Appendix P Draft Demolition, Deconstruction and Remediation Management Plan

Remediation of Former Tokanui Hospital Site

Assessment of Environmental Effects

Toitū Te Whenua Land Information New Zealand

SLR Project No.: 880.V11547.00001

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SLR

TOITŪ TE WHENUA

LAND INFORMATION NEW ZEALAND

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146 TE MAWHAI ROAD, TE AWAMUTU

FORMER TOKANUI HOSPITAL DEMOLITION AND REMEDIATION DEMOLITION, DECONSTRUCTION & REMEDIATION MANAGEMENT PLAN - DRAFT

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146 TE MAWHAI ROAD
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FORMER TOKANUI HOSPITAL DEMOLITION AND REMEDIATION DEMOLITION, DECONSTRUCTION & REMEDIATION MANAGEMENT PLAN - DRAFT

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FORMER TOKANUI HOSPITAL DEMOLITION AND REMEDIATION

DEMOLITION, DECONSTRUCTION & REMEDIATION MANAGEMENT PLAN - DRAFT

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B Wastewater Pipe Details in NW Wetland

C Trunk Stormwater System CCTV Results and Lining Requirements

GLOSSARY

CONTAMINATED MATERIALS	Hazardous building materials that pose some level of risk to human health and/or the environment, such as asbestos or lead-based paint, which potentially affects materials handling, haulage and/or disposal requirements. *Please note, management of contaminated soil as part of the demolition and remediation project follows the remedial standards process as outlined in the Tokanui Hospital Deferred Selection Process.*
CONTAMINATED LAND	Contaminated land is defined by the Ministry for the Environment as sites at which hazardous substances occur at concentrations above background levels and where assessment indicates it poses, or is likely to pose, an immediate or long-term risk to human health or the environment.
DEED OF SETTLEMENT (DEED)	The Ngāti Maniapoto Deed of Settlement signed by Maniapoto and the Crown, which was signed on 11 November 2021 and given effect by the Maniapoto Settlement Claims Act 2022, which came into force on 28 September 2022.
DEFERRED SELECTION PROPERTY	Is as defined in s154 of the Maniapoto Settlement Claims Act 2022. It means a property described in subpart A or C of part 4 of the property redress schedule for which the requirements for transfer under the deed of settlement have been satisfied.
DEMOLITION AND REMEDIATION WORKS*	The physical works required to carry out the demolition and remediation of each Tokanui Hospital deferred selection property (excluding any new disposal site or existing disposal site on that property) as described in paragraph 9.16
EXISTING DISPOSAL SITES*	The two existing sites (as described in the existing disposal consents) located on one of the Tokanui Hospital deferred selection properties that the Crown historically used to dispose of waste; indicated as 'Existing disposal sites' on the plan (subject to survey) 'Tokanui Hospital deferred selection properties' in part 7 of the attachments
GOVERNANCE ENTITY	The Ngāti Maniapoto post settlement governance entity, Te Nehenehenui Trust
HORIZONTAL INFRASTRUCTURE*	The roading and accessways, foundations and services that the Crown, with the consent of the relevant Ministers as required, decides must be retained on the relevant Tokanui Hospital deferred selection property, in accordance with paragraph 9.9 of the Deed. *Please note, at the date of this report, it is assumed that building foundations will be removed as part of the vertical demolition package rather than under horizontal infrastructure as stated in the Deed.*
MINISTERS*	The Minister of Finance, Minister for Land Information, and Minister for Treaty of Waitangi Negotiations
NEW DISPOSAL SITE*	A site which may be located on part of a Tokanui Hospital deferred selection property, such location to be determined in accordance with paragraph 9.9, where the Crown may, as part of the demolition and remediation works, dispose of contaminated and/or non-contaminated materials and waste in accordance with paragraph 9.12.

NON-CONTAMINATED MATERIALS	Building materials that do not contain any contaminated materials, as defined above and may be suitable for reuse and/or recycling
PURCHASED TOKANUI HOSPITAL DEFERRED SELECTION PROPERTY*	Means a Tokanui Hospital deferred selection property that is also a purchased deferred selection property
SETTLEMENT DATE	Is defined as s12 of the Maniapoto Settlement Claims Act 2022, being 24 November 2022.
VERTICAL BUILDING STRUCTURES*	All above-ground built structures on a Tokanui Hospital deferred selection property, excluding horizontal infrastructure
*DENOTES DEFINITIONS RELEVANT TO THIS REPORT COPIED FROM THE TOKANUI HOSPITAL DEFERRED SELECTION PROCESS, SUBPART A: DEFINITIONS.	

TOITŪ TE WHENUA – LAND INFORMATION NEW ZEALAND

FORMER TOKANUI HOSPITAL DEMOLITION AND REMEDIATION

DEMOLITION, DECONSTRUCTION & REMEDIATION MANAGEMENT PLAN - DRAFT

1 INTRODUCTION

The former Tokanui Hospital (the Site) was a psychiatric hospital approximately 80 hectares (ha) in area, with 76 buildings, a wastewater pump station, swimming pool, eight substations, a closed landfill (also referred to as the 'existing disposal site') and substantial roading and underground infrastructure and services. The site location and extent is shown in Figure 1

Figure 1: Site location and extent

The Site is currently managed by Toitū Te Whenua Land Information New Zealand (LINZ) on behalf of the Crown but has been held in the Treaty Settlements Landbank since 1999 following the hospital's closure in 1998. Land held in the Landbank is Crown land which has been declared surplus can be used as cultural or commercial redress in Tiriti o Waitangi Settlement claims.

The Ngāti Maniapoto (herein referred to as Maniapoto) Deed of Settlement (the Deed), that was initialed in December 2020, acknowledged the cultural significance of the Site and the need for demolition and remediation of the Site before it can be offered to Maniapoto.

Under the Deed, Maniapoto and the Crown have agreed that LINZ complete the demolition and remediation of the Site. The proposed demolition, deconstruction and remediation works cover the following:

- **"Vertical building structures":** all above-ground built structures within Areas 2, 3 and 4 of the Tokanui Hospital site, including associated footings/foundations.
- "**Horizontal infrastructure**": Partial removal of the roading, accessways, and services as defined in Table 1.
- **"Contaminated land"**: Contaminated land is defined by the Ministry for the Environment as sites at which hazardous substances occur at concentrations above background levels and where assessment indicates it poses, or is likely to pose, an immediate or long-term risk to human health or the environment.

These works, for simplicity, are referred to in this plan as the "**demolition works**", while this plan is referred to as the **DDRMP** (Demolition, Deconstruction and Remediation Plan - Draft).

This document has been prepared and provided as a draft for consultation and use, and is intended to remain a live document, to ensure it is updated regularly.

2 OBJECTIVES

The primary objective of this DDRMP is to:

- Provide relevant background information on the Site and the nature of the proposed demolition works;
- Describe the proposed demolition works scope; and
- Set out the requirements contractors need to follow in relation to the specified demolition works.

3 SCOPE

The scope of the works is summarised in Table 1.

Table 1: Scope of Demolition, Deconstruction and Remediation Works

Item	Required Works
BUILDINGS	
Buildings, including footings/ foundations	Demolition and/or deconstruction of all buildings within Areas 2, 3 and 4 of the site, including all footings/foundations. This includes historic demolition debris buried around specified buildings that is inferred to come from historic building renovation, demolition and/or extension works.
HORIZONTAL INFRASTRUCTURE	
Roading/ paving (6.3ha, 8.8km)	Removal of 3.49ha roading/paving and up to 4,180m^3 of coal tar and reinstate with up to 13,730m^3 backfill (solid measure); 3.5km residual roading retained and converted to farm access track standard (i.e. remove paving and retain hardfill basecourse (Option RD3)
Old road embankment & Culvert 2 (~1350dia)	Removal of redundant road embankment crossing over Wharekōrino Stream (approximately 6m wide by 50-60m long); earthworks over 3000m^2 area of approximately 6800m^3 volume, stream bank grading and riparian planting (Option RD4)

Concrete Ducts	Remove entire system (2937m); 880m^3 minimum backfilling (Option CD1)
Other Services	Partial removal: 633 surface features (MHs, fire hydrants, valve boxes, etc.) and associated infrastructure to 800mm depth for pipes/ducts (including water supply, wastewater and stormwater pipes except for the trunk stormwater system) and associated structures down to 1m depth (Option OS2C)
WASTEWATER TREATMENT PLANT (WWTP)	Removal of remaining WWTP infrastructure, grit chamber, inlet pipe and footbridge, trickling filter and stone media, UV treatment system, flow meter and outlet pipe.
CONTAMINATED SOIL	
Contaminated Soil	Low and moderate level contaminated soil from around the perimeters (halos) of many buildings on-site, comprising almost entirely allophanic topsoil, and containing primarily lead or asbestos contaminants, plus other non-building areas with localised pockets of fill containing construction and demolition debris and some heavy metal, hydrocarbon and/or asbestos contamination.

Note: The options names referred to above come from the separate Horizontal Infrastructure report and are included here for easy cross-referencing to that report.

The 633 surface features referred to under "other services" are listed in Table 2.

Table 2: Infrastructure Features Inventory and Condition

Asset/underground service	Comments	No	Condition
Power	Light poles (99), power poles (18), other (7)	124	Moderate to poor
Concrete ducting	Concrete duct access chambers (37)	37	Generally moderate
Water	Fire hydrants (41), valves (25)	66	Very poor
Stormwater	Manholes (145), catchpits (56)	201	Moderate
Wastewater	Manholes (152)	152	Poor to very poor
Telecom	Telecom post	7	Moderate
Unknown lids	4x4 lids	46	Moderate
Total		**633**	

Note: WWTP remaining infrastructure is covered in Table 1.

Trunk stormwater system lining works are included in this report, but will be undertaken separately from the demolition works.

The scope does not cover:

- An existing farm water supply system.
- An existing stone and mortar retaining wall, comprising 3 terraces of variable height 0.55-1.70m high.
- A wastewater pump station.
- The closed disposal site (landfill).

This infrastructure is described in section 9 and needs protecting from damage during the demolition works.

4 SPECIFIC REQUIREMENTS FOR DEMOLITION WORKS

Specific requirements for the demolition works are set out in this section covering resource consent requirements, adherence with standards, codes, regulations and guidelines and Site Management Plan requirements. These requirements are based on the best available information at this time and allow for contractors following a best practice approach, taking into account expected measures to manage and/or mitigate potential human health and environmental effects.

The works may be undertaken by one or more (main) contractors (and their sub-contractors) working in different areas.

4.1 COMPLIANCE WITH RESOURCE CONSENT REQUIREMENTS

LINZ is in the process of obtaining all necessary resource consents for the demolition works. This plan will be updated, to include any additional specific consent condition requirements not covered by it, following the granting of resource consent.

4.2 ADHERENCE WITH STANDARDS, CODES, REGULATIONS AND GUIDELINES

It is expected that all contractors will follow applicable standards, codes, regulations and guidelines during the contract, including but not limited to the following:

- Auckland Council, ACS740 Recycled Aggregates, version 1.0, Rev 0, December 2023
- BRANZ (2014), “Waste Reduction – Demolition”
- BRANZ and ALGA (2017), “New Zealand Guidelines for Assessing and Managing Asbestos in Soil”
- Codes of Practices for Hazardous Substances – refer epa.govt.nz and worksafe.govt.nz for further information.
- Ministry for the Environment, “Contaminated Land Management Guidelines
- Toitū Te Whenua Health and Safety Guidelines – Working with Lead-based Paints
- NZDAA – Best Practice Guidelines for Demolition in New Zealand 2011”
- WorkSafe New Zealand (2016), “Management and Removal of Asbestos – Approved Code of Practice”
- WorkSafe New Zealand (2016) “Excavation Safety Good Practice Guidelines”

4.3 SITE MANAGEMENT PLAN REQUIREMENTS

Subject to the above, each main contractor shall prepare an overall Site Management Plan (SMP) that specifically addresses:

- Project team structure, resources (human and plant), methodology, staging and programme.
- Health and safety.
- Quality assurance/control.
- Traffic management.
- Environmental Management of activities within their Work Area or directly related to activities outside of their Work Area, noting that it is the intention of LINZ that all Main Contractors take all practicable steps to implement environmental controls so as to prevent discharges beyond the boundary of their Work Area.

- Incorporate any specific requirements of LINZ (as stipulated) in the overall management of discharges and/or other adverse effects that may or may not be an indirect result of the main contractor's activities (within or outside their Work Area).

The SMP must comply with this DDRMP and other supporting management plans. The following table sets out the proposed outline of each main contractor's SMP.

Table 3: Contractor Site Management Plan Outline

Section/Component	Description
Project team structure, resources (human and plant), methodology, staging and programme	Contractor proposed team structure (including responsibilities), including sub-contractors, all resources (human and plant) and methodology for each work component, staging and overall programme
Health and safety	Health and safety plan, in compliance with best practice and NZ regulations and guidelines.
Quality assurance/control	Quality assurance/control system, including any hold points, compliance monitoring and certification details. See further below for specific environmental assurance and monitoring requirements.
Traffic management plan	Site traffic management plan, as the project will involve significant vehicle movements on and offsite.
Erosion and Sediment Control Plan (ESCP)	Final ESCP for Council certification, based on draft ESCP included with consent application.
Standards, Regulations and Guidelines	List the applicable standards, codes, regulations and guidelines the Contractor will apply during the contract.
Consents & Permits Register	Provide a register of all permits and consents pertaining to the activities being undertaken by the contractor.
Key Environmental Factors & Risks	Provide a detailed description of the key environmental factors to be managed during the construction. Undertake a risk assessment and provide a risk register defining the mitigation measures for all key environmental factors identified.
Competency & Training	Describe the specific training and/or competency requirements required to prevent adverse effects on human health and the environment from each key task type undertaken. Provide a description of how works management will be effectively addressed through site induction, competency certification and minimum training standards.
Communications	Provide a plan for how site management policies and procedures will be communicated to the project team.
Safe Work Method Statements	Provide specific and detailed safe work method statements for the management and mitigation of key human health and environmental risks identified by the contractor including procedures for the prevention, isolation and clean-up/removal of environmental incidents. Procedures shall be developed for the following, as a minimum: a. Transportation, unloading, storage, processing and reuse of materials removed from the site. b. Monitoring and reporting of the quantity, specific location and end use of materials removed from the site.

Section/Component	Description
	c. Soil and water management. d. Flora and fauna management, including trees, bats, birds and fish. e. Visual, landscape and rehabilitation management. f. Noise and vibration management. g. Air quality management (including dust). h. Accidental Discovery Protocol (procedure to stop work in the unlikely event of a discovery of items of archaeological or heritage significance, in accordance with this Site Management Plan).
Assurance & Monitoring	Provide a programme of and describe the quality and environmental assurance and monitoring activities that will be implemented to ensure compliance with the requirements of this SMP, and specific conditions imposed on LINZ as part of any resource consents, and to prevent any adverse effects. Provide a checklist template for regular inspections of site hazards and controls that will be used by the contractor to verify that site management practices are in place.
Complaints Procedure & Register	Provide a detailed procedure for the management of complaints and the complaints register (refer Section 6).
Emergency Response Plan	Provide a detailed procedure for emergency response to each type of discharge/spill that might occur (as identified by the contractor's risk assessment).

5 CULTURAL AND ARCHAEOLOGICAL REQUIREMENTS

5.1 CULTURAL REQUIREMENTS

The former Tokanui Hospital site is of high cultural significance to tangata whenua, specifically to an identifiable subset of hapū with traditional and customary authority over the former hospital site Pokuru 1B and the surrounding geographical area. These hapū include: Ngāti Ngutu, Ngāti Huiao, Ngāti Paia, and Ngāti Paretekawa.

Specific recommendations from the Cultural Impact Assessment (CIA) prepared for the hospital site relevant to the demolition works are summarised in Table 4. The Archaeological discovery protocol is set out in section 6.2, while know significant heritage, cultural and archaeological features are summarised in section 8.

Table 4: CIA Recommendations relevant to Demolition Works

Recommendation	Contractor Requirement
Protecting waipuna/freshwater springs that may be discovered during remediation.	No springs identified to date. Contractor to stop work if any springs encountered and advise LINZ Project Engineer and Cultural Monitor.
Identification of trees with Iwi that will remain standing and those which will may be felled if required	Completed, with identified trees to be protected shown on 33205 series drawings; also refer section 20.2 for further information
Regard be given to the specific provisions in the Heritage New Zealand Pouhere Taonga Act (2014) and the Protected Objects Act (2006) to protect waahi tapu, significant cultural sites and taonga.	Refer section 5.2 below

Development and implementation of a robust Accidental Discovery Protocol (ADP).	Refer section 5.2 below.
Precautionary approach to site works to manage the potential for waahi tapu and taonga tuku iho discovery.	Specific cultural/archaeological areas of concern identified and shown on drawing 33205/G01, precautionary approach taken through appointment of cultural monitors and procedures set out in section 5.2
The adverse effects of resource use and activity operations are managed so as to appropriately protect areas and sites of significance.	Addressed in this DDRMP, with contractors to cover in their SMP.
Ensure Tangata Whenua are actively involved in key project planning, contracting and cultural monitoring roles and decision processes.	In progress.
Cultural Monitors/Kaitiaki be appointed for the project to manage and monitor cultural safety protocols.	*TBC. Details will be included in Table 14.*

It is mandatory that all contractor staff attend a cultural induction prior to the commencement of any works on-site. Details of the induction will be provided during the tender process. The site may also be blessed prior to demolition works starting.

5.2 ARCHAEOLOGICAL DISCOVERY PROTOCOL

The following protocols should be followed in the event of the accidental or unexpected discovery of archaeological features, including human remains:

1. All work within the vicinity of the discovery should cease immediately.
2. A buffer of at least 5m should be set up around the discovery and this should be marked on the ground, preferably with pegs and tape, or similar.
3. All machinery and plant should be removed from the buffer zone where this is possible.
4. The site archaeologist, or other qualified archaeologist, should be informed.
    i. Heritage New Zealand Pouhere Taonga (HNZPT) should be informed.
    ii. If the discovery is of Māori origin, the relevant tāngata whenua authorities should also be informed (i.e. the appointed Cultural Monitors/Kaitiaki). Appropriate protocols (tikanga) should be observed.
    iii. If the discovery is of human remains, the New Zealand Police should also be informed.
5. The archaeologist should take relevant steps to secure the area of the discovery.
6. The archaeologist will assess the discovery and advise HNZPT and the client on the relevant steps to be taken.
7. Works in the area of the discovery shall not recommence until authorised in writing by the archaeologist in consultation with any identified affected parties or HNZPT.

It should however be noted that these protocols are preliminary, and must be reviewed by mana whenua prior to physical works beginning at the site. They will also be updated to reflect the requirements of the Archaeological Authority for the project, once this is approved.

6 COMMUNICATION

6.1 INFORMATION FOR IWI, HAPU & SPECIAL INTEREST GROUPS

All communications between contractors and Iwi, Hapu or any special interest groups must be approved by LINZ and be in accordance with the official communications plan for this project.

6.2 INFORMATION FOR NEIGHBOURS

The nearby neighbours who may be affected by noise, dust
or smoke will be made aware of:

- The extent and duration of the works and type of works proposed;
- The reasons for the demolition, deconstruction and remediation works; and
- A line of communication from the nearby property owners to:
  - (i) Contractor's representative.
  - (ii) The representative of the consultants managing the project.
  - (iii) The LINZ representative.

This line of communication will normally include work, after hours and mobile telephone
numbers and a priority list of who to contact first to obtain assistance.

6.3 INFORMATION FOR THE GENERAL PUBLIC

Information to be provided to the general public will be in accordance with the official communications plan for this project.

6.4 COMPLAINTS

All contractors shall include a detailed procedure for the management of complaints from the public and other stakeholders in their Site Management Plan.

A Complaints register shall be developed and maintained by the Contractor in a structured, clear and legible format. As a minimum, the following information about any complaints shall be recorded:

- The contact details of the complainant, including name, entity represented (if any), address, contact telephone number(s).
- The nature and description of the complaint.
- The location of the complainant, and of the place where the complaint was first noticed.
- Date and time of the complaint, plus any other details relevant to the complaint e.g. the prevailing wind direction for a dust complaint.
- How the complaint was resolved or followed up.

Any complaints identified as relevant to the construction activities shall be notified to the LINZ project representative as soon as practicable and within the same working day as a minimum. LINZ (or their nominated agent) shall be responsible for notifying Waipā District Council or Environment Waikato (as applicable) within 24 hours of receipt of a complaint, in accordance with any consent conditions, if required. LINZ (or its nominated party), in conjunction with the contractor, will be responsible for investigating and resolving all complaints as soon as practicable.

All complaints and means of resolution shall be discussed and minuted at the next project site meeting, to ensure that lessons learned are incorporated into forward work practices.

7 GENERAL REQUIREMENTS

7.1 SITE SECURITY

LINZ is responsible for maintaining security at the single site access point through the provision of security resources to:

- Prevent the egress of unauthorised person(s) onto the site.
- Undertake regular patrols of the site (excluding Contractor's Work Areas) to prevent the egress of unauthorised persons to parts of the Site outside of Contractor's Work Areas

Site security has their own portacom for night security located adjacent to the main access road. This area has its own dedicated power supply. The portacom is not to be removed or used by contractor staff. The power supply to this portacom is to be protected from damage, with the contractor being responsible for repairing any damage to it caused by them.

The contractor shall discuss and agree with LINZ any additional security arrangements considered necessary to secure their works areas, including signage and possible fencing around equipment/plant/vehicles that will stay on site overnight. These additional measures would be implemented by the Contractor upon agreement with LINZ. This shall also apply to any other contractors or personnel that have not been directly engaged by a main contractor.

7.2 SITE OFFICE, CONTRACTORS YARD AND REFUELING

The site office will be located at Building 75. There are kitchen and toilet facilities located here. It is likely additional facilities will be located around the site. The power supply to Building 75 will remain live for the duration of the demolition project, if any contractor damages the structure or power supply to Building 75, these will be repaired at the expense of the contractor.

The construction yard for plant/machinery parking and temporary storage/holding area shall be located at an appropriate location (e.g. paved industrial area). Any vehicle refuelling areas shall be clearly indicated and located well away from streams and protected vegetation. Any temporary fuel storage areas shall comprise double skinned tanks or bunded tanks, complying with WorkSafe regulations.

7.3 SERVICES AND AMENITIES

The site is relatively isolated.

There are only two power connections into the site that are known to still be live. These are to Building 75 and to the security staff portacom.

Water and wastewater to the site office (B75) are understood to be supplied separately via services running through the paddock to the north to Te Mawhai Rd. The wastewater reticulation is a low pressure system.

Mobile phone/internet connectivity is poor and should not be relied on.

There are no nearby shops, stores or petrol stations. The nearest places for purchasing food, water and other supplies is Kihikihi, approximately 6km north of the site, while Te Awamutu is 12km from the site.

Accommodation in the local area is of limited supply.

LINZ have installed a 75mm diameter water line, adjacent to the security Portacom, feeding off the Te Mawhai Rd supply, for contractor use during the demolition works.

Given the size of the site and the only toilet available for contractor use being in the site office, it is recommended that the contractor provide additional portaloos at appropriate locations on-site for use by their staff.

7.4 NEAREST MEDICAL CENTRE

The nearest medical centre is:

Mahoe Medical Centre
Mega Centre
670/4 Cambridge Road, Te Awamutu 3840
Tel: 07 872 0923
administration@mahoemed.co.nz
Hours: 8am-8pm Mon – Fri; 9am-3pm Sat-Sun

7.5 OTHER CONTACTS

(a) Electricity - Waipā Networks, 240 Harrison Drive, Te Awamutu; Tel: 07 872 0745; 24hrs faults call: 07 870 2000
(b) Telecommunications - Ultra Fast Fibre, 0800 342 735
(c) WorkSafe NZ - 0800 030 040

8 SITE CONSTRAINTS

There are a number of constraints across the site, that must be taken into consideration and accounted for by the contractor in their work. The current site constraints are listed and detailed below, and further identified on the attached DDRMP Features Plan (drawing 33205/G01).

Table 5: Site Constraints and Proposed Management/Mitigation Measure

Item	Description	Management/Mitigation Measure
Leased areas for grazing	Majority of site is leased to farmer for grazing	Assumed grazing will continue during demolition works, with areas of work being isolated from the stock
Highly productive land use classification	Soils across site classified as LUC Class 2 or 3	Proposed works will remove building footings/foundations and horizontal infrastructure to sufficient depth that it will help to restore the land to LUC Class 2 or 3, provided drainage is maintained in these areas – this should be achieved

		by leaving any drainage media present in pipe trenches in place, where the pipe itself is removed.
Ecology	Trees	Recommended that all large trees (native & exotic) are retained to avoid adverse effects on fauna, and to retain amenity values, where possible. Hence, large trees (≥15+ meters) or any protected trees should be managed to mitigate any detrimental impacts on these trees. However, some trees that may require removal or trimming, to facilitate the demolition works are shown on the 33205 series drawings. Also refer section 20.2.
	Bats	Contractor must comply with the Bat Management Plan (BMP) provided separately.
	Wetlands	Two natural wetlands identified on-site as shown in the 33205 series drawings. Works within 10m of any of these wetlands will be covered under specific resource consent conditions. This includes: • Demolition of buildings 75 & 76 (to be confirmed, as this is the site office and associated garage and may remain on-site post-demolition). • Removal of possible water pipe north-west of B76 (unlikely to exist based on available data) • Removal of wastewater pipes and concrete supports in the NW wetland and removal of grit chamber, inlet pipe, footbridge and outlet pipe in NE wetland.
Groundwater	Potentially elevated groundwater table, especially during winter months.	Majority of site encompassing the hospital infrastructure is classified as "poorly" or "imperfectly" drained areas on Landcare S-Maps. GHD advised that Aecom (DSI) found groundwater levels of 1.3-2.4m bgl over period May-Sep, inferred to represent winter conditions, while GHD only found groundwater in one location (B74, TP2) at 2.1m bgl. Contractor is responsible for any groundwater dewatering that may be required during works, these works will be covered under specific resource consent conditions. Available information and generally shallow nature of demolition works indicates this is low risk.
Heritage, cultural or archaeological significant areas	Five areas identified to date: NW and NE wetlands; area around B55; large area SW of Buildings B75/76 (location of 3 former buildings); corridor alongside Wharekōrino Stream; refer 33205 demolition series drawings	Works need to follow DDRMP section 6 requirements, including pre-approval from LINZ and observation by cultural monitors. Affected works are: • Removal of services surrounding B24, B26 (part), B55, B75, B76 & historic nurses accommodation buildings (NW side of site). • Concrete ducting by B23, B55 and historic nurses accommodation (NW side of site).

9 EXISTING INFRASTRUCTURE TO BE PROTECTED

Existing infrastructure to be protected on-site includes the following:

(a) Farm water supply - refer section 9.1;

(b) Wastewater pump station – refer section 9.2;
(c) Existing stone and mortar retaining wall, comprising 3 terraces of variable height 0.55-1.70m high, located north of Building 56 – refer section 9.3;
(d) The trunk stormwater system comprising approximately 1770m of 675-900dia pipe. This is to be relined under a separate contract following the completion of the demolition works. Refer section 9.4.
(e) The closed disposal site (landfill). This is located outside the works area and is described in separate reports.

9.1 FARM WATER SUPPLY

At present, approximately 32.85 ha of undeveloped grassed land within the hospital site are leased to AgResearch. These lands are used for cattle grazing, and as such, have their own dedicated water supply, providing water to troughs for a stock water supply. This water supply network has never been officially surveyed, but the best available sketch of the supply, provided by AgResearch, is provided on the attached Drawing 33205/G01.

As this water supply is sourced from the AgResearch site, contractors are not permitted to utilize the farm water supply for any means.

Contractors also need to protect this water supply from damage during the works and will be required to repair any lines damaged or destroyed by them at their cost.

9.2 WASTEWATER PUMP STATION

The Hospital had its own independent wastewater reticulation system, conveying wastewater to a wastewater treatment plant (WWTP) located in the north-eastern corner of the site, adjacent to the Wharekōrino Stream. The WWTP was decommissioned in 2021, when a new gravity sewer line was installed along Te Mawhai Road. Part of the former WWTP compound now contains a new wastewater pump station. The wastewater pump station area and associated concrete pad is to be protected from damage during the remaining WWTP demolition works.

9.3 TERRACE RETAINING WALL

There is only one retaining wall onsite, located on the north-western corner of B56. This retaining wall comprises three terraces, which were inspected in 2023 and found to be in good condition and worth keeping.

Contractors must make every practicable effort to not damage or undermine the retaining wall. Photographs should be taken of the retaining wall at specific locations prior to the works, and then again at the same locations on completion of the works, or any other occasions subject to damage. The contractor will be responsible for repairing any damage to the retaining walls resulting from the demolition works at their cost.

9.4 TRUNK STORMWATER

Stormwater runoff from rural farm land to the west of the site flows into and through the site via a combination of open channels and pipe reticulation, discharging into a tributary of the Wharekōrino Stream and then flowing to the north under Te Mawhai Road, into the Pūniu River a short distance downstream. This

system is referred to as the trunk stormwater system. The two natural wetlands onsite are located in different areas along the trunk stormwater system.

Archived plans show that the stormwater system was designed to have some flood detention areas located in the central and north-eastern corner of the site, before discharging into a tributary of the Wharekōrino Stream. A stormwater pipe is shown on these plans as running under the flood detention basin, which has separate culverts feeding into it, with a re-entry structure conveying water from the flood detention basin into the underlying stormwater system.

It is proposed to reline all trunk stormwater pipes on site, which is expected to increase the lifetime of the system by at least 50 years. This work falls outside of the main demolition works scope and will be undertaken after completion of the demolition works, when heavy plant and machinery has been removed from site. These works are described in section 16 of this report.

LINZ will undertake CCTV of the trunk stormwater line pre- and post-demolition works to check for any damage to this network caused by the contractor. The extent of the CCTV survey will be confirmed by LINZ but is likely to go from grate to grate in Figure 2, as this is the main area where it is considered possible damage to the trunk line may occur.

The contractor shall be responsible for repairing any damage to the trunk system, or removing any debris washed into this line from the MH removal and backfilling, attributed to their activities, based on the CCTV survey results.

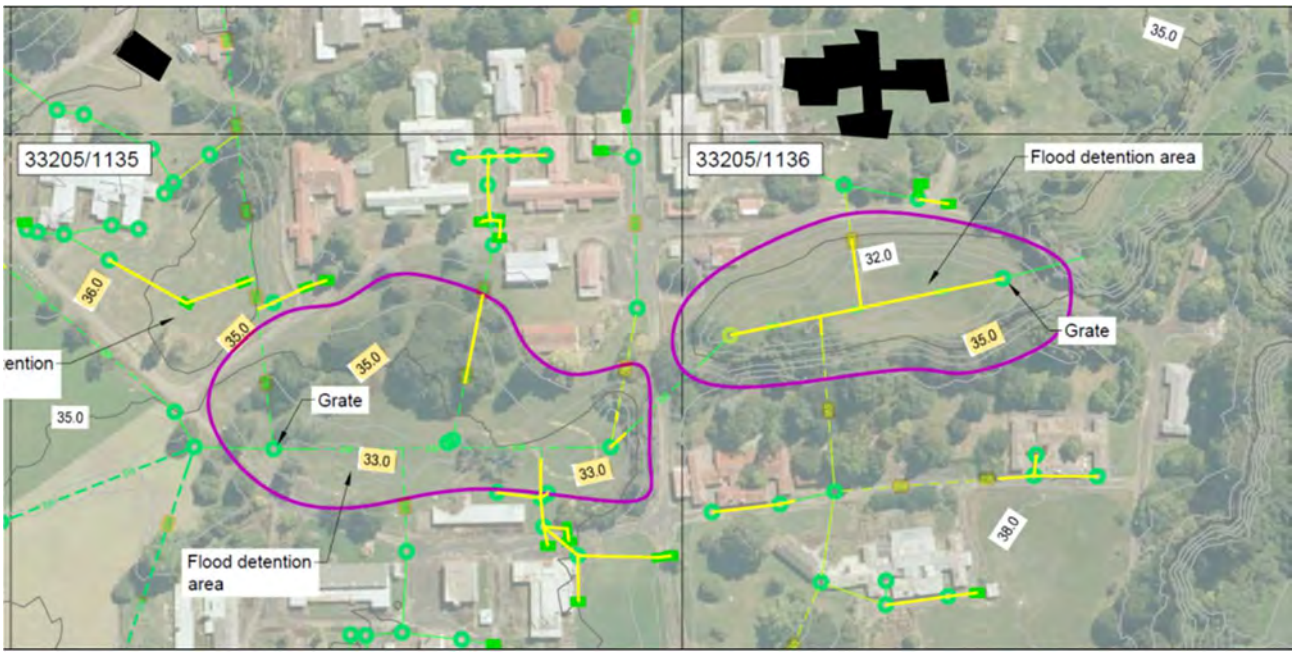


Figure 2: Likely Extent of Pre- and Post-demolition works CCTV of Trunk Stormwater System

10 DEMOLITION/DECONSTRUCTION WORKS PHILOSOPHY AND SEQUENCING

10.1 DEMOLITION/DECONSTRUCTION PHILOSOPHY

LINZ's philosophy for the demolition works is set out in the following:

(a) To undertake the demolition works in accordance with industry best practice and guidelines, complying with all resource consent requirements.
(b) To maximise materials recovery, as much as possible.
(c) To generally leave infrastructure in the ground that is deeper than 800mm (for pipes) and 1m (for structures – e.g. manholes, catchpits, etc.), except for building footings/foundations, which are to be completely removed. The contractor should address this in their methodology.

10.2 POTENTIAL MATERIALS REUSE AND RECOVERY

The contractor should as part of their methodology identify the materials they are proposing to recover for reuse/recycling and the associated recovery methodology. LINZ has undertaken a preliminary recycling potential exercise, the results of which are summarised below.

Table 6: Potential Recycling Opportunities

Recycling Potential	Materials	Comments
High	Untreated timber	Significant quantities of native timber in many buildings suitable for recovery/reuse; alternative use as biofuel
	Concrete from buildings and foundations; external concrete slabs and paving	Crushing to GAP40 or drainage aggregate or for use as backfill
	Access road/paving subbase and basecourse	Possible reuse as backfill material
	Soils identified as cleanfill	Possible reuse as backfill material and retopsoiling, including the majority of the Wharekōrino Stream embankment materials.
	Copper pipes/bronze fittings (in old building heating system ducting)	Sale as scrap metal
Medium	Brick and tile	Include with concrete for crushing, bricks for recycling
	Electrical wiring	Scrap metal recycling, but may not be economic
	Metals (e.g. iron roofing, galvanised metal fixtures, old boilers)	Depends on nature/quality/value of metal and if "pure" or contaminated with other materials (e.g. paint, lagging)
	Guano	Mix with mulch from site vegetation to make compost, or take to composting facility off-site; subject to being free of any cross-contamination (e.g. lead paint, asbestos)
Low	Treated timber, framing or external decking, fencing	Possible use as biofuel
	Gypsum based plasterboard	May be difficult to extract and not viable if painted
	Plastic	Depends on type of plastic – explore possible use by Future Post (futurepost.co.nz)
	Access roading/pavement asphalt	Excluding asphalt containing coal tar (some areas)
	External non-ACM cladding	Varies; may not be viable if painted
None	ACM building materials, pipes and other items	

10.3 WORKS BREAKDOWN AND SEQUENCING

This section summarises the works to be undertaken and the preferred order. The demolition of vertical buildings is to be started first. The contractor may undertake some tasks in parallel, particularly where this may result in cost and/or time savings, or reductions in human health/environmental risks.

Specific background information and requirements for the contract works have been split into the following categories:

(a) Buildings – refer section 11.
(b) Horizontal infrastructure – refer section 12.
(c) Contaminated soil – briefly discussed in section 13, and covered in detail in a separate Remedial Action Plan (RAP) (to be provided).
(d) Wharekōrino Stream Embankment Removal and Reinstatement – section 14.
(e) Works within wetland areas or within 10m of these wetlands – section 15.

Works sequencing is summarised below.

Table 7: Proposed Work Sequencing

Phase	Works	Indicative Timeframe
1	1. Site establishment; 2. Environmental Clean of Structures; 3. ACM Removals (including void spaces except for sub-floor); 4. Lead based paint (LBP) Removals; 5. Visual clearance inspections; 6. Soft strip and salvage; 7. Structural demolition and salvage; 8. Removal of demolished materials; 9. Sub-floor investigation	8.5 months to 2.2 yrs
2	1. Sub Floor ACM remediation; 2. Slab and foundation removal; 3. Contaminated HALO scrape and validation; 4. Backfilling and topsoiling.	4.5 – 6 months
3	1. ACM Services removal; 2. SW WW services removal; 3. Concrete duct and other service removal; 4. Hardstand (roading/paving) removal (including coal tar), including embankment over Wharekōrino Stream; 5. Backfilling and finishing/topsoiling/grassing. 6. WWTP demolition and remediation works.	11-13 months

Note: Phase 1 - In some buildings, consideration may be given to undertaking the sub-floor investigation earlier, as it is possible that above floor demolition activities may mobilise any sub-floor asbestos contamination (e.g. dust from vibration). The sub-floor investigation will not involve any soil disturbance other than very small volumes for soil sampling.

Contaminated soil removal is covered under a separate Remedial Action Plan.

11 BUILDINGS

11.1 SCOPE

The scope of work involves removing all existing buildings, excluding the security portacom and potentially buildings 75/76, as the latter will be used as the site office and may be left in place post-demolition.

Appendix A provides a list of all buildings and summarises the following information for each building where available:

- Building ID and name, roof area (m^2), built date, building type, number of storeys, footing/foundation details where available.
- Lead paint and ACM survey results.
- Historical HALO demolition debris. This relates to some buildings where during soil sampling works, old demolition debris, presumably from historical building renovations, was found buried in some locations around the building footprint.
- Special requirements relating to each building (i.e wetland separation, protected tree(s), significant cultural/archaeological features, etc.
- Data reliability, information sources and relevant notes.

It is important to reiterate that the site has a long and varied history, with limited information available for some buildings, and particularly for footings/foundations for most buildings. Appendix A also includes individual pages for each building containing the Opus 2015 building survey results and the 4Sight lead paint and ACM survey results referred to above.

11.2 METHODOLOGY

Suitable above ground infrastructure is to be deconstructed, in agreement with LINZ, with building materials recycled, where practicable.

It is anticipated that excavators (ranging from 5-20T) with demolition attachments and hydraulic breakers will be used, along with an on-site mobile concrete crusher plant that will be in the centre of the site, as shown in drawing 33205/G02.

Prior to any demolition or salvage of building materials off of existing structures, all asbestos removals and environmental cleaning to remove guano and other fauna excrement must have taken place. For all structures where asbestos has been removed, a clearance inspection and associated clearance certificate must be received by the main contractor or LINZ prior to any demolition/deconstruction taking place. Furthermore, all works involving lead-based paint related contamination or removal of materials contaminated with lead based paint must be completed in accordance with the recommendations outlined in the 'Toitū Te Whenua Health and Safety Guidelines – Working with Lead-based Paints'. Further advice is outlined in section 17.3.3 of this report.

If deconstruction is not possible or deemed impractical or uneconomic for a structure, then demolition debris must be loaded directly into trucks and removed from site for offsite disposal. Temporary stockpiling of demolition debris onsite, for extended periods shall not be allowed, except where agreed with LINZ due to special circumstances.

All contractors will be required to provide Safe Work Method Statements detailing their proposed deconstruction and demolition methods, which will be reviewed by LINZ and the project SQEP.

For each building, contractors will be responsible for keeping the site tidy (i.e. specific building and immediate surrounds), including removing all demolition materials and making the building area and immediate surrounds safe and tidy within one month of each building's demolition. All structural footprints are to be backfilled with suitable recycled or imported materials, topsoiled and grass seeded, within 1 month of the slab and foundations removal and any associated contaminated HALO scrape, validation for each building and removal of any services within the vicinity of each building.

In the event of phased demolition (i.e. where the above ground structures are to be demolished in one phase, followed by a later phase involving slab and foundations removal, any associated contaminated HALO scrape and validation for each building), contractors will be responsible for removing all demolition waste generated as part of that phase within one month of the phased demolition of each building. Any grass around each building that is damaged by demolition machinery is also to be re-seeded within the same timeframe and the immediate surrounds are to be made safe and tidy.

11.3 KEY BUILDINGS

There are a number of structures across the site that require careful demolition due to more complex construction and/or significant hazards and/or risks during the demolition phase. This information is summarised from the Opus (March 2015) building structural assessment demolition report. These buildings are:

- Boiler House (B68);
- Ward 21 (two storey portion) (B26);
- Waipā Community and Training Centre (B10);
- Ward B (two storey masonry portion) (B12);
- Main Administration Building (B1); and
- Village Hall (B36).

The below structure information, sequencing and guidance has been provided in order to facilitate the safe demolition of these structures and removal of the associated building materials from site. The Opus (March 2015) report is available as a separate document.

11.3.1 Boiler House (B68)

The boiler house (B68) is shown in Figure 3.

A. Structure

- Boiler house building contains a row of three reinforced concrete hopper structures (dimensions approximately 15m long by 4m wide by 8m high) to the south elevation, designed to feed coal into the main boilers.
- Hoppers are supported by 400x400 reinforced concrete columns in each corner, with a reinforced concrete ring beam around the top of the hopper cones constructed from reinforced concrete and suspended from a concrete ring beam at approximately 5m above slab level.
- The hopper cones are also constructed from reinforced concrete and hang from the ring beams.
- The hopper walls are constructed from in-situ concrete, up to approximately 8m above ground, supported by the concrete ring beam and capped with a flat concrete roof slab.

- An independent steel portal frame vehicle bay (8m high), reinforced concrete coal drop/ramp and vertical coal screw is located to the east of main boiler room.
- Single storey workshops located to west of boiler room. Lightweight roof and steel frame portals in a two bay north light configuration. In situ concrete walls including full height gables to the west elevation and a central dividing wall at the low point of the roof.
- Large steel frame lean-to addition to the north of the main boiler room and bolted back to the reinforced concrete hopper framing.
- Steel frame portal legs cased in concrete to approximately 3m above ground level. Reinforced concrete perimeter walls to same height with timber framing above.
- Three large diameter metal chimneys to 15-20m above ground level stabilised with tie wires attached to main building.
- Slab-on-grade ground floor. Assumed pad bases to columns and strip footings to masonry walls.

Figure 3: Boiler House

B. Suggested Demolition Sequence

- Take down the projecting metal chimneys and remove the boilers.
- Demolish the independent steel portal vehicle bay structure together with the associated concrete ramp structure and coal screw.
- Demolish the lean-to additions to the North and single storey workshops to the West in order to leave the three hoppers standing independently.
- Stabilise the three suspended hopper cones by propping from ground level or installing a steel cradle frame in order to relieve the load from the perimeter ring beams and/or hopper walls.
- Break out the concrete roof slab and take down the hopper walls to the top of ring beam level.
- Detach the hopper cones from the perimeter ring beams (while supported from ground level) and either break out and remove piece by piece or lift out whole using a crane.

- Demolish the remaining concrete ring beams and columns down to ground.
- Break out ground floor slab and grub out foundations.

C. Key Hazards & Specific Requirements

- Temporary stability of the concrete hopper structures and suspended cones to be maintained while remainder of building is taken down.
- The hoppers need to be taken down in a controlled manner. No detailed drawings are available but it is possible/likely that the suspended hopper cones are reliant on the concrete walls above. The weight of the cones should be relieved by propping before the hopper walls are taken down.
- Given the location of the Boiler House, it is proposed that this structure be demolished last out of the structures covered in this section.

11.3.2 Ward 21 (two storey portion) (B26)

Ward 21 (B61) is shown in Figure 4.

Figure 4: Ward 21 (B26)

A. Structure

- Two Storey timber frame ward accommodation block.
- Two independent blocks in an L-shape configuration with short linking corridors.
- Cross wall configuration with load bearing bedroom walls and central full-length corridors at both levels. Lateral stability provided by plasterboard linings
- Light weight duo-pitch roof with central ridge line. Long run metal sheet finish and plasterboard ceilings.
- Cement board finish to external walls.
- Timber first floor and suspended timber ground floor with concrete perimeter walls.

- Reinforced concrete basement boiler room in centre of block.

B. Suggested Demolition Sequence

- Remove all identified Class B ACM as per Table 7, 4Sight Asbestos and Lead Paint Demolition Survey Report, Area 2, dated December 2022.
- Demolish each wing progressively in a longitudinal direction.
- Break out basement and grub out perimeter walls/piles foundations.

C. Key Hazards & Specific Requirements

- Class B ACM present to building exterior, ceiling void and internal building structure.
- No demolition hazards noted.
- Given location and demarcation as a culturally significant area, removal of this structure will require observation by a cultural monitor at all times, especially during removal of any below ground infrastructure.

11.3.3 Waipā Community and Training Centre (B10)

The Waipā Community and Training Centre (B10) is shown in Figure 5.

Figure 5: Waipā Community and Training Centre (B10)

A. Structure

- Two Storey unreinforced masonry (URM) building. Approximately 17m wide by 11m deep by 6.5m high
- Traditional hipped timber roof with heavy concrete tile finish.
- Roof and timber first floor supported off central URM spine walls running in both East-West and North-South directions
- Remainder of internal walls at both floor levels constructed using lightweight timber framing.
- Slab-on-grade ground floor construction.

- Traditional strip footings assumed under perimeter walls and URM spine walls.
- Single storey extension at rear constructed using timber framing with external brick veneer

B. Suggested Demolition Sequence

- Remove all identified Class A & Class B ACM as per Table 10, 4Sight Asbestos and Lead Paint Demolition Survey Report, Area 1, dated December 2022.
- Remove roof.
- Demolish URM walls and timber first floor.
- Break out ground floor slab and grub out foundations.

C. Key Hazards & Specific Requirements

- Class A ACM present in roof void and internal building structure.
- No demolition hazards noted.
- Suggested early demolition and removal, to create more space and turning bays on main access road.

11.3.4 Ward B (two storey masonry portion) (B12)

Ward B (B12) is shown in Figure 6.

Figure 6: Ward B (B12)

A. Structure

- Two Storey URM building. Approximately 1.7m wide by 11m deep by 6.5m high
- Traditional pitched timber roof with long run metal sheet finish.
- Roof and timber first floor supported off URM corridor walls running in north-south direction in the ward dormitory.
- Full width roof trusses and timber first floor supported on steel beams (6.1m clear span) in the communal areas to the northern end.

- URM chimney and lean-to additions to the communal area, including a two-storey addition to the North elevation.
- Suspended timber ground floor construction.
- Traditional strip footings assumed under perimeter walls and internal URM walls.

B. Suggested Demolition Sequence

- Remove all identified Class B ACM as per Table 12, 4Sight Asbestos and Lead Paint Demolition Survey Report, Area 1, dated December 2022.
- Remove roof and take down URM Chimney.
- Demolish URM walls and timber first floor working progressively in a longitudinal direction starting from one end of the building.
- Break out ground floor slab and grub out foundations

C. Key Hazards & Specific Requirements

- Class B ACM identified to internal components of boiler room, sheds and switchboards.
- No demolition hazards noted.
- Suggested early demolition and removal, to create more space and turning bays on main access road.

11.3.5 Main Administration Building (B1)

The main administration building (B1) is shown in Figure 7.

Figure 7: Main Administration Building (B1)

A. Structure

- Two Storey Reinforced Concrete Frame. Approximately 45m long by 21m deep by 6.5m high.

- Longitudinal one-way concrete frames at approx. 3.8m centres. Perimeter columns only extend up to roof level.
- Concrete first floor slab, one-way transverse span between concrete frames.
- Lateral stability provided by concrete masonry stairwells at the rear (North-East and South- East corners) and concrete masonry walls up to the first-floor slab at the front (West).
- Lightweight timber roof with internal gutter and central butterfly roof portion.
- Roof appears to be supported on load-bearing timber wall panels built directly off the first-floor slab.
- Slab-on-grade ground floor. Assumed pad bases to columns and strip footings to masonry walls.

B. Suggested Demolition Sequence

- Remove all identified Class A & B ACM as per Table 1, 4Sight Asbestos and Lead Paint Demolition Survey Report, Area 1, dated December 2022.
- Remove roof and demolish timber framing down to first floor level.
- Demolish concrete frame, first floor slab and masonry walls progressively in a longitudinal direction from one end of the building.
- Break out ground floor slab and grub out foundations.

C. Key Hazards & Specific Requirements

- Class A & B ACM identified to external and internal components.
- No demolition hazards identified.
- Suggested early demolition and removal, to create more space and turning bays on main access road.

11.3.6 Village Hall (B36)

The Village Hall is shown in Figure 8.

Figure 8: Village Hall (B36)

A. Structure

- Single Storey structure. Predominately open plan. Approx. 14.5m long by 9m deep by 3.8m high
- Light weight mono-pitch roof supported on a series of 600mm deep plywood box beams or steelwork lattice beams clad with timber.
- Load bearing concrete masonry walls with 400mm square piers (max 3.1m high) supporting the roof.
- Concrete masonry spandrel panels and full height infill panels acting as shear walls in each corner.
- Concrete slab-on-grade ground floor.

B. Suggested Demolition Sequence

- Remove all identified Class A ACM as per Table 2, 4Sight Asbestos and Lead Paint Demolition Survey Report, Area 3, dated December 2022.
- Remove roof sheeting, ceiling and timber roof joists.
- Lift off main 8m long roof beams
- Demolish concrete masonry piers and wall panels, progressing in one direction along the length of the building.
- Break out slab-on-grade and grub out any foundations.

C. Key Hazards & Specific Requirements

- Class A ACM identified to internal components of structure.
- No demolition hazards identified.

11.4 OPUS (2015) BUILDING INSPECTION REPORTS

Opus undertook building inspections of 50 buildings at the site in 2015. This information is summarised in Appendix B, while the Opus report is available as a separate document. Contractors should refer to this appendix and the Opus 2015 report for more detailed information on each building, including photos.

11.5 3D BUILDING SCANNING (2023)

Barry Satchell undertook 3D scanning of 10 buildings at the site in 2023, providing “walkthrough” details of each building. These buildings are:

- B01 - Admin
- B11 – Ward A
- B13 – Ward C
- B27 – Ward 5
- B29 – Ward 7
- B30 – Ward 8
- B48 – Ward 16
- B53 – Ward 19
- B56 – Ward E
- B65 - Store

Links to these scans will be provided separately to the contractor due to file size.

11.6 HAZARDOUS SUBSTANCES

The main hazardous materials identified in relation to the building demolition works are guano, lead paint and asbestos. In addition, two further issues were identified:

- Some buildings with buried historical demolition debris in their HALOs.
- Some hazardous substances stored within different buildings.

These hazards and their management are described in more detail in section 17.3 of this plan.

12 HORIZONTAL INFRASTRUCTURE

12.1 ROADING/PAVEMENT

This section provides an overview of the existing pavement composition, thickness and condition at the Tokanui hospital site to help contractors understand what will be required to maintain relevant portions of this network in working order during the demolition works and to then undertake the relevant pavement related works, post-demolition activities.

12.1.1 Background Information

Roading and paving around the site will have been present since the hospital's inception in 1916. The earliest aerial photography information available indicates an extensive roading network was developed by 1944, alongside construction of the main hospital buildings. This network expanded up until 1966, when the site was fully developed. Based on available information, the road network is understood to be well over 50 years old.

Pavement specifications indicate typical design comprised 25-40mm AC (asphalt concrete), on 125-150mm M4 basecourse on 50mm sand or directly on subgrade, which represents a relatively "skinny" pavement.

WSP undertook a pavement investigation in 2023 with the results being presented in a factual report provided separately. Overall, they found that the existing road network is in a reasonable condition except for some localised failures. Most of the failures are surficial, indicating a good structure pavement. The existing asphalt and chip-seal surfaces are in poor condition and appear to be at the end of their life, evidenced by potholes, cracks and moss developing. The road generally has good drainage except for some localised issues and around the intersections. Kerb and channel are in good condition but require cleaning. There is some localised settlement near service trenches crossings and inspection chambers. The following table provides a summary of the investigation results and root cause analysis. Refer to the HIR report, WSP 2023 report and to drawing 33205/1700 and 1701 for more details and drawing 2702.

Table 8: Pavement Evaluation/Condition Assessment

Item	Assessment
Shape	The roads are generally in good shape without rutting or significant depressions. Some settlement was observed at service manholes and trenches, indicating poor backfill and compaction.
Surface	The existing surface comprises approximately 30mm of asphalt and chip-seal. The existing surfaces are in poor condition and appear to be at the end of their life, evidenced by potholes, cracks and moss developing. However, no deformation,

	heaving, shoving or rutting was observed, indicating the underlying pavement is structurally sound.
Drainage	The road generally has good drainage with well-formed kerb and channel at most locations. There are catchpits at regular intervals, typically in moderate to poor condition. The kerb and channel are overgrown with grass and moss and require cleaning. There are some localised ponding issues around the carparks and intersections due to poor cross-fall.
Geometric	The roads are generally 5.4m and 7.0m wide, suitable for two-way traffic. The roads have flat to moderate longitudinal gradients with good dual cross-fall on the main roads and single cross-fall on the side roads. However, some intersections and parking areas have poor cross-fall, which leads to drainage issues.
Pavement thickness	The road pavement varies significantly across the site. The total pavement depth ranges between 100mm and 600mm, with a mean of 300mm. The basecourse thickness is between 30mm and 380mm with a mean of 170mm, comprising medium dense to dense well-graded AP40. There is up to 350mm of fill at some locations. The existing pavement thickness is generally suitable for the historical low-traffic volume environment at the site.
Deflection	The Benklemen Beam deflection ranges between 0.4 and 3.7mm. The high deflection values are generally in parking areas. In contrast, most roads have a deflection value of less than 1.6mm, suitable for the historical low-traffic volume at the site. High deflection is generally associated with inadequate pavement strength and thickness and poor subgrade.
Potholes	Potholes were observed at some locations, generally associated with a lack of surface waterproofness, dirty basecourse and poor drainage, particularly near the intersections, trenches and speed humps. These should be fixed to prevent further deterioration by applying pothole patches or similar prior to and during the works.
Subgrade	The existing subgrade strength CBR ranges from 1% to 10%. The weakest subgrade was found in the parking areas. Most road subgrade CBR is between 4% and 10%, indicating a weak to moderate subgrade. At TP10 and 11, the subgrade CBR is 2% indicating a very weak subgrade. A subgrade CBR of 4% was adopted for the pavement evaluation.
Shallow/Deep-seated damage	Most of the damage is shallow surficial, indicating that the underlying pavement is structurally sound. Some deep-seated failures were observed at service trenches indicating poor backfill and compaction.

Analysis of the effects of demolition traffic on the existing pavement has found that the existing asphalt and chip-seal surface is at the end of its service life and unlikely to be able to withstand the construction traffic. Apart from the main entrance, the pavement is expected to be at the end of its service life after the site-clearing work.

The contractor will be responsible for maintaining the access and internal roading during the works so that the scheduled demolition/deconstruction/remediation works can be carried out.

12.1.2 Coal Tar Assessment

GHD undertook an initial high level coal tar assessment in February 2023, checking for the presence of coal tar in the binding of the pavement and underlying basecourse material on the hospital site, involving the collection and laboratory analysis of 26 pavement/basecourse samples for polycyclic aromatic hydrocarbons (PAHs) and TCLP (toxicity characteristic leaching procedure) testing of 12 asphalt samples for PAHs. This investigation found four locations where coal tar use was considered likely. Leaching of PAHs from all samples was very low.

FTL subsequently undertook several more in-depth investigations of both the road construction and for coal tar in the paving, basecourse and subbase roading layers, using a multiple lines of evidence approach involving a combination of paint tests, UV light fluorescence and laboratory testing to better determine the horizontal and vertical extent of coal tar content in the roading pavement layer and the underlying basecourse and subbase. The results of this investigation are reported on separately in the FTL Coal Tar Intrusive Investigation Report (September 2025). Figure 9 shows the sampling plan for the road surface (pavement) layers, to give an understanding of the sampling density undertaken.

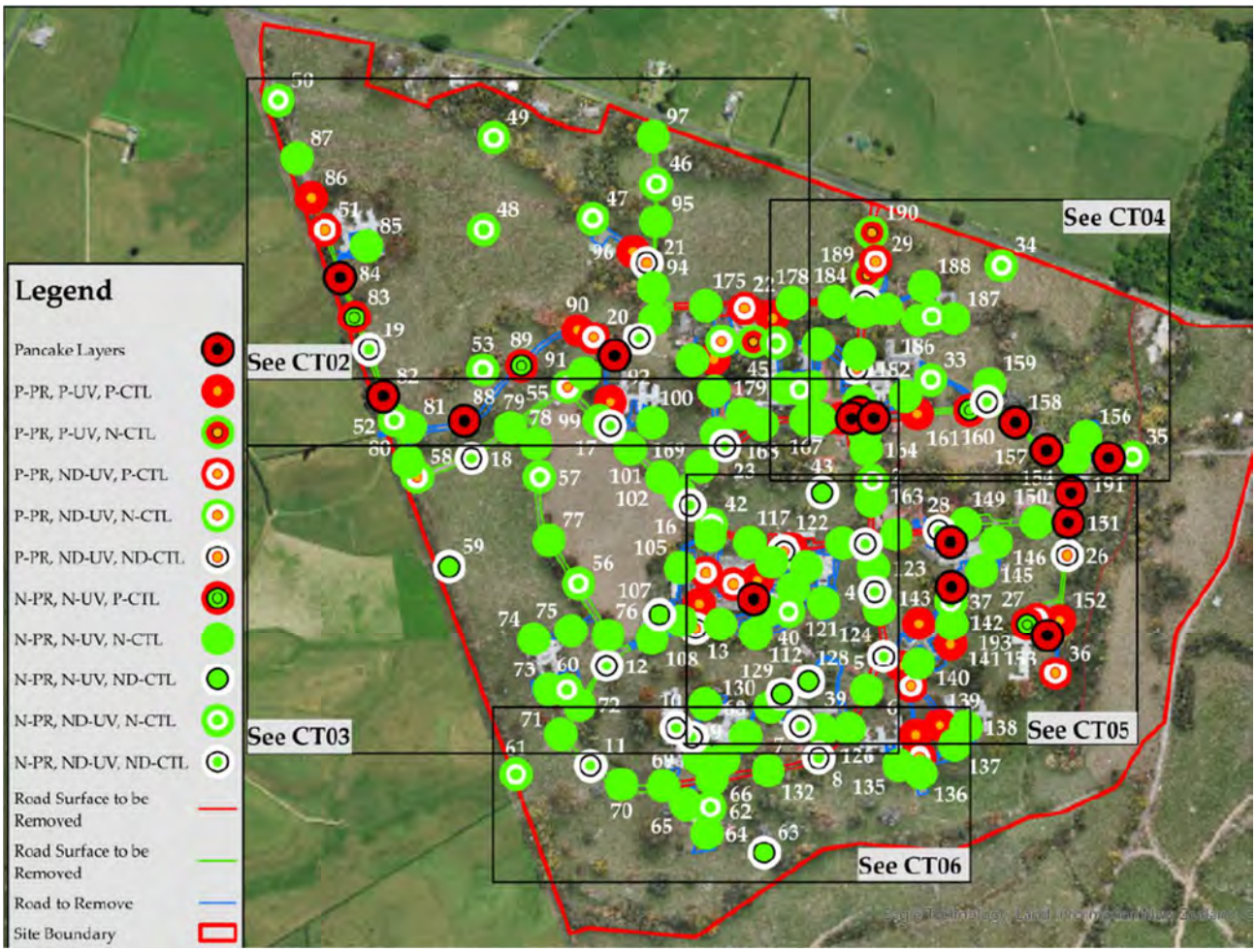


Figure 9: Coal Tar Road Surface (Paving) Overall Sampling Plan

12.1.3 Removal of Roading/Pavement

The road network within the Hospital site is approximately 8.8km in length, and has expanded over the lifetime of the hospital and been subject to ongoing repairs, resealing and maintenance works over the years.

As part of the Hospital demolition works, the roading network has been split into three portions, reflecting different management/removal options considered, primarily based on road function, degree of use and age. These are identified as the red, green and blue networks, each with their own management/removal requirements. The blue network is essentially minor roading and paving in and around buildings. The red network is the key "spine" roads that provide reasonable access to the main hospital areas, while the green network represents additional secondary access roads that provide extended access around the entire hospital site.

The Blue portion of the road network in FTL Drawing 33205/2700 is to be fully removed (surface, basecourse and subbase). The Blue network covers an estimated 5.37km (3.49ha) (56% of road network) with an estimated removal volume of 10,424m^3. This portion of the road network will be reinstated with clean soils to existing ground level. Backfill requirements involve an average of 150mm subsoils overlain by 150mm topsoil to tie in with the surrounding ground and regrassing.

The remaining portions of the road network (3.48km, 2.79ha) are split into Red and Green in the FTL Drawing 33205/2700. These areas will be partially removed, essentially removing the surface pavement down to basecourse, then topping up the basecourse to existing ground level to form "farm tracks" for ongoing use. The estimated total paving volume to be removed is 1,480m^3.

Coal tar is present across all three road network colours and roading layers. The majority of the coal tar, in terms of areal coverage, is in the surface pavement layers, with the areas with coal tar decreasing in the basecourse and further decreasing in the subbase. A conservative approach has been taken here, in that the entire basecourse and subbase depth profile has been assumed to contain coal tar, based on either a positive paint test and UV reaction or a positive lab result from a single test of these layers at each location. Given these layers are typically significantly thicker than the paving layer, this results in reasonable quantities of coal tar being calculated to be present in both the basecourse and subbase. Furthermore, there are localised areas of the site where multiple 'top ups' of the basecourse and pavement have been done over the years, forming a "pancake" roading structure. Figures 10, 11 and 12 show the areal distribution of coal tar in the paving, basecourse and subbase layers.

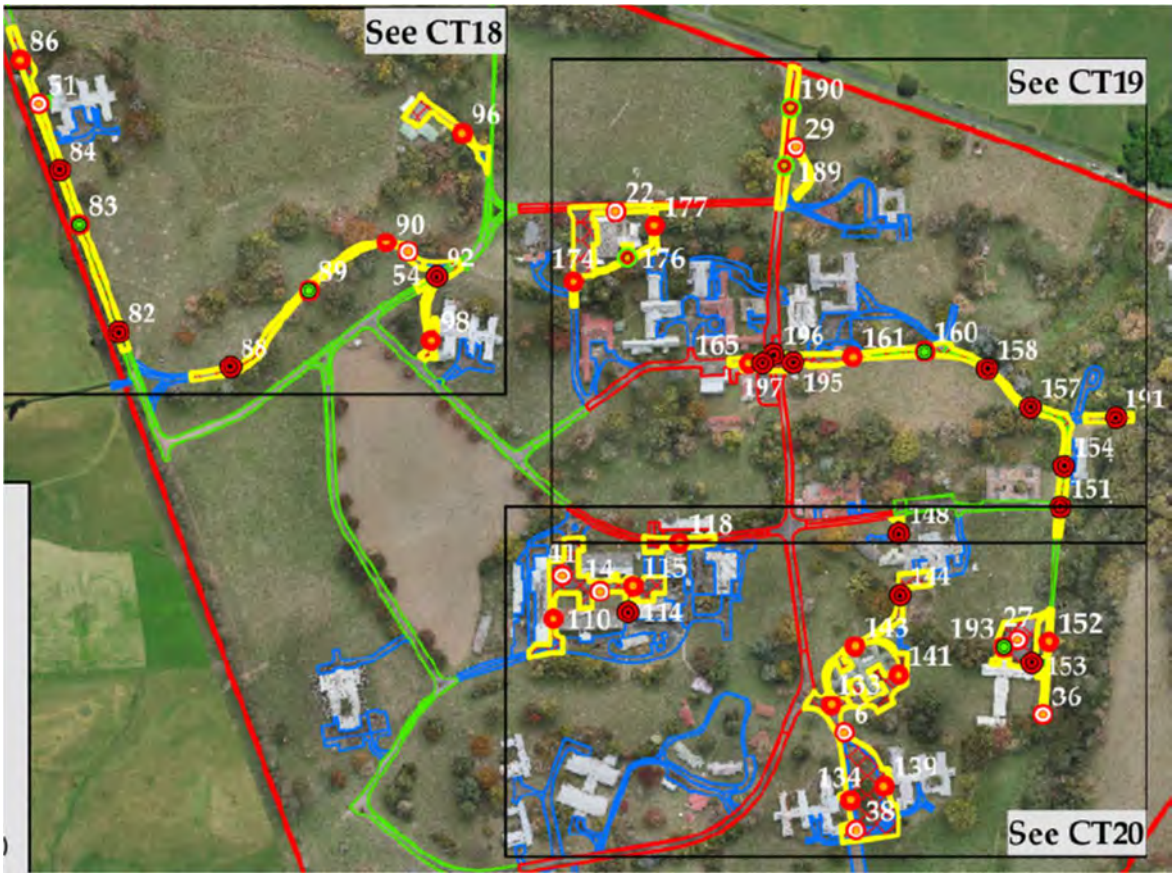


Figure 10: Coal Tar in Roading Surface (Paving) Location Plan – yellow polygons

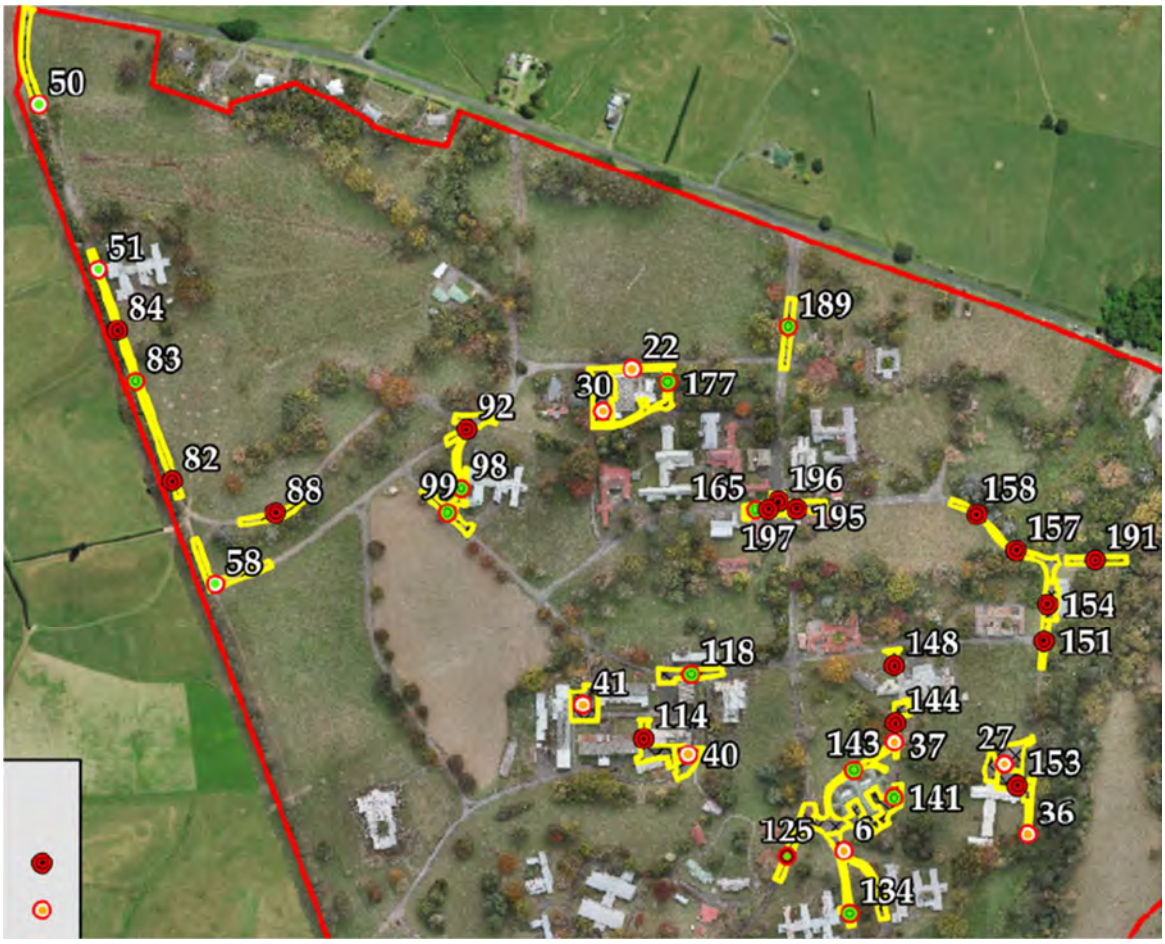


Figure 11: Coal Tar in Roading Basecourse Location Plan – Yellow Polygons

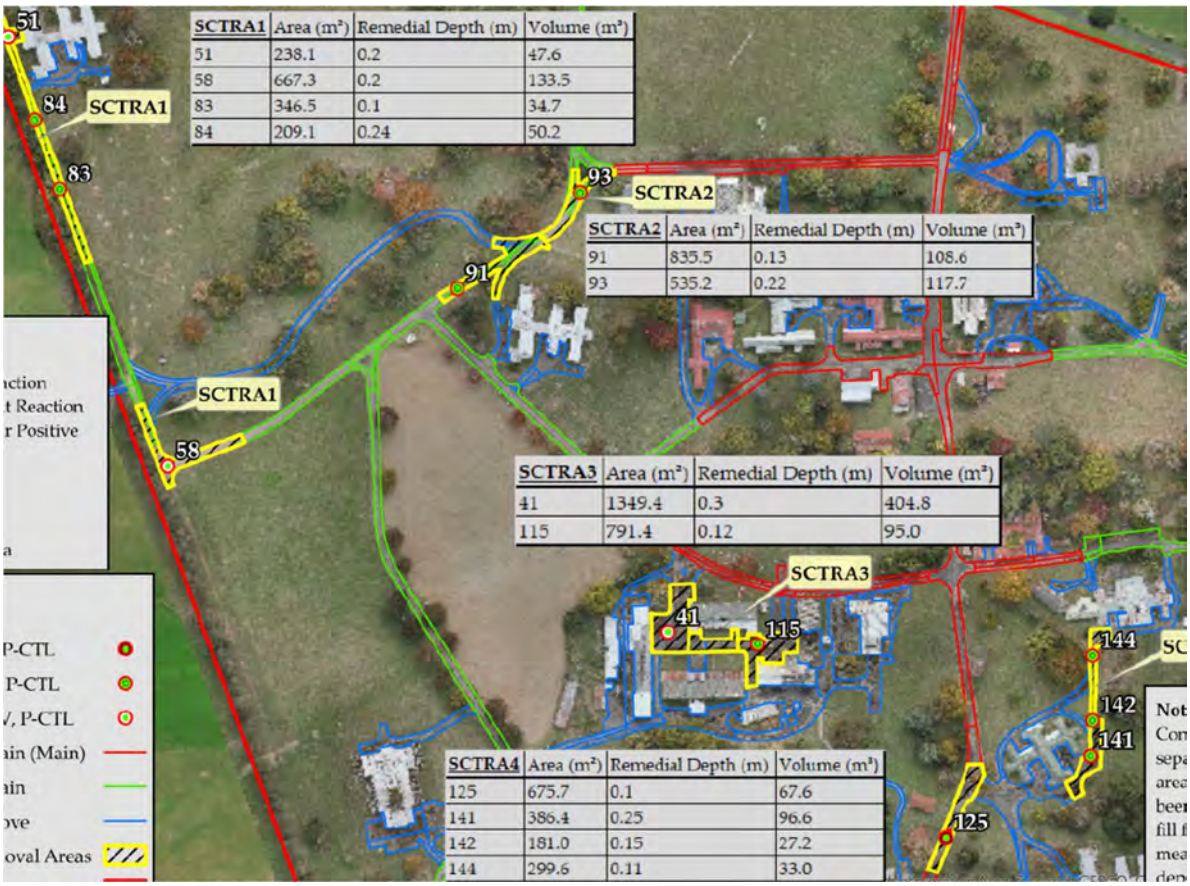


Figure 12: Coal Tar in Roading SubBase Location Plan – Yellow Polygons

All confirmed coal tar roading materials are to be removed from the site, regardless of depth within the road network. The proposed methodology for this is set out in the following:

- Remove all surface pavement in up to 50mm increments (to limit cross contamination) in line with FTL Coal Tar Drawings, utilising excavators and/or milling plant (if proposed by contractor). Surface material is to be placed directly into bins adjacent to the works area and/or stockpiled in controlled areas until sufficient volume is generated to fill trucks for offsite disposal. All excavated surface material to be placed in like for like bins or stockpiles, i.e. coal tar into coal tar bins/stockpiles, asphalt into asphalt bins/stockpile and chipseal into chipseal bins/stockpiles;
- In the Red/Green Road network areas, any surface layers that have been identified at depth (multiple layers of surface material) will also require removal by excavator and/or milling plant. This material is to be handled and placed in bins/stockpiles as detailed above;
- In the Red/Green Road network areas, any material removed will be "topped up" with basecourse using well graded Farm AP40 (FAP40), compacted to tie in with the existing basecourse material and forming rural "hardfill/gravel" farm tracks for ongoing use;
- In the Blue Road network area, all material (surface, basecourse and subbase) will be removed by excavator and/or milling plant. Material is to be handled and placed in bins/stockpiles as detailed above;
- In Blue Road network areas, the entire removal area to be reinstated with soil and returned to grazing land use;
- All roading material removed during this process is to be disposed of offsite to a suitably licensed disposal facility, or a processing facility for recycling and reuse.
- Some isolated other materials (concrete, coal tar vein) will be similarly removed during this process.

Table 9 summarises the estimated quantities of each layer of roading material across the red, green and blue networks. Table 10 summarises the corresponding estimated quantities of coal tar and Table 11 summarises the estimated quantities of roading materials to be removed from site, either due to the presence of coal tar or as part of the planned removal of the entire blue roading network. It should be noted, that where possible, basecourse and subbase from the blue road network will be used to 'top-up' excavations from elsewhere onsite.

Table 9: Total Roading Quantities (m^3)

Item	Red	Green	Blue	Total
Pavement	554	926	1,604	3,084
Basecourse	1,711	2,720	4,096	8,527
Subbase	1,159	2,102	4,724	7,985
Total	3,424	5,749	10,424	19,597
Other	Concrete: 118	Coal tar vein: 28	0	146
Revised Total	3,542	5,777	10,424	19,743

Table 10: Coal Tar Roading Quantities (m^3)

Item	Red	Green	Blue	Total
Pavement	175	395	506	1,075
Basecourse	437	868	624	1,929
Subbase	68	448	657	1,172
Total	680	1,711	1,787	4,177

Table 11: Total Roading Removal Quantities – Coal tar and Non-coal Tar (m^3)

Item	Red	Green	Blue	Total
Pavement				
➢ Coal tar	175	395	506	1,075
➢ Non-coal tar	379	531	1,098	2,008
Basecourse				
➢ Coal tar	437	868	624	1,929
➢ Non-coal tar	N/A	N/A	3,472	3,472
Subbase				
➢ Coal tar	68	448	657	1,172
➢ Non-coal tar	N/A	N/A	4,067	4,067
Total				
➢ Coal tar	680	1,711	1,787	4,177
➢ Non-coal tar	379	531	8,637	9,547

Note: Values in red are maximum values; total maximum backfill requirement (solid measure) is 13,724m^3 of which 3,301m^3 is hardfill and the remaining 10,424m^3 soil.

The removal of this contaminated material should be undertaken by contractors with PPE as described in section 17 below.

12.2 CONCRETE DUCTING

12.2.1 Background

The Hospital had an extensive building heating system comprising steam pipes supplied from the hospital boiler to the majority of buildings, and return condensate pipes. This pipe network was located within concrete ducting with access chambers at regular intervals and is referred to as the "concrete ducting" system in this DDRMP. Based on comparisons of available historical aerial photographs, it is understood the concrete ducting was installed site wide between 1944 – 1979, and hence is estimated to be 45-80 years old.

Based on historical plans, composition of the steam lines was generally ungalvanized mild steel of either medium or heavy grade. The return condensate lines were copper. In some areas there was a third pipe, conveying hot water pipes, but some drawings refer to this as "to be removed". Bronze anchors and guides for the condensate pipes are referred to on some drawings. Pipe sizes are shown as varying from 1.5" to 2.5" (38-63mm for condensate) and 2"-6" (50-150mm) for steam. The pipe system includes significant numbers of valves, anchors, brackets and guides. Cover over the concrete ducting varies but is around 400mm on the drawings reviewed, which only cover a small part of the overall system.

Some photos of the ducting are included below for information. More details and photos are included in the Horizontal Infrastructure Report.

Chamber – LID K01 located at B55 Ward K	Chamber – LID K01 located at B55 Ward K showing the internal duct height as 500mm

Chamber – LID K01 showing 50mm cover where the duct connects to the building	Chamber 1606 at B48 Ward 16
Chamber EDU04 at B51 EDU	Chamber K12 Located NW of the site
Chamber H08 located at B48 Ward 16	Chamber 925 located at B29 Ward 7

Figure 13: Representative Photos of the Concrete Ducting System

12.2.2 Removal of Concrete Ducting

Prior to starting these works, the contractor shall check that any contaminated soil removal works in areas where concrete duct demolition is also required have been completed and certified, prior to starting concrete duct demolition works. Where the concrete ducting is located within vegetation areas as identified in the plans, refer to section 21.2 of this DDRMP for the procedures to follow.

The contactor is to remove all concrete ducting (of estimated length 2940m), pipework and fittings, and associated access chambers, as shown on drawing 33205/2500. All appropriate metal pipes, fittings, etc. should be checked and sorted into different categories for recycling.

The contractor shall backfill excavated cavities and trenches with compacted cleanfill, followed by topsoiling and grassing, except at road crossings that are to remain post-works, which should be backfilled with approved, compacted hardfill. A minimum of 880m^3 of backfill material is estimated to be required, as well as excavation works to remove the soil overlying the ducting, temporarily stockpile it and then replace it on completion of ducting removal.

12.3 OTHER SERVICES

All other services listed and detailed below will be removed to 800mm bgl (below ground level) for all pipes (to top of pipe), ducting and cables, with any associated structural components removed to 1000mm bgl.

12.3.1 Water Reticulation

As explained in the FTL Horizontal Infrastructure Report (2023) (refer section 6.6 of that report), the existing houses along Te Mawhai Road and the two clusters to the east of the site (Croasdale Rd and Tokanui Village), as well as the reservoir further to the east, are provided with water from a relatively new watermain and are now independent of any water reticulation within the Tokanui hospital village itself. This means that removal of the water reticulation system within the Site will not cut off the water supply to users outside of the Site. Hence, the hospital site's water reticulation network, including the 200dia AC pipe referred to below, is completely redundant.

The water reticulation system within the site comprises an extensive network of water reticulation servicing the hospital buildings. A water tower used to be located adjacent to B54 and a water treatment plant was housed within Building B7.

Following inspections across the site to identify and assess the condition of water reticulation pipes, it was determined that the northern portion of the site is serviced by metallic pipes, identified as unpainted 100NB ductile iron pipes (approximately 2,970m) wrapped in denso tape. Watermains were identified at variable depths across the site.

The water reticulation pipes in the southern portion of the Hospital were not picked up during Electromagnetic Location Surveying (EML), which indicated the pipes were non-metallic. Further potholing works identified that the southern water reticulation pipe network was Asbestos Cement Pipes (AC).

Furthermore, a separate 200dia AC water feeder pipe system (approximately 790m) was found running through the northern half of the site that used to bring water from Te Awamutu to a header tank east of the hospital. This system is now redundant.

The existing water supply system and the required water supply demolition works are shown on drawings 32205/2200-2209 inclusive. The extent of the AC and non-AC pipes is labelled on these drawings.

The contractor shall:

- Check that any contaminated soil removal works in areas where water demolition is also required have been completed and certified, prior to starting water demolition works.
- Remove all identified ACM pipes, following the procedures set out later in this report.
- Remove all other water pipes down to 800mm depth (to top of pipe) and all water related fixtures, fittings, etc. down to 1m depth. Where the pipes or fixtures are located within vegetation areas as identified in the plans, refer to section 21.2 of this DDRMP for the procedures to follow.
- Cap any exposed pipe ends left in the ground.
- Survey the locations of any water pipes and associated structures left in the ground and prepare asbuilt plans.
- Backfill excavated cavities and trenches with compacted cleanfill, followed by topsoiling and grassing, except at road crossings that are to remain post-works, which should be backfilled with approved, compacted hardfill.

The contractor shall take care during works in the vicinity of B75/B76 (site office) not to remove or damage the water supply system to these buildings.

12.3.2 Wastewater Reticulation

As explained in the FTL Horizontal Infrastructure Report (2023) (refer section 6.8 of that report), the Site had its own independent wastewater reticulation system conveying wastewater to a wastewater treatment plant (WWTP) located in the north-eastern corner of the Site adjacent to the Wharekōrino Stream. The WWTP was decommissioned in 2021 and a new gravity sewer line was installed along Te Mawhai Road to a new wastewater pump station located at the former WWTP location which pumps wastewater into the new Waikeria Wastewater rising main along SH3 (Otorohanga Road). This rising main also collects wastewater from the two residential clusters to the east of the site (Croasdale Rd and Tokanui Village). This means that removal of the wastewater reticulation system within the Site will not cut off any of these existing houses outside of the Site.

Whilst the site's WWTP has been decommissioned, the now redundant wastewater reticulation network within the site has been left in place. During the services condition assessment, it was found that significant portions of the main trunk sewer going through the middle of the site to the pump station in the north east corner of the site were mostly unable to be surveyed as the lines were blocked and filled with water. It was found that the wastewater pipe system comprised of 100mm, 150mm and 225mm diameter pipes throughout the site with 225mm pipes being found on the CCTV survey connecting into the trunk sewer. As the remainder of the trunk sewer was flooded, it was assumed that this is 225mm diameter as well. The wastewater trunk sewer traversing through the middle of the site was investigated on site and was found to be very deep (approximately 4m). The total length of redundant wastewater reticulation pipework is estimated to be approximately 4910m, of which an estimated 1890m is to be removed. There is one internal

wastewater pump station remaining within the site which is to be removed. No details are available for this pump station.

The existing wastewater reticulation and the required wastewater demolition works are shown on drawings 32205/2000-2009 inclusive. Drawing 32205/2004 shows the location of the wastewater pump station to be removed.

The contractor shall:

- Check that any contaminated soil removal works in areas where wastewater demolition is also required have been completed and certified, prior to starting wastewater demolition works.
- Remove all wastewater pipes down to 800mm depth (to top of pipe) and all wastewater related manholes, fittings, etc. down to 1m depth, including the one pump station. Allow for dewatering, as required, and disposal of any trapped water within the sewer network off-site by sucker truck for disposal as trade waste. This should include allowing for testing of the water to determine appropriate disposal requirements.
- If during this process, new pipes <800mm depth (to top of pipe) are found that are not shown on the demolition drawings, advise LINZ project manager/site representative, who will issue instruction for any additional removal works.
- Where the pipes or fixtures are located within vegetation areas as identified in the plans, refer to section 21.2 of this DDRMP for the procedures to follow.
- Where any pipes are left in the ground, these shall be capped at any exposed ends.
- Survey the locations of any wastewater pipes and associated structures left in the ground and prepare asbuilt plans.
- Backfill excavated cavities and trenches with compacted cleanfill, followed by topsoiling and grassing, except at road crossings that are to remain post-works, which should be backfilled with approved, compacted hardfill.

The contractor shall take care during works in the vicinity of B75/B76 (site office) not to remove or damage the wastewater system serving these buildings.

12.3.3 Stormwater Reticulation

The site has an extensive stormwater reticulation network, draining into the trunk stormwater system. This comprises an estimated total non-trunk length of approximately 4460m of 100-375mm dia pipe in moderate to poor condition, of which approximately 990m has been identified as needing removal.

The existing stormwater reticulation and the required stormwater demolition works are shown on drawings 32205/2100-2110 inclusive. Drawing 32205/2110 shows the location of the trunk stormwater system to be retained. This system includes the grated inlets draining the flood detention areas shown on these drawings. These grates are not to be removed.

The contractor shall:

- Check that any contaminated soil removal works in areas where stormwater demolition is also required have been completed and certified, prior to starting stormwater demolition works.
- Remove all non-trunk stormwater pipes down to 800mm depth (to top of pipe) and all stormwater related catchpits, manholes, gratings, etc. down to 1m depth. Allow for dewatering, as required. As some

of this system is connected to catchpits in the road network, it is recommended that stormwater drainage serving the red and green road networks not be removed in critical areas that may result in inadequate road drainage/ponding until other demolition works are complete. Instead, it would be undertaken later, as part of reinstating these areas to a "farm access" standard. Alternatively, the contractor may provide alternative drainage measures in these critical areas.

- If during this process, new pipes <800mm depth (to top of pipe) are found that are not shown on the demolition drawings, advise LINZ project manager/site representative, who will issue instruction for any additional removal works.
- Where the pipes or fixtures are located within vegetation areas as identified in the plans, refer to section 21.2 of this DDRMP for procedures to follow.
- Cap any exposed ends of pipes left in the ground.
- Survey the locations of any stormwater pipes and associated structures left in the ground and prepare asbuilt plans.
- Backfill all other excavated cavities and trenches with cleanfill, followed by topsoiling and grassing, except at road crossings that are to remain post-works, which should be backfilled with approved, compacted hardfill.

It is possible that some of the stormwater pipes being removed or plugged may also have field and/or roading/pavement subsoil drainage connected into them, which may potentially cause waterlogging/ponding in areas that are no longer able to drain via the pipe network. It has been assumed that drainage metal bedding under the stormwater pipes being removed, will continue to provide a drainage pathway for any subsoil drainage connected to the stormwater system.

On the completion of site demolition and remediation works, the stormwater system that will remain in place will comprise the trunk stormwater reticulation system, as shown on drawing 33097/PL002, including the five inlets to the upgradient off-site rural area, the on-site flood detention areas shown and associated grated inlets. Damaged sections of the stormwater trunk main will be lined to repair them, as explained in section 16. All other stormwater pipe reticulation will be removed or capped. Overland flowpaths will be unchanged. Culvert 2 and its associated embankment will also be removed and the stream restored through this area (refer section 14).

12.3.4 Power and Telecom

The existing power and telecom infrastructure has been deemed obsolete, as its essentially at its 'end of life' and is in an inferred moderate to poor condition. The infrastructure to be removed only serves the hospital site and its removal will not affect any of the houses along Te Mawhai Road or the housing clusters in Croasdale Rd and Tokanui Village.

The existing comms and power services and the required comms/power demolition works are shown on drawings 32205/2300 (comms) and 32205/2400-2409 respectively. Limited potholing found that most of the underground power cabling is direct buried, and likely most of the comms as well. The available information is shown on these drawings.

The contractor shall:

- Check that any contaminated soil removal works in areas where power/telecom demolition is also required have been completed and certified, prior to starting power/telecom demolition works.

- Direct pull cables out of the ground from cable pits or potholes at selected locations (power ~7320m; comms ~4630m). Hence, the affected trees shown on the associated drawings is primarily for contractor information and no tree removal or other specific tree protection measures are proposed.
- Removal of cables deeper than 800mm for scrap metal recovery will be agreed between the contractor, engineer and LINZ, using the same methodology as above.
- Remove any associated ducting and concrete cable protection measures encountered during these works, and remove any associated structures to 1000mm, excluding the power supply to B75/76 (site office) and to the site security portacom.
- Remove any overhead power lines and light poles.
- Survey the locations of any power/telecom service lines and associated structures left in the ground and prepare asbuilt plans.
- Backfill excavated cavities and trenches with cleanfill, followed by topsoiling and grassing, except at road crossings that are to remain post-works, which should be backfilled with approved, compacted hardfill.

13 CONTAMINATED SOIL

This involves the removal of low-moderate level contaminated soil from around the perimeters (halos) of many buildings on-site, comprising almost entirely allophanic topsoil, and containing primarily lead or asbestos contaminants.

Lead: There are at least 20 buildings (possibly 22) that appear to require remediation for lead paint-derived contamination in the adjacent soil: B2, B5, B7, B8, B11, B13, B15, B17, B18, B21, B23, B24, B27, B29, B33, B35, B41, B52, B58, B59, possibly B19 and B55. Soil remediation details are provided in the Remedial Action Plan, based on meeting the adopted rural residential remedial standard of 120 mg/kg. If the buildings were instead placed into a managed zone with a higher remedial standard, the amount of soil to be removed would be less but the contamination greater. The 95th UCL (upper confidence limit) concentration 0.5m from these buildings is around 900 mg/kg, and the estimated TCLP-leachable lead at this concentration is approximately 1.2 mg/L. Any management or remediation works involving lead-based paint related contamination will be required to follow the recommendations outlined in the 'Toitū Te Whenua Health and Safety Guidelines – working with lead-based paints'.

Asbestos: There are eight buildings and a couple of substations that appear to require remediation for asbestos in soil based on asbestos fibres/friable asbestos (AF/FA) more than 0.001 %. These are B29, B30, B58, B63, B65, B68, B69, B74, and S8 and S3 with buried asbestos. Soil remediation details are provided in the separate Remedial Action Plan. The highest recorded AF/FA was 0.039 %.

Buildings B29 and B58 have both asbestos and lead as contaminants.

In addition, there is at least one building with elevated zinc but no lead, and one building with herbicide contamination around it.

Several non-building areas have also been identified with localised contamination or more than minor quantities of construction and demolition waste, that will be remediated.

Contaminated soil remediation is described in detail in the separate Remedial Action Plan.

Where the contaminated soil areas are located within vegetation areas as identified in the plans, refer to section 21.2 of this DDRMP for procedures to follow.

14 WHAREKŌRINO STREAM EMBANKMENT REMOVAL AND REINSTATEMENT

14.1 BACKGROUND

There is a redundant road embankment crossing the Wharekōrino Stream that provided an historical side road entrance to the Site. This road crossing is located in the north-eastern areas of the hospital site and is shown on drawing 33205/EMB001. The culvert through this embankment has not been able to be located yet, due to it being completely submerged. This culvert is estimated to have a diameter of 1350mm to be consistent with the upstream culvert 3. The road embankment is approximately 6m wide (at the top) by 50-60m long. It is relatively high, with an estimated height of 5.5m from the stream bed to the embankment crest. This culvert has a significant influence on flood levels affecting the existing disposal site while the road embankment acts as a dam, affecting stream flow patterns and ecology. The embankment itself was heavily overgrown and had been subject to fly tipping, but this has recently been cleared, with all debris, waste and vegetation removed.

The stream bed is very flat through this area, with significant water ponding both upstream and downstream of the culvert. This means it will be challenging to remove the bottom section of embankment within the stream bed itself.

Geotechnical investigation of this embankment found that the majority of the fill material appears to be controlled fill, likely borrowed from a nearby source. The exception was fill material, containing minor (ETP05), trace (ETP06) and abundant (ETP07) construction debris including concrete, bricks, metal and wire in 0.6-1.0m layers.

Embankment fill testing for contamination found that all samples complied with site specific remedial standards. Most samples were within or slightly above background levels, although Benzo-a-pyrene equivalent (BAP) was detected in one sample at 5.4mg/kg and asbestos was detected at one location at <0.001wt %, adjacent to where an asbestos pipe was found.

Based on the above, it seems the majority of the fill embankment can be reused for backfilling within the hospital site.

14.2 METHODOLOGY

Removal of this culvert would involve the following works over an approximately 3,000m^2 area, involving total excavation volume (soil and roading materials) of 6,800m^3:

(a) Vegetation and tree removal, with trees being mulched on-site, where practical (estimated 2800m^2 area);
(b) Establishment of erosion and sediment controls; including temporary damming of stream (likely both upstream and downstream) and diversion of stream runoff by pumping around the works area.
(c) Removal of redundant road paving, basecourse and subbase material to stockpile. Reuse suitable materials on-site as backfill material and dispose of other materials off-site to appropriate processing or disposal facility.

(d) Remove road embankment (assumed soil material) to stockpile. Reuse suitable materials on-site for backfill material and dispose of excess spoil off-site to appropriate facility.
(e) Remove culvert – estimated 1350mm dia x 20-30m long and associated inlet/outlet structures.
(f) Trim stream banks to tie in with existing stream profile (3000m^2).
(g) Place clean topsoil along stream batters – estimated 100-150mm thick and cover with biodegradable coir matting or similar.
(h) Grass and/or plant upper stream banks (estimated 1500m^2) and plant lower stream banks (estimated 1500m^2).
(i) Remove temporary dams and erosion/sediment controls.

These works are shown on the attached plans 33205/EMB001-003 and are explained in more detail in the separate ESCP. Any stream works must comply with the Fish Management Plan (separate document).

15 WWTP WORKS AND WORKS IN OR NEAR WETLAND AREAS

Demolition related works within wetland areas or within a 10m buffer of wetlands are described in this section, including the proposed works methodology. This includes all remaining WWTP demolition works, as the majority of these are located in or near the north-eastern wetland on the site.

15.1 NORTH-WESTERN WETLAND

Works in the north-western (NW) wetland comprise the following:

(a) Removal of an above ground wastewater reticulation network comprising 150-160mm diameter pipework, with concrete supports and thrust blocks at regular intervals.
(b) Removal of a below ground electrical supply cable, that runs to sub-station S7. This is likely to be a 11kV line and may be either direct buried or ducted in steel pipes. Site investigations found that most electrical pipes were on average 0.9m deep.
(c) Removal of the garage associated with the Doctor’s Flats (Building B76).

15.1.1 Wastewater Pipeline

The extent of the wastewater pipeline within the NW wetland is shown in Figures 14 and 15 below.

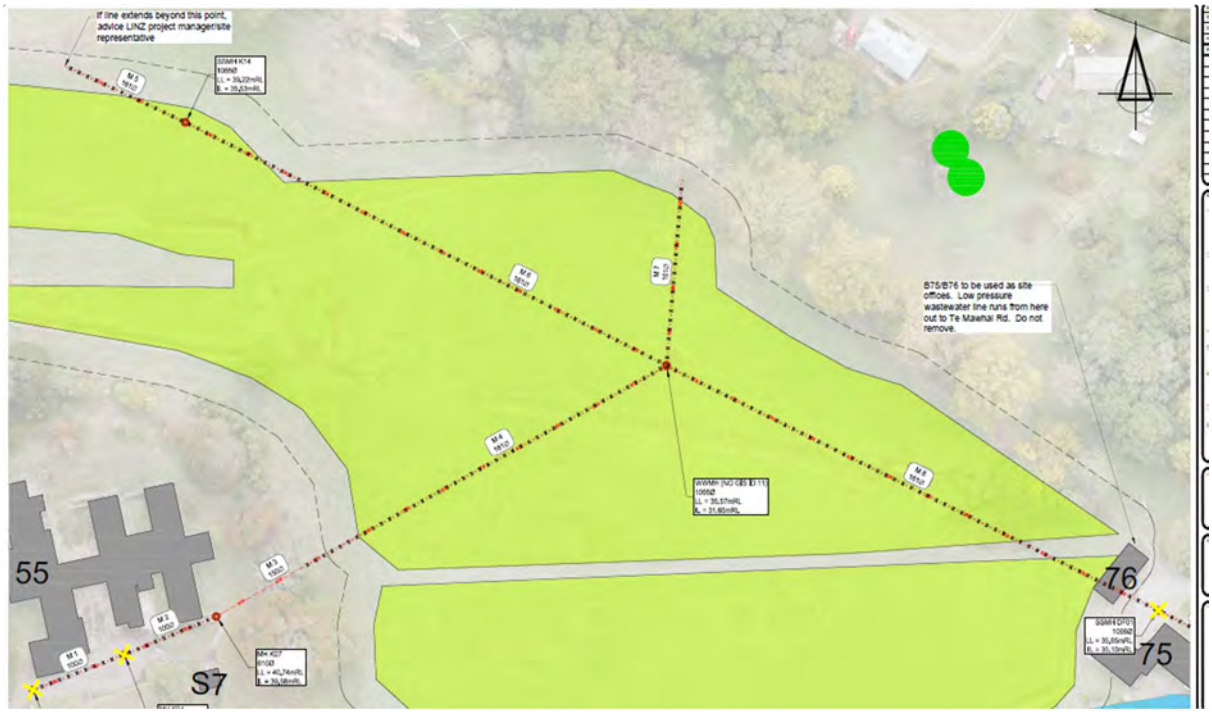


Figure 14: Above ground wastewater lines through NW wetland area

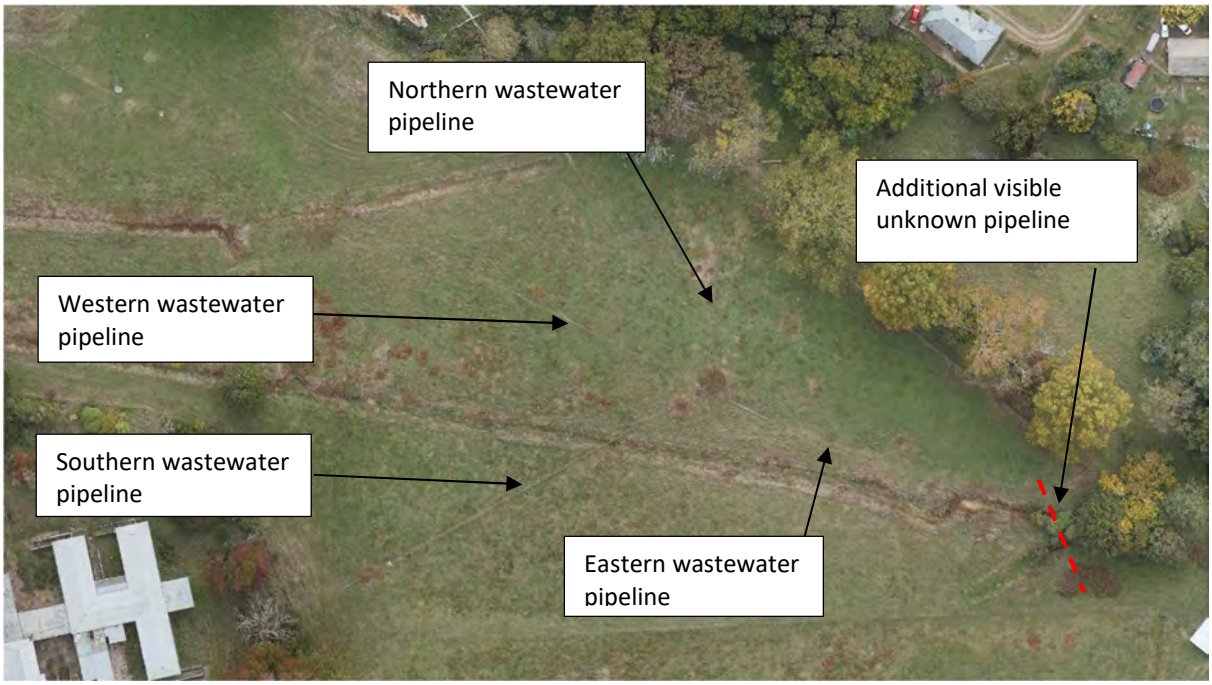


Figure 15: Visible wastewater lines in wetland area

GIS imagery (Figure 15) shows that this pipeline (approx. 150-190mm diameter) is generally above ground, with some areas covered by vegetation.

A site investigation of this pipeline network found it has a variety of supporting structures. Soil disturbance calculations and representative photographs are included in Appendix B. Site findings are summarised below.

The pipe supports on the southern pipeline comprise metal footings (approximately 860mm in length) and are spaced at 3m intervals. These extend into a concrete foundation which is approximately 1000mm (width)

and 1200mm (length), and is embedded approximately 200mm into the ground in this area, based on site measurements.

The pipe supports of the southern pipeline on the northern side of the waterway comprise of concrete piles that are at 3m intervals. These range from 200 – 450mm (width) and 200 – 450mm (height). They are embedded approximately 200mm bgl. Two concrete chambers also encase the pipeline in this area. One measures 500mm (width), 1040mm (length) and 360mm (height). The second measures 540mm (width), 640mm (length) and 340mm (height). Both are embedded bgl by approximately 200mm.

The remaining pipelines are generally located on a concrete slab foundation which is approximately 500mm (width) and 420mm (height) throughout the extent of the pipeline. The embedment of the concrete foundation varies across the extent of the pipeline, ranging from 150mm bgl to the entire foundation below ground level. Some parts of the western and eastern pipelines are buried, while one section of the eastern pipeline is encased in concrete – this concrete chamber extends along the eastern pipeline approximately 17m, measuring 450mm (width) and 280mm (height). The concrete chamber is embedded an additional 400mm into the ground.

At the junction of all four sections of pipeline, the pipes connect into a concrete chamber which is approximately 1220mm (width), 1520mm (length) and 600mm (height). The chamber is embedded an additional 400mm bgl.

An additional pipeline that was not identified in the GIS imagery was observed during the site walkover. This was located within the eastern portion of the wetland, running under the eastern wastewater pipe across the waterway. It is not visible above ground throughout the remainder of the wetland, and it is unknown where it extends to, or whether it is still live. Checks of other services plans do not show any pipe in this location.

Pipe supports have been grouped into a number of categories and are illustrated on drawing 33205/2011.

These pipes will be removed using the following methodology:

- These works will be done during an extended summer dry period to minimise the potential for damage to the wetland area.
- A small excavator (8T or 13T) will travel on swamp mats placed along the route of the pipeline. This will remove the pipe in small sections and it will then be transported by the excavator or a small truck (4W or 6W) or similar to a storage area for processing either for recycling of disposal.
- The pipe supports will be lifted out by the excavator and transferred by the same truck to the storage area for processing for recycling or disposal.
- This process will create an estimated 53m^3 void volume, typically 0.2-0.4m deep. These voids will be backfilled with topsoil, that will be placed and tamped down, followed by reseeding/replanting with appropriate grass/plants to match the vegetation in the wetland area.
- The swamp mats will be removed on completion of the works and any damaged vegetation areas reinstated.

15.1.2 Power Cabling

The length of power cabling through the wetland area is approximately 210m long, as shown in Figure 16 below. There is also a small section of overhead power cabling that passes through the southern tip of the wetland.

These pipes will be removed using the following methodology:

- These works will be done during an extended summer dry period to minimise the potential for damage to the wetland area.
- A small excavator (8T or 13T) will travel on swamp mats placed along the route of the cabling. The cable will be exposed at each end and then pulled out by excavator. The cabling will be cut into suitable lengths for transport and transferred by a small truck to the storage area for processing for recycling or disposal.
- This process will create a narrow trench where the cable has come out of the ground. Any displaced soil from the trench will be placed back into it and the trench topped up with topsoil and tamped down, followed by reseeding/replanting with appropriate grass/plants to match the vegetation in the wetland area.
- The swamp mats will be removed on completion of the works and any damaged vegetation areas reinstated.

The overhead power cable can be removed without touching the wetland area.

Figure 16: Extent of below ground power cable and above ground power cable in wetland area.

15.1.3 Building 76

Building 76 is shown as being located within the 10m wetland buffer. This is the garage to the Doctor's Flats. Building information indicates this building is approximately 24m^2 in area and has a "concrete plinth with post brackets" footing. Estimated ground disturbance for building footings removal is approximately 7m^3. These will be removed and reinstated with soil.

15.2 NORTH-EASTERN WETLAND - WWTP AREA

15.2.1 Further WWTP Demolition Works

The WWTP was decommissioned several years ago and has already been partially demolished.

The WWTP, pre-demolition, is shown below in Figure 17.

Figure 17: Former WWTP Pre-decommissioning

The following items have been decommissioned and removed:

- Drying beds
- Site office
- Imhoff Tank
- Humus Tank
- Chemical Store
- Shed
- Dry well and chlorine store

A new wastewater pump station has been installed in the north-east part of the compound. This comprises a number of inground tanks and chambers, including the pump station, set into a concrete pad, and an above ground control panel. This system is shown below in Figures 18 and 19.

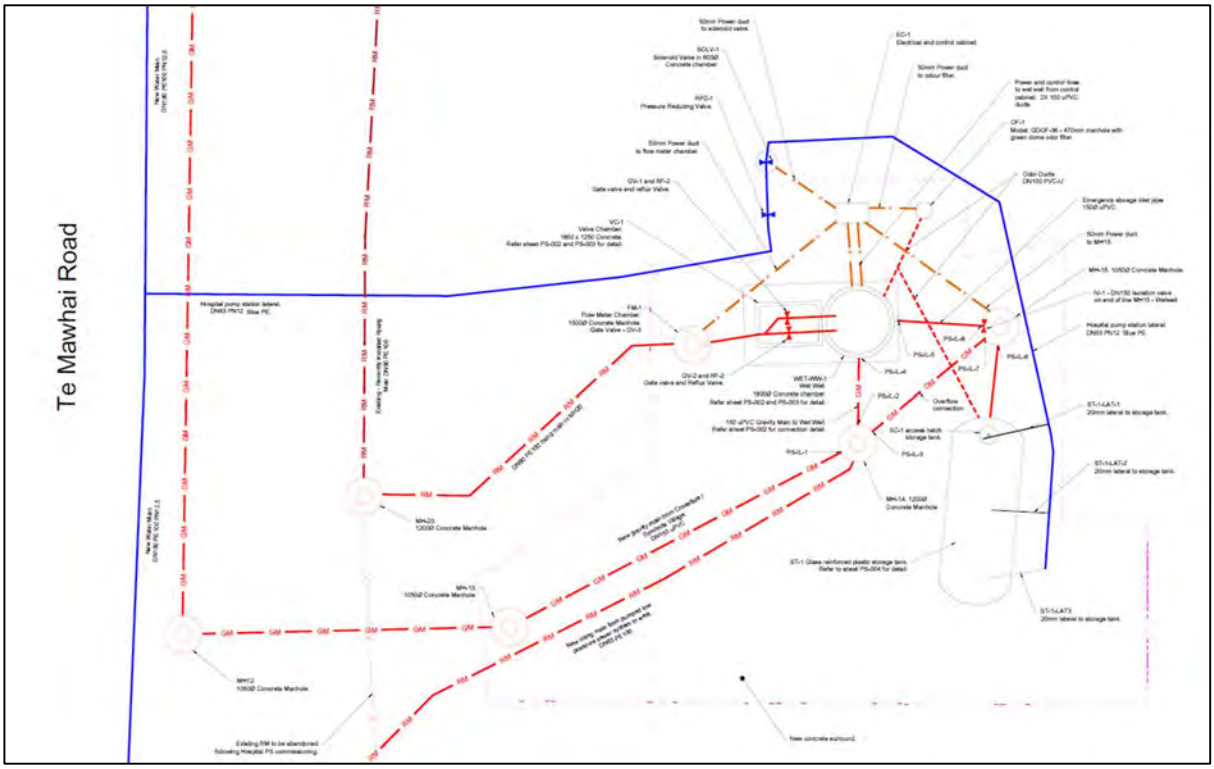


Figure 18: New Wastewater Pump Station Asbuilt Drawing

Figure 19: New Wastewater Pump Station (in ground tanks and chambers under concrete pad)

The WWPS system, including the concrete pad, needs to be protected from damage during further proposed demolition works in this area (item 1 in attached drawing 33205/2010).

When the WWPS became operational, an existing section of wastewater rising and gravity mains from MH20 to the end of the wastewater line (MH23) was abandoned, as shown in Figure 20. This work comprises three DN150 PVC gravity pipes of total length around 67m, with three associated wastewater manholes, and a short section of 380OD stormwater pipe as shown in Figure 20. All of this pipework is less than 800mm deep, except the first 18m of wastewater pipe from MH23 towards MH22.

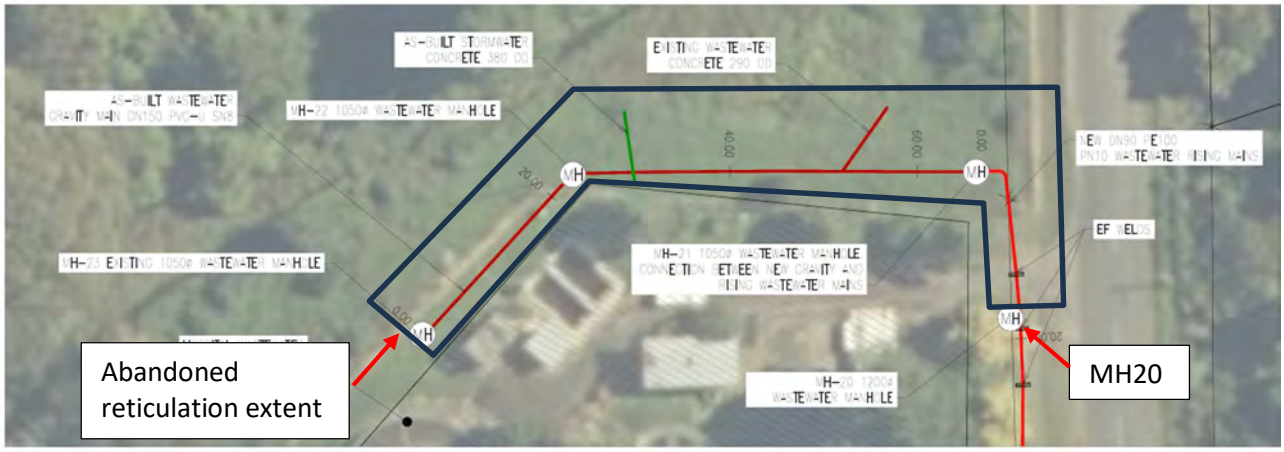


Figure 20: Abandoned wastewater line and MHs (item 13)

The following additional demolition works are to be undertaken in the WWTP compound area as part of the hospital demolition works (refer drawing 33205/2010):

- Item 2: Remove flow meter and associated concrete pad.
- Item 3: Remove redundant UV treatment system. LINZ want this to be salvaged for reuse elsewhere. Soil sampling of the WWTP area found soil near this system had slightly elevated arsenic concentration (15mg/kg) exceeding the site-specific managed standard. This will be remediated as discussed in the separate RAP.
- Item 4: Remove outfall pipe.
- Item 5: Remove shallow retaining wall and steps; regrade higher ground behind retaining wall to tie in with natural ground on lower side of retaining wall.
- Item 6: Remove edging around former humus tank.
- Item 7: Remove trickling filter and stone media. The stone media is suitable for reuse, but may need cleaning first, as it is likely to be caked with dead, dried slime material.
- Item 8: Remove grit chamber on wastewater inlet line.
- Item 9: Remove inlet wastewater pipe strapped to footbridge. Trace at each end and seal off with concrete once pipe depth reaches 800mm.
- Item 10: Remove footbridge.
- Item 11: Remove any associated ancillary cabling/ducts (e.g. electrical controls, former monitoring cables, etc. from footbridge).
- Item 12: Relocate fence to reduce compound size. LINZ to confirm extent.
- Item 13: Remove wastewater pipes down to 800mm depth out to the boundary with the road reserve and remove the stormwater pipe and associated three WWMHs shown in Figure 20. Cap the line at the road reserve boundary and at each end of the wastewater pipe greater than 800mm depth from MH23 to MH22.

These items are shown on the attached plan and in the following photos.

Figure 21: Former flow meter area

Figure 22: Redundant UV Treatment Plant

Figure 23: Outfall Pipe

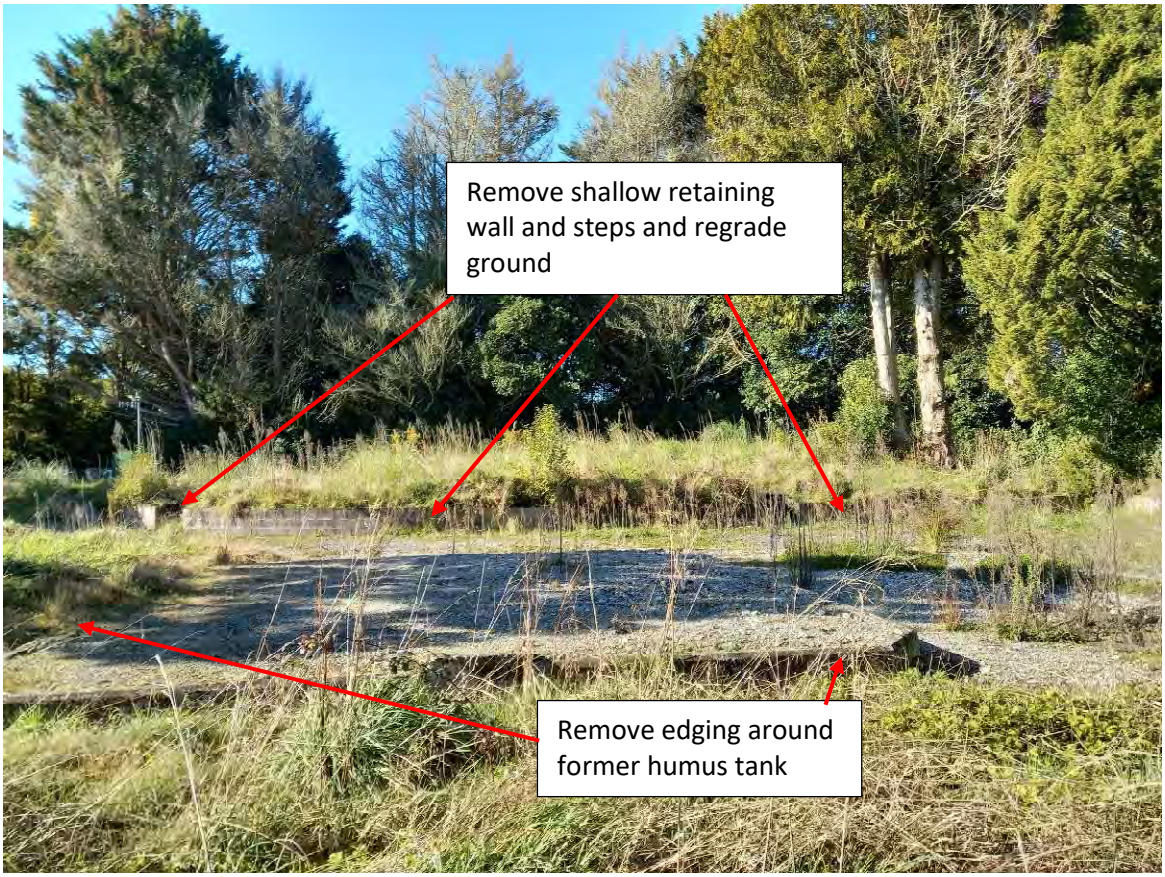


Figure 24: Remove shallow retaining wall and steps and regrade ground (item 5); remove edging around former humus tank and regrade ground (item 6)

Figure 25: Remove trickling filter (circular tank in background) and stone media (item 7).

Figure 26: Remove grit chamber on wastewater inlet line, wastewater inlet pipe strapped to footbridge, any ancillary cables/ducting, and footbridge itself (items 8-11)

Figure 27: Closeup of grit chamber showing concrete blockwork construction and grated metal lid (largely hidden under vegetation)

Figure 28: Inside of grit chamber

Figure 29: Relocate perimeter fence to reduce compound size. LINZ to confirm extent

15.2.2 WWTP Works within or near NE Wetland

Of these works, the following involve works either within the wetland or within the wetland 10m buffer:

(a) Item 4 – outfall pipe removal (~7m within wetland buffer zone)
(b) Item 6 – removing edging around former humus tank (within buffer)
(c) Item 7 – removing trickling filter and media (partly in buffer area)
(d) Items 8-11 – removing grit chamber, wastewater inlet pipe and footbridge (within wetland).
(e) Item 13: Removing wastewater pipes down to 800mm depth out to the boundary with the road reserve and remove the short length of 380OD stormwater pipe and associated three WWMHs (partly within wetland buffer area).

Item 4: Outfall pipe removal

This pipe would be removed using the following methodology:

- These works will be done during an extended summer dry period to minimise the potential for damage to the wetland area.
- A small excavator (8T or 13T) will travel on swamp mats placed along the route of the pipeline. This will remove the pipe in small sections and it will then be transported by the excavator or a small truck (4W or 6W) to a storage area for processing either for recycling or disposal.
- This process will involve estimated earthworks of 7.2m^3 (30m length x 300mm wide trench x maximum 0.8m depth), of which approximately 1.7m^3 will be within the wetland buffer zone. Soil disturbed during pipe removal would be reinstated within the trench (subsoils first and then topsoil) and the trench would be topped up with topsoil that will be placed and then tamped down, followed by reseeding/replanting with appropriate grass/plants to match the vegetation in the wetland area.
- The swamp mats will be removed on completion of the works and any damaged vegetation areas reinstated.

Item 6: Removing edging around the humus tank

This involves removing some edging around the former humus tank and then regrading the retaining soil to tie in with the adjacent ground. All the soil disturbed is inferred to be bedding for the former humus tank and hence there should be minimal if any disturbance of the underlying natural ground.

Item 7: Removing trickling filter and media

This involves removing the above ground trickling filter tank and its media and reinstating this area. There is expected to be minor disturbance of the underlying natural ground. Only approximately 10% of the trickling filter area is located within the wetland 10m buffer zone and these works are not expected to have any impact on the wetland.

Items 8-11: Removing Grit Chamber, Wastewater Inlet Pipe, Ancillary Cabling and Footbridge

These works are entirely located within the wetland area. They would be undertaken, working backwards from the grit chamber to the WWTP compound. They would involve the following:

- Remove the grit chamber – concrete block construction with grated metal lid. This will have to be done manually working from the footbridge, as it is not possible for an excavator to access this area.
- Remove the wastewater inlet pipes strapped to footbridge and trace back at each end. Stop at 0.8m depth (likely stream bank) and plug pipe with concrete.
- Remove any ancillary cabling.
- Remove footbridge, including the timber support posts – this would likely be done with a large excavator, working from the WWTP side.
- The wastewater inlet pipe and any ancillary cabling currently strapped to the footbridge will be removed by hand and/or small excavator when possible. When access is available for an excavator, swamp matting will be used.

Item 13: Removing wastewater pipes down to 800mm depth out to the boundary with the road reserve and remove the short length of 380OD stormwater pipe and associated three WWMHs.

Approximately 18m of the wastewater line, one WWMH and the short length of stormwater pipe are located within the wetland buffer area. The same methodology would be used for these works as for the outfall removal. This process will involve estimated earthworks of 22m^3 (57m length WW line x 300mm wide trench x maximum 0.8m depth + 7.5m long SW line x 600mm wide trench x maximum 0.8m depth + 3 1050dia MHs to maximum 1m depth), of which approximately 9m^3 will be within the wetland buffer zone.

16 PIPE LINING WORKS

The upgradient rural catchment areas feeding into the trunk stormwater system are shown on drawing 33205/PL001, while the trunk system itself is shown on drawing 33205/PL002. The pink highlighted pipes are to remain and be lined. This system has 5 inlets, receiving runoff from off-site, upgradient rural areas. It also drains some flood detention basins within the site (the blue shaded areas) via open grates which will be retained. It discharges to a tributary of the Wharekōrino Stream at Location O1. A comprehensive CCTV

survey was undertaken of this system, as shown in drawing 33205/PL003. This found that the lower portion of this system was "drowned", with this either due to partial blockage or to backwater effects from the main stream.

Stormwater non-trunk pipe removal and capping works will be undertaken separately as part of site demolition works and in advance of stormwater trunk pipe lining works, so that all piped inlets into the trunk main system will be removed or capped, except for those pipes draining flood detention areas.

The trunk pipe system comprises the following:

- 1170m x 900dia pipe
- 143m x 825dia pipe
- 292m x 750dia pipe
- 163m x 675dia pipe

Review of the CCTV shows limited sections within these pipe lengths that are damaged and require lining. Hence, it is proposed to "patch" these lines at these localised locations rather than line the entire line. The CCTV footage for the trunk system is included in Appendix C. This also includes a summary of the identified sections of pipe requiring lining.

The works are likely to take around 3-6 weeks and would be conducted during summer – likely January-March to take advantage of the typically driest time of year. Given the size of the contributing catchments and photos/videos of flow in pipes from the CCTV survey, it is considered unlikely these works can be done at a time of no flow (i.e. there is always likely to be some flow through pipes). Hence, temporary stream diversions will be required to facilitate the works. A proposed methodology for these works is set out in the separate Erosion and Sediment Control Plan.

17 HEALTH & SAFETY

17.1 GENERAL

The Contractor has a duty to conduct activities in such a manner so that the health and safety of their employees carrying out construction works are safeguarded to the best of their ability. The Contractor is expected to include the following in their Health and Safety Plan:

(i) Commitment

- Commitment to active management of health and safety
- Set clear goals and areas of responsibility

(ii) Planning

- Comprehensive hazard identification
- Hazard assessment
- Determination of appropriate control measures and management strategies

(iii) Action

Control measures and management strategies implemented including:

- Information
- Training and supervision
- Workplace/worker monitoring

- Emergency procedures
- Accident reporting and investigation

(iv) Application

- The Health and Safety Plan applies to principals, employees, contractors, sub-contractors and all land modification, civil and construction works being carried out on the development.

17.2 SITE SPECIFIC SAFETY PLANS (SSSPS) & JOB SAFETY ANALYSES (JSAS)

All primary contractors engaged by LINZ or subcontractors engaged by primary contractors will be required to provide SSSPs & JSAs for the tasks they are engaged for. These documents will be reviewed by LINZ or relevant project staff. No work may commence until each contractor has received a certified SSSP and/or JSA. These documents need to address the following site hazards and any additional hazards identified by the contractor.

Table 12: Assessment of Site Hazards

No	Hazard
1	General – remote work site
2	Public entering work site area (including after hours)
3	Injury from moving machinery
4	Injury from falling objects/insecure loads
5	Injury from falling from height
6	Trip hazards
7	Injury from incorrect use or overuse of manual equipment and lifting loads
8	Injury from animals/insects (grazing animals in vicinity, bee hives on site)
9	Sun exposure
10	Noise
11	Eye damage
12	Deep excavations
13	Steep contours, working on slopes – tripping, slipping and falling
14	Exposure to bird guano in buildings
15	Physical hazards associated with demolishing buildings (to be broken down into sub-categories by contractor)
16	Exposure to asbestos
17	Exposure to lead paint
18	Exposure to contaminated soils
19	Working in close proximity to watercourse
20	Tree felling

17.3 HAZARDOUS SUBSTANCES MANAGEMENT

Hazardous substances to be managed include the following:

- Asbestos in building structures and some pipes;
- Lead paint contaminated building materials;
- Guano (bird poo) in buildings;

- Contaminated dust;
- Hazardous chemicals, stored in various buildings;
- Buried historical demolition debris;
- Coal tar in some roading materials;
- Contaminated soil (refer RAP).

17.3.1 Asbestos Contaminated Building Materials (ACM)

All asbestos contaminated building materials (ACM) must be removed in accordance with the Approved Code of Practice (WorkSafe) (2016), Health and Safety at Work (Asbestos) Regulations (2016) and the BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil (2017).

Each contractor involved in removal of ACM must provide evidence of certification to remove Class B and Class A building materials. Furthermore, each contractor involved in the asbestos containing building material removal must provide an Asbestos Removal Control Plan (ARCP), covering their specific area of work. These ARCPs will be reviewed by the project SQEP and LINZ.

17.3.2 Asbestos Pipes

All asbestos pipe removals will be undertaken under Class B licensed removal work controls. All contractors involved in these works will need to provide ARCPs covering their removal areas and methods to the SQEPs and LINZ for review.

Prior to any removal works beginning, WorkSafe must be notified as these works will be licensed works.

All contractors must be wearing at minimum type 5/6 coveralls, gloves, steel capped gumboots and half or full mask respirators with P3 filters.

The age of asbestos pipes onsite is 60-80+ years old. Given this, the condition of these pipes is inferred to be highly weathered. Contractors should move to Full face masks where pipes are significantly damaged or in friable condition during removals.

Particular care shall be taken when separating pipe sections to minimise potential to cause cross-contamination of the adjacent soil.

17.3.3 Lead Paint Contaminated Building Materials

All contractors undertaking any management or remedial works involving materials contaminated with lead-based paint (LBP), or suspected to be contaminated with lead-based paint, must be familiar with and follow the requirements of the following documents:

(a) AS/NZS 4361.2:2017 Guide to hazardous paint management Part 2: Lead paint in residential, public, and commercial buildings;
(b) Guidelines for the management of lead-based paint – WorkSafe; and
(c) Toitū Te Whenua Land Information New Zealand 'Health and Safety Guidelines – Working with Lead-based Paints'.

It should be noted, lead paint contaminated building materials are to be removed intact (where possible) with the lead paint attached. These will either be removed for reuse/recycling purposes or disposed of to an appropriate landfill. These materials may be divided into the following sub-categories as shown in Table 13 below, with appropriate disposal/reuse options provided:

Table 13: Building Material Disposal/Reuse Options

Building Material	Disposal/Reuse Options
Wooden Weatherboard	• Chipped and used as biofuel; • Salvaged for reuse (remove LBP following LINZ Guidelines), dispose of LBP after stripping; • Disposed of at licensed landfill with LBP intact.
Structural Timber	
Fit out material – GIB/Render	Removal of substrate under correct controls or demolition and disposal to appropriate landfill facility
Concrete, Cement Blocks and Bricks	• If painted, dispose to licensed landfill with LBP intact; • If removal is practical to allow for reuse, of cement/cement blocks, LBP to be removed (following LINZ LBP Guidelines)
ACM Fibre Cement	Removed under licensed asbestos removal works controls, disposed of at licensed landfill as asbestos waste.

All contractors working with or in the vicinity of lead-based paint contaminated building material removal must be supplied with and wear the following PPE/RPE:

- P3 half or full-face respirator or powered air purifying respirator system;
- Type 5 disposal coveralls;
- Laceless boots able to be decontaminated or disposable boot covers; and
- Disposable nitrile gloves or similar.

17.3.4 Guano in Buildings

There is a significant amount of Guano (bird poo) throughout most structures within the Hospital site. LINZ have advised prior to any remediation and deconstruction/demolition taking place, a thorough environmental clean to remove the guano and other debris inside buildings will be completed. The guano may be mixed with mulch to make compost on-site, or taken to an off-site composting facility, subject to checking it is free of any cross-contamination (especially from lead paint and asbestos), or else taken to an appropriate disposal facility.

17.3.5 Contaminated Dust

There is potential for contaminated dust to be generated from various sources during the works.

- Asbestos dust: This should be managed through application of water and polymer-based solutions. Perimeter air monitoring and likely individual exposure monitoring around any Class A areas will also be needed. Particular care will be needed around building HALOS, where dust in the subfloor space may be mobilised from site works (e.g. vibration). These areas should be discussed with the LINZ Project

Manager or their representative and the Asbestos Removal Supervisor prior to starting work in these areas.

- Lead paint in soil dust: this will be managed through keeping any such materials damp.
- Other heavy metals of concern in soil: these should be removed when any contaminated building HALO areas are excavated, so water suppression should suffice.

17.3.6 Buried Historical Demolition Debris

During February 2024 site investigation work, some historical demolition debris, including some asbestos sheet fragments, filament bulbs, burnt material, terracotta/earthware pipes, etc. was found in rare/minor/small quantities at variable depths ranging from near surface to up to 1.2m on the northern sides of Buildings B02 (northern side of southern arm) and B26 (directly north in carpark area). A review of historical aerial photographs identified that some buildings, or parts of buildings, have been demolished in these areas in the past. All of these areas have been investigated as part of intrusive investigations by AECOM/GHD with no significant demolition debris or contaminated soil found. Nevertheless, some fill and minor demolition debris may be found in these areas during associated demolition works, particularly during the removal of building footings/foundations and any buried services. This may also apply to the industrial area, where some discoloured fill was encountered. The extent of the historical demolition works is shown in Figure 30. The contractor should be aware of this, and advise LINZ or their nominated representative, if such fill/materials are found. Accidental discovery protocols will be triggered, if the find is significant (e.g. asbestos fragments, concentrated pockets of demolition debris.)

Figure 30: Extent of Historical Building Demolition Works

17.3.7 Coal Tar Roading Materials

Coal tar roading materials present on-site have been identified in the 33205 CT drawing series. These materials will be removed and disposed of off-site as part of the demolition works, as explained in section 12.1 of this report. This will include some basecourse and subbase at the locations identified in section 12.1 and the tables in these drawings.

The associated PAH contamination is tightly bound to the road materials and is generally considered a low human health risk. Standard PPE for disturbing and removing contaminated materials should apply to the removal of coal tar roading materials.

17.3.8 Hazardous Substances

Some buildings that confirmed or potential hazardous substances are listed in Table 14 below, together with their current known status.

Table 14: Potential and/or Confirmed Hazardous Materials Present Onsite and Current Status

Source	Status
At least four boilers on-site	May still contain coal ash
Incinerator in shed 8	May still contain ash
4,500L of chemicals in swimming pool shed (from AECOM building hazard register (2018))	Unknown if these chemicals (chlorine and hydrochloric acid) have been removed from the site.
Fly tipping and whiteware are referred to as being present at three different locations across the Site (including ashes and ACM).	Relatively small volumes; some items may be recyclable; expect residual materials can be disposed to Class 1 landfill but needs confirming.
8 electricity substations – transformers	May still contain PCBs.

These materials will need to be handled and disposed of appropriately in accordance with EPA/WorkSafe requirements, with disposal receipts provided to LINZ.

18 SITE SUPERVISION

18.1 GENERAL

The demolition works will be undertaken under a panel contract based on NZS3910:2013. Site observation will involve regular inspections by LINZ or their nominated representative, as well as a Contaminated Land Specialist (SQEP) and independent WorkSafe Licensed Asbestos Assessor.

The proposed demolition works involve a wide range of activities that affect different areas and involve soil disturbance to variable depths. Site supervision will include the following:

- Initial meeting;

- Pre-start meeting, following the installation of all erosion and sediment controls prior to any soil disturbance activities commencing.
- Regular site inspections during the works to check the contractor is following the DDRMP.
- Fortnightly progress meetings.
- Site inspection (call-out basis) if the contractor encounters any specific issues that cannot be resolved by phone or email.

18.2 KEY PERSONNEL CONTACT DETAILS

Key personnel contact details are list below.

Table 15: Key Personnel Contact Details

Position	Name	Email	Mobile
LINZ Project Manager	Bryan Daly	bdaly@linz.govt.nz	027 264 6885
LINZ Site Representative	TBC		
LINZ Site Security	Mark Collins		021 183 6985
Cultural Monitor/Kaitiaki	TBC		
Contractor Project Manager	TBC		
Contractor Site Supervisor	TBC		
Asbestos Licensed Assessor	TBC		
SQEP	TBC		

19 EROSION AND SEDIMENT CONTROL

Activities onsite will involve various earthworks and land disturbance activities that have the potential for adverse environmental effects. Egress of silt and sediment in stormwater to nearby water bodies is to be minimised due to the presence of contaminants in soil. These contaminants bind to soil particles and hence good silt and sediment control is required to ensure contaminants are not released into the wider environment.

All sediment control works are to be operational prior to any other works commencing on site and shall remain in place until development works are complete and measures are in place to minimise erosion. All erosion and sediment controls shall comply with the Waikato Regional Council document 'Erosion & Sediment Control Guidelines for Soil Disturbing Activities' dated January 2009, technical report number No.2009/02, updated in 2014, with current information on specific items found online (https://waikatoregion.govt.nz/services/publications/tr200902/).

Erosion and sediment control requirements are set out in the separate Erosion and Sediment Control Plan (ESCP), which should be referred to for further details.

20 DUST, NOISE AND VIBRATION

20.1 DUST

Dust control aims to prevent or reduce the movement of dust from disturbed soil surfaces that may create nuisance, health hazards, traffic safety problems and/or off-site damage and discharge to the environment.

The activities that will take place at the site which may generate discharges to the air are;

- Deconstruction and demolition;
- Earthworks;
- Vehicle and plant movements;
- Bulk materials handling and processing, including crushing of some hard materials (e.g. concrete);
- Wind generated dust from dry exposed surfaces such as stockpiles, roads and impervious surfaces.

The major factors that influence dust emissions from surfaces are;

- Wind speed across the surface - the critical wind speed for pick up is 5m/s, while dust pickup increases rapidly for wind speed above 10m/s;
- The percentage of fine particles in the material on the surface;
- The area of exposed surface;
- Disturbances such as traffic, demolition, excavation, loading and unloading of materials;
- The height of the source above the surrounding ground level.

Standard dust control measures will be used to control dust at the site and soil disturbance measures will be suspended if dry and windy conditions prevail, or alternatively the disturbance area shall be watered and maintained in a slightly moist state to minimise dust generation.

Dust management during the excavation works and stockpiling will generally comply with the procedures set out in *Good Practice Guide for Assessing and Managing Dust* (Ministry for the Environment, 2016).

Dust will be controlled at the works site using appropriate measures from the following toolbox:

- Minimising the extent of the exposed area at any one time.
- Limiting traffic to specified construction access roads and minimising travel distances by optimising site layout.
- Controlling vehicle speeds.
- Maintaining road surfaces.
- Minimising tracking of dirt on vehicle wheels onto paved surfaces.
- Minimising drop heights when loading and unloading vehicles.
- Limiting stockpile heights.
- Providing shelter from the wind for stockpiles.
- Consolidating and sealing off loose surface material.
- Progressive placement of hardfill (sub-basecourse) for hardstand areas and mulching and grass establishment, as works are completed in grassed/vegetated areas.
- Use of water carts to dampen exposed areas.
- Use of soil binders to form a cohesive membrane or protective crust that reduces windblown dust generation (contingency measure).
- Use of textiles as temporary covers on stockpiles or partially completed batter slopes, or as permanent cover (e.g. vegetation promotion blanket) on completed areas (contingency measure).

Water for water cart usage will be sourced from a separate supply to be provided to a central location on-site by LINZ. Water usage will be carefully monitored to avoid overwatering, which may result in subsequent runoff of the dust laden water.

Any materials that are stockpiled onsite should be kept damp through water application. If stockpiled materials are expected to remain onsite long-term, then a polymer-based emulsion should be considered for application, to reduce ongoing dust generation issues.

Waste oil and any hazardous substance that is not licensed as a dust suppressant under HSNO are specifically excluded from being used as a dust suppressant.

Fixed plant that may be used on site includes equipment such as crushers, shredders and other processing equipment. These are point sources of dust emissions, which will be controlled by the equipment used includes standard dust capture technology, such as cyclones, wet scrubbers, and fabric filters. There is also potential for fugitive emissions from these types of plant, which would be controlled using a combination of one or more of the following measures:

- locating the fixed plant to provide maximum separation distances between it and any sensitive receptor;
- minimising of drop heights into hoppers and loading chutes;
- sprinklers or water sprays around hoppers and other transfer points;
- hooding or enclosure of significant fugitive sources, with the emissions being ducted to bag filters or other dust control equipment; and/or
- operating the fixed plant at times when meteorological conditions are not conducive to producing large dust plumes.

Fixed dust control systems can achieve control efficiencies ranging from about 70% for cyclones, and up to 95% or more for bag filters.

20.2 NOISE

All works will be undertaken in accordance with the requirements of NZS 6803: 1999 'Acoustic – Construction Noise' and any relevant resource consent conditions. All works on the site and the use of associated heavy machinery shall be undertaken between the following hours only:

- Monday to Saturday: 7.30 am to 7.00 pm
- Sunday and Public Holidays: No work

The New Zealand Standard NZS 6803:1999 "Acoustics - Construction Noise" (NZS6803) provides comprehensive guidelines for measuring and assessing noise from both existing and proposed construction work, including activities such as maintenance and demolition. Compliance with the noise limits in NZS 6803 should ensure that noise from demolition and/or removal of underground structures is assessed and managed in accordance with regulations and to minimise disruptions to the surrounding area.

NZS 6803 provides noise limits (at 1 m from the facade of any dwellings occupied during the works) to control and manage noise. The recommended noise limits for works, with an expected duration exceeding 20 weeks, are reproduced below.

Table 16: Noise Compliance Requirements

Time of Week	Time Period	Long-term duration (more than 20 weeks)	
		LAeq, dB	LAmax, dB
Weekdays	6:30 am – 7:30 am	55	75
	7:30 am – 6:00 pm	70	85
	6:00 pm – 8:00 pm	65	80
	8:00 pm – 6:30 am	45	75
Saturdays	6:30 am – 7:30 am	45	75
	7:30 am – 6:00 pm	70	85
	6:00 pm – 8:00 pm	45	75
	8:00 pm – 6:30 am	45	75
Sundays and public holidays	6:30 am – 7:30 am	45	75
	7:30 am – 6:00 pm	55	85
	6:00 pm – 8:00 pm	45	75
	8:00 pm – 6:30 am	45	75

The nearest residence to the Hospital site is in the northern section of the site, and is approximately 25m away from the nearest infrastructure removal works (separation distances for building demolition are considerably greater). To ensure acceptable noise outcomes, the Acoustic assessment has made the following recommendations:

- Excavators no greater than 30 tonnes.
- Compaction works to be undertaken using a compaction roller no greater than 15 tonnes.
- No vibratory compaction work within 45m of any dwelling.
- Woodchipper / mulcher plant should be located more than 80m away from any dwelling.
- Consultation with occupants shall be undertaken to determine the most suitable time for chainsaw work (when the building is unoccupied) for planned tree removal using a chainsaw within 45m of any dwelling.
- Advise the immediate neighbours in writing, no less than three (3) days prior to works commencing. The written advice should include details of the location of the works, the duration of the works, a phone number for complaints and the name of the site manager.
- Complete all work as quickly as possible and control the on-time of plant when onsite.
- Where practicable, scheduling of the works closest to the neighbouring properties to avoid periods where the buildings are occupied.

It is expected that all other residences will not be affected by noise compliance issues. Similarly, the operating hours of noisy activities (e.g. hydraulic breaker and concrete crusher) would be restricted to not occur after 6pm on working days.

Noise from other activities such as loading dump trucks and dump truck movements (on the basis that they would be quieter or at a similar level than those discussed above) would be expected to either comply or be controlled to achieve compliance with the relevant noise limit 70 dB LAeq, at surrounding receivers.

20.3 VIBRATION

Any effects of vibration will be temporary and limited to the duration of construction works. The effects of vibration will be limited by following relevant measures from DIN 4150-3:1999 “Structural Vibration – Part 3 Effects of Vibration on Structures”.

21 MATERIALS MANAGEMENT

21.1 BURNING

No demolition or waste materials will be burned on-site.

21.2 VEGETATION

All suitable vegetation removed as part of the demolition works will be mulched and stockpiled for reuse on-site. The exception is any noxious plants, that shall be stockpiled separately and disposed of to landfill.

21.3 TREE PROTECTION AND REMOVAL

Larger native trees are to be protected from damage during the works wherever practicable, as shown on the project drawings, as seeds from these trees are collected and utilised for propagation in the nursery at the marae.

Vegetation and tree removal will be minimised as much as practicable. Areas where services may potentially impact vegetation are shown on the 33205 services removal plans. The purpose of these drawings is to highlight areas where closer inspection of the vegetation is required to check the nature of the vegetation pre-works and to consider what measures can be practicably undertaken to minimise or mitigate damage to the affected vegetation. In the case of the identified larger native trees, appropriate mitigation measures may include hand digging and retention of the majority of the larger roots.

Any vegetation or trees that do need to be removed or pruned/trimmed to facilitate the demolition works shall be identified in advance and removed at the same time, implementing bat management protocols. It is expected that any tree materials removed will be mulched onsite where possible. Any large tree trunks that cannot be mulched will be stockpiled for reuse.

21.4 TEMPORARY STORAGE/STOCKPILING

All materials to be reused as backfill or for topsoiling will be stockpiled in specified areas. Any temporary soil stockpiles that will be in place for more than one month shall be stabilised by mulching/seeding, as soon as practicable. Land left bare as a result of any temporary stockpiling of demolished building materials shall be stabilised by mulching/seeding, as soon as practicable and in no more than one month from when the stockpile was first generated.

Any recyclable materials that are being temporarily stored until there is sufficient volume to remove off-site shall be stored in dedicated skip bins or similar and covered in the event of heavy rain.

21.5 MACHINERY/PLANT CLEANING FOR SEED/PLANT MATTER REMOVAL

Measures will be put in place to clean machinery and plant coming onto and off site to ensure that all seed and/or plant matter has been removed. This will be done using a range of dry and wet (e.g. water blaster) cleaning methods, as appropriate.

21.6 LOADING AND TRANSPORTING CONTAMINATED MATERIALS

Trucks removing contaminated soil from site will park adjacent to the works area and be loaded directly from there by an excavator. This approach will minimise the need to stockpile the contaminated soil and speed up the removal works.

All trucks transporting contaminated soils from asbestos removal areas must be lined with polythene prior to being loaded with asbestos contaminated soils, and the polythene must be wrapped and sealed, prior to the trucks leaving the site.

All trucks transporting soils from heavy metal & hydrocarbon areas will need to check lining requirements with the receiving disposal facility. The trucks will need to be covered in any case.

No trucks shall be allowed to traverse any contaminated areas so that the potential for tracking contaminants outside of this area is minimised.

21.7 IMPORTED CLEANFILL

Any imported soil brought to the site (if required) shall be verified cleanfill, as defined in the consent conditions for the site.

TO ADD FROM CONSENT IN FINAL VERSION

Any imported fill will be supplied from an approved quarry, civil contractor, landscaping supplier or similar. Dockets should be provided specifying the source of the cleanfill, and certification provided to confirm it is cleanfill as defined above.

For non-hardfill cleanfill material, the certification shall confirm that the imported materials come from a non-HAIL site or include the results of laboratory testing to confirm the material is cleanfill as defined above.

21.8 OFF-SITE DISPOSAL

Demolition materials not otherwise recoverable and contaminated soils will be disposed off site to a consented landfill site appropriate to the material, namely Class 1 or 2 landfills, according to the WasteMINZ Technical Land Disposal Guidelines. The two most suitable Class 1 and 2 landfill sites within 100km travel distance by road from the site are the Hampton Downs regional landfill and the GRP facility at Rotawaro.

There are a number of other facilities classified as Class 3 or 4 landfills that could potentially be used for other materials, but some of these are over 100km away. The Te Kowhai facility has been identified as the nearest cleanfill.

This information was compiled in 2023 and has not updated since then. The contractor is responsible for advising what disposal sites they are proposing to use, and obtaining approval from LINZ for their use. Distance from site, in terms of minimising vehicle emissions, is a key consideration.

Table 17: Off-site Disposal Facilities

Available Sites	Operator	Landfill/Fill Class	Distance from Tokanui – one way (km)	Comments
North Waikato Regional Landfill, Hampton Downs	Envirowaste Services Ltd (ESL)	Class 1	99	Most modern, engineered landfill facility in region with capacity for 30,000,000m^3 over its lifetime.
1161 Rotowaro Rd, Glen Afton	GRP Ltd (Green Gorilla)	Class 2 & 4	85	Active. Limited to 208,000T/yr; Waste acceptance criteria (WAC) exclude asbestos and contaminated soils
205 Bedford Rd, Te Kowhai	IH Wedding & Sons (Waikato) Ltd	Class 2 & 4	50	Active, but can only accept 300m^3/d. While consent allows for accepting C&D waste, site is only accepting cleanfill now.
Riverview Rd, Huntly	Gleeson Quarries	Class 3 & 4	40	Going through consent appeal; may not be operational by mid-2024
225 Ridge Rd, Bombay	Ridge Road Quarry Limited	Class 3 & 4	114	Active
Ridge Rd, Bombay (Envirofill South)	ESL	Class 3 & 4	114	Active

The responsibility for ensuring that demolition materials are appropriately disposed of in full compliance with resource consents of the receiving site and that any material specific Health & safety requirements (ACMs, contaminated soils) are met lies with the Contractor.

21.9 RECORD KEEPING

The Contractor shall keep full records of all materials imported to site and reused, recycled or disposed of off-site including:

- Quantity of material in tonnes or m^3 as appropriate (dockets/receipts)
- Type of material
- Source or destination site
- Date of delivery/removal
- Location on Tokanui site where material sourced from
- Supporting photos
- Proof of compliance with cleanfill criteria for materials imported to site.

This information shall be provided to LINZ or their representative on a monthly or milestone basis.

LINZ will undertake independent audits of site operations to verify that consent requirements are being met.

21.10 ACCIDENTAL DISCOVERY PROTOCOLS

If during demolition and/or remediation earthworks, any contractor encounters any visually stained or odorous soil, ACM, rubbish/building debris or other hazardous materials that appear to be contaminated that has not previously been identified, they shall stop work within a 5m radius of that area and advise the project SQEP who will then visit the site to determine the nature and extent of the potentially contaminated soil. This is likely to involve the collection of soil samples and laboratory analysis, followed by disposal off-site to an appropriate disposal facility. Subject to the approval of the Project SQEP, the affected material may be relocated to a secure stockpile and covered with tarpaulins or placed in covered bins, while waiting for the laboratory results.

Work shall not recommence within this area unless authorised by the project manager or nominated LINZ representative.

Discovery protocols for archaeological finds are detailed in Section 6.2 above.

22 TRAFFIC MANAGEMENT

22.1 GENERAL

It is anticipated that over the duration of the demolition works, there will be a significant number of total vehicle movements, but the actual number of vehicles per day will be relatively low. LINZ are in the process of undertaking an Integrated Transport Assessment and submitting this to Waipā District Council for review and approval. Initial discussions with Waipā District Council (Paul Strange) have indicated that as the site has reasonable entrances therefore the assessment and associated approval should be straight forward. Any additional recommendations from the ITA or Council review/approval process, not covered in this section, will be added to a revised version of this plan.

22.2 SITE SPEED LIMIT

The site speed limit is set at 15 km/hr maximum.

Exceedance of this speed limit shall be considered an incident, and may result in, at LINZ's discretion, the temporary or permanent removal of the driver from the site.

22.3 VEHICLE ACCESS

Site access shall be via a single point, being the main entrance off Te Mawhai Road (located at 146 Te Mawhai Road, Tokanui). LINZ will establish a site access pass system that positively identifies all employees of Main Contractors, Minor Contractors, Sub-contractors, LINZ and their representatives, who have been authorised to undertake work on the site and have undertaken a formal site induction (in addition to any other induction requirements of their employer or a contractor). LINZ, at their discretion, may allow visitors to enter the site, when escorted by an authorised person.

22.4 PUBLIC ROAD DILAPIDATION SURVEY

Prior to works beginning at the site, a dilapidation survey for the main road 500m either side of the main site entrance and at the Te Mawhai Road intersection with SH3 will be undertaken by a contractor engaged directly by LINZ or the Main Contractor.

The condition of the main road 500m either side of the main entrance must be maintained by LINZ or the Main Contractor for the duration of the works.

The dilapidation survey will be repeated at the end of the works, with the Main Contractor responsible for repairing any damage.

22.5 CONTRACTOR PARKING

All vehicles not directly used in the demolition works shall be required to park in the general contractors parking area, this area is shown on drawing 33205/G02.

22.6 TRAFFIC MANAGEMENT PLANNING AND CONTROL (ON-SITE)

All contractors and other person(s) involved in demolition works at the site shall be responsible for maintaining at all times access along the internal road corridors.

Should a contractor's activities result in an access corridor being restricted in any way, that contractor shall be responsible for the development and implementation of a Traffic Management Plan in accordance with the NZTA/Transit NZ "Code of Practice for Temporary Traffic Management" (CoPTTM) Fourth Edition, Amendment 3, November 2018. Such Traffic Management Plans shall be submitted and accepted by LINZ's Representative prior to restricting access.

22.7 TRAFFIC MANAGEMENT PLANNING AND CONTROL (OFF-SITE)

Subject to the requirements of the ITA and any other requirements of Waipā District Council and the New Zealand Transport Agency, LINZ or the Main Contractor shall prepare and submit for approval a Traffic Management Plan for the control of vehicle movements at Te Mawhai Road and other access corridors required and external to the site. LINZ shall be responsible for establishing the required traffic controls.

22.8 SIGNAGE

Council requirements (Rule 4.4.2.44(c)) for signage state no more than one sign may be erected at the site entrance, and it may not cover more than $2m^2$ area.

22.9 MINIMISING IMPACT ON ROAD NETWORK

Generally, heavy vehicle movements associated with demolition works operations are limited to the delivery and removal of the machinery and plant required to undertake the works and the transport of works related materials on and off-site.

The following measures shall be employed to ensure that there are limited impacts on the surrounding roading network resulting from the land disturbance operation:

- The entry/exit point is clearly defined and will ensure that the safe and convenient movement of traffic, pedestrians and cyclists is not compromised.
- All soils removed from site for disposal to landfill shall be transported in lined and/or covered trucks depending on receiving facility requirements.
- A water blaster or similar facility is to be provided on-site, if necessary, in the immediate vicinity of entry/exit point to the site.
- The adjoining roading network is to be kept clear of mud and debris at all times.

22.10 PEDESTRIAN MANAGEMENT

No pedestrians will be allowed access to the site, unless prior approval has been sought from LINZ and the Main Contractor.

23 REFERENCES

DOC (October 2021), *Protocols for Minimising the Risk of Felling Bat Roosts*

Fraser Thomas Ltd (November 2023), *Former Tokanui Hospital, Demolition and Remediation, Horizontal Infrastructure Assessment Report*

Fraser Thomas Ltd (November 2024), *Former Tokanui Hospital, Coal Tar Investigation and Removal Report*

Opus (March 2015), *Tokanui Mental Hospital Demolition* [structural requirements for safe demolition of specified buildings]

SLR (November 2023), *Acoustic Assessment, Tokanui Hospital Demolition Works*

SLR (November 2023), *Acoustic Assessment, Underground Infrastructure Removal and Rehabilitation*

Toitū Te Whenua Land Information New Zealand (October 2023), Health and Safety Guidelines – Working with Lead-based Paints

WSP (March 2023), *Tokanui Hospital Infrastructure Assessment – Pavement Investigations Factual Report* [Appendix B of FTL horizontal infrastructure report]

4Sight Consulting (part of SLR), (December 2022), *Asbestos and Lead Paint Demolition Survey Report – Former Tokanui Hospital – Area 1*

4Sight Consulting (part of SLR), (December 2022), *Asbestos and Lead Paint Demolition Survey Report – Former Tokanui Hospital – Area 1*

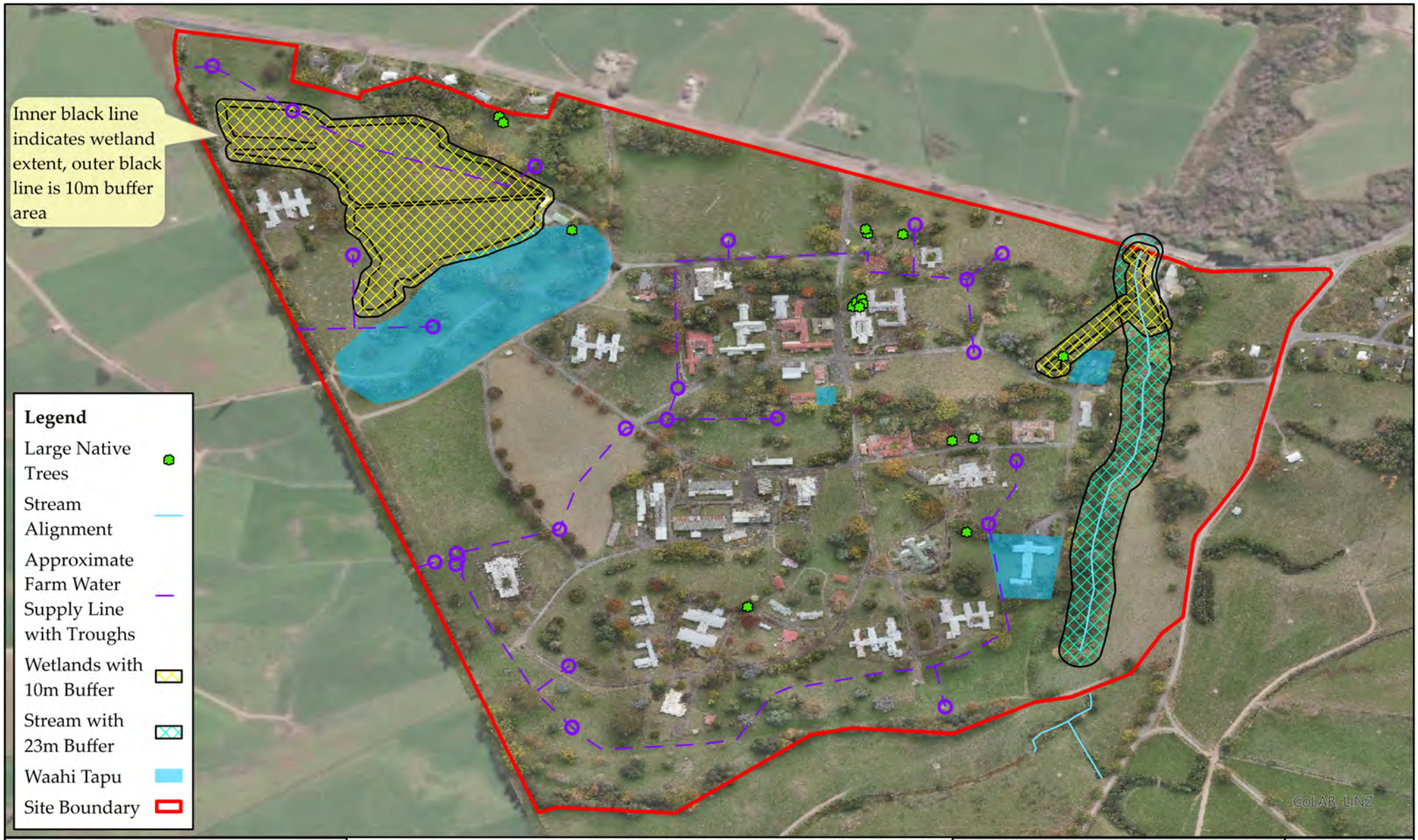
4Sight Consulting (part of SLR), (December 2022), *Asbestos and Lead Paint Demolition Survey Report – Former Tokanui Hospital – Area 2*

4Sight Consulting (part of SLR), (December 2022), *Asbestos and Lead Paint Demolition Survey Report – Former Tokanui Hospital – Area 3*

4Sight Consulting (part of SLR), (December 2022), *Asbestos and Lead Paint Demolition Survey Report – Former Tokanui Hospital – Area 4*

4Sight Consulting (part of SLR), (February 2023), *Tokanui Psychiatric Hospital – Ecological Constrains and Opportunities*

General Drawings



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G01: Site Features Plan

Toitū Te Whenua Land Information New Zealand
Demolition Management Plan
Former Tokanui Hospital Demolition and Remediation Project
Tokanui, Te Awamutu

Date:	12/11/2024
Figure Reference:	33205/G01
Drawn by:	EB
Reviewed by:	SF
Job Number:	33205

N

0 100 200 400 600
Meters

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G02: Site Amenities Plan

Toitū Te Whenua Land Information New Zealand
Demolition Management Plan
Former Tokanui Hospital Demolition and Remediation Project
Tokanui, Te Awamutu

Date:	12/11/2024
Figure Reference:	33205/G02
Drawn by:	EB
Reviewed by:	SF
Job Number:	33205

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0 100 200 400 600
Meters

Appendix A

Buildings Data Summary

Area 1	
B1	Admin
B2	Ward 1 & 2
B3	SSDU
B4	Steeple & foundations of the Church
B5	Male Toilet
B6	Shed 5 (behind B5)
B7	Water Treatment
B8	Dentist
B9	Bus Shelter and Carport, by Admin
B10	Old Admin (WTC) & Pharmacy
B11	Ward A
B12	Ward B
B13	Ward C
B14	Shed 3 by Ward D
B15	Ward D
B16	Petrol Station
B17	Oct #1 left of Petrol Station
B18	Shed 6 behind Petrol Station
B19	Old Morgue left of Shed 6
B34	Shed 2 Toilet Block
B35	Shed 1, by SSDU
B58	Rec Hall
B72	Shed hidden in trees behind B18 (Shed 6)

Area 2	
B20	front ACM extension of Ward 6
B21	Ward 6
B22	rear ACM extension of Ward 6
B23	Ward 4
B24	Ward 22
B25	Morgue New
B26	Ward 21 &21A
B27	Ward 5
B28	OCT#2
B29	Ward 7
B30	Ward 8
B31	Shed 10 beside B30 (Ward 8)
S1	Substation 1 by Steeple
S2	Substation 2 by Admin
S3	Substation 3 by Ward 5
S4	Substation 4 by Fire Station
S5	Substation 5 by House by EDU
S6	Substation 6 by Ward E
S7	Substation 7 by Ward K
S8	Substation 8 by Ward K

Area 3	
B32	Shed 4
B33	Ward 9
B36	Hall
B37	Wooden Shed behind hall
B38	RFTD by Hall
B39	RFTD Shed BY Hall
B40	Covered Area by Hall
B41	Shed 9
B42	Building 15 includes shed at rear of building
B43	Building 14
B44	Building 13
B45	Building 12
B46	Building 11
B47	Building 10
B48	Ward 16
B49	Ward 17
B50	Ward 18
B51	EDU
B52	Old House by EDU

Area 4	
B53	Ward 19
B54	Water Tower
B55	Ward K
B56	Ward E
B57	Pool and Pool Shed
B59	Gardener
B60	Fitter
B61	Shed 11
B62	Racks
B63	Workshop
B64	Sports Pavillion & shed
B65	Store
B66	Assistant Engineers Office
B67	Shed 8
B68	Boiler House
B69	Fire Station
B70	Kitchen
B71	Garages
B73	Shed 7 by Laundry
B74	Laundry
B75	Doctors Flats (OCCUPIED)
B76	Doctors Flats Garages

Building Count

Area 1	23
Area 2	20
Area 3	19
Area 4	22
Total	84

Tokanui Hospital - Building Survey Data Summary

			Building								Special requirements						
Area	Building ID	Building name	Area (m2)	Built date	Building Type	No of storeys	Footings/ foundations	Lead paint	ACM	Historical HALO demo debris	<10m from wetland	Protected tree(s)	Cultural	Archeo-logical	Data reliability	Info sources	Notes
1	B1	Admin	796	1978	External: reinforced concrete block with cedar shiplap weatherboard. Tin tile on roof with corrugated ACM cladding in central roof portion. Internal: gib plasterboard, concrete block, timber frame, concrete floor with carpet and vinyl lino, ceiling finish painted gib plaster and stained pine.	3 - basement plus ground floor and level 1	reinforced concrete perimeter footing with concrete slab	No	Yes - internal and external Class A & B	Yes - N and E side of building confirmed. Likely present S and W as well.	No	Yes, directly north of building	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL Environmental XRF Screening, FTL visual walkover & HALO demo debris Investigation	
	B2	Ward 1 & 2	1152	1912-1928	External: in situ concrete with shiplap weatherboard cladding, Gabel roof construction with pitched corrugated iron roof. Timber window frames. Internal: gib plaster, fibrous plasted, concrete and brick walls, concrete and native timber flooring with vinyl lino floor finish. Ceiling fibrous plaster and timber, painted.	1	concrete perimeter footing with concrete piles, concrete slab under kitcken and toilets only.	Yes - internal and external	Yes - internal and external Class A & B	Yes, throughout internal courtyard area. Note: historical building demolished W of this structure.	No	Yes, directly west of building	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL Environmental XRF Screening, FTL visual walkover & HALO demo debris Investigation	
	B3	SSDU	425	1971	External: Concrete & plaster external walls with timber framing. Painted. Internal: Fibrous plaster, gib plaster, timber frame, accoustic tile, native timber flooring and carpet.	1	concrete perimeter footing with concrete piles, concrete slab under kitcken and toilets only.	Yes - internal only (<3,000mg/kg)	Yes - internal and external Class A & B	No	No	30m NW of building	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, FTL visual walkover & HALO demo debris Investigation	
	B4	Steeple & foundations of the Church	75	1960s-70s	Steeple and concrete slab from chapel is all that remains.	NA	concrete slab	NA	No	No	No	Yes, directly NW of building and East.	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys	
	B5	Male Toilet	24	1912-1928	External: concrete slab with concrete blockwork, board and baton, painted. Roof is pitched corrugated iron - painted. Internal: Hardboard walls - painted. Concrete floors with possible enamel coating. Ceiling is fibrous plaster, pre-finished	1	Concrete slab	Yes - internal and external	No	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, FTL visual walkover & HALO demo debris Investigation	
	B6	Shed 5 (behind B5)	6	1912-1928	External: brick - painted, pitched corrugated iron roof - painted. Internal: Brick with concrete floor	1	reinforced concrete perimeter footing with concrete slab	Yes - external	No	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
	B7	Water Treatment	35	1912-1928	External: reinforced concrete block with corrugated iron walls - painted. Internal: timber pannelling, hardboard - painted, concrete floor. Partial carpet. Ceiling timber & corrugated iron.	2 - basement and ground floor	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	Yes - internal Class B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
	B8	Dentist	145	1912-1928	External: walls timber frame with shiplap weatherboard - painted. Roof pitched corrugated iron - painted. Internal: hardboard walls - painted, timber particle board floors with lino cover. Fibrous plaster ceiling - painted.	1	concrete perimeter footing with concrete piles, concrete slab under kitcken and toilets only.	Yes - internal and external	Yes - External & Interna	Possible (not investigated). Historical Building directly East of structure demolished between 1961 & 1974	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	

B9	Bus Shelter and Carport, by Admin	70	1974-1979	Steel pole, timber rafters, timber frame, fibrolite cladding - painted	1	concrete slab	Yes	Yes	Possible area directly north of structure has demo debris noted from demo of old structures surrounding B01 & B02	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B10	Old Admin (WTC) & Pharmacy	220 (Old Admin), 188 (Pharmacy)	Old Admin (1930), Pharmacy (1944-1961)	External: Brick, concrete insitu, walls brick & solid plaster. Concrete tile roofing. Galvanised bars over pharmacy windows. Internal: Gib plaster - painted, timber frame, in situ concrete, concrete and native timber floors with lino and carpet cover. Ceiling is gib plaster and fibrous plaster & concrete - painted.	Old Admin (2), Pha	Old Admin - reinforced concrete perimeter footing with concrete slab. Pharmacy - concrete perimeter footing with concrete piles, concrete slab under toilet	Yes - internal and external	Yes - internal and external Class A & B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B11	Ward A	1520	1912	External: timber frame, cement sheeting, shiplap weatherboard - painted. Roof pitched corrugated iron - painted. Internal: Gib plaster, timber pannelling, timber frame, hardboard, in situ concrete - painted, wallpaper, tiles, pre-finished sheeting. Floors concrete/native timber covered with carpet/lino/tiles. Ceiling fibrous plaster/timber/ hardboard/seratone - painted.	1	concrete perimeter footing with concrete piles, concrete slab under kitchen and toilets only.	Yes - internal and external	Yes - internal and external Class A & B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B12	Ward B	510	1925	External: Brick, solid plaster and texture coat finshing and in situ concrete walls. Roof pitched corrugated iron - painted. Internal: gib plaster, timber pannelling, timber frame, brick, concrete in situ - painted and some wallpaper. Flooring concrete/native timber covered with carpet/lino. Ceiling is gib plaster/fibrous plaster and timber - painted.	2	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - internal class B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B13	Ward C	1460	1912	External: concrete in situ, shiplap weatherboard, board and baton. Walls painted solid plaster. Internal: gib plaster, timber pannelling, timber frame, brick & in situ concrete. Painted wallpaper and pre finished sheeting. Flooring concrete/native timber with carpet or lino finish. Ceiling gib plaster/fibrous plaster, timber and hardboard - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - external and internal	Yes - internal and external Class A & B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B14	Shed 3 by Ward D	47	1995-2000	External: vertical PVC weatherboard - painted. Pitched corrugated rood - painted. Internal: gib plaster, wallpaper. Floor: Timber particle board with carpet. Ceiling is gib plaster - painted.	1	raised timber piles	No	Yes - internal Class A	No	No	No	No	No	Medium	OPUS Building Inspection Reports	

B15	Ward D	970	1917	External: Timber frame, shiplap weatherboard - painted. Roof - pitched corrugated iron - painted. Internal: Gib plaster, timber pannelling, timber framing - painted or wallpapered with some areas prefinished sheeting. Floors - concrete or native timber with carpet/lino cover. Ceiling - fibrous plaster/timber - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - internal Class A &	No	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B16	Petrol Station	385	Late 1970s	External: reinforced concrerte block walls with cement sheeting - painted. Roof is tin ribbed. Internal: Gib plaster, timber frame, hardboard and concrete block walls - painted or wallpaper. Floors Concrete with carpet or lino cover. Ceilings Gib plaster - painted	1	reinforced concrete perimeter footing with concrete slab	No	Yes - internal and external Class B	Possible - not investigated on Western side. No demo debris S or E of structure.	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B17	Oct #1 left of Petrol Station	265	1912-1944	External: timber frame, shiplap weatherboard - painted. Roof - pitched corrugated iron - painted. Internal: Hardboard - painted. Floors - concrete or native timber with lino cover. Ceiling - gib plaster/timber - painted	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - external and internal	Yes - internal Class A and external Class B	Not on E or S side, possibly on N or W side	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B18	Shed 6 behind Petrol Station	336	1912-1944	External: Timber frame, shiplap weatherboard - painted. Roof: pitched corrugated iron - painted. Internal: hardboard - painted. Floors: Concrete & native timber with Lino cover. Ceiling: Pinex - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - internal ceiling voi	Not on E or S side, possibly on N or W side	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover	
B19	Old Morgue left of Shed 6	36	1912-1944	External: Brick - painted, pitched corrugated iron roof - painted. Internal: Gib plaster - painted, Floors: Concrete. Ceilings: Pinex - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	Yes - internal Class B	Not on E or S side, possibly on N or W side	No	No	Yes	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, HAIL XRF Screening, FTL visual walkover & HALO demo debris investigation	
B34	Shed 2 Toilet Block	7	1970s-1980s	External: Reinforced concrete block. Roof: Pitched corrugated iron. Internal: timber frame, hardboard and concrete block - painted. Ceiling: Hardboard.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal/ external timber	No	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys	
B35	Shed 1, by SSDU	50	1944-1961	External: Corrugated iron - painted. Roof: Pitched corrugated iron - painted. Internal: Timber frame. Floor: bare earth.	1	perimeter concrete, earth floor	Yes - internal and external	Yes - Class B internal	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys	
B58	Rec Hall	1,110	1940	External: brick, concrete in situ with cement sheeting - painted. Roof: Pitched corrugated iron & Super Six ACM. Internal: gib plaster, timber pannelling, timber frame, hardboard - painted, wallpaper, pre finished sheeting. Floors: Concrete or native timber, covered with carpet or lino. Ceiling: fibrous plaster, acoustic tile, hardboard - painted or pre finished.	2, basement and ground floor	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - internal and external Class A & B	No - but ACM is in HALO soils	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, FTL visual walkover & HALO demo debris Investigation	
B72	Shed hidden in trees behind B18 (Shed 6)	See B18														

2	B20	front ACM extension of Ward 6	1,310	1930	External: timber frame, bevel back weatherboard, hardiplank weatherboard - painted. Roof: Pitched corrugated iron. Internal: gib plaster, timber pannelling, timber frame, Pinex, Hardiboard - painted. Floors: Not stated - covered in carpet and lino. Ceiling: timber, fibrous plaster - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - Internal & external Class A & Class B (High Risk building)	No	No	Yes - Directly E of buildings	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, FTL visual walkover & HALO demo debris Investigation	
	B21	Ward 6															
	B22	rear ACM extension of Ward 6															
	B23	Ward 4	995	1928	External: timber frame, bevel back weatherboard - painted. Roof: Piched corrugated Iron - painted. Internal: Gib plaster, timber frame, pinex, hardboard, seratone, concrete in situ - painted or wallpapered. Floor: concrete, timber - painted or lino cover. Ceiling: Fibrous plaster, acoustic tile, concrete, wood - painted	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - Internal & external Class A & Class B (High Risk building)	No	No	Yes - Directly W of building	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, FTL visual walkover & HALO demo debris Investigation	
	B24	Ward 22	370	1922	External: timber frame, bevel back weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: gib plaster, hardboard - wallpapered. Floors: concrete, native timber, carpet or lino cover. Ceiling: Pinex/fibrous plaster - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - external - no internal painted surfaces	Yes - Class B internal and external Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, AECOM DSI, FTL visual walkover	
	B25	Morgue New	50	1964-1971	External: reinforced concrete block, solid plaster - painted. Roof: Tin ribbed - painted. Internal: concrete - painted. Floors: Concrete - lino cover. Ceiling: Hardboard - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	Yes - external Class A and internal Class B	No	No	No	Yes	No	High	OPUS Building Inspection Reports, GHD DSI. FTL visual walkover	
	B26	Ward 21 &21A	1175	Ward 21 - 1960. Ward 21A - 1975	External: concrete in situ, cement sheeting, timber framing, timber sheeting - painted or solid plaster cover. Roof: Pitched corrugated iron - painted. Internal: gib plaster, timber pannelling - painted or wallpaper. Floor: Concrete, native timber with carpet, tiles or lino cover. Ceiling: gib plaster, timber stained pine - painted.	Ward 21 - 2. Ward 21A - 2 + Basement	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - external and internal Class B	Likely under existing strucure, old farm building noted in historicals.	No	No	Yes	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, GHD/AECOM DSI, FTL visual walkover & HALO demo debris Investigation, HAIL XRF screening	
	B27	Ward 5	1250	1912-1944 (western wing added in 1980s-1990s	External: timber frame, bevel back weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: plaster, timber panneling, timber frame, pinex, seratone - painted and wallpaper. Floor: concrete, timber, timber particle board, covered with carpet or lino. Ceiling: gib plaster, fibrous plaster, accoustic tile, timber, pinex - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - external Class B and Internal Class A.	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, FTL visual walkover & HALO demo debris Investigation. HAIL XRF screening	

B28	OCT#2	205	1944-1961	External: reinforced in situ concrete, solid plaster, timber frame. Solid plaster or textured coating finish. Roof: Tin tile - painted. Internal: gib plaster, timber panelling, timber frame, pinex. Painted or wallpapered. Floor: timber particle board with lino finish. Ceiling: pinex - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - external and internal Class B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, FTL visual walkover & HALO demo debris Investigation. HAIL XRF screening	
B29	Ward 7	1,230	1912-1944	External: Timber frame, bevel back weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: gib plaster, timber pannelling, timber frame, pinex, hardboard. Painted, wallpapered, tiled, pre finished sheeting. Floors: concrete, native timber covered with lino or carpet. Ceiling: gib plaster, fibrous plaster - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - external and internal Class A & Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, AECOM DSI, 4Sight Pb Paint & ACM Surveys, FTL visual walkover	
B30	Ward 8	1425	1960	External: brick, concrete in situ, cement sheeting, finished with brick, solid plaster or painted. Roof: Pitched corrugated tin - tin ribbed - painted. Internal: gib plaster, timber pannelling, timber frame, brick. Finished with paint, wallpaper, tiles or pre finished sheeting. Floor: Concrete or native timber with carpet/lino or tile cover. Ceiling: gib plaster, fibrous plaster, pinex - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - internal Class A & B, external Class B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb Paint & ACM Surveys, FTL visual walkover & HALO demo debris Investigation. HAIL XRF screening	
B31	Shed 10 beside B30 (Ward 8)	60	1979-1995	No info available	1	No info available	No	No	No	No	No	No	No	Low	4Sight Pb paint & ACM Survey.	No OPUS Building Survey sheet available
S1	Substation 1 by Steeple	27	1961-1974	External: reinforced concrete block, painted. Roof: Pitched corrugated iron - painted. Locked during survey, no internal specifications.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	No	No	No	No	No	No	High	AECOM + GHD DSI, OPUS Building Inspection Report	
S2	Substation 2 by Admin	105	1961-1974	External: reinforced in situ concrete, galvanised steel - painted. Roof: Tin ribbed - painted. Internal: Reinforced concrete block - painted. Floor: Concrete - no finish. Ceiling: hardiflex - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - external	Yes - internal Class A & B, external Class B	Likely built on demo debris, historical structure footprint visible In 1944 historical image.	No	No	No	No	Medium	AECOM + GHD DSI, OPUS Building Inspection Report, HAIL XRF screening	
S3	Substation 3 by Ward 5	35	1961-1974	External: reinforced concrete block - painted. Roof: Pitched corrugated iron - painted. Internal: concrete block walls. Floors: Concrete.	1	reinforced concrete perimeter footing with concrete slab	Yes - External	No	No	No	No	No	No	Medium	AECOM + GHD DSI, OPUS Building Inspection Report, HAIL XRF screening	
S4	Substation 4 by Fire Station	35	1961-1974	External: reinforced concrete block - painted. Roof: Pitched corrugated iron - painted. Internal: Locked no access	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	No	No	No	No	No	No	Medium	AECOM + GHD DSI, OPUS Building Inspection Report, HAIL XRF screening	
S5	Substation 5 by House by EDU	35	1961-1974	External: reinforced concrete block - painted. Roof: Pitched corrugated iron - painted. Internal: Concrete block walls - painted. Floors: Concrete. Ceiling: Timber - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	Yes - Internal Class B	No	No	No	No	No	Medium	AECOM + GHD DSI, OPUS Building Inspection Report, HAIL XRF screening	

	S6	Substation 6 by Ward E	27	1961-1974	External: reinforced concrete block - painted. Roof: Pitched corrugated iron - painted. Internal: concrete block - painted. Concrete and native timber floors. Ceiling: Timber - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	Yes - internal Class B	No	No	No	No	No	Low	AECOM + GHD DSI, OPUS Building Inspection Report	
	S7	Substation 7 by Ward K	27	1961-1974	External: reinforced concrete block - painted. Roof: Pitched corrugated iron - painted. Internal: concrete block wall - painted. Floor: Concrete and native timber. Ceiling: timber - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - external	Yes - Internal Class B	No	No	No	No	No	Low	AECOM + GHD DSI, OPUS Building Inspection Report	
	S8	Substation 8 by Ward K	18	1944-1961	External: reinforced concrete block - painted. Roof: Pitched corrugated iron - unpainted. Internal: concrete block walls - painted. Floor: Concrete.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	Yes - internal Class B	No	No	No	No	Yes	Medium	AECOM + GHD DSI, OPUS Building Inspection Report, HAIL XRF screening	
3	B32	Shed 4	17	1974-1995	External: Painted plywood structure with plastic roof. Structure has fallen over, largely rotten.	1	none	Unlikely	No	No	No	No	No	No	Low	OPUS Building Inspection Report	
	B33	Ward 9	1,430	1960	External: brick, concrete in situ, cement sheeting, finished with brick, solid plaster or painted. Roof: Pitched corrugated tin - tin ribbed - painted. Internal: gib plaster, timber pannelling, timber frame, pinex, hardboard, brick. Finished with paint, wallpaper, tiles. Floor: Concrete or native timber with carpet/lino or tile cover. Ceiling: gib plaster, fibrous plaster, pinex - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal and external	Yes - internal Class A & B, external Class B	No	No	No	No	No	Medium	AECOM DSI, OPUS Building Inspection Reports	
	B36	Hall	205	1970	External: reinforced concrete block - painted. Roof: Tin ribbed - painted. Internal: concrete block - painted. Floor: concrete, carpet or lino cover. Ceiling: Plywood - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - external	Yes - internal Class A	No	No	No	No	No	Medium	OPUS Building Inspection Reports, HAIL XRF screening	
	B37	Wooden Shed behind hall	13	1974-1979	External: timber exterior with painted tin roof.	1		Yes - external	No	Unlikely	No	No	No	No	Low	4Sight Pb paint survey	
	B38	RFTD by Hall	60	1974-1979	External: timber frame, shiplap weatherboard - painted. Roof: pitched corrugated iron - painted. Internal: timber pannelling, pinex, hardboard - painted. Floor: timber with carpet or lino cover. Ceiling: fibrous plaster or timber - painted.	1	raised piles	Yes - exterior and interior	Yes - exterior Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, 4Sight pb paint & ACM Survey	
	B39	RFTD Shed BY Hall	8	1979-1995	External: corrugated iron - painted. Roof: Pitched corrugated iron - painted. Internal: timber pannelling, timber framing - painted. Floor: timber particle board. Ceiling: not stated, painted.	1	Raised piles	Yes - external and internal	No	No	No	No	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey. HAIL XRF screening.	
	B40	Covered Area by Hall	65	1979-1995	External: galvanised steel, sheet cladding, timber poles, plywood. Roof: pitched corrugated iron - painted. Internal: concrete floor.	1	concrete slab with pole brackets	Yes - external	No	No	No	No	No	No	Low	OPUS Building Inspection Reports, 4Sight Pb & ACM survey	

B41	Shed 9	15	1974-1979	External: timber frame, bevel back weatherboard, brick - painted. Roof: Pitched corrugated iron - painted. Internal: bare timber, no finish. Floors: Concrete.	1	reinforced concrete perimeter footing with concrete slab	Yes - external	Yes - external Class B	No	No	No	No	No	Medium	AECOM DSI, OPUS Building Inspection Reports	
B42	Building 15 includes shed at rear of building	250	1971	External: brick, cement sheet, bevel back weatherboard - painted or brick/stone. Roof: Pitched corrugated iron - painted. Internal: gib plaster, seratone, hardboard - painted/wallpapaer/vinyl. Floor: Timber with carpet or lino cover. Ceiling: Gib plaster - painted	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior	Yes - external Class B	No	No	Yes - Directly West of Building	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey. HAIL XRF screening.	
B43	Building 14	160	1971	External: shiplap weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: gib plaster, seratone, hardboard - painted or vinyl. Floors: timber with carpet or lino cover. Ceilings: gib plaster - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior only.	Yes - external class B	No	No	No	No	No	Medium	AECOM DSI, OPUS Building Inspection Reports, 4Sight Pb & ACM Survey	
B44	Building 13	160	1971	External: shiplap weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: gib plaster, seratone, hardboard - painted or vinyl. Floors: timber with carpet or lino cover. Ceilings: gib plaster - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior only.	Yes - external and internal Class B	No	No	No - but large tree directly N of building.	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey. HAIL XRF screening.	
B45	Building 12	160	1971	External: shiplap weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: gib plaster, seratone, hardboard - painted or vinyl. Floors: timber with carpet or lino cover. Ceilings: gib plaster - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior only.	Yes - external and internal Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey. HAIL XRF screening.	
B46	Building 11	160	1971	External: shiplap weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: gib plaster, seratone, hardboard - painted or vinyl. Floors: timber with carpet or lino cover. Ceilings: gib plaster - painted.	2	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior only.	Yes - external and internal Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey. HAIL XRF screening.	
B47	Building 10	260	1971	External: brick, cement sheet, bevel back weatherboard - painted or brick/stone. Roof: Pitched corrugated iron - painted. Internal: gib plaster, seratone, hardboard - painted/wallpapaer/vinyl. Floor: Timber with carpet or lino cover. Ceiling: Gib plaster - painted	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior only.	Yes - external Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey. HAIL XRF screening.	
B48	Ward 16	1750	1972	Reinforced concrete block, cement sheets, shiplap weatherboard - painted/brick. Roof: Pitched corrugated iron - painted. Internal: gib plaster, timber framing - painted/wallpaper/vinyl. Floor: Concrete with carpet or lino cover. Ceiling: Gib plaster, accoustic tile, timber - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior and interior	Yes - Internal and external Class B	No	No	Yes - directly	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey. HAIL XRF screening.	

	B49	Ward 17	550	1976	External: reinforced concrete block, shiplap weatherboard - painted. Roof: tin ribbed - painted. Internal: gib plaster, timber pannelling, timber framing - painted, pre finished sheeting or vinyl cover. Floor: Concrete with Lino cover. Ceiling: Gib plaster or timber, painted.	1 + Basement	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior and interior	Yes - internal and subfloor Class B	No	No	No	No	No	Medium	AECOM DSI, OPUS Building Inspection Reports, 4Sight Pb & ACM survey	
	B50	Ward 18	550	1975	External: reinforced concrete block, shiplap weatherboard - painted. Roof: tin ribbed - painted. Internal: gib plaster, timber pannelling, timber framing - painted or vinyl cover. Floor: Concrete with Carpet or Lino cover. Ceiling: Gib plaster or timber, painted.	1 + Basement	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - external	Yes - internal, exterior and subfloor Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey, HAIL XRF screening	
	B51	EDU	635	1970	External: Reinforced concrete block, board and baton - painted and/or brick. Roof: Tin ribbed - painted. Internal: Timber frame, concrete block - painted. Floor: Concrete with carpet/lino/tile cover. Ceiling: Gib plaster - painted	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - external	Yes - internal Class A & B, external Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey, HAIL XRF screening	
	B52	Old House by EDU	105	1974-1979	External: timber frame, shiplap weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: pinex/hardboard - painted. Floors: timber with lino cover. Ceiling: pinex - painted.	1	raised timber piles	Yes - external and internal	Yes - external Class B	No	No	No	No	No	Medium	OPUS Building Inspection Reports, 4Sight Pb & ACM survey, HAIL XRF screening	
4	B53	Ward 19	2,080	1978	External: reinforced concrete block with cement sheeting - painted or solid plaster finish. Roof: Tin ribbed - painted. Internal: gib plaster, timber framing, concrete block - painted. Floors: Concrete - Lino cover. Ceiling: gib plaster - painted.	1 + Basement	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	No	Yes Internal and external Class B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb & ACM survey, HAIL XRF screening, FTL visual walkover & HALO demo debris Investigation.	
	B54	Water Tower	10	1978	External: reinforced concrete in situ - painted or solid plaster cover. Roof: Concrete water tank - painted. Internal: Reinforced concrete in situ - not painted. Floors: Concrete. Ceiling: Concrete.	2	reinforced concrete perimeter footing with concrete slab	No	No	No	No	No	No	No	High	OPUS Building Inspection reports, 4Sight Pb & ACM survey, FTL visual walkover.	
	B55	Ward K	1,480	1944-1961	External: Brick, concrete in situ, reinforced concrete block, cement sheet, board and baton - painted/brick/solid plaster finish. Roof: Pitched corrugated iron, tin ribbed - painted. Internal: gib plaster, timber pannelling, timber framing, brick - painted/wallpapered/tiled/pre-finished sheeting.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior	Yes - Class A internal, Class B external.	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb & ACM survey, HAIL XRF screening, FTL visual walkover & HALO demo debris Investigation.	

B56	Ward E	1,480	1958	External: Brick, concrete in situ, reinforced concrete block, cement sheet - painted/brick/solid plaster finish. Roof: Pitched corrugated iron, tin ribbed - painted. Internal: gib plaster, timber pannelling, timber framing, seratone, concrete blocks, bricks - painted/wallpapered/tiled/pre finished sheets.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - Interior and exterior	Yes - internal Class A and B, External Class B	No	No	No	No	No	High	OPUS Building Inspection Reports, 4Sight Pb & ACM survey, HAIL XRF screening, FTL visual walkover & HALO demo debris Investigation.	
B57	Pool and Pool Shed	525	1961-1974	External: concrete in situ, reinforced concrete block, corrugated iron - painted or covered in solid plaster.Roof: Pitched corrugated iron - painted. Internal: timber frame, concrete block - painted. Floor: concrete. Ceiling: Hardboard - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - external.	Yes - external Class B	No	No	No	No	No	Low	OPUS Building Inspection Report, 4Sight Pb & ACM Survey. GHD DSI	
B59	Gardener	260	1961-1974	External: Corrugated iron. Roof: Pitched corrugated iron - painted.Internal: Timber framing, concrete floor, building paper ceiling.	1	reinforced concrete perimeter footing with concrete slab	Yes - external	No	No	No	No	No	No	High	OPUS Building Inspection Report, 4Sight Pb & ACM Survey. GHD DSI, HAIL XRF Screening, FTL Visual walkover and HALO demo debris investigation	
B60	Fitter	100	1961-1974	External: timber frame, shiplap weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: gib plaster - painted. Floors: Concrete covered with carpet or lino. Ceiling: Gib plaster - painted.	1	Concrete perimeter footing with concrete piles. Concrete slab under toilets and kitchens only.	Yes - internal and external	No	No	No	No	No	No	Medium	OPUS Building Inspection Report, 4Sight Pb & ACM Survey. HAIL XRF Screening. FTL Visual walkover	
B61	Shed 11	16	1979-1995	External: reinforced concrete block - painted. Roof: tin ribbed - painted. Internal: concrete block - painted. Floor: concrete, no cover. Ceiling: no data.	1	reinforced concrete perimeter footing with concrete slab	Yes - external	Yes - Class A internal, Class B external.	No	No	No	No	No	Medium	OPUS Building Inspection Report, 4Sight Pb & ACM Survey. GHD DSI. HAIL XRF Screening. FTL Visual walkover	
B62	Racks	350	1961-1974	External: timber frame, shiplap weatherboard - painted. Roof: Corrugated ACM 'super six'. Internal: timber frame racks. Floors: Concrete, no finish. Ceiling: None.	1	reinforced concrete perimeter footing with concrete slab	Yes - external and internal	Yes - external and internal Class B	No	No	No	No	No	Medium	OPUS Building Inspection Report, 4Sight Pb & ACM Survey. HAIL XRF Screening. FTL Visual walkover and HALO demo debris Investigation	
B63	Workshop	1,100	1961-1974	External: reinforced concrete in situ, reinforced concrete slab, bevel back weatherboard - painted. Internal: gib plaster, seratone, concrete block - painted/wallpaper/tile. Floor: Concrete with lino/wallpaper/ tile cover. Ceiling: fibrous plaster - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - external and internal	Yes - internal Class A & B, external Class B	No	No	No	No	No	High	OPUS Building Inspection Report, 4Sight Pb & ACM Survey. AECOM & GHD DSI's. HAIL XRF Screening. FTL Visual walkover and HALO demo debris Investigation	
B64	Sports Pavillion & shed	(120)Demolished	1944-1961	External: concrete in situ, shiplap weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: hardboard, seratone - painted. Floor: concrete with carpet or lino cover. Ceiling: gib plaster - painted.	1	Concrete perimeter footing with concrete piles. Concrete slab under toilets and kitchens only.	Yes, building demolished but pb in soil elevated.	Yes - external. Building now Demolished	Unlikely	No	No	No	NO	Medium	OPUS Building Inspection Report. GHD DSI's. HAIL XRF Screening. FTL Visual walkover.	Building demolished - no ACM in soil testing done
B65	Store	1,160	1961-1974	External: reinforced concrete in situ - painted. Roof: Corrugated ACM 'super six', tin ribbed - reinforced glass - painted. Internal: concrete in situ, timber framing, hardboard - painted. Floor: Concerete with lino, tile cover. Ceiling: Fibrous plaster, pinex - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	Yes - internal Class A & B, external Class B	No	No	No	No	No	High	OPUS Building Inspection Report. GHD & AECOM DSI's. HAIL XRF Screening. FTL Visual walkover.	

B66	Assistant Engineers Office	250	1961-1974	External: corrugated iron - painted. Roof: Pitched corrugated iron - painted. Internal: concrete blocks - painted. Floor: Concete with carpet cover. Ceiling: gib plaster - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal	Yes - internal and external Class B	No	No	No	No	No	Medium	OPUS Building Inspection Report. GHD & AECOM DSI's, 4Sight Pb & ACM Survey	
B67	Shed 8	20	1974-1979	External: reinforced concrete block, shiplap weatherboard - painted. Roof: Flat roof, tin ribbed - painted. Internal: Concrete block - painted. Floor: Concrete.	1	reinforced concrete perimeter footing with concrete slab	Yes - external	Yes - External Class B, Internal Class A	No	No	No	No	No	Medium	OPUS Building Inspection Report. GHD & AECOM DSI's, 4Sight Pb & ACM Survey	
B68	Boiler House	630	1944-1961	External: concrete in situ, cement sheeting (ACM), galvanised steel - painted. Roof: Tin ribbed - painted. Internal: timber frame, hardboard, concrete in situ - painted. Floors: concrete. Ceiling: Hardboard - painted.	2 + Basement	reinforced concrete perimeter footing with concrete slab	Yes - exterior	Yes - internal Class A & B, external Class B	No	No	No	No	No	High	OPUS Building Inspection Report. GHD & AECOM DSI's, 4Sight Pb & ACM Survey	Salters Demolition specification noted by OPUS, havent seen this document though.
B69	Fire Station	290	1944-1961	External: reinforced concrete in situ, reinforced concrete block, corrugated iron - painted. Roof: Pitched corrugated iron - likely painted. Internal: timber pannelling, pinex, seratone, concrete blockwork, concrete in situ - painted. Floor: concrete with carpet/lino/tile cover. Ceiling: Pinex, hardboard, seratone, concrete - painted.	2	reinforced concrete perimeter footing with concrete slab	Yes - internal	Yes - External Class B	No	No	No	No	No	Medium	OPUS Building Inspection Report. AECOM DSI's, 4Sight Pb & ACM Survey. HAIL XRF Screening	
B70	Kitchen	780	1961-1974	External: Concrete in situ - painted. Roof: tin ribbed - painted. Internal: seratone, concrete in situ - painted or tiled. Floor: Concrete with carpet, lino, tile cover. Ceiling: gib plaster, concrete - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - internal	Yes - internal & external Class B	No	No	No	No	No	Medium	OPUS Building Inspection Report. AECOM DSI's, 4Sight Pb & ACM Survey.	
B71	Garages	300	1961-1974	External: reinforced concrete block - painted. Roof: tin ribbed - painted. Internal: concrete block - painted. Floor: Concrete with lino cover. Ceiling: Gib plaster - painted.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal and external	Yes - Internal and external Class B	No	No	No	No	No	High	OPUS Building Inspection Report, 4Sight Pb & ACM Survey. HAIL XRF Screening, FTL visual walkover and HALO demo debris investigation.	
B73	Shed 7 by Laundry	23	1944-1961	External: concrete in situ, shiplap weatherboard - painted. Roof: Pitched corrugated iron - painted. Internal: timber frame, concrete in situ - painted. Floor: Concrete.	1	reinforced concrete perimeter footing with concrete slab	Yes - external	Yes - internal Class B	No	No	No	No	No	Medium	OPUS Building Inspection Report, 4Sight Pb & ACM Survey, GHD DSI. FTL Visual walkover.	
B74	Laundry	930	1944-1961	External: concrete in situ - painted. Roof: tin ribbed - painted & Corrugated ACM 'super six'. Internal: seratone, concrete in situ - painted. Floor: Concrete with lino cover. Ceiling: none.	1	reinforced concrete perimeter footing with concrete slab	Yes - internal	Yes - internal Class A & B, external Class B	No	No	No	No	No	Medium	OPUS Building Inspection Report. AECOM & GHD DSI's, 4Sight Pb & ACM Survey.	

	B75	Doctors Flats (OCCUPIED)	335	1944-1961	External: Brick, concrete in situ, cement sheeting (ACM) - Painted/Brick. Roof: Pitched corrugated iron - painted. Internal: gib plaster, timber pannelling, timber framing, hardboard, seratone - painted/wallpaper/pre-finished sheeting. Floors: Timber with carpet or lino cover. Ceiling: Gib plaster or hardboard - painted.	1	concrete perimeter footing with concrete piles, concrete slab under toilets and kitchens	Yes - exterior	Yes - internal Class A & B, external Class B	No	Yes	Yes - directly south of structure	No	No	High	OPUS Building Inspection Report, 4Sight Pb & ACM Survey, HAIL XRF screening, FTL Visual walkover and HALO demo debris investigation.	
	B76	Doctors Flats Garages	112	1944-1961	External: galvanised steel. Roof: Pitched corrugated iron. Internal: timber framing.	1	concrete plinth with post brackets	No	No	No	Yes	Yes - Native vegetation directly north of structure	No	No	Medium	OPUS Building Inspection Report, 4Sight Pb & ACM Survey. FTL Visual Walkover	

Notes:
1. Building IDs and names from LINZ, Appendix 7 - Building identification spreadsheet
2. Building areas are based on roof areas or OPUS Building survey sheets; where measured off GIS, building footprint will be slightly less
3. Building built date is approximate and from review of historical aerial photographs, unless stated on OPUS Building survey sheets.
4. Lead paint and ACM presence is from 4Sight building survey

Count

Building	Lead Paint	ACM
84	72	65

Table 1: Asbestos Containing Materials – B01 - Admin

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B01 - Admin Ground Floor	Stairwell Ceiling	Textured ceiling	Fibrous plaster	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B01 - Admin Ground Floor	Interior Crawl space access	Support pads	Friction product	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls (if item can be removed intact).
B01 - Admin Roof	Roof Profiled roof lining	Panels	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B01 - Admin 1	External Rain head east and west elevation	Panel underneath rainhead	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B01 - Admin Ground Floor	Electrical room Electrical distribution board (EDB)	Fuse	Insulation	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

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Table 24: LBP Identified – B01 – Admin

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
No Lead-Based lead paint samples were identified during the survey.					

OPUS Tokanui Building Inspection

General			
Building:	Admin	Year Built:	1978
Footprint (m2)	800	Storeys:	2|Basement
Surveyed by:	NE and RS	Survey Date:	2/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block|Cedar shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Tile		
Roof Finish:		Gutters Present:	yes
Single Doors:	4	Double Doors:	0
Ranchsliders:	0	Windows:	148
Soffit Height (mm):	7000	Soffit Width (mm):	
Surrounding Features:	Services|Roads		
Comments:			
Reinforced concrete columns between windows. Steel frames bolted to the façade with timber louvers. (see photos) Too dangerous to see what the roof finish is. Central box gutter. Aluminium joinery. Some windows boarded up. Cedar weatherboard. Dried up outdoor water feature.			

Internal			
Wall Material:	Gib Plaster|Concrete Block|Timber Frame		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Concrete		
Floor Finish:	Tiles|Carpet|Lino		
Ceiling Material:	Gib Plaster|Stained pine		
Ceiling Finish:	Painted and stained		
Av. Stud Height (mm):	2650	Max. Stud Height (mm):	2670
Rooms of Max. Stud Height:	Ground floor ceiling heights		
No. Rooms:	44	No. Internal Doors:	63
No. Bathrooms:	7	No. Plant Rooms:	2
Pipework Lagging:		Radiator Heating System:	yes
Comments:			
Rotting carpet. Ceilings to central rooms upstairs are raking from 2650mm, under central box gutter to 5m at the highest point. Stained pine, negative detail ceiling finish. Floors: carpet rooms; lino & tile bathrooms; tile stairs & ground main entrance. 29 rooms upstairs (40 doors), and 15 downstairs (23 doors). Has 10 internal glazing partitions upstairs and 17 downstairs. 3 bathrooms upstairs and 4			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	First floor main switch room of circuit boards. Upstairs & Downstairs Continu		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			
Toilet nearest the entrance works.			

Table 2: Asbestos Containing Materials – B02 – Ward 1 & 2

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B02 - Ward 1 & 2, Ground Floor	South-eastern rooms	Debris	Lagging	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B02 - Ward 1 & 2 Ground Floor	Interior Throughout	Lagging	Insulation material	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B02 - Ward 1 & 2 Ground Floor	External Soffit	Lining to entrance awning, west elevation	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B02 - Ward 1 & 2 Ground Floor	Hallway - R31 Floor	Floor Lining	Tiles	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B02 - Ward 1 & 2 Ground Floor	Throughout Trusses	Infill panel	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 25: LBP Identified – B02 – Ward 1 & 2

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B02 – Ward 1 & 2, Ground Floor	External	Light blue	Brick	Fair	LEAD-BASED 40,000
B02 – Ward 1 & 2, Ground Floor	External	Yellow	Timber	Poor	LEAD-BASED 85,000
B02 – Ward 1 & 2, Ground Floor	External	Light blue	Concrete	Fair	LEAD-BASED 1,100
B02 – Ward 1 & 2, Ground Floor	External	Grey	Concrete	Poor	LEAD-BASED 32,000
B02 – Ward 1 & 2, Ground Floor	External	Light blue	Timber	Poor	LEAD-BASED 120,000
B02 – Ward 1 & 2, Ground Floor	External	White	Timber	Poor	LEAD-BASED 42,000
B02 – Ward 1 & 2, Ground Floor	Internal	Grey	Concrete	Poor	LEAD-BASED 1,400
B02 – Ward 1 & 2, Ground Floor	Internal	Yellow	Concrete	Poor	LEAD-BASED 1,700
B02 – Ward 1 & 2, Ground Floor	Internal	Blue	Concrete	Poor	LEAD-BASED 6,200
B02 – Ward 1 & 2, Ground Floor	Internal	Green	Concrete	Poor	LEAD-BASED 16,000
B02 – Ward 1 & 2, Ground Floor	Internal	White	Plaster	Poor	LEAD-BASED 1,900
B02 – Ward 1 & 2, Ground Floor	Internal	Beige	Hardboard	Poor	LEAD-BASED 1,400
B02 – Ward 1 & 2, Ground Floor	Internal	Beige	Hardboard	Poor	LEAD-BASED 22,000
B02 – Ward 1 & 2, Ground Floor	Internal	White	Timber	Poor	LEAD-BASED 9,400
B02 – Ward 1 & 2, Ground Floor	External	Grey	Timber	Poor	LEAD-BASED 160,000

OPUS Tokanui Building Inspection

General			
Building:	Ward 1	**Year Built:**	Unknown
Footprint (m2)	1170	**Storeys:**	1
Surveyed by:	NE and RS	**Survey Date:**	2/02/2015
General Comments:			
Central courtyard inaccessible - lots of vegetation.			

External			
Wall Material:	Concrete in situ|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	**Gutters Present:**	yes
Single Doors:	9	**Double Doors:**	0
Ranchsliders:	0	**Windows:**	90
Soffit Height (mm):	3500	**Soffit Width (mm):**	300
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road|Concrete Chimneys|Header Tanks		
Comments:			
Gable roof construction. Timber window frames. Mixed types of windows. Appears to be re-cladded with timber weather board over reinforced insitu concrete.			

Internal			
Wall Material:	Gib Plaster|Fibrous Plaster|Concrete|Brick		
Wall Finish:	Painted		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Lino		
Ceiling Material:	Fibrous plaster|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3600	**Max. Stud Height (mm):**	
Rooms of Max. Stud Height:			
No. Rooms:	30	**No. Internal Doors:**	35
No. Bathrooms:	6	**No. Plant Rooms:**	1
Pipework Lagging:	yes	**Radiator Heating System:**	yes
Comments:			
Kitchen flooded / waterlogged. Boiler- radiator system. Some sagging in wooden floor. Pipework potentially wrapped in asbestos. Stud height 3.6m floor to low point and 4.7m to high point. Radiator heating system present			

Environmental			
Electricity Isolated:	yes	**Water Isolated:**	
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			
Blackberries in central courtyard.			

Table 3: Asbestos Containing Materials – B03 – SSDU

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B03 - SSDU Ground Floor	External Wall	EDB boxing	Rope seal	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B03 - SSDU Ground Floor	Subfloor Under boiler room	Gasket	Debris	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B03 - SSDU Ground Floor	Internal Boiler - pipework flanges	Gaskets	Composite Material	Low (5)	Remove items intact prior to demolition by a licenced asbestos removalist under Class B controls
B03 - SSDU Ground Floor	Boiler room Wall	Coating	Plaster	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B03 - SSDU Ground Floor	Internal Walls throughout	Coating	Plaster	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B03 - SSDU Ground Floor	External Soffit	Panels	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B03 - SSDU Ground Floor	External Wall	EDB	Fuse insulation	Very Low (4)	Remove item intact prior to demolition by a licenced asbestos removalist under Class B controls

Table 26: LBP Identified – B03 – SSDU

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B03 – SSDU, Ground Floor	R15	Blue	Concrete	Poor	LEAD-BASED 2,600
B03 – SSDU, Ground Floor	R1	Yellow	Concrete	Poor	LEAD-BASED 2,300
B03 – SSDU, Ground Floor	R1, R6	Green	Concrete	Poor	LEAD-BASED 2,200
B03 – SSDU, Ground Floor	R13	Beige	Concrete	Fair	LEAD-BASED 1,300

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OPUS Tokanui Building Inspection

General			
Building:	SSDU	Year Built:	1971? opened 1972.
Footprint (m2)	505	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			

External			
Wall Material:	Reinforced in situ concrete|Solid plaster|Timber frame		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Flat Roof|Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	1
Ranchsliders:	2	Windows:	78
Soffit Height (mm):	4000	Soffit Width (mm):	east and west sides c
Surrounding Features:			
Comments:			
Concrete and plaster external walls. Tin ribbed roof - mono pitched butterfly with flat in between. Box gutter. Wooden window frames. Ranchsliders lead to internal courtyard. Timber louvres over windows			

Internal			
Wall Material:	Gib Plaster|Timber Frame		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Timber Native T/G		
Floor Finish:	Carpet		
Ceiling Material:	Fibrous Plaster|Accoustic Tile		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3000	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	12	No. Internal Doors:	20
No. Bathrooms:	2	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
1 kitchen. Acoustic tile ceiling in lecture theatre.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

OPUS Tokanui Building Inspection

General			
Building:	Steeple	**Year Built:**	Unknown
Footprint (m2)	3.2	**Storeys:**	1
Surveyed by:	NE and RS	**Survey Date:**	20/02/2015
General Comments:			
In situ concrete structure in shape of a cross each wall is 550L x 140w x 12 m high, with copper flashings where old Chapel roof used to be.			

External			
Wall Material:	Concrete in situ		
Wall Finish:	Painted		
Foundation:	Concrete slab		
Roof Material:			
Roof Finish:		**Gutters Present:**	no
Single Doors:	0	**Double Doors:**	
Ranchsliders:		**Windows:**	0
Soffit Height (mm):	11000	**Soffit Width (mm):**	550
Surrounding Features:	Services|Road|Other		
Comments:			
Old chapel concrete slab still remains use aerial image for slab area cannot measure due to excessive blackberry growth.			

Internal			
Wall Material:			
Wall Finish:			
Floor Material:			
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):		**Max. Stud Height (mm):**	
Rooms of Max. Stud Height:			
No. Rooms:		**No. Internal Doors:**	
No. Bathrooms:		**No. Plant Rooms:**	0
Pipework Lagging:		**Radiator Heating System:**	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:	electrical boxes next to steeple		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 5: Asbestos Containing Materials – B05 – Male Toilet

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM identified during the survey.					

Table 28: LBP Identified – B05 – Make Toilet

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B04 – Male Toilet, Ground Floor	External	White	Timber	Poor	LEAD-BASED 22,000
B04 – Male Toilet, Ground Floor	External	White	Timber	Poor	LEAD-BASED 2,200
B04 – Male Toilet, Ground Floor	External	White	Timber	Poor	LEAD-BASED 7,200
B04 – Male Toilet, Ground Floor	Internal	Cream	Timber	Poor	LEAD-BASED 12,000

OPUS Tokanui Building Inspection

General			
Building:	Toilet Block	Year Built:	Unknown
Footprint (m2)	28	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			

External			
Wall Material:	Concrete block|Board and baton		
Wall Finish:	Painted		
Foundation:	Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	0
Ranchsliders:	0	Windows:	6
Soffit Height (mm):	2200	Soffit Width (mm):	500
Surrounding Features:			
Comments:			

Internal			
Wall Material:	Hardboard		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Other		
Ceiling Material:	Fibrous Plaster		
Ceiling Finish:	Pre-finished		
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	0
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
Bathroom fixtures have been vandalised or removed.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 29: LBP Identified – B06 – Shed 5

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B06 – Shed 5, Ground Floor	External	White	Timber	Fair	LEAD-BASED 4,000

Table 6: Asbestos Containing Materials – B06 – Shed 5

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM identified during the survey.					

OPUS Tokanui Building Inspection

General			
Building:	Shed 5	Year Built:	Unknown
Footprint (m2)	6	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	19/02/2015
General Comments:			

External			
Wall Material:	Brick		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	0	Double Doors:	
Ranchsliders:		Windows:	0
Soffit Height (mm):	2400	Soffit Width (mm):	300
Surrounding Features:			
Comments:			
2.4m x 2.4m decromastic brick 150 series			

Internal			
Wall Material:	Brick		
Wall Finish:			
Floor Material:	Concrete		
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
3 x timber shelves on left steel hangers on right.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:	N/A		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 7: Asbestos Containing Materials – B07 - Water Treatment

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B07 - Water Treatment Ground Floor	Internal Throughout	Switches and fixings	Bakelite	Very Low (2)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls

Table 30: LBP Identified – B07 – Water Treatment

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B07 – Water Treatment, Ground Floor	External	Yellow	Concrete/ metal	Fair	LEAD-BASED 74,000
B07 – Water Treatment, Ground Floor	External	White	Timber	Poor	LEAD-BASED 38,000
B07 – Water Treatment, Ground Floor	Internal	Yellow	Chipboard	Fair	LEAD-BASED 1,200
B07 – Water Treatment, Ground Floor	Internal	Green	Chipboard	Fair	LEAD-BASED 1,500

OPUS Tokanui Building Inspection

General			
Building:	W Treatment	Year Built:	Unknown
Footprint (m2)	30	Storeys:	1|Basement
Surveyed by:	SD and AS	Survey Date:	16/02/2015
General Comments:			
Large pampas grass outside			

External			
Wall Material:	Reinforced concrete block|Corrugated iron		
Wall Finish:	Painted|None		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	1	Double Doors:	1
Ranchsliders:	0	Windows:	4
Soffit Height (mm):	0	Soffit Width (mm):	0
Surrounding Features:	Road|Services		
Comments:			
No soffit			

Internal			
Wall Material:	Timber Pannelling|Hardboard|Other		
Wall Finish:	Painted|Other		
Floor Material:	Concrete		
Floor Finish:	Carpet|Other		
Ceiling Material:	Other		
Ceiling Finish:	Pre-finished		
Av. Stud Height (mm):	2360	Max. Stud Height (mm):	2360
Rooms of Max. Stud Height:	2		
No. Rooms:	3	No. Internal Doors:	1
No. Bathrooms:	0	No. Plant Rooms:	1
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	First room		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 31: LBP Identified – B08 – Dentist

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B08 – Dentist, Basement	Internal basement	Beige	Timber	Poor	LEAD-BASED 37,000
B08 – Dentist, Ground Floor	External	Beige	Timber	Poor	LEAD-BASED 36,000
B08 – Dentist, Ground Floor	External	White	Timber	Poor	LEAD-BASED 90,000
B08 – Dentist, Ground Floor	External	White	Timber	Poor	LEAD-BASED 82,000
B08 – Dentist, Ground Floor	Internal	Beige	Hardboard	Fair	LEAD-BASED 1,100

Table 8: Asbestos Containing Materials – B08 – Dentist

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B08 - Dentist Lower Ground	Subfloor Floor	Debris	Intact fibre cement and electrical components	Low (6)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls
B08 - Dentist Ground Floor	External Wall	Panel	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B08 - Dentist Ground Floor	Basement Wall	EDB	Composite material	Very Low (3)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Dentist	Year Built:	Unknown
Footprint (m2)	145	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	1
Ranchsliders:	0	Windows:	12
Soffit Height (mm):	3750	Soffit Width (mm):	350
Surrounding Features:	Stairs/Ramps		
Comments:			
Connected to wastewater treatment plant			

Internal			
Wall Material:	Hardboard		
Wall Finish:	Painted		
Floor Material:	Timber Particle Board		
Floor Finish:	Lino		
Ceiling Material:	Fibrous Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2500	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	3	No. Internal Doors:	
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Unknown		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 9: Asbestos Containing Materials – B09 – Bus Shelter

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B09 - Bus Shelter Ground Floor	External Wall	Lining	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 32: LBP Identified – B09 – Bus Shelter

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B09 – Bus Shelter, Ground Floor	External	Pink	Timber	Poor	LEAD BASED 600
B09 – Bus Shelter, Ground Floor	External	White	Timber	Poor	LEAD BASED 24,000

OPUS Tokanui Building Inspection

General			
Building:	Bus shelter & carport	Year Built:	Unknown
Footprint (m2)	70	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			

External			
Wall Material:	Steel pole|Timber rafters|Timber frame|Fibrolite cladding		
Wall Finish:	Painted		
Foundation:	Concrete slab		
Roof Material:	Pitched corrugated pvc		
Roof Finish:	None	Gutters Present:	yes
Single Doors:	0	Double Doors:	0
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2500	Soffit Width (mm):	
Surrounding Features:			
Comments:			
An open double sided dual purpose structure (no doors) which has a middle wall which is cement sheet fibrolite, steel poles, and timber frame rafters. Roof is monopitched corrugated PVC with PVC guttering. Foundation is asphalt in the carport and footpath in the bus shelter.			

Internal			
Wall Material:			
Wall Finish:			
Floor Material:			
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	0	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	N/A	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	N/A	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			
Bees in nearby garden.			

Table 33: LBP Identified – B10 – Old Admin & Pharmacy

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B10 – Old Admin & Pharmacy, 1	Old admin	White	Timber and metal	Intact	LEAD-BASED 74,000
B10 – Old Admin & Pharmacy, 1	Old admin	White	Plasterboard	Intact	LEAD-BASED 38,000
B10 – Old Admin & Pharmacy, 1	Old admin	Salmon	Timber	Poor	LEAD-BASED 2,000
B10 – Old Admin & Pharmacy, Ground Floor	Pharmacy internal	Green	Timber	Intact	LEAD-BASED 3,500
B10 – Old Admin & Pharmacy, Ground Floor	Pharmacy external	White	Timber and metal	Poor	LEAD-BASED 6,000
B10 – Old Admin & Pharmacy, Ground Floor	Old admin external	White	Timber and metal	Poor	LEAD-BASED 5,100

Table 10: Asbestos Containing Materials – B10 – Old Admin & Pharmacy

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B10 - Old Admin & Pharmacy, 1st Floor	Old admin - Roof void Pipes and floor	Pipe lagging and debris	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B10 - Old Admin & Pharmacy Ground Floor	Internal Lagging throughout building	Lagging	Insulation material	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B10 - Old Admin & Pharmacy Ground Floor	Internal Ceiling inside wards	Textured ceiling	Textured coating	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B10 - Old Admin & Pharmacy Ground Floor	External - Pharmacy Soffits	Panels	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B10 - Old Admin & Pharmacy Ground Floor	Pharmacy Bathroom	Hot water cylinder	Cable wrap and insulation	Low (6)	Remove item intact prior to demolition by a licenced asbestos removalist under Class B controls
B10 - Old Admin & Pharmacy 1st Floor	Old admin - cleaners cupboard Walls	Lining	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B10 - Old Admin & Pharmacy 1st Floor	Old admin - R10 Wall	Switchboard	Backing	Very Low (4)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General

Building:	Pharmacy	**Year Built:**	Unknown
Footprint (m2)	108	**Storeys:**	1
Surveyed by:	NE and RS	**Survey Date:**	9/02/2015
General Comments:			
Solid Rimu cabinetry			

External

Wall Material:	Brick|Concrete in situ		
Wall Finish:	Brick|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Other		
Roof Finish:	None	**Gutters Present:**	yes
Single Doors:	2	**Double Doors:**	0
Ranchsliders:	0	**Windows:**	9
Soffit Height (mm):	2700	**Soffit Width (mm):**	350
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Road		
Comments:			
Concrete tile roofing. Possible copper guttering. Galvanised bars over windows.			

Internal

Wall Material:	Gib Plaster|Timber Frame|Concrete in situ		
Wall Finish:	Painted		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Fibrous Plaster|Concrete		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	**Max. Stud Height (mm):**	
Rooms of Max. Stud Height:			
No. Rooms:	7	**No. Internal Doors:**	3
No. Bathrooms:	1	**No. Plant Rooms:**	0
Pipework Lagging:	no	**Radiator Heating System:**	yes
Comments:			
Large steel safe door and steel entry door. Concrete medicine store with sunken concrete floor. Rimu medicine shelving.			

Environmental

Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

OPUS Tokanui Building Inspection

General

Building:	Old admin WTC	**Year Built:**	1930
Footprint (m2)	290	**Storeys:**	2
Surveyed by:	NE and RS	**Survey Date:**	9/02/2015
General Comments:			

External

Wall Material:	Brick|Concrete in situ		
Wall Finish:	Brick|Solid Plaster		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Other		
Roof Finish:	None	**Gutters Present:**	yes
Single Doors:	1	**Double Doors:**	2
Ranchsliders:	0	**Windows:**	40
Soffit Height (mm):	6230	**Soffit Width (mm):**	600
Surrounding Features:	Awnings/Pergolas|Road|Powerlines		
Comments:			
Concrete tile roofing			

Internal

Wall Material:	Gib Plaster|Timber Frame|Brick|Concrete in situ		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Fibrous Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3000	**Max. Stud Height (mm):**	
Rooms of Max. Stud Height:			
No. Rooms:	26	**No. Internal Doors:**	30
No. Bathrooms:	2	**No. Plant Rooms:**	0
Pipework Lagging:	yes	**Radiator Heating System:**	yes
Comments:			
All rimu doors, door frames, skirting boards and stair balustrades. Concrete floor downstairs. Native timber upstairs			

Environmental

Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Ground hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 11: Asbestos Containing Materials – B11 – Ward A

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B11 - Ward A, Ground Floor	Internal Debris on the floor throughout the building	Debris	Various	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B11 - Ward A Ground Floor	Internal Pipes	Lagging and debris	Insulation material	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B11 - Ward A Ground Floor	Carpark Manhole between B11 and B10	Rope seal	Insulation material	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B11 - Ward A Ground Floor	Internal R17 Floor	Debris from old hot water cylinder (HWC)	Woven ropes and gasket	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B11 - Ward A Ground Floor	Internal R11 Wall behind EDB	Panel	AIB	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B11 - Ward A Ground Floor	Internal R23 Wall behind EDB	Panel	AIB	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B11 - Ward A Ground Floor	Internal Ceiling in bathroom (wet) areas	Ceiling lining	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B11 - Ward A Ground Floor	External Exterior soffits - toilet blocks	Panels	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B11 - Ward A Ground Floor	Internal bathrooms Floor	Floor Lining	Bituminous backing to vinyl	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B11 – Ward A Ground Floor	R17 Wall	Switchboard	Backing board	Very Low (4)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls
B11 – Ward A Ground Floor	Internal R31 Floor	Floor Lining	Vinyl tiles – green and grey	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B11 – Ward A Ground Floor	Roof void Timber framing	Cement sheet boxing	Fibre Cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 34: LBP Identified – B11 – Ward A

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B11 – Ward A, Ground Floor	Northern elevation	White	Timber	Poor	LEAD-BASED 55,000
B11 – Ward A, Ground Floor	External	White	Timber	Poor	LEAD-BASED 150,000
B11 – Ward A, Ground Floor	External	Green	Timber	Poor	LEAD-BASED 28,000
B11 – Ward A, Ground Floor	External	Beige	Timber	Poor	LEAD-BASED 100,000
B11 – Ward A, Ground Floor	External	Red	Timber	Poor	LEAD-BASED 47,000
B11 – Ward A, Ground Floor	External	Grey	Timber	Poor	LEAD-BASED 11,000
B11 – Ward A, Ground Floor	Internal R35	Grey	Plaster	Poor	LEAD-BASED 13,000
B11 – Ward A, Ground Floor	Internal R35	Grey	Plaster	Poor	LEAD-BASED 50,000
B11 – Ward A, Ground Floor	Internal R34, R23	Pink	Plaster	Poor	LEAD-BASED 1,900
B11 – Ward A, Ground Floor	Internal R33	Blue/green	Plaster	Poor	LEAD-BASED 12,000
B11 – Ward A, Ground Floor	Internal hallway	White	Timber	Poor	LEAD-BASED 3,400
B11 – Ward A, Ground Floor	Internal bathroom	Turquoise	Plaster	Poor	LEAD-BASED 3,200
B11 – Ward A, Ground Floor	Internal hallways	Light blue	Plaster	Poor	LEAD-BASED 5,900
B11 – Ward A, Ground Floor	Internal r	Green	Plaster	Poor	LEAD-BASED 7,900
B11 – Ward A, Ground Floor	Internal R1	Green	Hardboard/ timber	Poor	LEAD-BASED 1,900

OPUS Tokanui Building Inspection

General			
Building:	Ward A	Year Built:	1912
Footprint (m2)	1520	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	9/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Cement sheet|Shiplap weatherboard		
Wall Finish:	Painted|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	13	Double Doors:	2
Ranchsliders:	0	Windows:	243
Soffit Height (mm):	4000	Soffit Width (mm):	400
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road|Concrete Chimneys|Header Tanks		
Comments:			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Hardboard|Concrete in situ		
Wall Finish:	Painted|Wallpaper|Tile|Pre-finished sheeting		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Fibrous Plaster|Timber (TGV)|Hardboard|Seratone		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2500	Max. Stud Height (mm):	3800
Rooms of Max. Stud Height:	5		
No. Rooms:	45	No. Internal Doors:	60
No. Bathrooms:	9	No. Plant Rooms:	0
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:	Exposed trusses, match lining, doors, framing, and flooring are all rimu. Plant believed to be fed from shed attached to Ward B.		

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 35: LBP Identified – B12 – Ward B

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B12 – Ward B, 1	Internal	Pink	Plaster	Poor	LEAD-BASED 2,900
B12 – Ward B, 1	Internal	Yellow	Plaster	Poor	LEAD-BASED 3,400
B12 – Ward B, 1	Internal	Green	Plaster	Poor	LEAD-BASED 29,000
B12 – Ward B, Ground Floor	Internal	White	Brick	Poor	LEAD-BASED 3,200
B12 – Ward B, Ground Floor	External	Beige	Timber	Poor	LEAD-BASED 93,000
B12 – Ward B, Ground Floor	External	Beige	Timber	Poor	LEAD-BASED 130,000
B12 – Ward B, Ground Floor	External	White	Timber	Poor	LEAD-BASED 24,000
B12 – Ward B, Ground Floor	Internal	Blue	Plaster	Poor	LEAD-BASED 62,000
B12 – Ward B, Ground Floor	Internal	Salmon	Plaster	Poor	LEAD-BASED 5,300
B12 – Ward B, Ground Floor	Internal	Blue	Plaster	Poor	LEAD-BASED 3,100
B12 – Ward B, Ground Floor	Internal	Light blue	Plaster	Poor	LEAD-BASED 11,000

Table 12: Asbestos Containing Materials – B12 – Ward B

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B12 – Ward B Ground Floor	Internal Boiler room	Equipment	Gaskets	Medium (7)	Remove items intact prior to demolition by a licenced asbestos removalist under Class B controls
B12 – Ward B Ground Floor	Internal Outer shed	Equipment and debris	Gaskets	Medium (7)	Remove items intact prior to demolition by a licenced asbestos removalist under Class B controls
B12 – Ward B Ground Floor	Internal Northeast end	Switchboard and components	Composite material	Very Low (3)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Ward B	Year Built:	1925
Footprint (m2)	480	Storeys:	2
Surveyed by:	NE and RS	Survey Date:	9/02/2015
General Comments:			

External			
Wall Material:	Brick|Concrete in situ		
Wall Finish:	Brick|Solid Plaster|Texture Coat		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	6	Double Doors:	1
Ranchsliders:	0	Windows:	111
Soffit Height (mm):	6400	Soffit Width (mm):	500
Surrounding Features:	Stairs/Ramps|Services|Road|Concrete Chimneys		
Comments:			
External fire escape			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Brick|Concrete in situ		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Fibrous Plaster|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3100	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	35	No. Internal Doors:	50
No. Bathrooms:	5	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Two staircases solid kauri balustrade and handrail. Rest appears to be built with rimu.			

Environmental			
Electricity Isolated:	yes	Water isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 13: Asbestos Containing Materials – B13 – Ward C

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B13 – Ward C, Ground Floor	Internal Roof void – pipe heating network	Lagging	Insulation material	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B13 – Ward C, Ground Floor	Internal Throughout	Lagging debris to floor	Insulation material	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B13 – Ward C Ground Floor	External Toilet block	Soffit	Fibre cement sheeting	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B13 – Ward C Ground Floor	External Toilet block	Window infill panel	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B13 – Ward C Ground Floor	External East elevation entrance	Door infill panel	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 36: LBP Identified – B13 – Ward C

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B13 – Ward C, Ground Floor	External	Beige	Timber	Poor	LEAD-BASED 49,000
B13 – Ward C, Ground Floor	External	Green	Timber	Poor	LEAD-BASED 57,000
B13 – Ward C, Ground Floor	External	White	Timber	Poor	LEAD-BASED 65,000
B13 – Ward C, Ground Floor	Internal R1	Yellow	Hardboard and plaster	Poor	LEAD-BASED 1,600
B13 – Ward C, Ground Floor	Internal throughout	White	Timber	Poor	LEAD-BASED 11,000
B13 – Ward C, Ground Floor	Internal hallways and ward rooms	Pink	Timber	Fair	LEAD-BASED 7,300
B13 – Ward C, Ground Floor	Internal hallways and ward rooms	Blue	Timber	Fair	LEAD-BASED 4,000
B13 – Ward C, Ground Floor	Internal R27	Purple	Hardboard and metal	Fair	LEAD-BASED 38,000
B13 – Ward C, Ground Floor	Internal north wing	Orange	Hardboard	Fair	LEAD-BASED 1,200
B13 – Ward C, Ground Floor	Internal north wing	Orange	Timber	Fair	LEAD-BASED 3,300

OPUS Tokanui Building Inspection

General			
Building:	Ward C	Year Built:	1912
Footprint (m2)	1460	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			

External			
Wall Material:	Concrete in situ|Shiplap weatherboard|Board and baton		
Wall Finish:	Painted|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	8	Double Doors:	5
Ranchsliders:	0	Windows:	260
Soffit Height (mm):	3200	Soffit Width (mm):	400
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road|Header Tanks		
Comments:			
Header tank on steel pole and concrete plinth (see photo 1).			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Brick|Concrete in situ		
Wall Finish:	Painted|Wallpaper|Pre-finished sheeting		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Fibrous Plaster|Timber (TGV)|Hardboard		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	3800
Rooms of Max. Stud Height:	6		
No. Rooms:	39	No. Internal Doors:	45
No. Bathrooms:	7	No. Plant Rooms:	2
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Exposed trusses, doors, floors, ceiling, and framing all native timber (rimu). High ceilings in wings and day rooms.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 37: LBP Identified – B14 – Shed 3

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
No Lead-Based lead paint samples were identified during the survey.					

Table 14: Asbestos Containing Materials – B14 – Shed 3

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B14 – Shed 3 Ground Floor	Internal Wall	Debris	AIB	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls

OPUS Tokanui Building Inspection

General			
Building:	Shed 3	Year Built:	Unknown
Footprint (m2)	47	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			
Prefab room. Services trench running under it. Couldn't access but could see inside.			

External			
Wall Material:	Vertical PVC weatherboard		
Wall Finish:	Painted		
Foundation:	Raised Timber Piles		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	0
Ranchsliders:	0	Windows:	3
Soffit Height (mm):	2800	Soffit Width (mm):	450
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Other		
Comments:			
Walls are PVC sheeting. Timber pile foundation. Awning attached to Ward D.			

Internal			
Wall Material:	Gib Plaster		
Wall Finish:	Wallpaper		
Floor Material:	Timber Particle Board		
Floor Finish:	Carpet		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Blackboard. Has fire sprinklers.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 15: Asbestos Containing Materials – B15 – Ward D

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B15 – Ward D Ground Floor	Internal R30 Wall	Insulation panel	Asbestos insulation board	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B15 – Ward D Ground Floor	Internal Old HWC Cupboard	Wiring	Textile	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B or A controls, depending on ability to remove item intact.
B15 – Ward D Ground Floor	Internal R22 Upper walls	Lining	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B15 – Ward D Ground Floor	Internal R29-R32 Ceiling to wet areas	Panels	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 38: LBP Identified – B15 – Ward D

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B15 – Ward D, Ground Floor	External	White	Timber	Fair	LEAD-BASED 17,000
B15 – Ward D, Ground Floor	External	White	Timber	Fair	LEAD-BASED 36,000
B15 – Ward D, Ground Floor	External	White	Timber	Fair	LEAD-BASED 36,000
B15 – Ward D, Ground Floor	Internal	Cream	Plaster	Poor	LEAD-BASED 13,000
B15 – Ward D, Ground Floor	Internal	Beige	Plaster	Poor	LEAD-BASED 1,800
B15 – Ward D, Ground Floor	Internal	Peach	Plaster	Poor	LEAD-BASED 1,600
B15 – Ward D, Ground Floor	Internal	Green	Fibre cement	Poor	LEAD-BASED 1,800

OPUS Tokanui Building Inspection

General			
Building:	Ward D	Year Built:	1917
Footprint (m2)	970	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			

External			
Wall Material:	Timber Frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	8	Double Doors:	1
Ranchsliders:	0	Windows:	94
Soffit Height (mm):	3800	Soffit Width (mm):	500
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Concrete Chimneys		
Comments:			
Street lamps. Fire hydrant			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame		
Wall Finish:	Painted|Wallpaper|Pre-finished sheeting		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino|Other		
Ceiling Material:	Fibrous Plaster|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3000	Max. Stud Height (mm):	4200
Rooms of Max. Stud Height:	1		
No. Rooms:	34	No. Internal Doors:	50
No. Bathrooms:	5	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
1 kitchen & 2 kitchenettes. Max stud height in dayroom. Native timber construction. Polished concrete in bathrooms.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 39: LBP Identified – B16 – Petrol Station

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
No Lead-Based lead paint samples were identified during the survey.					

Table 16: Asbestos Containing Materials – B16 – Petrol Station

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B16 – Petrol Station Ground Floor	External Walls	Cladding, Gable End and Soffit	Fibre Cement Sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B16 – Petrol Station Ground Floor	External Fencing – Eastern Elevation	Wall	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B16 – Petrol Station Ground Floor	Internal Corner storage box	Lid lining	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B16 – Petrol Station Ground Floor	Internal Wall	Pump	Gasket	Very Low (4)	Remove item intact prior to demolition by a licenced asbestos removalist under Class B controls
B16 – Petrol Station Ground Floor	Internal Toilet wall	Shower lining	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Petrol Station	Year Built:	Unknown
Footprint (m2)	385	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			
Still contains old pumps and tanks to be removed by owners, (Shell, Mobil)			

External			
Wall Material:	Reinforced concrete block|Cement Sheet		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Ribbed		
Roof Finish:	None	Gutters Present:	yes
Single Doors:	3	Double Doors:	0
Ranchsliders:	0	Windows:	28
Soffit Height (mm):	3400 to underside of awning	Soffit Width (mm):	4500
Surrounding Features:	Awnings/Pergolas|Services|Road		
Comments:			
4 Garage roller doors. 1 Mobil and 1 Shell pump. Shell diesel pump inside			

Internal			
Wall Material:	Gib Plaster|Timber Frame|Hardboard|Concrete Block		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2500	Max. Stud Height (mm):	3500
Rooms of Max. Stud Height:	1		
No. Rooms:	4	No. Internal Doors:	8
No. Bathrooms:	1	No. Plant Rooms:	1
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
Butterfly roof construction formed with steel beam on concrete block columns. Old pit in floor - flooded. Old diesel pump and oil drums present.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Store room		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 17: Asbestos Containing Materials – B17 – Oct #1

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B17 – Oct #1 Ground Floor	Internal R1 wall	Insulation board lining	Asbestos insulation board	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B17 – Oct #1 Ground Floor	Internal R1 furnace	Furnace lining	Asbestos insulation board	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B17 – Oct #1 Ground Floor	External Wall	EDB	Fuse insulation	Very Low (4)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls

Table 40: LBP Identified – B17 – Oct #1

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B17 – Oct #1, Ground Floor	External	White	Timber	Poor	LEAD-BASED 270,000
B17 – Oct #1, Ground Floor	External	Burgundy	Timber and concrete	Poor	LEAD-BASED 140,000
B17 – Oct #1, Ground Floor	Internal	White	Timber	Fair	LEAD-BASED 9,300
B17 – Oct #1, Ground Floor	Internal	Blue	Timber	Fair	LEAD-BASED 3,400
B17 – Oct #1, Ground Floor	Internal	Cream	Timber	Fair	LEAD-BASED 15,000

OPUS Tokanui Building Inspection

General			
Building:	OCT1	Year Built:	Unknown
Footprint (m2)	265	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			
Customised seating and wheel chair workshop			

External			
Wall Material:	Timber frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	2
Ranchsliders:	1	Windows:	18
Soffit Height (mm):	4100	Soffit Width (mm):	300
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road		
Comments:			
Chimney vent			

Internal			
Wall Material:	Hardboard		
Wall Finish:	Painted		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Lino|Other		
Ceiling Material:	Gib Plaster|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3500	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	12	No. Internal Doors:	12
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Concrete floor in back workshop has no finish.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Back workshop		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 18: Asbestos Containing Materials – B18 – Shed 6

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B18 – Shed 6 Ground Floor	Internal Ceiling void	HWC wiring	Cable wrap	Low (5)	Remove item intact prior to demolition by a licenced asbestos removalist under Class B controls

Table 41: LBP Identified – B18 – Shed 6

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B18 – Shed 6, Ground Floor	Interior	Light Cream	Timber	Fair	LEAD-BASED 1,200
B18 – Shed 6, Ground Floor	Internal	White	Timber	Fair	LEAD-BASED 1,400
B18 – Shed 6, Ground Floor	External	White	Timber	Poor	LEAD-BASED 110,000
B18 – Shed 6, Ground Floor	External	Beige	Timber	Poor	LEAD-BASED 29,100

OPUS Tokanui Building Inspection

General			
Building:	Shed 6	Year Built:	Unknown
Footprint (m2)	320	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			
Woodworking workshop			

External			
Wall Material:	Timber frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	2
Ranchsliders:	0	Windows:	20
Soffit Height (mm):	3100	Soffit Width (mm):	300
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services		
Comments:			

Internal			
Wall Material:	Hardboard		
Wall Finish:	Painted		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Lino		
Ceiling Material:	Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3000	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	8	No. Internal Doors:	14
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 19: Asbestos Containing Materials – B19 – Old Morgue

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B19 – Old Morgue Ground Floor	Internal Wall	EDB	Thermoplastic	Low (5)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls

Table 42: LBP Identified – B19 – Old Morgue

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B19 – Old Morgue, Ground Floor	External	White	Timber	Fair	LEAD BASED 16,000
B19 – Old Morgue, Ground Floor	Internal	White	Concrete	Fair	LEAD BASED 2,100

OPUS Tokanui Building Inspection

General			
Building:	Old Morgue	Year Built:	Unknown
Footprint (m2)	62	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			
Now used as plant room			

External			
Wall Material:	Brick		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	0
Ranchsliders:	0	Windows:	5
Soffit Height (mm):	2850	Soffit Width (mm):	500
Surrounding Features:	Services|Road		
Comments:			
Plant pipes feeding to woodwork shop and garage.			

Internal			
Wall Material:	Gib Plaster		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Other		
Ceiling Material:	Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	2	No. Internal Doors:	1
No. Bathrooms:	0	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	no
Comments:			
Floor painted			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Back room		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 43: LBP Identified – B34 – Shed 2 Toilet Block

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
, Ground Floor	Exterior/Interior	White	Timber	Poor	LEAD-BASED 34,000

Table 20: Asbestos Containing Materials – B34 – Shed 2 Toilet Block

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM identified during the survey.					

OPUS Tokanui Building Inspection

General			
Building:	Shed 2 (toilet block)	Year Built:	Unknown
Footprint (m2)	17	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	None		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	None	Gutters Present:	yes
Single Doors:	0	Double Doors:	0
Ranchsliders:	1	Windows:	2
Soffit Height (mm):	2300	Soffit Width (mm):	300
Surrounding Features:	Services|Fence		
Comments:			
Height 2.3m, length 2.2m x width 2.8m. Exterior walls made up of 150 series concrete block. Monopitched galvanised steel roof with galvanised steel guttering.			

Internal			
Wall Material:	Timber Frame|Hardboard|Concrete Block		
Wall Finish:	Painted|Other		
Floor Material:	Concrete		
Floor Finish:	Other		
Ceiling Material:	Hardboard		
Ceiling Finish:			
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	2	No. Internal Doors:	
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:		Radiator Heating System:	no
Comments:			
Timber wall partition. Lining is hardboard. Concrete blocks are not painted.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	yes
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			
Consideration: sewage. Buried in trees. 2 or 3 trees growing right next to it. No lighting or water.			

Table 21: Asbestos Containing Materials – B35 – Shed 1

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B35 – Shed 1 Ground Floor	Internal Lower wall lining	Wall lining	Fibre cement sheeting	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B35 – Shed 1 Ground Floor	Internal Ground	Fibre cement fragments	Debris	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 44: LBP Identified – B35 – Shed 1

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B35 – Shed 1, Ground Floor	External	Green	Metal	Poor	LEAD-BASED 170,000
B35 – Shed 1, Ground Floor	External	Beige	Timber	Poor	LEAD-BASED 120,000
B35 – Shed 1, Ground Floor	Internal	White	Timber	Fair	LEAD-BASED 2,200

OPUS Tokanui Building Inspection

General			
Building:	Shed 1	Year Built:	Unknown
Footprint (m2)	50	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			

External			
Wall Material:	Corrugated iron		
Wall Finish:	Painted		
Foundation:	Perimeter concrete earth floor		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	1	Double Doors:	0
Ranchsliders:	0	Windows:	8
Soffit Height (mm):	2500	Soffit Width (mm):	200
Surrounding Features:			
Comments:			
Foundation is concrete ringed with an earth floor. Window frames are timber with no window panes. Large concrete structure to the east of the shed, 92m2 of concrete slab with .8m high wall around perimeter			

Internal			
Wall Material:	Timber Frame		
Wall Finish:			
Floor Material:	Earth		
Floor Finish:	Other		
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):	2600	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:		No. Internal Doors:	
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:		Radiator Heating System:	no
Comments:			
Earth floor.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees/Vegetation		
Comments:			

Table 22: Asbestos Containing Materials – B58 – Rec Hall

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B58 – Rec Hall Ground Floor	Internal Subfloor piping	Pipe Lagging	Insulation material	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B58 – Rec Hall Ground Floor	Internal Projector room	Wall and ceiling lining	Asbestos insulation board	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B58 – Rec Hall Lower Ground	Internal R13 subfloor on ground	Pipe Lagging and debris	Insulation material	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B58 – Rec Hall Ground Floor	Internal R5 pipes to subfloor	Pipe Lagging	Insulation material	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B58 – Rec Hall Ground Floor	External Cladding under window (infill panels)	Wall cladding	Fibre cement sheeting	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	External Cladding and gable ends	Wall cladding	Fibre cement sheeting	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	External Cladding above windows	Wall cladding	Fibre cement sheeting	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	Internal R5, R6 walls behind radiators	Radiator heat shielding	Fibre cement	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	External Wall	EDB	Fuse insulation	Low (5)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Roof	Roof Corrugated roof	Super six panels	Fibre cement	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	External Flat roof section	Roof membrane	Butyl roof	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	Internal R3, R4 showers	Wall lining	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	Internal R10, R20 by door	EDB	Composite material	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	Internal R17 wiring to light fittings	Cable wrap	Woven material	Very Low (3)	Remove item intact prior to demolition by a licenced asbestos removalist under Class B controls or under Class A if intact removal is not possible.
B58 – Rec Hall Ground Floor	Internal R26 main water heater	Flange	Gasket	Very Low (3)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls
B58 – Rec Hall Ground Floor	Internal R26 supply pipe to feeder tank	Flange	Gasket	Very Low (3)	Remove item intact prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Rec hall	Year Built:	1940
Footprint (m2)	1110	Storeys:	2|Basement
Surveyed by:	NE and RS	Survey Date:	9/02/2015
General Comments:			
Large brick and concrete courtyard (see photo 1)			

External			
Wall Material:	Brick|Concrete in situ|Cement Sheet		
Wall Finish:	Painted|Brick		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron|Other		
Roof Finish:	None	Gutters Present:	yes
Single Doors:	3	Double Doors:	9
Ranchsliders:	0	Windows:	142
Soffit Height (mm):	3700	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road|Concrete Chimneys|Header Tanks		
Comments:			
Fibre cement corrogated roofing. Possible asbestos sheet cladding.			

Internal			
Wall Material:	Gib Plaster|Timber Panneiling|Timber Frame|Hardboard		
Wall Finish:	Painted|Wallpaper|Pre-finished sheeting		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Fibrous Plaster|Accoustic Tile|Hardboard		
Ceiling Finish:	Painted|Pre-finished		
Av. Stud Height (mm):	2600	Max. Stud Height (mm):	4700
Rooms of Max. Stud Height:	1		
No. Rooms:	23	No. Internal Doors:	35
No. Bathrooms:	6	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Main hall is steel portal and beam construction. Solid matai or rimu flooring. Rimu subfloor framing under stage most likely whole building. Upstairs area inaccessible without ladder, appeared to be 2 rooms. Basement area under stage.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Lobby cupboard		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 45: LBP Identified – B58 – Rec Hall

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B58 – Rec Hall, Ground Floor	External	Purple	Timber	Fair	LEAD-BASED 34,000
B58 – Rec Hall, Ground Floor	External	White	Timber	Fair	LEAD-BASED 12,000
B58 – Rec Hall, Ground Floor	Internal throughout	White	Plaster and wood	Fair	LEAD-BASED 3,200
B58 – Rec Hall, Ground Floor	Internal	Green	Plaster	Fair	LEAD-BASED 42,000
B58 – Rec Hall, Ground Floor	Internal	White	Wood	Fair	LEAD-BASED 59,000

Table 23: Asbestos Containing Materials – B73 – Shed behind B18

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM identified during the survey.					

Table 23: Asbestos Containing Materials – B73 – Shed behind B18

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM identified during the survey.					

As reported in tab for B18

OPUS Tokanui Building Inspection

General			
Building:	Shed 6	Year Built:	Unknown
Footprint (m2)	320	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			
Woodworking workshop			

External			
Wall Material:	Timber frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	2
Ranchsliders:	0	Windows:	20
Soffit Height (mm):	3100	Soffit Width (mm):	300
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services		
Comments:			

Internal			
Wall Material:	Hardboard		
Wall Finish:	Painted		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Lino		
Ceiling Material:	Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3000	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	8	No. Internal Doors:	14
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 1: B20- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 20- Ground Floor	External	Insulation	Lagging	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 20- Ground Floor	External	Cladding	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 20- Ground Floor	External wall	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 21: B20- Positive Lead Based Paint

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 20- Ground Floor	External	White	Wood	Poor	LEAD-BASED 4,800
Building 20- Ground Floor	External	Pink	Wood	Poor	LEAD-BASED 1,600
Building 20- Ground Floor	Internal	White	Plasterboard	Fair	LEAD-BASED 2,400
Building 20- Ground Floor	Internal	White	Wood	Fair	LEAD-BASED 1,100
Building 20- Ground Floor	Internal	Cream	Plasterboard and Wall paper	Fair	LEAD-BASED 2,300

Table 2: B21- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 21- Ground Floor	Ward 6 Floor	Discarded lagging and debris	Lagging and debris	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 21- Ground Floor	Scullery laundry kitchen Floor	Discarded lagging and debris	Lagging and debris	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 21- Ground Floor	Kitchen Wall	Chimney	Insulation	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 21- Ground Floor	Boiler Room Floor	Discarded lagging and debris	Lagging and debris	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 21- Ground Floor	Ceiling void	Insulation	Lagging	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 21- Ground Floor	Scullery, Laundry, and Bathrooms	Ceiling lining	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Locker Room	Ceiling lining	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Wall void	Ceiling lining	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Boiler Room	Ceiling lining	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Porch	Ceiling lining	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Boiler room	Pipework	Gaskets	Very low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Porch	Ceiling Lining (Above Door by Ramp)	Cement sheet	Very low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Porch	Ceiling Lining (Above Door by Visitors' Entrance)	Cement sheet	Very low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Porch	Ceiling Lining (Above Door by Kitchen)	Cement sheet	Very low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Porch	Ceiling Lining (Above Door)	Cement sheet	Very low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	External	Cladding	Cement sheet	Very low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Toilets	Wall Lining	Cement sheet	Very low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 21- Ground Floor	Kitchen	Dishwasher	Gasket	Very low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Ward 6	Year Built:	1930
Footprint (m2)	1310	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Bevel back weatherboard|Hardiplank weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:		Gutters Present:	yes
Single Doors:	17	Double Doors:	5
Ranchsliders:	0	Windows:	123
Soffit Height (mm):	3200	Soffit Width (mm):	500
Surrounding Features:	Stairs/Ramps|Concrete Chimneys|Header Tanks		
Comments:			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Pinex|Hardboard		
Wall Finish:	Painted		
Floor Material:	Other		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Timber (TGV)|Fibrous Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	3800
Rooms of Max. Stud Height:	1		
No. Rooms:	24	No. Internal Doors:	35
No. Bathrooms:	15	No. Plant Rooms:	2
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Central day room stud 3.8m			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 4: B23- Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 23- Ground Floor	Ward 4 Floor	Discarded lagging and debris	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 23- Ground Floor	Sub floor and ceiling Pipework	Insulation	Lagging	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls

Table 22: B21- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 21- Ward 6, Ground Floor	External	White	Timber	Poor	LEAD-BASED 59,000
Building 21- Ward 6, Ground Floor	External	White	Timber	Poor	LEAD-BASED 88,000
Building 21- Ward 6, Ground Floor	External	White	Timber	Fair	LEAD-BASED 82,000
Building 21- Ward 6, Ground Floor	External	Grey	Concrete	Fair	LEAD-BASED 5,000
Building 21- Ward 6, Roof	External	Red	Corrugated iron	Poor	LEAD-BASED 2,300
Building 21- Ward 6, Ground Floor	External	Yellow	Timber cladding	Poor	LEAD-BASED 67,000
Building 21- Ward 6, Ground Floor	Internal	White	Timber	Intact	LEAD-BASED 1,300
Building 21- Ward 6, Ground Floor	Internal	White	Plasterboard	Fair	LEAD-BASED 2,900
Building 21- Ward 6, Ground Floor	Internal	Green	Fibreboard	Fair	LEAD-BASED 1,100
Building 21- Ward 6, Roof	Internal	Blue	Brick and fibreboard	Fair	LEAD-BASED 1,700

Table 23: B22- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
No lead-based paint samples were identified during the survey.					

Table 24: B23- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 23- Ground Floor	External	White	Timber	Fair	LEAD-BASED 82,000
Building 23- Ground Floor	External	Yellow	Timber	Fair	LEAD-BASED 85,000
Building 23- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 3,800
Building 23- Ground Floor	External	Grey	Concrete	Fair	LEAD-BASED 6,000
Building 23- Ground Floor	Internal	Cream	Timber	Poor	LEAD-BASED 2,300

Table 4: B23- Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 23- Ground Floor	Ward 4 Floor	Discarded lagging and debris	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 23- Ground Floor	Sub floor and ceiling Pipework	Insulation	Lagging	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 23- Ground Floor	Floor	Discarded lagging and debris	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 23- Ground Floor	Floor	Debris	Insulating board	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 23- Ground Floor	Hallway Floor	Discarded lagging and debris	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 23- Ground Floor	Dispensary Floor	Discarded lagging and debris	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 23- Ground Floor	Boiler room Pipework	Flanges	Gaskets	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 23- Ground Floor	Ward 4 Scullery, laundry and bathrooms	Ceiling lining	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 23- Ground Floor	Back porch Ceiling	Lining	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 23- Ground Floor	Ward 4 Boiler room	Ceiling lining	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 23- Ground Floor	Porch Ceiling	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 23- Ground Floor	Back porch Ceiling	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 23- Ground Floor	Back porch Ceiling	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 23- Ground Floor	Side porch Ceiling	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 23- Ground Floor	Toilets Walls	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Ward 4	Year Built:	1928
Footprint (m2)	995	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Bevel back weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	15	Double Doors:	3
Ranchsliders:	0	Windows:	129
Soffit Height (mm):	3200	Soffit Width (mm):	500
Surrounding Features:	Header Tanks|Concrete Chimneys|Services|Road|Fence		
Comments:			
Concrete chimney. Header tank on roof. Timber window frames.			

Internal			
Wall Material:	Gib Plaster|Timber Frame|Pinex|Hardboard|Seratone|Concrete insitu		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Paint|Lino		
Ceiling Material:	Fibrous Plaster|Accoustic Tile|Concrete|Wood		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2750	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	25	No. Internal Doors:	32
No. Bathrooms:	5	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Internal walls are a mixture of timber frame, concrete fire walls, gib plaster, hardboard, pinex, Hardiflex, MDF, ceiling tile, and seratone. The ceiling has been reframed and lined with ceiling tile. Floors are mostly native timber t/g, but concrete in bathrooms. Has Internal glazing partitions. Pipework lagging in plant room. Radiator heating system present			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 5: B24- Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 24- Ground Floor	Boiler Wall	Boiler room	Gasket	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 24- Ground Floor	External Electrical box	Electrical components	Fuses	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 25: B24- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 24- Ground Floor	External	White	Timber	Fair	LEAD-BASED 200,000
Building 24- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 49,000
Building 24- Ground Floor	External	Grey	Timber	Fair	LEAD-BASED 180,000
Building 24- Ground Floor	External	White	Steel	Poor	LEAD-BASED 1,600
Building 24- Ground Floor	External	White	Timber	Fair	LEAD-BASED 220,000
Building 24- Ground Floor	External	Grey	Steel	Poor	LEAD-BASED 3,700

OPUS Tokanui Building Inspection

General			
Building:	Ward 22	Year Built:	1922
Footprint (m2)	370	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Bevel back weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	3	Double Doors:	2
Ranchsliders:	0	Windows:	50
Soffit Height (mm):	3200	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Road		
Comments:			
Pitched hip and valley roof construction.			

Internal			
Wall Material:	Gib Plaster|Hardboard		
Wall Finish:	Wallpaper		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Pinex/ fibrous plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2750	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	12	No. Internal Doors:	14
No. Bathrooms:	2	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Pipe lagging in plant room. Radiator heating system present.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 26: B25 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 25- Ground Floor	Internal	White	Timber	Poor	LEAD-BASED 1,700
Building 25- Ground Floor	Internal	Cream	Concrete	Poor	LEAD-BASED 12,000
Building 25- Ground Floor	External	Red	Steel	Poor	LEAD-BASED 1,700
Building 25- Ground Floor	External	White	Timber	Fair	LEAD-BASED 94,000

Table 6: B25- Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 25- Ground Floor	Morgue Ceiling	Electrical components	Rope	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 25- Ground Floor	External Wall	Cladding	Render	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 25- Ground Floor	Store area Wall	Electrical items	EDB	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Morgue (new)	Year Built:	Unknown
Footprint (m2)	50	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block|Solid plaster		
Wall Finish:	Painted|Solid Plaster		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	0
Ranchsliders:	0	Windows:	4
Soffit Height (mm):	3800	Soffit Width (mm):	50
Surrounding Features:	Road		
Comments:			
Roof material is mono pitched tin ribbed with a box gutter. Timber window frames. All windows boarded up.			

Internal			
Wall Material:	Concrete		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Lino		
Ceiling Material:	Hardboard		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2600	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	2	No. Internal Doors:	1
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:		Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	
Distribution Board Loc:	Left of entry		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 7: B26- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 26- Ground floor	External	Cladding	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 26- Ground floor	External	Soffit	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 26- Ground floor	Corridor ceiling void	Cable wrap	Textile	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 26- Ground floor	Boiler room	Ceiling	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 26- Ground floor	Store room	Ceiling	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 26- Ground floor	Hallway	Electrical box	Fuse	Very low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 26- Ground floor	External	Electrical box	Fuse	Very low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 26- Ground floor	Hallway near entrance	Electrical box	Fuse	Very low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 27: B26- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 26- Ground Floor	Internal	Yellow	Fibre board	Poor	LEAD-BASED 1,100
Building 26- Ground Floor	External	Orange	Timber	Fair	LEAD-BASED 220,000
Building 26- Ground Floor	External	Brown	Timber	Poor	LEAD-BASED 190,000
Building 26- Ground Floor	Internal	Blue	Concrete	Fair	LEAD-BASED 3,000
Building 26- Ground Floor	Internal	Yellow	Concrete	Fair	LEAD-BASED 5,700
Building 26- Ground Floor	Internal	Pink	Concrete	Poor	LEAD-BASED 3,100
Building 26- Ground Floor	Internal	White	Fibre board	Poor	LEAD-BASED 1,600
Building 26- Ground Floor	Internal	Grey	Timber	Fair	LEAD-BASED 190,000
Building 26- Ground Floor	Internal	Yellow	Fibre board	Poor	LEAD-BASED 1,100
Building 26- Ground Floor	Internal	Pink	Fibre board	Poor	LEAD-BASED 1,100
Building 26- Lower Ground	External	Orange	Timber	Fair	LEAD-BASED 120,000
Building 26- Lower Ground	External	White	Timber	Poor	LEAD-BASED 140,000
Building 26- Lower Ground	External	White	Metal	Poor	LEAD-BASED 71,000

OPUS Tokanui Building Inspection

General			
Building:	Ward 21	Year Built:	1960
Footprint (m2)	892	Storeys:	2
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			

External			
Wall Material:	Concrete in situ| Cement sheet|Timber frame|Timber sheet		
Wall Finish:	Painted|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	4
Ranchsliders:	0	Windows:	153
Soffit Height (mm):	3500/ 6000 at two storey	Soffit Width (mm):	600
Surrounding Features:	Stairs|Ramps|Road|Fence|Other		
Comments:			
External walls are a mixture of - Concrete, timber, cement sheet. Timber window frames.			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Gib Plaster|Timber Stained pine T/G		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	45	No. Internal Doors:	50
No. Bathrooms:	4	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Floor material is concrete to plant room and kitchen. Ceiling finish is stained. There is internal glazing partitions. Radiator heating system present			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

OPUS Tokanui Building Inspection

General			
Building:	Ward 21A	Year Built:	1975
Footprint (m2)	265	Storeys:	2|Basement
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			
Much the same as the adjoining Ward 21			

External			
Wall Material:	Concrete in situ| Cement sheet|Timber frame|Timber sheet		
Wall Finish:	Painted|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	0
Ranchsliders:	1	Windows:	25
Soffit Height (mm):	3500/ 6000 at two storey	Soffit Width (mm):	600
Surrounding Features:	Stairs|Ramps|Road|Fence|Other		
Comments:			
PVC gutters. Other surrounding features include flooded basement, remnants of clothes lines, and fencing.			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Timber Stained pine T/G		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	19	No. Internal Doors:	25
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Basement is completely flooded. Radiator heating system present			

Environmental			
Electricity Isolated:	yes	Water Isolated:	
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			
Basement is completely flooded			

Table 28: B27- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 27- Ground Floor	External	White	Timber	Poor	LEAD-BASED 200,000
Building 27- Ground Floor	External	White	Timber	Poor	LEAD-BASED 49,000
Building 27- Ground Floor	External	Green	Concrete	Fair	LEAD-BASED 2,400
Building 27- Ground Floor	External	Blue	Concrete	Fair	LEAD-BASED 88,000
Building 27- Ground Floor	External	Green	Concrete	Poor	LEAD-BASED 1,800
Building 27- Ground Floor	Internal	White	Timber	Fair	LEAD-BASED 1,600

Table 8: B27- Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 27- Ground Floor	Internal Ceiling space	Insulation material	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 27- Ground Floor	Internal Hallway	Insulation material	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 27- Ground Floor	Internal Floor	Insulation material	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 27- Ground Floor	Int IM room Floor	Insulation material	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 27- Ground Floor	Staff tea room Floor	Insulation material	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 27- Ground Floor	Kitchen Floor	Insulation material	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 27- Ground Floor	Kitchen Floor	Insulation material	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 27- Ground Floor	External boiler room Floor	Debris	Debris	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 27- Ground Floor	Exterior porch Ceiling	Lining	Cement sheet	Very Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 27- Ground Floor	External Entrance	Ceiling	Cement sheet	Very Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Ward 5	Year Built:	Various
Footprint (m2)	1250	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			
This building joins OCT2			

External			
Wall Material:	Timber frame|Bevel back weatherboard		
Wall Finish:	Painted|Other		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	11	Double Doors:	4
Ranchsliders:	0	Windows:	130
Soffit Height (mm):	3200	Soffit Width (mm):	500
Surrounding Features:	Awnings/Pergolas|Header Tanks|Concrete Chimneys		
Comments:			
Header tank, concrete chimney, vegetation			

Internal			
Wall Material:	Plaster|Timber Pannelling|Timber Frame|Pinex|Seratone		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Concrete|Timber TGV|Timber Particle Board		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Fibrous Plaster|Accoustic Tile|Timber (TGV)|Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	62	No. Internal Doors:	75
No. Bathrooms:	10	No. Plant Rooms:	2
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Radiator heating system present			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 9: B28- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 28- Ground Floor	Room 1 and 2	Heater	Cable wrap	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 28- Ground Floor	External	Canopy	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 28- Ground Floor	External	Downpipe	Cement pipe	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 28- Ground Floor	Roof void	Chimney	Cement sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 29: B28- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 28- Ground Floor	External and internal	White	Timber	Poor	LEAD-BASED 140,000
Building 28- Ground Floor	External	Yellow	Timber	Poor	LEAD-BASED 150,000
Building 28- Ground Floor	External	White	Timber	Poor	LEAD-BASED 150,000
Building 28- Ground Floor	Internal	White	Timber	Fair	LEAD-BASED 17,000
Building 28- Ground Floor	Internal	Cream	Fibreboard	Fair	LEAD-BASED 42,000
Building 28- Ground Floor	Internal	Yellow	Fibreboard	Fair	LEAD-BASED 23,000
Building 28- Ground Floor	Internal	Brown	Timber	Fair	LEAD-BASED 9,800

OPUS Tokanui Building Inspection

General			
Building:	OCT2	Year Built:	Unknown
Footprint (m2)	210	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			
This building is an extention of Ward 5			

External			
Wall Material:	Reinforced in situ concrete|Solid plaster|Timber frame		
Wall Finish:	Solid Plaster|Texture Coat		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Tin Tile		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:		Double Doors:	1
Ranchsliders:		Windows:	25
Soffit Height (mm):	3600	Soffit Width (mm):	400
Surrounding Features:	Stairs/Ramps		
Comments:			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Pinex		
Wall Finish:	Painted|Wallpaper		
Floor Material:	Timber Particle Board		
Floor Finish:	Lino		
Ceiling Material:	Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	5	No. Internal Doors:	
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 10: B29- Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 29- Ground Floor	Floor void	Pipes	Insulation	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	Room 22 Wall	Panel	Insulation board	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	External porch room 42 43 Ceiling	Lining	Cement lining	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	External Roof	Roof	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	External Canopy	Ceiling panel	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	Bathroom room 55 Floor	Flooring	Terrazzo	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	Room 54 toilet Wall	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	Bathroom room 54 Floor	Flooring	Terrazzo	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	Room 56 Floor	Flooring	Terrazzo	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	Room 56 Wall	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	Bathroom room 45 Floor	Flooring	Terrazzo	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	Room 45 Wall	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	Bathroom room 33 Floor	Flooring	Terrazzo	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	Room 33 Wall	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	Bathroom room 34 Floor	Flooring	Terrazzo	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	Room 34 Wall	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	Bathroom room 32 Floor	Flooring	Terrazzo	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 29- Ground Floor	Room 32 Wall	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	Room 15 Wall	Lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 29- Ground Floor	Bathroom room 3 Floor	Flooring	Terrazzo	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class A controls

OPUS Tokanui Building Inspection

General			
Building:	Ward 7	Year Built:	Unknown
Footprint (m2)	1235	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Bevel back weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	13	Double Doors:	1
Ranchsliders:	0	Windows:	99
Soffit Height (mm):	3400	Soffit Width (mm):	400
Surrounding Features:	Concrete Chimneys		
Comments:			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Pinex|Hardboard		
Wall Finish:	Painted|Wallpaper|Tile|Pre-finished sheeting		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Fibrous Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	3200
Rooms of Max. Stud Height:	2		
No. Rooms:	40	No. Internal Doors:	80
No. Bathrooms:	8	No. Plant Rooms:	2
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Roughly 80 doors including lockers. Kitchen and dining stud height of 3.2m. The overhead extraction in the kitchen appears to be solid copper			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	By kitchen		
Water Valve Loc:			
Surrounding Features:			
Comments:			

Table 30: B29- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 29- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 61,000
Building 29- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 53,000
Building 29- Ground Floor	External	Grey	Concrete	Poor	LEAD-BASED 3,000
Building 29- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 28,000
Building 29- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 47,000
Building 29- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 43,000
Building 29- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 26,000
Building 29- Ground Floor	Internal	Grey	Timber	Fair	LEAD-BASED 3,700
Building 29- Ground Floor	Internal	Cream	Plasterboard	Poor	LEAD-BASED 2,900
Building 29- Ground Floor	Internal	White	Plaster	Fair	LEAD-BASED 1,300
Building 29- Ground Floor	Internal	Cream,	Timber	Fair	LEAD-BASED 52,000
Building 29- Ground Floor	Room 41	Grey	Timber	Fair	LEAD-BASED 2,000
Building 29- Ground Floor	Internal	Cream/ grey	Plasterboard	Poor	LEAD-BASED 4,600
Building 29- Ground Floor	Internal	Grey	MDF	Poor	LEAD-BASED 5,500
Building 29- Ground Floor	Internal	Cream	MDF	Intact	LEAD-BASED 8,500
Building 29- Ground Floor	Internal	Cream	MDF	Intact	LEAD-BASED 8,700
Building 29- Ground Floor	External	Red	Metal	Fair	LEAD-BASED 9,900

Table 11: B30- Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Building 30- Ground Floor	Internal subfloor Pipework	Insulation material	Lagging	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 30- Ground Floor	Room 18 Wall	Pipe	Insulation	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 30- Ground Floor	Room 4 Wall	Boiler	Insulation	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 30- Ground Floor	Room 3 toilets Pipes	Ceiling	Pipe wrap	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 30- Ground Floor	Room 4 Wall	Boiler	Insulation	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 30- Ground Floor	Internal Boiler room Wall	Pipework	Lagging	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 30- Ground Floor	Internal Ceiling space and sub floor Insulation material	Pipework	Lagging	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Building 30- Ground Floor	External Wall	Soffit	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	External Wall	Boxing	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 34 Wall	Panels behind heaters	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 24 Wall	Panels behind heaters	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 26 Wall	Panels behind heaters	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 27 Wall	Panels behind heaters	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 31 Wall	Panels behind heaters	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 31 Wall	Wall panel	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 28 Wall	Wall panel	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 15 Wall	Wall panel	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 29 Wall	Wall panel	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 13 Wall	Wall panel	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	External Wall	Gable end	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 35 Wall	Electrical box	Fuse	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 42 boiler room Wall	Pipework	Gaskets	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	Room 42 Wall	Electrical box	Fuse	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Building 30- Ground Floor	External Wall	Electrical box	Fuses	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Ward 8	Year Built:	1960
Footprint (m2)	1415	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			

External			
Wall Material:	Brick|Concrete in situ|Cement sheet		
Wall Finish:	Painted|Brick|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron|Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	10	Double Doors:	2
Ranchsliders:	1	Windows:	110
Soffit Height (mm):	3800	Soffit Width (mm):	400
Surrounding Features:	Stairs/Ramps		
Comments:			
Various concrete courtyards and steel handrails around the building			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Brick		
Wall Finish:	Painted|Wallpaper|Tile|Pre-finished sheeting		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Gib Plaster|Fibrous Plaster|Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2600	Max. Stud Height (mm):	3200
Rooms of Max. Stud Height:	2		
No. Rooms:	30	No. Internal Doors:	
No. Bathrooms:	9	No. Plant Rooms:	3
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Kitchen dining and dayroom stud heights of 3.2m. Roughly 60 doors. The overhead extraction in the kitchen appears to be solid copper			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Kitchen and entry hall		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 31: B30- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 30- Ground Floor	External	White	Timber	Fair	LEAD-BASED 9,400
Building 30- Ground Floor	External	White	Timber	Poor	LEAD-BASED 41,000
Building 30- Ground Floor	External	White	Timber	Poor	LEAD-BASED 58,000
Building 30- Ground Floor	External	White	Timber	Poor	LEAD-BASED 19,000
Building 30- Ground Floor	External	White	Metal	Poor	LEAD-BASED 31,000
Building 30- Ground Floor	Internal	Cream	Cement	Poor	LEAD-BASED 4,200
Building 30- Ground Floor	Internal	Grey	Cement	Poor	LEAD-BASED 1,300
Building 30- Ground Floor	Internal	White	Plasterboard	Poor	LEAD-BASED 2,500
Building 30- Ground Floor	Internal	Pale pink	Timber, plasterboard	Poor	LEAD-BASED 1,600
Building 30- Ground Floor	Internal	Light blue	Plasterboard	Fair	LEAD-BASED 1,900
Building 30- Ground Floor	Internal	Red	Metal	Fair	LEAD-BASED 16,000
Building 30- Ground Floor	Internal	Purple	Timber	Intact	LEAD-BASED 1,200
Building 30- Ground Floor	Internal	Green	Timber, metal pipes	Fair	LEAD-BASED 2,700
Building 30- Ground Floor	Internal	White	Metal	Fair	LEAD-BASED 2,600
Building 30- Ground Floor	External	Grey	Timber	Poor	LEAD-BASED 37,000

Table 32: B31- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
No lead-based paint samples were identified during the survey.					

No OPUS Survey Sheet

Table 12: B31: Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM was identified or presumed during the survey.					

Table 13: S1: Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM was identified or presumed during the survey.					

Table 33: S1- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Substation 1- Ground Floor	External and internal	Cream	Timber	Poor	LEAD-BASED 13,000

OPUS Tokanui Building Inspection

General			
Building:	Sub 1	Year Built:	Unknown
Footprint (m2)	27	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	3/02/2015
General Comments:			
Couldn't access. Main power comes in - power line stops here then cable to ground.			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	1
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	3100	Soffit Width (mm):	200
Surrounding Features:	Powerlines|Fence|Other		
Comments:			
Roof is monopitched. Soffit is 3300mm at the high end and 2900mm at the low end. Powerline, fence, gates nearby. Gutters are galvanised steel.			

Internal			
Wall Material:			
Wall Finish:			
Floor Material:			
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:		No. Internal Doors:	
No. Bathrooms:	0	No. Plant Rooms:	
Pipework Lagging:		Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			
Couldn't access so can't comment on much			

Table 34: S2- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Substation 2- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 24,000
Substation 2- Ground Floor	External	White	Timber	Poor	LEAD-BASED 33,000
Substation 2- Roof	External	Red	Metal	Fair	LEAD-BASED 86,000

Table 14: S2- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Substation 2- Ground Floor	Switch room	Panel	Insulating board	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
Substation 2- Ground Floor	External	Wall	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Internal	Wall	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Internal	Wall	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Internal	Wall	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Internal	Wall	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Internal	Wall	Cement sheet	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Boiler room	Wall	Gaskets	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	External	Wall	Cement sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Switch room	Wall	Fuses	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Boiler room	Wall	Fuses	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
Substation 2- Ground Floor	Boiler room	Wall	Fuses	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Sub 2	Year Built:	Unknown
Footprint (m2)	104	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	2/02/2015
General Comments:			
Unable to properly scope as access was limited.			

External			
Wall Material:	Reinforced in situ concrete |Galvanised steel		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	3
Ranchsliders:	0	Windows:	50
Soffit Height (mm):	2500	Soffit Width (mm):	200
Surrounding Features:	Road|Powerlines|Other		
Comments:			
Vent pipe. Centre box gutter. Foundations ~300mm deep. Timber window frames. Windows are half louvers with mesh and half reinforced glass. Timber doors. Padlocked (didn't have key)/otherwise nailed or screwed shut. Each door goes to a separate room. Overhead lines (power pole next to it & overhead cables running to Admin building).			

Internal			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	None		
Ceiling Material:	Other		
Ceiling Finish:	Painted		
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	4	No. Internal Doors:	
No. Bathrooms:	0	No. Plant Rooms:	4
Pipework Lagging:		Radiator Heating System:	no
Comments:			
Block wall through the centre. Ceiling is hardi-flex. Couldn't access 2 of the 4 rooms. Assume all rooms are plant rooms. No internal glazing partitions.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			
Ivy growing on the back wall. Some moss.			

Table 15: S3- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM were identified or presumed during the survey.					

Table 35: S3: Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Substation 3- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 51,000
Substation 3- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 23,000

OPUS Tokanui Building Inspection

General			
Building:	Sub 3	Year Built:	Unknown
Footprint (m2)	35	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			
Could not access			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	0	Double Doors:	1
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2600	Soffit Width (mm):	200
Surrounding Features:			
Comments:			
High voltage wires warning on door			

Internal			
Wall Material:			
Wall Finish:			
Floor Material:	Concrete		
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:		No. Internal Doors:	
No. Bathrooms:	0	No. Plant Rooms:	1
Pipework Lagging:		Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 36: S4- Summary of LBP identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Substation 4- Ground Floor	External and internal	White	Timber	Poor	LEAD-BASED 8,800
Substation 4- Ground Floor	External	White	Timber	Fair	LEAD-BASED 9,300

Table 16: S4 Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM were identified or presumed during the survey.					

OPUS Tokanui Building Inspection

General			
Building:	Sub 4	Year Built:	Unknown
Footprint (m2)	36	Storeys:	1
Surveyed by:	SD and AS	Survey Date:	16/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	1
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2670	Soffit Width (mm):	300
Surrounding Features:	Road|Powerlines		
Comments:			

Internal			
Wall Material:			
Wall Finish:			
Floor Material:			
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:		No. Internal Doors:	
No. Bathrooms:		No. Plant Rooms:	0
Pipework Lagging:		Radiator Heating System:	no
Comments:			
No access available. Pried doors apart enough to look inside. Transformer still there. No other visuals possible			

Environmental			
Electricity Isolated:		Water Isolated:	N/A
Distribution Board Loc:	No idea if isolated		
Water Valve Loc:			
Surrounding Features:			
Comments:			

Table 17: S5- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Substation 5- Ground Floor	Switch Room	Electrical components	Fuses	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 37: S5- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Substation 5- Ground Floor	External and internal	Cream	Timber	Poor	LEAD-BASED 2,500

OPUS Tokanui Building Inspection

General			
Building:	Sub 5	Year Built:	Unknown
Footprint (m2)	30	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			
Same as Sub 7. Wasn't able to access.			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	1
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2800	Soffit Width (mm):	200
Surrounding Features:	Services|Powerlines|Fence		
Comments:			
On fence line. Gate attaches.			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Other		
Ceiling Material:	Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	3	No. Internal Doors:	
No. Bathrooms:	0	No. Plant Rooms:	3
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 38: S6- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Substation 6- Ground Floor	External and internal	Cream	Timber	Poor	LEAD-BASED 17,000
Substation 6- Ground Floor	Internal	White	Timber	Poor	LEAD-BASED 3,700

Table 18: S6- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Substation 6- Ground Floor	Switch Room	Electrical items	Fuses	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Sub 6	Year Built:	Unknown
Footprint (m2)	27	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	5/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	1
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2800	Soffit Width (mm):	200
Surrounding Features:	Road|Powerlines		
Comments:			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:			
Ceiling Material:	Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2800	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	3	No. Internal Doors:	1
No. Bathrooms:	0	No. Plant Rooms:	3
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
Steel caged door			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 19: S7- Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Substation 7- Ground Floor	Switch room	Electrical items	Fuses	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 39: S7- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Substation 7- Ground Floor	External	Cream	Timber	Poor	LEAD-BASED 13,000

OPUS Tokanui Building Inspection

General			
Building:	Sub 7	Year Built:	Unknown
Footprint (m2)	27	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	5/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	1
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2800	Soffit Width (mm):	200
Surrounding Features:	Road		
Comments:			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Other		
Ceiling Material:	Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	3	No. Internal Doors:	1
No. Bathrooms:	0	No. Plant Rooms:	3
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
1 x steel caged door inside			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 40: S8- Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Substation 8- Ground Floor	External and internal	Cream	Timber	Poor	LEAD-BASED ≥ 300

Table 20: S8: Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
Substation 8- Roof	Roof lining	Building paper	Paper	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Sub 8	Year Built:	Unknown
Footprint (m2)	18	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	5/02/2015
General Comments:			
Empty of most plant used to store old TV. Has some old cables coming up from service trench			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	None	Gutters Present:	no
Single Doors:	0	Double Doors:	1
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2800	Soffit Width (mm):	200
Surrounding Features:			
Comments:			
Hole to service trench			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):	2800	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Not surveyed during 4Sight ACM & Pb Paint surveys

OPUS Tokanui Building Inspection

General			
Building:	Shed 4	Year Built:	Unknown
Footprint (m2)	17	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	19/02/2015
General Comments:			
Free standing painted ply shed. Floor completely rotted no roof			

External			
Wall Material:	Other		
Wall Finish:	Painted		
Foundation:	Other		
Roof Material:			
Roof Finish:	None	Gutters Present:	no
Single Doors:	1	Double Doors:	
Ranchsliders:		Windows:	2
Soffit Height (mm):		Soffit Width (mm):	
Surrounding Features:	Road		
Comments:			
Painted plywood structure with timber bearer and joint subfloor			

Internal			
Wall Material:	Timber Frame		
Wall Finish:	Painted		
Floor Material:	Timber Particle Board		
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):	2200	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	
No. Bathrooms:		No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:		Water Isolated:	
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:			
Comments:			

Table 1: Asbestos Containing Materials – B33 – Ward 9

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B33-Ward 9 Ground Floor	Boiler Room To boiler main section	Lagging	Lagging insulation	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B33-Ward 9 Ground Floor	Internal Boot Room	Boxing	Cement Sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B33-Ward 9 Ground Floor	Exterior Soffits to roofline	Soffits	Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B33-Ward 9 Ground Floor	Sprinkler Cupboard To pipework	Gaskets	Gaskets	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B33-Ward 9 Roof	Roof Water Tank Sheds Walls	Cladding	Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B33-Ward 9 Ground Floor	Front Entrance Gables Gable Ends	Cladding	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B33-Ward 9 1st Floor	Ceiling Space Under metal roof	Paper lining	Bitumen paper	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 16: LBP Identified – B33 – Ward 9

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B33-Ward 9 Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 32,000
B33-Ward 9 Ground Floor	Exterior	Yellow	Wood	Fair	LEAD-BASED 83,000
B33-Ward 9 Ground Floor	Interior	Green	Plaster-board	Fair	LEAD-BASED 2,900

OPUS Tokanui Building Inspection

General			
Building:	Ward 9	Year Built:	1960
Footprint (m2)	1430	Storeys:	1
Surveyed by:	NE and DV	Survey Date:	4/02/2015
General Comments:			

External			
Wall Material:	Brick|Concrete in situ|Cement sheet		
Wall Finish:	Painted|Brick|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron|Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	10	Double Doors:	2
Ranchsliders:	1	Windows:	110
Soffit Height (mm):	3800	Soffit Width (mm):	400
Surrounding Features:	Stairs/Ramps		
Comments:			
Various concrete courtyards and steel handrails around the building			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Pinex|Hardboard|Brick		
Wall Finish:	Painted|Wallpaper|Tile		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Gib Plaster|Fibrous Plaster|Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2600	Max. Stud Height (mm):	3200
Rooms of Max. Stud Height:	2		
No. Rooms:	36	No. Internal Doors:	60
No. Bathrooms:	10	No. Plant Rooms:	2
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Kitchen dining and dayroom stud heights of 3.2m. Roughly 60 doors. The overhead extraction in the kitchen appears to be solid copper			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway at entry		
Water Valve Loc:			
Surrounding Features:			
Comments:			

Table 17: LBP Identified – B36 - Hall

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B36-Hall Ground Floor	Exterior	Red	Metal	Poor	LEAD-BASED 6,800

Table 2: Asbestos Containing Materials – B36 - Hall

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B36-Hall Ground Floor	R6	Electrical Insulating Backing Board	AIB	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls

OPUS Tokanui Building Inspection

General			
Building:	Hall	Year Built:	1970
Footprint (m2)	260	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			
Also has external laundry and toilets			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	2
Ranchsliders:	0	Windows:	31
Soffit Height (mm):	3900	Soffit Width (mm):	1200
Surrounding Features:	Services|Road		
Comments:			
Toilets joined to hall with pitched roof. Soffit on north side only. Metal pipe and punga fence			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted|Other		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Ply		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	3200
Rooms of Max. Stud Height:	2		
No. Rooms:	5	No. Internal Doors:	4
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Vinyl wall coverings. Mono pitched ply ceiling (see photo 6)			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	In main room opposite kitchen		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 18: LBP Identified – B37 – Wooden Shed Behind Hall

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B37-Wooden Shed behind Hall Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 120,000
B37-Wooden Shed behind Hall Roof	Exterior	Red	Metal	Poor	LEAD-BASED 1,200

Possibly no ACM, No inspection sheet

Table 3: Asbestos Containing Materials – B38 – RFTD by Hall

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B38-RFTD by Hall Ground Floor	Exterior Skirting by Ramp	Skirting Board	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 19: LBP Identified – B38 – RFTD by Hall

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B38-RFTD by Hall Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 350,000
B38-RFTD by Hall Ground Floor	R1 and R2	Blue	Wood	Fair	LEAD-BASED 44,000
B38-RFTD by Hall Ground Floor	R3, R4 and R5	Pink	Wood	Fair	LEAD-BASED 32,000
B38-RFTD by Hall Roof	Roof	Red	Metal	Poor	LEAD-BASED 1,700

OPUS Tokanui Building Inspection

General			
Building:	RFTD	Year Built:	Unknown
Footprint (m2)	60	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Raised piles		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	0
Ranchsliders:	0	Windows:	7
Soffit Height (mm):	2700	Soffit Width (mm):	300
Surrounding Features:	Stairs/Ramps|Road		
Comments:			

Internal			
Wall Material:	Timber Pannelling|Pinex|Hardboard		
Wall Finish:	Painted		
Floor Material:	Timber T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Fibrous Plaster|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3100	Max. Stud Height (mm):	3100
Rooms of Max. Stud Height:			
No. Rooms:	4	No. Internal Doors:	4
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Appears most made of native timber			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Main room		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 20: LBP Identified – B39 – RFTD Shed by Hall

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B39-RFTD Shed by Hall Ground Floor	Exterior and Interior	Purple	Metal and timber	Fair	LEAD-BASED 34,000

No ACM identified

OPUS Tokanui Building Inspection

General			
Building:	RFTD Shed	Year Built:	Unknown
Footprint (m2)	7	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			

External			
Wall Material:	Corrugated iron		
Wall Finish:	Painted		
Foundation:	Raised piles		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	1	Double Doors:	0
Ranchsliders:	0	Windows:	1
Soffit Height (mm):	2100	Soffit Width (mm):	
Surrounding Features:	Awnings/Pergolas		
Comments:			

Internal			
Wall Material:	Timber Pannelling|Timber Frame		
Wall Finish:	Painted		
Floor Material:	Timber Particle Board		
Floor Finish:	None		
Ceiling Material:	Other		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2100	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
Just shelves			

Environmental			
Electricity Isolated:	N/A	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 21: LBP Identified – B40 – Covered Area by Hall

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B40 - Covered Area by Hall Roof	Exterior	Green	Metal	Poor	LEAD-BASED 17,000

Covered Area by Hall – Small single storey shelter building with concrete floor slab, timber structural poles, corrugated metal pitched roof. A small metal shed is attached as part of the structure

OPUS Tokanui Building Inspection

General			
Building:	Covered area by Hall	Year Built:	Unknown
Footprint (m2)	65	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			

External			
Wall Material:	Galvanised steel|Sheet cladding|Timber pole|Ply		
Wall Finish:	Painted		
Foundation:	Concrete slab with pole brackets		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	0	Double Doors:	0
Ranchsliders:	0	Windows:	0
Soffit Height (mm):		Soffit Width (mm):	
Surrounding Features:	Fence		
Comments:			
Covered outdoor seating area with bridal storage shed			

Internal			
Wall Material:			
Wall Finish:			
Floor Material:	Concrete		
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:		No. Internal Doors:	
No. Bathrooms:		No. Plant Rooms:	0
Pipework Lagging:	N/A	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	N/A	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 4: Asbestos Containing Materials – B41 – Shed 9

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B41-Shed 9 Ground Floor	Exterior Soffits	Soffit linings	Cement Sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B41-Shed 9 Ground Floor	Interior To pipework	Gaskets	Gaskets	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 22: LBP Identified – B41 – Shed 9

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B41-Shed 9 Ground Floor	Exterior	Yellow	Wood	Poor	LEAD-BASED 15,000
B41-Shed 9 Ground Floor	Exterior	Brown	Concrete and Metal	Poor	LEAD-BASED 16,000

OPUS Tokanui Building Inspection

General			
Building:	Shed 9	Year Built:	Unknown
Footprint (m2)	13	Storeys:	1
Surveyed by:	SD and AS	Survey Date:	16/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Bevel back weatherboard|Brick		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	0
Ranchsliders:	0	Windows:	1
Soffit Height (mm):	2500	Soffit Width (mm):	300
Surrounding Features:	Road		
Comments:			

Internal			
Wall Material:	Bare timber		
Wall Finish:	none		
Floor Material:	Concrete		
Floor Finish:	None		
Ceiling Material:	none		
Ceiling Finish:			
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	1
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
No internal wall coverings or ceiling. Bare frame			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Inside on left		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 23: LBP Identified – B42 – Building 15

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B42-Building 15 Roof	Exterior	Red	Metal	Poor	LEAD-BASED 7,600

Table 5: Asbestos Containing Materials – B42 – Building 15

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B42-Building 15 Ground Floor	Exterior Soffit to roofline	Soffits	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B42-Building 15 Ground Floor	Exterior Infill panels around windows	Infill Panels	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Building 15	Year Built:	1971
Footprint (m2)	250	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			
Same as building 10			

External			
Wall Material:	Brick|Cement sheet|Bevel back weatherboard		
Wall Finish:	Painted|Brick		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	
Ranchsliders:		Windows:	30
Soffit Height (mm):	2900	Soffit Width (mm):	500
Surrounding Features:	Stairs/Ramps|Road		
Comments:			
2 long concrete ramps. 1 large concrete block and stairway			

Internal			
Wall Material:	Gib Plaster|Seratone|Hardboard		
Wall Finish:	Painted|Wallpaper|Vinyl		
Floor Material:	Timber T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	2450
Rooms of Max. Stud Height:			
No. Rooms:	14	No. Internal Doors:	30
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 6: Asbestos Containing Materials – B43 – Building 14

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B43-Building 14 Ground Floor	Exterior Soffit to roofline	Soffits	Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B43-Building 14 Ground Floor	Exterior Infill panels around windows	Infill Panels	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 24: LBP Identified – B43 – Building 14

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B43-Building 14 Ground Floor	Exterior	Pink	Wood	Poor	LEAD-BASED 12,000
B43-Building 14 Ground Floor	Exterior	White	Wood and Fibre Cement	Fair	LEAD-BASED 9,200
B43-Building 14 Ground Floor	Exterior	White,	Wood	Poor	LEAD-BASED 1,200
B43-Building 14 Roof	Exterior	Red	Metal	Poor	LEAD-BASED 17,000

OPUS Tokanui Building Inspection

General			
Building:	Building 14	Year Built:	1971
Footprint (m2)	150	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			
Same as buildings 11, 12, and 13			

External			
Wall Material:	Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:		Double Doors:	
Ranchsliders:		Windows:	15
Soffit Height (mm):	2800	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Road		
Comments:			

Internal			
Wall Material:	Gib Plaster|Seratone|Hardboard		
Wall Finish:	Painted|Vinyl		
Floor Material:	Timber T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	11	No. Internal Doors:	23
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 25: LBP Identified – B44 – Building 13

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B44-Building 13 Ground Floor	Exterior	Blue	Wood and Fibre Cement	Fair	LEAD-BASED 1,300
B44-Building 13 Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 3,600
B44-Building 13 Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 1,100
B44-Building 13 Roof	Exterior	Red	Metal	Poor	LEAD-BASED 1,700

Table 7: Asbestos Containing Materials – B44 – Building 13

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B44-Building 13 Ground Floor	Exterior To Ground	Loose Pipe	Cement Pipe	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B44-Building 13 Ground Floor	Exterior To Roofline	Soffits	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B44-Building 13 Ground Floor	Exterior Panels around Windows	Infill Panels	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B44-Building 13 Ground Floor	Rooms R2 R11 To Ceilings	Light Fittings	Bakelite	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Building 13	Year Built:	1971
Footprint (m2)	150	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			
Same as building 14, 12 and 11. Large tree may interfere with demolition (see photo 4)			

External			
Wall Material:	Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:		Double Doors:	0
Ranchsliders:	0	Windows:	15
Soffit Height (mm):	2800	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Road		
Comments:			

Internal			
Wall Material:	Gib Plaster|Seratone|Hardboard		
Wall Finish:	Painted|Vinyl		
Floor Material:	Timber T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	11	No. Internal Doors:	23
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 8: Asbestos Containing Materials – B45 – Building 12

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B45-Building 12 Ground Floor	Exterior To Roofline	Soffits	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B45-Building 12 Ground Floor	Exterior Panels around Windows	Infill Panels	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B45-Building 12 Ground Floor	Rooms R2 R3 R8 To Ceilings	Light Fittings	Bakelite	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B45-Building 12 Ground Floor	Exterior To Ground	Loose Pipe	Cement Pipe	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 26: LBP Identified – B45 – Building 12

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B45-Building 12 Ground Floor	Exterior	Cream	Wood and Fibre Cement	Poor	LEAD-BASED 36,000
B45-Building 12 Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 23,000
B45-Building 12 Roof	Exterior	Red	Metal	Poor	LEAD-BASED 5,000

OPUS Tokanui Building Inspection

General			
Building:	Building 12	Year Built:	1971
Footprint (m2)	150	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			

External			
Wall Material:	Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	0
Ranchsliders:	0	Windows:	15
Soffit Height (mm):	2800	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Road		
Comments:			

Internal			
Wall Material:	Gib Plaster|Seratone|Hardboard		
Wall Finish:	Painted|Vinyl		
Floor Material:	Timber T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	11	No. Internal Doors:	23
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 27 LBP Identified – B46 – Building 11

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B46-Building 11 Ground Floor	Exterior	White	Wood and fibre cement	Poor	LEAD-BASED 29,000
B46-Building 11 Ground Floor	Exterior	White,	Wood	Poor	LEAD-BASED 34,000
B46-Building 11 Ground Floor	Exterior	White,	Wood	Poor	LEAD-BASED 1,200
B46-Building 11 Roof	Exterior	Red	Metal	Poor	LEAD-BASED 2,600

Table 9: Asbestos Containing Materials – B46 – Building 11

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B46-Building 11 Ground Floor	Exterior Soffit to roofline	Soffits	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B46-Building 11 Ground Floor	Exterior Infill panels around windows	Infill Panels	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Building 11	Year Built:	1971
Footprint (m2)	150	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			

External			
Wall Material:	Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	0
Ranchsliders:	0	Windows:	15
Soffit Height (mm):	2800	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Road|Fence		
Comments:			
Steel mesh fence			

Internal			
Wall Material:	Gib Plaster|Seratone|Hardboard		
Wall Finish:	Painted|Vinyl		
Floor Material:	Timber T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	11	No. Internal Doors:	23
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Rimu shelves			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 10: Asbestos Containing Materials – B47 – Building 10

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B47-Building 10 Ground Floor	Exterior Soffit to roofline	Soffits	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B47-Building 10 Ground Floor	Exterior Infill panels around windows	Infill panels	Cement sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 28: LBP Identified – B47 – Building 10

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B47-Building 10 Ground Floor	Exterior	Yellow,	Wood	Fair	LEAD-BASED 43,000
B47-Building 10 Ground Floor	Exterior	White	Wood and Fibre Cement	Fair	LEAD-BASED 5,400
B47-Building 10 Roof	Exterior	Red	Metal	Poor	LEAD-BASED 6,900

OPUS Tokanui Building Inspection

General			
Building:	Building 10	Year Built:	1971
Footprint (m2)	250	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			

External			
Wall Material:	Brick|Cement Sheet|Bevel back weatherboard		
Wall Finish:	Painted|Brick		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	0
Ranchsliders:	0	Windows:	30
Soffit Height (mm):	2900	Soffit Width (mm):	500
Surrounding Features:	Stairs/Ramps|Road		
Comments:			
2 long concrete ramps. 1 large concrete block and stairway			

Internal			
Wall Material:	Gib Plaster|Seratone|Hardboard		
Wall Finish:	Painted|Wallpaper|Vinyl		
Floor Material:	Timber T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	2450
Rooms of Max. Stud Height:			
No. Rooms:	14	No. Internal Doors:	30
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 29: LBP Identified – B48 – Ward 16

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B48-Ward 16 Ground Floor	Exterior	White	Concrete and wood	Intact	LEAD-BASED 24,000
B48-Ward 16 Ground Floor	Exterior	Green	Wood and fibre cement	Intact	LEAD-BASED 13,000
B48-Ward 16 Ground Floor	Interior	Light Green	Wood	Fair	LEAD-BASED 1,300

Table 11: Asbestos Containing Materials – B48 – Ward 16

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B48-Ward 16 Exterior	Infill panels around windows - Rock Surface	Infill Panels	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B48-Ward 16 Boiler Room	Boiler Room Flanges	Flange Gaskets	Gaskets	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B48-Ward 16 Exterior	Soffits by linen store	Soffits	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B48-Ward 16 Exterior	Soffits by Kitchen	Soffits	Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B48-Ward 16 Exterior	Fascia boards under soffits	Fascia Boards	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B48-Ward 16 Exterior	Infill panels around windows - Smooth Surface	Infill Panels	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B48-Ward 16 Exterior Roof	To skylight surround	Cladding	Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Ward 16	Year Built:	1972
Footprint (m2)	1760	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	11/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block|Cement sheet|Shiplap weatherboard		
Wall Finish:	Painted|Brick|Other		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	9	Double Doors:	9
Ranchsliders:	0	Windows:	138
Soffit Height (mm):	3400	Soffit Width (mm):	800
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road		
Comments:			
Courtyards			

Internal			
Wall Material:	Gib Plaster|Timber Frame		
Wall Finish:	Painted|Wallpaper|Vinyl		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Accoustic Tile|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3000	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	38	No. Internal Doors:	60
No. Bathrooms:	5	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Timber beam and rafter construction.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 12: Asbestos Containing Materials – B49 – Ward 17

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B49-Ward 17 Exterior	South Porch	Cladding	Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B49-Boiler House Subfloor	Subfloor	Underfloor Boxing	Corrugated Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 30: LBP Identified – B49 – Ward 17

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B48-Ward 17 Ground Floor	Exterior	Yellow	Wood	Fair	LEAD BASED 1,900
B48-Ward 17 Ground Floor	Exterior	Brown	Wood	Fair	LEAD BASED 1,200
B48-Ward 17 Ground Floor	Exterior	Brown	Metal	Fair	LEAD BASED 3,900
B48-Ward 17 Ground Floor	Interior	White	Wood	Fair	LEAD BASED 1,400

OPUS Tokanui Building Inspection

General			
Building:	Ward 17	Year Built:	1976
Footprint (m2)	580	Storeys:	1|Basement
Surveyed by:	NE and SD	Survey Date:	11/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	4	Double Doors:	4
Ranchsliders:		Windows:	46
Soffit Height (mm):	2800	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Services|Road		
Comments:			
Aluminum joinery			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame		
Wall Finish:	Painted|Pre-finished sheeting|Vinyl		
Floor Material:	Concrete		
Floor Finish:	Lino		
Ceiling Material:	Gib Plaster|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	32	No. Internal Doors:	45
No. Bathrooms:	6	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 31: LBP Identified – B50 – Ward 18

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B50-Ward 18 Ground Floor	Exterior	Brown	Metal	Fair	LEAD BASED 4,500

Table 13: Asbestos Containing Materials – B50 – Ward 18

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B50-Boiler House Ground Floor	Boiler Room R7	Boiler Pipework Flanges	Gaskets	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B50-Ward 18 Exterior	South Porch	Cladding	Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B50-Boiler House Subfloor	Subfloor	Underfloor Boxing	Corrugated Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Ward 18	Year Built:	1975
Footprint (m2)	575	Storeys:	1|Basement
Surveyed by:	NE and SD	Survey Date:	11/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted|None	Gutters Present:	yes
Single Doors:	6	Double Doors:	4
Ranchsliders:		Windows:	54
Soffit Height (mm):	2400	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road		
Comments:			
Steel fenced area on west side. Aluminium joinery.			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame		
Wall Finish:	Painted|Vinyl		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	32	No. Internal Doors:	45
No. Bathrooms:	6	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Front of building		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 14: Asbestos Containing Materials – B51 – EDU (Old School)

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B51-EDU (Old School) Ground Floor	Internal Areas Walls and Ceilings	Textured Ceiling	Textured Coating	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B51-EDU (Old School) Exterior	To Roofline	Soffits	Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B51-EDU (Old School) Exterior	Exterior back door to R23	Infill Panels	Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B51-EDU (Old School) Ground Floor	R32	Gaskets	Composite Material	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 32: LBP Identified – B51 – EDU (Old School)

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B51-EDU (Old School) Ground Floor	Exterior	Tan	Wood	Fair	LEAD-BASED 33,000
B51-EDU (Old School) Ground Floor	Exterior	Tan	Metal	Fair	LEAD-BASED 5,600

OPUS Tokanui Building Inspection

General			
Building:	EDU	Year Built:	1970
Footprint (m2)	640	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	11/02/2015
General Comments:			
Skilion roof with pine rafters			

External			
Wall Material:	Reinforced concrete block|Board and baton		
Wall Finish:	Painted|Brick		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	5
Ranchsliders:	0	Windows:	78
Soffit Height (mm):	2700	Soffit Width (mm):	0
Surrounding Features:	Stairs/Ramps|Services|Road|Concrete Chimneys|Powerlines		
Comments:			
Skilion roofs			

Internal			
Wall Material:	Timber Frame|Concrete Block		
Wall Finish:	Painted|Other		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	24	No. Internal Doors:	30
No. Bathrooms:	4	No. Plant Rooms:	2
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Skylights			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 33: LBP Identified – B52 – Old House by EDU

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
B52-Old House by EDU Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 120,000
B52-Old House by EDU Ground Floor	Interior	Cream	Wood particle board	Fair	LEAD-BASED 1,800
B52-Old House by EDU Ground Floor	Interior	Pink Cream	Wood particle board	Fair	LEAD-BASED 1,400
B52-Old House by EDU Ground Floor	Interior	White	Wood particle board	Intact	LEAD-BASED 1,500

Table 15: Asbestos Containing Materials – B52 – Old House by EDU

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B52-Old House by EDU Ground Floor	Exterior To skirting	Cladding	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Old House (by EDU)	Year Built:	Unknown
Footprint (m2)	105	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	10/02/2015
General Comments:			

External			
Wall Material:	Timber frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Raised Timber Piles		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	0
Ranchsliders:	0	Windows:	14
Soffit Height (mm):	2800	Soffit Width (mm):	200
Surrounding Features:	Stairs/Ramps|Services|Road		
Comments:			

Internal			
Wall Material:	Pinex|Hardboard		
Wall Finish:	Painted		
Floor Material:	Timber T/G		
Floor Finish:	Lino		
Ceiling Material:	Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2300	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	3	No. Internal Doors:	3
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Accoustic tile on walls too.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			
Tap in handbasin works			

Table 1: B53 – Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B53 Ground Floor	Exterior	Walls Cladding Upper Elevation	Fibre Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B53 Ground Floor	Exterior	Fascia	Fibre Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B53 Ground Floor	Exterior	Soffit	Fibre Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B53 Ground Floor	Subfloor	Subfloor Formwork	Fibre Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B53 Ground Floor	Exterior to ward rooms only	Wall Cladding	Fibre Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B53 Ground Floor	Room 77	Wall Cladding	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B53 Ground Floor	Room 83	Boiler unit main flange	Gasket	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B53 Ground Floor	Room 83	Pipework flanges	Gasket	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 22: B53 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
No lead-based lead paint samples were identified during the survey.					

OPUS Tokanui Building Inspection

General			
Building:	Ward 19	Year Built:	1978
Footprint (m2)	2100	Storeys:	1|Basement
Surveyed by:	NE and SD	Survey Date:	11/02/2015
General Comments:			
Concrete washdown bays around exterior are 4.6m x 3.1 x6 of ~2m apart on each side of building, and two wash down bays at 6.9m x 6.5m all with 2m high wall separating them with a walkway surrounding			

External			
Wall Material:	Reinforced concrete block|Cement sheet		
Wall Finish:	Painted|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	16	Double Doors:	5
Ranchsliders:	2	Windows:	4
Soffit Height (mm):	3000	Soffit Width (mm):	800
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road		
Comments:			
Sliding doors are roller doors. Stainless steel fire surpression cabinets			

Internal			
Wall Material:	Gib Plaster|Timber Frame|Concrete Block|Other		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2600	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	47	No. Internal Doors:	118
No. Bathrooms:	12	No. Plant Rooms:	1
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Walls lined with partical board before GIB.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 23: B54 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
No lead-based lead paint samples were identified during the survey.					

Table 2: B54 – Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No positive ACMs were identified during the survey.					

OPUS Tokanui Building Inspection

General			
Building:	Water Tower	Year Built:	1978
Footprint (m2)	10	Storeys:	2
Surveyed by:	NE and SD	Survey Date:	11/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete in situ		
Wall Finish:	Painted|Solid Plaster		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Concrete Water Tank		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	0	Double Doors:	0
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	7000	Soffit Width (mm):	
Surrounding Features:	Services		
Comments:			
Water tank of 3m diameter on top by 2.5m high (see photo 3).			

Internal			
Wall Material:	Reinforced Concrete in situ		
Wall Finish:	None		
Floor Material:	Concrete		
Floor Finish:	None		
Ceiling Material:	Concrete		
Ceiling Finish:	None		
Av. Stud Height (mm):	6900	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	1
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
Metal and copper pipe work. Access ladder.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:	Still under pressure		
Surrounding Features:	Vegetation		
Comments:			

Table 3: B55 - Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B55, Ground Floor	Room 28 Ceiling	Pipe from ceiling	Lagging	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B55, Ground Floor	Boiler Room	Pipework	Insulation material	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B55, Ground Floor	Boiler Room	Boiler Unit	Insulation	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B55, Ground Floor	Room 29	Sub Main	Fuses	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B55, Ground Floor	Exterior	Around building	Fibre Cement Sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B55, Ground Floor	Room 11	Wall Lining	Fibre Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B55, Ground Floor	Room 19	Heater to Wall	Wiring	Very Low (4)	Remove intact prior to demolition by a licenced asbestos removalist under Class B controls
B55, Ground Floor	Room 42	Red gaskets	Gasket	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B55, Ground Floor	Exterior	Water Tank Housing	Fibre Cement Sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 24: B55 - Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 55 - Ward K, Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 66,000
Building 55 - Ward K, Ground Floor	Exterior	Beige	Wood	Intact	LEAD-BASED 34,000

OPUS Tokanui Building Inspection

General			
Building:	Ward K	Year Built:	Unknown
Footprint (m2)	1480	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	5/02/2015
General Comments:			

External			
Wall Material:	Brick|Concrete in situ|Reinforced concrete block|Cement sheet|Board and ba		
Wall Finish:	Painted|Brick|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron|Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	11	Double Doors:	5
Ranchsliders:	2	Windows:	303
Soffit Height (mm):	3500	Soffit Width (mm):	500
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road|Concrete Chimneys|Header Tanks		
Comments:			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Brick		
Wall Finish:	Painted|Wallpaper|Tile|Pre-finished sheeting		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Plaster|Fibrous Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2500	Max. Stud Height (mm):	3200
Rooms of Max. Stud Height:	3		
No. Rooms:	38	No. Internal Doors:	60
No. Bathrooms:	6	No. Plant Rooms:	2
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
High stud in dayroom kitchen dinning			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway entry		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 25: B55 - Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building B56 - Ward E, Ground Floor	46-48	Blue	Plaster	Intact	LEAD-BASED 1,700
Building B56 - Ward E, Ground Floor	Exterior	Yellow	Wood	Intact	LEAD-BASED 110,000
Building B56 - Ward E, Ground Floor	Exterior	White	Wood	Poor	LEAD-BASED 120,000
Building B56 - Ward E, Ground Floor	Exterior	Red	Concrete	Fair	LEAD-BASED 1,300
Building B56 - Ward E, Ground Floor	Exterior	Green	Metal	Poor	LEAD-BASED 50,000

Table 4: B56 - Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B56, Basement	Boiler Room and Subfloor Pipe	Lagging	ACM lagging	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B56, Ground Floor	Rooms 22,23,45,31,42, 39, 38, 36, 52-54	Wall Cladding	Fibre Cement Sheeting	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B56, Ground Floor	Exterior	Soffit	Fibre Cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B56, Ground Floor	Exterior	Fascia	Fibre Cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B56, Ground Floor	Room 29	Wall-Mounted Fuse Holder	Fuses	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B56, Ground Floor	Room 49	Flange	Gasket	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B56, Roof	Exterior	Water Tank Housings	Fibre Cement Sheet	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Ward E	Year Built:	1958
Footprint (m2)	1480	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	5/02/2015
General Comments:			

External			
Wall Material:	Brick|Concrete in situ|Reinforced concrete block|Cement sheet		
Wall Finish:	Painted|Brick|Solid Plaster		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron|Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	11	Double Doors:	5
Ranchsliders:	2	Windows:	303
Soffit Height (mm):	3500	Soffit Width (mm):	500
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road|Concrete Chimneys|Header Tanks		
Comments:			
Extension to roof above plant rooms (see photo 10)			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Seratone|Concrete Block|Brick		
Wall Finish:	Painted|Wallpaper|Tile|Pre-finished sheeting		
Floor Material:	Concrete|Timber Native T/G		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Gib Plaster|Fibrous Plaster|Timber (TGV)		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2700	Max. Stud Height (mm):	3200
Rooms of Max. Stud Height:	3		
No. Rooms:	39	No. Internal Doors:	60
No. Bathrooms:	8	No. Plant Rooms:	2
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
High studs in kitchen and dining dayroom			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Hallway		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 5: B57 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B57, Ground Floor	1 Pool floor following pipe	Boxing to trench	Fibre Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B57, Ground Floor	4 Pipe	Flanges	Gasket	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B57, Ground Floor	4 Wall	Zip internal	Cable wrap	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 26: B57 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 57 - Pool and Pool Shed, Ground Floor	Exterior	White	Wood	Fair	LEAD-BASED 4,800

OPUS Tokanui Building Inspection

General			
Building:	Pool and pool shed	Year Built:	Unknown
Footprint (m2)	525	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	9/02/2015
General Comments:			
Wire mesh perimeter fence. Main pool 338m2 and 1m to 1.5m deep. Kids pool 24m2 and 0.5m deep. Could not access pool shed.			

External			
Wall Material:	Concrete in situ|Reinforced Concrete block|Corrugated iron		
Wall Finish:	Painted|Solid Plaster		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	4	Double Doors:	0
Ranchsliders:	0	Windows:	8
Soffit Height (mm):		Soffit Width (mm):	
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road		
Comments:			
Concrete retaining wall at north end of pool see photo. Concrete surrounding pool. Kids in situ concrete pool			

Internal			
Wall Material:	Timber Frame|Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Other		
Ceiling Material:	Hardboard		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2600	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	4	No. Internal Doors:	
No. Bathrooms:	2	No. Plant Rooms:	1
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 27: B59 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 59 - Gardener, Ground Floor	Exterior	Pink	Wood	Fair	LEAD-BASED 210,000
Building 59 - Gardener, Ground Floor	Exterior	Maroon	Wood/ metal	Fair	LEAD-BASED 71,000

Table 6: B59 Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM identified during the survey.					

OPUS Tokanui Building Inspection

General			
Building:	Gardener	Year Built:	Unknown
Footprint (m2)	280	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			

External			
Wall Material:	Corrugated iron		
Wall Finish:	None		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	0	Double Doors:	0
Ranchsliders:	2	Windows:	5
Soffit Height (mm):	2500	Soffit Width (mm):	300
Surrounding Features:	Road		
Comments:			
Rimu framing. Exposed truss construction			

Internal			
Wall Material:			
Wall Finish:			
Floor Material:			
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):		Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	
No. Bathrooms:		No. Plant Rooms:	0
Pipework Lagging:	N/A	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 7: B60 Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACM identified during the survey.					

Table 28: B60 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building B60 - Fitter, Ground Floor	Interior	Yellow pink	Wood	Intact	LEAD-BASED 55,000
Building B60 - Fitter, Ground Floor	Exterior	Pink	Wood	Intact	LEAD-BASED 120,000
Building B60 - Fitter, Ground Floor	Exterior	Maroon	Wood	Intact	LEAD-BASED 5,400

OPUS Tokanui Building Inspection

General			
Building:	Fitter	Year Built:	Unknown
Footprint (m2)	100	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			
Cannot gain access. Too many blackberry bushes and wasp nests			

External			
Wall Material:	Timber frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	2	Double Doors:	0
Ranchsliders:	0	Windows:	10
Soffit Height (mm):	2500	Soffit Width (mm):	400
Surrounding Features:	Road		
Comments:			

Internal			
Wall Material:	Gib Plaster		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	6	No. Internal Doors:	6
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Cannot get internal access			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			
Wasps and blackberries			

Table 29: B61 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building B61 - Shed 11, Ground Floor	Exterior	White	Wood	Fair	LEAD BASED 75,000
Building B61 - Shed 11, Ground Floor	Exterior	Purple	Wood	Fair	LEAD BASED 55,000

Table 8: B61 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B61, Ground Floor	1 Floor corner	Lagging	Rope	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B61, Ground Floor	Exterior Soffit	Soffit	Cement sheet	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Shed 11	Year Built:	Unknown
Footprint (m2)	16	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	19/02/2015
General Comments:			
Wasp nest present on door cannot enter			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:		Double Doors:	1
Ranchsliders:		Windows:	0
Soffit Height (mm):	2300	Soffit Width (mm):	350
Surrounding Features:	Road|Powerlines		
Comments:			
3.0m x 3.6m concrete block shed			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):	2200	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	
No. Bathrooms:		No. Plant Rooms:	0
Pipework Lagging:		Radiator Heating System:	no
Comments:			
Could not get access to this shed			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 9: B62 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B62, Ground Floor	4,6 Ground and storage shelf	Debris	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B62, Ground Floor	External Wall	Cladding panel	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 30: B62 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 62 - Racks, Roof	Exterior	Light blue	Metal	Intact	LEAD-BASED 1,100
Building 62 - Racks, Roof	Room 2,3,5	Purple	Plasterboard	Intact	LEAD-BASED 120,000
Building 62 - Racks, Roof	All exterior	White	Wood	Intact	LEAD-BASED 120,000

OPUS Tokanui Building Inspection

General			
Building:	Racks	Year Built:	Unknown
Footprint (m2)	350	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			
External covered racking system for supplies			

External			
Wall Material:	Timber frame|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:	0	Double Doors:	2
Ranchsliders:	3	Windows:	2
Soffit Height (mm):	3000	Soffit Width (mm):	258
Surrounding Features:	Road		
Comments:			

Internal			
Wall Material:	Timber Frame (Native) Racks		
Wall Finish:			
Floor Material:	Concrete		
Floor Finish:	None		
Ceiling Material:	None		
Ceiling Finish:			
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	7	No. Internal Doors:	5
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			

Table 31: B63 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 63 - Workshop, Ground Floor	Internal	Beige	Concrete	Intact	LEAD-BASED 9,000
Building 63 - Workshop, Ground Floor	Internal	White	Plaster	Intact	LEAD-BASED 37,000
Building 63 - Workshop, Ground Floor	Exterior	White	Wood	Intact	LEAD-BASED 69,000
Building 63 - Workshop, Ground Floor	Exterior	Purple	Wood	Intact	LEAD-BASED 79,000
Building 63 - Workshop, Ground Floor	Exterior	Green	Concrete	Intact	LEAD-BASED 11,000

Table 10: B63 Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B63, Ground Floor	Rooms 9, 12	Radiator Pipe to Wall	Rope	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B63, Ground Floor	Rooms 6, 12	Pipes along Wall	Lagging	Medium (8)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B63, Ground Floor	Room 10	Spray booth	AIB	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B63, Ground Floor	Roof	Roof Sheeting	Fibre Cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B63, Ground Floor	Room 4	Wall Cladding	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B63, Ground Floor	Rooms 2, 3	Wall Lining	Fibre Cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B63, Ground Floor	Exterior	Soffits	Fibre Cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B63, Ground Floor	External to 5	Wall Cladding	Fibre Cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B63, Ground Floor	Exterior	Downpipes	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B63, Ground Floor	Room 6	Pipe	Gasket	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B63, Ground Floor	Room 5	Dust extraction unit	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B63, Ground Floor	Exterior	Metal downpipes	Putty	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Workshop	Year Built:	Unknown
Footprint (m2)	1100	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	12/02/2015
General Comments:			
Has dust extraction system			

External			
Wall Material:	Reinforced concrete in situ|Reinforced concrete block|Bevel back weatherbo		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron|Other		
Roof Finish:	None	Gutters Present:	yes
Single Doors:	5	Double Doors:	6
Ranchsliders:	6	Windows:	47
Soffit Height (mm):	3150	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Road		
Comments:			
Roof is concrete corrugated sheet likely asbestos			

Internal			
Wall Material:	Gib Plaster|Seratone|Concrete Block		
Wall Finish:	Painted|Wallpaper|Tile		
Floor Material:	Concrete		
Floor Finish:	Lino|Tiles|Other		
Ceiling Material:	Fibrous Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3150	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	3	No. Internal Doors:	2
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
some shelves are solid rimu			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Fitters front room		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation|Other		
Comments:			

Demolished prior to 4Sight Pb & ACM Survey

OPUS Tokanui Building Inspection

General			
Building:	Sports Pavilion	Year Built:	Unknown
Footprint (m2)	120	Storeys:	1
Surveyed by:	SD and AS	Survey Date:	16/02/2015
General Comments:			

External			
Wall Material:	Concrete in situ|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	1
Ranchsliders:	0	Windows:	14
Soffit Height (mm):	2800	Soffit Width (mm):	400
Surrounding Features:	Concrete Chimneys		
Comments:			

Internal			
Wall Material:	Hardboard|Seratone		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2400	Max. Stud Height (mm):	2400
Rooms of Max. Stud Height:	6		
No. Rooms:	6	No. Internal Doors:	2
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
No access. Viewed through the windows			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Main room		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 11: B65 Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B65, Ground Floor	Room 5	Pipe	Insulation material	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B65, Ground Floor	Room 5	Boiler unit	Insulation material	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B65, Ground Floor	External	Roof	Fibre Cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B65, Ground Floor	Room 5	Internal walls	Fibre Cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B65, Ground Floor	Room 1	Ceiling of entry	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B65, Ground Floor	External	Canopy	Bitumen	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B65, Ground Floor	Room 5	Flanges	Composite material (Gaskets)	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B65, Ground Floor	Rooms 10, 13, 19	Walls	Insulation	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 32: B65 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 65 - Store, Ground Floor	Internal	Blue	Concrete	Intact	LEAD-BASED 2,100
Building 65 - Store, Ground Floor	Internal	White	Wood/ plaster	Intact	LEAD-BASED 3,200
Building 65 - Store, Ground Floor	Exterior	White	Wood	Intact	LEAD-BASED 12,000

OPUS Tokanui Building Inspection

General			
Building:	Store	Year Built:	Unknown
Footprint (m2)	1160	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	13/02/2015
General Comments:			
I beam on reinforced concrete concrete column forming a skillion roof			

External			
Wall Material:	Reinforced concrete in situ		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin ribbed|Reinforced glass		
Roof Finish:	painted	Gutters Present:	no
Single Doors:	2	Double Doors:	2
Ranchsliders:	2	Windows:	27
Soffit Height (mm):	0	Soffit Width (mm):	0
Surrounding Features:	Stairs/Ramps|Road		
Comments:			
Roof is concrete corrugated sheet likely asbestos. 2 large roller doors marked as sliders. South side stud to roof top mesh reinforced glasd along entire length			

Internal			
Wall Material:	Concrete in situ|Timber frame |Hardboard		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Lino|Tiles|Other		
Ceiling Material:	Fibrous Plaster|Pinex		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2740	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	21	No. Internal Doors:	19
No. Bathrooms:	2	No. Plant Rooms:	1
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
Entire structure cast in situ concrete incl all bar 6 internal walls			

Environmental			
Electricity Isolated:	yes	Water isolated:	no
Distribution Board Loc:	Room 1, which is west end room. Room 2 (larger one)		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 33: Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 66 - Assistant Engineers Office, Ground Floor	Interior	Cream	Concrete	Poor	LEAD BASED 1,700
Building 66 - Assistant Engineers Office, Ground Floor	Interior	Beige	Wood	Intact	LEAD BASED 140,000

Table 12: B66 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B66, Ground Floor	External Soffit to 1-5	Soffit	Fibre Cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B66 Ground Floor	5 East and South walls	Electrical board	Backing board	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Assistant Engineers Office	Year Built:	Unknown
Footprint (m2)	250	Storeys:	1
Surveyed by:	SD and AS	Survey Date:	16/02/2015
General Comments:			
Fuel spills on exterior perimeter			

External			
Wall Material:	Corrugated iron		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	
Ranchsliders:	3	Windows:	12
Soffit Height (mm):	3540	Soffit Width (mm):	400
Surrounding Features:	Stairs/Ramps|Road		
Comments:			
Roller doors marked as sliders			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Carpet|Other		
Ceiling Material:	Gib Plaster		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2650	Max. Stud Height (mm):	3600
Rooms of Max. Stud Height:	3		
No. Rooms:	4	No. Internal Doors:	4
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
4 equipment storage bays plus office building. Severe amount of animal poo throughout			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	West most room of office lot		
Water Valve Loc:	No evidence of water for this building		
Surrounding Features:			
Comments:			

Table 13: B67 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B67, Ground Floor	External Soffit	Soffit	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B67, Ground Floor	Room 1 Around flue	Wall lining	AIB	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class A controls

Table 34: B67 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 67 - Shed 8, Ground Floor	Exterior	Maroon	Wood	Fair	LEAD BASED 1,100

OPUS Tokanui Building Inspection

General			
Building:	Shed 8	Year Built:	Unknown
Footprint (m2)	20	Storeys:	1
Surveyed by:	NE, SD and AS	Survey Date:	16/02/2015
General Comments:			
4.6 x 3.6 Concrete block structure with ship lap weather board parapet roof			

External			
Wall Material:	Reinforced concrete blockReinforced concrete block|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Flat Roof|Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	0	Double Doors:	2
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2800	Soffit Width (mm):	300
Surrounding Features:	Stairs/Ramps|Services|Road|Powerlines		
Comments:			
2.4m steel chimney of furnace above roof line. There is a 1.2m high 12.6m long concrete block storage bay with concrete slab and a mesh fence joined to in situ concrete repair pit between shed 8 and the engineers office see photos			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):	2100	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	1	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
Old furnace housing			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:	By furnace		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 35: B68 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 68 - Boiler House, Ground Floor	Exterior	White	Wood	Fair	LEAD BASED 47,000

Table 14: B68 Summary of ACM Identified

Building & Floor	Location/Room Name	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B68, Ground Floor	12	Southern wall	Insulation material	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B68, Mezzanine	6	Above toilet/shower	Insulation material	High (11)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B68, Ground Floor	1	Top of Boiler 3	Insulation	High (10)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B68, Ground Floor	3	Fuse cabinets to north wall	Rope	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B68, Mezzanine	1	Above boiler 3	Wire Insulation	Medium (7)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B68, Roof	2	Roof	Fibre Cement	Very Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B68, Ground Floor	1	Boiler 3	Rope	Very Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B68, Mezzanine	External	Wall Cladding	Fibre Cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B68, Ground Floor	External	Soffits	Fibre Cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B68, Ground Floor	1, 4, 12	Pipe flanges	Gaskets	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B68, Ground Floor	Internal	Boiler House	Gaskets	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B68, Mezzanine	Internal	Wall lining (throughout) and 9	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B68, Ground Floor	1	Boiler 1	Insulation	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls using glovebag

OPUS Tokanui Building Inspection

General			
Building:	Boiler House	Year Built:	Unknown
Footprint (m2)	630	Storeys:	2|Basement
Surveyed by:	NE and RS	Survey Date:	19/02/2015
General Comments:			
Boiler mechanical and structure for demo scoped by Graeme Salter. please attach his reports.			

External			
Wall Material:	Concrete in situ|Cement sheet|Galvanised steel		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	4
Ranchsliders:	5	Windows:	62
Soffit Height (mm):		Soffit Width (mm):	
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road|Powerlines|Other		
Comments:			
Ranch sliders are roller doors. 3 story steel staircase at west end of building to access roof, as well as insitu concrete wash pit and I beam construction canopy at average 8.5m high. 3 times stainless steel smoke stacks on roof. Two raised diesel tanks on concrete plinth at north side of building. Mechanical machinery on roof.			

Internal			
Wall Material:	Timber Frame|Hardboard|Concrete in situ		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:			
Ceiling Material:	Hardboard		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2750	Max. Stud Height (mm):	6500
Rooms of Max. Stud Height:	3		
No. Rooms:	112	No. Internal Doors:	8
No. Bathrooms:	1	No. Plant Rooms:	5
Pipework Lagging:	yes	Radiator Heating System:	no
Comments:			
Concrete column and I beam construction with timber purlins. High roof purlins appear to be clean solid Rimu. There are service trenches in the floor throughout, some are missing covers. Old chemical drums and containers present. Old batteries present. Lagged pipework overhead throughout. Valve house contains basement area with stagnant water flooding. Boiler stacks are solid concrete			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Generator room		
Water Valve Loc:			
Surrounding Features:	Vegetation		
Comments:			
Extreme risk of asbestos and chemical contamination.			

Table 15: B69 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B69, Roof	Roofing	Corrugated Sheet	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B69, 1	External walls	Cladding	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B69, Roof	Roof to 12 Flue	Flue lining	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B69, Roof	Roof to 12 Flue	Bitumen Membrane	Bitumen Paper	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B69, Roof	Entrance Canopy	Waterproof Membrane	Bitumen	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 36: B69 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 69 - Fire Station, Ground Floor	Interior 5,6,8-11	Green	Concrete, plaster, wood	Intact	LEAD-BASED 2,800

OPUS Tokanui Building Inspection

General			
Building:	Fire station	Year Built:	Unknown
Footprint (m2)	400	Storeys:	2
Surveyed by:	NE and SD	Survey Date:	13/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete in situ|Reinforced concrete block|Corrugated iron		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron|Other		
Roof Finish:	None	Gutters Present:	no
Single Doors:	5	Double Doors:	4
Ranchsliders:	1	Windows:	23
Soffit Height (mm):	None	Soffit Width (mm):	None
Surrounding Features:	Stairs/Ramps|Road		
Comments:			
Cannot see roof type			

Internal			
Wall Material:	Timber Pannelling|Pinex|Seratone|Concrete Block|Concrete in situ		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Pinex|Hardboard|Seratone|Concrete		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3600	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	13	No. Internal Doors:	12
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			
1 internal room is a fridge another freezer a lot of stainless steel benches and equipment			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Dining area		
Water Valve Loc:			
Surrounding Features:			
Comments:			

Table 37: B70 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 70 - Kitchen, Ground Floor	Interior	Green	Wood	Fair	LEAD BASED 18,000

Table 16: B70 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B70, Ground Floor	External Wall	Cladding	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B70, Mezzanine	Room 20 Ducting	Sealant	Putty	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B70, Basement	Tunnels Flanges	Gaskets	Gaskets	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B70, Basement	Tunnels Ceiling above concrete to tunnel roof	Boxing	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B70, Ground Floor	Exterior Soffit	Soffit	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Kitchen	Year Built:	Unknown
Footprint (m2)	780	Storeys:	1
Surveyed by:	SD and AS	Survey Date:	16/02/2015
General Comments:			

External			
Wall Material:	Concrete in situ		
Wall Finish:	Painted		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	4	Double Doors:	5
Ranchsliders:	2	Windows:	37
Soffit Height (mm):	3900	Soffit Width (mm):	150
Surrounding Features:	Stairs/Ramps|Road|Concrete Chimneys|Other		
Comments:			
Mass rooftop ventilation system			

Internal			
Wall Material:	Seratone|Concrete in situ		
Wall Finish:	Painted|Tile		
Floor Material:	Concrete		
Floor Finish:	Carpet|Lino|Tiles		
Ceiling Material:	Gib Plaster|Concrete		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2600	Max. Stud Height (mm):	2800
Rooms of Max. Stud Height:	12		
No. Rooms:	16	No. Internal Doors:	8
No. Bathrooms:	2	No. Plant Rooms:	0
Pipework Lagging:	yes	Radiator Heating System:	yes
Comments:			
Fridge and freezer units still insulated. Mass ventilation system			

Environmental			
Electricity Isolated:	no	Water Isolated:	no
Distribution Board Loc:	Main room		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 17: B71 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B71, Ground Floor	External Fascia	Fascia	Fibre cement	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B71, Ground Floor	Room 4 Hot water cylinder cupboard	Wiring	Wrap	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B71, Ground Floor	Exterior to 3 South wall	Infill panels	Cement sheet	Low (5)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B71, Ground Floor	Rooms 1,6,7 Between Wall joins	Expansion gap	Sealant	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 38: B71 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 71 - Garages, Ground Floor	3,4,5	Blue	Wood and concrete	Fair	LEAD-BASED 1,500
Building 71 - Garages, Ground Floor	Exterior	Red	Wood	Poor	LEAD-BASED 11,000
Building 71 - Garages, Ground Floor	Exterior	Blue	Metal	Intact	LEAD-BASED 7,700

OPUS Tokanui Building Inspection

General			
Building:	Garages	Year Built:	Unknown
Footprint (m2)	300	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	13/02/2015
General Comments:			

External			
Wall Material:	Reinforced concrete block		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	no
Single Doors:		Double Doors:	12
Ranchsliders:		Windows:	2
Soffit Height (mm):	3300	Soffit Width (mm):	1000
Surrounding Features:	Road		
Comments:			

Internal			
Wall Material:	Concrete Block		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Lino|Other		
Ceiling Material:	Gib Plaster|Other		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	3000	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	8	No. Internal Doors:	6
No. Bathrooms:	1	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	yes
Comments:			

Environmental			
Electricity Isolated:	N/A	Water Isolated:	no
Distribution Board Loc:	Inside west end		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 39: B73 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 73 - Shed 7 by Laundry, Ground Floor	Exterior	White	Wood and concrete	Poor	LEAD-BASED 1,600
Building 73 - Shed 7 by Laundry, Ground Floor	Exterior	Red	Metal	Intact	LEAD-BASED 91,000
Building 73 - Shed 7 by Laundry, Ground Floor	Exterior	Purple	Wood	Poor	LEAD-BASED 1,200
Building 73 - Shed 7 by Laundry, Ground Floor	Exterior	Yellow	Wood	Poor	LEAD-BASED 13,000

Table 18: B73 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B73, Ground Floor	Room 2, Large pipe run supports	Boxing	Fibre Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Shed 7	Year Built:	Unknown
Footprint (m2)	23	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	19/02/2015
General Comments:			
Structure made up of two joined sheds timber one housing what looked to be conc transformer plinth and electrical switch board and the in situ concrete shed contain plant pipework see photo			

External			
Wall Material:	Concrete in situ|Shiplap weatherboard		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	3	Double Doors:	
Ranchsliders:		Windows:	6
Soffit Height (mm):	2200	Soffit Width (mm):	100
Surrounding Features:	Services|Road		
Comments:			
Concrete shed has pipework and service trench connecting to the laundry			

Internal			
Wall Material:	Timber Frame|Concrete in situ		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:			
Ceiling Material:			
Ceiling Finish:			
Av. Stud Height (mm):	2200	Max. Stud Height (mm):	2400
Rooms of Max. Stud Height:	2		
No. Rooms:	2	No. Internal Doors:	
No. Bathrooms:		No. Plant Rooms:	1
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			

Environmental			
Electricity Isolated:	yes	Water Isolated:	N/A
Distribution Board Loc:	Timber shed		
Water Valve Loc:			
Surrounding Features:			
Comments:			

Table 19: B74 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B74, Ground Floor	Rooms 2, 9, 11,12, 13 Pipe	Lagging	Insulation material	Medium (9)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B74, Ground Floor	Rooms 2 and 13 Ceiling	Ceiling lining	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B74, Ground Floor	Internal Flange	Gasket	Gasket	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B74, Ground Floor	Rooms 2 and 13 Wall	Wall lining	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B74, Roof	Exterior Roof to 2	Corrugated sheet	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B74, Ground Floor	Rooms 4,5,6, 9 Wall	Wall lining	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B74, Ground Floor	Exterior To Rooms 8, 10, 11, 12	Cladding	Cement sheet	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B74, Ground Floor	Exterior Extension to loading bay southern elevation.	Cladding	Cement sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

Table 40: B74 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 74 - Laundry, Ground Floor	Interior	White	Concrete and wood	Poor	LEAD-BASED 1,300
Building 74 - Laundry, Ground Floor	13	Blue	Concrete	Fair	LEAD-BASED 1,400

OPUS Tokanui Building Inspection

General			
Building:	Laundry	Year Built:	Unknown
Footprint (m2)	930	Storeys:	1
Surveyed by:	NE and SD	Survey Date:	13/02/2015
General Comments:			
Very dirty. A lot of piping. Very thick concrete floor			

External			
Wall Material:	Concrete in situ		
Wall Finish:	Painted		
Foundation:	Reinforced concrete perimeter footing|Concrete slab		
Roof Material:	Tin Ribbed		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	1	Double Doors:	2
Ranchsliders:	4	Windows:	15
Soffit Height (mm):	0	Soffit Width (mm):	0
Surrounding Features:	Road|Other		
Comments:			
South wall stud to roof top steel mesh reinforced glaas along entire length of southern wall. SE corner has loading bay with 2 x 6m high rollers. 4 roller doors marked as sliders, 2 of these are 6m high. Other surrounding features includes drainage and transformer shed with oil contamination but no transformer.			

Internal			
Wall Material:	Concrete in situ|Seratone		
Wall Finish:	Painted		
Floor Material:	Concrete		
Floor Finish:	Lino|None		
Ceiling Material:	None		
Ceiling Finish:			
Av. Stud Height (mm):	2800	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	9	No. Internal Doors:	9
No. Bathrooms:	1	No. Plant Rooms:	1
Pipework Lagging:	yes	Radiator Heating System:	no
Comments:			
600mm solid concrete floor on top of concrete slab foundation.			

Environmental			
Electricity Isolated:	yes	Water Isolated:	no
Distribution Board Loc:	Room by itself, left hand side in entrance corridor		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			
Full of guano			

Table 41: B75 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
Building 75 - Doctors Flats, Ground Floor	Exterior	White	Wood	Intact	LEAD BASED 73,000
Building 75 - Doctors Flats, Ground Floor	Exterior	Green	Metal	Intact	LEAD BASED 20,000

Table 20: B75 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
B75, Ground Floor	Room 13,17/18 Ceiling space Packing to flue	Insulation board	AIB	Low (6)	Remove prior to demolition by a licenced asbestos removalist under Class A controls
B75, Ground Floor	Room 4, 10 Floor	Floor lining	Vinyl	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls if via "cut and drop". Otherwise remove under Class A controls
B75, Ground Floor	External Wall	Cladding	Fibre cement	Very Low (4)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B75, Ground Floor	External Gable ends	Eaves	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B75, Ground Floor	External Soffit	Soffit	Fibre cement	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B75, Ground Floor	Room 18 Wall	Electrical board	Board	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls or inspect once power is isolated
B75, Ground Floor	Room 19 Wall and ceiling	Lining	Cement sheet	Very Low (3)	Remove prior to demolition by a licenced asbestos removalist under Class B controls
B75, Ground Floor	Exterior Porch to 1, infill panel to 1 and infill panel to 11	Cladding	Fibre Cement	Very Low (2)	Remove prior to demolition by a licenced asbestos removalist under Class B controls

OPUS Tokanui Building Inspection

General			
Building:	Doctors Flats	Year Built:	1981/1982
Footprint (m2)	335	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	20/02/2015
General Comments:			
These flats are tenanted by security staff.			

External			
Wall Material:	Brick|Concrete in situ|Cement sheet		
Wall Finish:	Painted|Brick		
Foundation:	Concrete perimeter footing with concrete piles|Concrete Slab under Toilets & Kitchens Only		
Roof Material:	Pitched corrugated iron		
Roof Finish:	Painted	Gutters Present:	yes
Single Doors:	5	Double Doors:	0
Ranchsliders:	0	Windows:	27
Soffit Height (mm):	3400	Soffit Width (mm):	600
Surrounding Features:	Stairs/Ramps|Awnings/Pergolas|Services|Road|Concrete Chimneys|Powerlines		
Comments:			
47m2 of concrete patio areas see photos. There is a insitu concrete retaining wall around the south and west side of the flats tapering from. 2m to 1.5m at highest point. aprox 28m long see photo. Old clothes lines x2 and old 10m2 shed slab at west side of flats.			

Internal			
Wall Material:	Gib Plaster|Timber Pannelling|Timber Frame|Hardboard|Seratone		
Wall Finish:	Painted|Wallpaper|Pre-finished sheeting		
Floor Material:	Timber T/G		
Floor Finish:	Carpet|Lino		
Ceiling Material:	Gib Plaster|Hardboard		
Ceiling Finish:	Painted		
Av. Stud Height (mm):	2450	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	21	No. Internal Doors:	25
No. Bathrooms:	3	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
The flooring material appears to be native timber rimu/matai. Sprinkler system present.			

Environmental			
Electricity Isolated:	no	Water Isolated:	no
Distribution Board Loc:	west wall flat one		
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Table 21: B76 Summary of ACM Identified

Building & Floor	Location	Item/Suspect Material	Material Type	Material Risk Score	Recommended action
No ACMs were identified or presumed during the survey.					

Table 42: B76 Summary of LBP Identified

Building & Floor	Location	Colour	Substrate	Surface Condition	Lead Result (ppm)
No lead-based paint samples were identified during the survey.					

OPUS Tokanui Building Inspection

General			
Building:	Doctors Flats Garages	Year Built:	1981/1982
Footprint (m2)	112	Storeys:	1
Surveyed by:	NE and RS	Survey Date:	20/02/2015
General Comments:			
Timber pole and frame construction cladded with galvanised iron sheeting to outside only.			

External			
Wall Material:	Galvanised Steel		
Wall Finish:			
Foundation:	Concrete plinth with post brackets		
Roof Material:	Pitched corrugated iron		
Roof Finish:	None	Gutters Present:	no
Single Doors:	0	Double Doors:	0
Ranchsliders:	0	Windows:	0
Soffit Height (mm):	2460	Soffit Width (mm):	200
Surrounding Features:	Services|Road|Fence		
Comments:			
Concrete pile with bracket and bolt fixings to timber frame. Galvanised sheet cladding. Pole farm fence next to west side.			

Internal			
Wall Material:	Timber Frame		
Wall Finish:	Other		
Floor Material:	Other		
Floor Finish:	Other		
Ceiling Material:	Other		
Ceiling Finish:			
Av. Stud Height (mm):	2380	Max. Stud Height (mm):	
Rooms of Max. Stud Height:			
No. Rooms:	5	No. Internal Doors:	0
No. Bathrooms:	0	No. Plant Rooms:	0
Pipework Lagging:	no	Radiator Heating System:	no
Comments:			
5 bay car garaging with unlined timber frame fixed with brackets to concrete pile foundations. Sprinkler system present. Floor is chip seal same as driveway			

Environmental			
Electricity Isolated:	no	Water Isolated:	no
Distribution Board Loc:			
Water Valve Loc:			
Surrounding Features:	Trees|Vegetation		
Comments:			

Appendix B

Wastewater Pipe Details in NW Wetland

Works in NW Wetland

Pipe	Location	Description	L (m)	Dia (mm)	XS Area bgl (m2)	XS Vol bgl (m3)	Soil disturbance (m3)	Dimensions Width (m)	Depth bgl (m)	Split AG/BG	Notes
Eastern	1	Above ground pipe on concrete bed	4.8	150	0		0.00	0.5	0.2		
		Below ground pipe, ~200-400mm deep x 500mm wide concrete bed	10	150	0.15		1.50	0.5	0.3		
	2	Pipe approx 50:50 split between above ground and in ground; in ground = concrete bed	22	191	0.05		1.10	0.5	0.2	0.5	
	3	Pipe on concrete bed	21	191	0.1		2.10	0.5	0.2		
	4	Pipe extends west underground and/or covered by vegetation; top of pipe ~240mm bgl	49	191	0.17		8.26	0.39	0.43		Assumed width = pipe dia +100mm ea side
	5	Pipe encased in concrete chamber	17	191	0.18		3.06	0.45	0.4		
		Concrete chamber at pipe junction	1.52		0.48		0.73	1.2	0.4		
Northern	6	Short section with concrete cradle	1.7	191	0.21		0.36	0.7	0.3		
		Rest on concrete bed	51.3	191	0.12		6.16	0.4	0.3		
Western	7	Pipe on concrete bed	129	191	0.12		15.48	0.4	0.3		
		Rest of pipe bgl, ranging from 0 to estimated 0.8m depth	55	191	0.1564		8.60	0.391	0.4		Assumed avg depth = 400mm
Southern	8	Pipe support varies:									
		> concrete block 1	1.04		0.1		0.10	0.5	0.2		
		> concrete block 2	0.64		0.108		0.07	0.54	0.2		
		> individual concrete piles	1.8		0.09		0.16	0.45	0.2		No = 4 L (ea) = 0.45 m
	9	> concrete blocks with metal brackets	26.4		0.2		5.28	1	0.2		No = 22 L (ea) = 1.2 m
		Total	392.2		0		**53.0**				
								Avg	0.28		

Southern pipeline with footings

Southern pipeline footings and concrete foundation

Southern pipeline with concrete casing

Southern pipeline with concrete pile

Pipeline situated on concrete foundation

Pipeline situated on concrete foundation

Westernmost pipeline below ground level

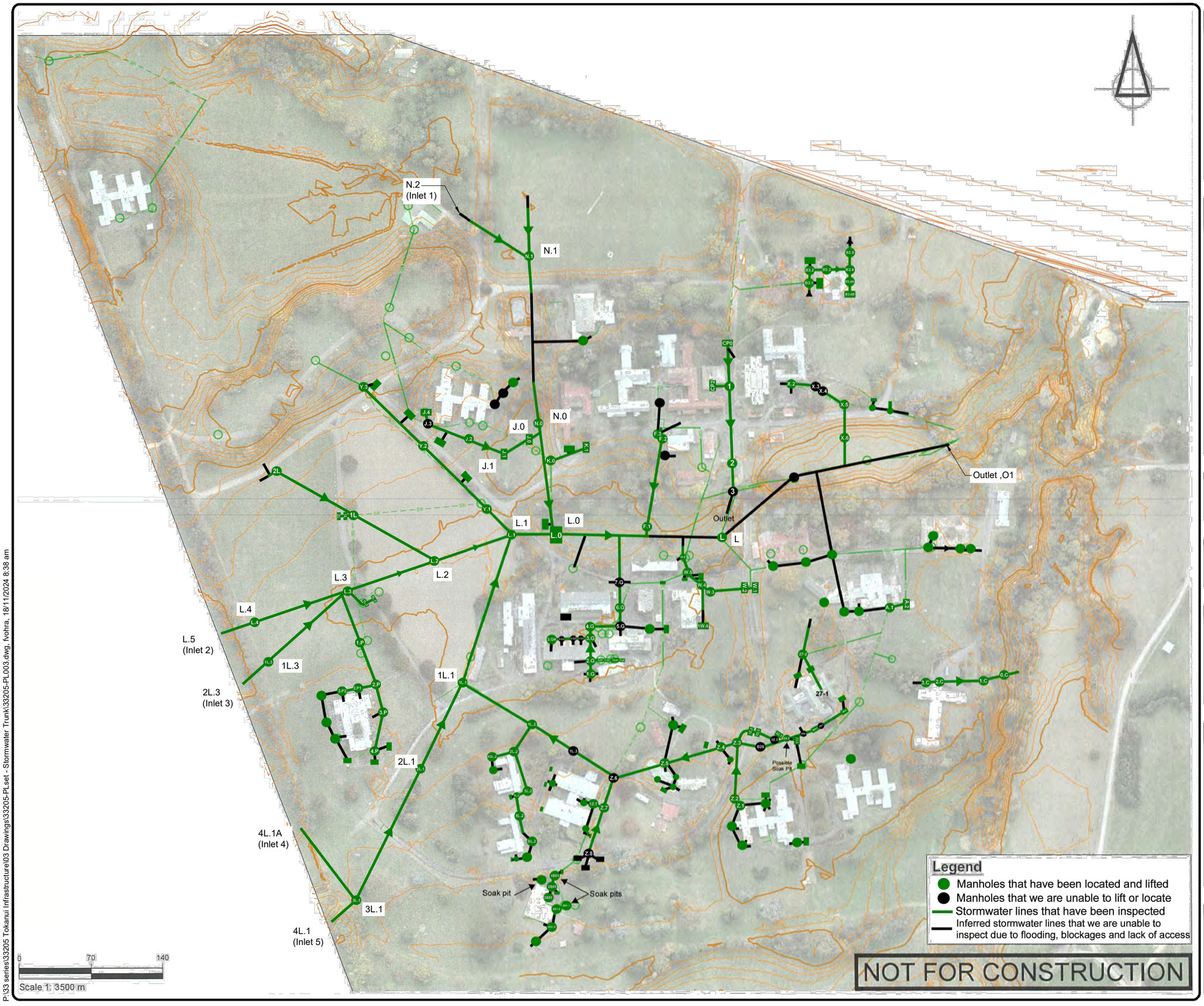
Concrete chamber connecting all four pipelines

Eastern pipeline within concrete chamber

Additional pipeline underlying eastern pipeline

Appendix C

Trunk Stormwater System CCTV Results and Lining Requirements



			APPROVED	DATE
SURVEYED			SF	
DESIGNED	TB	01.06.23	24.09.24	
DRAWN	FV	24.09.24		
CHECKED	SF	24.09.24		

REVISION	CHANGES	CHECKED	DATE

NOTES

1. CCTV Survey Plan Provided by CST.
2. Refer Demolition Management Plan for spreadsheet summary of CCTV defects and CCTV logs.

CLIENT

TOITŪ TE WHENUA - LINZ

PROJECT

TOKANUI HOSPITAL
HORIZONTAL INFRASTRUCTURE

TITLE

STORMWATER SYSTEM CCTV
SURVEY PLAN

Fraser Thomas
ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLENHEIM	03 428 3292
NELSON	03 222 1132
TAURANGA	07 220 9277

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STATUS

FOR RESOURCE CONSENT

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:3500 (A3)

DRAWING No 33205/PL003

REVISION -

P:\33 series\33205 Tokanui Infrastructure\03 Drawings\33205-PLset - Stormwater Trunk\33205-PL003.dwg, fvohra, 18/11/2024 8:38 am

Pipe Run		Distance from Node 1 (m)	Defect	Full Observation	Comments
Node 1	Node 2				
SWMH L.0	SWMH L	5.32	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		37.13	Hole	Pipe holed, the hole is greater than 20% of the pipe circumference and has not been repaired from 12 o'clock to 3 o'clock / Hole has been fixed	
		65.61	Lateral Issue	Lateral problem, large defect at 2 o'clock / Unknown water running	
		69.67	Lateral Issue	Lateral sealing faulty, evidence exist that the connection between the lateral and the main pipe is leaking at 9 o'clock / Water seeping in	
		69.99	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
SWMH L.1	SWMH L.0			No Defects recorded	
SWMH L.2	SWMHL.1	48.44	Encrustation	Encrustation deposits, clear diameter is reduced by 10% to 25% from 6 o'clock to 9 o'clock	
		49.21	Lateral Issue	Lateral problem, large defect at 9 o'clock / Signs of ground water	
		60.78	Faulty Joint	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 12 o'clock to 2 o'clock	
		74.13	Faulty Joint	Joint faulty, minor cracking or spalling from 10 o'clock to 12 o'clock	
		99.47	Hole	Pipe holed, the hole has been repaired at 12 o'clock, end / Lifting eye	
SWMH L.2	SWMH L.3	4.52	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		4.66	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock	
		40.27	Faulty Joint	Joint faulty, minor cracking or spalling from 12 o'clock to 2 o'clock / tiny chip	
		44.68	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 12 o'clock to 2 o'clock / tiny chip	
		50.19	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 6 o'clock / Roots protruding joint	
		50.19	Root intrusion	Root intrusion, roots restrict flow by 10% or less of full flow from 3 o'clock to 7 o'clock, start	
		52.96	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 6 o'clock / Roots protruding	
		54.62	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Roots protruding	
		57.42	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 6 o'clock to 10 o'clock / Roots protruding joint	
		59.17	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 10 o'clock / Roots protruding joints	
		61.72	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		61.72	Root intrusion	Root intrusion, roots restrict flow by 10% or less of full flow from 3 o'clock to 7 o'clock	
SWMH L.3	SWMH L.4	0.24	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 12 o'clock to 6 o'clock	
		1.87	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / tiny roots protruding	
		12.1	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		24.94	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		36.69	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		81.27	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		83.37	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		86.05	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
SWMH L.4	Inlet L.5			No Defects recorded	
SWMH L.3	SWMH 1 L.3	0.7	Faulty Joint	Joint faulty, minor cracking or spalling from 4 o'clock to 8 o'clock / Roots protruding joint	
		2.14	Hole	Pipe holed, the hole has been repaired at 10 o'clock	
		9.55	Hole	Pipe holed, the hole has been repaired at 1 o'clock	
		12.46	Hole	Pipe holed, the hole has been repaired at 3 o'clock	
		17.57	Hole	Pipe holed, the hole has been repaired at 4 o'clock	
		20.11	Hole	Pipe holed, the hole has been repaired from 7 o'clock to 9 o'clock / Lifting eyes seeping water	
		59.23	Faulty Joint	Joint faulty, minor cracking or spalling from 12 o'clock to 11 o'clock	
		70.76	Faulty Joint	Joint faulty, minor cracking or spalling from 12 o'clock to 11 o'clock	
		72.33	Faulty Joint	Joint faulty, minor cracking or spalling from 1 o'clock to 7 o'clock	
		73.43	Faulty Joint	Joint faulty, minor cracking or spalling from 2 o'clock to 5 o'clock	
		89.18	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 6 o'clock to 8 o'clock	
		96.71	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 6 o'clock	
		108.36	Faulty Joint	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 5 o'clock to 9 o'clock	
		110.58	Debris	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end	

SWMH 1L.3	Inlet 2L.3	0.53	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 10 o'clock	
		22.1	Root intrusion	Root intrusion, restrict flow by more than 25% of full flow from 3o'clock to 9 o'clock, start	
		25.68	Root intrusion	Root intrusion, restrict flow by more than 25% of full flow from 3 o'clock to 9 o'clock, end	
SWMH L.1	SWMH 1L.1	0.45	Debris	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, start	
		5.42	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 3 o'clock to 7 o'clock	
		6.89	Faulty Joint	Joint faulty, minor cracking or spalling from 2 o'clock to 3 o'clock	
		13.68	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		15.3	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, start	
		17.75	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		57.79	Lateral Issue	Lateral sealing faulty, gaps between the lateral pipe and the main pipe that appear open at 12 o'clock	
		59.54	Lateral Issue	Lateral protruding, into the pipe by 10% to 25% of the diameter of the pipe at 10 o'clock	
		61.93	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 9 o'clock / Tiny root protruding	
		64.92	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 5 o'clock to 8 o'clock / Roots protruding joint	
		66.33	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		83.36	Lateral Issue	Lateral sealing faulty, small gaps between the lateral and the main pipe which are not open at 10 o'clock	
		86.03	Root intrusion	Root intrusion, roots restrict flow by 10% or less of full flow from 4 o'clock to 8 o'clock, end / Protruding joints	
		92.02	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 7 o'clock / Roots protruding joint	
		99.31	Lateral Issue	Lateral sealing faulty, small gaps between the lateral and the main pipe which are not open at 11 o'clock	
		116.45	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		141.52	Faulty Joint	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 11 o'clock to 1 o'clock	
		144.95	Faulty Joint	Joint faulty, minor cracking or spalling at 5 o'clock	
		152.52	Debris	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end	
		152.52	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, end	
SWMH 2L.1	SWMH 1L.1	10.5	Hole	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock / Faulty lifting eye	
		17.51	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 2 o'clock to 7 o'clock / Roots protruding joint	
		36.87	Obstruction	Inspection abandoned / Unable to pass the same point 0 Lateral protruding, into the pipe by 10% to 25% of the diameter of the pipe at 10 o'clock	Full pipe extent has not undergone CCTV
SWMH 2L.1	SWMH 3L.1	0.8	Hole	Pipe holed, the hole has been repaired at 12 o'clock	
		4.83	Hole	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock, start / Lifting eye	
		5.67	Faulty Joint	Joint faulty, minor cracking or spalling from 7 o'clock to 9 o'clock	
		7.74	Debris	Debris greasy, small, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, start	
		17.74	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 7 o'clock to 9 o'clock	
		29.99	Hole	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired from 11 o'clock to 1 o'clock	
		51.86	Root intrusion	Root intrusion, roots restrict flow by 10% or less of full flow from 5 o'clock to 7 o'clock	
		51.86	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Roots protruding joint	
		53.36	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 2 o'clock to 7 o'clock / Roots protruding joint	
		55.38	Lateral Issue	Lateral sealing faulty, gaps between the lateral pipe and the main pipe that appear open at 3 o'clock	
		56.94	Faulty Joint	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 1 o'clock to 3 o'clock	
		67.94	Hole	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired at 12 o'clock	
		82.42	Faulty Joint	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 10 o'clock to 12 o'clock	
		83.19	Hole	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired from 11 o'clock to 1 o'clock	
		83.82	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 12 o'clock to 10 o'clock	
		85.74	Hole	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired at 12 o'clock	
		86.65	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 1 o'clock to 6 o'clock	
		88.2	Encrustation	Encrustation deposits, clear diameter is reduced by less than 10% from 1 o'clock to 8 o'clock	

		137.48	Faulty Joint	Joint faulty, minor cracking or spalling at 3 o'clock	
SWMH 3L.1	Inlet 4L.1	1.91	Hole	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock / Lifting eye faulty	
		7.02	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 12 o'clock to 11 o'clock	
		23.4	Hole	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired from 11 o'clock to 1 o'clock	
		24.6	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 12 o'clock to 11 o'clock	
SWMH 3L.1	Inlet 4L.1A	0.8	Faulty Joint	Joint faulty, minor cracking or spalling at 11 o'clock	
		1.4	Hole	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock	
		4.03	Hole	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock, start / Faulty lifting eye	
		9.4	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 6 o'clock to 9 o'clock / Rubber seal out	
		20.11	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 8 o'clock to 10 o'clock	
		34.27	Joint Displacement	Joint open, displacement is less than 20mm	
		41.66	Hole	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock, end / Faulty lifting eye	
SWMH L.0	SWMH N.0	0.99	Hole	Pipe holed, the hole has been repaired at 12 o'clock, start / Lifting eyes faulty, seeping water	
		28.08	Faulty Joint	Joint faulty, minor cracking or spalling from 1 o'clock to 3 o'clock	
		48.84	Faulty Joint	Joint faulty, minor cracking or spalling from 12 o'clock to 2 o'clock	
		52.42	Faulty Joint	Joint faulty, minor cracking or spalling from 11 o'clock to 1 o'clock	
		67.43	Faulty Joint	Lateral problem, medium defect at 2 o'clock / Constant water trickling in	
		85.93	Lateral Issue	Lateral sealing faulty, gaps between the lateral pipe and the main pipe that appear open at 10 o'clock / Water seeping in around latera	
		95.94	Root intrusion	Root intrusion, roots restrict flow by 10% or less of full flow from 11 o'clock to 1 o'clock / Roots coming through lifting eye	
		108.68	Lateral Issue	Lateral problem, large defect at 3 o'clock / Ground water seeping through lateral	
		110.52	Hole	Pipe holed, the hole has been repaired at 12 o'clock, end / Lifting eyes faulty, seeping water	
SWMH N.0	SWMH N.1	2.41	Joint Displacement	Joint displaced, more than 25% of pipe diameter	
		2.41	Joint Displacement	Joint open, displacement is greater than 40mm	
		7.19	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 7 o'clock / Roots protruding join	
		10.87	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 6 o'clock / Roots protruding joint	
		17.91	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 5 o'clock / Roots protruding joint	
		23.31	Cracking	Cracks multiple, small, visible but not open from 11 o'clock to 1 o'clock	
		28.55	Faulty Joint	Joint faulty, minor cracking or spalling from 12 o'clock to 11 o'clock / All joints	
		31.96	Cracking	Crack longitudinal, small, visible but not open at 12 o'clock	
		37.00	Faulty Joint	Joint faulty, minor cracking or spalling from 12 o'clock to 11 o'clock / All joints	
		39.39	Cracking	Pipe broken, damage extends 10% - 25% of circumference, displaced by less than half the pipe wall thickness from 11 o'clock to 1 o'clock	
		40.49	Lateral Issue	Lateral protruding, into the pipe by more than 25% of the diameter of the pipe at 3 o'clock	
SWMH N.1	SWMH N.2	37.66	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Tiny rootsprotruding joint	
		48.81	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Roots protruding	
		48.81	Cracking	Crack longitudinal, medium, crack open but there is no evidence that the crack extends to the outside wall at 12 o'clock	
		58.45	Obstruction	Debris obstruction - unable to pass	Full pipe extent has not undergone CCTV
SWCP J.0	Main	0.7	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 1 o'clock to 3 o'clock / Seal visable	
		2.07	Faulty Joint	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 8 o'clock to 12 o'clock	
SWCP J.1	SWCP J.0	3.15	Faulty Joint	Joint faulty, minor cracking or spalling from 1 o'clock to 9 o'clock	
		8.67	Faulty Joint	Joint faulty, minor cracking or spalling from 8 o'clock to 10 o'clock	
		12.35	Faulty Joint	Joint faulty, minor cracking or spalling from 11 o'clock to 1 o'clock	
		17.84	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 1 o'clock to 3 o'clock / Seal visable	
		19.59	Hole	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired from 11 o'clock to 1 o'clock	

		19.59	Cavity	Tomo, a cavity is evident outside of the pipe wall. from 11 o'clock to 1 o'clock	
		21.63	Faulty Joint	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 6 o'clock / Seal visable	
		23.38	Faulty Joint	Joint faulty, minor cracking or spalling from 7 o'clock to 9 o'clock	

Repairs required to be confirmed

CST Group Ltd
, Cambridge
Tel. 07 827 9161
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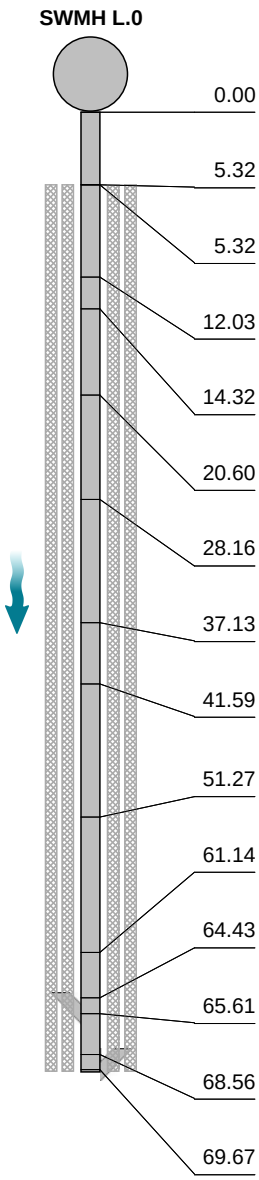
Section Inspection - 28/03/2023 - MH L.0 To MH L

Section No.	Asset No.	Contract Number	Date	Time	Weather
39	**MH L.0 To MH L**	**1**	**28/03/2023**	**12:26 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**

Line Length	**69.99 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Upstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**69.99 m**	Dia/Height	**900 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**900 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWMH L.0**	D/S Node	**SWMH L**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater miscellaneous**
U/S Pipe Depth	**2.24 m**	D/S Pipe Depth	
U/S Location		D/S Location	

Comments: **Unable to get depth from the downstream end**



1:550	m +	OC	Observation	MPEG	Photo	Score
	0.00	IS	Inspection start, node reference: MH L.0	00:00:00		
	5.32 S02	CF	Construction feature at 12 o'clock, start / Lateral connection	00:01:23	MH L.0 To MH L_bc5c82b	
	5.32 S01	PHS	Pipe holed, the hole has been repaired at 12 o'clock, start	00:01:24	MH L.0 To MH L_ccd6a42	
	12.03	CF	Construction feature from 1 o'clock to 3 o'clock / Lateral connection	00:03:51	MH L.0 To MH L_f12a781	
	14.32	GC	General comment / General condition photo	00:04:28	MH L.0 To MH L_194c1ef	
	20.60	GC	General comment / General condition photo	00:05:45	MH L.0 To MH L_0e8bd7	
	28.16	CF	Construction feature from 2 o'clock to 4 o'clock / Lateral connection	00:07:15	MH L.0 To MH L_ddd0d9	
	37.13	PHL	Pipe holed, the hole is greater than 20% of the pipe circumference and has not been repaired from 12 o'clock to 3 o'clock / Hole has been fixed	00:09:13	MH L.0 To MH L_058c85e	40
	41.59	GC	General comment / Geneal condition photo	00:10:54	MH L.0 To MH L_c681fdc	
	51.27	GC	General comment / General condition photo	00:12:19	MH L.0 To MH L_8597e2	
	61.14	GC	General comment / General condition photo	00:13:57	MH L.0 To MH L_d2a1a6	
	64.43	CF	Construction feature from 2 o'clock to 4 o'clock / Lateral connection	00:14:35	MH L.0 To MH L_673f452	
	65.61	LXL	Lateral problem, large defect at 2 o'clock / Unknown water running	00:14:59	MH L.0 To MH L_1ab971	30
	68.56	CF	Construction feature from 9 o'clock to 11 o'clock / Lateral connection	00:16:05	MH L.0 To MH L_c29b95e	
	69.67	LFL	Lateral sealing faulty, evidence exist that the connection between the lateral and the main pipe is leaking at 9 o'clock / Water seeping in	00:16:35	MH L.0 To MH L_e52ca46	25

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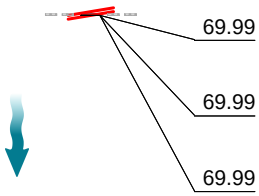
Section Inspection - 28/03/2023 - MH L.0 To MH L

Section No.	Asset No.	Contract Number	Date	Time	Weather
39	**MH L.0 To MH L**	**1**	**28/03/2023**	**12:26 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**



1:550	m +	OC	Observation	MPEG	Photo	Score
69.99	E02	CF	Construction feature at 12 o'clock, end / Lateral connection	00:16:47		
69.99	E01	PHS	Pipe holed, the hole has been repaired at 12 o'clock, end	00:16:48		5
69.99		IA	Inspection abandoned / Unable to see through the pipe	00:16:49		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	45.0	1.4	100.0	4.0	0	0.0	0.0	0.0	1.0

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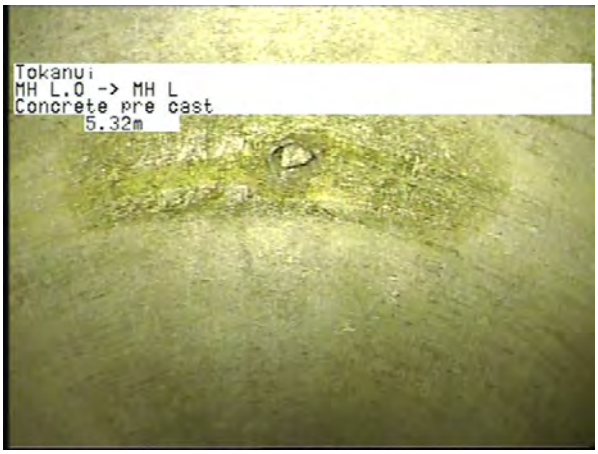
Section Pictures - 28/03/2023 - MH L.0 To MH L

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.0 To MH L**	**39**

MH L.0 To MH L_bc5c82b4-6374-44e7-a6f7-cb496a6223fa_20230328_122801_777.jpg, 00:01:23, 5.32m

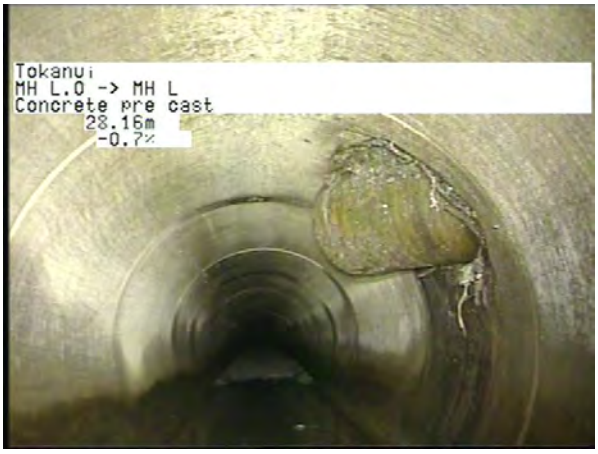


MH L.0 To MH L_ccd6a429-5123-49b0-ae58-c01bc82ff87d_20230328_122809_508.jpg, 00:01:24, 5.32m

MH L.0 To MH L_f12a7810-30b6-4208-aef4-d6ce680feeeb_20230328_123056_656.jpg, 00:03:51, 12.03m

MH L.0 To MH L_194c1efd-790c-4c0f-ac9c-e8a3ff83501b_20230328_123141_927.jpg, 00:04:28, 14.32m

MH L.0 To MH L_0e8bd76d-7a14-4391-8c30-2cdb63caf836_20230328_123306_887.jpg, 00:05:45, 20.60m



MH L.0 To MH L_ddd0d91a-fb41-455c-ab15-3b164221f884_20230328_123445_310.jpg, 00:07:15, 28.16m

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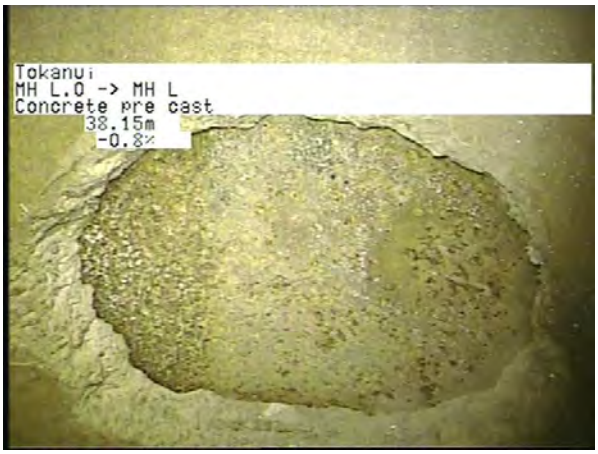
Section Pictures - 28/03/2023 - MH L.0 To MH L

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.0 To MH L**	**39**

MH L.0 To MH L_058c85ea-b3dd-40c2-9b21-4372abf15b57_20230328_123653_311.jpg, 00:09:13, 37.13m



MH L.0 To MH L_b9e0d909-04d6-43b8-a1a1-f0d21ae873c3_20230328_123732_159.jpg, 00:09:13, 37.13m

MH L.0 To MH L_c681fdcc-d3b5-4cdf-903f-81a6f0852f94_20230328_123845_352.jpg, 00:10:54, 41.59m

MH L.0 To MH L_8597e2b6-2e19-4c18-8e50-f8c2c716f355_20230328_124035_665.jpg, 00:12:19, 51.27m

MH L.0 To MH L_d2a1a6bf-1e08-4414-83f0-34183da806f6_20230328_124221_712.jpg, 00:13:57, 61.14m

MH L.0 To MH L_673f452c-867c-44e7-b695-37a5a3c08713_20230328_124307_284.jpg, 00:14:35, 64.43m

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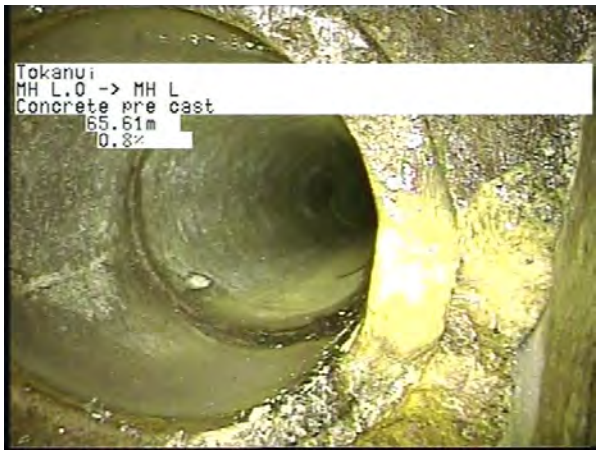
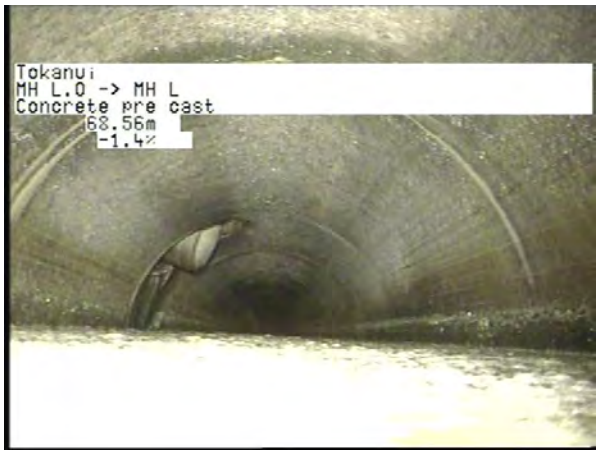
Section Pictures - 28/03/2023 - MH L.0 To MH L

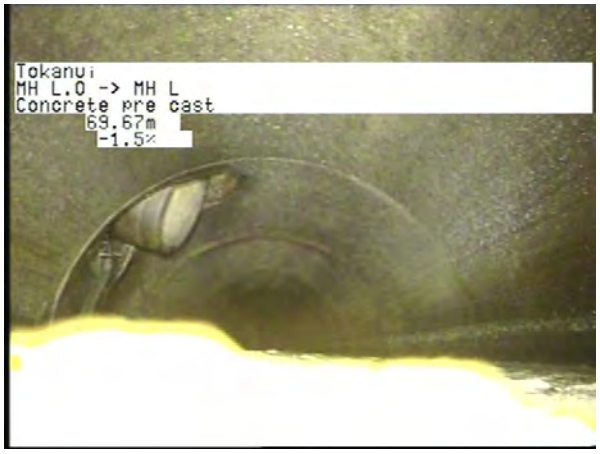
Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.0 To MH L**	**39**



MH L.0 To MH L_1ab9717d-4439-4e6c-a20a-3a59d6fb6d44_20230328_124355_554.jpg, 00:14:59, 65.61m



MH L.0 To MH L_c29b95e2-5e53-4228-9a9b-15aed35940d1_20230328_124515_306.jpg, 00:16:05, 68.56m



MH L.0 To MH L_e52ca460-30ce-4dc8-aef2-f443ef434d10_20230328_124631_365.jpg, 00:16:35, 69.67m

Section Inclination - 28/03/2023 - MH L.0 To MH L

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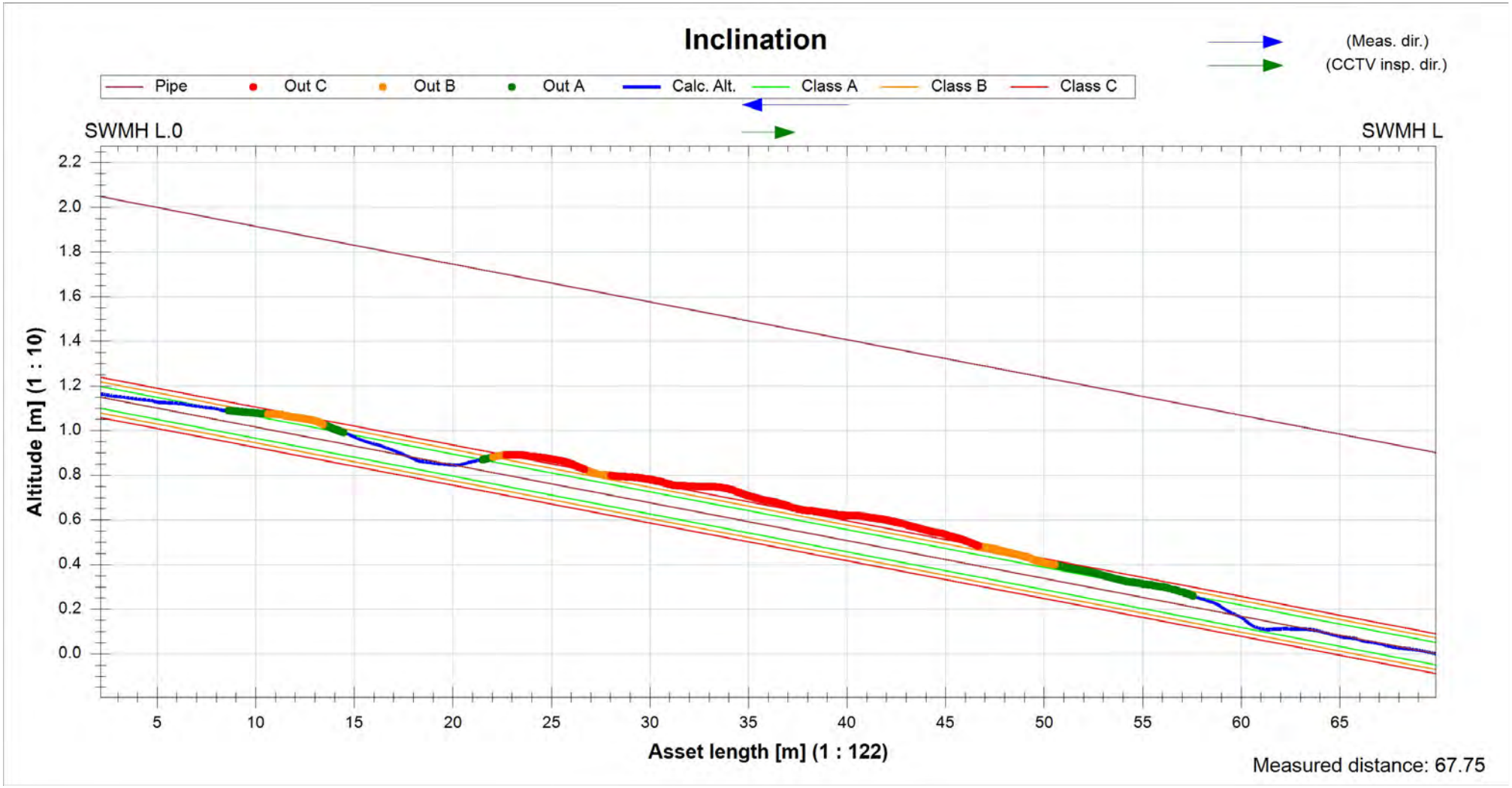
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.0 To MH L	28/03/2023	12:26 pm	CST Group	Tokanui		Upstream node	67.75 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	900 mm	900 mm	SWMH L.0	SWMH L	0.000 m	1.163 m	-1.716 %



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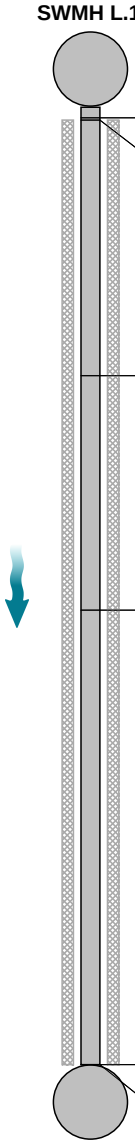
Section Inspection - 28/03/2023 - MH L.1 To MH L.0

Section No.	Asset No.	Contract Number	Date	Time	Weather
38	**MH L.1 To MH L.0**	**1**	**28/03/2023**	**12:17 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**

Line Length	**36.10 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Upstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**35.70 m**	Dia/Height	**800 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**800 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWMH L.1**	D/S Node	**SWMH L.0**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater node**
U/S Pipe Depth	**2.90 m**	D/S Pipe Depth	**2.24 m**
U/S Location		D/S Location	

Comments



1:285	m +		OC	Observation	MPEG	Photo	Score
	0.40		IS	Inspection start, node reference: MH L.1	00:00:00		
	0.50	S01	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, start / tiny	00:00:21	MH L.1 To MH L.0_01bfe	
	10.13		GC	General comment / General condition photo	00:02:39	MH L.1 To MH L.0_fbfbd2	
	18.96		GC	General comment / General condition photo	00:04:06	MH L.1 To MH L.0_57ddf	
	36.10	E01	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end / tiny	00:07:06		
	36.10		IE	Inspection ends, node reference: MH L.0	00:07:08		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 28/03/2023 - MH L.1 To MH L.0

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.1 To MH L.0**	**38**

MH L.1 To MH L.0_01bfe479-5985-457c-a0fb-1c946f6e2a24_20230328_121819_172.jpg, 00:00:21, 0.50m

MH L.1 To MH L.0_fbfbd21c-d50d-4f33-9bf1-b65d759c40e9_20230328_122048_867.jpg, 00:02:39, 10.13m

MH L.1 To MH L.0_57ddf494-7e4a-4875-9188-35cb15678539_20230328_122222_671.jpg, 00:04:06, 18.96m

Section Inclination - 28/03/2023 - MH L.1 To MH L.0

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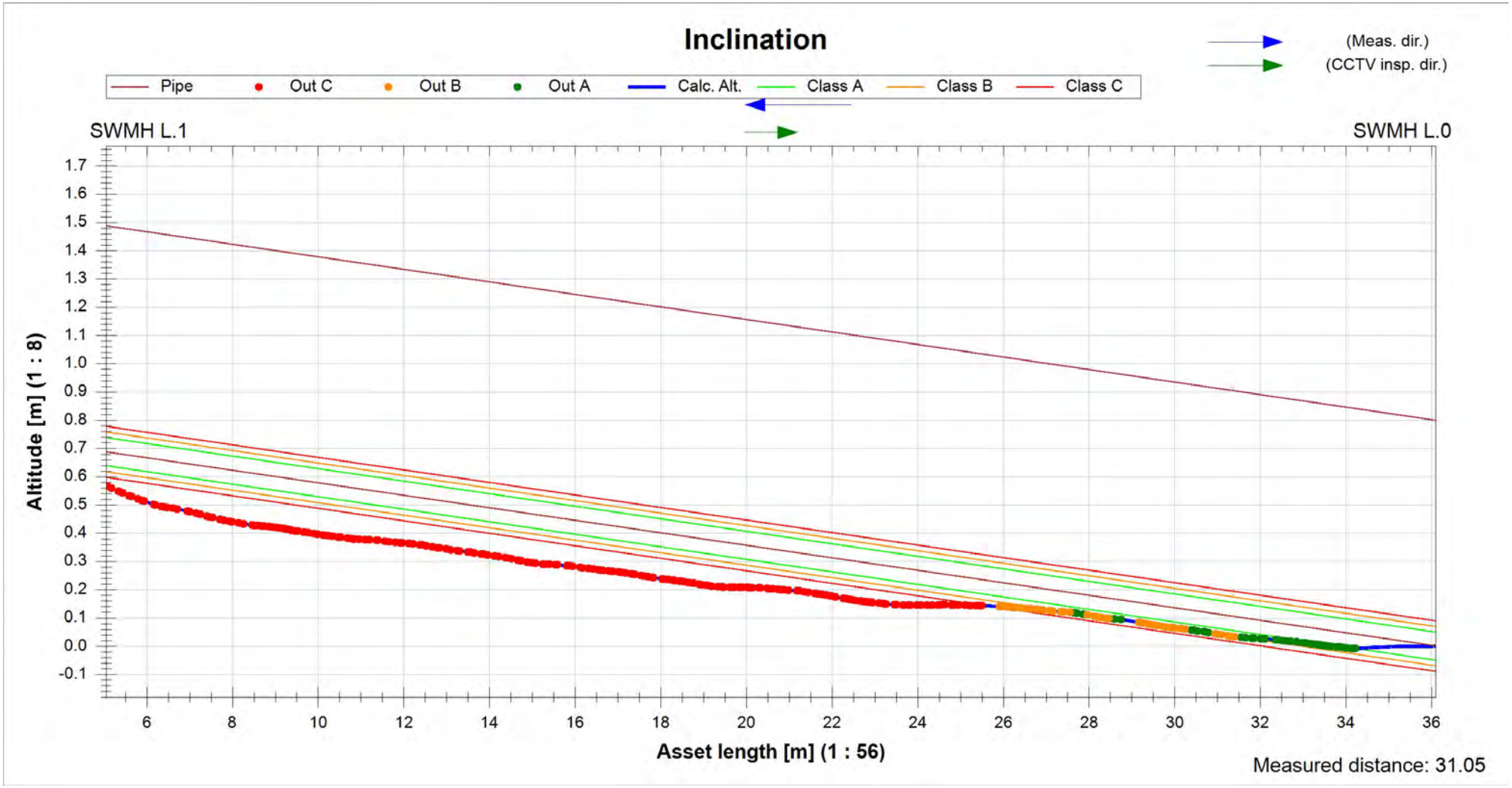
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.1 To MH L.0	28/03/2023	12:17 pm	CST Group	Tokanui		Upstream node	31.05 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	800 mm	800 mm	SWMH L.1	SWMH L.0	0.000 m	0.567 m	-1.827 %



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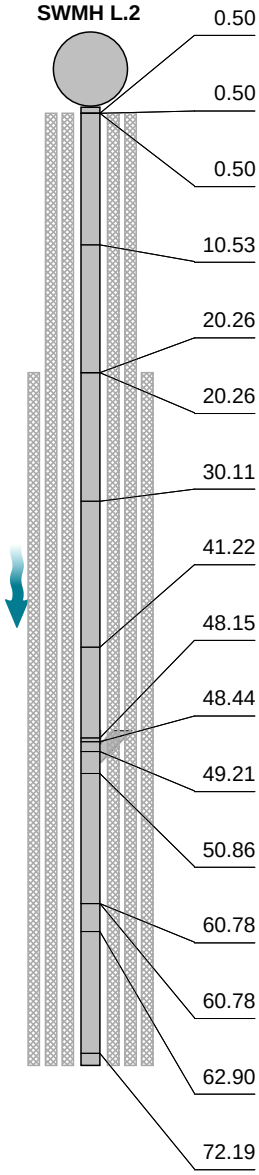
Section Inspection - 28/03/2023 - MH L.2 To MH L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
37	**MH L.2 To MH L.1**	**1**	**28/03/2023**	**11:37 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**

Line Length	**99.47 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Upstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**98.97 m**	Dia/Height	**800 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**800 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWMH L.2**	D/S Node	**SWMH L.1**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth	**2.20 m**	D/S Pipe Depth	**2.90 m**
U/S Location		D/S Location	

Comments



1:577	m +	OC	Observation	MPEG	Photo	Score
	0.50	IS	Inspection start, node reference: MH L.2	00:00:00		
	0.50	S01 CF	Construction feature at 12 o'clock, start / Lifting eye	00:00:12	MH L.2 To MH L.1_bf9ab	
	0.50	S02 PHS	Pipe holed, the hole has been repaired at 12 o'clock, start / Lifting eye	00:00:28	MH L.2 To MH L.1_20ebe	
	10.53	GC	General comment / General condition photo	00:03:55	MH L.2 To MH L.1_5de91	
	20.26	S03 EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, start	00:06:14	MH L.2 To MH L.1_16023	
	20.26	GC	General comment / General condition photo	00:06:19	MH L.2 To MH L.1_1812c	
	30.11	GC	General comment / General condition photo	00:08:38	MH L.2 To MH L.1_ecea2	
	41.22	GC	General comment / General condition photo	00:11:12	MH L.2 To MH L.1_7db50	
	48.15	CF	Construction feature from 8 o'clock to 10 o'clock / Lateral connection	00:12:53	MH L.2 To MH L.1_2b036	
	48.44	EDM	Encrustation deposits, clear diameter is reduced by 10% to 25% from 6 o'clock to 9 o'clock	00:14:12	MH L.2 To MH L.1_d89c9	5
	49.21	LXL	Lateral problem, large defect at 9 o'clock / Signs of ground water	00:13:47	MH L.2 To MH L.1_f1743	30
	50.86	GC	General comment / General condition photo	00:15:01	MH L.2 To MH L.1_5c75d	
	60.78	JFM	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 12 o'clock to 2 o'clock	00:18:10	MH L.2 To MH L.1_efb44	10
	60.78	GC	General comment / General condition photo	00:18:44	MH L.2 To MH L.1_87119	
	62.90	CF	Construction feature from 11 o'clock to 1 o'clock / Lateral connection	00:20:10	MH L.2 To MH L.1_849fa	
	72.19	GC	General comment / General condition photo	00:23:16	MH L.2 To MH L.1_05f56	

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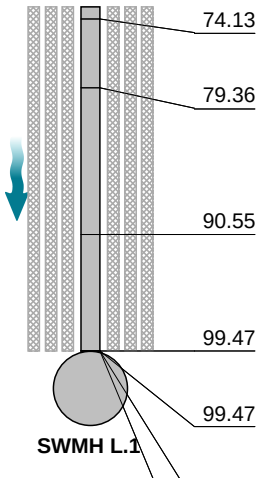
Section Inspection - 28/03/2023 - MH L.2 To MH L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
37	**MH L.2 To MH L.1**	**1**	**28/03/2023**	**11:37 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**



m +		OC	Observation	MPEG	Photo	Score
74.13		JFS	Joint faulty, minor cracking or spalling from 10 o'clock to 12 o'clock	00:24:36	MH L.2 To MH L.1_ffbfeb	1
79.36		GC	General comment / General condition photo	00:25:58	MH L.2 To MH L.1_992a1	
90.55		GC	General comment / General condition photo	00:28:10	MH L.2 To MH L.1_7b631	
99.47	E01	CF	Construction feature at 12 o'clock, end / Lifting eye	00:29:59		
99.47	E02	PHS	Pipe holed, the hole has been repaired at 12 o'clock, end / Lifting eye	00:30:00		5
99.47	E03	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, end	00:30:01		
99.47		IE	Inspection ends, node reference: MH L.1	00:30:06		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	35.0	0.5	46.0	4.0	1	5.0	0.1	5.0	2.0

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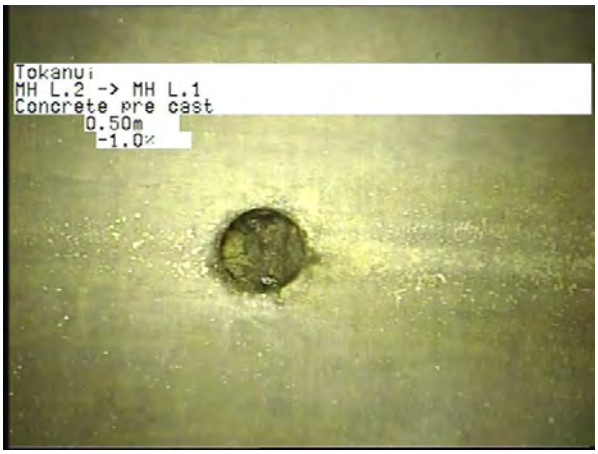
Section Pictures - 28/03/2023 - MH L.2 To MH L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.2 To MH L.1**	**37**

MH L.2 To MH L.1_bf9ab755-a0ee-4834-9b76-2dec664be48e_20230328_113745_386.jpg, 00:00:12, 0.50m



MH L.2 To MH L.1_20ebec42-80a7-4b70-bc9c-0acc7b94c2ef_20230328_113819_493.jpg, 00:00:28, 0.50m

MH L.2 To MH L.1_5de9122a-2035-4069-bf26-f079979d5ad5_20230328_114157_754.jpg, 00:03:55, 10.53m

MH L.2 To MH L.1_16023d8f-7f34-4f61-87cd-a060305a2e5e_20230328_114430_558.jpg, 00:06:14, 20.26m

MH L.2 To MH L.1_1812caa0-d4a0-44e8-bd95-4cbe5cc6e1a2_20230328_114454_982.jpg, 00:06:19, 20.26m

MH L.2 To MH L.1_ecea2b43-d4e0-4411-be2f-42ea484c9973_20230328_114733_026.jpg, 00:08:38, 30.11m

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Section Pictures - 28/03/2023 - MH L.2 To MH L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.2 To MH L.1**	**37**

MH L.2 To MH L.1_7db502fc-657b-4ba8-ba6f-37cb63ced641_20230328_115013_724.jpg, 00:11:12, 41.22m

MH L.2 To MH L.1_2b036aa8-bd7c-4b10-ac49-301e16fa4047_20230328_115220_452.jpg, 00:12:53, 48.15m

MH L.2 To MH L.1_d89c90f5-4912-4b08-a357-afea7510f596_20230328_115456_292.jpg, 00:14:12, 48.44m

MH L.2 To MH L.1_f1743155-69ae-4a14-957b-195c700051c6_20230328_115338_028.jpg, 00:13:47, 49.21m

MH L.2 To MH L.1_5c75dd65-c56b-47f9-96e8-593603864276_20230328_115552_877.jpg, 00:15:01, 50.86m

MH L.2 To MH L.1_efb44499-721b-4229-8c4f-42665233aa51_20230328_115911_584.jpg, 00:18:10, 60.78m

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Section Pictures - 28/03/2023 - MH L.2 To MH L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.2 To MH L.1**	**37**

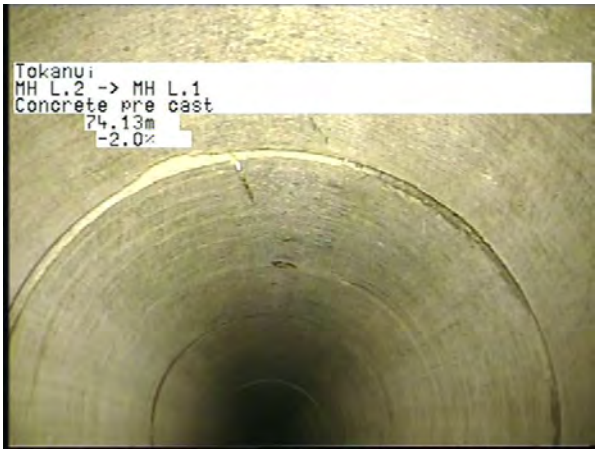
MH L.2 To MH L.1_3a461e8f-6cd9-40f8-bed3-cd2fc278f286_20230328_120109_510.jpg, 00:18:10, 60.78m

MH L.2 To MH L.1_871192d3-4982-43f0-86ab-6d695a16e812_20230328_120028_336.jpg, 00:18:44, 60.78m

MH L.2 To MH L.1_849fab06-2ce5-4837-b552-7d49813f3271_20230328_120204_715.jpg, 00:20:10, 62.90m

MH L.2 To MH L.1_68bb6ee9-5d17-4b5a-9c18-8d08dc184668_20230328_120226_030.jpg, 00:20:10, 62.90m

MH L.2 To MH L.1_05f56b3c-4af3-4120-90a2-48c31bdc07a0_20230328_120519_428.jpg, 00:23:16, 72.19m



MH L.2 To MH L.1_ffbfebbb-dd82-4ab3-be30-caf043b25dee_20230328_120645_556.jpg, 00:24:36, 74.13m

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Section Pictures - 28/03/2023 - MH L.2 To MH L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.2 To MH L.1**	**37**

MH L.2 To MH L.1_992a1c25-3d75-46ce-a01f-b7ca6963de68_20230328_120814_157.jpg, 00:25:58, 79.36m

MH L.2 To MH L.1_7b631029-85b6-4662-a0aa-34b32d2fd38b_20230328_121032_751.jpg, 00:28:10, 90.55m

Section Inclination - 28/03/2023 - MH L.2 To MH L.1

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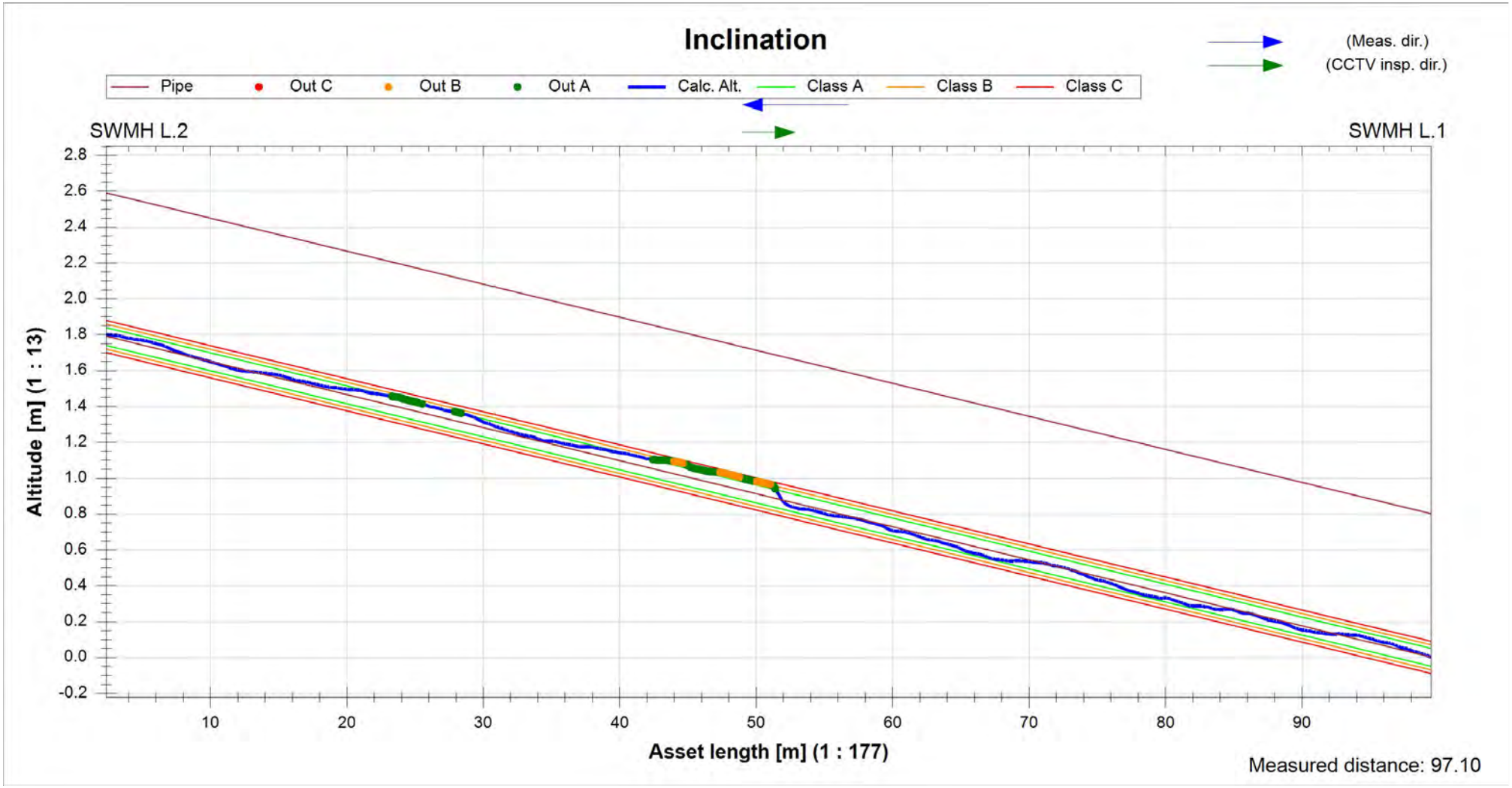
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.2 To MH L.1	28/03/2023	11:37 am	CST Group	Tokanui		Upstream node	97.10 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	800 mm	800 mm	SWMH L.2	SWMH L.1	0.000 m	1.800 m	-1.854 %



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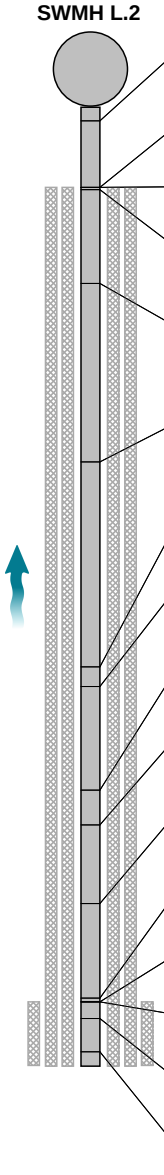
Section Inspection - 28/03/2023 - MH L.2 To MH L.3

Section No.	Asset No.	Contract Number	Date	Time	Weather
40	**MH L.2 To MH L.3**	**1**	**28/03/2023**	**1:46 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**

Line Length	**61.72 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**60.92 m**	Dia/Height	**800 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**800 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWMH L.3**	D/S Node	**SWMH L.2**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth	**2.60 m**	D/S Pipe Depth	**2.20 m**
U/S Location		D/S Location	

Comments



1:424	m +	OC	Observation	MPEG	Photo	Score
	0.80	IS	Inspection start, node reference: MH L.2	00:00:00		
	4.52 S02	CF	Construction feature at 12 o'clock, start / Lifting eye	00:01:15	MH L.2 To MH L.3_b5486	
	4.52 S01	PHS	Pipe holed, the hole has been repaired at 12 o'clock, start	00:01:15	MH L.2 To MH L.3_f987bf	
	4.66	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock	00:01:36	MH L.2 To MH L.3_986ca	
	9.89	GC	General comment / General condition photo	00:03:45	MH L.2 To MH L.3_838cb	
	19.91	GC	General comment / General condition photo	00:06:49	MH L.2 To MH L.3_4e1ad	
	31.40	GC	General comment / General condition photo	00:09:40	MH L.2 To MH L.3_01678	
	32.49	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 3 o'clock to 6 o'clock	00:10:10	MH L.2 To MH L.3_56833	
	38.30	GC	General comment / General condition photo	00:11:54	MH L.2 To MH L.3_20816	
	40.27	JFS	Joint faulty, minor cracking or spalling from 12 o'clock to 2 o'clock / tiny chip	00:13:08	MH L.2 To MH L.3_64599	1
	44.68	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 6 o'clock to 8 o'clock	00:14:00	MH L.2 To MH L.3_d4aa0	
	49.96	GC	General comment / General ocndition photo	00:15:12	MH L.2 To MH L.3_e372a	
	50.19	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 6 o'clock / Roots protruding joint	00:16:16	MH L.2 To MH L.3_7a485	25
	50.19 S03	RIS	Root intrusion, roots restrict flow by 10% or less of full flow from 3 o'clock to 7 o'clock, start	00:16:18	MH L.2 To MH L.3_a2773	
	51.12	GC	General comment / General condition photo	00:16:02	MH L.2 To MH L.3_c4df61	
	52.96	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 6 o'clock / Roots protruding	00:16:55	MH L.2 To MH L.3_29f25	25

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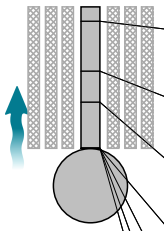
Section Inspection - 28/03/2023 - MH L.2 To MH L.3

Section No.	Asset No.	Contract Number	Date	Time	Weather
40	**MH L.2 To MH L.3**	**1**	**28/03/2023**	**1:46 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**



1:424	m +		OC	Observation	MPEG	Photo	Score
	54.62		JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Roots protruding	00:17:18	MH L.2 To MH L.3_50faec	25
	57.42		JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 6 o'clock to 10 o'clock / Roots protruding joint	00:18:30	MH L.2 To MH L.3_03e73	25
	59.17		JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 10 o'clock / Roots protruding joints	00:18:46	MH L.2 To MH L.3_8bfc96	25
	61.72	E02	CF	Construction feature at 12 o'clock, end / Lifting eye	00:19:53		
	61.72	E01	PHS	Pipe holed, the hole has been repaired at 12 o'clock, end	00:19:54		5
	61.72	E03	RIS	Root intrusion, roots restrict flow by 10% or less of full flow from 3 o'clock to 7 o'clock, end	00:19:55		5
	61.72		IE	Inspection ends, node reference: MH L.3	00:19:56		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
7	30.0	2.2	131.0	4.0	4	5.0	0.1	5.0	2.0

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Section Pictures - 28/03/2023 - MH L.2 To MH L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.2 To MH L.3**	**40**

MH L.2 To MH L.3_b5486849-fbf5-4630-8596-273ccbec6469_20230328_134815_657.jpg, 00:01:15, 4.52m

MH L.2 To MH L.3_f987bf23-4756-4827-ae23-684241dcd8ca_20230328_134826_521.jpg, 00:01:15, 4.52m

MH L.2 To MH L.3_986ca93e-b1a9-4261-9fe1-2494c373453f_20230328_134937_188.jpg, 00:01:36, 4.66m

MH L.2 To MH L.3_838cbd75-93b0-4437-922b-ec6b662c3dd9_20230328_135257_735.jpg, 00:03:45, 9.89m

MH L.2 To MH L.3_4e1ad88c-6513-485a-8ae7-f95aea91eb4e_20230328_135616_257.jpg, 00:06:49, 19.91m

MH L.2 To MH L.3_0167836e-dc1a-4ab9-8c15-90217fcd2ad6_20230328_140015_663.jpg, 00:09:40, 31.40m

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Section Pictures - 28/03/2023 - MH L.2 To MH L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.2 To MH L.3**	**40**

MH L.2 To MH L.3_568339f8-f189-43ca-bc6b-fe03ac71797e_20230328_140056_140.jpg, 00:10:10, 32.49m

MH L.2 To MH L.3_20816295-8f31-4580-ae7c-6c200e2ecbbd_20230328_140247_469.jpg, 00:11:54, 38.30m

MH L.2 To MH L.3_64599a16-9a20-4a6e-8d0f-d6710a681735_20230328_140454_459.jpg, 00:13:08, 40.27m

MH L.2 To MH L.3_d4aa0fbd-a310-427e-bb5c-b73b1572e744_20230328_140554_236.jpg, 00:14:00, 44.68m

MH L.2 To MH L.3_e372af21-6ca6-4a1f-ac4a-0894e8a8c844_20230328_140718_267.jpg, 00:15:12, 49.96m

MH L.2 To MH L.3_7a485f99-6caa-477c-ae76-26ec77a4d9a1_20230328_140843_916.jpg, 00:16:16, 50.19m

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Section Pictures - 28/03/2023 - MH L.2 To MH L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**28/03/2023**	**MH L.2 To MH L.3**	**40**

MH L.2 To MH L.3_a277394f-7fb6-450e-b345-6d2dd3481bd6_20230328_140854_849.jpg, 00:16:18, 50.19m

MH L.2 To MH L.3_c4df61e2-5b78-483f-9ea5-b42eaed0fa8d_20230328_140814_580.jpg, 00:16:02, 51.12m

MH L.2 To MH L.3_29f251b6-5a99-48cb-8bd7-bfa904795369_20230328_140942_137.jpg, 00:16:55, 52.96m

MH L.2 To MH L.3_50faec17-9592-40c3-b72e-967ba7ed3250_20230328_141021_428.jpg, 00:17:18, 54.62m

MH L.2 To MH L.3_03e73cab-167b-4032-b96d-6a3dc889c008_20230328_141144_508.jpg, 00:18:30, 57.42m

MH L.2 To MH L.3_8bfc9669-19e9-44fe-be56-2918c2d705ac_20230328_141218_604.jpg, 00:18:46, 59.17m

Section Inclination - 28/03/2023 - MH L.2 To MH L.3

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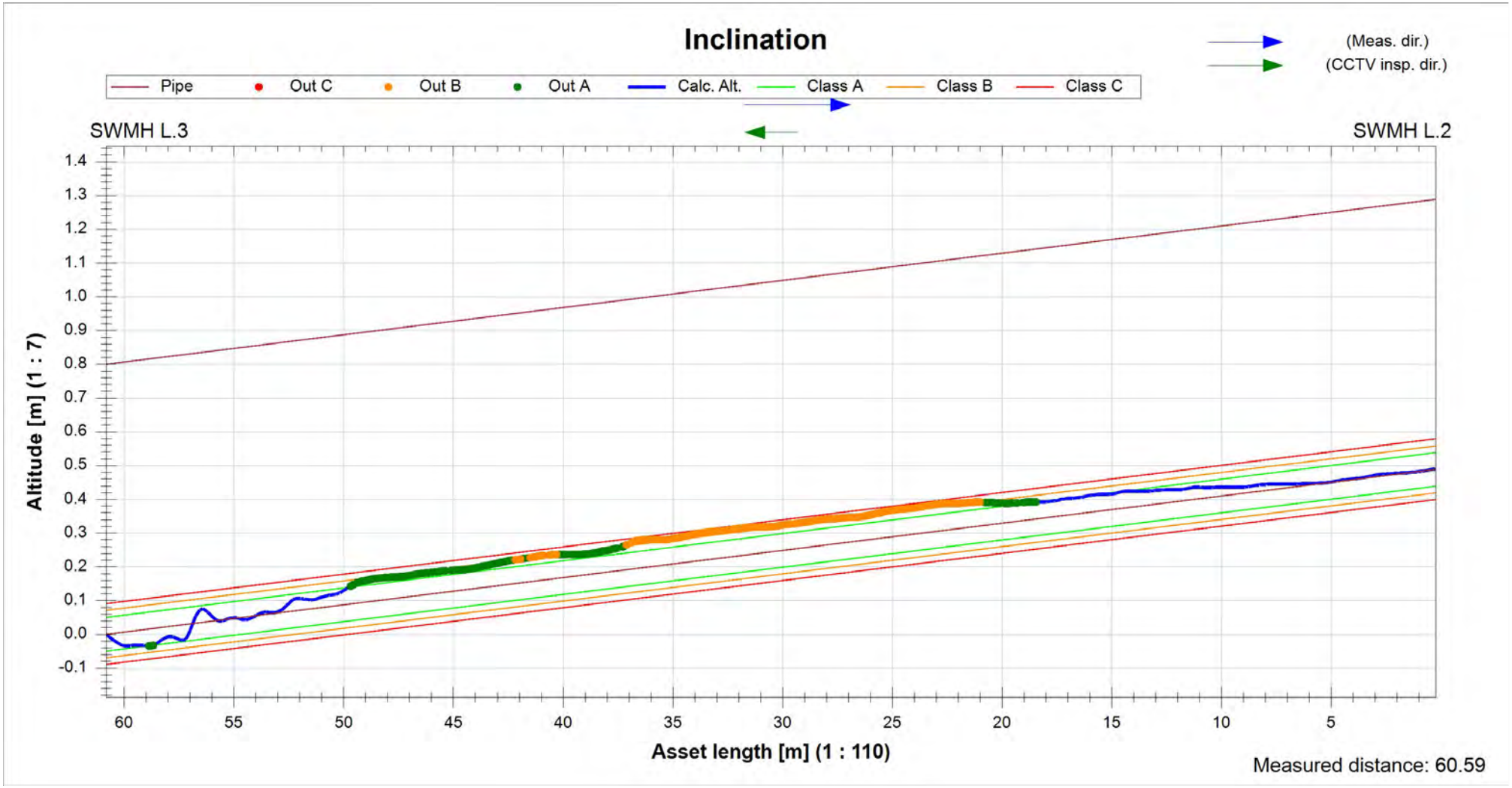
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.2 To MH L.3	28/03/2023	1:46 pm	CST Group	Tokanui		Downstream node	60.59 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	800 mm	800 mm	SWMH L.3	SWMH L.2	0.000 m	0.489 m	0.807 %



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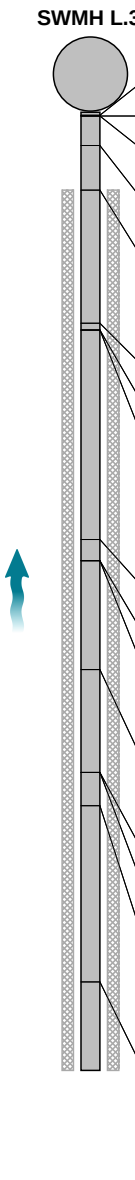
Section Inspection - 4/04/2023 - MH L.3 To MH L.4

Section No.	Asset No.	Contract Number	Date	Time	Weather
14	**MH L.3 To MH L.4**	**1**	**4/04/2023**	**9:27 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**99.87 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**99.67 m**	Dia/Height	**800 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**800 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWMH L.4**	D/S Node	**SWMH L.3**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth	**3.20 m**	D/S Pipe Depth	**2.60 m**
U/S Location		D/S Location	

Comments



1:420	m +	OC	Observation	MPEG	Photo	Score
	0.20	IS	Inspection start, node reference: SWMH L.3	00:00:00		
	0.24	JOM	Joint open, displacement is 20mm to 40mm	00:01:33	MH L.3 To MH L.4_9483e	5
	0.24	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 12 o'clock to 6 o'clock	00:01:35	MH L.3 To MH L.4_acd75	25
	1.87	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / tiny roots protruding	00:02:46	MH L.3 To MH L.4_e2f87	25
	4.33 S01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, start	00:03:51	MH L.3 To MH L.4_95ba2	
	11.73	GC	General comment / General condition photo	00:05:15	MH L.3 To MH L.4_d6136	
	12.10	CF	Construction feature at 12 o'clock / Lifting eye	00:05:26	MH L.3 To MH L.4_4eba1	
	12.10	PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:05:27	MH L.3 To MH L.4_03d75	5
	23.76	GC	General comment / General condition photo	00:07:46	MH L.3 To MH L.4_da1d5	
	24.94	CF	Construction feature at 12 o'clock / lifting eye	00:08:08	MH L.3 To MH L.4_c95fa5	
	24.94	PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:08:19	MH L.3 To MH L.4_55d71	5
	30.99	GC	General comment / General condition photo	00:09:46	MH L.3 To MH L.4_6a7c9f	
	36.69	CF	Construction feature at 12 o'clock / Lifting eye faulty	00:10:29	MH L.3 To MH L.4_63eab	
	36.69	PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:10:31		5
	38.54	GC	General comment / General condition photo	00:11:32	MH L.3 To MH L.4_c9c74	
	48.32	GC	General comment / General condition photo	00:13:15	MH L.3 To MH L.4_f287f1	

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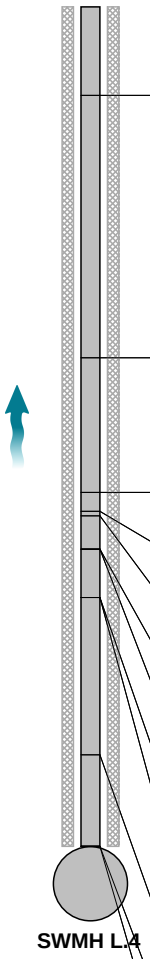
Section Inspection - 4/04/2023 - MH L.3 To MH L.4

Section No.	Asset No.	Contract Number	Date	Time	Weather
14	**MH L.3 To MH L.4**	**1**	**4/04/2023**	**9:27 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			



1:420	m +		OC	Observation	MPEG	Photo	Score
	58.15		GC	General comment / General condition photo	00:15:13	MH L.3 To MH L.4_1ab03	
	72.75		GC	General comment / General condition photo	00:18:00	MH L.3 To MH L.4_00c07	
	80.21		CF	Construction feature at 12 o'clock / Lifting eye	00:19:34	MH L.3 To MH L.4_a6dc9	
	81.27		PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:19:47		5
	81.54		GC	General comment / General condition photo	00:20:03	MH L.3 To MH L.4_104e6	
	83.37		CF	Construction feature at 12 o'clock / Lifting eye	00:20:28	MH L.3 To MH L.4_cd437	
	83.37		PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:20:28		5
	86.05		CF	Construction feature at 12 o'clock / Lifting eye	00:20:52	MH L.3 To MH L.4_1145e	
	86.05		PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:20:53		5
	94.81		GC	General comment / General condition photo	00:23:02	MH L.3 To MH L.4_f6360	
	99.87	E01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end	00:24:06		8
	99.87		IE	Inspection ends, node reference: SWMH L.4	00:24:07		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
9	30.0	0.9	85.0	3.0	1	8.0	0.1	8.0	3.0

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Section Pictures - 4/04/2023 - MH L.3 To MH L.4

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH L.4**	**14**

MH L.3 To MH L.4_9483e21f-fbf2-4525-84ac-cde70fca9a8b_20230404_092922_705.jpg, 00:01:33, 0.24m

MH L.3 To MH L.4_acd751df-e779-47b3-9dc6-eb01e40c7129_20230404_092932_514.jpg, 00:01:35, 0.24m

MH L.3 To MH L.4_e2f87596-29fe-4ec1-934e-0f3ccad4d5b2_20230404_093057_865.jpg, 00:02:46, 1.87m

MH L.3 To MH L.4_95ba27fa-0b01-46ac-bbcb-ec2fe721d773_20230404_093219_100.jpg, 00:03:51, 4.33m

MH L.3 To MH L.4_a4b88312-16c3-479b-aef9-69c133b0f164_20230404_093233_851.jpg, 00:03:51, 4.33m

MH L.3 To MH L.4_d6136215-d14d-4474-84f1-c046939e6261_20230404_093413_023.jpg, 00:05:15, 11.73m

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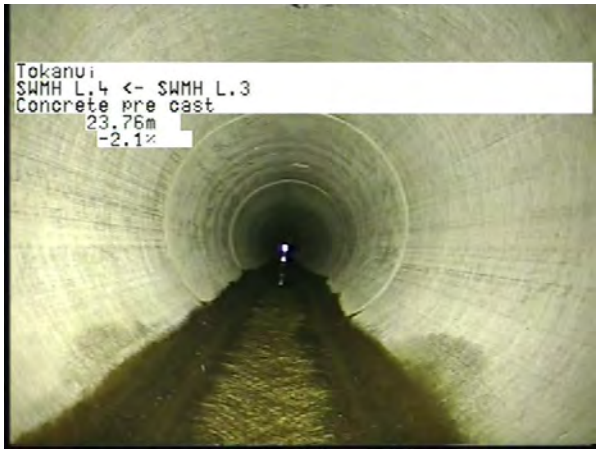
Section Pictures - 4/04/2023 - MH L.3 To MH L.4

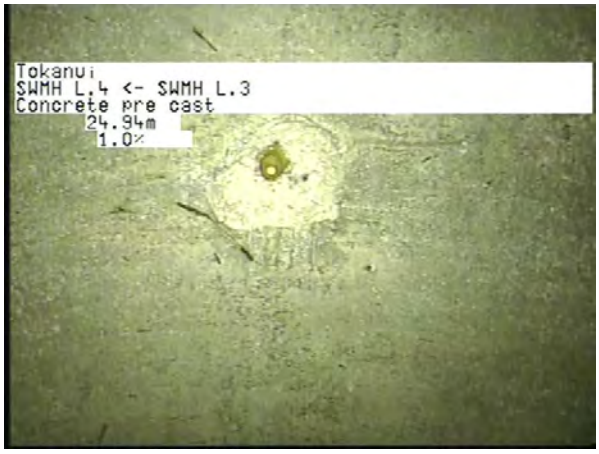
Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH L.4**	**14**

MH L.3 To MH L.4_4eba152a-e6ac-4849-9cd8-310ac2841de4_20230404_093436_287.jpg, 00:05:26, 12.10m

MH L.3 To MH L.4_03d758d2-c9f0-4aed-bd14-6ea585a74467_20230404_093442_339.jpg, 00:05:27, 12.10m

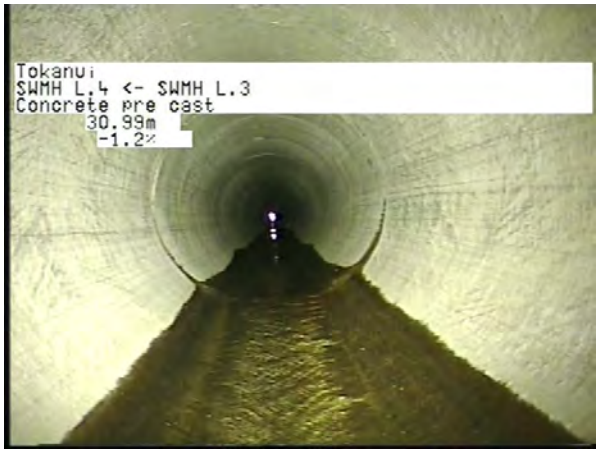


MH L.3 To MH L.4_da1d5de0-ffa4-4fbd-9279-2b5495244872_20230404_093709_030.jpg, 00:07:46, 23.76m



MH L.3 To MH L.4_c95fa51e-953b-4745-a434-022365713ad3_20230404_093737_811.jpg, 00:08:08, 24.94m

MH L.3 To MH L.4_55d716a5-7160-45a6-b9e2-5e59cd11868a_20230404_093753_136.jpg, 00:08:19, 24.94m



MH L.3 To MH L.4_6a7c9fea-2cca-49db-b36a-38717db22a9c_20230404_093927_545.jpg, 00:09:46, 30.99m

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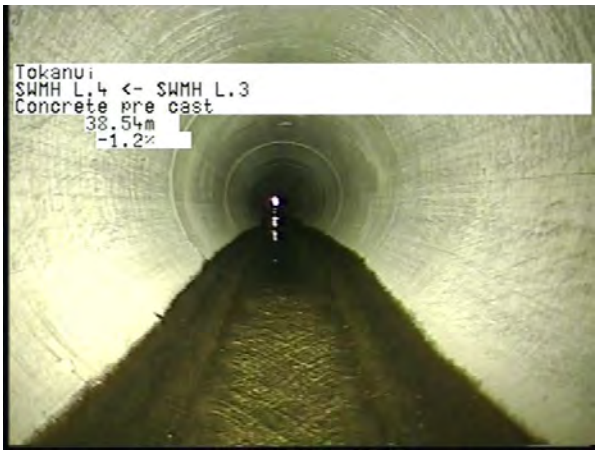
Section Pictures - 4/04/2023 - MH L.3 To MH L.4

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH L.4**	**14**

MH L.3 To MH L.4_63eaba63-f480-494e-adec-0f2d2e46468f_20230404_094020_895.jpg, 00:10:29, 36.69m

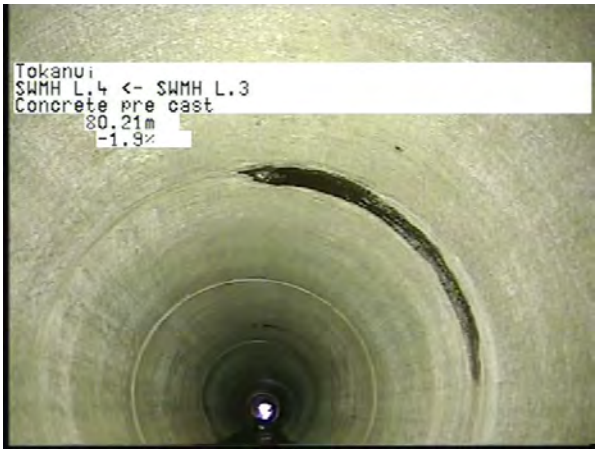


MH L.3 To MH L.4_c9c748e8-9ef1-4a3c-851e-9fd03abd3631_20230404_094133_210.jpg, 00:11:32, 38.54m

MH L.3 To MH L.4_f287f16f-eca9-47be-a283-cfe61ffd1641_20230404_094323_061.jpg, 00:13:15, 48.32m

MH L.3 To MH L.4_1ab034b0-4456-4136-93f3-79203cee5797_20230404_094533_346.jpg, 00:15:13, 58.15m

MH L.3 To MH L.4_00c0760c-1fa4-4709-9b65-66771ccc44d4_20230404_094827_863.jpg, 00:18:00, 72.75m



MH L.3 To MH L.4_a6dc95f5-03b6-4d4d-9bc4-2a3672d0ecac_20230404_095010_400.jpg, 00:19:34, 80.21m

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Section Pictures - 4/04/2023 - MH L.3 To MH L.4

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH L.4**	**14**

MH L.3 To MH L.4_104e6884-0071-49e3-9eb9-a2205b0c45ce_20230404_095100_027.jpg, 00:20:03, 81.54m

MH L.3 To MH L.4_cd437be2-9ea3-414e-b7ee-161ba26f5424_20230404_095133_886.jpg, 00:20:28, 83.37m

MH L.3 To MH L.4_1145e1e5-58c4-4518-9f96-9c7287b2e87d_20230404_095212_284.jpg, 00:20:52, 86.05m

MH L.3 To MH L.4_f6360997-c065-4c52-9205-3b60b91c3178_20230404_095435_038.jpg, 00:23:02, 94.81m

Section Inclination - 4/04/2023 - MH L.3 To MH L.4

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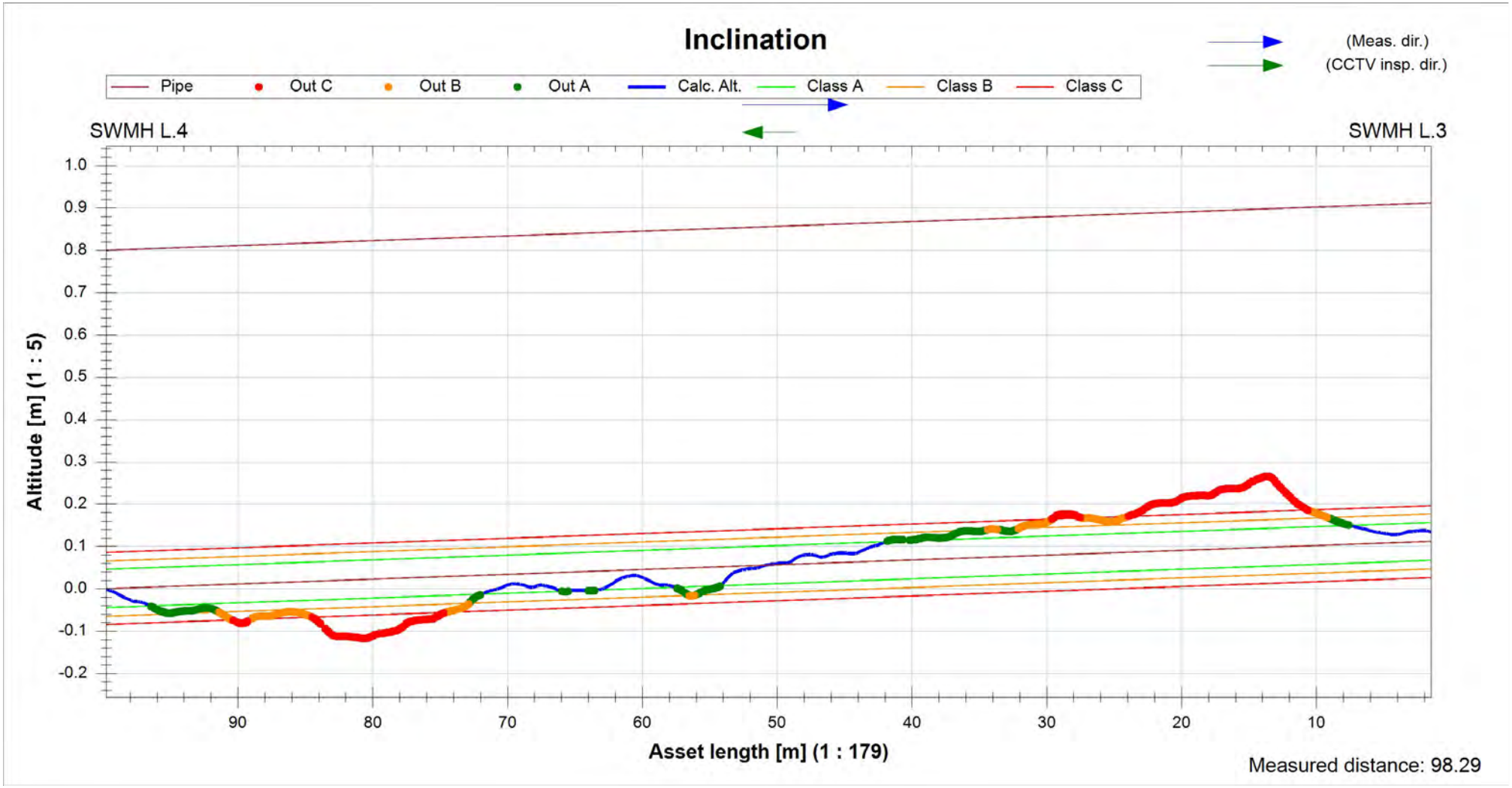
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.3 To MH L.4	4/04/2023	9:27 am	CST Group	Tokanui		Downstream node	98.29 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	800 mm	800 mm	SWMH L.4	SWMH L.3	0.000 m	0.134 m	0.136 %



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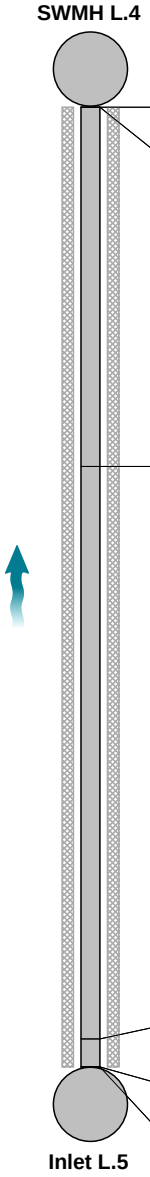
Section Inspection - 4/04/2023 - MH L.4 To Inlet

Section No.	Asset No.	Contract Number	Date	Time	Weather
15	**MH L.4 To Inlet**	**1**	**4/04/2023**	**9:57 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**27.68 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**27.68 m**	Dia/Height	**800 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**800 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**Inlet L.5**	D/S Node	**SWMH L.4**
U/S Node Type	**Stormwater inlet**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth		D/S Pipe Depth	**3.20 m**
U/S Location		D/S Location	

Comments



1:218	m +		OC	Observation	MPEG	Photo	Score
	0.00		IS	Inspection start, node reference: SWMH L.4	00:00:00		
	0.00	S01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, start	00:00:01	MH L.4 To MH L.5_70c09	
	10.36		GC	General comment / General condition photo	00:02:30	MH L.4 To MH L.5_c014e	
	26.87		GC	General comment / Inlet half full	00:05:34	MH L.4 To MH L.5_92d46	
	27.68	E01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, end	00:05:47		8
	27.68		IE	Inspection ends, node reference: SWMH L.5	00:05:49		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	8.0	0.3	8.0	3.0

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Section Pictures - 4/04/2023 - MH L.4 To Inlet

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.4 To Inlet**	**15**

MH L.4 To MH L.5_70c0984e-f9b5-458c-8f39-eecd9a836a59_20230404_095710_366.jpg, 00:00:01, 0.00m

MH L.4 To MH L.5_c014e1cd-ee90-404a-9d96-e6b505e72d05_20230404_095955_739.jpg, 00:02:30, 10.36m

MH L.4 To MH L.5_92d4635b-d2a6-45ae-8fe8-9bb89ba7f701_20230404_100304_576.jpg, 00:05:34, 26.87m

Section Inclination - 4/04/2023 - MH L.4 To Inlet

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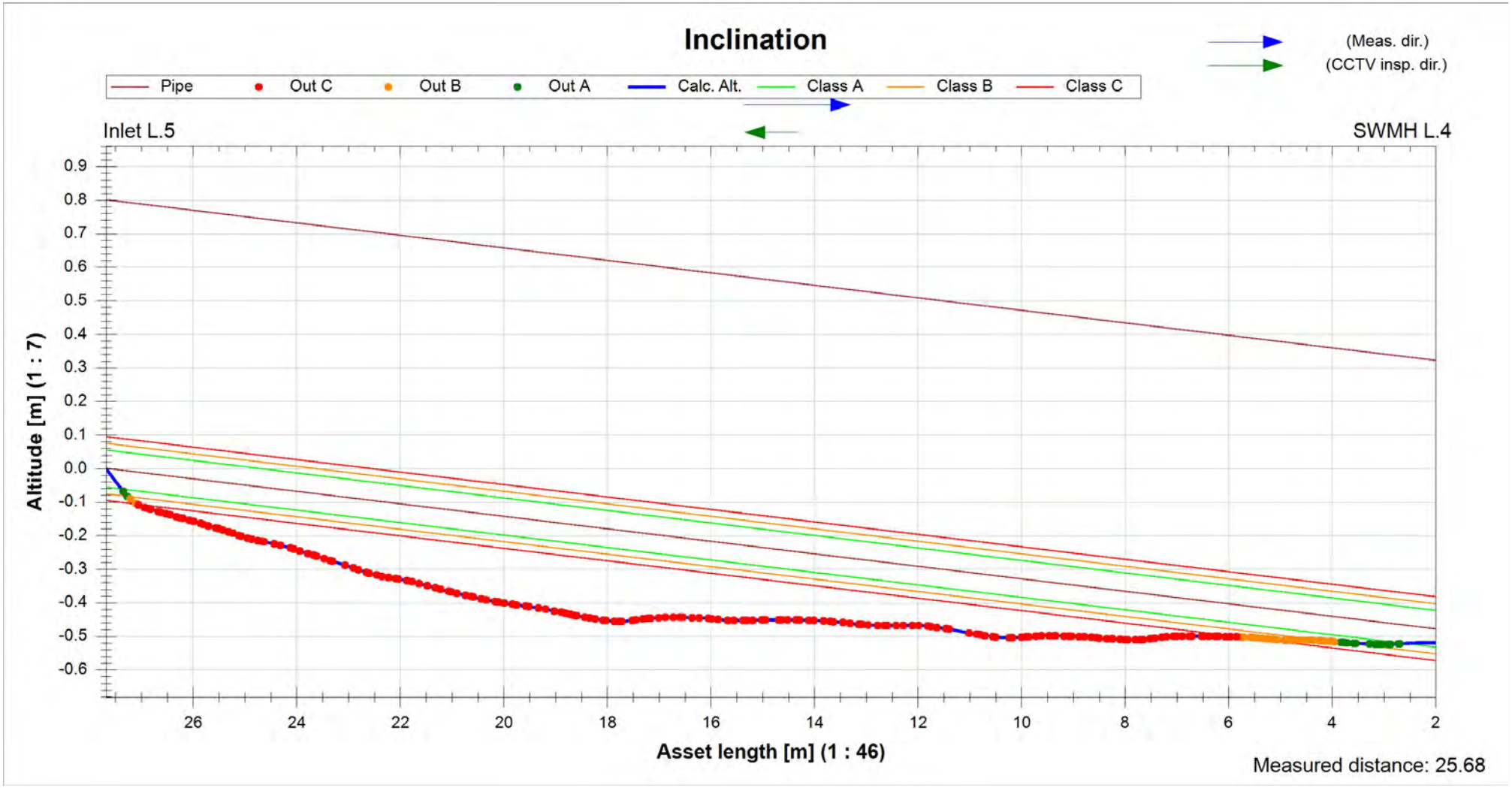
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.4 To Inlet	4/04/2023	9:57 am	CST Group	Tokanui		Downstream node	25.68 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	800 mm	800 mm	Inlet L.5	SWMH L.4	0.000 m	-0.519 m	-2.020 %



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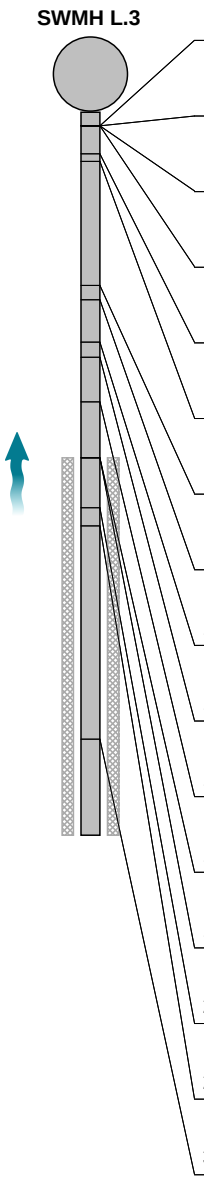
Section Inspection - 4/04/2023 - MH L.3 To MH 1L.3

Section No.	Asset No.	Contract Number	Date	Time	Weather
16	**MH L.3 To MH 1L.3**	**1**	**4/04/2023**	**10:27 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**110.58 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**109.88 m**	Dia/Height	**675 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**675 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWMH 1L.3**	D/S Node	**SWMH L.3**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth	**2.90 m**	D/S Pipe Depth	**2.60 m**
U/S Location		D/S Location	

Comments



1:384	m +	OC	Observation	MPEG	Photo	Score
	0.70	IS	Inspection start, node reference: MH L.3	00:00:00		
	0.70	CF	Construction feature from 8 o'clock to 10 o'clock / Lateral connection	00:00:09	MH L.3 To MH 1L.3_97d0	
	0.70	JFS	Joint faulty, minor cracking or spalling from 4 o'clock to 8 o'clock / Roots protruding joint	00:00:26	MH L.3 To MH 1L.3_69bc	1
	0.70	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Roots protruding joint	00:01:21	MH L.3 To MH 1L.3_3b63	25
	2.14	PHS	Pipe holed, the hole has been repaired at 10 o'clock	00:02:15	MH L.3 To MH 1L.3_8f31	5
	2.53	CF	Construction feature at 10 o'clock / Lifting eye	00:02:25		
	8.83	CF	Construction feature from 1 o'clock to 2 o'clock / Lifting eye	00:04:00	MH L.3 To MH 1L.3_752a	
	9.55	PHS	Pipe holed, the hole has been repaired at 1 o'clock	00:04:14	MH L.3 To MH 1L.3_0da7	5
	11.71	CF	Construction feature at 3 o'clock / Lifting eye	00:05:19	MH L.3 To MH 1L.3_fa5b	
	12.46	PHS	Pipe holed, the hole has been repaired at 3 o'clock	00:05:33	MH L.3 To MH 1L.3_0ecd	5
	14.73	GC	General comment / General condition photo	00:06:02	MH L.3 To MH 1L.3_32b6	
	17.57 S01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, start	00:06:57	MH L.3 To MH 1L.3_81ca	
	17.57	PHS	Pipe holed, the hole has been repaired at 4 o'clock	00:06:59	MH L.3 To MH 1L.3_7968	5
	20.11	PHS	Pipe holed, the hole has been repaired from 7 o'clock to 9 o'clock / Lifting eyes seeping water	00:07:37	MH L.3 To MH 1L.3_0be5	5
	21.02	GC	General comment / General condition photo	00:07:50	MH L.3 To MH 1L.3_29ce	
	31.84	GC	General comment / General condition photo	00:10:19	MH L.3 To MH 1L.3_3f09	

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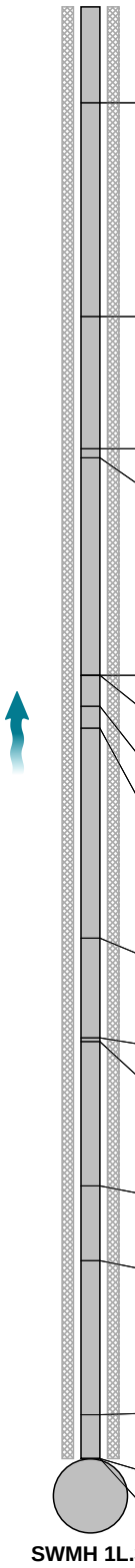
Section Inspection - 4/04/2023 - MH L.3 To MH 1L.3

Section No.	Asset No.	Contract Number	Date	Time	Weather
16	**MH L.3 To MH 1L.3**	**1**	**4/04/2023**	**10:27 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			



1:384	m +	OC	Observation	MPEG	Photo	Score
	41.65	GC	General comment / General condition photo	00:12:43	MH L.3 To MH 1L.3_f238	
	52.50	GC	General comment / General condition photo	00:14:27	MH L.3 To MH 1L.3_e313	
	59.23	JFS	Joint faulty, minor cracking or spalling from 12 o'clock to 11 o'clock	00:16:48	MH L.3 To MH 1L.3_dbe0	1
	59.70	GC	General comment / General condition photo	00:16:58	MH L.3 To MH 1L.3_0fbd	
	70.76	GC	General comment / General condition photo	00:19:01	MH L.3 To MH 1L.3_1250	
	70.76	JFS	Joint faulty, minor cracking or spalling from 12 o'clock to 11 o'clock	00:19:02	MH L.3 To MH 1L.3_f6aac	1
	72.33	JFS	Joint faulty, minor cracking or spalling from 1 o'clock to 7 o'clock	00:19:20	MH L.3 To MH 1L.3_a86f	1
	73.43	JFS	Joint faulty, minor cracking or spalling from 2 o'clock to 5 o'clock	00:19:33	MH L.3 To MH 1L.3_8679	1
	84.11	GC	General comment / General condition photo	00:22:20	MH L.3 To MH 1L.3_c797	
	89.18	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 6 o'clock to 8 o'clock	00:23:54	MH L.3 To MH 1L.3_735a	
	89.38	GC	General comment / General condition photo	00:24:01	MH L.3 To MH 1L.3_6fc0d	
	96.71	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 6 o'clock	00:25:40	MH L.3 To MH 1L.3_f516	
	100.52	GC	General comment / General condition photo	00:26:54	MH L.3 To MH 1L.3_2f22	
	108.36	JFM	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 5 o'clock to 9 o'clock	00:28:35	MH L.3 To MH 1L.3_0e40	10
	110.58	E01 DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end	00:29:56		8
	110.58	IE	Inspection ends, node reference: MH 1L.3	00:29:57		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
12	26.0	0.6	65.0	3.0	3	8.0	0.1	8.0	3.0

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Section Pictures - 4/04/2023 - MH L.3 To MH 1L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH 1L.3**	**16**

MH L.3 To MH 1L.3_97d0d5ca-abb6-436f-91d0-db6672ef513a_20230404_102815_967.jpg, 00:00:09, 0.70m

MH L.3 To MH 1L.3_69bcc7ab-8059-4ba9-80e0-7c9783bc7058_20230404_102846_035.jpg, 00:00:26, 0.70m

MH L.3 To MH 1L.3_3b63cc1a-fda2-4980-80ac-24fcff635840_20230404_102957_802.jpg, 00:01:21, 0.70m

MH L.3 To MH 1L.3_8f3149b8-46b5-47b3-a989-f6b5b56313f4_20230404_103057_801.jpg, 00:02:15, 2.14m

MH L.3 To MH 1L.3_b089e72a-b609-48d1-850c-a5fc0d352078_20230404_103106_821.jpg, 00:02:15, 2.14m

MH L.3 To MH 1L.3_752af1d2-ad7e-493d-9bd1-af300831cc88_20230404_103303_226.jpg, 00:04:00, 8.83m

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Section Pictures - 4/04/2023 - MH L.3 To MH 1L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH 1L.3**	**16**

MH L.3 To MH 1L.3_0da7215c-217b-462b-a9d5-e333d2ba599c_20230404_103322_565.jpg, 00:04:14, 9.55m

MH L.3 To MH 1L.3_fa5b7d5d-493e-4bd6-bcd6-a91ff1d814ea_20230404_103435_131.jpg, 00:05:19, 11.71m

MH L.3 To MH 1L.3_0ecd87f5-1820-486d-8d32-f001d87cf676_20230404_103459_359.jpg, 00:05:33, 12.46m

MH L.3 To MH 1L.3_32b6b64f-7446-4f41-a2b9-fb84f00ec80a_20230404_103537_441.jpg, 00:06:02, 14.73m

MH L.3 To MH 1L.3_81ca6150-c54d-46d4-87ae-a1ad59e814ac_20230404_103641_628.jpg, 00:06:57, 17.57m

MH L.3 To MH 1L.3_79684a4b-7a56-4f34-bb87-7320c1fda5e1_20230404_103648_439.jpg, 00:06:59, 17.57m

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Section Pictures - 4/04/2023 - MH L.3 To MH 1L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH 1L.3**	**16**

MH L.3 To MH 1L.3_660184ce-4980-4deb-ab86-f7affadb5d2a_20230404_103703_545.jpg, 00:06:59, 17.57m

MH L.3 To MH 1L.3_0be531a1-51f3-4133-92f4-60a50cd26c59_20230404_103749_262.jpg, 00:07:37, 20.11m

MH L.3 To MH 1L.3_29ce032d-9b10-4b6c-b26b-c9792552ccf2_20230404_103814_801.jpg, 00:07:50, 21.02m

MH L.3 To MH 1L.3_3f0952e8-055a-47f2-98e7-9af1672a533b_20230404_104050_803.jpg, 00:10:19, 31.84m

MH L.3 To MH 1L.3_f238ae69-96ec-4b1f-b915-15ef75a6fc8c_20230404_104322_966.jpg, 00:12:43, 41.65m

MH L.3 To MH 1L.3_e3136017-e4c8-4a80-871b-724d2b483ce9_20230404_104516_055.jpg, 00:14:27, 52.50m

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Section Pictures - 4/04/2023 - MH L.3 To MH 1L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH 1L.3**	**16**

MH L.3 To MH 1L.3_dbe0252b-adad-401c-83c7-f555bd97aa7f_20230404_104742_860.jpg, 00:16:48, 59.23m

MH L.3 To MH 1L.3_0fbd45b7-3a20-4d1b-9d1a-b7a4a0d73bb5_20230404_104802_646.jpg, 00:16:58, 59.70m

MH L.3 To MH 1L.3_1250d530-7bdd-418a-b5fe-2f673034d37f_20230404_105017_902.jpg, 00:19:01, 70.76m

MH L.3 To MH 1L.3_f6aac0d2-7d14-4cab-8a2d-18d16530992b_20230404_105033_365.jpg, 00:19:02, 70.76m

MH L.3 To MH 1L.3_a86f57e8-f424-4cfb-9c0b-d81d8fead7d5_20230404_105058_071.jpg, 00:19:20, 72.33m

MH L.3 To MH 1L.3_86797a0e-c2d7-4d35-8631-55ad125fb115_20230404_105120_199.jpg, 00:19:33, 73.43m

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Section Pictures - 4/04/2023 - MH L.3 To MH 1L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.3 To MH 1L.3**	**16**

MH L.3 To MH 1L.3_c79736d4-5661-4711-8d29-eb5952b75ddd_20230404_105417_300.jpg, 00:22:20, 84.11m

MH L.3 To MH 1L.3_735a4276-00cb-4f96-888d-98baefb8c386_20230404_105617_608.jpg, 00:23:54, 89.18m

MH L.3 To MH 1L.3_6fc0d206-46fe-4ded-84f3-3717a3a2e390_20230404_105632_934.jpg, 00:24:01, 89.38m

MH L.3 To MH 1L.3_f5160bf1-0893-409a-93c1-d7c758f5e3a8_20230404_105820_973.jpg, 00:25:40, 96.71m

MH L.3 To MH 1L.3_2f22ebd9-a633-4f45-98d5-41e8c925061f_20230404_105946_440.jpg, 00:26:54, 100.52m

MH L.3 To MH 1L.3_0e402055-9531-471c-a05a-3fd09f339a5d_20230404_110136_057.jpg, 00:28:35, 108.36m

Section Inclination - 4/04/2023 - MH L.3 To MH 1L.3

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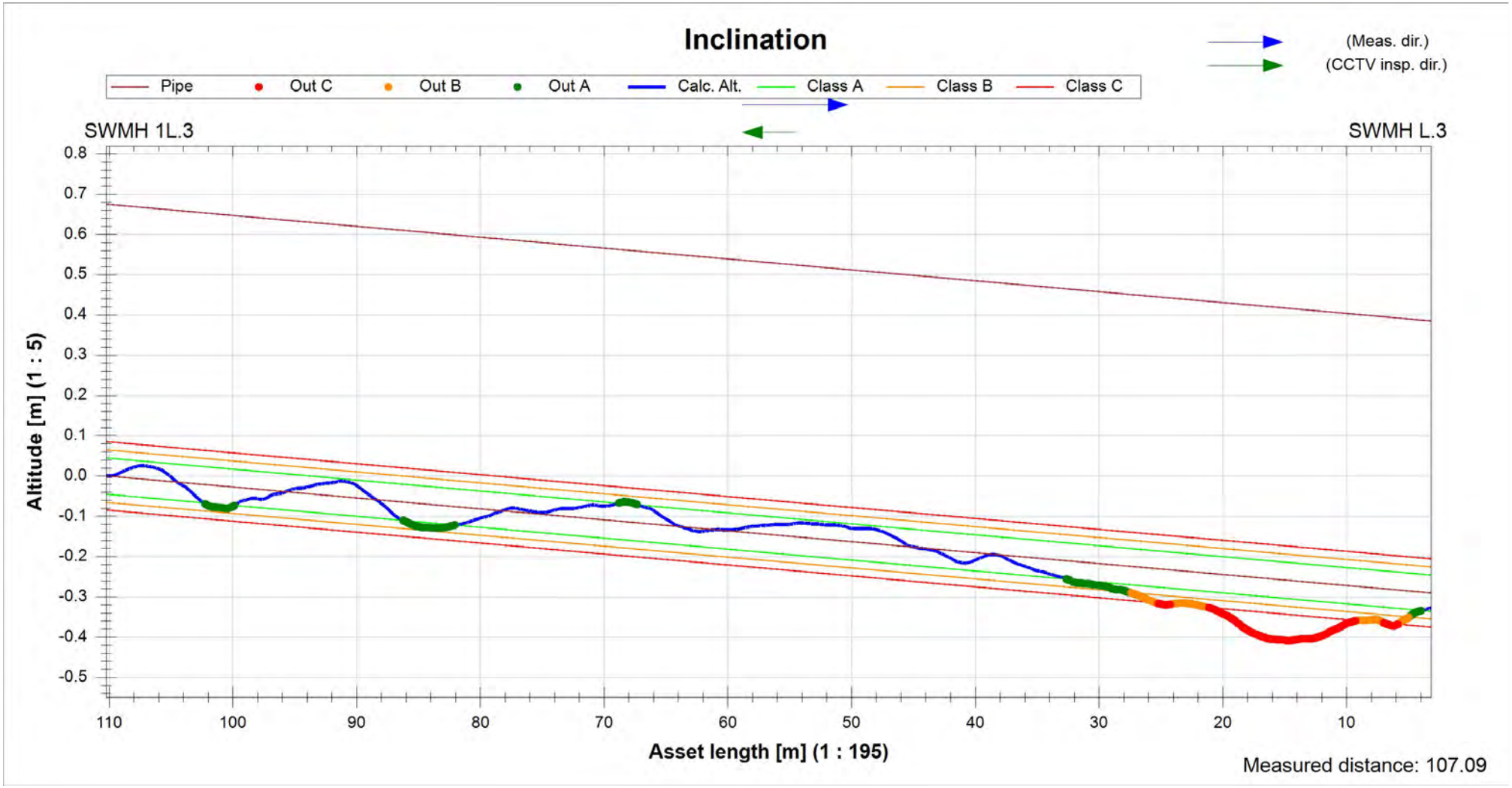
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.3 To MH 1L.3	4/04/2023	10:27 am	CST Group	Tokanui		Downstream node	107.09 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	675 mm	675 mm	SWMH 1L.3	SWMH L.3	0.000 m	-0.328 m	-0.306 %



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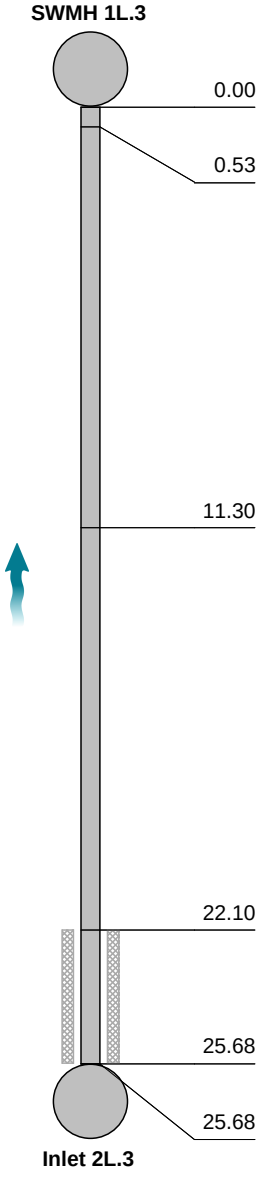
Section Inspection - 4/04/2023 - MH 1L.3 To Inlet 2L.3

Section No.	Asset No.	Contract Number	Date	Time	Weather
17	**MH 1L.3 To Inlet 2L.3**	**1**	**4/04/2023**	**11:05 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**25.68 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**25.68 m**	Dia/Height	**700 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**700 mm**	Inspection	**Inspection complete**
Surface		Location		Cleaning Status	

U/S Node	**Inlet 2L.3**	D/S Node	**SWMH 1L.3**
U/S Node Type	**Stormwater inlet**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth		D/S Pipe Depth	**2.90 m**
U/S Location		D/S Location	

Comments



1:203	m +	OC	Observation	MPEG	Photo	Score
	0.00	IS	Inspection start, node reference: MH 1L.3	00:00:00		
	0.53	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 10 o'clock	00:00:23	MH 1L.3 To Inlet 2L.3_7037	
	11.30	GC	General comment / General condition photo	00:03:00	MH 1L.3 To Inlet 2L.3_8195	
	22.10	S01 RIL	Root intrusion, restrict flow by more than 25% of full flow from 3 o'clock to 9 o'clock, start	00:05:01	MH 1L.3 To Inlet 2L.3_9e0a	
	25.68	E01 RIL	Root intrusion, restrict flow by more than 25% of full flow from 3 o'clock to 9 o'clock, end	00:05:37		70
	25.68	IE	Inspection ends, node reference: Inlet 2L.3	00:05:38		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	2	70.0	2.7	70.0	5.0

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Section Pictures - 4/04/2023 - MH 1L.3 To Inlet 2L.3

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH 1L.3 To Inlet 2L.3**	**17**

MH 1L.3 To Inlet 2L.3_7037c356-1129-4f76-9f56-4f972d7413da_20230404_110552_632.jpg, 00:00:23, 0.53m

MH 1L.3 To Inlet 2L.3_8195242b-7ad1-4342-80fa-8380f7f9a542_20230404_110837_830.jpg, 00:03:00, 11.30m

MH 1L.3 To Inlet 2L.3_9e0a22ce-6dc6-4e69-a672-1a998b86b0ad_20230404_111056_221.jpg, 00:05:01, 22.10m

Section Inclination - 4/04/2023 - MH 1L.3 To Inlet

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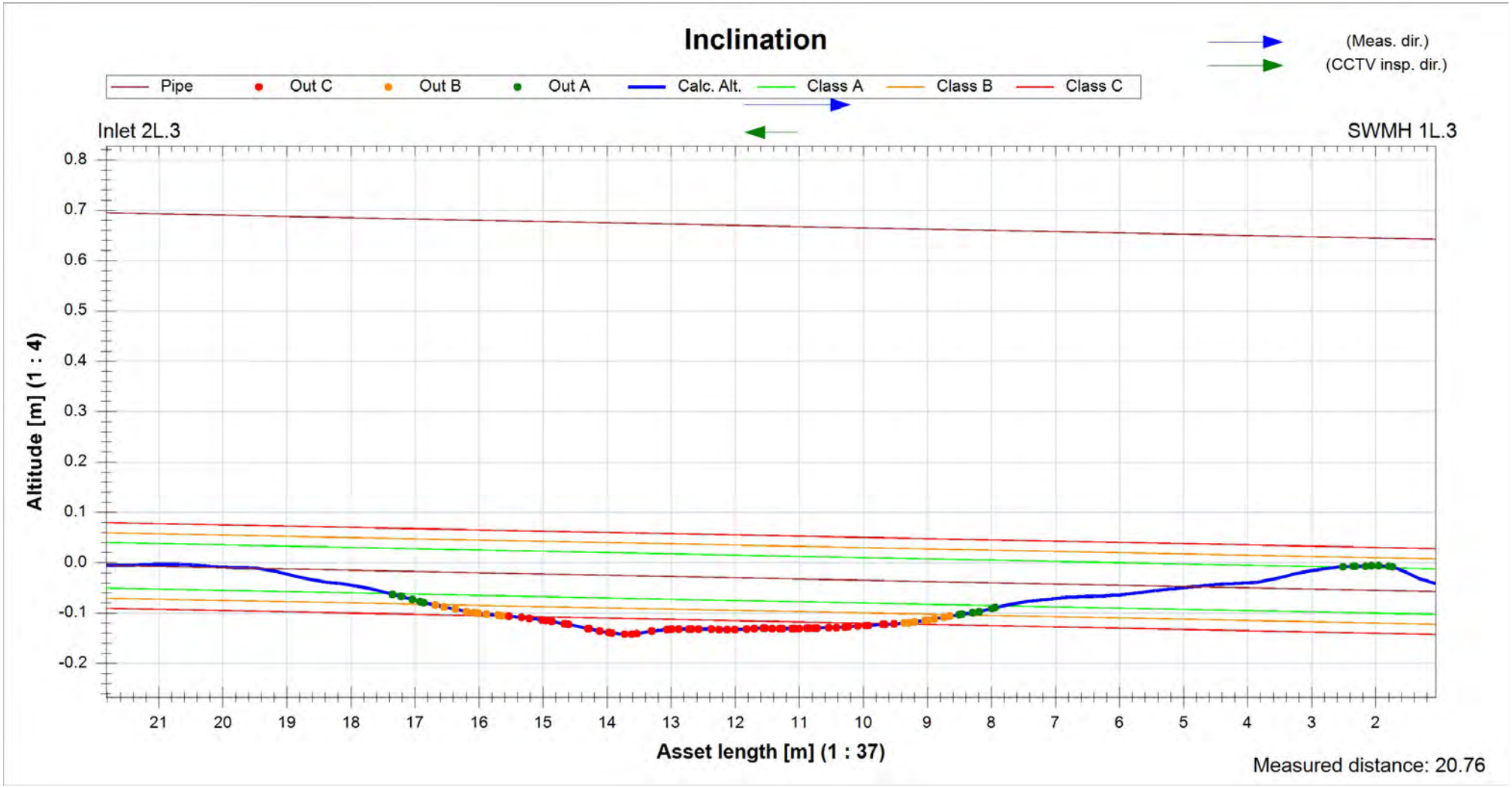
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH 1L.3 To Inlet 2L.3	4/04/2023	11:05 am	CST Group	Tokanui		Downstream node	20.76 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	700 mm	700 mm	Inlet 2L.3	SWMH 1L.3	-0.006 m	-0.042 m	-0.174 %



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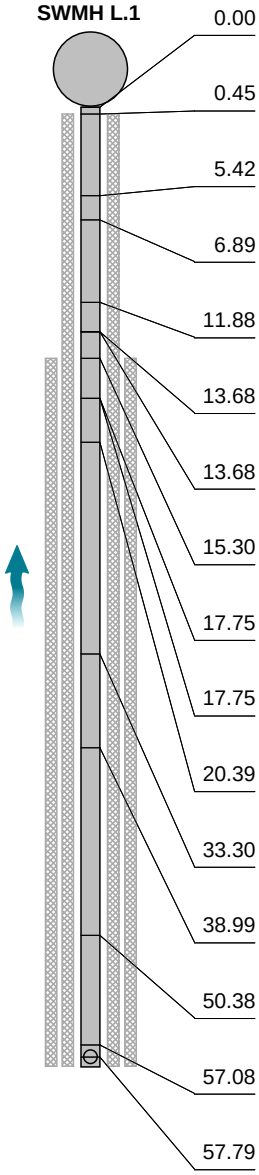
Section Inspection - 4/04/2023 - MH L.1 To MH 1L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
18	**MH L.1 To MH 1L.1**	**1**	**4/04/2023**	**11:59 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**152.52 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**152.52 m**	Dia/Height	**700 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**700 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWMH 1L.1**	D/S Node	**SWMH L.1**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth	**1.60 m**	D/S Pipe Depth	**3.00 m**
U/S Location		D/S Location	

Comments



1:460	m +	OC	Observation	MPEG	Photo	Score
	0.00	IS	Inspection start, node reference: SWMH L.1	00:00:00		
	0.45	S01 DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, start	00:01:06	MH L.1 To MH 1L.1_a891	
	5.42	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 3 o'clock to 7 o'clock	00:02:27	MH L.1 To MH 1L.1_efe4	
	6.89	JFS	Joint faulty, minor cracking or spalling from 2 o'clock to 3 o'clock	00:02:55	MH L.1 To MH 1L.1_d7dd	1
	11.88	GC	General comment / General condition photo	00:04:48	MH L.1 To MH 1L.1_a51cf	
	13.68	CF	Construction feature at 12 o'clock / Lifting eye	00:05:07		
	13.68	PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:05:09	MH L.1 To MH 1L.1_7328	5
	15.30	S02 EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, start	00:06:21	MH L.1 To MH 1L.1_ddeb	
	17.75	CF	Construction feature at 12 o'clock / Lifting eye	00:06:47	MH L.1 To MH 1L.1_f797	
	17.75	PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:06:49		5
	20.39	GC	General comment / General condition photo	00:07:47	MH L.1 To MH 1L.1_4d26	
	33.30	GC	General comment / General condition photo	00:10:19	MH L.1 To MH 1L.1_04a8	
	38.99	GC	General comment / General condition photo	00:11:39	MH L.1 To MH 1L.1_5cd2	
	50.38	GC	General comment / General condition photo	00:14:08	MH L.1 To MH 1L.1_6756	
	57.08	CF	Construction feature from 11 o'clock to 1 o'clock / Lateral connection	00:15:28	MH L.1 To MH 1L.1_86a0	
	57.79	LFM	Lateral sealing faulty, gaps between the lateral pipe and the main pipe that appear open at 12 o'clock	00:15:44	MH L.1 To MH 1L.1_42f8	10

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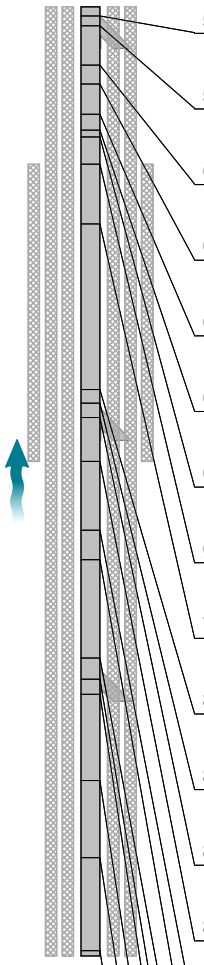
Section Inspection - 4/04/2023 - MH L.1 To MH 1L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
18	**MH L.1 To MH 1L.1**	**1**	**4/04/2023**	**11:59 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			



1:460 m +		OC	Observation	MPEG	Photo	Score
58.97		CF	Construction feature from 10 o'clock to 11 o'clock / Lateral connection	00:16:02	MH L.1 To MH 1L.1_35d0	
59.54		LPM	Lateral protruding, into the pipe by 10% to 25% of the diameter of the pipe at 10 o'clock	00:16:11	MH L.1 To MH 1L.1_6df5	15
61.93		JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 9 o'clock / Tiny root protruding	00:16:58	MH L.1 To MH 1L.1_3fb9	25
63.11		GC	General comment / General condition photo	00:17:54	MH L.1 To MH 1L.1_217a	
64.92		JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 5 o'clock to 8 o'clock / Roots protruding joint	00:18:12	MH L.1 To MH 1L.1_e72c	25
65.88		CF	Construction feature at 12 o'clock / Lifting eye	00:18:30	MH L.1 To MH 1L.1_c6b1	
66.33		PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:18:41	MH L.1 To MH 1L.1_418a	5
67.95	S03	RIS	Root intrusion, roots restrict flow by 10% or less of full flow from 4 o'clock to 8 o'clock, start / Protruding joints	00:19:02	MH L.1 To MH 1L.1_510fc	
71.62		GC	General comment / General condition photo	00:20:18	MH L.1 To MH 1L.1_0afd	
81.70		GC	General comment / General condition photo	00:22:41	MH L.1 To MH 1L.1_4282	
82.49		CF	Construction feature from 9 o'clock to 11 o'clock / Lateral connection	00:22:53	MH L.1 To MH 1L.1_44b9	
83.36		LFS	Lateral sealing faulty, small gaps between the lateral and the main pipe which are not open at 10 o'clock	00:23:11	MH L.1 To MH 1L.1_8c99	5
86.03	E03	RIS	Root intrusion, roots restrict flow by 10% or less of full flow from 4 o'clock to 8 o'clock, end / Protruding joints	00:23:36		5
90.23		GC	General comment / General condition photo	00:24:42	MH L.1 To MH 1L.1_0f50	
92.02		JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 7 o'clock / Roots protruding joint	00:25:00	MH L.1 To MH 1L.1_ea58	25
98.00		CF	Construction feature from 9 o'clock to 11 o'clock / Lateral connection	00:26:20	MH L.1 To MH 1L.1_c7b5	
99.31		LFS	Lateral sealing faulty, small gaps between the lateral and the main pipe which are not open at 11 o'clock	00:26:42	MH L.1 To MH 1L.1_dc82	5
100.20		GC	General comment / General condition photo	00:27:40	MH L.1 To MH 1L.1_1d7f	
105.48		CF	Construction feature from 11 o'clock to 1 o'clock / Lateral connection	00:28:56	MH L.1 To MH 1L.1_2c7ef	
110.15		GC	General comment / General condition photo	00:30:08	MH L.1 To MH 1L.1_2d00	
115.83		CF	Construction feature at 12 o'clock / Lifting eye	00:31:23	MH L.1 To MH 1L.1_8e9d	

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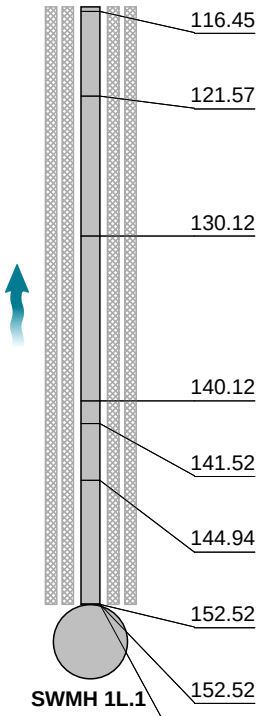
Section Inspection - 4/04/2023 - MH L.1 To MH 1L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
18	**MH L.1 To MH 1L.1**	**1**	**4/04/2023**	**11:59 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			



1:460	m +	OC	Observation	MPEG	Photo	Score
	116.45	PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:31:34	MH L.1 To MH 1L.1_62fc0	5
	121.57	GC	General comment / General condition photo	00:32:47	MH L.1 To MH 1L.1_1250	
	130.12	GC	General comment / General condition photo	00:34:54	MH L.1 To MH 1L.1_1a4a	
	140.12	GC	General comment / General condition photo	00:36:59	MH L.1 To MH 1L.1_1270	
	141.52	JFM	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 11 o'clock to 1 o'clock	00:37:24	MH L.1 To MH 1L.1_b31a	10
	144.94	JFS	Joint faulty, minor cracking or spalling at 5 o'clock	00:38:30	MH L.1 To MH 1L.1_7013	1
	152.52 E01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end	00:39:49		8
	152.52 E02	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, end	00:39:49		
	152.52	IE	Inspection ends, node reference: SWMH 1L.1	00:39:50		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
14	25.0	0.9	142.0	3.0	3	13.0	0.1	13.0	3.0

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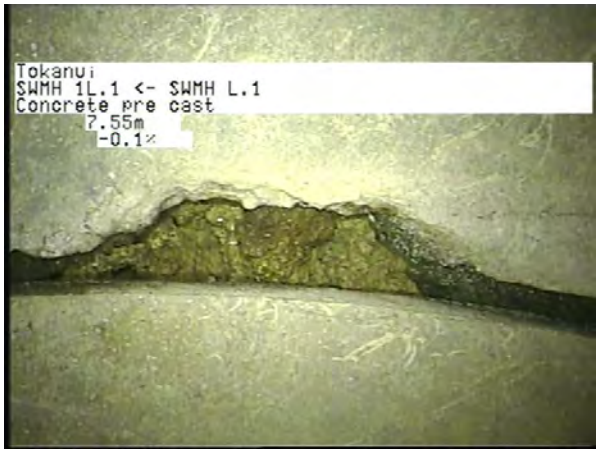
Section Pictures - 4/04/2023 - MH L.1 To MH 1L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.1 To MH 1L.1**	**18**

MH L.1 To MH 1L.1_a891dc14-e186-4d51-89eb-a05aef7b844c_20230404_120032_471.jpg, 00:01:06, 0.45m

MH L.1 To MH 1L.1_efe4325f-6193-4cf5-8fae-0de62265ead3_20230404_120207_122.jpg, 00:02:27, 5.42m

MH L.1 To MH 1L.1_d7ddc1f8-ff6b-4066-9a3e-e9ac1c07d5db_20230404_120247_678.jpg, 00:02:55, 6.89m



MH L.1 To MH 1L.1_06c6dd06-d60a-4796-8be9-911ed625a1db_20230404_120315_914.jpg, 00:02:55, 6.89m

MH L.1 To MH 1L.1_a51cfb48-c721-495d-9475-12ef7ef4b782_20230404_120451_789.jpg, 00:04:48, 11.88m

MH L.1 To MH 1L.1_7328faf1-e9fd-4b70-b36d-d89065e11fd0_20230404_120532_852.jpg, 00:05:09, 13.68m

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Section Pictures - 4/04/2023 - MH L.1 To MH 1L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.1 To MH 1L.1**	**18**

MH L.1 To MH 1L.1_ddeb10f3-b577-4669-8edd-7efe4b96e1f7_20230404_120653_052.jpg, 00:06:21, 15.30m

MH L.1 To MH 1L.1_f79701cd-4f67-44d8-b66a-579e775648a5_20230404_120734_042.jpg, 00:06:47, 17.75m

MH L.1 To MH 1L.1_4d264062-72ec-4b23-9a35-fa8798e3465f_20230404_120907_321.jpg, 00:07:47, 20.39m

MH L.1 To MH 1L.1_04a8f97b-4bad-48b7-8a96-fea918bddee7_20230404_121146_371.jpg, 00:10:19, 33.30m

MH L.1 To MH 1L.1_5cd2019c-ff89-4b03-994a-e4ca7ae62175_20230404_121318_924.jpg, 00:11:39, 38.99m

MH L.1 To MH 1L.1_67567631-e148-4c01-88fd-9c6bdd18b35a_20230404_121553_955.jpg, 00:14:08, 50.38m

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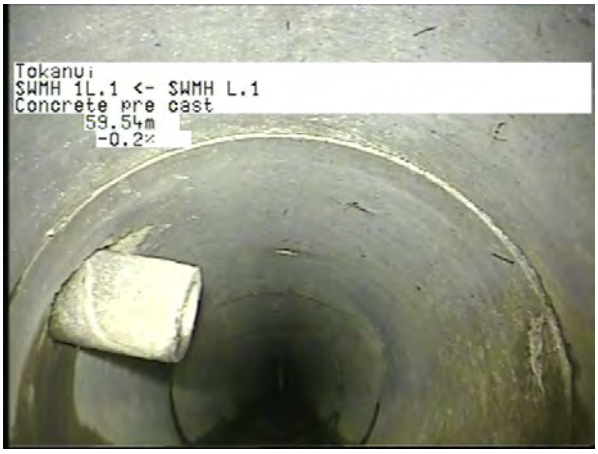
Section Pictures - 4/04/2023 - MH L.1 To MH 1L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.1 To MH 1L.1**	**18**

MH L.1 To MH 1L.1_86a0788c-11dd-40f7-a6c0-3777bbc11132_20230404_121725_361.jpg, 00:15:28, 57.08m

MH L.1 To MH 1L.1_42f8a8e7-9c5f-4050-acd7-894a60ad9256_20230404_121758_258.jpg, 00:15:44, 57.79m

MH L.1 To MH 1L.1_35d0d170-0f81-4417-84fc-51ead01dbb7a_20230404_121828_648.jpg, 00:16:02, 58.97m



MH L.1 To MH 1L.1_6df50fc2-ba82-4283-b27a-64b756c8048f_20230404_121848_157.jpg, 00:16:11, 59.54m

MH L.1 To MH 1L.1_3fb91a5d-147c-4c91-8f09-84a6609702d5_20230404_121955_441.jpg, 00:16:58, 61.93m

MH L.1 To MH 1L.1_217acfb7-81a1-48f4-9c33-f982301366d5_20230404_122102_027.jpg, 00:17:54, 63.11m

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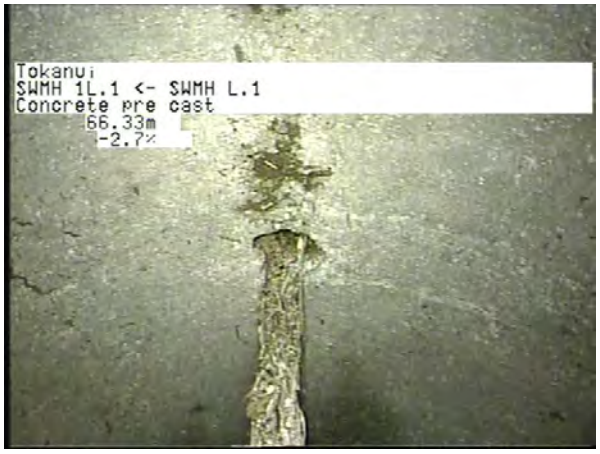
Section Pictures - 4/04/2023 - MH L.1 To MH 1L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.1 To MH 1L.1**	**18**

MH L.1 To MH 1L.1_e72c306c-649a-4164-91a8-1ecba2a48658_20230404_122145_992.jpg, 00:18:12, 64.92m

MH L.1 To MH 1L.1_c6b15fa7-e75e-4b7a-b2bf-da857a010b5e_20230404_122220_625.jpg, 00:18:30, 65.88m



MH L.1 To MH 1L.1_418a2c01-9d84-4963-b087-1e3aebd9728b_20230404_122238_777.jpg, 00:18:41, 66.33m

MH L.1 To MH 1L.1_510fc2ed-e598-4f17-88f0-a68e8f3b1666_20230404_122316_895.jpg, 00:19:02, 67.95m

MH L.1 To MH 1L.1_0afddfb9-b861-45b3-8309-d383d53be967_20230404_122445_181.jpg, 00:20:18, 71.62m

MH L.1 To MH 1L.1_42825bdf-2533-4d78-89c6-f464772da77f_20230404_122721_178.jpg, 00:22:41, 81.70m

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Section Pictures - 4/04/2023 - MH L.1 To MH 1L.1

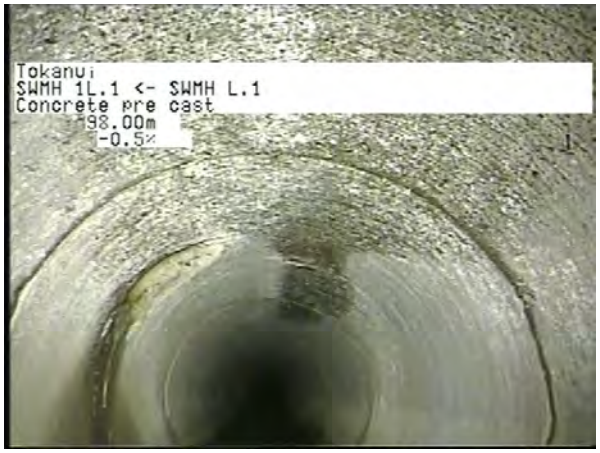
Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.1 To MH 1L.1**	**18**

MH L.1 To MH 1L.1_44b9a4b4-8ea3-4557-abc0-f63d0688fcb3_20230404_122745_592.jpg, 00:22:53, 82.49m

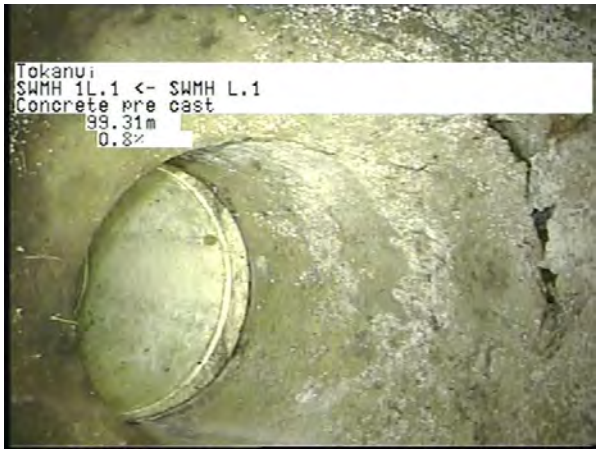
MH L.1 To MH 1L.1_8c992c4c-160a-43ed-8d8e-4f000d7d3860_20230404_122808_826.jpg, 00:23:11, 83.36m

MH L.1 To MH 1L.1_0f5006bf-4117-4fb8-bc62-3c18a0844030_20230404_123000_556.jpg, 00:24:42, 90.23m

MH L.1 To MH 1L.1_ea5826bb-7cb9-4991-806a-6ca7d6780f5d_20230404_123032_106.jpg, 00:25:00, 92.02m



MH L.1 To MH 1L.1_c7b5bc8a-909f-4303-b4a7-2fb66a44ad2a_20230404_123203_411.jpg, 00:26:20, 98.00m



MH L.1 To MH 1L.1_dc82e9c0-edc4-4321-a016-a4ef2259fb45_20230404_123231_069.jpg, 00:26:42, 99.31m

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Section Pictures - 4/04/2023 - MH L.1 To MH 1L.1

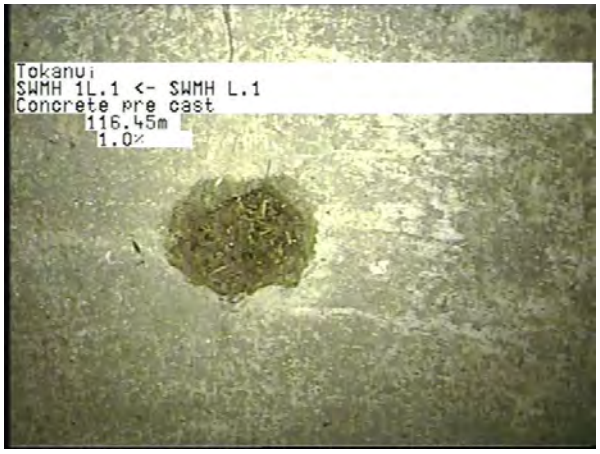
Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.1 To MH 1L.1**	**18**

MH L.1 To MH 1L.1_1d7f7522-ff45-4bc8-8e34-c083bc55e52d_20230404_123338_682.jpg, 00:27:40, 100.20m

MH L.1 To MH 1L.1_2c7ef29f-c7e1-41ca-ae0c-a44b80309301_20230404_123504_608.jpg, 00:28:56, 105.48m

MH L.1 To MH 1L.1_2d00e69a-401a-4f6c-b68f-de18bc68fec6_20230404_123625_720.jpg, 00:30:08, 110.15m

MH L.1 To MH 1L.1_8e9d2cae-b773-40b0-8ab7-475f3d2c9f91_20230404_123748_125.jpg, 00:31:23, 115.83m



MH L.1 To MH 1L.1_62fc0495-b501-4df9-b61d-762ee3180e67_20230404_123807_495.jpg, 00:31:34, 116.45m

MH L.1 To MH 1L.1_12508613-d3dd-4856-a07f-2026801c5e45_20230404_123927_778.jpg, 00:32:47, 121.57m

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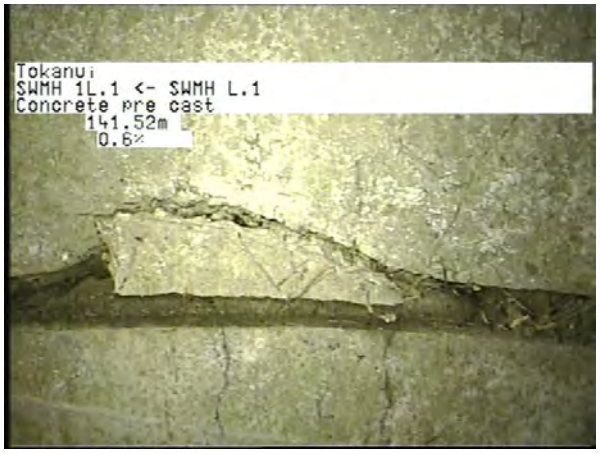
Section Pictures - 4/04/2023 - MH L.1 To MH 1L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH L.1 To MH 1L.1**	**18**

MH L.1 To MH 1L.1_1a4a32d8-8ee8-4e4b-9fba-48dae8734319_20230404_124204_762.jpg, 00:34:54, 130.12m

MH L.1 To MH 1L.1_1270f635-a8da-4348-895f-1a9997846ef4_20230404_124415_564.jpg, 00:36:59, 140.12m



MH L.1 To MH 1L.1_b31ae029-cb6a-44cd-b78c-e27016cdda12_20230404_124446_180.jpg, 00:37:24, 141.52m

MH L.1 To MH 1L.1_7013948b-c463-4cad-98bf-244be2a26ba7_20230404_124606_202.jpg, 00:38:30, 144.94m

Section Inclination - 4/04/2023 - MH L.1 To MH 1L.1

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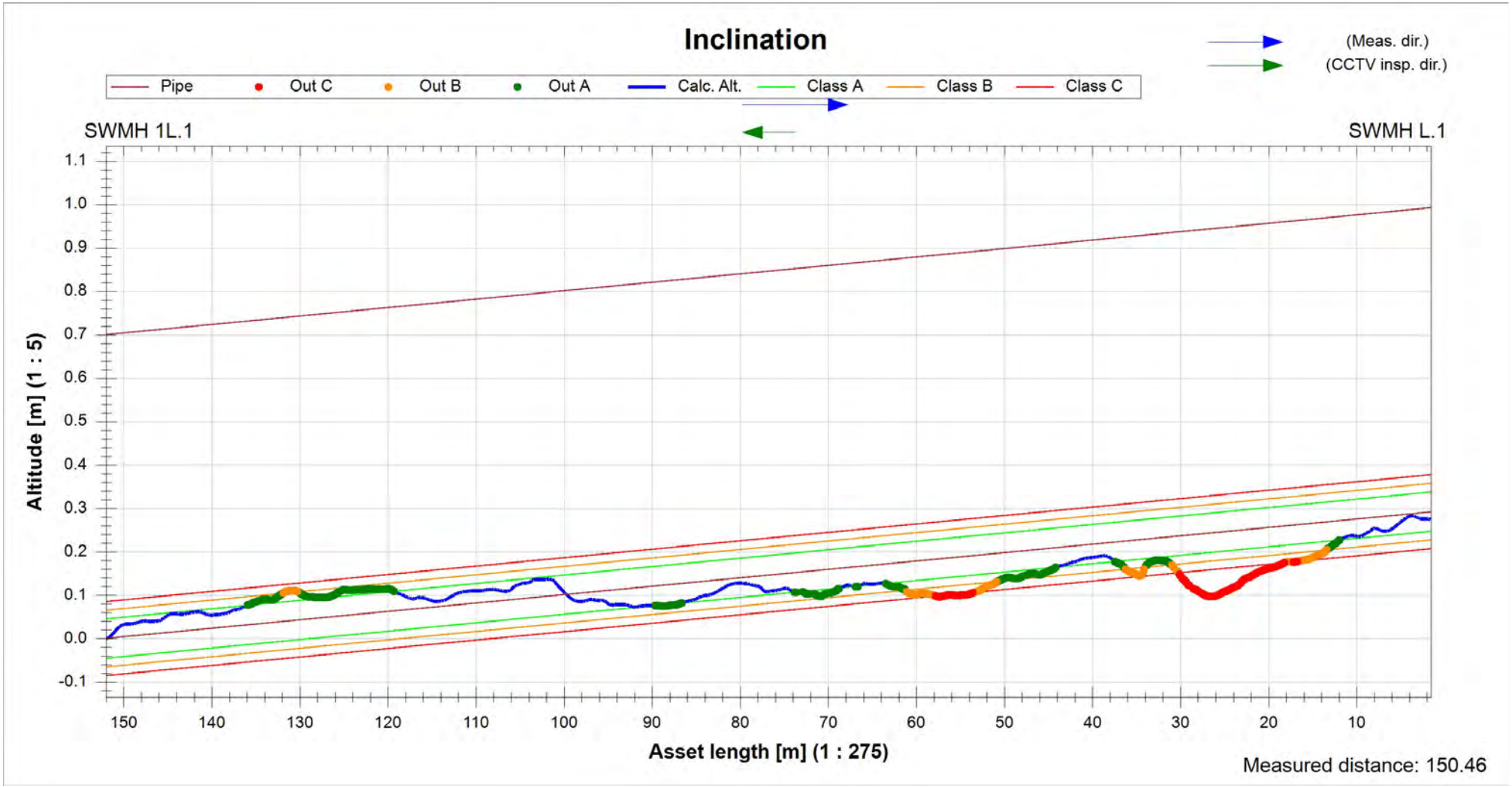
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.1 To MH 1L.1	4/04/2023	11:59 am	CST Group	Tokanui		Downstream node	150.46 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	700 mm	700 mm	SWMH 1L.1	SWMH L.1	0.000 m	0.276 m	0.183 %



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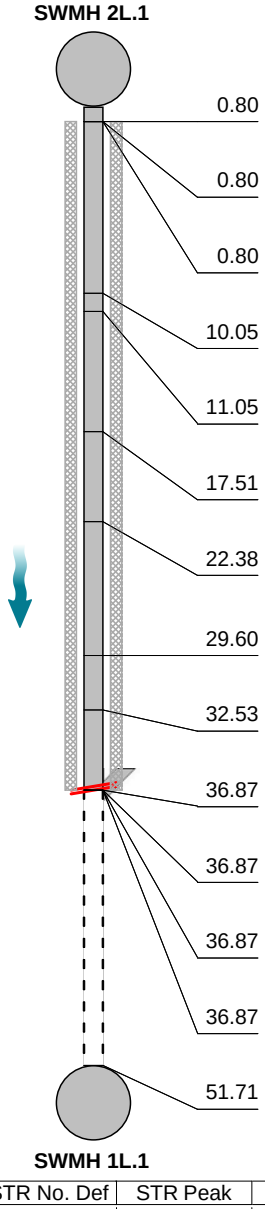
Section Inspection - 6/04/2023 - MH 1L.1 To MH 2L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
19	**MH 1L.1 To MH 2L.1**	**1**	**6/04/2023**	**1:18 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**51.71 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Upstream node**	Shape	**Circular pipe**	Pipe Status	
Surveyed Length	**36.07 m**	Dia/Height	**675 mm**	Currency	
Joint Spacing	**0.00 m**	Width	**675 mm**	Inspection	
Surface		Location	**Private property - hardstand**	Cleaning Status	

U/S Node	**SWMH 2L.1**	D/S Node	**SWMH 1L.1**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth	**2.62 m**	D/S Pipe Depth	**1.60 m**
U/S Location		D/S Location	

Comments



1:408	m +	OC	Observation	MPEG	Photo	Score
	0.80	IS	Inspection start, node reference: SWMH 2L.1	00:00:00		
	0.80	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock	00:00:57	MH 1L.1 To MH 2L.1_d455	8
	0.80 S01	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 3 o'clock to 9 o'clock, start / tiny	00:00:58	MH 1L.1 To MH 2L.1_2b5e	
	10.05	PHS	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock / Faulty lifting eye	00:03:53	MH 1L.1 To MH 2L.1_eda2	5
	11.05	GC	General comment / General condition photo	00:04:44	MH 1L.1 To MH 2L.1_a2ecf	
	17.51	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 2 o'clock to 7 o'clock / Roots protruding joint	00:06:22	MH 1L.1 To MH 2L.1_1fe5	25
	22.38	GC	General comment / General condition photo	00:08:13	MH 1L.1 To MH 2L.1_cf8b6	
	29.60	GC	General comment / General condition photo	00:09:38	MH 1L.1 To MH 2L.1_67ad	
	32.53	DES	Debris silt, small, clear diameter reduced by less than 10%	00:10:04	MH 1L.1 To MH 2L.1_9511	8
	36.87	CF	Construction feature from 9 o'clock to 12 o'clock / Lateral connection	00:11:21	MH 1L.1 To MH 2L.1_c2db	
	36.87	LPM	Lateral protruding, into the pipe by 10% to 25% of the diameter of the pipe at 10 o'clock	00:11:25	MH 1L.1 To MH 2L.1_fe83	15
	36.87 E01	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 3 o'clock to 9 o'clock, end / tiny	00:11:26		
	36.87	IA	Inspection abandoned / Unable to pass the same point	00:11:26	MH 1L.1 To MH 2L.1_3873	
	51.71		End of pipe			

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
3	25.0	1.2	45.0	3.0	2	8.0	0.4	16.0	3.0

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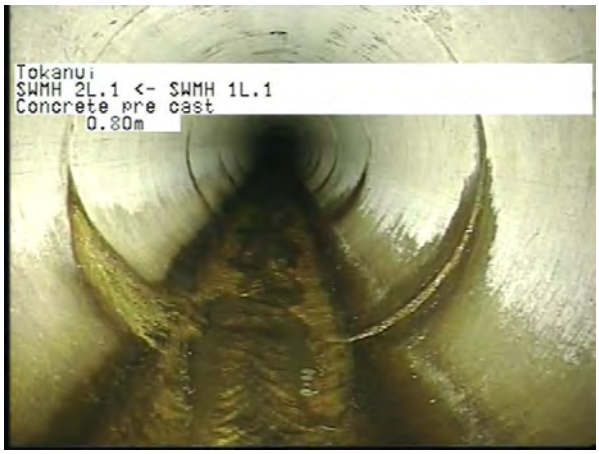
Section Pictures - 6/04/2023 - MH 1L.1 To MH 2L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 1L.1 To MH 2L.1**	**19**

MH 1L.1 To MH 2L.1_d4559110-03d0-4742-ac00-2ab37aa6b3cb_20230406_131950_784.jpg, 00:00:57, 0.80m



MH 1L.1 To MH 2L.1_2b5e9f26-976e-4358-8db4-38f0ecac8e6e_20230406_132002_561.jpg, 00:00:58, 0.80m

MH 1L.1 To MH 2L.1_eda2b90a-1d1c-4106-9b4f-754491419473_20230406_132413_569.jpg, 00:03:53, 10.05m

MH 1L.1 To MH 2L.1_a2ecf20a-1bbc-4f12-b816-bc1f694962aa_20230406_132511_680.jpg, 00:04:44, 11.05m

MH 1L.1 To MH 2L.1_1fe58d7c-9b98-4df4-9b4c-a75e3ba0233c_20230406_132700_939.jpg, 00:06:22, 17.51m

MH 1L.1 To MH 2L.1_cf8b62ef-b751-4901-9600-9a2f4e4a00fd_20230406_132903_909.jpg, 00:08:13, 22.38m

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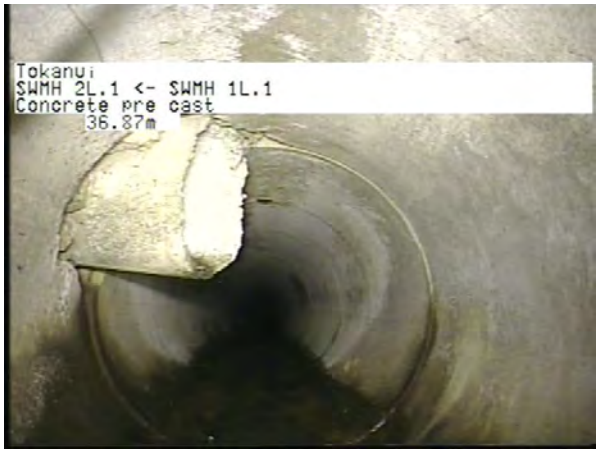
Section Pictures - 6/04/2023 - MH 1L.1 To MH 2L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 1L.1 To MH 2L.1**	**19**

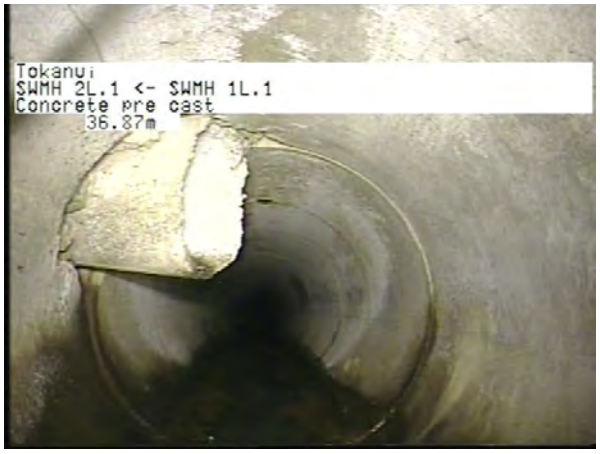
MH 1L.1 To MH 2L.1_67ad981e-242c-4808-939b-bc1a8066da8f_20230406_133036_044.jpg, 00:09:38, 29.60m

MH 1L.1 To MH 2L.1_9511c068-864d-4c84-9b94-0e42454dbf51_20230406_133107_242.jpg, 00:10:04, 32.53m

MH 1L.1 To MH 2L.1_c2db88c6-bce0-402e-beac-0c8459e6653a_20230406_133236_184.jpg, 00:11:21, 36.87m



MH 1L.1 To MH 2L.1_fe839006-cb3a-4915-99b0-470c2130e1f0_20230406_133247_716.jpg, 00:11:25, 36.87m



MH 1L.1 To MH 2L.1_38738545-3add-430d-b2eb-d071fc078472_20230406_133306_274.jpg, 00:11:26, 36.87m

Section Inclination - 6/04/2023 - MH 1L.1 To MH 2L.1

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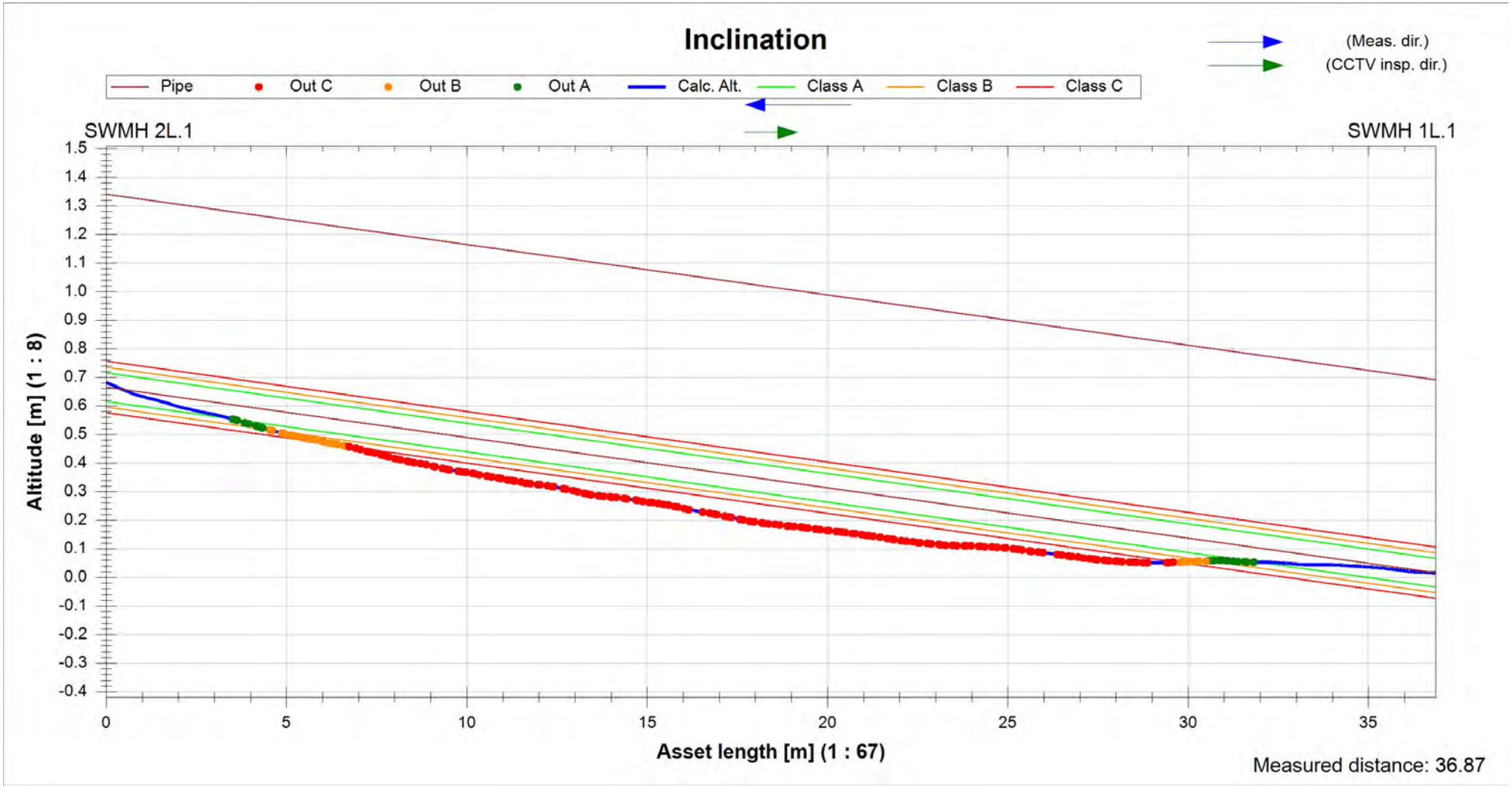
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH 1L.1 To MH 2L.1	6/04/2023	1:18 pm	CST Group	Tokanui		Upstream node	36.87 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	675 mm	675 mm	SWMH 2L.1	SWMH 1L.1	0.016 m	0.682 m	-1.806 %



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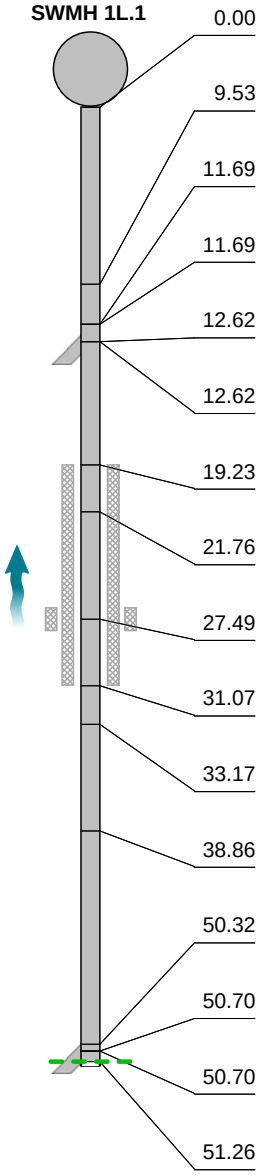
Section Inspection - 4/04/2023 - MH 1L.1 To MH 2L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
19	**MH 1L.1 To MH 2L.1**	**1**	**4/04/2023**	**12:52 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**51.71 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**51.71 m**	Dia/Height	**675 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**675 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - hardstand**	Cleaning Status	

U/S Node	**SWMH 2L.1**	D/S Node	**SWMH 1L.1**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth	**2.62 m**	D/S Pipe Depth	**1.60 m**
U/S Location		D/S Location	

Comments



1:406	m +		OC	Observation	MPEG	Photo	Score
	0.00		IS	Inspection start, node reference: SWMH 1L.1	00:00:00		
	9.53		EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock	00:02:28	MH 1L.1 To MH 2L.1_9f3b	
	11.69		SDS	Surface damage, superficial only, cement Lining spalled from steel pipe from 11 o'clock to 1 o'clock	00:02:51	MH 1L.1 To MH 2L.1_9c73	3
	11.69		CF	Construction feature from 2 o'clock to 3 o'clock / Lateral connection	00:03:25	MH 1L.1 To MH 2L.1_ddc7	
	12.62		LFL	Lateral sealing faulty, evidence exist that the connection between the lateral and the main pipe is leaking at 2 o'clock	00:03:56	MH 1L.1 To MH 2L.1_324b	25
	12.62		GC	General comment / General condition photo	00:04:10	MH 1L.1 To MH 2L.1_093e	
	19.23	S01	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 5 o'clock to 9 o'clock, start	00:05:40	MH 1L.1 To MH 2L.1_f0e8	
	21.76		GC	General comment / General condition photo	00:06:40	MH 1L.1 To MH 2L.1_f728	
	27.49	S02	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, start	00:07:51	MH 1L.1 To MH 2L.1_8777	8
	31.07	E01	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 5 o'clock to 9 o'clock, end	00:08:18		
	33.17		GC	General comment / General condition photo	00:09:13	MH 1L.1 To MH 2L.1_75cf8	
	38.86		GC	General comment / General condition photo	00:10:42	MH 1L.1 To MH 2L.1_6eeb	
	50.32		GC	General comment / General condition photo	00:13:06	MH 1L.1 To MH 2L.1_beb3	
	50.70		CF	Construction feature from 1 o'clock to 3 o'clock / Lateral connection	00:13:14	MH 1L.1 To MH 2L.1_3463	
	50.70		LPM	Lateral protruding, into the pipe by 10% to 25% of the diameter of the pipe at 2 o'clock	00:13:15		15
	51.26		IA	Inspection abandoned / Unable to pass	00:14:49		

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Section Inspection - 4/04/2023 - MH 1L.1 To MH 2L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
19	**MH 1L.1 To MH 2L.1**	**1**	**4/04/2023**	**12:52 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

1:406	m +	OC	Observation	MPEG	Photo	Score
	51.71	LFL	Lateral sealing faulty, evidence exist that the connection between the lateral and the main pipe is leaking at 3 o'clock	00:13:37	MH 1L.1 To MH 2L.1_d2d5	25
	51.71		End of pipe			

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	25.0	1.3	68.0	3.0	1	0.0	0.0	0.0	1.0

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Section Pictures - 4/04/2023 - MH 1L.1 To MH 2L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH 1L.1 To MH 2L.1**	**19**

MH 1L.1 To MH 2L.1_9f3b7746-20b1-435a-bcc7-c81218aa085a_20230404_125500_217.jpg, 00:02:28, 9.53m

MH 1L.1 To MH 2L.1_9c730f4d-16b9-4017-8de4-735069fda835_20230404_125529_719.jpg, 00:02:51, 11.69m

MH 1L.1 To MH 2L.1_ddc7b103-169d-44bc-a0cb-142f49ae2616_20230404_125634_590.jpg, 00:03:25, 11.69m

MH 1L.1 To MH 2L.1_324b1f6d-28ae-4dbf-a417-5cecea7b1012_20230404_125708_954.jpg, 00:03:56, 12.62m

MH 1L.1 To MH 2L.1_093e2240-aeb3-44ec-962a-a4ac91c675dd_20230404_125730_151.jpg, 00:04:10, 12.62m

MH 1L.1 To MH 2L.1_f0e82095-1b62-4dac-8fc4-cca58a9d07c5_20230404_125904_777.jpg, 00:05:40, 19.23m

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Section Pictures - 4/04/2023 - MH 1L.1 To MH 2L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH 1L.1 To MH 2L.1**	**19**

MH 1L.1 To MH 2L.1_f728b9c7-2735-4eb4-8496-00f25ba1a8e7_20230404_130019_167.jpg, 00:06:40, 21.76m

MH 1L.1 To MH 2L.1_87774ce4-2d50-4951-b680-e12bfc90df6a_20230404_130137_193.jpg, 00:07:51, 27.49m

MH 1L.1 To MH 2L.1_75cf8c6b-2962-43c8-a939-98187d64e050_20230404_130311_774.jpg, 00:09:13, 33.17m

MH 1L.1 To MH 2L.1_6eebb0b5-4458-4d8c-be4b-18553b91225f_20230404_130447_801.jpg, 00:10:42, 38.86m

MH 1L.1 To MH 2L.1_beb392cb-1e80-43ff-8a38-c3d941ea7b3c_20230404_130722_377.jpg, 00:13:06, 50.32m

MH 1L.1 To MH 2L.1_3463942b-ab0a-4358-b2d3-99ffe2bc20f5_20230404_130744_889.jpg, 00:13:14, 50.70m

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Section Pictures - 4/04/2023 - MH 1L.1 To MH 2L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**4/04/2023**	**MH 1L.1 To MH 2L.1**	**19**

MH 1L.1 To MH 2L.1_d2d5e66b-6c21-4dc5-809b-275de36f7b36_20230404_130832_089.jpg, 00:13:37, 51.71m

MH 1L.1 To MH 2L.1_b4f8d65b-9a35-42c1-bc8c-fb426e3f6133_20230404_130841_954.jpg, 00:13:37, 51.71m

Section Inclination - 4/04/2023 - MH 1L.1 To MH 2L.1

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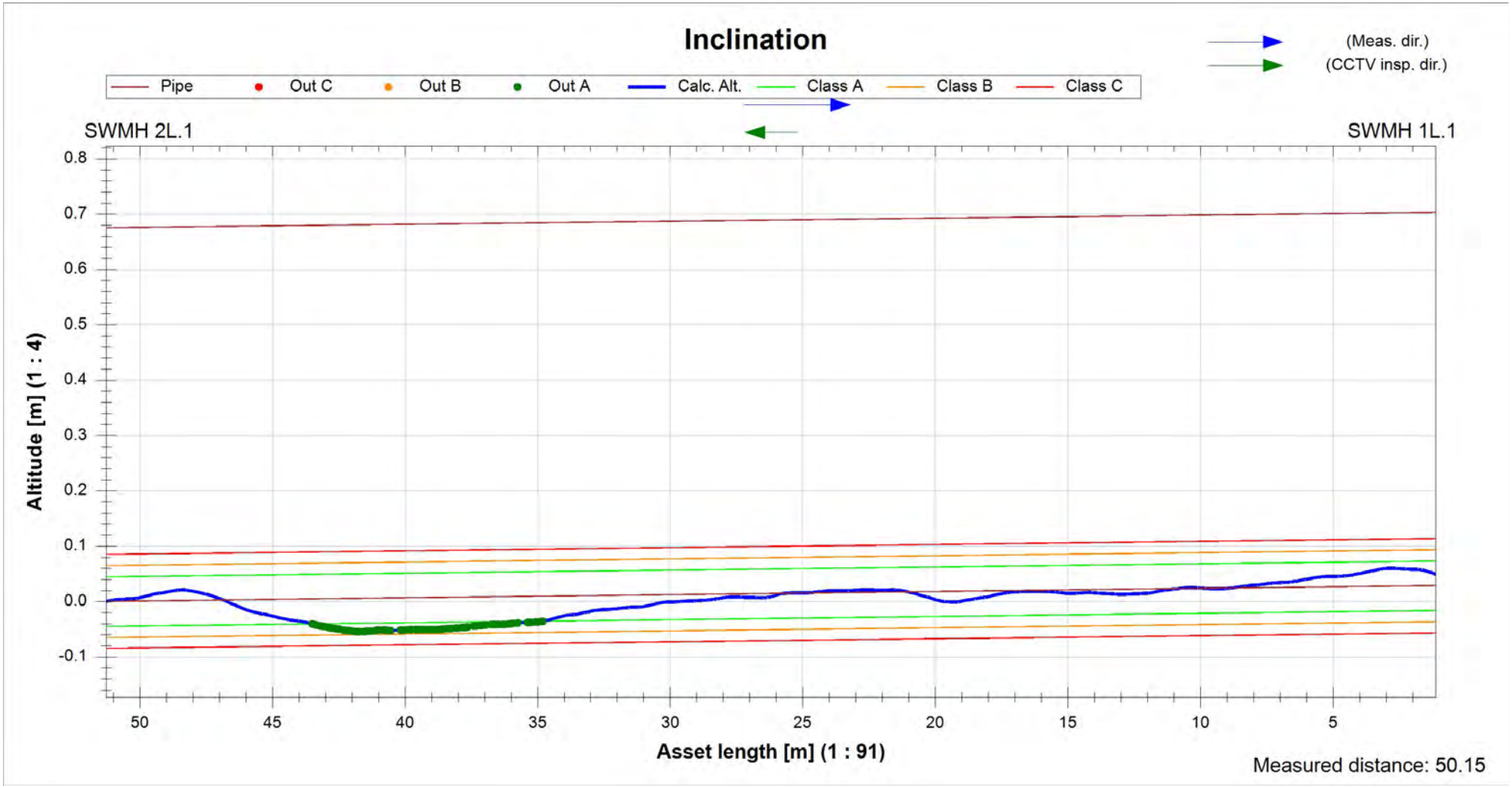
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH 1L.1 To MH 2L.1	4/04/2023	12:52 pm	CST Group	Tokanui		Downstream node	50.15 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	675 mm	675 mm	SWMH 2L.1	SWMH 1L.1	0.000 m	0.049 m	0.098 %



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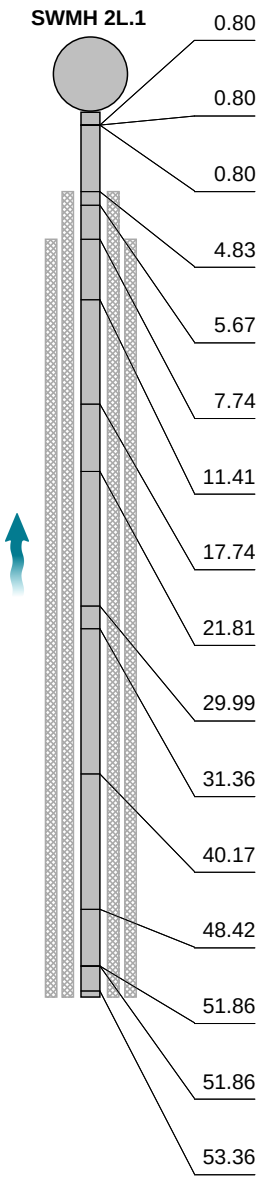
Section Inspection - 6/04/2023 - MH 2L.1 To MH 3L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
20	**MH 2L.1 To MH 3L.1**	**1**	**6/04/2023**	**11:56 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**146.38 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**145.58 m**	Dia/Height	**675 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**675 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - hardstand**	Cleaning Status	

U/S Node	**SWMH 3L.1**	D/S Node	**SWMH 2L.1**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth	**3.40 m**	D/S Pipe Depth	**2.62 m**
U/S Location		D/S Location	

Comments



1:459	m +	OC	Observation	MPEG	Photo	Score
	0.80	IS	Inspection start, node reference: SWMH 2L.1	00:00:00		
	0.80	CF	Construction feature at 12 o'clock / Lifting eye	00:00:18	MH 2L.1 To MH 3L.1_b20d	
	0.80	PHS	Pipe holed, the hole has been repaired at 12 o'clock	00:00:19	MH 2L.1 To MH 3L.1_f3e5	5
	4.83 S01	PHS	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock, start / Lifting eye	00:01:57	MH 2L.1 To MH 3L.1_9af4	
	5.67	JFS	Joint faulty, minor cracking or spalling from 7 o'clock to 9 o'clock	00:02:41	MH 2L.1 To MH 3L.1_e35f	1
	7.74 S02	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, start	00:03:17	MH 2L.1 To MH 3L.1_ad2d	
	11.41	GC	General comment / General condition photo	00:04:30	MH 2L.1 To MH 3L.1_c316	
	17.74	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 7 o'clock to 9 o'clock	00:06:12	MH 2L.1 To MH 3L.1_25a9	
	21.81	GC	General comment / General condition photo	00:07:18	MH 2L.1 To MH 3L.1_e31b	
	29.99	PHM	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired from 11 o'clock to 1 o'clock	00:09:52	MH 2L.1 To MH 3L.1_eba0	25
	31.36	GC	General comment / General condition photo	00:11:03	MH 2L.1 To MH 3L.1_e559	
	40.17	GC	General comment / General condition photo	00:13:47	MH 2L.1 To MH 3L.1_ca35	
	48.42	GC	General comment / General condition photo	00:15:29	MH 2L.1 To MH 3L.1_e554	
	51.86	RIS	Root intrusion, roots restrict flow by 10% or less of full flow from 5 o'clock to 7 o'clock	00:16:04	MH 2L.1 To MH 3L.1_14d3	5
	51.86	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Roots protruding joint	00:16:05	MH 2L.1 To MH 3L.1_a3cc	25
	53.36	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 2 o'clock to 7 o'clock / Roots protruding joint	00:17:02	MH 2L.1 To MH 3L.1_da89	25

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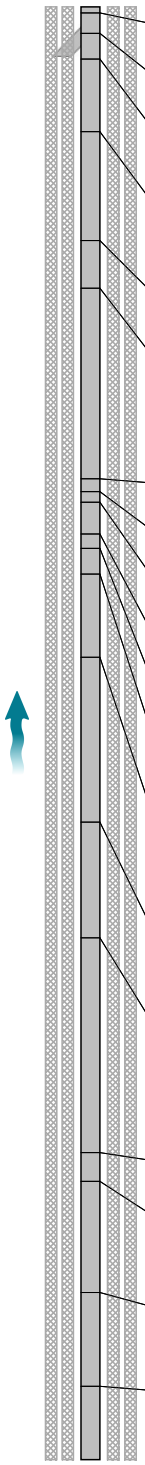
Section Inspection - 6/04/2023 - MH 2L.1 To MH 3L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
20	**MH 2L.1 To MH 3L.1**	**1**	**6/04/2023**	**11:56 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			



1:459	m +	OC	Observation	MPEG	Photo	Score
	54.13	CF	Construction feature from 12 o'clock to 3 o'clock / Lateral connection	00:17:12	MH 2L.1 To MH 3L.1_6d6e	
	55.38	LFM	Lateral sealing faulty, gaps between the lateral pipe and the main pipe that appear open at 3 o'clock	00:17:39	MH 2L.1 To MH 3L.1_f2f34	10
	56.94	JFM	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 1 o'clock to 3 o'clock	00:18:08	MH 2L.1 To MH 3L.1_61a6	10
	61.32	GC	General comment / General condition photo	00:19:54	MH 2L.1 To MH 3L.1_0e2c	
	67.94	PHM	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired at 12 o'clock	00:21:48	MH 2L.1 To MH 3L.1_03b9	25
	70.86	GC	General comment / General condition photo	00:22:57	MH 2L.1 To MH 3L.1_1368	
	82.42	JFM	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 10 o'clock to 12 o'clock	00:25:16	MH 2L.1 To MH 3L.1_076b	10
	83.19	PHM	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired from 11 o'clock to 1 o'clock	00:25:35	MH 2L.1 To MH 3L.1_cfd60	25
	83.82	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 12 o'clock to 10 o'clock	00:26:38	MH 2L.1 To MH 3L.1_13f3	25
	85.74	PHM	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired at 12 o'clock	00:26:51	MH 2L.1 To MH 3L.1_7276	25
	86.65	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 1 o'clock to 6 o'clock	00:27:08	MH 2L.1 To MH 3L.1_8aa1	
	88.20	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 1 o'clock to 8 o'clock	00:27:30	MH 2L.1 To MH 3L.1_bd96	
	93.24	GC	General comment / General condition photo	00:29:01	MH 2L.1 To MH 3L.1_e1d5	
	103.23	GC	General comment / General condition photo	00:31:26	MH 2L.1 To MH 3L.1_155a	
	110.27	GC	General comment / General condition photo	00:32:44	MH 2L.1 To MH 3L.1_8e5a	
	123.31	DES	Debris silt, small, clear diameter reduced by less than 10%	00:35:20	MH 2L.1 To MH 3L.1_94e4	8
	125.07	GC	General comment / General condition photo	00:35:46	MH 2L.1 To MH 3L.1_b04a	
	131.80	GC	General comment / General condition photo	00:37:05	MH 2L.1 To MH 3L.1_0fb4	
	137.48	JFS	Joint faulty, minor cracking or spalling at 3 o'clock	00:38:02	MH 2L.1 To MH 3L.1_1913	1

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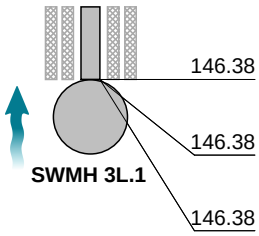
Section Inspection - 6/04/2023 - MH 2L.1 To MH 3L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
20	**MH 2L.1 To MH 3L.1**	**1**	**6/04/2023**	**11:56 am**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			



1:459	m +	OC	Observation	MPEG	Photo	Score
	146.38	E01 PHS	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock, end / Lifting eye	00:40:53		5
	146.38	E02 DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 4 o'clock to 8 o'clock, end	00:40:54		8
	146.38	IE	Inspection ends, node reference: SWMH 3L.1	00:40:55		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
14	55.0	1.5	217.0	5.0	6	16.0	0.1	21.0	4.0

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Section Pictures - 6/04/2023 - MH 2L.1 To MH 3L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 2L.1 To MH 3L.1**	**20**

MH 2L.1 To MH 3L.1_b20df469-94c0-402b-8b8c-79a977d35bfc_20230406_115653_807.jpg, 00:00:18, 0.80m

MH 2L.1 To MH 3L.1_f3e577a9-28ba-4560-b89e-0da46a5d7ccd_20230406_115700_124.jpg, 00:00:19, 0.80m

MH 2L.1 To MH 3L.1_9af431fd-b2b1-4d42-a45b-882d6635cdf3_20230406_115851_257.jpg, 00:01:57, 4.83m

MH 2L.1 To MH 3L.1_e35f5190-348a-4a58-bd9f-28573eeee306_20230406_115942_547.jpg, 00:02:41, 5.67m

MH 2L.1 To MH 3L.1_ad2d04a8-5c22-4e96-a7b5-048c418ce6a8_20230406_120026_135.jpg, 00:03:17, 7.74m

MH 2L.1 To MH 3L.1_c3161c03-8bab-4901-adc5-2b3b1994c4df_20230406_120147_401.jpg, 00:04:30, 11.41m

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Section Pictures - 6/04/2023 - MH 2L.1 To MH 3L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 2L.1 To MH 3L.1**	**20**

MH 2L.1 To MH 3L.1_25a9d203-42bf-4094-b32a-dc82147c3bdd_20230406_120335_143.jpg, 00:06:12, 17.74m

MH 2L.1 To MH 3L.1_e31beeec-a341-4644-9dc6-b9bd917d6d67_20230406_120447_477.jpg, 00:07:18, 21.81m

MH 2L.1 To MH 3L.1_eba0790a-3924-4b26-907a-3cd8429df09d_20230406_120730_087.jpg, 00:09:52, 29.99m

MH 2L.1 To MH 3L.1_3ef362ac-0bf4-4888-a7d1-e53af14c699f_20230406_120742_982.jpg, 00:09:52, 29.99m

MH 2L.1 To MH 3L.1_e5591110-9edc-4d18-84b2-f6409b4e1367_20230406_120848_244.jpg, 00:11:03, 31.36m

MH 2L.1 To MH 3L.1_ca357b35-9e6c-4f01-9f87-4f16c5b942b2_20230406_121137_810.jpg, 00:13:47, 40.17m

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Section Pictures - 6/04/2023 - MH 2L.1 To MH 3L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 2L.1 To MH 3L.1**	**20**

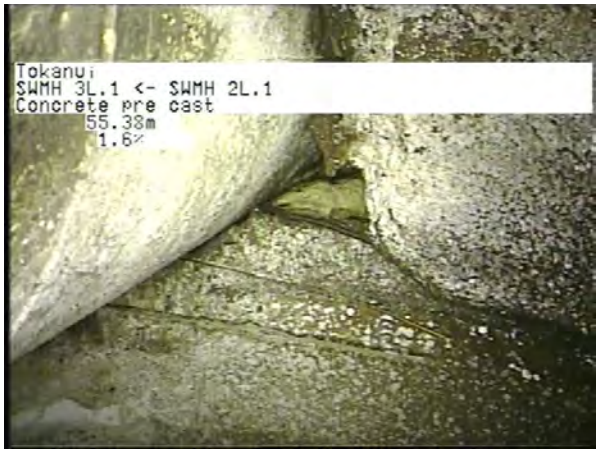
MH 2L.1 To MH 3L.1_e554e0b9-0110-479f-99d1-f1319bec53e9_20230406_121327_666.jpg, 00:15:29, 48.42m

MH 2L.1 To MH 3L.1_14d392c3-0f7a-4779-b954-347071fcc349_20230406_121422_414.jpg, 00:16:04, 51.86m

MH 2L.1 To MH 3L.1_a3cc5103-f815-4127-be36-5974781bb71f_20230406_121434_603.jpg, 00:16:05, 51.86m

MH 2L.1 To MH 3L.1_da89f198-a029-4dd7-9e50-f13d7dbff8b4_20230406_121540_689.jpg, 00:17:02, 53.36m

MH 2L.1 To MH 3L.1_6d6e23aa-cbe9-48e4-a1f1-a2cdcafd09a1_20230406_121559_281.jpg, 00:17:12, 54.13m



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Section Pictures - 6/04/2023 - MH 2L.1 To MH 3L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 2L.1 To MH 3L.1**	**20**

MH 2L.1 To MH 3L.1_61a6279a-f437-4444-93b9-dfcccaec0b7e_20230406_121716_659.jpg, 00:18:08, 56.94m

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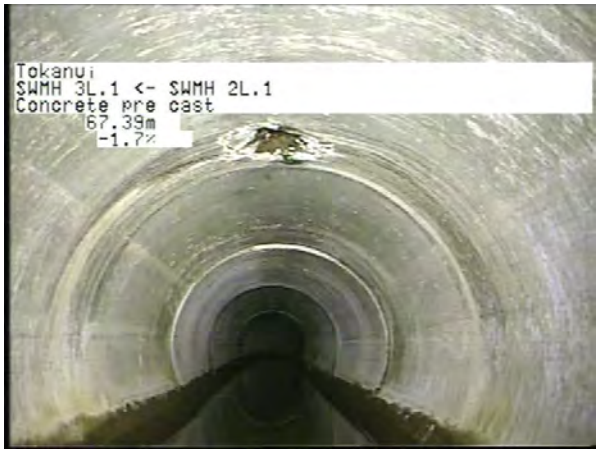
MH 2L.1 To MH 3L.1_03b9ea51-5a63-4fa5-8fff-331a83bb6ca2_20230406_122114_253.jpg, 00:21:48, 67.94m



MH 2L.1 To MH 3L.1_f8a626dc-c15d-4079-b907-47acf5c79cff_20230406_122127_184.jpg, 00:21:48, 67.94m

MH 2L.1 To MH 3L.1_136818a2-df21-4a67-ac6d-4a4953e24792_20230406_122231_453.jpg, 00:22:57, 70.86m

MH 2L.1 To MH 3L.1_076b8fb5-4238-4183-b4a1-5861ccafb161_20230406_122456_980.jpg, 00:25:16, 82.42m

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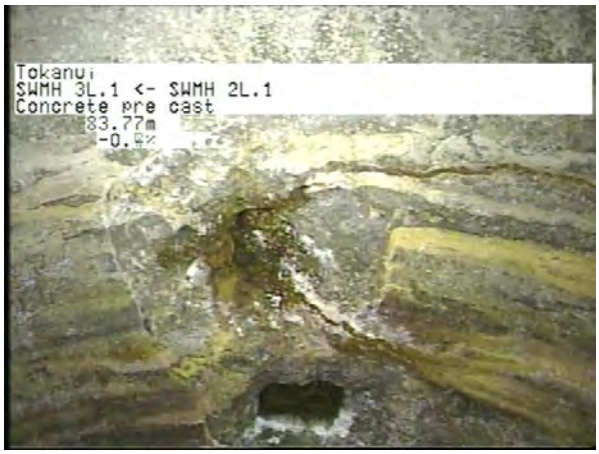
Section Pictures - 6/04/2023 - MH 2L.1 To MH 3L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 2L.1 To MH 3L.1**	**20**

MH 2L.1 To MH 3L.1_cfd606d4-2baa-4957-9a26-e42d5893397a_20230406_122520_992.jpg, 00:25:35, 83.19m



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MH 2L.1 To MH 3L.1_13f3426a-5d68-482f-85e6-5cdaf74485b9_20230406_122629_068.jpg, 00:26:38, 83.82m

MH 2L.1 To MH 3L.1_72767a2a-11d7-4fb3-a775-4c123d77f17e_20230406_122646_970.jpg, 00:26:51, 85.74m

MH 2L.1 To MH 3L.1_8aa14d2c-8d03-4b5a-885b-c75f949e1c53_20230406_122710_190.jpg, 00:27:08, 86.65m

MH 2L.1 To MH 3L.1_bd9683a4-d2d6-45bd-a6f7-64a7ab74fe45_20230406_122742_049.jpg, 00:27:30, 88.20m

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Section Pictures - 6/04/2023 - MH 2L.1 To MH 3L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 2L.1 To MH 3L.1**	**20**

MH 2L.1 To MH 3L.1_e1d52d70-a10c-49b9-82e1-83502db2b1e9_20230406_122921_487.jpg, 00:29:01, 93.24m

MH 2L.1 To MH 3L.1_155a9132-91b5-4f1b-97ed-c7b638091c30_20230406_123152_268.jpg, 00:31:26, 103.23m

MH 2L.1 To MH 3L.1_8e5a35ef-e81f-4f5f-8d3e-c46288c65d89_20230406_123319_889.jpg, 00:32:44, 110.27m

MH 2L.1 To MH 3L.1_94e435f8-c298-4f98-a11a-c86148ee5e35_20230406_123602_149.jpg, 00:35:20, 123.31m

MH 2L.1 To MH 3L.1_b04a8d02-70fb-47fd-ac87-52fbed3a7acc_20230406_123636_380.jpg, 00:35:46, 125.07m

MH 2L.1 To MH 3L.1_0fb4beae-e805-4480-b9f5-c4db597143a4_20230406_123805_012.jpg, 00:37:05, 131.80m

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Section Pictures - 6/04/2023 - MH 2L.1 To MH 3L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 2L.1 To MH 3L.1**	**20**

MH 2L.1 To MH 3L.1_1913bf69-b4da-4470-9a33-11dee16a84c6_20230406_123908_637.jpg, 00:38:02, 137.48m

Section Inclination - 6/04/2023 - MH 2L.1 To MH 3L.1

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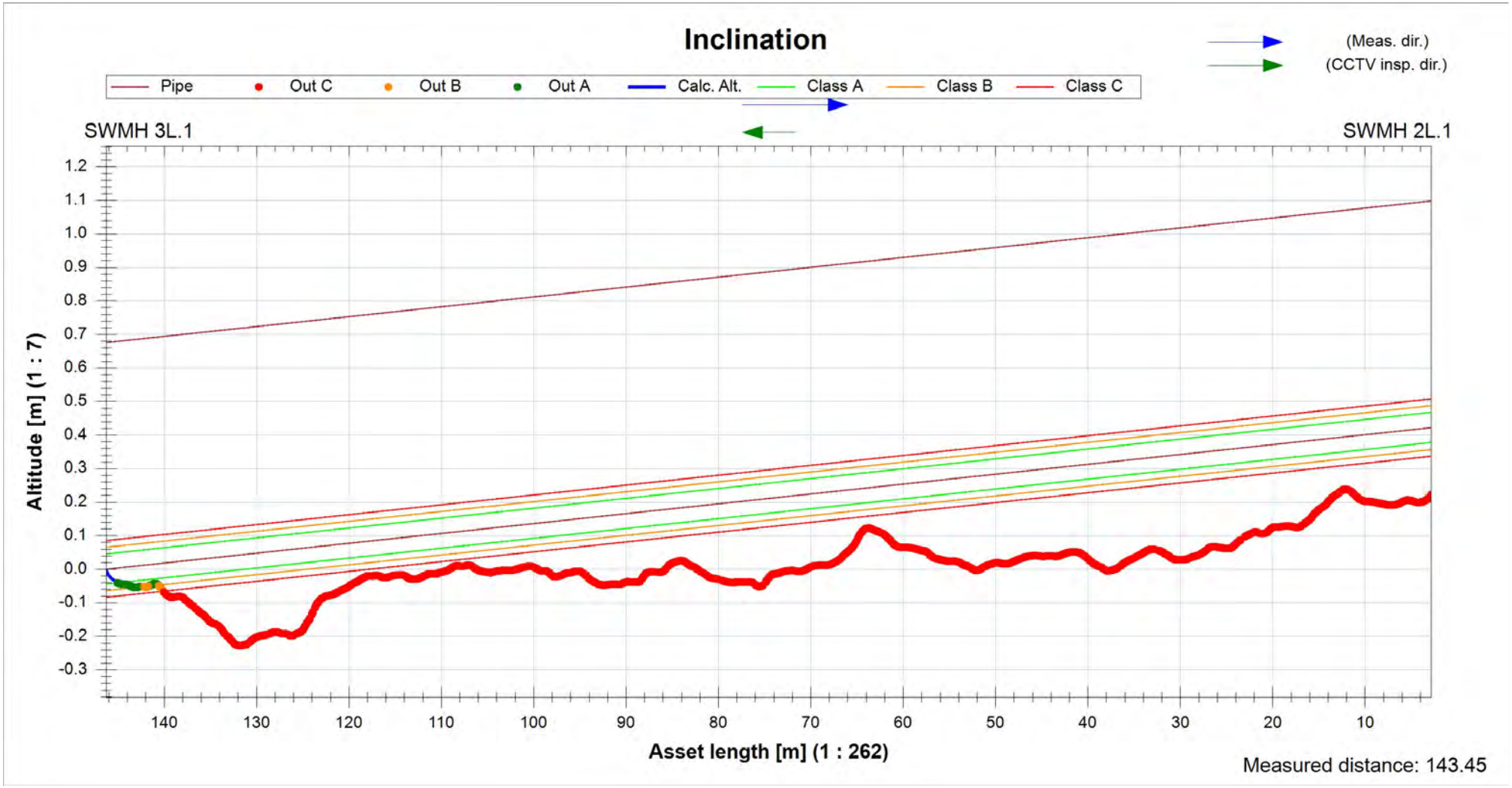
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH 2L.1 To MH 3L.1	6/04/2023	11:56 am	CST Group	Tokanui		Downstream node	143.45 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	675 mm	675 mm	SWMH 3L.1	SWMH 2L.1	0.000 m	0.221 m	0.154 %



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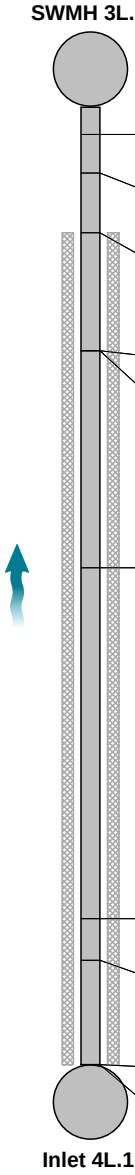
Section Inspection - 6/04/2023 - MH 3L.1 To Inlet 4L.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
21	**MH 3L.1 To Inlet 4L.1**	**1**	**6/04/2023**	**12:44 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**27.62 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**26.82 m**	Dia/Height	**675 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**675 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**Inlet 4L.1**	D/S Node	**SWMH 3L.1**
U/S Node Type	**Stormwater inlet**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth		D/S Pipe Depth	**3.45 m**
U/S Location		D/S Location	

Comments



1:218	m +	OC	Observation	MPEG	Photo	Score
	0.80	IS	Inspection start, node reference: SWMH 3L.1	00:00:00		
	1.91	PHS	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock / Lifting eye faulty	00:00:56	MH 3L.1 To Outlet 4L.1_1aba	5
	3.62	S01 DES	Debris silt, small, clear diameter reduced by less than 10%, start	00:01:16	MH 3L.1 To Outlet 4L.1_8e00	
	7.02	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 12 o'clock to 11 o'clock	00:01:54	MH 3L.1 To Outlet 4L.1_e416	25
	7.02	EDS	Encrustation deposits, clear diameter is reduced by less than 10% from 6 o'clock to 11 o'clock	00:01:58	MH 3L.1 To Outlet 4L.1_8a03	
	13.28	GC	General comment / General condition photo	00:04:12	MH 3L.1 To Outlet 4L.1_034c	
	23.40	PHM	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired from 11 o'clock to 1 o'clock	00:06:24	MH 3L.1 To Outlet 4L.1_87e7	25
	24.60	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 12 o'clock to 11 o'clock	00:07:33	MH 3L.1 To Outlet 4L.1_11e4	25
	27.62	E01 DES	Debris silt, small, clear diameter reduced by less than 10%, end	00:08:00		8
	27.62	IE	Inspection ends, node reference: Inlet 4L.1	00:08:01		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	25.0	3.0	80.0	4.0	2	8.0	0.3	8.0	3.0

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Section Pictures - 6/04/2023 - MH 3L.1 To Inlet 4L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 3L.1 To Inlet 4L.1**	**21**

MH 3L.1 To Outlet
4L.1_1abac5b6-8670-4230-94b7-bd4fef31e91e_20230406_124535_589.jpg, 00:00:56, 1.91m

MH 3L.1 To Outlet
4L.1_8e005ace-6982-4f74-a075-611227db762a_20230406_124600_011.jpg, 00:01:16, 3.62m

MH 3L.1 To Outlet
4L.1_e4161afd-e948-44e2-a649-42ff507c516a_20230406_124650_316.jpg, 00:01:54, 7.02m

MH 3L.1 To Outlet
4L.1_8a036046-8af3-45b3-84a4-b02f39ee56aa_20230406_124659_854.jpg, 00:01:58, 7.02m

MH 3L.1 To Outlet
4L.1_034cb46f-8662-41f2-97a4-684fef888fe2_20230406_124921_082.jpg, 00:04:12, 13.28m

MH 3L.1 To Outlet
4L.1_87e76c73-d798-439d-8f50-d9681a4bc55e_20230406_125138_342.jpg, 00:06:24, 23.40m

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Section Pictures - 6/04/2023 - MH 3L.1 To Inlet 4L.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 3L.1 To Inlet 4L.1**	**21**

MH 3L.1 To Outlet
4L.1_11e4b69d-76b0-48b6-869b-82ee541d92a4_20230406_125256_863.jpg, 00:07:33, 24.60m

Section Inclination - 6/04/2023 - MH 3L.1 To Inlet

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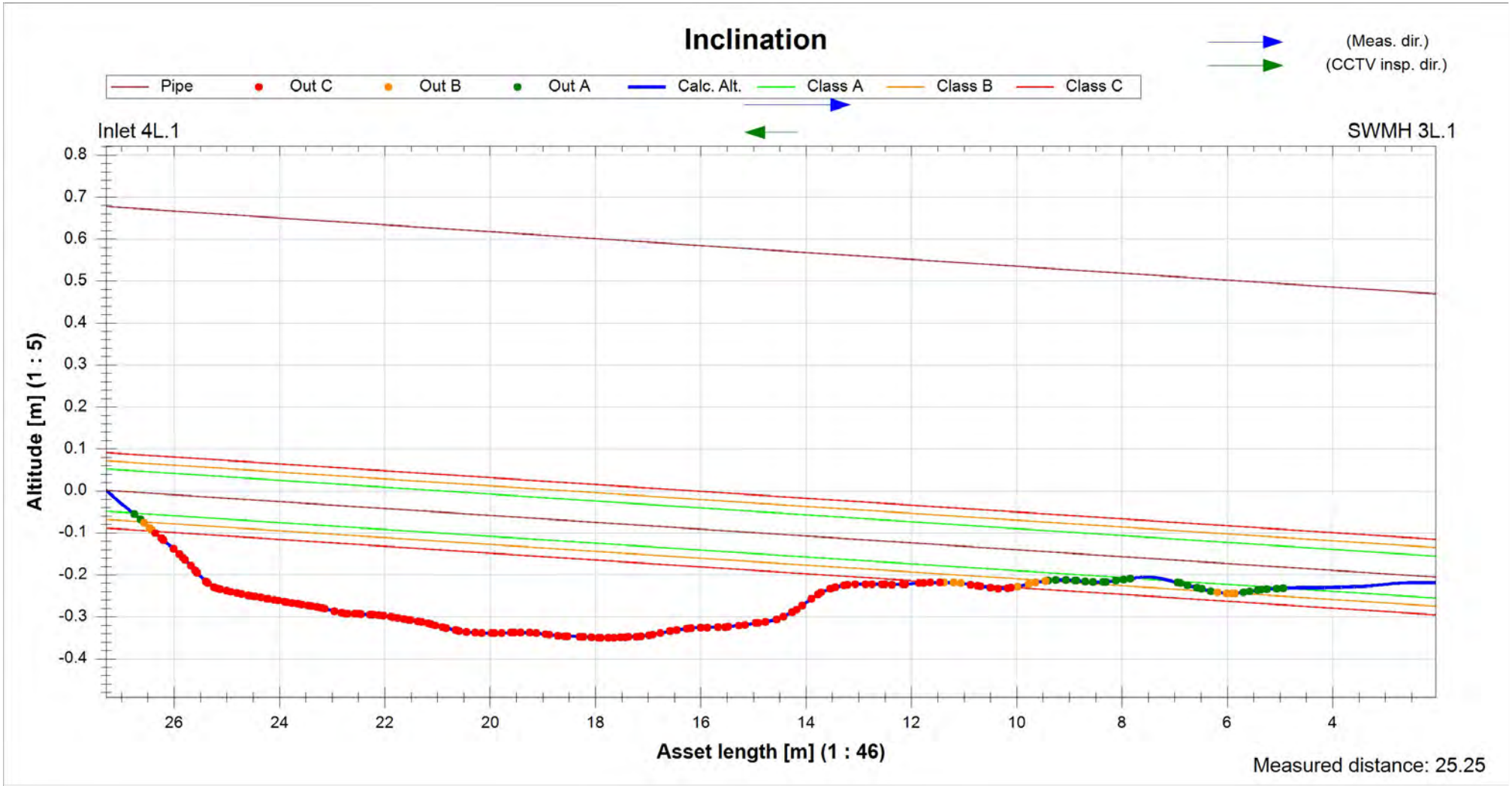
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH 3L.1 To Inlet 4L.1	6/04/2023	12:44 pm	CST Group	Tokanui		Downstream node	25.25 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	675 mm	675 mm	Inlet 4L.1	SWMH 3L.1	0.002 m	-0.219 m	-0.871 %



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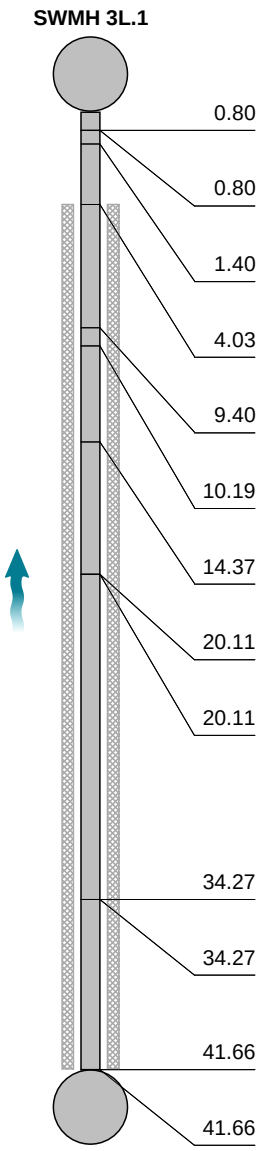
Section Inspection - 6/04/2023 - MH 3L.1 To 4L.1A Inlet

Section No.	Asset No.	Contract Number	Date	Time	Weather
30	**MH 3L.1 To 4L.1A Inlet**	**1**	**6/04/2023**	**2:23 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**41.66 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**40.86 m**	Dia/Height	**675 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**675 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**Inlet 4L.1A**	D/S Node	**SWMH 3L.1**
U/S Node Type	**Stormwater inlet**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth		D/S Pipe Depth	**3.45 m**
U/S Location		D/S Location	

Comments



1:329	m +	OC	Observation	MPEG	Photo	Score
	0.80	IS	Inspection start, node reference: SWMH 3L.1	00:00:00		
	0.80	JFS	Joint faulty, minor cracking or spalling at 11 o'clock	00:00:36	MH 3L.1 To 4L.1A Inlet_6e2fd	1
	1.40	PHS	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock	00:01:01	MH 3L.1 To 4L.1A Inlet_ff668	5
	4.03 S01	PHS	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock, start / Faulty lifting eye	00:01:36	MH 3L.1 To 4L.1A Inlet_996a	
	9.40	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 6 o'clock to 9 o'clock / Rubber seal out	00:02:26	MH 3L.1 To 4L.1A Inlet_47ae	25
	10.19	GC	General comment / General condition photo	00:03:16	MH 3L.1 To 4L.1A Inlet_27d7	
	14.37	OTM	Obstruction temporary, the clear diameter of the pipeline is reduced by 10% to 25% from 5 o'clock to 7 o'clock	00:03:51	MH 3L.1 To 4L.1A Inlet_0a5fc	20
	20.11	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 8 o'clock to 10 o'clock	00:05:22	MH 3L.1 To 4L.1A Inlet_87e4	25
	20.11	GC	General comment / General condition photo	00:05:44	MH 3L.1 To 4L.1A Inlet_4b4b	
	34.27	JDM	Joint displaced, 10% to 25% of the pipe diameter	00:08:17	MH 3L.1 To 4L.1A Inlet_0f017	15
	34.27	JOS	Joint open, displacement is less than 20mm	00:08:19	MH 3L.1 To 4L.1A Inlet_daa2	
	41.66 E01	PHS	Pipe holed, the hole has been repaired from 11 o'clock to 1 o'clock, end / Faulty lifting eye	00:10:03		5
	41.66	IE	Inspection ends, node reference: Inlet 4L.1A	00:10:04		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
7	30.0	1.9	76.0	4.0	1	20.0	0.5	20.0	4.0

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Section Pictures - 6/04/2023 - MH 3L.1 To 4L.1A Inlet

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 3L.1 To 4L.1A Inlet**	**30**

MH 3L.1 To 4L.1A
Inlet_6e2fd88e-489a-4334-925a-5ea1c237ff7c_20230406_142434_799.jpg, 00:00:36, 0.80m

MH 3L.1 To 4L.1A
Inlet_ff668f9b-7c2e-42c4-b980-c91699fd68e9_20230406_142518_512.jpg, 00:01:01, 1.40m

MH 3L.1 To 4L.1A
Inlet_996a0ca0-0fb5-4ab1-8c77-3beade6c34b4_20230406_142602_793.jpg, 00:01:36, 4.03m

MH 3L.1 To 4L.1A
Inlet_47aebede-4187-4981-a74e-e369e4ee9c31_20230406_142704_666.jpg, 00:02:26, 9.40m

MH 3L.1 To 4L.1A
Inlet_27d76b44-1329-4185-a445-6a22b89150e4_20230406_142804_766.jpg, 00:03:16, 10.19m

MH 3L.1 To 4L.1A
Inlet_0a5fc193-8175-4f24-b7fc-62fa2161c2dc_20230406_142911_003.jpg, 00:03:51, 14.37m

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Section Pictures - 6/04/2023 - MH 3L.1 To 4L.1A Inlet

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH 3L.1 To 4L.1A Inlet**	**30**

MH 3L.1 To 4L.1A
Inlet_87e499ee-67c2-4bf4-9c4e-d0c141d2ad9f_20230406_143037_117.jpg, 00:05:22, 20.11m

MH 3L.1 To 4L.1A
Inlet_4b4bd8bc-6f4a-4216-86dd-b5b0e69d989f_20230406_143111_974.jpg, 00:05:44, 20.11m

MH 3L.1 To 4L.1A
Inlet_0f017929-4dd3-4872-8303-7d38d6cd798e_20230406_143407_948.jpg, 00:08:17, 34.27m

MH 3L.1 To 4L.1A
Inlet_daa24287-8527-4576-af81-8c6700fd4912_20230406_143419_252.jpg, 00:08:19, 34.27m

Section Inclination - 6/04/2023 - MH 3L.1 To 4L.1A

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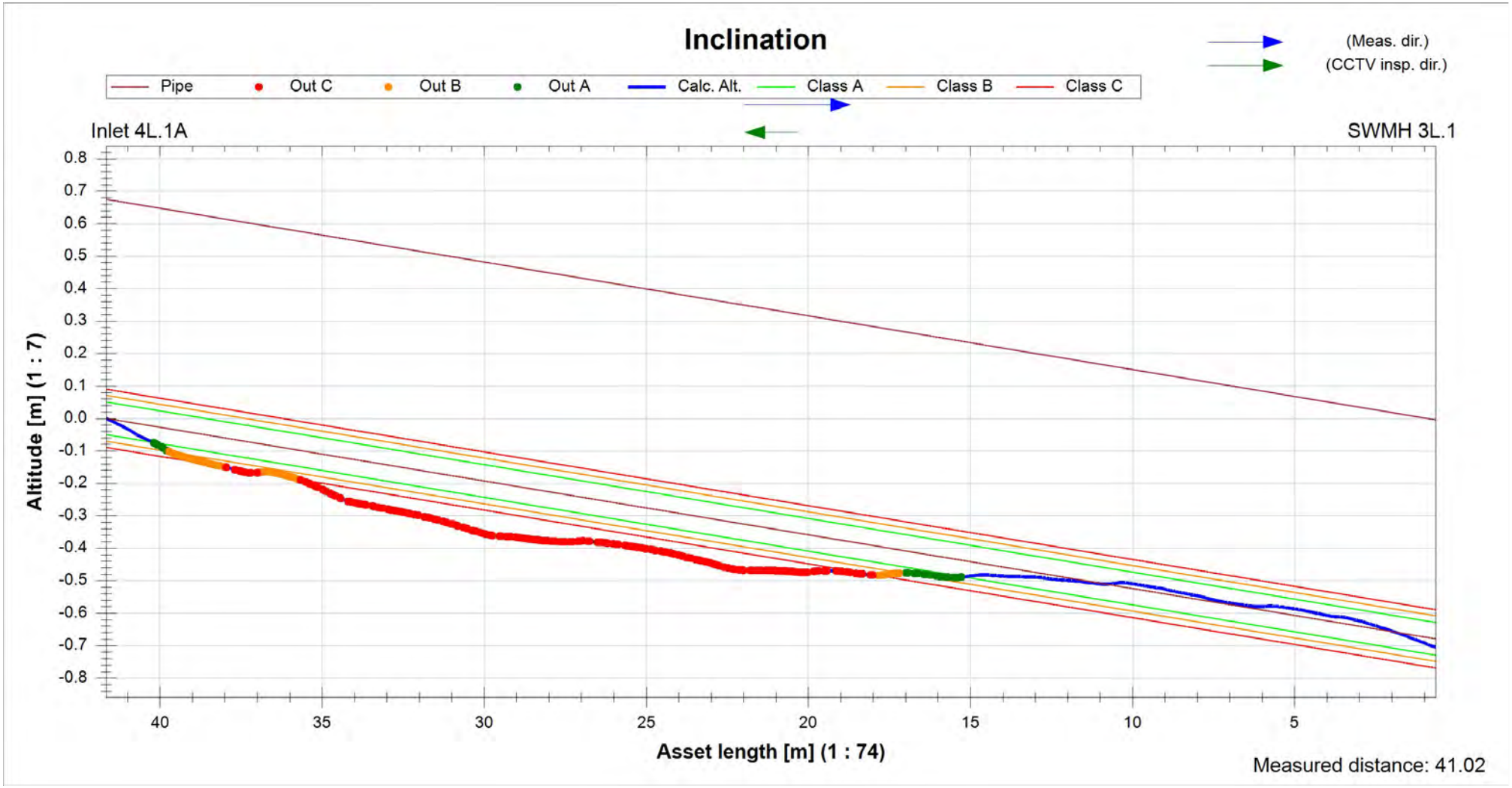
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH 3L.1 To 4L.1A Inlet	6/04/2023	2:23 pm	CST Group	Tokanui		Downstream node	41.02 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	675 mm	675 mm	Inlet 4L.1A	SWMH 3L.1	0.000 m	-0.704 m	-1.717 %



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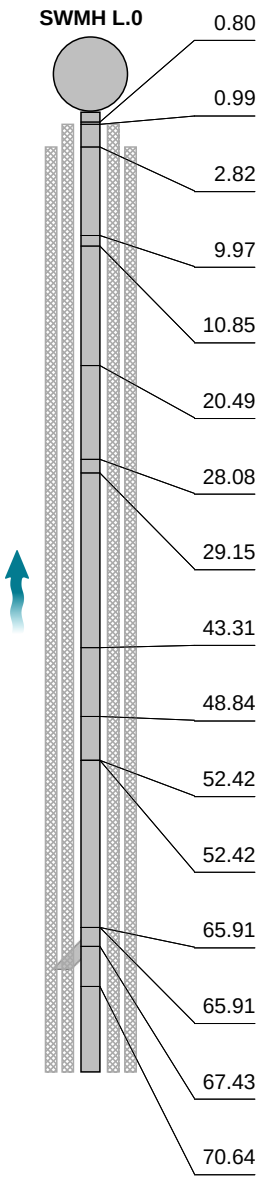
Section Inspection - 6/04/2023 - MH L.0 To MH N.0

Section No.	Asset No.	Contract Number	Date	Time	Weather
31	**MH L.0 To MH N.0**	**1**	**6/04/2023**	**3:24 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**110.52 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**109.72 m**	Dia/Height	**800 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**800 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - hardstand**	Cleaning Status	

U/S Node	**SWMH N.0**	D/S Node	**SWMH L.0**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater miscellaneous**
U/S Pipe Depth		D/S Pipe Depth	**2.24 m**
U/S Location		D/S Location	

Comments



1:611	m +	OC	Observation	MPEG	Photo	Score
	0.80	IS	Inspection start, node reference: SWMH L.0	00:00:00		
	0.99	S01 PHS	Pipe holed, the hole has been repaired at 12 o'clock, start / Lifting eyes faulty, seeping water	00:00:25	MH L.0 To MH N.0_d86cd	
	2.82	S02 DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, start	00:01:39	MH L.0 To MH N.0_bcd2d	
	9.97	GC	General comment / General condition photo	00:03:00	MH L.0 To MH N.0_7dc38	
	10.85	CF	Construction feature from 10 o'clock to 12 o'clock / Lateral connection	00:03:12	MH L.0 To MH N.0_75dd4	
	20.49	GC	General comment / General condition photo	00:05:17	MH L.0 To MH N.0_d65ad	
	28.08	JFS	Joint faulty, minor cracking or spalling from 1 o'clock to 3 o'clock	00:05:59	MH L.0 To MH N.0_84f4b	1
	29.15	GC	General comment / General condition photo	00:06:34	MH L.0 To MH N.0_c4d85	
	43.31	GC	General comment / General condition photo	00:08:08	MH L.0 To MH N.0_fe6ef8	
	48.84	JFS	Joint faulty, minor cracking or spalling from 12 o'clock to 2 o'clock	00:08:37	MH L.0 To MH N.0_bdf7b	1
	52.42	JFS	Joint faulty, minor cracking or spalling from 11 o'clock to 1 o'clock	00:09:21	MH L.0 To MH N.0_f1a43	1
	52.42	GC	General comment / General condition photo	00:09:23	MH L.0 To MH N.0_beed4	
	65.91	GC	General comment / General condition photo	00:11:02	MH L.0 To MH N.0_755d8	
	65.91	CF	Construction feature from 1 o'clock to 3 o'clock / Lateral connection	00:11:02	MH L.0 To MH N.0_7fcaf3	
	67.43	LXM	Lateral problem, medium defect at 2 o'clock / Constant water trickling in	00:11:18	MH L.0 To MH N.0_8ef91	20
	70.64	GC	General comment / General condition photo	00:12:16	MH L.0 To MH N.0_6219b	

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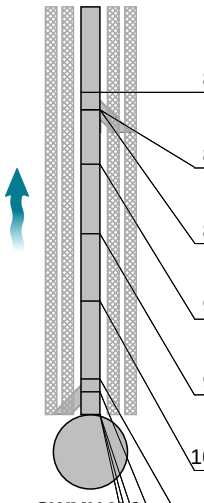
Section Inspection - 6/04/2023 - MH L.0 To MH N.0

Section No.	Asset No.	Contract Number	Date	Time	Weather
31	**MH L.0 To MH N.0**	**1**	**6/04/2023**	**3:24 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			



1:611 m +		OC	Observation	MPEG	Photo	Score
84.52		CF	Construction feature from 9 o'clock to 11 o'clock / Lateral connection	00:14:06	MH L.0 To MH N.0_c8ce0	
85.93		LFM	Lateral sealing faulty, gaps between the lateral pipe and the main pipe that appear open at 10 o'clock / Water seeping in around lateral	00:14:26	MH L.0 To MH N.0_e4918	10
85.93		DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 6 o'clock to 8 o'clock	00:14:48	MH L.0 To MH N.0_788a8	8
90.33		GC	General comment / General condition photo	00:15:45	MH L.0 To MH N.0_69e20	
95.94		RIS	Root intrusion, roots restrict flow by 10% or less of full flow from 11 o'clock to 1 o'clock / Roots coming through lifting eye	00:16:14	MH L.0 To MH N.0_5621b	5
101.36		GC	General comment / General condition photo	00:17:13	MH L.0 To MH N.0_64ca1	
107.69		CF	Construction feature from 2 o'clock to 4 o'clock / Lateral connection	00:17:47	MH L.0 To MH N.0_06c0a	
108.68		LXL	Lateral problem, large defect at 3 o'clock / Ground water seeping through lateral	00:18:04	MH L.0 To MH N.0_1c3a9	30
110.52	E01	PHS	Pipe holed, the hole has been repaired at 12 o'clock, end / Lifting eyes faulty, seeping water	00:18:51		5
110.52	E02	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end	00:18:52		8
110.52		IE	Inspection ends, node reference: SWMH N.0	00:18:53		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
7	35.0	0.6	68.0	4.0	3	16.0	0.2	21.0	4.0

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Section Pictures - 6/04/2023 - MH L.0 To MH N.0

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH L.0 To MH N.0**	**31**

MH L.0 To MH N.0_d86cde5e-42e8-4368-8579-a99ad8755ca5_20230406_152537_334.jpg, 00:00:25, 0.99m

MH L.0 To MH N.0_bcd2da46-5308-4325-944e-bce3e7c063da_20230406_152657_067.jpg, 00:01:39, 2.82m

MH L.0 To MH N.0_7dc38427-e264-4876-8582-31f10e6f1f74_20230406_152828_461.jpg, 00:03:00, 9.97m

MH L.0 To MH N.0_75dd4cbc-cf68-4eb8-bd10-85fa86fa8054_20230406_152853_132.jpg, 00:03:12, 10.85m

MH L.0 To MH N.0_d65ad6a2-e3ab-4f0f-81eb-6eaac14ceb03_20230406_153109_779.jpg, 00:05:17, 20.49m

MH L.0 To MH N.0_84f4b8db-3f8a-488a-96d1-36db2789082d_20230406_153157_560.jpg, 00:05:59, 28.08m

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Section Pictures - 6/04/2023 - MH L.0 To MH N.0

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH L.0 To MH N.0**	**31**

MH L.0 To MH N.0_c4d854e7-7c40-4eaf-a0d4-cc1a2f796d6c_20230406_153239_211.jpg, 00:06:34, 29.15m

MH L.0 To MH N.0_fe6ef8c5-7a24-4f63-95e3-03998bf35ef8_20230406_153417_459.jpg, 00:08:08, 43.31m

MH L.0 To MH N.0_bdf7bd39-fd77-4658-863c-e918b1a400a8_20230406_153452_225.jpg, 00:08:37, 48.84m

MH L.0 To MH N.0_f1a43aad-f720-4bba-89eb-06cf6aa0544d_20230406_153541_152.jpg, 00:09:21, 52.42m

MH L.0 To MH N.0_beed4716-67b9-4cb7-8f97-55b4515aa116_20230406_153547_675.jpg, 00:09:23, 52.42m

MH L.0 To MH N.0_755d8516-0426-4715-a277-cf488cb6289d_20230406_153730_932.jpg, 00:11:02, 65.91m

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Section Pictures - 6/04/2023 - MH L.0 To MH N.0

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH L.0 To MH N.0**	**31**

MH L.0 To MH N.0_7fcaf3ab-4819-4c10-8afe-1e61be001199_20230406_153741_167.jpg, 00:11:02, 65.91m

MH L.0 To MH N.0_8ef91109-dd1e-48f5-b4a7-1bee298a1b75_20230406_153811_012.jpg, 00:11:18, 67.43m

MH L.0 To MH N.0_6219bdfe-dab6-4dde-a1e5-6f34164f0dbe_20230406_153916_073.jpg, 00:12:16, 70.64m

MH L.0 To MH N.0_c8ce0c33-58b0-487e-8ed6-a217ba6b1107_20230406_154114_388.jpg, 00:14:06, 84.52m

MH L.0 To MH N.0_e4918654-d695-4254-a153-06d53a8b685d_20230406_154149_638.jpg, 00:14:26, 85.93m

MH L.0 To MH N.0_788a8711-d5b1-4c5f-aaa8-4dbfa7651d49_20230406_154224_533.jpg, 00:14:48, 85.93m

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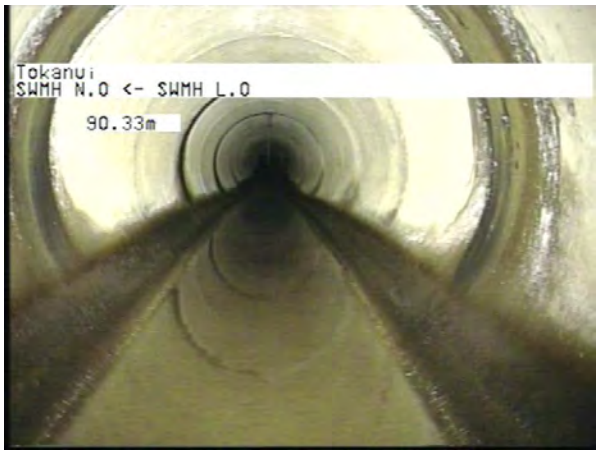
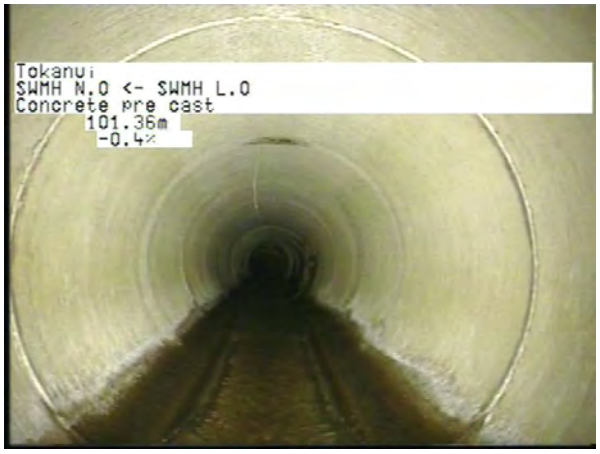
Section Pictures - 6/04/2023 - MH L.0 To MH N.0

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH L.0 To MH N.0**	**31**



MH L.0 To MH N.0_69e208ac-ab81-40d5-bae9-4e431ffb17ef_20230406_154329_172.jpg, 00:15:45, 90.33m

MH L.0 To MH N.0_5621bd13-0c32-42b2-a720-e078e0422212_20230406_154407_660.jpg, 00:16:14, 95.94m



MH L.0 To MH N.0_64ca1a11-fbb4-4cfc-bda9-5df4a1b661a4_20230406_154533_385.jpg, 00:17:13, 101.36m

MH L.0 To MH N.0_06c0ac44-61fe-4108-831f-b021c789ebf6_20230406_154615_108.jpg, 00:17:47, 107.69m

MH L.0 To MH N.0_1c3a9508-21c5-4743-abf8-5b709a7b9879_20230406_154647_322.jpg, 00:18:04, 108.68m

Section Inclination - 6/04/2023 - MH L.0 To MH N.0

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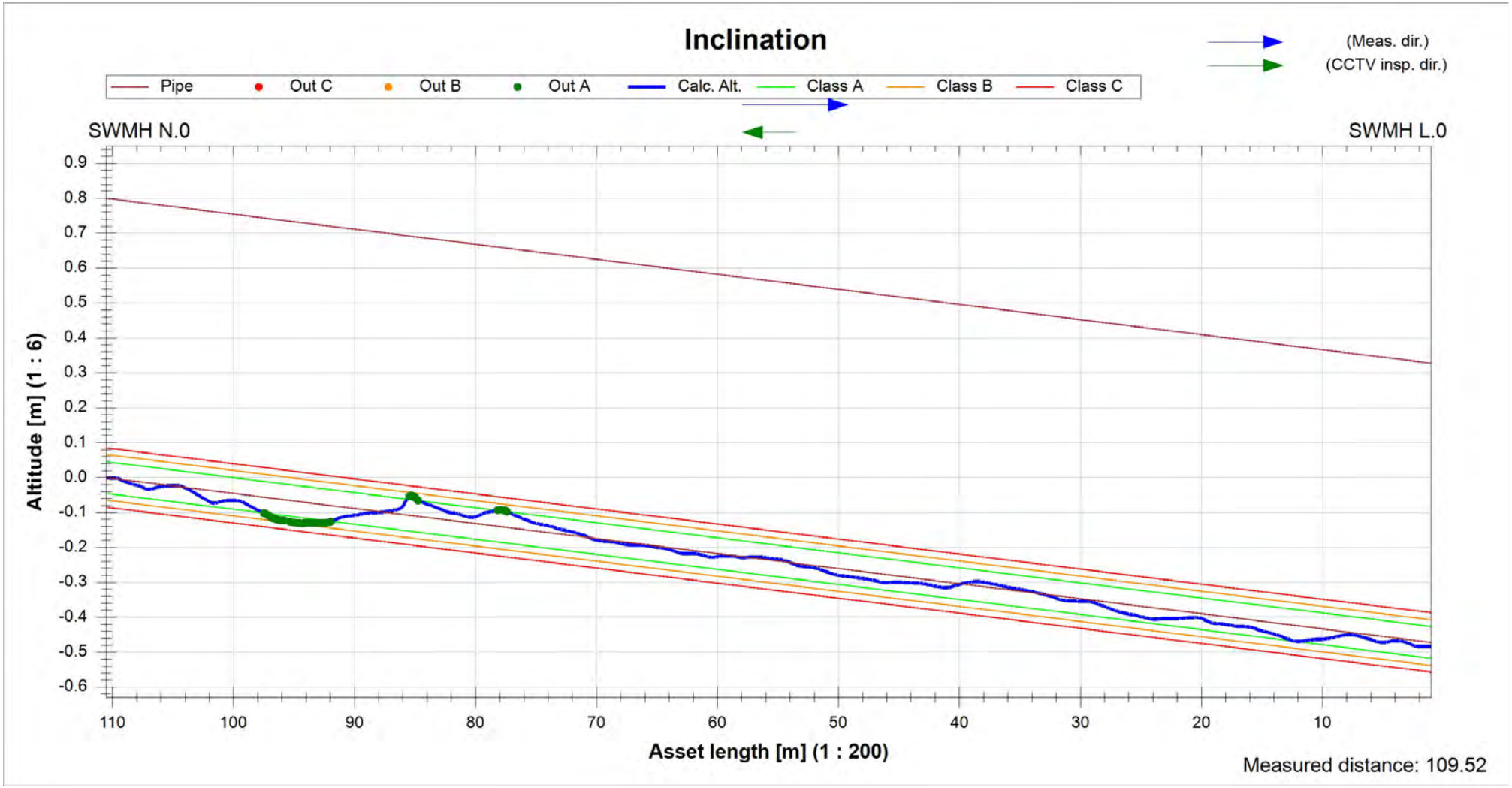
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH L.0 To MH N.0	6/04/2023	3:24 pm	CST Group	Tokanui		Downstream node	109.52 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	800 mm	800 mm	SWMH N.0	SWMH L.0	0.000 m	-0.484 m	-0.442 %



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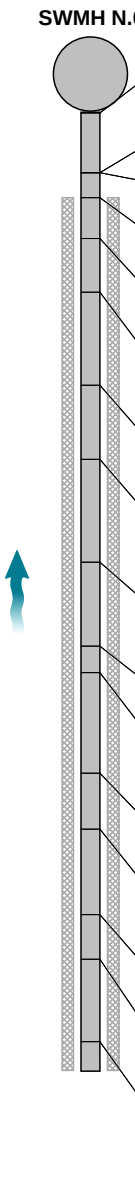
Section Inspection - 6/04/2023 - MH N.0 To MH N.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
32	**MH N.0 To MH N.1**	**1**	**6/04/2023**	**3:50 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			

Line Length	**40.49 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**40.45 m**	Dia/Height	**800 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**800 mm**	Inspection	**Inspection complete**
Surface		Location		Cleaning Status	

U/S Node	**SWMH N.1**	D/S Node	**SWMH N.0**
U/S Node Type	**Stormwater miscellaneous**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth		D/S Pipe Depth	
U/S Location		D/S Location	
Comments	**Unable to locate N.1 for pipe depth**		



1:301	m +	OC	Observation	MPEG	Photo	Score
	0.04	IS	Inspection start, node reference: SWMH N.0	00:00:00		
	2.41	JDL	Joint displaced, more than 25% of pipe diameter	00:18:55	MH N.0 To MH N.1_259ab	45
	2.41	JOL	Joint open, displacement is greater than 40mm	00:18:55	MH N.0 To MH N.1_9e2e3	25
	3.43	S01 DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, start	00:01:25	MH N.0 To MH N.1_221ee	
	5.05	JDS	Joint displaced, less than 10% of pipe diameter	00:01:40	MH N.0 To MH N.1_ac7cb	
	7.19	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 7 o'clock / Roots protruding joint	00:01:59	MH N.0 To MH N.1_c7232	25
	10.87	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 6 o'clock / Roots protruding joint	00:03:01	MH N.0 To MH N.1_11209	25
	13.84	GC	General comment / General condition photo	00:03:58	MH N.0 To MH N.1_2457e	
	17.91	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 5 o'clock / Roots protruding joint	00:04:59	MH N.0 To MH N.1_3eac6	25
	21.26	CF	Construction feature from 1 o'clock to 2 o'clock / Lateral connection	00:05:46	MH N.0 To MH N.1_21630	
	22.31	CMS	Cracks multiple, small, visible but not open from 11 o'clock to 1 o'clock	00:06:08	MH N.0 To MH N.1_33e43	10
	26.33	GC	General comment / General condition photo	00:07:12	MH N.0 To MH N.1_e287c	
	28.55	JFS	Joint faulty, minor cracking or spalling from 12 o'clock to 11 o'clock / All joints	00:07:27	MH N.0 To MH N.1_d9756	1
	31.96	CLS	Crack longitudinal, small, visible but not open at 12 o'clock	00:07:54	MH N.0 To MH N.1_30d38	3
	33.73	GC	General comment / General condition photo	00:08:41	MH N.0 To MH N.1_84117	
	37.00	JFS	Joint faulty, minor cracking or spalling from 12 o'clock to 11 o'clock / All joints	00:09:07	MH N.0 To MH N.1_b35e9	1

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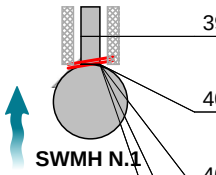
Section Inspection - 6/04/2023 - MH N.0 To MH N.1

Section No.	Asset No.	Contract Number	Date	Time	Weather
32	**MH N.0 To MH N.1**	**1**	**6/04/2023**	**3:50 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			



1:301	m +	OC	Observation	MPEG	Photo	Score
	39.39	PBM	Pipe broken, damage extends 10% - 25% of circumference, displaced by less than half the pipe wall thickness from 11 o'clock to 1 o'clock	00:10:07	MH N.0 To MH N.1_f2864f	30
	40.49	CF	Construction feature from 9 o'clock to 3 o'clock / Two lateral connections	00:11:22	MH N.0 To MH N.1_f6582	
	40.49	LPL	Lateral protruding, into the pipe by more than 25% of the diameter of the pipe at 3 o'clock	00:11:22	MH N.0 To MH N.1_9ae4f	25
	40.49 E01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end	00:11:24		8
	40.49	IA	Inspection abandoned / Camera stuck	00:11:25		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
12	70.0	5.3	215.0	5.0	1	8.0	0.2	8.0	3.0

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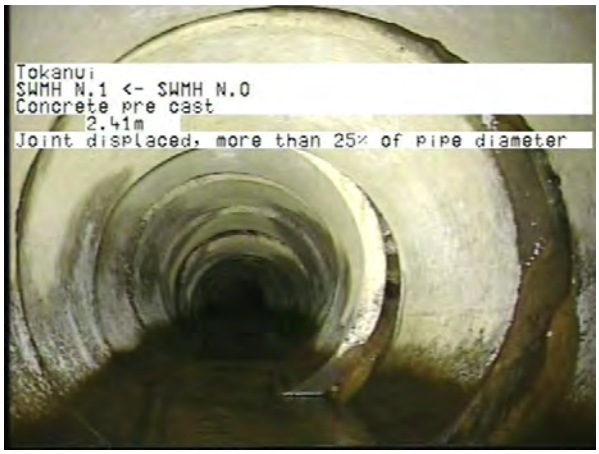
Section Pictures - 6/04/2023 - MH N.0 To MH N.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH N.0 To MH N.1**	**32**

MH N.0 To MH N.1_259abef6-3357-417a-b6b1-21ff3703d394_20230406_154853_590.jpg, 00:18:55, 2.41m



MH N.0 To MH N.1_9e2e3a4f-5139-4ab2-9f2f-71c516adb67e_20230406_154858_249.jpg, 00:18:55, 2.41m

MH N.0 To MH N.1_221eed31-167c-4f08-826e-db48a05f480a_20230406_155157_256.jpg, 00:01:25, 3.43m

MH N.0 To MH N.1_ac7cb133-4512-45c0-a01b-6bd7c186c8b3_20230406_155218_080.jpg, 00:01:40, 5.05m

MH N.0 To MH N.1_c7232d6d-8ca5-4339-b763-ab7e100d83d2_20230406_155248_798.jpg, 00:01:59, 7.19m

MH N.0 To MH N.1_11209ceb-76f4-48d7-87bc-2711dad56384_20230406_155403_423.jpg, 00:03:01, 10.87m

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Section Pictures - 6/04/2023 - MH N.0 To MH N.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH N.0 To MH N.1**	**32**

MH N.0 To MH N.1_2457edcf-bf72-4670-a094-92838979a6aa_20230406_155507_840.jpg, 00:03:58, 13.84m

MH N.0 To MH N.1_3eac6d58-c56f-4066-8242-dc9fa803d092_20230406_155620_357.jpg, 00:04:59, 17.91m

MH N.0 To MH N.1_21630247-33fe-4858-a748-056b93b7cd26_20230406_155716_905.jpg, 00:05:46, 21.26m

MH N.0 To MH N.1_33e4370a-b819-4c5e-9fc3-591f345c4d96_20230406_155748_522.jpg, 00:06:08, 22.31m

MH N.0 To MH N.1_e287cf9b-b63c-4d09-9c9e-0598a1d7223b_20230406_155906_831.jpg, 00:07:12, 26.33m

MH N.0 To MH N.1_d975649e-4ba4-4fbc-9259-76ecd8d5261e_20230406_155927_210.jpg, 00:07:27, 28.55m

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Section Pictures - 6/04/2023 - MH N.0 To MH N.1

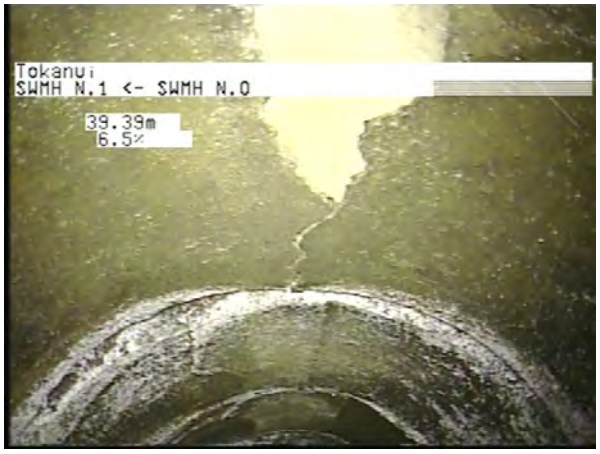
Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH N.0 To MH N.1**	**32**

MH N.0 To MH N.1_30d3853e-2439-4199-8db5-d60147d27aa8_20230406_160002_120.jpg, 00:07:54, 31.96m

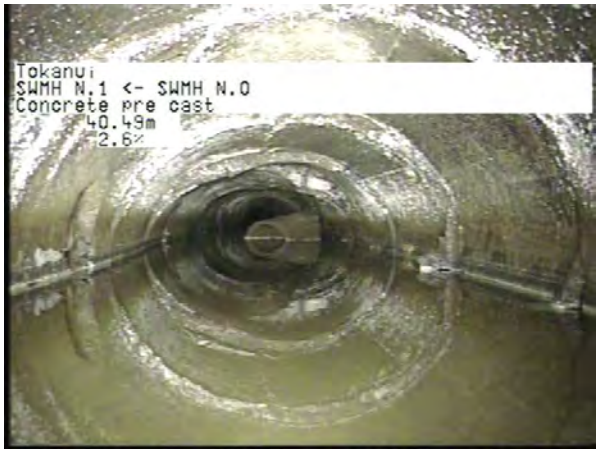
MH N.0 To MH N.1_8411798e-72cc-457d-aa6f-8cf4f8be5c3e_20230406_160056_090.jpg, 00:08:41, 33.73m

MH N.0 To MH N.1_b35e9991-e497-44ad-afd6-10aac7df1d05_20230406_160131_447.jpg, 00:09:07, 37.00m

MH N.0 To MH N.1_f2864fbd-5ed4-43ba-949d-37f8b8cb9dbd_20230406_160238_511.jpg, 00:10:07, 39.39m



MH N.0 To MH N.1_f9fb307b-237d-47c4-a331-6183db07786c_20230406_160245_276.jpg, 00:10:07, 39.39m



MH N.0 To MH N.1_f65822e3-23f9-4c1c-b0bf-5ee59af7f06b_20230406_160404_490.jpg, 00:11:22, 40.49m

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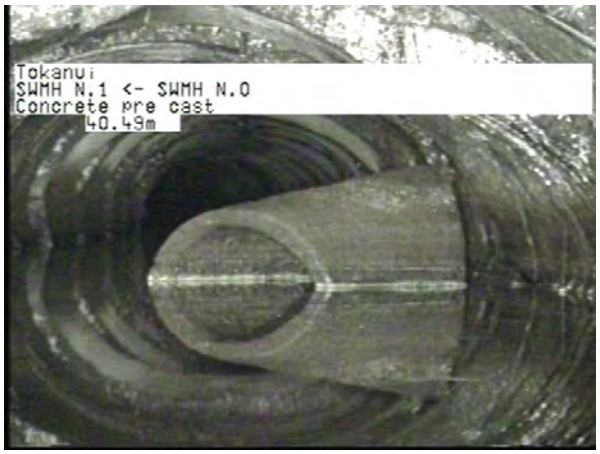
Section Pictures - 6/04/2023 - MH N.0 To MH N.1

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**6/04/2023**	**MH N.0 To MH N.1**	**32**



MH N.0 To MH N.1_9ae4f51b-189a-4bab-be16-10cb53b7fe75_20230406_160413_898.jpg, 00:11:22, 40.49m

Section Inclination - 6/04/2023 - MH N.0 To MH N.1

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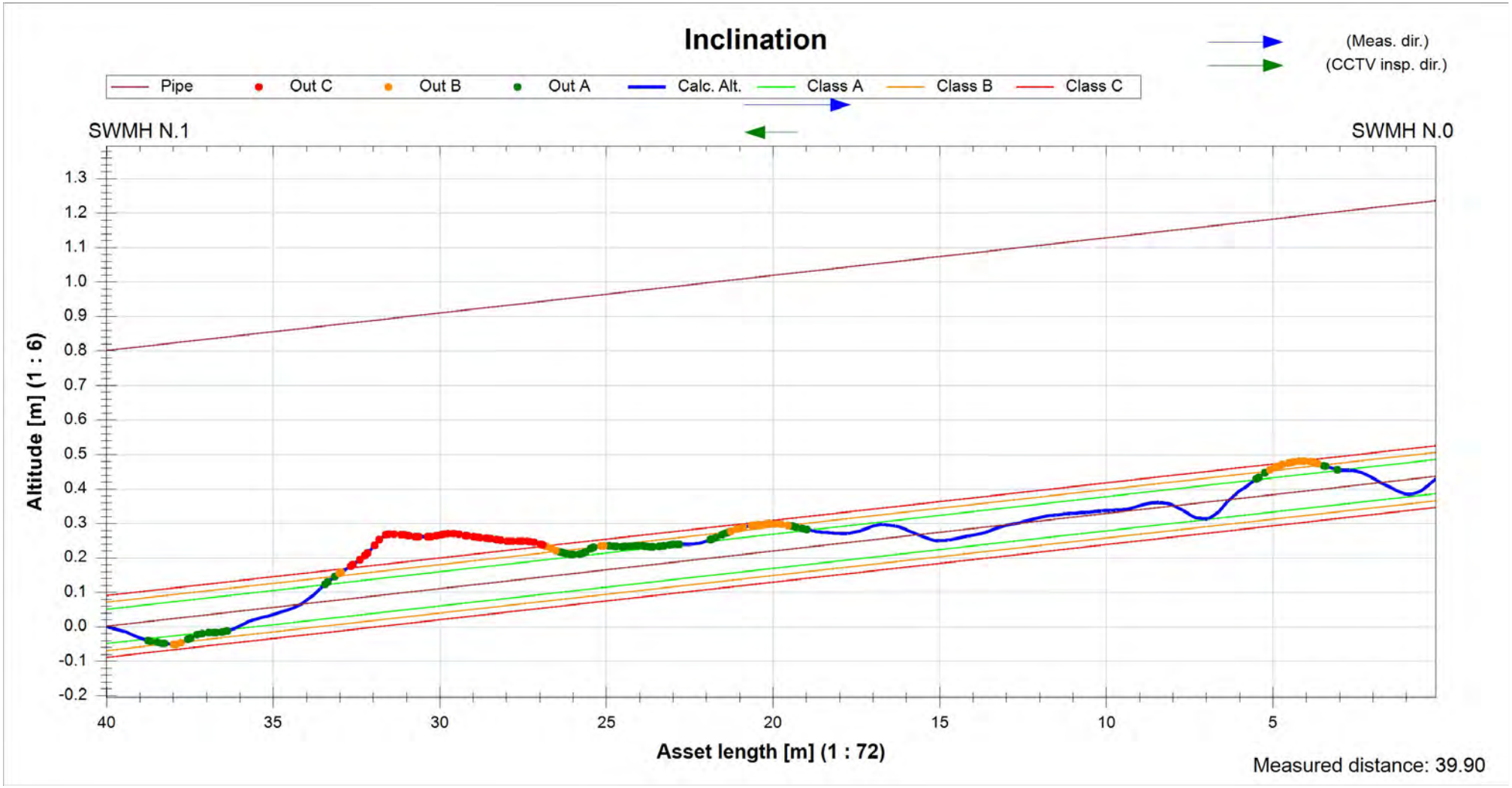
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH N.0 To MH N.1	6/04/2023	3:50 pm	CST Group	Tokanui		Downstream node	39.90 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	800 mm	800 mm	SWMH N.1	SWMH N.0	0.000 m	0.429 m	1.074 %



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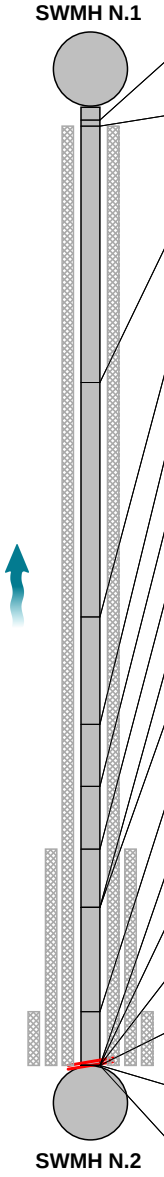
Section Inspection - 24/04/2023 - MH N.1 To MH N.2

Section No.	Asset No.	Contract Number	Date	Time	Weather
34	**MH N.1 To MH N.2**	**1**	**24/04/2023**	**9:46 am**	
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**

Line Length	**58.45 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Downstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**57.65 m**	Dia/Height	**750 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**750 mm**	Inspection	**Inspection complete**
Surface		Location	**Council road - hardstand**	Cleaning Status	

U/S Node	**SWMH N.2**	D/S Node	**SWMH N.1**
U/S Node Type	**Stormwater manhole**	D/S Node Type	**Stormwater manhole**
U/S Pipe Depth		D/S Pipe Depth	**2.60 m**
U/S Location		D/S Location	

Comments: **Unable to locate and get depth for upstream**



1:461	m +		OC	Observation	MPEG	Photo	Score
	0.80		IS	Inspection start, node reference: SWMH N.1	00:00:00		
	1.19	S01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, start	00:00:59	MH N.1 To MH N.2_9edf6	
	16.82		GC	General comment / General condition photo	00:04:16	MH N.1 To MH N.2_f7bf92	
	31.09		GC	General comment / General condition photo	00:07:43	MH N.1 To MH N.2_c63ee	
	37.66		JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Tiny rootsprotruding joint	00:10:47	MH N.1 To MH N.2_df2cdf	25
	41.44		GC	General comment / General condition photo	00:11:24	MH N.1 To MH N.2_86ad3	
	45.25	S02	RIS	Root intrusion, roots restrict flow by 10% or less of full flow from 4 o'clock to 8 o'clock, start	00:11:57	MH N.1 To MH N.2_dafba	
	48.81		JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 4 o'clock to 8 o'clock / Roots protruding	00:12:40	MH N.1 To MH N.2_7414f	25
	48.81		CLM	Crack longitudinal, medium, crack open but there is no evidence that the crack extends to the outside wall at 12 o'clock	00:12:48	MH N.1 To MH N.2_58711	15
	55.17	S03	EDM	Encrustation deposits, clear diameter is reduced by 10% to 25% from 4 o'clock to 8 o'clock, start	00:14:32	MH N.1 To MH N.2_c59d2	
	58.45		DEL	Debris silt, large, pipe diameter reduced more than 25%	00:16:04	MH N.1 To MH N.2_a55ae	40
	58.45		EDM	Encrustation deposits, clear diameter is reduced by 10% to 25% from 4 o'clock to 8 o'clock	00:16:05	MH N.1 To MH N.2_b8ee1	5
	58.45	E01	DGS	Debris greasy, small, clear diameter is reduced by less than 10% from 5 o'clock to 7 o'clock, end	00:16:06		8
	58.45	E02	RIS	Root intrusion, roots restrict flow by 10% or less of full flow from 4 o'clock to 8 o'clock, end	00:16:07		5
	58.45	E03	EDM	Encrustation deposits, clear diameter is reduced by 10% to 25% from 4 o'clock to 8 o'clock, end	00:16:08		5
	58.45		IA	Inspection abandoned / Unable to pass	00:16:10	MH N.1 To MH N.2_d399f	

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
3	40.0	1.1	65.0	4.0	5	45.0	1.1	63.0	5.0

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Section Pictures - 24/04/2023 - MH N.1 To MH N.2

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**24/04/2023**	**MH N.1 To MH N.2**	**34**

MH N.1 To MH N.2_9edf6547-a75e-42dc-a5a2-5c82b3edac54_20230424_094747_653.jpg, 00:00:59, 1.19m

MH N.1 To MH N.2_f7bf921f-eb2b-42e4-9436-32cb18c6aa52_20230424_095111_092.jpg, 00:04:16, 16.82m

MH N.1 To MH N.2_c63ee5a0-3c23-4d9f-844f-a11509564c3e_20230424_095446_091.jpg, 00:07:43, 31.09m

MH N.1 To MH N.2_df2cdf52-89b8-443e-a250-bfb9ad9ce134_20230424_095759_488.jpg, 00:10:47, 37.66m

MH N.1 To MH N.2_86ad3450-3e9e-4312-abf6-b71885a288ad_20230424_095844_517.jpg, 00:11:24, 41.44m

MH N.1 To MH N.2_dafba99f-01b1-49da-984f-d7ac430ea192_20230424_095921_998.jpg, 00:11:57, 45.25m

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Section Pictures - 24/04/2023 - MH N.1 To MH N.2

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**24/04/2023**	**MH N.1 To MH N.2**	**34**

MH N.1 To MH N.2_7414f722-c10b-4872-ae14-51277d6b977b_20230424_100020_389.jpg, 00:12:40, 48.81m

MH N.1 To MH N.2_5871115d-83dd-4e24-b180-30adad29c29d_20230424_100033_719.jpg, 00:12:48, 48.81m

MH N.1 To MH N.2_c59d25d8-64b4-491b-9dcb-9b197f4d4d8b_20230424_100225_951.jpg, 00:14:32, 55.17m

MH N.1 To MH N.2_a55ae409-c745-4899-89f7-bbce7466703d_20230424_100412_241.jpg, 00:16:04, 58.45m

MH N.1 To MH N.2_b8ee1645-0d80-4422-b222-ed19e8726faa_20230424_100422_729.jpg, 00:16:05, 58.45m

MH N.1 To MH N.2_d399f190-451f-4809-bac6-876092910497_20230424_100440_532.jpg, 00:16:10, 58.45m

Section Inclination - 24/04/2023 - MH N.1 To MH N.2

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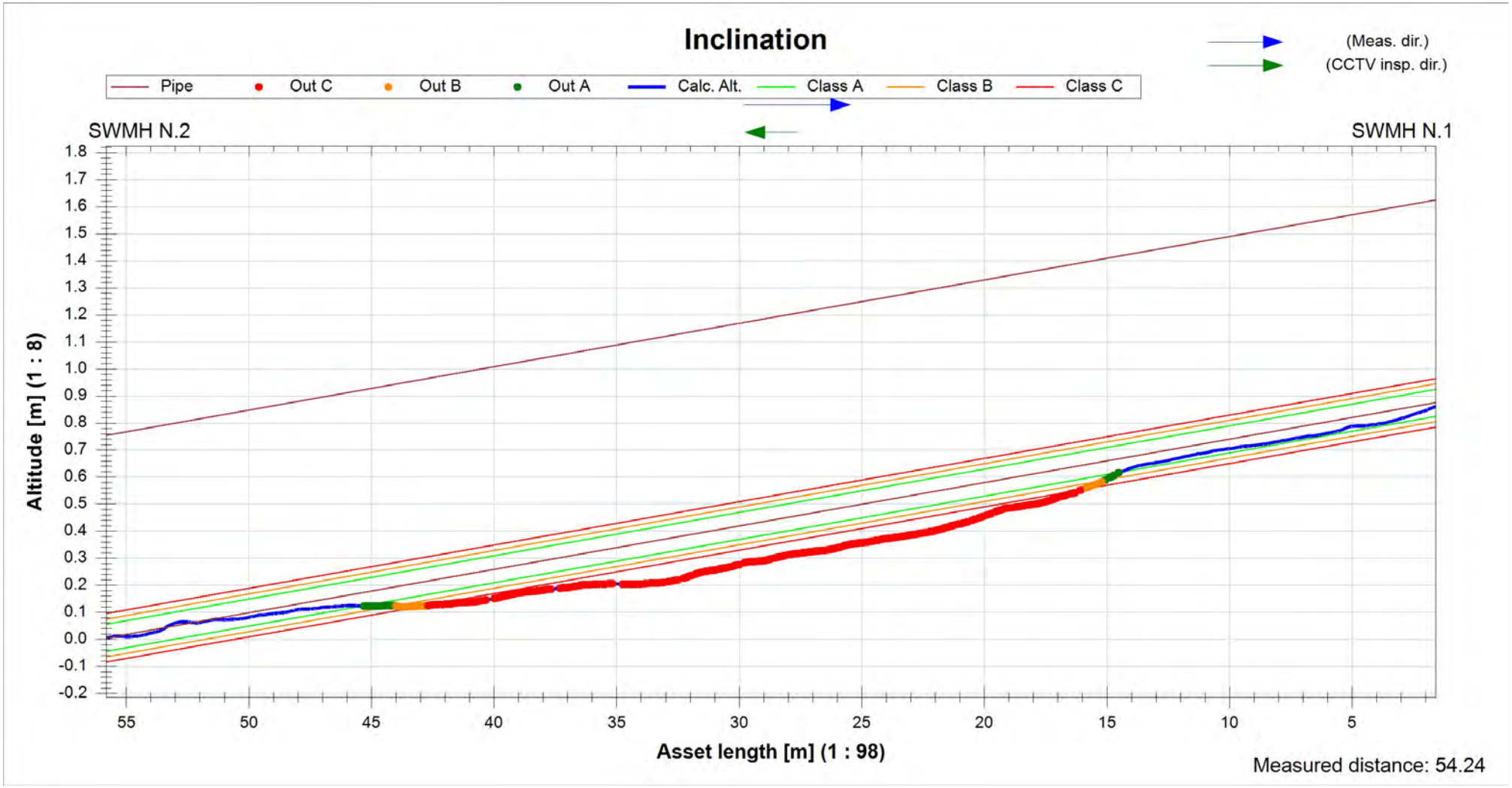
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
MH N.1 To MH N.2	24/04/2023	9:46 am	CST Group	Tokanui		Downstream node	54.24 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	750 mm	750 mm	SWMH N.2	SWMH N.1	0.004 m	0.860 m	1.578 %



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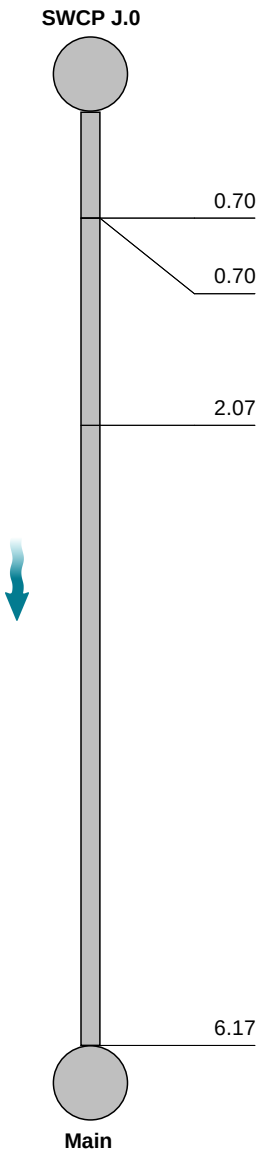
Section Inspection - 27/03/2023 - CP J.0 To Main

Section No.	Asset No.	Contract Number	Date	Time	Weather
34	**CP J.0 To Main**	**1**	**27/03/2023**	**1:35 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**

Line Length	**6.17 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Upstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**5.47 m**	Dia/Height	**225 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**225 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWCP J.0**	D/S Node	**Main**
U/S Node Type	**Stormwater node**	D/S Node Type	**Stormwater miscellaneous**
U/S Pipe Depth	**0.40 m**	D/S Pipe Depth	
U/S Location		D/S Location	

Comments: **Unable to get pipe depth where is drops into main**



1:50	m +	OC	Observation	MPEG	Photo	Score
	0.70	IS	Inspection start, node reference: MH J.0	00:00:00		
	0.70	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 1 o'clock to 3 o'clock / Seal visable	00:00:20	CP J.0 To Main_4ca91f64-afc5-	25
	2.07	JFM	Joint faulty, medium cracking or spalling, unlikely through the pipe wall from 8 o'clock to 12 o'clock	00:01:30	CP J.0 To Main_7587a93c-4c5c-	10
	6.17	IE	Inspection ends, node reference: Main	00:02:53		

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	25.0	6.4	35.0	5.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 27/03/2023 - CP J.0 To Main

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**27/03/2023**	**CP J.0 To Main**	**34**

CP J.0 To Main_4ca91f64-afc5-4da9-9724-3b39ad6651b7_20230327_133602_285.jpg, 00:00:20, 0.70m

CP J.0 To Main_7587a93c-4c5c-4505-bc90-22155f335ad2_20230327_133718_936.jpg, 00:01:30, 2.07m

Section Inclination - 27/03/2023 - CP J.0 To Main

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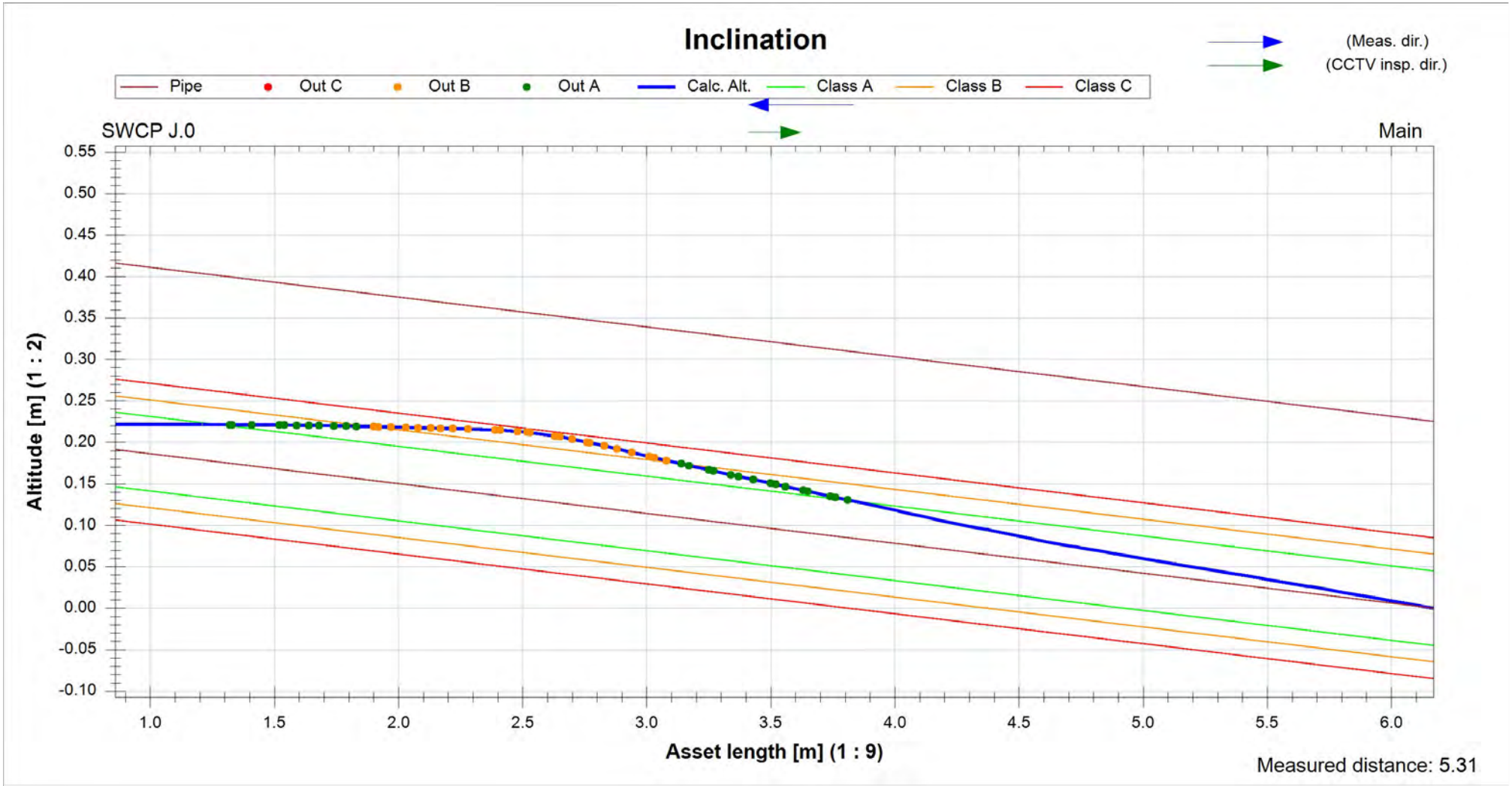
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
CP J.0 To Main	27/03/2023	1:35 pm	CST Group	Tokanui		Upstream node	5.31 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	225 mm	225 mm	SWCP J.0	Main	0.000 m	0.222 m	-4.174 %



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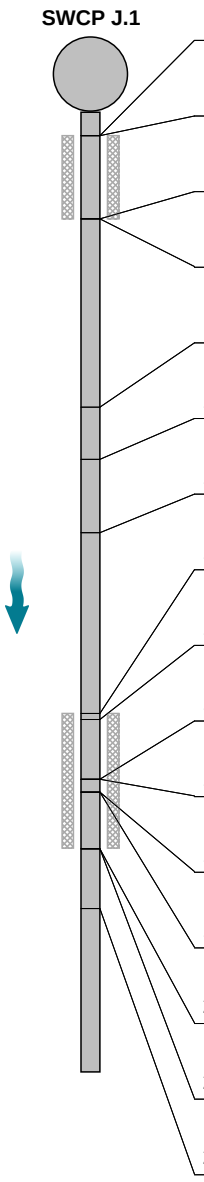
Section Inspection - 27/03/2023 - CP J.1 To CP J,0

Section No.	Asset No.	Contract Number	Date	Time	Weather
33	**CP J.1 To CP J,0**	**1**	**27/03/2023**	**12:56 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**

Line Length	**32.99 m**	Material	**Concrete pre cast**	Use	**Stormwater**
Setup	**Upstream node**	Shape	**Circular pipe**	Pipe Status	**Original condition**
Surveyed Length	**32.29 m**	Dia/Height	**225 mm**	Currency	**Current Inspection**
Joint Spacing	**0.00 m**	Width	**225 mm**	Inspection	**Inspection complete**
Surface		Location	**Private property - yard**	Cleaning Status	

U/S Node	**SWCP J.1**	D/S Node	**SWCP J.0**
U/S Node Type	**Stormwater node**	D/S Node Type	**Stormwater node**
U/S Pipe Depth	**0.40 m**	D/S Pipe Depth	**0.40 m**
U/S Location		D/S Location	

Comments



1:222	m +	OC	Observation	MPEG	Photo	Score
	0.70	IS	Inspection start, node reference: CP J.1	00:00:00		
	0.70	S01 DES	Debris silt, small, clear diameter reduced by less than 10%, start	00:00:18	CP J.1 To Main_d4033b3c-ad8c	
	3.15	E01 DES	Debris silt, small, clear diameter reduced by less than 10%, end	00:00:56		8
	3.15	JFS	Joint faulty, minor cracking or spalling from 1 o'clock to 9 o'clock	00:00:57	CP J.1 To Main_12aa38e7-de58	1
	8.67	JFS	Joint faulty, minor cracking or spalling from 8 o'clock to 10 o'clock	00:03:06	CP J.1 To Main_5be21a3c-ac2a	1
	10.19	GC	General comment / General condition photo	00:03:35	CP J.1 To Main_3de1eed8-d761	
	12.35	JFS	Joint faulty, minor cracking or spalling from 11 o'clock to 1 o'clock	00:04:35	CP J.1 To Main_04e528a1-f5c8-	1
	17.67	S02 DES	Debris silt, small, clear diameter reduced by less than 10%, start	00:05:26	CP J.1 To Main_e8c73de5-c97d	
	17.84	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 1 o'clock to 3 o'clock / Seal visable	00:05:38	CP J.1 To Main_43ea1813-f2e4-	25
	19.59	PHM	Pipe holed, the hole is up to 20% of the pipe circumference and has not been repaired from 11 o'clock to 1 o'clock	00:06:33	CP J.1 To Main_26ed628b-415c	25
	19.59	TML	Tomo, a cavity is evident outside of the pipe wall. from 11 o'clock to 1 o'clock	00:06:34	CP J.1 To Main_6f840b69-f4d9-	40
	19.96	DEM	Debris silt, medium, clear diameter is reduced by 10% - 25%	00:07:16	CP J.1 To Main_f08382c1-dc73	20
	19.96	GC	General comment / General condition photo	00:07:18	CP J.1 To Main_2371c38a-bcb7	
	21.63	E02 DES	Debris silt, small, clear diameter reduced by less than 10%, end / \	00:07:37		8
	21.63	JFL	Joint faulty, major cracking or spalling, likely through the pipe wall from 3 o'clock to 6 o'clock / Seal visable	00:07:42	CP J.1 To Main_be7a1704-4782	25
	23.38	JFS	Joint faulty, minor cracking or spalling from 7 o'clock to 9 o'clock	00:08:32	CP J.1 To Main_d7b5f459-51b5-	1

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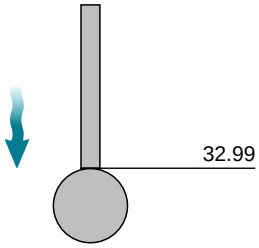
Section No.	Asset No.	Contract Number	Date	Time	Weather
33	**CP J.1 To CP J,0**	**1**	**27/03/2023**	**12:56 pm**	**Dry Weather**
Town or Suburb	Camera Operator	Operator	Video Reference	Drawing No.	Client
Tokanui	**Nathan Whare**	**CST Group**			**Fraser Thomas**

1:222	m +	OC	Observation	MPEG	Photo	Score
	32.99	IE	Inspection ends, node reference: Main	00:10:33		

SWCP J.0

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
8	65.0	3.7	119.0	5.0	3	28.0	1.1	36.0	4.0

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Section Pictures - 27/03/2023 - CP J.1 To CP J,0

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**27/03/2023**	**CP J.1 To CP J,0**	**33**

CP J.1 To Main_d4033b3c-ad8c-4d5a-ab4d-ad89e06926d9_20230327_125649_207.jpg, 00:00:18, 0.70m

CP J.1 To Main_12aa38e7-de58-49df-8560-95b462b03d59_20230327_125738_184.jpg, 00:00:57, 3.15m

CP J.1 To Main_5be21a3c-ac2a-4955-96c5-c1514c1df63f_20230327_125954_613.jpg, 00:03:06, 8.67m

CP J.1 To Main_3de1eed8-d761-4e8e-adcf-faf82f32b9b9_20230327_130033_000.jpg, 00:03:35, 10.19m

CP J.1 To Main_04e528a1-f5c8-42f0-929d-68fad9dbd7fa_20230327_130139_352.jpg, 00:04:35, 12.35m

CP J.1 To Main_e8c73de5-c97d-4ac5-845e-dbbb266924dd_20230327_130234_562.jpg, 00:05:26, 17.67m

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Section Pictures - 27/03/2023 - CP J.1 To CP J,0

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**27/03/2023**	**CP J.1 To CP J,0**	**33**

CP J.1 To Main_43ea1813-f2e4-433a-a272-e674b921a434_20230327_130251_161.jpg, 00:05:38, 17.84m

CP J.1 To Main_b1912c78-224a-4218-9f6c-5e82040088d9_20230327_130317_522.jpg, 00:05:38, 17.84m

CP J.1 To Main_26ed628b-415c-43c6-8de6-75aa20e6f7b0_20230327_130356_181.jpg, 00:06:33, 19.59m

CP J.1 To Main_6f840b69-f4d9-46ae-9b25-b124606bd218_20230327_130409_342.jpg, 00:06:34, 19.59m

CP J.1 To Main_f894179b-4af2-4376-b3b8-867c0209bb19_20230327_130440_545.jpg, 00:06:34, 19.59m

CP J.1 To Main_f08382c1-dc73-4f6b-a21d-86737853ee7a_20230327_130456_695.jpg, 00:07:16, 19.96m

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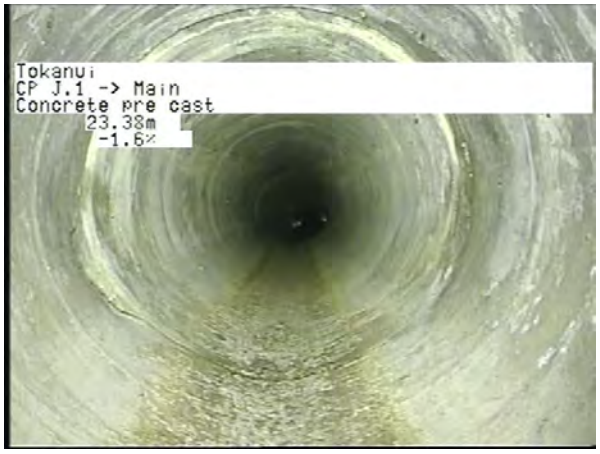
Section Pictures - 27/03/2023 - CP J.1 To CP J,0

Town or Suburb		Date	Asset No.	Section No.
Tokanui		**27/03/2023**	**CP J.1 To CP J,0**	**33**

CP J.1 To Main_2371c38a-bcb7-4626-a41b-950699dc0b05_20230327_130504_662.jpg, 00:07:18, 19.96m

CP J.1 To Main_be7a1704-4782-4de7-878e-bddef75a6674_20230327_130558_456.jpg, 00:07:42, 21.63m



CP J.1 To Main_d7b5f459-51b5-438e-8b58-3e1d4f671a4d_20230327_130837_353.jpg, 00:08:32, 23.38m

Section Inclination - 27/03/2023 - CP J.1 To CP J,0

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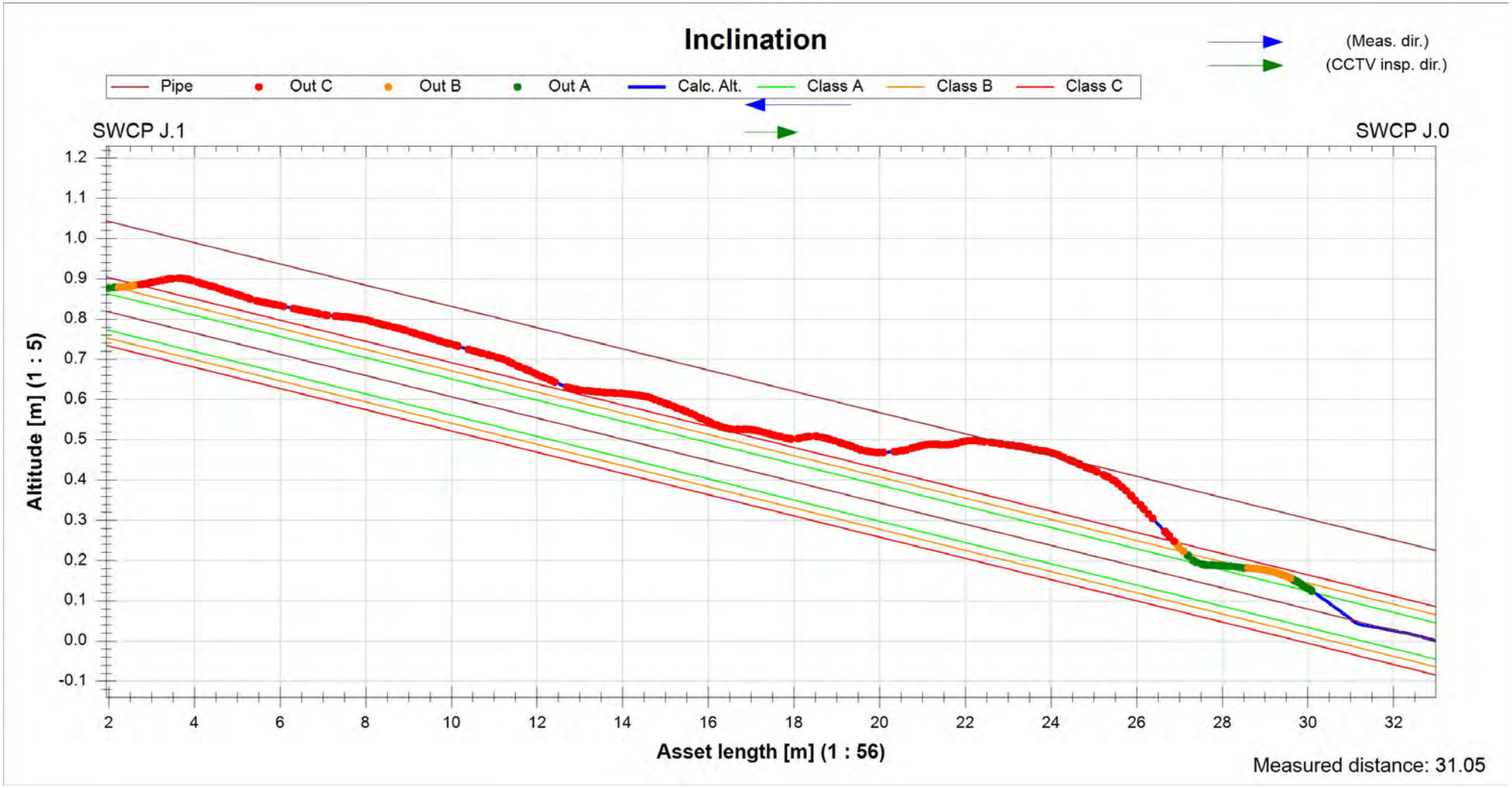
Asset No.	Date	Time	Operator	Town or Suburb	Road	Setup	Surveyed Length
CP J.1 To CP J,0	27/03/2023	12:56 pm	CST Group	Tokanui		Upstream node	31.05 m
Shape	**Dia/Height**	**Width**	**U/S Node**	**D/S Node**	**Start altitude**	**End altitude**	**Measured Inc**
Circular pipe	225 mm	225 mm	SWCP J.1	SWCP J.0	0.000 m	0.876 m	-2.822 %