Southern Link Inland Port

Wastewater Assessment

Prepared for:
Southern Link Property Limited

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Prepared by:
Stantec New Zealand

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Stantec New Zealand

Revision Schedule

Revision No.	Date	Description	Prepared by	Quality Reviewer	Independent Reviewer	Project Manager Final Approval
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3	20/02/2026	Final	Isobel Halliday, Jack Boyd	Roger Oakley	Jonathan Krause	Sarah Lloyd

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Acronyms / Abbreviations

Acronym / Abbreviation	Full Name
AEP	Annual Exceedance Probability
ADWF	Average Dry Weather Flow
ADWV	Average Dray Weather Volume
AWWF	Average Wet Weather Flow
AWWV	Average Wet Weather Volume
BOD	Biological Oxygen Demand
DCC	Dunedin City Council
DN	Nominal Diameter
FTE	Full Time Employee
l/s	Litres per second
l/min	Liters per minute
m^3	Cubic metres
mm	Millimetres
NZS	New Zealand Standard
PDWF	Peak Dry Weather Flow
PWWF	Peak Wet Weather Flow
RCP	Regional Concentration Pathway
SLIP	Southern Link Inland Port
SLPL	Southern Link Property Limited
TSS	Total Suspended Solids
UPT	Universal Pollutant Trap
WWTP	Wastewater Treatment Plant

Executive Summary

The purpose of this report is to present the proposed wastewater supply schemes for the Southern Link Inland Port development to support the substantive application for all necessary approvals under the Fast-track Approvals Act 2024.

The wastewater scheme will include the following elements:

- Gravity wastewater network.
- Container washbay pretreatment device (universal pollutant trap).
- Container washbay attenuation tank with outlet throttle.
- Terminal wastewater pump station.
- Wastewater rising main to connect to the DCC wastewater network

The characteristics of the wastewater flow that would be discharged to the DCC system on Odlins Place are summarised below:

- Average Dry Weather Flow (ADWF) = 3.4 litres per second
- Average Dry Weather Volume (ADWV) = 63 m^3/day
- Average Wet Weather Flow (AWWF) = 4.1 litres per second
- Average Wet Weather Volume (ADWV) = 350 m^3/day
- Peak Dry Weather Flow (PDWF) = 3.7 litres per second
- Peak Wet Weather Flow (PWWF) = 5.1 litres per second

Note that the above flowrates occur when the container washbay is in full operation. On average, this is two hours per working day.

DCC have confirmed that the DCC wastewater network has capacity to accept the required wastewater flow demand from the SLIP site, however this would be subject to the following requirements:

- The first section of the DCC wastewater gravity network on Odlins Place, an existing DN150 pipe (approx. 130m long), would need to be upgraded or the proposed rising main would need to be extended to discharge downstream of the DN150 pipe, into manhole FSM08601.
- Limiting of trade waste flows in heavy rainfall events
- Efforts to reduce wet weather flow from the development.

At the time of writing, the options to resolve DCC requirements are being investigated. The preferred option will be finalised during detailed design. The intention is to work collaboratively with DCC to ensure that a solution acceptable to both DCC and the Applicant is agreed.

The concept design of the gravity wastewater network has confirmed that it is feasible to service the SLIP via gravity while meeting the design criteria specified in the DCC DCSD 2010 and NZS 4404.

Stantec provides professional support that the wastewater scheme, as proposed, is effective and appropriate to service the SLIP. The design is in accordance with industry best practice and can be implemented without detriment to the surrounding environment. Details of the wastewater system will be refined during the detailed design phase.

1 Purpose

Stantec has been commissioned by Southern Link Property Limited (SLPL) to prepare a wastewater assessment to support the Southern Link Inland Port (SLIP) substantive application which seeks all necessary approvals under the Fast-track Approvals Act 2024.

The purpose of this report is to present the proposed wastewater scheme for the SLIP development.

2 Code of Conduct

The Quality Reviewer of this report is Roger Oakley.

Roger has 40 years' experience as a civil engineer, specialising in three waters infrastructure and associated construction projects. He has acted as Technical Lead and Engineer to Contract for many projects and is well regarded for his proactive, informed and fair approach. Roger has worked on numerous water and wastewater treatment schemes and three waters major infrastructure projects. This provides him with a comprehensive understanding of all the stages of a project, from concept development and planning consents through to stakeholder engagement, design and construction. He has been responsible for, and has significant practical experience in, all phases of capex implementation. Roger's work is highly regarded and he has led teams who have won National Excellence Awards from Ingenium in 2006 and 2012. This was for the $33M Southern Water Treatment Plant the Raw Water Lifelines project for the Dunedin City Council. Further details are included in Roger's CV in Appendix A.1.

Roger has read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023. This report has been prepared in compliance with that Code, as if it was expert evidence presented in proceedings before the Environment Court. Unless stated otherwise, this report is within his areas of expertise, and he has not omitted to consider material facts known to him that might alter or detract from the opinions expressed in this report.

3 Project Overview

SLPL seeks to establish and operate an Inland Port / Logistics Hub on an approximately 40-hectare site located at 270-292 Dukes Road North on the Taieri Plains near Mosgiel. The Site location and proposed layout is shown in Figure 3-1. This project will deliver critical infrastructure to support regional economic growth, improve freight logistics, and enhance resilience to environmental risks. The development will include:

- A new rail siding off the Taieri Branch Line to enable loading, unloading and operation of a rail freight shuttle service to Port Chalmers and the wider rail network;
- Approximately 155,000 m^2 of high stud warehousing (chilled and ambient) and associated yard and canopy areas;
- Two road exchange areas for the loading and unloading of container trucks;
- A container depot facility enabling the inspection, cleaning, upgrading and repair of containers including for food grade repacking;
- Approximately 9 ha of container terminal for storage and movement of empty and full containers including refrigerated containers;
- Approximately 1000 m^2 of onsite offices ancillary to the Inland Port;
- Road widening and construction of a new intersection onto Dukes Road North;
- 24/7 operation with flood and road lighting for nighttime operation;
- Ancillary activities to support the above including vehicle parking, truck waiting areas, onsite road network, three waters and power infrastructure, flood mitigation, landscaping, security measures, acoustic barriers and lighting; and
- Ongoing management and monitoring activities including ensuring establishment of landscaping, stream health monitoring, wildlife management and effects management.

Construction of the Inland Port is anticipated to be undertaken in three stages however the timing of the delivery of each stage, and discrete works within each stage, may change in response to demand for logistics capacity at the Inland Port. Each stage of works will involve site clearance, earthworks, construction of buildings, hardstanding and access, installation of infrastructure, landscaping and works and management activities necessary to manage environmental effects during construction including erosion and sediment controls and construction management activities:

- Stage 1 is estimated to be completed 1 to 3 years following approval of the Project and will include clearance of the southern area of the site and construction of the ‘Stage 1’ container storage concrete pad, rail siding, container service area, warehouses, internal roading, parking and loading, road widening and construction of the new intersection on Dukes Road North, stormwater attenuation pond, Silver Stream stormwater outlets, servicing infrastructure, flood management measures, landscaping, acoustic barriers and eastern bund, and lighting.
- Stage 2 is estimated to be completed 3 to 5 years following approval of the Project and will include clearance of the northern area of the site and construction of the ‘Stage 2’ container storage concrete pad, warehouses, ancillary offices, internal roading, parking and loading, emergency egress onto Dukes Road North, expansion of the stormwater attenuation pond, landscaping, extension of the servicing infrastructure and lighting.
- Stage 3 is estimated to be completed 5 to 10 years following approval of the Project and will include clearance of the eastern area of the site, including the eastern acoustic bund, and construction of the ‘Stage 3’ warehouses, internal roading, parking and loading, landscaping, extension of the servicing infrastructure and lighting

