

Growth Plan

May 2024

Funding and delivery of
growth infrastructure



Hunter Water acknowledges the Traditional Countries of the Awabakal, Darkinjung, Geawegal, Wonnarua and Worimi peoples and the Countries on which we operate and beyond where our water flows.

We recognise and respect the cultural heritage, beliefs and continuing connection to the lands and waters of our Traditional Custodians and pay respect to their Elders past, present and emerging.



Artwork by Tyson Jolly



Foreword	5	10 Growth mapping	28
1 Who we are and what we do	6	10.1 Our growth mapping process	28
2 Our Towards 2024 Strategy	7	10.2 Layout of growth maps	29
3 Hunter Regional Plan 2041	9	11 Related documents	30
4 Our Region	10	12 Document control	30
5 Our system	12	Appendix: Growth maps	31
5.1 Drinking water	12	A. Cessnock	31
5.2 Wastewater	14	B. Charlestown	32
5.3 Recycled water	15	C. Clarence Town	32
5.4 Stormwater	16	D. Cooranbong	33
6 Regulatory framework	18	E. Dungog	33
6.1 Economic regulation	18	F. Kurri Kurri / Minmi	34
6.2 Lower Hunter Water Plan	18	G. Lochinvar	34
7 Capital expenditure prioritisation	20	H. Maitland	35
8 Capital expenditure projects	22	I. Medowie	35
8.1 Recent	22	J. Nelson Bay	36
8.2 Current and planned	23	K. Newcastle	36
9 Developer delivered infrastructure	26	L. Vacy	37
9.1 Funding and Delivery of Growth Infrastructure	26		

Foreword



Supporting liveable communities and enabling regional prosperity in the Lower Hunter is important to Hunter Water. Part of this vision includes publishing information on projected growth in our area of operations and planned capital expenditure. We have also enacted changes to the funding arrangements for those assets that connect new developments and provide shared infrastructure in our water and wastewater systems.

The Growth Plan provides a central point of information on Hunter Water's planning processes, capital works program and growth projections. The Growth Plan shows how we are investing in our services to enable future growth in new connections, both residential customers and employment lands.

The NSW Government's Hunter Regional Plan 2041, published by the Department of Planning and Environment (DPE) in December 2022, will guide the NSW Government's land use planning priorities over the next 20 years. The Plan puts in place a number of actions to

facilitate timely and effective infrastructure planning and delivery across the Hunter, and provide detailed information on likely growth areas.

This Growth Plan includes maps showing those local areas where we anticipate new development within our area of operations over the next ten years. We use this information when planning regional servicing strategies. It helps inform our decisions about upgrading and augmenting works to ensure that we are meeting compliance requirements and servicing expected urban growth in the Lower Hunter. The growth maps also play a role in determining funding categories and repayment arrangements for developer delivered infrastructure agreements.

The Growth Plan is updated periodically to reflect the latest connection growth information and development forecasts ensuring that developers, planners and the broader community can reference up-to-date information.

I Who we are and what we do

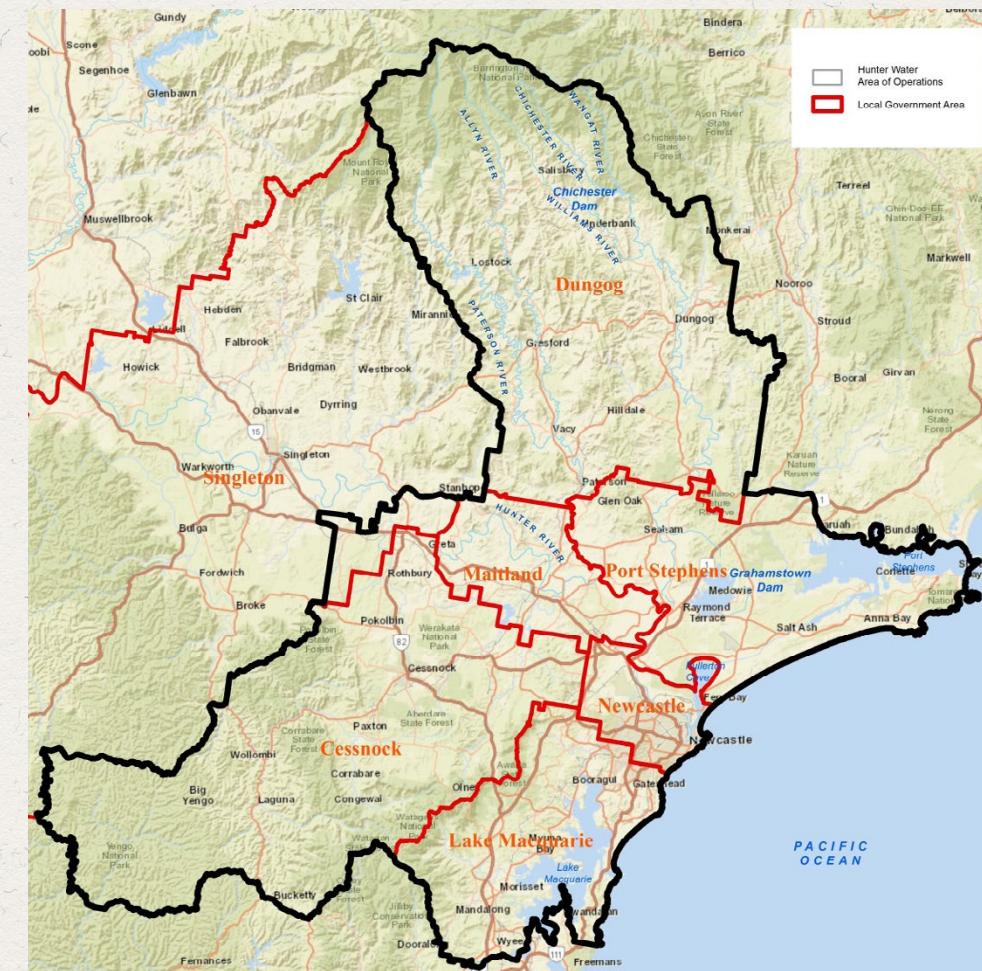


Hunter Water is a State Owned Corporation owned by the NSW Government, and we are governed by an independent Board of Directors.

We provide drinking water, wastewater, recycled water and some stormwater services to a population of 620,000 people in homes and businesses across the Lower Hunter. As both an operator and retailer of water services, we manage our water and wastewater systems from catchment to customer to environment, to provide safe, reliable and efficient services.

We cover the geographic area defined by the boundaries of six local government areas:

- Cessnock City Council;
- Dungog Shire Council;
- Maitland City Council;
- Lake Macquarie City Council;
- City of Newcastle; and
- Port Stephens Council.



We also provide services to part of Singleton Shire Council's local government area, supply bulk water to small parts of the Great Lakes area and are capable of supplying and receiving up to 35 megalitres of bulk treated water per day to or from the Central Coast.

Our vision and purpose

Water is life.
We are creating a sustainable water future for all.

Who we are

We are here for our **customers and community**
We are **passionate about water**
We **care about our people**
We aspire to be **trusted partners**
We are champions for a **sustainable future**



Hunter Water is proud of the important and significant contribution we make to the health, wellbeing and prosperity of our region. Initially established in the 1800s to protect public health for the City of Newcastle, we have grown to be the trusted provider of high quality water services for a population of 620,000 people across the Lower Hunter region.

We have established a series of strategic outcomes to guide our prioritisation and decision-making processes. We have also determined how we will work to these strategic outcomes. Each year, we revise the strategic objectives, measures and targets that get us to the outcomes.

Hunter Water's investment decision-making process ensures that all investments are aligned to the Strategy and are prioritised to deliver the best community value. The objective is to align the strategic investment management process to enable Hunter Water to deliver the aspirations of our region.

The investment management process ensures a majority of investment decisions proceed through a strategic case and investment plan. Individual investment items are developed and prioritised within the investment plan.





3 Hunter Regional Plan 2041



The NSW Government's *Hunter Regional Plan 2041* (the Regional Plan) will guide land use planning decisions over the next 20 years. The Regional Plan identifies the importance of delivering infrastructure and services to support growth, the preferred staging of development, and supporting changing communities. A focus on greater collaboration between the NSW Government and councils on strategic planning and development sequencing should allow infrastructure providers, including Hunter Water, to plan and deliver infrastructure that is in the right place, well designed, of the right scale and cost effective.

The Regional Plan recognises the importance of coordinated planning for the closely connected urban areas of Cessnock, Lake Macquarie, Maitland, Newcastle and Port Stephens local government areas. The Lower Hunter region is currently home to around 620,000 people, and the Department of Planning and Environment expects its population to grow to around 790,000 over the next 20 years.

Local Strategic Planning Statements (LSPS) produced by each Council draw together the strategic land use planning directions of state, regional and local strategic plans, and detail how those directions are to be delivered at the local level. They set out each Council's 20-year vision and the land use planning priorities and actions that they will undertake to achieve their vision. Hunter Water was closely involved in the development of the draft LSPSs.

The Urban Development Program Committee was formed in August 2018 and comprises representatives from Councils, government agencies and development industry bodies. The Hunter Urban Development Program Committee's primary objective is to provide advice on matters relating to the supply and servicing of land for residential development, to meet short and longer-term demand across the Hunter Region. Hunter Water will be closely involved in the preparation and ongoing implementation of these plans and monitoring programs, along with Councils and other infrastructure providers. This includes early involvement with Cessnock, Lake Macquarie, Maitland, Newcastle and Port Stephens Councils as they prepare, implement and update their local plans.

The overall aim is to ensure alignment between state and local planning and infrastructure provision.

For more information on the Hunter Regional Plan, please: [click here](#).





BY 2041, THE POPULATION IN HUNTER WATER’S AREA OF OPERATIONS IS FORECAST TO GROW FROM APPROX. **620,000 to 790,000**

Connections to our services will increase as the regional population grows.



