

Central Tablelands *Water*



Water Quality Management Policy

Policy Title:	Water Quality Management	
Responsible Officer:	Director Operations and Technical Services	
Adopted:	Date: 12.10.2016	Minute Number: 16/079
Last Reviewed:	Date: May 2016	
Version Number:	v1	

Introduction

Public drinking water supply systems are vulnerable to a variety of organisms that have the potential to spread diseases such as gastroenteritis, cryptosporidiosis, giardiasis, typhoid, dysentery and cholera to the consumer. Sources of such contamination can include poor quality untreated water in the system, breaks in the reticulation system (and subsequent repairs), construction of new systems or the replacement of existing systems.

The water supplies of the Central Tablelands Water (CTW) are produced and supplied to standards required by the NSW Department of Health, Public Health Act 2010, the Public Health Regulation 2012 and the National Health and Medical Research Council/Natural Resource Management Ministerial Council's (NHMRC/NRMMC) Australian Drinking Water Guidelines 2011.

To ensure water quality, a robust water monitoring and testing program must be in place.

To date CTW has not had a formal policy on water monitoring and testing. As a consequence CTW has now developed this Policy for the monitoring and testing of its public drinking water supply system.

Objectives

The objectives of the document are to:

- institute confidence that water monitoring and testing is undertaken by trained personnel; and
- provide guidelines for the monitoring and testing of various components of the water reticulation systems.

Applicability

This policy applies to all employees and contractors of CTW.

Water Quality Management for the supply of public drinking water

The Council of the Central Tablelands Water accepts responsibility for maintaining the supply of high-quality public drinking water that consistently meets the standards set by the NSW Department of Health, Public Health Act 2010 and Public Health Regulation 2012 and the National Health and Medical Research Council / Natural Resource Management Ministerial Council's (NHMRC/NRMMC) Australian Drinking Water Guidelines 2011.

CTW is committed to managing water supply systems effectively to provide safe and reliable water, including high-quality drinking water that consistently meets the NHMRC/NRMMC *Australian Drinking Water Guidelines* and customer and other regulatory requirements. To achieve this, in partnership with stakeholders and relevant agencies, CTW will:

- ensure that protection of public health is recognised as being of paramount importance;
- maintain communication and partnerships with all relevant agencies in management of water resources for their supply;
- engage appropriate scientific expertise in developing drinking water schemes;
- recognise the importance of community participation in decision making processes and the need to ensure that community expectations are met;
- manage water quality at all points along the delivery chain from source of water to end-user;
- use a risk-based approach in which potential threats to water quality for the water supplied by CTW is identified and balanced;
- integrate the needs and expectations of our customers, stakeholders, regulators and employees into our planning processes;
- establish regular monitoring of control measures and the quality of source waters and establish effective reporting mechanisms to provide relevant and timely information, and promote confidence in drinking water supply and its management;
- develop appropriate contingency planning and incident response capability;
- participate in and support appropriate research and development activities to ensure continued understanding of drinking water quality issues and performance;
- contribute to the development of industry regulations and guidelines, and other standards relevant to public health and the water cycle; and
- continually improve our practices by assessing performance against corporate commitments and stakeholder expectations.

Monitoring & Testing of Public Drinking Water Supplies

CTW will implement and maintain water quality management systems consistent with the Frameworks of the *Australian Drinking Water Guidelines* to effectively manage the risks to drinking water quality including monitoring and testing programs.

In compliance with the Australian Drinking Water Guidelines, NSW Health Drinking Water Monitoring Program 2005 and the Forensic and Analytical Science Service (FASS) 2010, Guide for Submitting Water Samples to the Division of Analytical Laboratories for Analysis 2nd Edition. NSW Health,

CTW will undertake daily, weekly and monthly monitoring and testing of public drinking water. Specific monitoring and testing activities will also be performed at particular times of the year and in a range of sites representative of the water supplied to consumers.

Monitoring will encompass a wide range of measurable characteristic compounds or constituents which fall into a number of categories including:

- Microbiological
- Chemical (including inorganic chemicals, organic compounds and pesticides)
- Disinfection by-products
- Radiological
- Physical (taste, odour and appearance)

Procedure for Collecting Water Samples for Analysis at the Laboratory

The collection and submission of water samples will be undertaken in accordance with the Forensic and Analytical Science Service (FASS) 2010, Guide for Submitting Water Samples to the Division of Analytical Laboratories for Analysis 2nd Edition. NSW Health and the companion document, Guide for Submitting Water Samples to the Division of Analytical Laboratories for Analysis – Quick Reference Guide which can be found at www.health.nsw.gov.au/environment/water/Documents/dal_analysis.pdf

The Quick Reference Guide provides a summary of the more detailed information set out in the Guide for Submitting Water Samples to the Division of Analytical Laboratories for Analysis. A copy outlining the procedure for collecting and submitting water samples to the Division of Analytical Laboratories is attached at Appendix 1.

The following monitoring and testing programs are recommended for the water supply systems of CTW:

Daily

Samples of the raw and final water at CTW Filtration Plant, testing by operators for the following:

- pH
- Apparent colour
- Free Chlorine
- Fluoride
- Temperature
- Turbidity

Weekly

CTW operators collect samples from around reticulation systems of Blayney, Millthorpe, Carcoar, Mandurama, Lyndhurst and Trunk Main 'H', Canowindra, Grays Hill, Grenfell, Eugowra, Quandialla and is tested by CTW operators for the following:

- pH
- Apparent colour
- Turbidity
- Free Chlorine
- Fluoride
- Iron
- Manganese
- Aluminium Residuals

Lake Rowlands

- Iron
- Manganese

Fortnightly

CTW operators collect samples from Lake Rowlands inflow streams, and is tested by CTW operators for the following:

- Ammonia
- Chloride
- Nitrate
- pH
- Apparent Colour
- Alkalinity

Weekly/Monthly

CTW operator collects samples from CTW systems and sends to Division of Analytical Laboratories

Testing for MIB & Geosmin (summer months only)

Samples of raw and filtered water and backwash water from sludge lagoons at Water Filtration Plants may be collected by the WTP Operator to be tested for methylisoborneol (MIB) and geosmin.

AWT at the Australian Water Quality Centre in Adelaide can test for MIB & Geosmin

Sample Sites

Monitoring and testing activities are to be performed at a range of sites representative of the water supplied to consumers.

