Moreton Bay Regional Council – Caboolture Shire

Planning Scheme Policy

PSP 21F - Trunk Infrastructure Contributions - Water Supply

Moreton Bay Regional Council – Caboolture Shire

PSP21F Trunk Infrastructure Contributions – Water Supply

ADOPTION
Moreton Bay Regional Council adopted this planning scheme policy on 8 September 2009.

COMMENCEMENT
This planning scheme policy took effect from 29 October 2009.

This document contains the corrections identified in the "Planning Scheme Policies List of Corrections" document, and reflects the directive by the CEO to implement those corrections. The adopted version of the PSPs and the "Planning Scheme Policies List of Corrections" document can be accessed at Council's webpage.

I, Daryl Hitzman, A/Chief Executive Officer, of the Moreton Bay Regional Council, hereby certify that this document is a true copy of the original.

Daryl Hitzman
A/Chief Executive Officer

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PSP21F – TRUNK INFRASTRUCTURE CONTRIBUTIONS – WATER SUPPLY

Head of Power

This document is a Planning Scheme Policy for the purposes of the *Integrated Planning Act 1997* (the Act) and is made in compliance with the process prescribed in Schedule 3 of the Act.

Objective

The objective of this policy is to apportion the cost of Water Supply Trunk Infrastructure over all benefiting development (existing and future) commensurate with the demand or load that existing and future development will place on existing and planned future infrastructure, while ensuring a reasonable and equitable distribution of the costs of Water Supply Trunk Infrastructure works between Council and developers of land in the former Caboolture Shire.

Definitions / Application

Application

This policy applies to all applications for development which has been made assessable against the *Caboolture ShirePlan* and which will utilise any part of the Water Supply Trunk Infrastructure Network. For the purposes of this policy, the extent of the Water Supply Trunk Infrastructure Network within the former Caboolture Shire is shown in Schedule D.

The policy outlines the basis of Council's Infrastructure Contributions Regime for Water Supply Trunk Infrastructure in the former Caboolture Shire. It is to be read in conjunction with Planning Scheme Policy PSP21G Trunk Infrastructure Contributions – Administration Policy.

Payment of any monetary contribution under this policy will in no way relieve the development proponent from any requirement under a condition of development approval to undertake non-trunk works or to connect the development to trunk infrastructure. Nothing contained in this policy precludes Council and the development proponent from entering into an infrastructure agreement in regard to the matters dealt with by this policy.

Definitions

The definitions of applicable terms are contained in PSP21G Trunk Infrastructure Contributions – Administration Policy. Where a term used in this policy is not defined in PSP21G that term shall, unless the context indicates or requires otherwise, have the meaning assigned to it in the *Caboolture ShirePlan* or in the *Integrated Planning Act 1997*.

Policy Statement

1 Scope

This policy sets out the basis for determining the amount of Development Contributions for Water Supply Trunk Infrastructure which Council will impose as conditions of development approval. The provisions of this policy shall apply to applications for development within the former Caboolture Shire which are planned to utilise Water Supply Trunk Infrastructure either immediately or at some time in the future. This policy:

- is to be read in conjunction with Planning Scheme Policy PSP21G Trunk Infrastructure Contributions – Administration Policy;
- specifies the assumptions made in determining the rate of the contribution payable towards the cost of Water Supply Trunk Infrastructure within Council's Designated Infrastructure Service Area (DISA);
- lists the land use, density and demand assumptions made for predicting demand and planning the Water Supply Trunk Infrastructure Network;
- specifies the works, structures or equipment, which the Council determines to be Water Supply Trunk Infrastructure;
- establishes the estimated cost of construction and any required augmentation of the Water Supply Trunk Infrastructure Network in respect of which contributions are to be made; and
- lists the applicable Demand Factors and Schedules of Infrastructure Contribution Rates.

2 Background Information

The methodology used in establishing the amount of required Trunk Infrastructure Contributions under this policy is based on the following reports:

(1) GHD, "CabWater, Report for Trunk Infrastructure Planning – Water Supply", June 2008;

(2) GHD, "CabWater, Infrastructure Charges Schedule – Background Report – Water Supply and Sewerage", May 2008;

(3) GHD, "CabWater, Infrastructure Charges Schedule –Water Supply", June 2008;

(4) 15 year capital works program - internal minute to Moreton Bay Regional Council Financial Department 23 December 2008.

3 Water Supply Methodology

3.1 Methodology

The methodology used for determining the rate of Infrastructure Contributions for Trunk Water Supply under this policy is based upon the approach set out in the Department of Local Government and Planning's IPA Guidelines 1/04 and 2/04 (dated 4th October 2004) and the Standard Infrastructure Charges Schedule Nov 2008.

In summary, Infrastructure Contribution rates for the Water Supply Trunk Infrastructure Network have been derived in the following manner:-

(a) determine the service catchments for Trunk Infrastructure Delivery;

(b) estimate the amount of new development and resulting demand on the network within each service catchment;

(c) determine the Trunk Infrastructure likely to be needed to service the development or planned / ultimate population within the service catchment to deliver the Desired Standard of Service (DSS) outlined in Schedule E of this policy. Where water supply trunk infrastructure is shared between service catchments, the cost of these infrastructure components has been apportioned in proportion to the relative demands;

(d) determine the current replacement costs for existing Trunk Infrastructure in base year dollars, and the future establishment costs for future Trunk Infrastructure in net present values in the base year for each service catchment; and

(e) derive the applicable Infrastructure Contribution Rates by dividing the total network costs in net present values by the total discounted 'ultimate' demand on the network in the service catchment, thereby producing a rate per selected demand unit.

The contribution rate, for each particular service catchment, was determined by applying the formula:-

$$CR_{Catchment} = (Asset\ Values)/(Demand)$$

Where:-

$CR_{Catchment}$ = Contribution Rate for an individual service catchment (expressed in $/EPW)

Asset Values = Value of Catchment's Assets ($)

= Σ(Current Replacement Cost of Existing assets at 01-01-2009 x proportion of the asset utilised by the service catchment) + Σ (net present value at 01-01-2009 of future assets x proportion of the asset utilised by the service catchment)

Demand = Σ(Existing Demand in the service catchment at 01-01-2009) + (Net Present Value at 01-01-2009 of the Future Demand to Ultimate Development) (expressed in EPW)

This methodology applies an equitable distribution of trunk infrastructure costs between Council (on behalf of the existing community), and entities proposing new development. Each development proponent will only be responsible for meeting the establishment costs of that proportion of the water supply trunk infrastructure network planned to be consumed by that entity's development proposal.

3.2 Water Supply Service Catchments

In general, Council supplies all residential, rural residential, industrial and commercial land uses with treated water. It does not generally supply rural properties, however, some properties adjacent to existing water mains have been connected.

Infrastructure contribution rates for the Water Supply Network have been calculated for that part of the former Caboolture Shire planned to be serviced with a reticulated water supply.

There are two discrete water supply areas within the Shire, the "Woodford D'Aguilar" area (Upland) and the Wamuran to Coastal region (Lowland) which are serviced by the regional water supply system. Because of the discrete nature of these two catchments and the differing costs of servicing these areas, they are treated as two separate service catchments.

Table 3.2A – Water Supply Service Catchments

Service Catchments
Upland
Lowland

The location and extent of the service catchments are shown on the maps contained in Schedule C.

3.3 Water Supply Demand Assumptions

The residential growth projections used for deriving the water supply demand are expressed in this policy in terms of dwellings and population. The non-residential projections are expressed in terms of Gross Floor Area (GFA) and employee numbers. Residential and non- residential development projections were then converted to 'Equivalent Persons, water' (EPW) in order to adopt a uniform measure of water demand. For water supply, Equivalent Person, water (EPW) is the average quantity of water used by a typical person in a residential setting over the long term for drinking, cooking, bathing, washing and cleaning, flushing, irrigation and all other associated purposes as well as an allowance for system losses incurred in delivering the water to the person. The projected serviced Equivalent Population for the former Caboolture Shire is summarised in Table 3.3 B and represents the product of the number of development units at the end planning horizon for the network and the relevant demand generation rate.

The Demand Projections, Capacity Planning and Infrastructure Contribution Rates developed for the Water Supply Network are expressed in the Standard Demand Units of 'Equivalent Person (Water)' (EPW). Table 3.3B summarise the projections for the Water Supply service area, derived using the demand assumptions shown in Table 3.3A and the development intent expressed in the *Caboolture ShirePlan*.

Table 3.3A - Water Demand Assumptions in Residential and Non-Residential Areas

Zone / Lot Type by Catchment	Assumption
Upland - Residential	
Residential A – lot area >1000m^2	3.4 EPW / lot
Residential A – lot area 501m^2 – 1000m^2	2.8 EPW / lot
Residential A – lot area <501m^2	2.25 EPW / lot
Residential B	67 EPW / ha
Rural Residential	3.4 EPW / lot
Upland – Non-Residential	
Metropolitan Centre	30 EPW / ha
District Centre	30 EPW / ha
Local Centre	10 EPW / ha
Regional Industry	30 EPW / ha
District Industry	15 EPW / ha
Local Industry	15 EPW / ha
Special Use	6 EPW / ha
Open Space	0 EPW / ha
Management Lot	3.4 EPW / lot
Lowland - Residential	
Residential A – lot area >1000m^2	3.5 EPW / lot

Zone / Lot Type by Catchment	Assumption
Residential A – lot area 501m^2 – 1000m^2	2.9 EPW / lot
Residential A – lot area <501m^2	2.3 EPW / lot
Residential B	67 EPW / ha
Rural Residential	3.5 EPW / lot
Lowland – Non-Residential	
Metropolitan Centre	30 EPW / ha
District Centre	30 EPW / ha
Local Centre	10 EPW / ha
Regional Industry	30 EPW / ha
District Industry	60 EPW / ha
Local Industry	15 EPW / ha
Special Use	10 EPW / ha
Open Space	0 EPW / ha
Management Lot	3.4 EPW / lot

Projected Water Supply Demand

Projected ultimate demand for the water supply trunk network is shown in Table 3.3B. To satisfy the discounted cash flow methodology requirements of calculating the infrastructure contribution rates, existing demand is added to the value of future demand indexed for anticipated fluctuations in construction costs (generally increases) and discounted for cost of capital, resulting in NPV Demand.

Table 3.3B – Demand in EPWs by Water Supply Service Catchment[1]

Service Catchment	Ultimate Demand in EPWs	Total Ultimate NPV Demand in EPWs
Upland	7,413	7,149
Lowland	202,100	199,251
	209,513	**206,400**

[1] Differences between the total value and the sum of the column can occur due to values being displayed without cents. Background calculations including cents are correct.

4 Water Supply - Plan for Trunk Infrastructure

4.1 Water Supply Trunk Infrastructure Network

The water supply trunk infrastructure items for this infrastructure contributions regime are restricted to the Distribution Network components only. These items comprise infrastructure that is of general benefit to a service catchment and are limited to:-

- water mains (larger than 150mm nominal diameter (DN));
- local reservoirs;
- pump stations;
- flow meters; and
- chlorination facilities.

The various elements of this Trunk Infrastructure are shown on the maps in Schedule D and are individually tabulated in Section 4.3.

4.2 Water Supply Trunk Infrastructure Valuations

The establishment cost for both the existing and future components of the Water Supply network was derived from the background material listed in Section 2 of this policy and is summarised in Table 4.2A (the amounts shown are in 01 January 2009 dollars.)

The construction years for each of the listed elements of future infrastructure have been estimated from projected growth levels. The actual year(s) of construction and the sizing of the infrastructure will depend upon how and when the development fronts progress in Caboolture. The schedule of works is outlined in Table 4.3A and the costs are total costs after deducting subsidies. The costs are expressed in net present values current at 01 January 2009.

Table 4.2A - Water Supply Infrastructure Establishment Cost by Service Catchment[2]

NETWORK COMPONENTS	LOWLANDS	UPLANDS	TOTALS
TOTAL COSTS:			
SERVICE CATCHMENT-ACTIVE-EXISTING(Jan 2009)	$48,162,198	$5,716,831	$53,879,029
SERVICE CATCHMENT-PASSIVE-EXISTING(Jan 2009)	$280,539,203	$12,214,288	$292,753,491
SERVICE CATCHMENT-FUTURE	$44,736,897	$3,715,222	$48,452,119
TOTAL SERVICE CATCHMENT	**$373,438,299**	**$21,646,340**	**$395,084,638**

[2] Differences between the total value and the sum of the column can occur due to values being displayed without cents. Background calculations including cents are correct.

4.3 Future Water Supply - Plan for Trunk Infrastructure

The construction years have been estimated based on the projected growth levels. The schedule of works is outlined in Table 4.3A and the costs are total costs after deducting subsidies. The costs are expressed in net present values current at 01 January 2009 dollars.

Table 4.3A - Future Asset Schedule as at 01 January 2009[3]

	Project Name	Anticipated Commencement of Construction	Service Catchment	NPV - 01 January 2009
	PUMP STATIONS			
CPIPWS0024	Raaen Rd, New Fire Booster Pump (25 L/s @ 30m)	2011	Upland	$30,589
CPIPWS0025	Chambers Road PS Upgrade (35 L/s @ 45m)	2012	Upland	$387,853
CPIPWS0026	Morayfield LLZ Pump Station Upgrade	2014	Lowland	$1,582,903
CPIPWS0027	Morayfield HLZ Pump Station Upgrade	2009	Lowland	$395,823
CPIPWS0028	Narangba HLZ Pump Station Upgrade	2011	Lowland	$391,689
CPIPWS0029	Donnybrook Fire Pump	2012	Lowland	$223,022
	MAINS			
CPIPWS0002	Windsor St (retic), Woodford (750m of 150mm dia)	2015	Upland	$930,311
CPIPWS0003	Windsor St, Woodford (3310m of 200mm dia)	2015	Upland	$2,366,468
CPIPWS0005	O'Mara Road HLZ 250mm Water Main	2009	Lowland	$348,168
CPIPWS0006	300 dia water main Dobson Lane	2009	Lowland	$674,529
CPIPWS0007	Anderson Rd, Morayfield (375mm dia x 2280m)	2020	Lowland	$2,398,081
CPIPWS0008	Beerburrum Rd, Caboolture (500mm dia x 1050m)	2013	Lowland	$1,791,648
CPIPWS0009	Business Park Morayfield (300mm dia x 1430m)	2013	Lowland	$1,017,956
CPIPWS0010	Business Park Morayfield (300mm dia x 890m)	2013	Lowland	$635,024
CPIPWS0011	Cayenne Rd/Old Gympie Rd, Caboolture (300mm dia x 2040m)	2010	Lowland	$1,459,814
CPIPWS0012	Cayenne Rd/Old Gympie Rd, Caboolture (300mm dia x 790m)	2010	Lowland	$563,311
CPIPWS0013	Cottrill Rd, Caboolture (300mm x 570m) (300mm dia x 230m) (300mm dia x 440m)	2013	Lowland	$875,024
CPIPWS0014	Male Rd, Caboolture (300mm dia x 1910m)	2013	Lowland	$1,340,563
CPIPWS0015	Old Gympie Rd, Elimbah (500mm dia x 3110m) (500mm dia x 1880m)	2013	Lowland	$5,254,649
CPIPWS0016	Omara Rd, Narangba (250mm dia x 1440m)	2014	Lowland	$791,477
CPIPWS0017	Redondo St, Sandstone Point (300mm dia x 1160m)	2009	Lowland	$837,957
CPIPWS0018	Riverbank, Morayfield (300mm dia x 1460m)	2014	Lowland	$1,021,708
CPIPWS0019	Riverbank, Morayfield (300mm dia x 1960m)	2014	Lowland	$1,381,489
CPIPWS0020	Riverbank, Morayfield (300mm dia x 960m)	2014	Lowland	$671,567
CPIPWS0021	Smiths Rd/ Cottrill Rd, Caboolture (300mm dia x 690m)	2014	Lowland	$479,691
CPIPWS0022	Summerfield Dr, Caboolture (250mm dia x 630m)	2009	Lowland	$361,584
CPIPWS0023	Woolworths site, Bongaree (250mm dia x 1320m)	2015	Lowland	$734,116
CPIPWS0037	Benabrow Ave, Bongaree (200mm x 320m)	2017	Lowland	$163,963
CPIPWS0038	Bishop Rd Develop, Beachmere (200mm x 300m)	2017	Lowland	$153,716
CPIPWS0039	Boundary Rd, Narangba (200mm x 210m)	2010	Lowland	$111,628
CPIPWS0040	Boyd St, Woorim (200mm x 120m)	2017	Lowland	$61,486
CPIPWS0041	Burpengary Rd, Narangba (200mm x 2080m)	2017	Lowland	$1,065,573
CPIPWS0042	Burpengray Rd, Narangba (200mm x 1130m)	2016	Lowland	$591,391
CPIPWS0043	Caboolture River Rd, Upper Caboolture (200mm x 190m)	2009	Lowland	$101,529
CPIPWS0044	Caboolture River Rd, Upper Caboolture (200mm x 520m)	2009	Lowland	$277,868
CPIPWS0045	Caboolture River Rd, Upper Caboolture (200mm x 2870m)	2012	Lowland	$1,519,590
CPIPWS0079	Cottrill Rd, Caboolture (200mm x 80m)	2014	Lowland	$41,641
CPIPWS0046	Dobson Lane, Upper Caboolture (200mm x 250m)	2017	Lowland	$128,096
CPIPWS0047	Dobson Lane, Upper Caboolture (200mm x 450m)	2017	Lowland	$230,574
CPIPWS0048	Duncans Rd, Caboolture (200mm x 510m)	2011	Lowland	$269,678
CPIPWS0049	Duncans Rd, St, Caboolture (250mm x 650m)	2011	Lowland	$369,167

[3] Differences between the total value and the sum of the column can occur due to values being displayed without cents. Background calculations including cents are correct.

