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

In The Matter Plan Change 73 – Rolleston

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:
   - *Odour Assessment* prepared by Golder 11 November 2020 including the additional responses dated 1 February 2021 and 25 February 2021,
   - *Infrastructure Report* prepared by Inovo Projects 12 November 2020 including the WSP memorandums 10 November 2020 Wastewater Capacity Assessment and 12 November Water Supply Assessment

- *Acoustic report* by Powell Fenwick 17 November 2020 including the addendum 1 dated 2 February 2021
- *Ecological values report* by Aquatic Ecology Limited 12 November 2020
- *Mahaanui Kurataiao Ltd Statement* December 2020
- *Novogroup 4* February 2021 RFI Response

6. This evidence considers the plan change request in relation to the water supply, wastewater system, stormwater and water race network operated by Council which will be impacted by this plan change. Because the Holmes Block adjoins the Pines Wastewater Treatment Plant, this evidence also provides a summary of how the plant operates. I have not specifically addressed relevant submission points that have been made by submitters, as I understand that my comments cover matters raised by the 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**) . 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 m^3/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 BX23/0312	Bore decommissioned Max 100 L/s

		Max annual volume 246,240 m^3
CRC175045	M36/7533 M36/7833 BX23/0507 *M36/7835* *Proposed: M36/7834*	Max 75 L/s (each bore) Max 300 L/s (combined from all bores) Max annual volume 4,445,700 m^3
CRC193859	M36/2298 BX23/0508 BX23/0827	Max 52.8 L/s, up to 4,562 m^3/day Max 70 L/s 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 19,200[1] cubic metres per day and 3,300,000 cubic metres per year. This means consented 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

[1] Jan 2021

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. Capacity upgrades are proposed to meet this growth including additional water sources (bores), storage and pipeline infrastructure. Recently Council developed the 2021 – 31 Long Term Plan which included budget for further development funded, capacity upgrades on the Rolleston water supply.

14. As the township grows the consented allocation will be put under pressure. To 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 area[2].

15. If development is to occur outside of the Rolleston Structure Plan area then provision of consented water allocation should be provided by the applicant.

16. I confirm that these plan change areas are outside of the Rolleston Structure Plan area and therefore, should the plan change be approved in whole or in part, consented water should be vested in Council.

17. The applicant has in their RFI response confirmed that *'the following bores and consents exist and if it is advantageous for these assets and consents to be transferred to Council, then the applicant is willing to discuss the options further in the future, likely during subdivision stage.*

Holmes Block	*M36/8063 – 300mm, 99m deep, used for irrigation (CRC181607)*
Skellerup Block	*M36/8581 – 300mm, 88m deep, used for irrigation (no reference)*
	M36/8130 – 300mm, 87.1 deep, used for irrigation (CRC181608)'

18. Resource consent CRC181607 (replaced with CRC203010) has an annual volume of 160,956 cubic meters and CRC181608 (replaced with CRC203009) has an annual volume of 161,756 cubic meters. This gives a total annual volume of 322,712 cubic meters and would provide in the order 1622 residential properties.

19. Provision of land within the plan change areas will likely be required for water

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

treatment, storage and pumping to ensure adequate provision of water. Land can be vested at time of resource consent. (**Refer Appendix 2**).

Fire Fighting Capacity

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

21. The Infrastructure Report accompanying the plan change states that *"The internal pipework within the development will be designed to accommodate peak demand including provision for fire-fighting demand in accordance with SDC's Engineering Code of Practice and SNZ/PAS 4509:2008 Fire Service Code of Practice."*

22. 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).'

23. 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.
    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."

24. In summary, the reticulated water supply for this proposed plan change would need to be designed to meet firefighting standards.

Conclusion

25. In my opinion, there is potential for those plan change applications outside of the structure plan area to be recommended for decline due to water availability limitations. In this instance however, I am satisfied that sufficient water can be made available to service this plan change area on the basis that consents CRC203009 and CRC203010 are vested in Council.

26. I consider that capacity within the reticulated network to service this plan change is available and/or further capacity upgrades are proposed and planned for and therefore future water conveyance capacity can be provided. Vesting of land to facilitate capacity upgrades will be required.

27. It is noted that development contributions are payable for any additional lots developed.

Wastewater

General

28. Wastewater is treated and disposed of at the Pines wastewater treatment plant (the Pines WWTP) in Rolleston. Council consulted on the expansion of the Pines WWTP, to cater for growth, as part of the 2021/22 LTP. The Pines WWTP is currently at or near capacity, with upgrades currently underway and additional upgrades planned and budgeted for.

29. The Pines WWTP is designed to be progressively upgraded to accommodate up to 60,000 person equivalents (PE) of incoming flow, with plans to increase the treatment capacity up to 120,000 PE being prepared. The current connected catchment (2021) has a population equivalent of approximately 42,000 - 45,000.

30. Connections from Darfield and from Leeston are planned within the next 3-4 years. These connections along with projected growth are estimated to require additional

treatment processes (beyond 60,000 PE) developed on site to meet incoming flows. These upgrades are planned and budgeted for within the Selwyn District Council 2021-2031 Long Term Plan.

31. The Pines WWTP is considered significant infrastructure (Designations D411 & D416) 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 base). It is also critical to ensure that the proposed plan change does not result in any reverse sensitivity issues which would obstruct the Pines WWTP upgrade program. Completion of the Pines WWTP upgrade program is necessary to ensure there is sufficient capacity to provide for additional growth, including that which would be enabled by the proposed plan change.

Wastewater Conveyance

Holmes Block

32. The applicant proposes a number of options to convey wastewater to the Pines WWTP. Each option has benefits and limitations. Another potential solution would be for the majority of this site to gravitate to a new dedicated wastewater pump station discharging directly to the Pines WWTP.

33. Connection of the development's wastewater network to the Council's reticulated network is feasible and will be the subject of an engineering approval process in the future.

Skellerup Block

34. Council has begun the master planning process for the Southern Rolleston catchment. The discharge location of this proposed site would best be directed to the Selwyn Road pump station catchment via the proposed South West pump station located on Selwyn Road. This is shown in (**Refer Appendix 4**).

35. Should the development progress in advance of adjoining developments, a temporary pump station and pressure main could be used to discharge into the Selwyn Road pump station catchment.

36. Connection of the development's wastewater network to the Council's reticulated network is feasible and will be the subject of an engineering approval process in the future.

Pines Wastewater Treatment Plant

37. Part of the plan change (Holmes Block) is located adjoining the Pines WWTP. This section of my evidence provides a general overview of the activities operating on the site and their location, in order to assist in the understanding of the potential effects at the interface between the Pine WWTP and the Holmes Block (**Refer Appendix 5**):

Inlet Works

38. The influent wastewater is pumped via community based pumping stations into a reception chamber and then flows into screening channels. Two screening channels operate as duty/assist. A third channel exists for installation of a future screen. An emergency bypass channel with a high level overflow entry weir and manually raked bar screen is available if there is a complete failure of the inlet screens. The screens are automatically cleaned and the screenings washed and compacted, and then stored in a covered screenings skip/bin.

39. Screened wastewater then flows to one of two vortex grit chambers. The grit is settled in the grit hopper at the bottom of the chamber and periodically pumped out and delivered to the grit classifier for washing and dewatering. Dewatered grit is stored in a covered grit skip/bin.