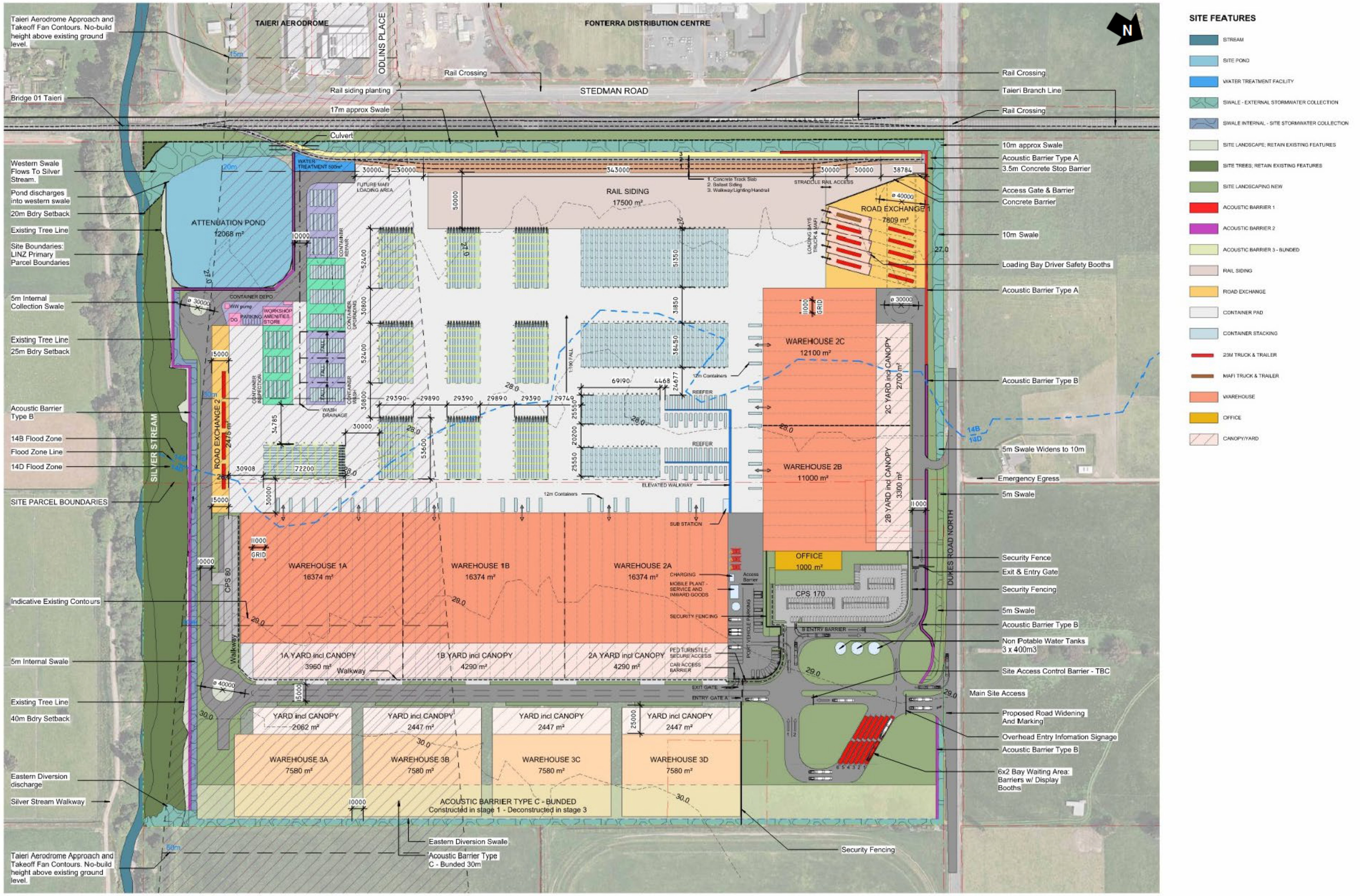

Figure 3-1. Proposed SLIP Site Plan and Layout

4 Existing Infrastructure

The proposed site for the SLIP is a greenfield site which is largely made up of farmland, along with several existing farmhouses.

The site is bordered by Dukes Road North to the north, and Stedman Road to the west. The Dunedin City Council (DCC) Water Service Map shows that there are reticulated wastewater assets to the west of the SLIP site on:

- Odlins Place and Stedman Road, a 300 mm PVC pressurised wastewater pipeline installed circa 1991 (the “Fortex” pipeline).
- Odlins Place, a 150 mm concrete gravity wastewater pipeline circa 1980.

The “Fortex” pipeline is a pressurised system that is thought to have been built to service the former Fortex meat works site within the Mosgiel Industrial Zone. The pipeline is a DCC owned DN300 pressurised pipe, which conveys flows to the Green Island Wastewater Treatment Plant (WWTP). The pump station that supplies the Fortex pipeline is privately owned and operated. DCC has indicated that the SLIP is unlikely to be allowed to connect to the Fortex pipeline, which is understood to be because of complexities in the scheme ownership. A connection to this pipeline from the SLIP has therefore been discounted as an option.

The upstream node of the wastewater network on Odlins Place is a wastewater manhole with Unit ID FSM08600, approximately 200 m from the site boundary. This manhole discharges to the existing 150 mm gravity wastewater pipeline on Odlins Place. From here, wastewater flows are conveyed west through a gravity wastewater network. The size of this gravity network gradually increases as flows move downstream, finishing as a DN1050 pipe at terminal wastewater pump station (Mosgiel Wastewater No 4), approximately 1.5 km from the SLIP site. From the pump station, a pressure main transfers flows over the Silver Stream River via a pipe bridge, before discharging back to a gravity wastewater network around 600 m downstream. This gravity wastewater network flows approximately 2.1 km to the Mosgiel WWTP.

The SLIP proposes to connect to the gravity pipeline at manhole FSM08600 on Odlins Place.

Key existing DCC wastewater assets are summarised in Figure 4-1.

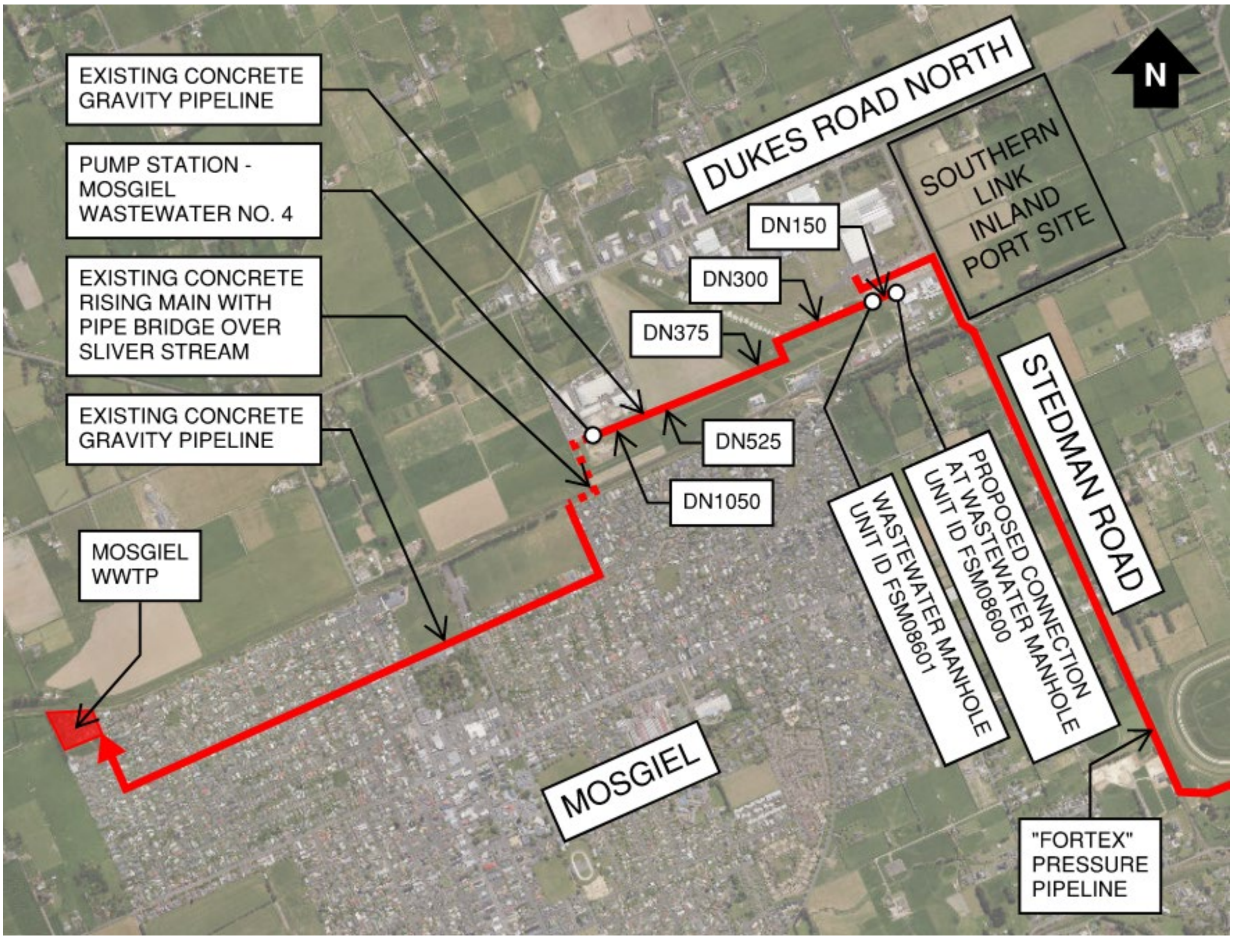

Figure 4-1: Existing wastewater infrastructure in the vicinity of the Southern Link Inland Port site

5 Engagement with Dunedin City Council

SLPL has engaged with Dunedin City Council (DCC) during the pre-application phase to seek its feedback as to whether:

- The planned development meets the requirements outlined in the Dunedin Code of Subdivision and Development 2010
- The proposed wastewater flow from the site can be accepted at the proposed connection point to the DCC water network.

Pre-application advice was received following a consultation meeting on 12 February 2025 between SLPL and DCC. Details of the pre-application advice are provided in Appendix A.2. The pre-application correspondence has included the request for the following critical wastewater measures:

- An estimate of daily wastewater flow from site (including any trade waste)
- A description of what items on-site would be connected to wastewater from the site.

