

Development Servicing Plans for Water Supply and Sewerage

2024

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Definitions

Annual Bill: LWUs annual water supply or sewerage bill for an annual demand of 1 ET.

Asset: An asset (or part of an asset) including land and headworks assets that directly provides, or will provide, the developer services to developments within the DSP area for which the Developer Charge is payable

Annual Demand: The total water demand over a year. Used to size headworks components.

Capital Cost: The Present Value (MEERA basis) of all expenditure on assets used to service the development.

Capital Charge: Capital cost of assets per ET adjusted for commercial return on investment (ROI).

Developer Charge: Charge levied on developers to recover part of the capital cost incurred in providing infrastructure to new development.

Development Area: See DSP area.

Discount Rate: The rate used to calculate the present value of money arising in the future.

DSP area: That part of a water utility's area covered by a particular Development Servicing Plan.

ET: Equivalent tenement. The annual demand a detached residential dwelling will place on the infrastructure in terms of the water consumption or sewage discharge.

Headworks: Significant assets at the top end of the water systems or the bottom end of the sewerage and stormwater system. For example water headworks may comprise a system of storage reservoirs, water treatment works and major supply conduits.

MEERA: Modern Engineering Equivalent Replacement Asset. An asset value calculated on the basis that the asset is constructed at the time of valuation in accordance with modern engineering practice and the most economically viable technologies, which provides similar utility functions to the existing asset in service.

NPV: Net present value means the difference between the present value of a revenue stream and the present value of a cost stream.

Operating cost: In relation to a DSP is the operation, maintenance and administration cost (excluding depreciation and interest) of a LWU in providing customer services to a DSP area.

PV: Present value. The current value of future money or ETs.



Reduction Amount: The amount by which the capital charge is reduced to arrive at the developer charge. This amount reflects the capital contribution that will be paid by the occupier of a development as part of future annual bills.

ROI: Return on investment. Represents the income that is, or could be, generated by investing money.

Service Area: An area serviced by a separate water supply system, an area served by a separate sewage treatment plant, a separate small town or village, or a new development of over 500 ETs.

TRB: Typical residential bill, which is the principal indicator of the overall cost of a water supply or sewerage system and is the bill paid by a residential customer using the utility's average annual residential water supplied per connected property.



Executive Summary

This document provides the Development Servicing Plans (DSPs) for water supply and sewerage developer charges for the development areas served by Tweed Shire Council.

The DSPs have been prepared in accordance with section 306 (3) of the *Water Management Act, 2000*. In preparing the DSPs, Council has considered the 2016 *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* issued by the Minister for Lands and Water, pursuant to that Act.

The areas covered by these DSPs are shown on the plans in Appendix A.

The timing and expenditure for works serving the areas covered by these DSPs are shown in the DSP Background Documents. Future capital works expenditure included in Council's Total Asset Management Plan (TAMP) have been applied to the DSPs including (refer Section 5.4) water supply security improvements, water treatment upgrades, wastewater treatment plant upgrades, assets required to service new development areas and asset renewals.

Council's TAMP is being reviewed in conjunction with the update of the Integrated Water Cycle Management Strategy.

System design and operation in the DSP areas are based on TSC's levels of service (refer Section 6) including:

- Water supply flow, pressure, quantity, consumption restrictions during drought conditions, notification of supply interruptions, infrastructure failures, firefighting supply, water quality and energy consumption; and
- Sewerage availability of service, notification of supply interruptions, infrastructure failures, odours, effluent quality, effluent reuse and energy consumption.

The proposed water supply and sewerage developer charges for the areas covered by these DSPs are given in Table 1.

Table 1: Proposed Developer Charges (2024\$)

Service Area	Tweed Shire Council Developer Charge (per ET)	Cross-Subsidy (from the Typical Residential Bill p.a.)
All water supply areas	\$12,576	\$13
All sewerage areas	\$7,798	\$10

Developer charges relating to this DSP document will be reviewed after a period of 4 to 8 years.

In the period between any review, developer charges will be adjusted on 1 July annually on the basis of the movements in the CPI for Sydney, excluding the impact of GST.

Developers are responsible for the full cost of the design and construction of water supply and sewerage reticulation works within subdivisions.



Background information containing all the critical data including calculation models behind each DSP is available on request.



1 Introduction

Section 64 of the *Local Government Act, 1993* enables a local government authority to levy developer charges for water supply, sewerage and stormwater. This derives from a cross-reference in that Act to section 306 of the *Water Management Act, 2000*.

A Development Servicing Plan (DSP) details the water supply and sewerage developer charges to be levied on development areas utilising a water utility's water supply and sewerage infrastructure.

This document provides the DSPs for water supply and sewerage for the development areas served by Tweed Shire Council (TSC). In preparing the DSPs, TSC has considered the 2016 *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* issued by the Minister for Lands and Water, pursuant to the *Water Management Act, 2000*.

These DSPs supersede any other requirements related to water supply and sewerage developer charges for the areas covered by these DSPs. These DSPs take precedence over any of Council's codes or policies where there are any inconsistencies relating to water supply and sewerage developer charges.

Dispute resolution procedures are discussed in the 2016 *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*. TSC is not a member of the Electricity and Water Ombudsman.



2 Administration

2.1 DSP Areas

The areas covered by these DSPs are shown on the maps in Section 13.

- Water Supply service areas – Tweed District and the surrounding development areas (Area E, The Rise, Kings Forest and Cobaki), Tyalgum and Uki.
- Sewerage service areas – Banora Point and the surrounding development areas (Area E, The Rise and Cobaki), Kingscliff and the surrounding development area (Kings Forest), Hastings Point, Murwillumbah, Tumbulgum, Tyalgum, Uki and Burringbar/Mooball.

2.2 DSP Boundaries

These DSPs apply to all land in the Tweed Shire that is within the water supply and/or sewerage service areas and are to be connected to the TSC water supply system and/or sewerage service as a result of development (refer plans in Appendix A). The basis for defining DSP area boundaries is the existing and future development serviced by TSC water systems and sewerage systems within the period of this DSP.

These include connection of land with existing residences and/or non-residential buildings if water or sewerage developer charges have not been paid previously.

The basis for defining the DSP area boundaries is the existing and future development serviced by the TSC water supply and sewerage systems. Any development outside the water supply and sewerage service areas will require a special agreement with TSC.

2.3 Application of Developer Charges

TSC will assess the demand for service in terms of equivalent tenements (ET) in accordance with the Tweed Shire Council Fees and Charges and will levy developer charges proportional to the number of ETs. The minimum demand for each development is 1 ET. The developer charges will apply to new development and re-development (i.e. change of use).

As an alternative to up-front developer charges, eligible industrial and commercial developments have the option of paying for any water consumption and sewerage usage above the existing ET entitlement through a high consumption charge.

2.4 Timing and Payment of Developer Charges

Developer charges will be determined and levied in accordance with the provisions of these DSPs at the time of considering an application for a compliance certificate under section 305 of the *Water Management Act 2000* or a construction certificate under section 109 of the *Environmental Planning and Assessment Act 1979* or at the time of issuing a notice or other form of written advice e.g. under the *SEPP (Exempt and Complying Development Codes) 2008* or approval under section 68 of the *Local Government Act, 1993*. The time limit for payment of developer charges will be included in the notice of determination or will be advised to the developer by a separate notice. The amount of any developer charges not



paid within the specified time limit will be reassessed and a subsequent determination of developer charges will be made in accordance with council's then current DSP.

A Subdivision Certificate, Occupancy Certificate, Complying Development Certificate or, where so conditioned the approval of a Section 68 Application, will not be issued until the conditions of the Certificate of Compliance have been fulfilled.

2.5 Review

Developer charges relating to this DSP document will be reviewed after a period of 4 to 8 years. If the review indicates that the developer charges in the DSPs remain valid, the DSPs will apply for a further four years after TSC releases a public notice to this effect. However, if it is considered that new DSPs are warranted, new DSPs shall be prepared, audited, exhibited and registered.

2.6 Indexation

In the period between any review, developer charges will be adjusted on 1 July annually on the basis of the movements in the CPI for Sydney, excluding the impact of GST.

2.7 Exemption

Under section 306 (4) and (5) of the *Water Management Act 2000*, the Minister for Planning may make a determination in regard to developer charges levied on Crown development.

Crown developments for essential community services (education, health, community services, and law and order) are exempt from general developer charges. Water utilities may charge these developments only for that portion of the direct connection cost (e.g. for a lead-in main) relating to Crown development.

Tweed Shire Council may also apply other exemptions for developer charges.

2.8 Special Levies

Where Council funds works that would otherwise be provided by the developer, Council may apply a Special Levy for those works.



3 Land Use Planning

3.1 Growth Projections

Growth projections provided by TSC for the water and sewerage service areas are shown in the following table as the number of water supply and sewerage ETs from 1996 until 30 years into the future. The ET growth projections for each service area are given in the DSP Background Documents.

Major developments are in progress or planned for:

- Area E (Terranora)
- Cobaki
- Kings Forest
- The Rise

Table 2: Growth Projections

Year	Total Number of Water Supply ETs*	Total Number of Sewerage ETs*
1996	22,069	20,280
2000	24,195	22,475
2005	28,450	26,595
2010	33,440	31,514
2015	36,103	33,641
2020	37,943	35,451
2025	39,762	37,211
2030	41,706	39,114
2035	45,191	42,597
2040	48,729	46,130
2045	52,492	49,866
2050	55,687	53,069
2053	57,558	54,945

*The calculation of ETs was derived from population and lot development projections undertaken for Council by id Consulting. The information from id Consulting was then adjusted using historical records to determine the development or uptake of commercial and industrial lots. The subsequent forecast ETs were then confirmed by comparing the results of the above calculations for the recent past and present to actual recent past and present flows at the wastewater treatment plants and the production of water from Council's water treatment plants.

3.2 Land Use Information

These DSPs should be read in conjunction with the Tweed Shire Council Local Environmental Plan 2014 and Development Control Plan 2008.



4 Developer Charges Methodology

Developer charges are up-front charges levied to recover part of the infrastructure costs incurred in servicing new developments or additions/changes to existing developments. Developer charges serve two related functions:

- They provide a source of funding for infrastructure required for new urban development; and
- They provide signals regarding the cost of urban development and thus encourage less costly forms and areas of development.

The developer charges calculation is based on the net present value (NPV) approach adopted by the Independent Pricing and Regulatory Tribunal (IPART) for the metropolitan water utilities. The fundamental principle of the NPV approach is that the investment in assets for serving a development area is fully recovered from the development. The investment is recovered through up-front charges (i.e. developer charges) and the present value (PV) of that part of annual bills received from the development in excess of operation, maintenance and administration (OMA) costs.

$$\text{Developer Charge} = \text{Capital Charge (cost of providing the assets)} - \text{Reduction Amount (cost recovered through annual bills)}.$$

In setting the developer charges, TSC may consider financial, social and environmental factors to determine a level of developer charges that is balanced, fair and meet Council's objectives.

LWUs may elect to cap the developer charges for small villages in order to maintain affordability and to avoid 'stranded' assets in such villages. LWUs may also cap other developer charges to maintain affordability, subject to adopting a commercial developer charge which recovers a significant proportion of the capital cost of the infrastructure.

The capital charge and reduction amount are discussed further in the following sections. The developer charges process is described fully in the 2016 *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*.

4.1 Capital Charge

The capital charges were calculated for TSC water supply and sewerage service areas based on the existing and future assets providing the services in these areas. The capital charge is calculated by dividing the present value (PV) of the cost of the assets by the PV of the number of new ETs.

The capital charge represents the efficient capital cost of assets used in providing water related services in a DSP area. This includes the cost of both existing and future assets that will be used to service the DSP area. In addition, because local water utilities provide the upfront funding for constructing these assets, the capital charge also includes a commercial return on this investment.



The capital charge is calculated for each service area. Service areas are:

- An area served by a separate sewage treatment plant
- An area served by a separate water supply distribution system
- Separate small towns or villages
- A new development area of over 500 lots.

Where the capital charges for two or more service areas are within 30% of each other, they are agglomerated into a single DSP area.

4.2 Reduction Amount

The reduction amount represents the portion of the cost of assets that TSC expects to recover through its annual bills to the new residents.

Council has adopted the NPV of annual bills method to calculate the reduction amount. This method calculates the reduction amount as the NPV for 30 years of the future net income from annual charges (revenue from annual bills less operation, maintenance and administration costs) for the development areas.



5 Infrastructure

5.1 Water Supply

Reticulated water is available in all urban centres within Tweed Shire. TSC is responsible for three water supply distribution systems servicing the coastal areas and Murwillumbah (Tweed District water supply), Tyalgum and Uki. The Tweed District water supply will be extended to the new development areas known as Area E, Cobaki, Kings Forest and The Rise. The water supply service areas are (Section 13):

- W1: Tweed District – existing water supply distribution system;
- W2: Area E - new development area > 500 lots
- W3: Cobaki - new development area > 500 lots
- W4: Kings Forest - new development area > 500 lots
- W5: The Rise - new development area > 500 lots
- W6: Tyalgum – existing water supply distribution system
- W7: Uki – existing water supply distribution system.