	Project Name	Anticipated Commencement of Construction	Service Catchment	NPV - 01 January 2009
CPIPWS0050	Eucalyptus St, Bellara (200mm x 400m)	2017	Lowland	$204,954
CPIPWS0051	Fairmount St, Elimbah (200mm x 840m)	2014	Lowland	$437,236
CPIPWS0052	Ferguson Ave, Bongaree (200mm x 370m)	2017	Lowland	$189,583
CPIPWS0053	Figtree Court, Burpengary (200mm x 1050m)	2014	Lowland	$546,544
CPIPWS0054	Goshawk Court, Caboolture (200mm x 390m)	2014	Lowland	$203,002
CPIPWS0055	Greening Rd, Moodlu (200mm x 960m)	2011	Lowland	$507,629
CPIPWS0056	Industrial site, Bongaree (200mm x 1120m)	2017	Lowland	$573,872
CPIPWS0057	Jensen Rd, Caboolture (200mm x 760m)	2014	Lowland	$395,594
CPIPWS0058	Jubilee St, Caboolture (200mm x 320m)	2012	Lowland	$168,324
CPIPWS0059	Marshman Rd/ Omara Road, Narangba (200mm x 1220m)	2013	Lowland	$644,382
CPIPWS0060	Mckean St, Caboolture (200mm x 250m)	2009	Lowland	$133,590
CPIPWS0080	Old Gympie Rd, Elimbah (500mm x 1880m)	2014	Lowland	$3,180,946
CPIPWS0061	Old Gympie Rd, Narangba (200mm x 950m)	2014	Lowland	$491,601
CPIPWS0062	Pauls Rd, Upper Caboolture (200mm x 880m)	2017	Lowland	$450,900
CPIPWS0063	Randolph St, Beachmere (200mm x 1750m)	2017	Lowland	$896,675
CPIPWS0064	Randolph St, Beachmere (200mm x 330m)	2017	Lowland	$169,087
CPIPWS0065	Riverbank, Morayfield (200mm x 1110m)	2015	Lowland	$574,751
CPIPWS0081	Smiths Rd, Caboolture (200mm x 590m)	2012	Lowland	$310,347
CPIPWS0066	Sunita Dr, Elimbah (200mm x 190m)	2015	Lowland	$98,381
CPIPWS0067	Sunita Drive, Elimbah (200mm x 280m)	2015	Lowland	$144,982
CPIPWS0068	Swann Rd, Bellmere (200mm x 1110m)	2015	Lowland	$574,751
CPIPWS0069	Sylvan Beach Esplanade, Bellara (200mm x 150m)	2017	Lowland	$69,741
CPIPWS0070	Sylvan Beach Esplanade, Bellara (200mm x 350m)	2017	Lowland	$179,335
CPIPWS0071	Sylvan Beach Esplanade, Bellara (200mm x 90m)	2017	Lowland	$46,115
CPIPWS0072	Sylvan Beach Esplanade, Bellara (200mm x 90m)	2017	Lowland	$46,115
CPIPWS0073	Sylvan Beach esplanade, Bellara, (200mm x 280m)	2017	Lowland	$143,468
CPIPWS0074	Wallace St North, Caboolture (200mm x 740m)	2012	Lowland	$389,249
CPIPWS0075	Warana Ave, Bellara (200mm x 200m)	2017	Lowland	$102,477
	DISINFECTION BOOSTER STATIONS			
CPIPWS0031	Callaghan Road Chloramine Dosing Station	2009	Lowland	$49,738
CPIPWS0032	Wamuran Chloramine Dosing Station	2009	Lowland	$16,735
CPIPWS0033	Augment Bellara Reservoir Chloramine Dosing Station	2009	Lowland	$2,479,100
	TOTAL PROGRAMME - WATER SUPPLY			**$48,452,119**

Schedule A: Demand Factors

Demand factors are calculated based on defined uses within the jurisdiction of each relevant planning scheme, and are therefore unique to each district within the Moreton Bay Regional Council area.

Table A1 - Demand Factors for Water Supply Infrastructure Contributions

Demand Factors For MCUs – by Land Use	Demand Parameter Type	Demand Factor (EPWs)
Accommodation Building		
Boarding House	per bed	1.1
Hostel	per bed	1.1
Backpacker's Accommodation	per bed	1.1
Motel or Serviced Apartments (Summative Components)		
studio unit (See note 2)	unit	1.1
1-bedroom unit	unit	1.5
2-bedroom unit	unit	2
3 or more bedroom unit	unit	3.3
Any other item identified elsewhere in this table	As per item	Assess Impact on Application
Agricultural (see Note 4)	Individual Basis	Assess Impact on Application
Animal Husbandry (Intensive) (See Note 4)	Individual Basis	Assess Impact on Application
Animal Husbandry (Non-Intensive) (See Note 4)	Individual Basis	Assess Impact on Application
Aquaculture	Individual Basis	Assess Impact on Application
Brothel (Summative components)		
Bedrooms	bedroom	6.5
Bar	As Hotel	
Any other item identified elsewhere in this table	As per item	
Car Wash	100 square metres gross use area	3.1
Caravan Park (Summative Components)		
Tent site	site	1.4
Caravan site	site	1.8
Relocatable Homes and Tourist Cabins		
studio unit[2] (See note 2)	unit	1
1-bedroom unit	unit	1.4
2-bedroom unit	unit	1.8
3 or more bedroom unit	unit	2.9
Office	As Office	
Restaurant	As Restaurant	
Shop	As Shop	
Bar	As Hotel	

Demand Factors For MCUs – by Land Use	Demand Parameter Type	Demand Factor (EPWs)
Any other item identified elsewhere in this table	As per item	
Caretaker's Residence	As per appropriate dwelling house or multiple dwelling	
Cemetery (Summative Components)		
Any item identified elsewhere in this table	As per item	
Child Care Centre		
without laundry	Licensed child & staff member	0.175
with laundry	Licensed child & staff member	0.225
Corrective Institution	inmate	1.2
Dependent Person's Accommodation	No additional charge over main dwelling	0
Display Home	As per the home type on display	
Dual Occupancy	As per 2 dwelling houses each on half the lot	
Dwelling House (by lot size)		
lots sized up to but excluding 501 square metres	Refer Table A2	
lots sized 501 to 1000 square metres	Refer Table A2	
lots sized greater than 1000 square metres	Refer Table A2	
Educational Establishment (Summative Components)		
Schools (Summative Components)		
Non-boarding schools	Licensed enrolment	0.21
Boarding schools	Licensed enrolment of boarding students	1.1
Other Education Establishments	Licensed enrolment	0.26
Addition for areas irrigated by potable water	per 100 square metres under irrigation	0.05
Entertainment & Recreation (Indoors) (Summative Components)		
Cinema	seat	0.05
Licensed Clubs & Organisations	As Hotel	
Swimming Pools	Pool volume in cubic metres	0.01
Gymnasiums and Fitness Centres (see note 1)		
• Water Closet	Pedestal	0.7
• Urinal (Stall)	Stall	0.125
• Urinal (Trough)	metre	0.25
• Shower/ Bath	Shower/ bath	0.4
• Wash Basin	basin	0.2
Commercial Clubs & Organisations	As Hotel	
Community Service or not-for-profit Clubs and Organisations with no gaming or liquor licence		Assess Impact on Application
• With facilities for the frequent provision of cooked	100 square metres gross floor area	1

Demand Factors For MCUs – by Land Use	Demand Parameter Type	Demand Factor (EPWs)
food		
• Without facilities for the frequent provision of cooked food	100 square metres gross floor area	0.5
Other Types (See note 4)	Individual Basis	Assess Impact on Application
Entertainment and Recreation (Outdoors) (Summative Components)		
Swimming Pools	Pool volume in cubic metres	0.01
Changing Rooms, Showers and Toilets (see note 1)		
• Water Closet	Pedestal	0.7
• Urinal (Stall)	Stall	0.125
• Urinal (Trough)	metre	0.25
• Shower Bath	shower	0.4
• Wash Basin	basin	0.2
Drinking fountains and standpipes	fountain/standpipe	0.2
Areas irrigated by potable water	per 100 square metres under irrigation	0.1
Any other item identified elsewhere in this table	As per item	
Estate Sales Office (Choose 1 only)		
Where the office will be removed upon completion of sales		0
Where the office is the temporary use of a dwelling house	As per the home type being used	
Where the office will be retained for a use identified elsewhere in this table	As per the scheduled use	
Extractive Industry (Summative Components)		
Changing Rooms, Showers and Toilets (see note 1)		
• Water Closet	Pedestal	0.7
• Urinal (Stall)	Stall	0.125
• Urinal (Trough)	metre	0.25
• Shower / Bath	Shower / bath	0.4
• Wash Basin	basin	0.2
• Load from industrial process (see note 4)	individual calculation	Assess Impact on Application
Fuel Depot	As Warehouse	
Funeral Parlour (Summative Components)		
Mortuary Area	100 square metres gross use area	5
Other Area	100 square metres gross use area	2
General Industry		
Changing Rooms, Showers and Toilets (see note 1)		
• Water Closet	Pedestal	0.7
• Urinal (Stall)	Stall	0.125

Demand Factors For MCUs – by Land Use	Demand Parameter Type	Demand Factor (EPWs)
• Urinal (Trough)	metre	0.25
• Shower Bath	shower	0.4
• Wash Basin	basin	0.2
Load from industrial process (See Note 4)	individual calculation	Assess Impact on Application
Home Based Business		Assess Impact on Application
Hospital (Summative Components)		
In-patients	per bed	1.5
Out-patients	100 square metres gross use area	1.5
Restaurant	As Restaurant	
Shop	As Shop	
Mortuary	100 square metres gross use area	5
Office	As Office	
Overnight accommodation for staff or relatives	As per relevant accommodation type	
Any other item identified elsewhere in this table	As per item	
Hotel (Summative Components)		
single room (without kitchen facilities)	room	0.9
double room (without kitchen facilities)	room	1.3
Suites or rooms with kitchen facilities	As Serviced Apartments	
Restaurant	As Restaurant	
Shop	As Shop	
Bar and Gaming Areas	100 square metres gross use area	4
Beer Garden	100 square metres gross use area	3
Function Rooms	100 square metres gross use area	2
Swimming Pools	Pool volume cubic metres	0.01
Any other item identified elsewhere in this table	As per item	
Landscape Supplies Production	Individual basis	Assess Impact on Application
Landscape Supply Centre (Summative Components)		
Dwelling House	As Dwelling House	
Plant Nursery	Per 100 square metres under irrigation	0.1
Shop	As Shop	
Any other item identified elsewhere in this table	As per item	
Marina (Summative Components)		
General	berth	0.3
Any other item identified elsewhere in this table	As per item	
Market	No charge	0
Medical Centre	100 square metres gross use area	1.5

Demand Factors For MCUs – by Land Use	Demand Parameter Type	Demand Factor (EPWs)
Motor Vehicle Repair Station	As Service Industry	
Multiple Dwelling (Summative Components)		
studio unit (see note 2)	unit	1
1-bedroom unit	unit	1.4
2-bedroom unit	unit	1.8
3 or more bedroom unit	Unit.	3.3
Office	100 square metres of gross use area	2.5
Park	As Entertainment & Recreation (Outdoors)	
Place of Worship	100 square metres of gross floor area	0.5
Public Utility		
Post Office Retail	As Shop	
Post Office Sorting Facility	As Warehouse	
Fire Station Ambulance Station	100 square metres of use area	1
Police Station	As per Office	
Water Treatment Plant Sewage Treatment Plant	Exempt	0
Landfill and Tip	Individual basis	Assess Impact on Application
Relocatable Home Park	As per Caravan Site	
Restaurant		
Café / Coffee shop/ Cafeteria/ Bistro	100 square metres of gross use area	3
Fast Food Restaurant	100 square metres of gross use area	5
Other Restaurants	100 square metres of gross use area	4
Retail Showroom	100 square metres gross use area	0.9
Retirement Village (Summation of the following Components)		
Accommodation for residents and staff	As Multiple Dwelling	
Office	As Office	
Medical Centres and Clinics	As Medical Centre	
Restaurant	As Restaurant	
Shop	As Shop	
Roadside Stall		
Rural Service Industry	As General Industry	
Rural Worker's Dwelling	As Multiple Dwelling	
Recycling Yard	Individual Basis	Assess Impact on Application
Sales or Hire Yard (Summative Components)		
Office	As Office	
Cleaning or Service Area	As Service Industry	

Demand Factors For MCUs – by Land Use	Demand Parameter Type	Demand Factor (EPWs)
Service Industry		
Laundries and Laundromats	100 square metres gross use area	6
Repair Shops and General	100 square metres gross use area	0.75
Service Station (Summative Components)		
Pump Sets	pump	0.25
Repair / Service Area	As Service Industry	
Shop	As Shop	
Any other item identified elsewhere in this table	As per item	
Shop		
Hairdressers, beauty salons, barbers (Summative Components)		
• General Retail Loading	100 square metres gross use area	0.9
• Installed Washbasins	basin	0.2
Other Shops	100 square metres gross use area	0.9
Special Care Facility	As Retirement Village	
Special Industry (Summative Components)		
Changing Rooms, Showers and Toilets (see note 1)		
• Water Closet	Pedestal	0.7
• Urinal (Stall)	Stall	0.125
• Urinal (Trough)	metre	0.25
• Shower Bath	shower	0.4
• Wash Basin	basin	0.2
Load from industrial process (See Note 4)	Individual Basis	Assess Impact on Application
Storage Facility	100 square metres of gross use area	0.1
Surgery		
Take Away Food Outlet	100 square metres of gross use area	4
Telecommunication Facility	No charge	0
Transport Depot	100 square metres gross use area	0.75
Vehicle Sales and Service (Summative Components)		
Showroom	As Retail Showroom	
Service Facilities	As Service Industry	
Veterinary Establishment	100 square metres of gross use area	1.5
Warehouse	100 square metres of gross use area	0.9
Winery (Summative Components)		
Restaurant	As Restaurant	
Shop	As Shop	

Demand Factors For MCUs – by Land Use	Demand Parameter Type	Demand Factor (EPWs)
Bar and Gaming Areas	100 square metres of gross use area	4
Beer Garden	100 square metres of gross use area	3
Function Rooms	100 square metres of gross use area	2
Any other item identified elsewhere in this table	As per item	
Load from wine making and bottling process (See Note 4)	individual calculation	Assess Impact on Application
NOTES Pertaining to the Use of Table A1		
Note 1: Only charged when the facility is available to customers not resident in the facility.		
Note 2: A studio unit is a unit designed for single occupancy, which has either no separate bedroom or only one separate bedroom of insufficient size to place a double bed.		
Note 3: Where demand for water is partly met by Council's recycled water, a consequential reduction shall be made to the EPWs used to calculate Water Infrastructure contributions.		
Note 4: Load from industrial process: As advised by the applicant and determined by Council as being a reasonable estimate of the demand attributable to the process. Conversion to EPW for water demand shall be on the basis of 1EPW = 300 litres/day.		
Note 5: This Table is applicable to all water supply areas.		