An initial meeting with DCC was held on 27 November 2025 to present the proposed SLIP wastewater scheme and the required wastewater discharge to the DCC wastewater network. DCC explained that they would distribute the information presented at the meeting to their relevant internal departments to confirm whether the proposed SLIP wastewater scheme was acceptable. Post meeting DCC requested a follow-up workshop to further discuss the SLIP wastewater scheme with additional members of DCC staff. The follow up workshop was scheduled for 10 December 2025 but was cancelled at DCC's request.

Follow up email correspondence from DCC was received on 26 January 2026, which provided responses from the DCC modelling team. The responses indicated that the DCC modellers did not see any major issues with the proposed wastewater discharge presented at the initial 27 November 2025 meeting.

In response to the initial modelling findings, a follow-up meeting was held between Stantec and DCC on 28 January 2026. This meeting was held to clarify the outcomes of the initial modelling findings and explain that the wastewater flow demands had been revised since the meeting on 27 November 2025. DCC confirmed that the initial modelled flows were acceptable, but that modelling would need to be re-run to test the revised flow demands.

The revised wastewater flow demands from the SLIP site were emailed to the DCC modelling team on 5 February 2026. Stantec asked whether DCC wished to review a draft version of the wastewater assessment report on 9 February 2026. Confirmation was received on 16 February 2026, and the draft report was issued to DCC the same day.

DCC provided a response to the revised wastewater flow demands on 16 February 2026. They confirmed that the DCC wastewater network has capacity to accept the required wastewater flow demand from the SLIP site, however this would be subject to the following requirements:

- The first section of the DCC wastewater gravity network on Odlins Place, an existing DN150 pipe (approx. 130m long), would need to be upgraded or the proposed rising main would need to be extended to discharge downstream of the DN150 pipe, into manhole FSM08601.
- Limiting of trade waste flows in heavy rainfall events
- Efforts to reduce wet weather flow from the development.

At the time of writing, the options to resolve DCC requirements are being investigated. The preferred option will be finalised during detailed design. The intention is to work collaboratively with DCC to ensure that a solution acceptable to both DCC and the Applicant is agreed.

6 SLIP Wastewater Scheme

The proposed SLIP wastewater servicing scheme is shown in Figure 6-1.

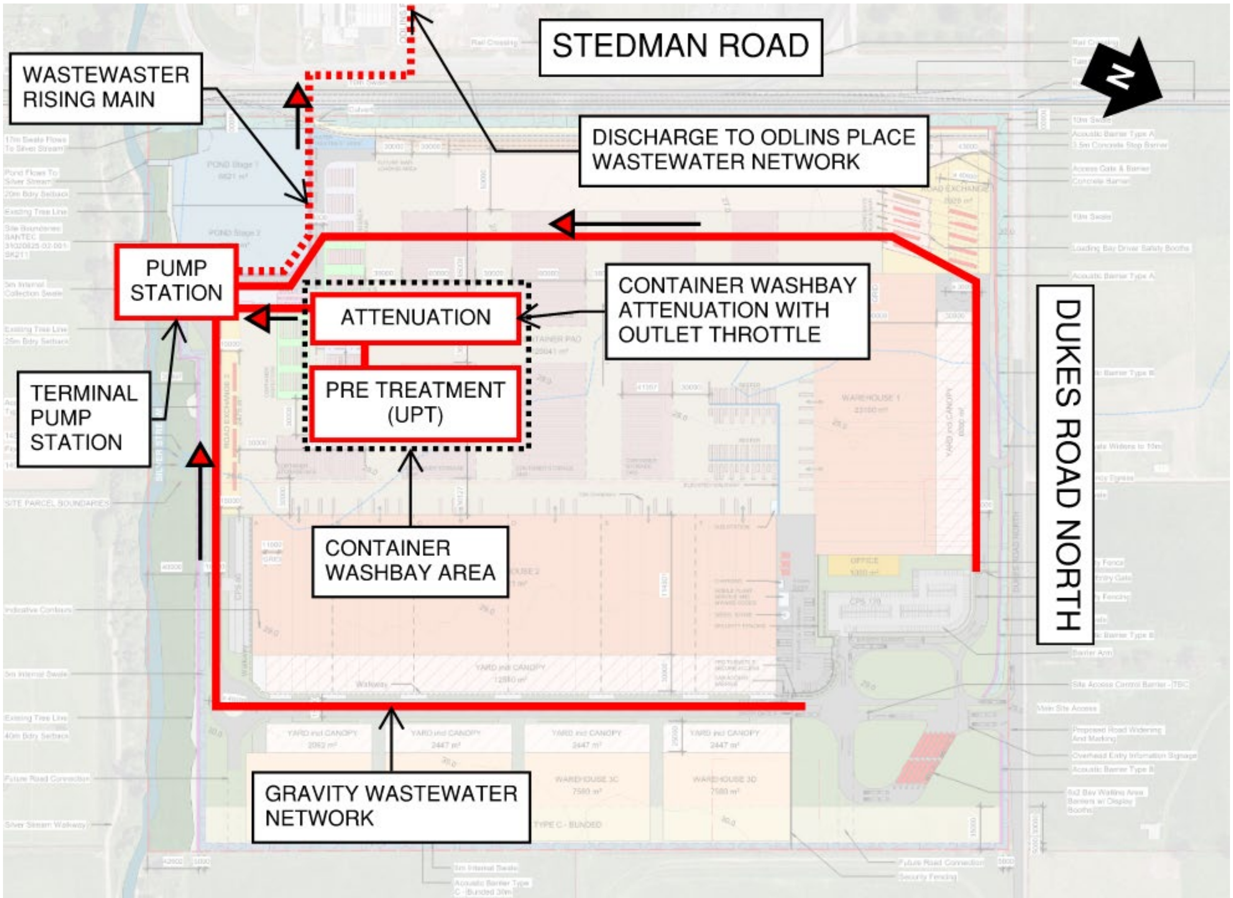

Figure 6-1. Southern Link Inland Port – Wastewater scheme

The wastewater scheme includes one connection to the DCC wastewater network on Odlins Place to the west of the Site.

Within the SLIP site, the wastewater scheme will include the following elements:

- Gravity wastewater network.
- Container washbay pretreatment device (universal pollutant trap).
- Container washbay attenuation tank with outlet throttle.
- Terminal wastewater pump station.
- Wastewater rising main to connect to the DCC wastewater network. This rising main is within the road reserve downstream of the rail and ORC scheduled drain crossings.

7 Regulatory Requirements

The wastewater system serving the SLIP will comply with the following guidance and regulatory documents:

- DCC Dunedin Code of Subdivision and Development 2010 (DCSD 2010).
- New Zealand Standard 4404:2010 Land Development and Subdivision Infrastructure (NZS 4404:2010).
- DCC Trade Waste Bylaw 2020.
- Otago Regional Council (ORC) Flood Protection Management Bylaw 2022.
- Further information has been supplemented from the Watercare Auckland Code of Practice for Land Development and Subdivision 2021.

8 Wastewater Scheme

8.1 Wastewater Generation

The wastewater generation from the SLIP has been calculated using the codes and standards listed in Section 7. There are two main sources of wastewater generation from the SLIP:

- Site occupancy (people).
- The container washbay.

The wastewater generated from each of these sources is described in the following sections.

8.1.1 Site Occupancy (people) Wastewater Generation

Key inputs and assumptions applied to calculated wastewater generation from site occupancy are provided below:

- 172 full time employees (FTEs) when the site is fully developed.
- 288 daily site visitors when the site is fully developed. This is based on 12 truck moments per hour over 24 hours.
- Conservatively, a wastewater unit base flowrate of 65 litres/person/day(1) has been used for both FTEs and site visitors to calculate average dry weather flow (ADWF).
- A dry weather diurnal peaking factor of two (2)(2) to convert average dry weather flow (ADWF) to peak dry weather flow (PDWF).
- A wet weather peaking factor of three (3)(3) to convert peak dry weather flow (PDWF) to peak wet weather flow (PWWF).

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[1] Watercare, *The Auckland Code of Practice for Land Development and Subdivision – Water and Wastewater Code of Practice for Land Development and Subdivision – Chapter 5: Wastewater,* 2021. Pg 29, Table 5.1.3

[2] Dunedin City Council, *Dunedin Code of Subdivision and Development 2010,* 2010. Pg 23, section 5.3.5.1

[3] Dunedin City Council, *Dunedin Code of Subdivision and Development 2010,* 2010. Pg 23, section 5.3.5.1

The wastewater generation from site occupancy is summarised in Table 8-1.

