Former Tokanui Hospital

Preliminary Site Investigation

Toitū Te Whenua - Land Information New Zealand

12 May 2022

→ The Power of Commitment

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Executive Summary

GHD Limited (GHD) has been engaged by Toitū Te Whenua Land Information New Zealand (LINZ) to undertake contaminated land investigations of the former Tokanui Hospital (the Site) located on Te Mawhai Road, Tokanui, Waikato. This investigation covers the whole Site for the purposes of fulfilling a preliminary site investigation (PSI) requirement under the Ministry for the Environment's (MfE) Contaminated Land Management Guidelines (CLMG). Although reference to the existing disposal sites is included within this PSI these have been investigated separately by Fraser Thomas Ltd (FTL, 2022).

The former Tokanui Psychiatric Hospital is a Deferred Selection Property (DSP) in the Ngāti Maniapoto (herein referred to as Maniapoto) Deed of Settlement (the Deed). The Deed was signed by Maniapoto and the Minster of Treaty of Waitangi Negotiations, became effective on the 11 November 2021 and forms part of the Maniapoto Settlement Claims Act 2022 (Maniapoto Claims Settlement Act, 2022). Under the Deed, the Crown has committed to a standalone process within the Property Redress Schedule for the transfer of the Tokanui Hospital (the Tokanui Hospital Deferred Selection Process or THDSP) which details specific requirements for demolishing buildings and remediating soils before the Site is available for transfer to Maniapoto. LINZ is the Government agency responsible for delivering this project. For detailed project background and context, please refer to the Project Background Document prepared by LINZ (2022). In regards to ground contamination and remediation standards, under Section 9.3 of the deed of settlement property redress schedule, the Crown has agreed to use best endeavours to remediate the Site to:

– 85% of the total land area of the Tokanui Hospital deferred selection properties to "the rural residential remediation standard" (defined in Section 9.1.22 of the Deed as "an acceptable standard or standards for rural residential use chosen in accordance with Contaminated Land Management Guidelines No. 2 Hierarchy and Application in New Zealand of Environmental Guideline Values (Revised 2011) (CLMG 2), or derived through a site-specific risk assessment); and
– A contiguous area not exceeding 15% of the total land area of the Tokanui Hospital deferred selection properties, to "the managed remediation standard" (defined in section 9.1.15 of The Deed as "an applicable standard or standards for recreational use chosen in accordance with CLMG 2, or derived through a site-specific risk assessment, but where use may be subject to controls (for example, in relation to excavating, erecting buildings, or domestic gardening)".

The Deed sets out a process that prior to demolition and remediation, commits the Crown to a number of reports including a Detailed Site Investigation (DSI) and Remedial Action Plan. To inform and enable the future DSI, LINZ has instructed GHD to undertake a Preliminary Site Investigation (this report).

The objectives of this Preliminary Site Investigation were to

– Review the available information and data from the existing reports provided to GHD to identify and close any data gaps identified.
– Identify activities on the MfE Hazardous Activities and Industries List (HAIL) and potential sources of contamination for the purposes of change of land use under *the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011* (NES CS) (changing from a commercial industrial hospital site to a grassed site with no buildings) and compliance with the terms of the Deed.
– Refine the conceptual site model developed by AECOM (2019) to reflect the findings from the PSI and inform the sampling plan.

To fulfil this purpose, GHD obtained information from a number of sources, including previous environmental reporting undertaken by others, council property records, historical documentation and a

walkover inspection of the Site. Previous investigations have confirmed that the Site has been or has more likely than not to have been subject to activities listed on the HAIL.

A total of 43 locations where HAIL activities have taken place were identified across the Site. The following list includes HAIL categories and the locations of these activities on the Site in italics:

- A2: Chemical bulk storage – *located in the water treatment plant*
- A5: Dry cleaning plants including dry-cleaning premises or the bulk storage of dry-cleaning solvents – *located in the Laundry*
- A8: Livestock dip – *located in the horticultural area*
- A10: Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds – *associated with spray sheds, horticultural areas, sports turfs*
- A14: Pharmaceutical manufacture including the blending, mixing or formulation of pharmaceuticals – *associated with the Pharmacy*
- A17: Storage tanks or drums for chemicals or liquid waste – *in various locations; Swimming pool chemical store, water treatment plant, morgues, fuel storage tanks*
- B4: Substations – *eight substations located on Site*
- E1: Asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition – *associated with current and previously demolished buildings*.
- F4: Motor vehicle workshops – *associated with a vehicle workshop which is part of a fuel station*
- F7: Service stations including retail or commercial refuelling facilities – *two former fuel stations*
- G4: Landfilling – *Waste disposal to land – the consented disposal sites*
- G6: Waste or wastewater treatment – *the incinerator and former hospital waste water treatment plant*
- I – Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment – *Boiler, dentist, fly tipping*

In addition to the identified HAIL activities, the deterioration or weathering of building fabric may have impacted soils at the Site.

A conceptual site model (CSM) was developed by Opus (Opus, 2015) and AECOM (AECOM, 2019) as part of a limited detailed site investigation for the site as part of a project scoping and feasibility study. The updated CSM completed as part of this report has identified potentially complete linkages between contaminant sources on Site and human and ecological receptors, these receptors being excavation workers, future land users and the Wharekōrino Stream.

The findings of this PSI are to be used to complete a Sampling and Analysis Plan in accordance with CLMG No.1 in order to detail the sampling design for the future Detailed Site Investigation.

The THDSP requires that the Crown will apply for all necessary consents required for the demolition and remediation works. Future owners will need to evaluate the need for (and obtain) their own resource consents for redevelopment of the Site. A full planning assessment regarding the demolition and remediation works is to be completed under a separate scope of works, however as HAIL activities have been identified at the Site, it is considered likely that resource consents will be required under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES CS) will be required. An investigation should be undertaken to assess the impact these activities may have had at the Site. The results of this assessment should be used to inform the consenting requirements for the Site under the NES CS.

This report is subject to, and must be read in conjunction with, the limitations set out in Section 7.

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List of abbreviations/glossary

Acronym/term	Description
*Denotes definitions relevant to this report copied from the Tokanui Hospital Deferred Selection Process, Subpart A: Definitions	
ACM	Asbestos containing material, used to refer to material containing asbestos. These are usually building materials such as fibre cement, cladding material or insulation.
BTEX	Benzene, toluene, ethylbenzene and xylenes, a group of contaminants associated with petrol.
CEnvP SC	Certified Environmental Practitioner – Site Contamination, a professional accreditation for site contamination specialists. This accreditation is one way for a practitioner to demonstrate suitable qualifications and experience to certify site contamination reports and is a requirement for LINZ suppliers conducting contaminated land investigations.
CLMG	Contaminated Land Management Guidelines, a series of guidelines produced by the Ministry for Environment used for consistency of reporting and investigation of contaminated sites. The NES CS (see below) incorporates six documents by reference which include the CLMG. For example, interpretation of the NES CS requires preliminary site investigations and detailed site investigations to be prepared in accordance with CLMG 1.
CLMG 1*	Contaminated land management guidelines No. 1: reporting on contaminated sites in New Zealand, Ministry for the Environment, revised edition 2011;
CLMG 2*	Contaminated land management guidelines No 2: hierarchy and application in New Zealand of environmental guideline values, Ministry for the Environment, revised edition 2011
CSM	Conceptual site model, a systematic identification of contaminant sources, routes of potential exposure, and receptors that may be impacted by contamination. This model is used as the basis of investigation and is continually updated as new information is gathered.
Deed of Settlement (the 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.
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;
DSI	Detailed site investigation, as defined in the NES CS; "*a detailed site investigation involves intrusive techniques to collect field data and soil samples for analytical testing to determine concentrations of contaminants of concern*". The investigation must be done in accordance with CLMG 5 and reported in accordance with CLMG 1 (the DSI report is specifically defined in the Deed, see below).
Detailed Site Investigation report (DSI)*	means a detailed site investigation report as described in the CLMG 1
Existing Disposal Consents*	means the land use resource consents numbered 102269.01.01, 102270.01.01 and 102271.01.01.
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;
HAIL	The Hazardous Activities and Industries List, issued by the Ministry for the Environment in 2011. The HAIL is a list of 51 activities and industries and two catch-all categories that are considered likely to cause land contamination through the use, storage or disposal of hazardous substances.
Managed Remediation Standard*	An applicable standard or standards for recreational use chosen in accordance with CLMG 2, or derived through a site-specific risk assessment, but where use may be subject to controls (for example, in relation to excavating, erecting buildings or domestic gardening).
NES CS	Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011, a set of nationally consistent regulations for the resource consenting of contaminated sites.

Acronym/term	Description
OCP	Organochlorine pesticides, a group of pesticides characterised by chlorine atoms in the molecular structure, long banned in New Zealand and many other countries.
PAH	Polycyclic aromatic hydrocarbons, a group of contaminants associated with diesel fuel and burnt material
PCB	Polychlorinated biphenyls, a group of contaminants associated with electrical transformers.
PID	Photo-ionisation detector, a measurement tool for field screening soil for volatile vapours such as those associated with petrol or solvents.
PFAS	Per-and poly-alkyl substances, a group of persistent contaminants associated with firefighting foams.
PSI	Preliminary site investigation, as defined in Regulation 3 of the NES CS as a contaminated land investigation that is done by a SQEP, reported on in accordance with CLMG 1, and results in a report that is certified by the practitioner. The NES CS also states, "*the main objectives of the PSI are to gather information about a piece of land to assess the suitability of the land for its current or intended use, and to design a detailed site investigation (if required).*"
Rural residential remediation standard*	Means an applicable standard or standards for rural residential use chosen in accordance with CLMG 2, or derived through a site-specific risk assessment.
SAP	Sampling and analysis plan, a plan setting out the proposed sampling programme for an environmental investigation and completed in accordance with CLMG 1 and CLMG 5.
Settlement Date	Is defined in Section 12 of the Maniapoto Settlement Claims Act 2022, being 24 November 2022.
Site-specific risk assessment*	Means the derivation of remedial criteria based on a conceptual site model in a manner generally consistent with CLMG 1.
SQEP	Suitably Qualified and Experienced Practitioner. This is not defined within the NES CS regulations, but in the *Users Guide, National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (April 2012)* which provides guidance on determining who is a SQEP in Section 2.1.1.
SVOC	Semi-volatile organic compounds, a group of hydrocarbon contaminants which are commonly associated with industrial processes.
THDSP	Tokanui Hospital Deferred Selection Process, a standalone process for the demolition and remediation of the Tokanui Hospital set out in Part 9 of the Deed of Settlement: Property Redress Schedule.
TPH	Total petroleum hydrocarbons, a screening analysis used to assess the presence of hydrocarbons in soil.
VOC	Volatile organic compounds, a group of hydrocarbon contaminants associated with fuels, solvents and cleaning products.
WDC	Waipa District Council, the territorial authority for the Site and surrounding district.
WRC	Waikato Regional Council, the regional council for the Site and surrounding region.
WWTP	Waste-water treatment plant
XRF	X-ray fluorescence detector, a device for field screening soil for metal samples.

1 Introduction

1.1 Preface

GHD Limited (GHD) and HAIL Environmental Ltd (HAIL Environmental) have been engaged by Toitū Te Whenua Land Information New Zealand (LINZ) to undertake a suite of contaminated land investigations in accordance with the Ministry for the Environment's Contaminated Land Management Guidelines (CLMG) to support the demolition and remediation of the former Tokanui Hospital (the Site) located on Te Mawhai Road, Tokanui, Waikato. The Site location and key features are shown in Figure A1 in Appendix A.

The Site was first designated as a hospital in 1910 and was opened in July 1912; by the 1960s it was one of the largest psychiatric institutions in New Zealand (Swarbrick, 2022). The move towards deinstitutionalisation meant a shift towards community care, and smaller more decentralised psychiatric wards attached to general hospitals and the hospital eventually closed in March 1998 (Coleborne, 2012). Following its closure, the Site was transferred from the Waikato District Health Board (DHB) to the Office for Treaty Settlements Landbank, initially managed by Ministry of Justice and then transferred to LINZ in 2017.

LINZ has since been responsible for facilities and property management; the structures have restricted access, there is 24/7 security in place and there is a grazing license on the large grassed areas of the site.

1.2 Background: Ngati Maniapoto Deed of Settlement and the Tokanui Deferred Selection Process

The former Tokanui Hospital (the Site) is managed by LINZ on behalf of the Crown in the Treaty Settlements Landbank. Land held in the Landbank is Crown land which has been declared surplus and can be used as cultural or commercial redress in Tiriti o Waitangi Settlement claims. The Tokanui Hospital is a deferred selection property in the Ngāti Maniapoto Deed of Settlement (the Deed) and forms part of the Maniapoto Settlement Claims Act 2022, which gives effect to the Deed. The Tokanui situation is unique as no other property included in a Treaty settlement has required demolition and remediation on this scale or required a commitment to undertake remediation in a deed of settlement. Under the Deed, Maniapoto and the Crown have agreed to a standalone process within the Property Redress Schedule, Part 9: Tokanui Hospital Deferred Selection Process (THDSP), for the transfer of the Site which details specific requirements for the demolition and remediation of the Site before it is available for transfer to Maniapoto. LINZ is the Government agency responsible for delivering this project. For detailed project background and context, please refer to the Project Background Document (Toitū Te Whenua Land Information New Zealand, 2021).

Subpart B of the THDSP out sets out agreed standards for the demolition and remediation of the Site. While Opus Limited (Opus) and AECOM Limited (AECOM) have undertaken several previous investigations at the Site, which are further detailed in Section 3 of this report, the Crown and Maniapoto have acknowledged at the date of Deed signing, there was not enough information available for the Crown to commit to a particular remediation standard (paragraph 9.2 of the Deed). LINZ have therefore engaged GHD and HAIL Environmental to undertake contaminated land investigations in accordance with the Ministry for the Environment's (MfE) Contaminated Land Management Guidelines (CLMG) to enable LINZ to meet the Crown's obligations in regard to the remediation of the Site as set out in the Remediation Standards, described in detail in Section 1.4.2. The GHD and HAIL Environmental works

will support the demolition and remediation of the Site as part of the Former Tokanui Psychiatric Hospital Demolition and Remediation Project (the Project).

In accordance with the Deed requirements, demolition and removal of the Site buildings and some of the Site infrastructure will take place, leaving the Site in a grassed state, remediated to a rural residential or managed land use standard. A future change in land use from commercial/industrial (former hospital use) to rural residential may occur. LINZ will obtain the necessary resource consents under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES CS) for the demolition and remediation activities and potentially for the land use change to a grassed site. Future changes in land use as part of redevelopment will require separate consenting and are not part of the Crown responsibility, that will be the responsibility of the future land owners.

The land will be changed from a commercial/industrial land use to a rural residential land use in accordance with the Deed requirements. This means demolition and removal of the Site buildings, with the Site being left in a grassed state. LINZ will obtain the necessary resource consents under the NES CS for the demolition and remediation activities. Changes in land use as part of future redevelopment will require separate consenting and are not part of the Crown responsibility, that will be the responsibility of the future land owners.

1.3 Background: Investigation Timeline to Date

A number of previous investigations dating back to 2015 have been completed to gain an understanding of the Site. The timeline from 2015 is summarised below, with further information provided in Section 3.

In 2015, the Ministry of Justice (MoJ) commissioned Opus to prepare a Demolition Plan for the safe and efficient removal of all subterranean infrastructure and services, roadways and terrestrial infrastructure, buildings and hard standing from the Site, so that it can be returned to pasture. Opus' brief was to provide MoJ a comprehensive Demolition Plan. The Opus Preliminary Site Inspection (the Opus PSI) report comprised an initial contamination assessment of the Site and potential effects on the proposed Site use and was intended to be included as part of the Demolition Plan. The Opus PSI report highlighted areas for which further work was required, in addition to identifying parts of the Site that required a Detailed Site Investigation (DSI).

After the Opus PSI was completed, LINZ took over the responsibility of the Site from MoJ, and therefore the management of any demolition and remedial works. Over the course of 2018-2019, LINZ commissioned several reports from AECOM, to gain an understanding of the Site as well as detailed options assessment and associated costings for the demolition and remediation.

In 2018 AECOM completed a gap assessment of the Opus PSI. The purpose of this task was to review the Opus PSI and identify any gaps in the process that may have led to potentially contaminating historical activities or industries not being identified. In 2019 AECOM also completed an onsite disposal feasibility study. The options report identified two key variables affecting the final level of demolition:

– whether demolition waste from the site will be transported offsite or buried onsite; or,
– whether roading and below ground services are partially retained.

In 2019 AECOM prepared a draft DSI of the Site (the AECOM DSI). The purpose of the AECOM DSI was "to assess the soil contaminant conditions at the Site and the associated risk to human health and the environment, for a proposed future agricultural land use." AECOM's investigative approach was to investigate soils associated with selected areas / features, which collectively were intended to be representative of the wider Site, rather than embarking on a comprehensive investigation.

The AECOM DSI included a conceptual site model (CSM) which considered source, pathway and receptor linkages, allowing an assessment of risk to human health and the environment. AECOM's draft

conclusion indicated that the CSM showed some complete and potentially complete source, pathway, receptor linkages, and that the soil contaminant conditions at the Site could pose some risk to human health and the environment if no soil remediation is completed.

1.4 GHD and HAIL Environmental Ltd Investigations

GHD and HAIL Environmental Limited have been engaged to undertake contaminated land investigations in accordance with the CLMG to enable LINZ to meet the Crown's obligations regarding the remediation of the Site.

The investigations comprise iterative steps as per the MfE CLMG. These steps are summarised in Figure 1 with more detailed descriptions in the remainder of this section.

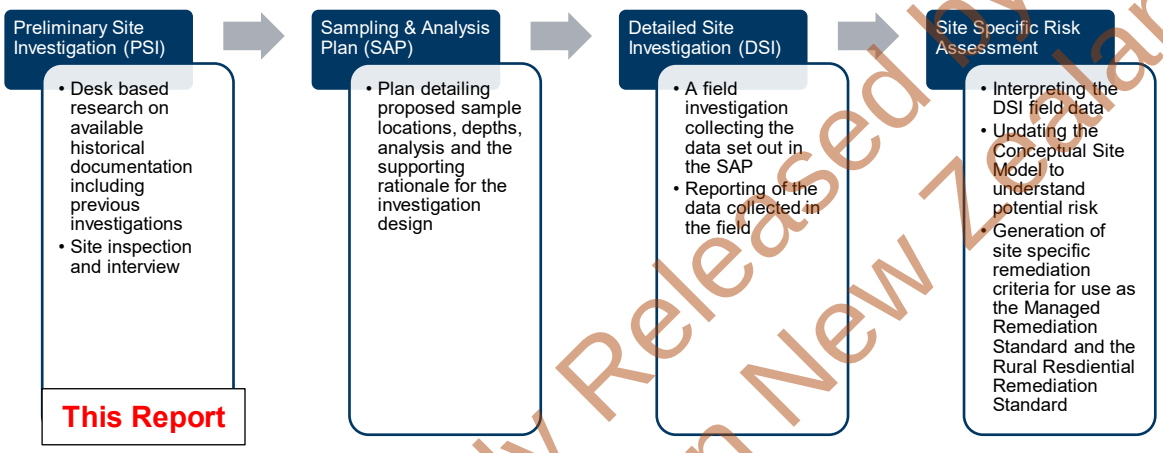

Figure 1 Tokanui Site Investigation Process

1.4.1 PSI Purpose & Objectives

The purpose of this Preliminary Site Investigation (PSI) is to review and capture a robust site history to ensure the presence and extent of soil contamination arising from historical uses of the Site is well understood and to assess the potential risk to human health and the environment to enable LINZ to successfully complete the demolition and remediation of the Tokanui Hospital in accordance with the Deed. The objectives of the PSI are:

- Review the available information and data from the existing reports provided to GHD to identify and close any data gaps identified.
- Identify HAIL activities and potential sources of contamination for the purposes of change of land use under NES CS (changing from a commercial industrial hospital site to a grassed site with no buildings) and compliance with the terms of the Deed.
- Refine the conceptual site model developed by AECOM (2019) to reflect the findings from the PSI and inform the sampling plan.

This PSI report has been designed to bring the available information from the previous reporting at the Site into one place, while addressing identified data gaps and updating information, where required. As such, it relies on large amounts of information from past investigations, and property records obtained by GHD as part of this investigation.

It should be noted that the Existing Disposal Sites, located to the east of the Wharekōrino Stream are being investigated and managed by Fraser Thomas Limited (FTL) under a separate scope of works and are therefore outside the scope of this investigation, they are however referenced in this report where appropriate in this report as they are a HAIL activity.

1.4.2 Subsequent Stages of the Site Investigation

The Sampling & Analysis Plan and Detailed Site Investigation

In order to understand the degree and extent of contamination that may have occurred, sampling is required from across the Site, as part of a DSI. Such investigations typically involve a number of sampling techniques, sampling different environmental media (e.g. soil and sediment) and the use of a variety of laboratory chemical analysis. CLMG No.5: *Site Investigation and Analysis of Soils* (Ministry for the Environment, 2021) recommends that a Sampling and Analysis Plan (SAP) be prepared as part of the investigation to provide the methodology for addressing the investigation priorities and data gaps identified during the PSI. The SAP will detail the proposed sample locations, depths, analysis and the supporting rationale for the DSI investigation design. The DSI will then be completed in accordance with the SAP.

Site Specific Risk Assessment & Remediation Standards

The DSI data will be used to undertake a site-specific risk assessment in order to:

- Generate site specific remediation criteria for use as the Managed Remediation Standard and Rural Residential Remediation Standard referred to in the Deed.
- Evaluate if the soil quality currently meets the Rural Residential Remediation Standard and / or Managed Remediation Standard referred to in the Deed.
- If required, inform a remedial options analysis to identify a preferred remedial approach for areas of the Site requiring remedial works to meet the Rural Residential Remediation Standard and / or Managed Remediation Standard referred to in the Deed.

The THDSP sets out the process for establishing remediation standards for the Site. The THDSP states that each deferred selection property requires certain demolition and remediation to be undertaken before it can be made available. However at the date of signing of the Deed, there was not enough information available for the Crown to be able to commit to a particular remediation standard to be achieved for all the Tokanui Deferred Selection Properties.

The THDSP Subpart B, Section 9.3 states,"….*the Crown will use best endeavours to remediate:*

9.3.1: 85% of the total land area of the Tokanui Hospital deferred selection properties to the rural residential remediation standard; and

9.3.2: a contiguous area not exceeding 15% of the total land area of the Tokanui Hospital deferred selection properties, to the managed remediation standard."

The THDSP defines the two remedial standards in clauses 9.3.1 (rural residential) and 9.3.2 (managed) are to be chosen in accordance with CLMG 2 (Ministry for the Environment, 2011) or derived through a Site Specific Risk Assessment. Guidance on this decision is provided within CLMG 5 (Ministry for the Environment, 2021) and the NES CS Users Guide (Ministry for the Environment, 2012) which states a Site Specific Risk Assessment can be carried out when soil concentrations exceed Soil Contaminant Standards or does not fit the generic land use scenario used in the guidance documents.

The Site does not fit the generic land use scenarios for a rural residential site and therefore a Site Specific Risk Assessment is being undertaken. The Site Specific Risk Assessment will define the

remedial standards using the site specific soil information gathered during the DSI. These remedial standards will include:

– Protection of human health criteria
– Environmental protection criteria

The Deed specifies that the land will be remediated in accordance with the applicable remedial standards (as per those which will be developed in the Site Specific Risk Assessment), remove all vertical building structures, determine the extent of horizontal infrastructure to be removed and ensure that the site is free of building debris and is stabilised by grassing.

1.5 Scope

The scope of the PSI expands on the purpose and objectives above and includes the following items:

– Review and summarise the findings of existing environmental investigations;
– Address identified data gaps in previous environmental investigations by undertaking a further background information review and conducting a further review of publicly available information for the Site, including Waikato Regional Council (WRC) and Waipā District Council (WDC) files, historical aerial photographs to further understand the nature and extent of identified HAIL at the Site;
– Undertake a site inspection to visually assess the presence of activities or industries listed on the HAIL and identify any evidence of potential contamination;
– Undertake interviews with former site workers to understand site activities that had the potential to cause contamination;
– Refine the CSM developed by AECOM (2019) including confirming primary contaminants of concern, potential migration and exposure pathways and receptors for any new sources of contamination identified by GHD as part of the further information review; and
– Assess the risks to human health and the environment and assess the magnitude of the risk to receptors, in accordance with NES CS regulations 8(4)(b).

2 Site Description

2.1 Site Description and Features

2.1.1 Site Details

The Site is located at 149 Te Mawhai Road, Tokanui, Waipā, approximately 6.2 km south of Te Awamutu. A map of the Site is included in Appendix A, Figure A1.

Table 1 below summarises the Site information.

Table 1 Site information

Attribute	Details
Address	149 Te Mawhai Road, Tokanui, Waipā.
Legal description	Section 1, SO 44852
Area of the Site	79.0175 Hectares
Current property manager	LINZ, on behalf of the New Zealand Government.
Regional council	Waikato Regional Council
District council	Waipā District Council
Zoning	Rural, under the Waipā District Council Plan
Current site use	Vacant buildings and other structures associated to the former hospital; grassed areas of the Site are leased for stock grazing.
Proposed future site use	This is beyond the scope of the Crown. As per the Tokanui Hospital Deferred Selection Process, the Crown will, in carrying out the demolition and remediation works: - comply with all necessary consents and approvals for the demolition and remediation works (9.16.1);. - Remediate the land in accordance with the applicable remediation standard as referred to in paragraphs 9.3 and 9.7 (9.16.2); - remove all vertical building structures from the property (9.16.3.); - 9.16.4. determine the extent of horizontal infrastructure to be removed, subject to Ministerial decisions described in 9.9 (9.16.4); and, - ensure that, where the land has been damaged by the impact of the demolition and remediation works, it is left free of building debris, and is stabilised by grassing (9.16.5.). Future land use beyond the demolition and remediation of the Site is unknown but likely to be a rural residential use (e.g. agricultural land with farm houses).

2.1.2 Hospital Layout

The hospital was, in many ways, a self-sufficient town; it featured patient care facilities, as well as patient wards, housing/accommodation for hospital employees, waste-water treatment plant (WWTP), a swimming pool, a closed landfill (existing disposal site) and substantial roading and underground infrastructure. There are a total of 74 remaining buildings associated with the hospital; several buildings have been demolished prior to LINZ management of the Site. In addition to this there are eight substations, some containing transformers located around the Site and structures associated with stormwater management. Site buildings are detailed in Figure A2, Appendix A.

The Site is predominantly grassed, with asphalted roads and developed areas containing buildings. There are small groups of trees along the roadways and amongst the structures. Access to the Site is

via the main access gate on Te Mawhai Road. There were several other site entrances; these have been removed since the closure of the Site.

The land beyond the north-western boundary of the Site includes six residential tenanted houses; the eastern boundary of the Site adjoins a residential village of ~50 tenanted houses; and a second residential village and decommissioned WWTP, approximately 1 km to the east of site. The residential villages are out of scope of the demolition and remediation project.

A building identification system was adopted in previous investigations and compiled by LINZ in a Building Register. For example, the Former Service Station is designated Building B16. For consistency this naming system has been used in this report and the Building Register is provided in Appendix B.

2.1.3 Site infrastructure

A complex network of horizontal infrastructure to support the hospital operation is found throughout the Site and includes:

- Roading;
- Water (potable, stormwater, sewer);
- Power (underground cables, overhead lines, and eight substations);
- Telecommunications;
- Concrete ducting; and,
- Stormwater catchpits.

Services mostly follow the roads with some water and power infrastructure cutting across grazing areas. FTL has undertaken a detailed assessment to confirm the extent and location of the services throughout the site as part of their horizontal infrastructure assessment (Fraser Thomas, 2023).

2.1.4 Existing Disposal Sites

Waste from the hospital was disposed of at the existing disposal sites, located on the eastern side of the Wharekōrino Stream. Detailed history and intrusive investigation of the disposal sites has been undertaken by FTL. Their investigations have identified exceedances of the NES CS rural residential (no produce) and commercial/industrial guideline values (Ministry for the Environment, 2011), as well as numerous exceedances of the BRANZ asbestos in soil guidelines (BRANZ, 2017) for rural residential and commercial/industrial sites. There were also several exceedances of the Class 1 landfill acceptance criteria (Ministry for the Environment, 2004).

FTL assessed the landfill construction, which found that groundwater was able to come into contact with the buried refuse. Boiler ash was also disposed of in the landfill, which *"likely introduces a significant boron reservoir into the landfill"*, and is *"the likely source of elevated boron levels in groundwater sampled from the landfill monitoring bores and in the adjacent stream."* There are no leachate or landfill gas collection systems, and some capping areas are non-compliant with the existing resource consents. LINZ is working to address these outside of the current scope of works of this project.

Please refer to the report "*Former Tokanui Psychiatric Hospital demolition and remediation existing disposal sites report*" (Fraser Thomas, 2022) for further information.

2.1.5 Archaeological and Cultural Sites of Significance

LINZ are working with archaeologists and mana whenua to attempt to locate and protect sites of cultural and archaeological significance during the demolition and remediation works. Archaeological authority will be applied for under the Heritage New Zealand Pouhere Taonga Act (2014) as required.

2.1.5.1 Urupā (unconfirmed)

Anecdotal evidence of urupā, or burial grounds, are potentially located in the Site, however their location is unknown. Urupā are significant as they contain the bones of the tupuna (ancestors).

2.1.5.2 Mokoroa Hill

Mokoroa is the original name for part of the Tokanui Hospital campus, referring to one of the two swamps which were drained and filled to build the hospital (the other being Tarutuhi). Mokoroa also refers to a taniwha, in this case a kaitiaki. The area was, and still is a very significant and special place for Ngāti Paia.

Mokoroa hill is located at the high point of the Site where Wards F, G and H were formerly located. The area was the site of a papakainga, and Matengaro Te Haate's whare was located here when the land was confiscated for the construction of the Hospital Site (Te Muraahi & Maniapoto, 2021).

2.2 Surrounding land use

The Site is in a predominantly rural area. There are some residential properties to the north and east, as well as the AgResearch Tokanui Dairy Research Farm located to the south-east. The remainder of the surrounding land being in agricultural use, mostly as dairy farms.

There are several wāhi tapu sites located within 500 metres of the Site. These are listed below, with their reference numbers and classifications from the District Plan database where appropriate (Waipā District Council, 2016):

- Waipuna/freshwater springs.
- Cultural sites approximately 400 metres to the north-east of the Site: CH12 (Urupā) and CH33 (Mangatoatoa Pā) and "Rewatu Urupā". These are also referenced as archaeological sites S15/182 (Pā/ Urupā).
- A significant natural area, the Te Mawhai Road willow wetland. This is located to the north of the Site along the Wharekōrino Stream, downstream of the Hospital WWTP. It is included on the Waipa District Plan as a significant natural area (local significance) (Waipā District Council, 2016). It is expected to include habitat for indigenous wetland species (Kessels and Associates Ltd., 2013).
- A forest patch 250 m east of Wharekino stream Tokanui Township (WP333 unprotected).

2.3 Environmental setting

2.3.1 Topography

The topography of the Site is relatively flat, however there are a number of hills and gullies. Elevation ranges between 29 and 46 metres above sea level.

2.3.2 Soils

The Manaaki Whenua Landcare Research 'SoilsMapViewer' (Manaaki Whenua Landcare Research, 2022) identifies two main soil types underlying the Site, Orthic Gley soils (in blue) and Orthic Allophanic (in grey). Figure 2 below, shows the distribution of soils in the region.

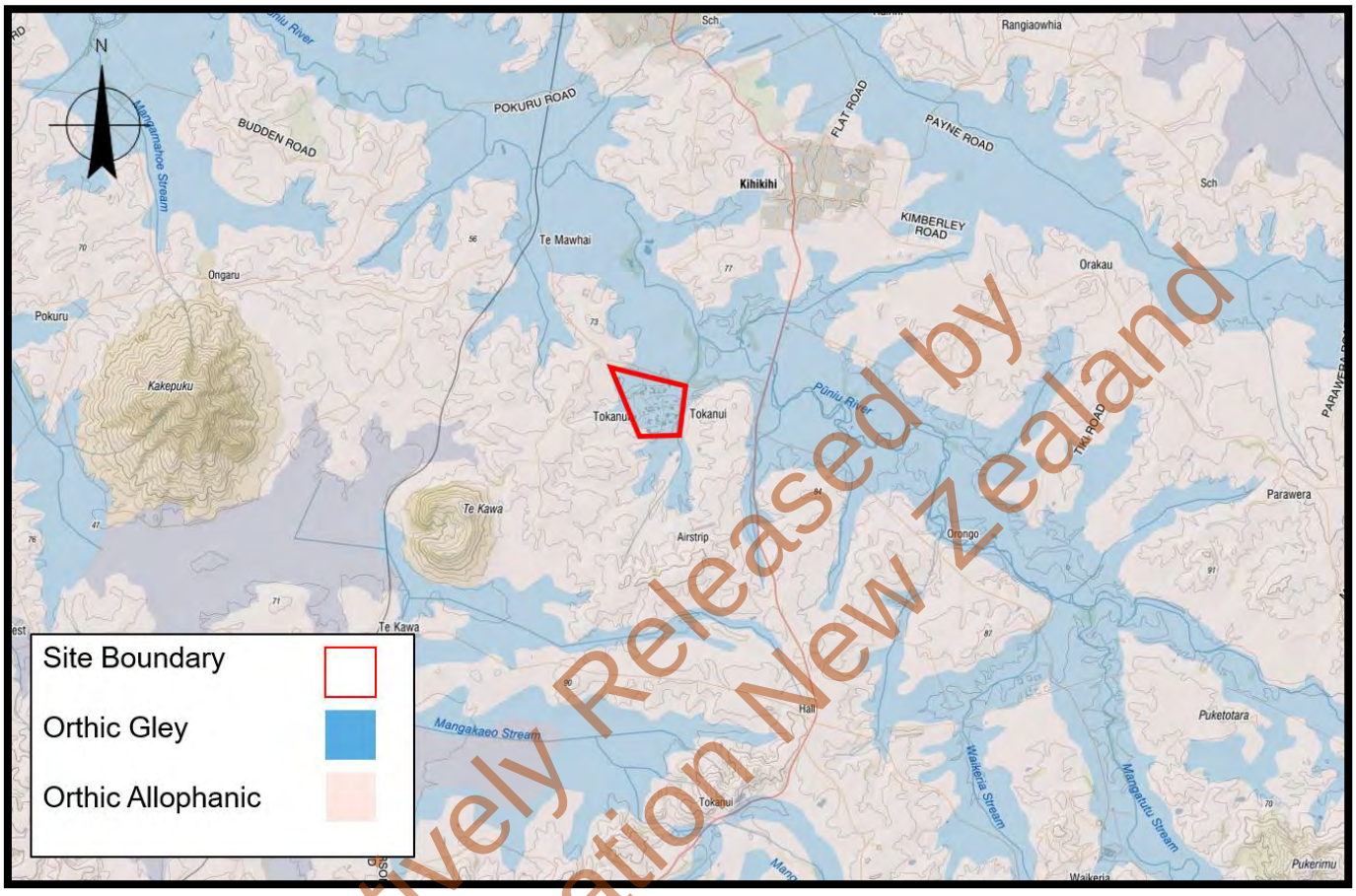

Figure 2 Published soil map

Landcare Research provides the following definitions and descriptors for these soil types:

- **Orthic Gley Soils** are ordinary Gley Soils, usually found on older land surfaces. They are strongly affected by waterlogging and have been chemically reduced. They have light grey subsoils, usually with reddish brown or brown mottles. The grey colours usually extend to more than 90 cm depth. Waterlogging occurs in winter and spring, and some soils remain wet all year. (Manaaki Whenua Landcare Research, 2022)
- **Orthic Allophanic Soils** are deep Allophanic Soils, dominated by allophane (also imogolite or ferrihydrite) minerals. These stiff, jelly-like minerals coat the sand and silt grains and maintain porous, low-density structure with weak strength. The soils are identified by a distinctly greasy feel when moistened and rubbed firmly between the fingers. The soil is easy to dig and samples crumble easily when crushed in the hand (Manaaki Whenua Landcare Research, 2022).

Due to their large specific surface area and small particle size, allophanes are very reactive and have a high ion exchange capability This may lead to charged contaminants such as metal ions adsorbing to the surface of these grains (Parfitt, 1990) (McLarren & Cameron, 1996).

2.3.3 Geology

The Institute of Geological and Nuclear Science (GNS) 1:250,000 map of the Waikato (Edbrooke, 2005) shows two main geological units underlying the Site:

– The regional geology consists of the Hamilton Basin, a thick alluvial deposit (approximately 300 m), comprising:
  - Typically unconsolidated alluvial sediments (Middle Pleistocene – Late Pleistocene river deposits of the Piako subgroup of the Tauranga group, described as locally derived pumiceous clays, sandy clays and gravels).
  - Distal ignimbrite deposits of the Tauranga group (Early Pleistocene – Middle Pleistocene river and igneous deposits of the Walton subgroup of the Tauranga group, being alluvium dominated by primary and reworked non-welded ignimbrite).
– The basement rock underlying the Hamilton Basin consists of faulted greywacke (indurated sandstone, siltstone and mudstone) of the Waipapa Terrane (late Jurassic to early Cretaceous, approximately 145- 180 million years old) (Edbrooke, 2005).

Figure 3 below shows the underlying geology of the area.

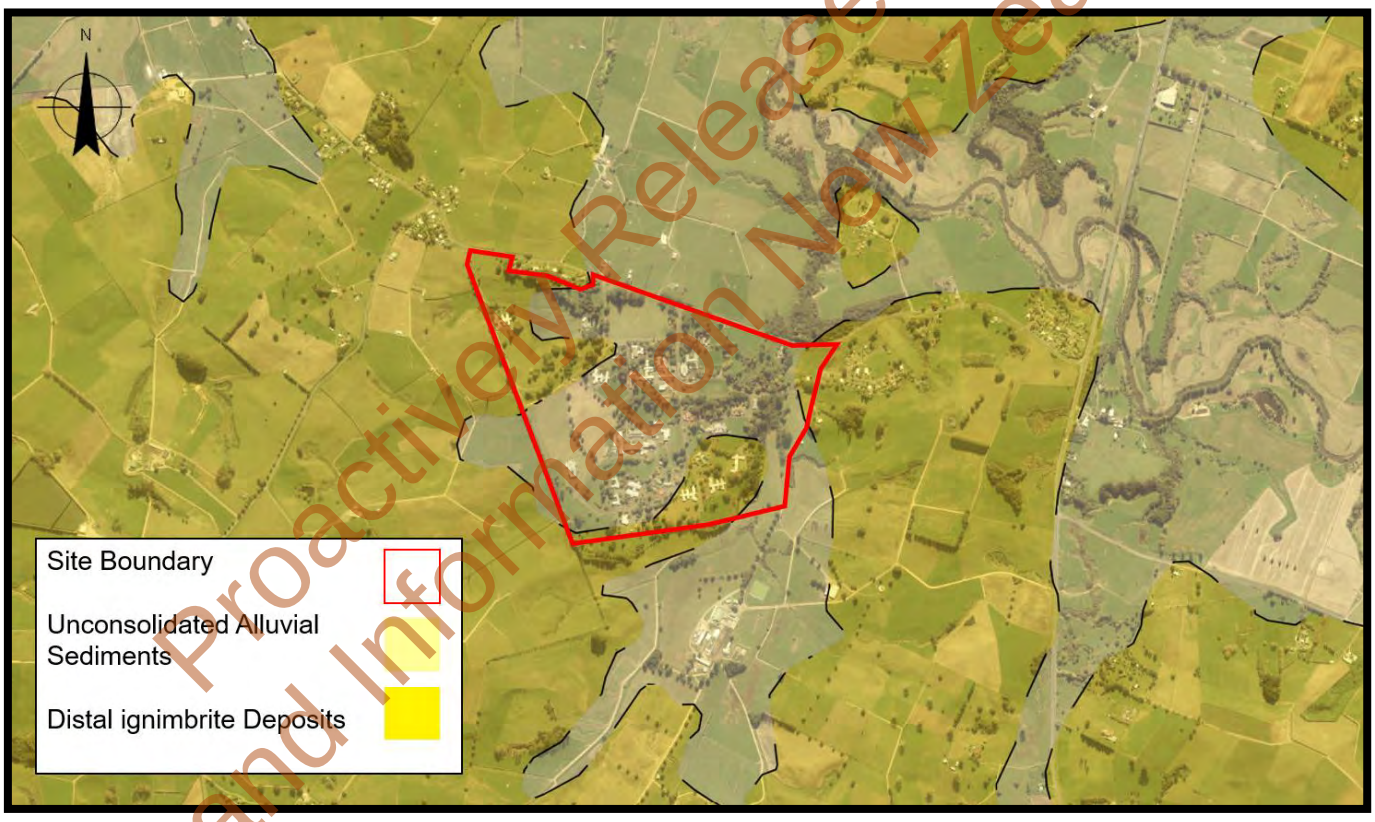

Figure 3 Published geological map

Site observations of sub-surface geology documented during previous investigations are discussed further in Section 3. These observations broadly confirm the published geology underlying the Site as predominantly clays and silts.

Lithology records from well construction for five wells within 500 metres of the Site boundary were also obtained and describe a shallow clay layer, with underlying Pumices and Gravels.

2.3.4 Hydrogeology

WRC aquifers

The Waikato Regional Plan defines the region's aquifers. They are typically based on catchments rather than on hydrostratigraphy (distinct hydrogeological units). The Site is located within the area classified by WRC as the Waipa Aquifer under Section 3.3 of the Waikato Regional Plan (Map 11) (Waikato Regional Council, 2012). This aquifer underlies an area of approximately 1,420 km^2 within the Waikato Region.

The southern end of the Hamilton Basin forms part of the Waipa Aquifer. The Waipa Aquifer comprises multiple, undefined 'water-bearing units', not all of which are productive aquifers. The most productive water-bearing units consist of well-sorted lenses of sand and gravel within the Tauranga Group alluvial sediments. However, these river valley type deposits are, by nature, variable in continuity (spatially and vertically). This results in many zones of higher permeability, rather than single continuous aquifers (Schofield, 1972). This makes it difficult to reliably place high yielding wells in the Waipa Aquifer.

Previous attempts to correlate bore logs with each other are generally not possible, and the Tauranga Group sediments may be considered hydraulically as a single hydrogeological unit with preferred flow paths defined by zones of permeable sediments (Perch & Marshall, 1988).The Waipa Aquifer is therefore considered to be a regional aquifer, comprising groupings of multiple units of undifferentiated unconfined and leaky aquifers.

Potable water

The AECOM tank pull reports (AECOM, 2018c) (AECOM, 2018e) state that the Site is supplied by a water source from the Mangaukia Stream near Pirongia, approximately 14 km north-west of the Site.

The Horizontal Infrastructure assessment undertaken by FTL (Fraser Thomas, 2023) states that the hospital is supplied from the DN200 AC Trunk watermain. The watermain was installed sometime in the late 1970s or early 1980s and runs from the Te Awamutu Public water supply system at Puniu Road and travels through farmland to the water supply reservoirs, located to the west of the Site. The hospital water supply previously entered the Site directly from the west, connecting to the water treatment plant. However, this main was replaced in 2021 with a new main running from the reservoirs along Te Mawhai road. An excerpt of the route from the FTL is shown below.

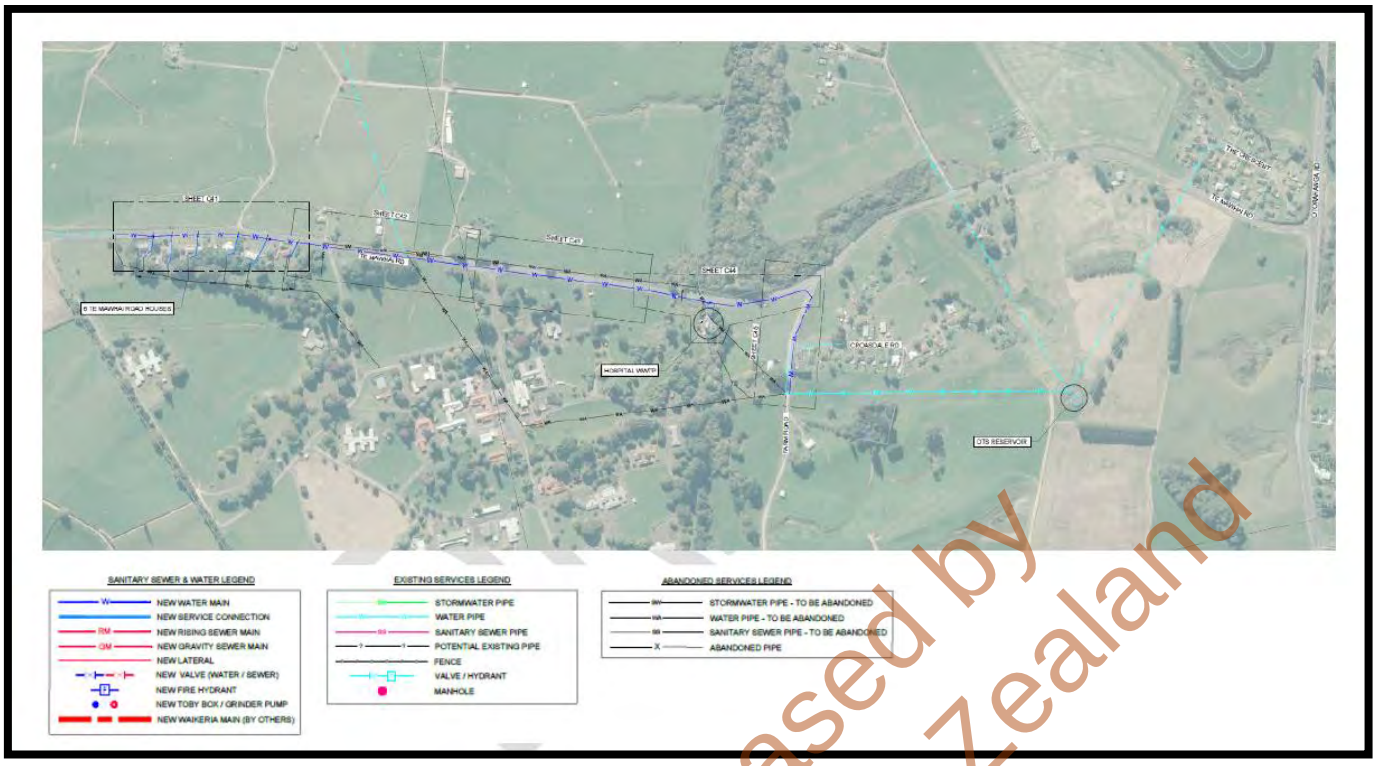

Figure 4 *Hospital water supply*

Borehole search

A search of the Wells Aotearoa New Zealand website (Te Uru Kahika, 2022) indicated a total of six groundwater bores were located within 500 metres of the Site. The bore locations are shown in Figure 5, below. The water level, screening depth, and consented use (if known) are shown in the table below.

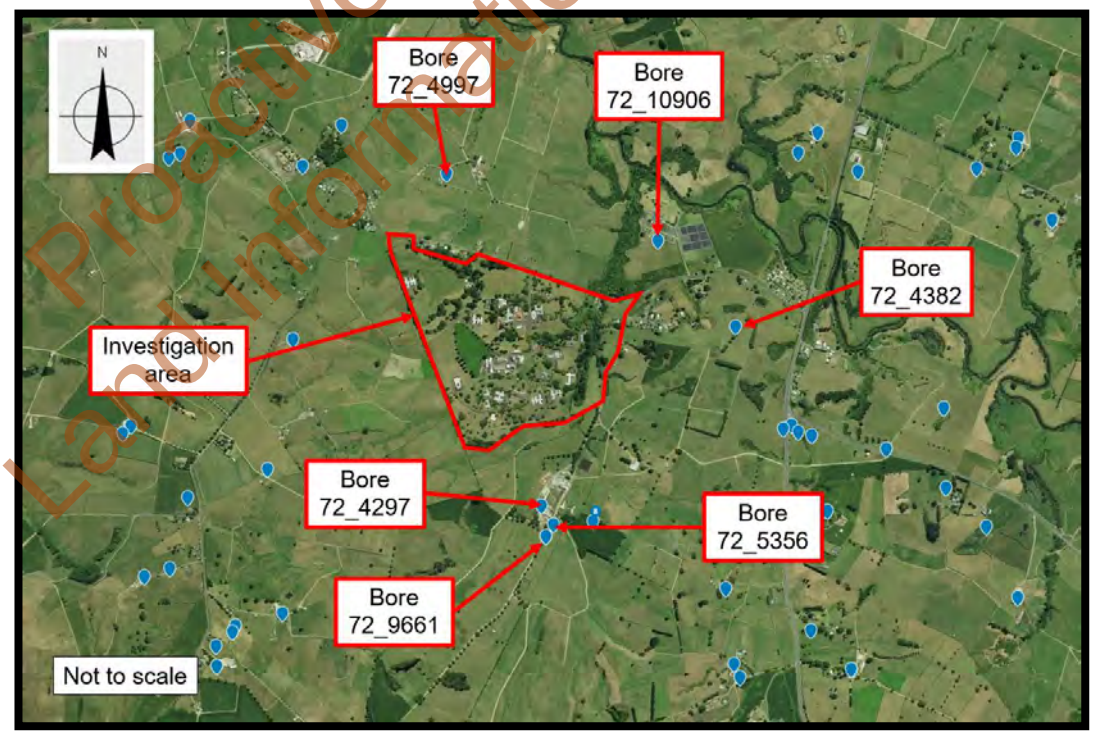

Figure 5 *Groundwater well locations*

The Wells Aotearoa New Zealand website (accessed on 19 August 2022) states that none of these wells supplies drinking water.

