party property damage risk, and
- service disruptions.

Council intends to invest $9.8M over the determination period.

Pumping station renewal

Council's detailed asset inspections and assessments inform a comprehensive sewerage pumping station renewal and upgrade program. Pump station renewals address both asset and service reliability and growth. . Council intends to invest $43.8M on upgrades and renewals to mechanical, electrical SCA and civil works over the period.

A more detailed analysis of the water projects to be undertaken in the period 2019 to 2023 is set out in Appendix 6.

8.5.12 Funding of sewerage capital investment

In the normal course Council's proposed capital investment program would be borne by current and future customers via the return on capital and depreciation building blocks.

There are two major projects to be delivered the costs of which Council is proposing not be fully borne by customers namely:

- upgrade to Gosford Central Business District
- infrastructure renewal program.

Upgrade to Gosford Central Business District

This investment is critical to promote growth of the Central Coast. This project is scheduled for completion in 2023.

The upgrades comprise of the construction of 6,420 m of new sewer mains, two new sewage pumping stations and major sewerage transport infrastructure crossings. The investment will address performance requirements for the sewerage network under both dry and wet weather flow conditions to enable reliable service to support the growth within the CBD.

Council has been successful in sourcing funds from NSW Government to cover the entire cost of the water and sewer Gosford CBD upgrades. The impact is that the capital costs of this program are not included in the prices customers will pay either now or in the future. Most operating costs will form part of the Council's submission to IPART for the 2023 price period.

Total forecast cost is $26.0m Council has been successful in obtaining 100% funding for the Gosford CBD infrastructure upgrade.

Infrastructure renewal program

Council commissioned an independent report on the status of it infrastructure which identified a capital investment backlog in infrastructure renewals.
As has been noted in the reporting of historical performance there was a decline in the capital investment in sewerage infrastructure. In addition Council's sewer network has been suffering recently from a number of relatively minor failures which reinforces the need to make an investment in infrastructure renewals.

8.5.13 Revenue variance

Council recognises the underspend in capital works programs by it and the two former Councils during the term of IPART's 2013 determination and Council intends to make up the shortfall using these funds during the term of 2019 determination.
Council is proposing these funds be applied to the following forecast capital investments that benefit all customers.

Infrastructure renewal program

This capital investment will improve service performance of the sewer network across the Central Coast LGA and has the potential to reduce future operating maintenance costs. Council, subject to IPART's acceptance, will fund from the revenue variance identified above on the complete Infrastructure renewals program.

Should Council's proposal to fund these investments not be acceptable to IPART then the infrastructure renewals program will not be undertaken in this period but will be required in future periods the costs of which will result in future increased revenue needs.

Impact assessment

A summary of the capital investment levels that will impact price over the proposed four year price period is as follows:

Table 50 Summary of capital investment program in sewer ($000 2018/19)

	2019/2020	2020/2021	2021/2022	2022/2023	Total
Capital investment					
Business as usual	22,687	18,251	20,327	22,194	83,459
Capital investments specific to the period	17,110	16,143	21,558	14,344	69,155
Total capital investment	39,797	34,394	41,884	36,538	152,614
Contributions					
State Government Grant	7,099	6,209	11,015	1,796	26,119
Revenue variance funding	10,011	9,934	10,542	12,547	43,034
Total contributions	17,110	16,143	21,557	14,343	69,153
Net capital investment funded via the price	22,687	18,251	20,328	22,195	83,461

Council therefore considers that this level of investment does not impose a socially unacceptable pressure on price.

8.5.14 Stormwater Drainage - Forecast Capex

The Central Coast Council is currently unifying the differing project prioritisation processes. The former Wyong and former Gosford Council methodologies are discussed below.

Identification of Stormwater Drainage - New and Upgrade Projects

At both former Councils, assessed new and major upgrade projects against the outcomes from recommendations in the core data sources, the respective Flood Plain Management Plans, overall flow studies and Trunk Drainage Studies. .

Council will continue with the methodologies to determine upcoming capital projects.

Former Wyong Shire Council

All the projects in the former Wyong LGA were assessed based on:

- flooding category of the area
- benefit/cost ratio
- impacts determined from the flood study
- high level risk assessment (for public safety)
- area/asset utilisation
- water quality/environmental impacts
- factors associated with climate change
- perceived legal liability to Council.

Cost estimation is based on comparison with similar project actuals, estimated dimensions of the assets and any other associated costs based on the professional judgement of technical officers.

Former Gosford City Council

Former Gosford LGA capital works projects are based in reactive assessment from customer requests and ongoing network condition assessments. These are then assessed on:

- risk to life
- risk to properties
- flooding and damage to public infrastructure
- accessibility during flood
- environmental damage impact
- net life cycle costing (based on standard rates and dimensions).

Factors such as estimated cost and useful life are evaluated and scored:

- risk score
- benefit score
- cost ratio.

The Project Score establishes the priority.

At the time of delivery plan development, a holistic assessment was undertaken for all of the identified projects to re-determine priorities and estimated costs

Projected capital expenditure

Table 51 Proposed capital investment – stormwater drainage ($000 2018/19)

Projected Capital Expenditure	2019-20	2020-21	2021-22	2022-23	Total
Former Wyong	4,190	3,870	3,145	3,340	14,545
Former Gosford	5,050	5,195	4,325	3,920	18,490
Combined Projects	725	750	2,445	2,720	6,640
Total	9,965	9,815	9,915	9,980	39,675

Based on the previous IPART determination there was some variance in the revenue generated and the funding utilised to meet the community demands which were evaluated to be $2.4 million. These funds would be utilised to for renewal of Council's existing Stormwater Drainage infrastructure with the focus on pipeline renewals. These projects and estimated expenditure timelines are listed below.

Table 52 Drainage capital investment program by project ($000 2018/19)

Name of the Project	Suburb	2019-20	2020-21	2021-22	2022-23	Total
Ocean Parade - The Entrance Beach Pipe Renewal	The Entrance Beach	420				420
Mimosa Avenue Pipe Renewal	Saratoga		510			510
Terrigal Bowl Open Channel Renewal	Terrigal			510	510	1,020
Tall Timbers Road to Wamberal Lagoon Channel Renewal	Wamberal		110	210	210	530
Total		420	620	720	720	2,480

8.6 Forecast Population

The demand for urban water supply is largely driven by the demographics of the region. The population, dwelling types and occupancy (person per dwelling), are key factors which affect the residential demand of the region.

Non-residential demands, which can be sub divided into commercial, industrial, institutional and recreational components, are also largely related to the size of the region's population. While most of the commercial and small scale industrial demands generally grow in line with increases in the population, the demand of some intensive industrial/ commercial customers may not. For the purposes of forecasting water sales over the price path, the demands for these intensive industrial/ commercial customers have been treated separately.

Council engaged a specialist consultant (*.id – the population experts*) to provide population forecasts for the region to 2036. The consultant used the most recent census data, 2016, from the Australian Bureau of Statistics (ABS) to forecast the future population and number of dwellings.

The population of the Central Coast region has been steadily growing for more than 15 years, a trend forecast to continue throughout the price path.

Council's population consultant provided estimated annual figures for the resident population in private dwelling, total population and the average occupancy rate. This data has been used to calculate the total number of occupied dwellings which is then subdivided in the number of standalone houses and units / flats. The subdivision into standalone houses and units / flats has been based on the Australian Bureau of Statistics (ABS) data detailed in the 2016 census.

On the Central Coast there is a portion of the population which is not connected to the town water supply. Only the estimated population connected to the water supply has been used to forecast water sales. The forecast serviced population growth pattern is shown in Figure 18.

8.7 Demand model used in this submission

Council has used the model known as the Integrated Supply-Demand Planning (iSDP) model to forecast water sales for this pricing path.

Prior to preparing the water sales forecast for this price determination, Council reviewed currently available water demand forecasting models. This review found that the Demand Side Management Decision Support System (DSM DSS) model used by the former Gosford and Wyong Councils in the last pricing submission was outdated.

That review also identified that the iSDP Model developed by the Institute of Sustainable Futures (ISF) at the University of Technology Sydney (UTS) and CSIRO for water resources planning is the most appropriate available model for the Central Coast.

The iSDP model was first developed by ISF for the Sydney Water Corporation (SWC) in the late 1990s, to enable SWC to conduct detailed water planning. This included both the development of a detailed demand forecast and of a broad range of demand management and supply options. The model was subsequently modified by SWC and later released in 2003 as the Water Services Association of Australia (WSAA) end use model (EUM).

The tool was further developed by ISF and CSIRO and has been applied to numerous cities across Australia. Hunter Water, which is working closely with Council on long term water resources planning, used the iSDP model for water demand forecasting for its latest IPART Water Pricing submission and intends to continue to use it for their long term water resource planning.

The iSDP is an end-use model based on a disaggregated analysis of consumption in individual customer categories (e.g. residential, industrial, commercial and unaccounted for water).

Individual customer categories can be broken down further into individual end users. The residential demand forecast is based on how water is used in and around the home (e.g. toilets, showers, taps, washing machines, gardens, etc.). For each end use, specific information is required for stock (number of households with each type of water appliance), water intensity (how much water each type of appliance uses) and frequency of usage (number of times and/ or duration of each use).

For non-residential customers the forecast is based on metered customer data. Such customers can be further subdivided into industrial, commercial, recreational and institutional depending upon the availability of data. Consumption for large industrial customers can be forecast separately based on historical consumption trends and future plans.

Factors such as projected population growth, the number of dwellings, occupancy rates and changes in the water appliance fleet over time are also integrated into the model.
ISF was engaged by Council to provide the latest updated model (including the latest water appliance fleet sales data), staff training and a thorough review of the Council's application of the model for the development of the water sales forecast for the pricing submission.

The review conducted by ISF is documented in the report, *Review of water demand forecasts and demand model for Central Coast Council, April 2018*

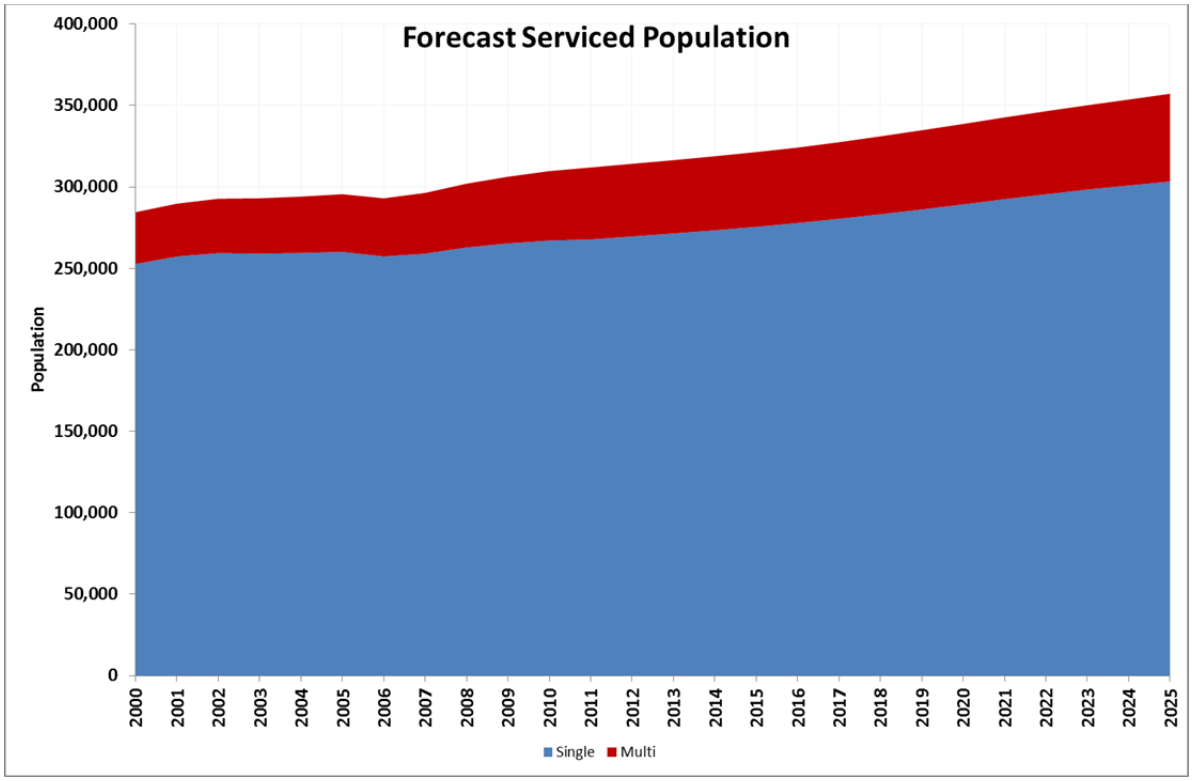


Figure 18: Forecast serviced population

8.7.1 Water services

Table 53 summarises the forecast population in private dwellings and connected population.

Table 53: Summary of population in private dwellings and forecast serviced population

Year	Central Coast Serviced Population
2019-20	334,452
2020-21	338,428
2021-22	342,178
2022-23	345,780

The predicted annual population growth for the Central Coast Council LGA as a whole over the price path is expected to be 1.1% pa.

Customer and connection number forecasts for:

- connections by service
- dwelling
- meter size

are provided in the 2017/2018 (refer Appendix 11)

Table 54: Forecast new dwellings over the price path

Year	New Single Houses	New Units /Flats/ other	Total New Dwellings
2019-20	1,206	314	1,520
2020-21	1,256	327	1,583
2021-22	1,185	308	1,493
2022-23	1,138	296	1,434

Based upon the above information Council has assessed the impact of residential changes on the fleet of meters servicing residential customers. The increase in meter numbers is provided in Table 55.

Table 55: Forecast increase in meter numbers

	2019/20	2020/21	2021/22	2022/23
20mm (stand-alone)	1,276	1,329	1,254	1,204
20mm (common meter)	15	16	15	14
25mm	18	19	18	17
32mm	5	5	5	5
40mm	9	9	8	8
50mm	5	6	6	5
65mm	0	1	0	0
80mm	1	1	1	1
100mm	1	0	1	0

Impact on non-residential services

Council has assessed the impact of the population changes on the demand for non-residential services. The increase in the number of businesses customers by property type is provided in Table 56.

Table 56: Forecast new business customers over the price path

	2019/20	2020/21	2021/22	2022/23
Stand alone	34	35	33	32
Strata common meters (excluding individually metered properties)	28	29	28	27
Strata individual meters (individually metered properties)	1	1	1	1
Mixed development	2	1	1	1
Retirement villages	50	52	50	48
Total non-residential customers	115	118	113	109

As with residential properties an assessment has been made of the changes in the meters servicing this increased customer base.

Table 57: Forecast new meters for non-residential over the price path

	2019/20	2020/21	2021/22	2022/23
20mm (stand-alone)	19	20	19	18
20mm (common meter or multiple meters)	7	8	7	7
25mm	13	13	12	12
32mm	4	4	4	4
40mm	9	9	9	8
50mm	7	7	7	7
65mm	0	1	0	0
80mm	2	2	2	1
100mm	1	2	2	1
150mm	0	1	0	0

8.7.2 Water consumption forecasts

Council's forecast water sales for the period 2020 to 2023 are provided in Table 58.

Table 58 Central Coast water sales forecast (ML)

Year	2019-20	2020-21	2021-22	2022-23
Residential	21,097	21,226	21,353	21,480
Non - residential	6,075	6,127	6,176	6,221
Total	27,172	27,353	27,529	27,701

Demand volatility mechanism

A volatility adjustment of 10% was established in the 2013 price determinations. This followed the two previous price paths where due primarily to drought water sales on the Central Coast were significantly below those provided for in the determination.

The 2013-17 forecast was developed at a time when water consumption was exposed to significant influencing factors, such as the removal of water restrictions for the first time in 10 years. There was no recent history to reliability predict how the community's water use behaviour might respond.

During this period, Council sold more water than provided for in the 2013 determination. The revenue variance from higher water sales relative to those forecasts was approximately 5%. The amount sold was however within the adjustment bandwidth.

Over the 2013-2017 period, relatively stable water use behaviour has emerged as the community has transitioned from the previous drought constrained period. Whilst annual unrestricted demands will fluctuate in response to prevailing weather conditions, there is no predicted stepwise change in likely water sales unless water restrictions are applied. Some variation of demand could occur if population growth differs from that forecast.

Reducing the adjustment bandwidth from 10% to 5% is considered an appropriate refinement to the approach applied to the 2013-2017 period.

Reduction in the bandwidth would provide greater protection of Council's revenue in the event that water restrictions are required during the next price path.

Sewerage services

Council sewerage services are not provided to all customers that receive water services. However in today's environment Council considers that it is unlikely that a new water connection will not also be required to have sewerage services provided. Therefore the forecast increase in sewerage connections matches the increase in water connections for both residential and non-residential customers.

Sewerage discharge

Non-residential customers are billed for sewerage discharge. The discharge volume is calculated by:

Water consumption x a discharge factor applicable to the industry in which the customer operates

The average discharge factor has been estimated based upon and average of the historical information over the current price determination period:
The revenue earned ÷ price = volume of sewerage discharge billed and assessing that as a proportion of non-residential water consumption.

This results in an average discharge factor of 54.3%.

8.7.3 Hunter Water Corporation

A major pipeline link between Council's supply network and Hunter Water's supply network was established during the millennium drought to enable water transfer during times of water shortage. The transfers reduce the rate of decline in the bulk water storages of the affected region until the conditions improve and the storages recover.
Individual customers are not reliant on the inter-regional transfers to meet daily water requirements. However in the event of infrastructure failure in either region the transfer system can provide an alternative supply to some locations.

Small water transfers occur on a regular basis to maintain water quality in the link. These transfers are scheduled such that under normal circumstance the transfers to the south match those to the north - resulting in a nil net transfer volume over a year.
During periods when either Hunter Water or the Council call on the pipeline agreement to supply water to manage declining water reserves, an imbalance in the annual transfer volumes would occur.

As these transfers are by their nature dependent on medium term climatic conditions prevailing at the time, the only way of realistically forecasting the transfers over the price path is to base the transfers on the weather forecast for the same period. Currently, there is no reliable method of accurately forecasting weather conditions four to five years into the future.

IPART considered this issue in the 2013 determinations when developing the approach to the cost of bulk water purchased from Hunter Water. Section 3.6 of IPART's Final Report May 2013 detailed the approach and maximum charges.

8.7.4 Addressing the costs of bulk water purchased from Hunter Water Corporation

Council proposes the charge/transfer price for water sales between Hunter Water Corporation and the Central Coast at the higher of Hunters Water's or Council's short run marginal cost.

Table 59 Maximum usage Charge for Hunter Transfers $ 2018/19

Financial year	2019/20	2020/21	2021/22	2022/23
Usage charge for transfers to Hunter Water ($kL)	0.70	0.70	0.70	0.70

8.7.5 Sydney Water Corporation

Water sourced from Sydney Water is supplied to residents in the Mooney Mooney area via the Mooney Mooney Service Reservoir. The Mooney Mooney area is within the Central Coast Council LGA and is therefore within Councils supply area under the Water Management Act 2000. This is a one way link and these customers are not linked to the Councils regional water supply system and have no alternative source.

As there is no connection between the Sydney Water Corporation system and the Councils system there is no ability to undertake water sharing between Sydney Water and Council to manage water shortages.

Over the last three years Sydney Water has provided an average of 67ML pa to meet the daily water demand. It is anticipated that requirements are unlikely to materially change over the period of this price path.

9 Revenue Requirements (2020 – 2023)

9.1 Weighted Average Cost of Capital (WACC)

IPART issued its weighted average cost of capital calculator with the relevant parameters updated as at February 2018. The parameters adopted by IPART are provided below:

Table 60: IPART Weighted Average Cost of Capital

	Current market data	Long-term averages
Nominal risk free rate	2.7%	3.9%
Inflation	2.5%	2.5%
Debt margin	1.8%	3.2%
Market risk premium	9.1%	6.0%
Debt funding	60%	60%
Equity funding	40%	40%
Total funding (debt+equity)	100%	100%
Gamma	0.25	0.25
Corporate tax rate	30%	30%
Effective tax rate for equity	30%	30%
Effective tax rate for debt	30%	30%
Equity beta	0.70	0.70

Council has reviewed these parameters and considers that the current economic environment has not changed materially since February 2018 that would require a change in these parameters. The result of this is that Council proposes a real pre-tax WACC of 4.3% being the midpoint of the WACC range assessed in IPART's WACC model.

9.2 Asset lives

In the 2013 price determination the remaining asset lives for the then existing regulatory asset base of two former councils was:

Table 61: Remaining asset life at 2013 determination (years)

	Former Gosford LGA	Former Wyong LGA
Water	81.06	82.44
Sewerage	76.99	72.44
Drainage	98.89	69.76

The asset lives for capital expenditure incurred during the price period was 100 years. These lives have been used to calculate the regulatory asset base for each of the former Councils as at 30 June 2019.

IPART, in its final price determination report 2014 requested the two predecessor councils to consider whether the asset lives set in the 2014 price determination were appropriate. Council has commenced a review of its infrastructure assets, part of this review will be to consider the appropriate asset lives to be adopted. At this point of time, Council is therefore not in a position to propose any change to the asset lives.

Accordingly for the period commencing 1 July 2019 Council has adopted:

- for the balance of the regulated asset base as at 1 July 2019 a straight line depreciation calculated on dollar weighted average remaining life based upon the lives of the two predecessor councils for each of water, sewerage services and stormwater drainage
- for capital expenditure incurred over the proposed price determination period 2019/20 to 2022/23 has adopted straight line depreciation on an asset life of 100 years.

Table 62: Weighted average life of assets

	Weighted average remaining life (years)
Water	77.2
Sewer	75.5
Drainage	80.9

9.3 Regulatory Asset Base

The opening regulatory asset base as at 1 July 2019 has been established by aggregating the regulatory asset base of the two previous councils and using a dollar weighted average life for calculating the depreciation on the opening balance for each of water, sewerage services and drainage.

The closing regulatory asset base has been established via:
Opening regulatory asset base as at 1 July 2014 + actual capex incurred by each Council during the period 1 July 2014 to 30 June 2018 + forecast capex for 2018/19 year – developer and other sources of capital contributions – depreciation allowed for in the price period 2013/4 to 2018/19 + inflation

The actual and forecast capital expenditures and the capital contributions used in these calculations are

Table 63 Actual and forecast capital expenditures and capital contributions

	2014 $'000 nominal	2015 $'000 nominal	2016 $'000 nominal	2017 $'000 nominal	2018 $'000 nominal	2019 $'000 nominal
Gosford capital expenditure						
Water capital expenditure	9,613	6,306	5,093	15,060	6,581	11,160
Sewerage capital expenditure	27,660	28,300	19,809	17,439	9,473	13,677
Stormwater drainage capital expenditure	5,614	1,734	1,944	4,405	2,221	5,460
Gosford capital contributions						
Water						
Water developer contributions	334	972	691	1,877	2,102	887
Government subsidy	1050	-	-	-	-	-
Other	123	155	49	66	111	-
Total	1,507	1,127	740	1,943	2,213	887
Sewerage						
Sewerage developer contributions	589	718	617	1,724	2,122	812
Government subsidy	-	-	575	-	-	-
other	76	1,307	72	2,588	293	-
Total	665	2,025	1,264	4,312	2,416	1,183
Stormwater drainage						
Stormwater drainage developer contributions	64	-	-	917	936	-
Government subsidy	1,329	-	-	-	-	-
Total	1,394	-	-	917	936	-

	2014 $'000 nominal	2015 $'000 nominal	2016 $'000 nominal	2017 $'000 nominal	2018 $'000 nominal	2019 $'000 nominal
Wyong capital expenditure						
Water capital expenditure	8,674	5,551	3,313	3,951	2,220	5,134
Sewerage capital expenditure	5,857	9,548	16,467	12,001	4,010	6,682
Stormwater drainage capital expenditure	8,332	6,566	4,865	6,314	6,209	4,340
Wyong capital contributions						
Water developer contributions	1,250	1,877	2,508	4,632	3,019	2,457
Other					123	
Total	1,250	1,877	2,508	4,632	3,142	2,457
Sewerage developer contributions	1,239	2,403	2,643	4,464	3,973	3,402
Other					167	
Total	1,239	2,403	2,643	4,644	4,140	3,402
Stormwater drainage developer contributions	262	695	1,387	1,822	2,062	1,200
Other	102	-	-	-	-	-
Total stormwater drainage developer contributions	364	695	1,387	1,822	2,062	1,200

The resulting closing regulatory asset base is provided below.

Table 64: Closing regulatory asset base for each year of the proposed price period as at 30 June 2019 ($000 2018/19)

	Gosford (incl. capex incurred by CCC for 2017/18 and 2018/19)	Wyong (incl. capex incurred by CCC for 2017/18 and 2018/19)	Central Coast Opening base	Average remaining life (years)
Water	324,538	259,583	584,121	77.2
Sewerage	417,716	203,746	621,463	75.5
Drainage	27,182	78,113	105,295	80.9

The opening regulatory asset base has been updated with the inclusion of the net capital expenditure for each year of the proposed regulatory period (2019 to 2023):
Net Capital expenditure = Gross capital expenditure – Government Grants – Developer Contributions – Capex funded via the revenue variance.

Table 65: Councils total regulatory asset base in $'000 (18/19)

	2019/20	2020/21	2021/22	2022/23
Opening Regulatory Asset Base	1,310,879	1,339,848	1,397,739	1,442,476
Net capital investment[1]	46,295	75,827	63,370	48,986
Disposals	0	0	0	0
Regulatory depreciation	17,326	17,937	18,633	19,194
Closing Regulatory Asset Base	1,339,848	1,397,739	1,442,476	1,472,268

Net capital investment includes the funding from Government and Council's proposal for funding a portion of its capital program from the revenue variance resulting from the period 2013/14 to 2018/19 (see chapter 9).

The regulatory asset base drives two of IPART's revenue building blocks:

- Return of assets (depreciation) – the depreciation of the regulatory asset base calculated using the economic lives of assets.
- Return on assets – the financial return on the regulatory asset base calculated using the weighted average cost of capital.

Table 66: Closing regulatory asset base for each year of the proposed price period ($000 2018/19)

	2019/20	2020/21	2021/22	2022/23
Water	588,968	627,868	650,093	657,932
Sewerage	636,846	647,288	661,222	674,634
Drainage	114,034	122,583	131,161	139,702

9.4 Working capital

The working capital building block recognises the operating funding needs of the business - driven primarily by cash flow shortfalls between revenue received and costs incurred.

9.5 Taxation

Council is not an income tax payable entity and therefore does not maintain accounting information required for taxation. The primary element is the tax depreciation on the infrastructure assets. Tax depreciation is calculated in the cost of the asset whereas the financial reporting value is the net carrying value which is subject to revaluation adjustments. Council has assessed it tax depreciation by:

- adjusting the net carrying value of assets reported in 2017 by the asset revaluation reserve as a proxy to estimate cost
- assessing the average length of time between the commencement of a capital project and the delivery of the service potential from the project
- calculating depreciation adopting:
  - for capital expenditure incurred during the proposed period (2019/20 to 2022/23) - adopting the current average accounting life
  - for the opening balance - the average remaining life of the asset base.