Table 8-1: Wastewater Generation – Site Occupancy

Activity	Number of Persons	Unit Base Flowrate	ADWF		AWWF		PDWF	PWWF
			(l/s)	Vol (m³/d)	(l/s) PF= 3	Vol (m³/d)	(l/s) PF= 2	(l/s) PF= 3
Full Time Employees (FTEs)	172	65 l/p/d	0.13	11	0.39	34	0.26	0.78
Site Visitor Numbers	288	65 l/p/d	0.22	19	0.65	56	0.44	1.30
		Total	**0.35**	**30**	**1.04**	**90**	**0.70**	**2.08**

8.1.2 Container Washbay Wastewater Generation

The container washbay area is an unroofed area (approx. 0.2 hectares) comprising of three washbays where shipping containers are cleaned on site. This area is unroofed because of the size and height of the machinery (e.g. side stackers) that is needed to load and unload shipping containers from the container washbay.

The wastewater generation from the container washbay area has been based on correlating two different approaches which are described below.

8.1.2.1 Peak dry weather flow rate

The first approach involves calculating the peak dry weather flow rate using the flow demand from water fittings within in the container washbay.

A flowrate from a commercial water blaster is assessed as 0.5 litres per second. With three water blasters operating simultaneously in each of the three washbays, this gives a flowrate of 4.5 litres per second.

The second approach is a conservative assessment of the wastewater generation from the container washbay area. This approach has been based on measured trade waste volumes from the container washbay at the Port Otago Port Chalmers site. Between September 2024 and October 2025, the discharge from the container washbay at the Port Otago Port Chalmers site averaged 500m³ per month and peaked at 650m³ per month.

While the scale of the existing container washbay area at the Port Otago Port Chalmers site matches the proposed container washbay area at SLIP, it is understood that the average and peak monthly demands include an unknown volume of stormwater. To determine a conservative estimate, it has been assumed that the peak month was during dry weather.

This peak monthly demand has been converted into a peak instantaneous flow demand by applying the following assumptions advised by Port Otago:

- The container washbays are in use every working day of the year (240 working days per year).

- A working day consists of an 8-hour day shift, and possibly a night shift. The container washbay will only be in operation during the day shift.
- There are three separate washbays within the container washbay area. Each washbay will wash on average two containers per shift with a total washing time of two hours per shift.
- Therefore, to estimate a conservative peak flow rate, it was assumed that the three washbays within the container washbay area are in simultaneous use for two hours per day

This gives wastewater generation of 4.5 litres per second by container washbay use.

Adopting a peak flowrate value of 4.5 litres per second therefore provides a conservative estimate of peak instantaneous wastewater flows. This demand will be refined during detailed design.

8.1.2.2 Average dry weather daily volume

The average monthly volume of 500 m^3 from the container washbay at the Port Otago Port Chalmers site has been adopted for the SLIP site.

This provides a conservative average dry weather volume of 25 m^3 per day. The average dry weather daily volume will be refined during detailed design.

8.1.2.3 Peak dry weather daily volume

The first approach used to calculate peak dry weather daily volume is to use the flow demand from water fittings within in the container washbay. This assumes that each washbay will be in operation for six hours, using a single 0.5 litres per second water blaster.

This equates to a peak daily dry weather volume (i.e. excluding stormwater) of 32.4 m^3 per day.

The second approach used to calculate peak dry weather daily volume is to assume the peak monthly volume of 650 m^3 from the Port Otago Port Chalmers site is averaged over 240 working days during a calendar year.

This equates to a peak daily dry weather volume (i.e. excluding stormwater) of 32.5 m^3 per day.

Adopting a peak dry weather daily volume of 32.5 m^3 per day therefore provides a conservative estimate of peak daily wastewater volume. The peak dry weather daily volume will be refined during detailed design.

8.1.2.4 Peak dry weather flow and daily volume

The wastewater generation from the container washbay (pre attenuation) is summarised Table 8-2.

Table 8-2. Wastewater Generation – Dry weather container washbay (pre-attenuation)

Activity	Unit Base Flowrate	Peak Instantaneous Flow (Pre Attenuation)	Peak Daily Volume
		(l/s)	Vol (m^3/d)
Container washbay (Dry Weather)	650 m^3/month	4.5	32.5

8.1.2.5 Effects of the attenuation system

Attenuation storage will be provided for the captured container washbay wastewater, with a throttle on the outlet to limit the flowrate to the site gravity wastewater network. An attenuation system will provide storage to limit the peak dry or wet weather wastewater flow from the container washbay area to three litres per second. This system is described further in Section 8.2.2.

Since the container washbay area is unroofed, a large component of the wastewater generation can arise from rainfall. To reduce this stormwater component of the wastewater generation, the container washbay area will be located at a local highpoint and away from secondary stormwater flowpaths to limit its catchment. The design of the wash pad level and vehicle access points will be completed during later design phases. As per the dry weather scenario described above, the attenuation system will limit the peak flow from the container washbay area to three litres per second. This system is described further in Section 8.2.2.

8.1.3 Total Wastewater Generation

The total wastewater generation from the SLIP is summarised in Table 8-3. A full breakdown of the calculations is provided in Appendix A.3.

Table 8-3. Total Wastewater Generation from Southern Link Inland Port

Activity	Number of Persons	Unit Base Flowrate	ADWF		AWWF		PDWF	PWWF
			(l/s)	Vol (m^3/d)	(l/s) PF= 2	Vol (m^3/d)	(l/s) PF= 2	(l/s) PF= 3
Full Time Employees (FTEs)	172	65 l/p/d	0.13	11	0.39	34	0.26	0.78
Site Visitor Numbers	288	65 l/p/d	0.22	19	0.65	56	0.43	1.30
Container Washbays (Post attenuation)	n/a	n/a	3.00	25	3.00	260	3.00	3.00
		Total	**3.35**	**55**	**4.04**	**350**	**3.69**	**5.08**

8.2 Wastewater Scheme Components

The wastewater scheme for the SLIP development is shown in the developed concept design drawings provided in Appendix A.4.

8.2.1 Gravity Wastewater Network

Wastewater within the SLIP is proposed to be collected via gravity wastewater pipes which will convey flows to a terminal pump station near the low point of the site.

The concept design of the gravity wastewater network has confirmed that it is feasible to service the SLIP via gravity while meeting the following design criteria specified in the DCC DCSD 2010 and NZS 4404:

- Minimum wastewater main grade of 0.33%[4]
- Minimum lateral grade of 1.2%[5]. The design assumes that laterals will need to service the far edge of each building on site, relative to the alignment of the wastewater main. This provides the lowest possible level of the lateral connection at the wastewater main to prove connectivity is feasible.
- Maximum manhole spacing of 100 metres[6]
- Minimum pipe cover of 0.75 metres[7]
- Minimum horizontal clearances[8] to potable and non-potable pipes (1000mm) and stormwater pipes (300mm)
- Minimum vertical clearances[9] to potable and non-potable pipes (500mm) and stormwater pipes (150mm)

There may be opportunities to relax the design criteria listed above to reduce the depth of the gravity wastewater network. This will involve completing additional design and assessments to prove whether reducing pipe cover and grade is possible. These assessments will be completed during future design phases. Similarly, low pressure lateral connections may be used to reduce the depth of the wastewater network.

8.2.2 Container Washbay Wastewater System

The container washbay area is not covered, and hence a large component of the peak wastewater flow generated during wet weather will be from stormwater (refer to Section 8.1.2). To reduce this stormwater component of the wastewater generation, the container washbay area will be located at a local highpoint to limit its catchment. The design of the wash pad level and vehicle access points will be completed during later design phases.

Wastewater from the container washbay area will be collected by a series of sumps, which will discharge via gravity to a pre-treatment system. Downstream of the pre-treatment system the wastewater will flow to an attenuation tank with a throttled outlet, which will limit the wastewater flowrate that is able to be discharged into the site gravity wastewater network. The container washbay wastewater system is described further in the sections below.

Wastewater from the container washbay is anticipated to be classified as a conditional trade waste discharge under the DCC Trade Waste Bylaw 2020. This will require a separate trade waste discharge permit under DCC Trade Waste Bylaw 2020 which will be applied for outside of the FTAA process.

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[4] Standards New Zealand, *Land Development and Subdivision Infrastructure*, NZS 4404:2010. Pg 138, Table 5.4
[5] Standards New Zealand, *Land Development and Subdivision Infrastructure*, NZS 4404:2010. Pg 138, Table 5.5
[6] Dunedin City Council, *Dunedin Code of Subdivision and Development 2010*. Pg 25, section 5.3.6.3
[7] Dunedin City Council, *Dunedin Code of Subdivision and Development 2010*. Pg 23, section 5.3.5.7
[8] Standards New Zealand, *Land Development and Subdivision Infrastructure*, NZS 4404:2010. Pg 143, Table 5.6
[9] Standards New Zealand, *Land Development and Subdivision Infrastructure*, NZS 4404:2010. Pg 143, Table 5.6

The contaminants within the wastewater are expected to include oil and grease, suspended solids, heavy metals, microplastics, paint flakes and other gross pollutants. Wastewater sampling from the existing container washbay at the Port Otago Port Chalmers Site will be utilised to identify and quantifying contaminants to confirm the design of the washbay pre-treatment is appropriate. This will be completed during the detailed design phase.

The existing trade waste discharge consent for the container washbay at the Port Otago Port Chalmers Site requires regular monitoring for pH, grease, biochemical oxygen demand (BOD), and total suspended solids (TSS).