Groundwater observations made during the AECOM DSI investigation ranged between 1.3 and 2.4 m bgl. These measurements were from test pits within the commercial area of the Site and were collected between late May and September, implying that these are likely to be high winter groundwater levels (AECOM, 2019).

Annual monitoring of bores is undertaken by WSP as part of a resource consent (Number 102269) associated with the former disposal sites on the east side of the Wharekōrino Stream. Two bores known as P2 and P7 are sampled with groundwater levels measured. Groundwater is sampled to coincide with high and low groundwater levels (generally September and April). The WSP annual reports from 2020 and 2021 (WSP, 2020) (WSP, 2021) both indicated that the P2 and P7 bores were dry. Groundwater samples were collected from P2 and sent for laboratory analysis in both 2018 and 2019 (WSP, 2018) (WSP, 2019a), but no groundwater levels were recorded in either of the reports. The AECOM 2019 data is therefore the only groundwater level data within the Site.

No assessment or investigation to confirm groundwater flow direction has been undertaken to date; however, the regional groundwater is inferred to flow in a general northerly direction, towards the Pūniu River. Localised groundwater is inferred to flow to the east towards the Wharekōrino Stream, which transects the Site.

2.3.5 Surface water

The nearest body of surface water, the Wharekōrino Stream, flows south to north and transects the eastern portion of the Site, flowing into the Pūniu River ~600 metres to the north.

The Wharekōrino stream is sampled twice yearly as part of the Tokanui Closed landfill resource consent (Number 102269) to assess the potential impacts from the closed landfills on the stream. The monitoring reporting states that there is a possible link between the landfills and an increased level of boron in the stream. However, these boron levels are *"well below the ANZECC 2000 guidelines"*. Nitrate levels are above the ANZECC 2000 guidelines (95% species protection) however the report concludes that *"nitrate unput occurs upstream of the landfill"*. Iron levels are higher, and are in exceedance of a 100 year irrigation guideline, however the hearings committee found that due to the low levels of flows the stream is *"highly unlikely to be used for irrigation purposes"*.

The Opus report (Opus, 2015) states that several drainage ditches across the Site flow into a larger gully, oriented west to east, which leads into the Wharekōrino stream. The DSI (AECOM, 2019) identified a low-lying area to the southeast of the bus shelter and carpark building (B09) as a suspected area where stormwater would collect.

2.3.6 Stormwater

A survey of horizontal infrastructure undertaken by FTL (Fraser Thomas, 2023) included an assessment of the stormwater system at the Site. The majority of stormwater is routed to a retention basin in the centre-east of the Site and then to a tributary of the Wharekōrino Stream. This is known as the Trunk Stormwater System. Remaining stormwater was found to discharge via a separate discharge point or was cross connected to other services (e.g. discharged to the sewer). Key findings are as follows:

– The majority of site drainage discharges to the Trunk Stormwater System. This also takes drainage from land to the west outside of the Site and flows into the stormwater retention basin which drains to the east via a stormwater grate, identified as SWMH (NOGISID6). This then discharges eastwards to a tributary of the Wharekorino Stream.

– Building 26, Former Wards 21/21A: this area drains directly to the Wharekorino Stream via a separate drainage outlet.
– Building 03: CCTV shows drainage heading to the north before being lost in a flooded section. The discharge point is unknown.
– Building 55: believed to have a cross connection to the wastewater pipe at this location.

Direct stormwater discharge to surface water is therefore limited to two locations, the discharge from the Trunk Stormwater System via the stormwater retention basin, and the direct discharge from Building B26.

Figure 6 below shows the stormwater discharge points from the Site.

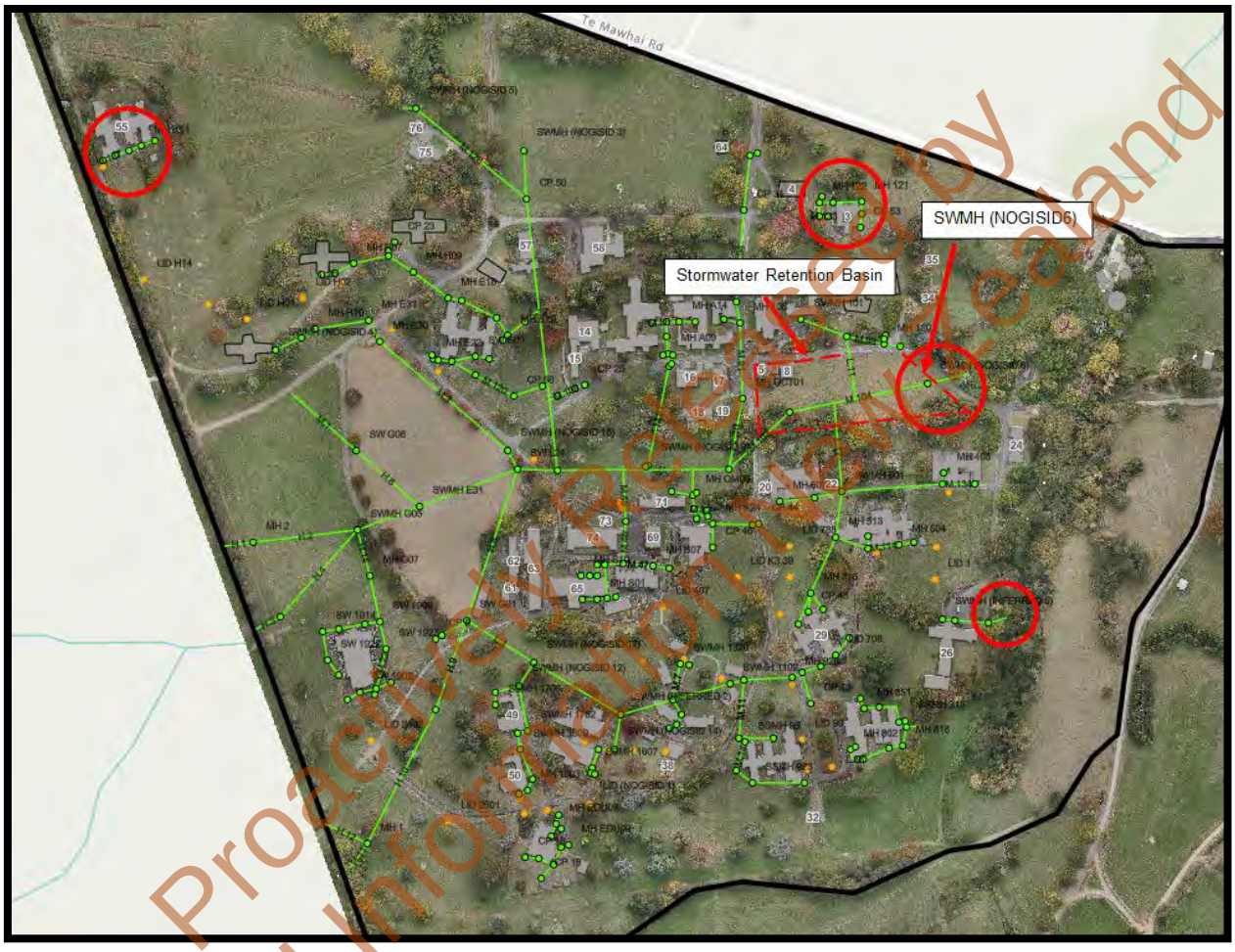

Figure 6 Stormwater discharge points

An interview with the former site manager also noted that many attempts at stormwater management were made including the installation of subsurface tile drainage in the playing field and planting of totara stands. Site drainage was extensively upgraded and replaced in the 1980s, including the installation of culverts draining across the road to the north.

2.3.7 Waste Water Treatment Plants

Wastewater (sewage) generated at the Site and associated residential villages was previously connected to the Hospital WWTP, located within the Site boundary accessed via Te Mawhai Road, where it was treated before discharging to the Wharekōrino Stream. A second WWTP, located off The Crescent approximately 1 km to the east of the Site, is not included in the scope of the demolition and remediation project and has been investigated separately (GHD, 2023).

The Hospital WWTP operated under WRC resource consent APP136247 (discharge permit to discharge treated domestic wastewater to the Wharekorino Stream) until it was decommissioned in 2021 and the associated resource consents discharged. As part of decommissioning, the residential houses associated to the Tokanui Hospital were connected to a pipeline to carry wastewater to Te Awamutu Municipal WWTP, operated by Waipā District Council. An underground pump station was installed within the Hospital WWTP in the location of the drying beds. Infrastructure associated to the Hospital WWTP was removed in 2021, including settlement and filter tanks. There were no oxidation ponds associated with the WWTP. The remaining trickle filter in the southern portion of the plant will be removed as part of the demolition and remediation project.

2.4 Site Inspection

The GHD SQEP undertook a site walkover on 11 and 12 August 2022. A summary of the findings of this walkover are recorded below in Table 2. Full details including a photographic log are included in Appendix C.

Table 2 Site Walkover Summary of Key Observations

Building/area	Observations
B8: Dentist building	A discharge pipe routed from inside the building was observed to exit on the eastern side of the building at the edge of the concrete pad. This pipe discharges to ground.
B16: Petrol station	The concrete island and some pipework is still visible. A manhole is located between the island and the building. Previous sampling undertaken by AECOM as part of the Z Energy Ltd. tank removal report have shown that the material beneath the concrete island and fuel lines had been impacted by the operation of the fuel tank but were suitable to remain on site. The workshop part of B16 still has vehicle inspection fits, these were filled with water. Some minor fly tipping was observed to the east, which shows some evidence of burning.
B57: Swimming pool	Evidence of chemical storage was observed in the form of drum storage in one of the outer buildings. This is highly likely to have been a pool-cleaning chemical, but this could not be confirmed via drum labels.
S2: Substation 2	Chicken wire is placed across the door. Equipment, including transformers can be observed inside.
Gully to the south of B8	The gully has a culvert which enters from the eastern side. Appears to be a surface water collection area. This location was sampled by AECOM as part of their site investigation.
B59: Gardeners Shed	Contains old, empty Intermediate Bulk Containers (IBCs) and drums. Currently used by the farmer for storage. An old concrete pad near the door with weed spray storage signage on it on the eastern side.
B61: Shed 11	A small square building in the commercial area of the Site. It has no windows and has vents on the outside. Initially not accessible at time of initial site inspection, but subsequent access has shown it contains a small above ground tank (potentially an air compressor) and associated pipework. Its exact use is unknown. The current utility service plans for the area do not show a piped connection to this building. Some minor oil staining on the internal floor was evident.
B63: Workshop	There is a large extraction chimney to the back of the workshop, which is a former wood working area. Sawdust was observed on the ground.
B65: Store	An old UST was present in the grass. The tank vent is still visible on the exterior of the building. The bowser footing is visible under the canopy.
B66: Assistant engineers office	Building has a vehicle ramp, with oil change/service pit outside. Oil filters were observed on the ground underneath the pit.
B67: Incinerator Shed 8	A small shed with a chimney. External pipe lagging on the northern external wall appears to contain asbestos fibres.
B68: Main boiler house	A hopper for coal was located on the eastern side. A sump is located beside the stairway below ground, filled with liquid and old plastic containers. On the northern side an old AST bund with pipework above ground entering the building. Old transformer units were located within the building.
B73: Shed 7	Appears to be a pump house associated with the laundry. The discharge point from the shed is unknown. There is a concrete plinth inside which has oil staining. A pipe tunnel with concrete paver covering in the paddock to the north appears to connect to the Laundry Building (B74). A scrub area in the paddock appears to have a discharge point within it, with stepped concrete surrounding it. This is heavily overgrown and may just be a stormwater drainage point.
B74: Laundry	A long building with a high glass roof. GHD was unable to access the building due to the risk of glass dropping inside. There are small concrete channels exiting the base of the building towards B73. On the western side of the laundry building is a blue stick up pipe, which looks like a monitoring well without a cap. There are piles of asphalt scrapings in the same area. On the south side near the pedestrian entrance there are downpipes to the ground which come from the inside of the building and may be a possible area of discharge to the ground.

Building/area	Observations
B35: Shed 1	A corrugated iron shed with no internal floor. Inside is some internal wooden racking and concrete structures. Immediately to the west are the ruins of a larger building, which includes areas of concrete lined below ground pits.
Area between B34 and B35	A number of concrete foundations, believed to be from former glasshouses.
Eastern/ south-eastern edge of paddock	A linear concrete structure leading to the paddock fence in the direction of the stream. The use of this structure is unknown but may have been used as a livestock dip.
South-east of the paddock	An old chimney base and other depressions and hummocks are present in the ground.
WWTP Seepage	The WWTP pump station appears to discharge to the Wharekōrino stream just south of the main road. Seepage was observed near the main discharge pipe, flowing from an area showing some ground collapse.
WWTP Discharge	During the walkover it was noted that a concrete discharge pipe flows into the Wharekōrino Stream from the pump station. This was associated with visibly poor water quality and algal growth.

3 Historical Site Use

3.1 Review of Existing Investigation Reports

The following environmental reports have been prepared for the Site previously:

- Opus (2015) *Tokanui Psychiatric hospital: site scoping, contamination preliminary site inspection report*.
- AECOM (2018a) *Tokanui Hospital – Environmental Compliance Observations.*
- AECOM (2018b) *Former Tokanui psychiatric hospital – AST removal and mechanical pit dewatering.*
- AECOM (2018c) *Underground petroleum storage system removal at the former Tokanui Hospital*.
- AECOM (2018d) *PSI gap assessment.*
- AECOM (2018e) *Underground petroleum storage system decommissioning at Tokanui Hospital*.
- AECOM (2019a) *Tokanui Hospital: Detailed site investigation (draft).*
- WSP (2019b) *Tokanui Village and Hospital Waste-water Upgrade Detailed Site Investigation.*
- 4Sight (2022) *Asbestos and lead paint demolition survey report*

A map summarising the historic sampling locations at the Site in the above reports is included in Appendix A, Figure A4.

3.1.1 Tokanui Psychiatric Hospital: Site Scoping, Contamination Preliminary Site Inspection Report, (Opus 2015)

A PSI report was undertaken by Opus for the Ministry of Justice as part of preparing a Demolition Plan for the Site.

The Opus PSI describes an initial contamination assessment of the site and potential effects on the proposed site use (pasture) and was intended to be include as part of the demolition plan. The Opus PSI included a review of the Site's history to understand likely HAIL activities at the Site, to identify key Areas of Concern (AoC) and likely Contaminants of Potential Concern (CoPC) arising from the identified HAIL activities. These are reproduced in Table 3, below. The investigation also included the development of a CSM (source-pathway-receptor linkages), shown in Table 4 below.

Table 3 Opus identified HAIL activities

Contaminant source	Activity	Opus List of Potential Contaminants
Buildings	Old paints from buildings flaking to ground	Metals (primarily lead)
Buildings	Asbestos containing materials	Asbestos fibres
Petrol station and adjacent Garages	Leaking oils / fuel to ground from underground storage tanks, pipework, pump filling areas, drums within petrol station and adjacent workshops. Also, spillages and leakages of oil within mechanics inspection pit. Potential for quantity of solvents and lubricating oils to have been used as part of workshop operations, also spilling, and leaking to the ground.	Metals (lead from fuel) Hydrocarbons Polycyclic aromatic hydrocarbon Volatile organic compounds
Vehicle Garages, Central Complex	Spillages and leakages of oil and solvents that may have been stored in the garages. Spillages of oil and solvents within mechanics inspection pit. Potential for quantity of solvents and lubricating oils to have been used as part of workshop operations, also spilling and leaking to the ground.	Metals Hydrocarbons Polycyclic aromatic hydrocarbons Volatile organic compounds
Main boiler building	Spillages and leakages of oils from the above ground storage tanks Spillages and leakages to ground surface of oils from heavy machinery within main boiler room	Hydrocarbons Polycyclic aromatic hydrocarbons Asbestos lagging
Storage bays next to engineer's office – central complex	Spillages and leakages of oils from the oil drum Ashes from the burn area in the storage bay	Hydrocarbons Polycyclic aromatic hydrocarbons
Fly tipping (next to fitter building)	Potential asbestos containing materials Old paint and treated timbers exposed to weathering	Asbestos fibres Detritus materials (e.g., glass, plastics, tyres) Metals Pesticides
Incinerator - Shed 8	Ashes from incinerator process	Metals Polycyclic aromatic hydrocarbons Dioxins
Electricity substations	Spillages and leakages to the ground of transformer oils and oils associated with machinery	PCBs
Former building areas	Potential ACMs and painted timbers within demolition rubble that may remain over the found surface around the former building footprint	Asbestos fibres Metals (lead)
Workshops	Potential for oils to have been used as part of workshop operations, spilling and leaking to the ground	Metals Hydrocarbons Solvents
Gardener building / sheds and fields around sites	Potential spillages and leakages of pesticides and herbicides that may have been stored in the gardener building Application of pesticides and herbicides over the hospital grounds and farmed fields	Metals Pesticides/herbicides

Table 4 Opus identified source-pathway-receptor links

Source	Plausible pathways	Potential receptors
Potential contaminants associated with buildings in general (asbestos/metals from paint)	Ingestion/inhalation Dermal contact Leaching	Site visitors Demolition contractors Surface water and aquatic life Groundwater Farmland workers
Potential contaminants associated with: • Petrol station • Garages • Boiler building • Storage bays • Incinerator building • Electricity substations • Workshops • Areas of fly tipping • Gardener buildings/sheds	Ingestion/inhalation Dermal contact Leaching	Site visitors Demolition contractors Surface water and aquatic life Groundwater Farmland workers
Potential contaminants associated with application of pesticides and herbicides over hospital grounds/fields	Ingestion/inhalation Dermal contact Leaching	Site visitors Demolition contractors Surface water and aquatic life Groundwater Farmland workers

Opus concluded that there is a likelihood that contamination is present beneath parts of the site that could, if not managed properly during demolition, pose a risk to demolition contractors, groundwater, aquatic life and farmland workers.

3.1.2 Tokanui Hospital – Environmental Compliance Observations (AECOM 2018a)

This report outlined the environmental compliance issues which AECOM recommended to LINZ. As part of this report a site visit was undertaken in April 2018 to:

– undertake a site walkover and observe immediate environmental risks
– undertake air monitoring of LINZ personnel
– assess if site visit protocols needed to be changed
– determine if controls or restrictions on activities undertaken by maintenance contractors should be implemented
– determine if restrictions on grazing are required

General environmental observations from the walkover noted:

– Access hatches to the underground conduit system, which contained asbestos lagging
– Flaking paint on the buildings
– Some damage to buildings
– Numerous outbuildings contained smaller boilers, which contained oil to heat the radiators
– A large rubbish area within the single complex adjacent to the fitter building which may contain ACM and other hazardous materials

– No labelling of asbestos was observed

Immediate actions recommended included:

– A hazardous materials register to assess the likelihood of further underground storage tanks or other hazardous materials
– The removal of USTs, drums and other hazardous substances from the site
– Development of a site health and safety plan covering all the activities at site, including an induction process
– An asbestos management plan is put in place for the site
– Cordons are established around buildings to restrict access
– Underground access hatches are locked and/or asbestos warning labels are installed
– The fly tip area should be cordoned off or the material removed

Other recommended actions included

– Confirming the non-essential services at the site are terminated and capped
– That LINZ investigates obtaining a global consent for the proposed demolition activities, which would need to highlight the following:
  - Known HAIL activities
  - Extent of potential soil disturbance activities
  - Soil sampling protocol
  - Retirements around the contaminated land management plan.

Many of these recommendations subsequently lead to the reports undertaken in Sections 3.1.3 – 3.1.7.

3.1.3 Former Tokanui Psychiatric Hospital – AST Removal and Mechanical Pit Dewatering (AECOM 2018b)

This report documents AECOM's supervision of a contractor (ECL Group Limited) engaged to:

– Empty and remove two above ground storage tanks of unknown volume adjacent to the former Boiler House (building B68)
– Empty and remove four waste oil drums and containers outside the former Assistant Engineer's Office (building B66) and within the former petrol station (building B16)
– Dewatering the mechanical pit in the former petrol station.

Works were undertaken on 30 and 31 July 2018. A total of 16,000 litres of waste oil and water was removed from the B68 ASTs, waste oil drums from B66 and B16 and water from the B16 mechanical pit. This volume also includes the dewatering of the UST from B65 (The Store), which was being removed from Site at the same time (outlined in Section 3.1.4).

No sampling or other analysis of soil or water were undertaken as part of this investigation. Waste disposal receipts were included in the report.

3.1.4 UPSS Removal Former Tokanui Hospital (AECOM 2018c)

This report documents the removal of an UPSS located near the former store building (B65), the associated soil sampling and a risk assessment.

A 5,000-litre steel UST in an unlined pit and associated fuel lines were removed on 30 and 31 July 2018 by ECL Group. The fuel line under the awning running to the former fuel dispenser remained in place. The tank was observed to be in fair condition. A vent line attached to the adjacent building was left in-

situ but was removed below ground level. A slight hydrocarbon odour was noted from the base of the tank pit, but no visual evidence of impacted material was noted.

Ten soil samples were collected during the removal. Six were analysed for TPH and BTEX compounds and a heavy metals suite. None of the soil samples representing natural soil remaining at the Site exceeded soil acceptance criteria protective of residential/agricultural land use and maintenance/excavation workers (Ministry for the Environment, 2011). Two additional samples were taken from the stockpiled material and analysed for TPH, BTEX and a metals suite. These samples were also compliant with the MfE petroleum criteria discussed above (Ministry for the Environment, 2011) however both stockpiles were removed from Site regardless.

Approximately 20 tonnes of hydrocarbon impacted soil and bedding material was removed from the southern wall of the tank pit site and disposed of at the Hampton Downs Landfill. Waste disposal receipts were included in the report.

3.1.5 PSI Gap Assessment (AECOM 2018d)

The purpose of this report was to review the Opus PSI (2015) and identify any gaps in the process in which the investigation was undertaken that may have led to potentially contaminating activities or other relevant site features not being identified, and, to make recommendations on how these gaps could be filled. The report was not intended to fill the identified data gaps.

The report recommended a review of historical aerial photography, a more thorough review of WDC and WRC property files and interviews with former site workers. Additionally, the compilation of a full site inventory, including a building-by-building assessment of potentially contaminating hazardous features or activities was recommended.

Additionally, a site walkover was undertaken by AECOM and observed:

- The majority of the buildings at the Site were in some state of disrepair.
- Concrete footings were observed to the South of Ward D (B15). A building may have been present in this location. (GHD notes that based on the aerial photography (as discussed in Section 3.2.1) no building has been present in this location.)
- It could not be confirmed what the exact uses of the Fire Station Café (B69) and the Store (B65) were.
- A boiler may have been present in Ward J (B55) and Occupational Therapy 1 (B17) buildings.
- Fluorescent lights are present in most buildings (these can contain hazardous components and the fluorescent tubes need appropriate disposal).
- A chimney was present on one of the Substations.
- It was not established:
  - whether the laundry at the Site included dry cleaning;
  - what the extent of the activities was at the dental surgery;
  - what activities occurred in the workshops at the Site; and
  - if pharmaceutical manufacture was undertaken at the Site.
- The extent of fly tipping at the Site was greater than identified in the Opus PSI.

AECOM made the following updates to the previous Opus observations of bulk storage of chemicals at the Site:

- The former service station (B16) underground storage system had been removed since the Opus PSI (see Section 3.1.3).

– The UST by the southern side of the Store (B65) had been removed since the Opus PSI (see Section 3.1.5).
– The Above-ground Storage Tank (AST) previously located by the boiler buildings (B68) had been removed since the Opus PSI (see Section 3.1.6).
– The swimming pool shed (B57) – Approximately 4,500 litres of chemicals were observed but not identified by AECOM.
– Potential chemical storage was observed at the water treatment plant (B7) and Substation 7.

3.1.6 UPSS Decommissioning at Tokanui Hospital, AECOM (2018e)

This report documents the decommissioning and removal of an UPSS from the former petrol station (Building B16), the associated soil sampling and a risk assessment. The work was commissioned by Z Energy Ltd as owner of the tanks.

Two 10,000 litre steel tanks (one petrol, one diesel) in good condition, installed circa 1979, and associated lines and dispensers were removed in July 2018 by Petroleum Services Limited. No soil discolouration was observed within the tank pits or UPSS components.

Hydrocarbon odours were noted in the excavated bedding material that supports the tank and approximately 31.4 tonnes of minor hydrocarbon impacted material was removed from the Site and disposed of at the Hampton Downs Landfill. Disposal receipts were included in the report.

36 soil samples were collected from the walls and base of the tank pit, tank pit bedding material, and beneath the associated lines and dispensers. A total of 21 samples were analysed for TPH and BTEX. None of the soil samples representing the natural ground remaining at the Site exceeded soil acceptance criteria (Ministry for the Environment, 2011).

The excavation was reinstated with GAP40 Gravel. A steam pipe, constructed of potentially asbestos containing material was observed during excavation and remains in place.

Due to the distance of surface water bodies from the underground storage tank (UST) removal area hydrocarbon soil impacts from the UST were not assessed by AECOM against the soil acceptance criteria for protection of groundwater quality.

3.1.7 Tokanui Hospital: DSI (draft) (AECOM 2019a)

AECOM undertook a DSI of the Tokanui Site in 2019. This investigation included:

– An investigation of the commercial area of the Site
– An investigation of the green areas of the Site (the grassed areas predominantly along the western and southern boundary of the Site
– Collection of soil samples from the halos of 13 existing and one former building
– Collection of soil samples from a low-lying area of the Site which in AECOM's assessment may be an area where stormwater collects.

AECOM's approach was to investigate the soils associated with selected features and areas of the Site and use them as a representative sample of the whole Site. These fell into four categories:

– Green space and undeveloped areas, then used for stock grazing
– The 'commercial area' of the Site, where the majority of identified HAIL activities were undertaken when the Site was operational
– The buildings, a selection of which were investigated
– A low-lying area where stormwater potentially collects

Buildings halos were investigated to assess the lateral and vertical extent of the potential impacts. Samples were collected between 0.5 – 2.5 m from the building edge, with additional sampling at some buildings at a distance of 6.5 m from the building edge. Samples were collected from depths of 0, 0.25 and 0.5 m bgl.

As part of the investigation, buildings were originally grouped by exterior cladding, however, as investigations progressed it was found that roof type and condition of guttering had the largest influence on halo contamination, and the investigation approach was modified. Building groupings are shown in Table 5below. Buildings where the halo was assessed are shown in bold.

Table 5 AECOM building groupings

Group	Building features	Building numbers
Group 1	Asbestos roof, all guttering conditions, all cladding types	2, **29**, **58**, 63, 65, 68, 69, **74**.
Group 2	Painted iron roof, no/damaged guttering, all cladding types	5, 6, 7, 11, **13**, 15, 17, **18**, 19, 21, 22, 23, **24**, 30, **33**, 35, 36, 37, 38, 39, 42, 47, 48, 52, 57, 59, 60, 61, 62, 66, **73**.
Group 3	Painted iron roof, intact guttering, all cladding types	8. **41**. **43**. 44. 45. 46. 51. 75
Group 4	Un-painted iron roof, all guttering conditions, painted cladding types	1, **16**, 20, 27, 34, 53, 54, 67, 71.
Group 5	Un-painted iron roof types, all guttering, non-painted cladding types	3, 9, 10, 12, 25, 26, 28, 31, 40 ,**49**, 50, 55, 56, 70, 72, 76.
Group 6	Substations	S **1** - 8
Group 7	Former buildings	4, 32, 52, 64, Former Wards F, **G**, H, Former Nurses Home

Samples were collected from test pits and from manual excavations around the buildings.

AECOM adopted the following guidelines to assess the potential risk to human health from contaminants at the site:

– Canadian Council of Ministers of the Environment (CCME), 1999, Canadian Environmental Quality Guidelines for the Protection of Environmental and Human Health – Agricultural land were adopted as soil guideline values for metals and metalloids at the Site.
– BRANZ Asbestos Guidelines were adopted for use as soil guideline values for asbestos at the Site.
– Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand were adopted for use as soil guideline values for hydrocarbons at the Site.

Waikato region upper limit soil background concentrations were adopted as background values for the investigation.

AECOM undertook an assessment of soil results using guidelines appropriate for a future agricultural land use.

Field screening of samples was undertaken with an X-ray fluorescence (XRF) detector and photo-ionisation detector (PID). Results of the XRF screening for lead in the building halo were compared to the results of laboratory analysis and the correlation coefficient (Pearson's) was calculated for each building. The range of results showed a "moderate to strong correlation". AECOM also noted that "*in most instances (82%) the XRF underestimated the 'true' lead concentration reported by the laboratory*".

The haloes of all building groups had exceedances of background concentrations of lead, and almost all building groups had exceedances of adopted human health guidelines for asbestos or lead. The extent of the exceedances was not vertically or horizontally delineated in the majority of building halos.

Test pitting in the green space of the Site showed exceedances of background concentrations for several metals, and an exceedance of the adopted human health guidelines for copper.

Test pitting in the commercial area of the Site showed exceedances of background concentrations for several metals, and an exceedance of the adopted human health guidelines for arsenic, chromium, copper, and nickel.

Test pitting in the stormwater collection area of the Site showed exceedances of background concentrations for several metals, and an exceedance of the adopted human health guidelines for lead and copper.

The Canadian guidelines used in the AECOM DSI make different exposure and receptor assumptions (Canadian Council of Ministers of the Environment, 2006) than the Tier 1 Rural Residential exposure scenario under the NES CS, and therefore exceedances of the Canadian guideline values may not be relevant to the New Zealand context and not correspond with exceedances of the NES CS for a rural residential site. Further assessment of their use is planned in the Tier 2 risk assessment and development of remedial targets which form the later stages of the current investigation.

3.1.8 Tokanui Village and Hospital Wastewater Upgrade Detailed Site Investigation (WSP 2019b)

WSP undertook a DSI of the Hospital WWTP ahead of the WWTP decommissioning. This included:

– Undertaking a desktop review to assess the presence of HAIL activities at the WWTP site
– Collection of 12 samples from six locations and analysis for a suite of contaminants identified during the desktop assessment

The desktop identified the potential use of oils and solvents at the WWTP, biological waste from the waste-water treatment process, and asbestos.

12 samples were collected from six locations in the northern half of the WWTP site from the area around the drying beds prior to works being upgrade works being undertaken. These samples were analysed for a metals suite, volatile organic compounds (VOC) and asbestos and compared to the applicable guideline values for a commercial/industrial land use.

Results from metals were found to be above background concentrations, but below applicable human health guideline values. VOCs and asbestos were not detected in any of the samples.

3.1.9 Asbestos and lead paint demolition survey report (4Sight, 2022)

4Sight Limited (4Sight) undertook an asbestos and lead paint demolition survey of the Site to identify asbestos containing material to be removed prior to demolition work commencing, and to identify and characterise lead-based coatings for waste characterisation and handling.

During the survey 4Sight undertook a programme of sampling potential asbestos materials. Bulk paint samples were also collected, and composite samples collected for TCLP analysis.

A total of 544 paint samples were collected, 297 of these were interpreted as lead paint. Of the 79 composite samples collected 47 showed TCLP results above Class A or B landfill criteria.

Of the 83 buildings assessed, nine had neither positive lead paint results or TCLP results above Class A and B landfill criteria.

A total of 946 asbestos samples were collected. Of these, a total of 250 samples showed the presence of asbestos. A total of 10 buildings did not have any positive results for asbestos.

3.2 Further Background Information Review

3.2.1 Aerial Photographs

Historical aerial photography of the Site between 1920 and 2020 were sourced from the RetroLens (IGGA, 2022) website and GoogleEarthPro to assess potentially contaminating activities at the Site. Additional documents including a plan of the buildings at the Site from 1920 sourced from Archives New Zealand, and oblique photography taken in 1951 and 1959 sourced from National Library of New Zealand were also included. The findings are outlined below and the historical aerial photographs are provided in Appendix D.

Newly identified HAIL activities from the photography are included and discussed in Table 9 in Section 4.

Table 6 Historical document and aerial photography

Year	Source	Comments
1920	Archives New Zealand	A block plan of the structures which have been constructed in the original hospital area of the Site. Buildings All structures are around the Site entrance. The plan shows five wards, a male and a female admission block, a boiler house and the sewer, foul wash, stormwater and fire mains. Two discharge points can be seen – one leading to the south of the plan, one leading off the east of the plan. The boiler house was located in the same location as the present location of Substation 2.
1944	Retrolens Crown_226_842_42 (flown 21/02/1944)	An aerial photograph of the Site. Buildings Additional buildings have been constructed to the west of the original hospital site (the Nurse's Home in the north-west corner and three ward buildings). Additional wards have been built to the south of the original hospital site. A trench has been dug running between the new ward buildings and the original structures. A cluster of buildings have been constructed in the original hospital area. These appear to be the old morgue, a therapy building, a building where the petrol station is located, sheds, and the water treatment building. A building has also been constructed in the north-east of the Site, potentially associated with agricultural activity. Agricultural/horticultural Two locations within the Site appear to have had horticulture/agricultural use occur. Horticulture has occurred in the north-east corner of the Site. A larger area of crops was located to the south of the original hospital area. Both these locations appear to have buildings associated with them. Additionally, there appear to be buildings (potentially a residential building) constructed to the south of the wards. Recreational Two sport areas have been built, a bowling green on the northern boundary, and a tennis court.

Year	Source	Comments
1951	National Library of New Zealand	The image is an oblique photograph of the Site, viewed from the east. Buildings A new ward is under construction on the western boundary of the Site. The school has been constructed, and a building to the south of the Site has been constructed. The buildings associated with the horticulture/agriculture use areas (identified in the 1944 aerial) remain. Additionally, another building has been constructed to the south of the existing buildings.
1959	National Library of New Zealand	The image is an oblique photo viewed from the north- east. Buildings The commercial area is under development. The laundry, boiler, fire station and incinerator have been constructed. New wards have been built in the south of the Site, and to the east of the original hospital site. The recreational building has also been built. The waste-water treatment plant has been constructed Recreational The sport field appears to have been developed.
1961	Retrolens Crown_1039_2623_16 (flown 12/09/1961)	The image is an aerial photograph of the Site. Buildings The doctor's flat and sports pavilion have been built. Construction appears to be occurring in the commercial area. The farming buildings in the southern area of the Site have been demolished. Agricultural/horticultural The growing areas appear to have been reduced in size.
1974	Retrolens Crown 3730_K_17 (flown 25/04/1974)	The image is an aerial photograph of the Site. Buildings The substations at the site have been constructed. The pool and chapel have been constructed. The remaining parts of the commercial area have been constructed. The cropping in this south-western area has ceased and the area has been redeveloped into wards and other buildings. Further development has occurred at the south of the Site. The buildings previously here (associated with the cropping) have been demolished and new buildings constructed. The building in the north-east of the site has been demolished. The morgue is visible in this photo, although this may be due to the removal of trees surrounding it. Soil disturbance An area of soil disturbance can be seen in the north-west of the site, against the north site of the hill and in the south-eastern corner of the site, near the stream.
1979	Retrolens Crown_5479_M_23 (flown 05/12/1979)	The image is an aerial photograph of the Site. The Site is mostly unchanged except for the following. Buildings New buildings have been constructed in the original hospital site and in the south-west of the Site. The area around the new buildings to the south appears to have had earthworks in the area. Soil disturbance The areas of the site in the previous photo appear to have been filled. Agricultural/horticultural The gardens appear to have expanded to the east.

Year	Source	Comments
1995	Retrolens Crown 9401_C2 (flown 16/02/1995)	The image is an aerial photograph of the Site. The Site is mostly unchanged except for the following. Buildings Demolition of structures has begun at the Site. Wards F, G, and H, the school, and Ward 2 have been removed. Agricultural/horticultural The area of horticulture/agriculture use in the north-east of the Site is no longer visible Soil disturbance Areas along the stream appear to have been infilled.
2007	Google Earth (captured 27/11/2007)	The image is a satellite image of the Site. The Site is mostly unchanged except for the following. Buildings The chapel and buildings associated with the garden have been demolished.
2020	Google Earth (captured 12/08/2020)	The image is a satellite image of the Site. The Site is mostly unchanged except for the following. Buildings The sports pavilion has been demolished.

3.2.2 Waikato Regional Council information

An information request was made to WRC requesting the results of a search of their Land Use Information Register. The results are shown below. Records of information received from WRC are included in Appendix E.

3.2.2.1 Contaminated land search

WRC have identified the following potentially contaminating activities in the Site. Only the categories have been supplied by WRC, no further information such as the location or nature of the activity, or the extent, was available. The categories listed however do match HAIL activities known to be present on the Site.

- A14: Pharmaceutical manufacture.
- A17. Storage tanks or drums for fuel, chemical or liquid waste.
- F4. Motor vehicle workshop.
- F7. Service Station.
- G3. Landfill sites associated with Tokanui Hospital.

3.2.2.2 Consents

A search of the WRC website showed that LINZ holds three discharge consents for the Site: one for discharge of stormwater from the Site to the Wharekōrino Stream, one for the discharge of leachate from the former disposal sites on the eastern side of the Wharekōrino stream, and one for the discharge of odour to air. These are described in Table 7 below.

Table 7 LINZ discharge consents

Consent type	Consent number	Description	Ongoing?
Discharge consent – water – stormwater	102270	Diversion and discharge stormwater into the Wharekōrino Stream	Consent issued in 2000, expires in 2035
Discharge consent – air – odour	102271	Discharge of contaminants into air for waste treatment/disposal. (The source of the discharge is not stated)	Consent issued in 2000, expires in 2035
Discharge consent – land – other	102269	Discharge leachate into land in circumstances that may result in contaminants entering groundwater (from the disposal sites)	Consent issued in 2000, expires in 2035

Additionally, there is a discharge consent for the discharge of treated wastewater from the Hospital WWTP to the Wharekōrino Stream (resource consent 105617). The WWTP consent allowed a discharge of an average of 30 m^3 per day with a maximum of 1000 m^3per day of treated effluent from the Tokanui Hospital wastewater treatment plant to the Wharekōrino Stream. As the WWTP ceased operations in 2021, LINZ is looking to surrender the consents associated with the WWTP. This consent replaced Consent 720857, which allowed the discharge of 80,000 gal/day to the Puniu River and expired in 2001.

A final discharge consent (722358) exists for the discharge of 20 m^3 from the Cresent WWTP, which services the Staff Village to the east of the Site. This replaced consent 722358 which allowed the discharge of 4,000 gal/day to the Puniu River and expired in 2001.

No additional information regarding monitoring or other requirements, compliance with the discharge with consents, or monitoring reports were available from the WRC website.

3.2.3 Waipā District Council information

A request was made to WDC for held about the Site. The results are outlined below. Records of information received from WDC are included in Appendix E.

3.2.3.1 Consents

The majority of the consents supplied by WDC were building consents for structures at the Site. There is one land use consent for the construction of the new pump station at the WWTP site, a DSI associated with this is detailed in Section 3.1.8. None of the consents appear to include requirements for environmental monitoring.

3.2.3.2 Dangerous Goods

Dangerous Goods storage records show the presence of a 10,000 litre UST, containing Class 3A substances, a second UST which is recorded as both a 10,000 litre and 14,000 litre UST, containing Class 3C substances, one 1,200 litre UST which is recorded as both a UST and a drum containing Class 3B substances. In addition to this there is one 4,000 litre AST at the Site, containing Class 3C substances.

These have all been classified under the Dangerous Goods Act 1974. Class 3 substances are scheduled as flammable liquids, mixtures of liquids, liquids containing solids in solution or suspension

The two larger USTs, and the AST are likely to be the tanks associated with the service station, the store and the incinerator. Their removal was supervised by AECOM as detailed in Section 3.1.

The location of the 1,200 litre tank is unknown, but is no longer recorded at the site after 1995. This may be the tank removed from the Store, although this tank (5,000 litres) is significantly larger than the tank

included in the records (1,200 litres). GHD notes that 1,200 gallons is approximately 5,500 litres and a transcription error may be the source of this discrepancy.

Additionally, 260 kg of calcium hypochlorite was stored at the Site. Calcium hypochlorite is typically used in water treatment via bleaching. By 1995 the calcium hypochlorite was no longer stored at the Site.

3.2.3.3 Spill incidents

No spill incidents were identified in Site records.

3.2.3.4 Contaminated land records

WDC provided the following information regarding potentially contaminating activities at the Site:

"As you will be aware this is a large site with mixed use. There are numerous potential HAIL activities. From my personal knowledge service station, water & waste water treatment, metal and wood workshops, boiler/generator rooms, cemetery, landfill. Essentially anything you might expect a small town to have."

HAIL categories identified by WDC included:

- G3: Landfill sites
- F4: motor vehicle workshops
- A17: Storage tanks or drums for fuel, chemicals or liquid waste
- G1: cemeteries,
- A14: pharmaceutical manufacture,
- F7: service stations including retail or commercial refuelling facilities

During the closed landfill consenting process the Council memo noted there was "*there is anecdotal evidence that suggests refuse was deposited elsewhere on the hospital grounds before this site* [the closed landfills] *was used"* (Waikato Regional Council, 2000). No information is available on these locations.

The HAIL categories supplied by WDC match the HAIL activities in the WRC information request, as well as HAIL activities identified in the Site.

In addition, it lists G1: Cemeteries as a HAIL activity. This is not on the Site and is likely to refer to the Tokanui Hospital cemetery located 550m to the south-east on the adjacent Landcare Research property.

3.2.4 FENZ incident database

An Official Information Act Request was made to Fire and Emergency New Zealand (FENZ) for any information on any responses to fires or spills of hazardous substances, or dangerous goods within 500 metres of the Site. Additionally, a copy of any historical records of a fire station or fire brigade being stationed at the Site were requested. Records of information received from FENZ are included in Appendix E.

A total of 20 incidents were supplied as part of the request. All 20 incidents were off-site, and related to smaller house fires, and are unlikely to have impacted the Site.

FENZ found one reference to a fire station located at the Site, in a publicly available research paper which states that "*More wards were added from the 1920s and in the 1930s a bakehouse, nurses' home, fire station, and dental surgery were built*" (Hoult, 2007). Additionally, a photo of the "Fire Station Café" was supplied in the response document.

Given the age of the building and the layout of the structure with large open front doors it is likely that this location operated as a fire station at some point. Activities at the fire station were further investigated during the interview and are included in Section 3.2.5.

3.2.5 Interview with former site manager

GHD undertook an interview on 8 June 2022 with the former site manager who worked at the site between 1976 and 1996 and resides near the site. The interview attempted to address the identified data gaps and obtain further information on the HAIL activities identified during the assessment.

A summary of the key points in relation to potential HAIL issues from the interview is provided below with details in Appendix E:

Topic	Key Comments from the Former Site Manager
Fire Station	The suspected fire station was confirmed to have existed, and had a small truck associated with it. The truck only used water and was designed to contain fires to allow evacuation, until brigades from off-site appeared. Only water was used.
Horticulture	A market garden was present at the site and was tended to by patients at the hospital. All work was done manually, and little pesticide was said to have been to have been applied to it. Vegetables, fruit trees, and nuts were grown in the northeast of the Site in the 1980s. The fruit trees are still present. A greenhouse operated at the Site in the gardener's area and was gone by the 1980s. Paraquat based pesticide was used at the Hospital Site, but the full extent of pesticide use was not known.
Laundry	During the interview it was mentioned that "basically everything [laundry related]" was done there but did not specifically mention dry cleaning. Laundry services ceased in 1994.
Workshops	Workshops used by maintenance workers for plumbing, metalworking, etc. The garage in this area was used for truck parking and maintenance. Other buildings were used for storage. These workshops operated until 1992 or 1994. Buildings with "concrete block, solid doors with locks" likely to have been used for chemical storage.
Pharmacy/Dentist	Waste from the dentist and pharmacist are likely to have been disposed of into drains and into wastewater treatment or stormwater drains. Some waste may have been burned.
Sports Turfs	A bowling green (near the chapel) and a tennis court (near the trade entrance) were present at the Site. The tennis court was filled in in the 1960s.
Drainage & Groundwater	A stormwater discharge to the gully between Wards 4, 5, and 6 into a "natural swale" related to the original wetland. There is a stormwater discharge point to the right of the morgue where it discharges into the stream. The Site has a very high water table and was formerly swamp. A "six foot deep groundwater table was noted."
Waste Management	Ash from the boiler was disposed of in the landfill to the east of the spring. "Whatever" was disposed of into the landfill, including paint, pesticides, ash and cars. He could not recall any dumping at the hospital site between 1974 – 1996. Sterilisation occurred on the wards and associated water was discharged down into the drains to the treatment plant.
Earthworks & Demolition	When required, aggregate was brought on Site, and demolition material was taken off Site. Rubble wasn't dumped anywhere at the Site.
Chemical Use & Storage	It is unknown which chemicals or the volumes of chemicals stored on Site. Waikato DHB may have these records. Embalming occurred at the morgue until the 1970s, after which funeral directors were engaged instead.

4 Gap Analysis

4.1 Data Gap Analysis

The first part of Table 8 shows the identified data gaps from previous reports and whether they have been resolved following reviews of historic information, council information, former site manager interview and the site walkover inspection. The second part comprises newly identified data gaps from the data review and GHD site walkover inspection.

Further commentary is provided in the last column of Table 8 as to whether additional investigation (e.g. soil sampling) is required for all data gaps, both existing and newly identified.