Table A2 - Demand Factors for RALs – by Zone

Zone/ Lot Type		EPW
Rural Residential		3.3/Lot
Residential A	lot area > 1000m^2	3.3/Lot
Residential A	lot area 501m^2 to 1000m^2	2.9/Lot
Residential A	lot area < 501m^2	2.4/Lot
Residential B		67/ha
Metropolitan Centre		30/ha
District Centre		30/ha
Local Centre		10/ha
Regional Industry		60/ha
District Industry		60/ha
Local Industry		15/ha
Special Use		10/ha
Management lot		3.3/Lot
Open Space		N/A

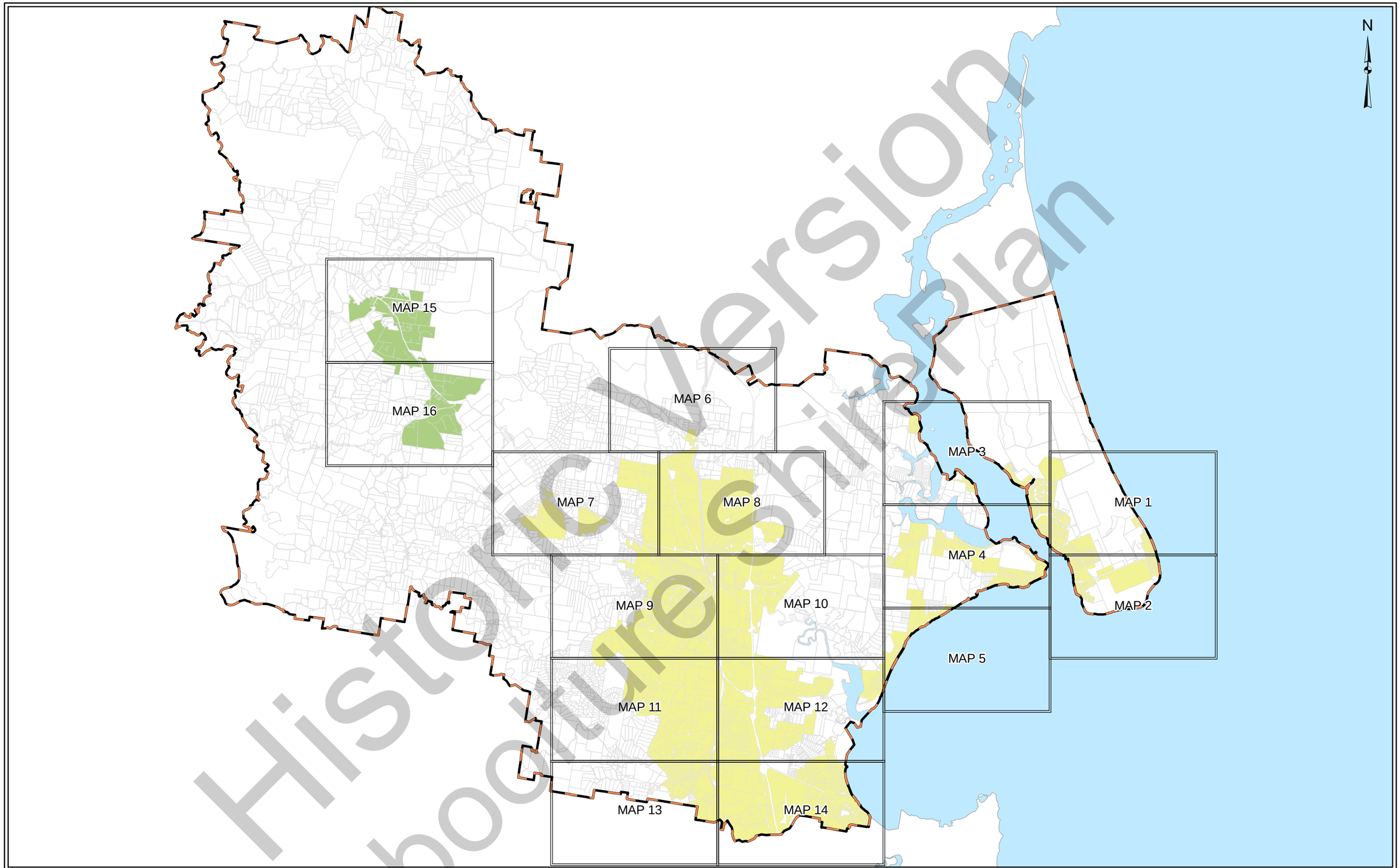
Schedule B: Infrastructure Contribution Rates

The water supply network infrastructure contribution rate, which applies in each of the service catchments, is shown in Table B – Trunk Water Supply - Infrastructure Contribution Rates (ICRs).

Table B – Trunk Water Supply - Infrastructure Contribution Rates (ICRs)

Service Catchment	ICR $ per EPW
Upland	$3,028
Lowland	$1,874

Schedule C: Service Catchments



0 2.5 5 10

Kilometres

SCALE 1:200,000 (at A3)

N

Water Supply Catchments

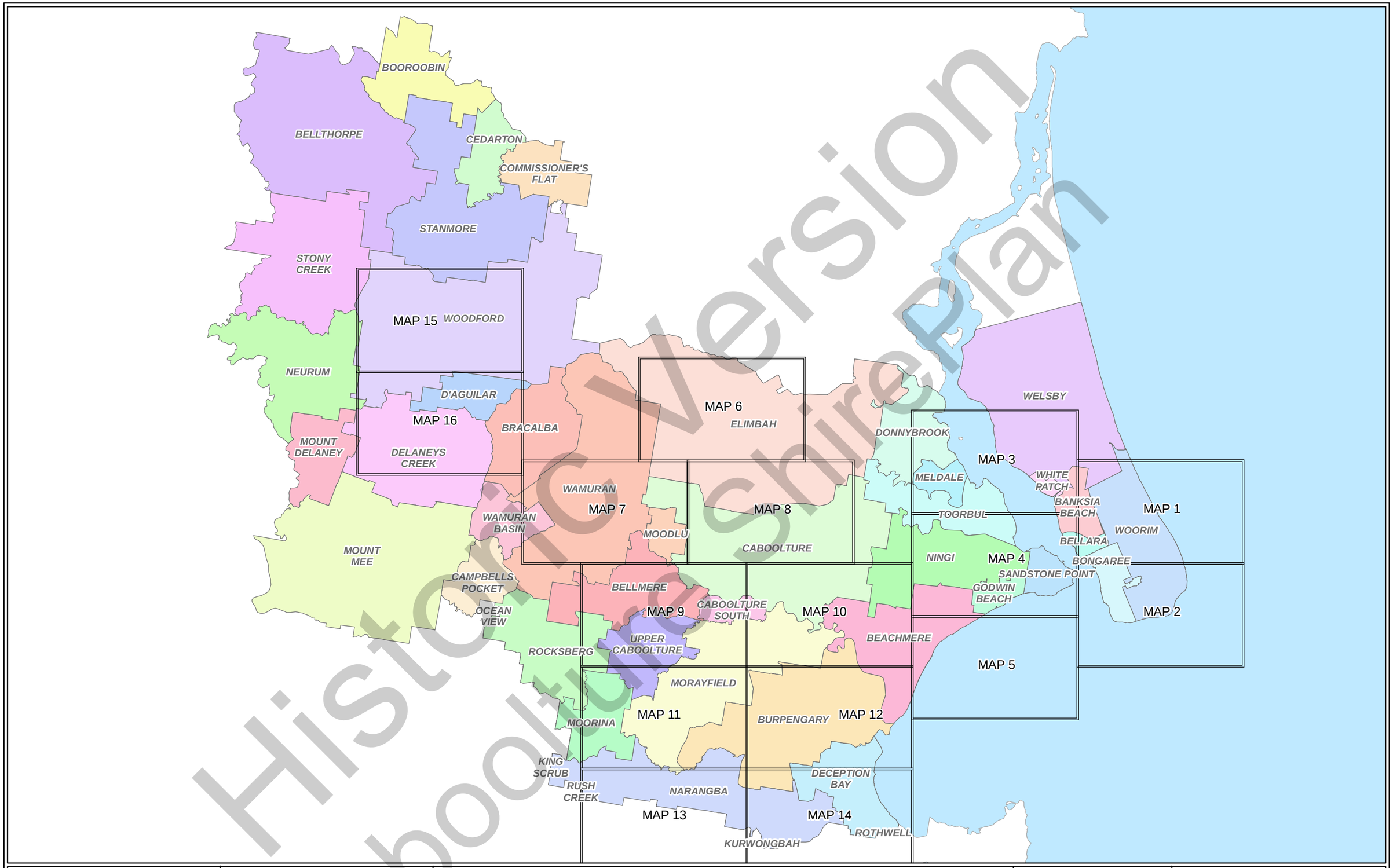
Lowlands Uplands

Caboolture Shire

Water Supply Service Catchments

EFFECTIVE FROM 29 October 2009

Schedule D: Network Assets

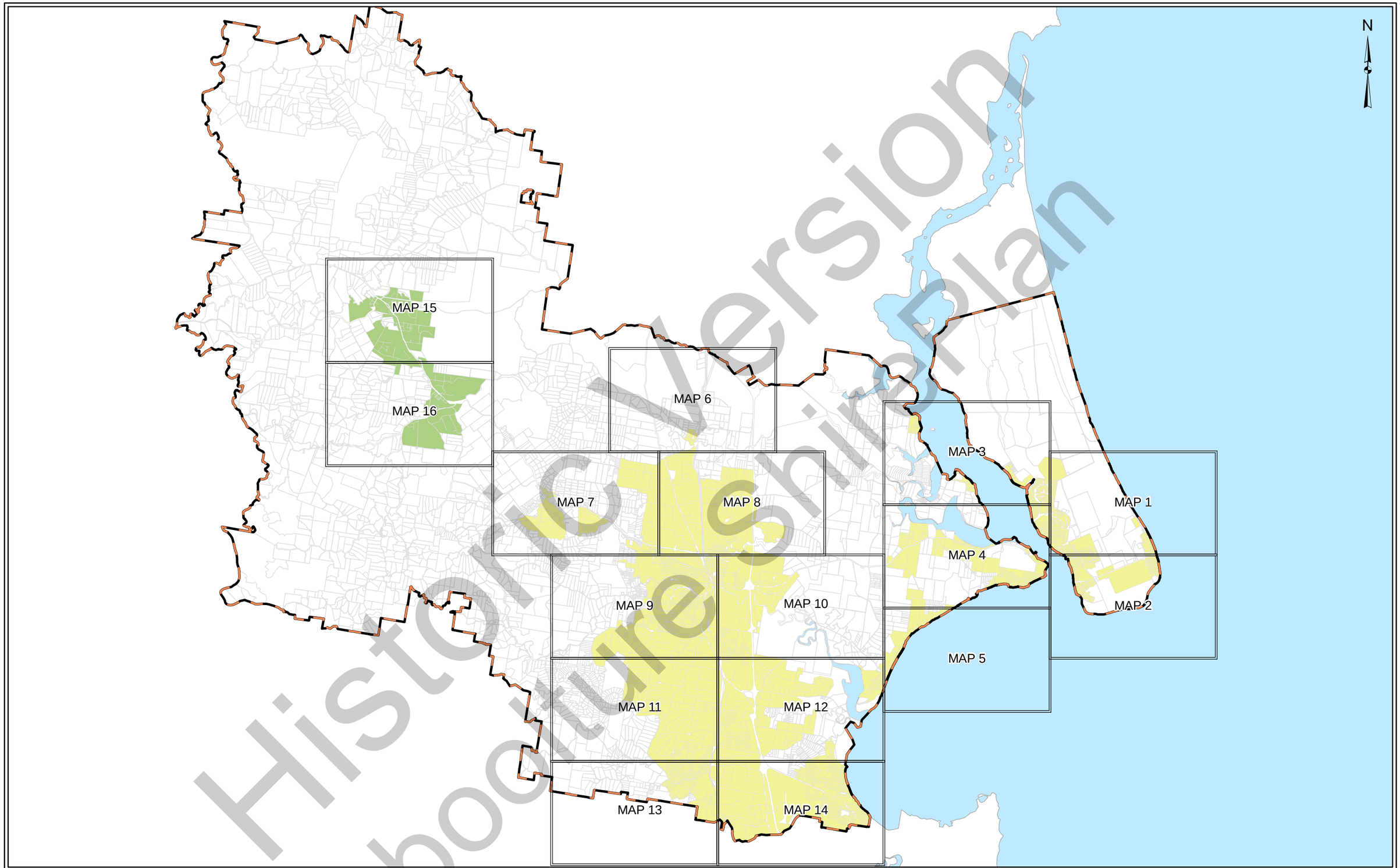


0 2.5 5 10
Kilometres

N

SCALE 1:200,000 (at A3)

Caboolture Shire
Index to Map Sheets



0 2.5 5 10

Kilometres

SCALE 1:200,000 (at A3)

N

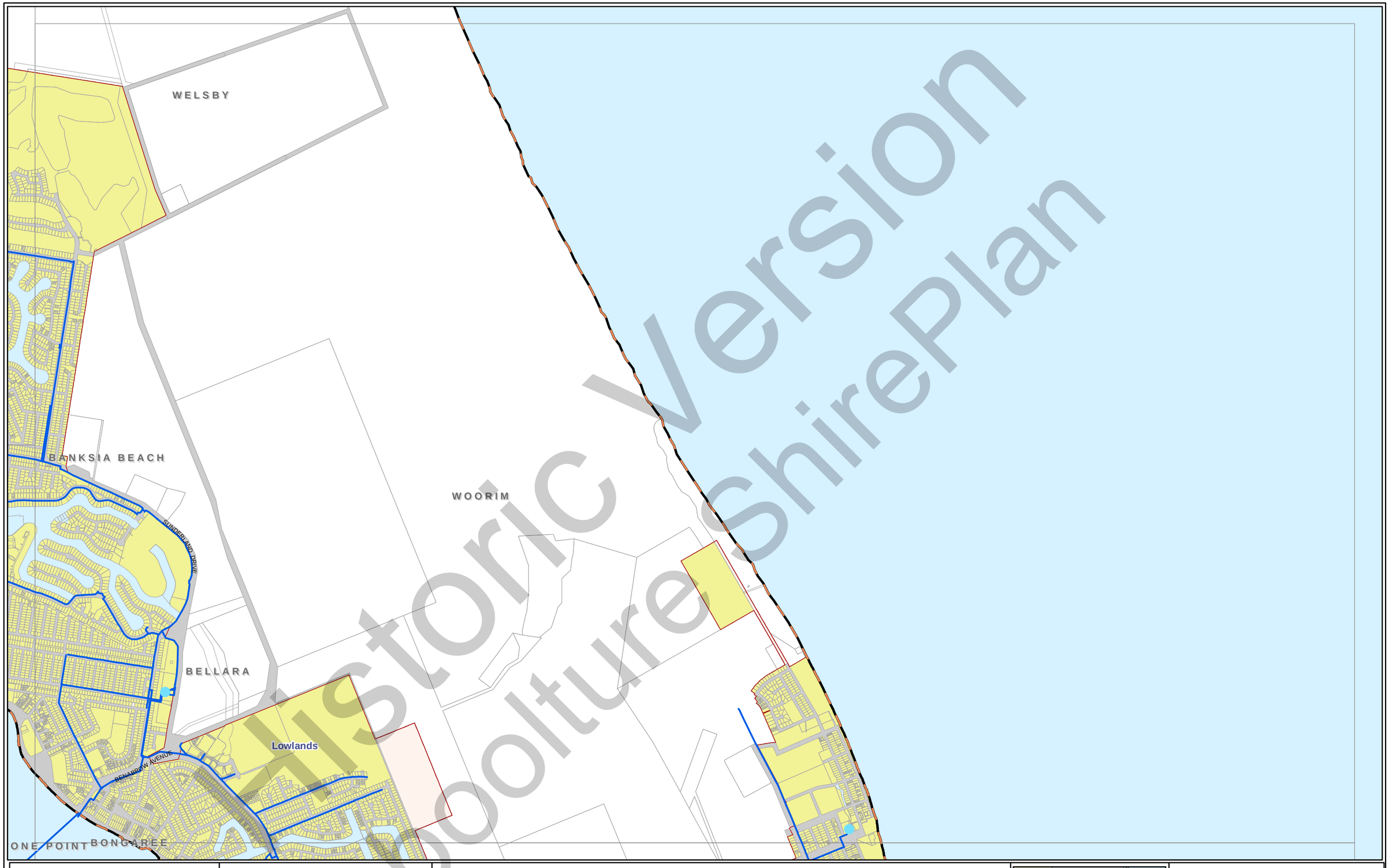
Water Supply Catchments

Lowlands Uplands

Caboolture Shire

Water Supply Service Catchments

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

- P Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 1

EFFECTIVE FROM 29 October 2009

BELLARA

SANDSTONE POINT

BONGAREE

WOORIM

Lowlands

FIRST AVENUE

0 0.25 0.5 1

Kilometres

SCALE 1:25,000 (at A3)