8.2.2.1 Pre-treatment

Wastewater from the container washbay will pass through a centralised pre-treatment system immediately downstream of the container washbay area. For this site, a universal pollutant trap (UPT) will be considered for the pre-treatment system.

UPTs capture both gross pollutants (i.e. large debris, litter, paint flakes) and fine pollutants (i.e. heavy metals and other chemical contaminants). Gross pollutants are trapped within an internal basket which can be periodically emptied using a sucker truck. Fine pollutants are captured downstream of the internal basket via an internal media filter followed by a membrane filter. The media within the filter is typically granulated activated carbon but can be changed to target specific contaminants within the wastewater.

The UPT will be an online treatment system. Conservatively, this is sized to treat the 10% annual exceedance probability (AEP) regional concentration pathway (RCP) 8.5 2080-2100 stormwater flow from the container washdown area. In larger storm events, water will flow through an internal bypass to the container washbay attenuation tank.

The type and sizing of the UPT treatment system will be confirmed during the detailed design phase.

8.2.2.2 Attenuation

From the UPT treatment system, wastewater flows are conveyed through a gravity wastewater pipe to a below-ground attenuation tank. Conservatively, this attenuation tank will provide sufficient storage volume for the container washbay wastewater and stormwater flow from a 10% AEP RCP 8.5 2080-2100 storm event. The attenuation volume required within this tank will be confirmed during the detailed design phase.

To achieve a gravity flow, the attenuation tank will be underground in a location near the container washbay area. The attenuation tanks will have an outlet throttle to limit wastewater discharge into the gravity wastewater network to three litres per second.

In large storm events, above the 10% AEP RCP 8.5 2080-2100 design storm, the container washbay wastewater system will surcharge to overflow overland at its lowest edge. The time it takes the system to surcharge during storm events larger than the design storm will vary. As an example, the attenuation system would provide sufficient capacity to capture flows from the first 20-30 minutes of a 1% AEP RCP 8.5 2080-2100 storm. This equates to a rainfall depth of around 25 – 30 mm over the container washbay catchment area. This initial rainfall, or first flush, would be captured, treated, attenuated, and discharged to the DCC wastewater system. In these extreme events, flow after this initial period will exceed the capacity of the attenuation tank, therefore becoming surcharge flow.

Surcharged flows will follow the secondary stormwater flowpath through the site, which ultimately drains to the stormwater attenuation ponds. It should be assumed that flows which surcharge the container washbay wastewater system are untreated (i.e., have bypassed the pretreatment device). Therefore, there is a risk that surcharged flows from the container washbay introduce additional contaminants to stormwater runoff. This risk is considered low because there will be a significant first flush, which will contain residual contaminants from the container washbay surface, will be captured into the attenuation storage before overflow occurs.

Furthermore, it is considered unlikely that operators will continue to wash containers in storm events above a 10% AEP storm, when the container washbay wastewater system is surcharging.

8.2.2.3 Connection to Wastewater Reticulation Network

The attenuation tank will discharge via a throttled outlet to a gravity wastewater pipe connecting into the SLIP gravity wastewater network.

8.2.3 Terminal Wastewater Pump Station

The gravity wastewater network will drain to a terminal wastewater pump station at the southwestern corner of the site. This pump station will convey wastewater flows to the DCC wastewater network on Odlins Place via a pressurised wastewater rising main, which may include a gravity flow section in its final length.

The terminal pump station will have emergency storage volume (at Dry Weather Flow conditions), and a standby pump facility. The vertical alignment of the gravity wastewater will be refined during detailed design.

The design of the terminal pump station will be completed in the detailed design phase of the Project.

8.2.4 Wastewater Rising Main

A wastewater rising main will convey flows from the terminal pump station to the DCC network on Odlins Place. The alignment of the rising main follows the internal road reserve around the stormwater attenuation pond, before crossing the railway tracks and ORC scheduled drain near the western SLIP boundary. The rising main length is in the order of 400 m.

The crossing beneath the railway tracks can be installed via trenchless construction. Similarly, the pipe crossing at the ORC scheduled drain can be installed via trenchless construction methods or a pipe bridge. The scheduled drain crossing may require ORC approval under the provisions of the ORC Flood Protection Management Bylaw 2022 which if required will be applied for outside of the Fast-track process.

Downstream of the scheduled drain crossing, the wastewater rising main will head north along Stedman Road, with an appropriate offset from an existing DCC wastewater pipe (the Fortex Line, refer to Section 4). The rising main will then turn onto Odlins Place before connecting into DCC wastewater manhole Unit ID FSM08600, which is addressed further in the section below.

The design of the wastewater rising main will be completed in future design phases of the Project.

9 Discharge to DCC Wastewater Network

The servicing strategy for the Southern Link Inland Port wastewater scheme includes one connection to the DCC wastewater network on Odlins Place. The location of this connection was proposed by DCC during initial consultation.

Wastewater flow from the SLIP site is conveyed to the DCC network via a terminal pump station on site and a wastewater rising main. The rising main would connect to DCC manhole Unit ID FSM08600 on Odlins Place, which is shown in Figure 4-1. This manhole drains to a gravity wastewater pipe, which ultimately discharges the Mosgiel WWTP approximately four kilometres from the SLIP site.

The characteristics of the wastewater flow that would be discharged to the DCC system in Odlins Place are summarised below:

- Average Dry Weather Flow (ADWF) = 3.35 litres per second
- Average Dry Weather Volume (ADWV) = 63 m^3/day
- Average Wet Weather Flow (AWWF) = 4.1 litres per second
- Average Wet Weather Volume (ADWV) = 350 m^3/day
- Peak Dry Weather Flow (PDWF) = 3.7 litres per second
- Peak Wet Weather Flow (PWWF) = 5.1 litres per second

Note that the above flowrates occur when the container washbay is in full operation. On average, this is two hours per working day.

DCC are in the process of confirming whether the DCC wastewater system has sufficient capacity to accept the above flows.

10 Staging

The proposed SLIP development staging is provided in the construction staging drawings. A summary of the wastewater infrastructure to be constructed at each stage is provided below:

Stage 1:

- The terminal pump station including the rising main connection off-site to Odlins Place.
- The container washbay wastewater system
- The bulk of the gravity wastewater main pipelines.
- The wastewater connections to Stage 1 buildings.

Stage 2:

- The remaining section of the gravity wastewater main pipelines
- The wastewater connections to Stage 2 buildings.

Stage 3:

- The wastewater connections to Stage 3 buildings.

11 Odour and Septicity

Odour and septicity can be an issue during early stages of developments, where the number of lateral connections to a wastewater network can be significantly lower than ultimate design. This can result in high retention times within the wastewater network with the potential for onset of septic conditions resulting in the generation of high levels of sulphides in the wastewater (liquid phase). The associated gas phase concentrations can result in odour complaints, corrosion and pose a potential health and safety issues.

It is considered that the onset of septic conditions is unlikely to occur during early stages of the development due to the proposed development staging plan. This staging plan generally allows the first lateral connections to be made towards the downstream end of the gravity wastewater network. Additional laterals will be progressively connected to the wastewater network upstream as the development progresses. Within the site the wastewater is conveyed in partially filled pipes via a gravity network with manholes, this allows for aeration and ventilation to limit any buildup of sulphides, should this occur.

Odour and Septicity will be considered further during the detailed design phase.

12 Summary

The purpose of this report is to present the proposed wastewater supply schemes for the SLIP development to support the substantive application for all necessary approvals under the Fast-track Approvals Act 2024.

The wastewater scheme will include the following elements:

- Gravity wastewater network.
- Container washbay pretreatment device (universal pollutant trap).
- Container washbay attenuation tank with outlet throttle.
- Terminal wastewater pump station.
- Wastewater rising main to connect to the DCC wastewater network

The characteristics of the wastewater flow that would be discharged to the DCC system on Odlins Place are summarised below:

- Average Dry Weather Flow (ADWF) = 3.4 litres per second
- Average Dry Weather Volume (ADWV) = 63 m^3/day
- Average Wet Weather Flow (AWWF) = 4.1 litres per second
- Average Wet Weather Volume (ADWV) = 350 m^3/day
- Peak Dry Weather Flow (PDWF) = 3.7 litres per second
- Peak Wet Weather Flow (PWWF) = 5.1 litres per second

DCC are in the process of confirming whether the DCC wastewater system has sufficient capacity to accommodate the wastewater demand from the SLIP site.

Note that the above flowrates occur when the container washbay is in full operation. On average, this is two hours per working day.

Stantec has been commissioned by Southern Link Property Limited (SLPL) to prepare a wastewater assessment to support the Southern Link Inland Port (SLIP) substantive application. The wastewater design was prepared by qualified practitioners and was completed in accordance with industry best practice and the appropriate design standards. The design has considered the surrounding environment and specific requirements of the site. It is therefore considered that the proposed wastewater scheme detailed within this report is effective and appropriate to service the SLIP.