Table 8 Data gaps

Identified gap	Resolved?	Further Investigation Required?
Previous Reporting – Data Gaps and Resolution		
A chimney is located on the exterior of Substation 2 (S2). No other substations have such a feature. At this stage its purpose is not known.	Partially - historical information supplied by LINZ, a map of the Site from 1920, shows this was formerly a boiler. However the soil in the location has not been fully investigated.	Substation 2 has already been identified as a location for further soil testing during the DSI – see Section 4.2 *HAIL Assessment & Data Gap Closure*.
A former dentist's surgery (D8) is located at the Site. It's not known what volumes of dentistry related materials and chemicals were held onsite or how they were stored.	Partially – dentistry did occur, unsure what quantities stored on Site, waste likely to have been into drains and into wastewater treatment or stormwater drains. The Site walkover inspection identified a discharge pipe that appeared to drain to ground at the rear of the former dentist building.	The review identified a potential discharge to ground location on the outside of the Dentist building. This has been identified as a location for soil testing during the DSI – see Section 4.2 *HAIL Assessment & Data Gap Closure.*
A large former laundry (B74) is located within the 'industrial area' of the Site. It is not known whether the laundry facilities extended to dry cleaning, which would have required the storage of large quantities of dry-cleaning fluids.	Partially – during the interview it was mentioned that "*basically everything [laundry related]*" was done there but did not specifically mention dry cleaning. Laundry services ceased in 1994.	The presence of a dry-cleaning facility at the Site has not been confirmed. Precautionary soil testing is proposed to confirm there is an absence of contaminants of concern – see Section 4.2 *HAIL Assessment & Data Gap Closure* related to dry cleaning.
The southern area of the Hospital WWTP site remains un-investigated.	No – no further assessment of the Hospital WWTP has been undertaken.	Soil sampling of the southern area of the WWTP is proposed for soil testing during the DSI – see Section 4.2 *HAIL Assessment & Data Gap Closure.*

Identified gap	Resolved?	Further Investigation Required?
The specific uses of several buildings, could not be confirmed from either the previous reports, document review or the Site walkover.	Partially – Workshop (B63) used by maintenance workers for plumbing, metalworking, etc. Garage (B71) in this area used for truck parking and maintenance. Other buildings such as (B60) used for storage. Two locations remain where the building use was uncertain – B61 and B35. Building 61 (also known as Shed 11) is a small square building in the commercial area of the Site. It has no windows and has vents on the outside and currently contains a small above ground tank (potentially an air compressor) and associated pipework. Its exact use is unknown. The current utility service plans for the area do not show a piped connection to this building. Some minor oil staining on the internal floor was evident. The former building west of B35 was a rectangular shaped building north of the former glasshouses and in the area used historically for horticulture. The building was demolished but some of the foundations and the building outline remains. As it has been demolished the building does not appear on the LINZ Building ID list.	Building use was able to be resolved except for 2 buildings (B61 and B35). Both locations have been identified as locations for soil testing during the DSI – see Section 4.2 *HAIL Assessment & Data Gap Closure.*
A former pharmacy (B10) is located at the Site, however it's not known whether pharmaceuticals were manufactured and/or blended, and what quantities of chemicals have been stored.	Yes – some medications manufactured offsite/came in bulk but manufacturing unlikely to have occurred onsite. Waste likely to have been discharged into drains and into wastewater system. It is expected that any contaminating activities were low volume and likely discharged to the sewerage system. No evidence of external discharge pipes to ground was observed (as opposed to the Dentist B8).	No testing required
Fly-tipped material was identified, located to the east of the 'Fitter' (B60) building. In addition to this waste, an as-yet-unconfirmed quantity of dumped whiteware and other waste is located to the west of the 'Racks' (B62).	Partially – fly tipping would have occurred after Site closure. From the GHD site inspection it appears that the fly tipped material has been removed from the Site. The area to the west of B62 was confirmed to be a much smaller area of fly tipping and was white ware goods. The area close to B60 was a much larger area and AECOM reported suspected asbestos containing materials.	B62 Area – No further investigation B60 Area - This has been identified as a location for soil testing during the DSI – see Section 4.2 *HAIL Assessment & Data Gap Closure.*
A drum with staining surrounding it, was observed to the south of the boiler building along with a potential above ground mechanics pit.	Partially – this was included in AECOM AST removal supervision report (no sampling included). During the site walkover oil filters were observed in the mechanics pit.	As no sampling has occurred and further evidence of oil filter waste was present in this location during the Site inspection, soil testing during the DSI is proposed – see Section 4.2 *HAIL Assessment & Data Gap Closure.*

Identified gap	Resolved?	Further Investigation Required?
External infrastructure seen on the several buildings indicated the presence of a boiler.	Yes – several wards and smaller outbuildings contained evidence of boilers or hot water tanks. The Site inspection found several hot water tanks around the Site. These did not appear to have contaminants associated with them. (Only the main boiler house building with its associated storage tanks and coal storage is proposed for further testing)	No further testing in the area of the hot water tanks is proposed.
Newly Identified Data Gaps and Resolution		
Impacts on the Wharekōrino Stream	Partially - While the biannual landfill discharge monitoring required under consent 102269 has been monitoring potential impacts on the Wharekōrino Stream, the potential for the Hospital site impacts via stormwater discharge and overland flow is not understood at this time. The stormwater discharge and overland flow may have contributed to impacts in the stream and its sediments.	Sediment sampling is proposed along points of overland flow and in the stream and discharge points from the Hospital WWTP -see Section 4.2 *HAIL Assessment & Data Gap Closure.*
Contaminants in building fabric affecting surrounding soils	Partially - Impacts were partially assessed during the AECOM DSI however these were limited to 13 buildings and the full extent of the impacts from building fabric across the Site is unknown.	Sampling is proposed around those buildings not previously tested by AECOM - see Section 4.2 *HAIL Assessment & Data Gap Closure.*
Impacts under the building slabs	No - As many of the impacts of the HAIL activities are likely to be within the footprint of the buildings associated with the activity, sampling of these locations is required prior to demolition of the structure.	It is proposed that suitable holes in building floors are made to enable the collection samples from specific buildings of interest. These are typically buildings with less permeable flooring (e.g. Gardeners Shed) or those with heavy staining (e.g. oil stained floor in B73).
Areas of soil disturbance and/or infilling	No – these were identified in the aerial photography review. These were in the area immediately north of the former Wards F, G and H, in the area of the stream gully and to the south of the hospital in the paddocks beyond Building 30. Sampling has not previously been undertaken in these areas.	Although there is evidence of soil disturbance, this does not necessarily mean landfilling with waste has occurred. The disturbance may be earthworks or reprofiling of the land surfaces in these areas. Investigation of these areas via test pitting and sampling of soils is recommended to confirm the absence of waste burial. See Section 4.2 *HAIL Assessment & Data Gap Closure*
Former Horticultural Area	The Site walkover inspection and aerial photography identified an area of former glasshouses and horticultural crop growth. Sampling has not previously been undertaken in these areas.	Targeted sampling is proposed for the former glasshouses. Composite sampling (the collection of various samples over a broad area which are then compiled into a single composite sample, deemed to be representative of that area) is proposed for the horticultural area. See Section 4.2 *HAIL Assessment & Data Gap Closure*

Identified gap	Resolved?	Further Investigation Required?
Potential Sheep Dip	The Site walkover inspection identified an in-ground linear structure which may have been a sheep-dip. Sampling has not previously been undertaken in this area.	Sampling is proposed in the area of this structure – see Section 4.2 *HAIL Assessment & Data Gap Closure*
Demolished Structures 1-3 (DS01-DS03)	No – three structures were identified via the aerial photography review. DS01 – Was located north of Substation #5 DS02 – Was located south of B26 DS03 – Was located in the far eastern end of Site, in a paddock east of the WWTP – thought to be a farm building Sampling has not previously been undertaken in these areas.	Sampling is proposed in the footprint of these three former buildings. See Section 4.2 *HAIL Assessment & Data Gap Closure*

4.2 HAIL Assessment & Proposed Data Gap Closure

One of the objectives of this report is to identify HAIL activities and potential sources of contamination.

Following this desktop assessment, it is considered '*more likely than not*' that activities or industries described in the HAIL are being or have been undertaken at the Site.

These activities are shown in Table 9 below with each HAIL activity being given a HAIL ID number. The table includes:

- A description of activity
- HAIL category
- Evidence sources
- Duration of activity, where known
- Contaminants associated with the HAIL activity
- Whether previous investigation has been undertaken
- Data gaps that exist and need to be closed via detailed site investigation

Contaminants of concern associated with the HAIL activities at the Site are taken from the *MfE's Hazardous activities and industries list guidance: Identifying HAIL land* (Ministry for the Environment, 2023) (Ministry for the Environment, 2012) **or** based on Site information obtained during this PSI.

If data gaps have been closed or there is not considered to be a risk from the activity, these has been highlighted in grey text in Table 9.

A map showing the locations of HAIL activities at the Site is shown in Appendix A, Figure A5.

Table 9 Identified HAIL activities

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
01	Former Shell petrol station (B16).	A fuel station with two 10,000 litre storage tanks (petrol and diesel) and vehicle workshop has historically operated at the Site. Hydrocarbon staining has been observed inside the vehicle workshop. Minor fly tipping to the south east of the building.	F4 – motor vehicle workshop F7 – service stations including retail or commercial refuelling facilities I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM Z tank pull report AECOM AST removal report Aerial photography Council data GHD Inspection	Workshop: Unknown (first identified in 1951 photograph) – unknown (likely site closure in 1998). Tanks approximately 1979 (based on records – 2018 (tank removal).	Hydrocarbons (diesel and petrol storage tanks, vehicle maintenance) PAH (waste oils and diesel tank, fly tipping) BTEX (petrol tank) VOC/Solvents (vehicle maintenance, fly tipping) Metals (petrol tank, waste oil, fly tipping) Asbestos (building fabric/fly tipping)	F7: yes – The forecourt and former UPSS has been well characterised. F4: no investigations have been undertaken in the vehicle workshop area.	Potential impacts beneath the former workshop area should be assessed. Potential impacts in an area of fly-tipping identified outside the south eastern corner of the building should be assessed. Soil sampling is proposed in this area.
02	Old Morgue (B19)	The original morgue for the Hospital operated in this location and embalming may have occurred.	A17 – storage tanks or drums for, chemicals or liquid waste	Opus PSI report LINZ building records	Unknown (first identified in 1944 photograph) – unknown (morgue activities had been moved to the new morgue after its construction, and embalming had been moved to outside funeral services by the 1970s.)	Formaldehyde, used in embalming fluids (*however given time that has elapsed, this is unlikely to remain in soil*) Metals	Partially – during the DSI sampling was undertaken on the adjacent building (B 18), and results of analysis were above adopted guideline and background values for metals.	Potential impacts from the chemicals stored have not been fully investigated or delineated and should be assessed. Soil sampling is proposed in this area.
03	Dentist (B8)	A dental surgery operated at the Site. It is not known what volumes of dentistry related materials and chemicals were held onsite or how they were stored. Disposal of material from dentist was mostly into the wastewater treatment network.	I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM gap assessment Interview LINZ building records GHD Inspection	Unknown (building first identified in 1920 plan) – unknown (potentially site closure in 1998)	Mercury, present in amalgam in dental fillings, is a hazardous substance; Wide range of chemicals and solvents	No – investigations have not been undertaken in this area.	The site walkover identified a potential discharge pipe to ground, routed from inside the building which should be investigated. Soil sampling is proposed in this area.
04	Pharmacy (B10)	A pharmacy operated from the Site. Disposal of material from the pharmacy if any, was mostly into the wastewater treatment network.	A14 – pharmaceutical manufacture including the, blending, mixing or formulation of pharmaceuticals	Opus PSI report AECOM gap assessment Aerial photography Interview LINZ building records	Unknown (building first identified in 1920 plan) – unknown (potentially site closure in 1998)	Pharmaceuticals	No – investigations have not been undertaken in this area.	It is expected that any contaminating activities were low volume and likely discharged to the sewerage system. No evidence of external discharge pipes to ground was observed (as opposed to the Dentist B8). **No sampling is recommended.**
05	Potable Water treatment plant (B7)	This building was used as a potable water treatment plant for the Hospital Site. There is evidence of damage to buildings and structures in the plant area.	A2– Chemical bulk storage E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition.	Opus PSI report LINZ records	Unknown (building first identified in 1994 aerial) – present (operation may have stopped at closure of the hospital site)	Asbestos and metals.	No – investigations have not been undertaken in this area.	Contaminants associated with the treatment activities are expected to have a low risk to human or environmental health. However there is evidence of damage to structures in this area and therefore testing should focus on materials associated with building deterioration (e.g. lead and asbestos). The 4Sight (2022) report found high concentrations of lead-based paint on the building. Investigation of the area immediately downslope from the treatment plant is recommended to understand impacts on surrounding soil.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
06	New morgue (B25)	A morgue operated at the Hospital. Embalming occurred in the morgue until the 1970s when it was outsourced to Funeral Directors who operated offsite.	A17 – storage tanks or drums for, chemicals or liquid waste	Opus PSI report Aerial photography Interview LINZ building records	Unknown (the morgue is first observed in the 1974, after the surrounding trees are removed, however anecdotal evidence suggests it was constructed earlier than this) – 1970s (when embalming was done offsite by funeral homes)	Formaldehyde, used in embalming fluids (*however given time that has elapsed, this is unlikely to remain in soil*) Metals	No – no investigations have taken place in this location.	Potential impacts from the chemicals stored have not been investigated or delineated and should be assessed. Soil sampling is proposed in this area.
07	Market Gardens/ Horticulture and Sheep Dip (Formerly located east of B34 and B35)	Market gardening occurred within the Site for consumption at the hospital and as a source of income for patients. Glasshouses and sheds were located in the area, but have been demolished. Most of the work was by hand, and from the mid-1970s may have been largely pesticide free, however before this pesticide application may have occurred. The site walkover found a suspected historical sheep dip.	A8 – Livestock dip or spray race operations A10 – persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds. E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition	Aerial photography Interviews GHD Inspection	Unknown (first identified in 1944 photography, although may have occurred before then) – unknown (does not appear in 1995 photography).	Metals and wide range of insecticides, herbicides and fungicides, including arsenic, lead, mercury, copper, tin, chromium, organochlorines, organonitrogens, organophosphates, acid herbicides, and carbamates. Dioxin may be present as an impurity.	No – investigations have not been undertaken in this area.	There are several glasshouses and other demolished buildings in these areas. A livestock dip may be present. The area former growing area was large and horticultural activities occurred in the area for a long span of time. Persistent pesticides may have been applied to the gardens. Metals such as arsenic may be present in the sheep dip area and its surrounds. Potential impacts have not been investigated or delineated and should be assessed. Soil sampling is proposed in this area.
08	Bowling green (Formerly located to the east of B3)	A bowling green operated at the site for use of patients and staff.	A10 – persistent pesticide use including sport turfs,	Aerial photography Interviews	Unknown (first observed in 1944 photography) – Unknown (last observed in 1979 photography)	Wide range of insecticides, herbicides and fungicides, including metals such as arsenic, lead, mercury, copper, tin, chromium, organochlorines, organonitrogens, organophosphates, acid herbicides.	No – investigations have not been undertaken in this area.	The bowling green took up a large area and persistent pesticides may have been used in the maintenance of the green. Potential impacts from the bowling green have not been investigated or delineated and should be assessed. Soil sampling is proposed in this area.
09	Tennis court (located to the north of B76)	A tennis court operated at the site for use of patients and staff. It is assumed to have been a grass court, but may have been artificial or clay surfaced.	A10 – persistent pesticide use including sport turfs	Aerial photography Interviews	Unknown (first observed in 1961 photography) – Unknown (last observed in 1974 photography)	Wide range of insecticides, herbicides and fungicides, including the metals arsenic, lead, mercury, copper, tin, chromium, organochlorines, organonitrogens, organophosphates, acid herbicides, In some artificial courts, asbestos can be a contaminant of concern.	No – investigations have not been undertaken in this area.	Potential impacts from the maintenance of the tennis court (e.g. pesticides) have not been investigated or delineated and should be assessed. Soil sampling is proposed in this area.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
10	Sports field (Present to the north of B57/B58)	A sports field is located at the site and was used by patients, staff and the local community.	A10 – persistent pesticide use including sport turfs,.	Aerial photography Interviews	Unknown (first observed in 1959 photography – unknown (cricket pitch last observed in 2008 photography)	Wide range of insecticides, herbicides and fungicides, including metals such as arsenic, lead, mercury, copper, tin, chromium, organochlorines, organonitrogens, organophosphates, acid herbicides	Partial – during the DSI sampling for metals has occurred in the general area of the activity and samples were found to be above background values	Typically there is a lower level of pesticide application to sports fields compared to high intensity use on bowling greens and golf greens. Only the demolished pavilion area is proposed to be tested in this area – see HAIL ID #17. **No sampling is recommended.**
11	Swimming pool chemical storage (B57)	The AECOM Gap Assessment report recorded 4,500 litres of chemicals in the swimming pool storage shed. It was not specified what these chemicals were. These appear to have been removed. A small room on the southern edge of the pool building contained some previously unrecorded chemical drums which were unlabelled.	A17 – storage tanks or drums for, chemicals or liquid waste	Opus PSI report AECOM gap assessment Aerial photography LINZ building records GHD Inspection	Unknown (first observed in 1974 photograph) – unknown (chemicals present in 2018, but may have been removed)	Potable treatment chemicals are not of concern. Drums in the small room are unlabelled so contents are uncertain – a broad analysis suite for metals, SVOC and VOC would be needed as a screen	No – investigations have not been undertaken in this area.	Similar to the potable water treatment building (B7) contaminants associated with the swimming pool treatment/dosing activities are expected to have a low risk to human or environmental health. The concrete floor of the small room with unlabelled drums is likely to have provided protection from spillages, if any. Potential impacts from the chemicals stored have not been investigated however the risk is considered to be low.
12	Substation 1 (S1)	One of eight substations remaining on Site	B4 –, Substation	Opus PSI report AECOM gap assessment Aerial photography Interview LINZ building records	Unknown (first identified in 1974 photograph) – present.	Metals, asbestos and PCBs	Yes – during the AECOM DSI the building halo was investigated for metals and asbestos, and exceedances of human health guidelines for metals and asbestos were identified.	Previous investigation did not include PCB analysis. PCB analysis proposed to fill data gap.
13	Substation 2/Former Boiler (S2)	The boiler at the site operated at this location, until it was replaced with the new boiler in the industrial area. A transformer was then installed inside the building. A substation is located in this building.	B4 – Substations I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM gap assessment Aerial photography Interview LINZ building records	Substation: Unknown (assumed since construction of other substations by 1974) – present Boiler: Unknown (first observed in 1920 plan) – unknown (assumed by the construction of the new boiler in 1959)	Substation – metals, asbestos, PCBs Former Boiler – TPH, PAH, metals	No – investigations have not been undertaken in this area.	Potential impacts from the substation or boiler have not been investigated or delineated. Proposed assessment both in internal and external areas is proposed.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
14	School (Formerly located between B56 and B57)	The School has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM gap assessment Aerial photography Interview LINZ building records	Unknown (first observed in 1951 photography) – unknown (last observed in 1979 photography)	Asbestos and metals	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.
15	Chapel (Formerly located north-west of B3)	The Chapel has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM gap assessment Aerial photography Interview LINZ building records	Unknown (first observed in 1974 photography) – unknown (last observed in 1995 photography)	Asbestos and metals	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.
16	Ward 2 (Was immediately east of B2)	The Ward has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM gap assessment Aerial photography Interview LINZ building records	Unknown (first identified in 1920 plan) – unknown (demolished sometime between 1979 – 1995	Asbestos and metals	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
17	Sports pavilion (Was north-east of B58, along eastern edge of Sports Field)	The Sport Pavilion has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM gap assessment Aerial photography Interview LINZ building records	Unknown (first observed in 1961 photography) – unknown (last observed in 2008 photography)	Asbestos and metals	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.
18	Main boiler building (B68)	The Boiler Building was previously located in this location. It appears that coal has been used for heating. Two above ground storage tanks are located adjacent to the building. Spills and leakage of oils from machinery were observed.	A17 – storage tanks or drums for chemicals, or liquid waste. I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM AST removal report Aerial photography	Boiler: unknown (first appears in 1959 photograph – unknown (likely site closure in 1998. AST: Unknown – 2019 (AST removal).	Metals (coal leaching) Hydrocarbons (fuel storage, machinery oils) BTEX (fuel storage) PAH (fuel storage)	AST – No – Sampling or analysis was not undertaken as part of the AST removal. Boiler – Partially investigated – during the DSI sampling for metals has occurred in the general area of the activity and samples were found to be above background and adopted Canadian guideline values.	The soil around the former ASTs have not been tested. The eastern side of the boiler house, in the area of coal storage was not part of the previous AECOM DSI. Both areas are proposed for testing in the DSI.
19	Vehicle garages, central complex (B71)	A series of garages which appear to have been used as workshops are located near the central complex. Black staining was observed on the floor of the garages.	F4 – Motor vehicle workshops	Opus PSI report Aerial photography	Unknown (first identified in 1974 photograph) – unknown (likely site closure in 1998).	Hydrocarbons (including PAH), solvents, metals (vehicle maintenance).	No – investigations have not been taken in the area of the garage	Potential impacts from the vehicle workshop have not been investigated. The concrete floor in the garages will have restricted downward movement of contamination. Sampling from the garage area is proposed for the DSI.
20	Incinerator (shed 8) (B67)	Burning of waste material was undertaken in this small incinerator.	G6 –Waste treatment	Opus PSI report Aerial photography Interview	Unknown (first identified in 1959 photograph) – unknown (likely site closure in 1998),	Metals, hydrocarbons (including PAH), dioxins (from incineration)	Partially – during the DSI sampling for metals has occurred in the general area of the activity and samples were found to be above background values.	Some investigation has been undertaken however not all contaminants of concern (hydrocarbons and dioxin) have been assessed. Burning chlorinated plastic is often a cause of dioxin generation, this is thought to be a lower likelihood but given the scale of the Site and number of commercial/industrial activities, this cannot be ruled out. Testing from hydrocarbons and dioxin proposed in this localised area.
21	Storage bays next to engineers' office – central complex (B66)	Waste material appears to have been stored here, including waste oil.	A17 – storage tanks or drums for chemicals, or liquid waste.	Opus PSI report AECOM AST removal report Aerial photography GHD Inspection	Unknown (storage bays first identified in 1974 photograph) – 2018 (potentially hydrocarbon impacted material in the storage bay was removed under AECOM's supervision).	Hydrocarbons, (including PAH), metals (from waste material)	No – The impacted material was removed but no assessment of the underlying material was made.	The OPUS PSI found oil drums and staining here. Although removed, some oil filters were observed on the ground in the same area during the GHD site inspection. No assessment of the underlying soil has been made, therefore soil sampling is proposed for this area.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
22	Fly tipping (west of Fitter building B62)	Fly tipped material mostly electronics waste was observed by AECOM (material now removed)	I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	AECOM gap assessment	Unknown – present	Metals (refrigerants also may have been present but unlikely to be a soil contaminant)	No – there are no records of the material being removed from the Site and investigations have not been undertaken in this area.	A much smaller area of fly tipping than that observed east of B60. Appeared to be mostly white goods and the material has been removed. **No sampling is recommended.**
23	Fly tipping (east of B60)	Fly tipped material including potentially asbestos containing material, tyres, electronics and other material was observed at the Site by Opus and AECOM (material now removed)	I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI Report AECOM gap assessment	Unknown – present	Asbestos, hydrocarbons, metals	No – there are no records of the material being removed from the Site and investigations have not been undertaken in this area.	A much larger area of fly tipping than was observed at B62. Fragments of suspected asbestos containing material were observed by Opus but not tested. Although now removed, due to the larger amount of waste, variety of waste material and suspected asbestos (compared to fly tipping at B62), it is recommended soil testing is undertaken in this area.
24	Laundry (B74) and associated Shed 7 (B73)	A laundry building was identified at the Site. It is unknown if dry-cleaning was undertaken in the facility. Documents reviewed could not confirm the presence of dry cleaning, despite some anecdotal evidence.	A5 – dry cleaning plants including fry-cleaning premises or the bulk storage of dry-cleaning solvents	AECOM gap assessment AECOM Draft DSI Aerial photography	Unknown (first appears in 1959 photograph) – 1994.	Volatile hydrocarbons including chlorinated solvents (from dry-cleaning)	Partial – during the DSI the building halo was investigated, and exceedances of human health guidelines for metals and asbestos were identified.	The presence of a dry-cleaning facility at the Site has not been confirmed. Precautionary soil testing is proposed to confirm there is an absence of contaminants of concern related to dry cleaning.
25	Workshop (B63)	A former workshop operated in this area. An area of sawdust was noted outside the building during the GHD site inspection.	I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	AECOM gap assessment Aerial photography Interview GHD Inspection	Unknown (first appears in 1974 photograph) – unknown (likely site closure in 1988).	Metals and SVOCs	No – investigations have not occurred in this area.	No sampling has been undertaken in the area of sawdust to the west of the workshop building. Soil sampling is proposed in this area.
26	Gardener building/sheds (B59)	Potential spills and leaks of pesticides and herbicides that were stored in the building. GHD site inspection indicated drum storage in shed and pesticide signage on outer doors.	A10 – persistent pesticide bulk storage including spray sheds.	Opus PSI report Aerial photography GHD Inspection	Unknown (first appears in 1974 photograph) – unknown (likely site closure in 1988).	Arsenic, lead, copper, mercury Pesticides including acid herbicides, organophosphates, and organochlorines (from pesticides)	No – investigations have not occurred in this area.	There is confirmed storage of pesticides in this location. These are typically a persistent contaminant. Soil sampling both within and around outside of building is proposed.
27	Store Building (B65)	A 5,000 litre underground storage tank and refuelling bowsers previously operated in this location.	A17 – Storage tanks or drums for chemicals or liquid waste	AECOM UST removal report GHD Inspection	Unknown (building first appears in the 1974 aerial) – unknown (likely site closure).	Hydrocarbons (TPH/PAH/BTEX)	Yes – UST removal report shows material remaining on site below TPH/BTEX below Agricultural guideline values.	Only samples from the tank pit were taken during the AECOM investigation, the bowsers and pipework remains in the ground. Some evidence of hydrocarbon vapours were recorded by AECOM at the base of the tank pit. Further sampling of the previously untested areas is recommended, along with investigation of tank pit area to understand if previous vapour detections have since dissipated.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
28	Substation 4 (Located to immediate south-east of B69)	One of eight substations remaining on Site	B4 – Substations	Opus PSI report AECOM Draft DSI Aerial photography	Unknown (first identified in 1974 photograph) – present.	PCBs, hydrocarbons, asbestos, copper, tin, lead, and mercury	No – investigations have not been undertaken in this area.	Potential impacts from the substation building have not been investigated. Soil sampling is proposed in this area.
29	Hospital waste-water treatment plant (WWTP)	A waste-water treatment plant formerly operated in this location and is now only a pump station. Part of the WWTP was previously investigated by WSP Ltd. GHD site inspection observed some discharge pipes and seepages to the adjacent stream.	G6 –Wastewater treatment.	WSP DSI Aerial photography GHD Inspection	1950 (plant commissioned) – 2021 (plant decommissioned)	Metals, asbestos, SVOC and VOC	Partially – sampling for metals, VOC and asbestos in the northern part of the site. Results for metals were found to be above background levels.	The southern part of the WWTP was not part of the WSP investigation. Soil sampling is proposed to close this data gap. Two areas of discharges/seepages were noted during the GHD Site walkover. Sediment sampling is proposed in these areas to close the data gap.
30	Nurses' home (formerly located north of B55)	The Nurses' Home has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM DSI Aerial photography	Unknown (building first appears in 1944 aerial photograph) – 1995 (demolition of building).	Lead, arsenic, zinc, copper chromium and asbestos	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.
31	Ward F, located south east of B55	The Ward has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM DSI Aerial photography	Unknown (building first appears in 1944 aerial photograph) – Unknown (building appears in 1979 photograph but has been demolished by 1995)	Lead, arsenic, zinc, copper chromium and asbestos	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
32	Ward G located south east of B55	The Ward has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM DSI Aerial photography	Unknown (building first appears in 1944 aerial photograph) – Unknown (building appears in 1979 photograph but has been demolished by 1995)	Lead, arsenic, zinc, copper chromium and asbestos	Yes – during the DSI the building halo was investigated for metals and asbestos, and exceedances of human health guidelines for metals and were identified	The previous sampling was focused on the southern side of the footprint of this demolished building. Further sampling is proposed to cover the northern part of the footprint and provide more complete coverage.
33	Ward H located south of B55	The Ward has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Opus PSI report AECOM DSI Aerial photography	Unknown (building first appears in 1944 aerial photograph) – Unknown (building appears in 1979 photograph but has been demolished by 1995)	Lead, arsenic, zinc, copper chromium and asbestos	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.
34	Substation 3 (S3)	One of eight substations remaining on Site	B4 – Substations	AECOM gap assessment Aerial photography Interview LINZ building records	Unknown (first identified in 1974 photograph) – present.	PCBs, hydrocarbons, asbestos, copper, tin, lead, and mercury	No – investigations have not been undertaken in this area.	Potential impacts from the substation building have not been investigated. Soil sampling is proposed in this area.
35	Substation 5 (S5)	One of eight substations remaining on Site	B4 – Substations	Opus PSI report AECOM Draft DSI Aerial photography	Unknown (first identified in 1974 photograph) – present.	PCBs, hydrocarbons, asbestos, copper, tin, lead, and mercury	No – investigations have not been undertaken in this area.	Potential impacts from the substation building have not been investigated. Soil sampling is proposed in this area.
36	Substation 6 (S6)	One of eight substations remaining on Site	B4 – Substations	Opus PSI report AECOM Draft DSI Aerial photography	Unknown (first identified in 1974 photograph) – present.	PCBs, hydrocarbons, asbestos, copper, tin, lead, and mercury	No – investigations have not been undertaken in this area.	Potential impacts from the substation building have not been investigated. Soil sampling is proposed in this area.
37	Substation 7 (S7)	One of eight substations remaining on Site	B4 – Substations	Opus PSI report AECOM Draft DSI Aerial photography	Unknown (first identified in 1974 photograph) – present.	PCBs, hydrocarbons, asbestos, copper, tin, lead, and mercury	No – investigations have not been undertaken in this area.	Potential impacts from the substation building have not been investigated. Soil sampling is proposed in this area.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
38	Substation 8 (S8)	One of eight substations remaining on Site	B4 – Substations E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition	AECOM gap assessment Aerial photography Interview LINZ building records	Unknown (first identified in 1974 photograph) – present.	PCBs, hydrocarbons, asbestos, copper, tin, lead, and mercury	Partially – previous investigations found asbestos in soil in a single external sample, not all sides of building were assessed.	Potential impacts from the substation have not been fully investigated or delineated. Soil sampling is proposed in this area.
39	Demolished Structure 1 (located near B48, B50, B51)	A building in this area has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment	Aerial photography	Unknown (building first appears in 1944 aerial photograph) – Unknown (appears to have been demolished in the expansion of the hospital in the by 1961 photograph)	Lead, arsenic, zinc, copper chromium and asbestos	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.
40	Demolished Structure 2 (located near B26, B30, B31)	A building in this area has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Aerial photography	Unknown (building first appears in 1944 aerial photograph) – Unknown (building appears to have been demolished by 1961 photograph)	Lead, arsenic, zinc, copper chromium and asbestos	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.

HAIL ID	Building Name and number	Description	HAIL classification	Evidence Source	Duration of HAIL Activity	Associated contaminants of concern	Previously Investigated?	Data Gap Discussion
41	Demolished Structure 3 (located in the far north eastern corner of the Site, east of the WWTP).	A building in this area has been demolished. It is unknown if any controls were used during the demolition, which may have caused contamination of the area surrounding the demolition.	E1 – asbestos products disposal including sites with buildings containing asbestos products known to be in a deteriorated condition I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Aerial photography	Unknown (building first appears in 1944 aerial photograph) – Unknown (building appears to have been demolished by 1974 photograph)	Lead, arsenic, zinc, copper chromium and asbestos	No – investigations have not been undertaken in this area.	Potential impacts from the demolition have not been investigated or delineated. Soil sampling is proposed in this area.
42	Grazing Areas	Some cropping and grazing activities occurred within the Site. Heavy metals (e.g. cadmium) associated with superphosphate fertiliser application and pesticides may have been used.	I – any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Aerial photography	Unknown (first observed in the 1944 photography) – present.	Metals (4Sight, 2022), Pesticides	No	Composite soil sampling is proposed across the 10 areas of grazing to understand levels of contaminants in soil.
43	Soil Disturbance Areas	Several areas of soil disturbance are evident from aerial photographs. These are located to the north of the former Wards F, G and H and a number of areas in the gully which holds the Wharekōrino stream.	Not currently considered HAIL but intrusive investigation should be undertaken to clarify	Aerial photography	Unknown (first observed in the 1974 aerial photograph) – Unknown (areas had been filled by the 1995 aerial photograph).	Metals, asbestos, SVOC	No	Although there is evidence of soil disturbance, this does not necessarily mean landfilling with waste has occurred. The disturbance may be earthworks or reprofiling of the land surfaces in these areas. Investigation of these areas via test pitting and sampling of soils is recommended to confirm the absence of waste burial.

4.2.1 Building Fabric – Data Gap Closure.

The deterioration or weathering of building fabric such as asbestos cladding, lead paint, treated timber or galvanised roofing may have impacted the halo area of the buildings in the Site. The previous AECOM DSI (AECOM, 2019) included soil sampling in transects around building halos and X-ray fluorescence (XRF) testing for lead in soil. In addition the AECOM DSI included some limited test pitting around buildings. This comprised 12 test pits in the commercial area of the Site.

Data gap closure associated with potential hazardous materials from building structures is discussed in Table 10.

Table 10 Potential Building Fabric Issues

Name	Potentially contaminating activity	Associated contaminants of concern	Data Gap Discussion
Building fabric with asbestos containing material	Asbestos containing materials may be present in the structure of the building, which may release into the environment.	Asbestos	It is proposed that building halo testing is undertaken by GHD and HAIL Environmental Ltd around those buildings not previously tested by AECOM. This will be completed by using XRF and soil sampling.
Painted metals	Deteriorated and weathered paint releasing into the halo around the structure.	Lead, arsenic, zinc, copper, other metals.	
Galvanized roofing and copper guttering	Runoff from galvanised material at the Site	Zinc	
Treated timber	Leaching of contaminants from treated timbers used in building structures	Copper, chromium, arsenic	

5 Risk Assessment and Conceptual Site Model

5.1 What is a Conceptual Site Model?

A Conceptual Site Model (CSM) identifies the potential contaminant sources (e.g. fuels, pesticides), sensitive receptors that may be affected (e.g. people, soil) and the contaminant transport pathways that may link them together (e.g. accidental ingestion of soil, leakage to ground). A risk is present if there is a complete source-pathway-receptor (SPR) linkage. An example of a complete linkage is shown below in Figure 7:

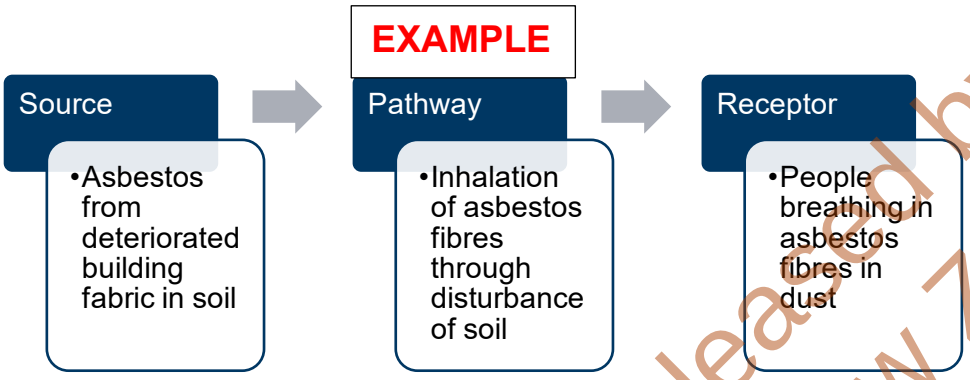

Figure 7 Example of a Complete Source-Pathway-Receptor Linkage

5.2 The Tokanui Hospital CSM

CSMs are designed to be refined and updated as more data is gathered through the investigation process. The most recent CSM was undertaken as part of the previous AECOM DSI (AECOM, 2019).

AECOM produced a tabular CSM based on two contaminants, asbestos and lead. At the time of writing, AECOM considered agriculture land use in their CSM. Potentially complete linkages identified were:

– the inhalation of asbestos fibres and lead in soil by future farm workers or residents (assumed farm house residents); and
– lead based paint from building weathering migrating via stormwater run off into nearby watercourses.

An updated CSM has been developed to communicate the potential risks to human health and the environment from the identified HAIL sites. This CSM will be reassessed once sampling data is collected during the DSI and presented as an updated version in the DSI report.

As part of the updated CSM, sources, pathways and receptors and a discussion of whether a complete SPR linkage is considered likely in current or future use are provided in Table 11. Due to the large number of potential contaminant sources on the Site, the sources have been amalgamated into similar groupings. A visual representation of the CSM is also provided below in Figure 8.

The final column of Table 11 shows whether the SPR linkage is considered *Potentially Complete* or *Incomplete*. These terms are defined as follows:

– *Potentially Complete* means that the three elements of the SPR linkage are potentially present however testing is required to confirm whether contaminants of concern are present and whether they are at concentrations that may pose a risk to human health or the environment.

– *Incomplete* means that the existing evidence indicates that the SPR linkage is incomplete or unlikely to occur – for example the linkage to offsite residents from hydrocarbons present in the soil within the Site is considered incomplete as there is not the opportunity for offsite residents to be in contact with such soil.

SPR linkages that have been assessed as *Incomplete* have been shaded grey in Table 11.

The purpose of the CSM is to highlight those areas of potential risk based on what is known at this point. For example, “Potentially Contaminated” just means that the three elements of the linkage are present – the land is not necessarily contaminated. To resolve this, the exposure pathways identified in the CSM will be assessed via sample collection in the DSI and subsequent risk assessment, with soil concentrations to be compared against remedial criteria as per the requirements of the THDSP.

Shallow groundwater is not abstracted for potable water supply purposes within the area, with potable reticulated (piped) supply in place. Water supply comes from the Mangaukia Stream near Pirongia, approximately 14 km north-west of the Site. Groundwater is not considered as a receptor in the CSM but rather as a potential contaminant transport pathway to nearby surface water – the Wharekōrino Stream and Puniu River. The results of the DSI soil sampling and site data collection (such as volatile vapour monitoring and field observations) will be used as a screening tool to understand whether further investigation of the underlying groundwater is warranted.

Future Site Users

The Site will be left in a remediated state as per the requirements of the Deed and the THDSP. This will include the removal of all buildings and leaving the Site in a grassed state. LINZ will obtain all necessary consents for the demolition and remediation as per the Deed requirements. The former disposal sites will remain on the east side of the Wharekōrino Stream and will be managed under their current resource consents.

Once remediation is complete and the land passes from the Crown to new owners, those future owners will need to evaluate contamination issues in relation to any planned future development. Development will need to be considered in the context of where the remediated areas are, where residual concentrations remain and the layout of the future development design.

Table 11 Conceptual Site Model Linkages & Discussion

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
Hospital Operations & Building Materials	Asbestos and heavy metals in soil	Inhalation of asbestos fibres or metals in contaminated dust	On-site human health (maintenance /excavation workers)	As part of the future remedial work at the Site, soil disturbance will occur. If not working under an appropriate management plan including appropriate personal protective equipment, workers may be exposed to contaminants in the soil via the inhalation of contaminated dust.	Complete – previous investigations have already established concentrations around site buildings above human health thresholds
			On-site human health (future site users)	Future site users may also be exposed to contaminants via the inhalation of dust during future on Site activities.	Potentially Complete
			Off Site Residents (via windborne dust)	There is the potential for windblown dust to affect both these receptors. However these can be managed with appropriate controls.	Potentially Complete
			Ecological Receptors (flora and fauna)	Building demolition phase will be subject to HSE requirements, so risks can be managed and controlled (e.g. dust, erosion and sediment control plans, boundary asbestos monitoring).	
	Inorganic contaminants from on-Site industrial activity such as fuel storage and handling (metals)	Contact with skin or accidental ingestion	On-site human health (maintenance /excavation workers)	Excavation workers may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices).	Potentially Complete
			On-site human health (future site users)	Future users may have direct contact with contaminated soil or ingest contaminants through contaminated future produce grown on Site.	Potentially Complete
			Off Site Residents	Offsite residents will not have direct contact with contaminated soil on the Site.	Incomplete
			Ecological Receptors (flora and fauna)	Plants may be affected by uptake of residual contaminants from soil, with potential for plant die-back in highly contaminated areas. Animals may have direct contact with contaminated soil or ingest contaminants through contaminated plants on Site.	Potentially Complete
		Stormwater run-off or from contaminated groundwater migration	Human health & Ecological Receptors (surface water – Wharekōrino Stream and Puniu River)	Ecological receptors in the river may be impacted via contaminated discharges. Surface water quality may also deteriorate as a result.	Potentially Complete

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
	Organic contaminants from on-Site industrial activity such as fuel storage and handling (hydrocarbons and chlorinated solvents)	Contact with skin or accidental ingestion	On-site human health (maintenance /excavation workers)	Excavation workers may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices).	Potentially Complete
			On-site human health (future site users)	Future users may have direct contact with contaminated soil or ingest contaminants through contaminated future produce grown on Site.	Potentially Complete
			Off Site Residents	Offsite residents will not have direct contact with contaminated soil on the Site.	Incomplete
			Ecological Receptors (flora and fauna)	Plants may be affected by uptake of residual contaminants from soil, with potential for plant die-back in highly contaminated areas. Animals may have direct contact with contaminated soil or ingest contaminants through contaminated plants on Site.	Potentially Complete
		Inhalation of vapours	On-site human health (maintenance /excavation workers)	Excavation workers may be exposed to pockets of vapours in the subsurface.	Potentially Complete
			On-site human health and structures (future site users)	Vapours may be present in the subsurface from historical leaks or spills. These may migrate into future buildings and structures and there is potential for human exposure.	Potentially Complete
			Off Site Residents	Vapours, if present, are likely to be associated with specific former structures on the Site (e.g. former fuel tanks). These are likely to be localised around the sources and migration beyond the Site boundary is unlikely. .	Unlikely to be Complete
			Ecological Receptors (flora and fauna)	Plants and animals may be exposed to pockets of vapours in the subsurface. As these are likely to be localised areas, animals - being more mobile, are unlikely to have long exposure periods. Potential impacts may be reduced plant growth or plant die-back.	Potentially Complete
		Stormwater run-off or from contaminated groundwater migration	Human Health & Ecological Receptors (Surface Water - Wharekōrino Stream and Puniu River)	Ecological receptors in the river may be impacted via contaminated discharges. Surface water quality may also deteriorate as a result.	Potentially Complete

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
Waste Water Treatment Plant	Asbestos in soil from former buildings	Inhalation of asbestos fibres	On-site human health (maintenance /excavation workers)	Previous investigation in the northern portion of the WWTP site did not find asbestos in soil. However, the southern portion of the WWTP site was not tested. Only one structure remains in the southern portion. Building demolition phase will be subject to HSE requirements, so airborne risk can be managed and controlled.	Potentially Complete
			On-site human health (future site users)		Potentially Complete
			Off Site Residents (via windborne dust)		Potentially complete
	Organic and inorganic contaminants from WWTP activities (metals, hydrocarbons)	Contact with skin or accidental ingestion	On-site human health (maintenance /excavation workers)	Excavation workers may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			On-site human health (future site users)	Future users may have direct contact with contaminated soil or ingest contaminants through contaminated future produce grown on Site	Potentially Complete
			Off Site Residents	Offsite residents will not have direct contact with contaminated soil on the Site	Incomplete
			Ecological Receptors (flora and fauna)	Plants may be affected by uptake of residual contaminants from soil, with potential for plant die-back. Animals may have direct contact with contaminated soil or ingest contaminants through contaminated plants on Site.	Potentially Complete
		Piped discharges from the WWTP (noting that there is an existing resource consent in place for the WWTP effluent)	Human Health & Ecological Receptors (Surface Water - Wharekōrino Stream and Puniu River)	The WWTP has a resource consent to discharge hospital effluent into the stream. Ecological receptors in the river may be impacted via contaminated stream sediment.	Potentially Complete

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
Historical Horticultural Activity	Organic and inorganic contaminants from fertilisers and crop spraying (pesticides, herbicides, metals)	Contact with skin or accidental ingestion	On-site human health (maintenance /excavation workers)	Excavation workers may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			On-site human health (future site users)	Future users may have direct contact with contaminated soil or ingest contaminants through contaminated produce grown on Site	Potentially Complete
			Off Site Residents	Offsite residents will not have direct contact with contaminated soil on the Site	Incomplete
			Ecological Receptors (flora and fauna)	Plants may be affected by uptake of residual contaminants from soil, with potential for plant die-back. Animals may have direct contact with contaminated soil or ingest contaminants through contaminated plants on Site.	Potentially Complete
		Leaching of contaminants from soil then migration in groundwater	Human Health & Ecological Receptors (Surface Water - Wharekōrino Stream and Puniu River)	There is no evidence of direct stormwater discharge pipework from the former horticultural area. However important transport mechanisms are via overland flow and leaching from soil to groundwater and then migration via groundwater flow towards the Wharekōrino Stream.	Potentially Complete
Fly Tipping (B60)	Organic and inorganic contaminants from refuse	Contact with skin or accidental ingestion	On-site human health (maintenance /excavation workers)	Excavation workers may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			On-site human health (future site users)	Future site users may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			Off Site Residents	Offsite residents will not have direct contact with fly tipped material on the Site.	Incomplete
			Ecological Receptors (flora and fauna)	Plants may be affected by uptake of residual contaminants from soil, with potential for plant die-back. Animals may have direct contact with contaminated soil or ingest contaminants through contaminated plants on Site.	Potentially Complete
		Stormwater run-off or from contaminated groundwater migration	Human Health & Ecological Receptors (Surface Water - Wharekōrino Stream and Puniu River)	Although some localised contaminants may have leached from stockpiles to soil, given the distance to the Wharekōrino Stream, it is considered unlikely to be at risk.	Incomplete

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
Animal Grazing	Heavy metals (e.g. cadmium) associated with superphosphate fertiliser application and pesticides (e.g. DDT)	Contact with skin or accidental ingestion	On-site human health (maintenance /excavation workers)	Excavation workers may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			On-site human health (future site users)	Future site users may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			Off Site Residents	Offsite residents will not have direct contact with contaminated soil on the Site	Incomplete
			Ecological Receptors (flora and fauna)	Plants may be affected by uptake of residual contaminants from soil, with potential for plant die-back. Animals may have direct contact with contaminated soil or ingest contaminants through contaminated plants on Site.	Potentially Complete
		Leaching of contaminants from soil then migration in groundwater	Human Health & Ecological Receptors (Surface Water - Wharekōrino Stream and Puniu River)	Leaching from soil to groundwater and then migration via groundwater flow towards the Wharekōrino Stream is a potential migration pathway. Some of the grazing areas immediately border the Wharekōrino Stream. The testing of the soils (via leaching tests) is proposed as a means of confirming if the exposure pathway is complete.	Potentially Complete
Sports Turfs (Former Bowling Green/Tennis Courts)	Organic and inorganic contaminants from spraying associated with sports turf care - e.g. weedkillers (pesticides, herbicides, metals)	Contact with skin or accidental ingestion	On-site human health (maintenance /excavation workers)	Excavation workers may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			On-site human health (future site users)	Future users may have direct contact with contaminated soil or ingest contaminants through contaminated future produce grown on Site	Potentially Complete
			Off Site Residents	Offsite residents will not have direct contact with contaminated soil on the Site	Incomplete
			Ecological Receptors (flora and fauna)	Plants may be affected by uptake of residual contaminants from soil, with potential for plant die-back. Animals may have direct contact with contaminated soil or ingest contaminants through contaminated plants on Site.	Potentially Complete

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
		Leaching of contaminants from soil then migration in groundwater	Human Health & Ecological Receptors (Surface Water - Wharekōrino Stream and Puniu River)	Leaching from soil to groundwater and then migration via groundwater flow towards the Wharekōrino Stream is a potential migration pathway. Given the distance of these locations to the Wharekōrino Stream, it considered unlikely to be at risk.	Incomplete
Sheep dip	Metals and metalloids, organo-chlorines, -nitrogens and -phosphates used in the drenching of livestock.	Contact with skin or accidental ingestion	On-site human health (maintenance /excavation workers)	Excavation workers may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			On-site human health (future site users)	Future site users may have direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)	Potentially Complete
			Off Site Residents	Offsite residents will not have direct contact with contaminated soil on the Site	Incomplete
			Ecological Receptors (flora and fauna)	Plants may be affected by uptake of residual contaminants from soil. Animals may have direct contact with contaminated soil or ingest contaminants through contaminated plants on Site.	Potentially Complete
		Leaching of contaminants from soil then migration in groundwater	Human Health & Ecological Receptors (Surface Water - Wharekōrino Stream and Puniu River)	Leaching from soil to groundwater and then migration via groundwater flow towards the Wharekōrino Stream is a potential migration pathway. Some of the grazing areas immediately border the Wharekōrino Stream. The testing of the soils (via leaching tests) is proposed as a means of confirming if the exposure pathway is complete.	Potentially Complete

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
Landfill* *Note this part of the conceptual site model has been summarised from the Fraser Thomas closed landfill assessment and unless otherwise noted is their assessment of the conditions of the disposal sites and the associated risk assessment, for full details please see their report*	Metals, hydrocarbons, asbestos, medical waste	Ingestion and dermal contact of contaminated materials	Site users	Current use of the area is pastoral farming and animal food crops. Topsoil contains some minor elevated contaminant levels, including some asbestos contamination. The landfill area is subject to intermittent access by site users and more frequent but still intermittent animal grazing. It is considered unlikely there would be an unacceptable risk of contaminant exposure to humans associated with ongoing direct soil contact, except in the portions of the area with asbestos contamination. This risk can be further mitigated through providing relevant H&S advice to site users and through appropriate management controls.	Complete
			Maintenance and excavation workers	Topsoil contains some asbestos contamination, while the fill material also contains asbestos above commercial/industrial levels. Medical waste is also present in the fill. If soil disturbance activities are to be undertaken then specific contaminated land management controls would need to be implemented to manage potential risks.	Complete
	Asbestos, metals, hydrocarbons	Inhalation of contaminated soils (dust)f.	Site Users Neighbouring site users	Inhalation of contaminated dusts and asbestos fibres generated during any disturbance of soils within the site presents a risk to site users, maintenance/ excavation workers, and neighbouring site users. [*GHD notes this risk is higher for maintenance and excavation workers due to the more direct contact with the soil, including the more heavily impacted soils in the disposal locations*] The risk is considered low for existing site users and neighbours and can be mitigated through specific land management controls during such soil disturbance works.	Potentially complete
			Maintenance and excavation workers		Complete

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
	Metals, hydrocarbons	Overland transport of contaminants within surface water and sediments	Downgradient receiving environments	The landfill area generally has good grass cover. There are some areas of exposed soils and some ponding areas around the landfill areas, and therefore potential for surficial silt/sediment from topsoil across the fill area to be transported in surface runoff to the Wharekorino Stream. Six monthly monitoring of Wharekorino Stream water has found heavy metal concentrations to be lower than the adopted ANZECC guidelines, but iron concentrations often exceed ANZECC long term irrigation and aesthetics drinking water standards. The Wharekorino Stream in the vicinity of the site is typically subject to low flows and is considered unlikely to be used for water consumption or long term irrigation. The Wharekorino Stream merges with the much larger Pūniu River approximately 670m below the landfill site, where it is considered unlikely, that after attenuation and mixing, contaminants would be recorded in concentrations that would pose an unacceptable risk to ecological receptors. If uncontrolled soil disturbance (e.g. ploughing of landfill area) is undertaken, then potential exists for contaminant release to the downgradient receiving environment via soil erosion and stormwater runoff. This is considered unlikely based on existing use of the landfill paddocks.	Potentially complete
		Leaching of contaminants to groundwater	Downgradient groundwater users Downgradient receiving environments	A complete pathway exists for contaminants to leach from fill materials to shallow groundwater beneath the site and discharge to the Wharekorino Stream. Long term groundwater and stream water quality monitoring has shown elevated boron levels within the groundwater and corresponding elevated groundwater levels midstream and downstream of the site in excess of upstream boron levels, but with all results complying with ANZECC 95% freshwater protection level standards. As there is only one groundwater abstraction bore within 1km downstream of the site where water is used for nursery irrigation, it is considered unlikely that any potential contaminant migration via groundwater would pose an unacceptable risk to human health.	Complete

Source	Contaminants of Concern	Pathway	Receptor	Discussion	SPR Linkage Complete?
				Furthermore, it has been confirmed that there is a direct pathway for shallow groundwater under the landfill to flow in to the Wharekorino Stream and hence be subject to attenuation and mixing, so that any contaminants present would not pose an unacceptable risk to ecological receptors.	
	Landfill gas	Inhalation of landfill gas	Site users Maintenance and excavation workers Neighbouring site users	The potential for landfill gases to be generated within the fill profile due to disposal of putrescible materials, including green waste, is considered low. Any landfill gas that was generated would likely be vented through the surface of the fill material to atmosphere. Main possible risk relates to the accumulation of landfill gas within confined spaces.	Incomplete

A cultural impact assessment has been undertaken for the Site (Te Muraahi & Maniapoto, 2021) to capture and understand the cultural significance of the Site. This will be used to inform LINZ of the demolition and remediation project scope. Further context as to the significance of these sites is included in the Cultural Impact Analysis (Te Muraahi & Maniapoto, 2021).