Liquid Stream Treatment

40. The liquid stream treatment consists of three 4-stage, activated sludge, biological nutrient removal (BNR) reactors.

41. Wastewater enters the inlet works and passes through screening and grit removal before entering the anaerobic selector zone of each BNR reactor and mixing with the return activated sludge (RAS) from the clarifiers. The activated sludge then moves into the first anoxic zones where recycled nitrate is converted into nitrogen gas and released from the process (denitrification). The activated sludge is then aerated: organics are broken down by the microorganisms in the biomass and

converted into additional biomass, carbon dioxide and water; ammonia is converted into nitrates (nitrification). A second denitrification step then removes more nitrogen before the activated sludge is re-aerated and sent to clarification.

42. The activated sludge biomass from the three bioreactors is combined before being distributed to two clarifiers. Sludge enters in the centre of the clarifiers and is allowed to settle to the bottom of the clarifier while a slowly rotating scraper moves settled solids to the centre pump-well where they are returned as RAS to the front of the BNR reactors. The clarified and treated wastewater decants into clarifier launders where it is then collected and passed through an ultra-violet (UV) treatment reactor for disinfection.

Tertiary Treatment and disposal

43. The UV disinfection plant reduces pathogens via inactivation by UV light. The treated wastewater then flows into the irrigation pump station and is pumped to centre pivot irrigators for disposal to land.

Disposal

44. The land surrounding the Pines WWTP has 7 centre pivot irrigators currently irrigating an area of 189 ha, with another 50 ha centre pivot irrigator to be installed this year (2021/22) bringing the total to 239 ha. This equates to servicing for more than 95,000 PE, or more than 75,000 PE if the largest irrigator is not in operation.

45. There are long term plans to expand the irrigation area to cover 302 ha. This equates to servicing for more than 120,000 PE, or more than 100,000 PE if the largest irrigator is not in operation. Ultimately, additional areas within the 486 ha of land consented could be developed for land based disposal, while remaining in compliance with the existing Resource Consent conditions.

Solid Stream Handling and Treatment

46. Control of the BNR process is achieved by wasting surplus activated sludge generated by the biological processes to maintain a targeted retention time with the BNR reactors. Waste Activated Sludge (WAS) pumps send a fraction of the biomass through to the gravity thickener where the solids are thickened.

47. In the thickener, solids settle to the bottom and are intermittently pumped to the

digester. Supernatant from the thickener is then collected and pumped back to the inlet works for further treatment via the supernatant pump station. The digester is broken down into four-stages that have alternating aerated and non-aerated zones. Volatile solids are further broken down as they pass through the digester.

48. The centrifuge receives the digested sludge and dewaters it further with the liquid centrate being recycled back to the inlet works for treatment. The dewatered solids are taken via conveyor to the solar drying halls where automated sludge managers shift and till the sludge around the hall allowing it to dry out within the glass-house.

Consents

49. The current authorisations under which these activities operate are provided below:

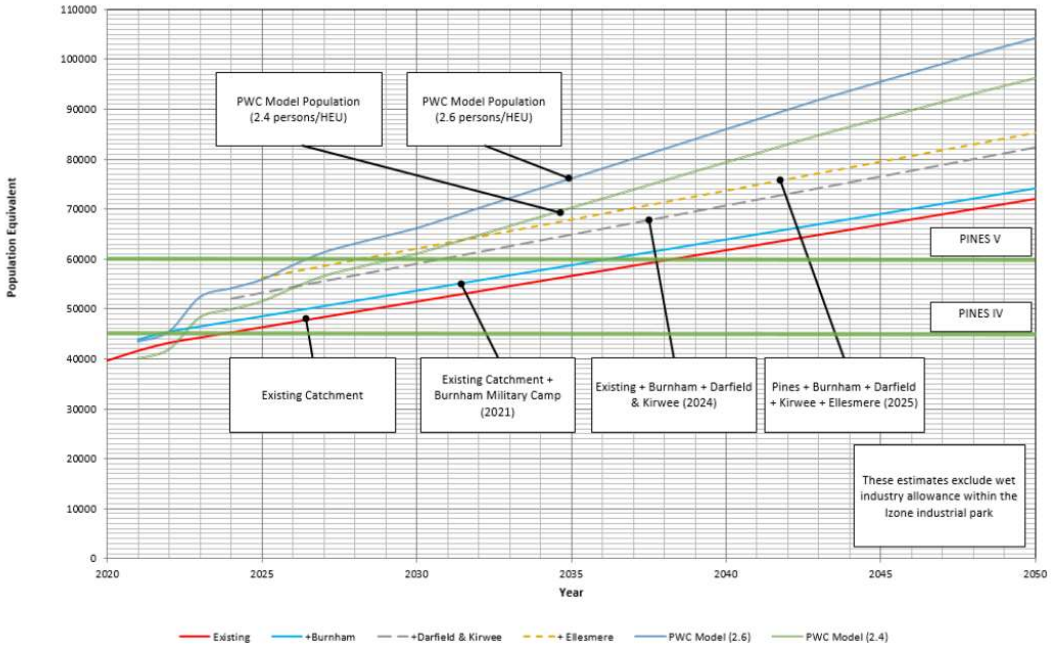
Table 2 Environment Canterbury Consents

Consent	Description	Discharge Quantities
CRC040100.1 *Issued - Active*	To discharge contaminants to air from the treatment of raw sewage and sludges.	N/A (discharge to air consent)
CRC210644 *Issued - Active*	To discharge contaminants to land	7,760 m^3/day Monthly average hydraulic loading rate ≤ 8mm/day
CRC101111 *Issued - Active*	To store contaminants.	N/A
CRC060964 Issued - Active	To discharge domestic sewage tank effluent into ground	2m^3/day from an individual property
CRC153952 *Issued - Active*	To discharge contaminants to land and to air	Combined with CRC210644, not more than 25,614 m^3/day

Strategic planning

50. Future flows into the Pines WWTP can be estimated by assuming a per capita rate and a modelled future population. Population models have been developed to account for the inclusion of the outlying townships/catchments of Burnham Military Camp, Darfield, Kirwee and Ellesmere. The most recent model was developed in

December 2020 by Price Waterhouse Cooper (PWC) and accounts for population densities of either 2.4 or 2.6 people per household equivalent unit (HEU).



51. Council confirmed in the 2021 LTP that Ellesmere, Darfield and Kirwee would connect to Pines WWTP and the NZDF has previously entered into an agreement to connect to Pines WWTP. On this basis, it is projected that the original design for Pines 60,000 PE will be exceeded within the next 10 years.

52. A masterplan has been developed for the treatment plant to confirm what it would take to expand the ultimate treatment capacity to 120,000 PE. Indicative plant layouts are shown in **Appendix 7**. Two options were considered for "Pines 120" (i.e. upgrading Pines WWTP to serve 120,000 PE), as summarised below:

- Option 1 Fully aerobic system (similar to current plant)
- Option 2 Primary treatment + anaerobic digestion

53. Council has budgeted for option 2 (**Refer Appendix 6**) within the long term plan. Option 2 is described below.

54. The upgrade includes the following unit processes:

- Pre-Treatment
    - New Inlet works including screens and grit removal
    - New screenings and grit washing facilities
- Primary treatment
    - Construction of primary sedimentation tanks (or High Rate Activated Sludge Systems)
    - Diversion of low solids primary treated wastewater to an upgrade of the existing secondary treatment system
    - Primary solids diverted to digestion process
- Secondary Treatment
    - Construction of third clarifier to treat 60,000PE capacity
    - Additional flow distribution to divert flow from inlet works to existing secondary process
    - Flow diverted to an upgraded Bioreactor No 4 with membrane separation (MBR bioreactor)
    - Upgraded blowers in existing blower room to support additional demand
    - Additional chemical dosing system
- Solids Management
    - New anaerobic digestion system including:
        - *i)* Primary solids thickening
        - *ii)* Biogas storage
        - *iii)* Combined heat and power generation
        - *iv)* New HV supply integrated into existing power supply
        - *v)* Re-purpose aerobic digester and thickener as sidestream shortcut nitrogen removal process

- Upgrade of existing centrifuges in existing dewatering building
- Expansion of solar drying facilities

- Heat generated by the process can be used to maintain temperature in the digesters and solar drying hall improving sludge stability and drying times. There is also be the potential to use dry sludge as a part-fuel mix, reducing the amount of solids to be disposed of.