Appendices

A.1 Quality Reviewer Curriculum Vitae

Roger Oakley

Senior Principal Civil Engineer

Stantec

Roger has 40 years' experience as a civil engineer, specialising in three waters infrastructure and associated construction projects. He has acted as Technical Lead and Engineer to Contract for many projects and is well regarded for his proactive, informed and fair approach. Roger has worked on numerous water and wastewater treatment schemes and three waters major infrastructure projects. This provides him with a comprehensive understanding of all the stages of a project, from concept development and planning consents through to stakeholder engagement, design and construction. He has been responsible for, and has significant practical experience in, all phases of capex implementation. Roger's work is highly regarded and he has led teams who have won National Excellence Awards from Ingenium in 2006 and 2012. This was for the $33M Southern Water Treatment Plant the Raw Water Lifelines project for the Dunedin City Council.

EDUCATION AND TRAINING

BE (Hons) Civil, University of Canterbury, 1986

DipGrad RRP, University of Otago, Regional and Resource Planning, 2003

International Professional Engineer (IntPE), #116759, 2004-Present

Chartered Professional Engineer (CPEng), 1993

CPMEngNZ, 2000-Present

Board Member, Institute of Public Works Engineering Australasia, 2012-2019

Member, Water New Zealand, Āpōpō

PROJECT EXPERIENCE

Cambridge Road Reservoir | Tauranga City Council | Technical Lead | 2024-Present
Roger is Technical Lead for identifying options, on a very tight site, for 10-20ML of new potable water reservoir storage and site services.

Bluff Wastewater Treatment Plant Consent Renewal | Invercargill City Council | Civil Lead | 2024-Present
Roger was Civil Lead for scoping civil works and piped services for a range of upgrade options, including preparation of cost estimates. A range of concepts were scoped, including significant land application options.

Frankton Road Watermain | Queenstown Lakes District Council | Technical Lead | 2025
Roger was Technical Lead for the implementation of this watermain project.

Seacliff Wastewater Treatment Plant | Dunedin City Council | Engineer's Representative | 2023-2024
Roger was Engineer's Representative and Technical Lead for the $3.5M construction phase of this wastewater treatment and land application via slow rate drip project.

Mataruahou Trunk mains ECI | Napier City Council | Technical Lead | 2023
Roger was Technical Lead for the preparation of an Early Contractor Involvement RFP for major new potable water trunk mains in Napier.

Tahuna WWTP Process Capability Upgrade | Dunedin City Council | Design Lead | 2021-2023
Roger was Design Lead for this $15M upgrade of a range of process elements to improve quality and reliability of the wastewater treatment plant.

Cromwell WW Ponds Rehabilitation | Central Otago District Council | 2021-2023
Roger was part of a team that investigated and improved the health of the wastewater ponds that feed into and are affected by the downstream membrane filtration plant.

Tahuna Wastewater Treatment Plant Lime Dosing Plant | Dunedin City Council | Technical Lead | 2022
Roger was Technical Lead for a $3M urgent implementation of a very multi-disciplinary lime dosing facility to allow wastewater sludge to be acceptable at landfill. This very successful project met extremely demanding timeframes and included an extremely collaborative arrangement with the DCC and contractor.

Roger Oakley

Senior Principal Civil Engineer

DCC Water Infrastructure | Dunedin City Council | Technical Reviewer / Advisor | 2020-2022
Roger was Technical Reviewer. The project included a range DCC projects including 3 waters renewals at Carey's Bay, Musselburgh PS rising main, Waikouaiti water. Roger provided a technical review and advisory role.

3 Waters Client Services Manager | Southland District Council | Consultant Representative | 2012-2022
Roger was Consultant representative for a full range of water and wastewater projects for Southland District Council. These include water treatment plants at Riverton and Eastern Bush (both membrane), RIB upgrade for the Riversdale WWTP, consenting for existing WWTPs at Nightcaps, Riversdale, Tokanui and Riverton.

Minimum Floor Levels | Dunedin City Council | Technical Lead | 2021
This project included an investigation of climate change effects and a literature review of all aspects that affect appropriate minimum floor levels for building consents subject to coastal hazards. As Technical Lead Roger derived a methodology and policy for the DCC to apply to building consents.

Southern WTP Swabbing | Dunedin City Council | Technical Lead | 2020-2021
Roger was Technical Lead for this scheme to determine (via MCA) the preferred option for disposing of contaminated water from annual swabbing of the water feed main.

Te Anau Wastewater Scheme | Southland District Council | Technical Lead | 2013-2021
Roger was Technical Lead for this $25M complex scheme to take pond wastewater, treat it via membrane filtration and transfer it 20km to an irrigation site for subsurface drip irrigation (SDI). Work included all piped services. The project included design, consenting, full business case preparation, and options assessment. It is the largest SDI scheme in NZ.

Frankton Flats Stormwater Strategy | Queenstown Lakes District Council | Technical Lead | 2016 - 2019
Roger was responsible for the preparation of the first stage of a $16M strategy to secure an overall stormwater layout for the Frankton Flats, which is subject to significant development pressure.

Eastern Access Rd 3 Waters | Queenstown Lakes District Council | 3W Technical Lead | 2015 – 2017
Roger was Technical Lead for the design of the 3 Waters infrastructure as part of a $22M project to provide an arterial road around the airport and services for new development areas of the Frankton Flats.

A.2 DCC Pre Application Advice

DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

20 February 2025

Southern Link – Logistics Park
C/- Ms Joanne Dowd
Port Otago
15 Beach Street
Port Chalmers 9023

Via email: [redacted]

Dear Joanne

DCC FEEDBACK FOLLOWING PRESENTATION

Following the consultation meeting on 12 February, the following comments from various DCC departments comprise a preliminary (and not exclusive) indication of the matters the DCC would like to see included in the Southern Link – Logistics Park proposal.

Transportation Matters

DCC Transport will require the section of Duke's Road North north of Stedman Road to be widened and a right run bay implemented, as identified in the integrated transport assessment that was circulated prior to the meeting on the 12th. As part of this, a footpath connection should be added to connect to the existing footpath on Stedman Road. This will require liaison with KiwiRail as part of the level crossing upgrade to make sure there is appropriate provision for pedestrians. Duke's Road North is a high productivity motor vehicle ("HPMV") route and to the south of Stedman Road is formed to an appropriate standard. There are known issues on the Mosgiel network around travel time delay, safety and the volume of heavy vehicles traveling through the centre. The volumes of heavy vehicle movements identified in the ITA are unlikely to significantly worsen these issues. The overall objective of shifting more freight to rail is likely to have a positive effect, especially on carbon emissions, safety and amenity on SH88.

There are aspects of the ITA that are not clear, or where further information would be helpful to understand the impacts on the transport network. Specifically:

- The ITA should include a little more information about the proposed new rail movements, including any identified impacts on other level crossings including Beach St and Wickliffe Terrace in Port Chalmers and St Andrew Street. The ITA alludes to increased rail movements south from the site but doesn't identify if this will be new rail services, or can be accommodated on existing services.
- The assessment of truck volumes would benefit from clearly stating the assumptions around what growth in freight volume is expected from the existing Dynes/Icon logistics movements, and what movements are anticipated from other companies using the site. Currently the ITA doesn't appear to show any growth in Icon logistics movements using heavy vehicles.
- The existing Icon logistics movements outlined in the ITA don't clearly show which heavy vehicle movements will shift to rail, which will remain on road and which are no longer be needed due to more efficient operation. This assessment could be presented more clearly and would benefit from including vehicles per day and well as annualised volumes. It is unclear at present how much of the existing icon heavy vehicle movements to and from the south via SH1 will travel on SH87, or can be shifted by rail.

- The assessment of freight volumes assumes that all movements associated with Sawyers Bay, 88 Parry St, T'Shed and the container depot on Strathallan will shift. If these sites are no longer used by Dynes/Icon logistics, other logistics or industrial uses may operate from these sites and some assessment of the potential for new uses to generate heavy vehicle movements should be included in the ITA.
- Clearer timing for the different stages would be helpful in assessing impacts on the overall transport network.
- The ITA indicates that 250 vehicles per day will be associated with the site, but only provides information about the anticipated 20-25 heavy vehicle movements. Some information about how the 250 vehicles per day figure was reached and what light vehicles movements are anticipated should be included in the ITA.
- Details of whether the internal site roads will be public or private, and what standards these will be constructed to would be helpful.

DCC contact: Helen Chapman, senior transport planner
Email: [redacted]

Noise and Light Spill

The DCC would appreciate seeing an acoustic assessment for the site/proposal as soon as possible, and anticipates that this will address construction noise and construction noise standards, with modelling for the site over various stages of development, and details of the mitigation measures proposed. It is expected that the acoustic assessment will detail the types and levels of construction and operational noise; and will include a draft noise management/mitigation plan.

Information regarding sources and levels of light-spill would also be helpful, together with details of the measures proposed to manage these.