- Sites should be a good geographic representation of the system.
- Samples should rotate amongst site codes.
- Samples should be collected at regular intervals over the year; and
- A site-code must always be nominated.

CTW will regularly review sample sites in each supply to ensure they are still representative of the whole reticulation system. The time interval between reviews of the sample sites will depend on the population served, the changes made and the complexity of the system.

Where there have been changes and additions to a reticulation system, additional sample sites may need to be added.

Councils will regularly review that the samples taken by field officers are representative of the whole reticulation system and not from the same sites.

The time interval between reviews of the sample sites used would be six monthly to allow for the corrections to be made or yearly as this is the period that labels are issued to water supply authorities under the NSW Health Drinking Water Monitoring Program. The time interval between reviews could change depending on the population served, changes made and the complexity of the system.

Locations for testing water in CTW systems are located in Appendix A

Non-Compliant Samples

Samples that are not compliant with the Australian Drinking Water Guidelines are notified to the water utility and the NSW Department of Health, Public Health Unit.

A Repeat or additional sample is required to be taken after a previous sample has been found to not comply with the Australian Drinking Water Guidelines.

The procedure for Repeat or Additional Samples can be found in the Forensic and Analytical Science Service (FASS) 2010, Guide for Submitting Water Samples to the Division of Analytical Laboratories for Analysis 2nd Edition at www.health.nsw.gov.au/environment/water/Documents/dal_analysis.pdf

Monitoring of Water Samples

NSW Drinking Water Database

All the data from the sampling undertaken within the Drinking Water Monitoring Program is stored in the Drinking Water Database.

The NSW Drinking Water Database administered by NSW Health Water Unit allows CTW to enter and upload water sample results and to monitor and report on water quality.

Permissions to the system are determined by the user role and are granted by the NSW Health Water Unit. To obtain a username and password contact the NSW Health Water Unit (02) 9391 9939 or email waterqual@doh.health.nsw.gov.au

To access the database log on through the NSW Health Application Management System URL: www.drinkingwaterdb.nsdw.gov.au

Log-in using your user name and password supplied by the Water Unit and click on the Drinking Water Database link.

A User Manual and Quick Reference Guide to assist with using the database are available at: http://www0.health.nsw.gov.au/PublicHealth/environment/water/drinking_water_database.asp

Council is required to regularly review the water sampling submission errors that are entered by the Forensic and Analytical Science Service (FASS) laboratory onto the NSW Health Drinking Water Database. This information is available to each water supply authority so that they can ensure that the samples they are submitting to the laboratory are being submitted correctly and are scientifically valid.

Accredited Training

Central NSW Councils (CENTROC), in conjunction with NSW Health, has developed training in water sampling and the NSW Drinking Water database. All CTW Council staff undertaking water sampling will have successfully completed an accredited training and hold a Water Sampling Training card.

Council will keep a register of current accredited trainees and provide refresher training every three years.

RELATED POLICIES/DOCUMENTS

NHMRC/NRMMC, 2011. Australian Drinking Water Guidelines 2011

Local Government Act 1993

NSW Public Health Act 2010

NSW Public Health Regulation 2012

Forensic and Analytical Science Service (FASS) 2010, Guide for Submitting Water Samples to the Division of Analytical Laboratories for Analysis 2nd Edition.

NSW Guidelines for Drinking Water Management Systems

NSW Health, Drinking Water Monitoring Program 2005

NSW Guideline for Water Carters

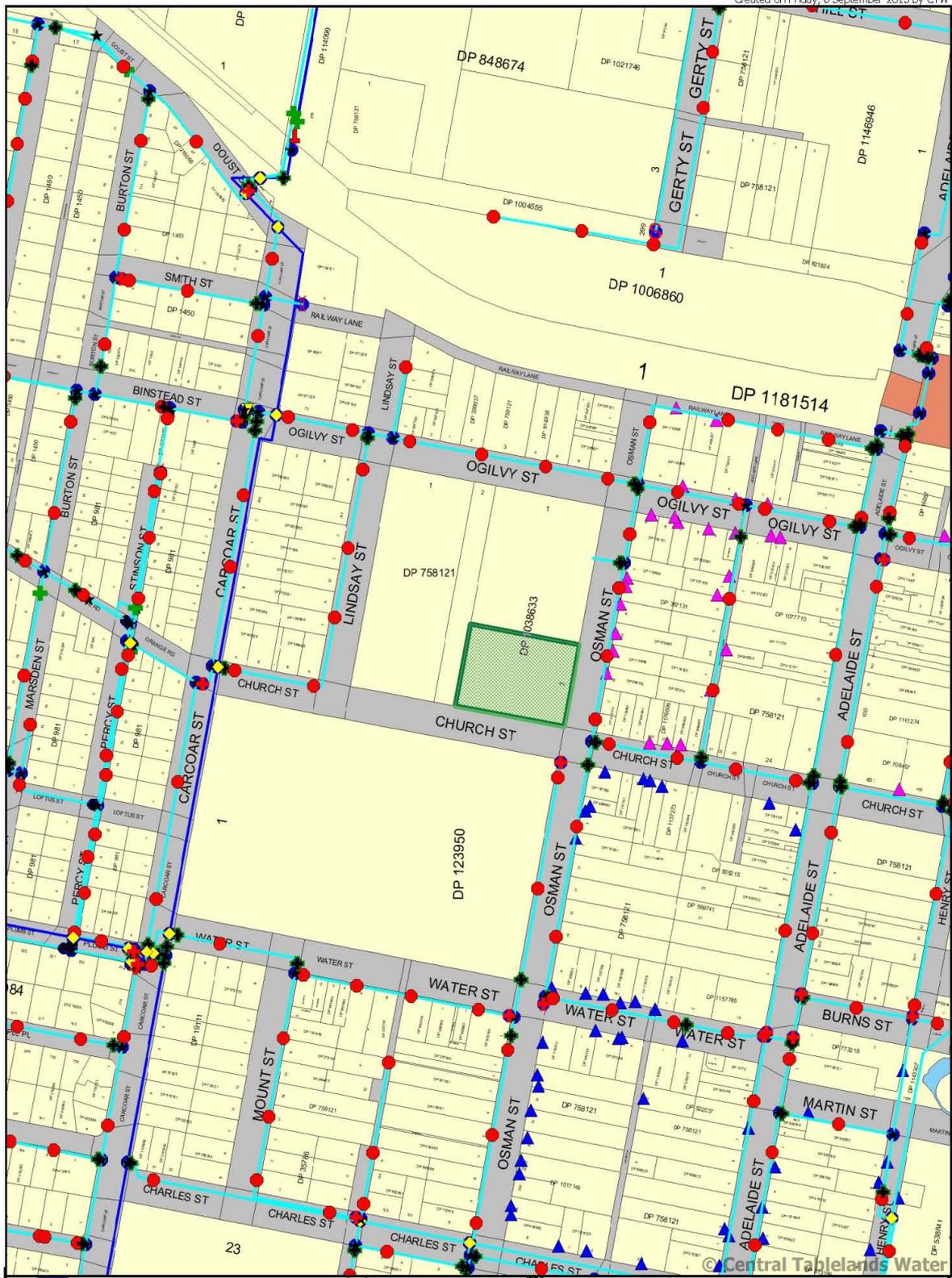
National Water Initiative indicators/National Performance Report (utilities serving over 10,000 connected properties)