Other developments at the Pines WWTP which should be considered

55. Council has budgeted this 2021/22 year to construct a dried solids blending pad which will be used to blend processed - dried solid waste from the solar drying halls with green / composting waste for the purposes of land based disposal.

56. A new bio solids consent has been granted CRC210644 (updated) and a wider consent application has been prepared.

57. There is also planned a septage receiving station which will receive trucked septic tank and trade waste at the Pines WWTP.

Complaints received by the Council on the WWTP operations

58. Odour complaints received by the Council from August 2018 - August 2021 on the WWTP operations are summarised below:

- Number of odour complaints relating to the Pines WWTP (total): 11
- Number of valid complaints related to the Pines WWTP (i.e. no other reason found): 9

Additional Consents Required

59. Consultancy firm Stantec has completed a preliminary assessment of the consents which are potentially required for the proposed Pines 120 upgrade. These are as follows:

<u>Designations</u>

- A Notice of Requirement to alter the designation if SDC wishes to seek, as part of the Pines 120 upgrade, the amalgamation of biosolids of an alternative standard to Class A into the soils on site,

- A Notice of Requirement to alter the designation, if the proposed upgrade is not considered to be within the scope/purpose of the designation,
- Otherwise, an outline plan of works submitted to SDC (Planning) in relation to the use of land within Designation D411 (or Designation SDC-69 under the Proposed District Plan),

  Temporary construction-phase consents from ECan:

  - The discharge of construction-phase stormwater, and
  - Excavation of land over an unconfined or semi-confined aquifer,

  Operational-phase consents from ECan:

  - The use of the site for a community wastewater treatment system,
  - The discharge of sewage sludge, bio-solids and treated sewage effluent from a community wastewater treatment system (if the discharge from further upgrades is considered to be outside the scope of existing consents),
  - The discharge of operational-phase stormwater,
  - The passive discharge of contaminants from contaminated land, if the land is determined to be contaminated.
  - The discharge of contaminants from the new boiler and new cogeneration plant, depending on details of their design.
- A change to the conditions of resource consent CRC040100.1 (discharge of odour) from ECan to allow an anaerobic digestion system for sludge management,
- A detailed site investigation (soil sampling for contaminants) and potentially consent under the NESCS

Reverse sensitivity

60. In my view, it is critical that this plan change application and specifically the Holmes block proposal does not cause any reverse sensitivity issues which would obstruct the future Pines 120 consenting and upgrade program or lead to an increase in

odour or other complaints relating to the Pines WWTP. If reverse sensitivity issues (including complaints) result in obstructing the future Pines 120 consenting and upgrade program, then there will be insufficient wastewater treatment capacity to provide for additional growth, including growth sought to be enabled by the proposed plan change.

61. Should the plan change be approved, I consider there should be measures put in place to avoid reverse sensitivity issues arising from sensitive activities (including residential activities) establishing in the Holmes block. I consider that one way this could be achieved is though the imposition of a setback area within the Holmes Block preventing sensitive activities from establishing. This should include planted areas on the boundary of the site.

62. While a setback area might reduce the risk of reverse sensitivity issues arising in the future following completion of the Pines 120 consenting and upgrade program, I consider a setback area by itself will be insufficient to address reverse sensitivity issues from complaints from the Holmes Block that could obstruct the consenting program for Pines 120. There remains a potential for complaints arising from development in those parts of the Holmes Block beyond the setback area that could obstruct the Pines 120 consenting process.

63. I consider that an option that could reduce reverse sensitivity issues obstructing the Pines 120 consenting program is the inclusion of a rule preventing development of those parts of the Holmes block outside the setback area until the expanded Pines 120 has been consented and/or made operational. Such a rule would enable the Pines 120 upgrade to be completed without obstruction from reverse sensitive complaints from new development in the Holmes Block.

64. I consider a further option that could reduce reverse sensitivity issues in addition to the above is the incorporation of rules into the plan change so that the use of sites within the Holmes Block for sensitive activities beyond the setback area:

    - is a permitted activity where a site is subject to a restrictive no-complaint/no-objection covenant in favour of the Council in relation to the Pines WWTP and expanded Pines 120; but

- requires resource consent (for example as a discretionary activity) where a site is not subject to a restrictive no-complaint covenant in favour of the Council (which would enable an application for consent to be declined if an application cannot adequately address reverse sensitivity issues).

Conclusion

65. Conveyance of wastewater to the Pines WWTP is feasible and will be subject to the engineering approval process.

66. The currently designed wastewater treatment system which is being built in modular stages has an ultimate capacity of up to 60,000 PE. The extension of the Pines WWTP to 120,000 PE capacity has been identified and funded in the LTP, with design and consenting works programmed for the forthcoming years, to allow for development within the district, including that proposed in this plan change request,.

67. In my view, this plan change application and specifically the Holmes block proposal must not cause any reverse sensitivity issues which would obstruct the future Pines 120 consenting and upgrade program.

68. Should this plan change area be approved, it is noted that development contributions are payable for any additional lots.

Stormwater

69. It is anticipated by the applicant that stormwater will be treated through one or a number of options including via a swale, or infiltration basin, or proprietary stormwater treatment devices such as hydrodynamic separators. The ultimate discharged of stormwater is to ground.

70. The treatment options proposed are appropriate and can be designed to provide a safe stormwater treatment utility. Particular attention to water depth, velocity and side slopes of swales and basins to ensure they are safe within the developments context fill be required. This can be resolved at subdivision stage.

71. Should the plan change go ahead, the engineering approval stage will require evidence that stormwater is managed and disposed of on-site for up to a 50 year

rainfall event. This ensures no adverse flooding effects off site.

72. From a stormwater perspective, the plan change can be supported with areas set-aside for stormwater treatment and attenuation. The discharge of stormwater to ground is appropriate.

73. Resource consent for stormwater discharge from Environment Canterbury will be required before any subdivision consent can be approved.

Conclusion

74. 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.

Water Race

75. The applicant refers to the Council water race which flows across the northwest corner of the Holmes Block and then southwards along the western boundary before passing under Burnham School Road.

76. There are a number of ways to treat the water race. These include: incorporating the race within the development or proposed reverse sensitivity buffer areas, closing the race, diverting the race, or piping the race.

77. It should be noted that the Council's water race closure process requires 80% of downstream user's approval prior to going out for consultation and ultimate Council decision to approve or otherwise. Therefore, closing the race may not be a viable option.

78. The ultimate treatment of the race can be determined at subdivision consent stage.

Overall Conclusion

79. ***Water Supply.*** There are viable means to provide Drinking water to the proposed plan change areas. To ensure adequate quantity of consented water remains for areas within the Rolleston Structure Plan, it is recommended that consents CRC203009 and CRC203010 are vested in Council and that this be a requirement of the plan change.