This assessment has identified several cultural receptors, such as culturally significant sites, waterways, flora and fauna.

The identification of culturally significant areas is important for the management of earthworks associated with the remedial work, including minimising earthworks in these areas to minimise potential damage to these sites, sediment, and erosion controls to prevent runoff, and to avoid soil disturbance in these areas. Each of these sites will need to be assessed to measure the level of potential risk of damage from earthworks and other remediation activities.

Cultural receptors do not easily align with the typical conceptual site model, however these have been included in the separate table below as a way to identify and acknowledge potential cultural risks.

Table 12 Cultural Impacts from Contaminated Soil

Source	Contaminants of concern	Pathway	Receptor	Discussion	SPR Linkage complete?
Contaminated soil	Metals, hydrocarbons, pesticides, asbestos	Overland flow of soil or sediments	Culturally significant land areas	Contamination may be mobilised during earthworks, or from exposed soil, and carried overland into significant areas of the site or into waterways, and subsequently into plants and animals in or near the waterways. These impacts may impact the cultural significance of the soils and waterways, and may impact the ability to collect kai from waterways. This can be managed via appropriate management plans during earthworks (sediment and erosion control plans).	Potentially complete
			Waterways		
			Flora and fauna		
	Metals, hydrocarbons, pesticides	Leaching	Underlying soil and groundwater	Contamination may leach from contaminated shallow soil in culturally significant areas, leading to further degradation of the soil or underlying groundwater.	Potentially complete
		Groundwater interactions with surface water	Flora and fauna	Impacted groundwater may flow into surface water, and subsequently impact the health of plants and animals who live in and near the surface water.	Potentially complete
	Hydrocarbons	Soil vapour	Culturally significant areas	Soil vapour may be carried through preferential pathways (e.g. permeable soil) to areas underlying culturally significant areas.	Potentially complete

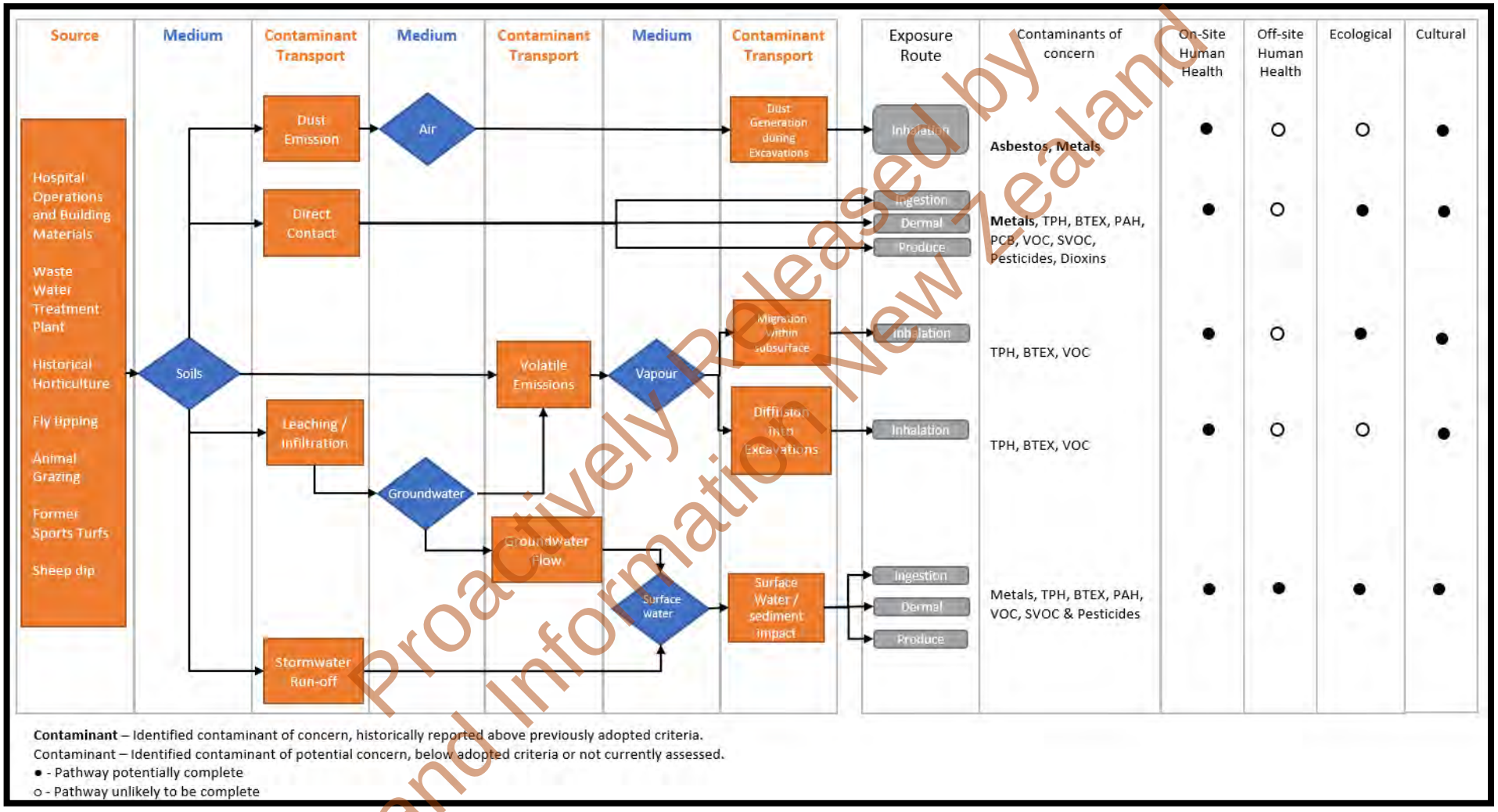

Figure 8 *Conceptual site model*

5.2.1 Potentially complete pathways

Potentially complete pathways identified in the CSM included several potential exposure risks to human health and environmental receptors from contaminants in the soil profile via ingestion, inhalation, dermal and produce pathways.

The potentially exposure pathways fall within broadly typical scenarios as follows:

- Excavation Workers – workers who come into contact with contaminated material as part of earthworks or soil disturbance within the Site
  - Soil disturbance may result in the accidental inhalation of asbestos or metal-contaminated dust generated during excavation works
  - Soil disturbance may result in the accidental inhalation of volatile vapours generated during excavation works from hydrocarbon or solvent sources
  - Excavation workers having direct contact with contaminated soil on skin or the accidental ingestion of contaminants (e.g. from poor hand-washing hygiene practices)
- Future Site users – the Site will be left in a remediated state as per the requirements of the Deed and the THDSP. This will include the removal of all buildings and leaving the Site in a grassed state. Once remediation is complete and the land passes from the Crown to new owners, those future owners will need to evaluate contamination issues in relation to any planned future development. Development will need to be considered in the context of where the remediated areas are, where residual concentrations remain and the layout of the future development design.
- Surface water and ecology– the Wharekōrino Stream has the potential to receive impacted stormwater and sediment from the site
  - Overland flows and the stormwater network transporting impacted sediment into surface water bodies near the site, may be impacting the ecology of the waterways and impacting potential food sources in the stream.
- While the CSM is based on the protection of human and environmental health, cultural health also needs to be protected. These concepts are often interwoven with each other, and often share several of the same exposure pathways. As a result there is the potential for risk to a number of cultural receptors from the historical Site activities.

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6 Conclusions

The PSI objectives as required by LINZ were as follows:

- Review the available information and data from the existing reports provided to GHD to identify and close any data gaps identified.
- Identify HAIL activities and potential sources of contamination for the purposes of change of land use under NES CS (changing from a commercial industrial hospital site to a grassed site with no buildings) and compliance with the terms of the Deed.
- Refine the conceptual site model developed by AECOM (2019) to reflect the findings from the PSI and inform the sampling plan.

Each of these are summarised in turn below, followed by discussion on NES CS resource consenting implications for LINZ as a result of the PSI findings.

6.1 Identification & Closure of Data Gaps

The PSI undertook a review of previous reports and available documentation in order to try and close data gaps identified in those previous reports. Many data gaps related to documentation of a suspected activity or process which were able to be closed out. A number of the data gaps raised can only be closed out by the collection of samples as part of the future DSI.

6.2 Identification of HAIL Activities

The results of the gap analysis were compiled into a table of identified HAIL activities, with recommendations for soil or sediment sampling where required. In total, 43 HAIL locations were identified across the Site. These comprised a wide range of HAIL activities, including the following categories:

- A2 - Chemical formulation or bulk storage
- A5 – Dry cleaning premises
- A8 – Livestock dip or spray race operations
- A10 – Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds
- A17 – Storage tanks or drums for fuel chemicals or liquid waste
- B4 – Substations
- E1 – asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition.
- F4 – Motor Vehicle Workshops
- F7 – Service Station
- G6 – Waste recycling or waste or wastewater treatment
- I – any other land that has been subject or the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.

6.3 Refinement of the CSM

The previous AECOM CSM was limited to consideration of lead and asbestos sources. The updated CSM in this PSI has considered all the previously known HAIL sources, plus new ones identified during the documentary assessment and site walkover inspection.

The updated CSM has identified potentially complete linkages between contaminant sources on Site and sensitive human and ecological receptors, these receptors being excavation workers, future land users and the Wharekōrino Stream. The findings of this PSI are to be used to complete a Sampling and Analysis Plan in accordance with CLMG No.1 in order to detail the sampling design for the future DSI.

6.4 Implications for Future LINZ Consenting

The THDSP requires that the Crown will apply for all necessary consents required for the demolition and remediation works. Note that once demolition and remediation is complete, future land use consenting is not the responsibility of the Crown. Future owners will need to evaluate the need for (and obtain) their own resource consents for redevelopment of the Site.

A full planning assessment regarding the demolition and remediation works is to be completed under a separate scope of works. As several HAIL activities have been identified at the Site, a Detailed Site Investigation should be undertaken in order to inform the consenting requirements under the NES CS for the Site. Additional contaminated land related consents under the Waipā District or Waikato Regional plan may be required and will be included in the Planning Assessment for the project.

7 Limitations

This report: has been prepared by GHD for Toitū Te Whenua - Land Information New Zealand and may only be used and relied on by Toitū Te Whenua - Land Information New Zealand for the purpose agreed between GHD and Toitū Te Whenua - Land Information New Zealand as set out in section 1.4 of this report.

GHD otherwise disclaims responsibility to any person other than Toitū Te Whenua - Land Information New Zealand arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the Statement of Work (N00457) and are subject to the scope limitations set out in the underlying agreement with LINZ.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

Although their existence is noted within the PSI, the PSI does not include detail on the Existing Disposal Sites to the east of the Wharekōrino Stream, which are being investigated by Fraser Thomas Ltd as part of a separate report (Fraser Thomas, 2022).

8 SQEP statement

8.1.1 GHD SQEP

8.1.1.1 Mark Ballard – CEnvP-Site Contamination

Mark Ballard is the GHD Technical Director for the project. Mark is a CEnvP-SC (#41175) under the Environment Institute of Australia and New Zealand (EIANZ) Certified Environmental Practitioner programme. He has 21 years' experience working on contaminated land and hydrogeological investigations and acts as the SQEP of this report.

8.1.2 HAIL Environmental review

Dr. Dave Bull of HAIL Environmental has acted as a third-party reviewer of this report. Dave is a CEnvP-SC (#40026), as well as a Charted Chemist. He has 20 years' experience working on contaminated land projects and as a chemist. A covering letter outlining his review has been prepared separately from this report.

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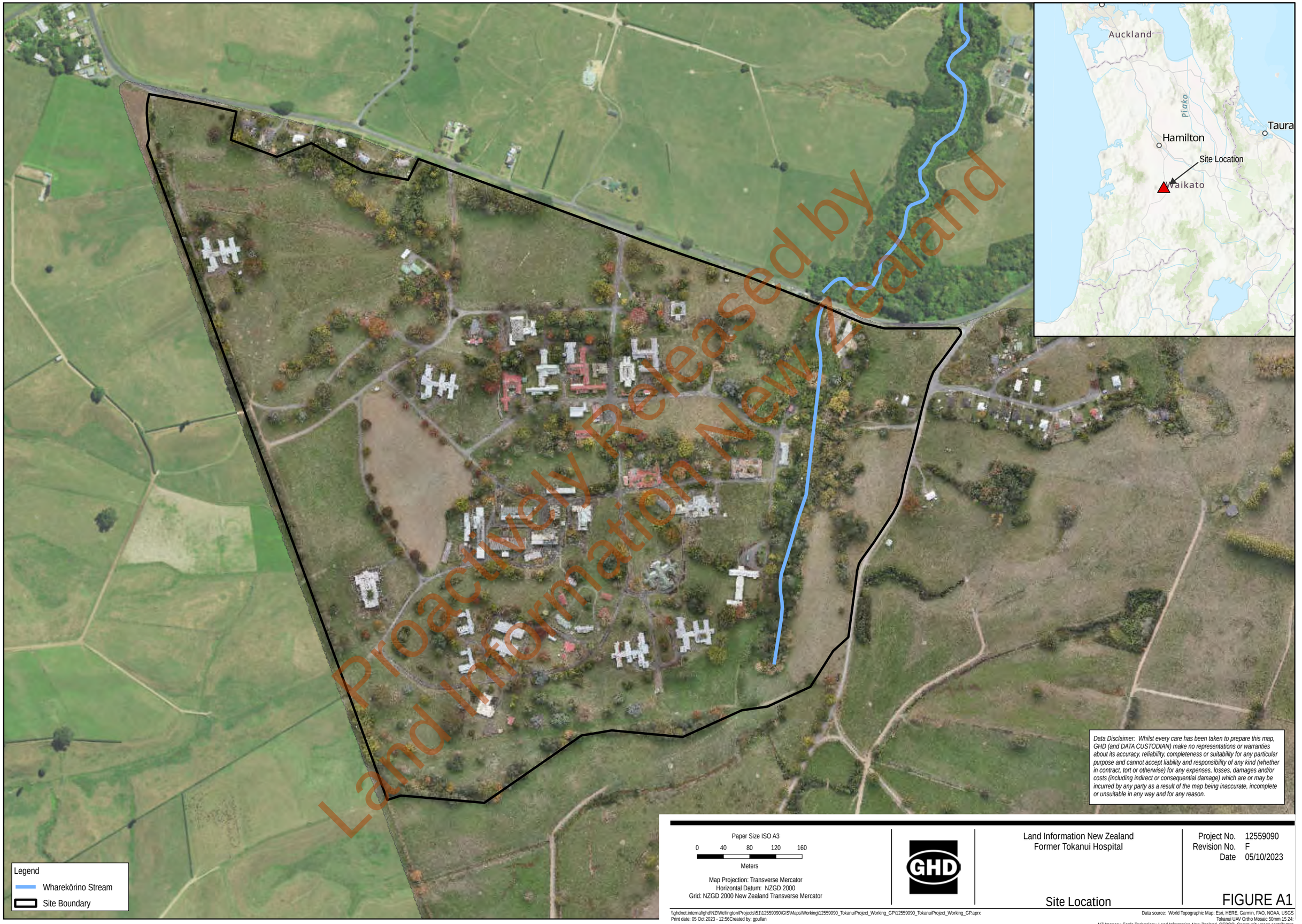
Appendices

Appendix A

Site maps



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Meters

Map Projection: Transverse Mercator
Horizontal Datum: NZGD 2000
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Land Information New Zealand
Former Tokanui Hospital

Site Location

Project No. 12559090
Revision No. F
Date 05/10/2023

FIGURE A1

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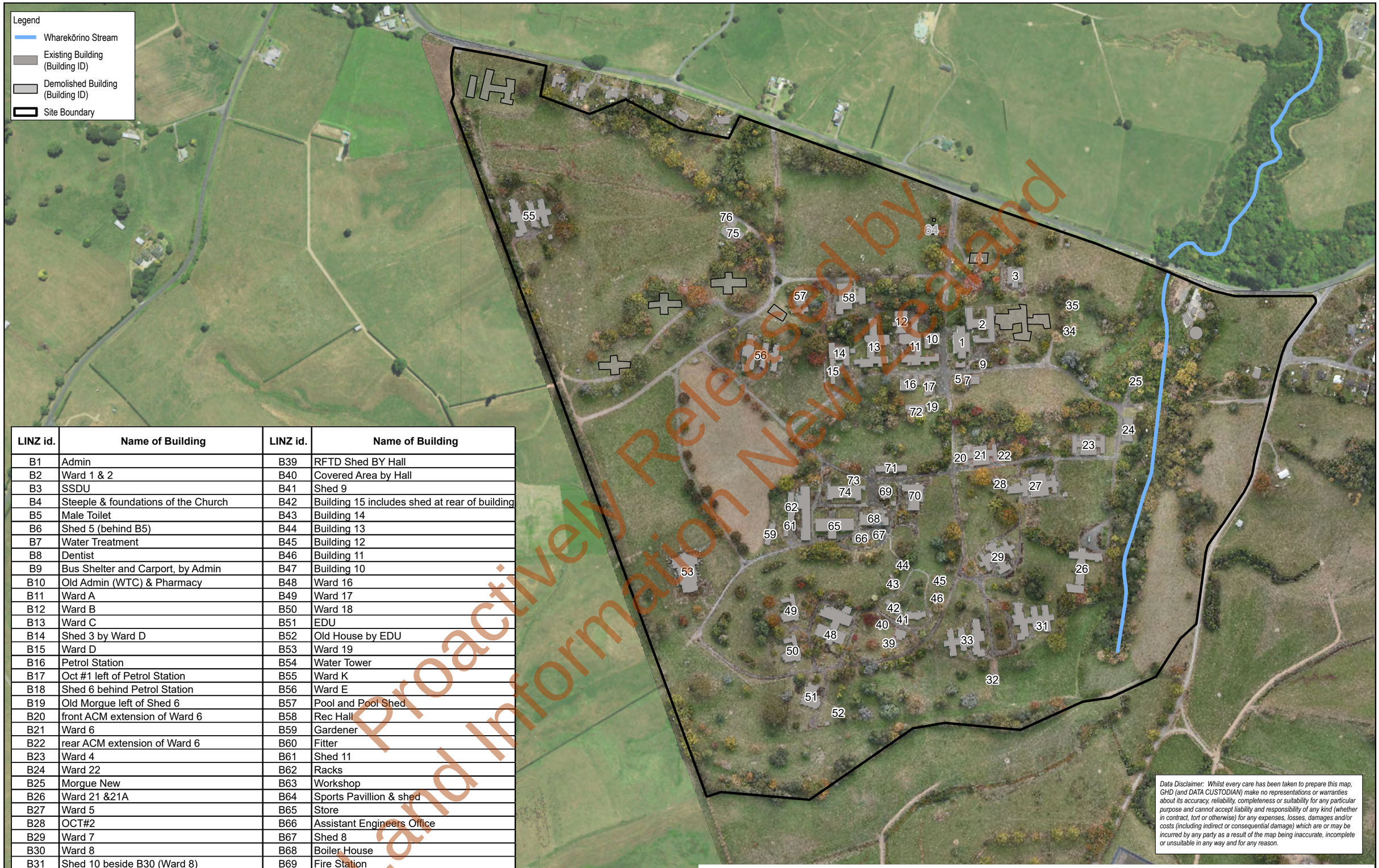

LINZ id.	Name of Building	LINZ id.	Name of Building
B1	Admin	B39	RFTD Shed BY Hall
B2	Ward 1 & 2	B40	Covered Area by Hall
B3	SSDU	B41	Shed 9
B4	Steeple & foundations of the Church	B42	Building 15 includes shed at rear of building
B5	Male Toilet	B43	Building 14
B6	Shed 5 (behind B5)	B44	Building 13
B7	Water Treatment	B45	Building 12
B8	Dentist	B46	Building 11
B9	Bus Shelter and Carport, by Admin	B47	Building 10
B10	Old Admin (WTC) & Pharmacy	B48	Ward 16
B11	Ward A	B49	Ward 17
B12	Ward B	B50	Ward 18
B13	Ward C	B51	EDU
B14	Shed 3 by Ward D	B52	Old House by EDU
B15	Ward D	B53	Ward 19
B16	Petrol Station	B54	Water Tower
B17	Oct #1 left of Petrol Station	B55	Ward K
B18	Shed 6 behind Petrol Station	B56	Ward E
B19	Old Morgue left of Shed 6	B57	Pool and Pool Shed
B20	front ACM extension of Ward 6	B58	Rec Hall
B21	Ward 6	B59	Gardener
B22	rear ACM extension of Ward 6	B60	Fitter
B23	Ward 4	B61	Shed 11
B24	Ward 22	B62	Racks
B25	Morgue New	B63	Workshop
B26	Ward 21 &21A	B64	Sports Pavillion & shed
B27	Ward 5	B65	Store
B28	OCT#2	B66	Assistant Engineers Office
B29	Ward 7	B67	Shed 8
B30	Ward 8	B68	Boiler House
B31	Shed 10 beside B30 (Ward 8)	B69	Fire Station
B32	Shed 4	B70	Kitchen
B33	Ward 9	B71	Garages
B34	Shed 2 Toilet Block	B72	Shed hidden in trees behind B18 (Shed 6)
B35	Shed 1, by SSDU	B73	Shed 7 by Laundry
B36	Hall	B74	Laundry
B37	Wooden Shed behind hall	B75	Doctors Flats (OCCUPIED)
B38	RFTD by Hall	B76	Doctors Flats Garages

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Former Tokanui Hospital

Site Buildings

Project No. **12559090**
Revision No. **D**
Date **06/07/2023**

FIGURE A2

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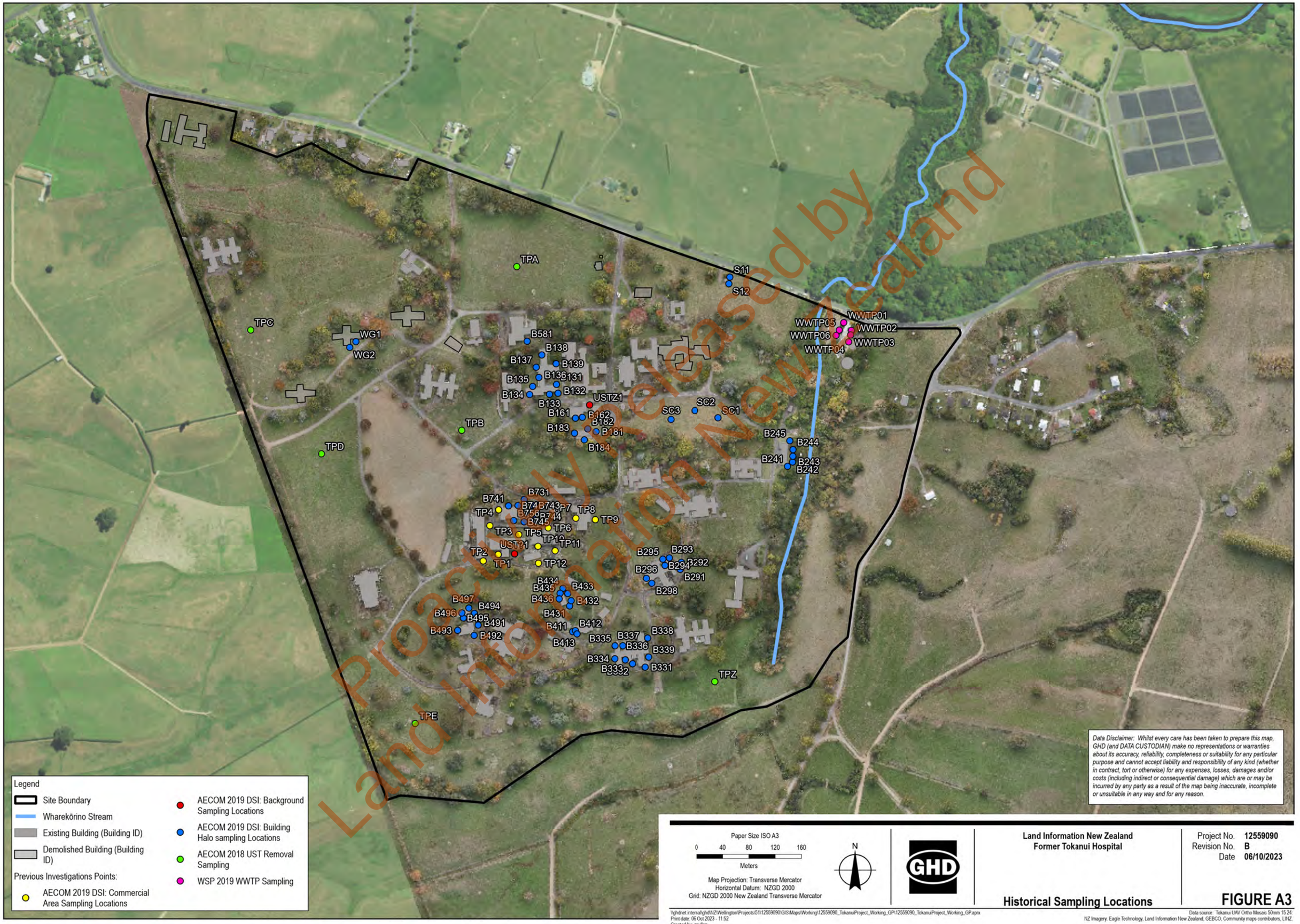

Legend

- Site Boundary
- Wharekōrino Stream
- Existing Building (Building ID)
- Demolished Building (Building ID)

Previous Investigations Points:

- AECOM 2019 DSI: Commercial Area Sampling Locations
- AECOM 2019 DSI: Background Sampling Locations
- AECOM 2019 DSI: Building Halo sampling Locations
- AECOM 2018 UST Removal Sampling
- WSP 2019 WWTP Sampling

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Date **06/10/2023**

Historical Sampling Locations

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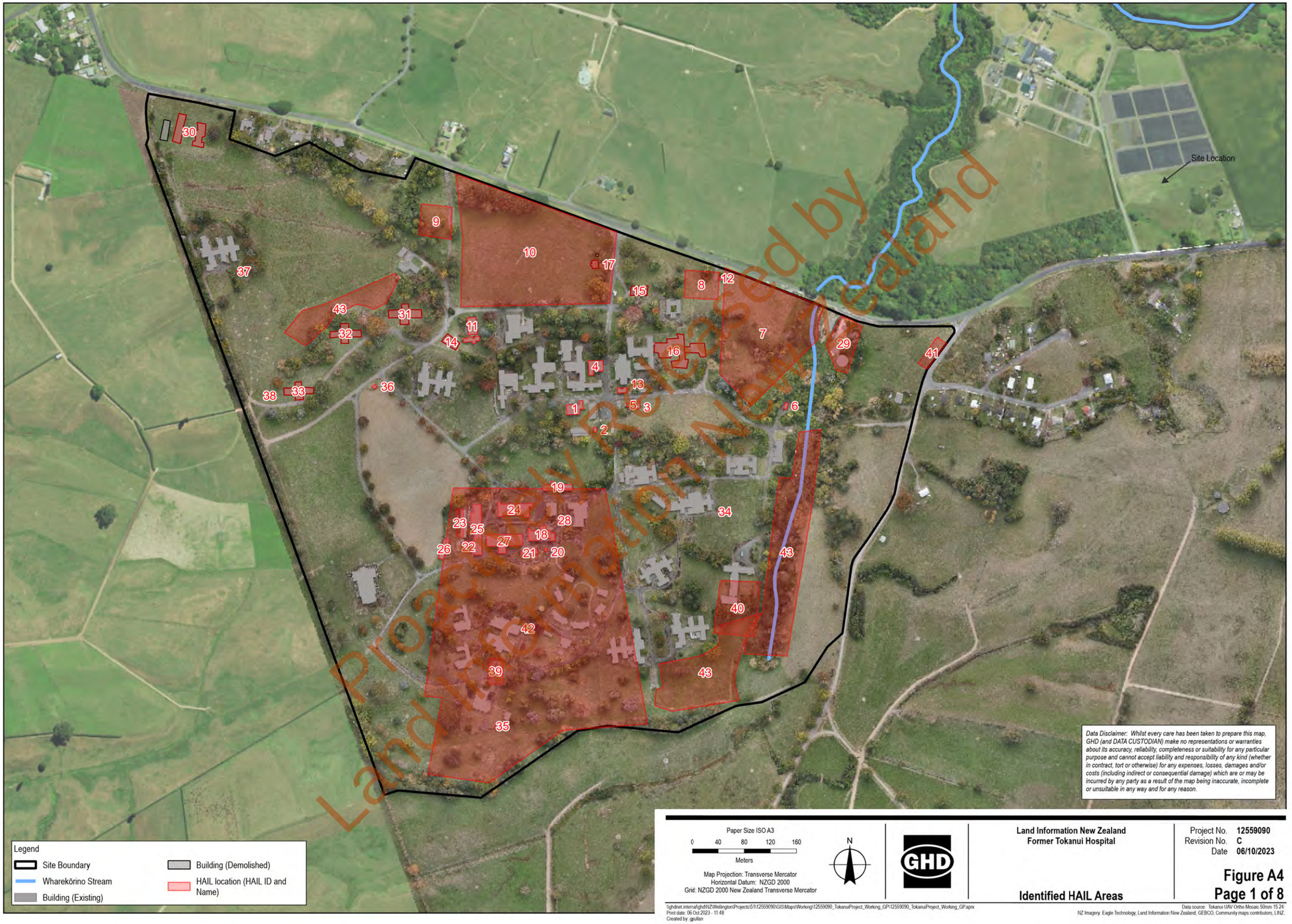

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Identified HAIL Areas

Project No. **12559090**
Revision No. **C**
Date **06/10/2023**

Figure A4
Page 1 of 8

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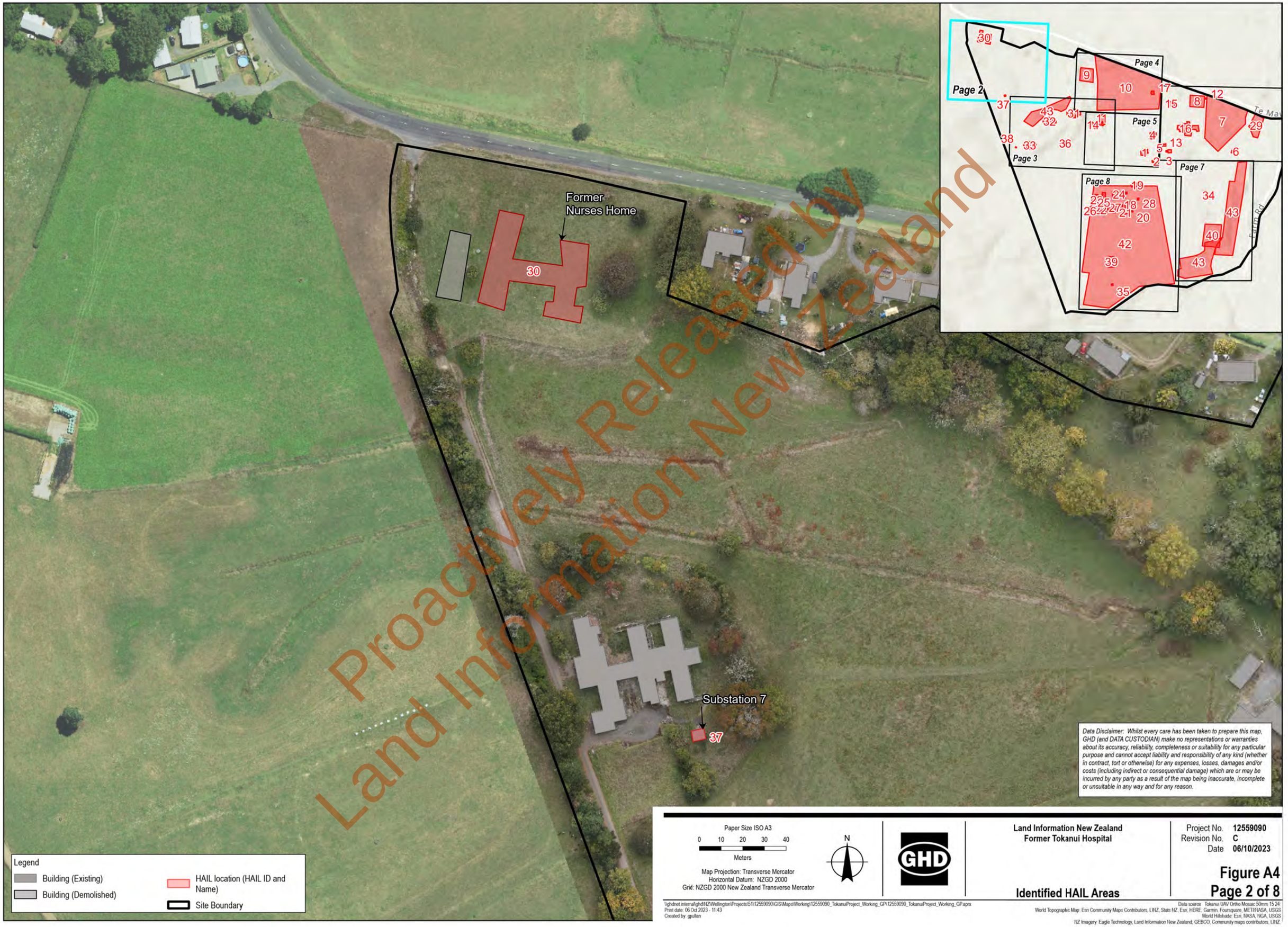

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Former Tokanui Hospital

Identified HAIL Areas

Project No. **12559090**
Revision No. **C**
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Figure A4
Page 2 of 8

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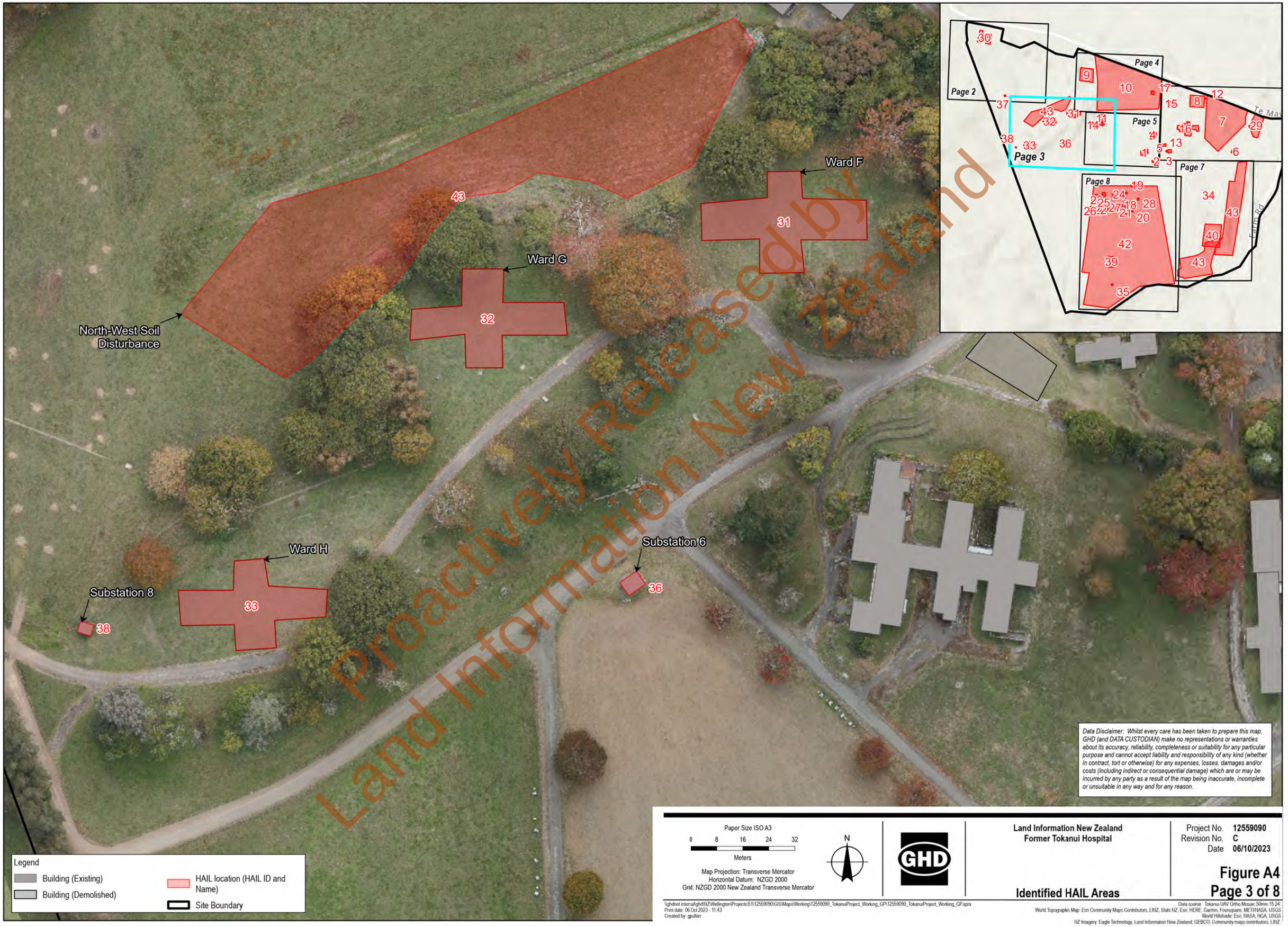

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Identified HAIL Areas

Project No. **12559090**
Revision No. **C**
Date **06/10/2023**

Figure A4
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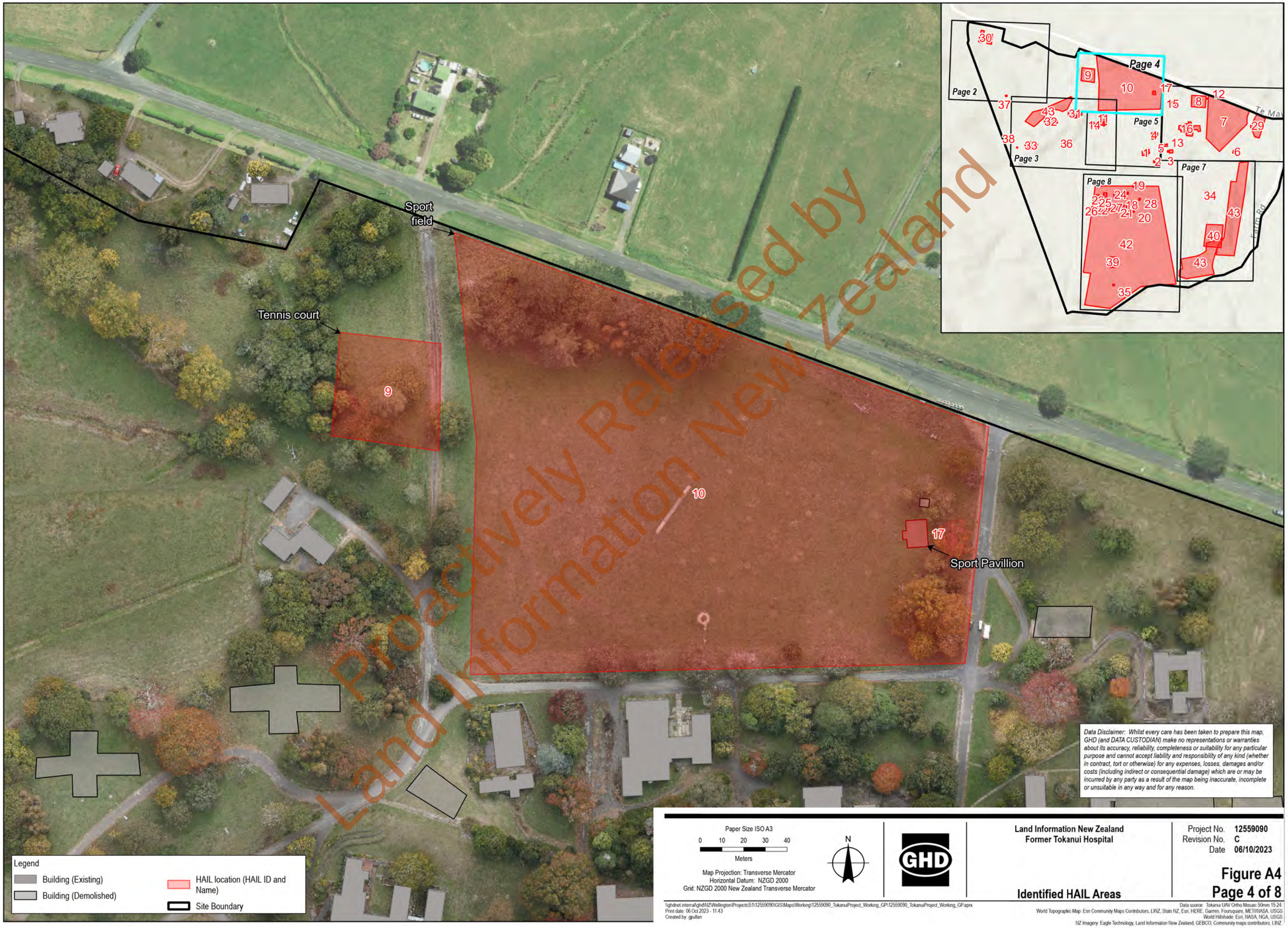

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Former Tokanui Hospital

Identified HAIL Areas

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Figure A4
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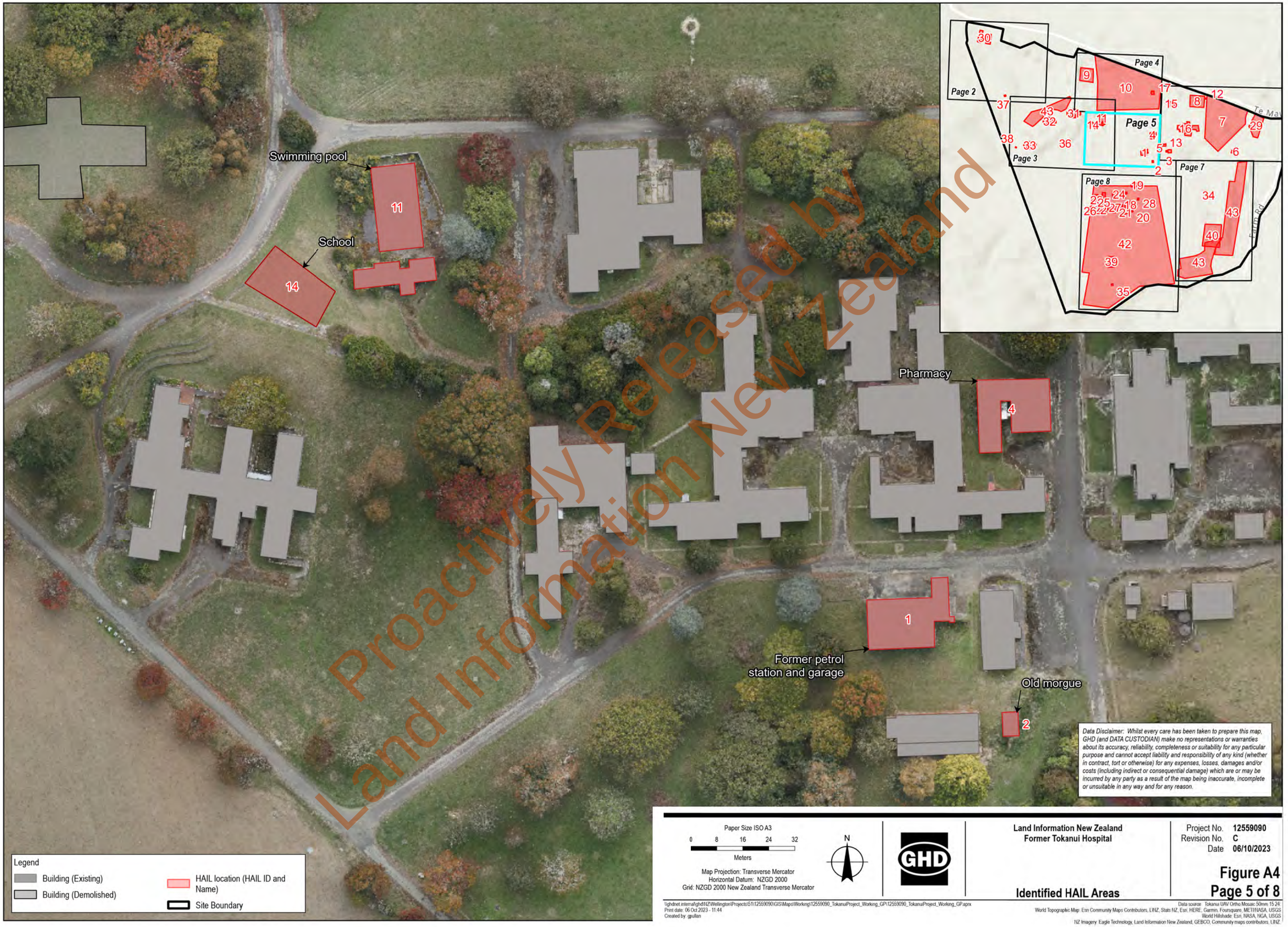
World Hillshade: Esri, NASA, NGA, USGS
NZ Imagery: Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, LINZ



Data Disclaimer: Whilst every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Paper Size ISO A3

0 8 16 24 32

Meters

Map Projection: Transverse Mercator
Horizontal Datum: NZGD 2000
Grid: NZGD 2000 New Zealand Transverse Mercator

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Land Information New Zealand
Former Tokanui Hospital

Identified HAIL Areas

Project No. **12559090**
Revision No. **C**
Date **06/10/2023**

Figure A4
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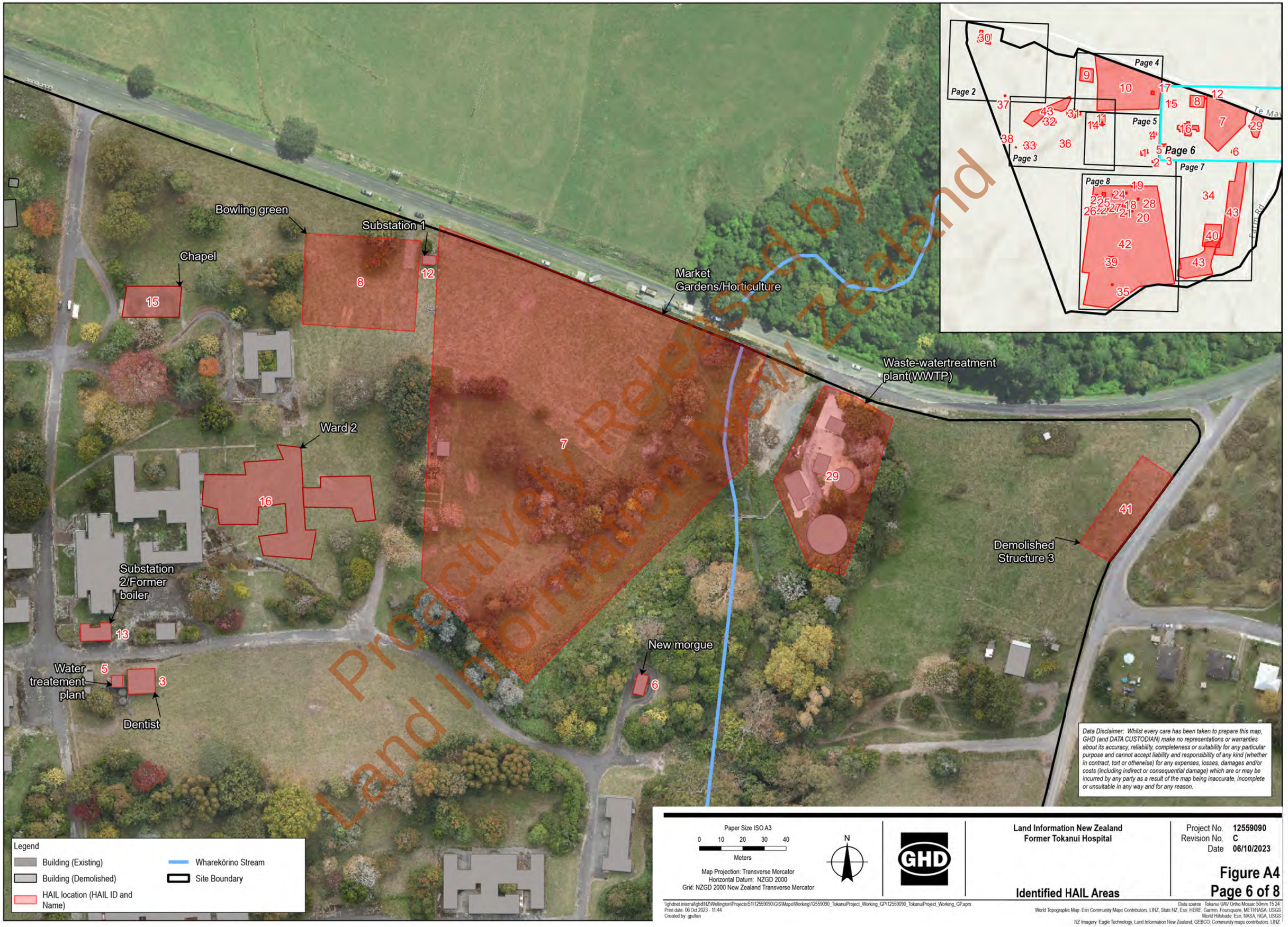
Print date: 06 Oct 2023 - 11:44
Created by: gpullan

Data source: Tokanui UAV Ortho Mosaic 50mm 15 24; World Topographic Map: Esri Community Maps Contributors, LINZ, Stats NZ, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS; World Hillshade: Esri, NASA, NGA, USGS; NZ Imagery: Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, LINZ.



