

In The Matter of the Resource Management Act 1991 ("the Act") And

In The Matter Plan Change 66 – Rolleston Industrial

OFFICER COMMENTS OF MURRAY ENGLAND

Introduction

1. My name is **MURRAY RUSSELL ENGLAND**. My qualifications are BE (Environmental) and NZCE (Civil).
2. I am the Asset Manager – Water Services for the Selwyn District Council ("the Council") and I am authorised to present this statement on its behalf. I have been employed by the Council since March 2009 initially holding the position of Stormwater Engineer and since May 2012 the position of Asset Manager Water Services.
3. I have the responsibility of managing Council's 5 waters which include Potable Water, Wastewater, Stormwater, Land Drainage and Water Races.
4. I have been involved in pre-application discussions and providing advice on behalf of Council to the applicant. This has included assessment of the application and the Request for Further Information (RFI) processes.
5. I have read in particular the September 2020 Infrastructure Report prepared by Babbage, included in the PC66 Request (as Appendix A) and the further information supplied through the RFI processes, including the WSP '*Iport 27 ha Extension Wastewater Capacity Assessment*' and the WSP '*Iport 27 ha Extension Water Supply Capacity Assessment*'.
6. I have considered the plan change request in relation to the water supply,

wastewater system and stormwater network operated by Council which will be impacted by this plan change. I have not specifically addressed relevant submission points that have been made by submitters, as I understand that my comments cover matters raised by submitters.

Water Supply

7. The Rolleston Water Supply provides UV treated deep groundwater to the Rolleston community from bores M36/7836, M36/7533, M36/7833, BX23/0507, M36/3922, BX23/0312, M36/2298, BX23/0508, and BX23/0827. These bores supply water to the network either direct online or via reservoir and booster pump stations (**Refer Appendix 1 and 2**). Several other wells are planned or drilled, but not yet operational.
8. Water take consents (CRC175045, CRC160628, CRC193859 and CRC962217) limit the maximum rate of water take based on a range of controls (Table 1). The maximum total water take from the scheme is limited to 7,183,440 m³/year. The maximum instantaneous water take for the scheme is 573 L/s. The daily water take limit is not specified, although daily limits exist for some bores.

Table 1 – Consented water take for the Rolleston water supply scheme

Consent number	Bores	Water take limits
CRC160628	M36/0026	Bore decommissioned
	BX23/0312	Max 100 L/s Max annual volume 246,240 m ³
CRC175045	M36/7533	Max 75 L/s (each bore)
	M36/7833	Max 300 L/s (combined from all bores)
	BX23/0507	Max annual volume 4,445,700 m ³
	M36/7835	
	Proposed: M36/7834	

CRC193859	M36/2298	Max 52.8 L/s, up to 4,562 m ³ /day
	BX23/0508	Max 70 L/s
	BX23/0827	Max 70 L/s
		Max annual volume 739,500 m ³
CRC962217	M36/3922	Max 55.6 L/s, up to 4,800 m ³ /day
		No annual volume

9. Over the last 3 years, the maximum supply demand was 19,200¹ cubic metres per day and 3,300,000 cubic metres per year. This means capacity for some growth is available.
10. The water supply provides both 'on-demand' connections via water meters and also a small number of restricted connections mainly to rural residential properties.

Future Growth Demand

11. In response to the accelerated growth within the Selwyn District, hydraulic models have been used to plan future water infrastructure for a number of water supplies including Rolleston.
12. The master planning provides an assessment of the sizing and timing of new infrastructure for new reservoirs, water sources (bores) and pipelines to service growth. Part of the master planning requires a water balance to be developed to forecast growth, using historical peak demand per household. The water balance forecasts the peak instantaneous flow per year versus the water resources available to determine the staging of new bores.
13. Rolleston is expected to see significant growth over the next 30-years and to meet this growth, capacity upgrades are proposed. Recently Council developed the 2021 – 31 Long Term Plan which included budget for further upgrades on the Rolleston water supply.
14. As the township grows the consented allocation will be put under pressure. To

¹ Jan 2021

ensure that growth is appropriately integrated with the provision of infrastructure, and planned growth is able to be serviced, priority of water allocation needs to be given to those developments within the Rolleston Structure Plan area². I confirm that this development is outside the structure plan area.