REVISION

	DATE	ADOPTION	DATE	ADOPTION
1	September 2013			

Appendix A

Locations for testing
water in CTW Systems



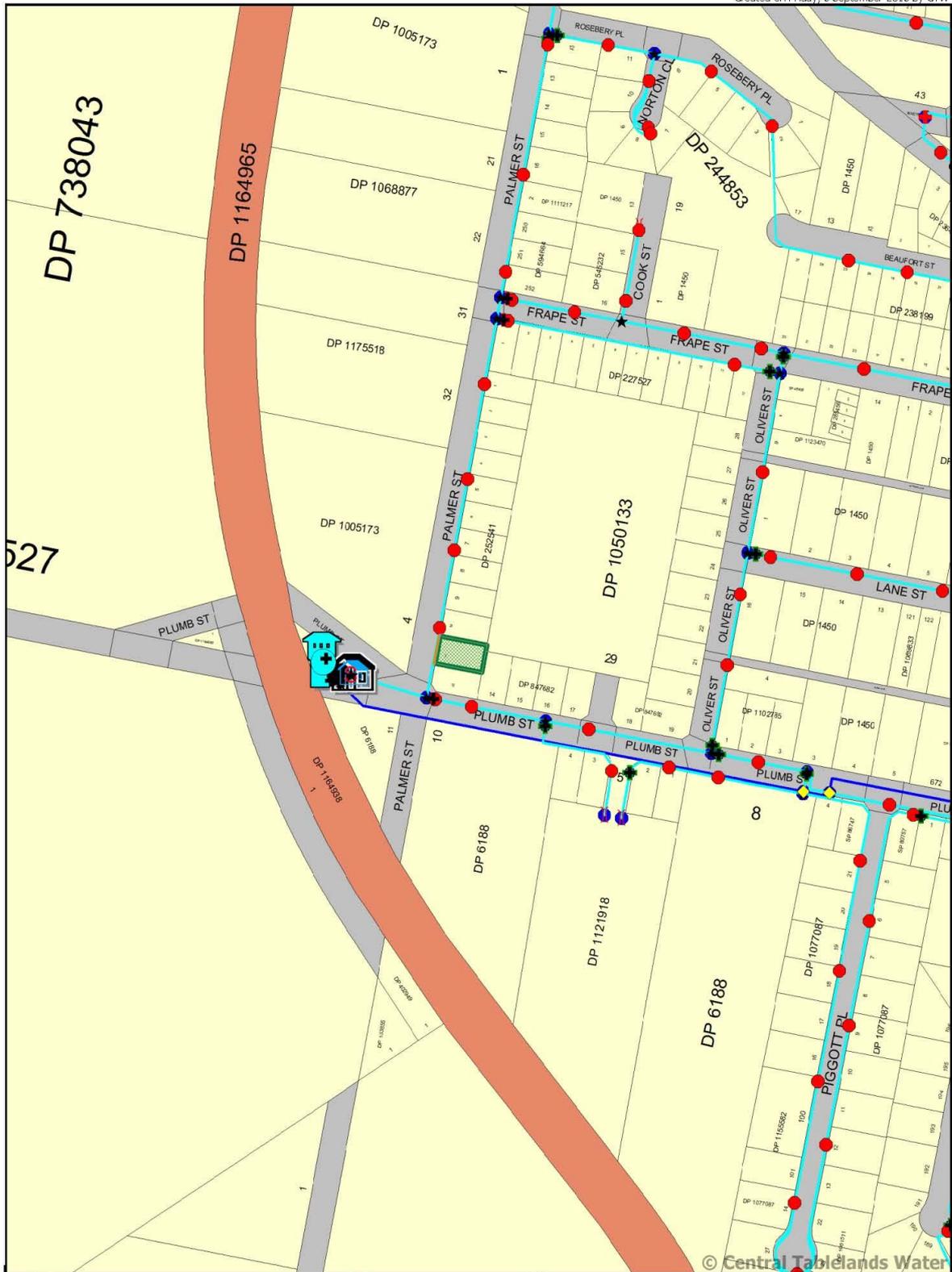
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Blayney