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Meters

Map Projection: Transverse Mercator
Horizontal Datum: NZGD 2000
Grid: NZGD 2000 New Zealand Transverse Mercator

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Former Tokanui Hospital

Project No. **12559090**
Revision No. **C**
Date **06/10/2023**

Identified HAIL Areas

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Print date: 06 Oct 2023 - 11:44
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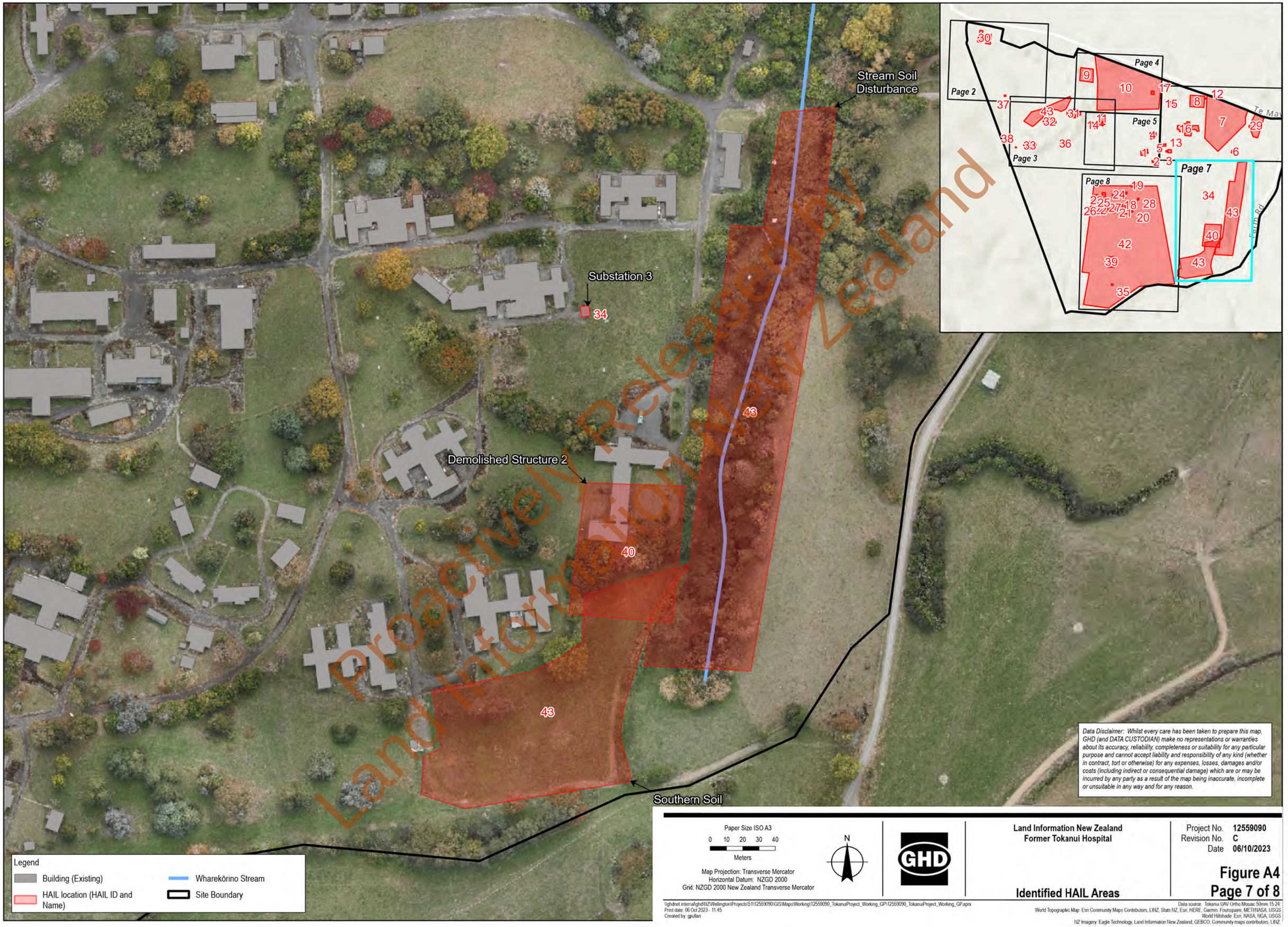

Data Disclaimer: Whilst every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

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Meters

Map Projection: Transverse Mercator
Horizontal Datum: NZGD 2000
Grid: NZGD 2000 New Zealand Transverse Mercator

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Former Tokanui Hospital

Identified HAIL Areas

Project No. **12559090**
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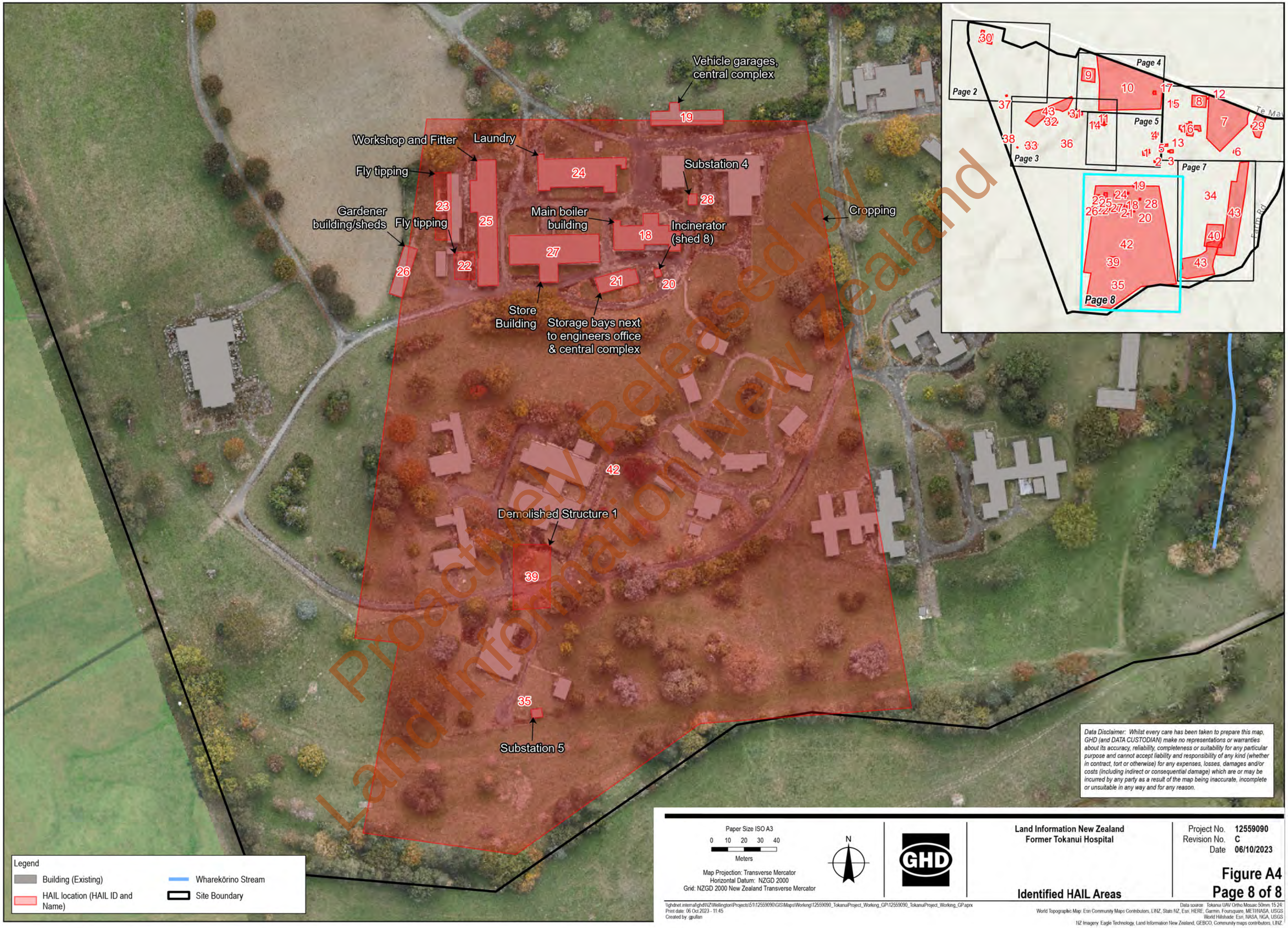
Print date: 06 Oct 2023 - 11:45
Created by: gpullan

Data source: Tokanui UAV Ortho Mosaic 50mm 15 24;
World Topographic Map: Esri Community Maps Contributors, LINZ, Stats NZ, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS
World Hillshade: Esri, NASA, NGA, USGS
NZ Imagery: Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, LINZ



Data Disclaimer: Whilst every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Paper Size ISO A3
0 10 20 30 40
Meters

Map Projection: Transverse Mercator
Horizontal Datum: NZGD 2000
Grid: NZGD 2000 New Zealand Transverse Mercator

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Identified HAIL Areas

Project No. **12559090**
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Data source: Tokanui UAV Ortho Mosaic 50mm 15.24;
World Topographic Map: Esri Community Maps Contributors, LINZ, Stats NZ, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS
World Hillshade: Esri, NASA, NGA, USGS
NZ Imagery: Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, LINZ.

Appendix B

Building register

TOKANUI HOSPITAL - BUILDING IDENTIFICATION

There are multiple references for the buildings at this site - this is the LINZ id list we have labelled each building on site

			Identified hazards (via visual inspection or sampling)								
LINZ id.	Name of Building	MOJ id from Draft Delivery Programme	Restricted	ACM	Lead Paint	Vermin and /or bird waste, mould	Chemicals/ Medicines	Broken Glass	Confined Spaces	Polychlorinated biphenyls (PBCs)	Contracted Specialist
			Y / N								
B1	Admin	#1	N	Y	Y	Y	Y	Y	Y	N	Y = Engineer
B2	Ward 1 & 2	not listed	Y	Y	Y	Y	N	Y	N	N	
B3	SSDU	not listed									
B4	Steeple & foundations of the Church	#41	N	Y	Y	Y	Y	Y	Y	N	
B5	Male Toilet	not listed	N	Y	Y	Y	N	Y	N	N	
B6	Shed 5 (behind B5)	not listed	N	N	Y	Y	N	N	N	N	
B7	Water Treatment	not listed	N	Y	N	Y	Y	N	N	N	
B8	Dentist	#44	N	Y	Y	Y	Y	Y	N	N	
B9	Bus Shelter and Carport, by Admin	not listed	N	Y	Y	Y	Y	Y	N	N	
B10	Old Admin (WTC) & Pharmacy	not listed	N	Y	Y	Y	N	Y	N	N	Y = Engineer
B11	Ward A	#16	Y	Y	Y	Y	N	Y	N	N	
B12	Ward B	#17	N	Y	Y	Y	Y	Y			Y = Engineer
B13	Ward C	#18	Y	Y	Y	Y	N	Y	N	N	
B14	Shed 3 by Ward D	not listed	N	N	Y	Y	N	Y	N	N	
B15	Ward D	#19	N	Y	Y	Y	N	Y	N	N	
B16	Petrol Station	#40	N	N	N	N	N	N	N	N	Y = Environmental Specialist & Engineer
B17	Oct #1 left of Petrol Station	not listed	N	Y	Y	Y	Y	Y	N	N	
B18	Shed 6 behind Petrol Station	not listed	N	Y	Y	Y	Y	Y	N	N	
B19	Old Morgue left of Shed 6	not listed	N	Y	Y	Y	N	N	N	N	
B20	front ACM extension of Ward 6	#14	Y	Y	Y	Y	N	Y	N	N	
B21	Ward 6	#14	Y	Y	Y	Y	N	Y	N	N	
B22	rear ACM extension of Ward 6	#14	Y	Y	Y	Y	N	Y	N	N	
B23	Ward 4	#12	N	Y	Y	Y	N	Y	N	N	
B24	Ward 22	#11	N	Y	Y	Y	Y	Y	N	N	
B25	Morgue New	#34	N	Y	Y	Y	Y	Y	N	N	
B26	Ward 21 &21A	#9 & #10	N	Y	Y	Y	N	Y	N	N	Y = Engineer
B27	Ward 5	#13	Y	Y	Y	Y	N	Y	N	N	
B28	OCT#2		N	Y	Y	Y	N	Y	N	N	
B29	Ward 7	#15	N	Y	Y	Y	N	Y	N	N	
B30	Ward 8	#5	N	Y	Y	Y	N	Y	N	N	
B31	Shed 10 beside B30 (Ward 8)	No ACM report									
B32	Shed 4		N	N	Y	Y	N	N	N	N	
B33	Ward 9	#6	N	Y	Y	Y	N	Y	N	N	
B34	Shed 2 Toilet Block	not listed	N	Y	Y	N	N	N	N	N	
B35	Shed 1, by SSDU	not listed	N	Y	Y	Y	N	N	N	N	
B36	Hall	#45	N	Y	Y	Y	N	N	N	N	Y = Engineer
B37	Wooden Shed behind hall	No ACM report									
B38	RFTD by Hall	not listed	N	Y	Y	Y	Y	Y	N	N	
B39	RFTD Shed BY Hall	not listed	N	N	N	Y	Y	N	N	N	
B40	Covered Area by Hall	not listed	N	N	N	N	N	N	N	N	
B41	Shed 9	not listed	N	N	Y	Y	N	N	N	N	
B42	Building 15 includes shed at rear of building	#30	Y	Y	Y	Y	N	Y	N	N	
B43	Building 14	#29	N	Y	Y	Y	N	Y	N	N	
B44	Building 13	#28	N	Y	Y	Y	N	Y	N	N	
B45	Building 12	#27	N	Y	Y	Y	N	N	N	N	
B46	Building 11	#26	N	Y	Y	Y	N	Y	N	N	
B47	Building 10	#25	N	Y	Y	Y	N	N	N	N	
B48	Ward 16	#2	N	Y	N	Y	N	Y	N	N	
B49	Ward 17	#3	N	Y	N	Y	N	Y	N	N	
B50	Ward 18	#4	N	Y	N	Y	N	Y	N	N	
B51	EDU	#23	N	Y	Y	Y	N	Y	N	N	
B52	Old House by EDU	not listed	N	Y	Y	Y	N	N	N	N	
B53	Ward 19	#8	N	Y	N	Y	N	Y	N	N	Y = Engineer for Water Tower ONLY
B54	Water Tower		N	N	N	N	N	N	N	N	
B55	Ward K	not listed	N	Y	Y	Y	N	Y	N	N	
B56	Ward E	#22	N	Y	Y	Y	N	Y	N	N	
B57	Pool and Pool Shed	#38	N	N	Y	Y	N	N	N	N	
B58	Rec Hall	#39	N	Y	Y	Y	N	Y	N	N	
B59	Gardener	#24	N	N	Y	Y	Y	Y	N	N	
B60	Fitter	not listed	N	N	Y	N	N	Y	N	N	
B61	Shed 11	not listed	N	N	Y	Y	N	N	N	N	
B62	Racks	not listed	N	N	N	Y	N	Y	N	N	
B63	Workshop	#43	N	Y	Y	Y	N	Y	N	N	
B64	Sports Pavillion & shed	not listed	N	Y	Y	Y	N	Y	N	N	
B65	Store	#42	N	Y	Y	Y	N	Y	N	N	
B66	Assistant Engineers Office	not listed	N	Y	?	Y	?	?	?	?	
B67	Shed 8	not listed	N	Y	Y	Y	N	N	N	N	
B68	Boiler House	#20	N	Y	Y	Y	Y	Y	Y	Y	Y = Environmental Specialist & Engineer
B69	Fire Station	#47	N	Y	Y	Y	Y	Y	N	N	
B70	Kitchen	#31	N	Y	Y	Y	Y	Y	N	N	
B71	Garages	#46	N	Y	Y	Y	Y	Y	Y	N	
B72	Shed hidden in trees behind B18 (Shed 6)	No ACM report									
B73	Shed 7 by Laundry	not listed	N	Y	Y	Y	N	Y	N	N	
B74	Laundry	#32	N	Y	Y	Y	Y	Y	N	Y	
B75	**Doctors Flats (OCCUPIED)**	**#21**	**N**	**N**	**N**	**Y**	**Y**	**N**	**N**	**N**	
B76	Doctors Flats Garages	#21 part of	N	N	N	N	N	N	N	N	
S1	Substation 1 by Steeple	not listed	N	Y	Y	N	N	N	N	N	Y = Electrical contractor
S2	Substation 2 by Admin	not listed	N	Y	Y	Y	Y	Y	Y	N	Y = Electrical contractor
S3	Substation 3 by Ward 5	not listed	N	Y	Y	N	N	N	N	N	Y = Electrical contractor
S4	Substation 4 by Fire Station	not listed	N	N	Y	N	Y	N	N	Y	Y = Electrical contractor
S5	Substation 5 by House by EDU	not listed	N	N	Y	Y	N	N	N	Y	Y = Electrical contractor
S6	Substation 6 by Ward E	not listed	N	N	Y	N	N	N	N	Y	Y = Electrical contractor
S7	Substation 7 by Ward K	not listed	N	Y	Y	Y	N	N	N	Y	Y = Electrical contractor
S8	Substation 8 by Ward K	not listed	N	N	Y	N	Y	N	N	N	Y = Electrical contractor

Appendix C

Site Walkover Notes & Photographs

Photo	Photograph
Photo 1: B3 SSDU 11/08/2022	

Photo	Photograph
Photo 2: B7 Water treatment building 11/08/2022	

Photo	Photograph
Photo 3: B8 Dentist 11/08/2022	

Photo	Photograph
Photo 4: B13 Ward 3 11/08/2022	

Photo	Photograph
Photo 5: B14 Ward D Shed 3 11/08/2022	

Photo	Photograph
Photo 6: B13 Petrol station 11/08/2022	

Photo	Photograph
Photo 7: B13 Petrol station 11/08/2022	

Photo	Photograph
Photo 8: B13 Petrol station 11/08/2022	

Photo	Photograph
Photo 9: B19 Old Morgue 11/08/2022	

Photo	Photograph
Photo 10: B57 Swimming Pool 11/08/2022	

Photo	Photograph
Photo 11: B57 Swimming Pool 11/08/2022	

Photo	Photograph
Photo 12: S2 Substation 2 11/08/2022	

Photo	Photograph
Photo 13: S2 Substation 2 11/08/2022	

Photo	Photograph
Photo 14: S2 Substation 2 11/08/2022	

Photo	Photograph
Photo 15: Gully to the south of B8 11/08/2022	

Photo	Photograph
Photo 16: B59 Gardeners Shed 11/08/2022	

Photo	Photograph
Photo 17: B59 Gardeners Shed 11/08/2022	

Photo	Photograph
Photo 18: B59 Gardeners Shed 11/08/2022	

Photo	Photograph
Photo 19: B59 Gardeners Shed 11/08/2022	

Photo	Photograph
Photo 20: B60 Fitter 11/08/2022	

Photo	Photograph
Photo 21: B61 Shed 11 11/08/2022	

Photo	Photograph
Photo 22: B62 Racking 12/08/2022	

Photo	Photograph
Photo 23: B62 Racking 12/08/2022	

Photo	Photograph
Photo 24: B63 Workshop 11/08/2022	

Photo	Photograph
Photo 25: B63 Workshop 11/08/2022	

Photo	Photograph
Photo 26: B65 Store 11/08/2022	

Photo	Photograph
Photo 27: B65 Store 11/08/2022	

Photo	Photograph
Photo 28: B66: Assistant engineers office 11/08/2022	

Photo	Photograph
Photo 29: B66: Assistant engineers office 11/08/2022	

Photo	Photograph
Photo 30: B66: Assistant engineers office 11/08/2022	

Photo	Photograph
Photo 31: B67: Shed 8/Incinerator 11/08/2022	

Photo	Photograph
Photo 32: B68: Main boiler house 11/08/2022	

Photo	Photograph
Photo 33: B68: Main boiler house 11/08/2022	

Photo	Photograph
Photo 34: B68: Main boiler house 11/08/2022	

Photo	Photograph
Photo 35: B68: Main boiler house 11/08/2022	

Photo	Photograph
Photo 36: B68: Main boiler house 11/08/2022	

Photo	Photograph
Photo 37: B69: Cafe 11/08/2022	

Photo	Photograph
Photo 38: B69: Cafe 11/08/2022	

Photo	Photograph
Photo 39: B71: Garages 11/08/2022	

Photo	Photograph
Photo 40: B73: Shed 7 11/08/2022	

Photo	Photograph
Photo 41: B73: Shed 7 11/08/2022	

Photo	Photograph
Photo 42: B73: Shed 7 12/08/2022	

Photo	Photograph
Photo 43: B73: Shed 7 12/08/2022	

Photo	Photograph
Photo 44: B74: Laundry 11/08/2022	

Photo	Photograph
Photo 45: B74: Laundry 11/08/2022	

Photo	Photograph
Photo 46: B74: Laundry 11/08/2022	

Photo	Photograph
Photo 47: B74: Laundry 12/08/2022	

Photo	Photograph
Photo 48: B74: Laundry 12/08/2022	

Photo	Photograph
Photo 49: B34 Shed 2 12/08/2022	

Photo	Photograph
Photo 50: B35 Shed 1 12/08/2022	

Photo	Photograph
Photo 51: B35 Shed 1 12/08/2022	

Photo	Photograph
Photo 52: B35 Shed 1 12/08/2022	

Photo	Photograph
Photo 53: Area between B34 and B35 12/08/2022	

Photo	Photograph
Photo 54: Area between B34 and B35 12/08/2022	

Photo	Photograph
Photo 55: Eastern/ south-eastern edge of paddock 12/08/2022	

Photo	Photograph
Photo 56: South-east of the paddock 12/08/2022	

Photo	Photograph
Photo 57: B41 Sprinkler shed 11/08/2022	

Photo	Photograph
Photo 58: B30 Ward 8 11/08/2022	

Photo	Photograph
Photo 59: B30 Ward 8 11/08/2022	

Photo	Photograph
Photo 60: WWTP 11/08/2022	

Photo	Photograph
Photo 61: WWTP 11/08/2022	

Photo	Photograph
Photo 62: WWTP 11/08/2022	

Photo	Photograph
Photo 63: WWTP 11/08/2022	

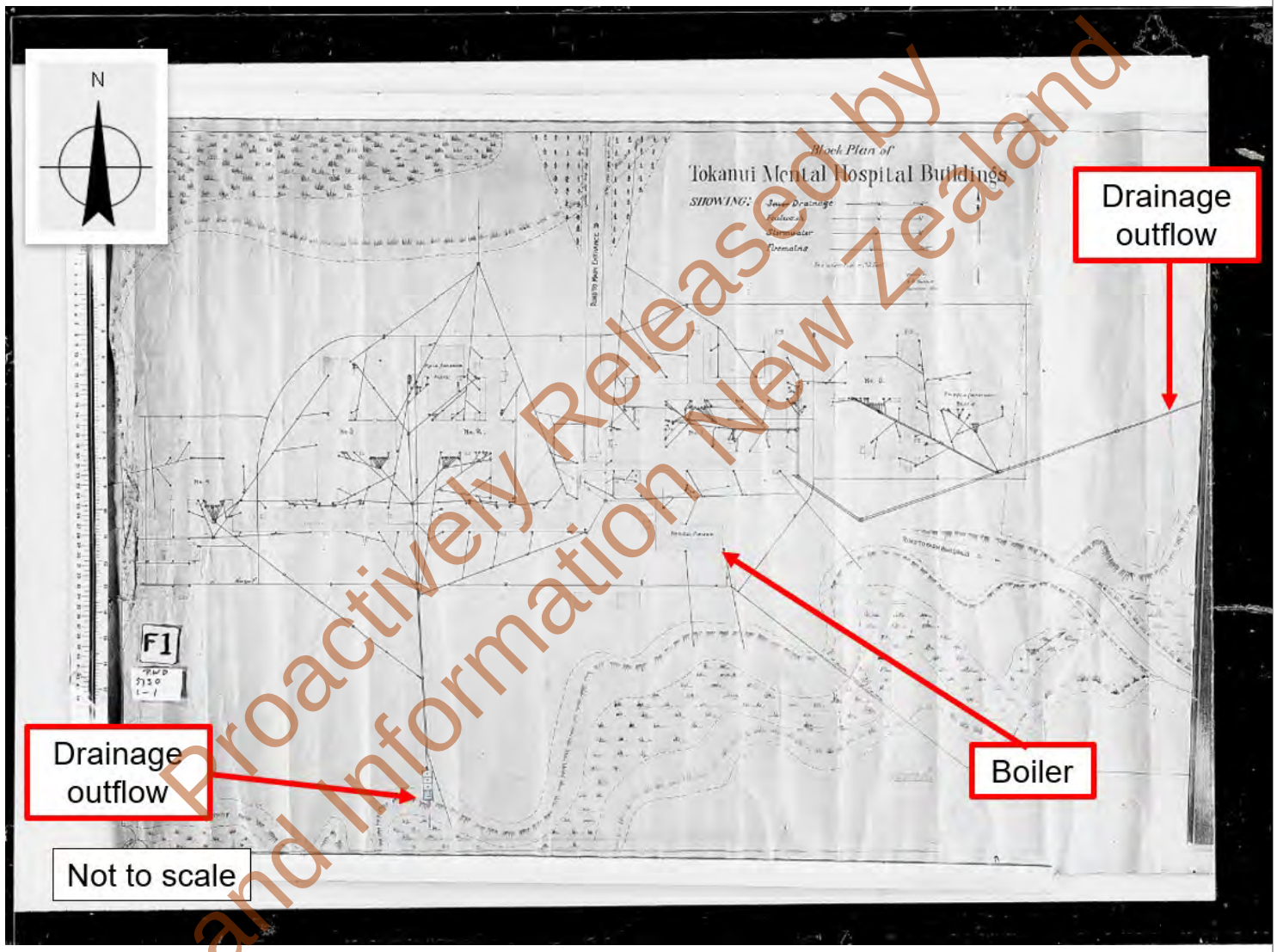
Photo	Photograph
Photo 64: Stream 11/08/2022	

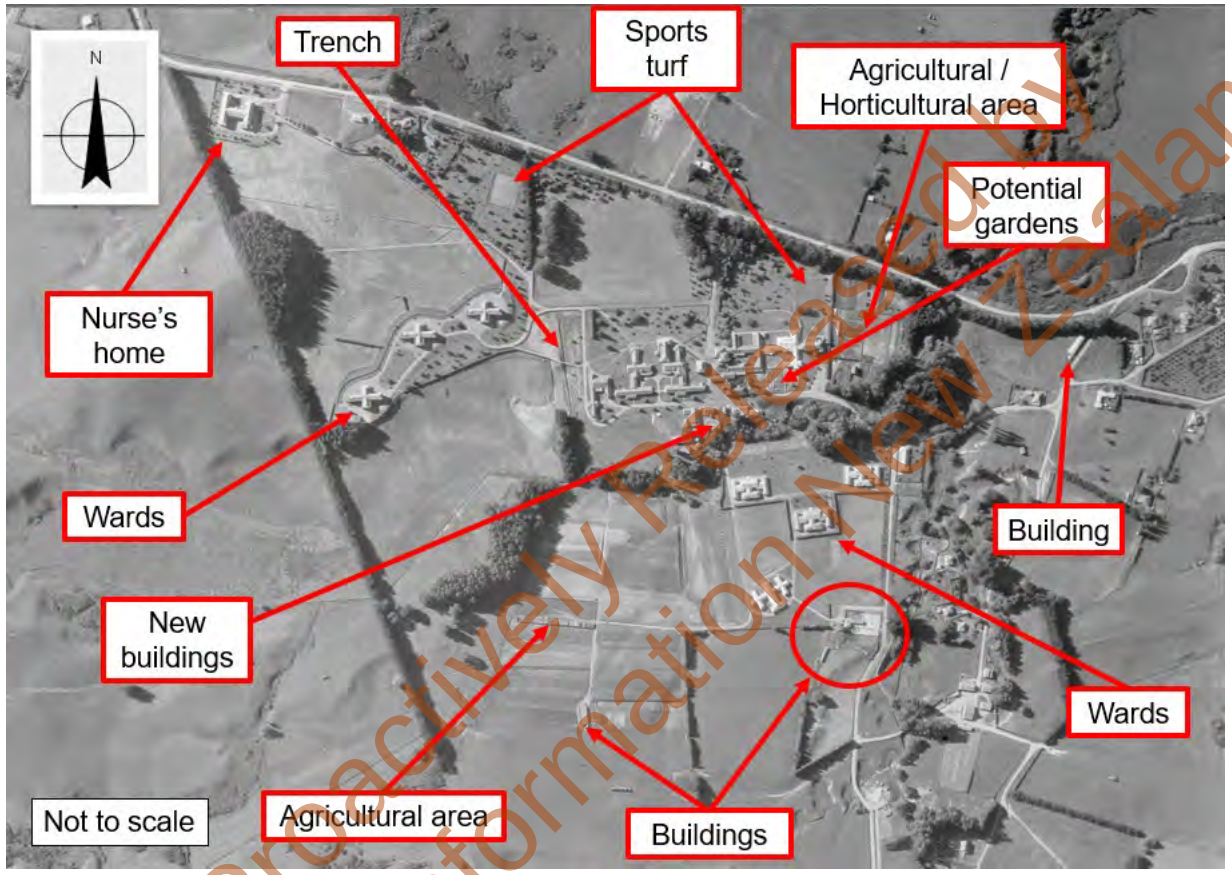
Photo	Photograph
Photo 65: WWTP discharge outlet 11/08/2022	

Photo	Photograph
Photo 66: WWTP Discharge outlet 11/08/2022	

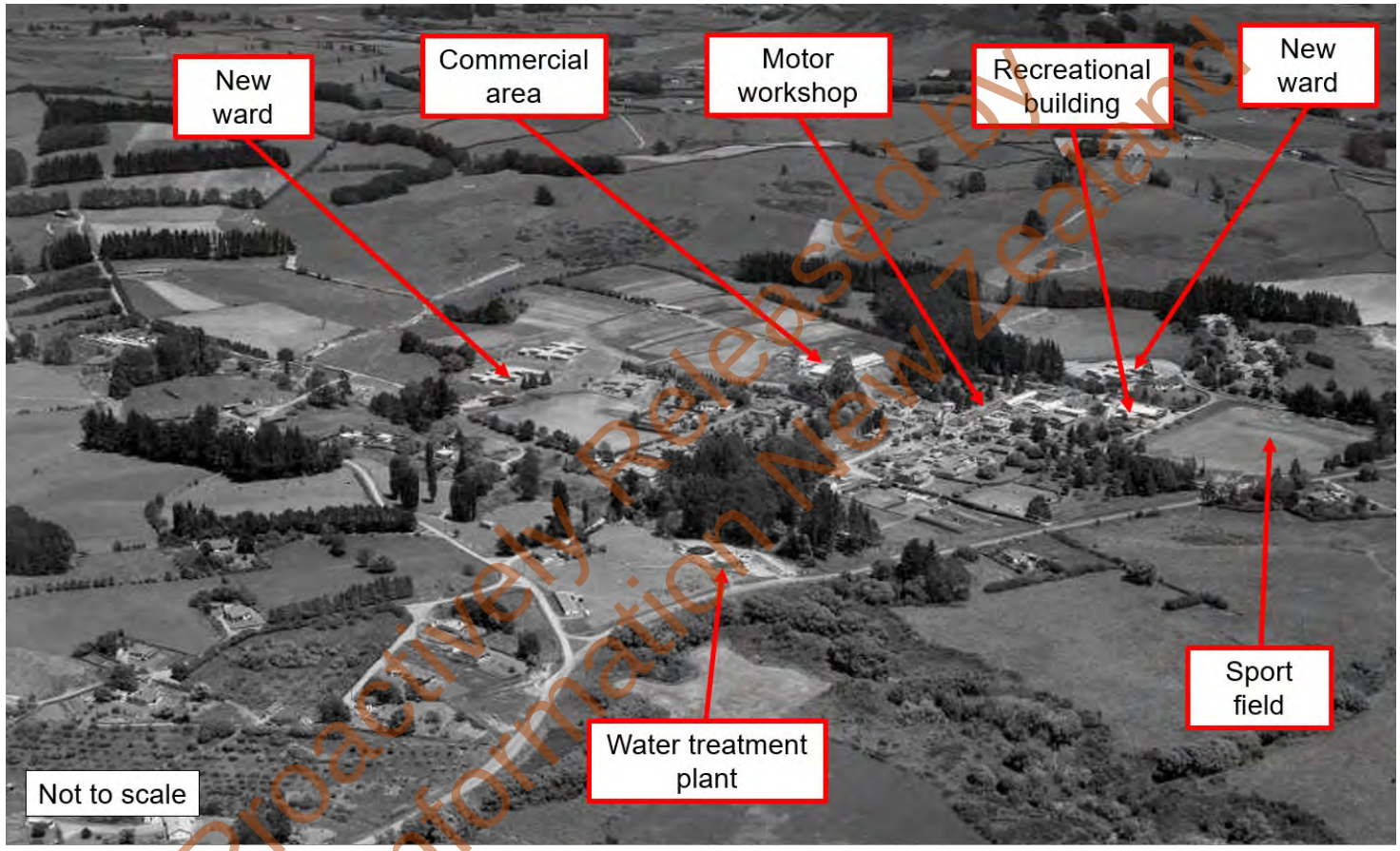
Appendix D

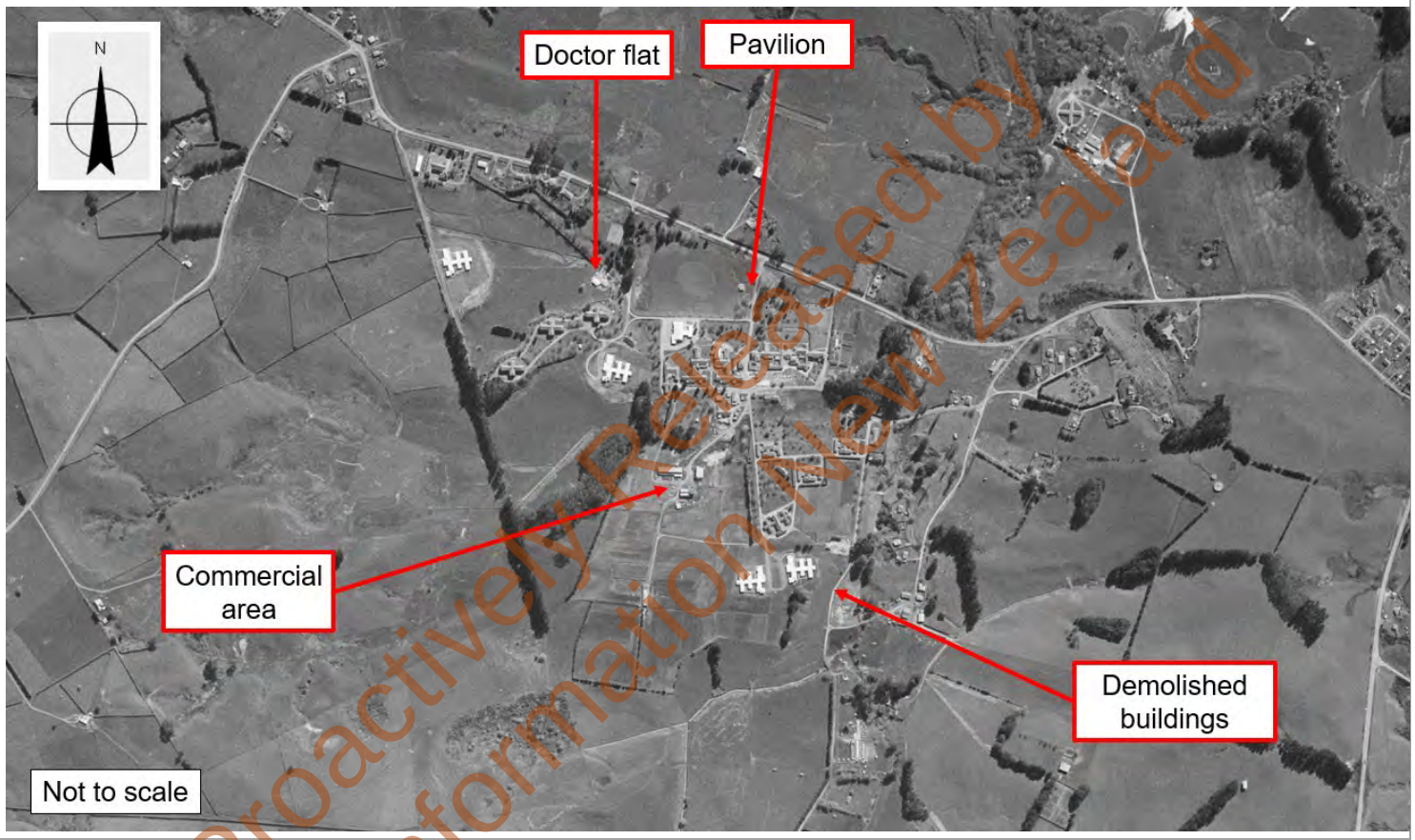
Aerial Photographs

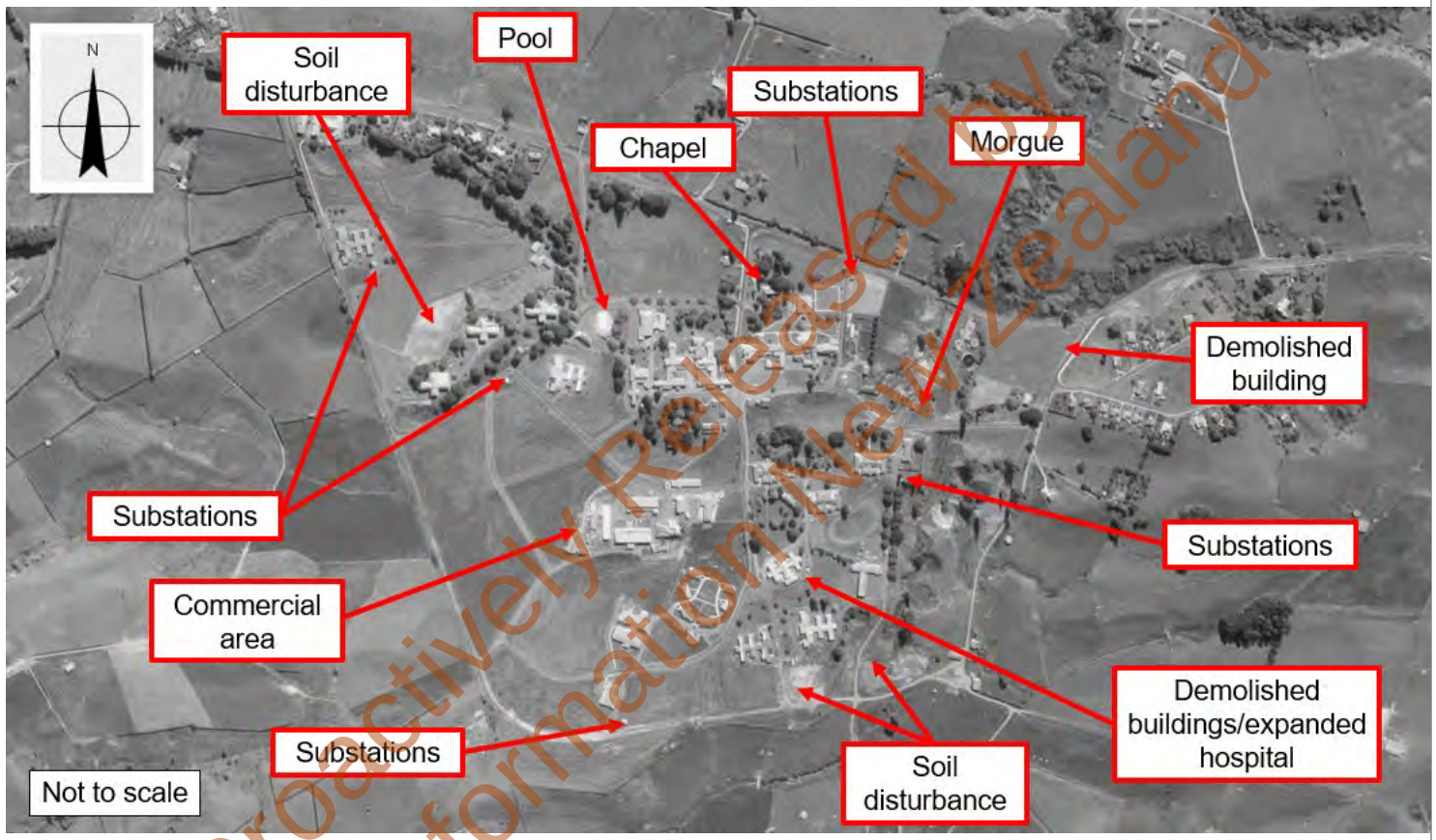
Year/ Source	Photograph
1920 Archives New Zealand	

Year/ Source	Photograph
1944 Retrolens	

Year/ Source	Photograph
1951 National Library of New Zealand	

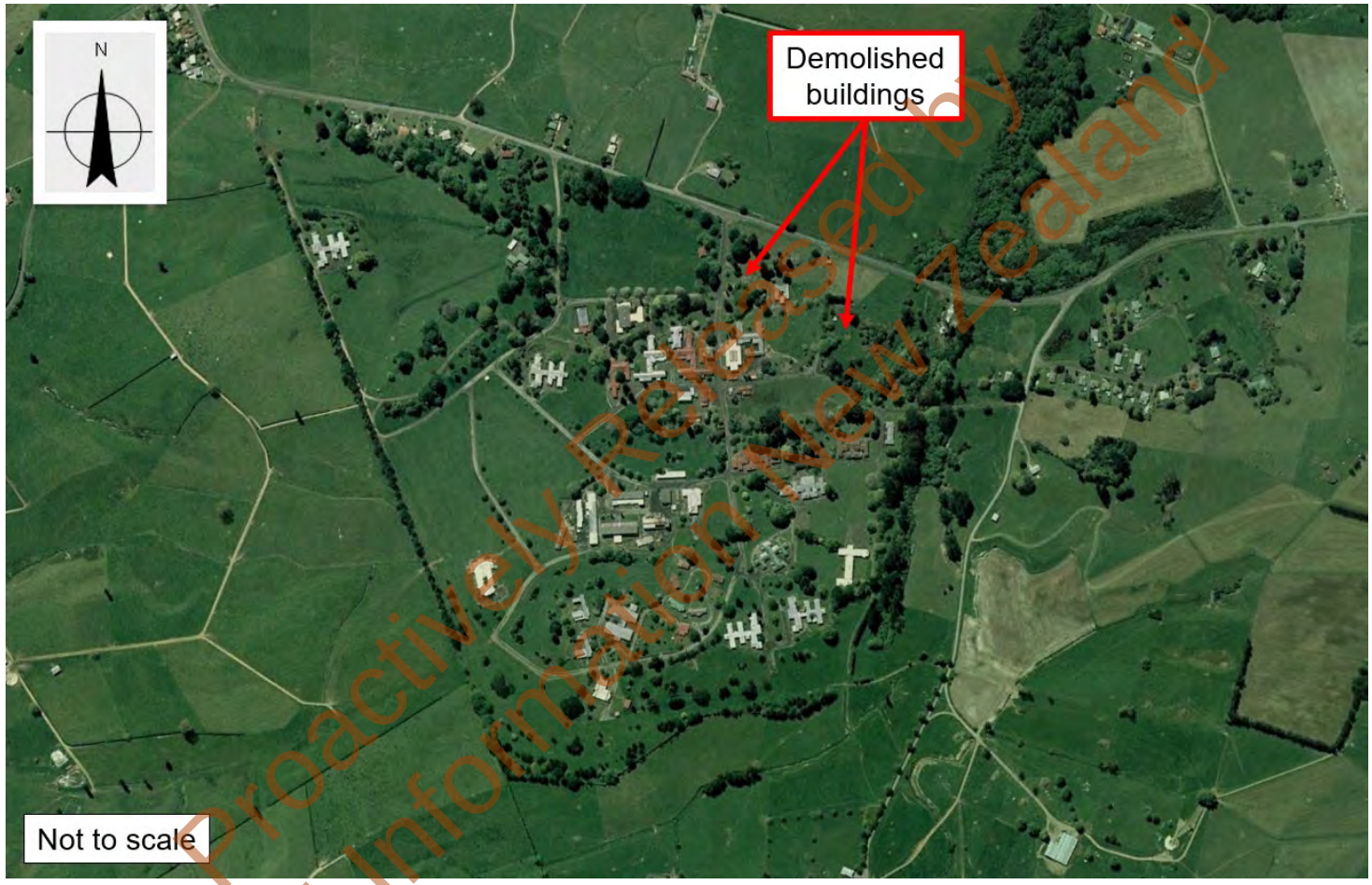
Year/ Source	Photograph
1959 National Library of New Zealand	