N

P Pump Station

Reservoir

Bulk Water Supply

Water Treatment Plant

Trunk Water Mains

Water Catchments

Lowlands

Uplands

DISA Boundary

Shire Boundary

Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 2

EFFECTIVE FROM 29 October 2009

DONNYBROOK

WELSBY

MELDALE

TOORBUL

WHITE PATCH

Lowlands

BANKSIA BEACH

PUMICESTONE ROAD

0 0.25 0.5 1

Kilometres

SCALE 1:25,000 (at A3)

N

P Pump Station

Reservoir

Bulk Water Supply

Water Treatment Plant

Trunk Water Mains

Water Catchments

Lowlands

Uplands

DISA Boundary

Shire Boundary

Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 3

EFFECTIVE FROM 29 October 2009

WHITE PATCH
BANKSIA BEACH
TOORBUL
BELLARA
NINGI
BRIBIE ISLAND ROAD
SANDSTONE POINT
Lowlands
GODWIN BEACH
BEACHMERE

0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

P Pump Station
Reservoir
Bulk Water Supply
Water Treatment Plant
Trunk Water Mains

Water Catchments
Lowlands
Uplands

DISA Boundary
Shire Boundary
Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 4

EFFECTIVE FROM 29 October 2009

0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

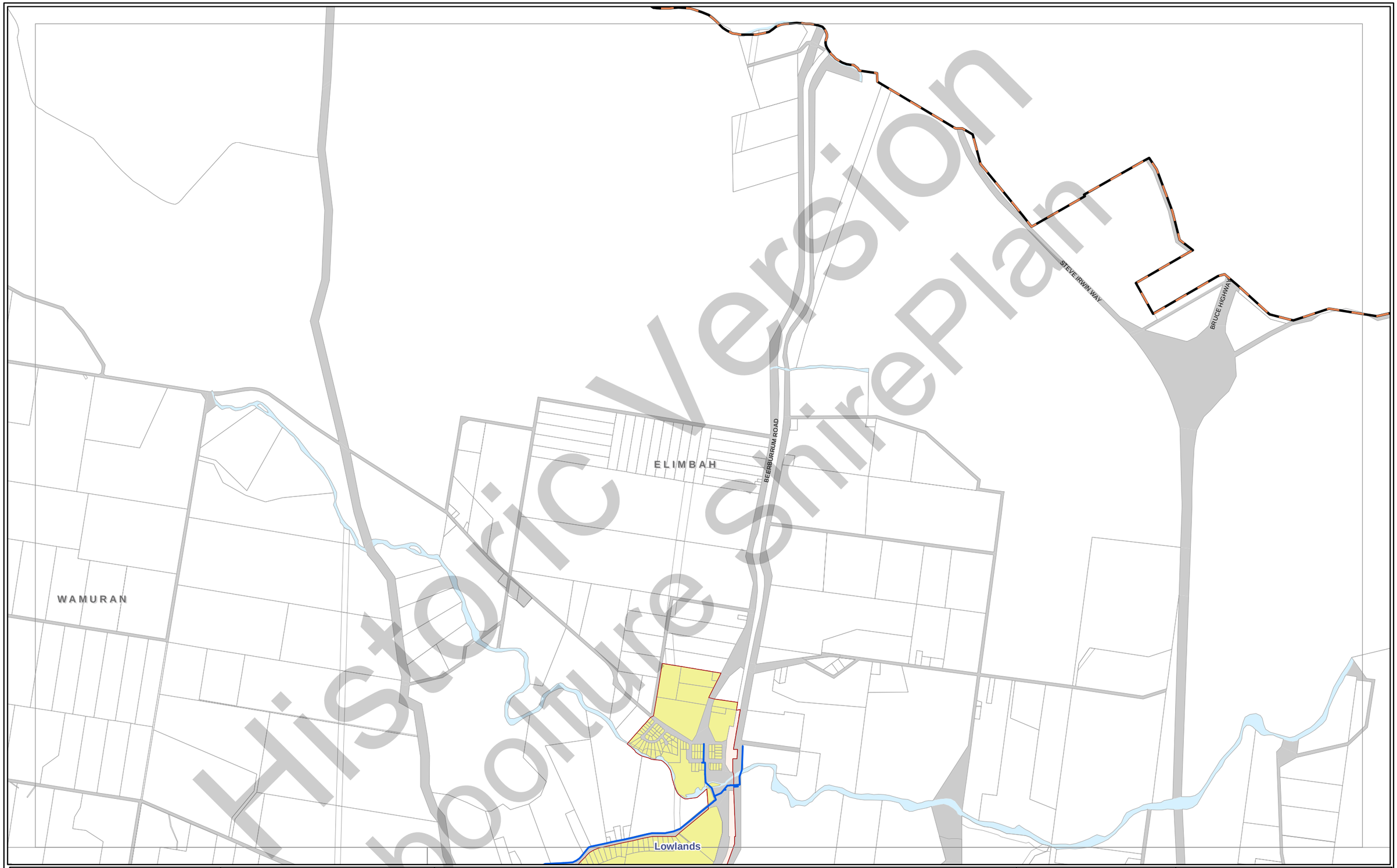
- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 5

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

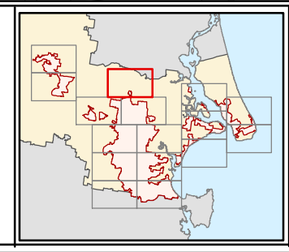
SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Cadastre

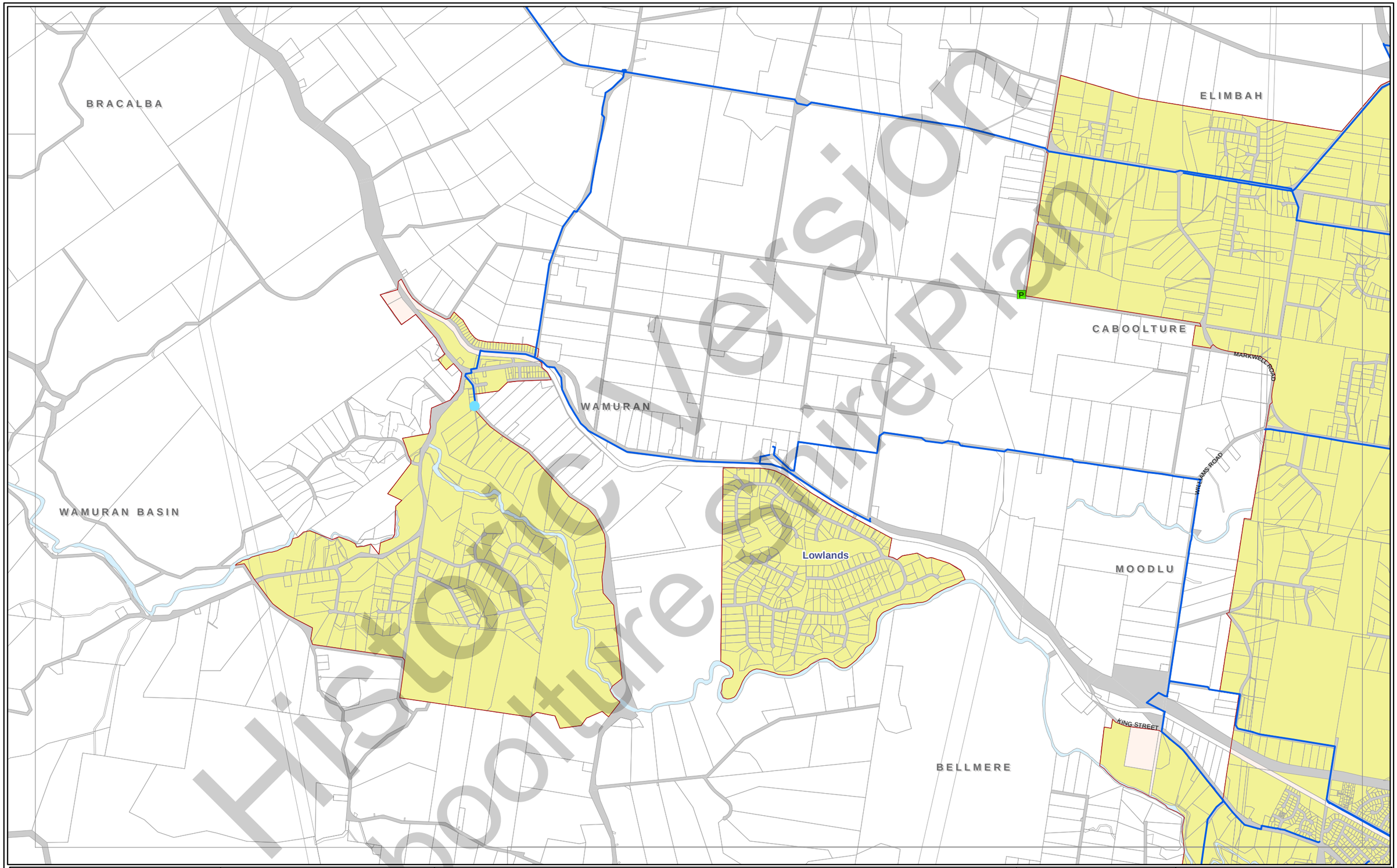


Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 6

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

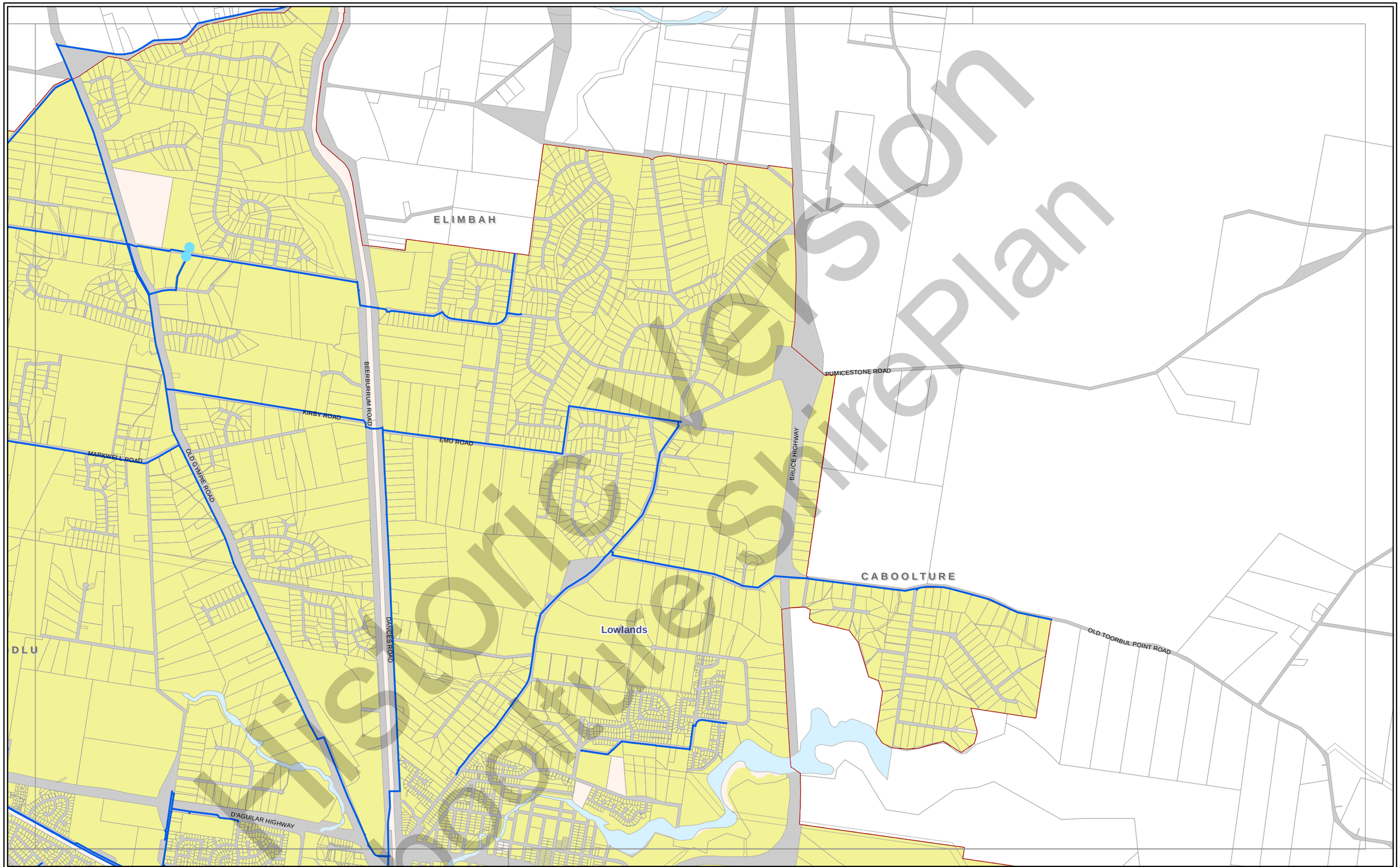
- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 7