Fire Fighting Capacity

15. The Rolleston scheme was designed as a domestic supply and complies with the NZ Fire Fighting Code of Practice.

16. The Infrastructure Report accompanying the plan change states that *“For a heavy industrial facility there could be the requirement for higher peak flows that the network might not be able to deliver, for example Fire Water flow rates. In such instances this can be mitigated by suitably sized water storage tanks on site which manage the peak flows to a level within the network’s capacity”*

17. The Council requires that all new subdivisions are to be designed and constructed in accordance with the Selwyn District Council’s ‘Engineering Code of Practice’. Section 7.5.4 – Fire service requirements, which includes the following requirement:

The water supply reticulation should comply with the Fire Service Code of Practice. In particular, the reticulation must meet the requirements for firefighting flows, residual fire pressure and the spacing of hydrants.

Location of hydrants shall comply with SNZ PAS 4509: 2008 with minimum hydrants spacing of 135 metres. Blue RRPM’s (cat eyes) shall be installed to offset from the road centreline adjacent to all hydrants. Hydrant Marker posts are to be installed to comply with Section G3.4 of the NZ Fire Service Code of Practice. Hydrant posts are not required in urban areas. The type of hydrant marker required is shown on drawing WS10.0 (see Appendix V).

18. In addition the Selwyn District Council’s ‘Engineering Code of Practice’. Section 7.5.4 – Fire service states that:

Many industrial and commercial sites require the installation of fire services. The site owner is responsible for providing these fire services, which must be designed to meet the requirements of the New Zealand Building Code.

² [Final-Rolleston-Structure-Plan-230909.pdf \(selwyn.govt.nz\)](#)

All fire service connections to the Council reticulation will have a meter fitted by Council to detect any unlawful water use.

Do not assume that current pressure and flow will be available in the future when designing private fire services. Pressure and flow available is likely to reduce in the future, due to demand growth and pressure management.

19. In summary, the reticulated water supply for this proposed plan change would need to be designed to meet firefighting standards. Where the future development of individual sites requires specific requirements, these would need to be provided by the applicant as on-site solutions.

Conclusion

20. I consider that additional capacity within the network to service this plan change is available and further capacity upgrades are proposed and planned for and therefore future water demand from the proposed plan change can be met.
21. High water use industries will require specific agreement with Council to take water from the reticulated network. This may be approved with conditions (e.g. time of day etc.) or declined. This process is managed through the Selwyn District Council Water Supply Bylaw 2008 (amended 2018)³
22. As other plan change applications are processed, there is potential for those plan change applications outside of the structure plan area to be recommended for decline due to water availability. At this time however, I am satisfied that water can be made available for this plan change area while still ensuring sufficient supply is available for all areas within the Structure Plan boundary.
23. It is noted that development contributions are payable for any additional lots developed.

³ [57608740_SELWYN-DISTRICT-COUNCIL-WATER-SUPPLY-BYLAW-2008_v24.pdf](#)

Wastewater

24. Wastewater would be conveyed from the plan change area via local reticulation to the George Holmes Rd pump station which then pumps directly to the Pines wastewater treatment plant (refer appendix 3).
25. There are some limitations to the network but these can be overcome by capital works funded by development contributions.
26. Wastewater is treated and disposed of at the Pines wastewater treatment plant in Rolleston. Council consulted on the expansion of the Pines wastewater treatment plant, to cater for growth, as part of the 2021/22 LTP. Pines is currently at or near capacity with upgrades currently underway and additional upgrades planned and budgeted for.
27. To ensure that growth is appropriately integrated with the provision of infrastructure, and planned growth is able to be serviced, priority of wastewater capacity needs to be given to those developments within the Rolleston Structure Plan area* and within the urban limits of all townships that connect to the Pines Wastewater treatment plants (both townships that currently connect as well as townships planned to be connected). The Pines wastewater treatment plant is considered significant infrastructure and the ongoing expansion of the plant is critical to allow for the future growth of Rolleston and other townships that the plant treats (Lincoln, Prebbleton, West Melton, Springston and in the planned future Darfield, Kirwee, Leeston, Southbridge, Doyleston and the NZDF site).
28. This plan change is outside of the Rolleston Structure Plan area. However, I am satisfied that in this instance capacity can be made available for this development. A time will come when developments that have not been planned for by Council will be unable to be serviced.
29. Depending on type of industry proposed to be established, flow limitations may need to be imposed or in some instances declined. This process is managed through the Selwyn District Council Trade Waste Bylaw 2016⁴.