The resulting estimate of tax depreciation is:

Table 67 Estimated tax depreciation for each of the years in the proposed price ($000 2018/19)

	2019/20	2020/21	2021/22	2022/23
Water	17,713	17,767	17,851	17,911
Sewerage	24,836	24,900	24,975	25,058
Stormwater drainage	16,778	16,814	16,845	16,850

9.6 Operating costs

The operating expenditure needs of Council for each of the services (water, sewerage and stormwater drainage) are set out in Chapter 8 Cost forecasts.

9.7 IPART Building Block Approach

Council has used IPART's building block methodology to calculate the revenue needs for each of the water, sewerage and stormwater drainage businesses.
The following table presents the forecast notional revenue needs over the Determination period.

Table 68: **Unsmoothed revenue needs for each business ($000 2018/19)**

	2019/20	2020/21	2021/22	2022/23
Operating expenditure excluding bulk water purchase	102,683	102,243	101,620	101,924
Bulk water purchase costs	342	342	342	342
Depreciation	16,965	17,563	18,245	18,795
Return on regulatory asset base	56,168	58,010	60,185	61,766
Return on working capital and tax allowance	380	282	338	400
Unsmoothed building block revenue	176,538	178,440	180,730	183,227

Table 69: **Revenue needs by service ($000 2018/19)**

Service	2019/20	2020/21	2021/22	2022/23
Water	77,696	78,466	79,684	80,844
Sewerage	81,875	82,478	83,147	83,960
Stormwater Drainage	16,969	17,496	17,899	18,423
Total	176,540	178,440	180,730	183,227

Comparing the above total revenue needs for the 2019 to 2023 period to the current determination period shows a 2.8% reduction in revenue needs.

10 Proposed Pricing (2020 – 2023)

10.1 Price Structure

Council notes the price structure principles in *IPART's review of Central Coast Council's prices from 1 July 2019* that IPART will take account of as it considers varying Council's price structure:

- identify issues relating to cost-reflectivity of Council's water, sewerage and stormwater drainage price structures
- propose potential changes to price structures to address these issues that we may consult on as part of the 2019 price review.

This price submission proposes to harmonise prices for all of Council's water, sewerage and stormwater drainage services. Council is of the firm belief that harmonising prices will assist in an improvement in service levels and greater water security for all.

Council is proposing a four-year price period. Prices include in this section and the accompanying appendices are for the four-year period 2019/20 to 2022/23

10.2 Setting price the Long Run Marginal Cost (LRMC) for Water

Consistent with standard economic theory prices should be set at the marginal cost as this reflects costs involved in providing an additional amount of output. Setting prices equal to the marginal cost should result (in the absence of externalities) the maximum economic welfare as customers will continue to purchase water until it is no longer economically efficient to produce at that price.

There are a number of methods for determining the marginal cost of water provided by a centralised water supply system.

For the purposes of this analysis, an Average Incremental Cost (AIC) approach has been used to derive a long range marginal capacity cost (LRMC).

Council is currently developing a new Integrated Water Resource plan (IWRP) for the Central Coast, which is programmed to be completed in 2021. Development of this plan will review the latest understandings of climate variability, associated supply risks, development of adaptive pathways to ensure a secure water supply in the context of significant uncertainty. The plan will investigate supply augmentation options and identify viable options to be incorporated into an adaptive pathway framework. This work is being undertaken in a coordinated and parallel approach with the Department of Industry – Water and Hunter Water's work on developing their next Lower Hunter Water Plan. The reason for this coordinated planning is to further explore and identify opportunities for mutually beneficial solutions for the two regions

In the absence of this analysis being completed, yield estimates of the current system have been used consistent with methodologies currently being used by Hunter Water together with the preliminary longer term water demand forecasts to identify timing for future augmentations. The timeframe selected for the LRMC is 30 years.

Whilst identification of the next round of water augmentations will be part of the IWRP, a proxy augmentation program has been assessed for the purposes of calculating a LRMC for the IPART submission.

The LRMC has been calculated on initially rectifying the flood capacity constraint on Mangrove Creek Dam (MCD) followed by a 20 ML/d additional supply option.

Rectification of the flood constraint on MCD is a very cost effective approach to increasing the capacity of the water supply (or more accurately, recovering lost capacity) with a low LRMC. As such it is considered that to limit the LRMC to only this action would significantly underestimate the real cost of providing a longer term additional amount of supply capacity. To provide a more realistic scenario that provides adequate supply for the assessment period an additional 20 ML/d supply augmentation was also included for the purposes of calculating the LRMC for the IPART submission. The capital cost of the augmentation is considered to be a reasonable indicator of the costs involved for the available supply options on a $/KL capacity basis.

10.2.1 Estimate of the SRMC for water

Whilst the setting of the usage price for water is based on the LRMC, the short run marginal cost (SRMC) over the price path has also been estimated for information.

Taking into account the relevant costs including electricity for pumping/ treatment/ system control, treatment chemicals, treatment sludge dewatering/ waste management and water licencing, the estimated SRMC over the proposed price path is $0.33/kL.

10.3 Setting price for the Short Run Marginal Cost (SRMC) for Sewerage

Short run marginal cost for sewerage usage in the current determination period is set at $0.83.

In IPART's Submission Information Package in January 2018, discusses the following:

'Water usage charges are currently set with reference to the long-run marginal cost (LRMC) of water supply, to reflect the cost of the next efficient augmentation and promote efficient water usage and investment. Sewerage usage charges are currently set with reference to the short-run marginal cost (SRMC) of supplying sewerage services. In principle, we consider the LRMC approach appropriate for both water and sewerage usage charges. However due to the difficulties of estimating LRMC within the context of disaggregated sewerage systems we have historically set the sewerage usage charges using a SRMC approach.

In 2013, we maintained the water usage charge (in real terms) over the determination period due to uncertainty regarding the LRMC of water. For sewerage usage charges, we have progressively reduced the usage charge over a series of determinations to reach the estimated SRMC of sewerage (around $0.30 per kL). We have not updated the SRMC for sewerage since 2010".

In response to IPART's comments regarding the SRMC for sewerage usage, Central Coast Council calculated the SRMC based on the following logic:

1. Over the previous 12 months period
    a. Determined the total effluent treated at all treatment plants
    b. Determined the budgeted variable costs associated with the treatment of sewerage.
    c. Total effluent treated/total variable costs.

Total variable costs were identified and forecast over the proposed determination period including forecast ML effluent treated to determine a proposed usage charge of $0.40.

Table 70: Variable costs

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
ML treated	32,741	32,741	32,741	32,741	32,741	32,741
Total variable costs ($'000)	13,342	13,422	13,249	13,114	12,983	12,983
$/kL total	0.41	0.41	0.40	0.40	0.40	0.40

10.4 Overarching pricing matters

Council's proposed prices have been established to completely recover the identified revenue needs associated with Water, Sewer and Stormwater drainage operations. Council has considered the pricing issues raised by IPART in its Issues Paper and these are addressed below. The price structures proposed are broadly in line with those adopted in the 2013 price determination.

Council has not identified any differential in the costs of servicing residential and non-residential customers.

Council's proposal to standardise service charges on 20 mm meters removes the current pricing anomaly between residential and non-residential customers.

Council has set prices for each of its services using the following framework:

Water	Sewerage
Revenue needs of the business **Subtract:**	
Water usage X long run marginal cost of water	Non-residential average discharge factor X non-residential water usage X short run marginal cost of sewerage services Or Where discharge meter installed metered quantity
	Forecast Trade waste revenue
Forecast revenue from fees and charges	
Equals Revenue needs for Service charge	
Residential and non-residential mixed developments – dwellings serviced* each with a single 20mm meter Non-residential (except mixed development) size of water meter(s) installed adopting 20 mm as the baseline Revenue needs for service charge attributed being the square of the diameter of the meter size	

*Excludes exempt properties

For stormwater drainage, as there are no other charges raised from drainage other than the annual charge, the total revenue needs have been attributed across the five area based prices adopting the following weightings:

Drainage area	
Residential , low impact, <1000sqm	1.00
Strata / flat / multi-premise	0.75
1001-10000sqm	2.50
10001-45000 sqm	15.50
>45000 sqm	49.00

Council considers that this is a proxy for the average cost that will be incurred in providing stormwater drainage services. These weightings reflect the average property size in each category and are similar to those adopted by Hunter Water in its 2016 price submission.

The following outlines Council's response to a number of overarching pricing principles raised by IPART in its Issues Paper.

IPART issues paper - 2

- Should we allow unregulated pricing agreements between the Council and its large non-residential customers?

Council's position

Council is not proposing to introduce unregulated pricing agreements between Council and large non-residential customers. Council has not been approached by its customers for any such agreement.

Council has a small number (<60) of customers who use more than 20kL/day. Many are residential in nature, being single metered villages or tourist accommodation. There are very few large industrial water users.

Council would prefer that there be no unregulated pricing. These users will only agree to unregulated prices which are lower in residential rates. Council believes this unfair and is detrimental as unregulated pricing:

- is a disincentive to reduce potable water use
- is a disincentive to consider internal or external recycled water options
- increases Council's administration costs through the need to negotiate and manage the various price requests and agreements
- effectively results in a subsidy to large users by residential users

IPART issues paper - 8 and 9

- Should water and/or sewerage service prices be aligned across the Council's area?
- Should stormwater drainage prices be aligned across the Council's area?

Council's position

Council's highest priority in setting prices for the 2019 determination period is to set a common price for its water, sewerage and stormwater drainage services. It is important to establish a common service level and associated price for all Council's services across its LGA.

IPART issues paper 10

- Should all of the Council's water and sewerage service prices be set on a 20mm meter basis?

Council's position

Council's pricing proposal sets all meter based charging on a 20 mm meter, thus removing the anomaly that non-residential customers are charged based on a 25 mm meter.

IPART issues paper 11

- Should residential service prices be lower for apartments than for houses? Why or why not?

Council's position

Council is not proposing any differential charging between residential customers living in apartments and those living in houses for its water and sewerage services.
The argument that supports a differential is that residents in apartments use less water as they do not have the same level of outdoor use as residents in houses. Council has considered this argument and has concluded that:

In today's urban environment the difference between standalone houses and other residential dwellings, flats, apartment, town or terraced housing is becoming somewhat blurred as sizes of housing blocks are reducing resulting in smaller gardens whereas complexes of flats and apartments, town or terraced houses are having larger open spaces.

Similarly flats, apartments, town or terraced housing as they get bigger are no longer the sole domain of a smaller number of people. There is a changing expectation, with families seeing living in these types of dwellings as desirable.

In relation to billing, there could be significant difficulty in defining which properties should get a lower price.

It is unclear what the impact of the changing residential designs is on water demand. Council's pricing proposal for water services is for a greater proportion of the bill being driven by water usage, so all customers if they use less water get a smaller bill. Council's highest pricing priority is to establish a common price. Council wishes to make pricing as simple as possible to facilitate customers' understanding

IPART issues paper 12

- Should retirement villages continue to be charged service prices on the basis of their meters?

Council's position

Council has not proposed any change from the existing price structure of charging retirement villages, as it does all other non-residential customers based on single meter size.

Council has considered:

- Under Schedule 4 of the Water Management Act 2000 water, sewerage or stormwater drainage charges cannot be levied on land *that belongs to any public hospital, public benevolent institution or public charity, and is used or occupied by the hospital, institution or charity for its purposes*.

If a retirement village meets any of the detailed criteria then no service charge can be levied. However, some retirement villages are commercially based enterprises and Council considers that such villages should be billed as any other non-residential commercial customers.
But in the case of non-strata retirement villages, there is no certainty that any discount that may result from a change in the proposed approach would be passed to residents of the village.

Council has considered the approach adopted by Hunter Water - where a pensioner rebate is applied if a pensioner card is provided. However, there is no bill chargeable to an individual resident. In addition any administrative impost from such a basis would increase Council's costs as maintaining an up-to-date database of such residents would be difficult. Finally other NSW councils do not charge retirement homes a different price to non-residential customers.

Exempt properties

The Water Management (General) Regulations 2018 provides that service charges include access and usage components. It is common terminology of many in the industry (including IPART) to refer to service charges as being only the availability/ access component and not water usage.

Until the 2017-18 financial year, the former Wyong Shire Council and former Gosford City Council interpreted the Water Management Act 2000 to the then exempt properties as they relate differently to.

The former Wyong Council, did not levy access charges on exempt properties.
The former Gosford Council, did levy access charges on most exempt properties on the basis that the fees it levies on 'exempt properties' are not "services charges" under s310 (1) of the Act, but are "fees or charges for services provided" under s310(2), and that land listed in schedule 4 is not exempt from charges under s310 (2).

There is extensive correspondence on the matter between Council and NSW Government Departments/Ministers between 2003 and 2012. In summary, the NSW Government has repeatedly articulated its position that "a water supply authority cannot circumvent s.312 (1) by purporting to impose under s.310 (2) what is in substance a "service charge"." (Crown Solicitor's Office, ECM document number 810548).

As of 2017-18 Council has not levied water and sewerage access charges on exempt properties. Council has also levied water usage charges on exempt properties.

The Central Coast Council is continuing to levy water usage charges on exempt properties under the Local Government Act 1993 s.501.

There are residential and non-residential exempt properties. In calculating the price for water and sewerage service charges the dwellings have been eliminated for residential properties and the meters for non-residential properties however the water usage and, for non-residential customers, sewerage discharge of the properties has been included.

10.5 Pricing for water services

Council proposes to adopt the current billing framework for water services being a fixed service price plus a cost of the water consumed (usage) component.
Currently about 70 percent of Councils revenue from residential bills comes from usage charges, and 30 percent from the fixed service charges.

Council's long run marginal cost results in approximately 80% of the water charge being the usage charge; the part directly influenced by individual water usage behaviour, and constitute the remaining 80 per cent.

IPART issue paper - 21

- Should we set maximum prices for the services the Council supplies to WICA licensees now, as part of this review?

Council's position

Council provides water services to two WICA licence holders, one of which is temporary. Council considers it is not necessary to set such a price for this determination.

IPART issues paper - 16

- On what basis should water usage prices be set?

Council's position

Council is proposing that the current basis - of using the long run marginal cost for the supply of water -should be that of setting the water usage price. Council's estimate is $2.20 ($18/19) per kL.

All customers will be charged based on meter readings.
Council's demand modelling, in conjunction with the proposed price, results in a larger proportion of a residential water bill resulting from water consumption thus giving residents greater control of their costs of water services.

IPART issues paper - Service charge calculation

In its Issues Paper IPART raised a number of concerns relating to the billing of the water service charge.

Council's position

The current pricing framework is broadly that every residential dwelling is billed a common price - namely the price of a 20 mm meter. For non-residential customers the bill is based upon the size of the meter(s).

Council's proposed service charge pricing framework is set out below.

Residential

Council has identified a number potentially adverse impacts of adopting a meter based approach for pricing residential services:

- The size of a water meter(s) installed in multi premises is decided by the property developer. Adopting a meter based approach may result in billing anomalies for residential customers in multi developments e.g. take 2 unit blocks and both block owners required a 40mm but one has 20 units and one 10 units then the price per residential dwelling in one is twice that of the other, a similar anomaly will occur if both blocks had the same number of units but differing size meters.

- For those residents in multi developments who do not own their residence there is no surety that any potential reduction offered by Council based on meter based pricing principles would be passed on to the resident.

As noted Council's key objective for this pricing proposal is to have common prices for all of Council's customers. Changing the basis of residential pricing again, after only changing it in the 2014 price determination, would result in some customers experiencing a price increase and others a decrease. Council considers that to impose changing the structure of residential pricing and its resulting implications on non-residential customers would make it more challenging for customers to understand the implications on their bills and distract from Council's key objective of establishing a common price for a common level of service.

All residential dwellings, vacant properties and properties that could be connected but are not are proposed to be charged a service charge for a 20 mm meter - i.e. no change from the current pricing framework). The exception is those properties classified as exempt under Schedule 4 of the Water Management Act 2000.

Council has no properties that are unmetered. However Council proposes the price that should be set is the 20 mm service charge plus 75% of the average annual water usage of 150kL i.e. 112.5kL. This price should be prorated by day to account for temporary unavailability of a meter.

Non-residential properties

Council proposes to adopt the current pricing structure namely:

For all customers except non-residential customers in mixed developments (i.e. developments that comprise both dwellings and commercial properties) a service charge based upon the size of the water meter plus the cost of the estimated volume discharged. Customers in mixed developments will be charged under the residential price structure.

IPART issue 22
What is the appropriate basis for setting the bulk water transfer price between Hunter Water and the Council?

Council's position
The nature of the agreement between Council and Hunter Water is to provide support to each other's customers in times of constrained supply. It is therefore very difficult to assess the volume flows.
Given that this arrangement is not for commercial gain Council proposes that the bulk water service price be set at the 2018/19 price allowed for in the Hunter Water 2016 price determination 0.70c /kL.

10.6 Pricing for sewerage services

IPART issue 15

- On what basis should we set sewerage discharge prices?

Council's position

Council proposes that the discharge price per unit of volume be based upon the short run marginal cost. Council has assessed this cost to be 0.40c /kL

Council proposes to adopt the current billing framework for sewerage services -namely that residential customers receiving sewerage services be levied a common service charge based on a 20 mm water meter inclusive of a deemed discharge component

For non-residential customers receiving sewerage services a service charge based upon the size of the water meter(s) installed inclusive of a deemed discharge component plus a discharge price based upon the assessed discharge factor on the water consumed. The discharge factor will be calculated in accordance with the industry in which the customer operates, less the implied discharge factor included in the service charge.

10.6.1 Residential sewerage service charge

To provide consistency with the water service price combined with the potential adverse implications of adopting a meter based price, Council proposes the service charge for all residential dwellings to be the sewerage service charge for a 20 mm water meter plus the price of an implicit volume of discharge.

The current price includes an implicit discharge volume however it is not disconnected from the base service charge - resulting in the potential for a change to the price impacting the implicit volumes. Disconnecting this element of the service charge means that the price of this component of the service charge can be changed independently.
In line with IPART's issues paper Council proposes that the implicit volume of discharge be 75% of the average residential water consumption being 150kL pa at the proposed discharge price of 0.40c/kL. This implicit discharge volume is part of the service charge

In summary

The price for providing sewerage services to residential customer will be $538.70 ($18/19) for each residential dwelling.

10.6.2 Non-residential

Service charge

Council proposes that non-residential sewerage service charges be assessed on water meter(s) size(s) inclusive of the implicit discharge with the exception of non-residential properties in mixed developments (i.e. developments that comprise both dwellings and commercial properties) that will be charged at the residential price.

Discharge volume

Currently non-residential customers are charged a discharge component of their bill -being the volume of water consumed multiplied by a discharge factor which is either independently assessed by the Department of Primary Industries applicable to the customer's industry or where there is an agreement between Council and the customer. The current service price includes an implicit volume based upon the water meter size the assessed discharge volume is then reduced by 150kL to quantify the volume to be billed.

Council is proposing that the implicit volume be the same as for residential customers i.e. 75% of 150kL (112.5kL) but that the discharge volume to be billed is reduced by the same amount.

Whilst arguments could be mounted that the implicit discharge volume included in the price should be greater, Council considers that it would be exceptional for a non-residential customer to discharge less than 112.5kL i.e. the vast majority of non-residential customers would pay more than the implicit discharge included in the service charge. Adopting the same implicit volumes provides equity between residential and non-residential customers. Council's proposal ensures that non-residential customers do not pay twice for a component of their sewerage discharge.

Council has a few non-residential customers that have a sewerage discharge meter. In these cases it is proposed that the discharge volume be billed as per the meter reading with no discharge factor applied.

In summary

Non-residential customers with the exception of those in mixed developments will be charged:

- A service charged based on the size of the water meter(s) supply to the property as set out in Appendix 4
- A sewerage discharge calculated as follows:
    - For customers with no sewerage discharge meter

The volume of water used X the assessed discharge factor * X discharge price (0.40c/kL ($18/19))
For customers with a sewerage discharge meter

The volume of metered discharge X discharge price (0.40c/kL ($18/19))

Non-residential customers in mixed developments will be charged the residential price.

10.6.3 Sewerage usage billing non-residential

The previous IPART determination defines the calculation of current sewerage usage charge for non-residential properties as follows;
([(W x DF)] –DA] x UC)/n
Where:
W = Water
DF = Discharge factor (averaged at .95)
DA = Discharge allowance 150kL (this 150kL is built into the service charge)
UC = usage charges (currently set at .85)
n = number of properties.

Example using the same 1000 water usage
W =1000kl
([(1500X.95)]) – 150] x.85)/4
1275-150*85/4=$270.93 per unit

Currently, the same four units, regardless of strata entitlement, will pay an equal share of the total sewerage usage bill.

Council proposes to set the sewerage usage charge using the apportionment by Unit Entitlement or, at customer's option, issue to Body Corporate where they have passed necessary by law and have separate internal metering to allocate the cost between unit owners) and therefore not using the IPART methodology.

10.6.4 Pricing for Stormwater Drainage

Should the Council's stormwater drainage prices be based on the area of a customer's property?

Council's Position
Prior to the amalgamation each former Council used different methods to charge drainage rates. These methods will be continued to be used until the end of the current IPART determination.

In the former Gosford LGA a flat rate was applied to all rateable residential and non-residential properties. As at 2018, each rateable property received a $124.64 stormwater drainage charge.

In the former Wyong LGA a drainage area was declared under S.308(2) of the Water Management Act 2000. All parcels of land in that Drainage Area were charged a levy and parcels of land outside not. Residential properties in the current declared areas within the Central Coast LGA are charged a flat rate of $128.32; residential multi premises were charged a discounted $96.24; and non-residential customers are charged based on their water meter sizes.

To ensure that the drainage rates are fair and equitable there is a need to align the rates methodologies to determine stormwater drainage charges. A comparative analysis between the charge within the former Gosford and Wyong LGAs is shown in Appendix 12. As part of the discussion further comparison was undertaken with the Sydney Water, and Hunter Water determinations which are both area-based (land size) stormwater drainage charging. However, the scope of Council's drainage operations differs from Sydney Water and Hunter Water where these two businesses manage only trunk mains whereas Council is responsible for all drainage.

Current Price Structure Review

Stormwater is rainwater that runs off buildings and land. Stormwater is carried in stormwater drainage network which is then discharged into natural creeks, rivers and the ocean.

Council is the single agency responsible for stormwater management within its LGA. Council is responsible for the construction, maintenance and upgrades of its entire stormwater drainage network. As the demand increases due to growth, Council will need to expand on its existing network.

Council collects stormwater drainage charges from all of its customers in the former Gosford area whereas in Wyong it only collects charges from those properties which fall within the declared drainage area.

Stormwater drainage charges can only be levied in a declared Drainage Area. At present a portion of the former Wyong LGA (>1.5 km west of the M1) is not included in the declared Drainage Area. Council will seek to extend the Drainage Area to all parts of the former Wyong LGA in which case the IPART's price determination should allow for residents in this extended drainage area to be charged as and when included in the declared Drainage Area.

Background: Price Structure reform

In the 2013, the former Gosford Council pricing submission proposed an area-based stormwater drainage charge. This was not supported by IPART as the former Gosford Council did not have data in an appropriate format to enable calculation nor did it have the billing system capability.

In 2009, the former Wyong Council pricing submission proposed an area-based non-residential charge. In its determination, IPART asked for further investigation before such a charge could be introduced. Subsequently in a letter to IPART dated 29 February 2012, the former Wyong Council requested IPART give consideration to placing any further work on an area-based non-residential drainage charge in abeyance pending the formation of the CCWC. At that stage it was proposed that the future regulatory, administrative, financial and operational structure for stormwater drainage in then former Gosford and Wyong LGAs would be clearer.

IPART accepted this proposition on the basis that the current charging arrangements are already achieving full cost recovery and that *"Wyong Council as an elected body is free to propose whatever arrangements for stormwater drainage in its 2012 submission it regards are appropriate"*. Wyong did not propose any changes to the charging methodology in that submission.

Improvements required to establish an equitable area-based charging model

Council proposes to seek an extension of the current Drainage Area in the former Wyong LGA to include all of the former LGA that will if made ensure all residents contribute towards the management of the stormwater drainage network. The revenue generated will enable the Council to maintain, renew, upgrade or build new infrastructure required throughout the LGA. These works may involve the completion of studies to define Flood Planning Levels for existing or future development to reduce flood damage or to define evacuation routes or procedures to vacate an area.

Council proposes to request that the Minister's order, pursuant to S.308(2)(b) of the Water Management Act 2000, Section 308 (2) to declare the whole of the former Wyong LGA a Drainage Area.

Proposed Charging Structure

The proposed Council charging structure includes two-tiered approach – one for residential customers and another one for non-residential customers. This approach is similar to the previously adopted Hunter Water and Sydney Water pricing structures.

Residential charges:
The residential pricing structure proposal comprises two charges:

- standard residential charge – for houses
- strata/Multi-premise residential charge – for villas, units, townhouses etc.

Non-residential charges:
In this submission, Council requests IPART to consider area based non-residential charges in line with the previously adopted pricing proposals from Sydney Water and Hunter Water.
The non-residential land-area charges propose four land-area bands:

- small or low impact or Strata – land area less than 1,000 square metres or larger areas that are assessed to have low impact on runoff or are classifies as non-residential strata properties
- medium – land area between 1,001 and 10,000 square metres
- large –land area between 10,001 and 45,000 square metres
- very large – land area greater than 45,000 square metres.

Defining Low Impact Properties

Developed properties are, in most circumstances, be able to absorb stormwater flows due to extensive impervious areas, so rainwater flows into the stormwater drainage network. However, underdeveloped properties such as parks, reserves, sport fields etc. have greater

ability to absorb the rainwater. Properties that are able to reduce run-off into the stormwater network, and thus the impact on the drainage network, may be classified as low impact properties.

The stormwater drainage proposed charges are shown in Table 70.

Table 71: Stormwater drainage proposed maximum charges

Stormwater drainage		Former Wyong LGA	Former Gosford LGA	Central Coast Council Proposed 2019-20
Residential properties				
Houses	$/dwelling	128.32	124.64	110.77
Strata/flat/multi premise	$/dwelling	96.24	124.64	83.08
Non-residential properties			124.64	
Low impact	$/dwelling	128.32	-	110.77
Small (<1,000m^2)	$/dwelling	200.50 to 12,832.09 subject to meter size	124.64	110.77
Medium (1,001 - 10,000m^2)	$/dwelling		124.64	276.93
Large (10,001 - 45,000m^2)	$/dwelling		124.64	1,716.96
Very Large (>45,000m^2)	$/dwelling		124.64	5,427.81

10.7 Liquid trade waste

Council proposes rationalising the liquid trade waste charges of the former Wyong and Gosford Councils. Fees such as those for applications, annual liquid trade waste and re-inspection were calculated with the standard costing model and the time allocated to these tasks.

The review also aligned the two former Councils' septic waste disposal charges and their categories. The miscellaneous charges of the former Gosford Council Category 4 will now align with the former Wyong Council Category S.