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1

Kilometres

SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments

- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 8

EFFECTIVE FROM 29 October 2009

MOODLU

CABOOLTURE

WAMURAN

BELLMERE

Lowlands

KING STREET

D'AGUILAR HIGHWAY

BEERBURRUM ROAD

MORAYFIELD ROAD

BELLMERE ROAD

CABOOLTURE SOUTH

ROCKSBERG

UPPER CABOOLTURE

CABOOLTURE RIVER ROAD

BUCHANAN ROAD

WALKERS ROAD

OAKEY FLAT ROAD

TIMMS ROAD

PETERSEN ROAD

MORAYFIELD

0 0.25 0.5 1

Kilometres

SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments

- Lowlands
- Uplands

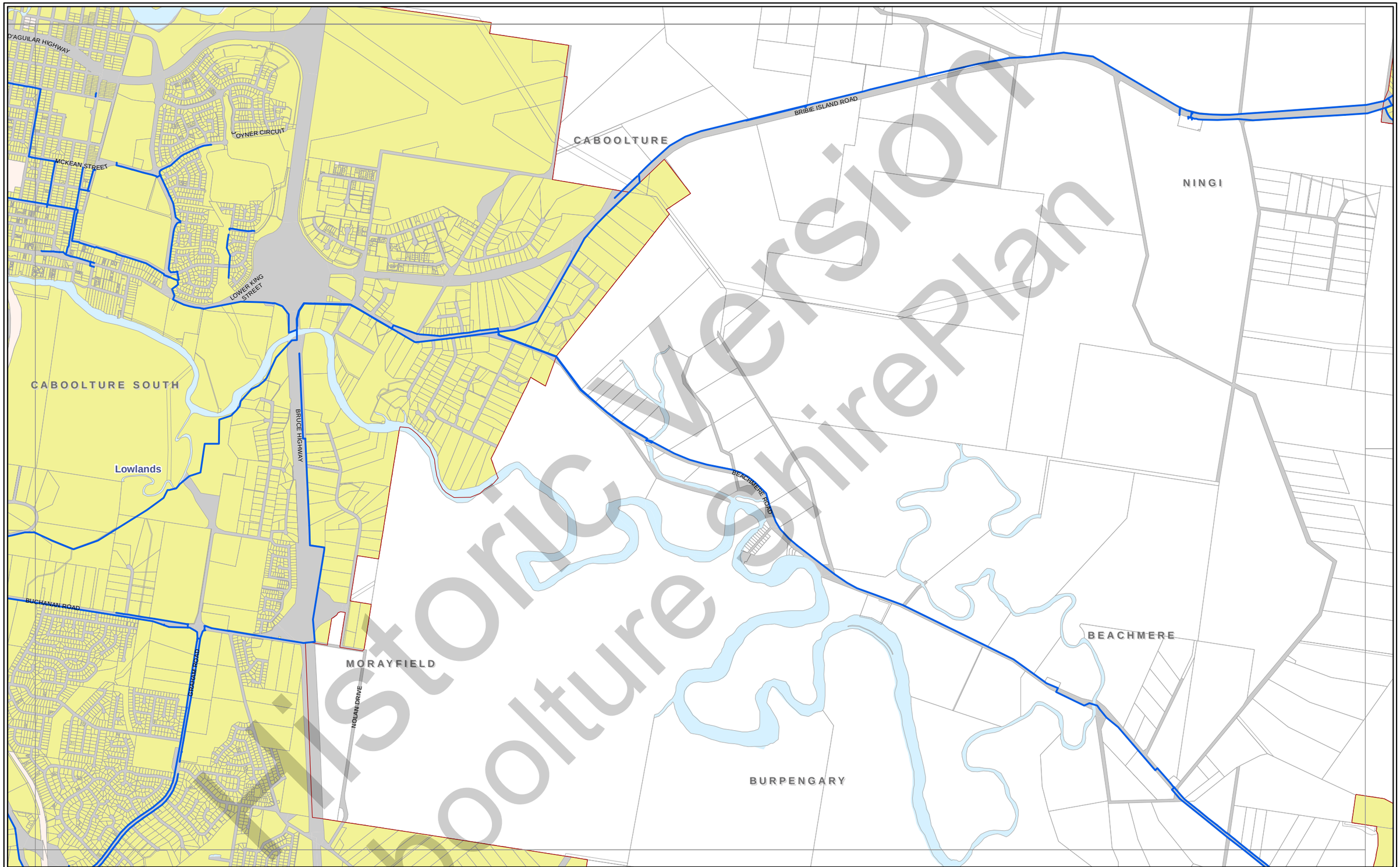
- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 9

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

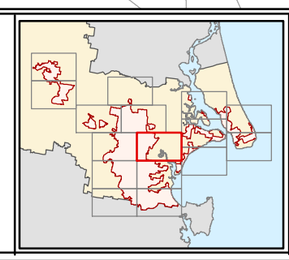
SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Cadastre

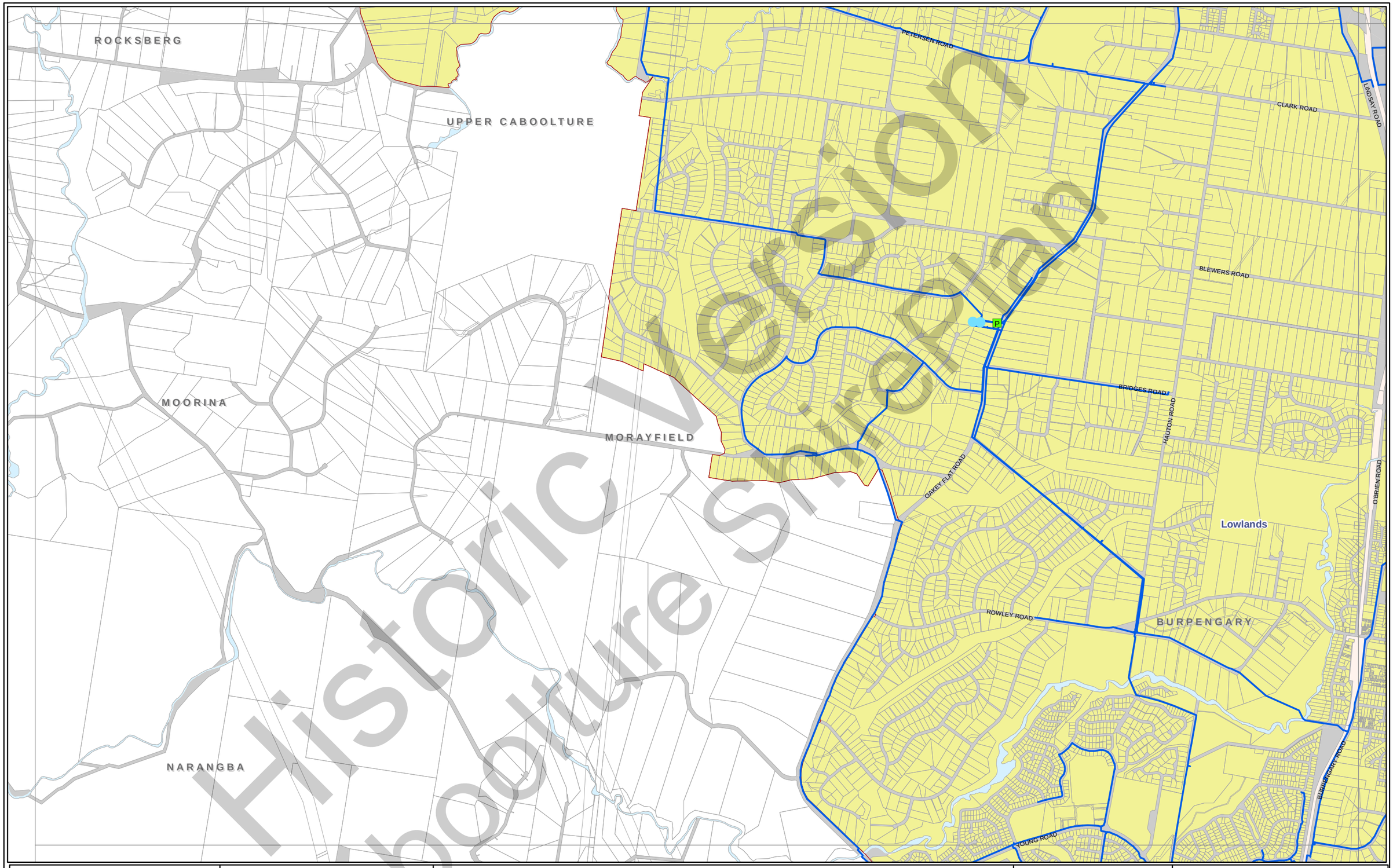


Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 10

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

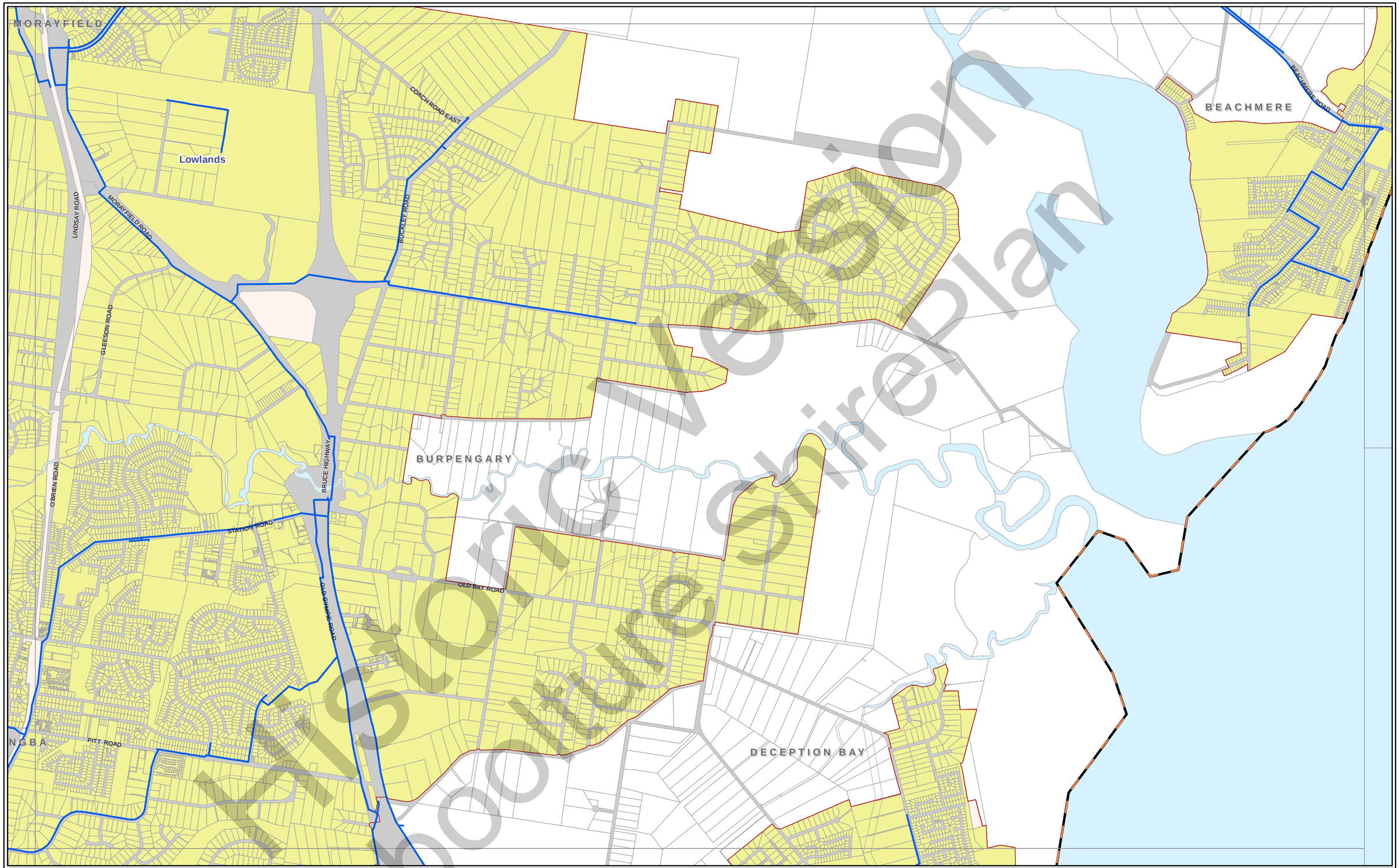
- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 11

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 12

EFFECTIVE FROM 29 October 2009

MORAYFIELD
NARANGBA
Lowlands
YOUNG ROAD
NEW SETTLEMENT ROAD
BURPEN
OAKEY FLAT ROAD
BURPENGARY ROAD
P
P
THEODORE ROAD
SMITHS ROAD NORTH
BROWNS CREEK ROAD
ERIC MCSWEENEY COURT
RUSH CREEK
KURWONGBAH
DAYBORO ROAD
THEODORE ROAD
BROWNS ROAD
FORBES ROAD
MOORE ROAD
RUSH CREEK ROAD
WHITESIDE
DENHAM ROAD
SAMSONVALE

N

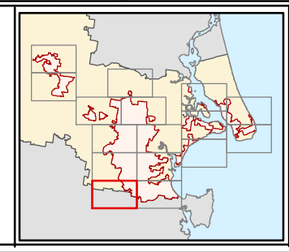
0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

P Pump Station
Reservoir
Bulk Water Supply
Water Treatment Plant
Trunk Water Mains