⁴ [Trade-Waste-Bylaw-2016-Web.pdf \(selwyn.govt.nz\)](#)

Conclusion

- 30. There is a viable means to dispose of wastewater for this plan change area.
- 31. It is noted that development contributions are payable for any additional lots developed.

Stormwater

- 32. It is anticipated by the applicant that stormwater will discharge to ground via sump to soakhole. The discharge of stormwater to ground is appropriate.
- 33. Resource consent for stormwater discharge from Environment Canterbury will be required before any subdivision consent can be approved.
- 34. The proposed Selwyn District Plan identifies areas of the site as being within the Plains Flood Management Overlay, and in particular mapping indicates that there are overland flow paths running through the site. This application proposes to introduce a minimum floor level for buildings within areas identified as being subject to a 200-year Average Recurrence Interval (ARI) flood hazard event, but does not more broadly discuss the effects of development facilitated by the plan change on the overland flow paths.
- 35. Council requested further information on this matter and the response received was that they can be appropriately managed at the time of detailed design and in particular at the time of subdivision. I consider this approach is appropriate in relation to 200-year ARI flood hazard events.
- 36. I have not commented on this approach in relation to high hazard areas, which is addressed in the Section 42 Officer's report.
- 37. I also note that the proposed Landscape Treatment Area proposed in the OPD will need to take into account any existing overland flow paths through the site.
- 38. There is a viable means to dispose of stormwater for this plan change area. I would recommend that a stormwater consent is obtained from Environment Canterbury prior to resource consent being applied for from Selwyn District Council.

Overall Conclusion

39. There are viable means to provide drinking water, to manage wastewater and to discharge stormwater. On this basis, I support proposed Plan Change 66 from an infrastructure perspective.