Map Scale: 1:4,602 at A4
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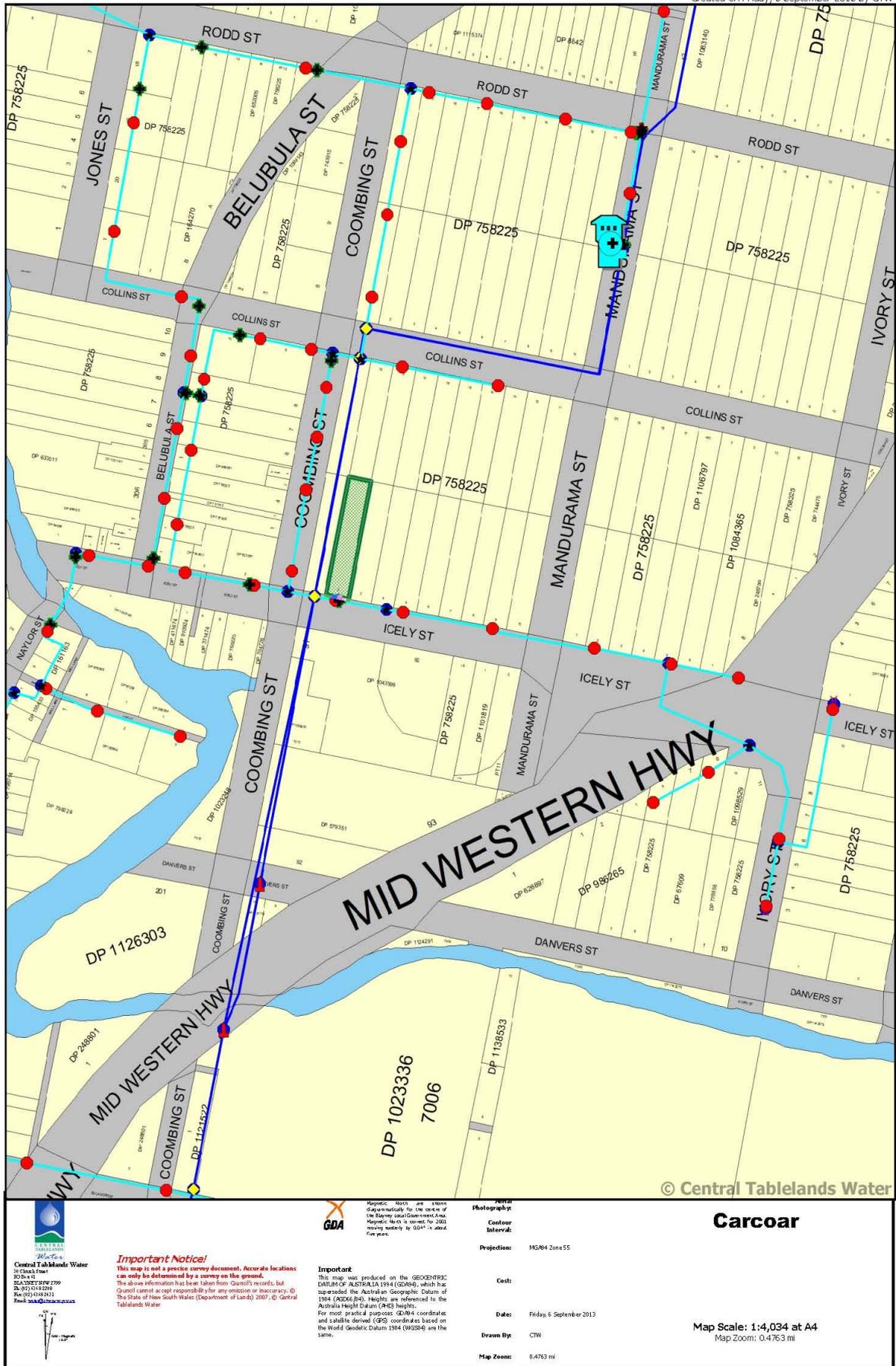
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Blayney

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 Map Zoom: 0.449 m



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Carcoar



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Map Scale: 1:4,034 at A4
 Map Zoom: 0.4763 mi





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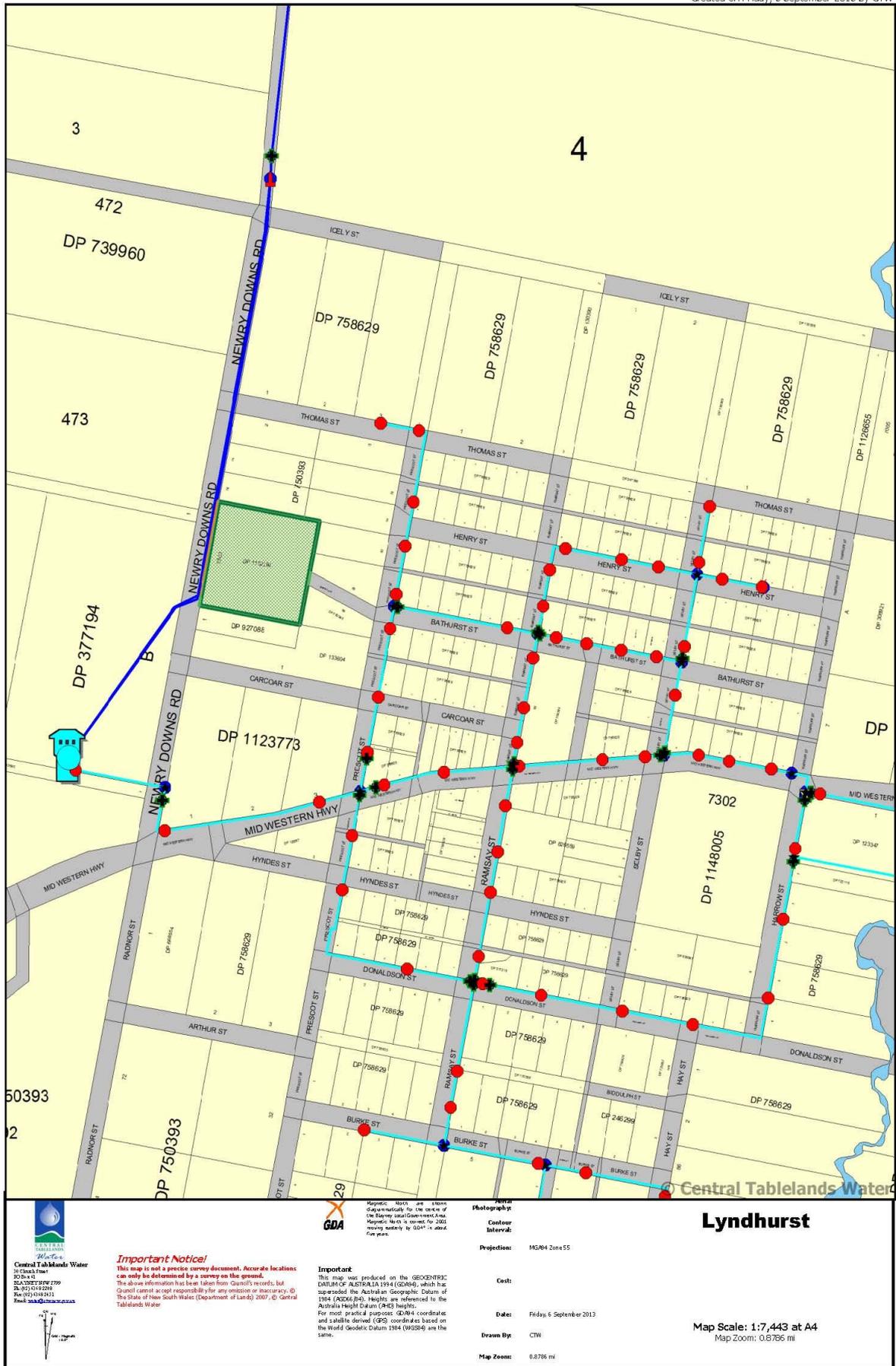