Water Catchments
Lowlands
Uplands

DISA Boundary
Shire Boundary
Cadastre

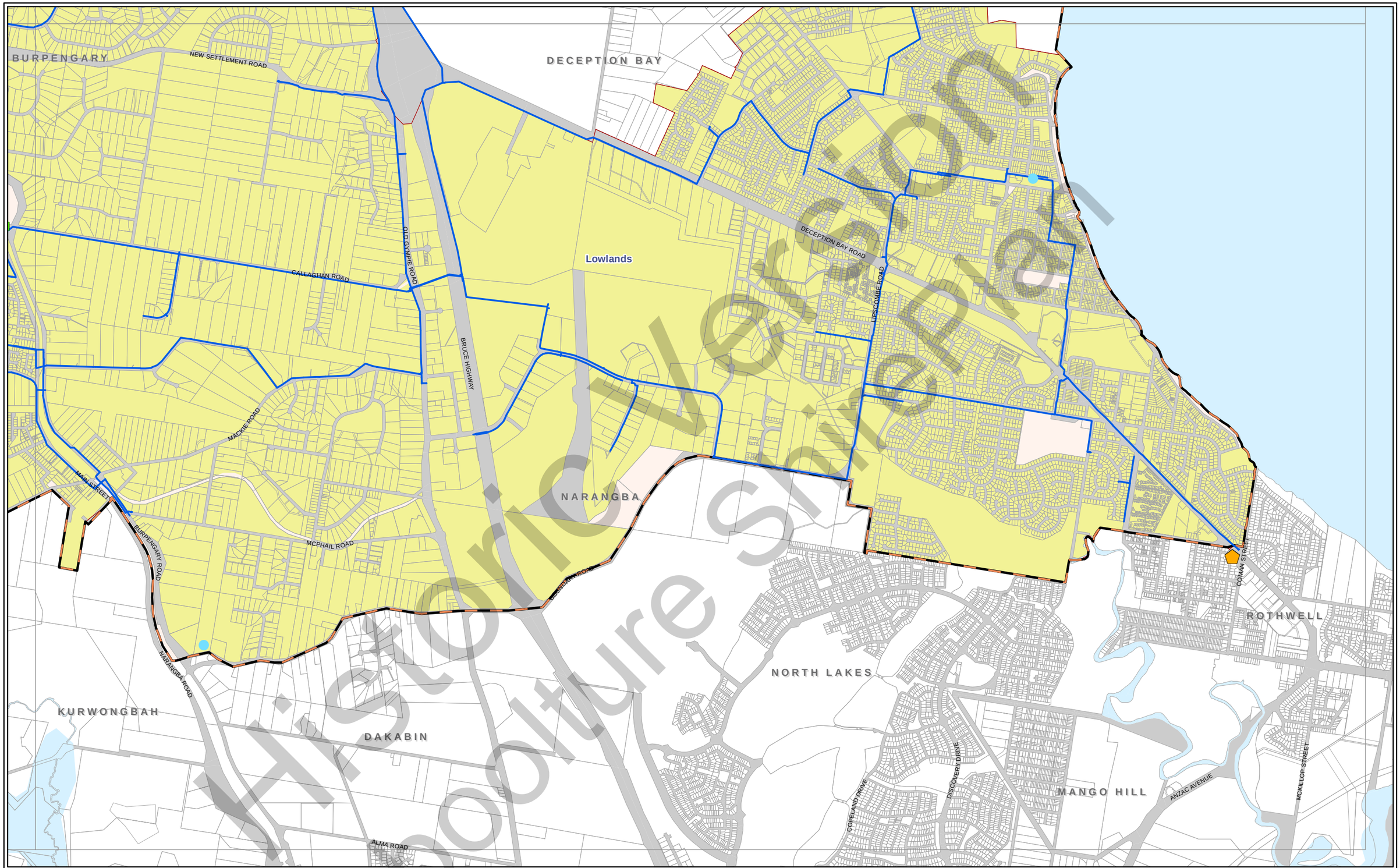


Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 13

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

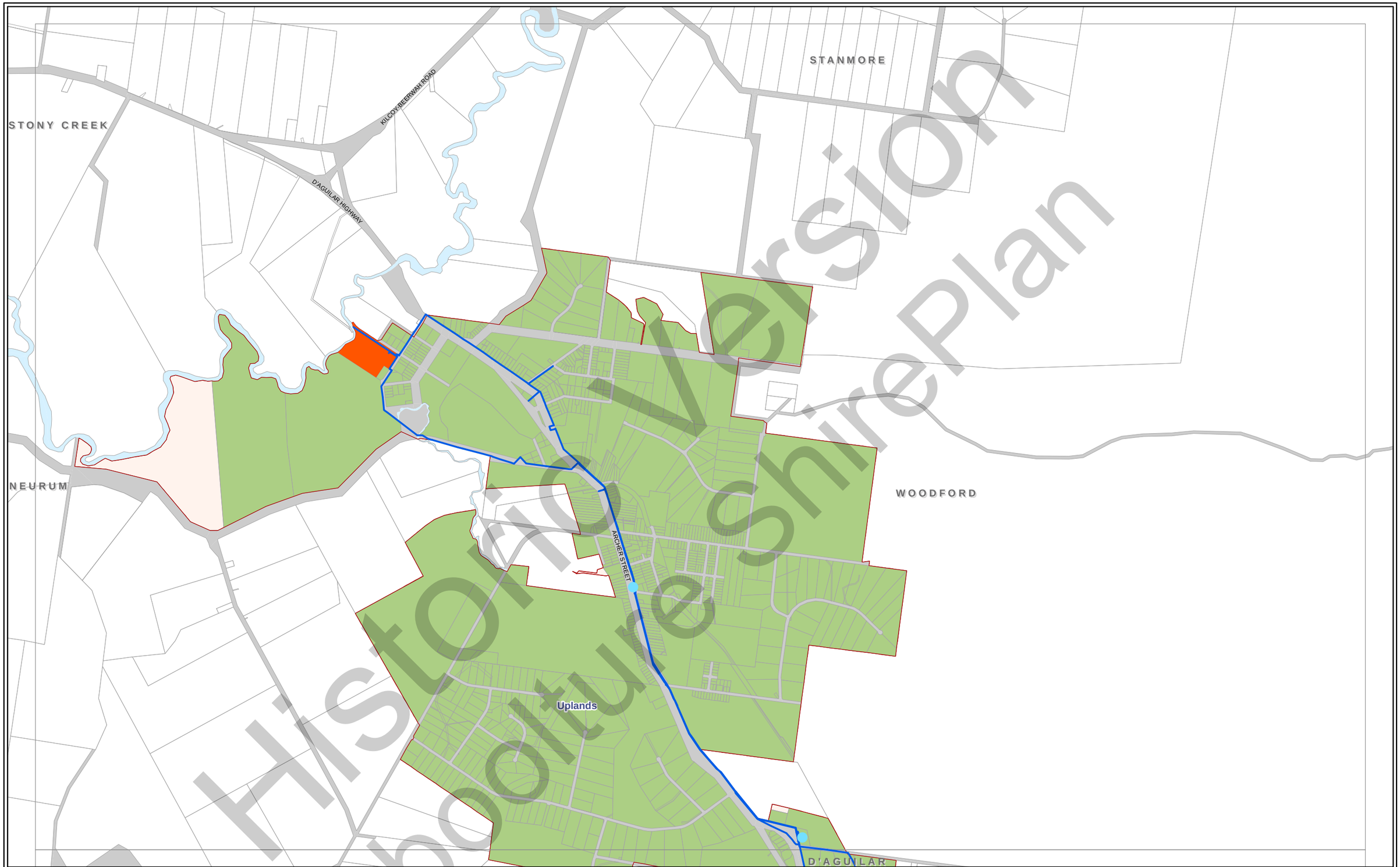
- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 14

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

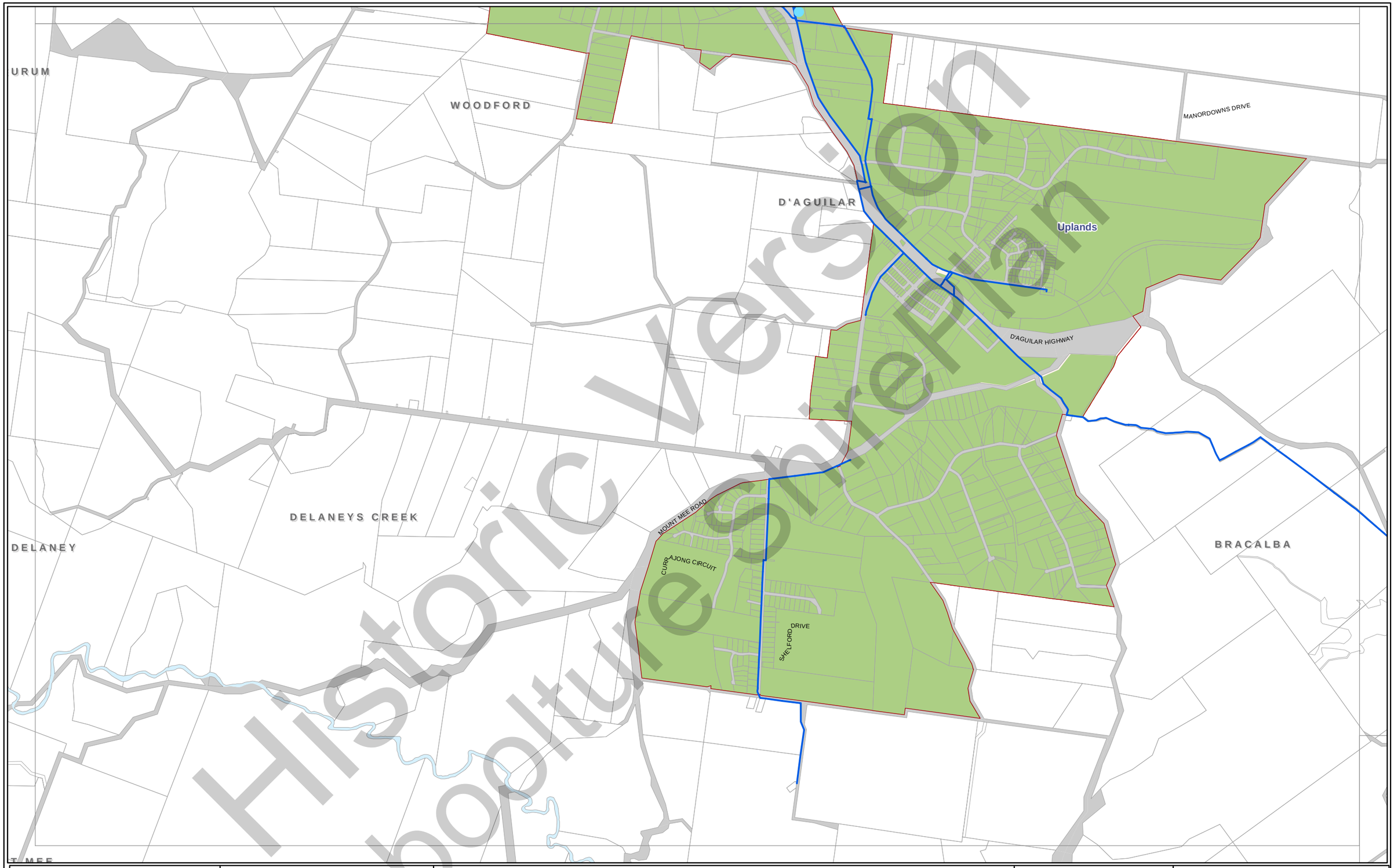
- DISA Boundary
- Shire Boundary
- Cadastre

Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 15

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

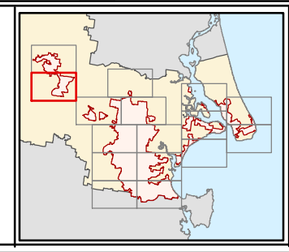
SCALE 1:25,000 (at A3)

N

- Pump Station
- Reservoir
- Bulk Water Supply
- Water Treatment Plant
- Trunk Water Mains

Water Catchments
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Cadastre



Caboolture Shire

Existing Water Supply Trunk Infrastructure

MAP WE 16

EFFECTIVE FROM 29 October 2009

0 0.25 0.5 1
Kilometres

N

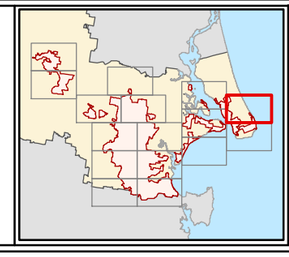
SCALE 1:25,000 (at A3)

- D Disinfection Booster Stations
- P Pump Stations
- Future Water Pipes

Code

Charge Areas
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Property Boundaries



Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 1

EFFECTIVE FROM 29 October 2009

0 0.25 0.5 1
Kilometres

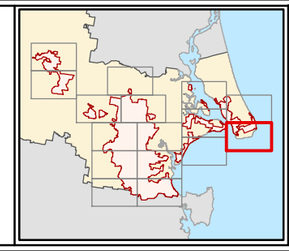
N

SCALE 1:25,000 (at A3)

D Disinfection Booster Stations
P Pump Stations
Future Water Pipes
Code

Charge Areas
Lowlands
Uplands

DISA Boundary
Shire Boundary
Property Boundaries

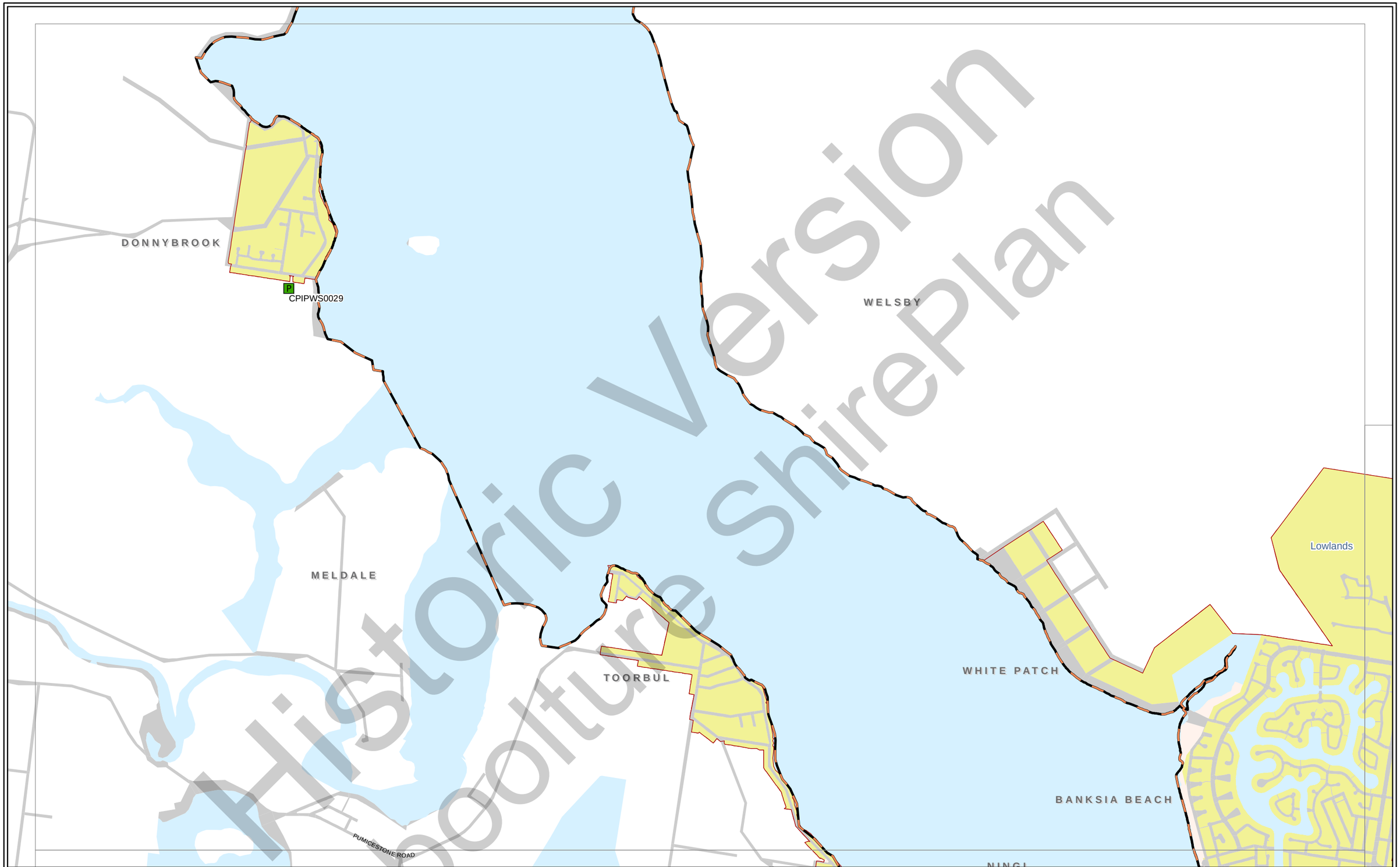


Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 2

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

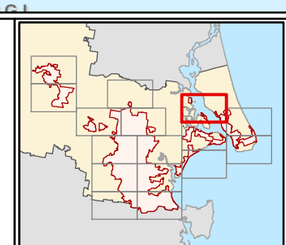
N

SCALE 1:25,000 (at A3)

D Disinfection Booster Stations
P Pump Stations
Future Water Pipes
Code

Charge Areas
Lowlands
Uplands

DISA Boundary
Shire Boundary
Property Boundaries



Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 3

EFFECTIVE FROM 29 October 2009

WHITE PATCH

TOORBUL

BANKSIA BEACH

BELLARA

CPIPWS0069
CPIPWS0070
CPIPWS0071
CPIPWS00
CPIPWS

NINGI

BRIBIE ISLAND ROAD

BRIBIE ISLAND ROAD

SANDSTONE POINT

CPIPWS0017

Lowlands

GODWIN BEACH

BEACHMERE

0 0.25 0.5 1
Kilometres

N

SCALE 1:25,000 (at A3)

D Disinfection Booster Stations
P Pump Stations
Future Water Pipes
Code

Charge Areas
Lowlands
Uplands

DISA Boundary
Shire Boundary
Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 4

EFFECTIVE FROM 29 October 2009

BEACHMERE

GODWIN BEACH

CPIPWS0038

CPIPWS0064

CPIPWS0063

Lowlands

0 0.25 0.5 1

Kilometres

N

SCALE 1:25,000 (at A3)

D Disinfection Booster Stations

P Pump Stations

Future Water Pipes

Code

Charge Areas

Lowlands

Uplands

DISA Boundary

Shire Boundary

Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 5

EFFECTIVE FROM 29 October 2009

ELIMBAH

WAMURAN

BEERBURRUM ROAD

STEVE IRWIN WAY

BRUCE HIGHWAY

Lowlands

0 0.25 0.5 1
Kilometres

N

SCALE 1:25,000 (at A3)

D Disinfection Booster Stations
P Pump Stations
Future Water Pipes
Code

Charge Areas
Lowlands
Uplands

DISA Boundary
Shire Boundary
Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 6

EFFECTIVE FROM 29 October 2009

BRACALBA

ELIMBAH

CABOOLTURE

MARKWELL ROAD

WAMURAN

CPIPWS0032
D

WAMURAN BASIN

Lowlands

WILLIAMS ROAD

CPIPWS0055

MOODLU

CPIPWS001

BELLMERE

KING STREET

0 0.25 0.5 1
Kilometres

N

SCALE 1:25,000 (at A3)

D Disinfection Booster Stations
P Pump Stations
Future Water Pipes
Code

Charge Areas
Lowlands
Uplands

DISA Boundary
Shire Boundary
Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 7

EFFECTIVE FROM 29 October 2009

ELIMBAH

CABOOLTURE

Lowlands

DLU

KIRBY ROAD

MARKWELL ROAD

OLD GYMPIE ROAD

BEERBURRUM ROAD

DANCER ROAD

EMU ROAD

BRUCE HIGHWAY

PUMICESTONE ROAD

OLD TOORBUL POINT ROAD

D'AGUILAR HIGHWAY

CPIPWS0066

CPIPWS0067

CPIPWS0051

CPIPWS0013

CPIPWS0014

CPIPWS0021

CPIPWS0012

CPIPWS0011

CPIPWS0015

0 0.25 0.5 1

Kilometres

N

SCALE 1:25,000 (at A3)