DCC contact: Tanya Morrison, acting team leader Environmental Health and Alcohol Licensing
Email: [redacted]

3 Waters

Information regarding the following matters would be helpful:

(Water)
- Details of anticipated treated water consumption, excluding fire flows. Estimated average daily consumption (annual average), daily peak use (maximum daily use) and peak hour use.
- A description of what treated water would be used for on site.
- An estimated number of people on site after full establishment of site.

(Stormwater)
- An outline of the event(s) that the stormwater management system for the site is designed for. (3 Waters would expect to see the system be designed to detain a 1% AEP event, and release at no greater than a 10% AEP event).
- In the event that retention of stormwater for firefighting is proposed, DCC would expect that this be removed from total detention volume calculations. (Draining the system manually prior to a rainfall event introduces an increased risk that the system will fail.)

(Wastewater)
- An estimate of daily wastewater flow from site (including any trade waste).
- A description of what items on-site would be connected to wastewater from the site.

(General)
- Clarify firefighting provisions.
- How much onsite tank storage is planned?

- Is pond stormwater retention required to meet firefighting requirements?
- How much extra tank storage would be required in the event stormwater retention wasn't viable?
- 3 Waters would like to see provisions made for stormwater to be utilised for non-potable applications on site.

DCC contact: Andrew Budd, subdivision support officer City Growth Team
Email: [redacted]

Geotechnical / Natural Hazards
The DCC notes that, from a natural hazards perspective, the underlying soils are alluvial flood sediments, with deep soils. The site lies to the east of any areas mapped as potentially liquefiable, so it is likely that normal foundation design from relatively shallow investigation is all that would be required.

Stormwater flows are a significant issue, and there are recognized overland flow paths, both flood and ephemeral. While any stormwater controls and amendments to existing overland flow will need to be reviewed by the Otago Regional Council, the DCC is likely to have a number of requirements for any earthworks on site. Details of how such works will be undertaken so as to avoid displacing stormwater onto neighboring properties, or creating undue concentrated flows would be helpful (noting that any bunding would have to be lower than the true left flood bank to avoid increasing risk to the residential zone on the south side of Silver Stream). Information about proposed flood protection works would be appreciated.

DCC contact: to be confirmed, but in the interim Karen Bain, associate senior planner
Email: [redacted]

Hopefully this summary is helpful to you. Please keep in touch – the DCC would appreciate early and ongoing involvement as you progress your proposal.

Ngā mihi

Karen Bain
Associate Senior Planner

A.3 Wastewater Generation Calculations

Title	Southern Link Inland Port - Wastewater demand calculation
Purpose	The purpose of this calculation is to determine the wastewater flow demand which will need to be discharged to the DCC system. This spreadsheet calculates the full site wastewater demand for the Southern Link Inland Port development. The calculations have been developed based on a first principles approach, where the wastewater demand is calculated based on the full-development full-time employees on site and full-development site visitors (12 trucks per hour)

Quality Assurance		
Designed	Isobel Halliday, Jack Boyd	17/02/2026
Quality Check	Roger Oakley	18/02/2026
Quality Review	Jonathan Krause	19/02/2026

Assumptions

1. The wastewater demand calculations are to NZS:4404:2010 and the amendments listed within DCC Code of Subdivision 2010
2. Full time employee numbers have been provided by Southern Link Logistics for when the site is fully developed.
3. Site visitor numbers have been based on truck movements on site at full development, which have been provided by the Southern Links Limited (12 trucks per hour). We are assuming one visitor per truck and truck movements over 24 hours
4. Washdown area demand has been provided by Southern Links Limited (500m^3/month average and 650m^3/month peak at the existing Port Otago site) . The Client has requested no factor of safety to be added to this value.
5.The operation of the washbay: Three containers can be washed in the container washbays at any one time (one container per washbay) - this is termed a washing cycle. One container washing cycle takes 1 hour. There are two container wash cycles during the day shift (8 hours). No container wash cycles are completed during the night shift (8-hours). So overall, the container washbays are in use for 2 hours per day. This is used to calculate a peak instantaneous flow from the container wash down area.
6. The daily wastewater demand for a full time employee is assumed to be 65 l/person/day. This is taken from Watercare - The Auckland Code of Practice for Land Development and Subdivision Chapter 5: Wastewater - COP-02
7. The daily wastewater demand for a site visitor is assumed to be 65 l/person/day. This is taken from Watercare - The Auckland Code of Practice for Land Development and Subdivision Chapter 5: Wastewater - COP-02
8. Dry weather diurnal peaking factor of 2.0 from DCC Code of Subdivision cl 5.3.5.1 (note: NZS 4404 is 2.5, not used)
9. Wet Weather dilution/infiltration peaking factor of 3.0 is from DCC Code of Subdivision cl 5.3.5.1 (note: NZS 4404 is 2, not used)
10. The container wash down area is uncovered, therefore this area will generate contaminated stormwater that will go to wastewater.
11. Wastewater demand does not allow for water generated from firefighting

Inland Port Basis of Design

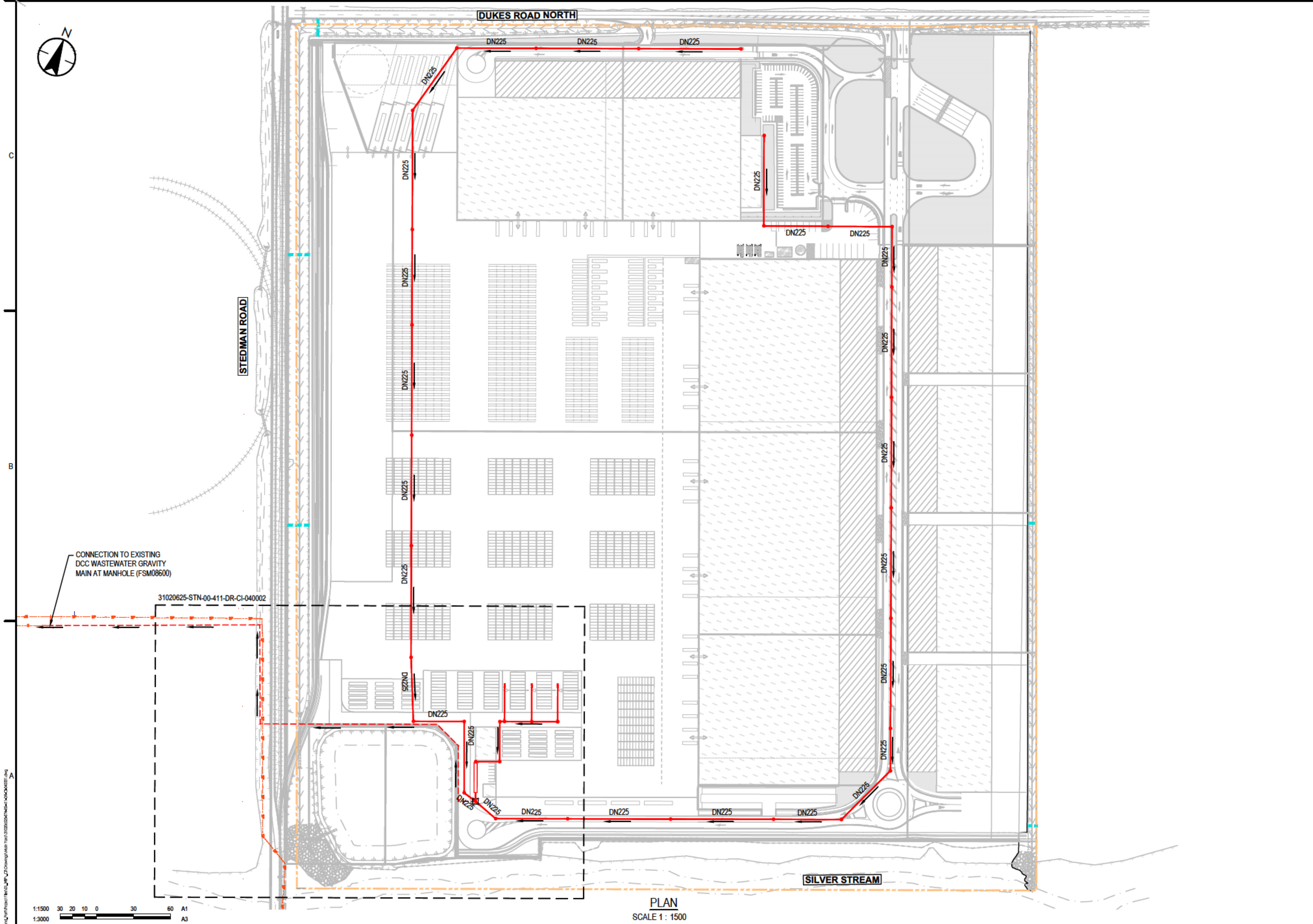
Method: Build up WW demand from expected FTE and site visitors

Activity	Number of Persons	Unit Base Flowrate	ADWF		AWWF (Average Wet Weather Flow) ADWF x wet weather peaking factor) (note 9)		PDWF (Peak Dry Weather Flow) (ADWF x diurnal peaking factor) (note 8)	PWWF Peak Wet Weather Flow (PDWF x dilution/infiltration wet weather peaking factor) (note 9)	Comments
			L/s	Vol (m^3/d)	(L/s)	Vol (m^3/d)	(L/s)	(L/s)	
					PF= 3.0		PF= 2.0	PF= 3.0	
Full Time Employees (FTEs) (note 2) Refer to calc on reference tab	172	65 L/p/d	0.13	11.18	0.39	33.54	0.26	0.78	
Site Visitor Numbers (note 3)	288	65 L/p/d	0.22	18.72	0.65	56.16	0.43	1.30	
Container Wash Down - post-attenuation, dry weather, 2hrs of operation during work days (note 5)	NA	650 m^3/month	3.00	25.00	NA	NA	3.00	NA	No PF applied to PDWF as factor is already included. NA - dry weather scenario. Flow rate is determined by the outlet control on the stormwater collection system for the container wash down area. Container wash down flow is capped at 3 l/s
Container Wash Down, post attenuation, wet weather (note 10)			NA	NA	3.00	259.20	NA	3.00	Flow rate is determined by the outlet control on the stormwater collection system for the container wash down area. Container wash down flow is capped at 3 l/s. 3 l/s over 24 hours equates to a volume of 260 m^3
Total			3.35	54.90	4.04	348.90	3.69	5.08	

Container Wash Bay ADWF (Average Dry Weather Flow) (Note 4)			Comments
Monthly Demand	500	m^3/month	
FOS	1		
Monthly Demand + FoS	500	m^3/month	
Daily Demand (ADWF) (Based on 240 working days/year)	25.0	m^3/day	

Container Wash Bay PDWF (Unattenuated Peak Dry Weather Flow) (Note 4 and 5)			Comments
Monthly Demand	650	m^3/month	
FOS	1		
Monthly Demand + FoS	650	m^3/month	
Daily Demand (Based on 240 working days/year)	32.5	m^3/day	
Hours in Operation/ Working Day.	2	Hours	2hrs total operation across (all washbays within the container washdown area)
PDWF	16.25	m^3/hour	
PDWF	4.51	L/s	Note: Kerrick KTD 3030 heavy duty trailer mounted water blaster is 0.5 L/s

A.4 SLIP Wastewater Scheme - Developed Concept Design Drawings



PLAN
SCALE 1 : 1500

LEGEND

- PROPOSED SEWER GRAVITY MAIN
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER RISING MAIN
- PROPOSED DOUBLE CATCHPIT
- SWALE INVERT
- PROPOSED RAIL
- SITE BOUNDARY
- TOP OF BANK
- BOTTOM OF BANK
- EXISTING RAIL
- SP — EXISTING SEWER PRESSURE MAIN
- S — EXISTING SEWER GRAVITY MAIN

NOTES

1. DETAILS OF THE WASTEWATER SYSTEM ARE SUBJECT TO CHANGE DURING FUTURE DESIGN STAGES.

Issued/Revision		By	Appd	YYYY.MM.DD
C	ISSUED FOR CONSENT	BG	SL	26.02.20
B	ISSUED FOR CONCEPT DESIGN	BG	SL	26.02.05
A	ISSUED FOR CONCEPT DESIGN	MS	FZ	25.12.19

Issue Status
A1
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Datum
NZVD 2016

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Stantec

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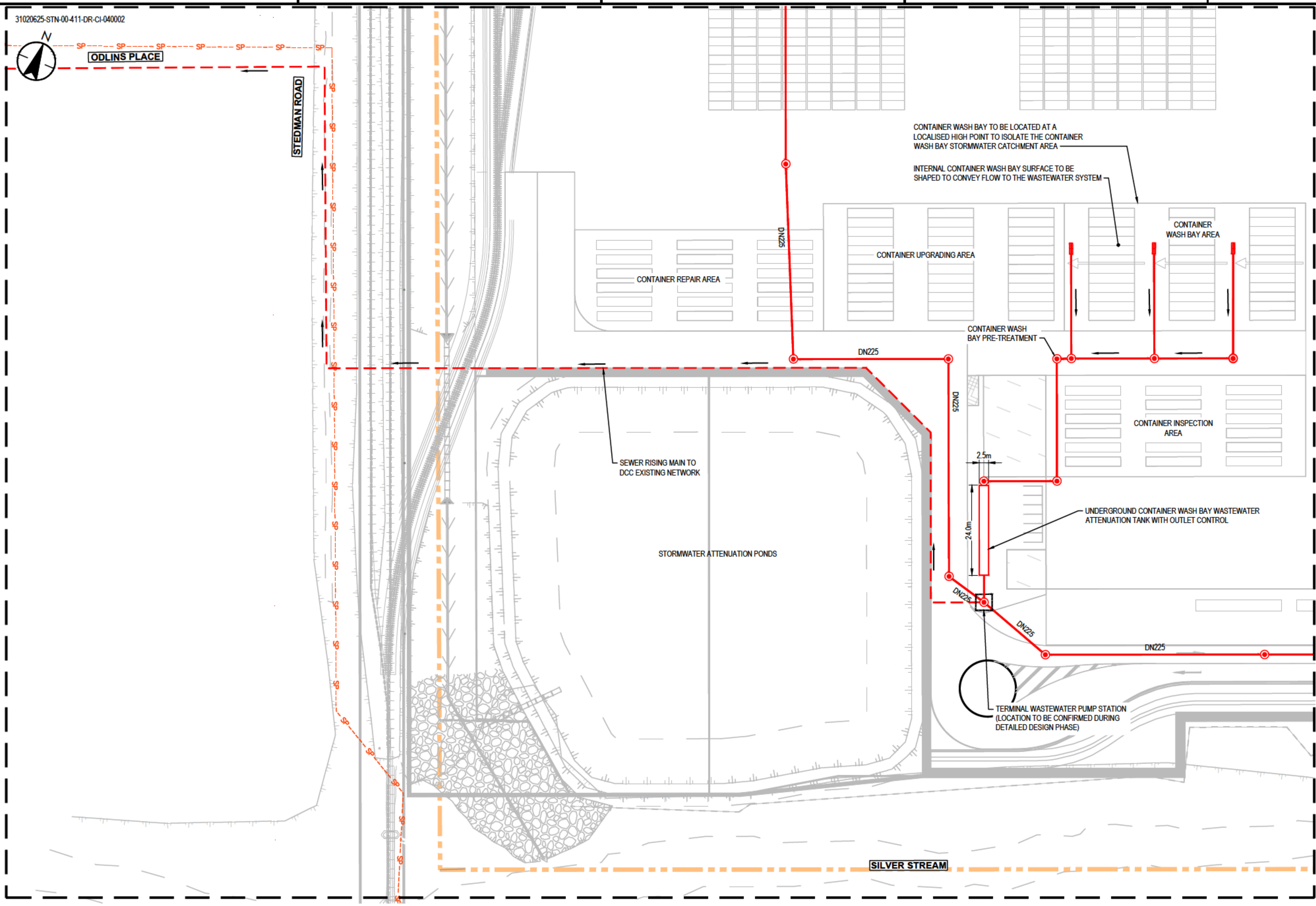
Client/Project Logo
Southern Link LOGISTICS PARK

Client/Project
SOUTHERN LINK PROPERTY Ltd
SOUTHERN LINK INLAND PORT
DEVELOPED CONCEPT DESIGN

Drawn	Designed	Reviewed	Approved	YYYY.MM.DD
Maninder Singh	Ben Martin	Jack Boyd	Sarah Lloyd	2026.02.20

Title WASTEWATER LAYOUT PLAN
OVERALL

Project No. 310206525
Scale at A1 1:1500
Revision C
Drawing No. 310206525-STN-00-411-DR-CI-040001



LEGEND

- PROPOSED SEWER GRAVITY MAIN
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER RISING MAIN
- PROPOSED DOUBLE CATCHPIT
- SWALE INVERT
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- EXISTING RAIL
- SP — EXISTING SEWER PRESSURE MAIN
- S — EXISTING SEWER GRAVITY MAIN

NOTES

1. DETAILS OF THE WASTEWATER SYSTEM ARE SUBJECT TO CHANGE DURING FUTURE DESIGN STAGES.

1:500 10 5 0 10 20 A1
1:1000 A3

PLAN

SCALE 1 : 500

		By	Appd	YYYY.MM.DD
C	ISSUED FOR CONSENT	BG	SL	26.02.20
B	ISSUED FOR CONCEPT DESIGN	BG	SL	26.02.05
A	ISSUED FOR CONCEPT DESIGN	MS	FZ	25.12.19

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Client/Project Logo

Southern Link LOGISTICS PARK

Client/Project
SOUTHERN LINK PROPERTY Ltd
SOUTHERN LINK INLAND PORT
DEVELOPED CONCEPT DESIGN

Drawn	Designed	Reviewed	Approved	YYYY.MM.DD
Maninder Singh	Ben Martin	Jack Boyd	Sarah Lloyd	2026.02.20

Title WASTEWATER LAYOUT PLAN PUMPSTATION

Project No. 310206525

Scale at A1 1:500

Revision C

Drawing No. 310206525-STN-00-411-DR-CI-040002

Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

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