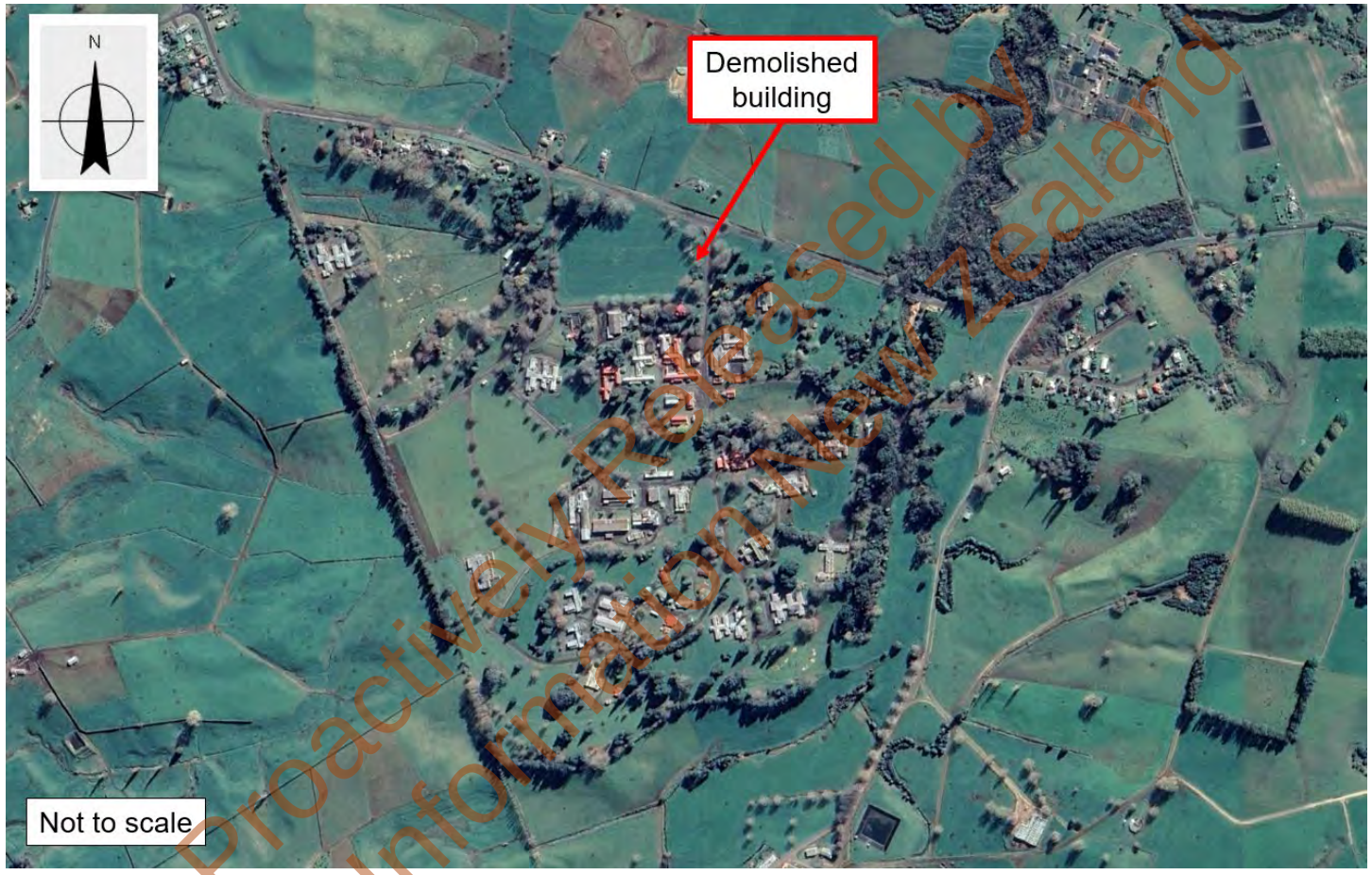
Year/ Source	Photograph
1961 Retrolens	

Year/ Source	Photograph
1974 Retrolens	

Year/ Source	Photograph
1979 Retrolens	

Year/ Source	Photograph
1995 Retrolens	

Year/ Source	Photograph
2007 Google Earth	

Year/ Source	Photograph
2020 Google Earth	

Appendix E

Information Request Documents and Site Manager Interview

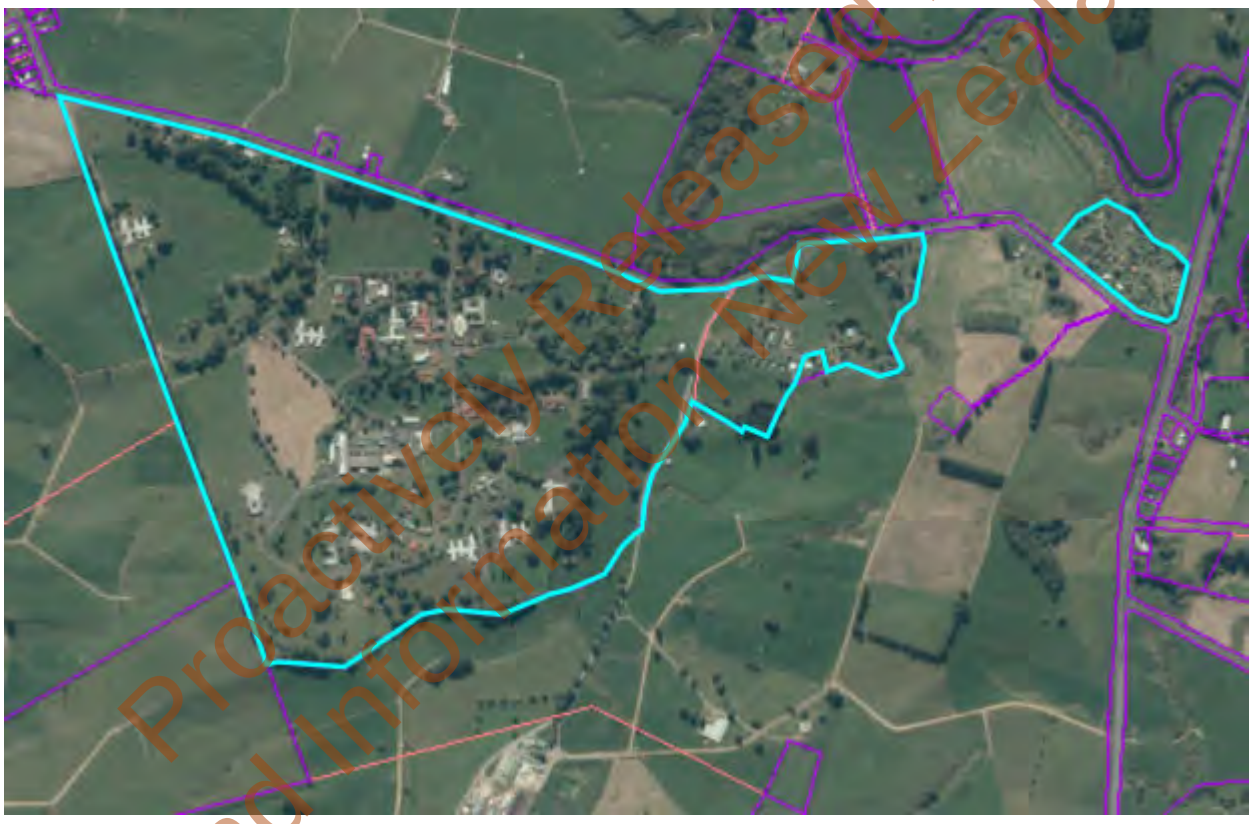
David Jackson

From: Guy Sowry <Guy.Sowry@waikatoregion.govt.nz>
Sent: Thursday, 31 March 2022 9:22 AM
To: David Jackson
Subject: Land Use Information Register enquiry 149 Te Mawhai Road, Tokanui (REQ184811) LUI03403
Attachments: Tokanui Hospital UST Removal Report July 2018.pdf

Dear David

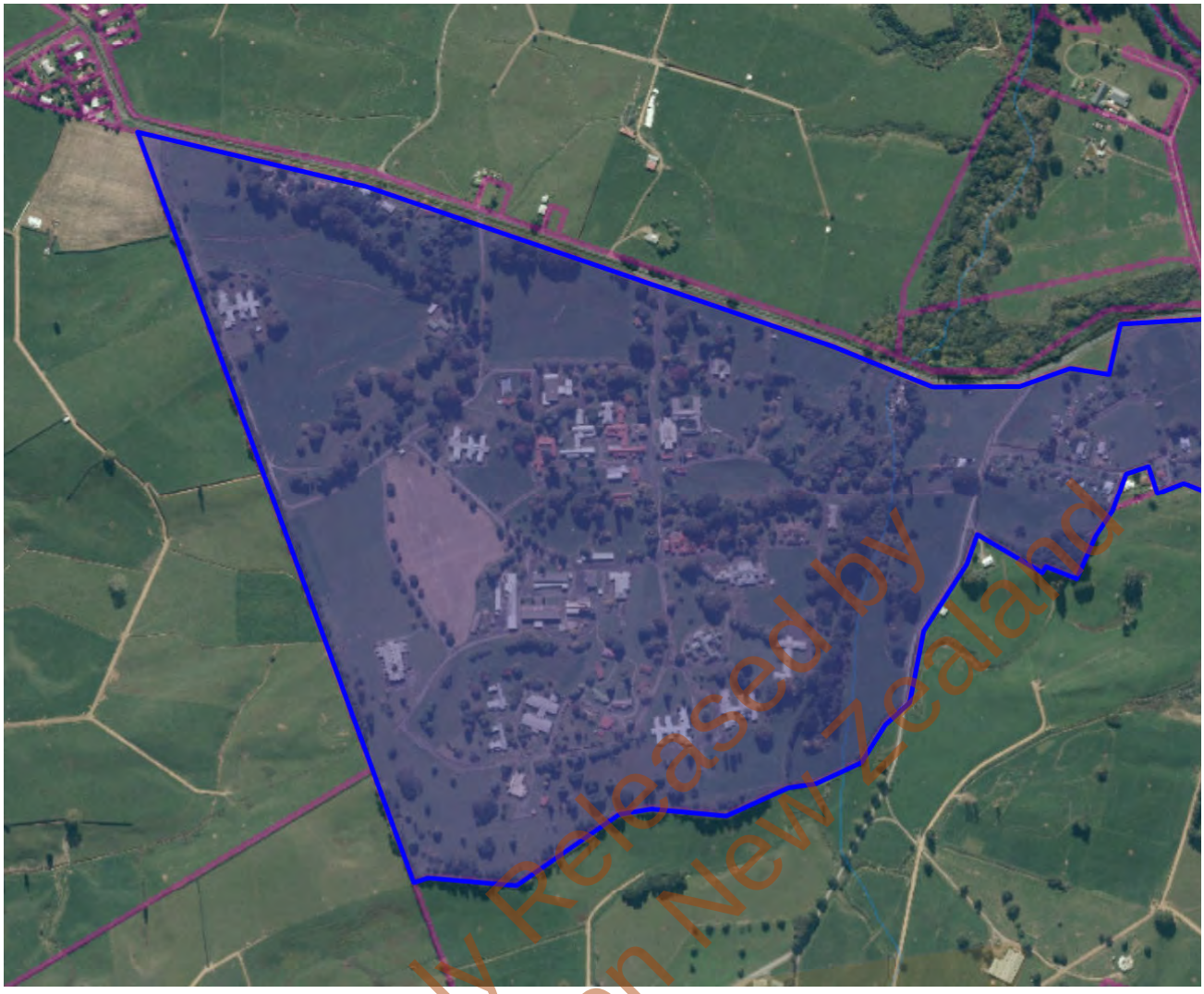
Thank you for your enquiry regarding information the Waikato Regional Council may hold relating to potential contamination at the properties indicated below:

149 Te Mawhai Road, Tokanui: SEC 1 SO 44852 SEC 1 SO 59771 SEC 3 SO 44852 (VRN 04611/394/00)



Background: The Waikato Regional Council maintains a register of properties known to be contaminated on the basis of chemical measurements, or potentially contaminated on the basis of past land use. This register (called the Land Use Information Register) is still under development and should not be regarded as comprehensive. The 'potentially contaminated' category is gradually being compiled with reference to past or present land uses that have a greater than average chance of causing contamination, as outlined in the Ministry for the Environment's Hazardous Activities and Industries List (HAIL): http://www.mfe.govt.nz/sites/default/files/hazards/contaminated-land/is-land-contaminated/hazardous-activities-industries-list.pdf

This property: I can confirm that this property **does** appear on the Land Use Information Register, as indicated by the map below.



The area shaded blue above appears on the Land Use Information Register as LUI03403 with a classification of 'Verified HAIL – limited sampling' due to past land HAIL activities: **A14.** Pharmaceutical manufacture; **A17.** Storage tanks or drums for fuel, chemical or liquid waste; **F4.** Motor vehicle workshop; **F7.** Service Station; and **G3.** Landfill sites associated with Tokanui Hospital.

We currently hold a Tank Pull Report completed in 2018 of which, I have attached this document for your reference (DOC#13017406). The majority of other information we hold is in regard to the closed landfill and are physical documents stored in offsite archives, which may take some time to retrieve (Consent file number 60 56 12C) as such a fee may apply.

District Councils: Our records are not integrated with those of territorial authorities, so it would also be worth contacting the Waipa District Council to complete your audit of Council records if you have not already done so. In general, information about known contaminated land will be included on a property LIM produced by the territorial authority.

Rural Land Considerations: Examples of sites that are "more likely than not" to have soil contamination (HAIL sites) include timber treatment activities, service stations and/or petroleum storage, panel beaters, spray painters, etc. Whilst pastoral farming is not included on this list, typical farming activities of horticulture, sheep dipping, chemical storage, petroleum storage and workshops are; but are more difficult to identify and may not be as well represented on the Land Use Information Register. Therefore, individuals interested in pastoral land may be interested in completing further investigations in accordance with Ministry for the Environment Guidelines prior to land purchase and/or development.

Additional Information: Please note that:

- Significant use of lead-based paint on buildings can, in some cases, pose a contamination risk; the use of lead-based paint is not recorded on the Land Use Information Register.
- Buildings in deteriorated or derelict condition which contain asbestos can result in asbestos fibres in soil; the use of asbestos in building materials is not recorded on the Land Use Information Register.
- The long term, frequent use of superphosphate fertilisers can potentially result in elevated levels of cadmium in soil; the use of superphosphate fertiliser is not recorded on the Land Use Information Register.
- We are not currently resourced to fully incorporate historic aerial photographs in our region-wide assessment of HAIL activities. A significant proportion of the Crown historical aerial image archive for the Waikato region is available to view free of charge at http://retrolens.nz/. We recommend this resource is consulted for any HAIL assessment.
- Due to the large volume of enquiries being received, we may not be able to respond to your enquiry as quickly as previously. We are resourced to meet 20 day response times as per LGOIMA, but endeavour to respond more quickly when workload permits. If your enquiry is urgent, please note this first in your enquiry and we will do our best to assist.

Bore Information: I have passed this request on to the appropriate officer. If you would like to undertake this search yourself please access Our Maps (wairc.govt.nz)

Please feel free to contact me if you have any further queries on this matter. For any new enquiries or requests for information please continue to use the Request for Service form for 'Contaminated Land/HAIL'.

Kind regards,
Guy

Guy Sowry | CONTRACTOR | Land and Soil, Science and Strategy
WAIKATO REGIONAL COUNCIL | Te Kaunihera ā Rohe o Waikato
P: +6478592839
F: facebook.com/waikatoregion
Private Bag 3038, Waikato Mail Centre, Hamilton, 3204

Environ DOT 105621

DANGEROUS GOODS LICENCE

(Dangerous Goods Act 1974)

PURSUANT to the Dangerous Goods Act 1974, and regulations made thereunder, licence is hereby granted to the undernamed to store dangerous goods in quantities and in containers scheduled hereunder, and only under the conditions set out in the Conditions of Storage.

Licensee Waikato Hospital Board
PO Box 934
HAMILTON

Location of licensed premises: TOKANUI

For and on behalf of the Chief Inspector of Dangerous Goods

Dated: 25 July 19 89

Inspector of Dangerous Goods

Unless sooner surrendered or revoked, this licence shall remain in force until 31 March 19 90 and may be renewed annually thereafter.

CLASSES, MAXIMUM QUANTITIES AND NUMBER OF CONTAINERS OF DANGEROUS GOODS AUTHORISED IN THIS LICENCE.

CLASS 2: GASES

Tanks:

Cylinders: 40.2m³ 2(a)(i)-39; 40m³ 2(c)-11; 210kg 2(e)-3

CLASS 3: FLAMMABLE LIQUIDS

Underground tanks 10 000 L 3(a); 10 000 L 3(c)

Aboveground tanks 4 000 L 3(c)-2

Mobile tanks

Drums (over 60 litres) 1 200 L 3(b)

Drums (under 60 litres)

Workroom containers

No. dispensing pumps 2

No. oil heaters Engine Generators 2

CLASS 4: FLAMMABLE SOLIDS

260kg Calcium Hypochlorite

CLASS 5: OXIDISING SUBSTANCES

CONDITIONS OF STORAGE

LAB 316 EXP

80120H—50pads/12/87 MK

WAIPA
DISTRICT COUNCIL

Private Bag,
Te Awamutu, New Zealand.
Location: Roche Street, Te Awamutu.
Telephone (07) 871-7133.
Fax (07) 871-4061.

Environ

DG
LA

please quote: 33-13-05

27th August 1990

Waikato Hospital Board
PO Box 934
HAMILTON

Dear Sir/Madam

DANGEROUS GOODS LICENCE - TOKANUI HOSPITAL

Our records indicate that your Dangerous Goods Licence has now expired and the renewal fee has not been forwarded to this office.

It would be appreciated that you forward the following fees, so that a Dangerous Goods Licence can be issued without any further delay.

Licence Fee	$100.00
GST	$ 12.50
Total	$112.50

Should you require any further information please do not hesitate to contact the undersigned.

Yours faithfully

John Apeldoorn
DANGEROUS GOODS OFFICER

Environ

DLF

108031

DANGEROUS GOODS LICENCE

(Dangerous Goods Act 1974)

PURSUANT to the Dangerous Goods Act 1974, and regulations made thereunder, licence is hereby granted to the under-named to store dangerous goods in quantities and in containers scheduled hereunder, and only under the conditions set out in clause(s) ..... of the Conditions of Storage.

Licensee Waikato Area Health Board
P O Box 934
HAMILTON

Location of licensed premises: Tokanui

For an on behalf of the Chief Inspector of Dangerous Goods

Dated: 27 September 19 90

Inspector of Dangerous Goods

Unless sooner surrendered or revoked, this licence shall remain in force until 31 March 19 91 and may be renewed annually thereafter.

CLASSES, MAXIMUM QUANTITIES AND NUMBER OF CONTAINERS OF DANGEROUS GOODS AUTHORISED IN THIS LICENCE.

CLASS 2: GASES

Tanks:

Cylinders:

CLASS 3: FLAMMABLE LIQUIDS

Underground tanks 10 000 L 3(a) 1200 L 3(b) 14 000 L 3(c)

Aboveground tanks

Mobile tanks

Drums (over 60 litres)

Drums (under 60 litres)

Workroom containers

No. dispensing pumps

No. oil heaters

CLASS 4: FLAMMABLE SOLIDS

CLASS 5: OXIDISING SUBSTANCES

CONDITIONS OF STORAGE

LAB 316 EXP

Environ

DK

DANGEROUS GOODS LICENCE

No 32254

(Dangerous Goods Act 1974)

PURSUANT to the Dangerous Goods Act 1974, and regulations made thereunder, licence is hereby granted to the under-named to store dangerous goods in quantities and in containers scheduled hereunder, and only under the conditions set out in Clause(s) ..... of the Conditions of Storage.

Licensee Waikato Area Health Board
P O Box 934
HAMILTON

Location of licensed premises: Tokanui Hospital

Dated: 16 April 19 91

Signed on behalf of Waipa District Council

Unless sooner surrendered or revoked, this licence shall remain in force until 31 March 19 92 and may be renewed annually thereafter.

CLASSES, MAXIMUM QUANTITIES AND NUMBER OF CONTAINERS OF DANGEROUS GOODS AUTHORISED IN THIS LICENCE.

CLASS 2: GASES

Tanks:

Cylinders:

CLASS 3: FLAMMABLE LIQUIDS

Underground tanks 10 000 L 3(a) 1200 L 3(b) 14 000 L 3(c)

Aboveground tanks

Mobile tanks

Drums (over 60 litres)

Drums (under 60 litres)

Workroom containers

No. dispensing pumps

No. oil heaters

CLASS 4: FLAMMABLE SOLIDS

CLASS 5: OXIDISING SUBSTANCES

CONDITIONS OF STORAGE

LAB 318 EXP

12198G—50pads/12/89MK

Environ

DUT

DANGEROUS GOODS LICENCE

NO: 000005

(Dangerous Goods Act 1974)

PURSUANT to the Dangerous Goods Act 1974, and regulations made thereunder, licence is hereby granted to the under-named to store dangerous goods in quantities and in containers scheduled hereunder, and only under the conditions set out in Clause(s) ..... of the Conditions of Storage.

Licensee *Waikato Area Health Board*
P O Box 934
HAMILTON

Location of licensed premises: ...Tokanui Hospital.....

Dated: ...19 March.....1992

.....
Signed on behalf of Waipa District Council

Unless sooner surrendered or revoked, this licence shall remain in force until 31 March 1993 and may be renewed annually thereafter.

CLASSES, MAXIMUM QUANTITIES AND NUMBER OF CONTAINERS OF DANGEROUS GOODS AUTHORISED IN THIS LICENCE.

CLASS 2: GASES

Tanks: .....

Cylinders: .....

CLASS 3: FLAMMABLE LIQUIDS

Underground tanks ....10 000L 3(a) 1200L 3(b) 14 000L 3(c).....

Aboveground tanks .....

Mobile tanks .....

Drums (over 60 litres) .....

Drums (under 60 litres) .....

Workroom containers .....

No. dispensing pumps .....

No. oil heaters .....

CLASS 4: FLAMMABLE SOLIDS

.....

CLASS 5: OXIDISING SUBSTANCES

.....

CONDITIONS OF STORAGE

.....

.....

DF

DANGEROUS GOODS LICENCE

(Dangerous Goods Act 1974) *NO: 000223*

***PURSUANT** to the Dangerous Goods Act 1974, and regulations made thereunder, licence is hereby granted to the under-named to store dangerous goods in quantities and in containers scheduled hereunder, and only under the conditions set out in Clause(s) _____ of the Conditions of Storage.*

Licensee *Tokanui Hospital*
P O Box 934
HAMILTON

Location of licensed premises: Tokanui Road

Dated: 15 April 1993

_____
Signed on behalf of Waipa District Council

Unless sooner surrendered or revoked, this licence shall remain in force until 31 March 1994 and may be renewed annually thereafter.

CLASSES, MAXIMUM QUANTITIES AND NUMBER OF CONTAINERS OF DANGEROUS GOODS AUTHORISED IN THIS LICENCE.

CLASS 2: GASES

Tanks: _____

Cylinders: _____

CLASS 3: FLAMMABLE LIQUIDS

Underground tanks *10 000L 3(a)* *1200L 3(b)* *14 000L 3(c)*

Aboveground tanks _____

Mobile tanks _____

Drums (over 60 litres) _____

Drums (under 60 litres) _____

Workroom containers _____

No. dispensing pumps _____

No. oil heaters _____

CLASS 4: FLAMMABLE SOLIDS

_____

CLASS 5: OXIDISING SUBSTANCES

_____

CONDITIONS OF STORAGE

_____

_____

Environ

DK

WAIPA DISTRICT COUNCIL

Private Bag 2402
Te Awamutu, New Zealand
DX 4893
Location: 101 Bank St, Te Awamutu
Telephone (07) 871-7133
Fax (07) 871-4061

DANGEROUS GOODS ACT 1974

Please quote: 4611/394.00

NOTICE OF LIABILITY TO RENEW LICENCE

Licensee: Waikato Hospital Board
P O Box 934
HAMILTON

Licence Fee: $157.50
(GST INCLUSIVE)

Premises: Te Mawhai Road (Tokanui Hospital)

RECEIVED 22 MAR 1994

PLEASE RETURN THIS NOTICE WITH YOUR REMITTANCE

Please note that all licences to store dangerous goods expire on 31 March 1994.

DANGEROUS GOODS LICENCE

To RENEW this licence, please use section 3 below. Where renewal is not required by you, section 1 or 2 whichever is appropriate, should be used instead.

Section 1 - CHANGE OF OWNERSHIP change of Name only

Please note that these premises have changed hands. The name and address of the new owner are:

Health Waikato P.O. Box 934 Hamilton

The expiring licence made out in my name is returned herewith for transfer to the new owner.

Signature:..... Date.....

Section 2 - CANCELLATION OF LICENCE

My dangerous goods licence is enclosed for cancellation, and I certify that:

(a) No dangerous goods in drums, tanks, or other containers are being stored, either above ground or underground, on the premises referred to above; and

(b) All underground storage tanks for dangerous goods of Class 3 have been/are to be removed; or

(c) I have obtained/intend seeking written permission to retain the tanks under such conditions are determined by you.

Signature:..... Date.....

Section 3 - RENEWAL APPLICATION FOR LICENCE TO STORE DANGEROUS GOODS

I hereby apply for renewal of my dangerous goods licence. I certify that I have examined the licence and other than as detailed be me in writing in the space provided below, no alteration is required.

(NOTE - Examples of alterations requiring an amendment of licence are - installation of additonal tanks, or removal of existing ones, changes in the maximum quantities stored in tins and drums, shifting of the positions of any pumps or tanks, change of site or construction of drum storage compound or other storage depot, and the inclusion of additional classes of dangerous goods).

.....

Nil

Full name of licensee: ~~Waikato~~ Health Waikato
(If a limited company, state title; if a partnership, give names of partners).

Signature of licensee or his agent: J.L Matthewson Date: 22-2-94

Receipt No: 265184 Date: 22/3/94

* THE WAIPA DISTRICT COUNCIL OFFICAL RECEIPT WILL BE THE GOODS & SERVICE TAX INVOICE FOR THIS LICENCE.

Environ DK

DANGEROUS GOODS LICENCE

Licensee:

HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location:

149 TE MAWHAI ROAD
TE AWAMUTU

Valuation No: 04611/394.00

DANGEROUS GOODS ACT 1974

Licence type: Dangerous Goods - Purpose: Transport Company

3A	10,000 L Underground tank	3B	1,200 L Underground tank
3C	14,000 L Underground tank		

Special Conditions:

* Change of Ownership
  Notify District Council of change of ownership.

* Display Certificate
  This certificate is to be displayed in a public place.

* Storage of Flammable Liquids
  The storage of flammable liquids to be stored in a well ventilated outdoor enclosure.

  Note: That Class 3 flammable liquids be stored separately from LPG.

** Licence shall remain in force until 31 March 1995*

Licence No: 80

Signed on behalf of Waipa District Council

DK

105621

DANGEROUS GOODS LICENCE

(Dangerous Goods Act 1974)

PURSUANT to the Dangerous Goods Act 1974, and regulations made thereunder, licence is hereby granted to the undernamed to store dangerous goods in quantities and in containers scheduled hereunder, and subject to the conditions set out in the Conditions of Storage.

Licensee Waikato Hospital Board
PO Box 934
HAMILTON

Location of licensed premises: TOKANUI

For and on behalf of the Chief Inspector of Dangerous Goods

Dated: 25 July 1989

Inspector of Dangerous Goods

Unless sooner surrendered or revoked, this licence shall remain in force until 31 March 19 90 and may be renewed annually thereafter.

CLASSES, MAXIMUM QUANTITIES AND NUMBER OF CONTAINERS OF DANGEROUS GOODS AUTHORISED BY THIS LICENCE.

CLASS 2: GASES

Tanks:

Cylinders: 40.2m³ 2(a)(i)-39; 40m³ 2(c)-11; 210kg 2(e)-3

CLASS 3: FLAMMABLE LIQUIDS

Underground tanks 10 000 L 3(a); 10 000 L 3(c)

Aboveground tanks 4 000 L 3(c)-2

Mobile tanks

Drums (over 60 litres) ~~1 200 L 3(b)~~ Not applicable now. (1995)

Drums (under 60 litres)

Workroom containers

No. dispensing pumps 2

~~**********~~ Engine Generators 2

CLASS 4: FLAMMABLE SOLIDS

~~260kg Calcium Hypochlorite~~ Not applicable 1995

CLASS 5: OXIDISING SUBSTANCES

CONDITIONS OF STORAGE

LAB 316 EXP

80120H—50pads/12/87 MK

PG

DANGEROUS GOODS LICENCE

Licensee:

HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location:

149 TE MAWHAI ROAD
TE AWAMUTU

Valuation No: 04611/394.00

DANGEROUS GOODS ACT 1974

Licence type: Dangerous Goods - Purpose: Transport Company

3A	10,000 L Underground tank	3B	1,200 L Underground tank
3C	14,000 L Underground tank		

Special Conditions:

* Change of Ownership
  Notify District Council of change of ownership.

* Display Certificate
  This certificate is to be displayed in a public place.

* Storage of Flammable Liquids
  The storage of flammable liquids to be stored in a well ventilated outdoor enclosure.

  Note: That Class 3 flammable liquids be stored separately from LPG.

** Licence shall remain in force until 31 March 1995*

Licence No: 80

Signed on behalf of Waipa District Council

DANGEROUS GOODS LICENCE

Licensee:

HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location:

149 TE MAWHAI ROAD
TE AWAMUTU

Valuation No: 04611/394.00

DANGEROUS GOODS ACT 1974

Licence type: Dangerous Goods - Purpose: Transport Company

3A	10,000 L Underground tank	3B	1,200 L Underground tank
3C	14,000 L Underground tank		

Special Conditions:

* Change of Ownership
  Notify District Council of change of ownership.

* Display Certificate
  This certificate is to be displayed in a public place.

* Storage of Flammable Liquids
  The storage of flammable liquids to be stored in a well ventilated outdoor enclosure.

  Note: That Class 3 flammable liquids be stored separately from LPG.

Licence No: 80

** Licence shall remain in force until 31 March 1996*

Signed on behalf of Waipa District Council

Environ

DANGEROUS GOODS LICENCE

Licensee:

HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location:

149 TE MAWHAI ROAD
TE AWAMUTU

Valuation No: 04611/394.00

DANGEROUS GOODS ACT 1974

Licence type: Dangerous Goods - Purpose: Transport Company

2A	40 C Cylinders	2C	11 C Cylinders
2E	210 K Cylinders	3A	10,000 L Underground tank
3C	14,000 L Underground tank		

Special Conditions:

* Change of Ownership
  Notify District Council of change of ownership.

* Display Certificate
  This certificate is to be displayed in a public place.

* Storage of Flammable Liquids
  The storage of flammable liquids to be stored in a well ventilated outdoor enclosure.

  Note: That Class 3 flammable liquids be stored separately from LPG.

Licence No: 80

** Licence shall remain in force until 31 March 1996*

Signed on behalf of Waipa District Council

PK

DANGEROUS GOODS LICENCE

Licensee:

HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location:

149 TE MAWHAI ROAD
TE AWAMUTU

Valuation No: 04611/394.00

DANGEROUS GOODS ACT 1974

Licence type: Dangerous Goods - Purpose: Transport Company

2A	40 C Cylinders	2C	11 C Cylinders
2E	210 K Cylinders	3A	10,000 L Underground tank
3C	14,000 L Underground tank		

Special Conditions:

* Change of Ownership
  Notify District Council of change of ownership.

* Display Certificate
  This certificate is to be displayed in a public place.

* Storage of Flammable Liquids
  The storage of flammable liquids to be stored in a well ventilated outdoor enclosure.

  Note: That Class 3 flammable liquids be stored separately from LPG.

Licence No: 80

** Licence shall remain in force until 31 March 1996*

Signed on behalf of Waipa District Council

80

3615 670900

RECEIVED
14 MAR 1996

WAIPA DISTRICT COUNCIL

Private Bag 2402
Te Awamutu, New Zealand
DX GA 29034
Location: 101 Bank St, Te Awamutu
Telephone (07) 871-7133
Fax (07) 871-4061

7051 0

DANGEROUS GOODS ACT 1974

Please quote: 4611/394.00

NOTICE OF LIABILITY TO RENEW LICENCE

Licensee: Health Waikato Limited
P O Box 934
HAMILTON

Licence Fee: $135.00
(GST INCLUSIVE)

Premises: Te Mawhai Road (Tokanui Hospital)

PLEASE RETURN THIS NOTICE WITH YOUR REMITTANCE

Please note that all licences to store dangerous goods expire on 31 March 1996.

DANGEROUS GOODS LICENCE

To RENEW this licence, please use section 3 below. Where renewal is not required by you, section 1 or 2 whichever is appropriate, should be used instead.

Section 1 - CHANGE OF OWNERSHIP

Please note that these premises have changed hands. The name and address of the new owner are:

.....

The expiring licence made out in my name is returned herewith for transfer to the new owner.

Signature:..... Date.....

Section 2 - CANCELLATION OF LICENCE

My dangerous goods licence is enclosed for cancellation, and I certify that:

(a) No dangerous goods in drums, tanks, or other containers are being stored, either above ground or underground, on the premises referred to above; and
(b) All underground storage tanks for dangerous goods of Class 3 have been/are to be removed; or
(c) I have obtained, or intend seeking, written permission to retain the tanks under such conditions as determined by you.

Signature:..... Date.....

Section 3 - RENEWAL APPLICATION FOR LICENCE TO STORE DANGEROUS GOODS

I hereby apply for renewal of my dangerous goods licence. I certify that I have examined the licence and other than as detailed be me in writing in the space provided below, no alteration is required.
(NOTE - Examples of alterations requiring an amendment of licence are - installation of additional tanks, or removal of existing ones, changes in the maximum quantities stored in tins and drums, shifting of the positions of any pumps or tanks, change of site or construction of drum storage compound or other storage depot, and the inclusion of additional classes of dangerous goods).

.....

.....

Full name of licensee: Tokanui Hospital Health Waikato
(If a limited company, state title; if a partnership, give names of partners).

Signature of licensee or his agent: J E Matthewson Date: 13-3-96

Receipt No: 1067344 Date: 14-3-96

* THE WAIPA DISTRICT COUNCIL OFFICIAL RECEIPT WILL BE THE GOODS & SERVICE TAX INVOICE FOR THIS LICENCE.

DW

DG

9

DANGEROUS GOODS LICENCE

Licensee:

HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location:

149 TE MAWHAI ROAD
TE AWAMUTU

Valuation No: 04611/394.00

DANGEROUS GOODS ACT 1974

Licence type: Dangerous Goods - Purpose: Transport Company

2A	40 C Cylinders	2C	11 C Cylinders
2E	210 K Cylinders	3A	10,000 L Underground tank
3C	14,000 L Underground tank		

Special Conditions:

* Change of Ownership
  Notify District Council of change of ownership.

* Display Certificate
  This certificate is to be displayed in a public place.

* Storage of Flammable Liquids
  The storage of flammable liquids to be stored in a well ventilated outdoor enclosure.

  Note: That Class 3 flammable liquids be stored separately from LPG.

Licence No: 80

* *Licence shall remain in force until 31 March 1997*

Signed on behalf of Waipa District Council

DCT

Environ

DANGEROUS GOODS LICENCE

Licensee:

HEALTH WAIKATO LTD
(TOKANUI HOSPITAL)
P O BOX 934
HAMILTON

Location:

149 TE MAWHAI ROAD
TE AWAMUTU

Valuation No: 04611/394.00

DANGEROUS GOODS ACT 1974

Licence type: Dangerous Goods - Purpose: Transport Company

2A	40 C Cylinders	2C	11 C Cylinders
2E	210 K Cylinders	3A	10,000 L Underground tank
3C	14,000 L Underground tank		

Special Conditions:

* Change of Ownership
  Notify District Council of change of ownership.

* Display Certificate
  This certificate is to be displayed in a public place.

* Storage of Flammable Liquids
  The storage of flammable liquids to be stored in a well ventilated outdoor enclosure.

  Note: That Class 3 flammable liquids be stored separately from LPG.

Licence No: 80

* *Licence shall remain in force until 31 March 1998*

Signed on behalf of Waipa District Council

DANGEROUS GOODS LICENCE

DANGEROUS GOODS ACT 1974

Licensee: HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location: 149 TE MAWHAI ROAD, TE AWAMUTU

Licence No: 80 ***Valuation No:*** 04611/394.00

Licence Type: Dangerous Goods Licence

Purpose: Transport Company

2A	40 C Cylinders	2C	11 C Cylinders
2E	210 K Cylinders	3A	10,000 L Underground tank

Notify District Council of change of ownership.

This certificate is to be displayed in a public place.

Flammable liquids to be stored in a well ventilated outdoor enclosure.

Amount: $135.00 ***Rec No:*** 1260693

* ***Licence shall remain in force until 31 March 1999***

Signed on behalf of Waipa District Council

Environ DLK

DANGEROUS GOODS LICENCE

DANGEROUS GOODS ACT 1974

RECORDS ONLY

Licensee: HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location: 149 TE MAWHAI ROAD, TE AWAMUTU

Licence No: 80 ***Valuation No:*** 04611/394.00

Licence Type: Dangerous Goods Licence

Purpose: Transport Company

2A	40 C Cylinder	2C	11 C Cylinder
2E	210 K Cylinder	3A	10,000 L Underground Tank
3C	14,000 L Underground Tank		

Notify District Council of change of ownership.

This certificate is to be displayed in a public place.

Flammable liquids to be stored in a well ventilated outdoor enclosure.

Amount: $135.00 ***Rec No:*** 1349140

* ***Licence shall remain in force until 31 March 2000***

Signed on behalf of Waipa District Council

DK

Environ

DG

DANGEROUS GOODS LICENCE

DANGEROUS GOODS ACT 1974

Licensee: HEALTH WAIKATO LTD

P O BOX 934
HAMILTON

Location: 149 TE MAWHAI ROAD, TE AWAMUTU

Licence No: 80 ***Valuation No:*** 04611/394.00

Licence Type: Dangerous Goods Licence

Purpose: Transport Company

2A	40 C Cylinders	2C	11 C Cylinders
2E	210 K Cylinders	3A	10,000 L Underground tank

Notify District Council of change of ownership.

This certificate is to be displayed in a public place.

Flammable liquids to be stored in a well ventilated outdoor enclosure.

Amount: $135.00 ***Rec No:*** 1349140

* ***Licence shall remain in force until 31 March 2000***

Signed on behalf of Waipa District Council

Environ

DCT

WAIPA DISTRICT COUNCIL

Private Bag 2402
Te Awamutu, New Zealand
DX GA 29034
Location: 101 Bank St, Te Awamutu
Telephone (07) 871-7133
Fax (07) 871-4061

Please quote:

Application is hereby made for the Issue/Renewal of the following licence for the period ending 31/03/01

From: HEALTH WAIKATO LTD
P O BOX 934
HAMILTON

Trading Name:
Situation: 149 TE MAWHAI ROAD, TE AWAMUTU 2400

AUTHORISATION:
DANGEROUS GOODS ACT 1974

The licence is held for Group: Dangerous Goods Licence
Type: Dangerous Goods -
Purpose: Transport Company

2A	40 C Cylinders	2C	11 C Cylinders
2E	210 K Cylinders	3A	10,000 L Underground tank
3C	14,000 L Underground tank		

Current Licence Number: 80

File Reference:
Assessment Number: 04611/394.00
Property ID: 012064

INVOICE NUMBER: /D80/6359
DATE: 16/03/2000
FEE AMOUNT: $337.50
PAYMENT DUE: 21/03/00
EXPIRY DATE: 31/03/2000

Signature of Applicant: AE Hamilton Date: 22/3/00

----------Please complete if DIFFERENT from above----------

Applicant
Surname:_____ Forenames:_____

Res. Address:_____

Trading Name:_____

Situation:_____

Dang. Goods Held:_____

Received
24 MAR 2000
Accounts Payable

Received
20 MAR 2000
Accounts Payable

DGT

DANGEROUS GOODS LICENCE

DANGEROUS GOODS ACT 1974

Licensee: HEALTH WAIKATO LTD
P O BOX 934
HAMILTON

Location: 149 TE MAWHAI ROAD, TE AWAMUTU 2400

Licence No: 80 ***Valuation No:*** 04611/394.00

Licence Type: Dangerous Goods Licence

Purpose: Transport Company

2A	40 C Cylinders
2C	11 C Cylinders
2E	210 K Cylinders
3A	10,000 L Underground tank
3C	14,000 L Underground tank

Notify District Council of change of ownership.

This certificate is to be displayed in a public place.

Flammable liquids to be stored in a well ventilated outdoor enclosure.

Amount: $337.50 ***Rec No:*** 1465427

* ***Licence shall remain in force until 31 March 2001***

Signed on behalf of Waipa District Council

Waipa DISTRICT COUNCIL

DANGEROUS GOODS LICENCE
Dangerous Goods Act 1974

LICENSEE: HEALTH WAIKATO LTD
P O BOX 1235
HAMILTON

LOCATION: 149 TE MAWHAI ROAD, TE AWAMUTU 2400

LICENCE NO: 80 **VALUATION NO:** 04611/394.00

LICENCE TYPE: Dangerous Goods Licence

PURPOSE: Transport Company

2A	40 C Cylinders
2C	11 C Cylinders
2E	210 K Cylinders
3A	10,000 L Underground tank
3C	14,000 L Underground tank

Notify District Council of change of ownership.

This certificate is to be displayed in a public place.

Flammable liquids to be stored in a well ventilated outdoor enclosure.

AMOUNT: $337.50 **REC NO:** 1580512

*** Licence shall remain in force until 31 March 2002**

Signed on behalf of Waipa District Council

ENGINEERING & PROPERTY
WAIKATO HOSPITAL
PRIVATE BAG 3200
HAMILTON
NEW ZEALAND

Fax Number: 07 - 839 8612
Phone Number:07 - 839 8602

HEALTH WAIKATO
Manaakitia Te Ira Tangata
Caring for Life

Date:1`9.2.01	TO:WAIPA DISTRICT COUNCIL
Total Pages: (incl this one)	Company:
	Fax No:07 871 4061
ONE	From:Brian King -Property Assistant

DANGEROUS GOODS ACT—SITUATION 149 TE MAWHAI RD TE AWAMUTU
ASSESSMENT REFERENCE 04611/394.00
PROPERTY ID 012064
NOTIIFICATION OF RENEWAL

HEALTH WAIKATO DISPOSED OF THIS PROPERTY IN JUNE 2000

The Property is now administered on behalf of the Office of Treaty Settlements by Knight Frank P O Box 1235 HAMILTON

Lic 80.

DP 23/2/01

Environ

DK Fax

Change Postal Address.
New Inv.

COPY

DANGEROUS GOODS LICENCE

HAZARDOUS SUBSTANCES AND NEW ORGANISMS ACT 1996.

Licensee: HEALTH WAIKATO LTD
C/- OPUS INTERNATIONAL
P O BOX 3057
HAMILTON.

Location: ***149 TE MAWHAI ROAD. TE AWAMUTU***

Licence No: 80 ***Valuation No:*** 04611/394.00

Licence Type: Dangerous Goods Licence

Purpose: ***Transport Company***

2A	4O Cub Mtr Cylinders	3A	10,000LT Underground Tank
2C	11 Cub Mtr Cylinders	3C	14,000LT Underground Tank
2E	210 Kg Cylinders		

Notify District Council of change of ownership.

This certificate is to be displayed in a public place.

Flammable liquids to be stored in a well ventilated outdoor enclosure.

Amount: $337.50 ***Receipt No: 1781007***

* ***Licence shall remain in force until 31 March 2003***

Environ

DG

p.p.

Signed on behalf of Waipa District Council

Environ

DLT

RECORDS COPY ONLY

Waipa DISTRICT COUNCIL

DANGEROUS GOODS LICENCE

Hazardous Substances and New Organisms Act 1996

LICENSEE: OFFICE OF TREATY SETTLEMENTS
HEALTH WAIKATO LTD
C/- Opus International Ltd
P O Box 3057
HAMILTON 2001

LOCATION: 149 TE MAWHAI ROAD, TE AWAMUTU 2400

LICENCE NO: 80 **VALUATION NO:** 04611/394.00

LICENCE TYPE: Dangerous Goods Licence

PURPOSE: Transport Company

2A	40 C Cylinders
2C	11 C Cylinders
2E	210 K Cylinders
3A	10,000 L Underground tank
3C	14,000 L Underground tank

Notify District Council of change of ownership.

This certificate is to be displayed in a public place.

Flammable liquids to be stored in a well ventilated outdoor enclosure.

AMOUNT: $337.50 **REC NO:** 1813064

*** Licence shall remain in force until 31 March 2004**

Signed on behalf of Waipa District Council

National Headquarters
Level 12
80 The Terrace
PO Box 2133
Wellington
New Zealand

Phone +64 4 496 3600

3 May 2022

David Jackson
GHD

By email: david.jackson@ghd.com

Tēnā koe David

Information Request – 149 Te Mawhai Road, Tokanui

I refer to your official information request dated 8 April 2022 asking for the following information held by Fire and Emergency New Zealand about the former Tokanui Hospital Site located at 149 Te Mawhai Road, Tokanui.

> *The main records I am after are for responses to fires, spills of hazardous materials, or dangerous goods between the years 1911 and the present day, and any historical records of a fire station or brigade of firefighters being located at the site and would like this aspect of the request prioritised, but I would like all information held for completeness.*

In accordance with the provisions of the Official Information Act 1982, please see *enclosed,* a table showing the results of incident database search for 149 Te Mawhai Road and within 500 metres of the hospital boundary as requested in your email on 26 April 2022. The search included spills of hazardous materials and/or dangerous goods between the years 1911 and the present day. We have identified 20 Incidents and the Incident reports are *enclosed.*

SMS Incident Report
Some personal information has been withheld to protect the privacy of natural persons under section 9(2)(a) of the Official information Act 1982. We do not consider that there is a public interest in the release of the information which outweighs withholding it.

Please note the SMS Incident Report provided to you is generated by Fire and Emergency New Zealand's electronic station management system (SMS Report). In SMS Reports, 'Notifications' and 'Message Log' fields are reported in real time as fire crews and our communication centres communicate with each other during the incident. They are not the official final records of

incidents but word for word transcripts of 'live' situations as they occur. They may contain spelling errors or commonly used abbreviations.

Fire station or brigade
You requested any historical records of a fire station or brigade of firefighters being located at the former hospital site. The only reference found is held in a publicly available research paper on Institutional responses to mental deficiency in New Zealand, 1911-1935: Tokanui Mental Hospital by Adrienne Hoult available here. This thesis stated: "More wards were added from the 1920s and in the 1930s a bakehouse, nurses' home, fire station, and dental surgery were built."

We were provided the following image but we cannot confirm if this was taken of the fire station, or whether the café on site was also named "Fire Station Café".