Murray England

15 July 2021

Appendix 1

Scheme layout – Water

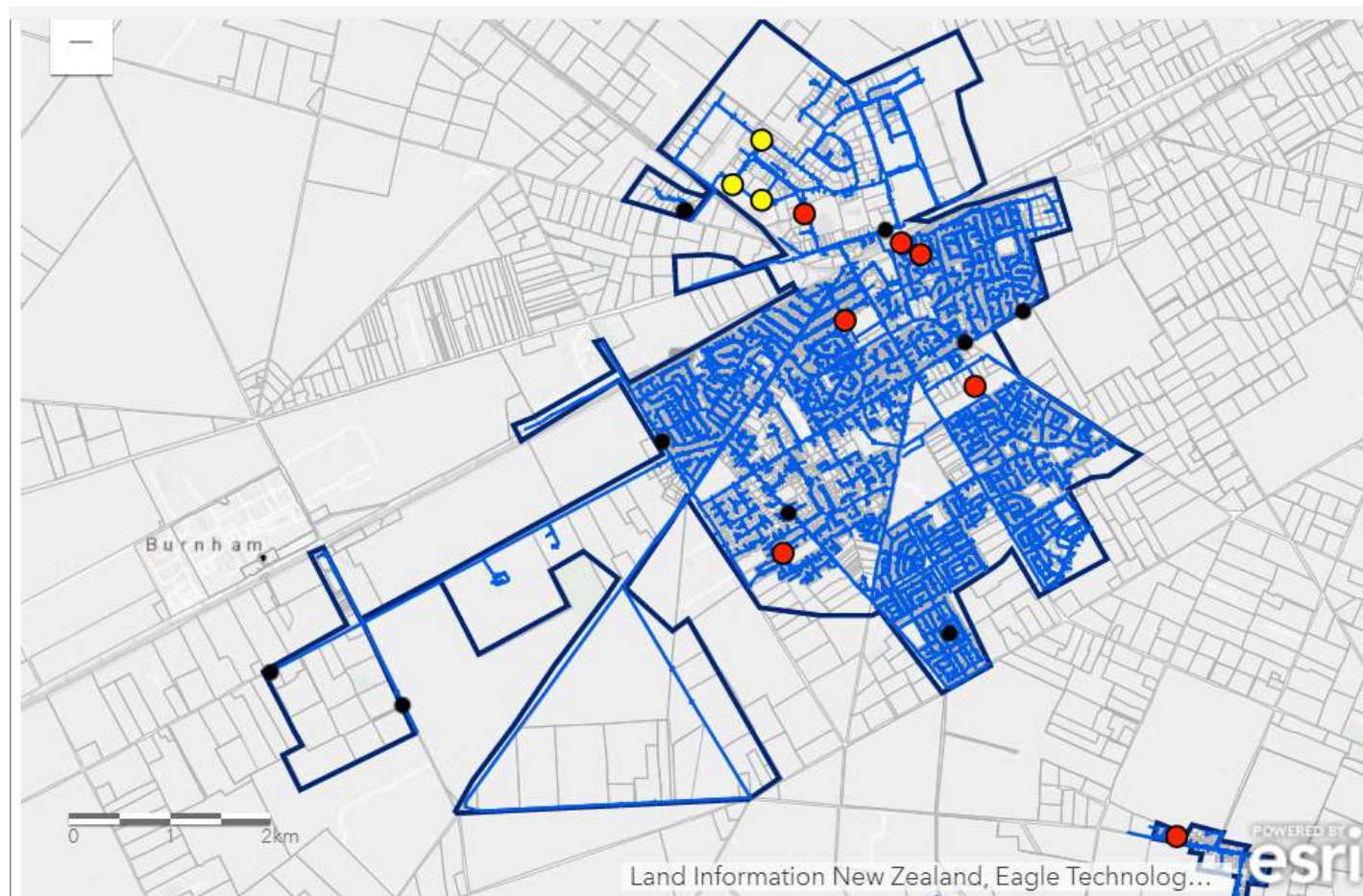
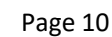