Central Coast Council provides liquid trade waste and tankered services to commercial and industrial customers where capacity and capability are available at the sewage treatment plants. These discharges are higher strength than domestic discharges and represent a proportionally greater treatment and cost imposition on the sewage treatment plants. There are also administration costs to manage customers and monitor discharges. The NSW Department of Industry – Water (DoI – Water) regulates Liquid trade waste utilities and provides guidelines relating to Liquid trade waste management and charging policies as part of its "Best Practice" Guidelines.
Although there were differences in operating practices between the two former councils many were relatively minor.

10.8 Pricing of Liquid trade waste services

Central Coast Council's liquid trade waste pricing is based on a number of factors which can vary over time. They 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, as shown in Appendix 4. 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) for high strength sewerage and specific constituents (e.g. Biochemical Oxygen Demand, Total Dissolved Solids, Ammonia) recover costs on the basis of the discharge quality, such as the energy and chemical costs associated with treating the additional load.

10.9 Overview of proposed charges

Usage charges for the former councils were brought into line in the 2012 IPART price determinations. It is proposed the current usage charges should increase annually in line with CPI.

Central Coast Council in this submission proposes the grouping of liquid trade waste administration and inspection charges. These groupings are:

- Application Fee (Category 1, 2, 3 and S non-residential)
- Annual Fee (Category 1, 2, 3 and S non-residential)
- Re-inspection Fee (Category 1, 2, 3 and S non-residential).

It is proposed that all other LTW charges increase annually in line with CPI.

Approvals

Liquid trade waste customers are currently issued approvals to discharge. These approvals are assessed in terms of quality and volume of discharge when the initial approval is created and categorised as 1 (Low risk), 2 (Medium risk), 3 (High risk) and S (Varied risk).

There are presently 1,540 liquid trade waste customers - 312 category 1; 1164 category 2; 24 category 3; and 40 category S approved customers.

Customers on a **Category 3** approval are charged additional discharge fees based on the volume and quality of liquid trade waste being discharged to sewer. There are two categories of mass based charges i.e.;

- "Excess mass charges" apply for the specific substance that are discharged to Council's sewerage system in excess of the deemed concentrations in domestic sewage, and

- "Non-compliant excess mass charges" apply to specific substances that are discharged to the sewerage system in excess of the limits specified in approvals

The nominated charges are applied in accordance with the formulae in Council's Liquid Trade Waste Policy.

For customers on a **Category 2** approval, charges are applied depending on the level of pre-treatment undertaken prior to discharge to Council's sewerage system i.e.;
- Where pre-treatment equipment is compliant with approval requirements
- Where pre-treatment equipment is not compliant with approval requirements **Category 1** customers are not subject to usage charges.

Category S customers are levied:
- Septage and septic effluent discharge charge, which is to treat, septic liquid effluent and seepage (septic tank sludge) and chemical toilet waste (such as portable toilets), and/or
- Septic effluent unable to discharge onsite, to allow properties who must tanker to the sewage treatment plant

Council's liquid trade waste approval charges proposed for the 2019 price period are detailed in Appendix 4. The derivation of those proposed charges makes no allowance for the effect of inflation, and those proposed charges should, it is respectfully submitted, be increased annually in line with CPI.

10.10 Miscellaneous Charges

Council has reviewed water and sewer miscellaneous services and proposed a restructure of the fees and charges based on the marginal cost only. Council proposes that the labour plus on costs be charged (refer Appendix 4) –except, where quotes are required, when it is proposed that inspections be based on a linear meter basis (at a minimum charge of 90 minutes) or meter workshop testing).

The process was to review both former Wyong LGA and former Gosford LGA 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. Determine the appropriate price using varying scenarios:
    i. labour only
    ii. labour plus on costs
    iii. labour, on costs & minimum overheads and
    iv. labour plus full overheads.

Council also proposes that sewer junction "cut ins" be removed from a Council-offered monopoly service and become contestable.

This will cover costs of services where one area may be outsourced, processes currently misaligned, service not previously offered in either former LGA and the service offered was previously by quote for connections (refer appendix 4).

Table 72: Summary of Miscellaneous charges changes

Section	Previous service name (including previous LGA)	New Service name
Water Planning and Development	Wyong – Development Investigation fees- major, minor and class 1 and 10 developments	Development Assessment small/medium/large/special projects
	Gosford Standpipe Hire security bond	Standpipe security bond 25mm Standpipe security bond 65mm
	Wyong did not have applicable charge for the service building over or adjacent to water and sewer conveyancing advice	Building over or adjacent to water and sewer conveyancing advice
	Wyong Inspections	Will now include inspections for rainwater tank connections, sewer re-inspections, sewer concrete encasements, lab sampling charges – min of 90 minutes applied (including ozone rather than chlorine disinfection) Alterations, caravans and mobile homes, additional WC, plumbing and drainage inspection for new sewer
	Wyong Major works inspection fee	This is now replaced by two new charges Inspection water or sewer pressure main and Inspections gravity sewer mains
	Wyong has no 307 without requirement charge	Now adopting section 307 development without requirements (note this charge has changed for the previous Gosford LGA and does not include items a/b/c/d) now called section 307 certificate development without requirements section 307 Boundary realign section 307 RFB and Dual occupancies section 307 Commercial buildings
Water construction and Project Management	Gosford Meter Workshop test of did not charge by meter size	Workshop test of meter 20mm- 80mm Workshop test of meter >80mm
	Gosford Water service connection – physical connection done by quote	Application for water service connection now based on meter size and long/short section pricing
	Wyong– not offered Cancellation of application	Cancellation of Water and Sewer application

	Gosford– not offered Manhole adjustments etc.	Raise/lower manhole –inspection Raise/lower manhole physical adjustment
	Wyong Alteration from dual service to single service	Rolled into water service application depending on meter size
	Wyong included in plumbing and drainage inspection new sewer for caravans, alterations, caravans etc.	Plumbing and drainage only now applies to new sewer. This has now been separated charges called Inspections - Additional WC Alterations, caravans and mobile homes sewer re inspections rainwater tank connection
	Wyong Underground plant locations	Now called location of water and sewer mains
	Wyong relocation existing services	This charge is now under Adjust Existing Services
	Gosford Relocation of stop valve or hydrant	This service now extended to Gosford (quote only).

Table 73: Charges not included in this submission

Section	Service name	Comments
Water Planning and Development	Water Sample Analysis	Previously offered for sampling service for non-treated water on private properties e.g. water tank sampling.
	Septage and Septic effluent Discharge	No longer offered as a miscellaneous service. Incorporated as a Category S charge.
	Gosford Water Carter fill charge	Not offered as a service
	Gosford Other liquid wastes transported by disposal	Not offered as a service
Water Construction and Project Management	Wyong – Sewer main encasement with concrete	Not offered as a service (will however be included in inspections)
	Wyong Sewerage junction cut ins all sizes	Not offered as a service (will however be included in inspections)
	Recoverable works	Not offered as a service

11 Impact of proposed prices (2019 – 2023)

Council has assessed the impacts of the proposed pricing against the following:

- customers
- the wider community
- the environment
- the financial sustainability of Council's water, sewerage and stormwater drainage services.

Further discussion on each category is provided below.

Council's proposed prices and tariff structures are cost reflective as evidenced in the use of the price structure principles outlined in Table 1 of IPARTs Submission Information Package. For example:

- Use of the LRMC for water usage
- Use of the SRMC for sewerage usage
- Service charge based on a 20mm equivalent for bot residential & non residential
- A reduction in assumed sewerage usage from 150kl to 112.5kl.
- Postage stamp pricing
- Harmonisation of pricing effective 1 July 2019

11.1 Customers

11.1.1 Residential

Council's proposed prices for its water, sewerage and stormwater drainage services will have differing impacts on customers. The key outcome is that most residential customers will pay less for the combined water, sewerage and stormwater drainage services in (2019/20) than currently - unless the customer uses materially more water than usual. Referencing recent Australian Bureau of Statistics (ABS) the affordability of the proposed pricing will have a positive impact on our customers as the prices proposed from a billing perspective are reducing whilst weekly ordinary time earnings are increasing.

The median weekly ordinary time earnings according to the ABS was as follows as at May 2018:

	May 2018 $	May 2017 to May 2018 % change
Trend(a)		
Full-time adult average weekly ordinary time earnings	1,586.20	2.6
Full-time adult average weekly total earnings	1,653.00	2.7
All employees average weekly total earnings	1,206.90	2.4
Original		
Full-time adult average weekly ordinary time earnings	1,585.30	2.7
Full-time adult average weekly total earnings	1,650.60	2.8
All employees average weekly total earnings	1,207.40	2.4

Trend estimates

In the twelve months to May 2018, Full-Time Adult Average Weekly Ordinary Time Earnings increased by 2.6% to $1,586.20.

The Full-Time Adult Average Weekly Total Earnings in May 2018 was $1,653.00, a rise of 2.7% from the same time last year.
The price structure proposed for water gives customers more ability to manage their bills with the usage charge for water usage for the average household using 150kL pa representing 78% of the water bill as compared to the current 71%.

Council still offers the same pensioner discounts and proposes not to recover the value of the discount not reimbursed by State Government from all other water users.
Council recognises that residents of the former Gosford LGA will receive a greater reduction in their current bills than the former Wyong LGA residents. Council will deliver the same service levels to all customers for a common price. This will set a firm financial bedrock to improve services and enhance water security across the Central Coast LGA.

The total bill for all services will, in real terms (excluding CPI adjustments that are advised by IPART), customers' bills will remain constant across the proposed four year price path. This will provide a high level of certainty for customers managing their household budgets.
Below is a comparison the bill impacts of Council's proposed prices against customers' current bills (2018/19) for the aggregate water, sewerage and stormwater drainage services:

Table 74: Comparison of bills by usage (per kL) ($ 2018/19)

Water consumptions	Previous Wyong LGA	Previous Gosford LGA	Proposed Central Coast LGA	Bill change for previous Wyong Shire	Bill change for previous Gosford City
100kL	1,005.23	1,223.78	982.67	-2.2%	-19.7%
150kL	1,119.73	1,338.28	1,092.67	-2.4%	-18.4%
200kL	1,234.23	1,452.78	1,202.67	-2.6%	-17.2%
300kL	1,463.23	1,681.78	1,422.67	-2.8%	-15.4%
400kL	1,692.23	1,910.78	1,642.67	-2.9%	-14.0%

The bill levels will be subject to CPI adjustments from 2019/20.

11.1.2 Non-residential

Non-residential customers will receive similar benefits, namely:
- more ability to manage water bills with the proposed usage component representing a larger proportion of the bill than currently
- the total bill in real terms will remain constant across the proposed price path period thus providing a high degree of cost certainty.

In addition the cost of sewerage discharge volumes reduces from the current $0.83kL to $0.40ckL

The largest change for non-residential customers is with the proposed stormwater drainage charge. Council's proposes to change to a whole of LGA area based charge – and impacts in the former council areas will therefore differ.

Council considers this proposed change is more equitable as it reflects the impacts of differing size properties and mirrors the changes adopted by both Sydney and Hunter Water in their last price determinations.

The impact on non-residential customers is more varied than on residential customers as a result of:

- differing sewerage discharge factors depending upon the customer's business
- the stormwater drainage charge being based upon the area of the property.

The two key factors that will drive changes in the bill level will be:

- The level of water consumption – this drives both water consumption and sewerage discharge costs.
- The area of the property – a small commercial operation operating on a large property will incur a higher drainage cost.

Council understands that any cost increase is not welcome. However, in assessing their own position customers should remember there has been a price freeze on water sewerage and stormwater drainage charges for the past two years.

Council wishes to see an economically thriving Central Coast and believes that the benefits of a common price fixed in real terms across four years with common service standards across the Central Coast are a key outcome of this pricing proposal.

11.1.3 Account Assistance for Financial Hardship

Council recognises that some of its customers can experience difficulties paying their bills from time to time due to financial hardship. Council works closely with relevant customers to develop appropriate payment plans.

Our Credit management team considers applications depending on needs and can provide information about:

- payment options, including help to set up weekly, fortnightly or monthly or direct debits
- personal payment plans
- access to Centrelink's Centrepay facilities
- referral to financial counselling services
- advice on how to manage water usage.

Council provides customers with hardship assistance and personalised payment plans for those who are experiencing financial difficulty paying their bills. Further information can be found on Council's website https://www.centralcoast.nsw.gov.au/residents/property/pay-rates-and-water-bills/rebates-and-hardship-assistance.

11.1.4 Pensioner Rebates

Council provides rebates to eligible pensioners for part of their water and sewerage bills. The Local Government Act prescribes the value. The current rebates are shown in the following table:

Table 75: Pensioner Rebates

Pensioner rebates		Annual rebate
Sewerage service charge	Rebate to a max of	$87.50
Water service charge		
Water usage charge	Rebate to a max of	$87.50
Total rebate		$175.00

Council expresses its support for a complete review by the NSW Government of the sufficiency and methodology for calculating water and sewerage pensioner rebates.

Council currently applies the pensioner rebates according to the Local Government Act 1993. The revenue received from the State Government in relation to this rebate is 55%, the remaining 45% is unrecovered revenue for which Council covers the cost

Council's revenue and price forecasts do not provide for any increases in the level of pensioner rebates to be funded by Council. Should any changes be made to the value of the pensioner rebates during the price period, Council is likely to under-recover its revenue needs.

To address this, Council proposes that:

- any increase in rebates be funded by the State or Federal Government, or
- any increases come into effect at the beginning of the next price period, or
- appropriate adjustment mechanism be included in the determination to allow Council to recover any costs of increased rebates in the price period.

11.2 Financial Sustainability

The objective of the financeability test is to assess the short term financial sustainability of Councils Water, Sewer and Stormwater Drainage services.

Adopting IPART's financeability test as set out in the paper financeability tests in price regulation (Dec 2013) Council's key financial ratios based upon the pricing proposal areas follows:

Year	2018-19	2019-20	2020-21	2021-22	2022-23
1. Funds from operations interest Cover	3.77	3.83	4.47	4.60	3.95
2. Debt / Regulatory Asset Base	35.0%	32.3%	30.9%	28.8%	26.7%
3. Funds from operation to debt	19.4%	20.3%	23.8%	25.6%	21.3%

Adopting the credit rating criteria as set out in IPART's financeability test Council's price regulated business (water, sewerage and stormwater drainage) has an investment credit rating over the proposed price path thus ensuring the financial sustainability to continue the provision of high quality service levels to customers and the wider community.

12 Customer Engagement

12.1 Introduction

Customer engagement for this submission has been designed in accordance with Central Coast Council's Engagement Framework. Key approaches of this framework include place-based engagement and balanced decision-making. The Framework is also guided by key elements of the International Association of Public Participation (IAP2), IAP2 Standard and AA1000 Stakeholder Standard.

The following principles from the Engagement Framework have guided the engagement activities for Council's pricing submission.

Respect and transparency

- We will consult when needed and use the information gathered in a meaningful way.
- We will respect your time and listen to you.
- We will engage at a level that is appropriate to the possibility to influence.
- We will share the responsibility, trust and transparency.

Access and inclusion

- We will seek a diversity of views and perspectives.
- We will provide feedback to the community as to how their input contributed to decision-making.
- We will endeavour to identify and remove barriers to participation.
- We will use a range of opportunities and techniques to encourage participation, and increase awareness and understanding for all who may be affected by or interested in the outcome.
- We will work in partnership with relevant community group's, State and Federal government, local government partners, and / or other stakeholders internally within Council.

Clarity

- We will have genuine and open dialogue with the community.
- We will clearly communicate the intention, scope and outcomes of the consultation.
- We will use plain language and avoid jargon to provide clear explanation.
- We will make information available in accessible formats.

Accountably and improvement

- We will seek to maintain consistent standards and levels of quality.
- We will share results internally and work together to avoid duplication and 'over consultation'.
- We will evaluate engagement efforts and consistently seek to learn and improve practice.

Capacity

- We will build the community's capacity to contribute, by educating and empowering both the community and staff so that they may participate in meaningful, two-way collaboration.

12.2 Consultation Objectives

The purpose of engaging with customers regarding Council's pricing submission is to determine what services our community seeks and for Council to gauge what the required capital and operating expenditure will be to deliver these services. To achieve this, the following objectives have been set.

1. Understand customer values
2. Understand customer expectations
3. Educate customers on water, sewerage and stormwater drainage pricing
4. Educate customers on water management
5. Determine customer priorities

12.3 Engagement Approach

A four step engagement approach was adopted that involved referencing information from a number of recent consultations with the Central Coast community as well as engaging directly with our customers to ensure their views, priorities and needs are reflected in the pricing submission.

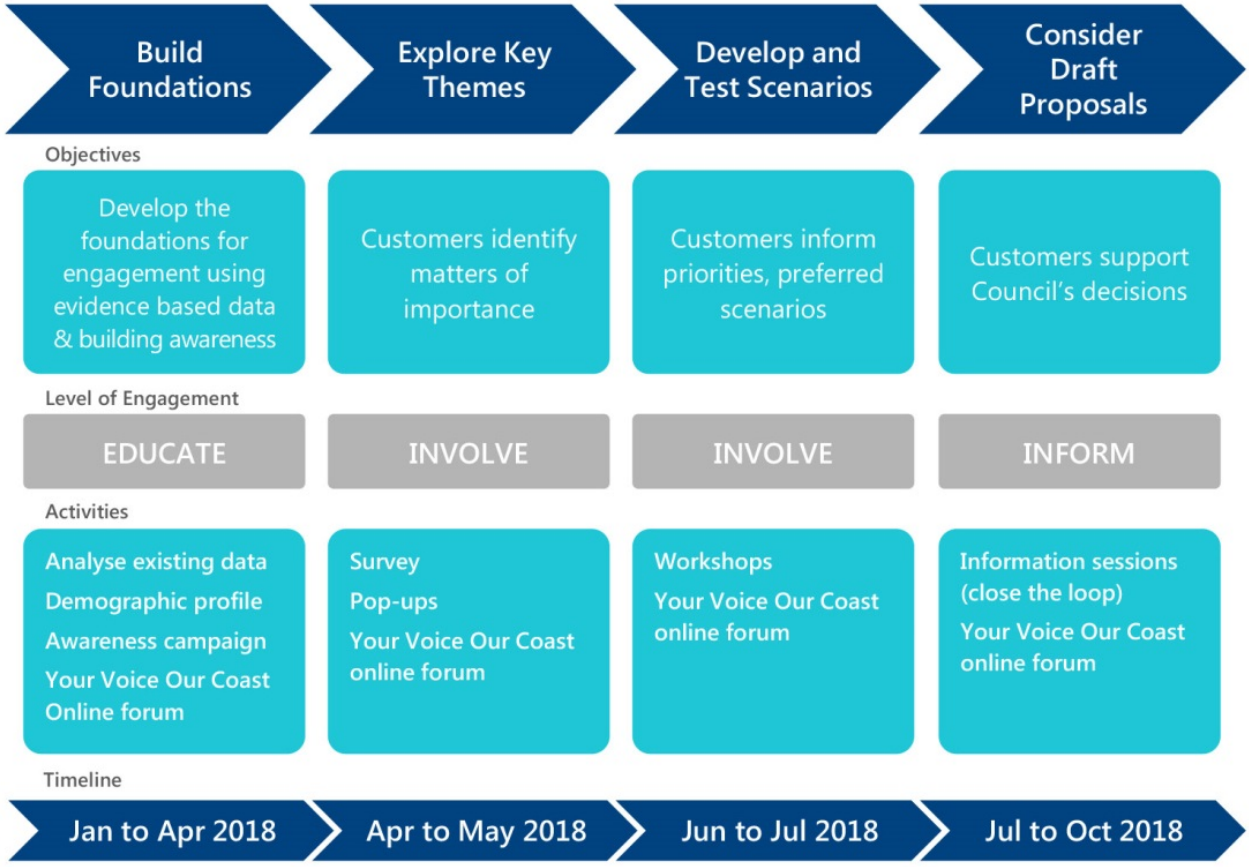


Figure 19: Council's engagement process

12.3.1 Building Foundations

The first phase of the process was to develop engagement foundations using evidence based data and building awareness in the community.

The Central Coast Community vision was adopted in June 2018 following 18 months of extensive consultation. The vision is "*We are One Central Coast. A smart, green, and liveable region with a shared sense of belonging and responsibility.*" Water, sewerage and stormwater drainage services play a pivotal role in achieving this vision.

Council's services are guided by the Community Strategic Plan which was developed in partnership with the Central Coast community to identify values and priorities for the next 10+ years. These values are: belonging; smart; green; responsible; and liveable.
To inform the submission process, consideration of the Community Strategic Plan and alignment with its values is required. The actions under these values that relate to water, sewerage and stormwater drainage services are:

Smart
A growing and competitive region
J.1 Target economic development in growth areas and major centres and provide incentives to attract businesses to the Central Coast

J.2 Revitalise Gosford CBD, Gosford Waterfront and town centres as key destinations and attractors for businesses, as well as local residents, visitors and tourists

A place of opportunity for people
I.2 Support local business growth by providing incentives, cutting red tape and encouraging social enterprises.

Green
Environmental resources for the future
L.1 Educate the community on the value and importance of natural areas and biodiversity, and encourage community involvement in caring for our natural environment.

L.2 Improve water quality for beaches, lakes, and waterways by minimising pollutants and preventing litter entering our waterways.

L.3 Reduce littering, minimise waste to landfill and educate to strengthen positive environmental behaviours

L.4 Incorporate renewable energy and energy alternatives in future design and planning, and ensure responsible use of water and other resources

Cherished and protected natural beauty
K.1 Protect our rich environmental heritage by conserving beaches, waterways, bushland, wildlife, corridors and inland areas, and the diversity of species.

K.4 Address climate changes and its impacts through strategic planning, responsible land management and collaborative partnerships.

Responsible

Good governance and great partnerships

G.2 Communicate openly and honestly with our community to build a relationship based on transparency, trust and respect.

G.3 Engage with the community in meaningful dialogue and demonstrate how community participation is being used to inform decisions

G.4 Serve the community by providing great customer experience, value for money and quality services.

Delivering essential infrastructure

H.1 Address road and drainage problem areas and partner with the State Government to improve road conditions across the region.

H.4 Plan for adequate and sustainable infrastructure to meet future transport, energy, water and telecommunication demands.

Liveable

Balanced and sustainable development

D.2 Ensure all new developments are well planned with good access to public transport, green space and community facilities.

D.3 Ensure land use planning and development is sustainable and considers environmental impacts including local habitat, green corridors, energy efficiency and stormwater management.

To gain a baseline understanding of the strengths, weaknesses and perceptions of the services, previous research and data was analysed, including:

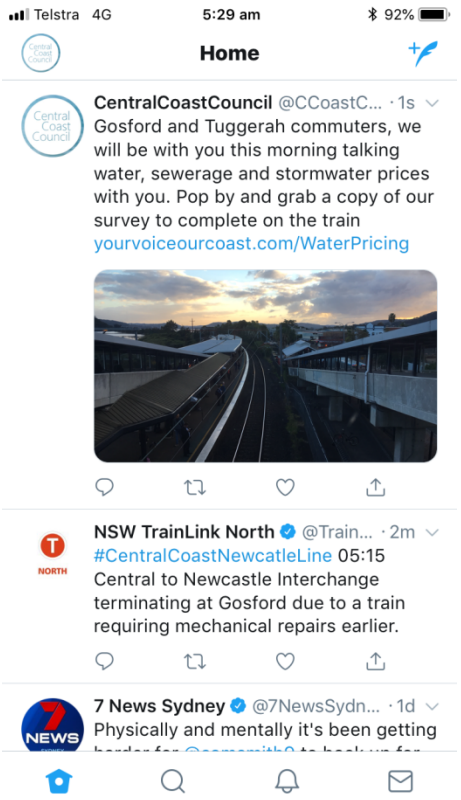
- Central Coast Council's Community Strategic Plan research data
- former Gosford City Council and former Wyong Shire Council customer satisfaction surveys
- urban national performance reports, which benchmarks the pricing and service quality of Australian water utilities
- internal reports on service and supply, including customer complaints
- research conducted during the development of *WaterPlan 2050*
- *Our Water - Our Future* - Central Coast Council's internal water and sewerage business improvement and strategic planning process.

12.3.2 Explore Key Themes

Survey
The key themes raised from Phase 1 Build Foundations formed the basis of a survey *'It's time to talk water, sewerage and stormwater pricing'*.

The purpose of the survey was to identify matters of importance to customers; gauge satisfaction levels; and understand customer perceptions regarding value for money in relation to Central Coast Council's water, sewerage and stormwater drainage services.
The priorities, expectations and themes raised from the survey were used to set the agenda for the workshops and inform Council's submission. A report on the findings and a copy of the survey can be found at Appendix 9

Community pop up events
Ten community pop up events were held across the region. Residents were encouraged to discuss their thoughts, complete a survey, understand the water, sewerage and stormwater drainage pricing process, and sign up for further engagement opportunities.
They were located in key shopping areas, and to capture the 30% of residents that commute for work, at local train stations.



Workshops

Four workshops were held across the Central Coast during business hours and after hours. The objective of the workshops was to explore key themes that emerged from the survey: the protection of water supply catchments; and managing future water supply demand. Participants discussed the risks associated with the themes and identified potential mitigating measures. The insights from these workshops will be used for a variety of planning processes.

Information sessions

Information sessions will be held across the region in mid to late September following Council's submission to IPART.

12.4 Customer and Community Views

Engagement Reach

More than 133,000 customers were reached through the communication and engagement channels and a total of 2,641 actively participated.

Engagement Activity	Number Engaged
Community pop ups	1,264
Survey	1,339
Workshops	38
Total	2,641

Figure 20: Consultation Phase 2 Explore Key Themes

Emerging themes and insights

Customer values
As part of the survey, customers were asked to rank six key values relating to their water, sewerage and stormwater drainage services. From 1,339 completed surveys the provision of a safe, readily available water supply and a reliable sewerage and stormwater system; services offering value for money; and services operate efficiently were ranked as the most important for our customers. These values are in line with how IPART reviews Council's services as part of its pricing determination.

Customer Ranking	Customer Value
1	Reliable - Water is safe to drink and available when required; sewerage system and stormwater system is reliable
2	Value for money - there is balance between the service Council provides and the charges I pay
3	Efficient - Services operate efficiently
4	Responsive - Respond quickly to faults and supply interruptions
5	Care for the environment - Protect the environment now and for the future.
6	Building for the future - Plan for adequate infrastructure to meet future demands

Alignment of prices

Water usage charges are already aligned across the region, however service charges differ. Customers were asked whether they thought service charges should be consistent across the Central Coast. Most customers indicated the water (74%), sewerage (73%) and stormwater drainage (65%) service charges should be consistent.

Satisfaction

Overall, customers are satisfied with the services provided by Council. Customers that completed the survey were most satisfied with sewerage services, followed by water then stormwater.