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Mandurama

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Lyndhurst

Map Scale: 1:7,443 at A4
 Map Zoom: 0.8786 mi



DP 750147

121

DP 750147

DP 623440

DP 259884

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Canowindra



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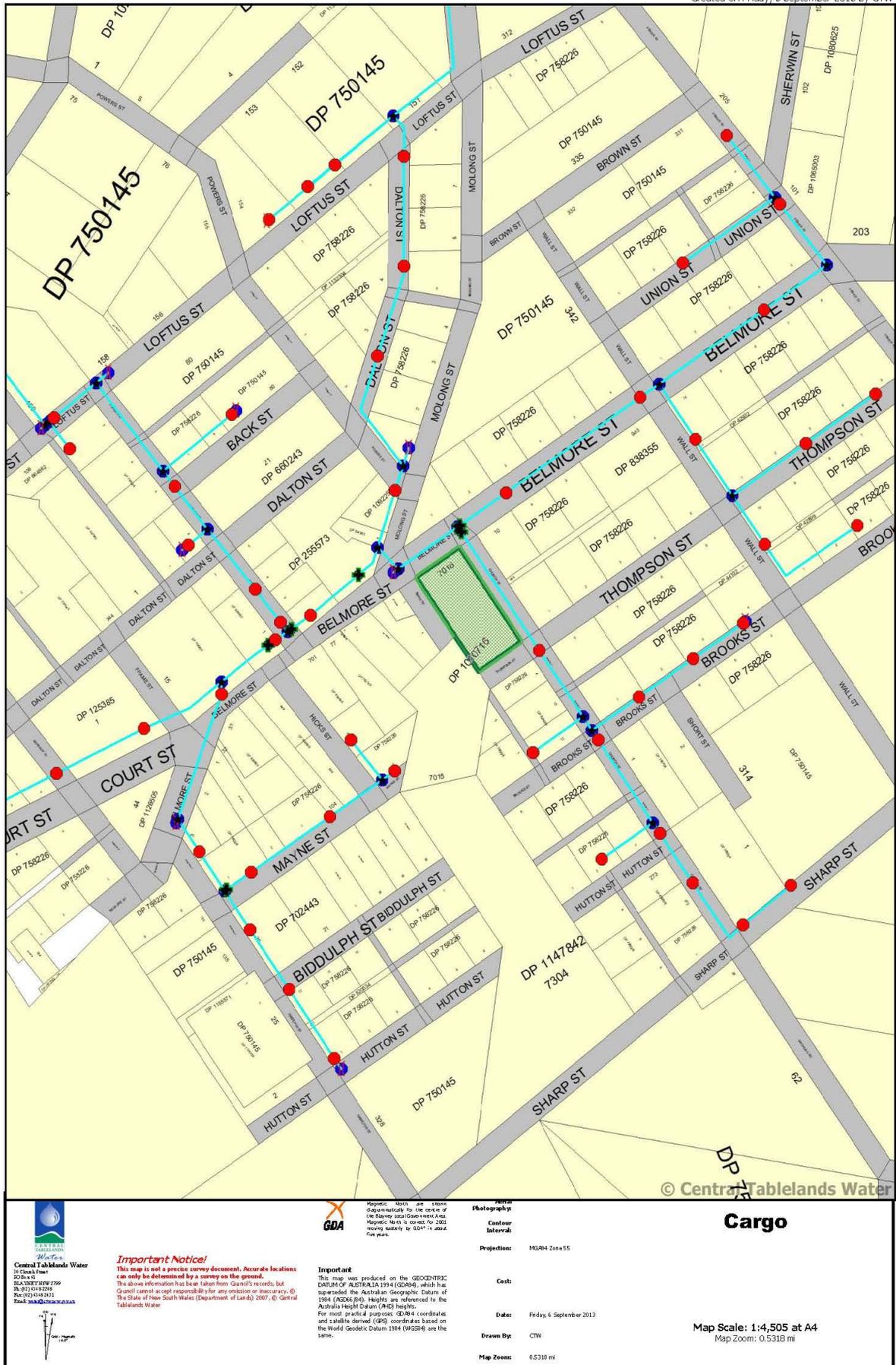
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Date: Friday, 6 September 2013
Drawn By: CTW
Map Zoom: 0.6588 mi