80. ***Stormwater.*** The ultimate discharge of stormwater to ground, following appropriate

treatment, is supported. There is a viable means to dispose of stormwater generated from these plan change areas.

81. ***Wastewater.*** The ultimate planned development of the Pines WWTP will have capacity to accept and treat wastewater from these proposed plan change areas. However, if the Pines 120 consenting and upgrade program is obstructed, then there will be insufficient wastewater treatment capacity to provide for the growing District (including the Holmes Block development). Accordingly, it is of significant importance that this plan change application and specifically the Holmes Block proposal does not cause any reverse sensitivity issues which would obstruct the consenting and upgrade program. I consider it appropriate to impose a setback rule and a rule preventing development of the rest of the Holmes block until the expanded Pines 120 has been consented and/or made operational.

82. Infrastructure to convey wastewater from the plan change areas can be provided by the applicant in agreement with Council.

83. ***Water races.*** There are a number of ways to treat the water race flowing through the plan change area. The chosen method can be confirmed at resource consent stage.

Murray England

3 September 2021

Appendix 1

Scheme layout – Water

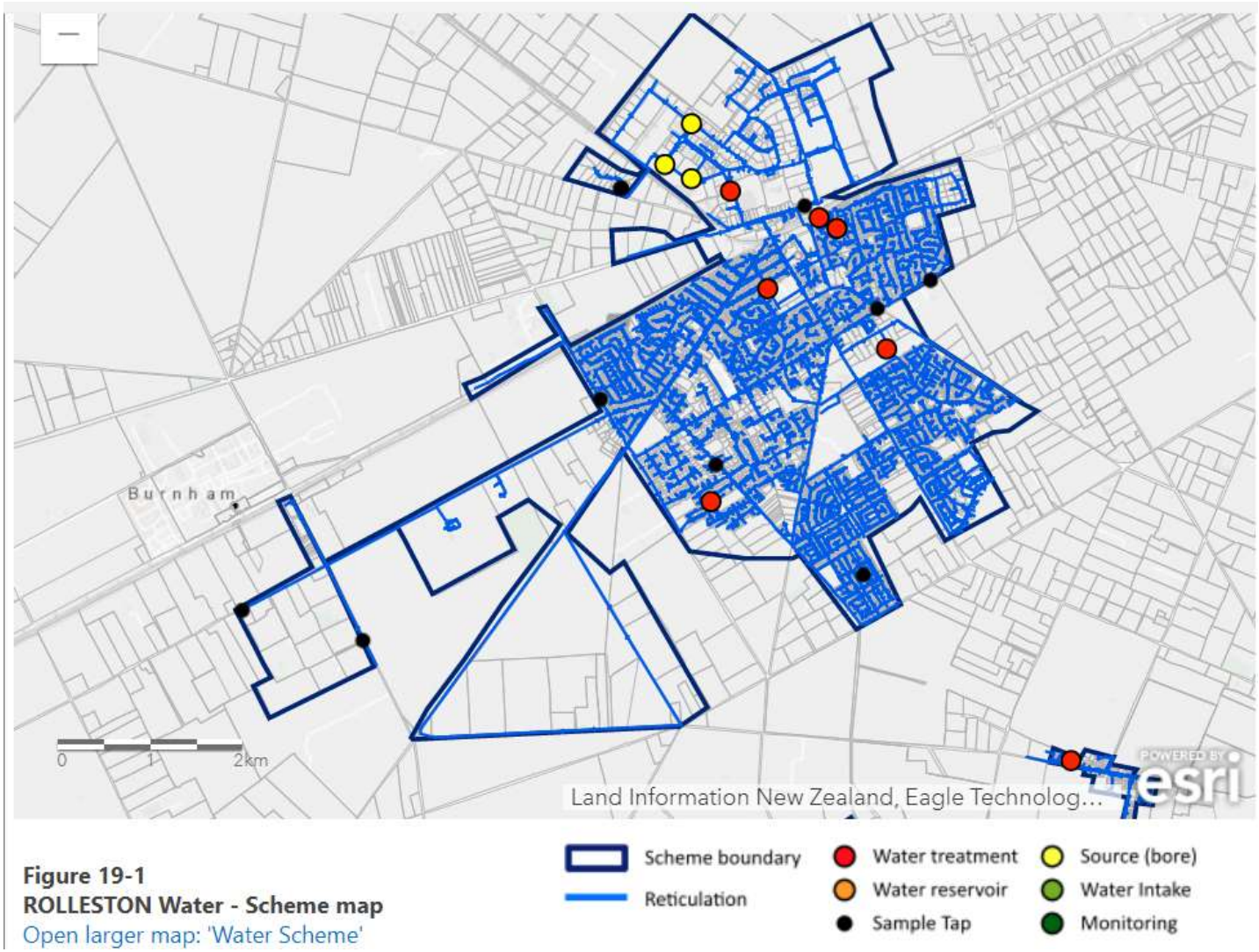
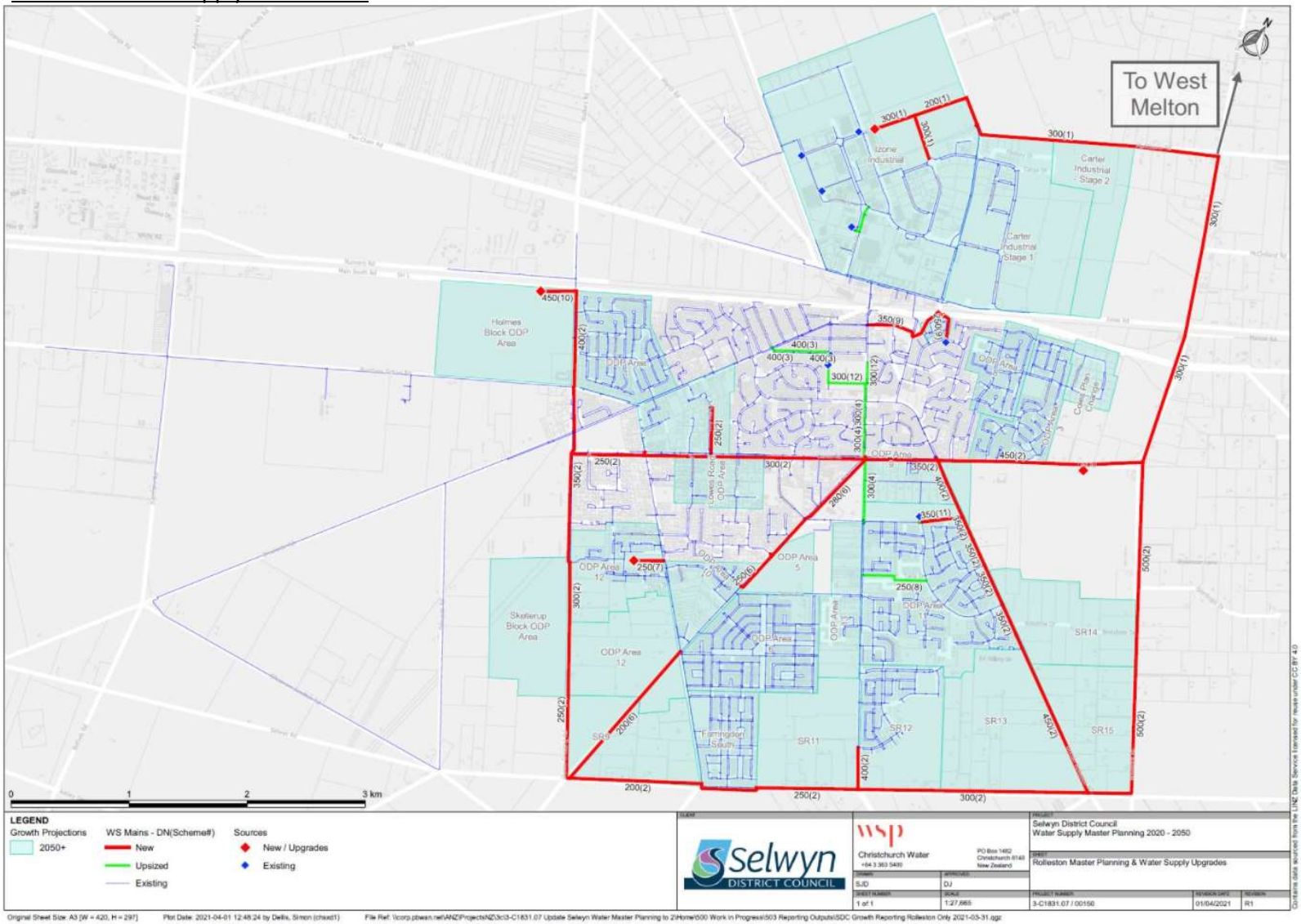