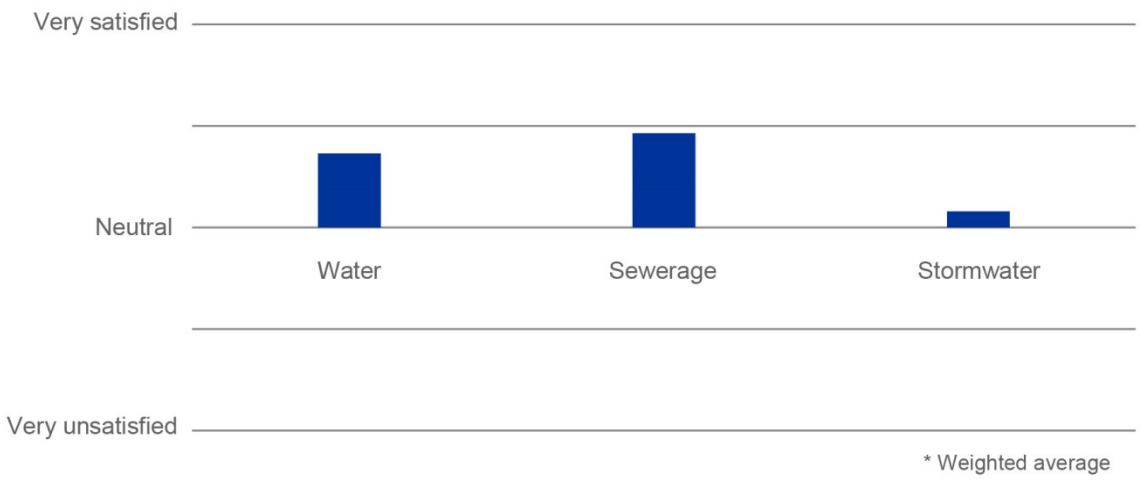


Figure 21: Level of satisfaction with the water, sewerage and stormwater drainage services*

Value for money

Value for money has been identified as a top priority for customers. Overall perception if current value for money was neutral, with customers seeing the greatest value in sewerage services, followed by water, then stormwater. This indicates the current balance between the service Council provides and the charges customers pay is acceptable.

Planning for the future

Although customers ranked planning for the future as the lowest priority, to ensure the top priority of a reliable service continues, Council must plan for the future. Customers were asked what measure Council should take to meet future water supply needs. The majority supported protecting our water supply catchments (73%); water conservation education (57%); increasing the water storage capacity at Mangrove Creek Dam (52%); and exploring addition water supplies (51%).

The consultation has directly influenced Council capital expenditure program via the prioritisation of the Mangrove Creek Spillway upgrade project and for the allocation of funds to the water & sewer main maintenance and renewals.

13 Pricing arrangements for WICA licensees

The Water Industry Competition Act (WICA) was introduced in 2006 https://www.ipart.nsw.gov.au/files/assets/website/water/water-static-pages/overviewoflicensingregime-formatted_001.pdf which allowed private sector entrants to provide licensed water/sewerage services to new customers and the ability to access public infrastructure.

There are two Water Industry Competition Act (WICA) schemes active within the Central Coast LGA. One is at Narara Eco Village, the other located at Catherine Hill Bay (run by Solo Water).
Council does not propose bulk supply charges in place of our standard regulated charges.

Narara Eco Village

- The developer chose WICA to alleviate having to connect to Council's systems which negated the need for the developer to pay water and sewerage contributions and also augment its various infrastructure including pump stations, rising mains and trunk mains.
- The proponent retains a connection to the Council water supply (50mm service) to fill an internal reservoir for the initial stages of the development - until thirty or more dwellings are occupied within the site. From this stage the development will become self-sufficient and the water service will be removed.
- A plan of management for the site was prepared to describe the water supply arrangements and a Deed entered into between the Council and the Eco Village has formalised implementation.

Catherine Hill Bay (Solo Water)

- Potential development of Catherine Hill Bay has been investigated extensively. A significant cost constraint is the adequate provision of water supply and sewerage services from the Hunter Water Corporation's area of operations. The remoteness of the site and requirements to augment infrastructure back towards the suburbs of Caves Beach and Swansea posed significant challenges for the developer.
- The scheme includes approximately 540-650 residential allotments dependent on the uptake of water supply within the existing Catherine Hill Bay Village. Solo Water was to provide sewerage via an onsite collection, treatment and disposal system. As a result of the reticulated recycled water system being installed this only equates to 373 equivalent tenements.
- Solo Water approached former Wyong Council in 2013 to discuss the technical feasibility of providing water to the Catherine Hill Bay Area under a WICA scheme. The then Water and Sewer unit of that Council reviewed that proposal and provided an assessment.
- Between the issue of the technical feasibility letter and the lodgment of Solo Water's Network Operators Licence (WICA), discussions were held regarding the commercial arrangements for a water supply connection. It was discussed that any new connection would be subject to an application under S.305 of the Water Management Act. and the payment of developer charges as per Council's Development Servicing Plan. It was also discussed that Council's Water Supply fees and charges were regulated by IPART and that no bulk discount would apply. Comparison was made between the proposed Solo water connection and a large commercial/industrial user within the network.

- A formal section 305 application was made to formalise the proposed connection and a separate Development Application was lodged for construction of their private water pump station and associated rising main. Following review of the operation of the scheme the relevant developer charges were determined and documented.
- Solo Water has commenced supply to their customers.
- Service charge situation:
  Council charges Solo Water an annual 200mm service charge in line with regulated charges.

14 Quality Assurance of Council Pricing Proposal

IPART requires that Council's pricing submissions be subject to an external quality assurance (QA) check prior to lodgement. IPART seeks to provide a level of assurance that the information submitted by Council is 'complete, accurate and consistent'.

To meet this requirement Council has engaged Frontier Economics who have verified that:

- The information in the submission is consistent with that in the information return, the agency's financial accounts, and reports against output measures, as relevant, and that any variances are explained
- Figures in the submission are accurate and correctly sourced. The figures sum correctly and are in the same terms (i.e. all figures are in nominal or real dollars).
- All the information that IPART has requested are addressed in the submission
- The submission includes proposed prices for all monopoly services of Council along with justification for the price movement

15 Glossary

AEMO	Australian Energy Market Operator
AIR	Annual Information return
CAPEX	Capital Expenses
CBD	Central business district
CCC	Central Coast Council
CCIWRP	Central Coast Integrated Water Resource Plan
CCWC	Central Coast Water Corporation
CDU	Chemical Dosing Units
CIC	Capital Investment Committee
DAF	Dissolved/Diffused Air Floatation (system) (used at KSTP)
DPI	Department of Primary Industry
DSP	Developer Servicing Plan
EPA	Environment Protection Authority
EPL	Environment Protection Licences
ESS	Energy Savings Scheme
ETEK	Electrical technical
EWON	Energy and Water Ombudsman. NSW Industry complaints scheme
HV	High Voltage
HWC	Hunter Water Corporation
IPART	Independent Pricing and Regulatory Tribunal
ICT	Information communication and technology
JWS	Joint Water Scheme
KL	Kilolitres (thousand litres)
KSTP	Kincumber Sewage Treatment plant
LGA	Local Government Area
LHWP	Lower Hunter Water Plan
LRET	Large Renewable Energy Target
LRMC	Long Run Marginal Cost
LTW	Liquid trade waste
LV	Low voltage
ML	Megalitres (million litres)
M2WP	Mardi to Warnervale Pipeline
MWTP	Mardi Water Treatment Plant
NMI	National Meter identifier
NPR	National Performance Report
OPEX	Operational Expenses
PIRMP	Pollution Incident Response Management Plans
POEO	Protection of Environment Operations
PRT	Project Review team
PRV	Pressurised Valve
QMRA	Quantitative microbial risk assessment
RAB	Regulated Asset base
SCADA	Supervisory Control and Data Acquisition
SPS	Sewage Pump Station
SRES	Small Renewable Energy Scheme

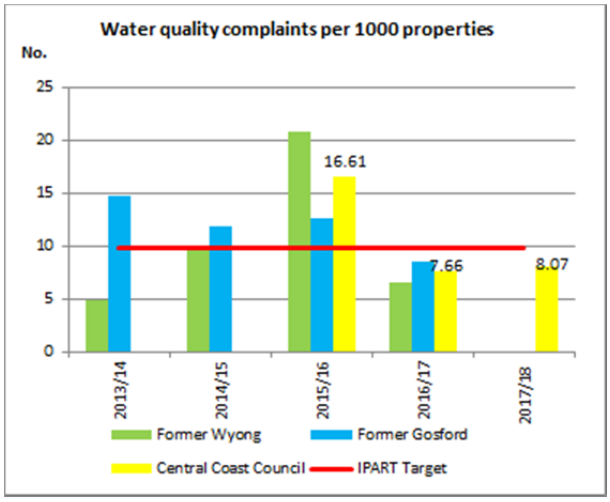
SRMC	Short Run Marginal Cost
STP	Sewage treatment plant
SWC	Sydney Water Corporation
TO	Toukley (in this context)
WHS	Workplace Health and Safety
WICA	Water Industry Competition Act
WMA	Water Management Act
WPS	Water Pumping Station
WYOMJ	Wyoming (in this context)

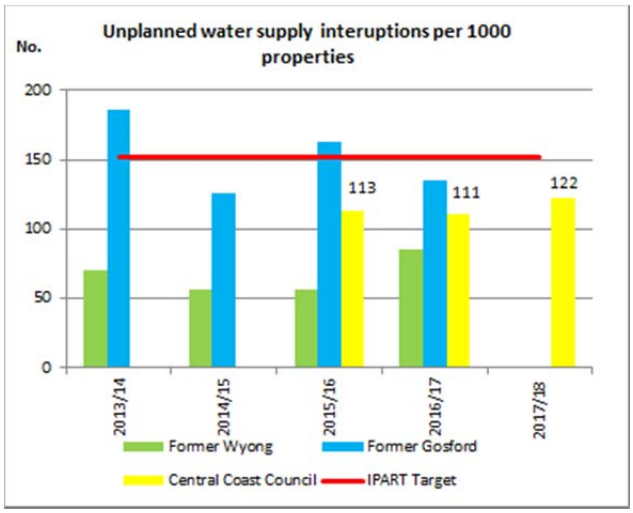
Appendices

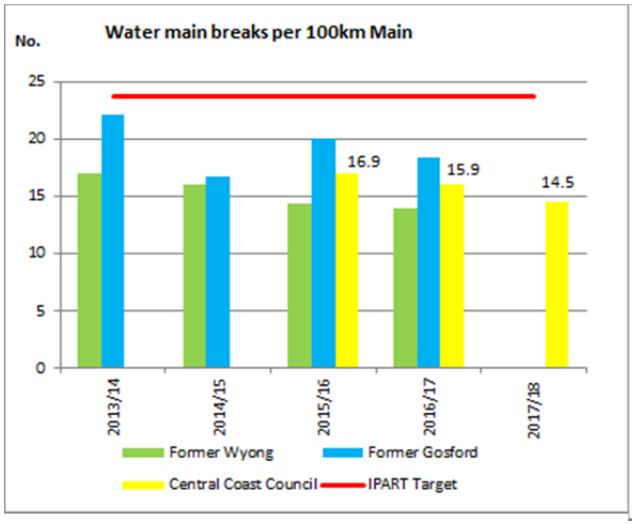
Central Coast Council
Submission to IPART
Review of Prices for Water, Sewerage and Stormwater Services
Central Coast Council - Price Path from 1 July 2019 - 30 June 2023

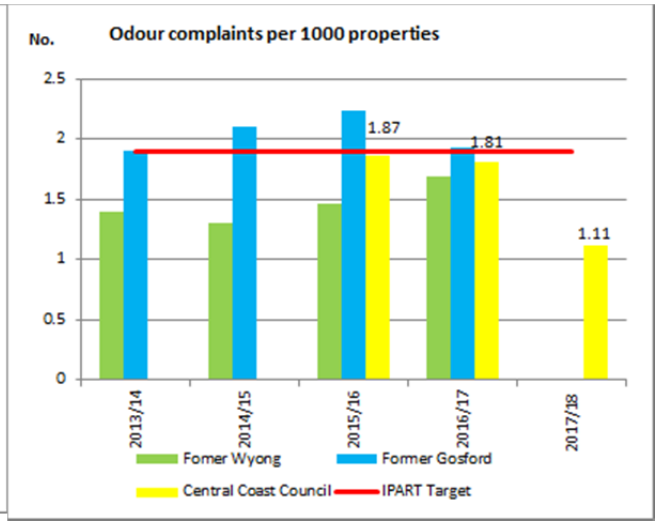
16 Appendices

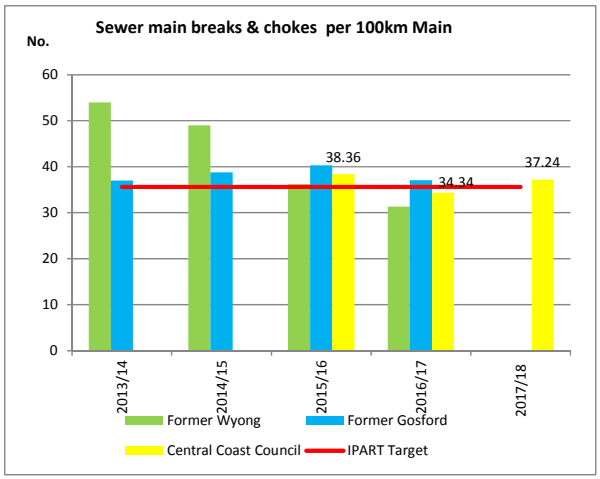
Appendix 1: Service level output measures

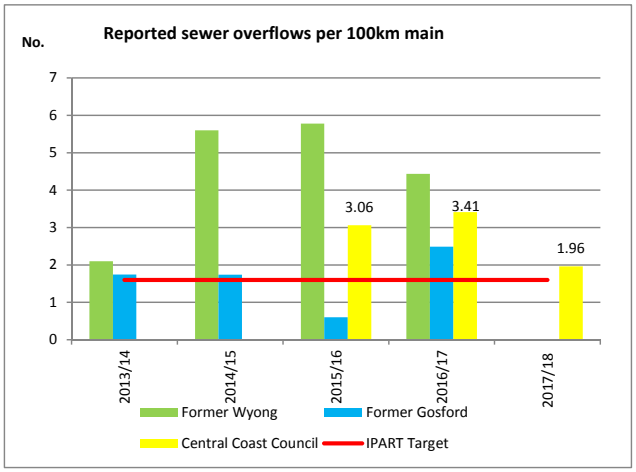


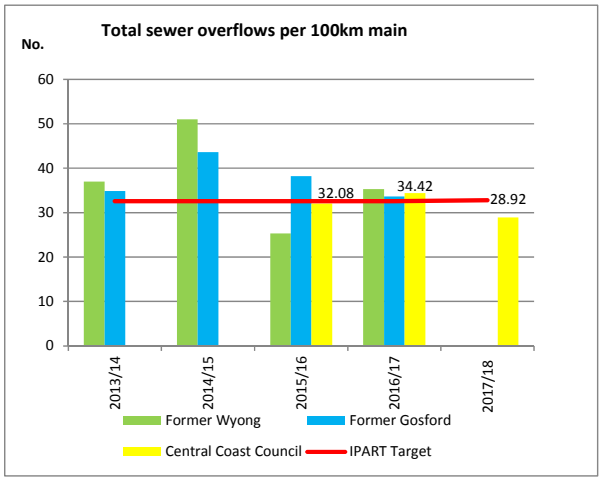







Sewer main breaks & chokes per 100km Main
No.
60
50
40
30
20
10
0
38.36
34.34
37.24
2013/14
2014/15
2015/16
2016/17
2017/18
Former Wyong
Former Gosford
Central Coast Council
IPART Target


Reported sewer overflows per 100km main
No.
7
6
5
4
3
2
1
0
3.06
3.41
1.96
2013/14
2014/15
2015/16
2016/17
2017/18
Former Wyong
Former Gosford
Central Coast Council
IPART Target


Total sewer overflows per 100km main
No.
60
50
40
30
20
10
0
32.08
34.42
28.92
2013/14
2014/15
2015/16
2016/17
2017/18
Former Wyong
Former Gosford
Central Coast Council
IPART Target

Appendix 2: Output Measures

This appendix sets out Council's target output measures for service levels for the 2019 Determination.

Output or activity measure	Proposed target 2019-2023
Water	
Water quality complaints per 1,000 properties	9
Average frequency of unplanned interruptions per 1,000 properties	136
Water main breaks per 100km main	20
Compliance with Australian Drinking Water Guidelines – microbial guideline values	100%
Compliance with Australian Drinking Water Guidelines – chemical guideline values	100%
Sewer	
Sewer overflows per 100km main	32
Sewer overflows reported to the environmental regulator per 100km main	1.6
Sewer odour complaints per 1,000 properties	1.9
Sewer main breaks and chokes per 100km main	35.6
Compliance with EPL concentration and load	Yes

Appendix 3 Total OPEX Actual 2013-18 ($'000 norminal)						
	2013-14	2014-15	2015-16 (11mo	2016-17 (13mo	2017-18 Prelim	2018-19
	$ nominal	$ nominal	$ nominal	$ nominal	$ nominal	$ nominal
Labour	24,544	26,021	20,619	27,719	27,424	23,885
Oncosts	7,768	6,352	4,097	5,915	4,611	4,218
Consultants	5,256	4,659	4,326	6,302	928	6,196
Hire and Contracts	11,568	11,752	9,615	14,389	10,885	16,683
Materials	10,278	9,976	4,926	6,443	8,299	10,347
Energy	9,572	8,159	6,184	7,586	7,699	8,162
Licence Fees	448	431	344	512	909	1,938
Bulk Water Purchases	312	339	447	484	342	321
Other	1,534	1,140	2,114	2,625	1,706	-274
Corporate Overheads	23,294	22,683	18,355	26,989	20,718	20,345
Rental Accommodation	1,049	1,075	1,103	1,129	0	0
Advertising, phone, insurance	308	194	596	510	132	29
Road Opening Fees	193	175	179	184	165	319
Loss on disposal of assets	290	307	-	-	35	-
Plant and Fleet	-	-	-	-	4,637	5,830
Total water	96,414	93,263	72,905	100,787	88,490	97,999

Appendix 4: Proposed Pricing

Appendix 4.1 Schedule of Proposed Prices – Water (Residential and Non-residential)

Water Service Charge

A water service charge is proposed to apply according to water meter size for non-residential. Residential dwelling will be based set on a 20 mm meter equivalent

Table 76: Proposed residential service charge stated in $18/19 + ΔCPI

Residential customers - Dwellings	Finalised unit cost 2019/20	Finalised unit cost 2020/21 ^	Finalised unit cost 2021/22^	Finalised unit cost 2022/23^
Houses	113.20	113.20	113.20	113.20
Strata common meters (excluding individually metered properties)	113.20	113.20	113.20	113.20
Strata individual meters (individually metered properties)	113.20	113.20	113.20	113.20
Flats	113.20	113.20	113.20	113.20
Mixed development	113.20	113.20	113.20	113.20
Unconnected properties (but reasonably available for connection)	113.20	113.20	113.20	113.20

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Table 77: Proposed Non-residential service charge stated in $18/19 + ΔCPI

Water Service Charge – Metered Services						
Nominal Pipe/Meter Size	Current former Wyong LGA	Current former Gosford LGA	2019/20	2020/2021^	2021/22^	2022/23^
20 mm	164.63	197.81	113.20	113.20	113.20	113.20
20 mm non res common meter	146.02	N/A	113.20	113.20	113.20	113.20
25 mm	228.15	276.05	176.87	176.87	176.87	176.87
32 mm	373.81	452.27	289.79	289.79	289.79	289.79
40 mm	584.09	706.68	452.79	452.79	452.79	452.79
50 mm	912.63	1,104.18	707.49	707.49	707.49	707.49
65 mm			1,195.65	1,195.65	1,195.65	1,195.65
80 mm	2,336.34	2,826.71	1,811.17	1,811.17	1,811.17	1,811.17
100 mm	3,650.54	4,416.74	2,829.95	2,829.95	2,829.95	2,829.95
150 mm	8,213.70	9,937.65	6,367.38	6,367.38	6,367.38	6,367.38
200 mm	14,602.14	17,666.93	11,319.78	11,319.78	11,319.78	11,319.78
300 mm			17,687.16	17,687.16	17,687.16	17,687.16

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Charges for meters in excess of 250 mm are calculated according to the ratio of the cross sectional area of the connection when compared to a 20mm connection.

Water Usage Charge

A standard water usage charge is proposed to apply to all water measured at the water meter. (Table 78)

Table 78: Proposed Water usage charge stated in $18/19 + ΔCPI

Water Usage Charge						
Type of Service	Former Current Wyong LGA	Former Current Gosford LGA	2019/20	2020/21^	2021/22^	2022/23^
Per kilolitre usage charge	$2.29	$2.29	$2.20	$2.20	$2.20	$2.20

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Vacant Land and Unmetered Service

A water service charge is levied on vacant land to which water is supplied or to which it is reasonably practical for water to be supplied and to all properties to which an unmetered water service is supplied.

Table 79: Proposed Water service charge vacant land stated in $18/19 + ΔCPI

Water Service Charges – Vacant Land and Unmetered Services						
Type of Service	Former Current Wyong LGA	Former Current Gosford LGA	2019/2020	2020/2021^	2021/2022^	2022/2023^
Water Service Charges	164.63	197.81	113.20	113.20	113.20	113.20

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Fire Fighting Water Supply Service

There is no charge to the fire services. Where a property has a combined fire and commercial service the property will be charged a water service charge based on the meter size.

Appendix 4.2 Schedule of Proposed Prices - Sewerage

Residential Properties

Residential properties include:

- single residential properties
- residential strata properties
- residential company titled properties.

Council has a charging structure based on a sewerage service charge for each residential property to which a sewerage service is below:

There is no sewerage usage charge for this category.

The service charge currently includes an implicit 150kL @ $0.83 per kL , or$124.50. The proposed prices will include an implicit usage charge for 112.5kL @ $0.40 per kL, or $45 included in the charge.

Table 80: Proposed Residential sewerage service in $18/19 + ΔCPI

Sewerage Service Charge						
Type of Service	Former Current Wyong LGA	Former Current Gosford LGA	2019/20	2020/21^	2021/22^	2022/23^
Sewerage Service Charge	483.28	672.66	538.70	538.70	538.70	538.70

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Non Residential Properties

Non Residential customers are commercial premises and include retirement village and community development properties.

The current service charge includes an implicit 150kL @ 0.83 per kL. Proposed prices will include an implicit usage charge of 112.5kL at $0.40 per kL added to the charge.

Sewerage Service Charge

Table 81: Proposed Non-residential service charge in $18/19 + ΔCPI

Sewerage service charge non-residential						
Nominal Pipe/Meter Size	Former Current Wyong LGA	Former Current Gosford LGA	2019/20	2020/21^	2021/22^	2022/23^
20 mm	284.15	672.42	538.70	538.70	538.70	538.70
25 mm	443.99	1,542.33	816.41	816.41	816.41	816.41
30 mm	-	-	-	-	-	-
32 mm	-	2,526.96	1,308.87	1,308.87	1,308.87	1,308.87
40 mm	1,136.61	3,948.37	2,019.80	2,019.80	2,019.80	2,019.80
50 mm	1,775.95	6,169.33	3,130.63	3,130.63	3,130.63	3,130.63
65 mm	-	-	5,259.71	5,259.71	5,259.71	5,259.71
80 mm	4,546.43	15,793.47	7,944.21	7,944.21	7,944.21	7,944.21
100 mm	7,103.80	24,677.20	12,387.5	12,387.52	12,387.52	12,387.52
150 mm	15,983.55	55,523.92	2	27,815.66	27,815.66	27,815.66
200 mm	28,415.20	98,709.20	27,815.6	49,415.07	49,415.07	49,415.07
300 mm	-	-	6	77,185.74	77,185.74	77,185.74
	-		49,415.0			
			7			
			77,185.7			
			4			

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Note - The listed charge is subject to a discount by the application of a discharge factor. The discharge factor is the estimated percentage of metered water discharged into Council's sewerage system. The discharge factor reflects the type of premises discharging to the sewerage system. The sewerage service charge is the product of the listed charge multiplied by the appropriate discharge factor.

Charges for meter sizes not specified above are calculated according to the ratio of the cross sectional area of the connection when compared to a 20mm connection.

Sewerage Usage Charge

Table 82: Proposed Non-residential sewerage usage charge in $18/19 + ΔCPI

Non-Residential Sewerage Usage Charge						
Type of Service	Former Current Wyong LGA	Former Current Gosford LGA	2019/20	2020/21^	2021/22^	2022/23^
$ per kilolitre of water discharged	0.83	0.83	0.40	0.40	0.40	0.40

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

The usage charge is based on the estimated volume of metered water discharged into Council's sewerage system. To calculate the estimated volume discharge to the sewerage system metered water usage is multiplied by the relevant discharge factor based on the type of premises.

Vacant Land

A sewerage service charge will apply for vacant land to which a sewerage service is supplied or to which it is reasonably practical for sewerage service to be supplied.

Table 83: Proposed Sewerage service charge vacant land in $18/19 + ΔCPI

Sewerage Service Charges – vacant land						
Type of Service	Former Current Wyong LGA	Former Current Gosford LGA	2019/20	2020/21^	2021/22^	2022/23^
Sewerage Service Charge	483.28	672.66	538.70	538.70	538.70	538.70

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Exempt Properties

Sewerage service charges are not applicable to exempt properties. Customers will be levied a usage charge only.

Appendix 4.3 Schedule of Proposed Prices – Stormwater Drainage

Residential Properties

A Stormwater Drainage Service Charge will apply to all residential properties. All multi-premises customers will pay a discounted standard price.

Table 84: Proposed Residential service charge in $18/19 + ΔCPI

Drainage Service Charge - Residential						
Type of Service	Former Current Wyong LGA	Former Current Gosford LGA	2019/20	2019/20^	2020/21^	2021/22^
Residential	128.32	124.64	110.77	110.77	110.77	110.77
Multi premise residential	96.24		83.08	83.08	83.08	83.08

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Non-residential Properties (Single Metered)

A stormwater drainage service charge will apply to all non-residential properties based on area.

All non-residential customers pay an area-based price with the potential for a low impact price on application to Council as per IPART issues paper.

Table 85: Proposed Non-residential stormwater drainage charge in $18/19 + ΔCPI

Stormwater Drainage Service Charge Non-residential						
Category	Former Current Wyong LGA	Former Current Gosford LGA	2019/20	2020/21^	2021/22^	2022/23^
Non-residential	124.68	-				
Low impact	-	128.32	110.77	110.77	110.77	110.77
25mm	-	200.50	-	-	-	-
40mm	-	513.28	-	-	-	-
50mm	-	802.01	-	-	-	-
80mm	-	2,053.14	-	-	-	-
100mm	-	3,208.03	-	-	-	-
150mm	-	7,218.05	-	-	-	-
200mm	-	12,832.09	-	-	-	-
<1000sqm	-	-	110.77	110.77	110.77	110.77
1001-10000sqm	-	-	276.93	276.93	276.93	276.93
10001-45000 sqm	-	-	1,716.96	1,716.96	1,716.96	1,716.96
>45000 sqm	-	-	5,427.81	5,427.81	5,427.81	5,427.81

^*All prices will be indexed each year by the change in relevant CPI (as defined by IPART)*

Multi Premises Properties (with Master Meter)

A stormwater drainage service charge will apply to multi premises properties. Properties in this category include:

- strata title units
- company title dwellings
- community development lots
- retirement village units
- a part of a building lawfully occupied or available for occupation.