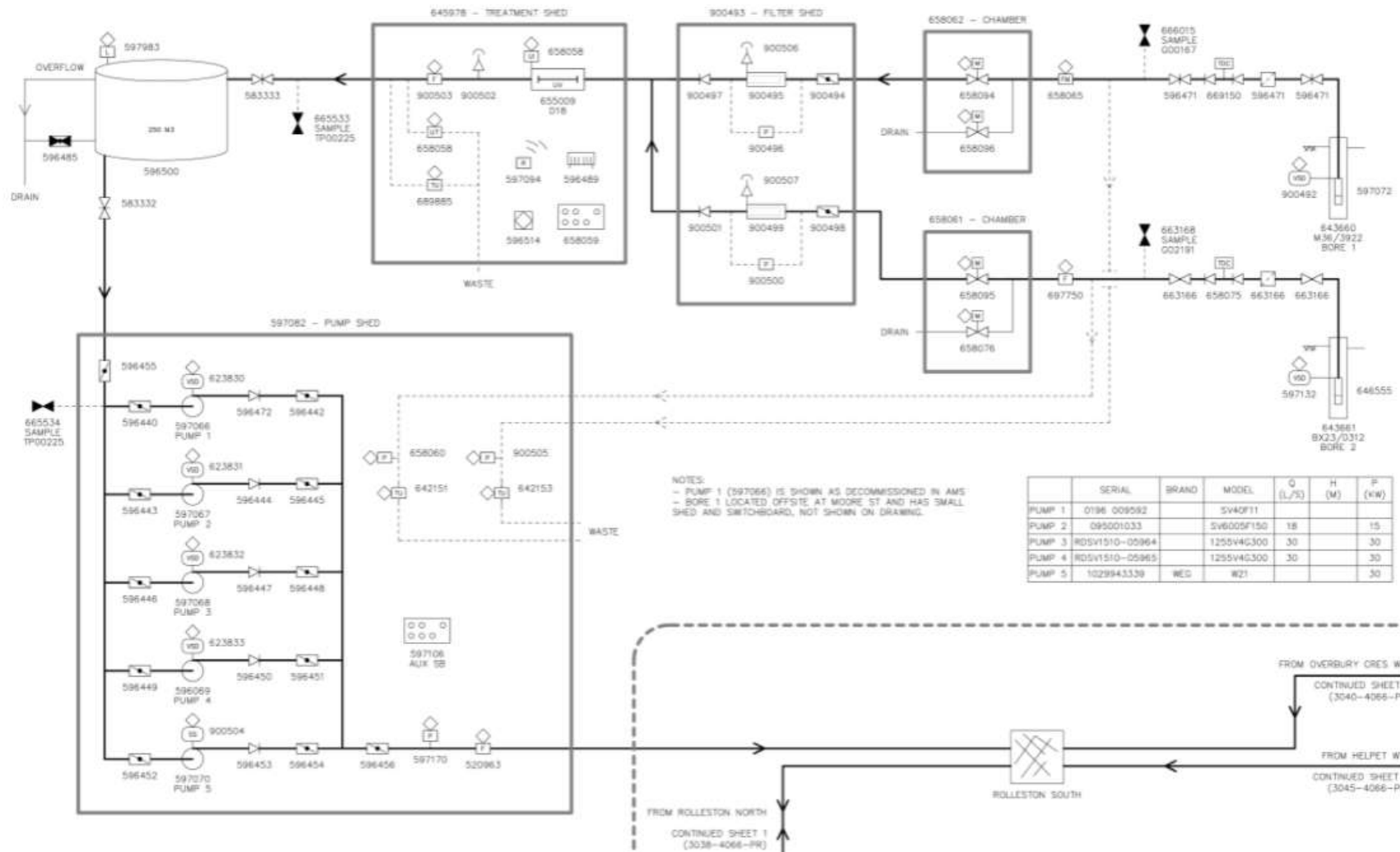
Figure 19-1
ROLLESTON Water - Scheme map
[Open larger map: 'Water Scheme'](#)



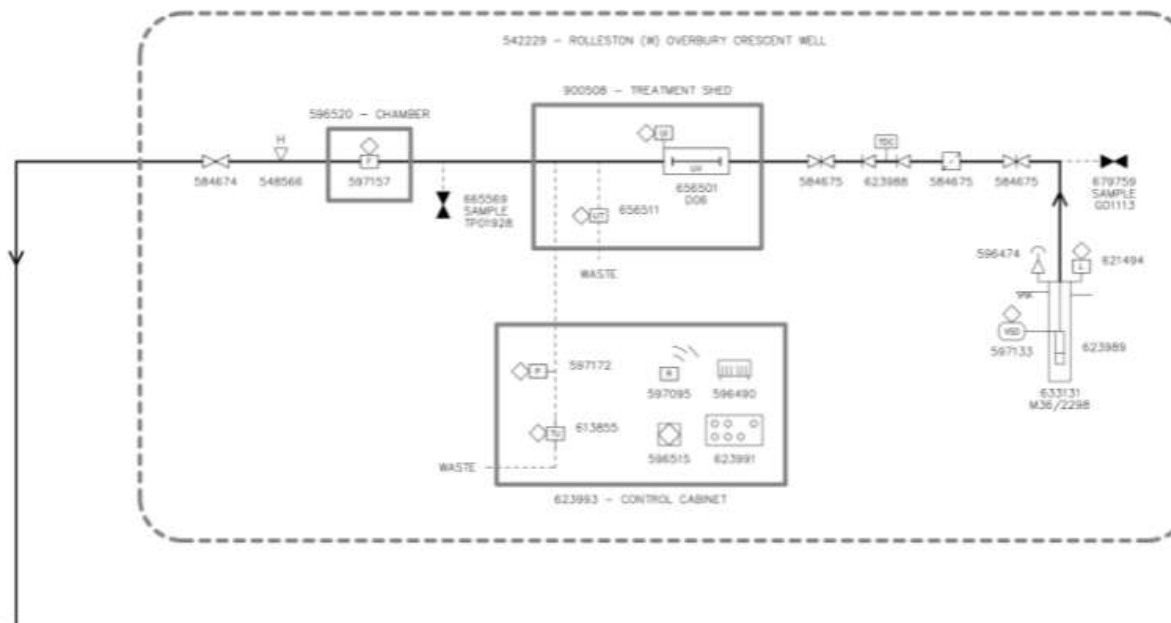
Water Supply Schematics for Rolleston



342231 - ROLLESTON (W) MOORE STREET PS



P E C B A	06-11-2020	ASSET ID REVIEW	ADD	SR	DESIGN SURVEY	COORD SYS	NORTH		DWS BY: MAPPAZZO DRAWN: K. NORRIS CHECKED: S. RIGBY CLIENT: D. POTTS		WATER NETWORKS ROLLESTON SCHEME PROCESS, SHEET 2 OF 4	DWS NO: 3039-4066-PR REV: F DATE: 06-11-2020	DWS SCALE: A1
	04-05-2020	ADDED ASSET ID, RECONSTRUCTED NOTES	ADD	SR									
	20-04-2020	ADDED ASSET ID, REVISED INSTRUMENT SYMBOLS	ADD	SR									
	13-03-2020	ADDED NEW FILTER SHED, UPDATED CONN TO OTHER DWS	ADD	SR									
	07-06-2018	UPDATED FROM SOC REVIEW, ADDED WTP, NAMED OVERBURY INCIDENT SITE TO SHEET 2	ADD	SR									
REV	DATE	REVISION	DCS	SRN	CHK								

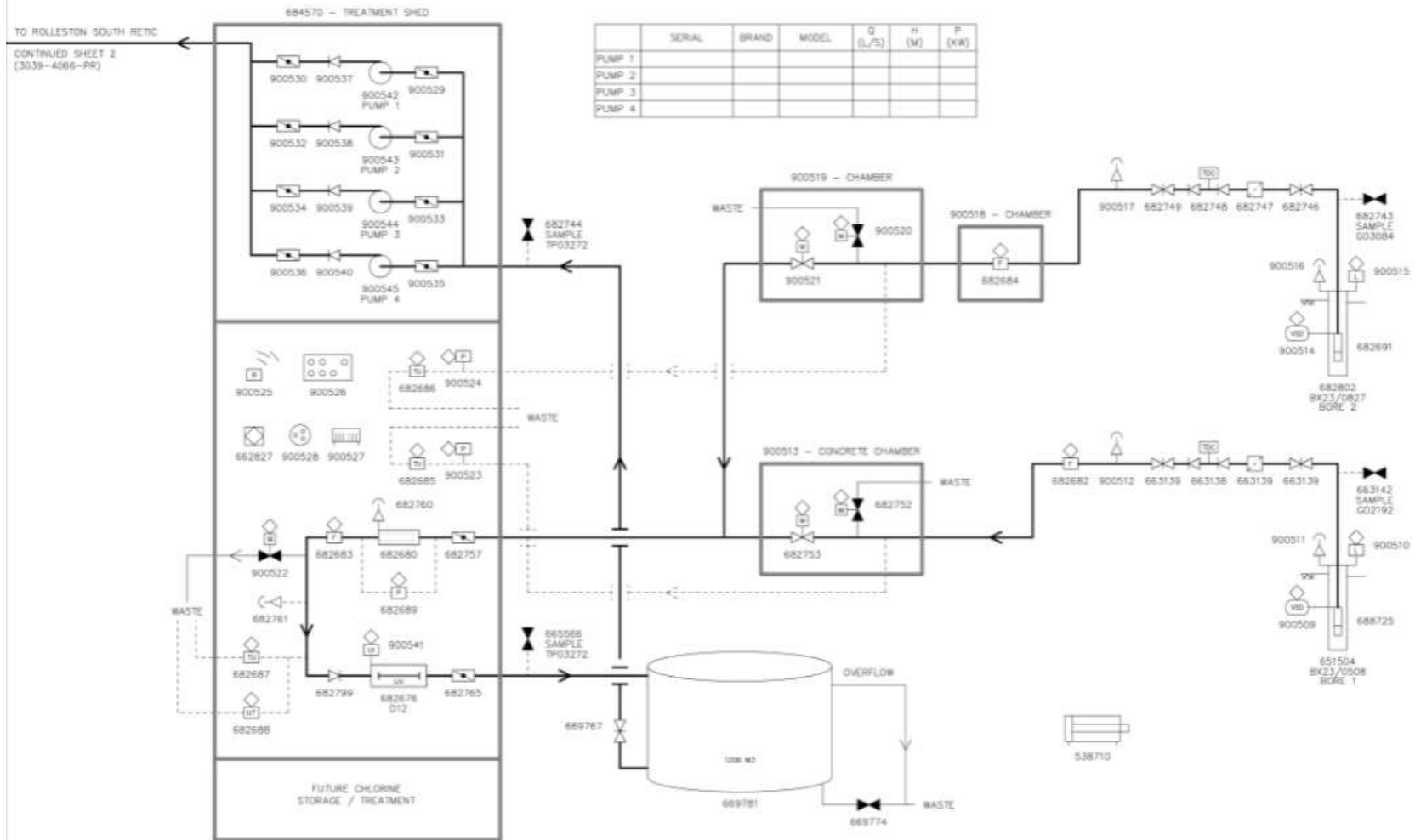


TO ROLLESTON SOUTH RETIC

CONTINUED SHEET 2
(3039-4066-PR)

F	08-11-2020	ASSET ID REVIEW	DN	DN	DESIGN SURVEY	COORD SYS	NORTH		DWG BY: MAPPAZZO		WATER NETWORKS ROLLESTON SCHEME PROCESS, SHEET 3 OF 4 DWG NO 3040-4066-PR	REV F 06-11-2020	A1
E	04-05-2020	ADD ASSET ID'S, REDUNDANT NOTES	DN	DN					DRAWN: K. NORRIS				
C	20-04-2020	UPDATE INSTRUMENT SYMBOLS	DN	DN					CHECKED: S. RIG				
B	13-03-2020	MOVED HEIGHT W/P TO SHEET 4	DN	DN					CLIENT: D. POTTS				
A	07-06-2018	UPDATED FROM SDG REVIEW, MOVED OVERBURY CRES SITE TO THIS DRAWING FROM SHEET 1, ADDED UV TREATMENT	DN	DN	AS-BUILT SURVEY	V. DATUM							
REV	DATE	REVISION	DN	DN	DN	DN	DN						

654322 - ROLLESTON (WTP) HELPET PARK

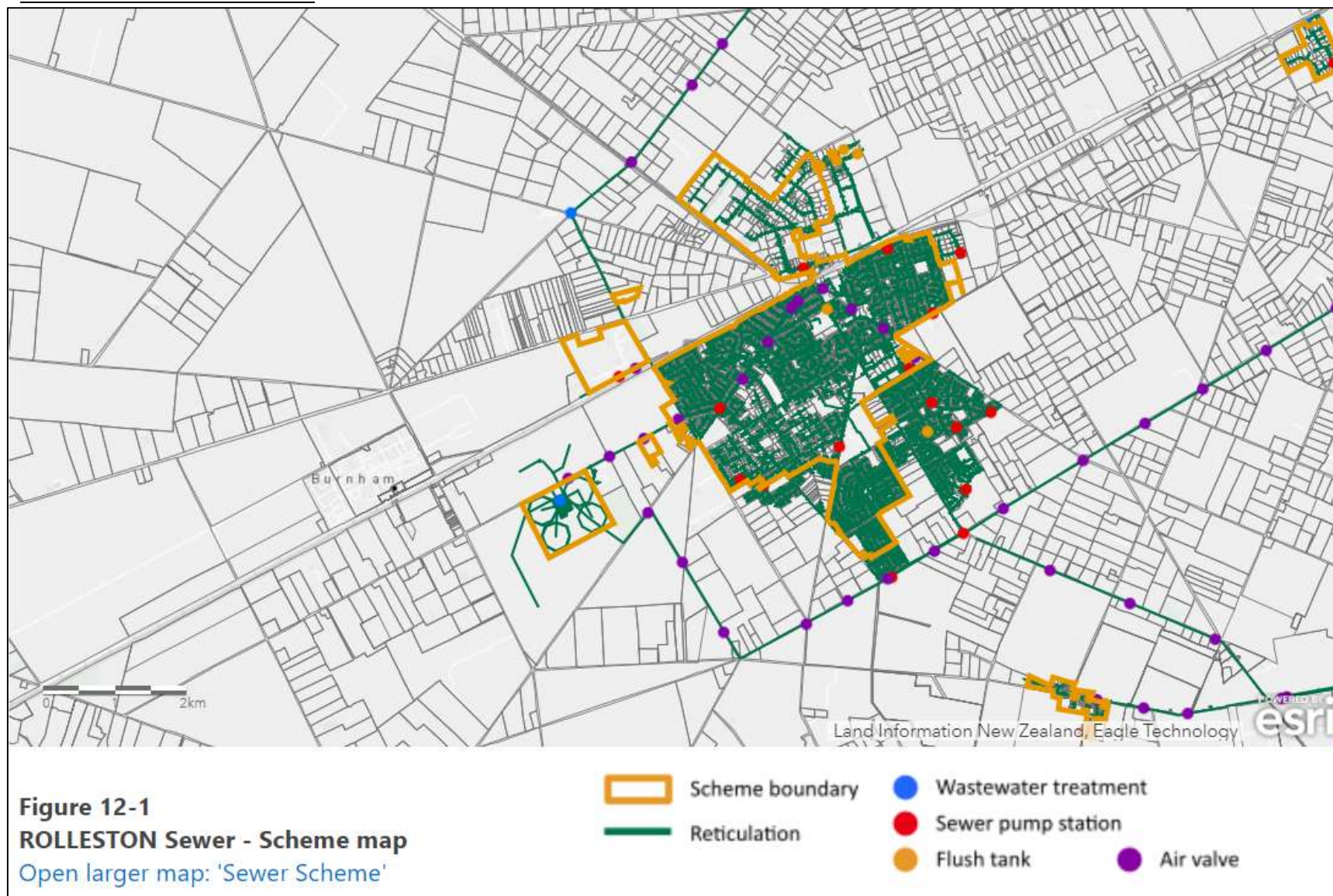


	SERIAL	BRAND	MODEL	Q (L/S)	H (M)	P (KW)
PUMP 1						
PUMP 2						
PUMP 3						
PUMP 4						

D	04.11.2020	ASSET ID REVIEW	WA	SP	DESIGN SURVEY	COORD. SYS	NORTH	ENG. BY: MAPPAZZO	WATER NETWORKS ROLLESTON SCHEME PROCESS, SHEET 4 OF 4	ORIG. SCALE A1
C	04.08.2020	ADDED ASSET GIS	WA	SP				DRAWN: K. NORRIS		
A	15.01.2020	ADDED MET. NUMBERS ISSUED FOR REVIEW	WA	SP	AS-BUILT SURVEY	V. DATUM		CHECKED: S. RIGI		
REV	DATE	REVISION	DES	DRN	CHK			CLIENT: D. POTTS	ENG. NO: 3045-4066-PR	REV D 06-11-2020



Appendix 3 –
Rolleston Wastewater Network



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