Figure 19-1
ROLLESTON Water - Scheme map
Open larger map: 'Water Scheme'

Appendix 2

Rolleston Water Supply Master Plan



Appendix 3 –

Rolleston Wastewater Network

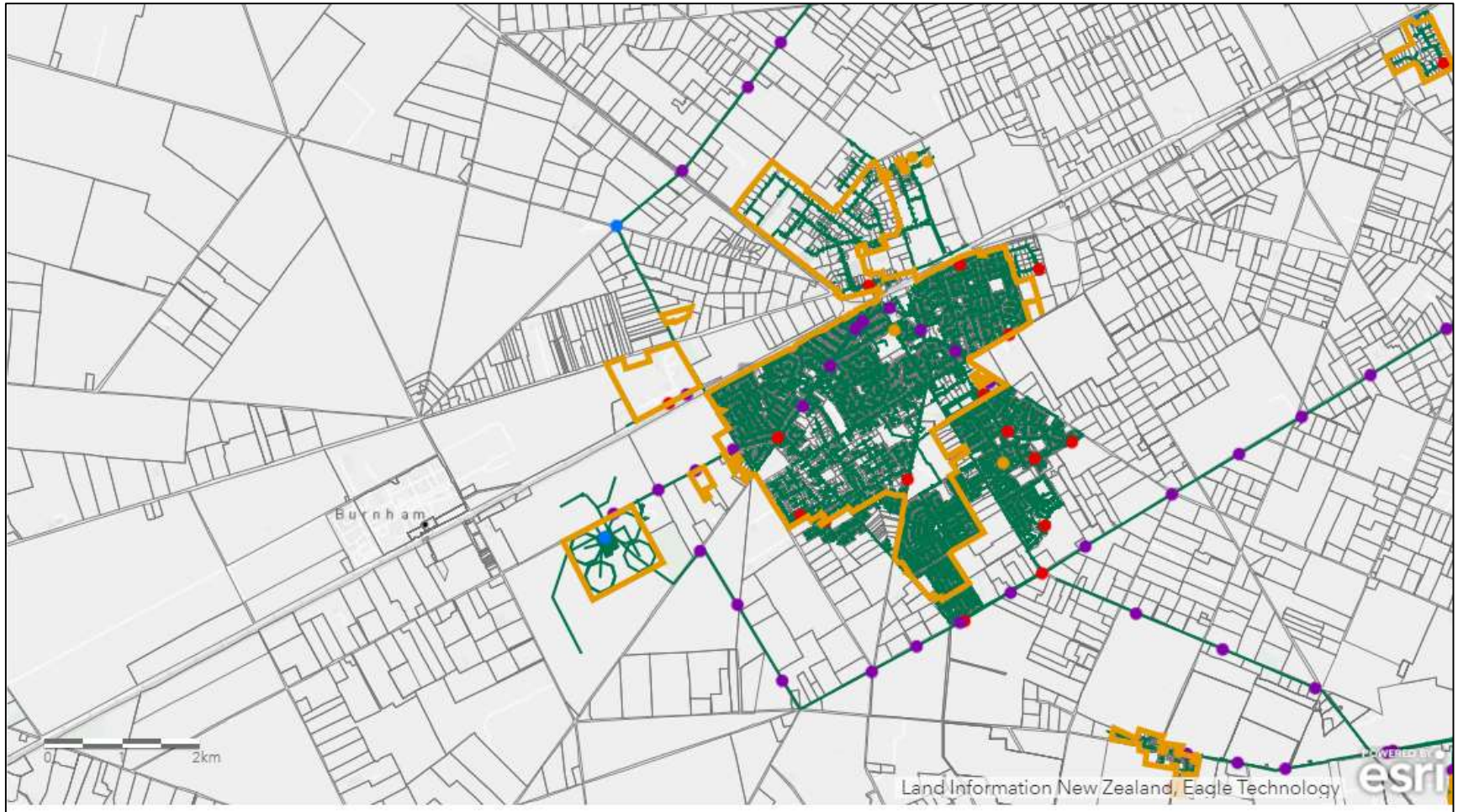
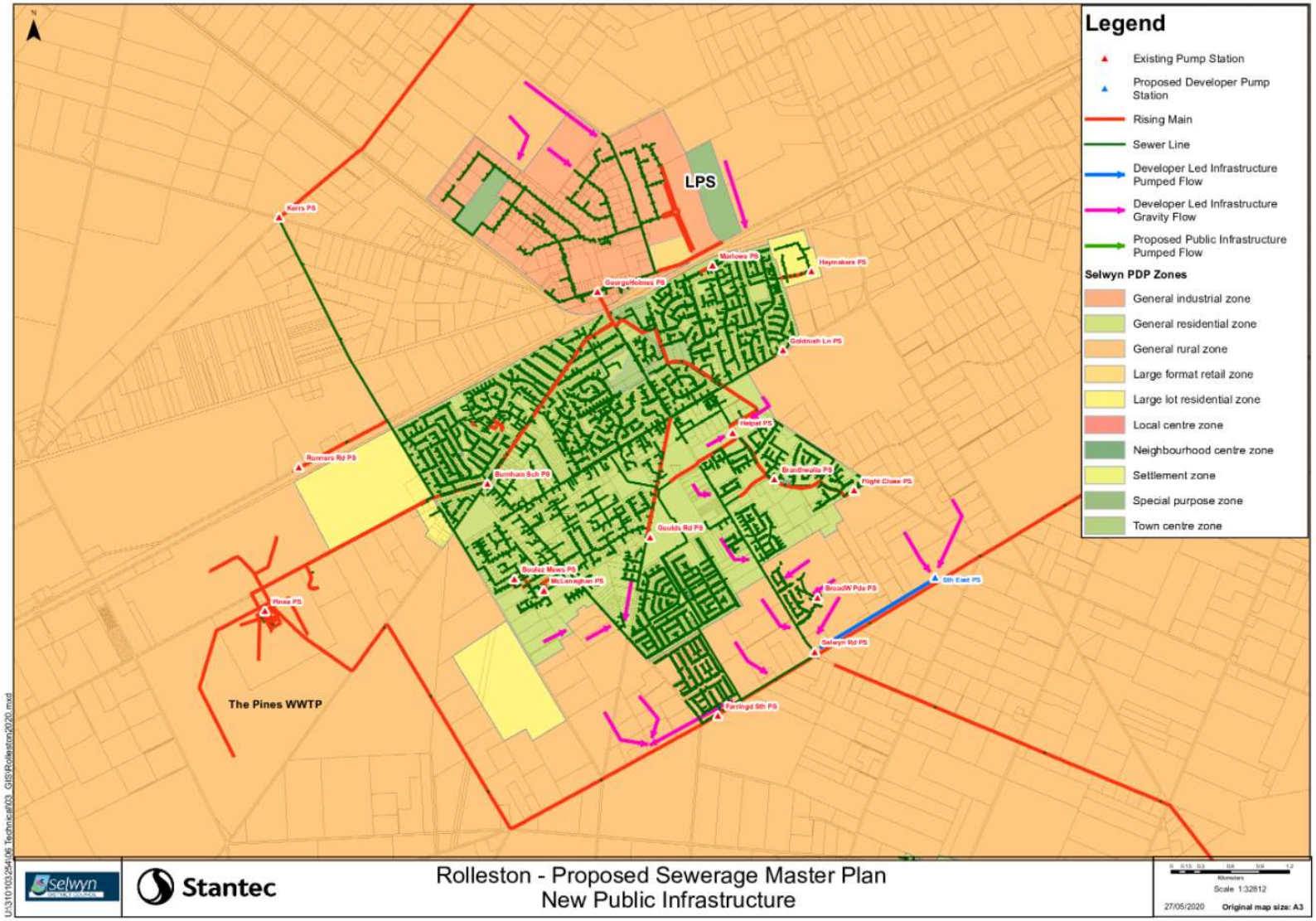


