



Water Supply and Sewerage

Declared Service Areas

Version 1.2

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1.0 Introduction

South Burnett Regional Council has Declared Water Supply and Sewerage Service Areas that were resolved by Council on 29 April 2020 as required under Division 2 Service Areas, Section 161 Declaration of service area – Water Supply (Safety and Reliability) Act 2008.

Under Section 163 -Map of service area (2)(b) of the Act, Council is required to review, and update declared service area maps annually. This report provides the review and process for determining the boundary extents for the Declared Water Supply and Sewer Service Areas for the South Burnett region.

2.0 Declared Water and Sewerage Service Area Maps

Declared Water Supply and Sewerage Service areas (DSA) have been developed on planning, engineering and financial considerations to ensure each water supply and sewerage scheme can provide adequate levels of service to all customer and ensure infrastructure meets the levels of service expected without the need for significant infrastructure upgrades outside of planned growth demands contributed from land development within the adopted DSA boundary.

DSA boundary extents were developed considering the following key components:

2.1 Consideration of Council's Local Government Infrastructure Plan and Priority Infrastructure Area

Declared service areas incorporate the Priority Infrastructure Area defined through the Council's Local Government Infrastructure Plan as required by the Planning Act 2016. All allotments inside the PIA are to be included within the declared service area boundaries.

2.2 Current Water and Sewerage network infrastructure location and capacity to cater for current and future connections.

Council's water network extends well beyond the PIA boundaries as described in item 1 above, predominantly for the rural residential areas and rural areas in the case of the Proston Rural Scheme. Some areas for the Sewerage DSA boundaries are extended beyond the PIA boundaries, and these have been included where Council owned sewerage infrastructure has been designed and installed to service specific allotments with consideration to the overall sewerage network.

DSA boundaries have been developed with consideration of the designed and installed infrastructure and their capacity to provide adequate levels of service to all

connected properties. Lots inside approved development boundaries for where infrastructure has been designed and installed for developed lots and donated to Council were included. Lots outside of these development boundaries, even if across the road from the infrastructure, have been excluded as the infrastructure was not designed to cater for external connections.

Unconnected properties located adjacent to or in close proximity (in this case within 30m) of water infrastructure were then considered for inclusion with reference to the following basic design principal:

- In urban/commercial/industrial areas, connection to infrastructure that has been designed and installed to cater for both demand and fire fighting principals, and where capacity in the network infrastructure allows.
- In rural residential and Proston rural areas, connection to infrastructure that has been designed and installed to cater for demands only, and where capacity in the network infrastructure allows.

In modelling network capacities, infrastructure ageing needs to also be considered as reductions in flow and pressure will be introduced as infrastructure ages, resulting in increasing deficiencies. To account for this network modelling utilises average age friction coefficients, and then adjusted based on monitored pressure and flow results taken during hydrant tests or from loggers installed to monitor flow and pressure in over time.

In both these cases, if a vacant lot fell between lots that were already connected as indicated by the highlighted block in the figure 1 below, or were within 30m from the end of a main where adjacent properties were already connected, these lots were considered for inclusion. If the infrastructure after modelling showed deficiencies in the levels of service under ultimate conditions (that is all unconnected blocks within the DSA were connected), the blocks near the end of the infrastructure were excluded from the zone. If the infrastructure installed in these areas was provided as a single service line or polyline <40mm in diameter currently serving more than 2 connections, any unconnected lots adjacent to or <30m from this infrastructure excluded from the zone as the infrastructure would not adequately support additional connections without impacting levels of service. Unconnected lots adjacent to privately owned infrastructure have been excluded from the DSA.

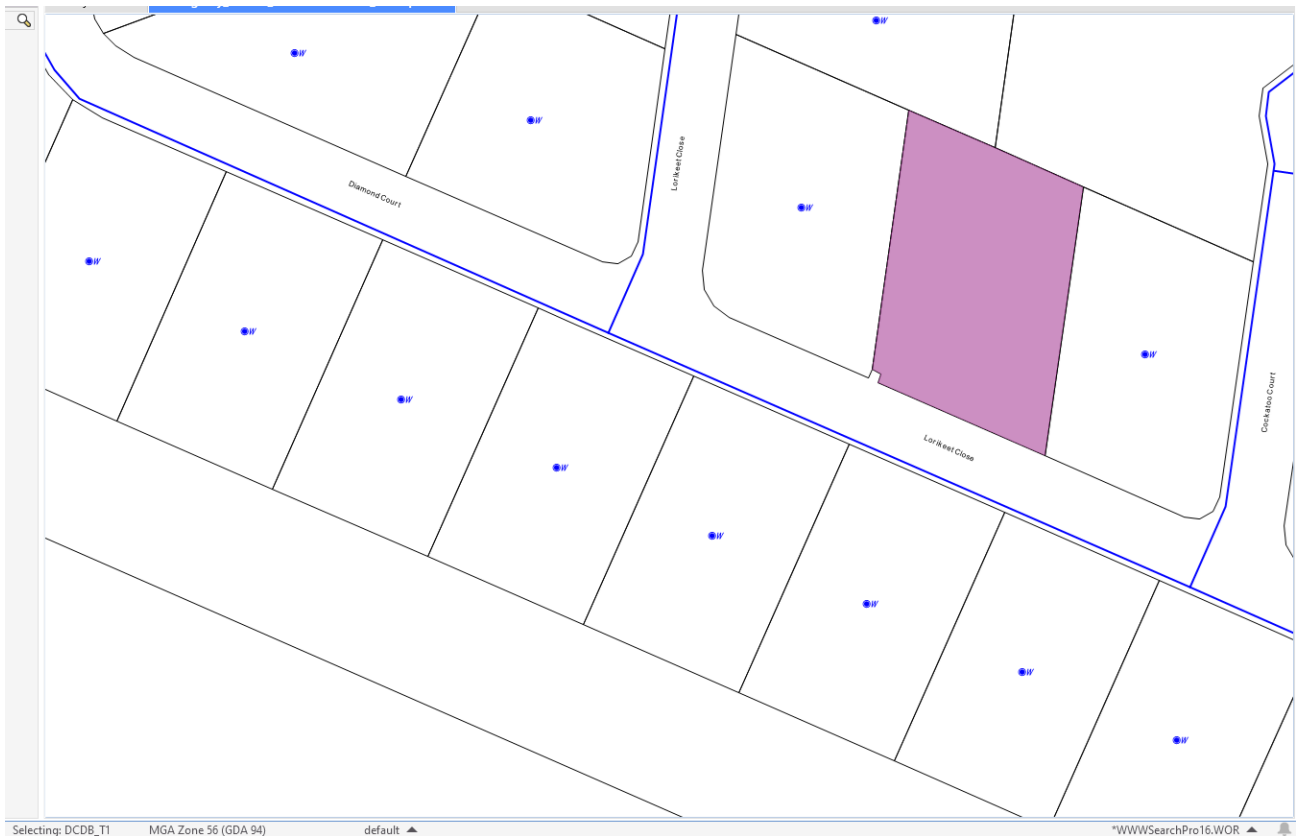


Figure 1

Trunk Infrastructure capacity is also assessed under ultimate conditions to ensure that adequate capacity and levels of service for any lot to be included within the DSA are adequality met.

2.3 Water and Sewerage trunk infrastructure operation and maintenance requirements

Historically, Council has approved connections to trunk infrastructure, bulk water supply rising mains, outside of the indicated DSA boundary. These rising mains service one purpose, the transfer of treated water from the treatment plants or from main pump stations to the initial trunk reservoir for the scheme. Regardless of size, connections to this infrastructure can have impacts on their operations, as well as limitations to desired levels of service and should be avoided.

The main reasons for this are:

- Operational of trunk infrastructure can result in variations of flow and pressure which can impact customer connections,

- Water quality can also alter, including chlorine demands which may not be at consistent level. Connections commonly have long service lines to their final use, resulting in poorer quality water that would be expected in a normal urban or rural residential environment.
- Assurance of supply cannot always be guaranteed, and infrastructure failures can result in long interruptions to supply, sometimes up to 48 hours.
- During infrastructure failures or malfunctions, poor treated water may have to temporarily be pumped up the line and scoured prior to normal operations. This requires all service connections to be turned off until water quality is suitable. This can also delay the return to normal operations as it can take 1-2 hours in some circumstances to turn off services and then reinstate them following repairs.

2.4 Water quality and public health implications

Additional connections to the end of existing infrastructure can result in increased water age and subsequently poor water quality being delivered to customers. Although as a service provider, disinfection to an acceptable levels is targeted to be achieved at the end of line customer connections. If post meter the service line internally extends for more than 30m to the point of use, this can result in increased water age and poor water quality due to low turnover. In addition in rural residential areas, pressure levels of service will also be affected.

2.5 Historically approved connections considering private infrastructure and meter locations and their impact on other customers.

Connections outside of the DSA have historically been approved by Council's since the water and sewer schemes have been installed. Approval has typically been granted solely on the basis of current network capacity, with little assessment of impacts under ultimate case conditions, that is all allotments within the DSA being connected to the network. Every service that is connected results in a reduction in pressure and flow to the overall network. Systems are designed to cater for a designated number of allotments. Every additional allotment connected outside of the boundary to cater allotments provided for in the ultimate case scenario reduces the capacity of the designed network by one connection. This can be compounded in rural settings, as additional connections approved outside a DSA can have significant demand increase if livestock are catered for, compared to a typical residential dwelling which historic connections have been provided for.

Additionally, several areas with historical connections also have private infrastructure installed, that can travel many kilometres past the point of connection to Council's infrastructure. Council should provide additional connections of these service lines to avoid disputes over ownership and maintenance.

2.6 Triggers for infrastructure extensions or upgrades necessary to provide connections

Under current infrastructure and capital works plans, upgrades to infrastructure have been programmed to be undertaken prior to major deficiencies in levels of service occurring. This can be determined by development, asset age and conditions, and current infrastructure capacity. Expanding the DSA to include additional lots may not only trigger an additional increase in capacity but may also require the upgrade to be brought forward and undertaken sooner than previously required.

2.7 Declared Service Area Maps

The declared water supply and sewerage boundary extent maps are available upon request via Councils Customer Contact Centre or via download from Council website. Table 1 and Table 2 provides a list of the available service area maps.

Table 1- Water Supply Service Area Maps

Declared Water Supply Service Area Extents	
Water Supply Scheme	Map
Blackbutt	Declared Water Supply Service Area -Blackbutt M1
Boondooma	Declared Water Supply Service Area -Boondooma M1
Kingaroy	Declared Water Supply Service Area -Kingaroy M1 (North) Declared Water Supply Service Area - Kingaroy M2 (South)
Kumbia	Declared Water Supply Service Area -Kumbia M1
Murgon	Declared Water Supply Service Area -Murgon M1
Nanango	Declared Water Supply Service Area -Nanango M1
Proston (Urban)	Declared Water Supply Service Area -Proston Urban M1
Proston Rural	Declared Water Supply Service Area -Proston Rural M1 (Oakden/Speedwell/Abbywood/Range) Declared Water Supply Service Area -Proston Rural M2 (Hivesville/Bluff)
Wondai	Declared Water Supply Service Area -Wondai M1
Wooroolin	Declared Water Supply Service Area -Wooroolin M1
Yallakool	Declared Water Supply Service Area -Yallakool M1

Table 2- Sewerage Service Area Maps

Declared Sewerage Service Area Extents	
Sewerage Scheme	Map
Blackbutt	Declared Sewerage Service Area -Blackbutt M1
Boondooma	Declared Sewerage Service Area -Boondooma M1
Kingaroy	Declared Sewerage Service Area -Kingaroy M1
Murgon	Declared Sewerage Service Area -Murgon M1
Nanango	Declared Sewerage Service Area -Nanango M1
Proston (Urban)	Declared Sewerage Service Area -Proston Urban M1
Wondai	Declared Sewerage Service Area -Wondai M1
Yallakool	Declared Sewerage Service Area -Yallakool M1