Multi premises properties do not include hotels, motels, guest houses or backpacker hostels.

Appendix 4.4 Schedule of Proposed prices – Liquid Trade Waste (LTW)

Summary of the methodology and assumptions applying to management of the discharge of liquid trade waste to Council's sewerage system for each of the charges specified under the categories below:

a) Administrative Charges (for Categories 1, 2 3 and S)
   - Application Fee for each Category
   - Annual Liquid trade waste fee for each Category
   - Common re-inspection fee for all Categories
   - Liquid Trade Waste Usage Charge for Category 2 (Compliant and Non-Compliant) and Category S dischargers.

b) Mass based charges (Category 3 only)

Basis of Charges

a) Administrative Charges (for Categories 1, 2 and 3)

LTW Application Fee (Category 1)

Required under the NSW State Government *"Best Practice Guidelines"* for the management of Liquid Trade Waste (LTW).

Basis of Charge	Former Wyong	Former Gosford
Introduced	1 July 2006	1 July 2014
Monopoly Service	Yes	Yes
Service Frequency	Typically 15 per annum	Typically 30 per annum
Current 2017/18 Charge:	$52.19	$126.63
Estimated Income per annum	$782.85	$3,798.90

Former Wyong	Former Gosford
A $40.40 Category 1 charge was introduced. The charge has only ever been subject to CPI adjustments increasing to $52.19 in 2017/18.	A $119.85 Category 1 charge was introduced. The charge has only ever been subject to CPI adjustments increasing to $126.63 in 2017/18.
Central Coast Council Proposed Charge – Category 1	
The current level service provided by Central Coast Council to support the charge is as follows: • single inspection of premises • associated administration functions	

Former Wyong	Former Gosford
Council proposes a more specific and locally based charge model as outlined in the example below: • Average travel time to/from premises: 60 minutes • Average inspection time on premises: 15 minutes • Average administration to process application: 20 minutes *Unit Costs:* • Liquid Trade Waste Officer; $39.41/hour + Standard Costing = $/hour $60.34 Total Cost to process application • Liquid Trade Waste Officer – 1.25 hours @ $60.34 = $75.42 • Administrative Functions – 0.33 hours @ $60.34 = $19.91 Total: $95.33 Calculated Fee: $95.33 2017/18 Charge: Former Wyong = $52.19 Former Gosford = $126.63 **Proposed 2019/20 Charge: $95.33**	

Liquid Trade Waste Application Fee (Category 2)

Basis of Charge	Former Wyong	Former Gosford
Introduced	1 July 2006	1 July 2014
Monopoly Service	Yes	Yes
Service Frequency	Typically 30 per annum	Typically 30 per annum
Current 2017/18 Charge:	$66.43	$211.27
Estimated Income per annum	$1,992.90	$6,338.10

Former Wyong	Former Gosford
A $51.42 Category 2 charge was introduced. The charge has only ever been subject to CPI adjustments increasing to $66.43 in 2017/18.	A $199.95 Category 2 charge was introduced The charge has only ever been subject to CPI adjustments increasing to $211.27 in 2017/18.
Central Coast Council - Proposed Charge Category 2	
Council proposes a more specific and locally based charge model as outlined in the example below: • Average travel time to/from premises: 60 minutes • Average inspection time on premises: 30 minutes • Average administration to process application: 30 minutes	

Former Wyong	Former Gosford
Unit Costs: • Liquid trade waste Officer; $39.41/hour + Standard Costing = $/hour $60.34 Total Cost to process application • Liquid trade waste Officer – 1.5 hours @ $60.34 = $90.51 • Administrative Functions – 0.5 hours @ $60.34 = $30.17 Total: $120.68 Calculated Fee: $120.68 Current 2017/18 Charge: Wyong $66.43 Gosford $211.27 **Proposed 2019/20 Charge: $120.68**	

Liquid Trade Waste Application Fee (Category 3)

Basis of Charge	Former Wyong LGA	Former Gosford LGA
Introduced	1 July 2006	1 July 2014
Monopoly Service	Yes	Yes
Service Frequency	Typically 1 per annum	Typically 1 per annum
Current 2017/18 Charge:	$1,018.90	$495.09
Estimated Income per annum	$1,018.90	$495.09

Former Wyong	Former Gosford
A $788.42 Category 3 charge was introduced. The charge has only ever been subject to CPI adjustments, increasing to $1,018.90 in 2017/18.	A $468.56 Category 3 charge was introduced. The charge only ever been subject to CPI adjustments, increasing to $495.09 in 2017/18.
Central Coast Council - Proposed Charge Category 3	
The assumptions used by Central Coast Council to support the above charge are as follows; • two inspections of premises • associated administration functions by Council including liaison with regulator Department of Industry - Water an estimated at 22 hours. The assessment of Category 3 applications is undertaken by the Liquid Trade Waste Supervisor. Council proposes a more specific and locally based charge model as outlined in the example below: • Average travel time to/from premises: 60 minutes per inspection (two inspections)	

Former Wyong	Former Gosford

- Average inspection time on premises: 60 minutes per inspection (two inspections)
- Average administration time to process application: 22 hours

Unit Costs:

- Liquid trade waste Supervisor; $54.60/hour + Standard Costing = $/hour $83.60

Total Cost to process application

Liquid trade waste Supervisor;

- Inspections 4 hours @ $83.60/hour = $334.40
- Administrative Functions 22 hours @ $83.60/hour = $1,839.20

Total: $2,173.60

Current 2017/18 Charge: Wyong $1,018.90
Former Gosford $495.09

Proposed 2019/20 Charge: $2,173.60

Annual Liquid Trade Waste Fee (Category 1)

Basis of Charge	Former Wyong	Former Gosford
Introduced	1 July 2006	1 July 2006
Monopoly Service	Yes	Yes
Service Frequency	Typically 96 per annum	Typically 216 per annum
Current 2017/18 Charge:	$91.29	$73.52
Estimated Income per annum	$8,763.84	$15,880.32

Category 1 dischargers are those conducting an activity requiring nil or only minimal pre-treatment equipment and whose effluent is well defined and generally (but not completely) of low risk to the sewerage system. The charge is intended to cover the cost of administration and one scheduled inspection of the premises each year to ensure ongoing compliance with approval conditions. The cost of any additional inspections is recovered through a separate re inspection charge.

The balances of Category 1 dischargers whose activities have been deemed by Department of Industry - Water to be of zero or near zero risk attract no annual liquid trade waste fee. Examples are café / coffee shop / canteen community hall/ ice cream parlour/ motel/ juice bar.

Former Wyong	Former Gosford
The default charge provided was $64 per annum expressed in 2002/3$. CPI adjustments have increased the fee to $91.29 in 2017/18.	The calculated charge provided was $61.33 per annum expressed in 2002/3$. CPI adjustments have increased the fee to $73.52 in 2017/18.

Central Coast Council - Annual LTW Fee Category 1

Council proposes a more specific and locally based charge model as outlined in the example below:

- Average travel time to/from premises: 60 minutes per inspection (once yearly)
- Average inspection time on premises: 20 minutes per inspection (once yearly)
- Average administration time per annum: 20 minutes

Unit Costs:

- Liquid Trade Waste Officer; $39.41/hour + Standard Costing = $/hour $60.34

Total Annual Costs

- Liquid trade waste Officer – 1.33 hours @ $60.34 = $80.25
- Administrative Functions – 0.33 hours @ $60.34 = $19.91

Total: $100.16
2017/18 Charge: Wyong $91.29
Gosford $73.52

Proposed 2019/20 Charge: $100.16

Annual Liquid Trade Waste Fee (Category 2)

Basis of Charge	Former Wyong	Former Gosford
Introduced	1 July 2006	1 July 2006
Monopoly Service	Yes	Yes
Service Frequency	Typically 480 per annum	Typically 684 per annum
Current 2017/18 Charge:	$365.16	$234.44
Estimated Income per annum	$175,276.80	$160,356.96

Category 2 dischargers are those conducting an activity requiring proscribed liquid trade waste pre-treatment equipment and whose effluent is well characterised.

Examples of dischargers are takeaway food outlets and radiator repairers.

Former Wyong	Former Gosford
The default charge provided was $64 per annum expressed in 2002/3$. CPI adjustments have increased the fee to $365.16 in 2017/18. The default charge introduced was $64 per annum expressed in 2002/3$. As the "Best Practice Guidelines" specified an inspection regime for Category 2 dischargers of up to four times per year the default rate was multiplied by four. This relatively high inspection regime reflects the degree of difficulty in maintaining compliance in some Category 2 areas. The default charge has only ever been subject to CPI adjustments and is $365.16 in 2017/18.	The calculated charge was $68.30 per annum expressed in 2002/3$. CPI adjustments have increased the fee to $234.44 in 2017/18. The calculated charge was $68.30 per annum and with CPI adjustments is $234.44 in 2017/18.

Central Coast Council - Annual LTW Fee Category 2

Since inception of Council's current LTW Policy operating experience indicates that the levels of inspections recommended by the "Best Practice Guidelines" have not been necessary. For the majority of Category 2 dischargers no more than two inspections per year are necessary.

Council proposes a more specific and locally based charge model as outlined in the example below:

- Average travel time to/from premises: 60 minutes per inspection (up to twice yearly)
- Average inspection time on premises: 30 minutes per inspection (up to twice yearly)
- Average administration time per annum: 45 minutes

Unit Costs:

- Liquid trade waste Officer; $39.41hour + Standard Costing = $/hour $60.34
- Typical total annual costs associated with sampling / testing Liquid trade waste samples is approximately $48,000 per annum (2016/17 costs).

Total Annual Costs

- Liquid trade waste Officer – 3.0 hours @ $60.34 = $181.02
- Administrative Functions – 0.75 hours @ $60.34 = $45.02
- Sampling / testing = $120*

* Average cost with 400 annual samples / testing cost of $48,000
Total = $346.04

Calculated Fee: $346.04
2017/18 Charge: Wyong $365.16
Gosford $234.44

Proposed 2019/20 Charge: $346.04

Annual Liquid Trade Waste Fee (Category 3)

Basis of Charge	Former Wyong	Former Gosford
Introduced	1 July 2006	1 July 2006
Monopoly Service	Yes	Yes
Service Frequency	Typically 12 per annum	Typically 12 per annum
Current 2017/18 Charge:	$613.39	$1,968.86
Estimated Income per annum	$7,360.68	$23,626.32

Category 3 dischargers are those conducting an activity of an industrial nature and/or which results in the discharge of large volumes (over 20 kilolitres per day) of liquid trade waste to the sewerage system.

This annual charge is intended to cover the cost of administration and two scheduled inspections of the premises each year to ensure ongoing compliance with the approval conditions.

If more inspections are required the cost of any additional inspections is recovered through a separate re inspection charge.

Former Wyong	Former Gosford:
The default charge was $430 per annum expressed in 2002/3$. CPI adjustments have increased to $613.39 in 2017/18.	The calculated charge was $68.30 per annum expressed in 2002/3$. CPI adjustments have increased the fee to $1,968.86 in 2017/18.

Central Coast Council - Annual LTW Fee Category 3

The current functions provided by Council to support the charge are;

- twice yearly audit/inspection of premises
- associated administration functions*
- sampling/testing of discharges when necessary *

* Category 3 dischargers undertake a high degree of self-monitoring with Council undertaking an oversight role.

The management of Category 3 dischargers is undertaken by the Liquid trade waste Supervisor.

Council proposes a more specific and locally based charge model as outlined in the example below:

- Average travel time to/from premises: 60 minutes per inspection (twice yearly)
- Average inspection time on premises: 60 minutes per inspection (twice yearly)
- Average administration time per annum: 60 minutes per month = 12 hours (to review and update spreadsheets)

Unit Costs:

- Liquid trade waste Supervisor; $54.60/hour + Standard Costing = $/hour $83.60
- As required sampling and testing has not been included in unit costs.

Total Annual Costs

- Liquid trade waste Supervisor – 16.00 hours @ $83.60 = $1,337.60

Calculated Fee: $1,337.60
Current 2017/18 Charge: Wyong $613.39
Gosford $1,968.86
Proposed 2019/20 Charge: $1,337.60

Re–inspection Fee (Categories 1, 2 and 3)

Basis of Charge	Former Wyong	Former Gosford
Introduced	1 July 2006	1 July 2006
Monopoly Service	Yes	Yes
Service Frequency	Typically 4 per annum	Typically 4 per annum
Current 2017/18 Charge:	$85.60	$118.31
Estimated Income per annum	$342.40	$473.24

Where non-compliance with the conditions of a LTW approval has been detected and the discharger is required to address these issues, Council may need to undertake additional inspections to confirm that remedial action has been satisfactorily implemented. If an inspection (over and above those scheduled inspections) is required a re- inspection fee is applicable.

Former Wyong	Former Gosford
The default charge of $60 per annum expressed in 2002/3$ was introduced. CPI adjustments have increased the fee to $85.60 in 2017/18.	The calculated charge was $104.39 per annum expressed in 2002/3$. CPI adjustments have increased the fee to $118.31 in 2017/18.

Central Coast Council - Re-inspections (Category 1, 2 and 3)

Council proposes a more specific and locally based charge model as outlined in the example below:

- Average travel time to/from premises: 60 minutes per inspection
- Average inspection time on premises: 30 minutes per inspection
- Average administration time per annum: 20 minutes

Unit Costs:

- Liquid Trade Waste Officer; $39.41/hour + Standard Costing = $/hour $60.34

Total Annual Costs

- Liquid Trade Waste Officer – 1.5 hours @ $60.34 = $90.51
- Administrative Functions – 0.33 hours/year @ $60.34 = $19.91

Total: $110.42
Calculated Fee: $110.42
Current 2017/18 Charge: Former Wyong $85.60
Former Gosford $118.31

Former Wyong	Former Gosford
Proposed 2019/20 Charge: $110.42 * does not include any sampling / testing costs	

Category 2 Liquid Trade Waste Usage Charge (Compliant and Non-Compliant)

Basis of Charge	Former Wyong	Former Gosford
Introduced	1 July 2006	1 July 2006
Monopoly Service	Yes	Yes
Service Frequency	Typically this charge is applied to 480 Category 2 premises per annum	Typically this charge is applied to 684 Category 2 premises per annum
Current 2017/18 Charge:	$1.71 per kilolitre (where pre-treatment processes are compliant) $14.59 per kilolitre (where pre-treatment process is non-compliant)	$1.71 per kilolitre (where pre-treatment processes are compliant) $14.58 per kilolitre (where pre-treatment process is non-compliant)
Estimated Income per annum	$740,000.00	$1,532,189.00

Category 2 dischargers are those conducting an activity deemed as requiring a prescribed type of pre-treatment equipment and whose effluent is well characterised. This volume based charge is applied to cover the additional cost (over and above sewerage charges) of transporting and treating LTW from the discharger.

Where appropriate pre-treatment has not been provided there is a significant increase in the volume charge to reflect the cost to accept and treat the non-compliant effluent.

Former Wyong	Former Gosford
As the Category 2 liquid trade waste usage charge introduction had the potential to significantly increase customer bills, the introduction of the charge has been transitioned in over a number of steps: • The compliant charge commenced at $0.10 per kilolitre in 2006/2007 with annual increases of $0.10 + CPI. This step increase approach is still continuing with the full cost recovery charge achieved in 2017/18. • The non-compliant charge	The calculated charges (in 2002/3$) were $1.21 per kilolitre where appropriate pre-treatment equipment was installed; and $10.13 per kilolitre where equipment was either non-compliant or non-existent. If these charges were introduced "as is" on 1 July 2006 they would have been $1.33 and $11.28 respectively. The calculated charge continues to be used to date and has only ever been subject to CPI adjustments increasing to $1.71 and $14.58

Former Wyong	Former Gosford
commenced at $4.05 per kilolitre in 2006/7 with annual increases of $4.05 + CPI over two years with full cost recovery charge achieved in 2008/9.	in 2017/18.

Central Coast Council - LTW Compliant and Non-Compliant

The calculated charge continues to be used to date and has only ever been subject to CPI adjustments increasing to $1.71 and $14.58 in 2017/18.

Current 2017/18 Charge:	Wyong $1.71 per kilolitre (for compliant pre-treatment processes) $14.59 per kilolitre (for non-compliant processes) Gosford $1.71 per kilolitre (for compliant pre-treatment processes) $14.58 per kilolitre (for non-compliant processes)
Proposed 2019/20 Charge:	$1.75 per kilolitre (for compliant pre-treatment processes) $14.94 per kilolitre (for non-compliant processes)

Category S and Category 4 charges

The former Wyong and Gosford Councils work practice related to Septic Effluent, Septage, Chemical Toilet and Private Pump Stations (PPS) were quite different, and this Council is proposing to align its practice and related charges.

PPS are only monitored in the former Wyong LGA and are subject to Application Fees and Annual Trade Waste Fees. Trade Waste Usage Charges do not apply to this category.
The table below demonstrates the comparison of charges applied in the former Wyong and Gosford Councils.

Table 86 - Comparison of Category S and 4

Former Wyong Council – Category S	Former Gosford Council – Category 4
The former Wyong Council classified this work practice as a Category S discharge as per "Best Practice Guidelines"	The former Gosford Council classified this work practice as a Category 4 discharge; it is proposed to align this charge with the trade waste Category S charges.
Application Fee	
Unlike other LTW charges the "Best Practice Guidelines" do not provide default charges for Application Fees and as such requires each water utility to set its own charge. The current level service provided by Council to support this charge is as follows; - single inspection of premises - associated administration functions The assessment of applications is undertaken by the Trade Waste Officers. Council proposes a more specific and locally based charge model as outlined in the example below: Average travel time to/from premises: 60 minutes Average inspection time on premises: 60 minutes Average administration to process application: 45 minutes <u>Unit Costs:</u> Trade Waste Officer; $39.41/hour + Standard Costing = $/hour $60.34 <u>Total Cost to process application</u> Trade Waste Officer – 2 hours @ $60.34 = $120.68	There were no Application fees associated with this discharge. Service Frequency: Typically 4 per annum

Former Wyong Council – Category S	Former Gosford Council – Category 4
Administrative Functions – 0.75 hours @ $60.34 = $45.25 **Proposed Charge = $165.93** Service Frequency: Typically 4 per annum Current 2017/18 Charge: $221.85 Estimated Income per annum: $887.40	
Annual Trade Waste Fees	
Unlike other LTW charges the "Best Practice Guidelines" do not provide default charges for Annual Trade Waste Fees and as such requires each water utility to set its own charge. The current functions provided by Council to support the charge are; - annual inspection of premises - associated administration functions The management of Category S dischargers is undertaken by the Trade Waste Officers. In relation to what a more contemporary Central Coast specific or locally based charge might be the following is advised; Average travel time to/from premises: 60 minutes per inspection (once yearly) Average inspection time on premises: 60 minutes per inspection (once yearly) Average administration time per annum: 45 minutes <u>Unit Costs:</u> Trade Waste Officer; $39.41/hour + Standard Costing = $/hour $60.34 <u>Total Annual Costs</u>	There were no Annual Trade Waste Fees associated with this discharge. Service Frequency: Typically 8 per annum

Former Wyong Council – Category S	Former Gosford Council – Category 4
Trade Waste Officer – 2 hours @ $60.34 = $120.68 Administrative Function – 0.75 hours @ $60.34 = $45.25 Total = $165.93 Service Frequency: Typically 50 per annum Current 2017/18 Charge: $99.09 Estimated Income per annum: $4,954.50 16.1.1	
Trade Waste Usage Charge	
This charge was classes as "Septage and Septic Effluent Discharge Charge" and was part of miscellaneous charges; it is proposed to align this charge with the trade waste Category S charges. In the lead up to the introduction of the new LTW Policy the "Best Practice Guidelines" provided a default charge that would achieve full cost recovery and that could be used by water utilities in the event that water utilities could not calculate their own charge. At the time Wyong elected to use its own charge which was a lower charge to the one proposed in the "Best Practice Guidelines". The charge has only ever been subject to CPI adjustments. Current Charge = $17.12 per kilolitre Service Frequency: Typically this charge is applied to 8 Category S dischargers per annum	There were two charges related to the Category 4 discharge. Septic Effluent Charge and Septage Charge and was part of miscellaneous charges, it is proposed to align this charge with the trade waste Category S charges. Septic Effluent Charge is used for disposal of septic effluent only from properties which are unable to discharge to sewer or dispose of onsite. Septage Charge is for every other discharge. In the lead up to the introduction of the new LTW Policy the "Best Practice Guidelines" provided a default charge that would achieve full cost recovery and that could be used by water utilities in the event that water utilities could not calculate their own charge. At the time Gosford elected to use its own charge which was a lower charge to the one proposed in the "Best Practice Guidelines". The charge has only ever been subject to CPI adjustments.

Former Wyong Council – Category S	Former Gosford Council – Category 4
Estimated Income per annum: $14,000.00	Current Charge: Septic Effluent = $1.71 per kilolitre Septage = $14.58 per kilolitre Service Frequency: Typically this charge is applied to 8 Category 4 dischargers per annum Estimated Income per annum: $14,000.00

Category S Charges for Central Coast Council (Proposed)
Application Fee It is proposed to have an Application Fee consistent with the Former Wyong Council, the calculated fees are as followed: Calculated Fee: $165.93 Current 2017/18 Charge: Former Wyong Council $221.85 Total income $887.40 Former Gosford No charge Proposed 2019/20 Charge: $165.93 The estimated income as followed: Service Frequency: Typically 8 per annum **Proposed 2019/20 Charge: $165.93** Estimated Income per annum: $1,327.44 Estimated increase income: $440.04
Annual Trade Waste Fee It is proposed to have an Annual Trade Waste Fee in line with the former Wyong Council, the calculated fees are as followed: Calculated Fee: $165.93 Current 2017/18 Charge: Former Wyong Council $99.09 Total income $4,954.50 Former Gosford Council no charge

Category S Charges for Central Coast Council (Proposed)	
Proposed 2019/20 Charge:	$165.93
The estimated income as followed:	
Service Frequency:	Typically 58 per annum
Proposed 2019/20 Charge:	**$165.93**
Estimated Income per annum:	$9,623.94
Estimated increase income:	$4,669.44

Trade Waste Usage Charge

It is proposed to have a Trade Waste Usage Charge as followed:

Service Frequency:	Typically 16 per annum
Current 2017/18 Charge:	Former Wyong $17.12 per kilolitre (Septage and septic effluent discharge charge) Total income $14,000.00 Former Gosford $1.71 per kilolitre (Septic effluent unable to discharge onsite) Total income $4,000.00 $14.58 per kilolitre (Septage and septic effluent discharge charge) Total income $10,000.00
Proposed 2019/20 Charge:	**$1.75 per kilolitre (Septic effluent unable to discharge onsite)** $17.54 per kilolitre (Septage and septic effluent discharge charge)
Estimated Income per annum:	$28,883.17
Estimated increase income:	$1,787.84

b) Mass Based Charges (Category 3 only)

Basis of Charge	Former Wyong Council	Former Gosford Council
Introduced	1 July 2006	1 July 2006
Monopoly Service	Yes	Yes
Service Frequency	Typically Excess Mass charges apply to 12 Category 3 premises. Non-Compliant Excess Mass charges are only applied on an "as required" basis.	Typically Excess Mass charges apply to no Category 3 premises. Non-Compliant Excess Mass charges are only applied on an "as required" basis.
Current 2017/18 Charge:	See Schedule	See Schedule
Estimated Income per annum	Estimated combined income per annum for excess mass and non-compliant excess mass is $130,000.00.	Estimated combined income per annum for excess mass and non-compliant excess mass is $0.00 (no category 3 dischargers have been charged)

These charges above represent the additional costs to Council to accept and handle the nominated substances. These charges apply in two cases:

- The substances specified that are discharged in excess of the deemed concentrations in domestic sewage.
- The substances specified that are discharged in excess of the Liquid Trade Waste Approval Limit.

Former Wyong	Former Gosford
NSW State Government "Best Practice Management Guidelines" provided a default suite of charges that would achieve full cost recovery and that could be used by water utilities in the event that water utilities could not calculate their own charge. At the time the former Wyong Council elected to use the default charge	The "Best Practice Guidelines" default suite of charges to achieve full cost recovery was never enforced resulting in $0.00 recovered for all Category 3 dischargers.
Council - Category 3 Mass Based Charges	
The usage charges for the former Wyong and Gosford councils where aligned in 2013/14 submissions. Calculated Fee: Not Applicable Current 2017/18 Charge: See Schedule below minus 3.2%	

Proposed 2019/20 Charge: See Schedule below

	Current Wyong	Current Gosford	Proposed 2019-23 plus annual CPI increase each year
Liquid Trade Waste Approval and Inspection Fees			
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 fee	$1,018.90	$495.09	$2,173.60
Annual fee	$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	$85.60	$118.31	$110.42

	Current Charge	Proposed 2019-23 plus annual CPI increase each year
Liquid trade waste usage charges (category 2 and S)		
Charge type		
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

	Current Charge	Proposed 2019-23 plus annual CPI increase each year
Mass Based Charges (category 3 only)		
Substance Discharges (per Kilogram)		
Biochemical Oxygen Demand	$0.76	$0.77
Suspended Solids	$0.97	$.099
Total Oil and Grease	$1.36	$1.39
Ammonia	$0.76	$0.77
pH	$0.42	$0.42
Total Kheldhal 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

	Current Charge	Proposed 2019-23 plus annual CPI increase each year
Petroleum Hydrocarbons (non-chlorinated)	$2.40	$2.30
Phenolic compounds (non-chlorinated)	$7.17	$7.34
Polynuclear aromatic 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

Table 87 Mass Based Charges (category 3 only)

Appendix 4.5 Schedule of Proposed Prices - Miscellaneous fees and charges ($2018/19)

Activity	Labour + min overheads
Conveyancing Certificate - statement of outstanding charges (s360 certificate) Electronic charge only applicable	$26.56
Property Sewer Line and Drainage Diagram Diagram showing the location of the house service line, building and sewerage for the property.	
d) Property Sewer Line and Drainage Diagrams	$18.06
e) Property Sewer Line and Drainage Diagrams (with long section)	$21.25
f) Property Sewer Line and Drainage Diagrams (property complex)	$30.81
Provision of Service Location Diagrams Provision of uncertified diagram showing location of sewerage and /or water mains in relation to a property's boundaries. This fee also covers provision of uncertified longitudinal sections where required.	
a) Water and Sewer Location Plans	$21.25
b) Water and Sewer Location Plans (including long section)	$26.56
Special Meter Reading Statement	
a) Manual request	$41.38
b) Online request	$30.76
Billing Record Search Statement	
a) up to and including 5 years	$37.19

Activity	Labour + min overheads
b) up to and including 10 years	$69.06
c) beyond 10 years	$100.94
Building over or adjacent to water and sewer advice	$53.82
Water reconnection (business hours only)	$148.17
Workshop test of meter Removal and full mechanical test of the meter by an accredited organisation at the customer's request to determine the accuracy of the water meter. This involves dismantling and inspection of meter components. If the meter is faulty no charge will be levied. 20mm to 80mm inclusive Greater than 80mm	
a) 20 mm to 80 mm	$310
b) > 80 mm	$480
Disconnection of Water Service	
a) Application for disconnection of water services (all sizes). *This covers the administration fee for processing the application only.*	$61.31
b) Physical disconnection (all sizes)	$233.60
Connection of Water Service	
a) Application for connection of water service (all sizes) *This covers the administration fee for processing the application only.*	$61.31
b) Water service connection meter only (20 mm)	$167.73

Activity	Labour + min overheads
c) Water service connection short or long service (20 mm)	$1,339.95
d) Water service connection short or long service (25 mm)	$1,339.95
e) Water service connection short service (32 mm)	$1,679.85
f) Water service connection long service (32 mm)	$2,738.54
g) Water service connection short service (40 mm)	$1,679.85
h) Water service connection long service (40 mm)	$2,739.04
i) Water service connection short service (50mm)	$2,355.12
j) Water service connection long service (50 mm)	$3,352.05
k) Water service connection short service (63 mm)	$2,355.12
l) Water service connection long service (63 mm)	$3,352.05
m) Water service connection >63 mm	By quote
Standpipe Hire - Security Bond	
a) Security Bond (25mm)	$433.34
b) Security Bond (63mm)	$833.88
Standpipe Hire - Annual Fee	
a) 25mm	$176.87
a) 63 mm	$1195.65
Standpipe Water Usage	$2.20 per kl
Standpipe Special reading fee	$60.13

Activity	Labour + min overheads
Backflow Prevention Device Application and Initial Registration	$69.98
Backflow Prevention Device Annual Administration Fee	
a) Inspections of new water and sewer assets - including encasements This fee is for inspection only, for the purpose of approval of water and sewerage mains, constructed by others, that are longer than 25 metres and/or greater than 2 metres in depth. Additional fees for inspection per metre of water and/or sewer main are provided in items b) and c) below:	$118.77
b)+ water and pressure sewer main ($ per metre)	$6.23/m
c) + gravity sewer main ($ per metre)	$8.31/m
Statement of Available Pressure and Flow	$131.97
Location of water and sewer mains	$564.70
Plumbing and Drainage Inspection:	
a) New Sewer Connection (including residential single dwelling, unit or villa complex, commercial and industrial)	$178.27
b) Each additional WC (including residential single dwelling, unit, villa, commercial and industrial)	$15.09
c) Alterations, Caravans and Mobile Homes	$163.18
d) Sewer re-inspection	$40.80
e) Rainwater Tank Connection	$66.79
Relocate Existing Stop Valve or Hydrant Quoted price inclusive of labour, plant hire charges, material costs and traffic control where applicable	By quote
Adjust existing service (Maximum adjustment of 1 metre from existing location)	

Activity	Labour + min overheads
a) 20 mm service	$188.38
b) >20 mm	By quote
Water Sample Analysis (for testing of private water supplies)	No longer offered
Alteration from Dual Service to Single Service (20mm only)	Now provided as Connection of water service (see above)
Concrete Encasement of Mains Service is no longer provided by Council. Encasement inspection fee is applicable when construction is not undertaken by Council. This fee is also applicable for inspections of other equivalent sewer protective measures.	Not applicable
Raise/Lower Manhole	
a) Inspection Price listed is the manhole adjustment inspection fee only.	$55.85
b) Physical adjustment up to 300 mm	No charge
b) Physical adjustment >300 mm Quoted price inclusive of labour, plant hire charges, material costs and traffic control where applicable	By quote
Septage, Septic Effluent and Non-Septic Wastewater Discharge Charge	
a) Septic tank, sewage pump-station, and chemical toilet pump-out	now trade waste charge
b) Non-septic wastewater	now trade waste charge
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
b) Medium Projects > 10 and < 50 lots, and mains relocation	$692.83

Activity	Labour + min overheads
c) Large Projects ≥ 50 and <150 lots or large or medium density developments	$884.18
d) Special Projects (roads and rail or SPS Adjustments, relocations, development water catchment areas, or subdivisions > 150 lots)	$3,035.23
Section 307 Certificate:	
a) Development without Requirement	$59.39
b) Boundary Realign, Subdivisions or developments involving mains extensions	$323.32
c) RFB and Dual Occupancies	$145.16
d) Commercial Buildings, Factories, Torrens Subdivision of Dual Occupancy etc.	$178.16
Cancellation of Water and Sewer Applications	$21.25
Water and Sewer Building Plan Assessment	$131.97
Disposal of liquid waste (other than septage and septic effluent)	Now trade waste charge
Water Supply Shutdown and Audit for Developer Contracted Connections	Now included in Inspection of new Water and sewer assets
Water Carter Bulk Fill Charge Charge proposed in former Gosford LGA, but not implemented	Not applicable
Location of water and sewer mains (on site) 2 x crew for 2 hours (return to base with truck). Additional plant and equipment costs are by quote, as these are highly variable, and contestable.	$564.70

Appendix 5: Response to IPART's Issue's paper

Issue no#	IPART's issue	Central Coast Council response
1	How long should we set prices for in the 2019 determination	A four year price path is requested - A four year price path will provide adequate time for Water and Sewer to build capacity to specify, develop and implement appropriate systems, processes and governance to fully understand the optimum cost (opex v capex) for the provision of best practice water and sewer services.
2	Should we allow unregulated pricing agreements between Council and its large non-residential customers why or why not?	Council has a small number (<60) of users at >20kL/day. Many are defacto residential as they are villages or tourist accommodation. There are very few large industrial water users. However, even for such users, Council would prefer not to allow unregulated pricing. Users will only agree to unregulated prices which are lower than residential rates. We feel this would be detrimental as it: 1. Provides a disincentive to reduce potable water use 2. Provides a disincentive to consider internal or external recycled water options (note that our community/stakeholders appear to favour increased use of recycled water particularly in drought periods, and already schemes can be financially justified) 3. Increases Council's administration costs via the need to negotiate and manage individual unregulated price requests and agreements 4. Effectively results in a subsidy to large users from residential users Furthermore, as a Council, we are able to consider other more effective mechanisms to encourage large businesses to the region rather than subsidise water or sewer charges.
3	Should we apply an efficiency carryover mechanism (ECM) to the Council's operating expenditure?	The overriding principle for the ECM is that Council could potentially have a lower OPEX in year 1 than year 4 versus the actual determination. Over the duration of the determination this gain gets less and the saving from year 1 are absorbed and never passed onto the customer. The ECM concept is that the efficiency gain, regardless of when it is achieved, is averaged and kept rolling forward each year until the next determination (or period defined) where this saving is passed to the customer by embedding it into the OPEX forecasts.

Issue no#	IPART's issue	Central Coast Council response
4	Has the Council's expenditure over the current determination period delivered appropriate levels of service?	The Output measures within the submission Appendix 2 outlines Council position. Service levels over current determination period are identified in section 1.9
5	What output measures should we use for the upcoming determination period?	It is recommended to include proposed Output Measures as described in the attached Appendix 2.
6	Should we continue to provide a demand volatility adjustment mechanism for the Council?	A volatility adjustment of 10% was established in the 2013 price determination for the period 2013 to 2017. This was following the two previous price paths where water sales on the Central Coast were significantly below those provided for in the price determination, due primarily to drought conditions. The 2013- 2017 forecast was developed at a time when water consumption was exposed to significant influencing factors, such the removal of water restrictions for the first time in 10 years. There was no recent history as to how the community's water use behaviour may respond over the price path. Over the 2013 period, Council sold more water than provided for in the price determination. The amount sold was within the adjustment bandwidth and so there should be no adjustment to the Council's revenue. The over-recovery of revenue from higher water sales relative to those forecasts was approximately 5%. Over the 2013-2017 period, relatively stable water use behaviour has emerged as the community has transitioned There is no predicted stepwise change in likely water sales in this submission. Some variation of demands could occur if population growth varies from that forecast. Reducing the adjustment bandwidth from 10% to 5% is considered an appropriate refinement to the approach applied to the 2013-2017 period. Given the current storage levels in the Central Coast water supply system, a reduction in the bandwidth would provide greater protection of Council's revenue in the event that water restrictions are required during the next price path.

Issue no#	IPART's issue	Central Coast Council response
7	Should the notional revenue requirement for water and sewerage prices include the costs of providing pensioner rebates and not charging exempt properties that are not funded by the NSW Government?	Exempt properties will be charged as per the LGA s 501. This will be usage charges only and applied on a cost recovery basis. Council provides a rebate on water and sewerage charges for pensioners. Government reimburses Council 55% of the rebate. IPART has raised the issue as to whether Council should recover the gap (45%) from its other water and sewer customers. Sydney Water and Hunter Water are fully reimbursed by government for their pensioner rebate community service obligations (CSO). Sydney Water and Hunter Water have enshrined in their legislation an objective to "Maximise the net worth of the State's investment in the Corporation" Council has no such objective. One of Council's roles is to support the community and providing assistance to the financially disadvantage without disadvantaging others is one way to contribute. The impost on the balance of customers to reimburse Council for the funding gap is small but is likely to generate adverse criticism of Council if it were to adopt IPART's preferred position. Financial implications The annual unfunded gap for pensioner rebate's is approximately $2m for water and sewer combined (average of 2016 and 2017). The unfunded gap represents approximately 2% of revenue. The cost and percentage is likely to rise in the future driven by the changing demographics of the central coast e.g. aging population.
8	Should water/sewer prices be aligned across the Council area	1. Yes 2. Council's target is there is no increase in the revenue needs; whilst there must be changes in price to achieve parity, it will generate more revenue for Council only to the extent of increased demand for services above that of 2016/17 as included in the 2013 price determination. IPART's suggested price restructuring will be addressed with the probable exception of including a usage component to residential sewerage prices; this will be considered if it assists in harmonising the availability price

Issue no#	IPART's issue	Central Coast Council response
9	Should stormwater drainage prices be aligned across the Council's area	Yes. Council recommends an area based approach, in line with Sydney Water and Hunter Water; this means that prices will be aligned between the two former LGAs. Council will press to get rid of anomalies west of the M1 in the Wyong area
10	Should all of the Council's water and sewerage service prices be set on a 20mm meter basis?	Yes. Council recommends prices based on a 20mm meter.
11	Should residential service prices be lower for apartments than for houses. -Should IPART deem individual apartments to have a 20mm meter (for the purposes of setting service prices) or should apartments pay water and sewerage prices based on their actual meter size?	No, refer submission Yes, refer submission
12	Should retirement villages continue to be charged service prices on the basis of their meters?	Yes Recommendation is to charge retirement villages as per non-residential billing (meter-based).
13	What is the appropriate deemed sewerage discharge volume to include in sewerage service prices? Should the deemed discharge volume be different for houses and apartments?	75% of the water input No refer pricing proposal
14	Should sewerage usage be billed separately for all customers? Why or why not?	Recommendation is that sewer usage should not be billed separately. Council proposes to keep the usage charge in line with the existing format due to complexities in the billing and avoidance of customer confusion.
15	On what basis should we set sewerage usage prices?	Recommendation is to set sewerage usage prices based on the Short Run Marginal Cost (SRMC), in line with non-residential billing model.
16	On what basis should we set water usage prices?	The preliminary IPART view that the LRMC be undertaken utilising an approach similar to the used for Sydney Water in 2016 is not possible for the Central Coast at this time given that the information requirements will not be available until after the

Issue no#	IPART's issue	Central Coast Council response
		is completed. Council does not have the necessary modelling tools required for that approach. There are a number of methods for determining the marginal cost of water provided by a centralised water supply system.
17	What prices would be appropriate for unmetered properties?	Recommendation is to keep the current model, which is not to charge usage on unmetered properties. Incidence of temporarily unmetered properties would be very low and most likely to relate to mains/supply issues where a temporary supply is put in place pending permanent fix.
18	Should the Council's stormwater prices be based on the area of a customer's property? Why or why not?	Recommend area based approach, in line with Sydney Water and Hunter Water. The business case is based on all rateable properties being charged for drainage – in short, as everyone benefits from and should contribute towards the drainage network service.
19	Should there be a low impact customer category for stormwater	Council has proposed a 'Low Impact' rate upon application.
20	Should IPART set maximum prices for the Council's recycled water services	Historically IPART has not set prices for voluntary recycled water schemes as it considered 'users had alternative options to recycled water'. IPART have reconsidered this position because 'recycled water services are government monopoly services'. IPART is undertaking a full review during 2018/2019of its approach to regulating recycled water prices for all metropolitan water utilities. It proposes to apply the outcome to set recycled water maximum prices at the next review of Council's prices. Council has not included recycled water pricing as part of its current submission. Council will make comment as part of IPART's review process
21	Should IPART set maximum prices for Water Industry Competition Act (WICA)	Council does not favour separate "wholesale" or "retail-minus" price determination for WICA schemes. This creates additional administrative burden and separate conditions for just these one or two schemes. Council favours continuing its transparent approach of treating these schemes as large meter customers.

Issue no#	IPART's issue	Central Coast Council response
22	What is the appropriate basis for settling the bulk water transfer price between Central Coast and Hunter Water	The nature of the agreement between Council and Hunter Water is to provide support to each other's customers in times of constrained supply. It is therefore very difficult to assess the volume flows. Given that this arrangement is not for commercial gain Council proposes that the bulk water service price be set at the 2018/19 price allowed for in the Hunter Water 2016 price determination 0.70c /kL.
23	Liquid trade waste pricing principles	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" for the following reasons; • To be in a position to vary liquid trade waste charges according to the treatment location, Council would need to accurately determine the treatment cost (potentially as a short run marginal cost (SRMC) within each of eight separate catchments/STP sites. Due to the high volume of shared resources within our treatment network this will be difficult to accurately determine. Further, in the former Wyong area, whilst there are six catchments/STPs, these share one of two common outfall locations. Any catchment based price would likely vary over time as the network and/or treatment plant is augmented. Such variations may be difficult to justify to customers who cannot vary the location of their businesses. This is especially the case if the reason for additional treatment costs is residential growth. Council currently has postage stamp pricing (same price) for both residential and non-residential customers. We don't believe that liquid trade waste cost should vary by location for similar businesses/across the Central Coast. Residential pricing is proposed to be the same. We don't see any value is sending liquid trade waste pricing signals to businesses when these may vary over time. • There is a concern that the introduction of location based pricing would lead to both additional administrative and system obligations that would add to costs. • In the case of larger businesses, Council has other drivers to guide the preferred location of commercial and industrial premises.

Appendix 6: Table of Major Projects
Water and Sewer

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Mardi to Warnervale Trunk Water Pipeline (Water Mains)	$56,841	High – several years planning and detail design. P90 tender estimate.	Construction of approx. 10km of new 750mm diameter pipeline from Mardi WTP to Warnervale. This pipeline is essential to support the growth in the Northern areas of the Central Coast LGA. It is also required to increase drinking water transfers to Hunter Water, honouring the legal agreement between Council and HW. This project is driven by growth and existing mandatory standards.	High-18	1. Various alternate pipeline routes 2. Use of shorter low capacity transfer line to Hunter Water	High – Concept designs complete and planning well developed. Draft project schedule developed.
Gosford CBD sewer infrastructure reinforcements (Sewer Mains; Sewer Pump Stations)	$26,119	High – individual projects costed and management costs included	Gosford CBD sewer infrastructure reinforcements program, including 23 individual projects within the CBD area. Program comprises construction of 6,420 m of new sewer gravity and rising mains; from 100 mm to 525 mm diameter, two new sewer pump stations, three new railway crossings and a new Central Coast LGA Highway crossing. The program addresses the performance requirements for the sewer network under both dry and wet weather flow conditions to enable reliable service to support the forecast growth within the CBD.	Extreme-25	A wide variety of concepts for each upgrade requirement have been evaluated before deciding on the favoured options. Sufficient flexibility exists to adapt the program as required.	High – Concept designs complete and planning well developed

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Mardi Water Treatment Plant - Major Upgrades (Water Treatment Plants)	$21,600	Medium – detailed project concept design costing.	Mardi WTP will undergo major capacity and process upgrades to secure 160 ML/D of drinking water capacity within Australian Drinking Water Guidelines. This capacity will cater for peak day demand for the current state and future growth in the Central Coast LGA. This will also ensure water of sufficient quality and quantity for water transfers to Hunter Water. The program is driven by existing mandatory standards, and licencing requirements.	High-21	Full options analysis and studies completed in conjunction with Hunter H2O. Designs reviewed and approved by Dept. of Industry-Water	High – Concept designs complete and planning well developed. Draft project schedule developed.
Gosford CBD water infrastructure reinforcements (Water mains, Network assets)	$10,869	High – individual projects costed and management costs included	Gosford CBD water infrastructure reinforcements program. 43 individual projects within the CBD area. Program comprises the construction of 7,720 m of water mains from 100 - 375 mm diameter, a key Pressure Reduction Valve, a key non-return valve, a new railway crossing and one new Central Coast Highway crossing. The program addresses the performance requirements for minimum pressure, reservoir storage and water mains velocity under peak demand conditions, enabling reliable service to support the growth within the CBD. The program also provides a higher standard of service to support high density development.	Extreme-25	A wide variety of concepts for each upgrade requirement have been evaluated before deciding on the favoured options. Sufficient flexibility exists to adapt the program as required.	High – Concept designs complete and planning well developed
Water Main renewal	$9,300	Medium – depends on	Proactive reticulation water main renewal program. This takes into account assessment of	High-18	Water main performance data	High – Concept designs are carried

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Program – Proactive (Water Mains)		individual items. Program is reviewed and developed periodically so can be tailored to this budget.	mains that have been identified to have high consequence of failure and high failure rates. These factors indicate that they are nearing the end of their useful asset life and replacement of the mains minimises customer impacts, operational risks, and environmental impacts. This program is driven by asset and service reliability.		and condition assessments reviewed periodically to ensure program project decisions are optimised	out internally with delivery via internal teams or via tender as appropriate
Charmhaven STP - Major Augmentation Works (Sewage Treatment Plants)	$9,890	Low – Project has undergone initial strategy development only. Concept design commencing 2018/19.	Charmhaven Sewage Treatment Plant has been subject to a comprehensive capacity and process review. This review identified that major upgrades will be required to address imminent risk of exceeding current EPA licencing limits and avoid compromising the capacity of the plant to treat sewage. The upgrades to optimise treatment capacity include: aeration upgrades, inlet works odour control, concrete corrosion protection upgrades, flow and hydraulic measurement upgrades at the inlet works. The tertiary treatment upgrades also include improvements to sludge management.	High-23	Condition and capacity assessment included assessment of upfront construction of third tank, compared to staged incremental upgrades to maximise capacity of existing assets (preferred).	Medium – Concept design is commencing 2018/19 and works can be implemented incrementally if required.

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Bateau Bay STP - Process Improvements (Sewage Treatment Plants)	$7,578	Low – Project has undergone initial strategy development only. Concept design commencing 2018/19	Process upgrade to Bateau Bay Sewage Treatment Plant to optimise treatment capacity of the existing process units. This interim upgrade is required to minimise the risk of Environmental Protection Licence breaches and allows the deferral of the next major augmentation of the plant until approximately 2030 while further detailed investigations, proposed options, and subsequent preliminary designs and EPA negotiations can be carried out. The project is driven by growth, risk of licence breach and asset and service reliability.	High-20	Options assessed included upfront construction of new plant, optimisation of existing plant ahead of later construction of new plant. Sub-options for sludge management, sedimentation tank refurbishment and flow splitting were also considered.	Medium – Elements of the proposed works are commencing construction in 2018/19 while other elements are pending completion of concept design.
Mangrove Creek Dam - Spillway and Dam Upgrades (Headworks)	$6,808	Medium – A concept design for the spillway upgrade has been prepared.	Upgrade Mangrove Creek Dam spillway and dam by raising the parapet wall, as well as concreting the battlers adjacent to the spillway chute. The overall objective of the project is to increase the maximum fill level of the dam (80% to 100%) by providing sufficient capacity to safely convey the revised probable maximum flood (PMF) for the catchment. This improves the yield of the water supply system and further leverages previous investment in the Mardi to Mangrove water supply pipeline. It also restores the storage capacity to that which the Hunter Central Coast	High-20	The main options to restore system yield were to either recover the previously lost storage volume (parapet wall raising and spillway modification) or to undertake raising of the dam (embankment) to	Medium – Existing concept design exists for the works. Additional investigations are currently being carried out to confirm final height of proposed parapet wall modifications etc. prior to proceeding

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
			Pipeline Agreement (the agreement) was based on. Until the storage capacity is reinstated the Central Coast LGA has survived by a reduced capacity dam and so have reduced capacity to provide water to the Hunter. NSW Government's Lower Hunter Water Plan incorporates water transfers under the agreement.		increase storage volume. The current proposed option is significantly more cost effective in terms of yield improvement than dam raising.	to detail design.
Critical Sewer Main Rehabilitation - Reticulation System (Sewer Mains)	$7,969	Medium – depends on individual items. Program is reviewed and developed periodically so can be tailored to this budget.	Rehabilitation of critical sewer gravity mains using trenchless techniques following a Gravity Sewer Main CCTV Inspection program. The rehabilitation program will reduce or minimise environmental impacts to waterways, reduce public health and safety risk, reduce critical infrastructure and third party property damage risk and reduce service disruption.	High-21	Sewer main performance data and condition assessments reviewed periodically to ensure program project decisions are optimised	High – Concept designs are carried out internally with delivery via the sewer rehabilitation services contract
Upper Mooney Dam Water Pump Station Capacity Upgrade (Headworks)	$4,690	Low – Project option analysis underway. Cost estimate currently based on	Upper Mooney Dam raw water pumping station upgrade will increase capacity from 30 to 60 ML/day, providing security of supply, enabling maximum yield from Upper Mooney Dam and simplifying water treatment during Average Day Demand conditions at Somersby Water Treatment Plant.	High -19	Project is required for security of water supply to the Southern areas of Council. Project option analysis underway. Previous	High – Concept designs are carried out internally with delivery via internal teams or via tender as appropriate

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		previous concept design.			concept design being revisited.	
Water Meter Renewal Program (Water Meters)	$4,603	High – Water meter unit replacement costs are known. Program is reviewed and developed periodically so can be tailored to this budget.	Domestic water meter replacement program for those up to 20 mm diameter in size. Water meters are replaced after 13 years in order to minimise lost revenue through inaccurate metering. Council is planning to replace approximately 13,500 meters per year across all CCC areas.	Medium-13	Water meters are replaced after 13 years in order to minimise lost revenue through inaccurate metering. Program is reviewed annually to ensure meter renewals are optimised.	High – Concept designs are carried out internally with delivery via tender
Sewer PS Upgrade - Clarke Rd Noraville (Sewer Pump Stations)	$3,358	Medium – Detail design consultant has prepared cost estimate.	Sewage Pump Station TO06 refurbishment and capacity upgrade in Noraville is essential to continue to service growth and maintain reliable operations. The works also aim to minimise the risks of environmental impacts to waterways and other environmentally sensitive areas as well as reducing public health risks and safety risks to Council employees working at the site.	High -19	Refurbishment of existing station or construction of new station. Sub-options for refurbishment were also considered including retaining as a dry well or converting to a wet well station	High – Detail design completed. Tender documentation being prepared with construction tenders planned to be called during 2018/19.

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Trunk Water Main Renewal Program (Water Mains)	$8,891	Medium – depends on individual items. Program is reviewed and developed periodically so can be tailored to this budget.	Trunk mains have a higher criticality and risk due to their function of transportation of large quantities of water under pressure to service the reticulation networks. This renewal program takes into account mains that have been identified to have high consequence of failure and high failure rates, indicating they are nearing the end of their useful asset life. Replacement of the mains will minimise customer impacts, operational risks, and environmental impacts.	High-18	Water main performance data and condition assessments reviewed periodically to ensure program project decisions are optimised	High – Concept designs are carried out internally with delivery via internal team or via tender as appropriate
Sewer PS Upgrade - Manns Rd West Gosford (Sewer Pump Stations)	$3,000	Medium – Options report currently underway.	Refurbishment of a major sewage pump station in West Gosford. This project is due to local growth affecting capacity and reliability. The refurbishment will reduce or eliminate environmental impacts to waterways and environmentally sensitive areas; public health and safety and service disruptions.	Extreme - 24	Refurbishment Options report currently underway. Options include partial / full refurbishment including emergency storage.	High – Concept and detail design are carried out externally with delivery via tender as appropriate
Kanangra Reservoir Remedial Work (Water Reservoirs)	$3,025	High – Cost estimates based on recommendation from specialised structural	Kanangra Reservoir will require remedial work following a structural condition assessment. Currently the reservoir capacity has been reduced because of the structural deficiencies. Repairs will include strengthening external walls and internal lining work so that the reservoir can be brought back to 100% operating level	High-21	Several repair options of various cost extent as per structural report	High – Currently preparing repair specification externally with delivery via tender commencing in 2019/20.

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		engineering report.	providing water supply reliability to the Crangan Bay, Gwandalan and Chain Valley areas.			
Sewer PS CH12 and CH13 and rising main upgrade (Sewer Pump Stations)	$3,032	Low – Reference rates approach to date however concept designs yet to be completed.	Upgrade of CH12 and CH13 which are key sewage pumping stations and rising mains in the Charmhaven catchment and are experiencing increases in load from major growth suburbs including Warnervale, Wadalba and Woongarah. The works also aim to minimise the risks of environmental impacts to waterways and other environmentally sensitive areas as well as reducing public health and safety risks.	High-18	Capital works being completed in an incremental manner while detailed options assessment is completed following the calibration of a hydraulic sewer model for the Charmhaven STP catchment.	Medium – Initial works to optimise capacity of existing CH12 can proceed ahead of subsequent hydraulic model development and options assessment required prior to delivery of major augmentations.
Kincumber Major Sewerage PS - Transient Relief Structure (Sewer Pump Stations)	$2,850	Medium – Concept design complete.	Installation of a transient relief structure and storage in the vicinity of Kincumber Major sewage pumping station to prevent uncontrolled overflows in the upstream catchments. The project is driven by risk of EPA licence breach and growth.	Extreme - 24	Project currently in the detail design phase. The concept design has identified a range of options for addressing sewage pressure transient mitigation at Kincumber Major Sewer PS.	High – Concept and detail design carried out externally with delivery via tender as appropriate

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Sewer PS Renewal - Cadonia Rd Tuggerawong - T19 (Sewer Pump Stations)	$2,781	Medium – Detail design consultant has prepared cost estimate.	Sewage Pump Station TO19 refurbishment and capacity upgrade is essential to continue to service the existing catchment and maintain reliable safe and reliable operations. The works aim to minimise the risks of environmental impacts to waterways and other environmentally sensitive areas as well as reducing public health and safety risks and safety risks to Council employees working at the site.	High-19	Refurbishment of the existing station or construction of a new station at two different locations. Construction of a new SPS in adjoining available land is the preferred option.	Medium – Detail design and environmental assessment completed.
Sewer PS Upgrade - Gavenlock Rd Tuggerah (Sewer Pump Stations)	$2,660	Medium – Existing preliminary design exists however other options currently under review as part of business case development.	The sewage pumping station WS09 in Tuggerah requires refurbishment and capacity upgrade due to previous growth in the catchment (overloaded) and the age of various mechanical and electrical assets at the site. The works will improve reliability, while minimising the risks of environmental impacts to waterways and environmentally sensitive areas.	High-21	Options review currently underway to compare the existing designed option (new SPS) to alternate options being developed with the support of hydraulic modelling.	Medium – Existing designs for two options have previously been developed and will assist implementing the delivery phase once business case is completed.
Kincumber Sewer System - Bolt down covers installation (Sewer Mains)	$2,222	Medium – Concept design complete.	Installation of 43 watertight lock-down covers in the Gosford Kincumber trunk sewerage system. This upgrade project is to better manage the reticulation sewer system flow isolation and prevent uncontrolled overflows upstream of Kincumber Major sewerage pumping station.	Extreme - 24	Project related to the Kincumber Major sewerage PS – transient relief structure. Project currently in the	High – Concept and detail design carried out externally with delivery via tender as appropriate

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
					detail design phase with delivery to commence in 2018/19	
Tacoma South Low Pressure Sewerage System (LPSS - Vacuum systems)	$2,150	High – Detail design consultant has prepared cost estimate.	Replacement of the existing vacuum sewerage system at Tacoma South with a low pressure system due to ongoing asset reliability issues, an increasing need for maintenance (during and after hours), frequent impacts to customers and risk of discharges to the environment. The project is driven by business efficiency with a decrease in operating costs for the Tacoma South suburb expected following the upgrade.	High-17	Previous attempts to improve the existing vacuum system have been unsuccessful. Options for implementation of the low pressure scheme included the use of the existing vacuum mains as conduits, with the provision of a new scheme the preferred option.	High – Detail design and environmental assessment completed. Final community consultation being undertaken in parallel to equipment selection and procurement during 2018/19.
Brownfield Developer Initiated Sewer PS Upgrade allowance (Sewer Pump Stations)	$2,000	Low – Site selection not yet undertaken as this is subject to activity within	Mechanical and electrical upgrade of sewage pumping stations at infill development locations due to growth. Locations and scope yet to be identified and are dependent on activity within the development community, outside of the main growth areas. These upgrades will enable ongoing servicing of growth while minimising	High-13	Requirement to undertake mechanical and electrical upgrades will be assessed as part of development application.	Low – Site selection subject to activity within developer community, outside of main growth areas.