A conceptual diagram of the water service areas is given in Figure 1. The existing water supply systems serving these areas are shown on the Plans in Appendix A. Some existing and future assets are/will be shared between some of the water service areas.

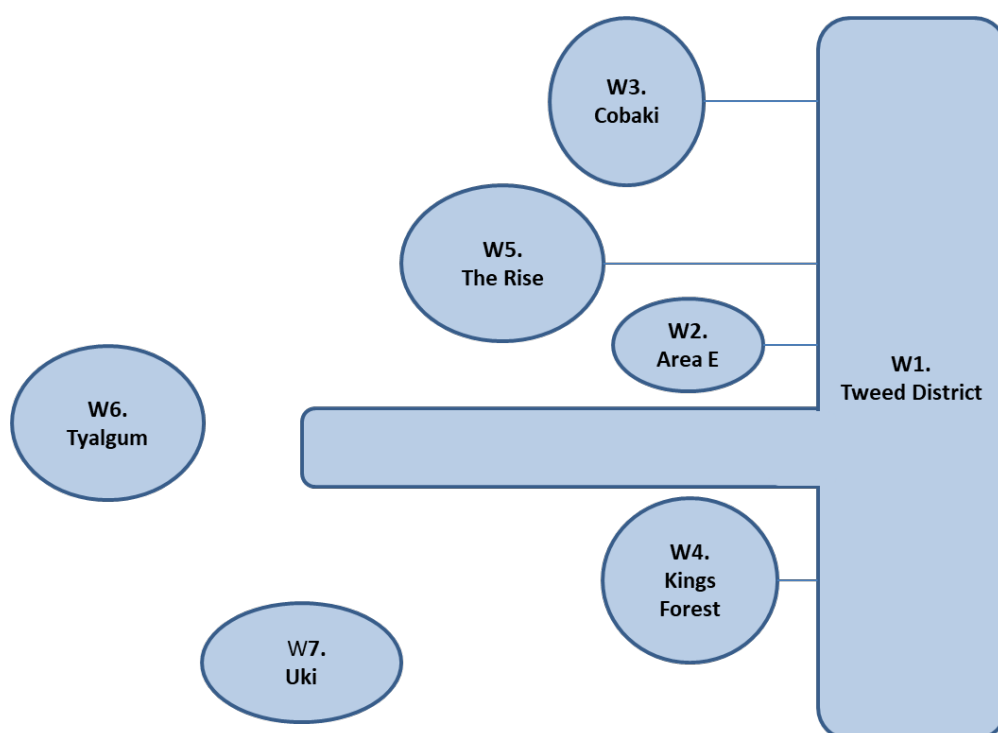


Figure 1: Conceptual Diagram of Water Supply Service Areas

5.2 Sewerage

TSC is responsible for the management of eight sewerage systems servicing the main towns and surrounding areas of Banora Point, Kingscliff, Hastings Point, Murwillumbah, Tumbulgum, Tyalgum, Uki and Burringbar/Mooball. Sewerage services will be extended to the new development areas known as Area E, Cobaki, Kings Forest and The Rise with sewage treated at existing STPs. The sewerage service areas are (Section 13):

- S1: Banora Point - served by an existing sewage treatment plant
- S2: Kingscliff - served by an existing sewage treatment plant
- S3: Hastings Point - served by an existing sewage treatment plant
- S4: Murwillumbah - served by an existing sewage treatment plant
- S5: Tumbulgum - served by an existing sewage treatment plant
- S6: Tyalgum - served by an existing sewage treatment plant
- S7: Uki - served by an existing sewage treatment plant
- S8: Burringbar/Mooball - served by an existing sewage treatment plant
- S9: Area E - new development area > 500 lots
- S10: Cobaki - new development area > 500 lots
- S11: Kings Forest - new development area > 500 lots
- S12: The Rise - new development area > 500 lots

A conceptual diagram of the sewerage service areas is given in Figure 2. The existing sewerage systems serving these areas are shown on the Plans in Appendix A. Some existing and future assets are/ will be shared between some of the sewerage areas.



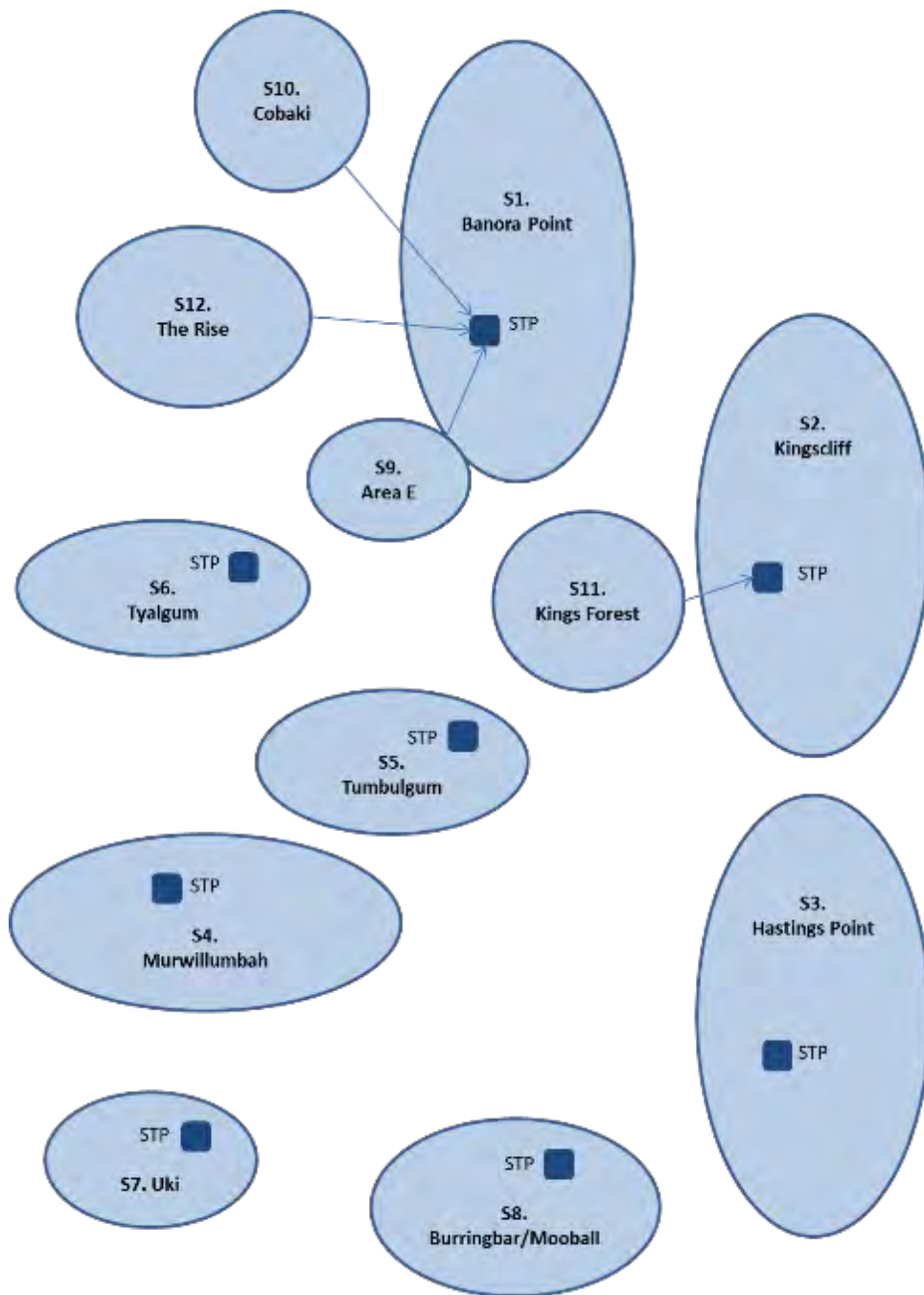


Figure 2: Conceptual Diagram of Sewerage Service Areas

5.3 Existing Assets

All existing assets servicing the TSC service areas are included in the capital charge calculations except for the following:

- Assets which will be more than 30 years old at the commencement of the DSPs (i.e. commissioned pre-1986) apart from headworks assets. The headworks assets included in the capital charge calculation are the dam, weirs, water treatment plants, large (>450mm) trunk mains and wastewater treatment plants as these have the capacity to service the proposed future development.



- Assets which are unlikely to be fully utilised over the planning horizon for calculating developer charges apart from headworks assets.
- Reticulation assets which are typically paid for directly by developers. Reticulation assets funded by Council as part of backlog works are included in the capital charge.
- Gifted assets which were built by developers and later transferred to Council.

Existing assets have been valued on the basis of Modern Engineering Equivalent Replacement Asset (MEERA) excluding contingencies.

The existing assets servicing the area covered by the DSPs are listed in the DSP Background Documents for Water Supply and Sewerage.

5.4 Future Capital Works

The TSC capital works programs (CWPs) are developed and reviewed annually through asset management planning (review of asset capacity, level of service and asset renewal requirements) as part of Council's Total Asset Management Plan (TAMP). Future assets have been valued on the basis of MEERA including contingencies.

The DSPs include 30 years of future capital works where these works will service the growth areas or where existing assets that service the growth areas will require replacement within 30 years (and the original asset has not been included in the calculation). The servicing of development areas has been derived from a review of asset capacity requirements, level of service and asset renewal requirements. Where possible, the construction of new assets servicing a development has been delayed to match expected staging of the development. Similarly, the timing of the replacement of these assets has been estimated from the predicted remaining life and renewals will be delayed as long as possible.

The timing and expenditure for water supply capital works serving the areas covered by this DSP are shown in the DSP Background Document for Water Supply and summarised in Figure 3.



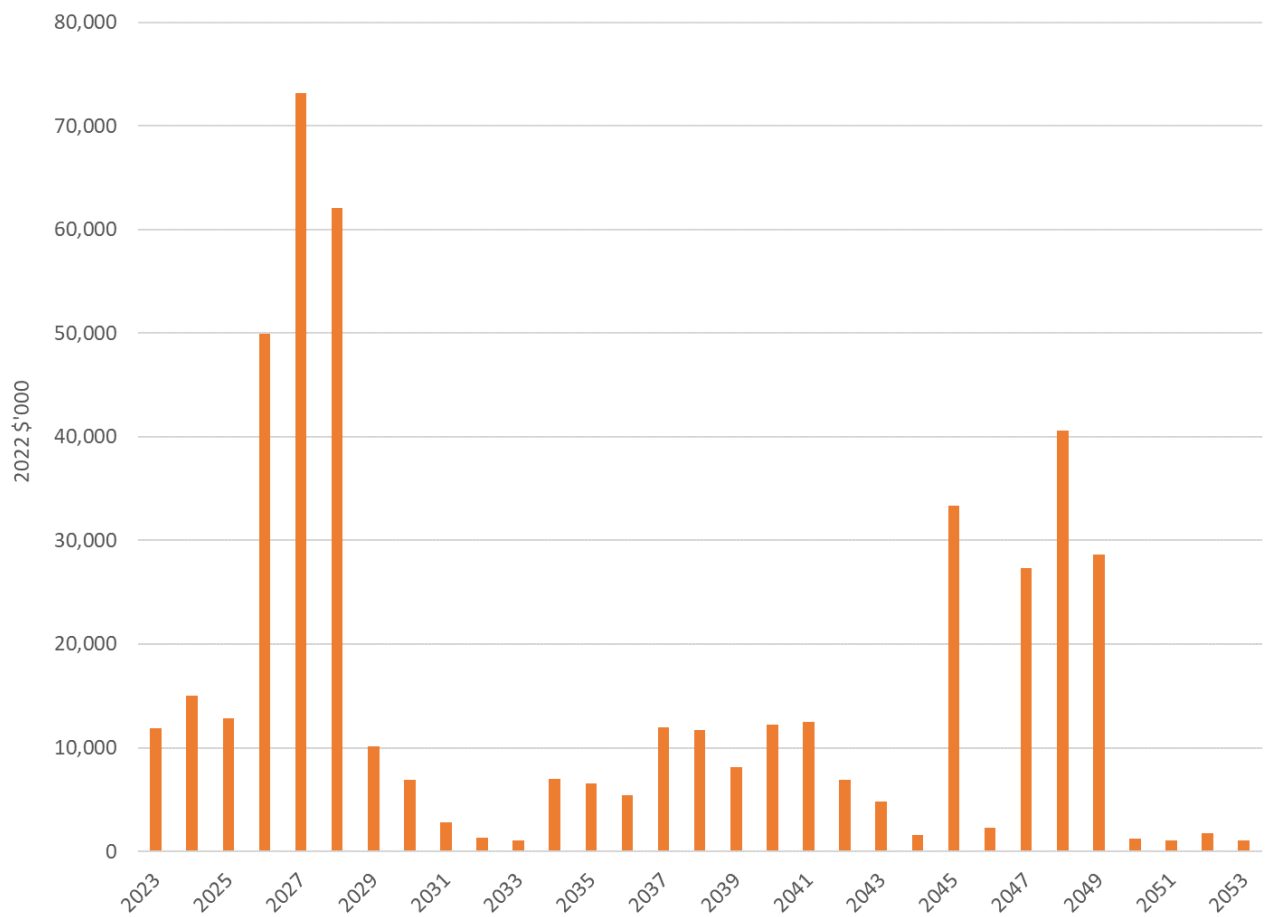


Figure 3: Water Supply Capital Works Estimates

The timing and expenditure for sewerage capital works serving the areas covered by this DSP are shown in the DSP Background Document for Sewerage and summarised in Figure 4.