256,010
RESIDENTIAL DWELLINGS CONNECTED TO WATER SERVICES ACROSS OUR AREA OF OPERATIONS



BY 2028 NO. OF CONNECTED DWELLINGS IS PROJECTED TO INCREASE TO **275,500 (7.6%)**



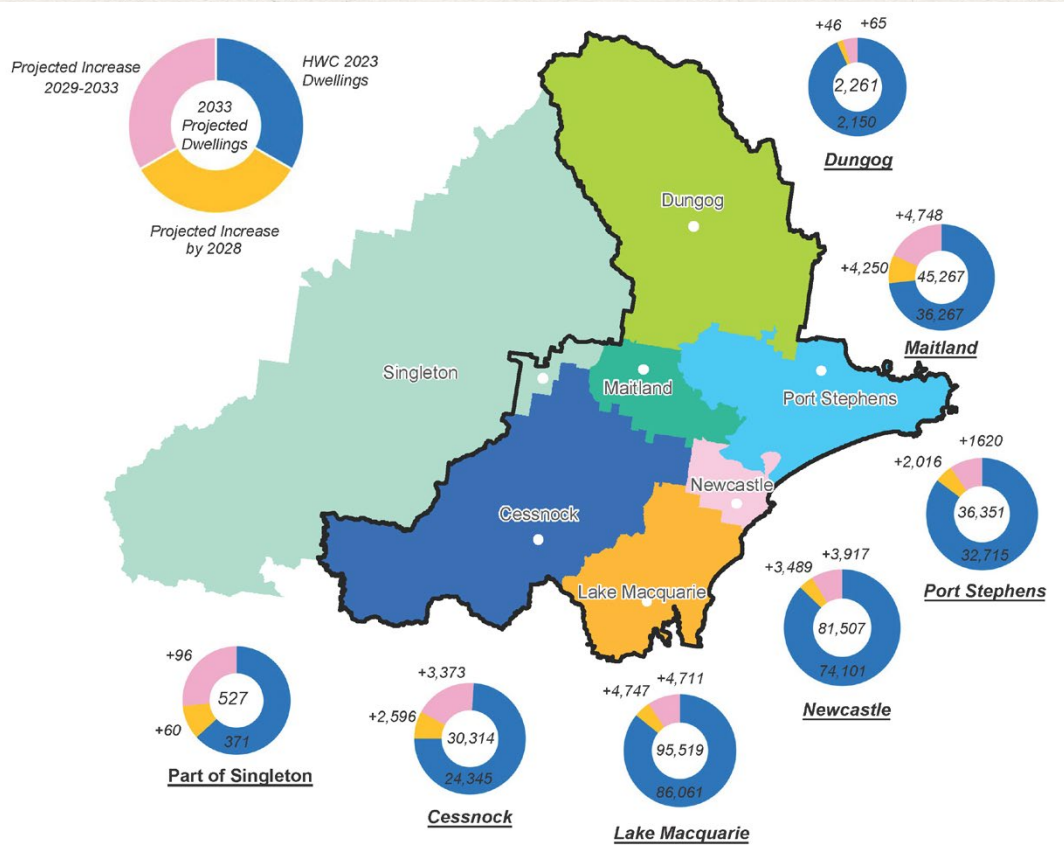
BY 2033 NO. OF CONNECTED DWELLINGS IS PROJECTED TO INCREASE TO **296,500 (15.8%)**

Our anticipated timing of new residential dwellings by local government area is shown in Figure 1. The graphic includes current dwellings, forecast growth in the period 2024 to 2028, and 2029 to 2033.

Local government area	Residential dwellings at July 2023		Distribution %
Cessnock	23,245		9.1
Dungog	2,150		0.8
Lake Macquarie	85,511		33.4
Maitland	36,267		14.2
Newcastle	74,101		28.9
Port Stephens	32,715		12.8
Singleton	371		0.1
Private Network Operators*	1650		0.6
Total	256,010		100.0

* Private network operator areas, Huntlee Water (1100) in Cessnock LGA, and Cooranbong Water (550) in Lake Macquarie LGA, include customers that are not direct Hunter Water customers, but are supplied with bulk water from Hunter Water.

Figure 1: Projected residential dwellings by 2033



Hunter Water provides drinking water, wastewater, recycled water and some stormwater services across our area of operations.

OUR ASSETS ARE VALUED
AT APPROXIMATELY
\$3.2 BILLION

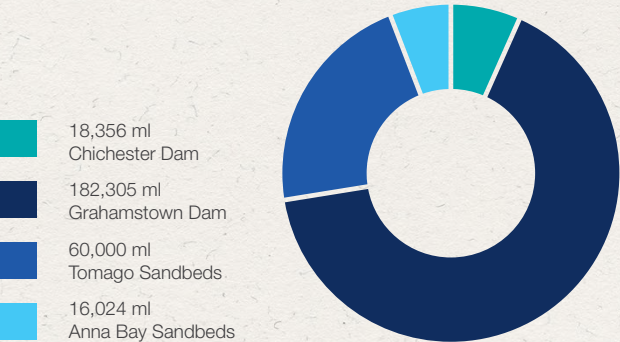
Which is inclusive of all water, wastewater and stormwater assets.

5.1 Drinking water

Hunter Water supplies reliable, high quality drinking water to 278,500 connected properties, servicing a population of around 620,000 people.

AVG AMOUNT OF WATER
DELIVERED PER DAY IN 2022-23
170 MEGALITRES
(one mega litre equals one million litres)

STORAGE CAPACITY
276,685 ML



We source our raw water from a network of surface water sources, including rivers and dams, and groundwater sources, with a combined storage capacity of 276,685 ML. The locations of our drinking water catchments and storages are shown in Figure 2.

We treat raw water at six water treatment plants (WTPs) to a quality suitable to safely drink.

These water treatment plants are:

- Dungog WTP
- Grahamstown WTP
- Lemon Tree Passage WTP
- Anna Bay WTP
- Nelson Bay WTP, and
- Gresford WTP.

The locations of our WTPs are shown in Figure 2.

The locations of the WTPs and interconnectivity within the water supply network allows for some supply between areas.

THE COMBINED MAXIMUM
TREATMENT DESIGN CAPACITY
371 ML PER DAY

The maximum available capacity is lower than this design capacity when equipment repairs and maintenance, variability in raw water quality, and process reliability factors are taken into account.

WATER IS SUPPLIED
TO CUSTOMERS VIA A
DISTRIBUTION NETWORK
CONSISTING OF:

5,220 KM
OF WATER MAINS (PIPES)

100 PUMPING
STATIONS

71 STORAGE
STATIONS AND
WATER TANKS

Our water supply systems are shown in Figure 3.

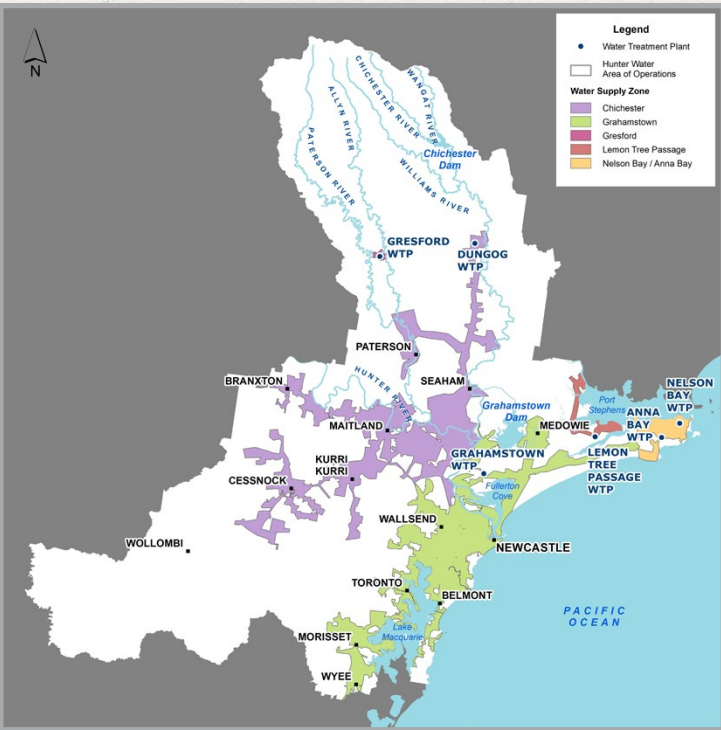
We invest in our drinking water catchments, WTPs and water supply networks to protect and maintain water quality, ensure our customers have reliable water services, and to protect the natural environment. We upgrade the system’s capacity to cater for population growth and ensure compliance with conditions in our operating licence.

We also supply and receive some drinking water from outside of our area of operations. We supply a small volume of treated water to MidCoast Water in Karuah, and can also supply and receive bulk treated water from the Central Coast.

Figure 2: Hunter Water’s drinking water catchments



Figure 3: Hunter Water’s water treatment plants and water supply zones



5.2 Wastewater

Hunter Water’s wastewater network consists of 5,311 km of sewer mains and 459 pumping stations that collect and transport wastewater flows from customer’s properties to treatment facilities.

We treat wastewater at 19 wastewater treatment works (WWTWs) of varying size, which treat around 67,000 ML of wastewater annually. Following treatment, effluent is discharged from these treatment plants to coastal and estuarine waterways in accordance with our NSW Environment Protection Authority (EPA) licences. The capacity of each of these treatment works is shown in Table 1.

We invest in our wastewater network to maintain and improve asset performance and to upgrade the network’s capacity in order to reduce overflow impacts on customers and the environment, and cater for growth.

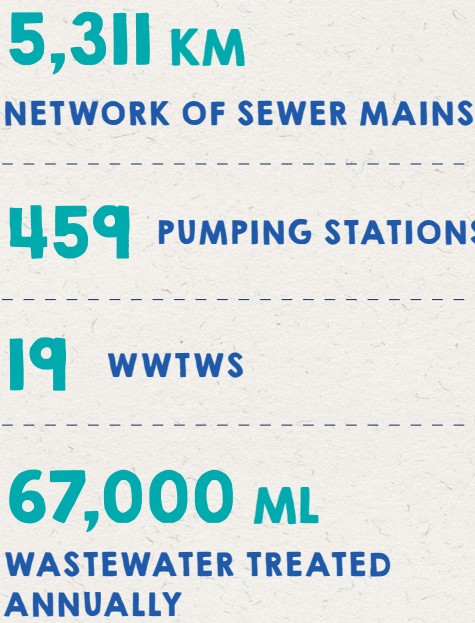


Table 1: Our wastewater treatment works and their capacity

WWTW	Capacity (Equivalent Population)	WWTW	Capacity (Equivalent Population)
Belmont	93,000	Karuah	2,250
Boulder Bay	58,000	Kearsley	2,050
Branxton	8,500	Kurri Kurri	25,000
Burwood Beach	220,000	Morpeth	60,000
Cessnock	32,000	Paxton	3,200
Clarence Town	1,200	Raymond Terrace	35,000
Dora Creek	28,800	Shortland	30,000
Dungog	4,200	Tanilba Bay	10,000
Edgeworth	70,000	Toronto	42,000
Farley	59,115		

5.3 Recycled water

Hunter Water recognises that recycling water can reduce the usage of drinking water, and reduce the potential impacts to the natural environment from our discharges of treated wastewater. We are committed to water recycling where environmentally, socially and economically beneficial. Supply volumes vary from year to year, however recycled water typically saves more than 14 million litres of drinking water each day, and continues to increase.

We currently provide recycled water to customers for commercial and industrial uses from 11 of our 19 wastewater treatment works: Branxton, Cessnock, Clarence Town, Dora Creek, Dungog, Edgeworth, Karuah, Kurri Kurri, Morpeth and Paxton WWTWs and the Mayfield West Advanced WTP (part of the Kooragang Industrial Water Scheme).