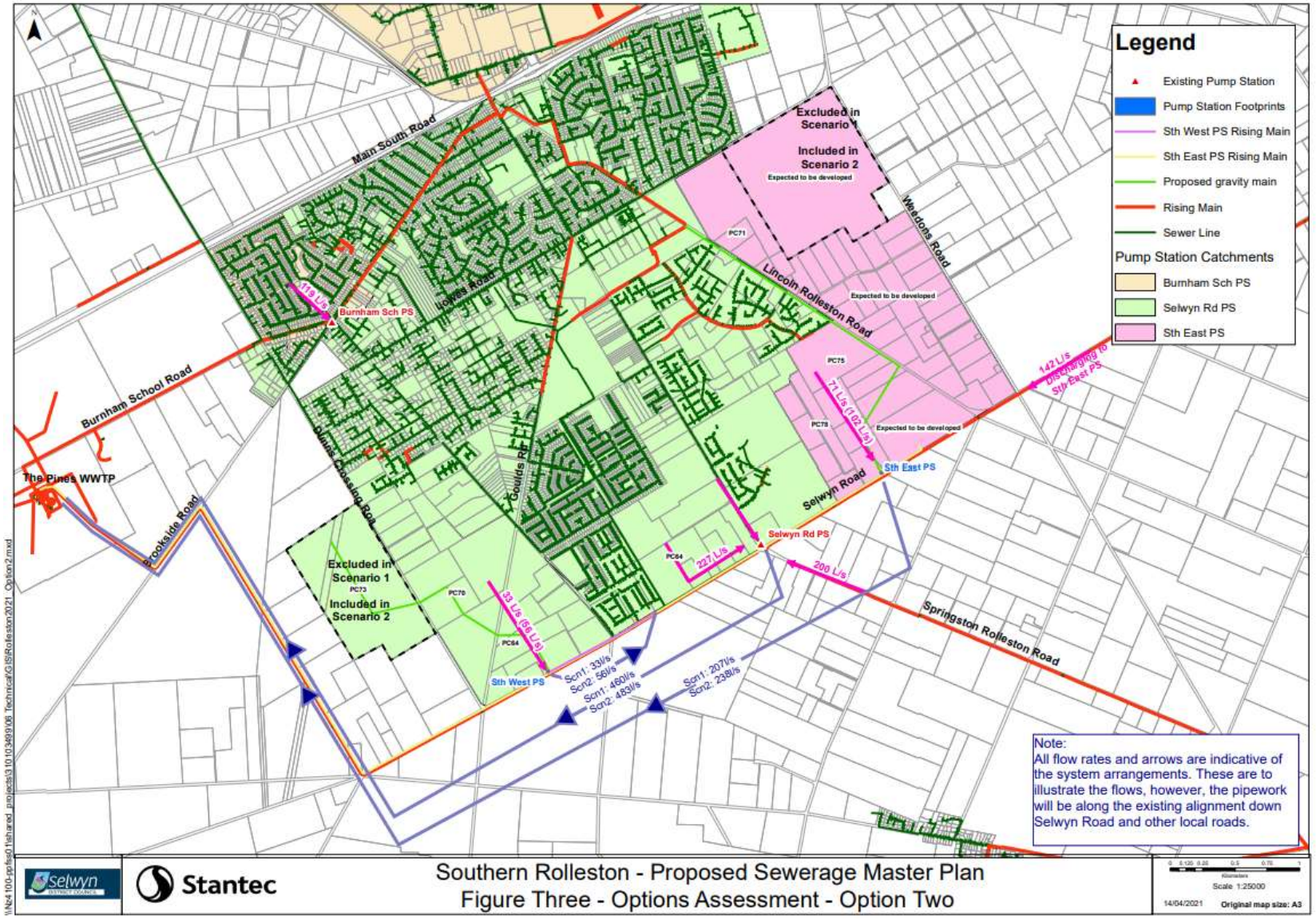
Figure 12-1
ROLLESTON Sewer - Scheme map
Open larger map: 'Sewer Scheme'

Appendix 4 –

Rolleston Wastewater Master Plan (2021 LTP)