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Nāku noa nā

Julia McCook-Weir
Manager, Information Requests

OIA 2022-00007611 - FENZ fires and hazardous substance spill incidents within 500m of former Tokanui Hospital site

						Quantity Leaked		Disposal Method	
CAD#	Date/Time	Address	Incident Type	Unsi	Trade Name	QL Code	QL Description	DM Code	DM Description
F2553480	May 30, 18 15:05	45 Croasdale Road, Tokanui	Outside Rubbish bin, Skip fire						
F2384445	Sep 22, 17 13:56	96 FARM ROAD, TOKANUI	Mobile Property Fire						
F1585568	Mar 30, 14 12:47	TE MAWHAI ROAD, TOKANUI	Vegetation Fire						
F1462245	Sep 16, 13 13:50	239 TE MAWHAI ROAD, TOKANUI	Structure fire with no damage						
F1457686	Sep 10, 13 20:24	239 TE MAWHAI ROAD, TOKANUI	Structure fire with no damage						
F1394707	May 25, 13 11:19	158 TE MAWHAI ROAD, TOKANUI	Other Fire - not classified above						
F0923832	Mar 3, 11 9:27	33 SYMONDS ROAD, TOKANUI	Structure fire with damage						
F0872630	Jan 2, 11 9:38	SYMONDS ROAD, TOKANUI	Structure fire with damage						
F0819504	Nov 8, 10 15:11	233 TE MAWHAI ROAD, TOKANUI	Vegetation Fire						
F0349482	Feb 4, 09 23:38	233 TE MAWHAI ROAD, TOKANUI	Structure fire with no damage						
F0302649	Dec 5, 08 2:58	276 TE MAWHAI ROAD, TOKANUI	Structure fire with damage						
F035252	Dec 5, 07 12:49	34 CRUICKSHANK ROAD, TOKANUI	Mobile Property Fire						
A664620	Nov 27, 06 3:38	31 SYMONDS ROAD, TOKANUI	Structure fire with damage						
A628907	Jul 13, 06 3:56	187 TE MAWHAI ROAD, TOKANUI	Structure fire with damage						
A599888	Mar 15, 06 20:30	TE MAWHAI ROAD, TOKANUI	Other Fire - not classified above						
A559779	Oct 5, 05 14:17	26 CROASDALE ROAD, TOKANUI	Structure fire with damage						
A497060	Dec 22, 04 5:32	, TOKANUI	Mobile Property Fire						
A310018	Jun 26, 02 1:50	248 TeMawhai ROAD, TOKANUI	Structure fire with damage						
A135640	Jul 3, 00 13:03	TE MAHAI ROAD, TE AWAMUTU	Other Fire - not classified above						
A098844	Feb 28, 00 14:54	3 118 CROOKSHANK, TE AWAMUTU	Vegetation Fire						

SMS Incident Report

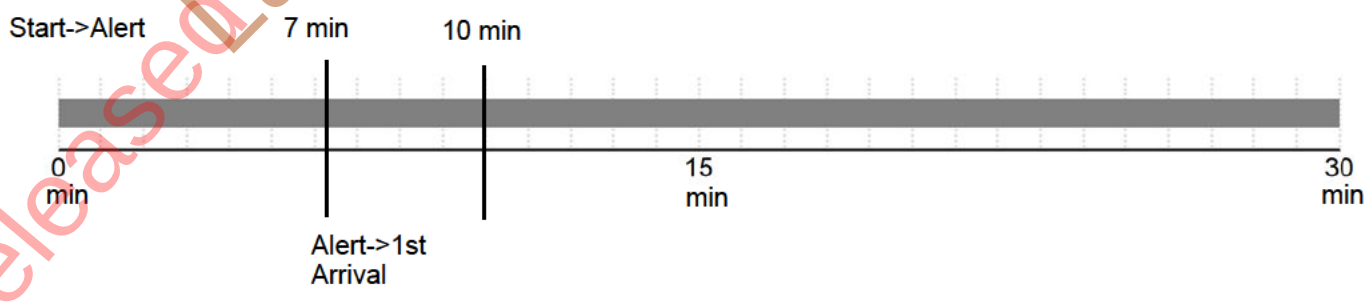
26/04/2022 15:01:07

Summary

CAD Number	A098844	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	28/02/2000 14:54:51	**Incident Ended**	28/02/2000 19:25:15
Incident Type	1307: Scrub fire (excluding gorse)		
Common Name			
Address	3 118 CROOKSHANK TE AWAMUTU		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1802783	**Map Grid N**	5784470
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	28/02/2000 19:26:21		
Report Completed			

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	14:57:02 28 Feb 2000	15:00:20 28 Feb 2000	15:15:44 28 Feb 2000	19:25:15 28 Feb 2000
TEAW4511	WT	15:00:39 28 Feb 2000	15:02:02 28 Feb 2000	15:21:32 28 Feb 2000	19:23:40 28 Feb 2000
TEAW459		17:19:14 28 Feb 2000	17:19:36 28 Feb 2000	17:22:01 28 Feb 2000	18:41:29 28 Feb 2000
TEAWVSO1		18:20:15 28 Feb 2000	18:20:21 28 Feb 2000	18:45:28 28 Feb 2000	19:18:36 28 Feb 2000
CAMB4411	WT	14:57:04 28 Feb 2000			15:01:29 28 Feb 2000



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:02:11	00:18:42	00:20:53	04:30:24
TEAW4511	00:05:48	00:20:53	00:26:41	04:28:49
TEAW459	02:24:23	00:02:47	02:27:10	03:46:38
TEAWVSO1	03:25:24	00:25:13	03:50:37	04:23:45
CAMB4411	00:02:13			00:06:38

Notifications

Date	Time	Party Notified
28 Feb 2000	14:59:08	REFERENCE TEAWA TANKER
28 Feb 2000	14:59:15	PRFO WAIPA PER PAGER
28 Feb 2000	15:40:06	PRFO WAIPA DC TO RESPOND
28 Feb 2000	18:24:22	TEAW451 RECOMITTED TO THE CALL

Message Log

Time	Message

Incident

CAD Number A098844
Incident Reporter
Incident Controller
Distance Travelled (km) 10
Delay In Receiving Call Information not recorded

Property Details

Occupant [redacted]
Building Owner Owner occupied
General Property Use Farming, Horticulture, Agricultural use
Special Property Use Farm: Dairy, Beef
Purpose Group

Actions

Persons Reported Trapped
Evacuation Status Information not recorded
Action Prior 1
Action Prior 2

Action Taken Extinguishment only: Includes isolating fuel/power

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location	Open land, Scrub land, Farm land
Level	Ground level

Equipment Used

Quantity	Equipment
2	Low pressure delivery
1	Portable pump

Equipment Involved

Equipment Involved

Year	0
Make	
Model	

Fire

Arrival Condition	Totally involved fire
Heat Source	Agricultural fire or burn off
Termination Stage	Flame
First Object Ignited	Scrub (living or dead)
First Object Material	Gorse, Scrub
Second Object Ignited	
Second Object Material	Information not recorded
Indicated Cause	Inadequate control: openfires/campfires/bonfires
Certainty of Cause	
Age of Person	Persons: 19 - 4 yrs
Ethnicity	
Gender	
FAIP Service Offered	Unknown

Vegetation

Gorse Area	m²	**Forest Danger**	
Grassland Area	m²	**Grassland Danger**	
Native Forest Area	m²	**Scrubland Danger**	
Exotic Forest Area	m²		
Scrub Area	m²	**BUI**	
Tussock Area	m²	**DC**	
Wetland Area	m²	**DMC**	
Crop Area	m²	**FFMC**	
Total Vegetation Area	2400 m²	**FWI**	
		ISI	

Map Grid N	5784470		
Map Grid E	1802783	**Wind Speed**	0km/hr
		Wind Direction	'
Closest Weather Station		**Rainfall**	mm
Fire Season Status		**Humidity**	%
Rural Fire Permit	U	**Temperature**	0'C

SMS Incident Report

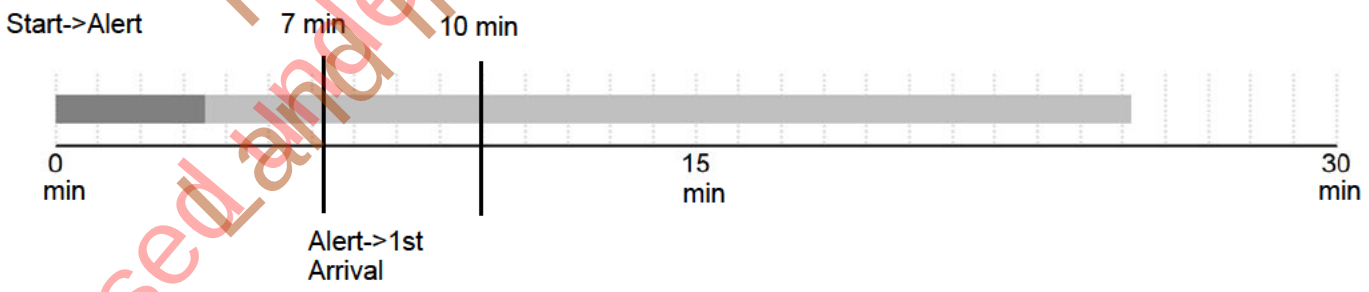
26/04/2022 15:00:46

Summary

CAD Number	A135640	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	03/07/2000 13:03:26	**Incident Ended**	03/07/2000 13:19:52
Incident Type	1501: Outside rubbish fire		
Common Name			
Address	TE MAHAI ROAD TE AWAMUTU		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803175	**Map Grid N**	5785070
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	03/07/2000 14:04:09		
Report Completed			

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	13:05:11 03 Jul 2000	13:07:55 03 Jul 2000	13:15:36 03 Jul 2000	13:19:52 03 Jul 2000
TEAW4511	WT	13:05:12 03 Jul 2000	13:08:46 03 Jul 2000	13:16:28 03 Jul 2000	13:19:04 03 Jul 2000



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:01:45	00:10:25	00:12:10	00:16:26
TEAW4511	00:01:46	00:11:16	00:13:02	00:15:38

Notifications

Date	Time	Party Notified
03 Jul 2000	13:10:29	DOC WAIKATO /RFO WAIPA DC

Message Log

Time	Message

Incident

CAD Number	A135640
Incident Reporter	
Incident Controller	
Distance Travelled (km)	15
Delay In Receiving Call	Information not recorded

Property Details

Occupant	[redacted]
Building Owner	Owner occupied
General Property Use	Single house
Special Property Use	Lawn area, Backyard, Garden area, Patio area
Purpose Group	

Actions

Persons Reported Trapped	No
Evacuation Status	Information not recorded
Action Prior 1	
Action Prior 2	
Action Taken	Investigation only (Fire related)

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location

Level

Equipment Used

Quantity	Equipment
0	

Equipment Involved

Equipment Involved

Year 0

Make

Model

Fire

Arrival Condition

Heat Source Information not recorded/Unknown

Termination Stage

First Object Ignited

First Object Material Information not recorded

Second Object Ignited

Second Object Material Information not recorded

Indicated Cause

Certainty of Cause

Age of Person

Ethnicity

Gender

FAIP Service Offered Unknown

SMS Incident Report

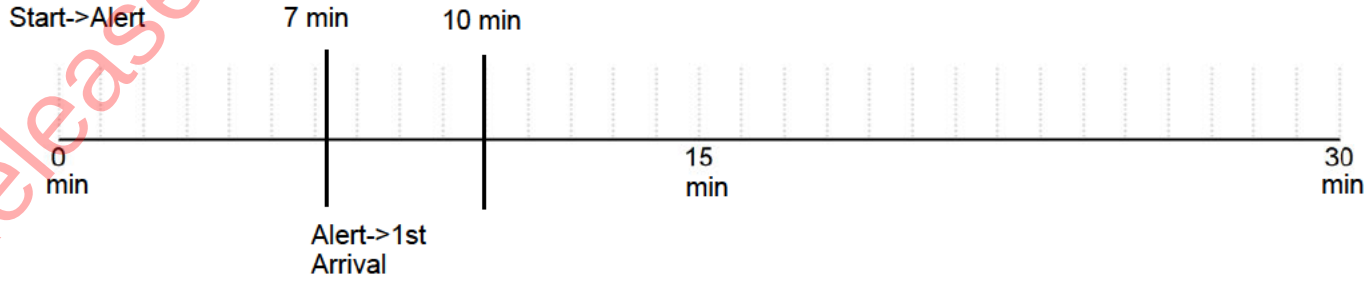
26/04/2022 15:00:26

Summary

CAD Number	A310018	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	26/06/2002 01:50:18	**Incident Ended**	26/06/2002 04:27:12
Incident Type	1101: Structure fire with damage		
Common Name			
Address	248 TeMawhai ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803206	**Map Grid N**	5785089
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	26/06/2002 13:08:33		
Report Completed			

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	01:52:16 26 Jun 2002	01:55:22 26 Jun 2002	02:02:48 26 Jun 2002	05:27:58 26 Jun 2002
TEAW4511	WT	01:52:17 26 Jun 2002	01:58:59 26 Jun 2002	02:07:38 26 Jun 2002	03:51:22 26 Jun 2002
TEAW457	PR	01:52:17 26 Jun 2002	01:57:23 26 Jun 2002	02:15:06 26 Jun 2002	04:11:34 26 Jun 2002
HAMILTON2	OF	02:29:38 26 Jun 2002	02:33:51 26 Jun 2002	03:01:42 26 Jun 2002	04:40:21 26 Jun 2002
HAMIFSO1	FSO	02:30:32 26 Jun 2002	02:40:46 26 Jun 2002	03:15:41 26 Jun 2002	08:16:11 26 Jun 2002
BAYW407	SPARE				13:07:29 26 Jun 2002



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:01:58	00:10:32	00:12:30	03:37:40
TEAW4511	00:01:59	00:15:21	00:17:20	02:01:04
TEAW457	00:01:59	00:22:49	00:24:48	02:21:16
HAMILTON2	00:39:20	00:32:04	01:11:24	02:50:03
HAMIFSO1	00:40:14	00:45:09	01:25:23	06:25:53
BAYW407				11:17:11

Notifications

Date	Time	Party Notified
26 Jun 2002	01:52:32	RFO DOC WAIKATO HAMILTON
26 Jun 2002	01:52:36	RFO WAIPA
26 Jun 2002	01:56:22	RFO DOC PHONES IN FOR UPDATE
26 Jun 2002	01:57:02	RFO DOC DOES NOT WANT INFORMATIVE UNLESS IT INVOLVES BUSH
26 Jun 2002	02:05:38	WAIPA NETWORKS ETA UNKNOWN
26 Jun 2002	02:08:29	RFO WAIPA DC OF INFORMATIVE
26 Jun 2002	02:13:55	WAIPA NETWORKS ETA 15 MINS
26 Jun 2002	02:26:33	CFO/DCFO HAMILTON VIA PAGER RE REQUEST FOR FIRE SAFETY
26 Jun 2002	02:27:39	FSO HAMILTON GROUP PAGE
26 Jun 2002	02:31:55	FSO [redacted]
26 Jun 2002	02:32:08	ACK PAGE - RESPONDING

Message Log

Time	Message

Incident

CAD Number A310018
Incident Reporter [redacted]
Incident Controller [redacted]
Distance Travelled (km) 9
Delay In Receiving Call

Property Details

Occupant [redacted]
Building Owner Owner occupied
General Property Use Single house
Special Property Use Single house

Purpose Group

Actions

Persons Reported Trapped	No
Evacuation Status	Not occupied at time of incident
Action Prior 1	No action taken by Civilian/Occupant/Passerby
Action Prior 2	
Action Taken	Extinguishment only: Includes isolating fuel/power

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location	Supply area, Tool room, Maintenance supply room
Level	Ground level

Equipment Used

Quantity	Equipment
2	Low pressure delivery
1	
1	
1	

Equipment Involved

Equipment Involved

Year	
Make	
Model	

Fire

Arrival Condition	Totally involved fire
Heat Source	Information not recorded/Unknown
Termination Stage	Flame
First Object Ignited	Exterior side wall covering surface, Cladding (included eaves)
First Object Material	Wood: sawn, finished timber
Second Object Ignited	Structure components - not classified above

Second Object Material	Multiple materials first ignited
Indicated Cause	Undetermined
Certainty of Cause	Medium
Age of Person	Persons: 19 - 64 yrs
Ethnicity	Information not recorded
Gender	[redacted]
FAIP Service Offered	Unknown

Structure

Area of One Floor		80
Age of Building	1946 - 1969	
Structural Frame Type	Heavy timber	
Number of Floors		1
Number of Basements		
Internal Wall Lining	Timber, Sarking, Scrim, Pinex	
Ceiling Lining	Wood: T&G, Hardboard, Chipboard, Customwood, Plywood	
Material Generating Most Flame	Wood: Sawn, Finished timber	
Material Generating Most Smoke	Wood: Sawn, Finished timber	
Avenue of Flame Travel	Corridor, Excessive open area	
Avenue of Smoke Travel	Floor, ceiling failure	
Extent of Flame Damage	Confined to structure of origin	
Area of Flame Damage		80
Extent of Smoke Damage	Extended beyond structure of origin	
Area of Smoke Damage		80
Extent of Water Damage	Confined to structure of origin	
Area of Water Damage		80
Extent of Fire Control Damage	Confined to structure of origin	
Area of Fire Control Damage		80

SMS Incident Report

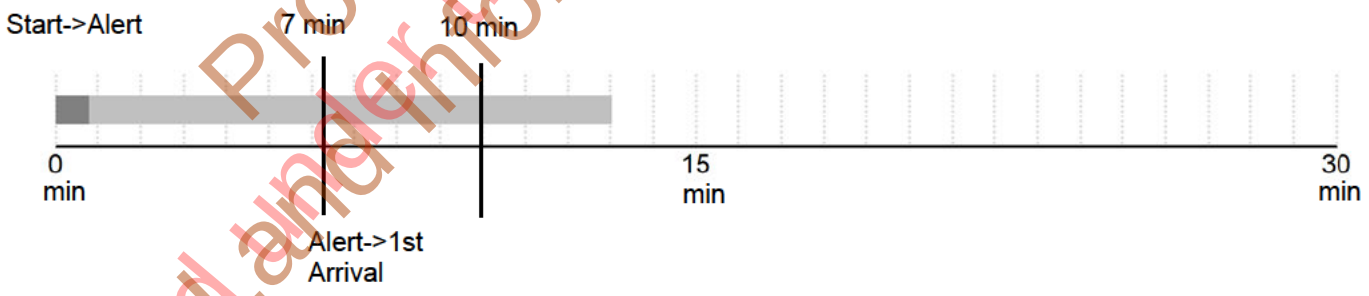
26/04/2022 15:00:05

Summary

CAD Number	A497060	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	22/12/2004 05:32:54	**Incident Ended**	22/12/2004 05:51:30
Incident Type	1201: Mobile Property Fire		
Common Name			
Address	TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803206	**Map Grid N**	5785089
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	22/12/2004 06:33:59		
Report Completed			

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	05:33:41 22 Dec 2004	05:37:09 22 Dec 2004	05:45:57 22 Dec 2004	06:17:19 22 Dec 2004



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:47	00:12:16	00:13:03	00:44:25

Notifications

Date	Time	Party Notified
22 Dec 2004	05:36:11	RFO DOC WAIKATO H AMILTON PAGED

22 Dec 2004	05:36:24	RFO WAIPA DC PAGED
22 Dec 2004	05:37:01	RFO WAIPA DC ACK PAGE
22 Dec 2004	05:42:08	RFO DOC HAMILTON ACK PAGE
22 Dec 2004	06:10:10	POLICE...

Message Log

Time	Message

Incident

CAD Number A497060

Incident Reporter [redacted]

Incident Controller [redacted]

Distance Travelled (km) 12

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Single house

Special Property Use Single house

Purpose Group

Actions

Persons Reported Trapped No

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Extinguishment only: Includes isolating fuel/power

Civilians

Civilians Rescued 0

Civilians Extricated 0

Civilians Assisted 0

Civilians Evacuated

Origin

Location Passenger area (of transportation equipment)

Level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery
1	
2	
1	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	Totally involved fire
Heat Source	Unable to classify
Termination Stage	Flame
First Object Ignited	Structure components - not classified above
First Object Material	Unable to classify
Second Object Ignited	
Second Object Material	
Indicated Cause	Undetermined
Certainty of Cause	Low
Age of Person	Unknown
Ethnicity	Unknown
Gender	[redacted]
FAIP Service Offered	Unknown

Mobile

Vehicle Type	Car, Taxi, Ambulance
Licence Plate	
Year	
Make	BMW
Model	

SMS Incident Report

26/04/2022 14:59:40

Summary

CAD Number	A559779	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	05/10/2005 14:17:30	**Incident Ended**	05/10/2005 15:15:50
Incident Type	1101: Structure fire with damage		
Common Name			
Address	26 CROASDALE ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1804651	**Map Grid N**	5784438
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	05/10/2005 15:15:50		
Report Completed			

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	14:18:24 05 Oct 2005	14:21:52 05 Oct 2005	14:28:50 05 Oct 2005	15:12:45 05 Oct 2005
TEAW457	PR	14:18:24 05 Oct 2005	14:26:28 05 Oct 2005	14:33:56 05 Oct 2005	14:47:55 05 Oct 2005
OTOR461	P1	14:26:28 05 Oct 2005			14:34:09 05 Oct 2005
TEAW4511	WT	14:18:24 05 Oct 2005			14:38:28 05 Oct 2005
OTOR467	PR	14:29:38 05 Oct 2005	14:30:09 05 Oct 2005		14:38:25 05 Oct 2005

Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:54	00:10:26	00:11:20	00:55:15
TEAW457	00:00:54	00:15:32	00:16:26	00:30:25
OTOR461	00:08:58			00:16:39
TEAW4511	00:00:54			00:20:58
OTOR467	00:12:08			00:20:55

Notifications

Date	Time	Party Notified
05 Oct 2005	14:19:17	RFO DOC WAIKATO (HAMILTON)/RFO WAIPA DC PER PAGER..
05 Oct 2005	14:20:35	RFO DOC WAIKATO (HAMILTON) ACK PAGER - NO UPDATE REQD..
05 Oct 2005	14:36:49	RFO WAIPA OF SITREP
05 Oct 2005	14:37:03	DELAYED DUE TO OTHER JOBS
05 Oct 2005	14:40:08	WAIPA NETWORKS ADVISED

Message Log

Time	Message

Incident

CAD Number A559779
Incident Reporter [redacted]
Incident Controller D.C.F.O [redacted]
Distance Travelled (km) 9
Delay In Receiving Call

Property Details

Occupant [redacted]
Building Owner State owned
General Property Use Single house
Special Property Use Single house
Purpose Group

Actions

Persons Reported Trapped No
Evacuation Status Fully evacuated
Action Prior 1 Garden hose

Action Prior 2	Garden hose
Action Taken	Extinguishment only: Includes isolating fuel/power

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location	Laundry area, Wash house
Level	Ground level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery

Equipment Involved

Equipment Involved

Year	1990
Make	F.P
Model	

Fire

Arrival Condition	Small fire
Heat Source	Exposure fire: Radiated heat
Termination Stage	Flame
First Object Ignited	Interior wall covering
First Object Material	Gypsum board, Gib board, Elephant board
Second Object Ignited	Ceiling coverings
Second Object Material	Gypsum board, Gib board, Elephant board
Indicated Cause	Failure to use ordinary care
Certainty of Cause	Medium
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	
FAIP Service Offered	Unknown

Structure

Area of One Floor		104
Age of Building	1946 - 1969	
Structural Frame Type	Metal frame protected	
Number of Floors		1
Number of Basements		0
Internal Wall Lining	Plywood, Particle board, Fibre board, Hardboard, Customwood	
Ceiling Lining	Fibrous plaster	
Material Generating Most Flame	Multiple forms ignited	
Material Generating Most Smoke	Polystyrene, Foam plastic	
Avenue of Flame Travel	Ceiling covering	
Avenue of Smoke Travel	Combination of any of: ceiling, wall, floor finish	
Extent of Flame Damage	Confined to fire cell of origin	
Area of Flame Damage		13
Extent of Smoke Damage	Confined to fire cell of origin	
Area of Smoke Damage		12
Extent of Water Damage	Confined to room of origin	
Area of Water Damage		12
Extent of Fire Control Damage	Confined to floor of origin	
Area of Fire Control Damage		12

Comments

10/17/2005 1:06:00 PM **Reporter Comments**

My opinion was the dryer was put by the wall and the vent was shut off this building up heat over the years . till the lint cought fire.as there was no outside vent.

[redacted]

10/26/2005 7:33:39 AM **Reporter Comments**

This fire was not investigated by Fire Safety Officers.

[redacted]

SMS Incident Report

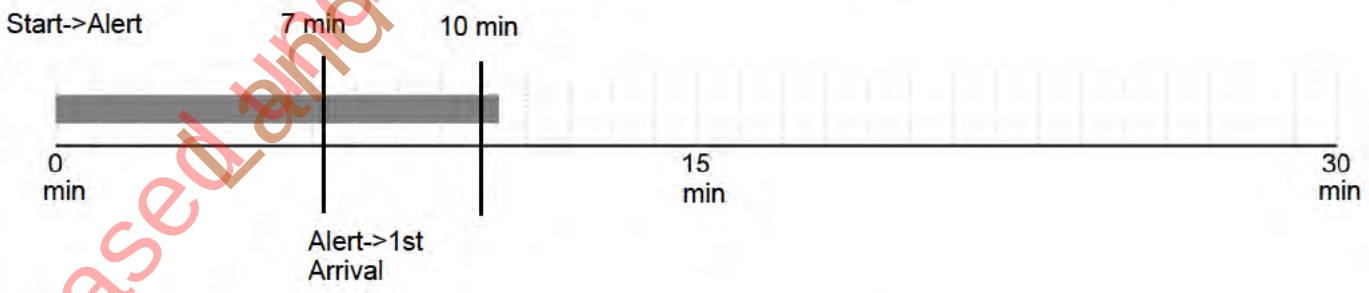
26/04/2022 14:59:17

Summary

CAD Number	A599888	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	15/03/2006 20:30:00	**Incident Ended**	15/03/2006 20:57:13
Incident Type	1501: Outside rubbish fire		
Common Name			
Address	TE MAWHAI ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803930	**Map Grid N**	5784756
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	15/03/2006 20:57:13		
Report Completed			

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	20:31:57 15 Mar 2006	20:35:00 15 Mar 2006	20:43:33 15 Mar 2006	20:49:09 15 Mar 2006
CAMB4411	WT	20:31:55 15 Mar 2006	20:33:50 15 Mar 2006		20:37:05 15 Mar 2006
PIRO5876	RWT	20:36:32 15 Mar 2006	20:42:32 15 Mar 2006		20:50:18 15 Mar 2006



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:01:57	00:11:36	00:13:33	00:19:09
CAMB4411	00:01:55			00:07:05

PIRO5876	00:06:32			00:20:18

Notifications

Date	Time	Party Notified
15 Mar 2006	20:32:37	RFO DOC WAIKATO HAMITON PAGEDF
15 Mar 2006	20:32:48	RFO WAIPA DC PAGED
15 Mar 2006	20:35:01	RFO DOC AKS PAGER. UPDATE ONLY IF MAJOR
15 Mar 2006	20:40:20	RFO WAIPA DC NO UPDATE REQD

Message Log

Time	Message

Incident

CAD Number A599888

Incident Reporter [redacted]

Incident Controller SFF [redacted]

Distance Travelled (km) 7

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Road, Street, Motorway

Special Property Use Roadside vegetation

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Extinguishment only: Includes isolating fuel/power

Origin

Location

Level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery
2	
2	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition

Heat Source

Termination Stage

First Object Ignited

First Object Material

Second Object Ignited

Second Object Material

Indicated Cause Unlawful

Certainty of Cause High

Age of Person Unknown

Ethnicity Unknown

Gender

FAIP Service Offered Unknown

SMS Incident Report

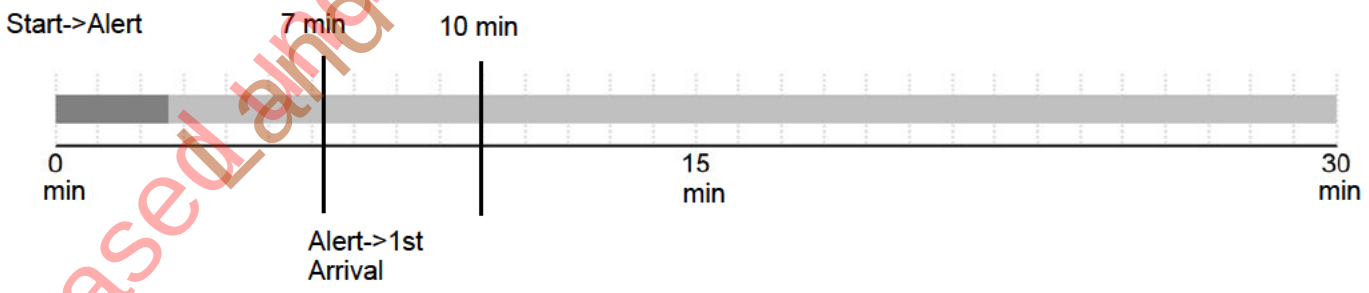
26/04/2022 14:58:51

Summary

CAD Number	A628907	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	13/07/2006 03:56:40	**Incident Ended**	13/07/2006 05:57:16
Incident Type	1101: Structure fire with damage		
Common Name			
Address	187 TE MAWHAI ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803679	**Map Grid N**	5784804
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	13/07/2006 05:57:16		
Report Completed			

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	03:57:33 13 Jul 2006	04:01:33 13 Jul 2006	04:16:27 13 Jul 2006	04:58:12 13 Jul 2006
TEAW4511	WT	03:57:33 13 Jul 2006	04:05:13 13 Jul 2006	04:18:57 13 Jul 2006	04:37:51 13 Jul 2006
TEAW457	PR	03:57:33 13 Jul 2006	04:03:37 13 Jul 2006	04:20:02 13 Jul 2006	04:44:17 13 Jul 2006



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:53	00:18:54	00:19:47	01:01:32
TEAW4511	00:00:53	00:21:24	00:22:17	00:41:11

TEAW457	00:00:53	00:22:29	00:23:22	00:47:37

Notifications

Date	Time	Party Notified
13 Jul 2006	03:59:24	RFO DOC WAIKATO (HAMILTON) RFO WAIPA DC PAGED
13 Jul 2006	04:03:46	RFO DOC WAIKATO (HAMILTON) ACKN PAGE NO UPDATE REQ
13 Jul 2006	04:10:41	RFO WAIPA DC ACKN PAGE NO UPDATE REQ
13 Jul 2006	04:27:28	AMB

Message Log

Time	Message

Incident

CAD Number A628907

Incident Reporter [redacted]

Incident Controller D.C.f.O. [redacted]

Distance Travelled (km) 10

Delay In Receiving Call

Property Details

Occupant Ms [redacted]

Building Owner Rented property

General Property Use Single house

Special Property Use Single house

Purpose Group

Actions

Persons Reported Trapped No

Evacuation Status Fully evacuated

Action Prior 1 Bucket/Container of water, bucket pump

Action Prior 2

Action Taken Investigation only (Fire related)

Civilians

Civilians Rescued 0

Civilians Extricated 0

Civilians Assisted 0

Civilians Evacuated

Origin

Location	Lounge, Common room, TV room, Music room
Level	Ground level

Equipment Used

Quantity	Equipment
3	

Equipment Involved

Equipment Involved

Year	
Make	
Model	

Fire

Arrival Condition	Out on arrival
Heat Source	Embers, Ashes
Termination Stage	Smoulder
First Object Ignited	Interior wall covering
First Object Material	Wood: sawn, finished timber
Second Object Ignited	
Second Object Material	
Indicated Cause	Inadequate control: openfires/campfires/bonfires
Certainty of Cause	Medium
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	
FAIP Service Offered	Unknown

Structure

Area of One Floor		270
Age of Building	1946 - 1969	
Structural Frame Type	Timber frame protected	
Number of Floors		1
Number of Basements		0
Internal Wall Lining	Plywood, Particle board, Fibre board, Hardboard, Customwood	
Ceiling Lining	Wood: T&G, Hardboard, Chipboard, Customwood, Plywood	

Material Generating Most Flame	Wood: Sawn, Finished timber
Material Generating Most Smoke	Wood: Sawn, Finished timber
Avenue of Flame Travel	Floor covering
Avenue of Smoke Travel	Combination of any of: ceiling, wall, floor finish
Extent of Flame Damage	Confined to part of room or area of origin
Area of Flame Damage	1
Extent of Smoke Damage	Confined to part of room or area of origin
Area of Smoke Damage	1
Extent of Water Damage	Confined to object of origin
Area of Water Damage	1
Extent of Fire Control Damage	Confined to object of origin
Area of Fire Control Damage	1

Comments

8/28/2006 8:58:33 AM **Reporter Comments**

Spark came out of a unatended fire and set fire to fire wood and floor put out by neighbours.

[redacted]

SMS Incident Report

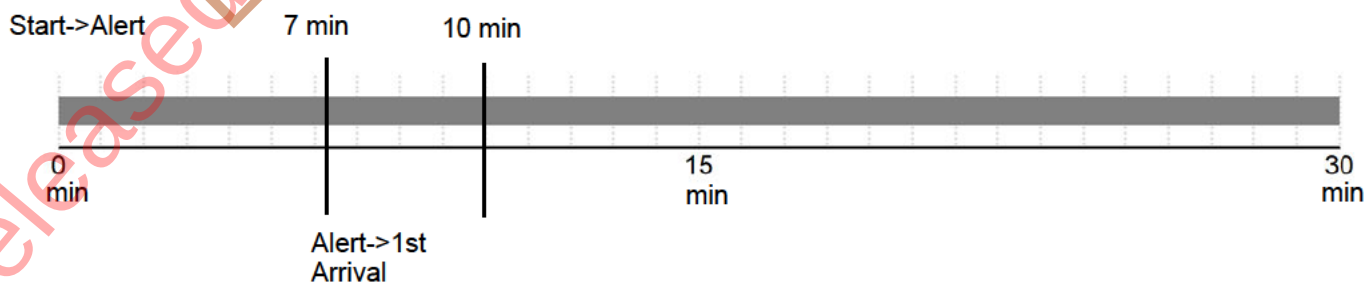
26/04/2022 14:58:26

Summary

CAD Number	A664620	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	27/11/2006 03:38:21	**Incident Ended**	27/11/2006 06:06:21
Incident Type	1101: Structure fire with damage		
Common Name			
Address	31 SYMONDS ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1804653	**Map Grid N**	5784488
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	27/11/2006 12:17:12		
Report Completed			

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW457	PR	03:39:15 27 Nov 2006	03:44:20 27 Nov 2006	03:52:17 27 Nov 2006	05:31:19 27 Nov 2006
TEAW4511	WT	03:39:15 27 Nov 2006	03:46:25 27 Nov 2006	03:53:12 27 Nov 2006	06:40:31 27 Nov 2006
TEAW451	P1	03:39:15 27 Nov 2006	03:41:55 27 Nov 2006	03:53:29 27 Nov 2006	06:24:51 27 Nov 2006
HAMIFSO3	FSO	03:56:23 27 Nov 2006	04:07:34 27 Nov 2006	05:02:10 27 Nov 2006	11:56:09 27 Nov 2006
VSOWAIKATO	VSO	04:30:46 27 Nov 2006	04:31:28 27 Nov 2006	05:34:17 27 Nov 2006	11:52:20 27 Nov 2006



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW457	00:00:54	00:13:02	00:13:56	01:52:58
TEAW4511	00:00:54	00:13:57	00:14:51	03:02:10
TEAW451	00:00:54	00:14:14	00:15:08	02:46:30
HAMIFSO3	00:18:02	01:05:47	01:23:49	08:17:48
VSOWAIKATO	00:52:25	01:03:31	01:55:56	08:13:59

Notifications

Date	Time	Party Notified
27 Nov 2006	03:40:18	RFO'S
27 Nov 2006	03:42:18	RFO DOC WAIKATO (HAMILTON) ACK PAGER NO SITREP REQD
27 Nov 2006	03:42:51	RFO WAIPA DC ACK PAGER
27 Nov 2006	03:43:22	RFO WAIPA DC ACK PAGER NO UPDATE REQD
27 Nov 2006	03:47:15	AMB
27 Nov 2006	03:48:59	CFO TE AWAMUTU
27 Nov 2006	03:49:02	WAIPA NETWORKS - AFTERHOURS
27 Nov 2006	03:49:03	CFO/DCFO HAMILTON
27 Nov 2006	03:49:10	VSO WAIKATO
27 Nov 2006	03:49:59	WAIPA NETWORKS
27 Nov 2006	03:53:34	FSO WAIKATO GROUP
27 Nov 2006	03:53:41	CFO HAMILTON ACK PAGE
27 Nov 2006	03:56:50	HAMIFSO3 ACK PAGER AND WILL RESPOND
27 Nov 2006	04:01:00	POLICE
27 Nov 2006	04:06:13	FROM OTOR461...SEEING AS HOUSE FIRE IS AT TOKANUI DO YOU WANT US
27 Nov 2006	04:06:43	AMB CALLED IN FOR DIRECTIONS
27 Nov 2006	04:21:34	VSO SOUTH WAIKATO OF REQUIREMENTS
27 Nov 2006	04:24:45	VSO SOUTH WAIKATO ACK PAGER
27 Nov 2006	05:17:13	OTOR461 VIA PHONE
27 Nov 2006	06:12:11	- OPUS IS TRANSIT NZ AND NOT THERE AREA
27 Nov 2006	06:12:30	- ADVISED FSO - HE WILL TALK TO OTHER RESIDENTS AS OPUS MANAGERS THE
27 Nov 2006	08:18:04	WELFARE CHECK ADVISE THEY ARE AWAITING THE POLICE
27 Nov 2006	09:34:18	TRUST POWER - ADVISE PROPERTY IS WITH MERCURY ENERGY 0800101810
27 Nov 2006	09:42:39	MERCURY ENERGY - THEY ADVISE DISCONNECTION OCCURED 23/11

Message Log

Time	Message

Incident

CAD Number	A664620
Incident Reporter	[redacted]
Incident Controller	SO [redacted]
Distance Travelled (km)	6
Delay In Receiving Call	

Property Details

Occupant	Unoccupied
Building Owner	State owned
General Property Use	Single house
Special Property Use	Single house
Purpose Group	

Actions

Persons Reported Trapped	No
Evacuation Status	Not occupied at time of incident
Action Prior 1	
Action Prior 2	
Action Taken	Investigation only (Fire related)

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location	Lounge, Common room, TV room, Music room
Level	Ground level

Equipment Used

Quantity	Equipment
3	Low pressure delivery
8	
2	
2	
8	

5	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	Totally involved fire
Heat Source	Unable to classify
Termination Stage	Flame
First Object Ignited	Interior wall covering
First Object Material	Vinyl eg. Floor coverings, Wallpaper (but NOT vinyl-coated)
Second Object Ignited	
Second Object Material	
Indicated Cause	Unlawful
Certainty of Cause	High
Age of Person	Unknown
Ethnicity	Unknown
Gender	
FAIP Service Offered	Unknown

Structure

Area of One Floor		400
Age of Building	1900 - 1945	
Structural Frame Type	Timber frame unprotected (normal housing)	
Number of Floors		1
Number of Basements		0
Internal Wall Lining	Timber, Sarking, Scrim, Pinex	
Ceiling Lining	Wood: T&G, Hardboard, Chipboard, Customwood, Plywood	
Material Generating Most Flame	Wood: Sawn, Finished timber	
Material Generating Most Smoke	Wood: Sawn, Finished timber	
Avenue of Flame Travel	Combination of any of: ceiling, wall, floor finish	
Avenue of Smoke Travel	Combination of any of: ceiling, wall, floor finish	
Extent of Flame Damage	Extended beyond structure of origin	
Area of Flame Damage		400
Extent of Smoke Damage	No damage of this type	
Area of Smoke Damage		0

Extent of Water Damage	Confined to structure of origin
Area of Water Damage	400
Extent of Fire Control Damage	No damage of this type
Area of Fire Control Damage	0

SMS Incident Report

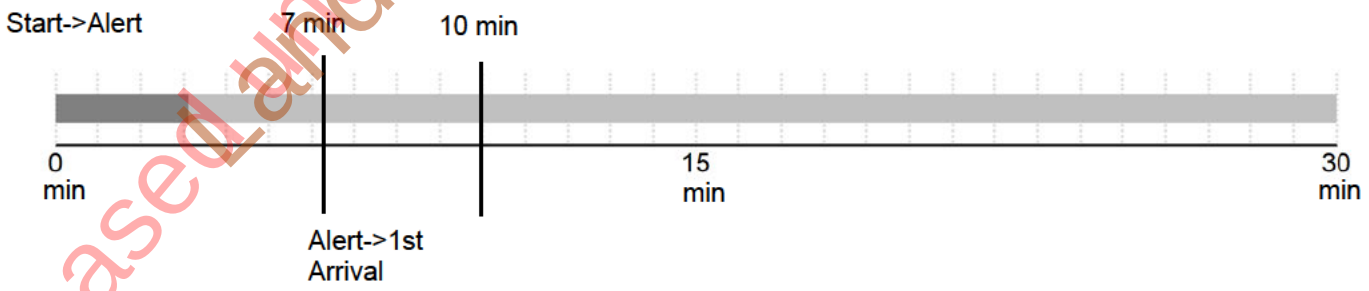
26/04/2022 14:56:58

Summary

CAD Number	F0349482	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	04/02/2009 23:38:20	**Incident Ended**	05/02/2009 00:47:59
Incident Type	1102: Structure fire with no damage		
Common Name			
Address	[redacted] TE MAWHAI ROAD TOKANUI		
Alarm Method	Ambulance Call	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803243	**Map Grid N**	5784952
First Caller	AMBULANCE NEW ZEALAND	**First Caller Contact**	[redacted]
Incident Closed	05/02/2009 02:16:24		
Report Completed	10:58, Wed 18 Feb 2009 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW4511	WT	23:39:22 04 Feb 2009	23:44:20 04 Feb 2009	23:52:28 04 Feb 2009	00:06:59 05 Feb 2009
TEAW457	PR	23:39:22 04 Feb 2009	23:44:17 04 Feb 2009	23:57:17 04 Feb 2009	00:08:29 05 Feb 2009
TEAW451	P1	23:39:22 04 Feb 2009	23:43:00 04 Feb 2009	23:58:01 04 Feb 2009	00:47:40 05 Feb 2009



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW4511	00:01:02	00:13:06	00:14:08	00:28:39
TEAW457	00:01:02	00:17:55	00:18:57	00:30:09

TEAW451	00:01:02	00:18:39	00:19:41	01:09:20

Notifications

Date	Time	Party Notified
04 Feb 2009	23:54:15	AMBULANCE WITH UPDATED LOCATION
05 Feb 2009	00:44:18	POLICE - THEY ARE NOT RESPONDING AS THEY HAVE NFU TA UNIT IS IN HAMILTON

Message Log

Time	Message

Incident

CAD Number F0349482

Incident Reporter [redacted]

Incident Controller SO [redacted]

Distance Travelled (km) 8

Delay In Receiving Call

Property Details

Occupant [redacted]

Building Owner Owner occupied

General Property Use Single house

Special Property Use Garage

Purpose Group

Actions

Persons Reported Trapped No

Evacuation Status Not occupied at time of incident

Action Prior 1 Garden hose

Action Prior 2

Action Taken Investigation only (Fire related)

Civilians

Civilians Rescued 0

Civilians Extricated 0

Civilians Assisted 1

Civilians Evacuated

Origin

Location	Garage, Carport, Vehicle storage, Storage Shed
Level	Ground level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery
6	
3	
1	

Equipment Involved

Equipment Involved

Year	
Make	
Model	

Fire

Arrival Condition	Small fire
Heat Source	Lighter/Match/Candle - POSSIBLE combination of
Termination Stage	Flame
First Object Ignited	Rubbish, Garbage, Waste
First Object Material	Rubbish (material having no value in the same container or pile)
Second Object Ignited	
Second Object Material	
Indicated Cause	Unlawful
Certainty of Cause	High
Age of Person	Persons: 19 - 64 yrs
Ethnicity	Unknown
Gender	[redacted]
FAIP Service Offered	Unknown

Casualties

Casualty Number 1

Gender	[redacted]
Age	[redacted]
Apparent Injury	[redacted]
Ethnicity	Unknown

Severity of Injury	[redacted]
Bleeding	[redacted]
Action by Fire FIghters	[redacted]
Condition Before Injury	[redacted]
How Removed	[redacted]
Location at Ignition	[redacted]
Factor Preventing Escape	[redacted]
Activity When Injured	[redacted]
Cause of Injury	[redacted]
Victim Aware of Fire	[redacted]
Room Where Victim Found	[redacted]
Location Where Victim Found	[redacted]
Familiarity With Property	[redacted]

SMS Incident Report

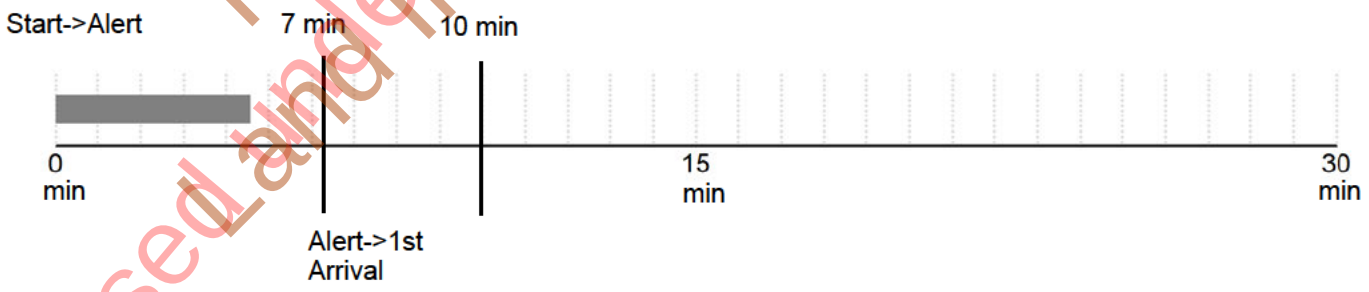
26/04/2022 14:57:50

Summary

CAD Number	F035252	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	05/12/2007 12:49:44	**Incident Ended**	05/12/2007 13:24:59
Incident Type	1201: Mobile Property Fire		
Common Name			
Address	34 CRUICKSHANK ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1802963	**Map Grid N**	5784801
First Caller	WILFARM ENTERPRISES LIMITED	**First Caller Contact**	[redacted]
Incident Closed	05/12/2007 13:24:59		
Report Completed	15:45, Wed 05 Dec 2007 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	12:51:28 05 Dec 2007	12:54:48 05 Dec 2007	13:04:11 05 Dec 2007	13:12:58 05 Dec 2007
TEAW4511	WT	12:52:34 05 Dec 2007	12:57:09 05 Dec 2007		13:06:22 05 Dec 2007



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:01:44	00:12:43	00:14:27	00:23:14
TEAW4511	00:02:50			00:16:38

Notifications

Date	Time	Party Notified
05 Dec 2007	12:51:59	RFO WAIPA DC

Message Log

Time	Message

Incident

CAD Number F035252

Incident Reporter [redacted]

Incident Controller SO [redacted]

Distance Travelled (km) 8

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Road, Street, Motorway

Special Property Use Roadside vegetation

Purpose Group

Actions

Persons Reported Trapped No

Evacuation Status

Action Prior 1 Portable extinguisher (all types)

Action Prior 2

Action Taken Investigation only (Fire related)

Civilians

Civilians Rescued 0

Civilians Extricated 0

Civilians Assisted 1

Civilians Evacuated

Origin

Location Engine area, Running gear

Level

Equipment Used

Quantity	Equipment
2	
2	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	Out on arrival
Heat Source	Heat from liquid fuelled equipment
Termination Stage	Flame
First Object Ignited	Agricultural: Hay, Straw (NOT food for human consumption)
First Object Material	Hay, Straw, Chaff
Second Object Ignited	Electrical wire, Wiring insulation
Second Object Material	PVC eg. Floor Tiles, Guttering/Pipes, Plastic Bags, Elec. Insulation
Indicated Cause	Failure to clean
Certainty of Cause	High
Age of Person	No person involved
Ethnicity	No person involved
Gender	
FAIP Service Offered	Unknown

Mobile

Vehicle Type	Farm vehicle, Tractor, Harvester, Picker
Licence Plate	
Year	1997
Make	John Deer
Model	96 TIR

SMS Incident Report

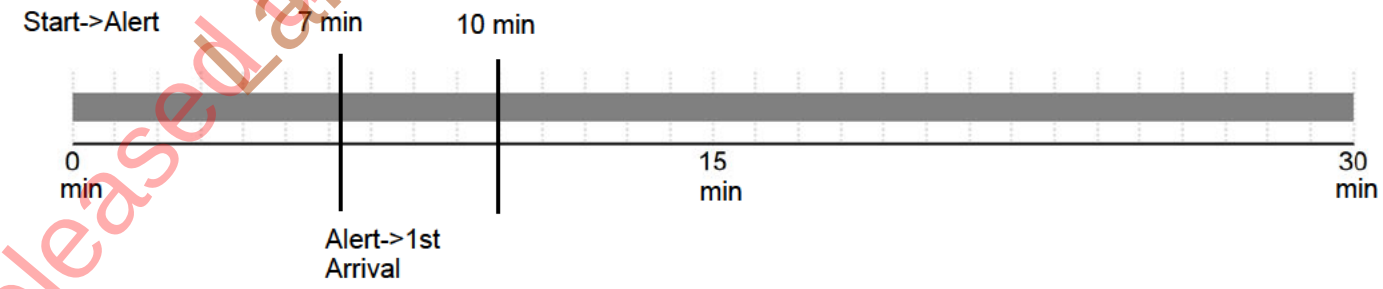
26/04/2022 14:57:24

Summary

CAD Number	F0302649	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	05/12/2008 02:58:51	**Incident Ended**	05/12/2008 05:08:27
Incident Type	1101: Structure fire with damage		
Common Name			
Address	276 TE MAWHAI ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1802984	**Map Grid N**	5785254
First Caller	VODAFONE NEW ZEALAND LTD	**First Caller Contact**	[redacted]
Incident Closed	05/12/2008 05:52:40		
Report Completed	16:6, Sat 13 Dec 2008 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	02:59:39 05 Dec 2008	03:02:05 05 Dec 2008	03:09:48 05 Dec 2008	05:11:17 05 Dec 2008
TEAW457	PR	02:59:39 05 Dec 2008	03:03:55 05 Dec 2008	03:11:27 05 Dec 2008	04:24:20 05 Dec 2008
TEAW4511	WT	02:59:39 05 Dec 2008	03:05:41 05 Dec 2008	03:14:25 05 Dec 2008	04:51:04 05 Dec 2008
HAMIFSO2	FSO	03:28:35 05 Dec 2008	03:38:06 05 Dec 2008	04:09:45 05 Dec 2008	05:35:35 05 Dec 2008



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:48	00:10:09	00:10:57	02:12:26
TEAW457	00:00:48	00:11:48	00:12:36	01:25:29
TEAW4511	00:00:48	00:14:46	00:15:34	01:52:13
HAMIFSO2	00:29:44	00:41:10	01:10:54	02:36:44

Notifications

Date	Time	Party Notified
05 Dec 2008	03:16:34	WAIPA NETWORKS
05 Dec 2008	03:20:06	AMBULANCE
05 Dec 2008	03:20:11	AMB
05 Dec 2008	03:20:18	POLICE
05 Dec 2008	03:20:46	CFO/DCFO HAMILTON-CFO TE AWAMUTU PER PAGER..
05 Dec 2008	03:21:35	AMB
05 Dec 2008	03:25:30	DCFO [redacted] ACK PAGER..
05 Dec 2008	03:25:31	FS WAIKATO GROUP PERPAGER
05 Dec 2008	03:28:12	AMB - UPDATE GIVEN
05 Dec 2008	04:15:54	CFO [redacted] ACK SITREP..