The location of our current recycled water schemes is shown in Figure 4b.

We also supply recycled water to some homes in Chisholm and Gillieston Heights for non-drinking purposes such as toilet flushing and garden watering.

Our recycled water schemes are managed in a way that protects human health and the environment, and complies with customer agreements and other relevant regulatory requirements.

Figure 4a: Hunter Water’s wastewater catchments

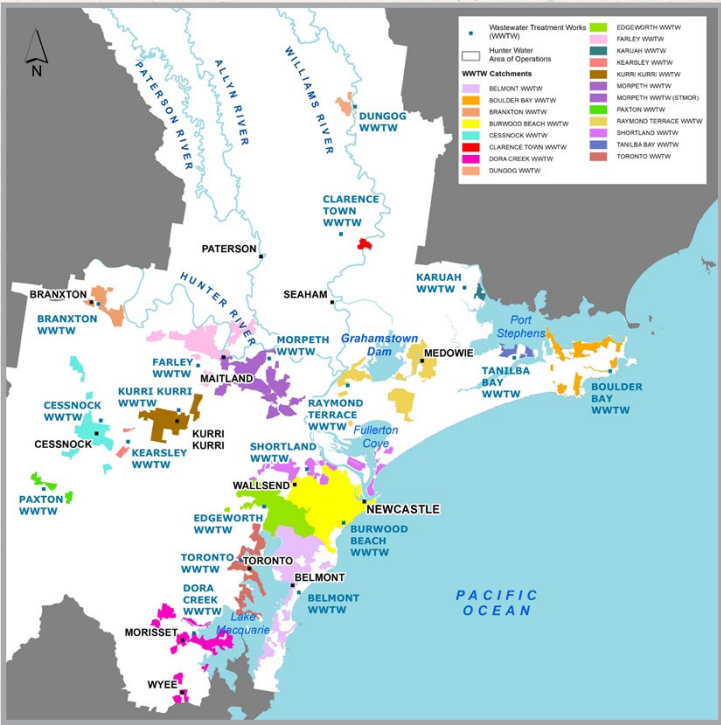
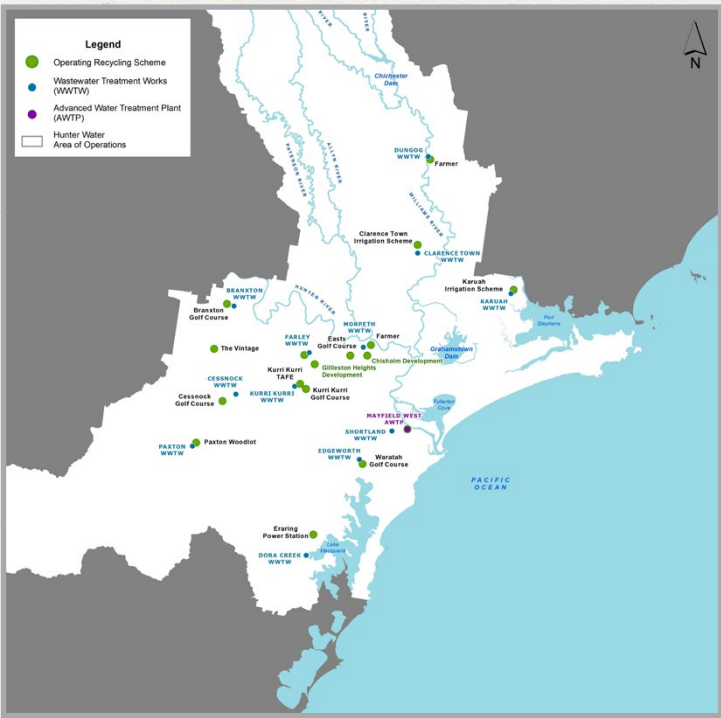


Figure 4b: Recycled water schemes in the Lower Hunter



5.4 Stormwater

Stormwater management in Hunter Water’s area of operations is primarily the responsibility of local councils, with NSW Roads and Maritime Services involved in drainage from major roads and highways.

About one quarter of our customers are within the catchments of our stormwater channels. We own and operate about 96 kilometres of major pipelines, concrete ‘trunk’ channels and culverts in Newcastle, Cessnock and Lake Macquarie LGA’s along with

two stormwater detention storages (see Figure 5). We are required to provide, operate, manage and maintain a drainage service within the capacity of the existing drainage service. Most of our expenditure aims to rehabilitate/replace our existing assets, manage system risks and manage debris, sediment and gross pollutants collected within the system.

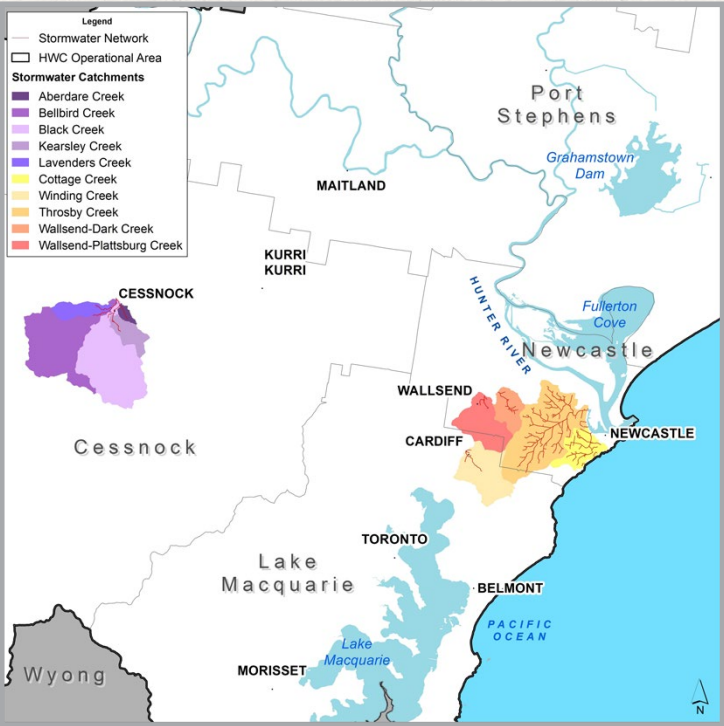
25%
OF CUSTOMERS LIVE WITHIN THE CATCHMENTS OF OUR STORMWATER CHANNELS

96 km
OF MAJOR PIPELINES, CONCRETE ‘TRUNK’ CHANNELS AND CULVERTS IN LAKE MACQUARIE



System	Asset	Description	LGA(s)	Length (km)
Throsby Creek Stormwater System	Throsby Creek	Open channels/pipes/culverts through West Newcastle and out to Mayfield, Kotara, New Lambton	Newcastle Lake Macquarie	54.4
Cottage Creek Stormwater System	Cottage Creek	Open channels/pipes/ culverts through East Newcastle, The Junction, Hamilton	Newcastle	19.8
Cessnock Stormwater Channel System	Black Creek	Open channels/culverts through Cessnock township	Cessnock	10.3
Dark Creek System	Dark Creek	Open channels/pipes/culverts through Jesmond township	Cessnock	5.0
Winding Creek System	Winding Creek	Open channels/pipes/culverts through Cardiff township Winding Creek Detention Basins 3 and 5.	Lake Macquarie	4.0
Wallsend-Plattsburg Stormwater Channel	Ironbark Creek	Open channels through Wallsend township	Newcastle	2.7

Figure 5: Hunter Water’s Stormwater catchments



6.1 Economic regulation

The Independent Pricing and Regulatory Tribunal (IPART) regulates the price and performance of several NSW water businesses. IPART ensures customers pay only what water businesses need to efficiently deliver the services their customers want. Their aim is to hold water businesses accountable in a way that delivers good short, medium, and long-term customer outcomes.

IPART’s water pricing framework focuses on customers, costs, and credibility – the ‘3Cs’. More information on IPART’s framework can be [found here](#).

IPART sets Hunter Water’s customer pricing every five years. We will lodge our next pricing proposal to IPART setting out proposed expenditure levels, by September 2024. IPART will conduct its review of Hunter Water’s proposal throughout 2024-25, with new prices commencing from 1 July 2025.

During each review, IPART considers the prudence and efficiency of Hunter Water’s proposed capital and operating expenditure. This may involve examining:

- How well Hunter Water’s proposal delivers value for customers and the community over the short and long-term.
- Key assumptions that are driving capital expenditure including asset replacements, water demand forecasting, growth assessments, environmental requirements and licencing standards.
- Whether the proposed investments are efficient, considering whole of lifecycle planning, and procurement processes.
- The robustness of Hunter Water’s processes for prioritising future expenditure and asset management decisions.

6.2 Lower Hunter Water Security Plan

The Lower Hunter Water Security Plan was released by the NSW Government in April 2022. It provides a whole-of-government approach that aims to ensure water security for the Lower Hunter for the next 40 years. The plan’s goal is to provide a resilient and sustainable water future that contributes to regional health and prosperity and is supported by the community.

To achieve the goals and objectives of the plan—and based on community feedback and technical analysis—four strategic priorities were identified.

A program of actions has been developed to deliver on the four strategic priorities. Increased investment will be needed to meet community expectations, service growth and ensure a water supply that is resilient to drought.

For more information on the Lower Hunter Water Security Plan, please [click here](#).



PRIORITY 1 Safe drinking water	Safe drinking water is our highest priority. We will continue to provide high-quality drinking water for the health and wellbeing of our community and the future prosperity of the region.
PRIORITY 2 Making the most of what we’ve got	We will manage our existing water resources wisely, working together with our community and stakeholders to make the most of our existing water resources, particularly before investing in new sources.
PRIORITY 3 Improving the resilience of the system	Our climate is changing and the future is uncertain. We will act to improve our resilience to shocks such as drought as well as remaining adaptive to future risks and opportunities.
PRIORITY 4 Water for life	Water is an essential part of connection to country for First Nations and Aboriginal people and supports liveable communities. Our plan will work to incorporate the values and participation of First Nations and Aboriginal people. Water supports liveable communities and our plan will seek to protect and restore our environment and ecosystems.



7 Capital expenditure prioritisation



Hunter Water's capital works prioritisation process helps determine the location and timing of new or augmented regional infrastructure assets to meet regulatory, environmental and customer performance objectives. This process also considers whether there is sufficient infrastructure capacity to support major urban development projects over time.

Hunter Water follows a robust set of procedures to ensure the impacts of developments are properly assessed. Key steps include:

- Maintaining a geographic information system (GIS) to collate, sort and analyse data from a variety of sources. The GIS is used to map developments and monitor connections as they occur over time.
- Assessing the capacity of the existing water and wastewater networks using hydraulic modelling software. Hydraulic network modelling helps identify capacity constraints in the networks and whether upgrades or further investigations are required.
- Undertaking annual risk reviews of the water and wastewater networks to assess compliance against regulatory requirements. Hunter Water may update upgrade strategies and/or decide to invest in infrastructure as a result of the risk review.
- Completing servicing strategies, upgrade strategies, or further studies as required to ensure available capacity for ongoing development and to meet regulatory requirements.
- Assessing capital expenditure proposals for upgrades through a gateway business case process including an assessment of economic, financial and regulatory impacts.
- Regularly updating our portfolio of capital upgrades in line with approved strategies and business cases.