- D Disinfection Booster Stations
- P Pump Stations
- Future Water Pipes
  Code

Charge Areas
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 8

EFFECTIVE FROM 29 October 2009

MOODLU
CABOOLTURE
WAMURAN
BELLMERE
ROCKSBERG
UPPER CABOOLTURE
CABOOLTURE SOUTH
MORAYFIELD
Lowlands
D'AGUILAR HIGHWAY
KING STREET
BELLMERE ROAD
CABOOLTURE RIVER ROAD
WALKERS ROAD
BUCHANAN ROAD
TINNEY ROAD
PETERSEN ROAD
OAKEY FLAT ROAD
MORAYFIELD ROAD
BEERBURRUM ROAD
CPIPWS0015
CPIPWS0008
CPIPWS0058
CPIPWS0074
CPIPWS0068
CPIPWS0006
CPIPWS0047
CPIPWS0046
CPIPWS0062
CPIPWS0045
CPIPWS0044
CPIPWS0043
CPIPWS0018

0 0.25 0.5 1
Kilometres

N

SCALE 1:25,000 (at A3)

D Disinfection Booster Stations
P Pump Stations
Future Water Pipes
Code

Charge Areas
Lowlands
Uplands

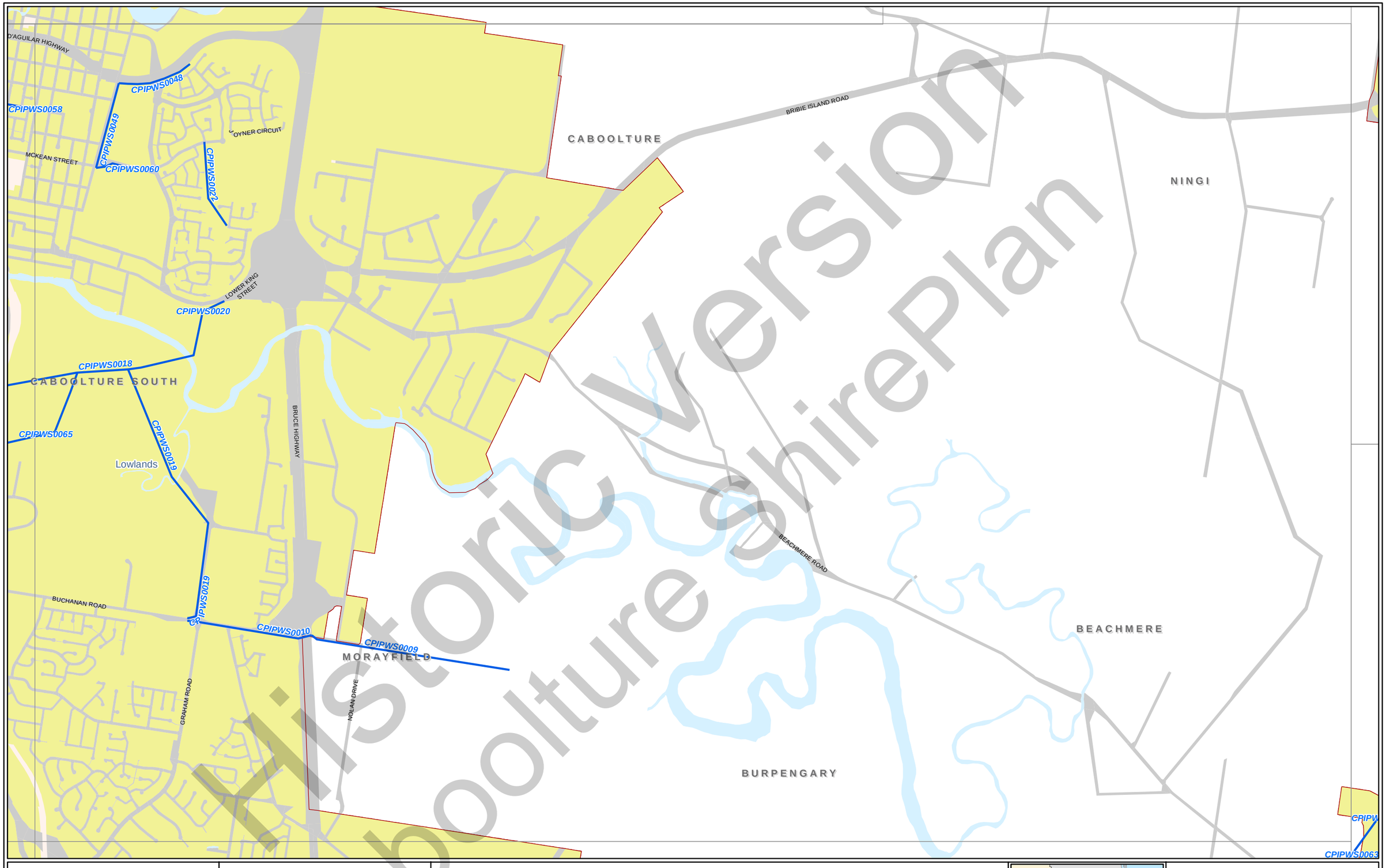
DISA Boundary
Shire Boundary
Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF 9

EFFECTIVE FROM 29 October 2009



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Kilometres

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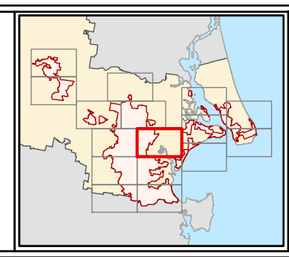
SCALE 1:25,000 (at A3)

- D Disinfection Booster Stations
- P Pump Stations
- Future Water Pipes
  Code

Charge Areas
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Property Boundaries

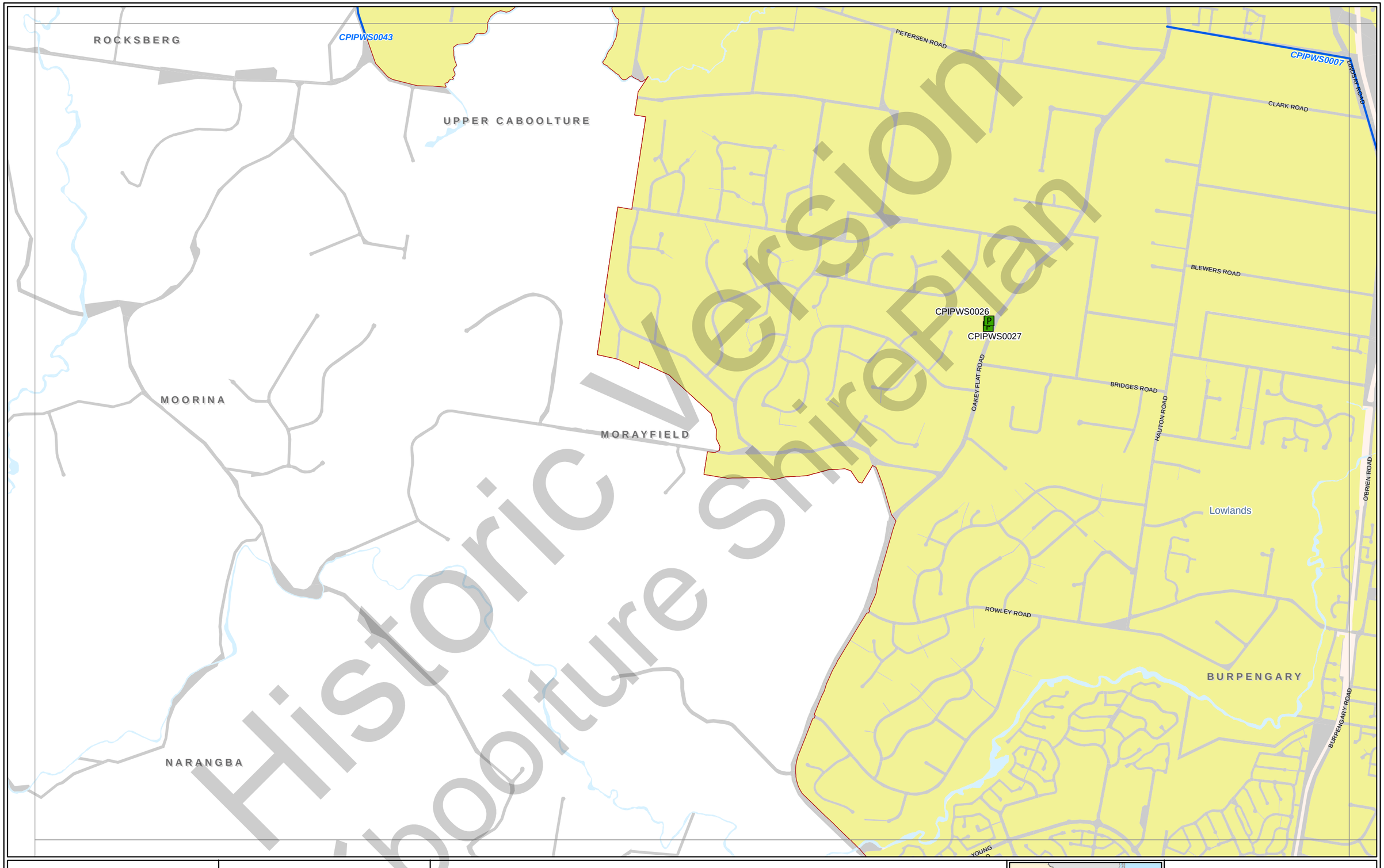


Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF10

EFFECTIVE FROM 29 October 2009



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Kilometres

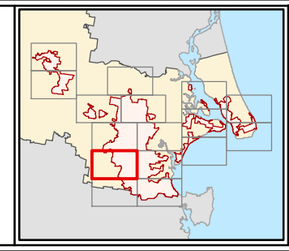
N

SCALE 1:25,000 (at A3)

- D Disinfection Booster Stations
- P Pump Stations
- Future Water Pipes
  Code

Charge Areas
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Property Boundaries



Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF11

EFFECTIVE FROM 29 October 2009

MORAYFIELD

CPIPWS0007

CPIPWS0053

Lowlands

LINDSAY ROAD

MORAYFIELD ROAD

GLEESON ROAD

COACH ROAD EAST

BUCKLEY ROAD

BRUCE HIGHWAY

O'BRIEN ROAD

STATION ROAD

OLD BAY ROAD

OLD GYMPIE ROAD

PITT ROAD

NGBA

BURPENGARY

DECEPTION BAY

BEACHMERE

BEACHMERE ROAD

CPIPWS0063

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Kilometres

SCALE 1:25,000 (at A3)

N

D Disinfection Booster Stations

P Pump Stations

Future Water Pipes

Code

Charge Areas

Lowlands

Uplands

DISA Boundary

Shire Boundary

Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF12

EFFECTIVE FROM 29 October 2009

MORAYFIELD
NARANGBA
RUSH CREEK
KURWONGBAH
WHITESIDE
SAMSONVALE
Lowlands
NEW SETTLEMENT ROAD
BURPEN
YOUNG ROAD
CPIPWS0059
CPIPWS0005
CPIPWS0016
BURPENGARY ROAD
OAKEY FLAT ROAD
P
CPIPWS0028
CPIPWS0
THEODORE ROAD
SMITHS ROAD NORTH
BROWNS CREEK ROAD
ERIC MCSWEENEY COURT
BROWNS ROAD
FORBES ROAD
MOORE ROAD
DENHAM ROAD
DAYBORO ROAD
THEODORE ROAD
RUSH CREEK ROAD

0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

D Disinfection Booster Stations
P Pump Stations
Future Water Pipes
Code

Charge Areas
Lowlands
Uplands

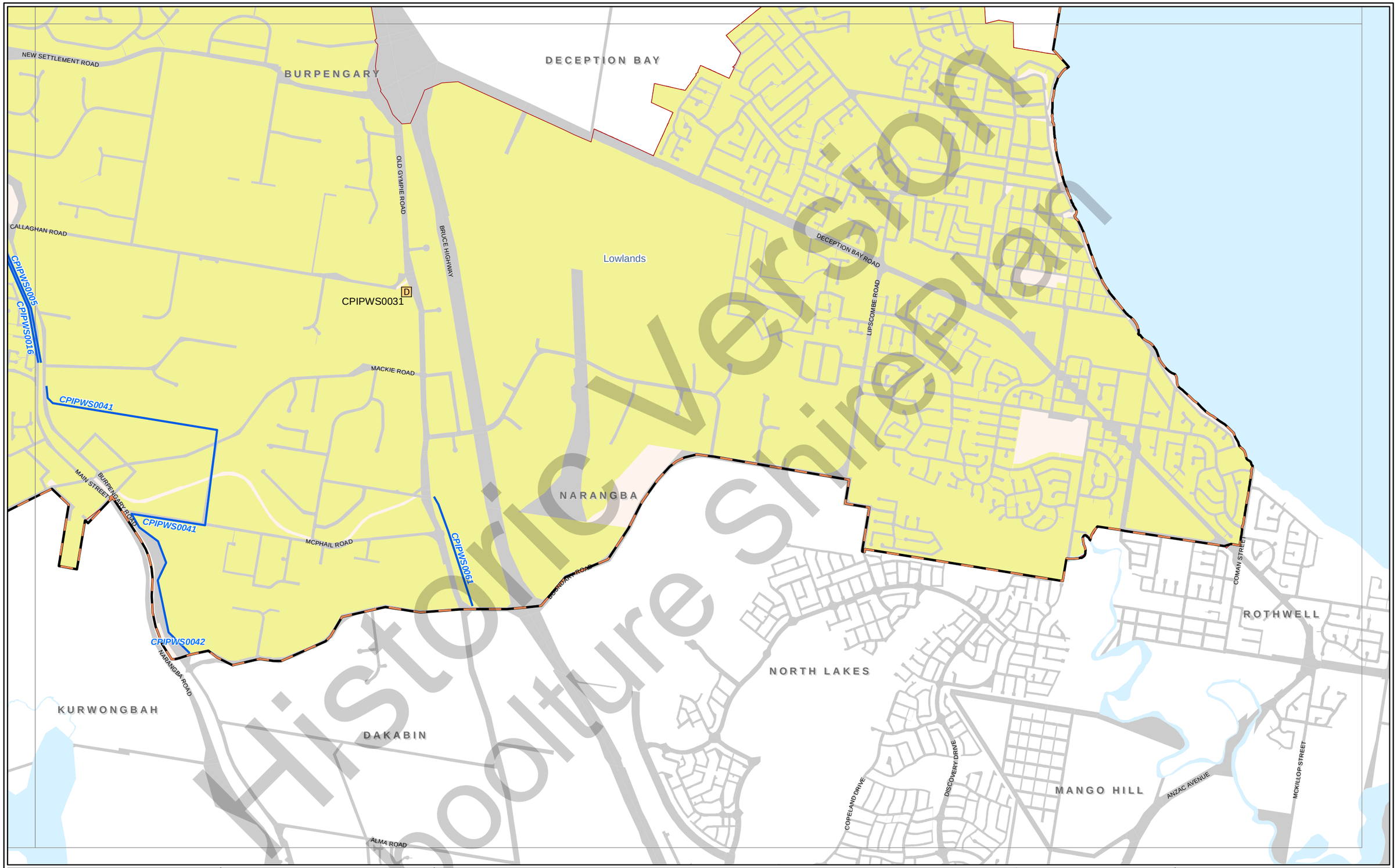
DISA Boundary
Shire Boundary
Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF13

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

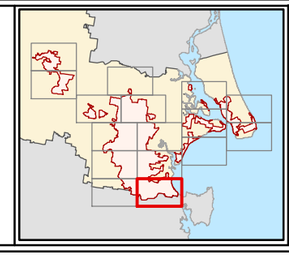
N

SCALE 1:25,000 (at A3)

- D Disinfection Booster Stations
- P Pump Stations
- Future Water Pipes
  Code

Charge Areas
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Property Boundaries