Map Scale: 1:5,580 at A4
Map Zoom: 0.6588 mi



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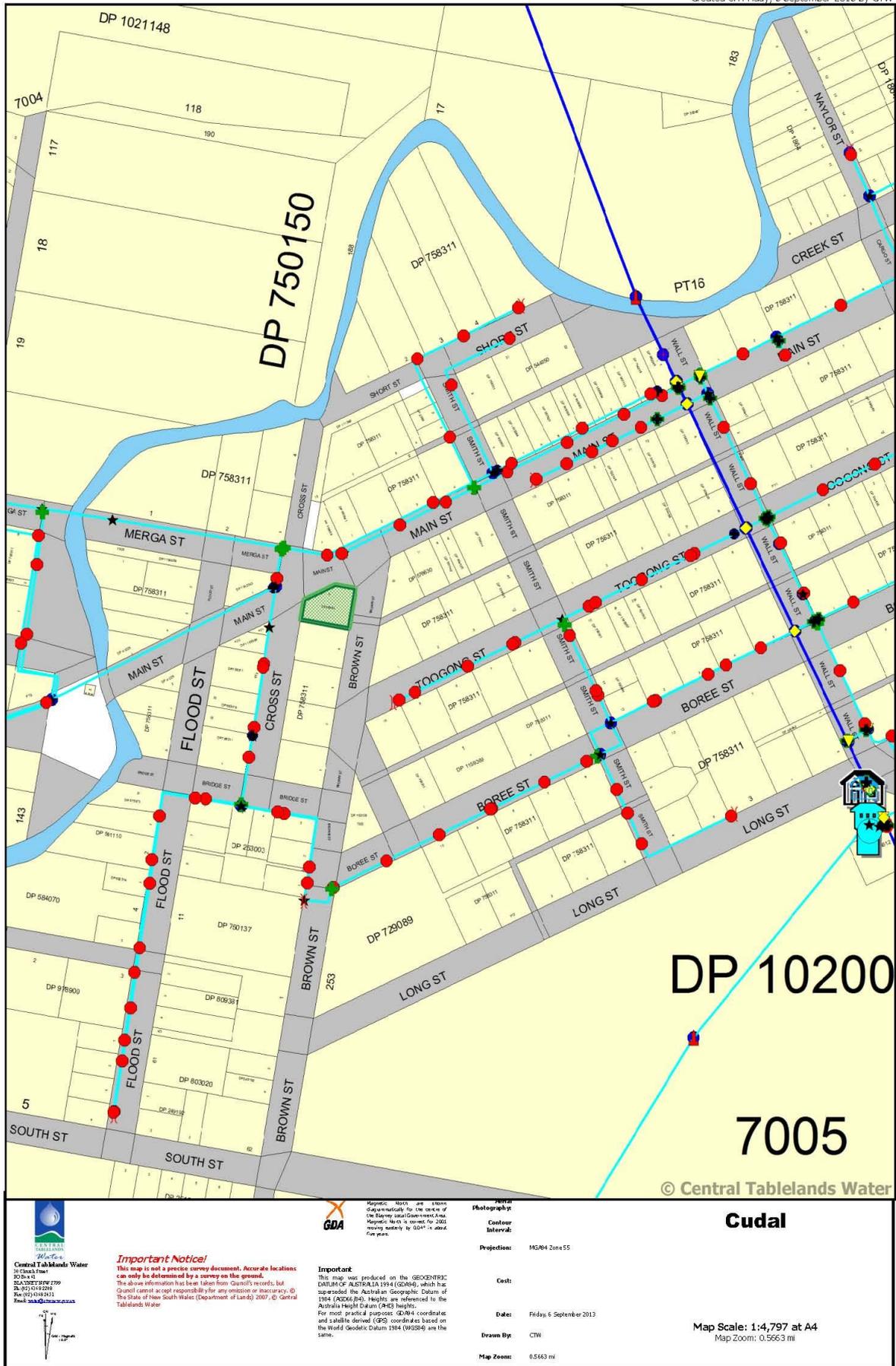
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Cargo

Map Scale: 1:4,505 at A4
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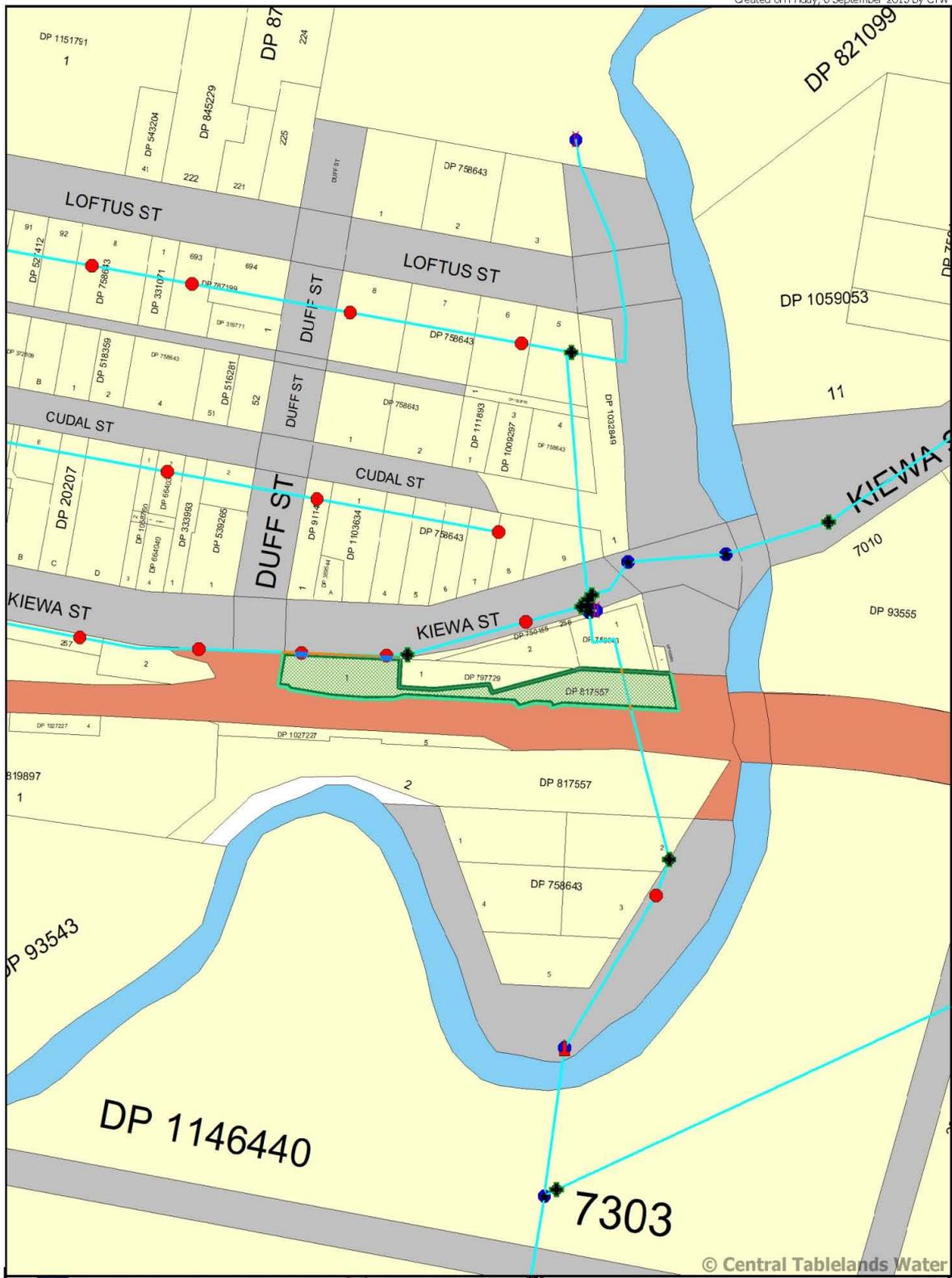
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Cudal

Map Scale: 1:4,797 at A4
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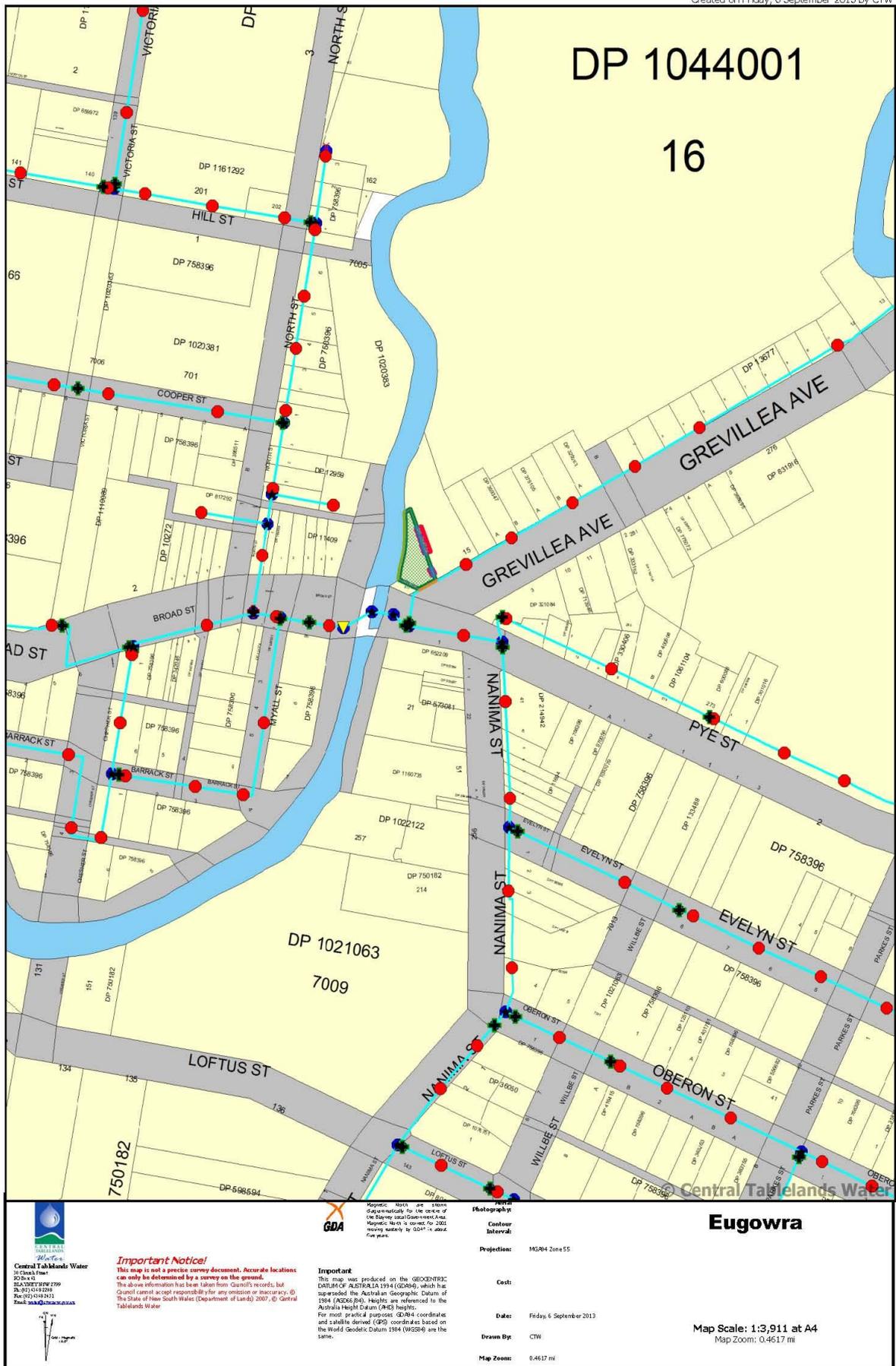


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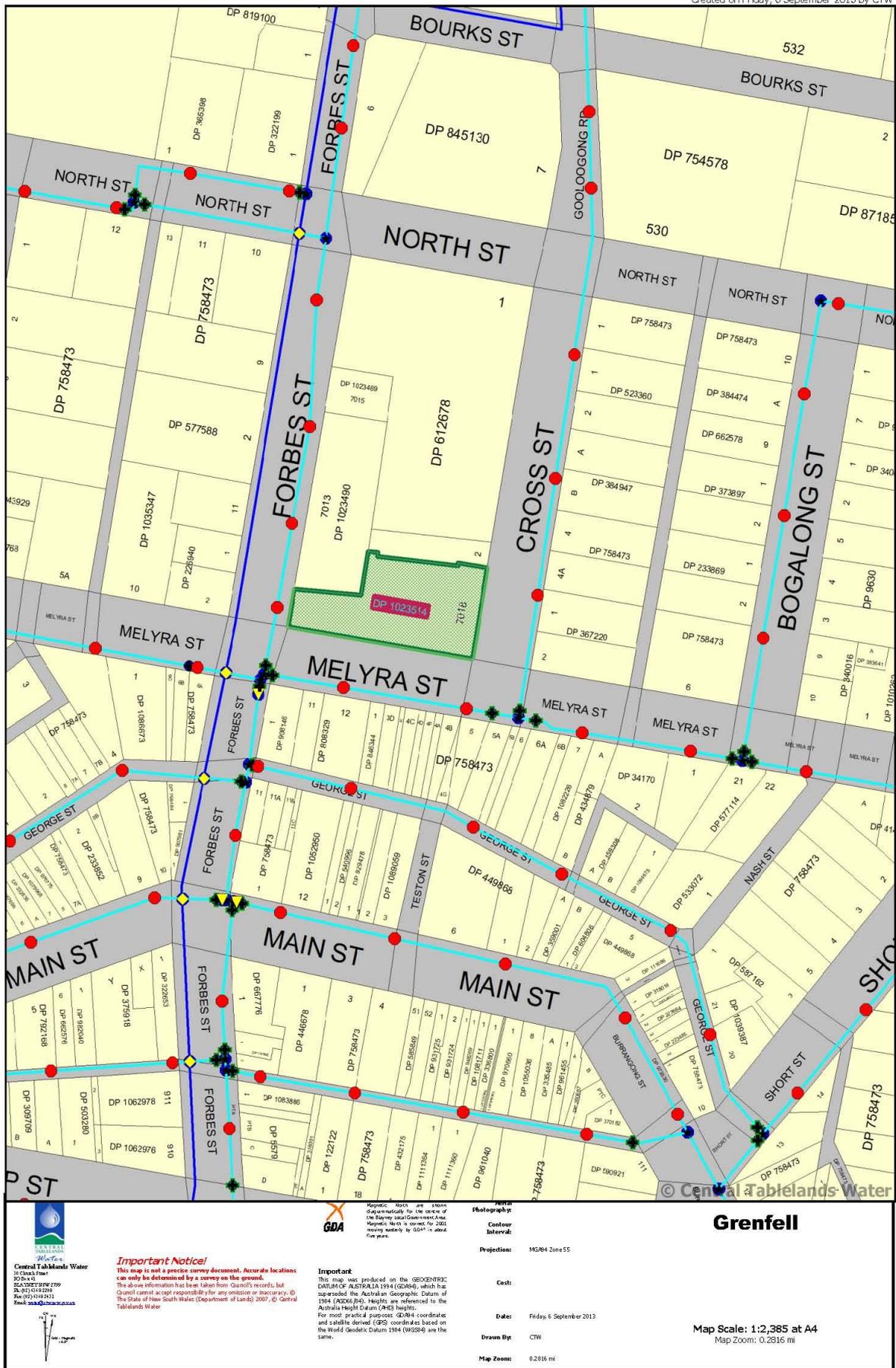


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Map Zoom: 0.4617 mi

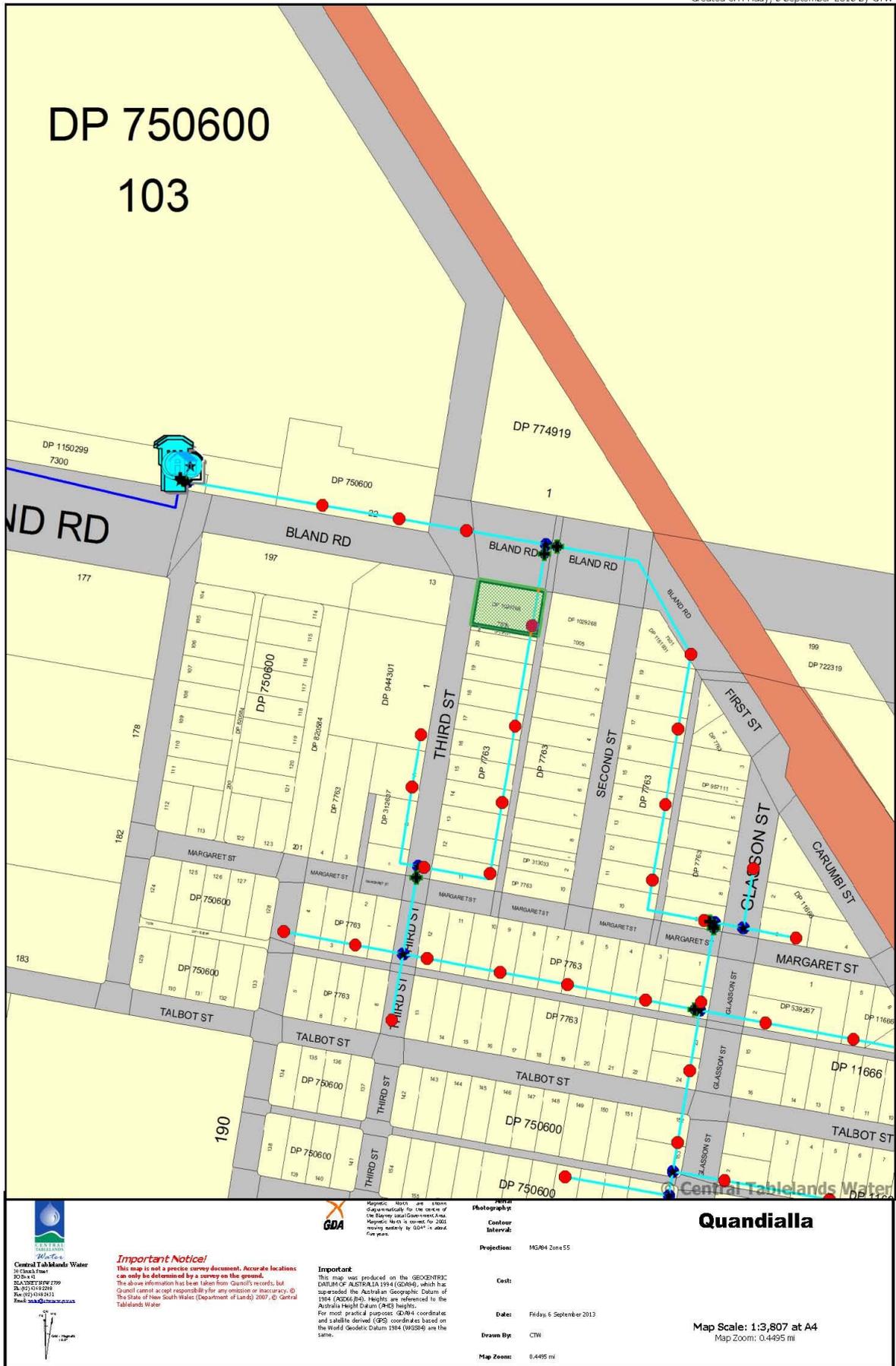


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 Map Zoom: 0.2816 mi

Grenfell
 Map Scale: 1:2,385 at A4
 Map Zoom: 0.2816 mi



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Photography:
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Date: Friday 6 September 2013
Drawn By: CTW
Map Zoom: 0.4495 m

Quandialla

Map Scale: 1:3,807 at A4
 Map Zoom: 0.4495 m



<p>Central Tablelands Water 50 Clark Road 2570 Rowlands Ph: (02) 6342 2222 Fax: (02) 6342 2121 Email: info@ctw.nsw.gov.au</p>	<p>Important Notice! This map is not a precise survey document. Accurate locations can only be determined by a survey on the ground. The above information has been taken from Queensland records, but Queensland cannot accept responsibility for any omission or inaccuracy. © The State of New South Wales (Department of Lands) 2007. © Central Tablelands Water</p>	<p>Geographical Information for the use of the Survey and Government, Aus. Metric Units, correct to 2003 survey epoch, to 0.004 m five years.</p>	<p>Photography: Contour Interval: Projection: MGRS Zone 55 Cozt: Date: Monday, 9 September 2013 Drawn By: CTW Map Zoom: 3.323 m</p>	<p>Lake Rowlands Catchment Map Scale: 1:28,140 at A4 Map Zoom: 3.323 m</p>
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