Hunter Water's *Connecting Asset Funding Standard* sets out funding arrangements for new investment in growth assets. Hunter Water will consider full funding for regional assets that provide the backbone to Hunter Water's system. Regional assets are generally those assets that will service a broad geographic region and broad customer base. Hunter Water considers whether the investment in a regional asset will:

- Provide longer term operational flexibility in servicing growth.
- Support high growth potential in a geographic area over longer time horizon, considering:
 - // land ownership
 - // land zoning and relevant settlement strategies
 - // the expected growth rate over the next 10 years, normally across multiple developments to mitigate the risk of under-utilised assets.
- Augment existing system capacity for growth across multiple developments, including water and wastewater treatment plant upgrades.
- Improve service provision to existing customers and ensure that Hunter Water complies with regulatory requirements.



8 Capital expenditure projects



8.1 Recent investments

Hunter Water has invested to support growth with over \$116m spent in the last five years including \$57m to provide capacity at wastewater treatment plants and \$47m on water and wastewater network assets. Over the same period, we have invested \$624m on meeting standards and maintaining asset and service reliability across our network of assets.

\$116 m

INVESTMENT TO SUPPORT GROWTH

\$57 m

TO PROVIDE CAPACITY AT WASTEWATER TREATMENT PLANTS

\$624 m

ON MEETING STANDARDS AND MAINTAINING ASSET AND SERVICE RELIABILITY ACROSS OUR NETWORK

WATER

- Replacement of the Tarro to Beresfield section of the Chichester Trunk Gravitation Main (CTGM).
- Restoration of the Balickera Tunnel to ensure ongoing reliable transfer of water from the Williams River to Grahamstown Dam.
- Gillieston Heights and Chisholm dual reticulation recycled water schemes.
- A program of water loss reduction including repair of Four Mile Creek and Black Hill reservoirs, commencement of the pressure reduction program, improved leakage monitoring through implementation of additional district metered areas and increased frequency of active leak detection surveys.

WASTEWATER

- Major upgrades to Dungog, Farley, Kurri Kurri and Tanilba Bay wastewater treatment plants. The upgrades include works to reduce health risks, provide additional treatment capacity, improve effluent quality, reduce the amount of effluent discharged to the environment, improve asset condition and reliability and reduce the risk of non-compliance with Environment Protection Licence conditions at wastewater treatment plants. Upgrades to wastewater pump station chemical dosing units to comply with workplace health and safety requirements and reduce the risk of spills to the environment.

8.2 Current and planned

Hunter Water’s investment program over the next five years will be driven by mandatory standards and asset and service reliability (\$1,113m), and growth (\$244m). The upgrades to support growth will be focused on wastewater treatment plant upgrades (\$115m) and water distribution (\$60m). Hunter Water’s planned capital expenditure by driver and by local government area (LGA) is provided in Figure 7 and Figure 8, respectively.

\$419 m

INVESTMENT ON UPGRADES TO SUPPORT GROWTH

Figure 6: Hunter Water Capital Expenditure 2018-19 to 2022-23 (\$m) by driver

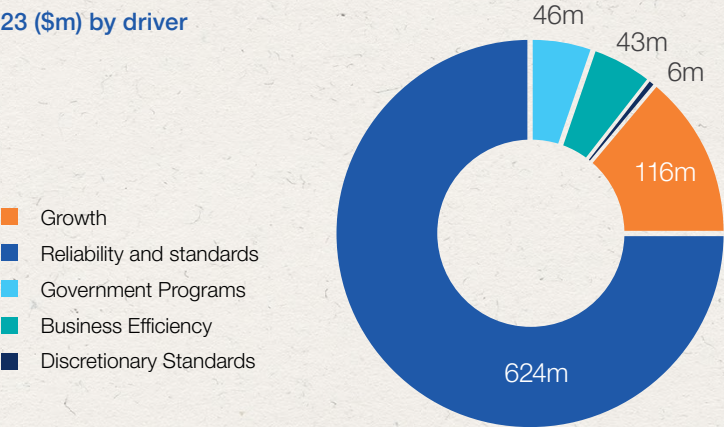


Figure 7: Hunter Water’s Capital Expenditure 2023-24 to 2027-28 (\$m) by driver

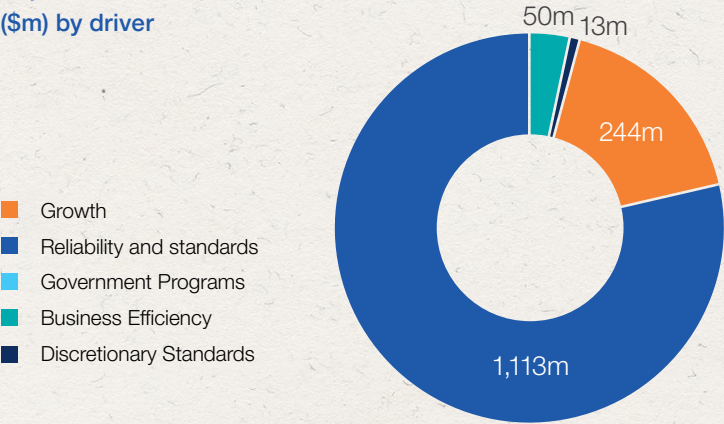
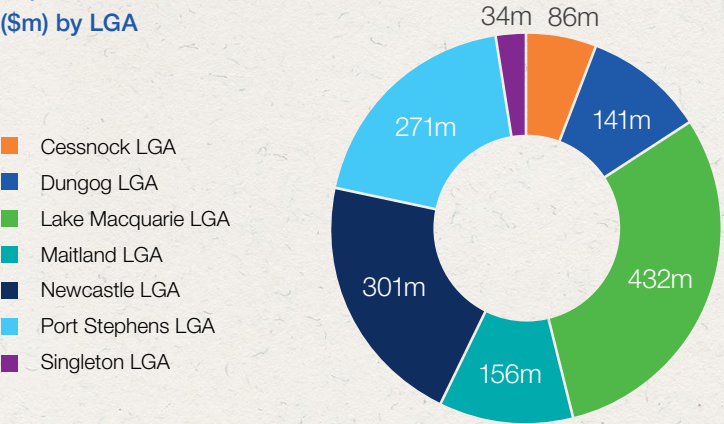


Figure 8: Hunter Water’s Capital Expenditure 2023-24 to 2027-28 (\$m) by LGA



WATER

- Hunter Water plans to build a permanent seawater desalination facility at Belmont. This facility will increase the diversity of the region’s drinking water supply system, which will improve the resilience of the overall system and help Hunter Water to support customers and communities into the future.
- Hunter Water plans to upgrade the capacity of its water distribution network as growth occurs to ensure that it complies with operating licence requirements. In the near term, works are focussed on development areas with strong historic growth, including Cameron Park to Minmi, Heddon Greta to Cessnock, Aberglasslyn to Branxton and East Lake Macquarie. Investments beyond five years are dependent on the timing and location of future growth.
- Work has commenced on upgrades to chlorination infrastructure which will help improve disinfection performance within the water distribution system, consistent with the Australian Drinking Water Guidelines.
- Work is underway to install a new ultraviolet disinfection unit at Grahamstown Water Treatment Plant to reduce the level of microbial risk to the drinking water supply.
- Replacement of ageing trunk watermain assets including Hunter River south arm and north arm crossings. These projects are planned to reduce supply and environmental risks, reduce maintenance costs and improve both employee and community safety.
- A fire fighting improvement program is being delivered to improve water network capacity for community fire fighting. This program is planned in consultation with Fire and Rescue NSW.

- Continued implementation of the water loss reduction program including the planned reduction in pressure at over 20 locations across the network, the implementation of district metered area leakage monitoring and improved active leakage detection targeting across the network.

\$60 m

INVESTMENT FOCUSED ON
WATER DISTRIBUTION

\$115 m

INVESTMENT FOCUSED ON
WASTEWATER TREATMENT UPGRADES

WASTEWATER

- Work continues on an upgrade to the Toronto treatment plant which addresses issues such as aeration capacity, odour and high voltage supply. Upgrades to Cessnock treatment plant to provide for future growth in the area and improve the quality of the treated effluent discharged from the site.
- Major treatment plant upgrades are scheduled to commence in the next five years at Burwood Beach, Morpeth and Raymond Terrace.
- Biosolids treatment upgrades to improve biosolids quality, bring risks associated with managing biosolids to within appetite, and will service growth.
- Hunter Water’s wastewater network upgrade program will address existing capacity deficiencies that present an unacceptable risk of wet weather overflow to customer properties, the environment and public amenity.
- Work has commenced on chemical system upgrades at various treatment plants that operate with a low risk of non-compliance to environmental regulations and a low risk of not complying with water quality requirements.
- Work continues on Wyee Sewer Transfer Scheme which will transfer flows from the 400 properties currently provided access to reticulated sewer, to Dora Creek wastewater treatment plan and provide wastewater services to up to 2750 new homes in the future.
- Upgrades to the wastewater pump station emergency storage facilities across the network to address environmental compliance risks associated with dry weather overflows.
- Wastewater systems in Medowie, Wallsend and Warners Bay are being upgraded to help reduce overflows during wet weather events.

STORMWATER

Hunter Water aims to continue to monitor the condition of its stormwater assets, with a focus on completing the open channel condition assessments, annual detention basin inspections, culvert investigations, and foot bridge assessments.

The investment in rehabilitation, renewals and replacements of stormwater channels, culverts and pipelines is anticipated to increase over the next ten-year period as Hunter Water works through a larger than usual number of trunk stormwater asset replacements.

Hunter Water is undertaking amenity improvements to its concrete stormwater channels in consultation with Councils and other stakeholders in areas where it would have the most benefit for the community. This is based on survey results that indicate that Hunter Water customers value, and are willing to pay extra for, works around stormwater channels to improve amenity and liveability in existing urban areas.