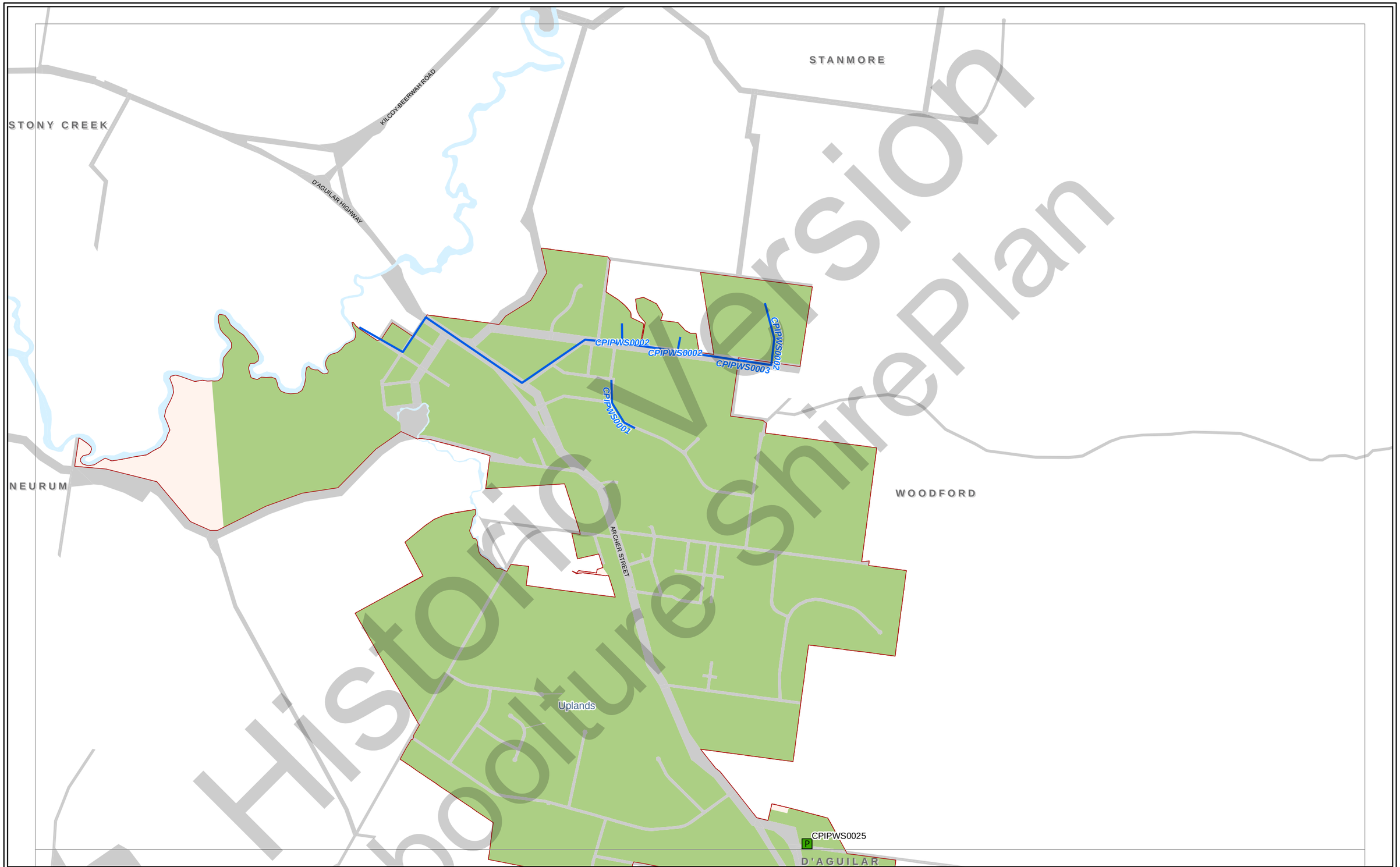


Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF14

EFFECTIVE FROM 29 October 2009



0 0.25 0.5 1
Kilometres

SCALE 1:25,000 (at A3)

N

- D Disinfection Booster Stations
- P Pump Stations
- Future Water Pipes

Code

Charge Areas
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Property Boundaries

Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF15

EFFECTIVE FROM 29 October 2009

URUM

WOODFORD

DELANEYS CREEK

DELANEY

D'AGUILAR

BRACALBA

CPIPWS0025

CPIPWS0024

Uplands

MANORDOWNS DRIVE

D'AGUILAR HIGHWAY

MOUNT MEE ROAD

CURRAJONG CIRCUIT

SHELFORD DRIVE

0 0.25 0.5 1

Kilometres

N

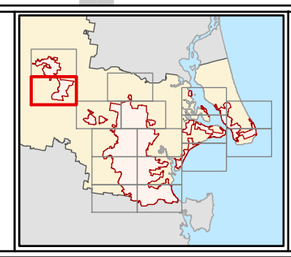
SCALE 1:25,000 (at A3)

- D Disinfection Booster Stations
- P Pump Stations
- Future Water Pipes

Code

Charge Areas
- Lowlands
- Uplands

- DISA Boundary
- Shire Boundary
- Property Boundaries



Caboolture Shire

Future Trunk Water Supply Infrastructure

MAP WF16

EFFECTIVE FROM 29 October 2009

Schedule E: Desired Standards of Service

The Desired Standards of Service (DSS) for water supply and sewerage trunk infrastructure within the Designated Infrastructure Service Area have been determined in accordance with the requirements of the Water Supply (Safety and Reliability) Act 2008. Moreton Bay Water's approved Strategic Asset Management Plan and Total Management Plan detail ongoing practice and future initiatives to achieve and maintain the published standards of service.

The Desired Standards of Service for water supply and sewerage infrastructure provision under this policy are expressed in terms of 'Operational Objectives' and 'Detailed Design Parameters'.

The 'Operational Objectives' and 'Detailed Design Parameters' are aimed at achieving the stated purpose of the Integrated Planning Act while satisfying the relevant requirements of the Environmental Protection Act. The detailed design parameters are the means by which the performance requirements of the operational objectives are achieved.

The Guidelines prepared by the Queensland Government for design of urban water supply and a survey of current practice of local governments in South-East Queensland have also been used in establishing the desired standards of service and design criteria for the water supply systems. Authorities that were consulted to confirm current practice in South-East Queensland included Ipswich Water, Redland Water, Brisbane Water, former CalAqua, former Cooloola Shire, Wide Bay Water, Logan Water and Gold Coast Water.

Operational Objectives for Trunk Water Supply Services

Each of the 'Operational Objectives' for the provision of water supply services in Moreton Bay Regional Council's local government area is examined in the context of corresponding user benefits and environmental effects. The Primary Objectives adopted for water services in this policy are set out in Table E1.

Table E1 - Water Supply Operational Objectives

Objective	User Benefit	Environmental Effect
• **Corporate / Business Objective**	• **Community and Customer Service** • **Quality and Safety**	• **Environmental Protection**
Drinking water will comply with the Australian Drinking Water Guidelines.	• Uniform quality of water monitored in relation to recognised standards. • Safe and reliable water supply	• Improves community health
Designs will comply with State Government Guidelines, and Council's Planning Scheme Policy *PSP 28 "Civil Infrastructure Design"*.	• System will be adequate in terms of; o day-to-day reliability, o long term continuity of supply; o delivery of high quality drinking water to the consumer ;and o minimum life cycle cost (i.e., optimum maintenance, replacement and operation costs). • Cost effective service for community.	• Maintains the health of the community. • Chemicals are stored and handled in accordance with relevant legislation to ensure safety of worker, public safety and to protect the environment. • Minimisation of Greenhouse gas emissions. • Optimum use of resources.
Minimise water loss	• Extend asset life • Defer system augmentation • Conserve raw water supply • Minimise energy consumption • Optimise size of elements within water supply network.	• Improve environmental flows • Minimisation of Greenhouse gas emissions.
Effective management of water consumption (Demand Management)	• Reduced cost of water • Defer requirement for new water source • Minimise energy consumption • Optimise size of elements within water supply network.	• Improve environmental flows • Minimisation of Greenhouse gas emissions.
Implement environmental responsibilities with respect to water supply operations	• Noise control • No adverse visual impact • Control of overflows from system. • Management of flushing water. • Maintain flows or storage in raw water sources for environmental purposes.	• Improves community health • Maintain amenity (e.g., visual and noise characteristics) of locality. • Reductions in discharges that have concentrations of free chlorine greater than 1 mg/l. • Control of discharge of turbid water to stormwater drainage

Objective	User Benefit	Environmental Effect
• **Corporate / Business Objective**	• **Community and Customer Service** • **Quality and Safety**	• **Environmental Protection**
		during construction of infrastructure and flushing or scouring operations. • Required environmental flows maintained
System design will aim to minimise energy consumption and optimise the use of green energy	• Reduced energy costs. • Cost effective service for community.	
The design of the water supply network shall provide fire fighting flow and specified water pressures and flow to the consumer.	• Reliable water supply • Adequate supply for community services • Adequate pressures and flow for fire fighting purposes.	• Maintains health and safety of the community.
Infrastructure will be designed, constructed and operated in accordance with Workplace Health and Safety Legislation.	• Minimisation of risk to workers and community (reduction in accidents and insurance premiums).	• Minimise risk of pollution events. • Safer work environment for staff and public.
Objective	**User Benefit**	**Environmental Effect**
• **Corporate / Business Objective**	• **Community and Customer Service** • **Quality and Safety**	• **Environmental Protection**
Drinking water will comply with the Australian Drinking Water Guidelines.	• Uniform quality of water monitored in relation to recognised standards. • Safe and reliable water supply	• Improves community health
Designs will comply with State Government Guidelines, and Council's Planning Scheme Policy *PSP 28 "Civil Infrastructure Design"*.	• System will be adequate in terms of; ○ day-to-day reliability, ○ long term continuity of supply; ○ delivery of high quality drinking water to the consumer ;and ○ minimum life cycle cost (i.e., optimum maintenance, replacement and operation costs). • Cost effective service for community.	• Maintains the health of the community. • Chemicals are stored and handled in accordance with relevant legislation to ensure safety of worker, public safety and to protect the environment. • Minimisation of Greenhouse gas emissions. • Optimum use of resources.
Minimise water loss	• Extend asset life • Defer system augmentation • Conserve raw water supply • Minimise energy consumption • Optimise size of elements within water supply network.	• Improve environmental flows • Minimisation of Greenhouse gas emissions.
Effective management of water consumption (Demand Management)	• Reduced cost of water • Defer requirement for new water source • Minimise energy consumption • Optimise size of elements within water supply network.	• Improve environmental flows • Minimisation of Greenhouse gas emissions.
Implement environmental responsibilities with respect to water supply operations	• Noise control • No adverse visual impact • Control of overflows from system. • Management of flushing water. • Maintain flows or storage in raw water sources for environmental purposes.	• Improves community health • Maintain amenity (e.g., visual and noise characteristics) of locality. • Reductions in discharges that have concentrations of free chlorine greater than 1 mg/l. • Control of discharge of turbid water to stormwater drainage during construction of infrastructure and flushing or scouring operations. • Required environmental flows maintained
System design will aim to minimise energy consumption and optimise the use of green energy	• Reduced energy costs. • Cost effective service for community.	
The design of the water supply network shall provide fire	• Reliable water supply • Adequate supply for community services	• Maintains health and safety of the community.

Objective	User Benefit	Environmental Effect
• **Corporate / Business Objective**	• **Community and Customer Service** • **Quality and Safety**	• **Environmental Protection**
fighting flow and specified water pressures and flow to the consumer.	• Adequate pressures and flow for fire fighting purposes.	
Infrastructure will be designed, constructed and operated in accordance with Workplace Health and Safety Legislation.	• Minimisation of risk to workers and community (reduction in accidents and insurance premiums).	• Minimise risk of pollution events. • Safer work environment for staff and public.

Detailed Design Parameters – Water Supply

Following an examination of the Queensland Government Guidelines and a survey of current practice of local governments in South East Queensland, Moreton Bay Regional Council has adopted the parameters summarised in Table E2 for design and assessment of water supply systems.

These factors are applied in accordance with procedures detailed in the Queensland Government Guidelines.

The summary outlined in Table E2 must be interpreted in conjunction with the design and construction standards for water supply set out in other Planning Scheme Policies of the relevant planning scheme.

Table E2 - Water Supply Design Parameters

Item	Description	Adopted Design Parameter
Water Demand		
1	Average Day Demand (AD)	Existing and Future Demand – 296 L/EPW/d AD is calculated as follows: AD= (230 x 1.2) + System Losses Where: • 230 L/EPW/day is the demand target under SEQ 'permanent water conservation measures'; • 1.2 is an operational flexibility factor that provides sufficient capacity to maintain an adequate level of service in the event that an element of the trunk infrastructure fails; and • System Losses = 20 L/EPW/day
Peaking Factors		
2	Mean Day Maximum Month (MDMM/AD)	1.2 x AD (355.2 L/EPW/day)
3	Maximum Day (MD/AD)	1.6 x AD (473.6 L/EPW/day)
4	Maximum Hour (MH/AD)	4.3 x AD (53.03 L/hr/EPW)
System Pressure		
5	Minimum Operating Pressure	• At maximum hour demand the minimum pressure at the water meter shall not be less than 22m. • In isolated high level areas, the minimum operating pressure may be reduced to 16 m above the highest elevation on any lot with the water level in the reservoir not more than 1.0 m above reservoir floor level.
6	Maximum Operating Pressure	80 m at the property's water meter
Fire Fighting Requirements		
7	System Pressure	12 m minimum pressure head at the hydrant/dedicated service location, and minimum 6m pressure head at any location in the water supply zone during the fire event with model conditions as detailed in Items 8, 9 and 10.
8	Fire Flow	• Predominantly residential development not more than 3 storeys - 15 L/s simultaneous with background demand as defined in Item 9 for a period of 2 hours. • Predominantly commercial/industrial and residential buildings greater than 3 storeys - 30 L/s simultaneous with background demand as defined in Item 9 for a period of 4 hours. • Special risk/hazard land use – to be assessed.
9	Background demand	• Predominantly Residential Area - 2/3 of MH demand • Predominantly Commercial/Industrial Area - MH demand (generally between

Item	Description	Adopted Design Parameter
		10 am to 4 pm)
10	Reservoir level	• At the commencement of the fire fighting event the reservoir level should be set at Mid-Water Level; where: Mid-Water Level = (Top Water Level + Floor Level) ÷ 2 (AHD). • The reservoir must not empty during the fire fighting event for the duration of the event specified in item 8 with supply pumps turned off.
Storage		
11	Design Condition	• Reservoirs must not empty in less than 3 consecutive MD demands. • During MDMM demand the reservoir shall have net positive inflow and shall be capable of continuous operation under this demand.
12	Ground Level Storage	Required Storage = [3 x (MD – MDMM)] + Fire Fighting Storage. Where: • Fire Fighting Storage = 4 hrs of MDMM demand or 0.5 ML whichever is the greater.
13	Elevated Storage	Required Storage Volume = Operating Volume + Fire Fighting Reserve Where: • Operating Volume = 6 x (MH – 1/12 MDMM) • Fire storage = 150 kL
Pumping Capacity		
14	Duty pump capacity to serve ground level reservoirs.	Supply MDMM demand in 20 hours of operation in any 24 hour period.
15	Pumps serving elevated storage.	Pump must discharge not less than; [(6 x MH) – Operating Volume]/(6 x 3600) Where: Operating Volume is defined in item 13 above.
16	Standby Pump Capacity	Equal to the capacity of the largest pump
Pipeline Design		
17	Trunk Main Capacity	Sized for MDMM flows
18	Reticulation Capacity	Sized for Maximum Hour and Fire Flow
19	Friction Default Values	Hazen Williams Coefficients of Friction: • C = 100 (diameters ≤ 150 mm) • C = 110 (150 mm> diameter < 300 mm) • C = 120 (diameter ≥ 300 mm)
20	Maximum Flow Velocity	2.5 m/s
Pressure and Leakage Management		
21	District Meter Area (DMA)	• The sizes of the reticulation mains should be designed according to the planned DMAs. • Existing DMA boundary should not be breached.

REVIEW TRIGGERS

This policy is reviewed internally for applicability, continuing effect and consistency with related documents and other legislative provisions when any of the following occurs:

(1) The related documents are amended;

(2) The related documents are replaced by new documents;

(3) Amendments which affect the allowable scope and effect of a policy of this nature are made to the head of power; and

(4) Other circumstances as determined from time to time by a resolution of Council.

RESPONSIBILITY

This policy is to be:

(1) implemented by the Senior Manager Development Services; and

(2) reviewed and amended in accordance with the "Review Triggers" by the Senior Manager Strategic Direction and Sustainability, the Senior Manager Regional and Environmental Planning and the Senior Manager Planning and Strategic Asset Management in consultation with the Senior Manager Development Services.

VERSION CONTROL

CEO Approval Date	**15/09/2009**

Related Links: