Joint IWCM Evaluation Study

Job number A060

Section 1

Technical Note 2 – Part 1

LWU's Systems Boundaries

1 Water System Boundaries

1.1 Blayney Shire Council

Council provides sewerage services to the township of Blayney and Millthorpe village.

Other villages including Carcoar, Barry, Neville, Mandurama, Lyndhurst and Newbridge are serviced by septic tanks.

Location of towns and villages within Blayney Shire Council is shown in Figure 1.

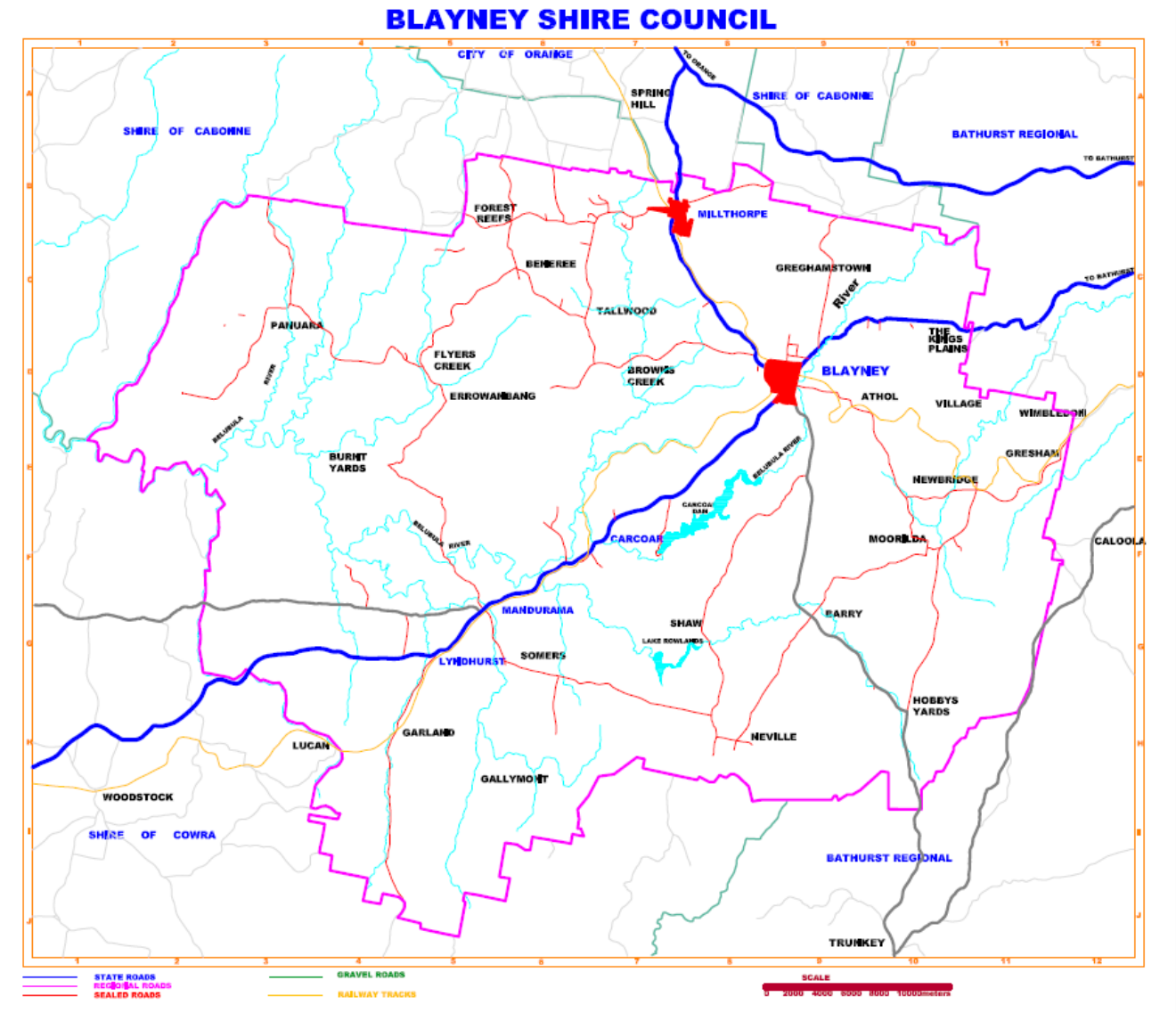

Figure 1: Map of Blayney Shire

1.1.1 Blayney Sewerage Scheme (refer: SBP sewer)

Blayney reticulation system consists of 51 Km of AC and uPVC mains and six pumping stations. The original reticulation system in Blayney was constructed in late 1960s with considerable augmentation in 1970's, 80's, 90's and in 2003. The sewerage reticulation which servicing the township of Blayney can be divided into three main catchment areas:

- North of the main western railway - Sewage from this catchment is collected at Pumping Station No. 2 and pumped across the railway line into the central town area gravity system.
- Central town area - Sewage from this catchment is collected at Pumping Station No. 1 and pumped directly to the sewage treatment facility.
- Area south of Martha Street - Sewage gravitates from this area back into the central town system. An exception to this is the development along Barry Road. Sewage from this area gravitates to Pumping Station No.3. This pumping Station pumps sewage directly to the Sewage treatment facility via an interconnection to the major rising main.

1.1.2 Millthorpe Sewerage Scheme (refer: SBP sewer)

Millthorpe sewerage services about 600 people in the village of Millthorpe. The sewer reticulation was commissioned in 2003. The system consists of 9.7 Km of uPVC gravity sewer mains and one pumping station. Collected sewage is pumped to the balancing tank of Blayney STP for treatment.

Maps showing the boundaries of Blayney and Millthorpe Sewerage Schemes are provided in Appendix A.

1.1.3 Blayney Stormwater Scheme (reference: Stormwater Mgmt plan)

Blayney Township is 37km west of Bathurst on the Mid Western Highway and 35km south of Orange on the Orange Road. Blayney is located on the banks of the Belubula River. Blayney Township is the only urbanised area within the Carcoar Dam catchment.

Blayney Township is situated approximately 13 km upstream of Carcoar Dam. The catchment for Carcoar Dam is 228 sq km (21,607ha). Almost all of the catchment area is under improved pasture and used for grazing. A very small proportion of the catchment is used for potato growing, the cultivation of oats and more recently wheat. Only a very small portion of the catchment, some 89ha (0.41%) remains relatively undisturbed (Taylor, 1994a).

Blayney Township is the main urbanised area within the Carcoar Dam catchment. Blayney stormwater infrastructure is shown in Appendix C.

1.2 Weddin Shire Council (refer: SBP for sewerage)

The Weddin Shire Sewerage System serves all of the urban residential development within the town of Grenfell and does not extend to the rural development. The unserviced rural properties are isolated and not economically viable to service and hence there is no intention to extend services to these areas.

The location of towns and villages within Weddin Shire Council is shown in Figure 2.

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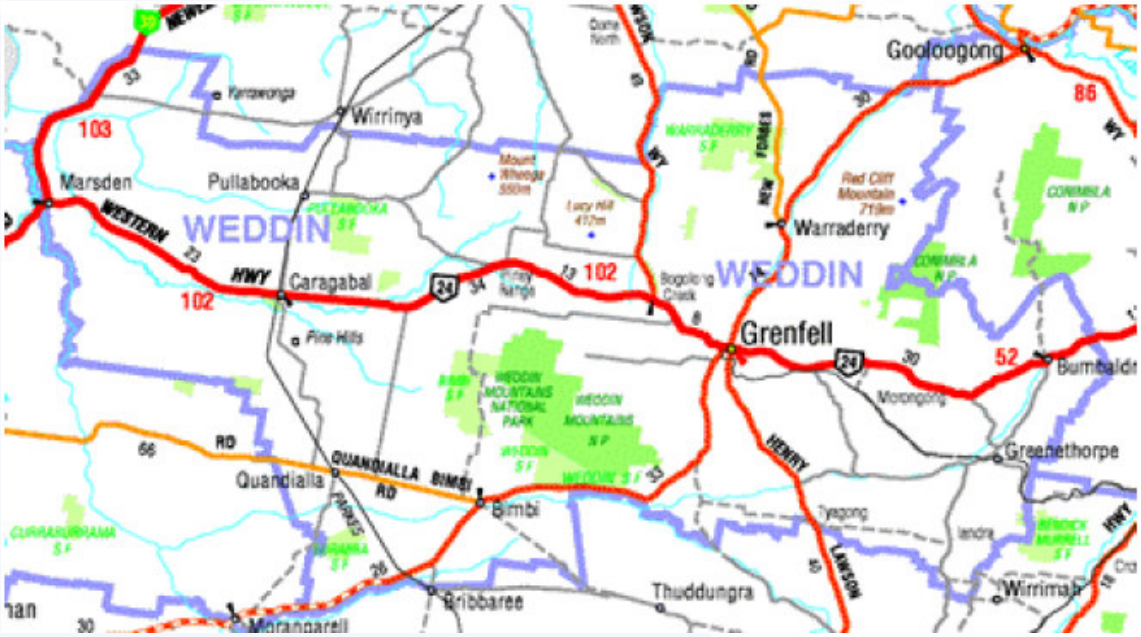

Figure 2: Map of Weddin Shire

1.2.1 Grenfell Sewerage Scheme

Weddin Shire Council is responsible for the installation, maintenance and operation of the sewerage reticulation pipe network, sewerage treatment plant and sludge disposal in Grenfell. The area sewered is approximately 325 ha.

There is one sewage treatment works (2,500 EP capacity) providing primary, secondary and tertiary treatment. The system comprises two trickling filters and five polishing ponds at the treatment works, 28 km of reticulation, and overflow discharge into Emu Creek.

Map showing the boundaries of Grenfell Sewerage Scheme is provided in Appendix A.

1.2.2 Grenfell Stormwater Scheme (refer: Grenfell Stormwater Mgmt Plan 2001)

Stormwater in the Grenfell urban area drains to various reaches of Emu Creek. Emu Creek cuts across Grenfell so that the majority of the urban area is to the south of the creek's bank, see Map 8 in Appendix C.

It is in the south of the creek's bank that most of Grenfell's stormwater infrastructure exists. It includes a mixture of kerb and gutter, piped stormwater, surface flows and open grassed channels.

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1.3 Cabonne Shire Council

The location of towns and villages within Cabonne Shire Council is shown in Figure 3.

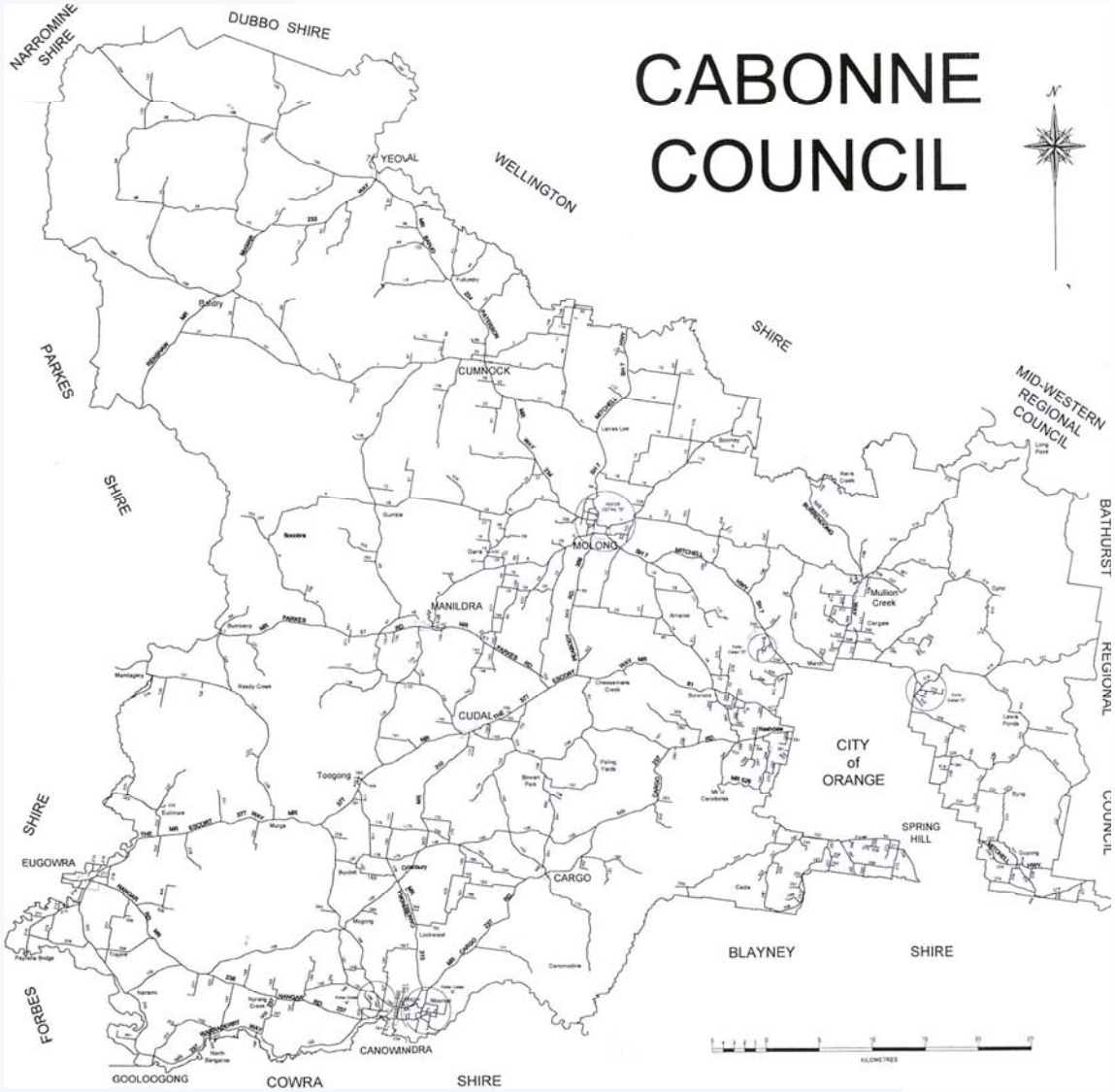

Figure 3: Map of Cabonne Shire

1.3.1 Cabonne Sewerage Scheme (refer: SBP sewerage scheme and HC_39)

CSC provides sewerage services for the towns of Molong, Canowindra and Eugowra. An augmentation for Canowindra including reticulation extensions in North Canowindra and upgrading of the treatment works are awaiting final approval. Diagrams showing the sewerage schemes for Molong and Canowindra are provided in Appendix A (Diagram 1 and Diagram 2 respectively).

Wastewater reuse scheme is operated by CSC in Canowindra.

Preliminary investigations are under way for sewering the villages of Cumnock, Yeoval, Cudal and Manildra. A scheme for Cargo is yet to be considered.

Other villages of Nashdale, Borenore, Baldry, Morbel, Mullion Creek, Toogong and Trajera operate on septic tank systems that are generally in a satisfactory condition.

1.3.2 Cabonne Water Supply Scheme (refer: SBP water supply scheme)

Cabonne Shire Council supplies potable water for the town of Molong, and non potable water for the villages of Cumnock and Yeoval and the urban/rural retreat area known as Delgany Estate. The water supply scheme diagrams for each village are shown in Diagram 3 to Diagram 5. Molong water supply scheme map is shown in Map 6.

Water supply is provided by Central Tablelands County Council to the town of Canowindra, the villages of Cargo, Eugowra, Cudal, Manildra and Moorbel and to a rural scheme at Trajere. See Central Tableland section.

The rural areas of Toogong, Nashdale and Borenore are presently unserviced.

1.3.3 Cabonne Stormwater Scheme

Cabonne Council is responsible for the stormwater facilities of Molong, Cumnock, Yeoval, Canowindra, Cargo, Eugowra, Cudal and Manildra. Maps showing the stormwater schemes of these villages can be seen in Appendix C from Map 9 to Map 15.

1.4 Central Tablelands Water (refer: SBP 2005)

The Central Tablelands Water County Council, a water supply authority constituted under Local Government Legislation was first proclaimed in 1944. The county area embraces the Shires of Blayney, Cabonne and Weddin as shown in Figure 4.

Bulk water is also sold to Cowra Shire Council to service the villages of Woodstock and Gooloogong.

The Council currently has 5,366 connections (figure provided by Tony Perry) and provides potable water to around 11,000 consumers in 14 towns and villages.

The main water source of the Council is Lake Rowlands. The unique slab and buttress dam constructed across the Coombing rivulet, a tributary of the Belubula River, form this lake. Various groundwater bores supplement Lake Rowlands water during summer. Bogolong Dam, near Grenfell is also owned by Central Tablelands Water and previously used as a back up supply for Grenfell during summer. Due to poor water quality, Bogolong Dam was taken out of service in the year 2000.

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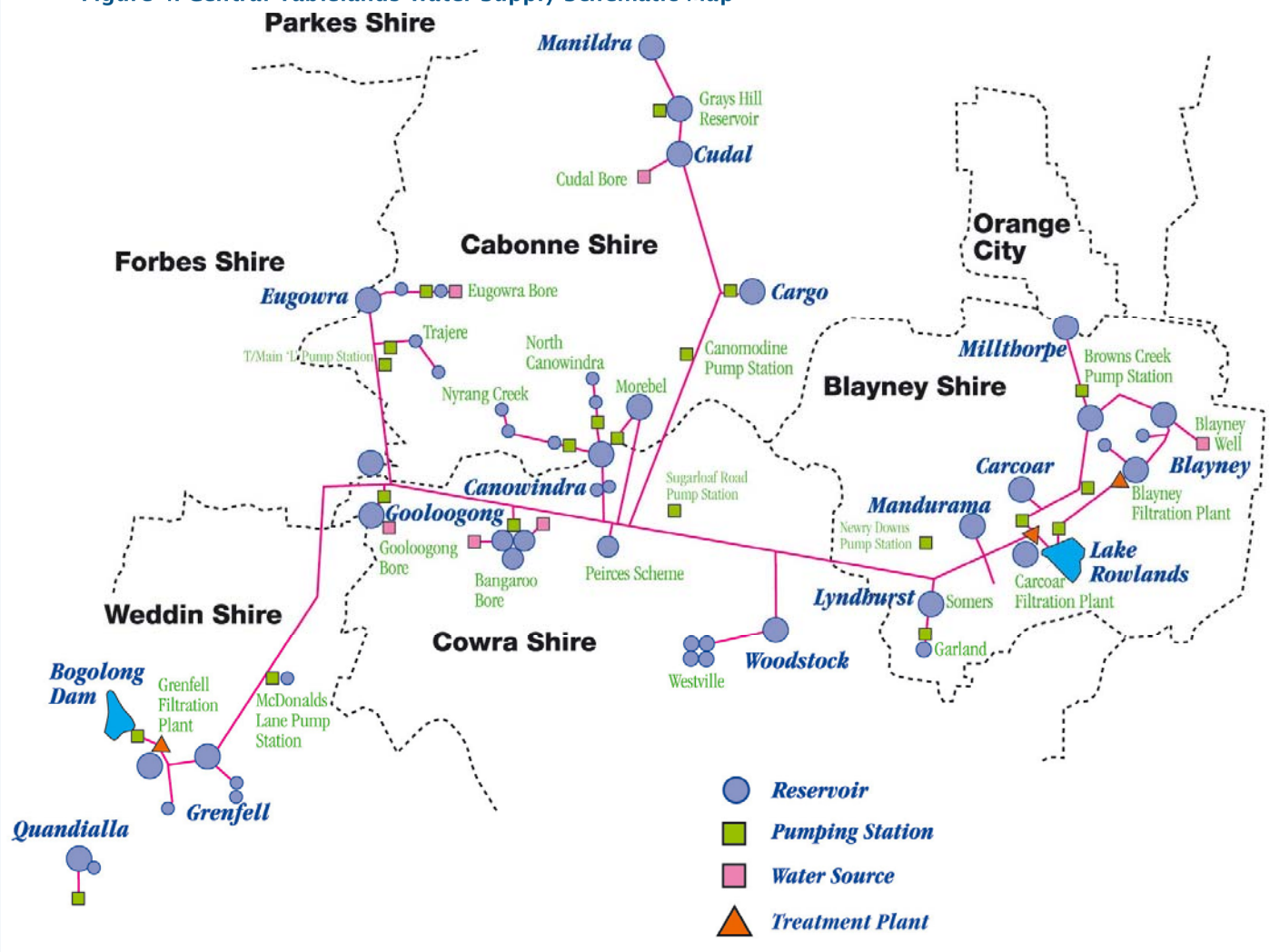
Figure 4: Central Tablelands Water Supply Schematic Map



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Appendix A

Wastewater Scheme

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Blayney Shire Council

Map 1: Blayney Sewerage Scheme

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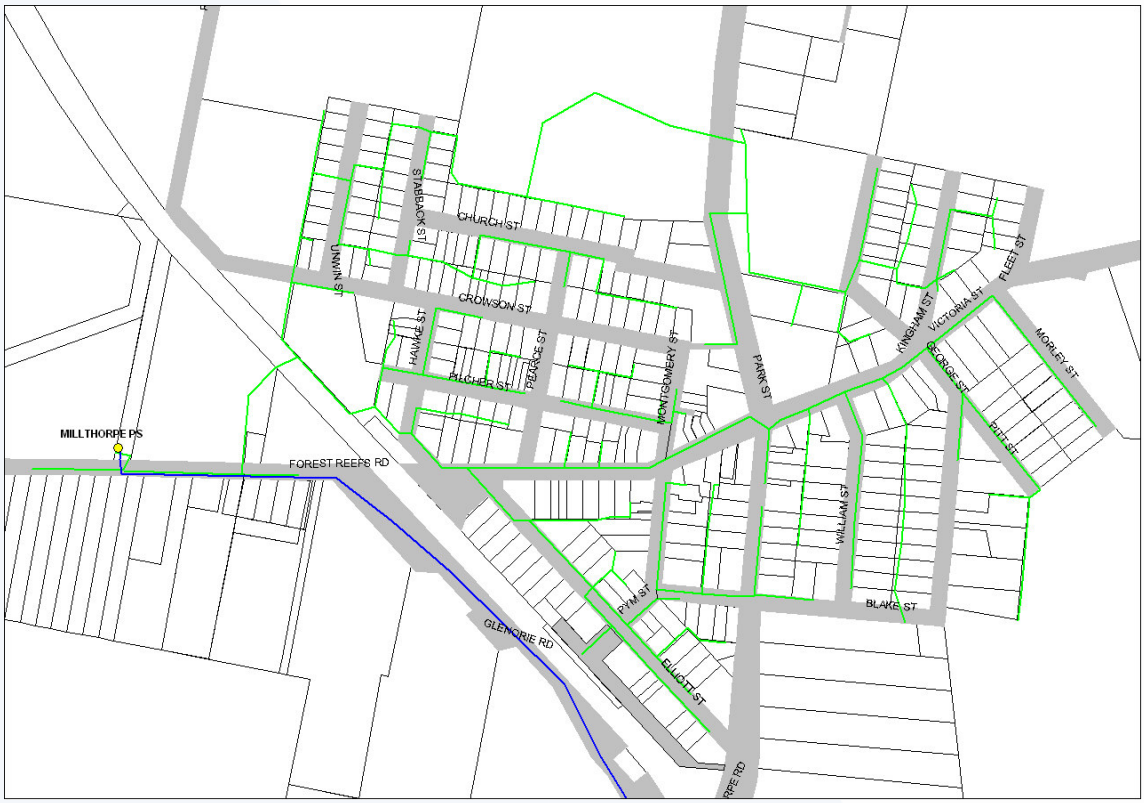

Map 2: Millthorpe Sewerage Scheme

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Weddin Shire Council

Map 3: Weddin Zoning Map

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Map 4: Weddin Shire Sewerage Town Serviced Area

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Map 5: Weddin Shire Sewerage Town Serviced Area (continued)

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Cabonne Shire Council

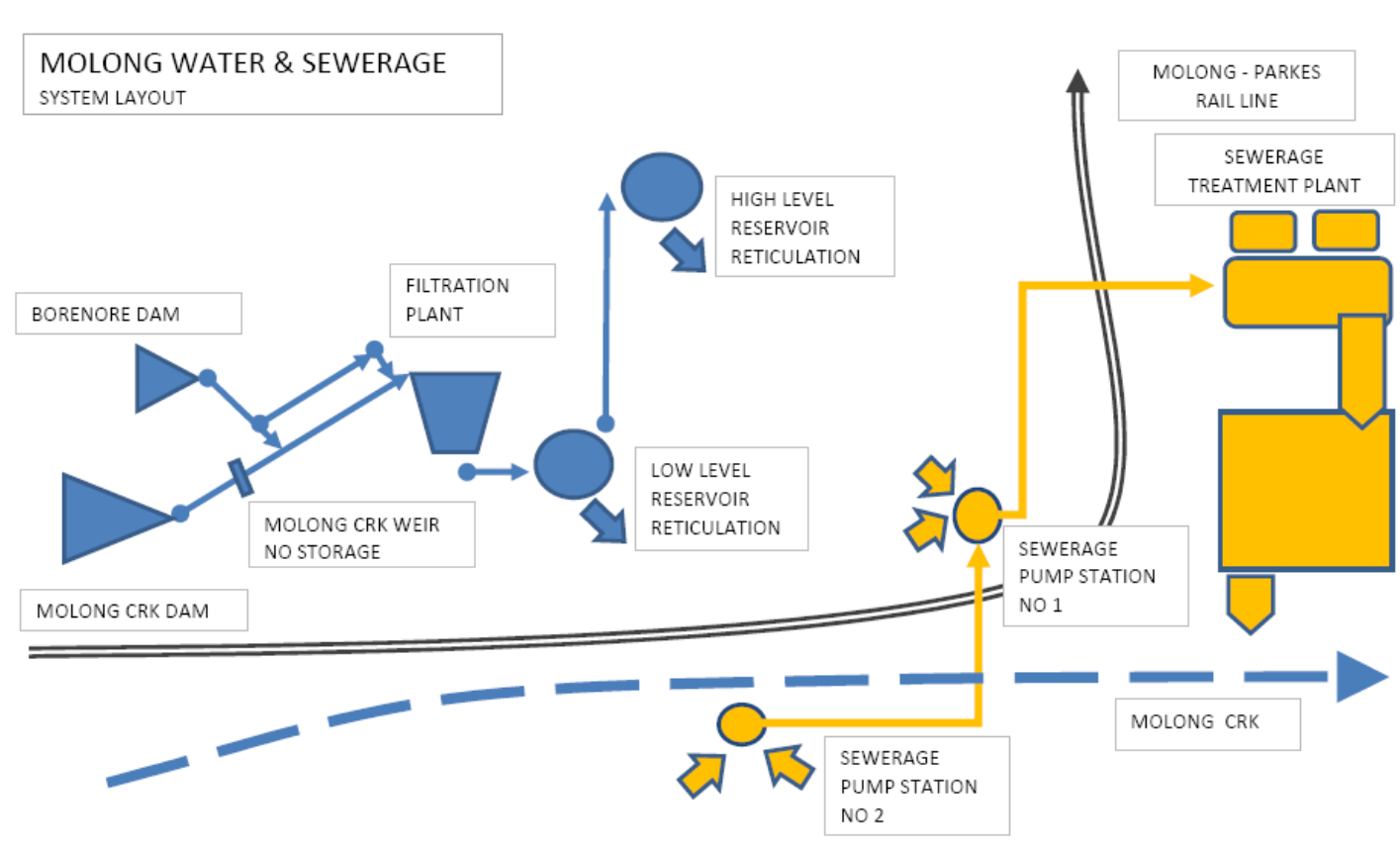

Diagram 1: Molong Water and Sewerage System

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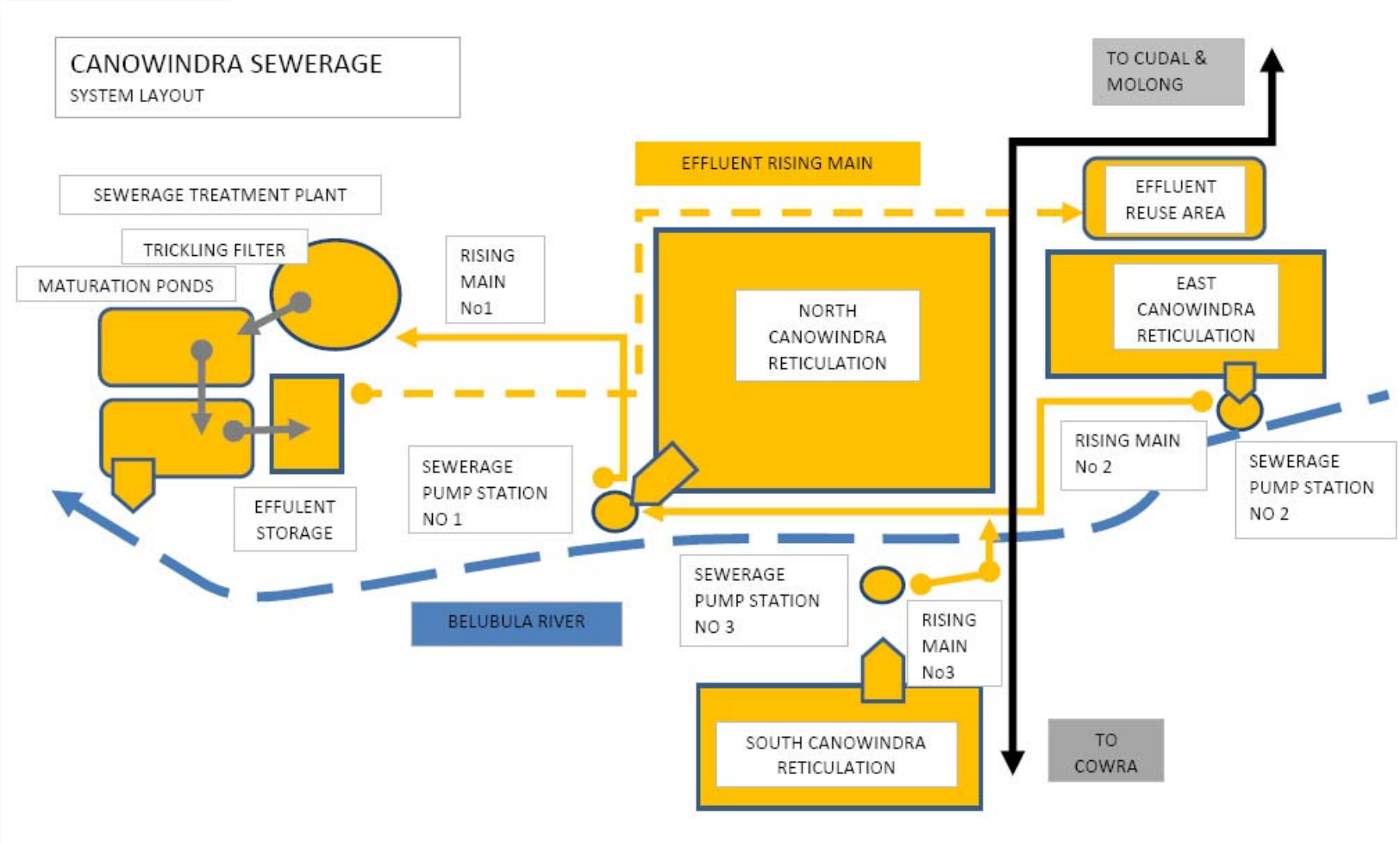

Diagram 2: Canowindra Sewerage System

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Appendix B

Water Supply Scheme

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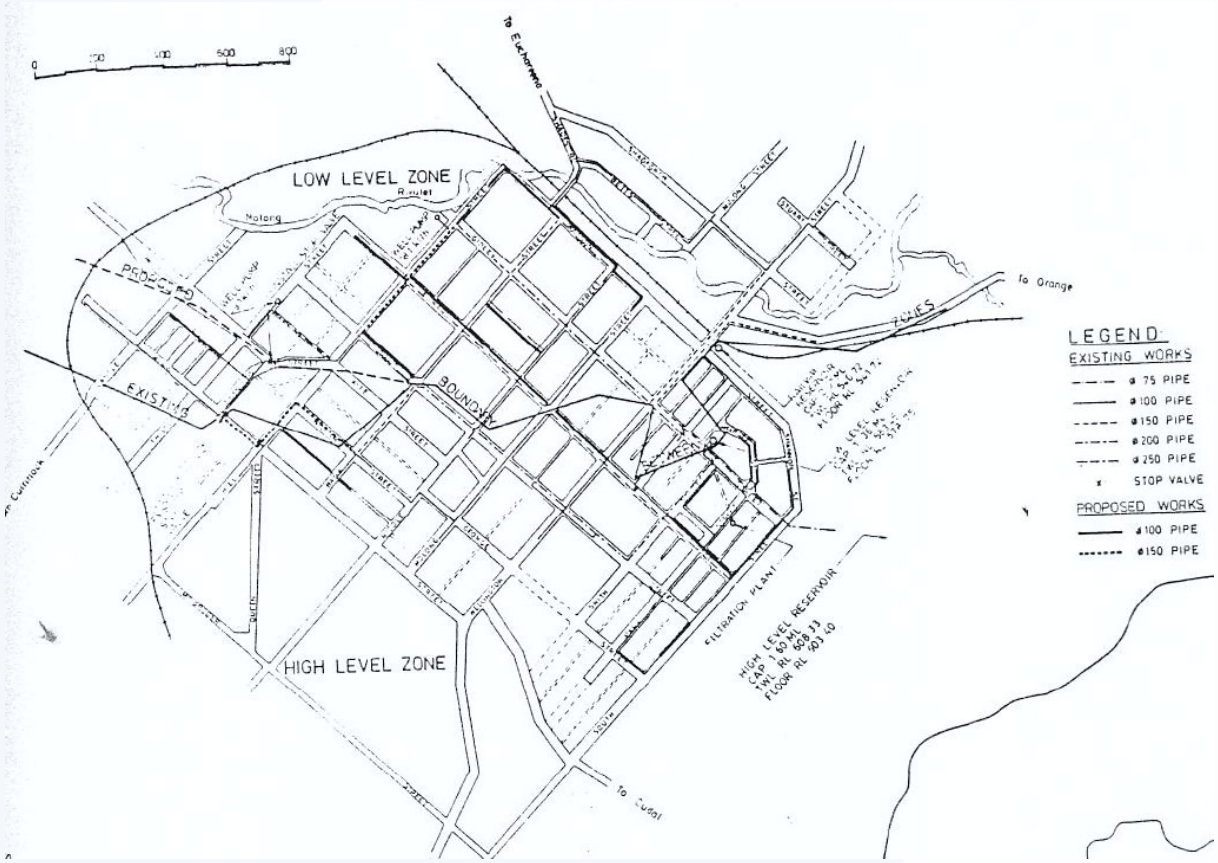
Cabonne Shire Council



Map 6: Molong Water Supply Scheme

See Diagram 1: Molong Water and Sewerage System.

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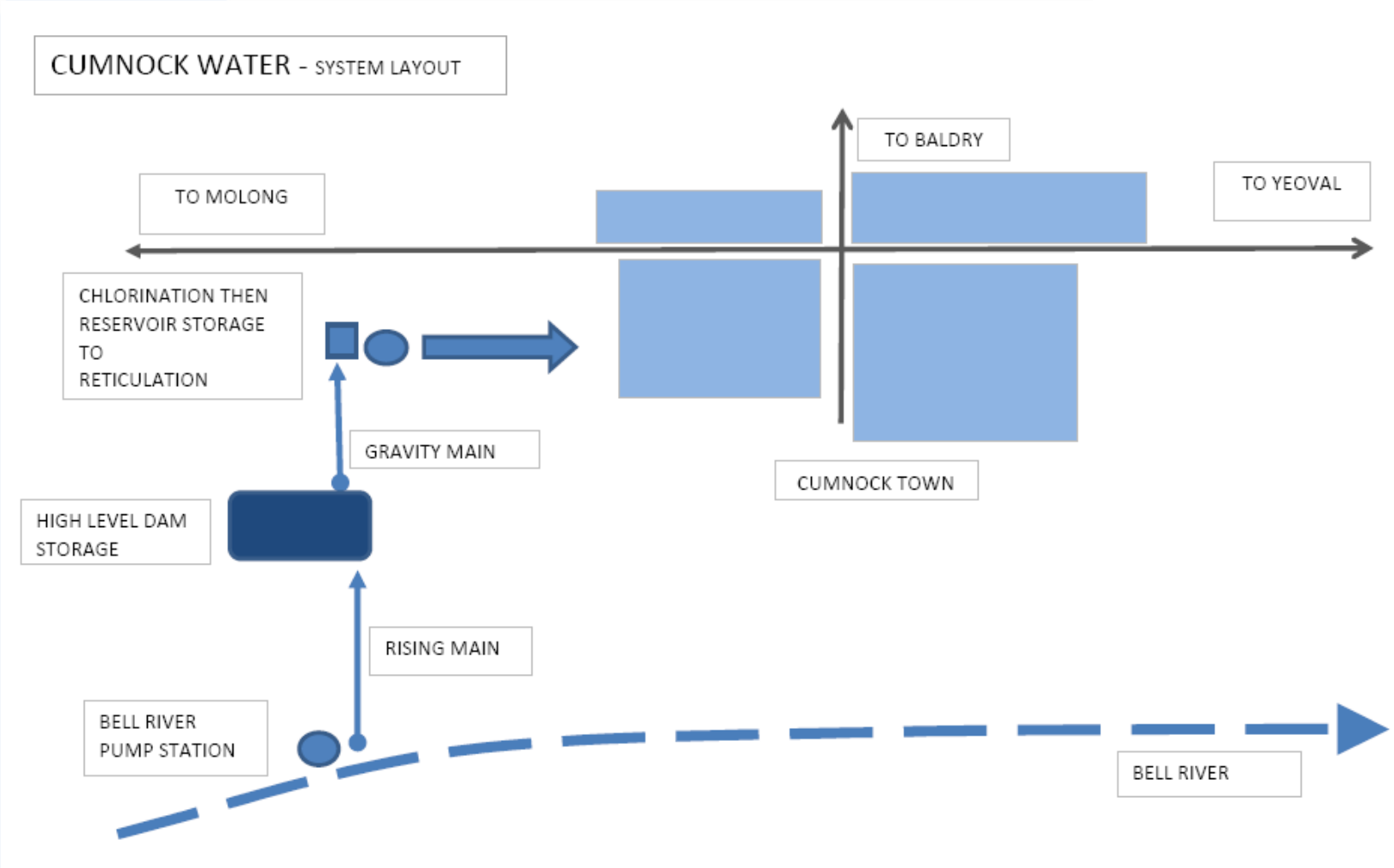

Diagram 3: Cumnock Water Supply System

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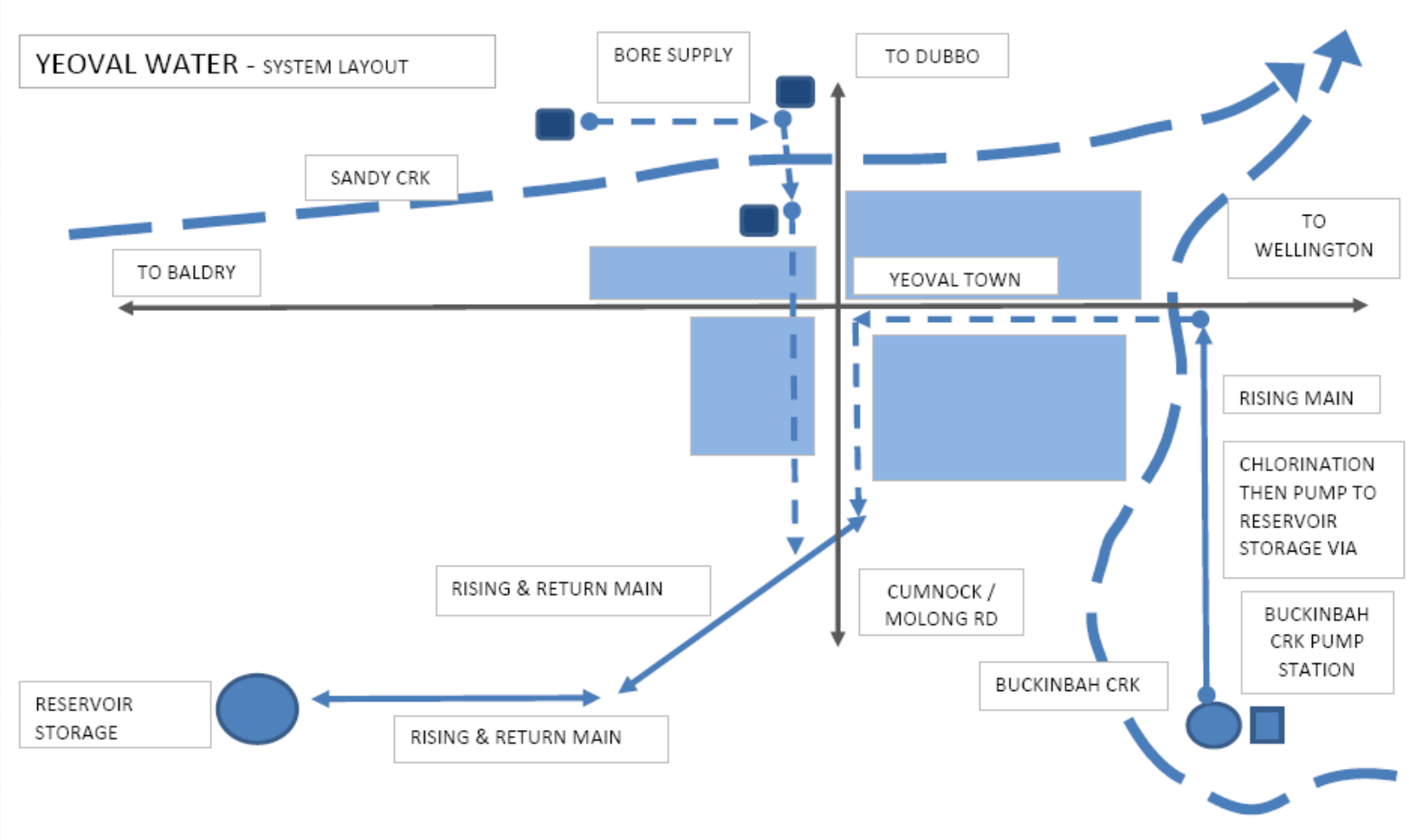

Diagram 4: Yeoval Water Supply System

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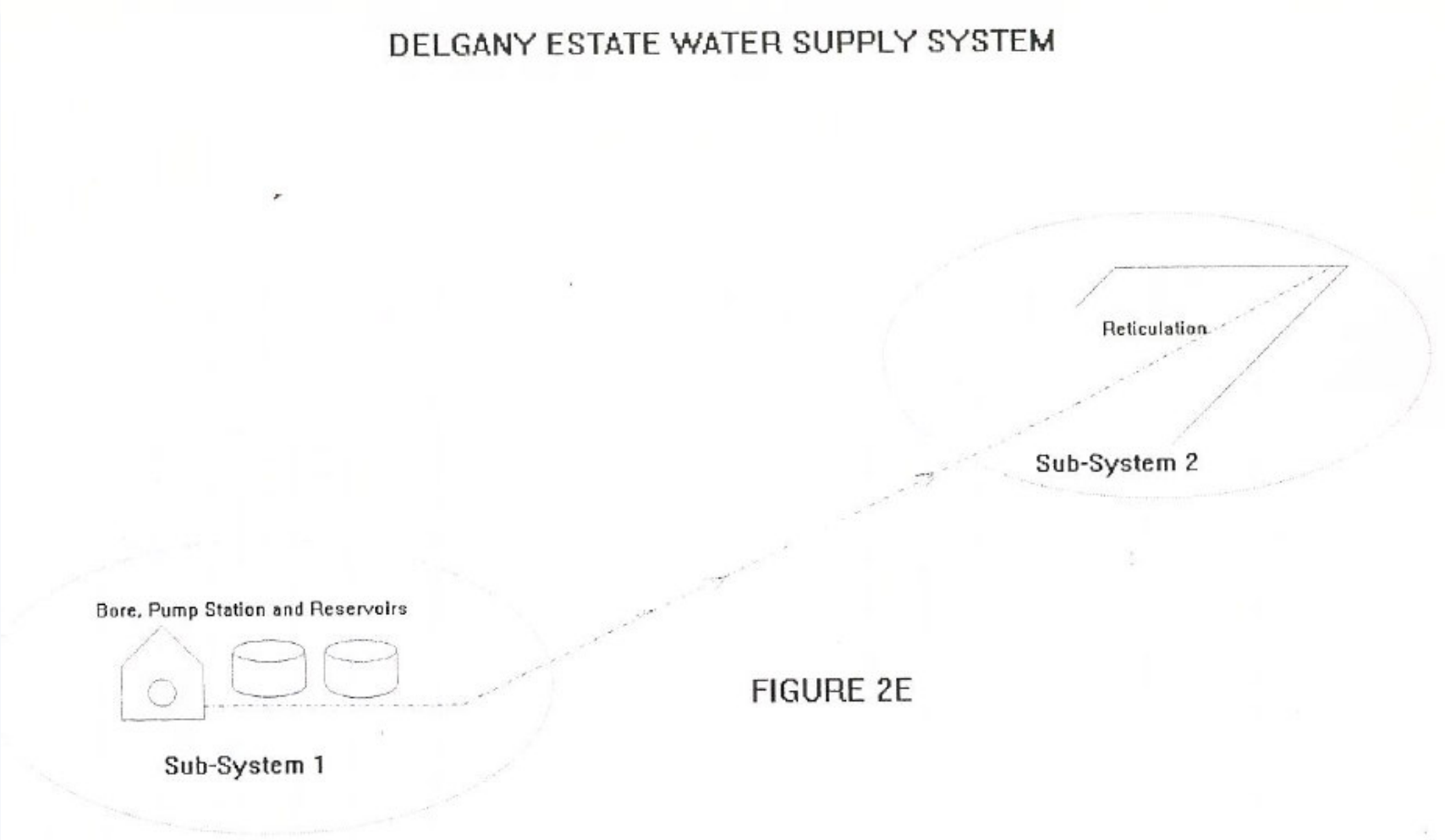

Diagram 5: Delgany Estate Water Supply System

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Appendix C

Stormwater Scheme

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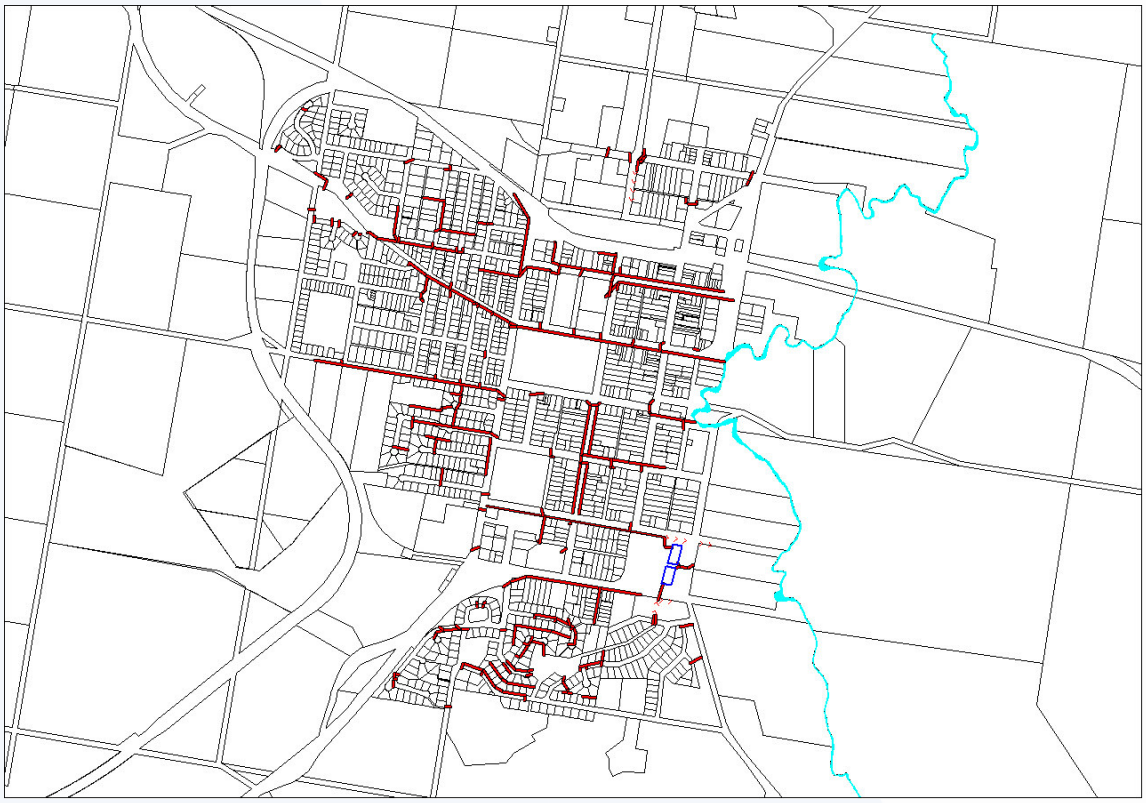
Blayney Shire Council



Map 7: Blayney Stormwater System

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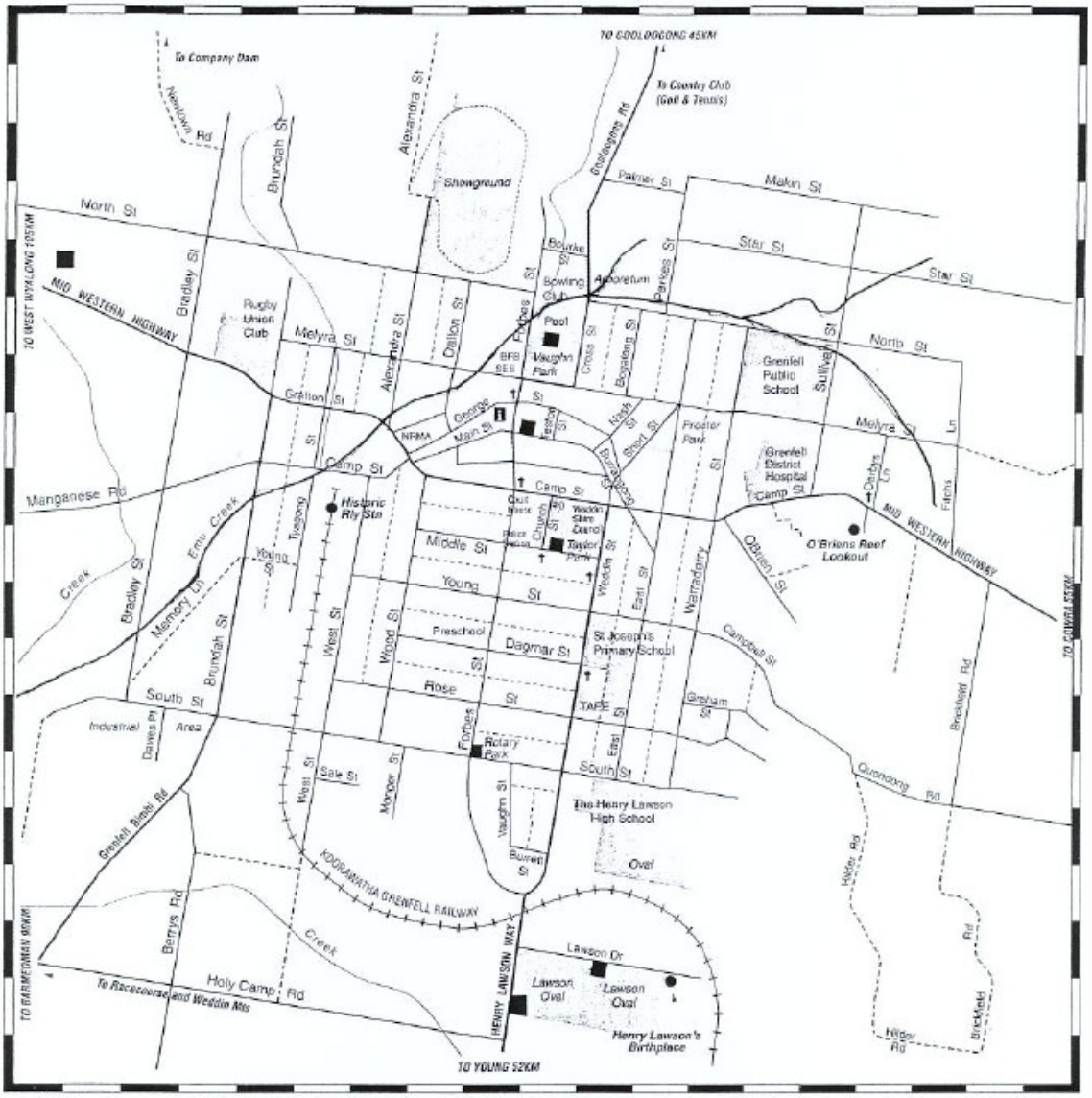
Weddin Shire Council



Map 8: Grenfell Town Map

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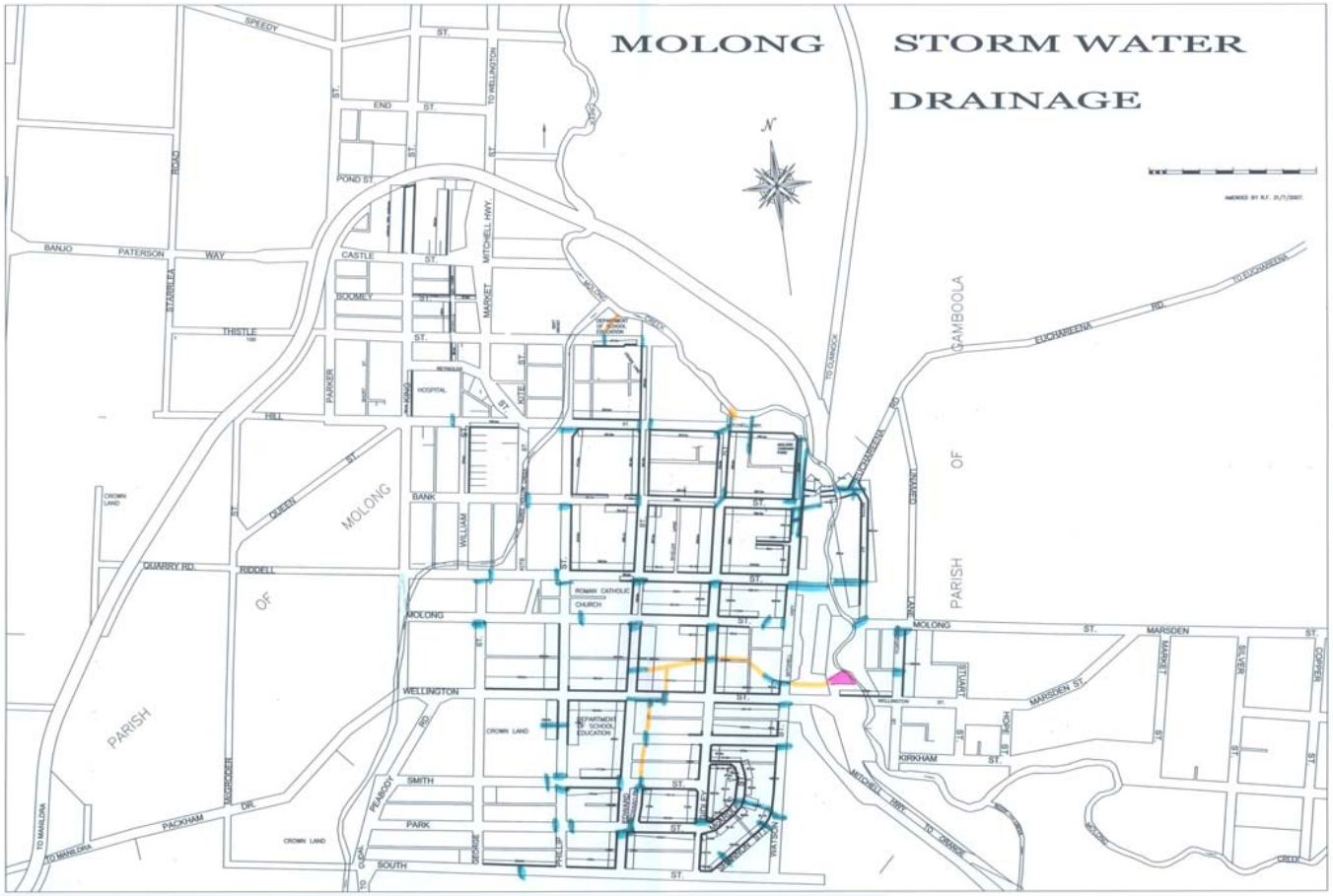
Cabonne Shire Council



Map 9: Molong Stormwater System

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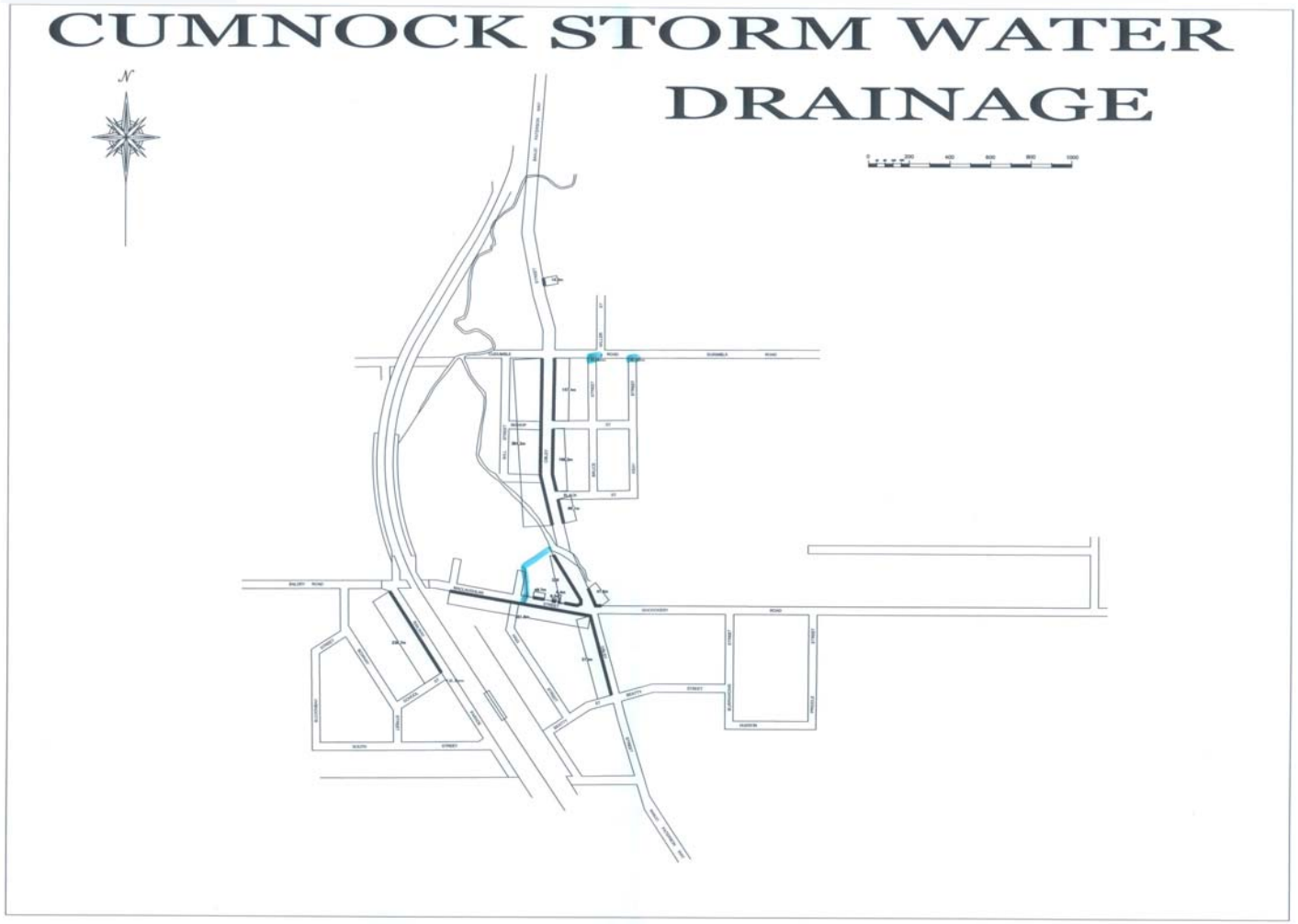

Map 10: Cumnock Stormwater System

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Map 11: Yeoval Stormwater System

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Map 12: Canowindra Stormwater System

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Map 13: Cargo Stormwater System

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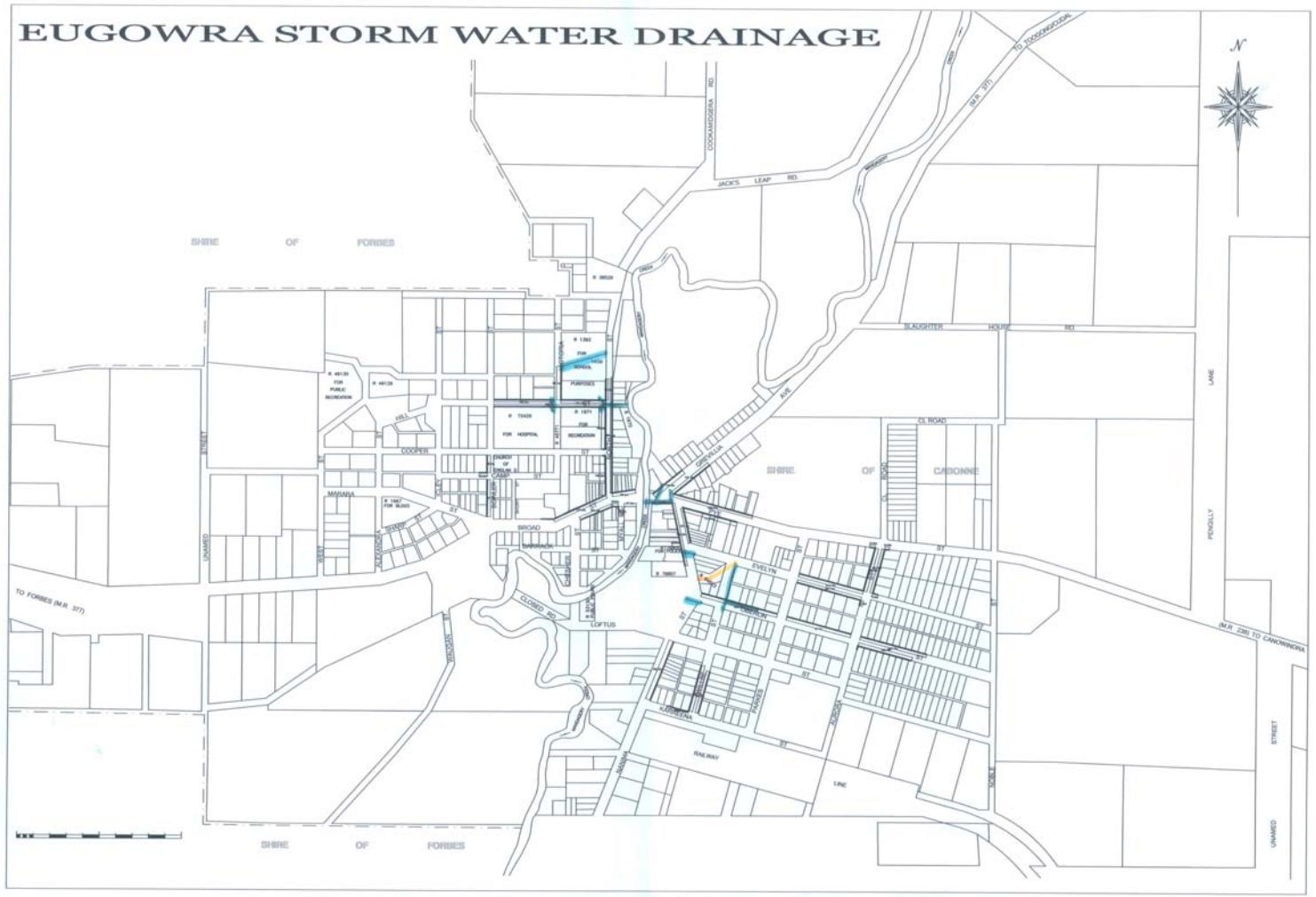

Map 14: Eugowra Stormwater System

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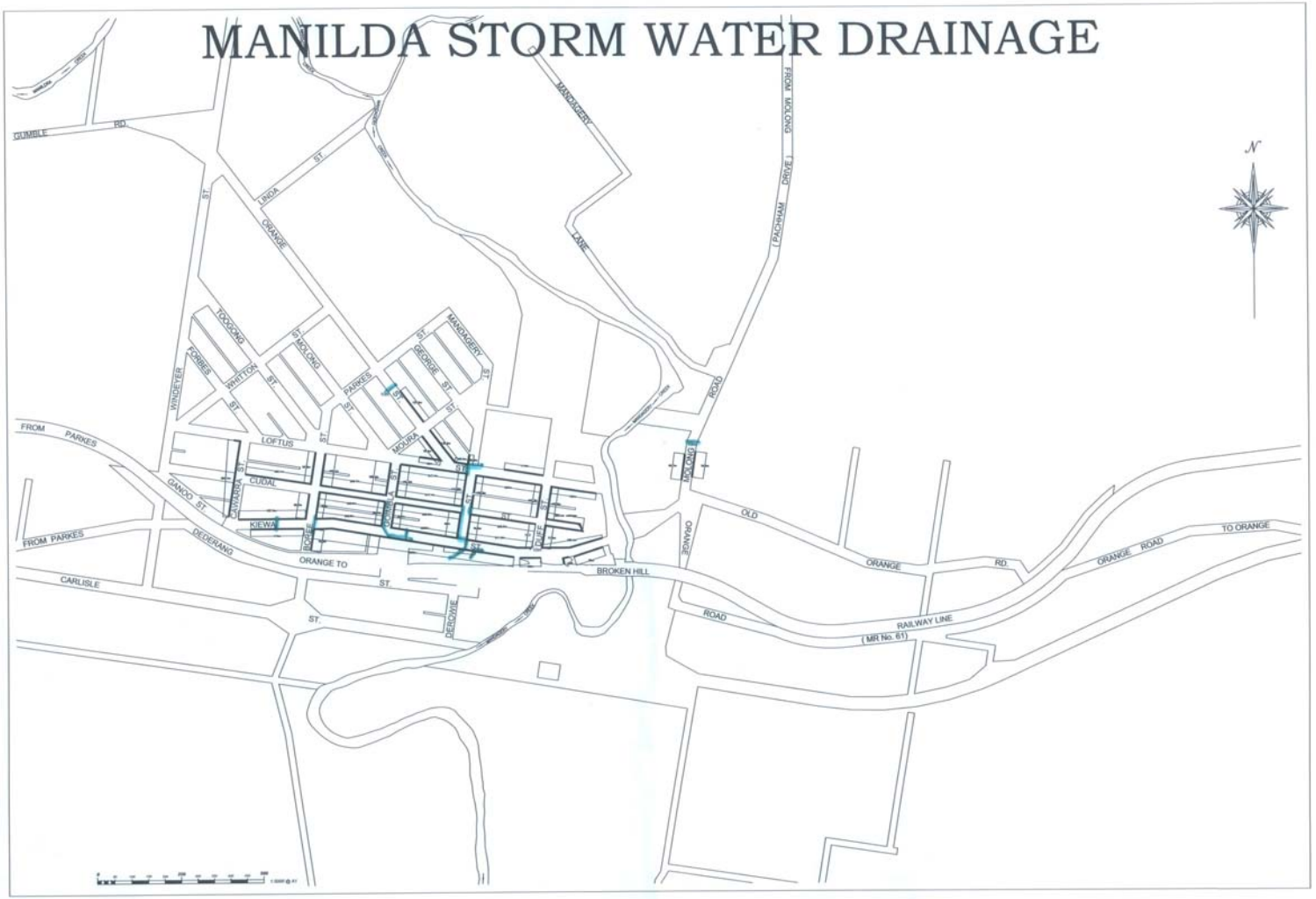

Map 15: Manildra Stormwater System

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Revision	Author	Reviewer	Approved for Issue		
			Name	Signature	Date
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HydroScience Consulting Pty Ltd