9.1 Overview

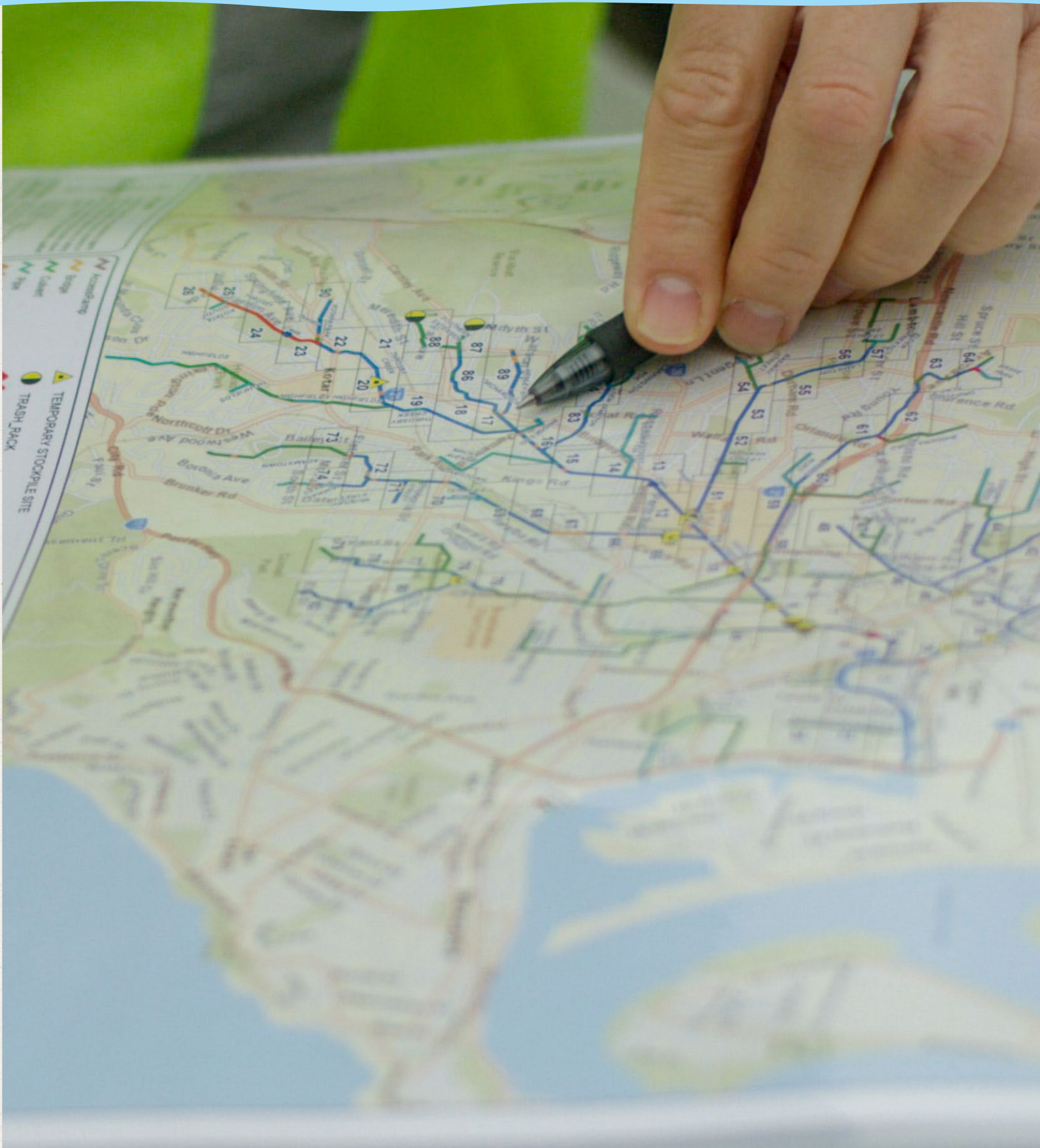
Our funding approach for growth-related infrastructure provides for the repayment of the agreed costs incurred by the Lead Developer in connecting to Hunter Water’s water and wastewater systems in certain circumstances. This approach is set out in the *Connecting Asset Funding Standard* which has replaced the previous *Funding of Growth Infrastructure Standard*.

A central component of our approach requires the Lead Developer to deliver right-sized connecting assets that provide capacity that can be shared with future adjoining or nearby developments. Hunter Water will consider a commercial agreement to pay for connection assets that provide lead-in and lead-out infrastructure to connect new developments and reticulation assets that are up-sized and configured to service future adjacent development.

The *Connecting Asset Funding Deed* provides a commitment to repay agreed procurement costs if scheduled project milestones are met. The developer must demonstrate that they have complied with Hunter Water’s *Guideline for Funding and Procuring Assets* prior to any repayment.

Hunter Water’s funding approach for connection assets and reticulation assets, relies upon the forecast timing of new development areas identified in the growth maps contained in this Growth Plan. Hunter Water will consider entering a Deed with a Lead Developer if the proposed development is expected within the next five years (for in sequence development, yellow polygons, payment upon completion), six to ten years (out of sequence development, orange polygons), or ten plus years (out of sequence development, green outlined polygon) (see Section 10).

For more information on Connecting Asset Funding and associated Procurement Guideline please refer to the Hunter Water [website](#).



10.1 Our growth mapping process

Hunter Water gathers information from a variety of sources in order to effectively forecast growth across our area of operation. Key data sources include:

- Development assessment applications
- Local and regional water and wastewater servicing strategies
- Council Urban Settlement and Land Use Strategies
- Regional planning instruments (including the Hunter Regional Plan 2041)
- Local Environmental Plan zoning
- Ongoing collaboration with local councils and the Department of Planning and Environment
- Historical customer connection and census data

Hunter Water uses a Geographic Information System to map development across the Lower Hunter, both spatially and temporally. Development sites are mapped as colour coded polygons over three distinct time periods, namely, zero to five years, five to ten years, and ten-plus years. The time periods relate to the expected connection date of the first lot within that particular development site. Given the many uncertainties associated with long-term urban development patterns, we have not mapped prospective locations beyond ten years.

We have not included ‘densification developments’ in major urban infill areas within the growth maps. Hunter Water has not applied any polygon for these densification areas, rather we assume that all infill areas are effectively coded yellow for development within five years. In general, where adjacent to existing infrastructure, we anticipate that densification developments and developments of less than ten lots could connect to existing assets.

Hunter Water asks the following key questions when identifying and scheduling individual development polygons:

- Is the site subject to a future rezoning application?
- Has the site been identified in a land use or urban settlement strategy?
- Has a development application been submitted or approved by council?
- Has a development assessment application been submitted to Hunter Water?
- What timing has been identified in Local or Regional Water or Wastewater Servicing Strategies? Is this realistic based on historical growth?
- What is the historical take-up rate for lots within the suburb or local government area?
- Does the site require approval by, or have any requirements from, state planning authorities?
- Has the Department of Planning and Environment or local council provided specific advice relating to a particular development area?
- Are there environmental considerations that could impact the development?
- At what stage is the design or construction of other supporting infrastructure at each location? This could include trunk mains, wastewater pumps stations, roads and other essential infrastructure.

We validate the overall number of forecast lots within any given year against past growth rates to ensure we fund the right infrastructure at the right time. This means that the timing of a particular development polygon, and growth rate within each polygon, is assessed concurrently with all development in the Lower Hunter. The Growth Plan represents our assessment of the most likely future use of water and wastewater networks at the time of publication.

Our annual Growth Plan contains detailed GIS growth maps for all parts of our area of operations. Annual updating of the maps and Growth Plan will help to ensure that the anticipated timing of future developments on the growth maps is based on the most recent information available. The growth maps are provided in Appendix A.1.

The identification and timing of polygons in the Growth Plan reflects Hunter Water’s best effort to forecast growth across Hunter Water’s area of operation. The identification of a site in the Growth Plan is not an indicator of Department of Planning and Environment or local council support for a particular development site.

10.2 Layout of growth maps

The maps show Hunter Water’s existing connections, and the indicative timing and location of forecast connection growth areas within Hunter Water’s area of operations. The maps also show Hunter Water’s recent and proposed capital works including major upgrades to: treatment works, water treatment plants, reservoirs, water and wastewater pump stations, and wastewater transportation and water distribution infrastructure. The planned capital works shown in the growth maps is current but could change in the future as projects are prioritised. A map legend is provided right.

LEGEND

- DESALINATION PLANT – Proposed**
- Future sewer network upgrade**
- RESERVOIR – Proposed /major upgrade**
- TREATMENT WORKS – Proposed major upgrade**
- TREATMENT WORKS – Recent major upgrade**
- WASTEWATER PUMP STATION – Proposed major upgrade**
- WASTEWATER PUMP STATION – Recent major upgrade**
- WATER PUMP STATION – Proposed major upgrade**
- WATER PUMP STATION – Recent major upgrade**
- WATER TREATMENT PLANT – Proposed major upgrade**
- WATER TREATMENT PLANT – Recent major upgrade**
- FCF – Recent major upgrade**
- WASTEWATER TRANSPORTATION – Proposed major upgrade**
- WASTEWATER TRANSPORTATION – Recent major upgrade**
- WATER DISTRIBUTION – Proposed major upgrade**
- WATER DISTRIBUTION – Recent major upgrade**
- Existing HWC Customer Connections**
- RESIDENTIAL DEVELOPMENT**
 - INITIAL CONNECTIONS EXPECTED (0-5 years)**
 - INITIAL CONNECTIONS EXPECTED (6-10 years)**
 - INITIAL CONNECTIONS EXPECTED (After 10 years)**
- NON RESIDENTIAL DEVELOPMENT**
 - INITIAL CONNECTIONS EXPECTED (0-5 years)**
 - INITIAL CONNECTIONS EXPECTED (6-10 years)**
 - INITIAL CONNECTIONS EXPECTED (After 10 years)**

To access information relating to Developer Works and Connecting Asset Funding, please go to Hunter Water’s website [here](#), where you will find the latest versions:

- Standard | Connecting Asset Funding
- Connecting Asset Funding Deed
- Guideline | Delivery and Procurement of Growth Assets
- Standard | Routine Major Works – Developers and Accredited Suppliers
- Standard | Complex Works – Developers and Accredited Suppliers

Developer Works Deeds:

- Developer Works Deed | Routine Major Works
- Developer Works Deed | Complex Works

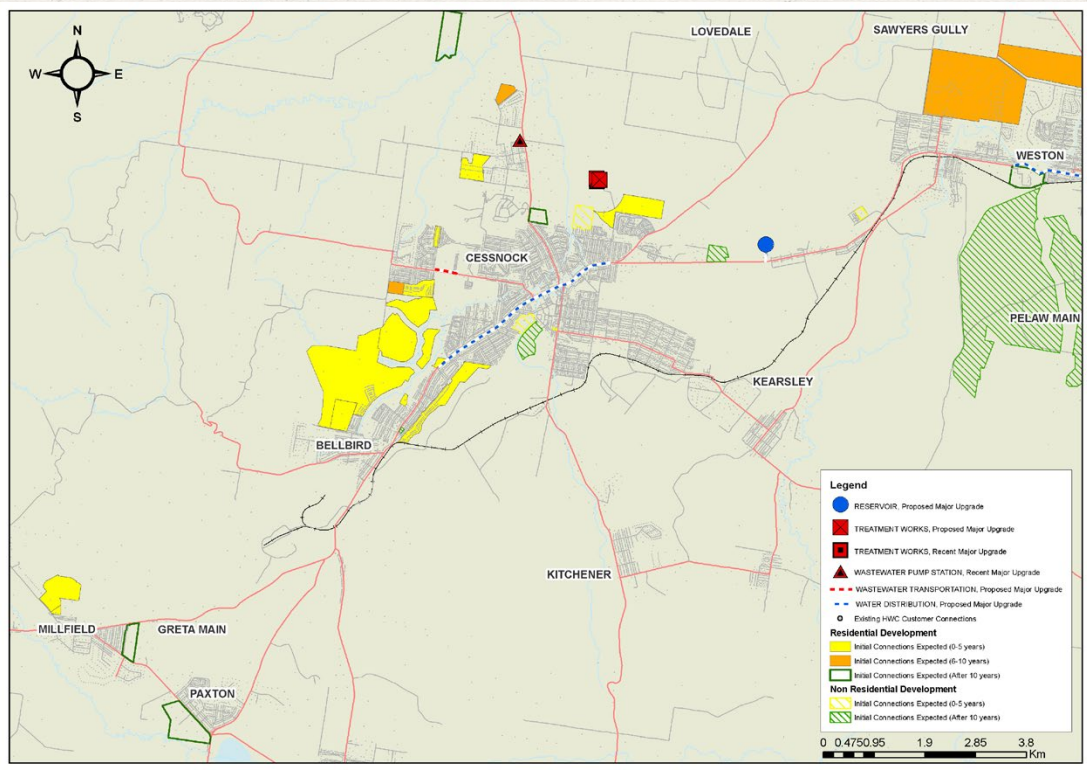


Appendix: Growth maps

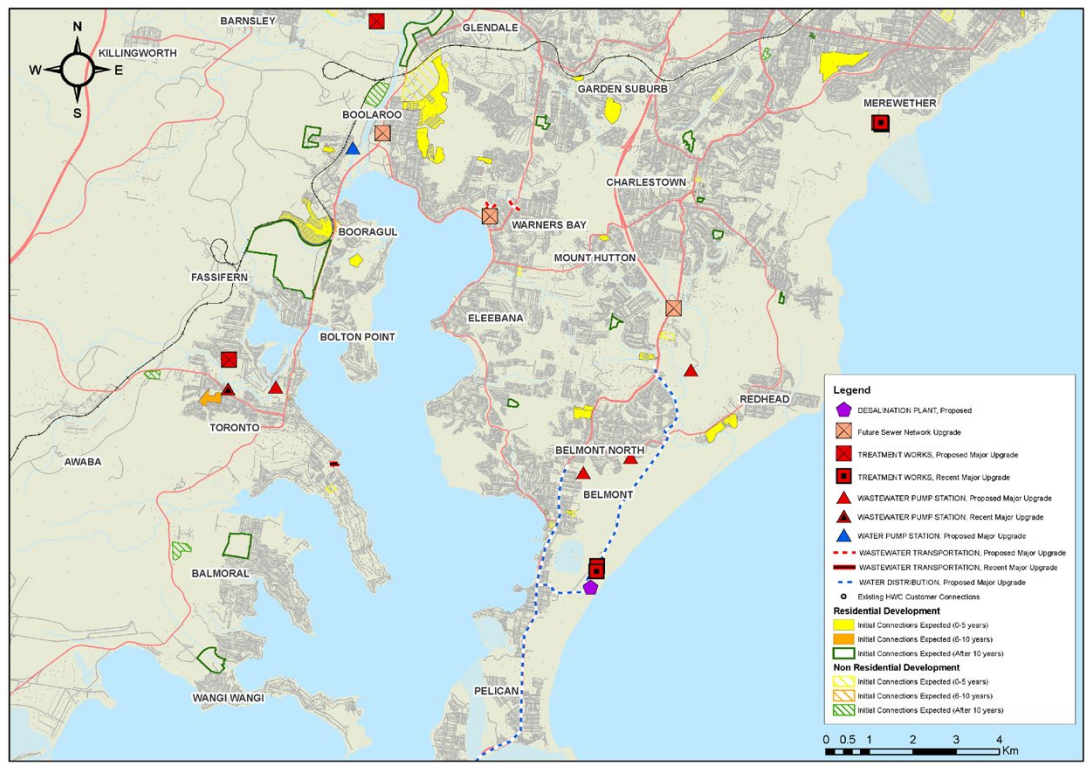
- A. Cessnock
- B. Charlestown
- C. Clarence Town
- D. Cooranbong
- E. Dungog
- F. Kurri Kurri / Minmi
- G. Lochinvar
- H. Maitland
- I. Medowie
- J. Nelson Bay
- K. Newcastle
- L. Vacy



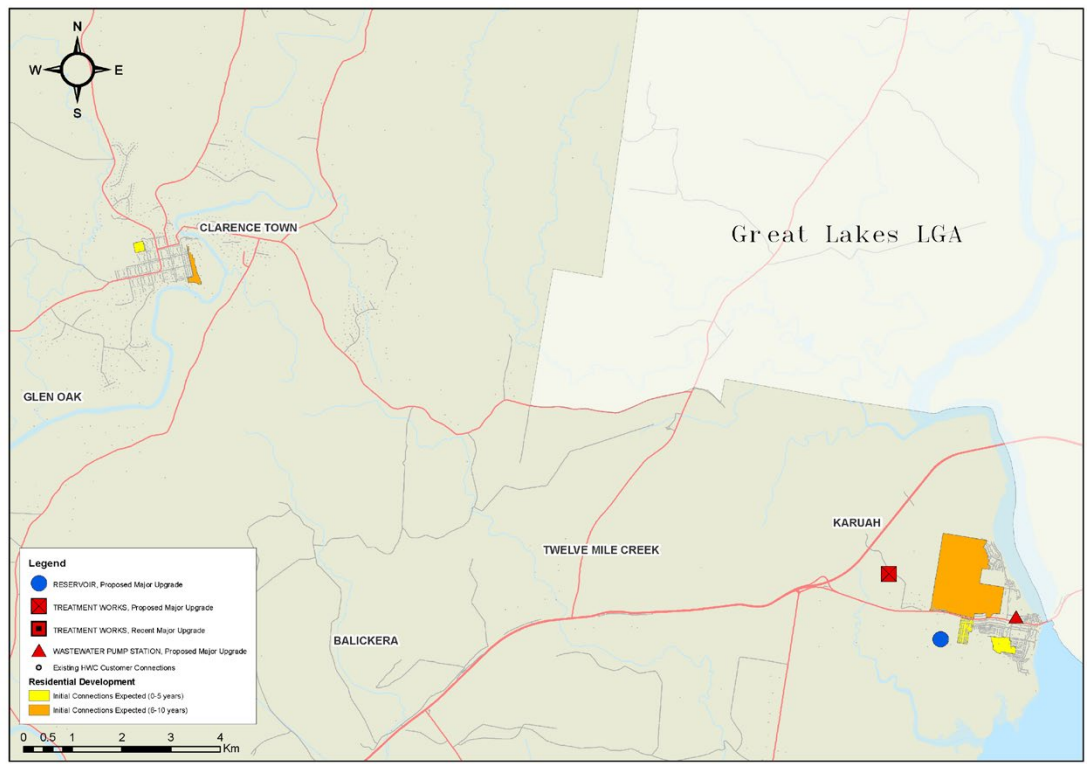
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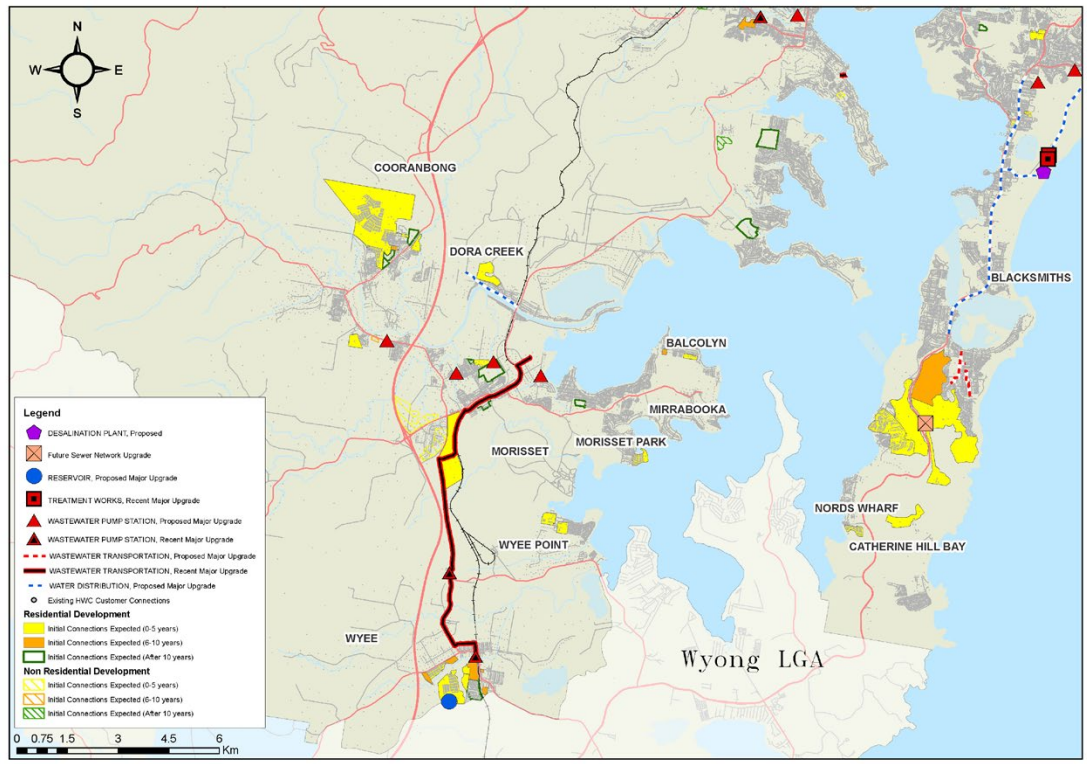
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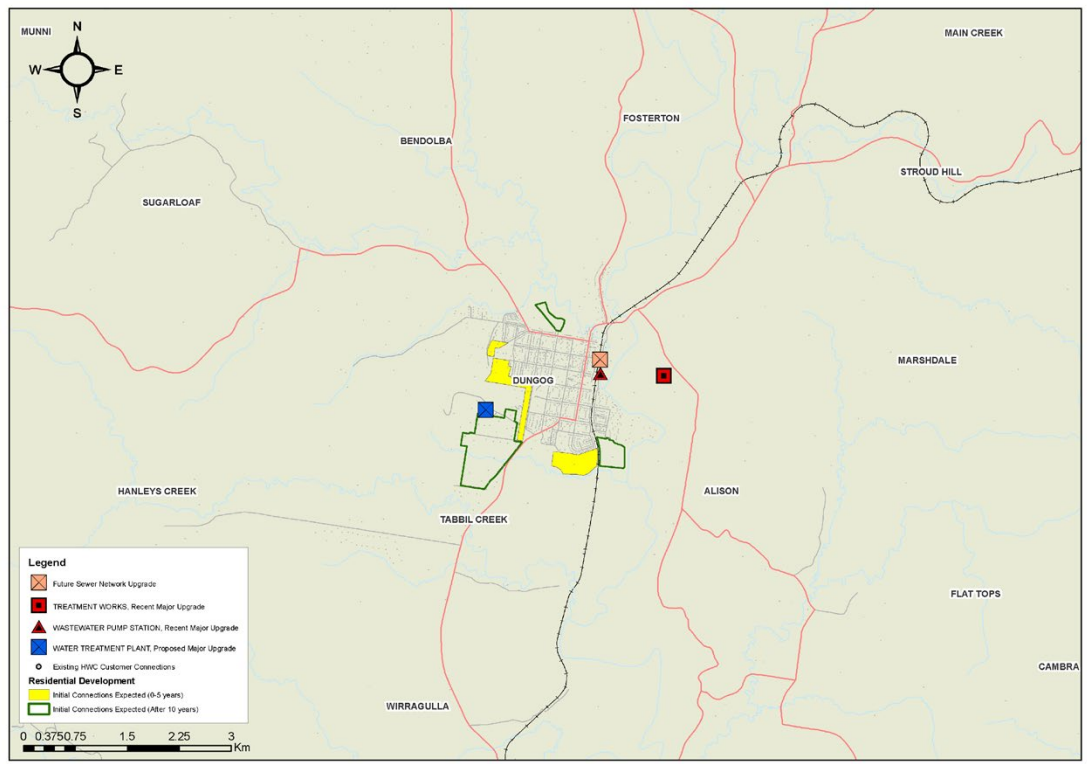
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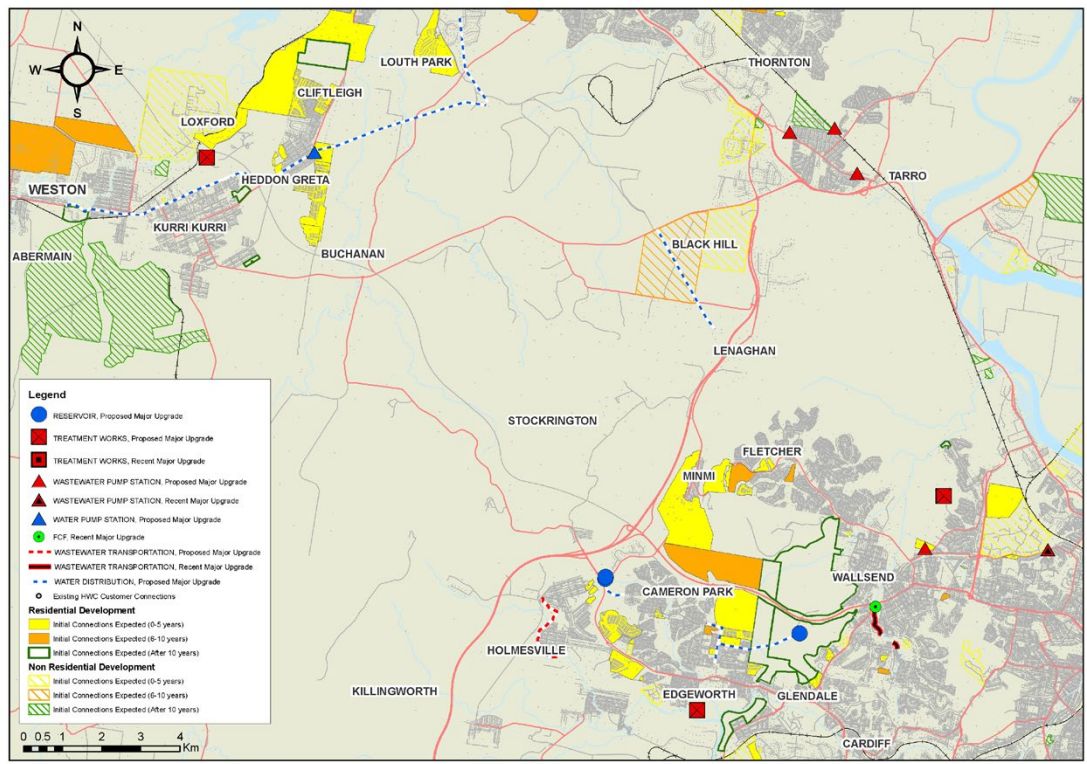
D. COORANBONG



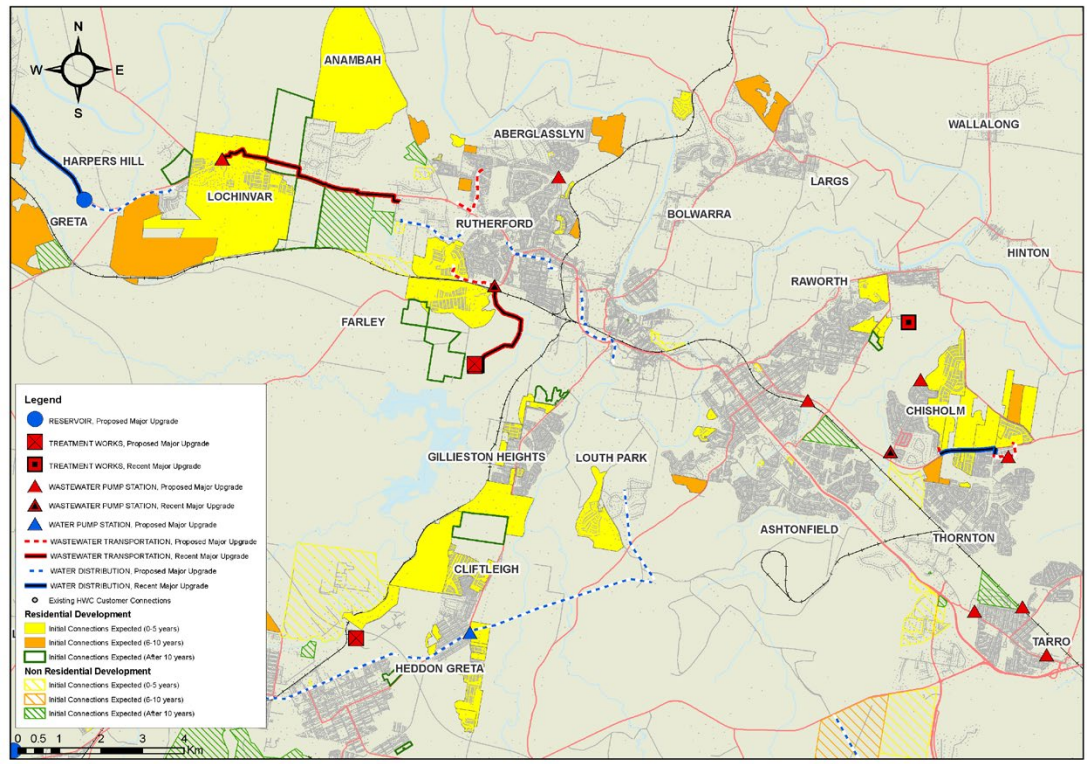
E. DUNGOG



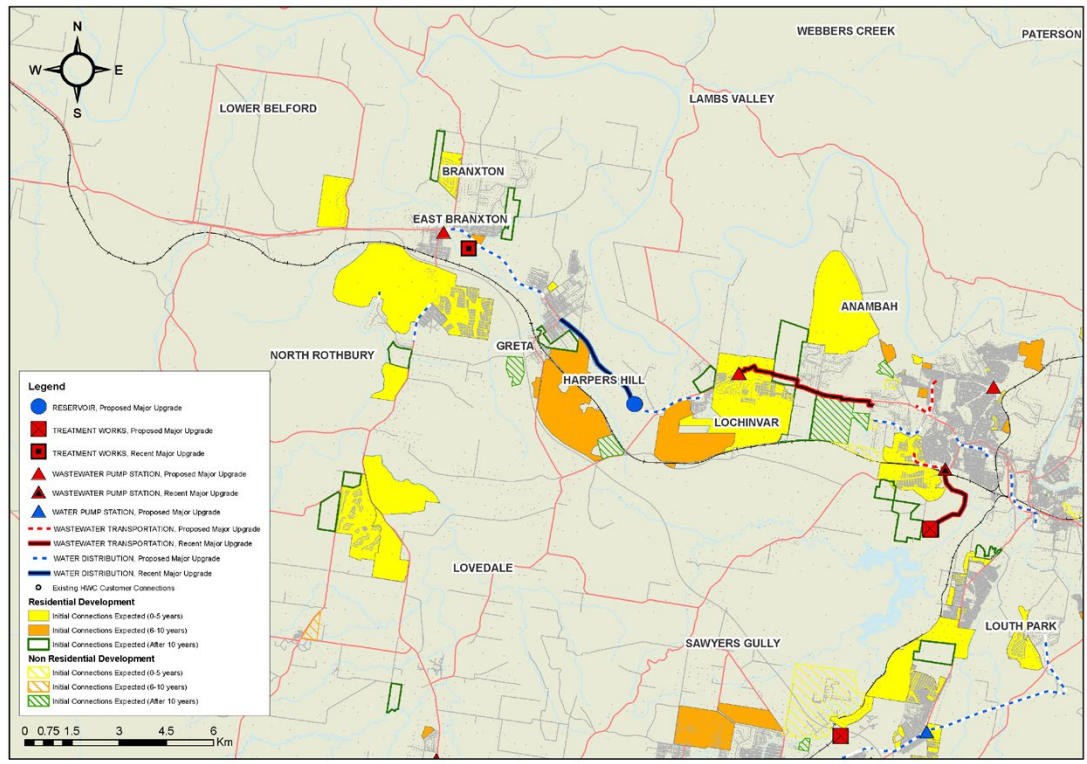
F. KURRI KURRI / MINMI



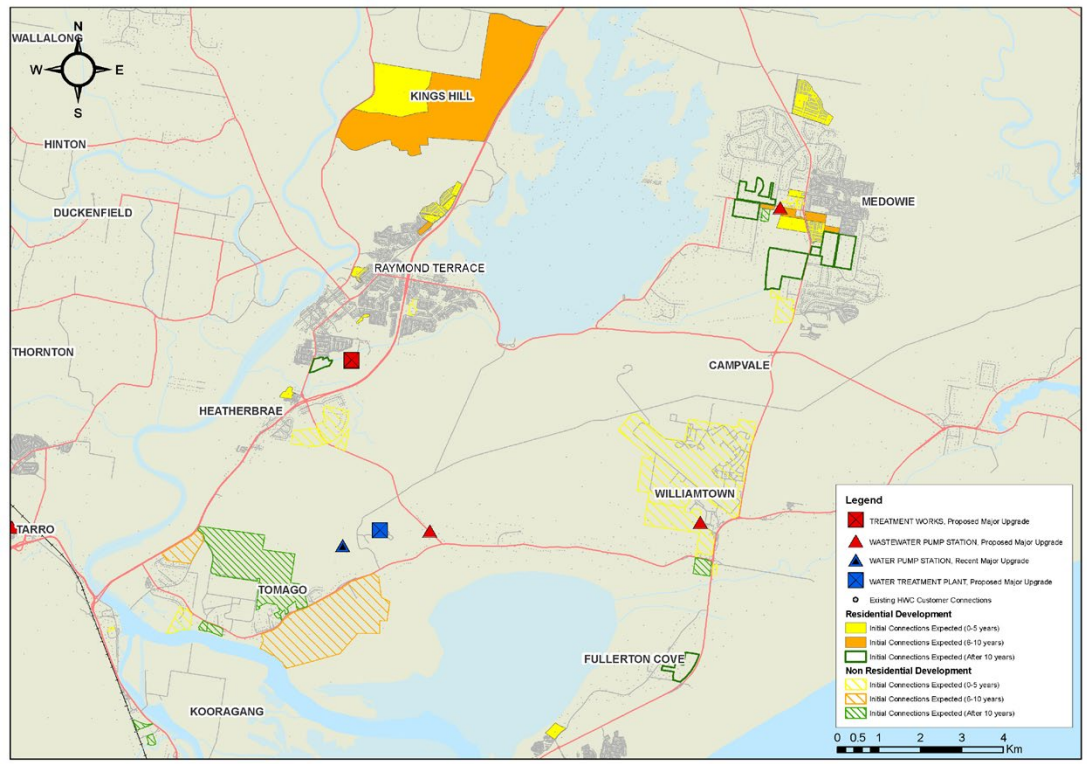
H. MAITLAND



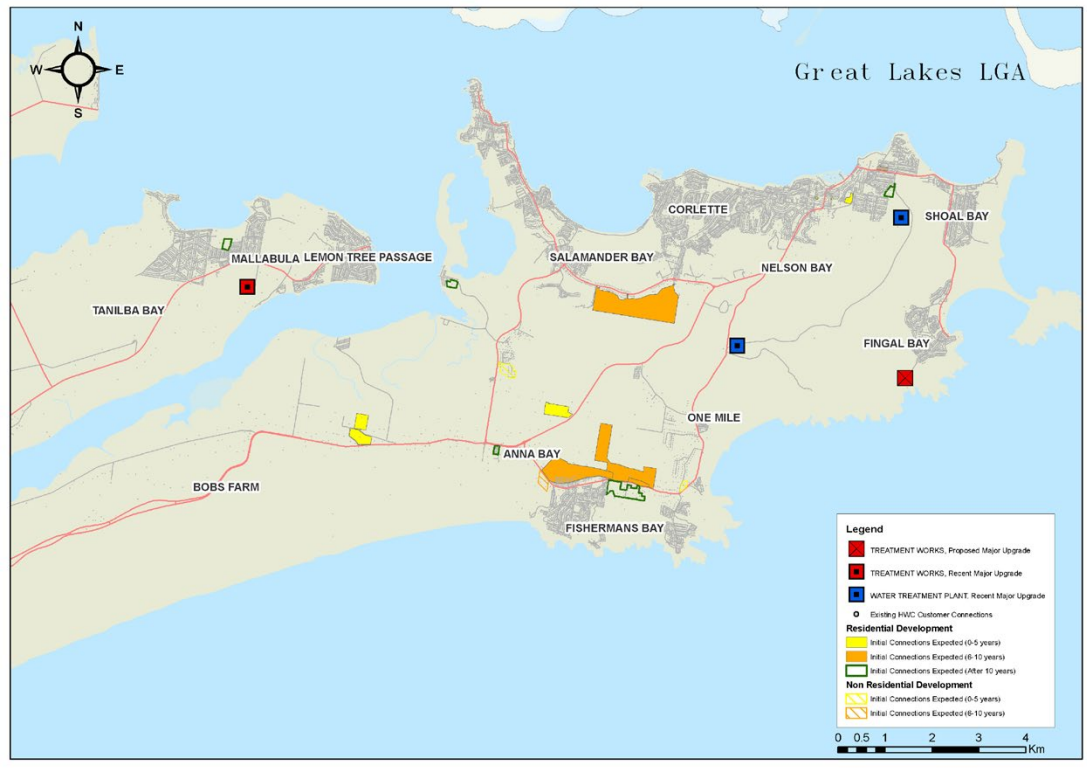
G. LOCHINVAR



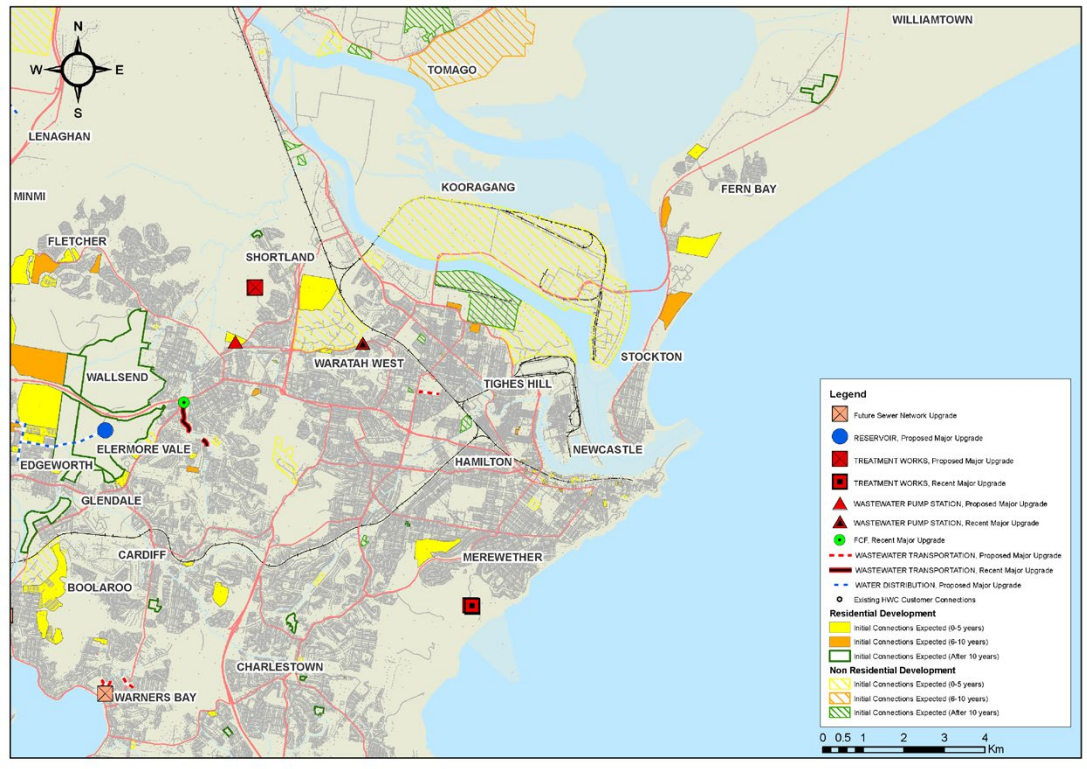
I. MEDOWIE



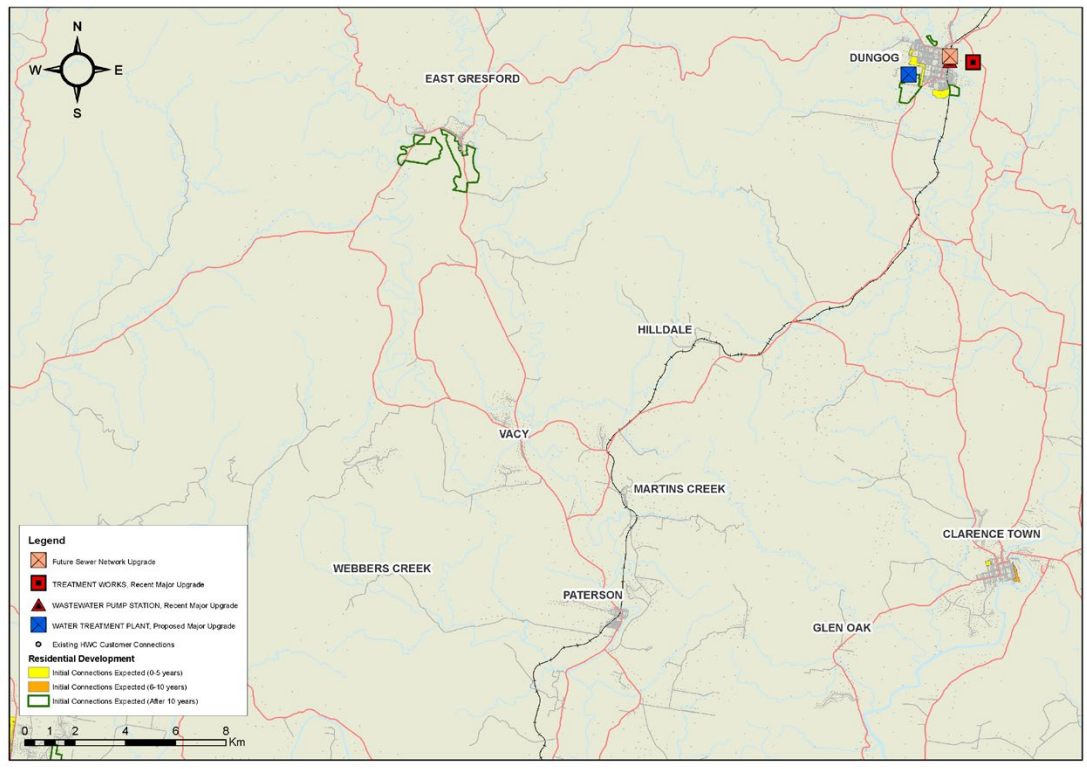
J. NELSON BAY



K. NEWCASTLE



L. VACY



Document Version History

Version No.	Name of author	Summary of changes	Approval date	Approved by	Periodic review
1.0	Chris Barker	New document	Jan 2018	Victor Prasad	1 year
2.0	Tony McClymont	General update on connection & growth data, capital projects & expenditure and growth plan	June 2019	Victor Prasad	1 year
3.0	Rajesh Khadka	General update on connection & growth data, capital projects & expenditure and growth plan.	February 2021	Victor Prasad	1 year
4.0	Rajesh Khadka	General update on connection & growth data, capital projects & expenditure and growth plan	May 2023	Matt Hingston	1 year
5.0	Rajesh Khadka	General update on connection & growth data, capital projects & expenditure and growth plan	May 2024	Matt Hingston	1 year



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