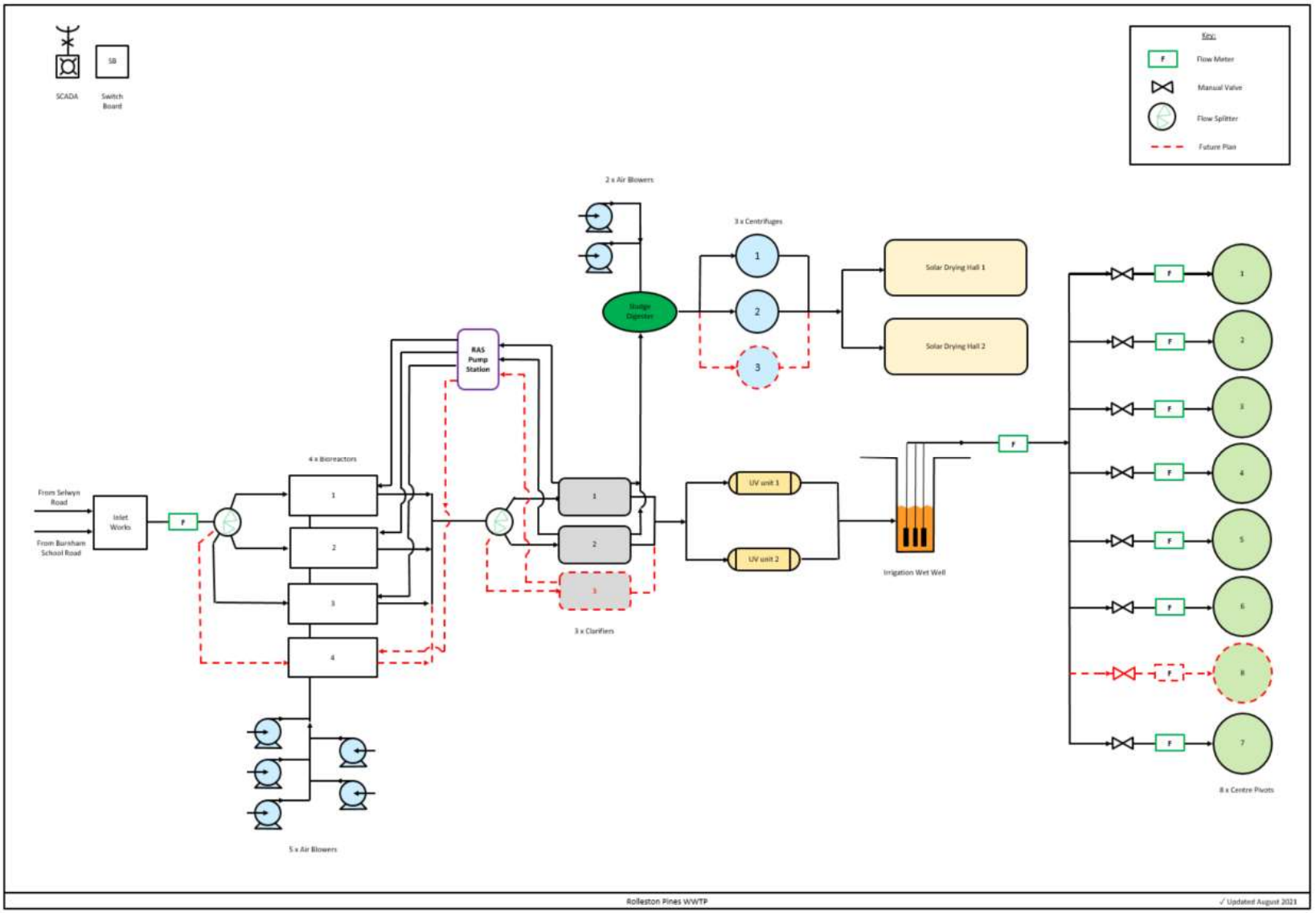


Rolleston South Wastewater Master Plan



Appendix 5 –

Pines Layout



Appendix 6 –
Pines 120 Consultation (2021 LTP)

FOR INFORMATION – OTHER IMPORTANT PROJECTS

In this section you can find information on other proposed projects which are likely to be of interest to the Selwyn community.

Have your say

We welcome your comments on any of these proposals. Please use the comments section on the submission form or share your views at www.selwyn.govt.nz/thisway2031.

Future of Malvern aquatic facility

We are proposing to repair the current swimming pool in Darfield. In the first year of the new Long-Term Plan (2021/22) a repair budget of $1.5 million would be set aside. Although current usage and projected future population growth do not warrant a new aquatic facility in Darfield at this time, we propose to carry out a further feasibility study in 2027/28 to determine the needs for a facility in the Malvern area, based on the latest population growth projections. We will make a provisional allowance of $5 million to build a new or upgraded facility in 2030/31. Any decision on a future facility in Malvern, following the completion of the study, will be subject to consultation at the time.

Commercial property investment

The Council has a property portfolio which includes a variety of buildings, farms and bare land that can be developed. To date the Council has successfully managed its investment portfolio, and the new Selwyn Health Hub in Rolleston is a good example. We propose to continue investing in commercial opportunities where they will create income streams and contribute to positive community outcomes. We are now proposing to include a total of $30 million over the first six years of this Long-Term Plan, for commercial investment. Any investment proposals will be subject to a comprehensive business case and approval by the Council. Money will be borrowed and repaid from lease rentals. Investment will be carried out in line with the Council's Commercial Property Strategy, which was approved in 2016. A key purpose of our property investment activity is to generate returns which are used to offset rates increases.

Ellesmere wastewater

To continue to meet environmental standards and provide for growth in Ellesmere, the Council has considered two upgrade options for wastewater treatment. The first was to upgrade the existing Ellesmere wastewater treatment plant, including enhanced treatment processes, additional land for increased irrigation capacity and providing increased buffer storage. The second and preferred option is to pipe wastewater to the Pines Wastewater Treatment Plant in Rolleston. For environmental and operational efficiency reasons, piping to Rolleston provides a high level of treatment and the economy of scale ensures a cost effective wastewater treatment for generations to come. We are planning to start construction of this upgrade in 2023/24. The work will be funded by a combination of the sewerage district-wide targeted rate and development contributions.

Pines 120K

The Rolleston Pines Wastewater Treatment Plant has been designed so that it can be upgraded in stages to match population growth. The current plant has the capacity to treat wastewater for up to 60,000 people[3]. A masterplan has been developed for the treatment plant to expand the maximum treatment capacity to 120,000 people[4]. The cost will be around $100 million and will be funded largely by development contributions.

[3] *Commercial and industrial discharges take some of this capacity as well.*
[4] *As above.*

Upper Selwyn Huts wastewater

The installation of a pipeline from Ellesmere Wastewater Treatment Plant to Pines Wastewater Treatment Plant (as proposed above) presents an opportunity to connect the Upper Selwyn Huts settlement to the scheme. This would have the additional benefit of allowing the Coes and Chamberlains Ford camping areas to connect, and would remove wastewater treatment facilities from near the Selwyn River. Another potential option is to provide a wastewater treatment plant and disposal field at the settlement, but this faces environmental, cultural, consenting and construction challenges. The Council will consult directly with the Selwyn Huts community on this proposal.

Land drainage network

There is a growing focus on the environmental performance of Selwyn's land drainage network, which is likely to require increased monitoring and reporting, as well as upgrades. It will be more challenging to gain and renew resource consents, and complying with these consents will be more demanding. Health and safety will continue to be a major focus. Local rūnanga are likely to continue taking a significant interest in the operation of the land drainage network, and will be increasingly involved in decision-making.

To help us prepare for these changes, we are proposing to transition to a district-wide land drainage committee, within the first year of the Long-Term Plan 2021–2031. This new governance structure will be accompanied in the future by a district-wide rating scheme, similar to the approach used for water races. One of the first responsibilities of the district-wide land drainage committee will be to develop the new rating structure, for consultation during or prior to the 2022/23 Annual Plan.

Proposed changes to fees and charges

Environmental and regulatory services fees and charges

The Council charges for a range of regulatory services including resource consents, building consents, and dog registration. We are proposing increases to the schedule of chargeable costs for these services. Details of the proposed fees and charges from 1 July 2021 are shown in the full draft Long-Term Plan, which is available at www.selwyn.govt.nz/thisway2031.

Solid waste fees and charges

Refuse bags: We propose to increase the charge for bags from $2.50 to $2.75 (incl GST) from 1 July 2021. This increase is to help offset the actual cost to Council to supply, collect and dispose of bags.

Pines Resource Recovery Park disposal charges: The waste disposal charge is currently $257 per tonne (incl GST) and we propose to increase it to $270 per tonne from 1 July 2021. Details of the proposed fees and charges from 1 July 2021 are shown in the full draft Long-Term Plan, which is available at www.selwyn.govt.nz/thisway2031.