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		Developer Community.	the risks of environmental impacts to waterways and environmentally sensitive areas, public health and safety impacts and reduce service disruptions.			
Water Main Renewal Program – Reactive (Water Mains)	$4,000	Medium – depends on individual items. Program is reviewed and developed periodically so can be tailored to this budget.	Reticulation water main renewal program allows for urgent replacements due to reliability issues, whilst minimising customer impacts, operational risks, and environmental impacts. This program is subject to reprioritisation and aligned with the proactive renewal program on an as needs basis.	High-18	Water main performance and failure risk is analysed to ensure program project decisions are optimised	High – Concept designs are carried out internally with delivery via internal teams or via tender as appropriate
Water Main Renewal Program - Network Improvement for Water Quality (Water Mains)	$2,000	Medium – depends on individual items. Program is reviewed and developed periodically so can be tailored to this budget.	Reticulation water main network improvements to address water quality issues. The program will involve the extension of water mains and/or linking dead-end water mains, thus improving water quality.	High-18	Water main extensions and network improvements for addressing water quality issues are prioritised ensuring program project decisions are optimised.	High – Concept designs are carried out internally with delivery via internal teams or via tender as appropriate

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Reservoir Roof Replacement (Water Reservoirs)	$1,750	Medium – depends on individual items. Program is reviewed and developed periodically so can be tailored to this budget.	Water reservoir roof repairs are crucial for maintaining water quality and preventing external contamination.	High-19	Specialised structural condition assessments results are reviewed periodically to ensure program project decisions are optimised and ensure appropriate asset and service reliability.	High – Concept designs are carried out internally with delivery via tender as appropriate
Coastal Carrier Stage 2 Sewer Main Augmentations (Sewer Mains)	$3,480	Low – Project has commenced sewerage servicing strategy development. Concept design commencing in 2019/20	Upsize and duplication of key sewer trunk main infrastructure in the Wamberal, Terrigal and North Avoca areas driven by growth, reducing or eliminating environmental impacts to waterways and environmentally sensitive areas and reducing public health and safety risk and reducing service disruptions.	Extreme - 24	Coastal carrier stage 2 sewerage servicing strategy commenced. Concept and detail design of upgrade / augmentations commencing in 2019/20 with construction starting in 2020/21.	Medium – Sewerage infrastructure augmentations pending completion of sewerage servicing strategy and concept / detail design.
Mooney Mooney - Upper Mooney Dam Crest and	$1,563	Medium – Project concept design	Upper Mooney dam crest replacement and remediate upstream wall face at top of dam due to concrete deterioration of dam crest.	High-19	Concept design complete with detail design and constructability	Medium – Due to the complex nature of replacing the dam capping.

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Face Renewal (Headworks)		complete with detail design commencing in 2018/19			commending in 2018/19 through to 2019/20. Project construction commencing in 2020/21.	Detail design will be carried out externally with delivery via tender as appropriate.
Kariong Sewer PS - KA4T Refurbishment (Sewer Pump Stations)	$1,470	Medium – Cost estimate based on similar completed sewer PS refurbishment projects.	Refurbishment of sewerage pumping station KA4T at Kariong due to reliability, reducing or eliminating environmental impacts to waterways and environmentally sensitive areas and reducing public health and safety risk and reducing service disruptions.	High-18	Sewer PS refurbishment following previous condition assessment. Options report to be completed in 2019.	Medium – Concept designs are carried out internally with delivery via internal teams or via tender as appropriate.
Kincumber STP - Sludge Scrapers Replacement (Sewage Treatment Plants)	$1,410	Medium – Cost estimate based on similar completed works	Replacement of sludge scrapers at Kincumber sewage treatment plant. This project will improve efficiency and reduce maintenance and repairs in a hazardous area.	High-17	Options analysis to commence in 2018/19. Various options will be considered for the replacement with a modern equivalent to overcome reliability issues.	High – Concept and detail designs will be carried out externally with delivery via tender as appropriate
Kincumber STP - Sludge Mechanical	$1,382	Medium – Cost estimate based on	Upgrade and replace current dewatering facility to meet the processing capacity required for comprehensive alignment of system-wide bio-	High-18	A range of options were considered to meet the current and	High – Concept design will be carried out

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Dewatering Facility Renewal (Sewage Treatment Plants)		previous concept design.	solids management. This project will improve efficiency and provide redundancy to the sludge dewatering process.		future processing capacity. Preferred option entails extending exiting dewatering facility and decommissioning the old facility. Concept design to commence in 2018/19 with construction starting in 2020/21	externally with delivery via tender as appropriate
Somersby WTP - Lime Clarifier System Upgrade (Water Treat. Plants)	$1,240	Medium – Project cost based on an optimised system prepared by consultants.	Supply and install new lime clarifier system at Somersby water treatment plant. This project will optimise the water treatment process while reducing chemical costs as identified in a recent capacity and process review through implementation of a more effective chemical dosing system.	High-18	Options investigation to commence in 2018/19, followed by concept design with construction commencing in 2020/21,	High – Concept designs are carried out externally with delivery via tender as appropriate
Mardi WTP-Electrical SCA and Switch Room Renewal (Water Treat.	$1,238	Medium – Cost estimate based on similar scale electrical	Renewal of electrical switchgear, control assembly and switch room at Mardi WTP to address ageing assets and obsolescence risks. This project will allow efficient and reliable operation of the planned water treatment plant	High-18	Options are being considered as part of business case development including the	Medium – The sequencing and integration of these works with the upcoming major

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Plants)		renewals at other CCC treatment plants.	major upgrade.		suitability to reuse the existing switchroom for a portion or all of the proposed switchboards and how the staging of the works can be completed to keep the plant operational.	upgrade to Mardi WTP are currently being reviewed prior to finalisation of the business case.
Sewer PS Upgrade - Carrington St Narara - SPS N7A (Sewer Pump Stations)	$1,212	Medium – Detail design underway following preferred package pump station installation.	Relocation and refurbishment of sewage pump station N7A at Narara. This project will address reliability issues and compliance. The relocation and refurbishment will reduce or eliminate environmental impacts to waterways and environmentally sensitive areas and reducing public health and safety risk and reducing service disruptions.	High -18	Installing package pump station to replace current non-confirming SPS following previous condition assessment results. Other options included diverting SPS to nearby SPS.	High – Concept designs are carried out internally with delivery via internal teams or via tender as appropriate
Kincumber STP - Liquid trade waste Disposal Point (Sewage	$1,200	Low – Option analysis commenced. Current estimate is	Construction of a new appropriate public disposal facility at Kincumber STP inlet works area. This project is intended to overcome blockages; odour and treatment issues at the site while providing better services to the	High-22	A range of public liquid trade waste disposal options are being considered. Options analysis	High – Concept and detail designs are carried out externally with delivery via tender

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Treatment Plants)		based on a previous concept design by consultants.	community.		currently underway. Detailed concept design to follow after options analysis, with detail design and construction commencing in 2019/20.	
Sewer PS Upgrade - Wairakei Rd Wamberal (Sewer Pump Stations)	$1,200	Medium – Based on previous concept design. Cost estimate to be reviewed once the sewerage servicing strategy is completed.	Refurbishment of a key sewage pumping station C13 at Wamberal. This project is due to growth and reliability, reducing or eliminating environmental impacts to waterways and environmentally sensitive areas and reducing public health and safety risk and reducing service disruptions.	High-18	Upgrade options and scope dependant on the Coastal Carrier sewerage servicing strategy outcomes.	High – Project completion required to address known sewerage servicing deficiencies. Concept and detail designs are carried out externally with delivery via tender as appropriate
Reservoir Relining Program (Water Reservoirs)	$1,150	Medium – depends on individual items. Program is	Water reservoir internal relining program for urgent and planned repairs following structural condition assessment of reservoirs. Internal relining works ensure the reservoir structural integrity whilst maintaining drinking water	High-19	Specialised structural condition assessments results are reviewed periodically to	High – Concept designs are carried out internally with delivery via tender as appropriate

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		reviewed and developed periodically so can be tailored to this budget.	quality.		ensure program project decisions are optimised and ensure asset and service reliability.	
Kincumber Major Sewer PS -Mechanical replacements (Sewer Pump Stations)	$1,120	Medium – Project cost estimate based on similar completed projects.	Mechanical replacement of pump risers and pedestals, including pump replacements and bifurcation manhole upgrades at Kincumber major sewerage pump station. This project is due to reliability issues reducing or eliminating environmental impacts to waterways and environmentally sensitive areas and reducing public health and safety risk and reducing service disruptions.	High-17	Mechanical replacement options are required due to reliability issues. The projects is dependent on the on the outcomes of the Kincumber Major augmentation and Transient relief structure detail design	Medium – Project delivery dependant on the sewer PS other upgrade works and will be carried out in conjunction with these works
Electrical and Control Switchboard Replacements (Sewer Pump Stations)	$1,103	Medium – depends on individual items. Program is reviewed and developed periodically	Replacement of obsolete and unsupported electrical and control (SCADA) switchboards at various sewage pumping stations identified in a recent Council wide specialised condition assessment.	High-18	Specialised electrical and control switchboard condition assessment is currently underway. A prioritisation of renewals will be	High – Concept designs are carried out internally with delivery via internal teams or via tender as appropriate.

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		so can be tailored to this budget.			carried out to ensure program project decisions are optimised.	
Sewer Trunk Main and Tunnel Renewals (Sewer Mains)	$3,250	Low – Program is reviewed and developed periodically so can be tailored to this budget.	Rehabilitation of key critical sewerage trunk mains and tunnels using trenchless rehabilitation techniques following sewer CCTV inspections. The work will reduce or eliminate environmental impacts to waterways and environmentally sensitive areas and reduce public health and safety risk as well as service disruptions.	High-18	Sewer main performance data and condition assessments reviewed periodically to ensure program project decisions are optimised	High – Concept designs are carried out internally with delivery via tender as appropriate
Toukley 8A Sewer Rising Main – Upgrade (Sewer Mains)	$1,058	High – Concept design underway by consultants.	New rising main extension of sewage pump station TO8A at Norah Head. This project is due to growth, reducing or eliminating environmental impacts to waterways and environmentally sensitive areas and reducing public health and safety risk and reducing service disruptions.	High-18	A range of options considered by to address deficiencies. Consultant developing preferred option.	High – Concept and detail design carried out externally with delivery via tender as appropriate
SPS Upgrade - Lakeside Dr Macmasters Beach (Sewer Pump Stations)	$1,000	Medium – Concept design underway by consultants.	Refurbishment of sewage pumping station M1 at Macmasters Beach. This project is due to asset and service reliability, reducing or eliminating environmental impacts to waterways and environmentally sensitive areas and reducing public health and safety risk and reducing service disruptions.	High-18	SPS upgrade required following previous condition assessment Pump upgrade and station refurbishment scope currently being assessed.	High – Concept and detail designs are carried out externally with delivery via tender.

Drainage

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
Avoca Dr - Avoca Bowl Drainage Upgrade Stage 6	$1,015	Medium - Project cost estimate based on similar completed projects	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Water sensitive urban design principles investigated to mitigate risk to life and property.	High - Designs being developed internally with construction scheduled to be delivered by internal construction resource
Avoca Dr - Avoca Bowl Drainage Upgrade Stage 6	$1,000	Medium - Project cost estimate based on similar completed projects	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 17	Existing drainage system duplication investigated being unable to cater for major storm events requiring renewal of system	High - Designs developed internally with construction scheduled to be delivered by internal construction resource
Avoca Dr - Avoca Bowl Drainage Upgrade Stage 7	$904	Medium - Project cost estimate based on similar completed	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Existing drainage system duplication investigated being unable to cater for major storm events requiring renewal	High - Designs developed internally with construction scheduled to be delivered by internal construction

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		projects			of system	resource
Blenheim Ave - Drainage Upgrade Stage 3	$750	Medium - Project cost estimate based on similar completed projects	Drainage works required to provide resident egress during 1:100 year storm event.	Extreme - 24	Water sensitive urban design principles investigated to mitigate risk to life and property.	High - Designs being undertaken in 2018/19 with construction scheduled to be delivered internally
Blenheim Ave - Drainage Upgrade Stage 4	$1,600	Medium - Project cost estimate based on similar completed projects	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 17	Water sensitive urban design principles investigated to mitigate risk to life and property.	High - Designs being developed internally with construction scheduled to be delivered by internal construction resource
Cross St - Drainage Upgrade Stage 1	$820	Medium - Project cost estimate based on similar	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Bridge construction investigated by culverts being more economical	High - Designs being developed internally with construction scheduled to be delivered by internal

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		completed projects			option	construction resource
Cross St - Drainage Upgrade Stage 2	$1,380	Medium - Project cost estimate based on similar completed projects	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Bridge construction investigated by culverts being more economical option	High - Designs being developed internally with construction scheduled to be delivered by internal construction resource
Drainage Renewal Program	$980	Medium - depends on individual items. Projects within program to be developed and reviewed throughout year so that it can be tailored to	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Multiple renewal options considered based on site constraints	High - Designs being developed internally with construction scheduled to be delivered by internal construction resource

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		the budget.				
Drainage Renewal Program	$750	Medium - depends on individual items. Projects within program to be developed and reviewed throughout year so that it can be tailored to the budget.	Essential drainage works identified throughout financial year to mitigate flooding and associated risk to the community	Medium - 13	Multiple renewal options considered based on site constraints	Medium - Assessments undertaken by Investigations team throughout the year with implementation undertaken incrementally.
Eloora Rd - Drainage Upgrade Stage 3	$1,285	Medium - Project cost estimate based on similar completed	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Water sensitive urban design principles investigated to mitigate risk to life	High - Designs being developed internally with construction scheduled to be delivered by internal construction

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		projects			and property.	resource
Lakedge Ave - Drainage Upgrade Stage 1	$1,050	Medium - Project cost estimate based on similar completed projects	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Multiple minor systems with lagoon outlets considered resulting in increased risk to environment	High - Designs being developed internally with construction scheduled to be delivered by internal construction resource
Lakedge Ave - Drainage Upgrade Stage 2	$1,235	Medium - Project cost estimate based on similar completed projects	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Multiple minor systems with lagoon outlets considered resulting in increased risk to environment	High - Designs being developed internally with construction scheduled to be delivered by internal construction resource
Lakedge Ave - Drainage Upgrade Stage 3	$950	Medium - Project cost estimate based on similar	Existing stormwater system with significant catchment that requires replacement with trunk drainage to mitigate flooding to surrounding residential areas	High - 18	Multiple minor systems with lagoon outlets considered resulting in	High - Designs being developed internally with construction scheduled to be delivered by internal

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		completed projects			increased risk to environment	construction resource
Louisiana Rd and Pacific Hwy - Drainage Upgrade	$775	Medium - Project cost estimate based on similar completed projects	Essential drainage works identified throughout financial year to mitigate flooding and associated risk to the community	High - 18	Bridge construction investigated by culverts being more economical option	Medium - Assessments undertaken by Investigations team throughout the year with implementation undertaken incrementally.
Lucinda Ave - Drainage Upgrade Stage 1	$1,250	Medium - Project cost estimate based on similar completed projects	Renewal of existing infrastructure which has reached its end of useful life to mitigate risk to life and property.	High - 21	Water sensitive urban design principles investigated to mitigate risk to life and property.	Medium - Assessments to be undertaken internally with delivery via internal and external resources.
Lucinda Ave - Road Upgrade Stage 2 & 3	$1,005	Medium - Project cost estimate based on	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Water sensitive urban design principles investigated to	High - Designs being developed internally with construction scheduled to be

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		similar completed projects			mitigate risk to life and property.	delivered by internal construction resource
Minor Drainage Improvement Program	$1,165	Medium - depends on individual items. Projects within program to be developed and reviewed throughout year so that it can be tailored to the budget.	Drainage works undertaken to formalise stormwater management through residential areas and mitigate flood damage.	High - 18	Multiple renewal options considered based on site constraints	High - Designs being developed internally with construction scheduled to be delivered by internal construction resource
Minor Drainage Improvement Program	$1,050	Medium - depends on individual items. Projects	Existing stormwater system with significant catchment that requires replacement with trunk drainage to mitigate flooding to surrounding residential areas	High - 18	Multiple renewal options considered based on site constraints	High - Designs being developed internally with construction scheduled to be delivered by internal

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		within program to be developed and reviewed throughout year so that it can be tailored to the budget.				construction resource
Minor Drainage Improvement Program	$800	Medium - depends on individual items. Projects within program to be developed and reviewed throughout year so that it can be tailored to	Essential drainage works identified throughout financial year to mitigate flooding and associated risk to the community	High - 18	Multiple renewal options considered based on site constraints	Medium - Assessments undertaken by Investigations team throughout the year with implementation undertaken incrementally.

Project name (IPART Asset Class)	Total IPART forecast ('000)	Cost Estimate Certainty	Description/Justification	Risk (if not completed)	Options Considered	Delivery Certainty
		the budget.				
Oceano St - Drainage Upgrade Stage 2	$1,500	Medium - Project cost estimate based on similar completed projects	Renewal of existing infrastructure which has reached its end of useful life to mitigate risk to life and property.	High - 17	Existing drainage system duplication investigated being unable to cater for major storm events requiring renewal of system	Medium - Assessments to be undertaken internally with delivery via internal and external resources.

Appendix 7: Business Case Template for Capital Investments

Central Coast Council

IPART Capital Program Business Case

Insert Asset Class

2020-23 Price Path Provision Project

Version 1 of the Document 0.2 Draft

Ruben de Roa Herrero
Tara McGill

28/06/2018

1. Strategic Objective

1.1. Project Purpose

Explain the purpose of the Project

1.2. Project Objective

Explain the objective of the Project

1.3. Project Benefits

Explain the benefits of the Project

2. Regulatory Alignment

2.1. Key Regulatory Requirements

Explain if the project is required due to regulatory requirements

2.2. Description

Explain the purpose of the Project

3. Options

3.1. Option 1 – Historical Renewal Forecast

3.2. Option 2 – Critical Business Drivers Forecast

3.3. Option 3 – Structural Defect Risk Forecast

4. Business Risk

4.1. Critical Success Factors

Critical Success Factors

4.2. Preferred Options Risks

Preferred Options

5. Financial Aspects

5.1. Cost Certainty

Provide info on cost certainly explain what costs are known/unknown and variables which could impact overall budget

5.2. Capital expenditure

Table 1

Price Path Provision – Source of IPART Approved Funding	
Value of funding currently available in the IPART Price Path Provision	
Value of this Project	
Value remaining in Price Path Provision if project was to proceed	

5.3. Operating expenditure

Will project increase operating expenditure??
What is the written down value of any assets proposed for decommissioning?

5.4. Revenue

Will any revenue be generated from this project?

6. Recommendation

Make recommendation for preferred option

7. Approvals

Note approval date/$$/Process/conditions etc.

8. Variations

Note any variations to original BC here, do not amend original plan

9. Final Report

Benefits/achievement/major issues

Appendix 8: Unsmoothed revenue requirements

Unsmoothed building block revenue ($000 2018/19)				
Financial year	**2019-20**	**2020-21**	**2021-22**	**2022-23**
RAB opens on 1 July 2012				
Water				
Operating expenditure excluding bulk water purchase costs	44,835	44,503	43,984	44,222
Bulk water purchase costs	342	342	342	342
Depreciation (regulatory)	7,466	7,756	8,135	8,364
Return on fixed assets	24,857	25,784	27,079	27,717
Return on working capital	197	81	145	199
Tax allowance	0	0	0	0
Unsmoothed building block revenue	77,696	78,466	79,684	80,844
Revenue from recycled water schemes	0	0	0	0
Other regulatory revenue	1,811	1,809	1,805	1,803
Unsmoothed building block revenue required from charges	75,884	76,658	77,879	79,041
For comparison - reported revenue	N/A	N/A	N/A	N/A
difference (will not = 0%)	N/A	N/A	N/A	N/A
Sewerage				
Operating expenditure	46,864	46,695	46,652	46,657
Depreciation (regulatory)	8,176	8,385	8,590	8,810
Return on fixed assets	26,666	27,214	27,732	28,312
Return on working capital	169	184	175	180
Tax allowance	0	0	0	0
Unsmoothed building block revenue	81,875	82,478	83,147	83,960
Other regulatory revenue	3,297	3,295	3,293	3,291
Unsmoothed building block revenue required from charges	78,578	79,183	79,855	80,668
Stormwater drainage				
Operating expenditure	10,985	11,045	10,985	11,045
Depreciation (regulatory)	1,324	1,422	1,521	1,620
Return on fixed assets	4,646	5,012	5,375	5,737
Return on working capital	15	17	19	21
Tax allowance	0	0	0	0
Unsmoothed building block revenue	16,969	17,496	17,899	18,423
Other regulatory revenue	164	164	164	164
Unsmoothed building block revenue required from charges	16,805	17,332	17,735	18,260
Combined business				
Operating expenditure excluding bulk water purchase costs	102,684	102,243	101,621	101,924
Bulk water purchase costs	342	342	342	342
Depreciation	16,965	17,563	18,245	18,795

Unsmoothed building block revenue ($000 2018/19)				
Financial year	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Return on RAB	56,168	58,010	60,185	61,766
Return on working capital and tax allowance	380	282	338	400
Tax allowance	0	0	0	0
Unsmoothed building block revenue	176,539	178,440	180,731	183,227
Revenue from recycled water schemes	0	0	0	0
Other regulatory revenue	5,272	5,267	5,262	5,257
Unsmoothed building block revenue required from charges	171,267	173,173	175,469	177,969

Appendix 9: Customer Survey

Central Coast Council

It's time to talk...

Water, sewerage and stormwater prices

CONSULTATION REPORT - SURVEY RESULTS

July 2018

Background

The Independent Pricing and Regulatory Tribunal (IPART) sets the maximum prices for the water, sewerage and stormwater services provided by Central Coast Council.

Central Coast Council is currently operating under two pricing determinations, one for the former Gosford Local Government Area and one for the former Wyong Local Government Area.

The most recent determined pricing period is 1 June 2013 to 30 June 2017. IPART agreed to defer the next review until 2018 to allow the amalgamated Central Coast Council to prepare a comprehensive pricing proposal.

Current prices will not change until a new determination is made and any changes as a result of the new determination will come in to effect from 1 July 2019.

Consultation objectives

The purpose of consultation was to help determine what services are needed, and what the required capital and operating expenditure will be to deliver these services. To achieve this, the following objectives have been set.

- Understand customer values
- Understand customer expectations
- Educate customers on water, sewerage and stormwater pricing
- Educate customers on water management
- Determine customer priorities

Engagement framework

Consultation has been designed in accordance with Central Coast Council's Engagement Framework.

This framework is available to view at https://www.yourvoiceourcoast.com/Central-Coast-Council-Engagement-Framework.

Consultation process

The engagement process is set out in four stages:

1. **Build foundations**
   Develop the foundations for engagement using evidence based data and building awareness
2. **Explore key themes**
   Customers identify matters of importance
3. **Develop and test scenarios** *(we are here)*
   Customers inform priorities and preferred scenarios
4. **Consider Council's proposal**
   Customers understand Council's proposal and how the consultation has influenced the proposal

1. Build foundations

Existing research and data was analysed to gain a general understanding of the strengths and weaknesses of the water, sewerage and stormwater services, as well as customer satisfaction and complaints with the services, including:

- Urban national performance reports, which benchmarks the pricing and service quality of Australian water utilities
- Central Coast Council's Community Strategic Plan research data
- Central Coast Council, former Gosford and former Wyong customer satisfaction surveys
- Internal reports on service and supply, including customer complaints
- Research conducted during the development of Water Plan 2050.

2. Explore key themes

A survey titled *"It's time to talk water, sewerage and stormwater prices"* was conducted during April and May 2018. The aim was to identify matters of importance to customers; gauge satisfaction levels; and understand customer perceptions regarding value for money in relation to Central Coast Council's water, sewerage and stormwater services.

A range of communications and engagement activities, including 10 community pop up events, were undertaken to encourage participation in the survey. A total of **1,339 surveys** were submitted. A list of the key themes and survey results can be found at Appendix A.

Of these respondents, 367 indicated they would like to be notified of further engagement opportunities regarding water, sewerage and stormwater services.

Next Steps

The next stage of consultation will focus on water supply catchment protection and demand, as these issues were identified as key topics from the survey results. Council will conduct four workshops, *Our future water supply – it's time to talk...,* to further discuss these issues with the community.

These workshops will cover:

- short, medium and long term water demands
- risks to future water supply
- water supply catchment protection measures
- water conservation measures.

Appendix A - Key themes and survey results

Key themes

The key themes from *It's time to talk water, sewerage and stormwater* survey results include:

Values

Top 3 values regarding water sewerage and stormwater services are (see Figure 1):

1. **Reliable** - Water is safe to drink and available when required; sewerage system and stormwater system is reliable
2. **Value for Money** – There is balance between the service Council provides and the charges I pay
3. **Efficient** – Services operate efficiently

Satisfaction

Overall satisfaction of water, sewerage and stormwater services is positive (see Figure 2), with customers being most satisfied with sewerage services, followed by water then stormwater.

Value for money

Overall perception of value for money is relatively neutral (see Figure 3), with customers seeing greatest value in sewerage services, followed by water then stormwater.

Importance of Services

All services were considered to be important with customers rating water services the most important, followed by sewerage, then stormwater (see Figure 4)

Service charges

Most customers indicated the water (74%), sewerage (73%) and stormwater (65%) service charges should be consistent across the Central Coast (see Figure 5).

Billing

Most customers (78%) indicated they would prefer to receive bills on a quarterly basis (see Figure 6).

Meeting future water supply needs

Top 3 measures Council should take to meet future water supply needs are (see Figure 7):

1. Protection of water supply catchments
2. Water conservation education
3. Increase water storage capacity at Mangrove Creek Dam

Reducing net greenhouse gas emission

Most customers (65%) would not consider paying more for water, sewerage and stormwater services to reduce net greenhouse gas emissions (see Figure 8). 17% would consider paying more, while 18% are unsure.

Demographics

Figures 9 to 14 provide demographic information.

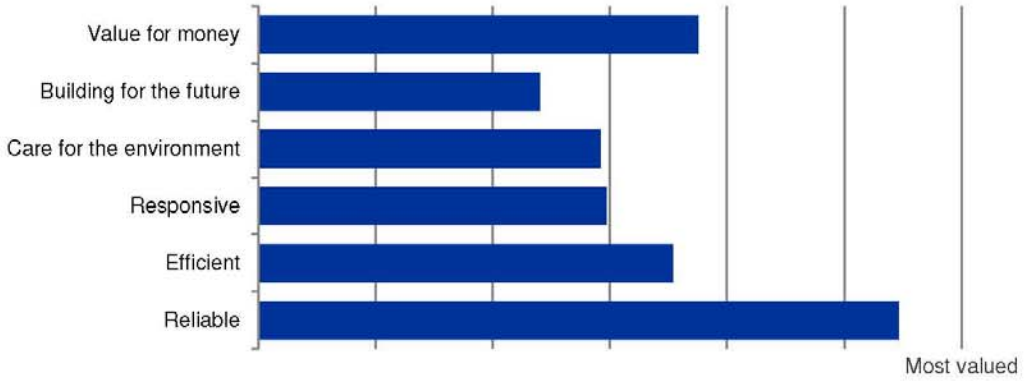


Figure 1 What do you value most about your water, sewerage and stormwater services?

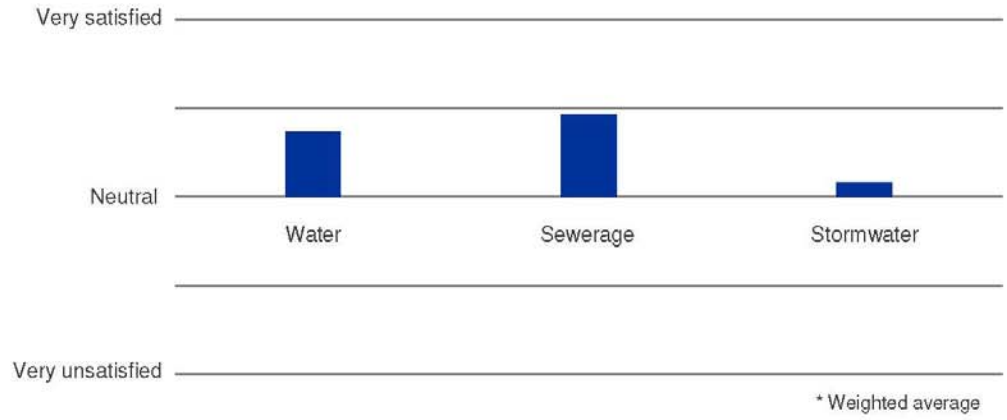


Figure 2 How would you rate your satisfaction with your water, sewerage and stormwater services? *

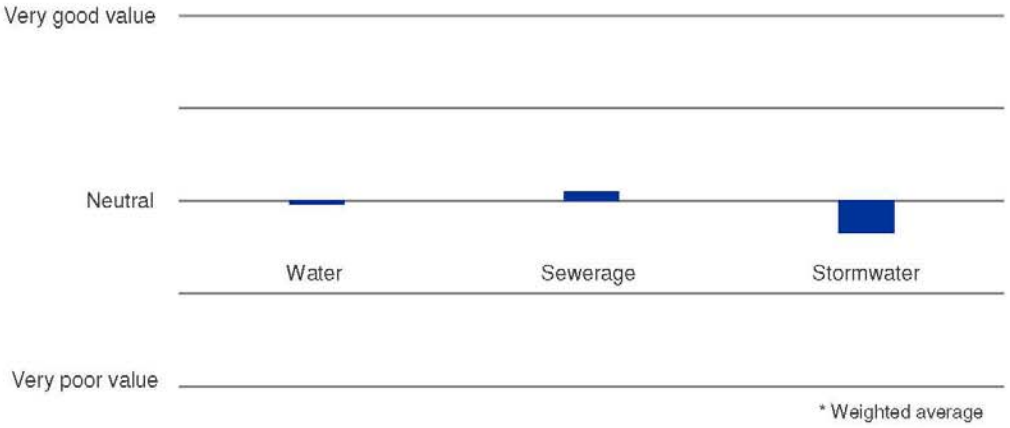


Figure 3 Do you feel you receive value for money for your water, sewerage and stormwater services? *

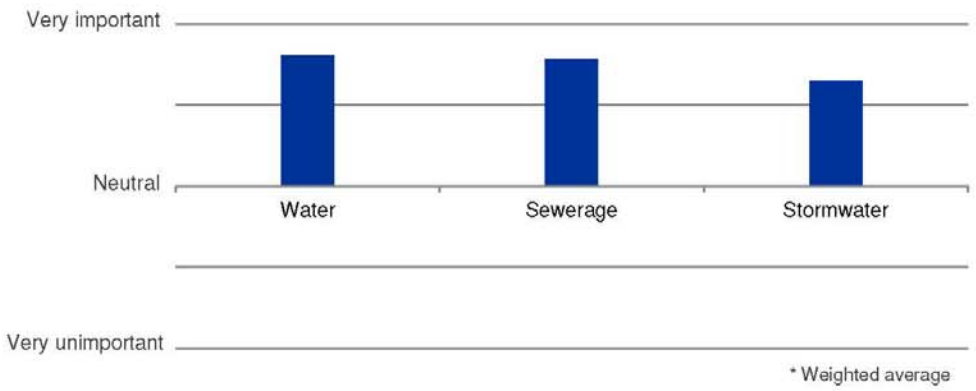


Figure 4 How would you rate the importance of your water, sewerage and stormwater services? *

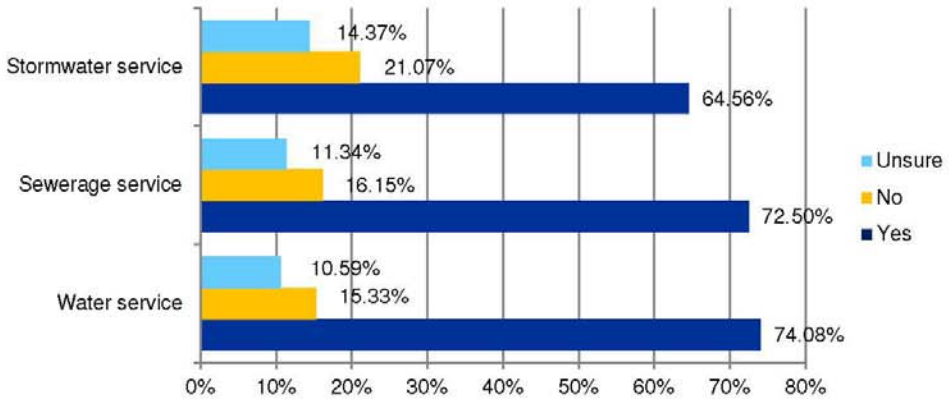


Figure 5 Should service charges be consistent across the Central Coast for water, sewerage and stormwater?

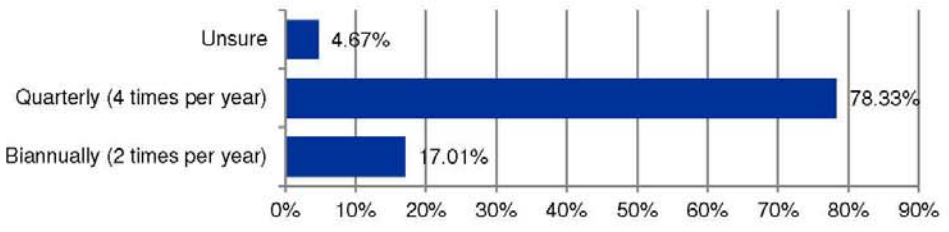


Figure 6 How often would you like to receive your bill?

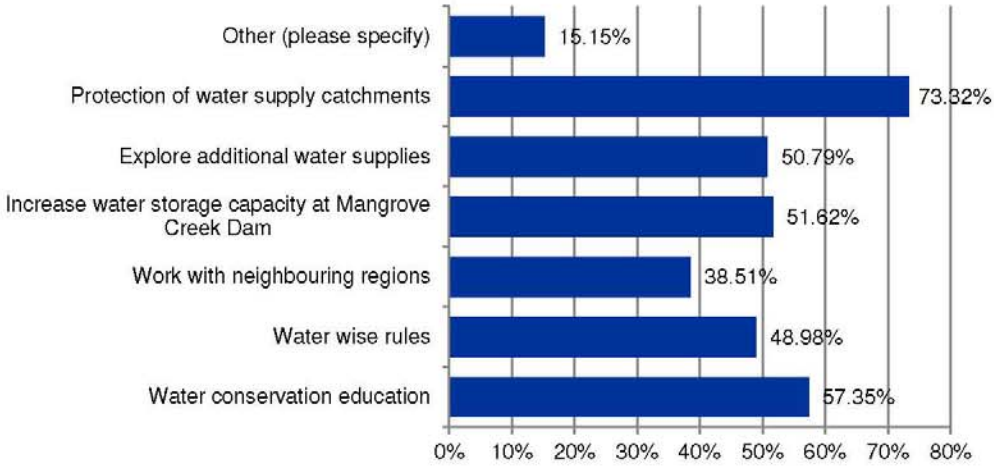


Figure 7 **What measures should Council take to meet future water supply needs?** Please check all that apply

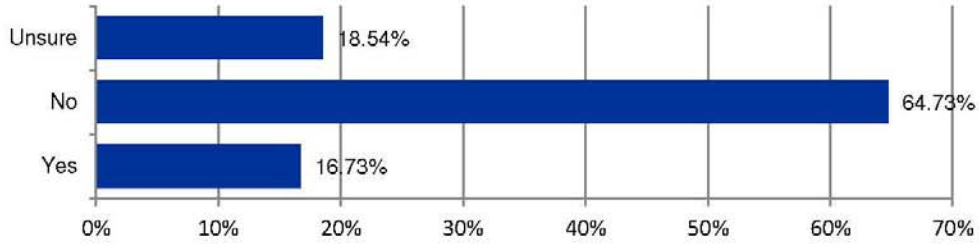


Figure 8 **Would you consider paying more for water, sewerage and stormwater services to reduce net greenhouse emissions?**

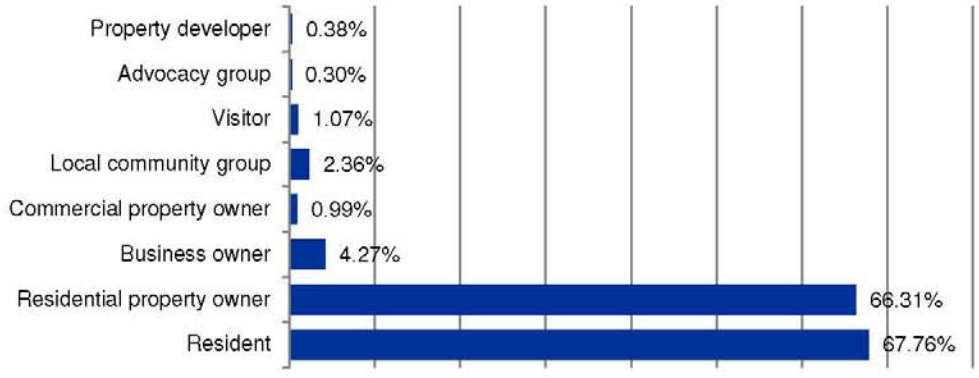


Figure 9 **What is your interest in this survey?** Please check all that apply

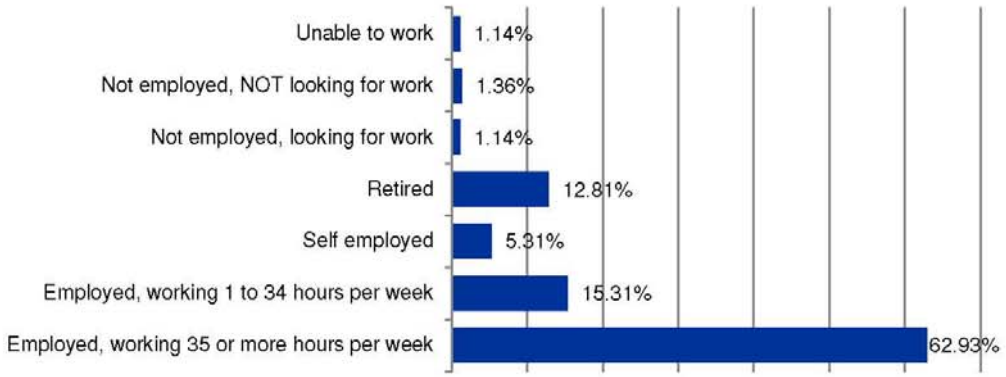


Figure 10 Which of the following best describes your employment status?

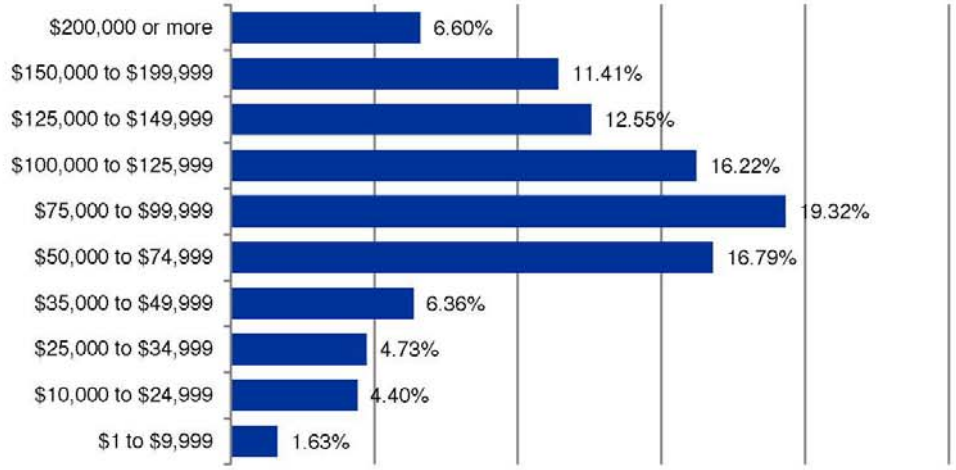


Figure 11 What is your total annual household income before taxes?

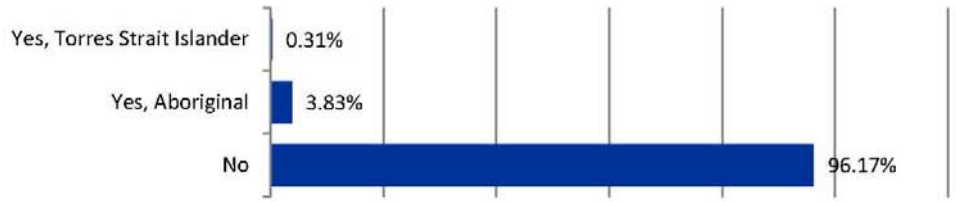


Figure 12 Are you of Aboriginal and/or Torres Strait Islander origin?

Figure 13 Do you speak a language other than English at home?

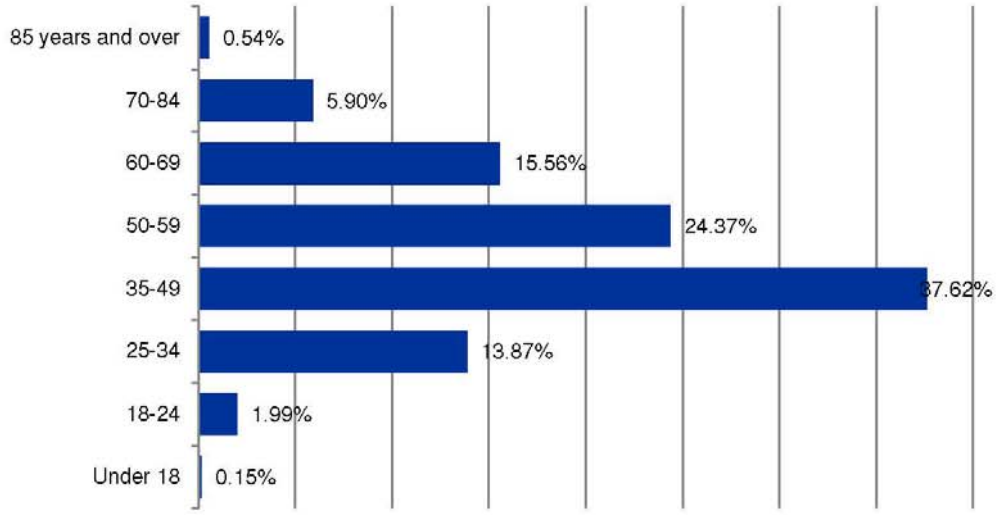


Figure 14 What is your age?

Appendix B – *It's time to talk water, sewerage & stormwater prices* survey

It's time to talk

water, sewerage & stormwater prices

Central Coast Council

We want to know what you value about your water, sewerage and stormwater services. This will help Central Coast Council develop its water, sewerage and stormwater pricing submission to the Independent Pricing and Regulatory Tribunal (IPART) for the period 1 July 2019 to 30 June 2023.

This survey will take about 5 minutes and is just one way to get involved. There will be opportunities to develop and test scenarios during the next phase of this engagement program. For more information visit your yourvoiceourcoast.com/WaterPricing

This survey closes midnight Wednesday, 23 May 2018.

What are water, sewerage and stormwater services?

Water - The supply of drinking water, which involves collecting and storing water for future use, treating the water and delivering it to our customer's tap.

Sewerage - The removal, treatment and disposal of wastewater from inside our customers' properties.

Stormwater - Separate to the sewerage service, the stormwater service involves the collection and removal of rain, and everything it carries with it, as it runs across roofs, roads and land into stormwater drains.

---

1. **What do you value most about your water, sewerage and stormwater services?**

Please rank from 1 to 6, with 1 being the most important. We understand they are all important, but your answers will help us to prioritise our services.

- ☐ **Reliable** - Water is safe to drink and available when required; sewerage system and stormwater system is reliable
- ☐ **Efficient** - Services operate efficiently
- ☐ **Responsive** - Respond quickly to faults and supply interruptions
- ☐ **Care for the environment** - Protect the environment now and for the future.
- ☐ **Building for the future** - Plan for adequate infrastructure to meet future demands
- ☐ **Value for money** - there is balance between the service Council provides and the charges I pay

2. **How would you rate your satisfaction with your water, sewerage and stormwater services?**

	Very unsatisfied	Unsatisfied	Neutral	Satisfied	Very satisfied	N/A
Water	○	○	○	○	○	○
Sewerage	○	○	○	○	○	○
Stormwater	○	○	○	○	○	○

3. **How would you rate the importance of your water, sewerage and stormwater services?**

	Very unimportant	Unimportant	Neutral	Important	Very important	N/A
Water	○	○	○	○	○	○
Sewerage	○	○	○	○	○	○
Stormwater	○	○	○	○	○	○

4. **Do you feel you receive value for money for your water, sewerage and stormwater services?**

	Very poor value	Poor value	Neutral	Good value	Very good value	N/A
Water	○	○	○	○	○	○
Sewerage	○	○	○	○	○	○
Stormwater	○	○	○	○	○	○

5. **Should service charges* be consistent across the Central Coast for:**

**A service charge is a fixed price to provide a property with access to a service.*

Water	○ Yes	○ No	○ Unsure
Sewerage	○ Yes	○ No	○ Unsure
Stormwater	○ Yes	○ No	○ Unsure

6. **How often would you like to receive your bill?**

○ Biannually (twice per year) ○ Quarterly (four times per year) ○ Unsure

7. **What measures should Council take to meet future water supply needs?** *Please check all that apply*

○ Water conservation education
○ Water wise rules
○ Work with neighbouring regions
○ Other (please specify) _____
○ Increase water storage capacity at Mangrove Creek Dam
○ Explore additional water supplies
○ Protection of water supply catchments

8. **Would you consider paying more for water, sewerage and stormwater services to reduce net greenhouse gas emissions?**

○ Yes ○ No ○ Unsure

9. **What suburb do you live in?**

_____

10. What is your interest in this survey *Please check all that apply*

- ○ I am a resident
- ○ I am a residential property owner
- ○ I am a business owner
- ○ I am a commercial property owner
- ○ I represent a local community group
- ○ I am a visitor
- ○ I represent an advocacy group
- ○ I am a property developer
- ○ Other (please specify) _____

11. Which of the following best describes your employment status?

- ○ Employed, working 35 or more hours per week
- ○ Employed, working 1 to 34 hours per week
- ○ Self employed
- ○ Retired
- ○ Not employed, looking for work
- ○ Not employed, NOT looking for work
- ○ Unable to work

12. What is your total annual household income before taxes?

- ○ $1 to $9,999
- ○ $10,000 to $24,999
- ○ $25,000 to $34,999
- ○ $35,000 to $49,999
- ○ $50,000 to $74,999
- ○ $75,000 to $99,999
- ○ $100,000 to $125,999
- ○ $125,000 to $149,999
- ○ $150,000 to $199,999
- ○ $200,000 or more

13. Are you of Aboriginal and/or Torres Strait Islander origin?
For persons of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes

- ○ No
- ○ Yes, Aboriginal
- ○ Yes, Torres Strait Islander

14. Do you speak a language other than English at home?

- ○ Yes
- ○ No

15. What is your age?

- ○ Under 18
- ○ 18-24
- ○ 25-34
- ○ 35-49
- ○ 50-59
- ○ 60-69
- ○ 70-84
- ○ 85 years and over

16. Would you like to be notified of further engagement opportunities regarding water, sewerage and stormwater services?

- ○ No
- ○ Yes

If 'Yes', please provide a valid email address: _____

Thank you for taking this survey.

Please return to one of Central Coast Council's Offices

49 Mann Street, Gosford NSW 2250 / 2 Hely Street, Wyong NSW 2259
(PO Box 20, Wyong NSW 2259)

For more information about Council's water, sewerage and stormwater pricing submission visit **yourvoiceourcoast.com**

Appendix 10: Central Coast Council *Resourcing Strategy*

Council's *Resourcing Strategy* is available on the Council website www.centralcoast.nsw.gov.au.

Appendix 11: Service Charges

Water service charges per meter size[4]

Table 88: Non residential meter sizes, service charge and anticipated meter numbers

	2019/20	2020/21	2021/22	2022/23	
Meter size	Meter no#	Meter no#	Meter No	Meter no#	Service charge
20mm	1,640	1,667	1,693	1,719	113.20
25mm	760	772	784	796	176.87
32mm	248	251	254	257	289.79
40mm	620	629	638	647	452.79
50mm	420	427	434	441	707.49
65mm	12	12	12	12	1,195.65
80mm	103	105	107	109	1,811.17
100mm	88	90	92	94	2,829.95
150mm	12	12	12	12	6,367.38
200mm	2	2	2	2	11,319.78
300mm	2	2	2	2	17,687.16

Table 89: Residential service charge water forecast dwellings

	2019/20	2020/21	2021/22	2022/23	
	Dwelling no#	Dwellings no#	Dwellings no#	Dwelling no#	Service charge
Houses	105,704	106,976	108,180	109,339	113.20
Strata common meters (excluding individually metered properties)	14,154	14,312	14,462	14,603	113.20
Strata individual meters (individually metered properties)	5,378	5,430	5,478	5,521	113.20
Flats	7,419	7,520	7,617	7,714	113.20
Mixed development	707	713	719	724	113.20
Unconnected properties (but reasonably available for connection)	1,527	1,527	1,527	1,527	113.20
Total residential dwellings	134,889	136,478	137,983	139,428	

[4] ** Note these tables do not include exempt properties and therefore will not align to the annual return. The forecast figures stated here are used for modelling purposes only*

Sewer service charge per meter size[5]

Table 90: Non-residential meter sizes, sewer service charges and anticpated meter no#

	2019/20	2020/21	2021/22	2022/23	
Non residential meters	Adjusted for mixed multi use				
	Meter no#	Meter no#	Meter no#	Meter no#	Service charge
20mm	1,577	1,605	1,632	1,658	538.70
25mm	672	684	696	708	816.41
32mm	239	241	243	245	1,308.87
40mm	553	569	585	600	2,019.80
50mm	376	383	390	397	3,130.63
65mm	12	12	12	12	5,259.71
80mm	88	90	92	94	7,944.21
100mm	87	89	91	93	12,387.52
150mm	12	12	12	12	27,815.66
200mm	2	2	2	2	49,415.07
250mm	2	2	2	2	77,185.74

Residential sewer service forecast dwellings

Table 91: Residential sewer service charge forecast dwellings

	2019/20	2020/21	2021/22	2022/23	Service charge
Houses	102,258	103,010	103,676	104,183	$538.70
Strata common meters (excluding individually metered properties)	14,071	14,174	14,266	14,336	$538.70
Strata individual meters (individually metered properties)	5,357	5,396	5,431	5,458	$538.70
Flats	7,319	7,373	7,420	7,457	$538.70
Mixed development	706	711	716	720	$538.70
Unconnected properties (but reasonably available for connection)	1572	1572	1572	1572	$538.70
Total residential dwellings	131,283	132,236	133,081	133,726	

[5] ** Note these tables do not include exempt properties and therefore will not align to the annual return. The forecasts figures stated here are for modelling purposes*

Appendix 12: Current stormwater drainage pricing comparison

Pricing Comparison	Former Current Wyong LGA	Former Current Gosford LGA	Hunter Water	Sydney Water
Residential	124.68	128.32	73.20	81.36
Non-residential	124.68	-	-	-
Low impact	-	128.32		
25mm	-	200.50	-	-
40mm	-	513.28	-	-
50mm	-	802.01	-	-
80mm	-	2,053.14	-	-
100mm	-	3,208.03	-	-
150mm	-	7,218.05	-	-
200mm	-	12,832.09	-	-
<1000sqm	-	-	73.20	81.36
1001-10000sqm	-	-	177.81	406.81
10001-45000 sqm	-	-	1,130.83	1,808.00
>45000sqm	-	-	3,592.00	4,502.00
Multi premises	124.68	96.24	27.08	29.84

The numbers in the above table are represented in 2017/18$