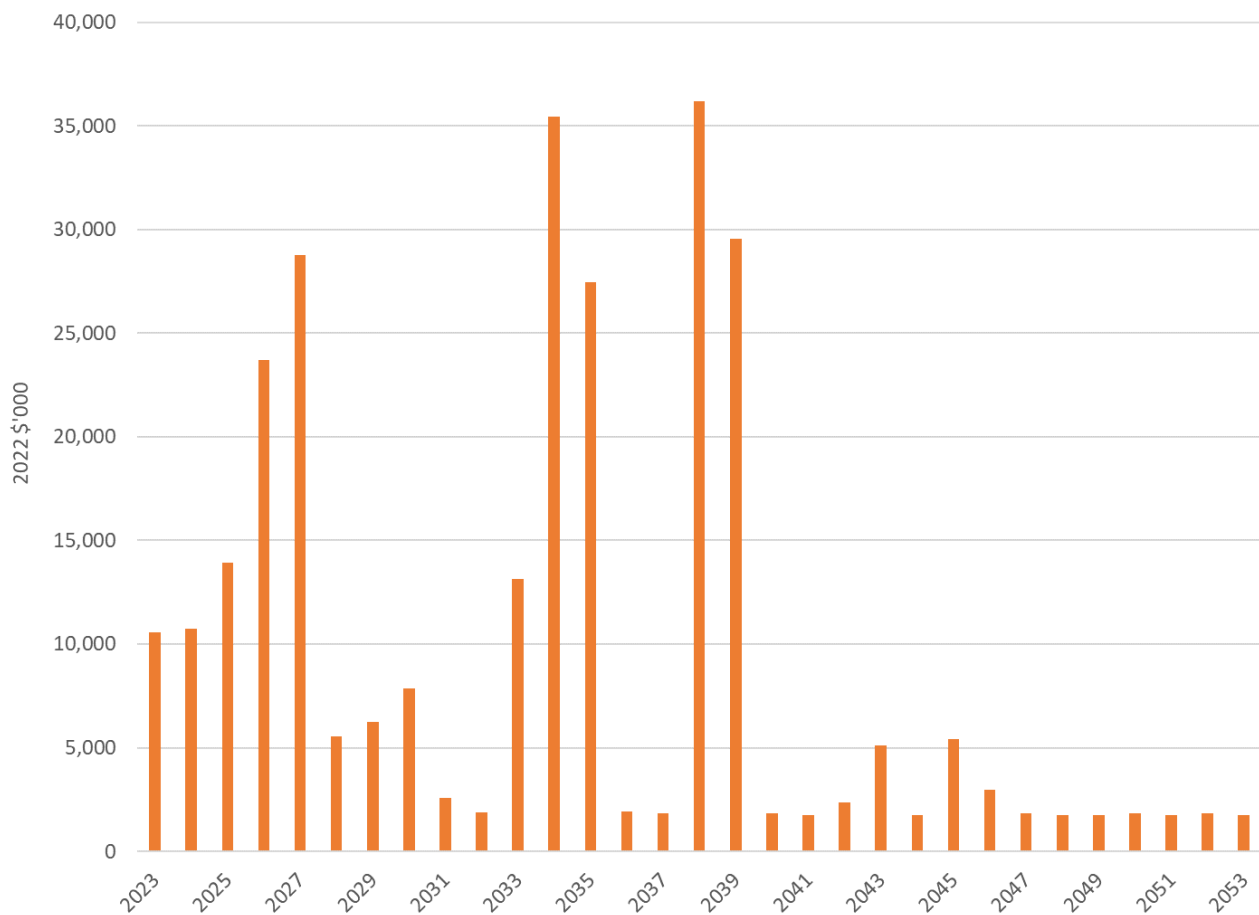


Figure 4: Sewerage Capital Works Estimates

5.5 Reticulation Works

The developer shall be responsible for the full cost of the design and construction of water supply and sewerage reticulation works within developments/subdivisions.



6 Levels of Service

TSC system design and operation are based on providing the levels of service (LOS) given in Table 3 and Table 4. During the preparation of Council's Delivery Plan, the community was consulted on the LOS to be provided by Council in all aspects of its operations. From the outcomes of that consultation, these LOS were confirmed.

The LOS applied to TSC's water supply and sewerage systems are the targets that TSC aims to achieve. They are not a customer contract.

Table 3: Levels of Service - Water Supply

Description	Unit	Long-Term Target
<i>Service Provided</i>		
Time to provide an individual connection to water supply in serviced area	Percent completed within 7 working days	100
<i>Demand</i>		
Domestic annual demand	kL/tenement/a	<180
Domestic annual demand	L/p/day	160
<i>Flow and Pressure</i>		
Flow and Pressure in urban areas	Percent meeting minimum flow of 4.5L/s and pressure of 200 KPa at boundary	100%
Flow and Pressure	Percent above maximum of 780 KPa at boundary	0%
<i>Consumption Restrictions in Droughts (5:10:10 Rule)</i>		
Average duration	No. months in 10 year period	5
Average frequency	No. times in 10 year period	1
Levels of restrictions	% of normal usage	90%
<i>Supply Interruptions - Planned:</i>		
Notification time	Hours before interruption	>48
Maximum duration	Hours	8
<i>Supply Interruptions - Unplanned:</i>		
Interruption Time	Percentage restored within 5 hours	95%
Total frequency of interruptions	No./year/1000 connections	<35
<i>Infrastructure Failures</i>		
Main Failures	No/100km of main/year	<10
Connection Failures	No/1000 connections/year	<10
Response to System Failure - no availability of supply	Percent responded to within 60 minutes	100%



Description	Unit	Long-Term Target
<i>Fire Fighting</i>		
Compliance with Building Code of Australia and NSW Fire Brigade requirements	% serviced area	100%
Residential flow and pressure in urban areas	Percent compliance 11L/s at 150 KPa	100%
Commercial and high rise flow and pressure	Percent compliance 20L/s at 150 KPa	100%
Local Commercial	Percent compliance 15L/s at 150 KPa	100%
<i>Water Quality</i>		
Compliance with health related criteria of ADWG guidelines 2004	% compliance	100%
<i>Energy Consumption</i>		
Energy Consumption	MWh/1,000 customers	<180
Energy Consumption	Tonnes CO ₂ equivalent/100 customers/year	<160

Table 4: Levels of Service – Sewerage

Description	Unit	Long-Term Target
<i>Service Provided</i>		
Time to provide an individual connection sewerage in serviced area	Percent completed within 10 working days	100%
Industrial connections licensed under Council's Trade Waste Policy	% licensed	100%
<i>Availability of Service</i>		
Minimum Service capacity of 0.077 L/sec	Percent properties meeting requirement	100%
<i>Supply Interruptions/System Failures - Planned:</i>		
Notification time	Hours before interruption	>48
Maximum duration	Hours	24
<i>Supply Interruptions/System Failures - Unplanned:</i>		
Interruption Time	Percentage restored within 5 hours	95%
Total frequency of interruptions	No./year/1000 connections	<10
<i>Infrastructure Failures</i>		
Overflows	Number per year per 100km	<10
Overflows	Number per 1000 connected assessments	<1.6
Chokes	No./year/100 Km	<40



Description	Unit	Long-Term Target
Rising Main Failures	No./year/100 Km	<10
Response to System Failure - no availability of supply or overflow	Percent responded to within 60 minutes	100%
<i>Odours</i>		
Complaints	No./year/1000 properties	1
<i>Effluent Quality</i>		
Compliance with EPA licence conditions	% compliance	100
<i>Effluent Reuse</i>		
Effluent Volume Re-used	% of total volume	15
<i>Energy Consumption</i>		
Energy Consumption	MWh/1,000 customers	<220
Energy Consumption	Tonnes CO2 equivalent/100 customers/year	<200



7 Design Parameters

Investigation, design and construction of water supply components are based on:

- Council's levels of service and asset management planning
- Tweed Shire Council Development Design Specification D11
- Tweed Shire Council Construction Specification C401
- WSAA water supply codes and standards.

Investigation, design and construction of sewerage components are based on:

- Council's levels of service and asset management planning
- Tweed Shire Council Development Design Specification D12
- Tweed Shire Council Construction Specification C402
- WSAA sewerage codes and standards.



8 Water Supply Developer Charges

The developer charges for the water supply areas covered by this DSP are shown in Table 5. The charges are shown in 2022\$. The proposed water supply developer charge (escalated) is \$12,576 per ET applicable from 1 July 2024.

Table 5: Developer Charges – Water Supply (2022\$)

DSP Area	Service Area	Capital Charge (\$ per ET)	Reduction Amount (\$ per ET)	Calculated Maximum Developer Charge (\$ per ET)	Proposed Developer Charge (\$ per ET)
A	W6: Tyalgum	\$46,544	\$2,411	\$44,133	\$11,324
B	W5: The Rise	\$27,248		\$24,837	
C	W7: Uki	\$17,778		\$11,324	
	W1: Tweed District	\$14,944			
	W2: Area E	\$13,195			
	W4: Kings Forest	\$13,091			
	W3: Cobaki	\$12,617			
Weighted Average ¹				\$12,231	\$11,324

1. Calculated from the predicted growth in each service area

Capital charge, agglomeration and reduction amount calculations for each service area are shown in the Water Supply DSP Background Document.

Council has proposed water supply developer charges that are lower than the calculated developer charges for some service areas. This means that existing residents will subsidise part of the new development. The cross-subsidy is the difference between the annual bill with the calculated weighted average (maximum) developer charge and the proposed developer charge. The proposed water supply developer charge results in an average cross-subsidy for developers of \$1,007 per ET (2024\$). This option requires an increase in the medium-term water supply typical residential bill (TRB) of \$12.60 per assessment p.a. (2024\$, Figure 5).

Cross-subsidy calculations are included in the Water Supply DSP Background Document.



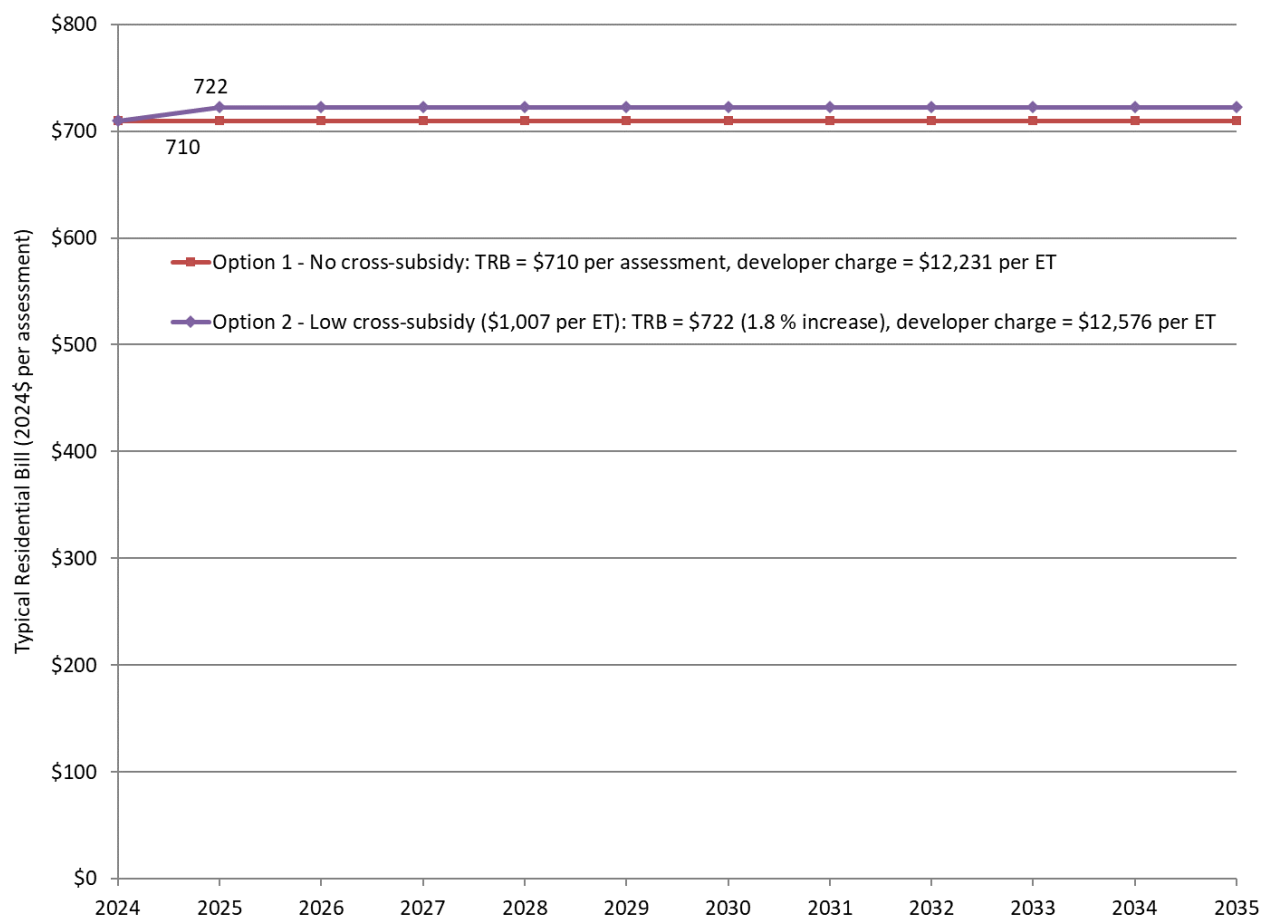


Figure 5: Comparison of water supply TRB with calculated and proposed developer charge

9 Sewerage Developer Charges

The developer charges for the sewerage areas covered by this DSP are shown in Table 6. The charges are shown in 2022\$. The proposed sewerage developer charge (escalated) is \$7,798 per ET applicable from 1 July 2024.

Table 6: Developer Charges – Sewerage (2022\$)

DSP Area	Service Area	Capital Charge (\$ per ET)	Reduction Amount (\$ per ET)	Calculated Maximum Developer Charge (\$ per ET)	Proposed Developer Charge (\$ per ET)
A	S7: Uki	\$53,335	\$3,248	\$47,375	\$7,022
	S6: Tyalgum	\$52,576			
	S8: Burringbar/ Mooball	\$47,864			
	S5: Tumbulgum	\$47,501			
B	S4: Murwillumbah	\$25,462		\$22,214	\$7,022
C	S3: Hastings Point	\$11,950		\$7,022	\$7,022
	S11: Kings Forest	\$11,256			
	S2: Kingscliff	\$10,803			
	S12: The Rise	\$10,606			
	S1: Banora Point	\$9,735			
	S10: Cobaki	\$9,567			
	S9: Area E	\$9,567			
Weighted Average ¹				\$7,736	\$7,022

1. Calculated from the predicted growth in each service area

Capital charge, agglomeration and reduction amount calculations for each service area are shown in the Sewerage DSP Background Document.

Council has proposed sewerage developer charges that are lower than the calculated developer charges for some service areas. This means that existing residents will subsidise part of the new development. The cross-subsidy is the difference between the annual bill with the calculated weighted average (maximum) developer charge and the proposed developer charge. The proposed sewerage cross-subsidy results in an average cross-subsidy for developers of \$793 per ET (2024\$). This option requires an increase in the medium-term sewerage TRB of \$10.50 per assessment p.a. (2024\$, Figure 6).

Cross-subsidy calculations are included in the Sewerage DSP Background Document.



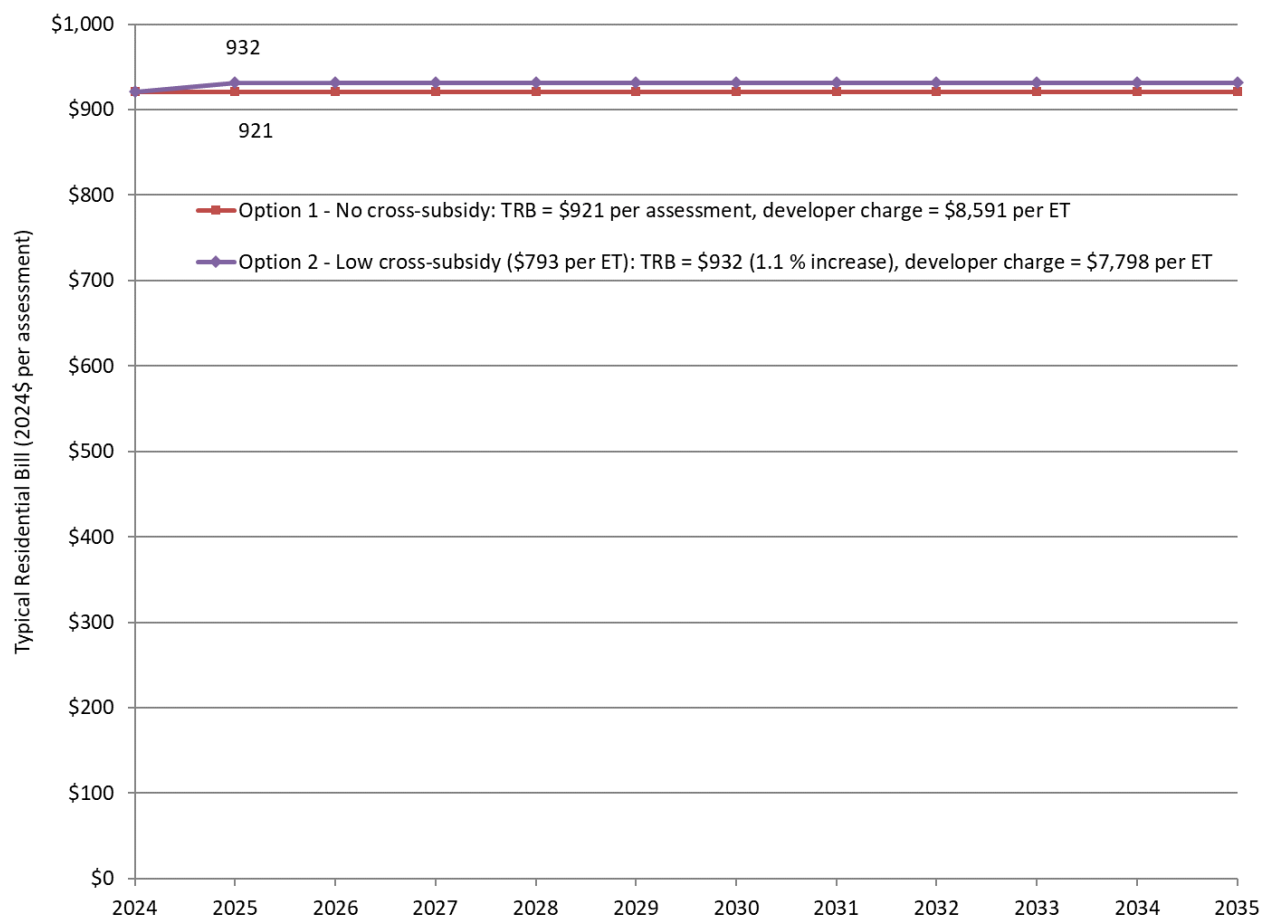


Figure 6: Comparison of sewerage TRB with calculated and proposed developer charge



10 Other DSPs and Related Contribution Plans

The following contribution plans may also apply to development within Tweed Shire:

- Tweed Shire Council *Section 7.11 Plans No 1 - 28.*



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<i>Table 5: Developer Charges – Water Supply (2022\$)</i>	21
<i>Table 6: Developer Charges – Sewerage (2022\$)</i>	23



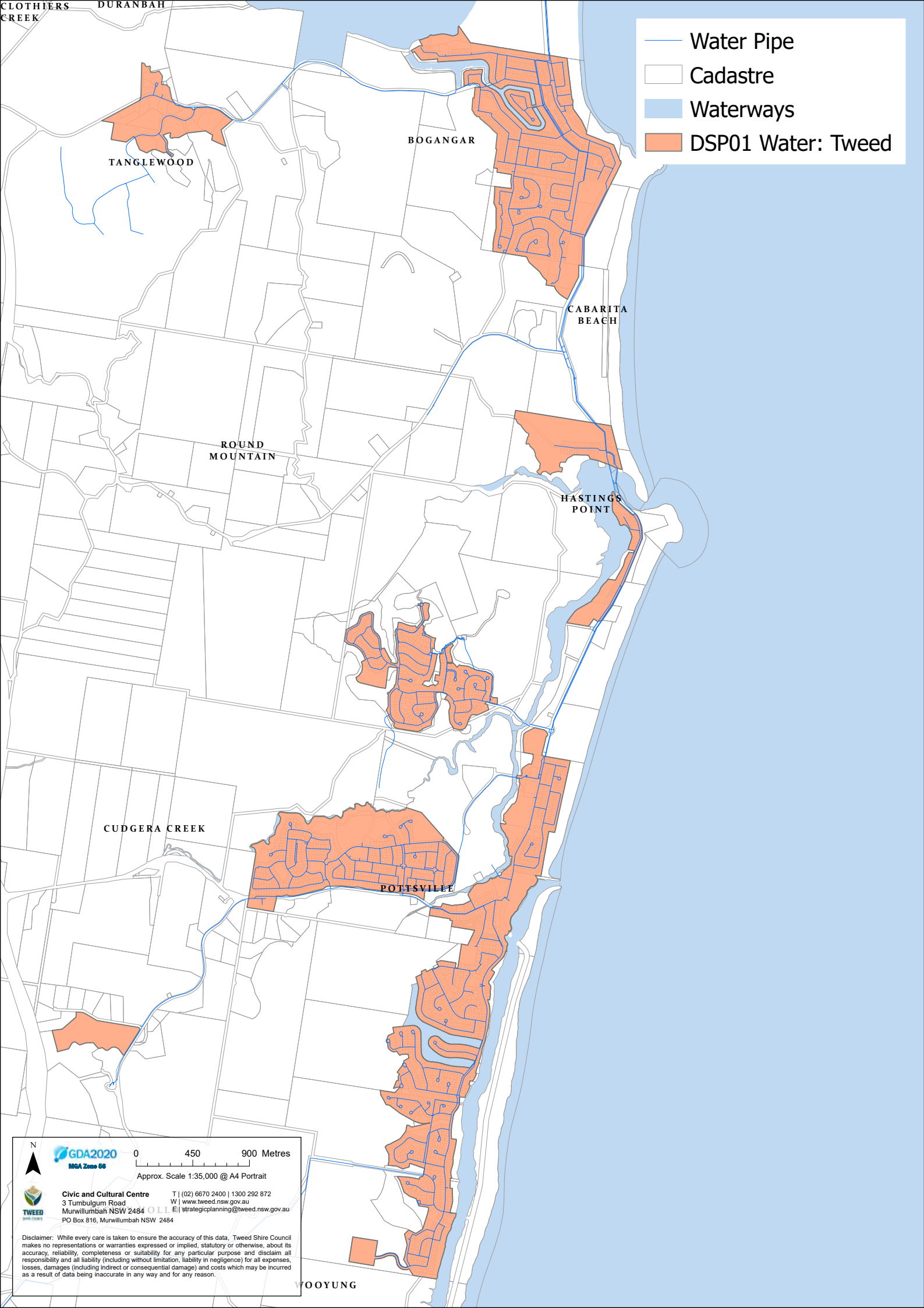
13 Plans

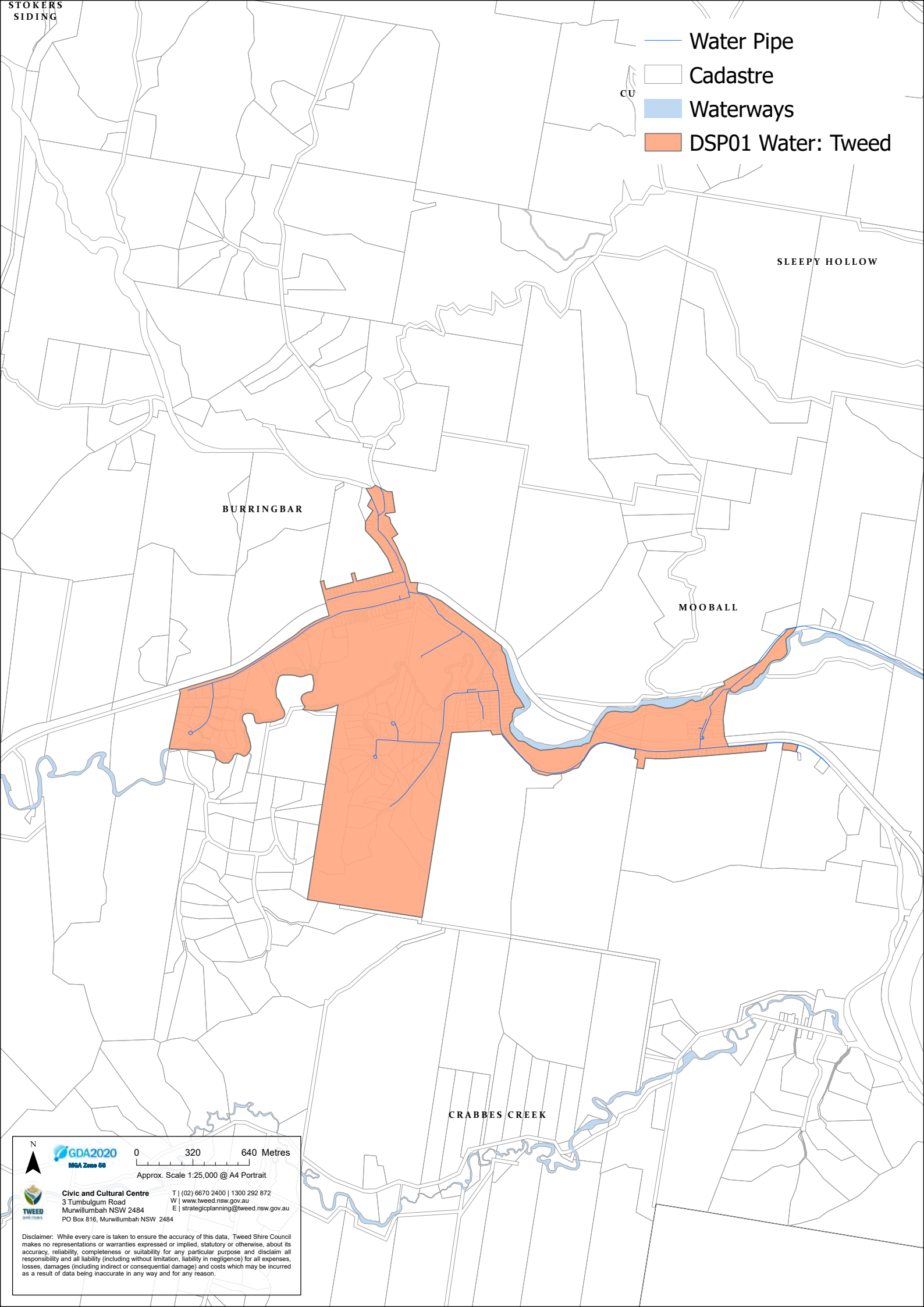
Please note that in the following maps:

	Map Legend	Service Area Ref	DSP AREA
	DSP01 Water: Tweed	W1	Water Supply DSP area
	DSP02 Water: Area E	W2	
	DSP03 Water: Cobaki	W3	
	DSP04 Water: Kings Forest	W4	
	DSP05 Water: The Rise / McAllister's	W5	
	DSP06 Water: Tyalgum	W6	
	DSP07 Water: Uki	W7	
	DSP01 Sewer: Banora Point	S1	Sewerage DSP area
	DSP02 Sewer: Kingscliff	S2	
	DSP03 Sewer: Hastings Point	S3	
	DSP04 Sewer: Murwillumbah	S4	
	DSP05 Sewer: Tumbulgum	S5	
	DSP06 Sewer: Tyalgum	S6	
	DSP07 Sewer: Uki	S7	
	DSP08 Sewer: Burringbar / Mooball	S8	
	DSP09 Sewer: Area E	S9	
	DSP10 Sewer: Cobaki	S10	
	DSP11 Sewer: Kings Forest	S11	
	DSP12 Sewer: The Rise / McAllister's	S12	

The maps are indicative only and actual areas should be confirmed by contacting tweed Shire Council at tsc@tweed.nsw.gov.au.







STOKERS
SIDING

- Water Pipe
- Cadastre
- Waterways
- DSP01 Water: Tweed

CU

SLEEPY HOLLOW

BURRINGBAR

MOOBALL

CRABBES CREEK

N

GDA2020
MGA Zone 56

0 320 640 Metres

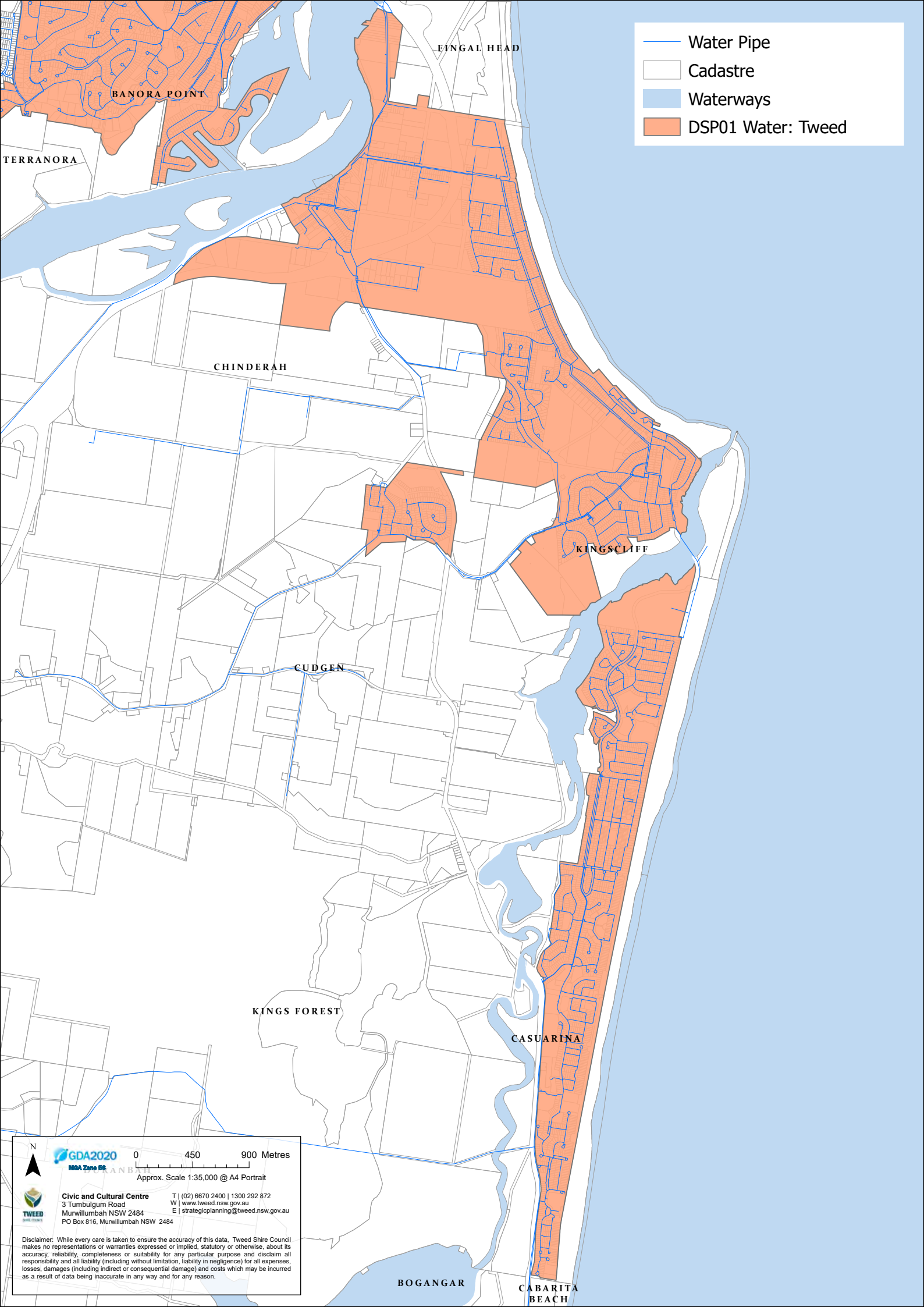
Approx. Scale 1:25,000 @ A4 Portrait

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- Water Pipe
- Cadastre
- Waterways
- DSP01 Water: Tweed

GDA2020
MGA Zone 56

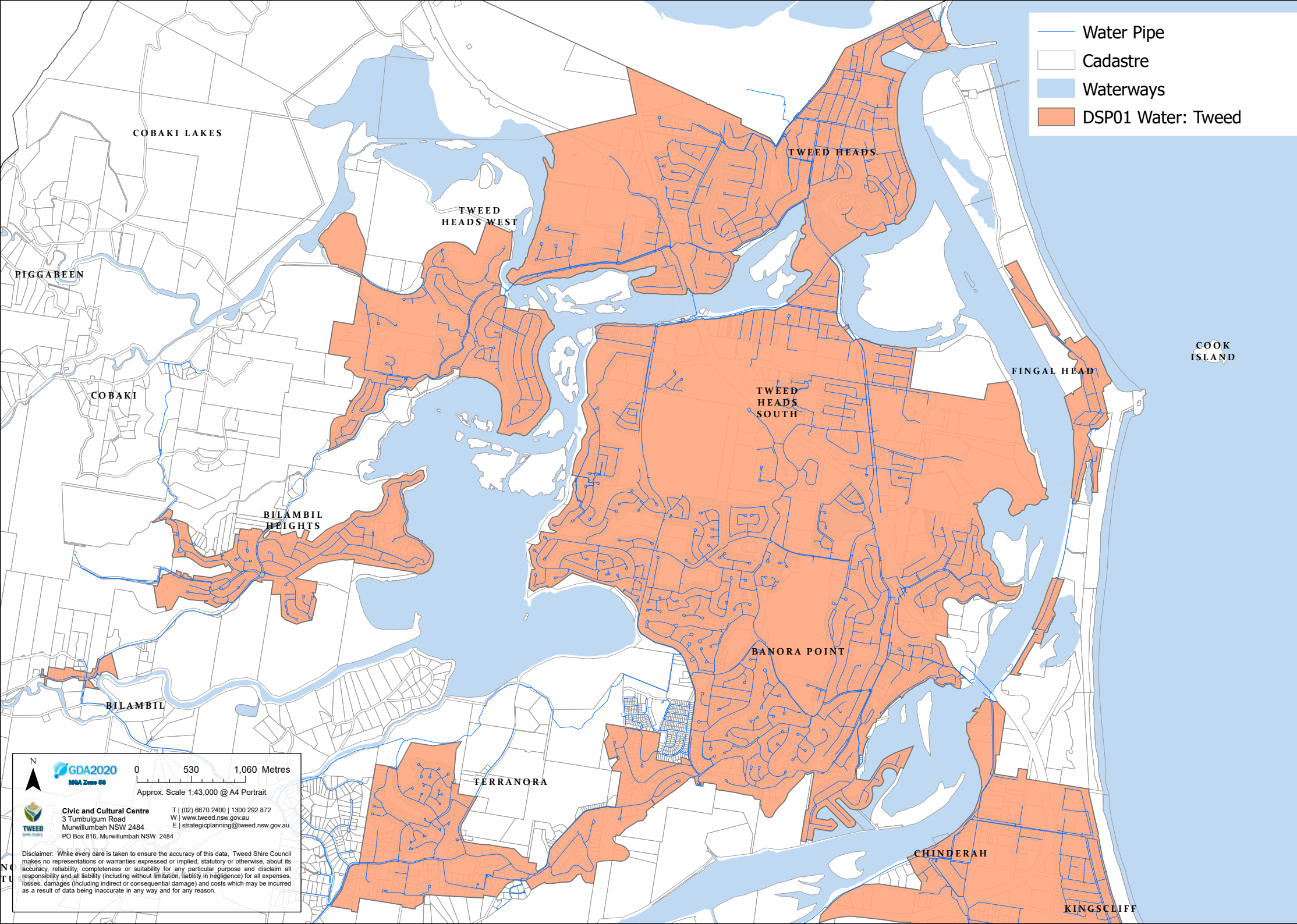
0 450 900 Metres
Approx. Scale 1:35,000 @ A4 Portrait

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GDA2020

100A Zone 56

05301,060

Metres

Approx. Scale 1:43,000 @ A4 Portrait

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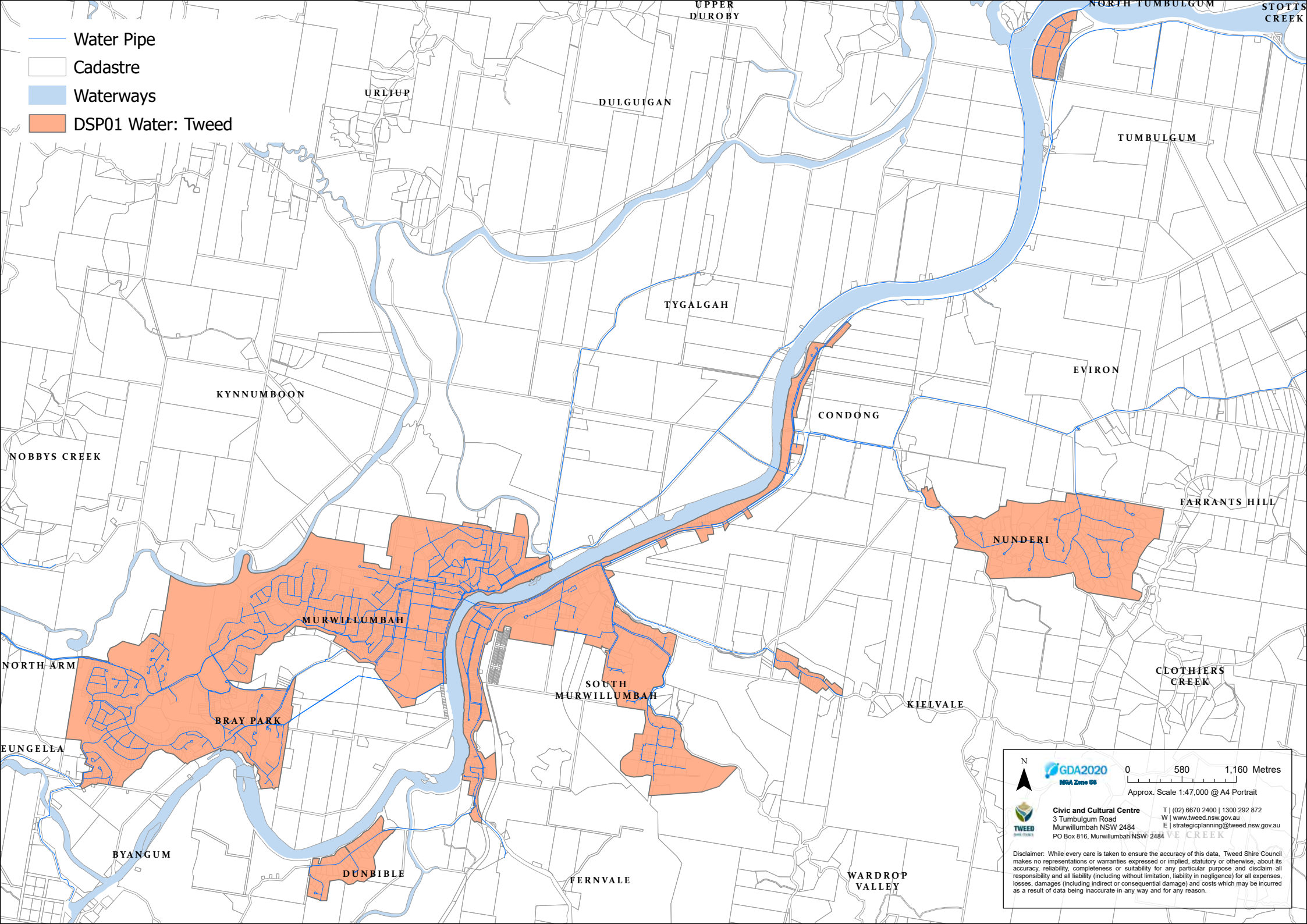
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- Water Pipe
- Cadastre
- Waterways
- DSP01 Water: Tweed