Burial fees and charges

The Council's cemeteries are funded from a mix of fees and support from the general rate, which reflects the broad public benefit associated with this service. Burial fees and charges were last increased five years ago and we now propose to increase most charges by 15% from 1 July 2021 (including proposed Government waste levy increases). Details of the proposed fees and charges from 1 July 2021 are shown in the draft Long-Term Plan, which is available at www.selwyn.govt.nz/thisway2031.

Reserve fees and charges

The Council has carried out a review of the current fees and charges for the use of reserves, and we are proposing a new schedule of charges. This reflects the change made in recent years to district-wide rating for reserves. The proposed changes are to achieve a standardised set of charges that are consistent, fair and tailored to the usage of the reserve. Details of the proposed fees and charges from 1 July 2021 are shown in the full draft Long-Term Plan, which is available at www.selwyn.govt.nz/thisway2031.

Rural water charge – additional units

In response to a survey of rural water users last year, we plan to undertake a number of upgrades to the Darfield, Malvern and Hororata rural water supplies, to provide customers additional water units. The up-front charge to cover these upgrade costs will be $4,702 (incl GST) per additional unit required. Annual rates, as outlined in the Long-Term Plan, will then apply for any units of water received.

OTHER IMPORTANT PROJECTS

In this section you can find information on other confirmed projects which are likely to be of interest to the Selwyn community.

Future of Malvern aquatic facility

The Council confirmed it will repair the current swimming pool in Darfield, with $1.5 million set aside for 2021/22.

While current usage and projected future population growth do not warrant a new aquatic facility in Darfield at this time, we will carry out a further feasibility study in 2027/28 to determine the needs for a facility in the Malvern area, based on the latest population growth projections. The Council will also start work with groups in Darfield including local schools to identify opportunities for future combined sports and aquatic facilities.

In the meantime, we will make a provisional allowance of $5 million to build a new or upgraded facility in 2030/31.

Any decision on a future facility in Malvern, following the completion of the feasibility study, will be subject to consultation at the time.

Commercial property investment

The Council has a property portfolio which includes a variety of buildings, farms and bare land that can be developed. To date the Council has successfully managed its investment portfolio, and the new Selwyn Health Hub in Rolleston is a good example. The Council confirmed it will continue investing in commercial opportunities where they will create income streams and contribute to positive community outcomes. We will include a total of $30 million over the first six years of this Long-Term Plan, for commercial investment. Any investment proposals will be subject to a comprehensive business case and approval by the Council. Money will be borrowed and repaid from lease rentals. Investment will be carried out in line with the Council's Commercial Property Strategy, which was approved in 2016. A key purpose of our property investment activity is to generate returns which are used to offset rates increases.

Ellesmere wastewater

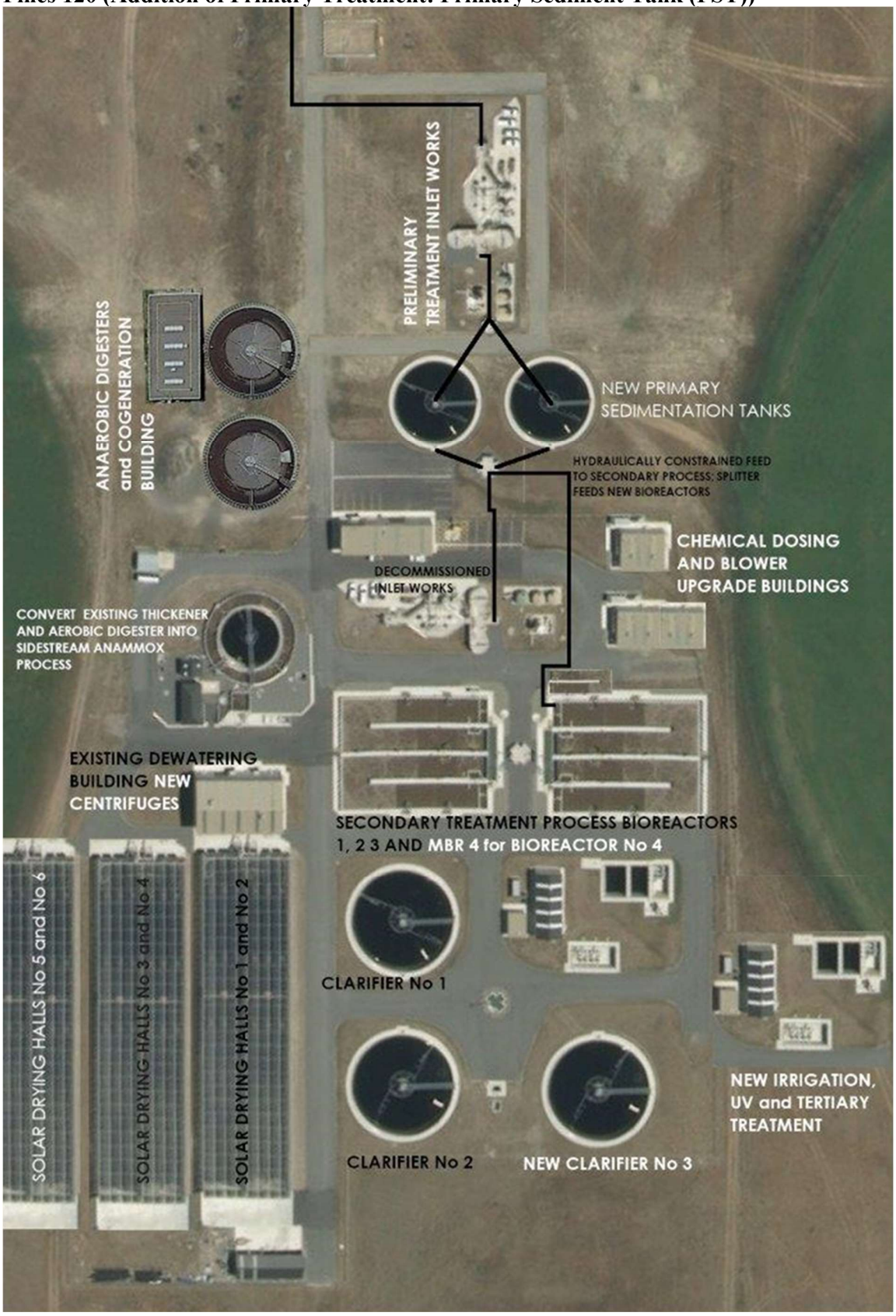
To continue to meet environmental standards and provide for growth in Ellesmere, the Council has agreed to go ahead with connecting Ellesmere wastewater to the Pines Wastewater Treatment Plant in Rolleston. For environmental and operational efficiency reasons, piping to Rolleston provides a high level of treatment and the economy of scale ensures a cost effective wastewater treatment for generations to come. We are planning to start construction of this upgrade in 2023/24. The work will be funded by a combination of the sewerage district-wide targeted rate and development contributions.

Pines 120K

The Rolleston Pines Wastewater Treatment Plant has been designed so that it can be upgraded in stages to match population growth. The current plant has the capacity to treat wastewater for up to 60,000 people. A masterplan has been developed for the treatment plant to expand the maximum treatment capacity to 120,000 people. The cost will be around $100 million and will be funded largely by development contributions.

Appendix 7 –
Pines 120 (Existing Layout)

Pines 120 (Addition of Primary Treatment: Primary Sediment Tank (PST))



Pines 120 (Duplicate Works: Fully Aerobic System)