GDA2020
MGA Zone 56

0 580 1,160 Metres

Approx. Scale 1:47,000 @ A4 Portrait

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VE CREEK

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- Water Pipe
- Cadastre
- Waterways
- DSP01 Water: Tweed


UPPER
BURRENBAR

SLEEPY HOLLOW


BURRENBAR

MOOBALL

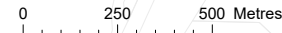
CRABBES CREEK



N




GDA2020
MGA Zone 56



0 250 500 Metres

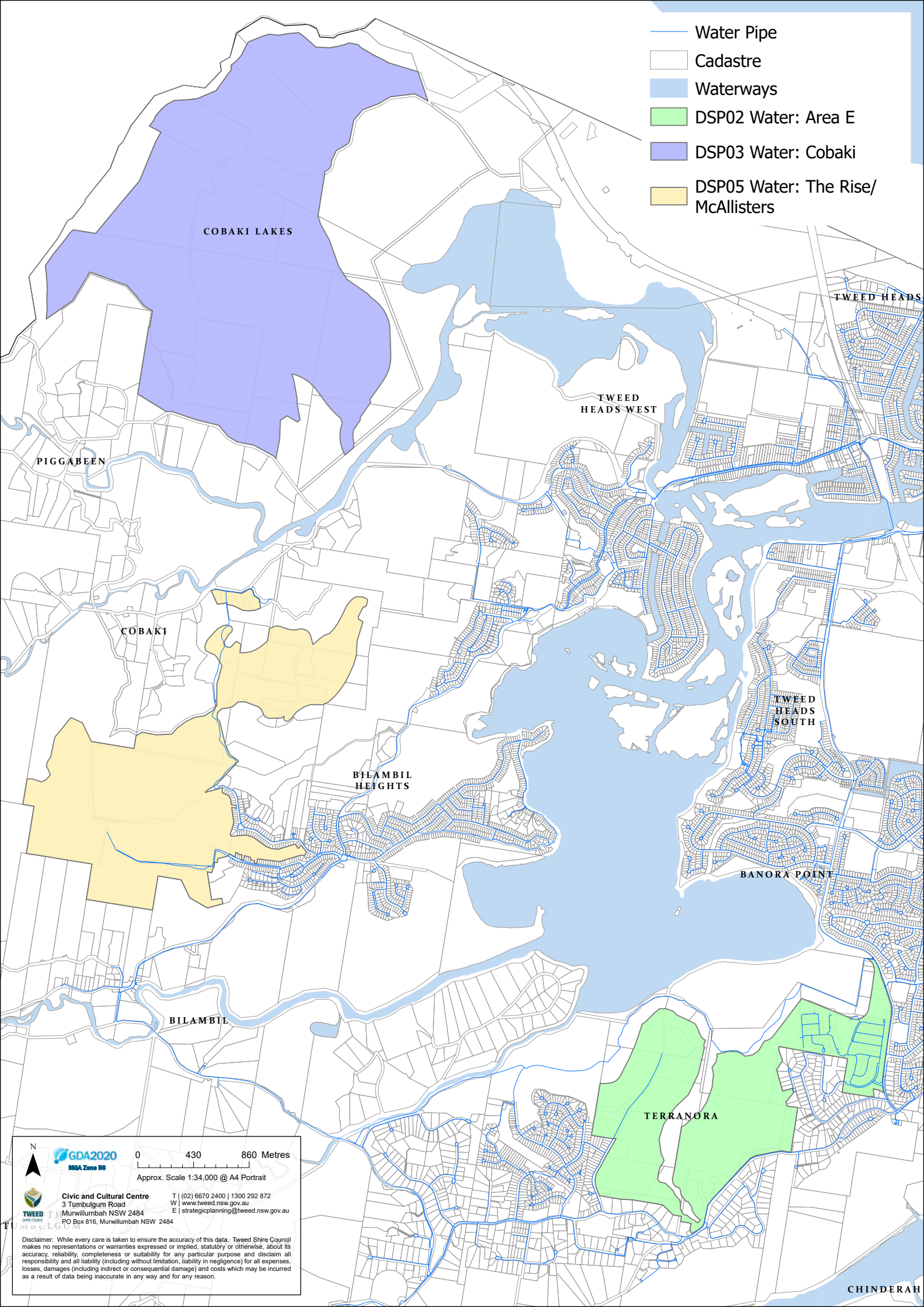
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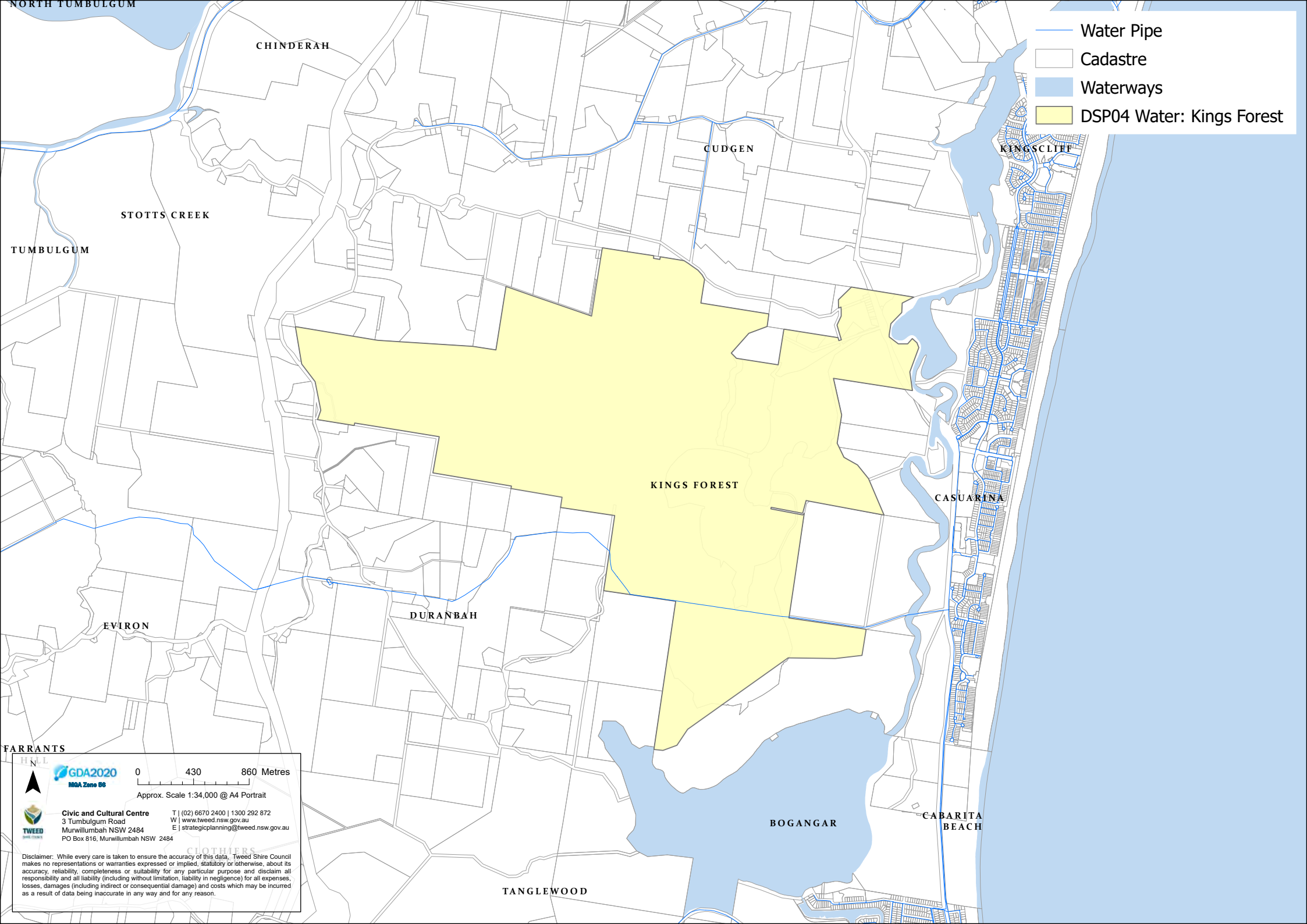


0 430 860 Metres

Approx. Scale 1:34,000 @ A4 Portrait

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- Water Pipe
- Cadaastre
- Waterways
- DSP04 Water: Kings Forest

FARRANTS

GDA2020
MGA Zone 56

0 430 860 Metres

Approx. Scale 1:34,000 @ A4 Portrait

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CLOTHIERS


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- Water Pipe
- Cadastre
- Waterways
- DSP06 Water: Tyalgum

TYALGUM CREEK

TYALGUM





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0110220

Metres

Approx. Scale 1:9,000 @ A4 Portrait


- Water Pipe
- Cadastre
- Waterways
- DSP07 Water: Uki

DUM DUM


UKI

SMITHS CREEK


ROWLANDS CREEK



N



GDA2020
MGA Zone 56



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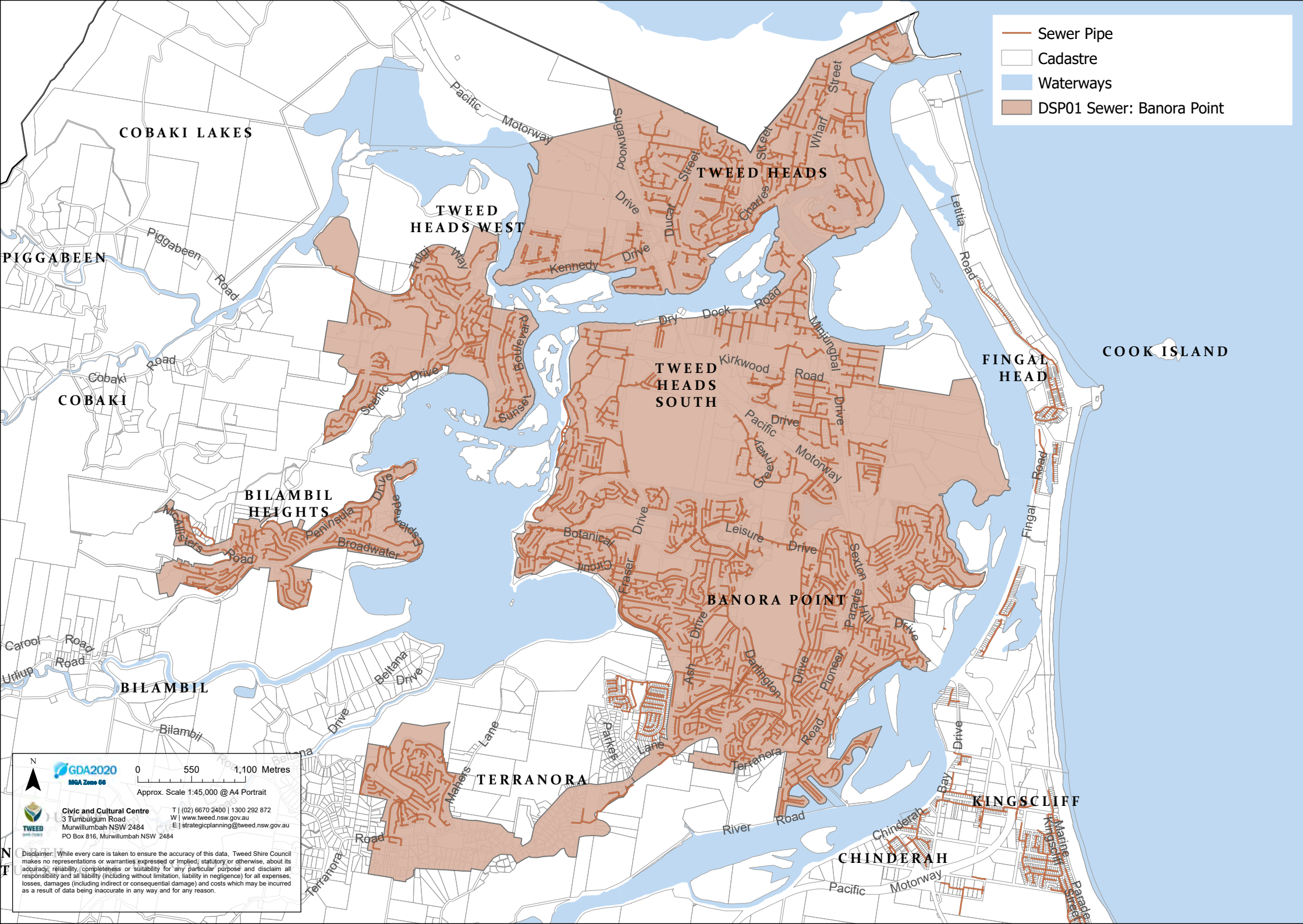
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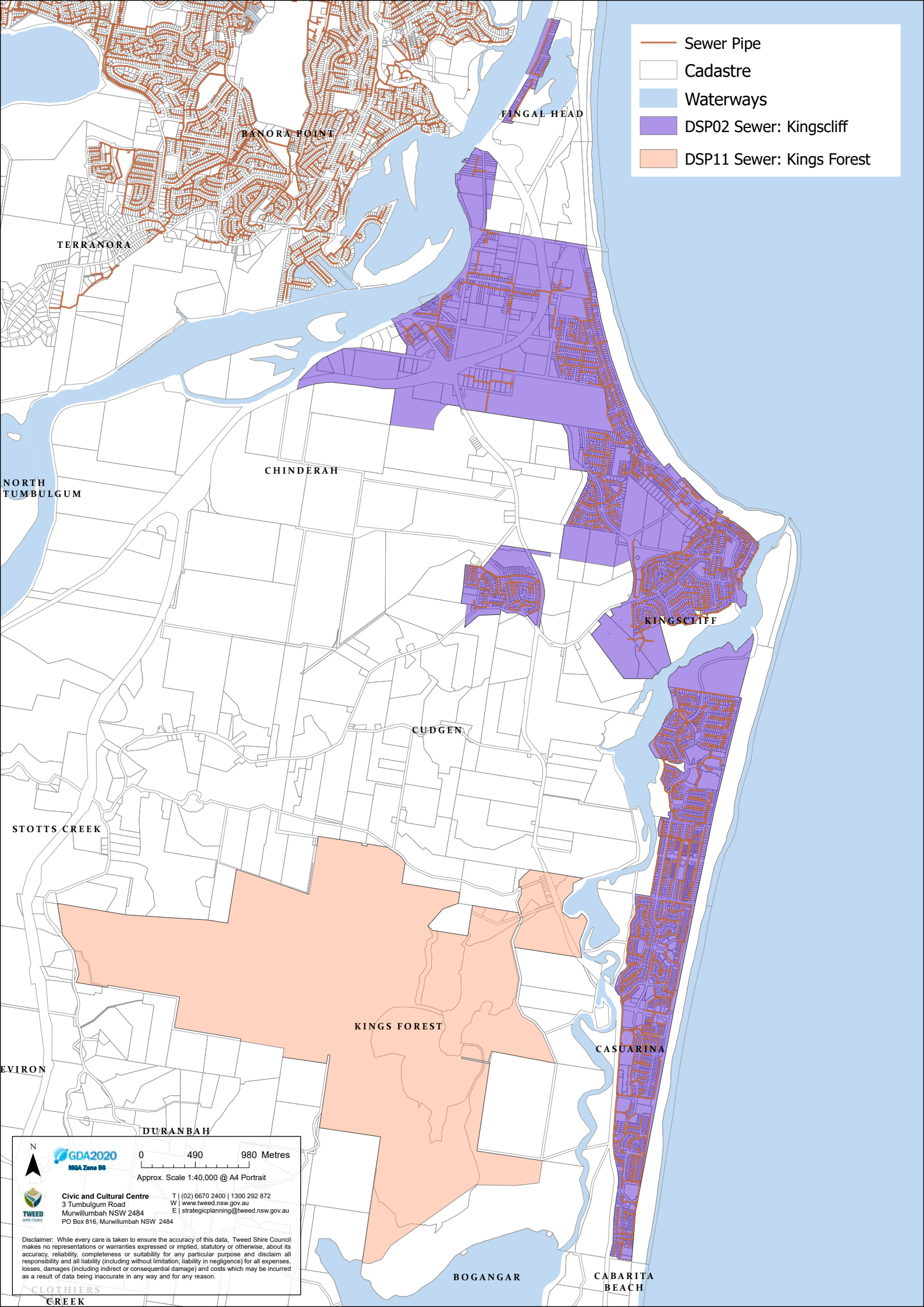
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0 180 360 Metres

Approx. Scale 1:14,000 @ A4 Portrait


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- Sewer Pipe
- Cadastre
- Waterways
- DSP02 Sewer: Kingscliff
- DSP11 Sewer: Kings Forest

N



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MGA Zone 56



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0490980

Metres

Approx. Scale 1:40,000 @ A4 Portrait


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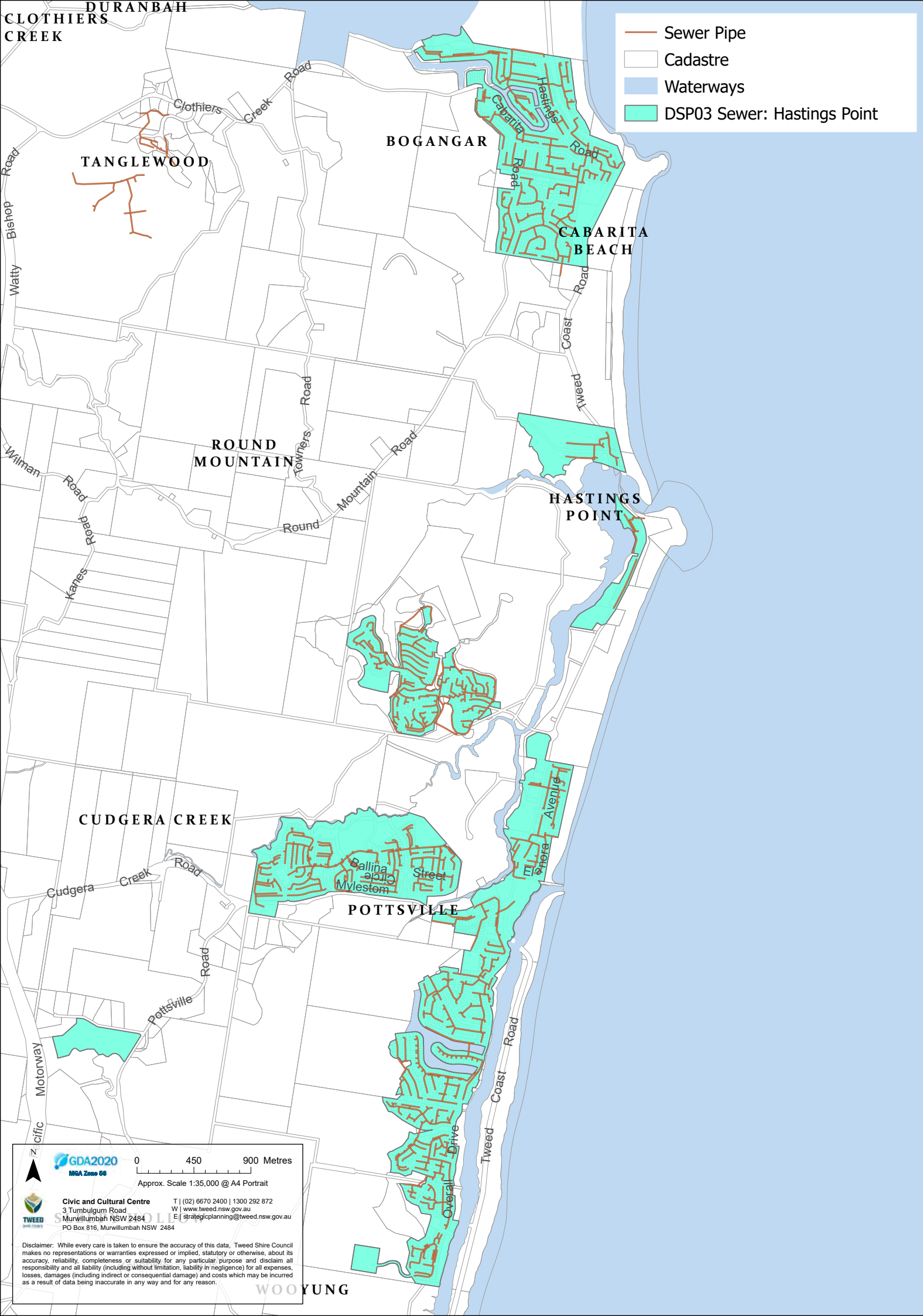
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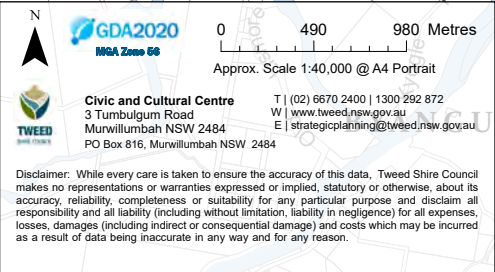
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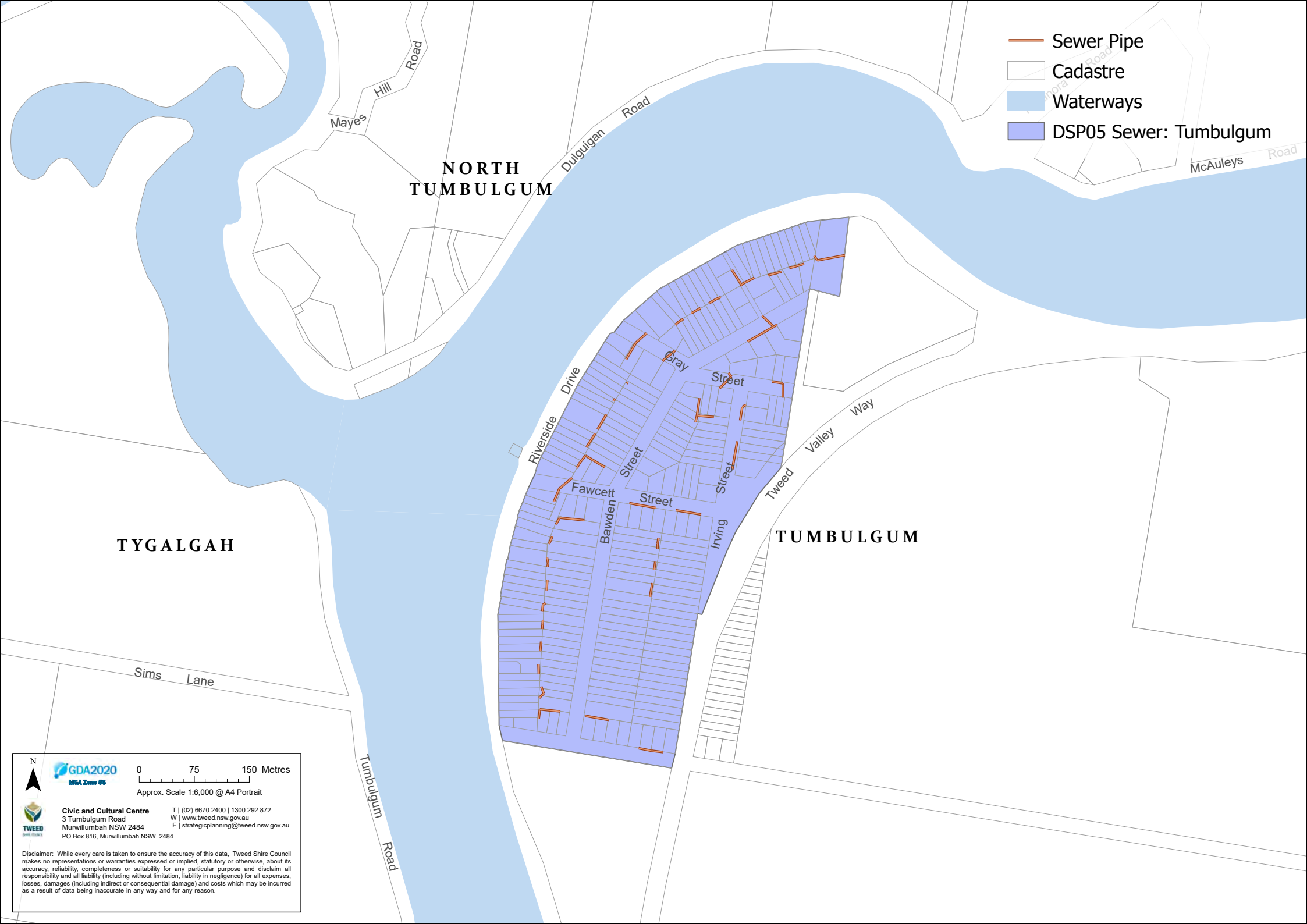
Metres

Approx. Scale 1:40,000 @ A4 Portrait

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- Sewer Pipe
- Cadastre
- Waterways
- DSP05 Sewer: Tumbulghum

TYGALGAH

NORTH
TUMBULGHUM

TUMBULGHUM

Sims Lane

Tumbulghum Road

Riverside Drive

Dulguigan Road

Fawcett Street
Bawden Street

Gray Street

Irving Street

Tweed Valley Way

McAuleys Road

N

GDA2020
MGA Zone 56

0 75 150 Metres

Approx. Scale 1:6,000 @ A4 Portrait

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TYALGUM CREEK

- Sewer Pipe
- Cadastre
- Waterways
- DSP06 Sewer: Tyalgum


TYALGUM



GDA2020
MGA Zone 56

0 75 150 Metres

Approx. Scale 1:6,000 @ A4 Portrait

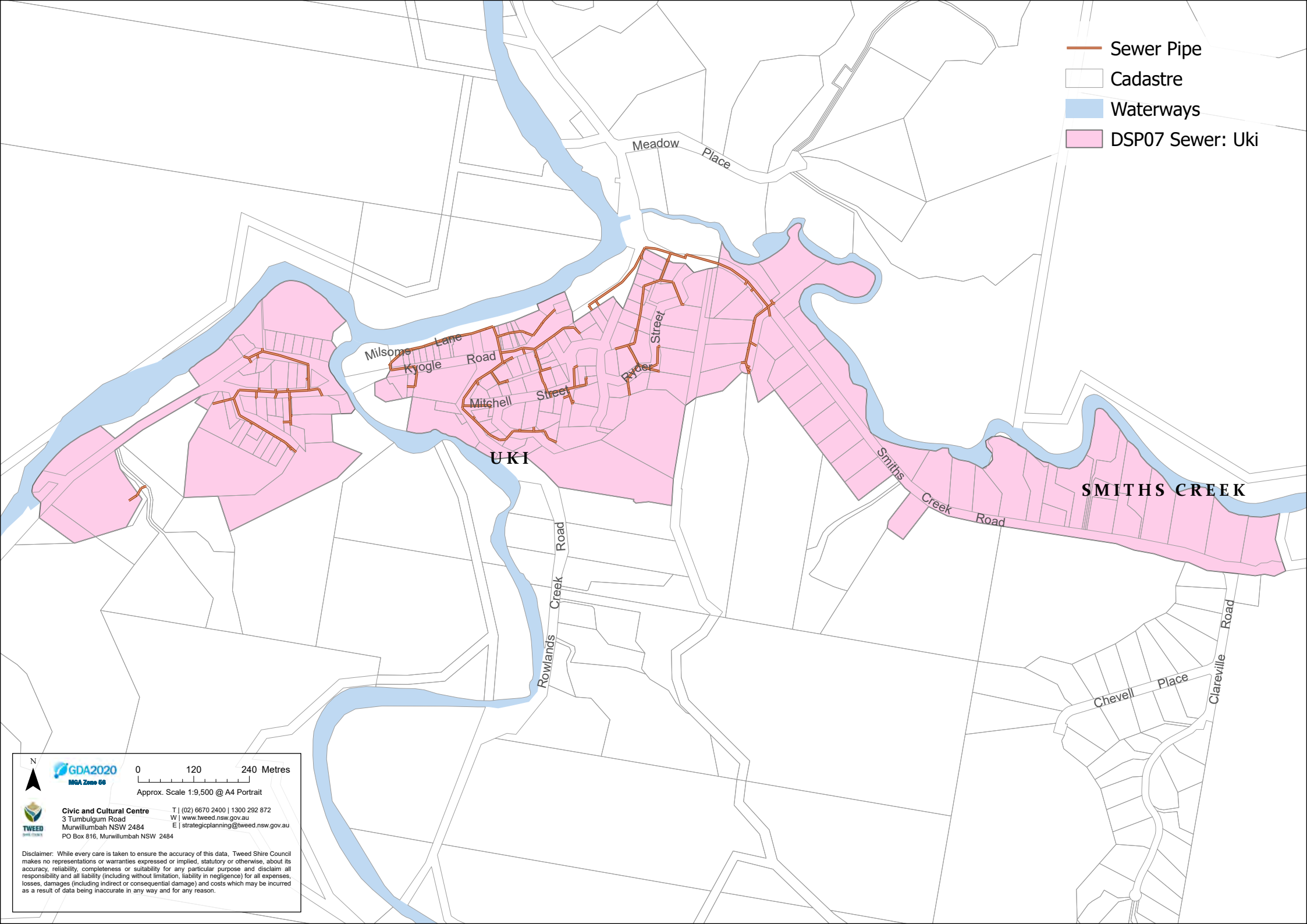



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- Sewer Pipe
- Cadastre
- Waterways
- DSP07 Sewer: Uki






GDA2020
MGA Zone 56

0 120 240 Metres

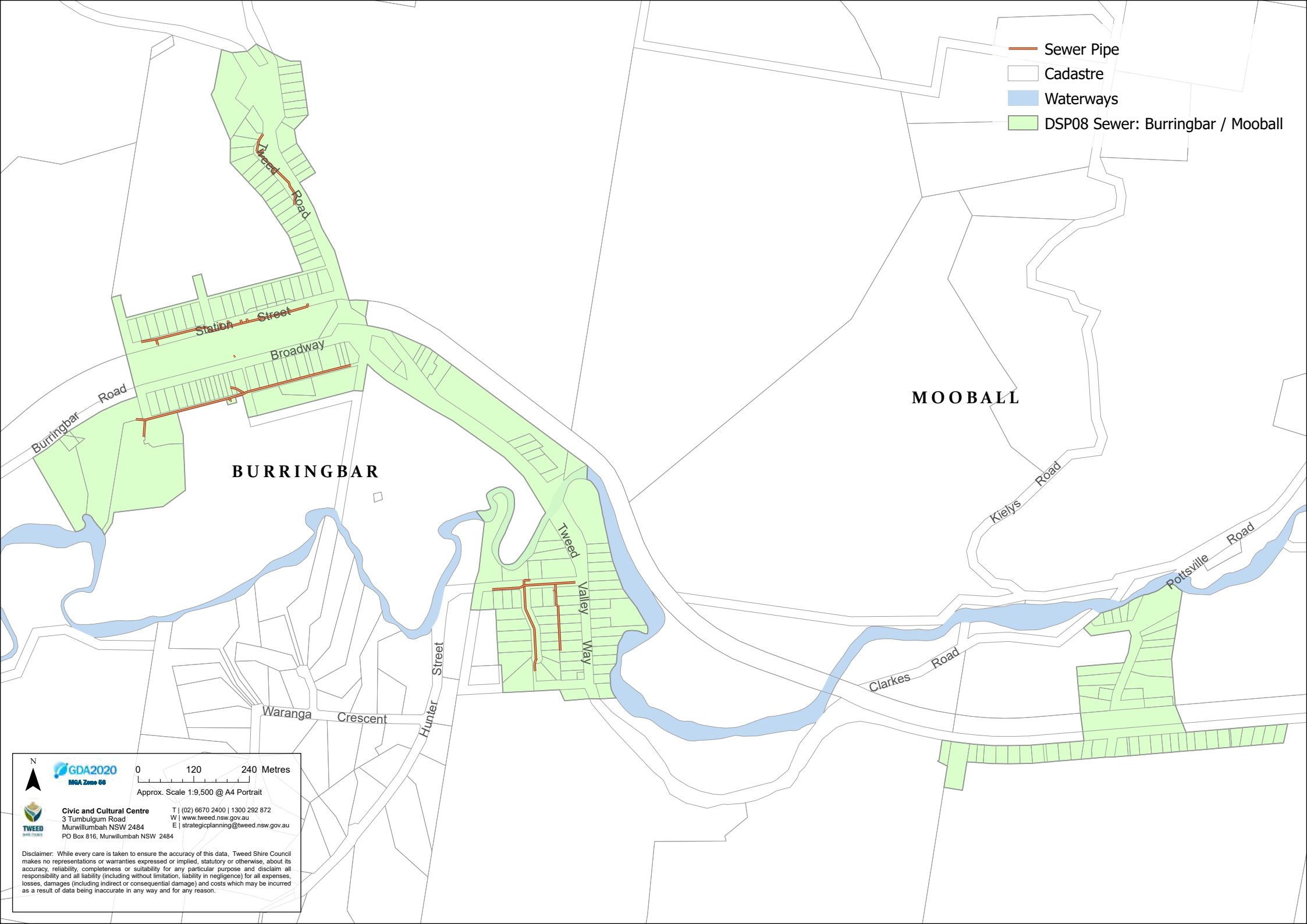
Approx. Scale 1:9,500 @ A4 Portrait




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GDA2020
MGA Zone 56

0 120 240 Metres

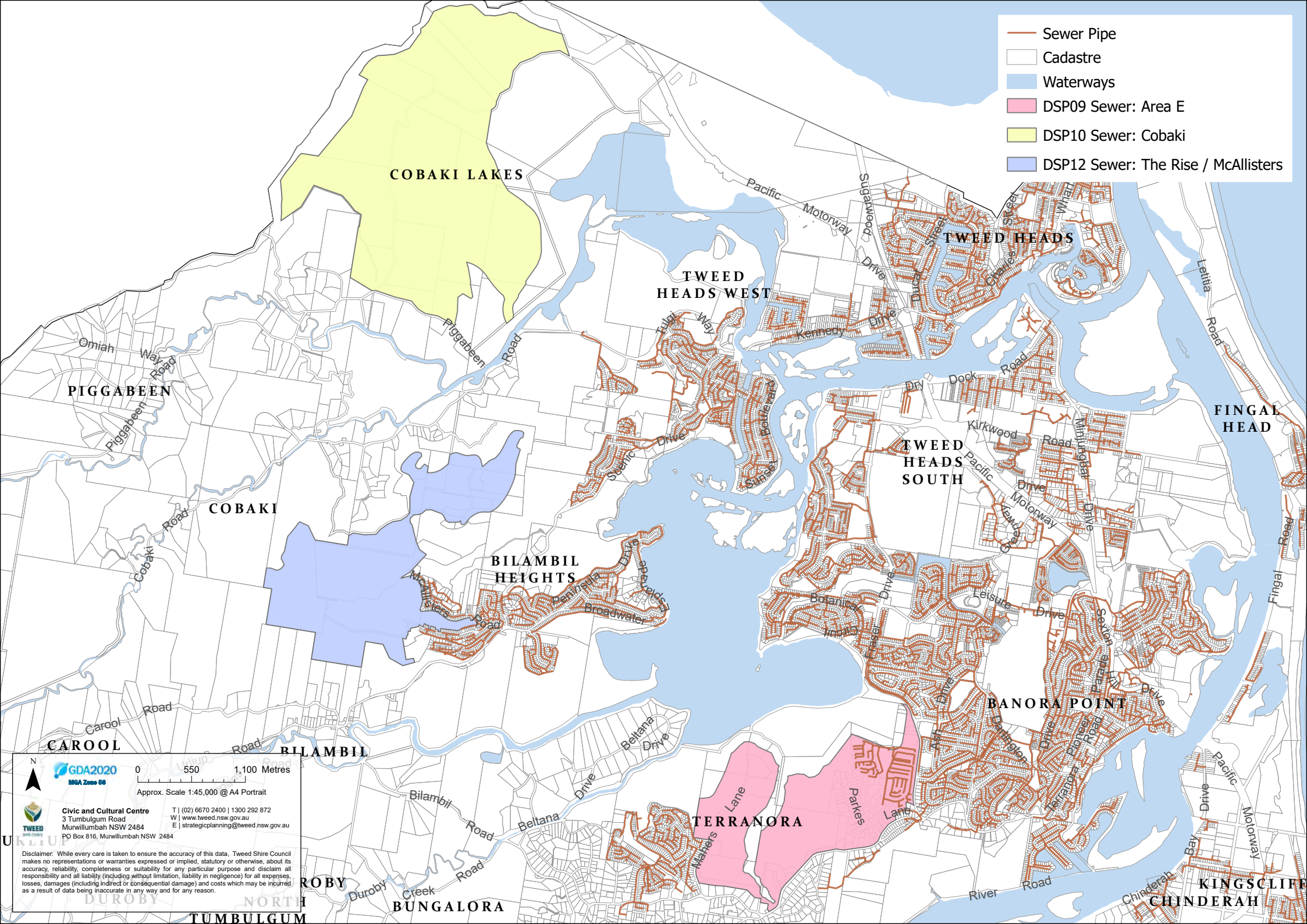
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14 Abbreviations

CPI:	Consumer price index
DSP:	Development Servicing Plan
ET:	Equivalent tenement
IPART:	The NSW Independent Pricing and Regulatory Tribunal
Kilolitre (kL):	1,000 litres
p.a.:	Per annum
TSC:	Tweed Shire Council
LWU:	Local Water Utility
MEERA:	Modern Engineering Equivalent Replacement Asset
Megalitre (ML):	1,000,000 litres or 1,000 kilolitres
NPV:	Net present value
OMA:	Operation, maintenance and administration (cost)
PV:	Present value. The current value of future money or ETs
ROI:	Return on investment
TRB:	Typical residential bill





Customer Service | 02 6670 2400

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