Message Log

Time	Message

Incident

CAD Number F0302649

Incident Reporter [redacted]

Incident Controller SSO [redacted]

Distance Travelled (km) 8

Delay In Receiving Call

Property Details

Occupant owner

Building Owner Owner occupied

General Property Use Single house

Special Property Use Garage

Purpose Group

Actions

Persons Reported Trapped	No
Evacuation Status	Not occupied at time of incident
Action Prior 1	No action taken by Civilian/Occupant/Passerby
Action Prior 2	No action taken by Civilian/Occupant/Passerby
Action Taken	Extinguishment, salvage and ventilation

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location	Garage, Carport, Vehicle storage, Storage Shed
Level	Ground level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery
1	Low pressure delivery
4	
1	
1	

Equipment Involved

Equipment Involved

Year	
Make	
Model	

Fire

Arrival Condition	Totally involved fire
Heat Source	Information not recorded/Unknown
Termination Stage	Flame
First Object Ignited	Information not recorded
First Object Material	Information not recorded
Second Object Ignited	Information not recorded
Second Object Material	Information not recorded

Indicated Cause	Mechanical failure, malfunction - Other
Certainty of Cause	Medium
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	[redacted]
FAIP Service Offered	Unknown

Structure

Area of One Floor		40
Age of Building	1970 - 1991	
Structural Frame Type	Timber frame protected	
Number of Floors		1
Number of Basements		0
Internal Wall Lining	No lining present	
Ceiling Lining	No lining present	
Material Generating Most Flame	Unable to classify	
Material Generating Most Smoke	Unable to classify	
Avenue of Flame Travel	Unknown	
Avenue of Smoke Travel	Unknown	
Extent of Flame Damage	Extended beyond structure of origin	
Area of Flame Damage		40
Extent of Smoke Damage	No damage of this type	
Area of Smoke Damage		0
Extent of Water Damage	Extended beyond structure of origin	
Area of Water Damage		30
Extent of Fire Control Damage	Extended beyond structure of origin	
Area of Fire Control Damage		30

Exposure Number 1

Incident Type	1101: Structure fire with damage
Address	276 TE MAWHAI ROAD TOKANUI
Distance Exposure Travelled	1
Surface Material of Exterior Wall	Wood, weatherboard
Construction Material of Roof	Not Involving Roof (Structure) in Exposure Fire
Method of Heat Transfer	Radiated heat

Property Details

Occupant	owner
Building Owner	Owner occupied
General Property Use	Single house
Special Property Use	Tent, Sleepout
Purpose Group	

Actions

Persons Reported Trapped	No
Evacuation Status	Information not recorded
Action Prior 1	No action taken by Civilian/Occupant/Passerby
Action Prior 2	No action taken by Civilian/Occupant/Passerby
Action Taken	Extinguishment, salvage and ventilation

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location	Wall surface (exterior)
Level	Ground level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery
1	
2	
1	
2	
1	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	Totally involved fire
Heat Source	Exposure fire: Radiated heat
Termination Stage	Flame
First Object Ignited	Exterior side wall covering surface, Cladding (included eaves)
First Object Material	Wood: sawn, finished timber
Second Object Ignited	Exterior trim eg. Doors, Porches, Decks
Second Object Material	Wood: sawn, finished timber
Indicated Cause	Exposure fire
Certainty of Cause	High
Age of Person	No person involved
Ethnicity	No person involved
Gender	[redacted]
FAIP Service Offered	[redacted]

Structure

Area of One Floor		8
Age of Building	1970 - 1991	
Structural Frame Type	Timber frame protected	
Number of Floors		1
Number of Basements		0
Internal Wall Lining	Gypsum board (e.g. Gib board, Elephant board)	
Ceiling Lining	Gypsum board (e.g. Gib board, Elephant board)	
Material Generating Most Flame	Wood: Sawn, Finished timber	
Material Generating Most Smoke	Wood: Sawn, Finished timber	
Avenue of Flame Travel	Exterior spread	
Avenue of Smoke Travel	Exterior spread	
Extent of Flame Damage	Extended beyond structure of origin	
Area of Flame Damage		8
Extent of Smoke Damage	Confined to room of origin	
Area of Smoke Damage		8
Extent of Water Damage	Confined to room of origin	

Area of Water Damage	8
Extent of Fire Control Damage	Confined to room of origin
Area of Fire Control Damage	8

Exposure Number 2

Incident Type	1101: Structure fire with damage
Address	276 TE MAWHAI ROAD TOKANUI
Distance Exposure Travelled	
Surface Material of Exterior Wall	Brick
Construction Material of Roof	Steel, iron (roll formed steel and corrugated iron)
Method of Heat Transfer	Radiated heat

Property Details

Occupant	owner
Building Owner	Owner occupied
General Property Use	Single house
Special Property Use	Single house
Purpose Group	

Actions

Persons Reported Trapped	No
Evacuation Status	Fully evacuated
Action Prior 1	No action taken by Civilian/Occupant/Passerby
Action Prior 2	No action taken by Civilian/Occupant/Passerby
Action Taken	Extinguishment only: Includes isolating fuel/power

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location	Wall surface (exterior)
Level	Ground level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	Large fire
Heat Source	Exposure fire: Radiated heat
Termination Stage	Flame
First Object Ignited	Exterior side wall covering surface, Cladding (included eaves)
First Object Material	PVC eg. Floor Tiles, Guttering/Pipes, Plastic Bags, Elec. Insulation
Second Object Ignited	Exterior side wall covering surface, Cladding (included eaves)
Second Object Material	Paint, Varnish
Indicated Cause	Exposure fire
Certainty of Cause	High
Age of Person	No person involved
Ethnicity	No person involved
Gender	[redacted]
FAIP Service Offered	[redacted]

Structure

Area of One Floor		300
Age of Building	1946 - 1969	
Structural Frame Type	Brick, Blocks etc	
Number of Floors		1
Number of Basements		0
Internal Wall Lining	Gypsum board (e.g. Gib board, Elephant board)	
Ceiling Lining	Gypsum board (e.g. Gib board, Elephant board)	
Material Generating Most Flame	Wood: Sawn, Finished timber	
Material Generating Most Smoke	Wood: Sawn, Finished timber	
Avenue of Flame Travel	Exterior spread	
Avenue of Smoke Travel	Exterior spread	
Extent of Flame Damage	Confined to structure of origin	
Area of Flame Damage		2
Extent of Smoke Damage	Extended beyond structure of origin	
Area of Smoke Damage		2
Extent of Water Damage	No damage of this type	
Area of Water Damage		2
Extent of Fire Control Damage	Confined to object of origin	

Area of Fire Control Damage 2

Comments

12/6/2008 5:39:11 PM Reporter Comments

This fire consisted of a garage fire been the main fire, the radiated heat from the garage fire started the next fire been a sleep out, the then the radiated heat from that melted the spouting and lightly bubbled the paint on the exterior eves of the house. this is why I have 2 xtra exposurers fire on this report. Now attaching this to FSO [redacted] Hamilton. CIB involved in this fire investigation.

[redacted]

12/9/2008 2:46:53 PM Reporter Comments

Fire investigated by F S O Fleet assisted by Det [redacted] Te Awamutu Police C I B section. Fire involving double garage and adjacent sleepout. Area of origin established as left rear corner of garage. A full excavation of the contents of this area was conducted. The refridgerator in that area was examined and showed definite patterns indicating that it was the point of origin for this fire. The top of the fridge had collapsed downward toward the floor and there was burning to floor level inside. An examination of the motor showed severe heat damage to the compressor compartment and associated switch gear and thermostat.I beleive this fire has commenced in the base of the fridge and spread to the shed and sleepout.The Fire Service will record the cause of this fire to be accidental.

Ross Fleet

SMS Incident Report

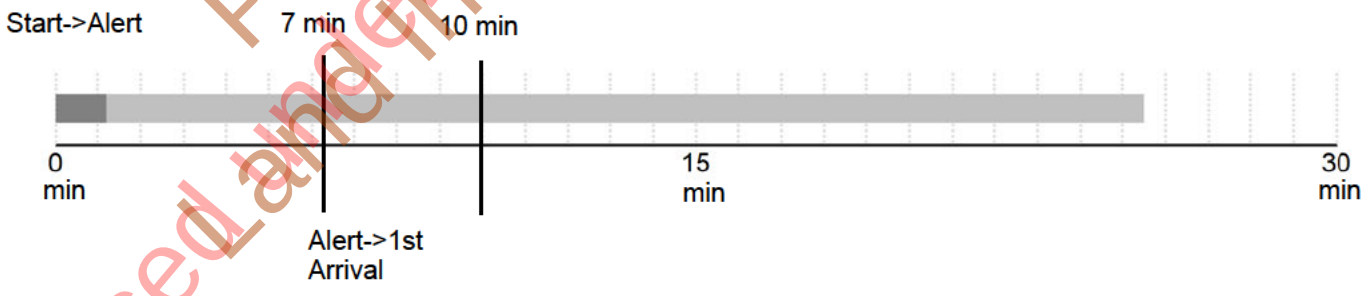
26/04/2022 14:56:30

Summary

CAD Number	F0819504	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	08/11/2010 15:11:29	**Incident Ended**	08/11/2010 15:29:02
Incident Type	1311: Vegetation Fire (less than 20 sq. m)		
Common Name			
Address	233 TE MAWHAI ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803243	**Map Grid N**	5784951
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	08/11/2010 15:31:56		
Report Completed	11:55, Tue 04 Jan 2011 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	15:12:05 08 Nov 2010	15:14:49 08 Nov 2010	15:22:35 08 Nov 2010	15:29:06 08 Nov 2010
TEAW4511	WT	15:12:05 08 Nov 2010	15:14:59 08 Nov 2010	15:25:52 08 Nov 2010	15:26:30 08 Nov 2010



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:36	00:10:30	00:11:06	00:17:37
TEAW4511	00:00:36	00:13:47	00:14:23	00:15:01

Notifications

Date	Time	Party Notified
08 Nov 2010	15:29:44	TEAW451 POLICE ARE RESPONDING

Message Log

Time	Message

Incident

CAD Number F0819504

Incident Reporter [redacted]

Incident Controller CFO [redacted]

Distance Travelled (km)

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Road, Street, Motorway

Special Property Use Roadside vegetation

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Extinguishment only: Includes isolating fuel/power

Origin

Location

Level

Equipment Used

Quantity	Equipment
2	Hose reel, high pressure delivery

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	
Heat Source	Cigarettes, matches and candles - Other
Termination Stage	
First Object Ignited	Dust, Lint, Fibre, Wood chips, Sawdust, Shavings, Bark
First Object Material	Shavings, Sawdust, Chips
Second Object Ignited	Dust, Lint, Fibre, Wood chips, Sawdust, Shavings, Bark
Second Object Material	Shavings, Sawdust, Chips
Indicated Cause	Unlawful
Certainty of Cause	High
Age of Person	Persons: [redacted]
Ethnicity	[redacted]
Gender	
FAIP Service Offered	Unknown

Vegetation

Gorse Area		m²	**Forest Danger**	1
Grassland Area		m²	**Grassland Danger**	1
Native Forest Area		m²	**Scrubland Danger**	4
Exotic Forest Area		m²		
Scrub Area	20	m²	**BUI**	26.8912334442139
Tussock Area		m²	**DC**	102.347557067871
Wetland Area		m²	**DMC**	20.0211791992188
Crop Area		m²	**FFMC**	86.6530990600586
Total Vegetation Area	20	m²	**FWI**	6.36826705932617
			ISI	3.24829912185669
Map Grid N	5784951			
Map Grid E	1803243		**Wind Speed**	4km/hr
			Wind Direction	30'
Closest Weather Station	Hamilton Aero (HNA)		**Rainfall**	0mm
Fire Season Status	Prohibited		**Humidity**	46%
Rural Fire Permit	N		**Temperature**	19'C

Comments

1/4/2011 11:55:26 AM	**Reporter Comments**

[redacted] with fire works. police attended the incident

[redacted]

SMS Incident Report

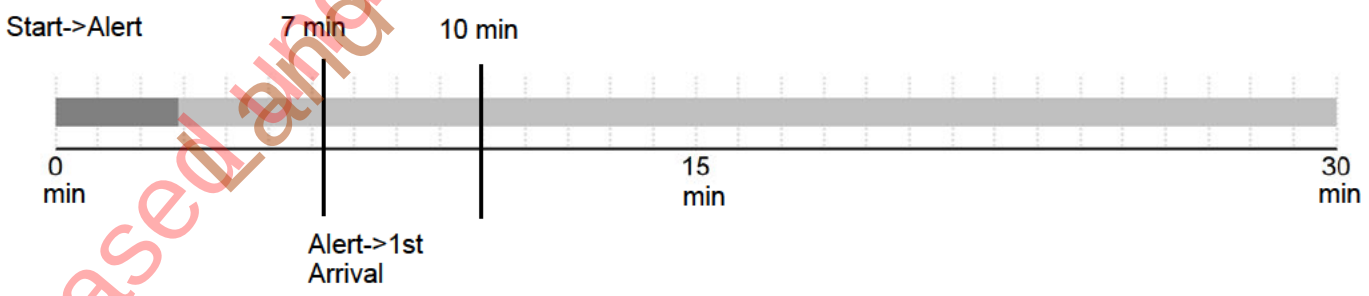
26/04/2022 14:56:08

Summary

CAD Number	F0872630	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	02/01/2011 09:38:39	**Incident Ended**	02/01/2011 10:02:10
Incident Type	1103: Derelict building fire		
Common Name			
Address	SYMONDS ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1804732	**Map Grid N**	5784523
First Caller	CALLPLUS LIMITED	**First Caller Contact**	[redacted]
Incident Closed	02/01/2011 10:03:57		
Report Completed	19:45, Fri 28 Jan 2011 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW457	PR	09:39:37 02 Jan 2011	09:43:36 02 Jan 2011	09:50:54 02 Jan 2011	10:02:18 02 Jan 2011
TEAW451	P1	09:39:37 02 Jan 2011	09:41:42 02 Jan 2011	09:52:13 02 Jan 2011	10:02:15 02 Jan 2011
TEAW4511	WT	09:39:36 02 Jan 2011	09:46:40 02 Jan 2011	09:54:48 02 Jan 2011	09:59:02 02 Jan 2011



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW457	00:00:58	00:11:17	00:12:15	00:23:39
TEAW451	00:00:58	00:12:36	00:13:34	00:23:36

TEAW4511	00:00:57	00:15:12	00:16:09	00:20:23

Message Log

Time	Message

Incident

CAD Number F0872630

Incident Reporter [redacted]

Incident Controller D.C.F.O. [redacted]

Distance Travelled (km) 6

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Farming, Horticulture, Agricultural use

Special Property Use Farm: Dairy, Beef

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Extinguishment only: Includes isolating fuel/power

Origin

Location

Level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition

Heat Source

Termination Stage

First Object Ignited

First Object Material

Second Object Ignited

Second Object Material

Indicated Cause	High temperature
Certainty of Cause	Medium
Age of Person	No person involved
Ethnicity	No person involved
Gender	
FAIP Service Offered	Unknown

Comments

1/28/2011 7:45:14 PM	**Reporter Comments**

Started by a bottle on the ground and the sun shineing onto it

[redacted]

SMS Incident Report

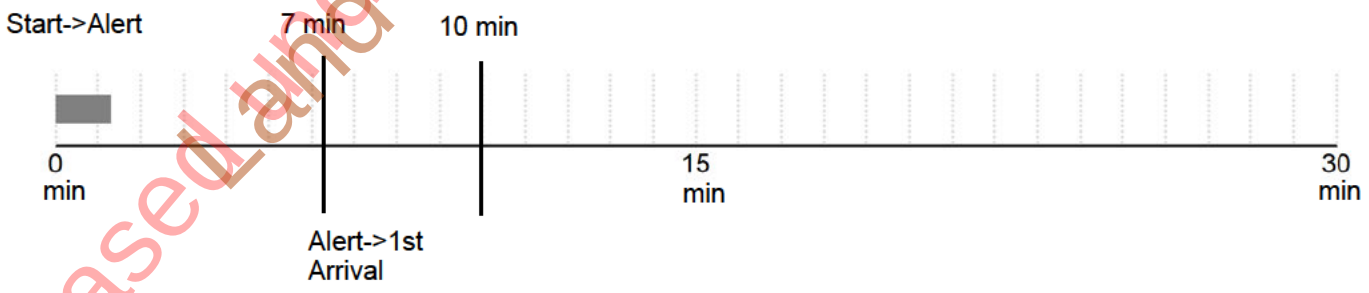
26/04/2022 14:55:43

Summary

CAD Number	F0923832	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	03/03/2011 09:27:38	**Incident Ended**	03/03/2011 13:37:22
Incident Type	1101: Structure fire with damage		
Common Name			
Address	33 SYMONDS ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1804699	**Map Grid N**	5784519
First Caller	CALLPLUS LIMITED	**First Caller Contact**	[redacted]
Incident Closed	03/03/2011 13:37:22		
Report Completed	17:21, Wed 09 Mar 2011 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	09:28:04 03 Mar 2011	09:30:57 03 Mar 2011	09:37:52 03 Mar 2011	09:59:38 03 Mar 2011
TEAW457	PR	09:28:04 03 Mar 2011	09:32:59 03 Mar 2011	09:40:14 03 Mar 2011	09:55:55 03 Mar 2011
TEAW4511	WT	09:28:04 03 Mar 2011			09:43:03 03 Mar 2011



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:26	00:09:48	00:10:14	00:32:00
TEAW457	00:00:26	00:12:10	00:12:36	00:28:17

TEAW4511	00:00:26			00:15:25

Message Log

Time	Message

Incident

CAD Number	F0923832
Incident Reporter	[redacted]
Incident Controller	SO [redacted]
Distance Travelled (km)	8
Delay In Receiving Call	

Property Details

Occupant	[redacted]
Building Owner	Owner occupied
General Property Use	Single house
Special Property Use	Single house
Purpose Group	

Actions

Persons Reported Trapped	No
Evacuation Status	Fully evacuated
Action Prior 1	Garden hose
Action Prior 2	
Action Taken	Investigation only (Fire related)

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	

Origin

Location	Ceiling and roof assembly
Level	Roof space

Equipment Used

Quantity	Equipment
1	
1	Ladder for Rescue
1	
1	
4	
3	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	Smoke only
Heat Source	Flame from gas equipment other than a torch
Termination Stage	Flame
First Object Ignited	Building paper
First Object Material	Adhesive, Resin, Tar
Second Object Ignited	Ceiling coverings
Second Object Material	Wood: sawn, finished timber
Indicated Cause	Heat source too close to combustibles
Certainty of Cause	High
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	[redacted]
FAIP Service Offered	Unknown

Structure

Area of One Floor		180
Age of Building	1946 - 1969	
Structural Frame Type	Timber frame unprotected (normal housing)	
Number of Floors		1
Number of Basements		0
Internal Wall Lining	Timber, Sarking, Scrim, Pinex	
Ceiling Lining	Wood: T&G, Hardboard, Chipboard, Customwood, Plywood	
Material Generating Most Flame	Paper: Treated, Building, Wax, Tar	
Material Generating Most Smoke	Paper: Treated, Building, Wax, Tar	

Avenue of Flame Travel	Ceiling covering	
Avenue of Smoke Travel	Ceiling covering	
Extent of Flame Damage	Confined to part of room or area of origin	
Area of Flame Damage		5
Extent of Smoke Damage	Confined to part of room or area of origin	
Area of Smoke Damage		5
Extent of Water Damage	Confined to part of room or area of origin	
Area of Water Damage		5
Extent of Fire Control Damage	Confined to part of room or area of origin	
Area of Fire Control Damage		5

SMS Incident Report

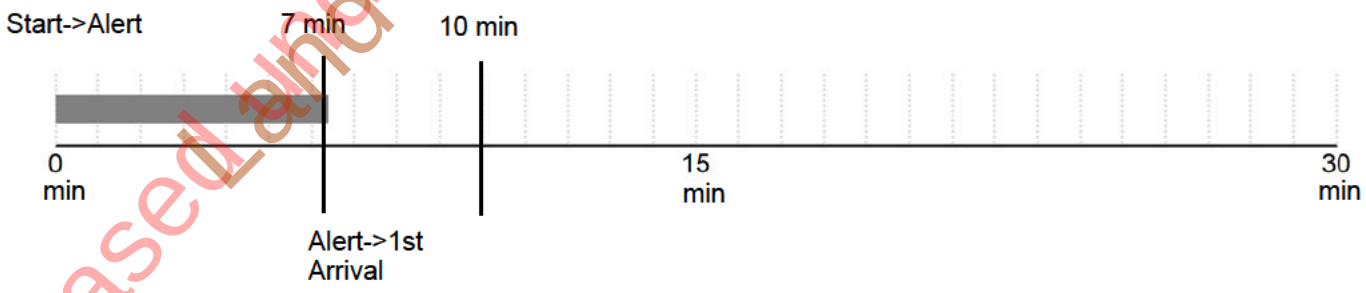
26/04/2022 14:54:52

Summary

CAD Number	F1394707	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	25/05/2013 11:19:02	**Incident Ended**	25/05/2013 12:43:05
Incident Type	1501: Outside rubbish fire		
Common Name			
Address	158 TE MAWHAI ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1804024	**Map Grid N**	5784778
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	25/05/2013 12:43:05		
Report Completed	16:11, Sat 25 May 2013 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	11:21:10 25 May 2013	11:23:26 25 May 2013	11:30:30 25 May 2013	11:35:00 25 May 2013
TEAW457	PR	11:21:10 25 May 2013	11:26:01 25 May 2013	11:32:35 25 May 2013	11:33:23 25 May 2013
TEAW4511	WT	11:21:10 25 May 2013	11:28:39 25 May 2013		11:34:05 25 May 2013



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:02:08	00:09:20	00:11:28	00:15:58
TEAW457	00:02:08	00:11:25	00:13:33	00:14:21

TEAW4511	00:02:08			00:15:03

Message Log

Time	Message
11:20:53	OPPOSITE THE ENTRANCE TO THE TOKANUI HOSPITAL
11:20:53	INC INFO: HOUSE FIRE
11:21:03	** LOI search completed at 25/05/13 11:21:03
11:21:04	** Recommended unit TEAW4511 for requirement TANKER (8.3 km)
11:21:04	** Recommended unit TEAW451 for requirement PUMP (8.3 km)
11:21:04	** Recommended unit TEAW457 for requirement PUMP (8.3 km)
11:21:13	CALLER SAYS THERE ARE ABOUT 6 CARS PARKED THERE / ALOT OF PEOPLE STANDING
11:21:13	OUTSIDE WATCHING IT
11:21:35	CALLER IS [redacted]
11:21:59	CALLER DIDNT KNOW WHAT STREET [redacted] WAS ON / JUST SAID OPPOSITE TOKANUI HOSPITAL
11:22:12	CALLER FROM OVERSEAS / JUST PASSING BY
11:23:26	Unit TEAW451 [K1 : PROCEEDING TO INCIDENT]
11:23:48	Unit TEAW451 [KC : UNIT CALLING]
11:25:04	Unit TEAW451 [SITREP :] ANY FURTHER INFORMATION
11:25:15	Unit TEAW451 [COMCEN COM : MESSAGE] FURTHER DETAILS PASSED
11:26:01	Unit TEAW457 [K1 : PROCEEDING TO INCIDENT]
11:28:40	Unit TEAW4511 [K1 : PROCEEDING TO INCIDENT]
11:28:50	Unit TEAW4511 [KC : UNIT CALLING]
11:29:52	Unit TEAW4511 [SITREP :] RESPONDING AT NORMAL TRAFFIC
11:30:28	Unit TEAW451 [COMCEN COM : MESSAGE] DETAILS PASSED
11:30:30	Unit TEAW451 [K66 : NON PROPERTY FIRE]
11:30:48	Unit TEAW451 [K66 : NON PROPERTY FIRE] VERBAL
11:32:12	Unit TEAW451 [KC : UNIT CALLING]
11:32:35	Unit TEAW457 [K2 : IN ATTENDANCE AT INCIDENT]
11:32:38	Unit TEAW451 [SITREP :] SO [redacted]: BRIG INV 1 PERMITTED RUBBISH FIRE
11:33:18	Unit TEAW451 [KC : UNIT CALLING]
11:33:23	Unit TEAW457 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
11:34:05	Unit TEAW4511 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
11:34:20	Unit TEAW451 [STOP : MESSAGE] 158 TE MAWHAI RD PERMITTED FIRE UNTIL 27TH
11:35:00	Unit TEAW451 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
11:36:08	** Cross Referenced to Event # F1394711 at: 25/05/13 11:36:08
11:37:02	** Event Location changed from "TE MAWHAI RD,TOKANUI,WAIPA DISTRICT" to "158 TE
11:37:02	MAWHAI RD,TOKANUI,WAIPA DISTRICT" at: 25/05/13 11:37:02

11:37:20	** LOI search completed at 25/05/13 11:37:20
12:43:04	** Assigned Result Code: STRU, Detailed Event Type: 1500, Qualifier 1: Q1,
12:43:04	Qualifier 2:

Incident

CAD Number F1394707

Incident Reporter [redacted]

Incident Controller SO [redacted]

Distance Travelled (km) 9

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Open land

Special Property Use Open land

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Investigation only (Fire related)

Origin

Location

Level

Equipment Used

Quantity	Equipment
3 4	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	
Heat Source	
Termination Stage	
First Object Ignited	
First Object Material	
Second Object Ignited	
Second Object Material	
Indicated Cause	Lawful
Certainty of Cause	High
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	[redacted]
FAIP Service Offered	Unknown

SMS Incident Report

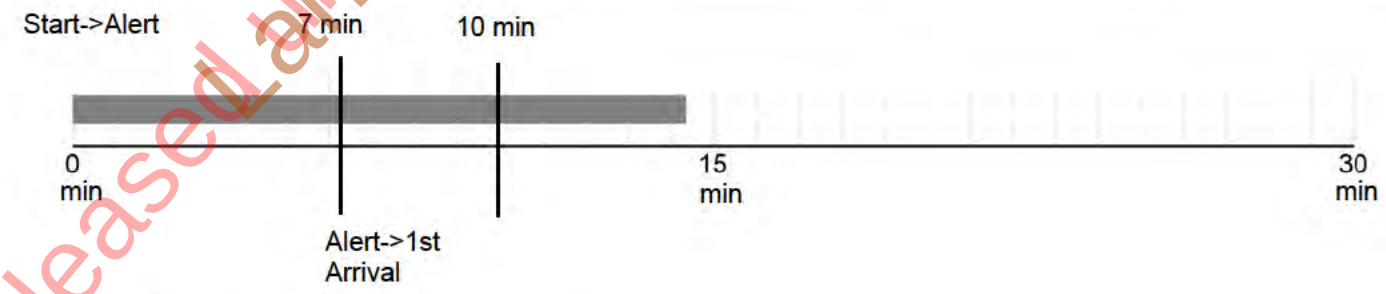
26/04/2022 14:54:10

Summary

CAD Number	F1462245	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	16/09/2013 13:50:14	**Incident Ended**	16/09/2013 14:15:38
Incident Type	1104: Chimney fire		
Common Name			
Address	239 TE MAWHAI ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803226	**Map Grid N**	5784999
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	16/09/2013 14:15:38		
Report Completed	20:7, Mon 16 Sep 2013 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	13:51:31 16 Sep 2013	13:55:47 16 Sep 2013	14:02:45 16 Sep 2013	14:14:01 16 Sep 2013
TEAW457	PR	13:51:31 16 Sep 2013			14:13:17 16 Sep 2013
OTOR461	P1	14:00:23 16 Sep 2013	14:01:47 16 Sep 2013		14:05:56 16 Sep 2013
OTOR4611	WT	13:51:53 16 Sep 2013	13:55:34 16 Sep 2013		14:06:38 16 Sep 2013



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:01:17	00:11:14	00:12:31	00:23:47

TEAW457	00:01:17			00:23:03
OTOR461	00:10:09			00:15:42
OTOR4611	00:01:39			00:16:24

Message Log

Time	Message
13:51:04	INC INFO: BACK OF CHIMNEY ON FIRE
13:51:09	** LOI search completed at 16/09/13 13:51:09
13:51:18	** Requirement TANKER added for alarm level 1
13:51:25	** Recommended unit TEAW451 for requirement PUMP (>5.4 km)
13:51:25	** Recommended unit TEAW457 for requirement PUMP (>5.4 km)
13:51:25	** No recommendation for requirement TANKER
13:51:25	** No recommendation for requirement ADHOC TANKER
13:51:48	CALLER THINKS BACK OF CHIMNEY (UNDER HOUSE) MAYBE ON FIRE
13:52:05	AL: PAGING ACK RECEIVED FROM STATION 1646 at 16/09/13 13:52:04
13:55:34	Unit OTOR4611 [K1 : PROCEEDING TO INCIDENT]
13:55:41	Unit OTOR4611 [K1 : PROCEEDING TO INCIDENT]
13:55:47	Unit TEAW451 [K1 : PROCEEDING TO INCIDENT]
13:55:51	Unit OTOR4611 [K1 : PROCEEDING TO INCIDENT]
13:55:58	Unit OTOR4611 [K1 : PROCEEDING TO INCIDENT]
13:56:04	Unit OTOR4611 [K1 : PROCEEDING TO INCIDENT]
13:56:16	Unit OTOR4611 [K1 : PROCEEDING TO INCIDENT]
14:00:14	** Requirement PUMP added for alarm level 1
14:00:18	** Recommended unit OTOR461 for requirement ADHOC PUMP (>16.7 km)
14:00:18	** No recommendation for requirement ADHOC TANKER
14:00:35	AL: PAGING ACK RECEIVED FROM STATION 1646 at 16/09/13 14:00:34
14:01:08	TE AWAMUTU FIRE ADV NO CREW FOR 657 AS OF 14:00
14:01:47	Unit OTOR461 [K1 : PROCEEDING TO INCIDENT]
14:02:45	Unit TEAW451 [K77 : NOTHING SHOWING]
14:04:43	Unit TEAW451 [KC : UNIT CALLING]
14:05:09	Unit TEAW451 [SITREP :] SSO [redacted] CHIMNEY FIRE OOA BRIG INV FURTHER K28-1
14:05:56	Unit OTOR461 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
14:06:39	Unit OTOR4611 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
14:12:28	Unit TEAW451 [KC : UNIT CALLING]
14:13:17	Unit TEAW457 [K7 : AT NORMAL STATION]
14:13:40	Unit TEAW451 [KC : UNIT CALLING]
14:13:57	Unit TEAW451 [STOP : MESSAGE] LEFT IN HANDS OF OWNERS
14:14:02	Unit TEAW451 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]

14:15:38	** Assigned Result Code: STRU, Detailed Event Type: 1100, Qualifier 1: Q1,
14:15:38	Qualifier 2:

Incident

CAD Number F1462245

Incident Reporter [redacted]

Incident Controller SSO [redacted]

Distance Travelled (km) 6

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Single house

Special Property Use Single house

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Investigation only (Fire related)

Origin

Location

Level

Equipment Used

Quantity	Equipment
3 1 1 1 3	Ladder for Rescue

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	
Heat Source	
Termination Stage	
First Object Ignited	
First Object Material	
Second Object Ignited	
Second Object Material	
Indicated Cause	Design, construction or installation fault - Other
Certainty of Cause	High
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	[redacted]
FAIP Service Offered	Unknown

SMS Incident Report

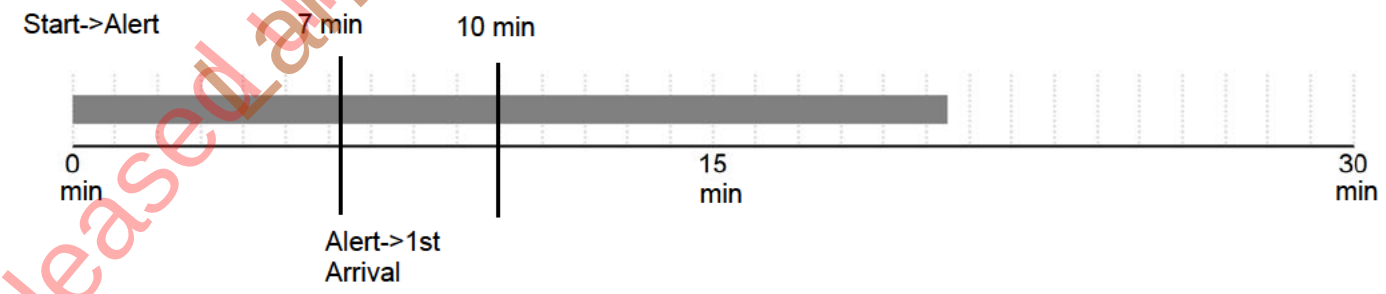
26/04/2022 14:51:50

Summary

CAD Number	F2384445	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	22/09/2017 13:56:42	**Incident Ended**	22/09/2017 14:54:29
Incident Type	1299: Mobile property fire - not classified above		
Common Name			
Address	96 FARM ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1804201	**Map Grid N**	5783695
First Caller		**First Caller Contact**	[redacted]
Incident Closed	22/09/2017 15:21:01		
Report Completed	11:7, Sat 23 Sep 2017 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	13:57:24 22 Sep 2017	14:01:45 22 Sep 2017	14:09:39 22 Sep 2017	14:54:19 22 Sep 2017
TEAW457	PR	13:59:06 22 Sep 2017	14:05:31 22 Sep 2017	14:12:45 22 Sep 2017	14:32:58 22 Sep 2017
TEAW4511	WT	13:59:06 22 Sep 2017	14:19:15 22 Sep 2017	14:19:16 22 Sep 2017	14:35:04 22 Sep 2017
OTOR4611	WT	14:11:43 22 Sep 2017			14:21:40 22 Sep 2017



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:42	00:12:15	00:12:57	00:57:37

TEAW457	00:02:24	00:13:39	00:16:03	00:36:16
TEAW4511	00:02:24	00:20:10	00:22:34	00:38:22
OTOR4611	00:15:01			00:24:58

Notifications

Date	Time	Party Notified
22 Sep 2017	14:15:28	AREA WAIKATO
22 Sep 2017	14:36:02	WAIKATO3 ([redacted] - SITREP PASSED VIA PHONE

Message Log

Time	Message
13:57:07	INC INFO: TRACTOR FIRE
13:57:09	** LOI search completed at 22/09/17 13:57:09
13:57:17	** Recommended unit TEAW451 for requirement PUMP (>6.7 km)
13:57:33	IN AN OPEN CARPORT SHED - NOT ATTACHED TO ANYTHING ELSE
13:57:50	[redacted] - KLAAS
13:58:50	** Event Type changed from MIN to STRU at: 22/09/17 13:58:50
13:58:50	** Event Priority changed from 2 to 1 at: 22/09/17 13:58:50
13:58:58	** Recommended unit TEAW4511 for requirement TANKER (>6.7 km)
13:58:58	** Recommended unit TEAW457 for requirement PUMP (>6.7 km)
13:59:17	** Cross Referenced to Event # F2384448 at: 22/09/17 13:59:17
14:00:21	FROM TE AWAMUTU FIRE - HAS THIS BEEN UPGRADED TO A STRUCTURE FIRE? (AFFIRMATIVE)
14:01:00	INC INFO: TRACTOR FIRE INSIDE BUILDING
14:01:46	Unit TEAW451 [K1 : PROCEEDING TO INCIDENT]
14:05:31	Unit TEAW457 [K1 : PROCEEDING TO INCIDENT]
14:05:37	Unit TEAW457 [KC : UNIT CALLING]
14:06:04	Unit TEAW457 [SITREP :] RESPONDING OFFICER AND 2
14:06:45	Unit TEAW451 [SITREP :] COPIED
14:07:20	Unit TEAW451 [SITREP :] CAN YOU RESPOND TEAW4511? (AFFIRMATIVE - ALERTED AT
14:07:20	TIME OF CALL) ETA 5 MINS K99 PRECEEDING
14:09:10	NO RESPONSE AT TE AWAMUTU STATION RE TEAW4511 @1409
14:09:40	Unit TEAW451 [K99 : PROPERTY FIRE WELL INV]
14:11:04	Unit TEAW451 [COMCEN COM : MESSAGE] IS THIS A STRUCTURE? (AFFIRMATIVE)
14:11:24	Unit TEAW451 [SITREP :] HALF ROUND BARN TRACTOR HALF INVOLVED 1 PUMP AND
14:11:24	TANKER SHOULD BE ADEQUATE 451 CAN CONTINE ON TRAININ FARM FOLLOW TRACK MOST OF
14:11:24	WAY YOU WILL SEE US
14:11:59	AL: PAGING ACK RECEIVED FROM STATION 1646 at 22/09/17 14:11:59

14:12:11	Unit TEAW451 [KC : UNIT CALLING]
14:12:46	Unit TEAW457 [K2 : IN ATTENDANCE AT INCIDENT]
14:13:59	Unit TEAW451 [SITREP :] SSO [redacted] - TRACTOR WELL INVLOVED IN A HALF ROUND
14:13:59	HAY BARN AT ORK WITH BA AND HPD - CONTINE TANKER
14:14:08	Unit TEAW457 [K28 : UNIT IS TO RETURN TO STATION]
14:15:08	Unit TEAW457 [SITREP :] IT APPEARS TEAW4511 ARE HAVING RADIO ISSUES (ADV US
14:15:08	WHEN THEY ARE IN ATTENDANCE)
14:18:00	Unit TEAW4511 [K7 : AT NORMAL STATION]
14:19:16	Unit TEAW4511 [K2 : IN ATTENDANCE AT INCIDENT]
14:19:20	Unit TEAW4511 [KC : UNIT CALLING]
14:19:51	Unit TEAW4511 [K2 : IN ATTENDANCE AT INCIDENT]
14:19:57	FM OTOR FIRE - SIREN DIDN'T ACTIVATE
14:20:05	Unit TEAW451 [K28-1 : RETURN OTHER RESPONDING UNITS] OTOR4611
14:20:44	Unit TEAW451 [SITREP :] (VIA PHONE) TEAW4511 IS IN ATT
14:21:32	Unit OTOR4611 [K28 : UNIT IS TO RETURN TO STATION]
14:21:34	Unit TEAW451 [COMCEN COM : MESSAGE] (VIA PHONE)IS THE POWER AUTHORITY NEEDED
14:21:34	(NEG)
14:21:41	Unit OTOR4611 [K7 : AT NORMAL STATION]
14:21:55	FM OTOR FIRE - OTOR4611 HAVE COPIED K28
14:24:14	Unit TEAW457 [K22-1 : UNIT AVAILABLE FOR A FURTHER EVENT]
14:30:55	Unit TEAW451 [KC : UNIT CALLING]
14:31:23	Unit TEAW451 [K42 : FIRE SUPPRESSED, COMMENCING OVERHAUL] FIRE EXTINGUISHED
14:33:00	Unit TEAW457 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
14:35:05	Unit TEAW4511 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
14:53:31	Unit TEAW451 [KC : UNIT CALLING]
14:54:21	Unit TEAW451 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
14:54:29	Unit TEAW451 [K47 : STOP MESSAGE: MESSAGE UNCHANGED FROM INFORMATIVE] SSO
14:54:29	[redacted] - 1 TRATOR FIR IN HALF ROUND HAY BARN EXT - HANDED BACK TO OWNERS
15:21:01	UNIT TEAW4511 RESPONSE TIME [NULL] ADJUSTED TO
15:21:01	UNIT TEAW4511 RESPONSE TIME [NULL] ADJUSTED TO
15:21:01	** Assigned Result Code: STRU, Detailed Event Type: 1100, Qualifier 1: Q1,
15:21:01	Qualifier 2:

Incident

CAD Number F2384445

Incident Reporter [redacted]

Incident Controller SSO [redacted]

Distance Travelled (km) 7

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Farming, Horticulture, Agricultural use

Special Property Use

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Extinguishment only: Includes isolating fuel/power

Origin

Location

Level

Equipment Used

Quantity	Equipment
1	Hose reel, high pressure delivery
1	Low pressure delivery
1	
3	
8	
3	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition

Heat Source	Unable to classify
Termination Stage	
First Object Ignited	Multiple items
First Object Material	
Second Object Ignited	
Second Object Material	
Indicated Cause	Undetermined
Certainty of Cause	Low
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	
FAIP Service Offered	Unknown

Mobile

Vehicle Type	Passenger road transport vehicle - Other
Licence Plate	
Year	
Make	John Deere
Model	63-20

Comments

9/23/2017 11:06:56 AM **Reporter Comments**

Tractor fire in half round shed. Tractor in daily use. Was used approx 1 hour prior to fire being noticed. Driver claimed that cab was well involved in fire upon investigating smell of smoke. Fire then spread to the front of the tractor. Fire damage confirms that fire started in or around the cab area and spread through fibreglass cab. Undetermined what started fire however tractor regularly checked and wasn't birds nest or similar. Tractor was a John Deere 63-20 4 x 4 approx. 3 years old. Unable to establish registration and farm workers unsure if registered. Tractor driver and farm manager is: [redacted]

[redacted]

SMS Incident Report

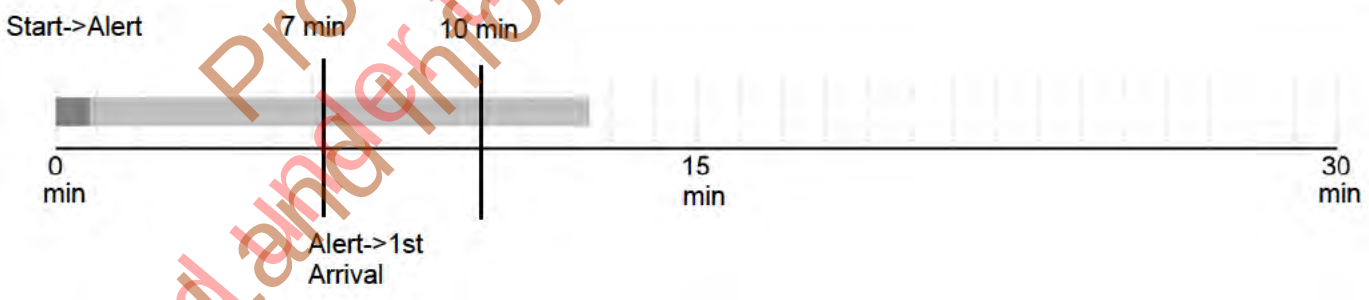
26/04/2022 14:50:33

Summary

CAD Number	F2553480	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	30/05/2018 15:05:57	**Incident Ended**	30/05/2018 15:52:24
Incident Type	1502: Outside Rubbish bin, Skip fire		
Common Name			
Address	/ 45 Croasdale Road Tokanui		
Alarm Method	Police Call	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1804726	**Map Grid N**	5784402
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	30/05/2018 15:52:24		
Report Completed	19:35, Wed 30 May 2018 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	15:06:45 30 May 2018	15:10:53 30 May 2018	15:18:28 30 May 2018	15:44:20 30 May 2018



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:48	00:11:43	00:12:31	00:38:23

Notifications

Date	Time	Party Notified
30 May 2018	15:25:33	SSO [redacted] - ETA FOR POLICE?

30 May 2018	15:26:22	SSO [redacted] [redacted] AND FIRE CAN NOT ACCESS THE PROPERTY

Message Log

Time	Message
15:06:27	** Event Type changed from POL2FIR to MIN at: 30/05/18 15:06:27
15:06:39	** Recommended unit TEAW451 for requirement PUMP (>6.0 km)
15:08:40	FIR2POL: YES, WE'VE ALERTED TE AWAMUTU BRIGADE, HOWEVER, THE ARE VOLUNTEERS, AND
15:08:40	WILL BE COMING FROM TE AWAMUTU
15:10:54	Unit TEAW451 [K1 : PROCEEDING TO INCIDENT]
15:18:29	Unit TEAW451 [K77 : NOTHING SHOWING]
15:18:59	Unit TEAW451 [KC : UNIT CALLING]
15:20:06	Unit TEAW451 [SITREP :] SSO [redacted] SMALL FIRE ON PROPERTY UNTIL TO GAIN ACCESS,
15:20:06	K11 POLICE, AWAITING POLICE ARRIVAL
15:20:44	FIR2POL: FIRECREW AWAITING POLICE ARRIVAL, UNTIL TO GAIN ACCESS. REQUESTING
15:20:44	POLICE ATTENDENCE, DO YOU HAVE AN ETA?
15:21:22	FIR2POL: CORRECTION - SHOULD READ UNABLE TO GAIN ACCESS
15:25:55	Unit TEAW451 [KC : UNIT CALLING]
15:26:22	YET AND FIRE LOOKS TO BE GETTING OUT OF CONTROL
15:26:37	Unit TEAW451 [SITREP :] POLICE IN ATTENDENCE
15:28:04	Unit TEAW451 [KC : UNIT CALLING]
15:28:26	Unit TEAW451 [SITREP :] SSO [redacted] LIAISING WITH POLICE
15:35:42	Unit TEAW451 [KC : UNIT CALLING]
15:36:21	Unit TEAW451 [SITREP :] RUBBISH FIRE IS ENDANGERING STRUCTURE - GETTING TO
15:36:21	WORK ONE LOW PRESSURE DELIVERY - POLICE IN ATTENDANCE
15:36:35	Unit TEAW451 [COMCEN COM : MESSAGE] DO YOU REQUIRE ANY FURTHER RESOURCES?
15:44:00	Unit TEAW451 [KC : UNIT CALLING]
15:44:16	Unit TEAW451 [STOP : MESSAGE] FIRE EXTINGUISHED - LEFT IN HAND OF POLICE
15:44:21	Unit TEAW451 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
15:52:24	** Assigned Result Code: MIN, Detailed Event Type: 1500, Qualifier 1: Q1,
15:52:24	Qualifier 2:

Incident

CAD Number F2553480

Incident Reporter [redacted]

Incident Controller

Distance Travelled (km)

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Single house

Special Property Use Lawn area, Backyard, Garden area, Patio area

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Extinguishment only: Includes isolating fuel/power

Civilians

Civilians Rescued	0
Civilians Extricated	0
Civilians Assisted	0
Civilians Evacuated	0

Origin

Location

Level

Equipment Used

Quantity	Equipment
1	Low pressure delivery

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition Small fire

Heat Source	
Termination Stage	
First Object Ignited	
First Object Material	
Second Object Ignited	
Second Object Material	
Indicated Cause	Lawful
Certainty of Cause	High
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	[redacted]
FAIP Service Offered	Unknown

SMS Incident Report

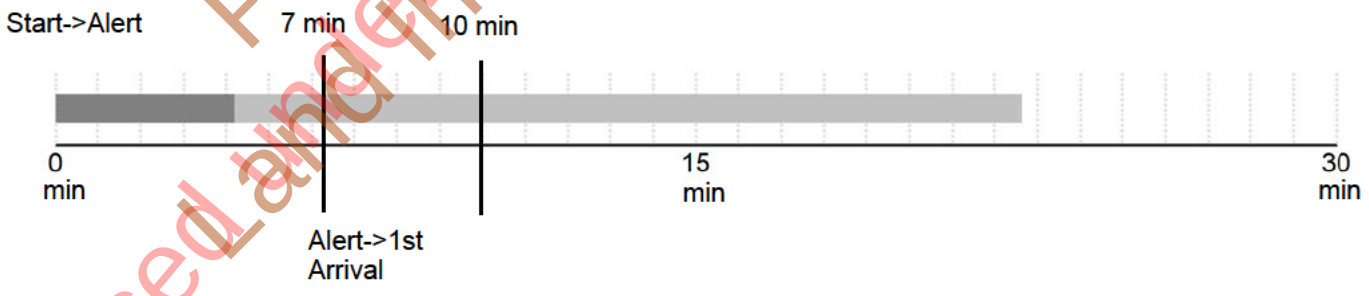
26/04/2022 14:53:40

Summary

CAD Number	F1585568	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	30/03/2014 12:47:08	**Incident Ended**	30/03/2014 13:26:09
Incident Type	1312: Vegetation Fire		
Common Name			
Address	TE MAWHAI ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1804091	**Map Grid N**	5784706
First Caller		**First Caller Contact**	[redacted]
Incident Closed	30/03/2014 13:30:29		
Report Completed	13:11, Mon 31 Mar 2014 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	12:49:14 30 Mar 2014	12:51:35 30 Mar 2014	12:57:56 30 Mar 2014	13:26:53 30 Mar 2014
TEAW4511	WT	12:49:14 30 Mar 2014	12:52:01 30 Mar 2014	12:58:59 30 Mar 2014	13:26:47 30 Mar 2014



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:02:06	00:08:42	00:10:48	00:39:45
TEAW4511	00:02:06	00:09:45	00:11:51	00:39:39

Notifications

Date	Time	Party Notified
30 Mar 2014	12:51:00	RFO WAIPA DC
30 Mar 2014	13:04:54	RFO

Message Log

Time	Message
12:48:57	INC INFO: RUBBISH FIRE AT THE MARAE
12:48:58	** LOI search completed at 30/03/14 12:48:58
12:49:09	** Recommended unit TEAW4511 for requirement TANKER (>5.7 km)
12:49:09	** Recommended unit TEAW451 for requirement PUMP (>5.7 km)
12:50:04	APPEARS A RUBBISH FIRE THAT HAS SPREAD INTO GRASS.
12:50:09	PINE TREES NEAR BU
12:50:11	UNATTENDED
12:51:36	Unit TEAW451 [K1 : PROCEEDING TO INCIDENT]
12:52:02	Unit TEAW4511 [K1 : PROCEEDING TO INCIDENT]
12:52:09	Unit TEAW451 [KC : UNIT CALLING]
12:52:42	Unit TEAW451 [KC : UNIT CALLING]
12:54:13	Unit TEAW451 [KC : UNIT CALLING]
12:57:56	Unit TEAW451 [K66 : NON PROPERTY FIRE]
12:58:10	Unit TEAW451 [KC : UNIT CALLING]
12:58:37	Unit TEAW451 [SITREP :] SO [redacted] INV RUBBISH FIRE
12:58:59	Unit TEAW4511 [K2 : IN ATTENDANCE AT INCIDENT]
13:03:07	Unit TEAW451 [KC : UNIT CALLING]
13:04:20	Unit TEAW451 [SITREP :] SO [redacted] RUBBISH FIRE 200 SQM 2 HPD
13:23:49	Unit TEAW451 [KC : UNIT CALLING]
13:24:59	Unit TEAW451 [K22-1 : UNIT AVAILABLE FOR A FURTHER EVENT]
13:26:09	Unit TEAW451 [K47 : STOP MESSAGE: MESSAGE UNCHANGED FROM INFORMATIVE]
13:26:48	Unit TEAW4511 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
13:26:55	Unit TEAW451 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
13:30:29	** Assigned Result Code: VEG, Detailed Event Type: 1500, Qualifier 1: Q1,
13:30:29	Qualifier 2:

Incident

CAD Number F1585568

Incident Reporter [redacted]

Incident Controller SO [redacted]

Distance Travelled (km) 5

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Marae, Maori Culture use

Special Property Use Wharenui - Cultural meeting house

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status Fully evacuated

Action Prior 1

Action Prior 2

Action Taken Investigation only (Fire related)

Civilians

Civilians Rescued

Civilians Extricated

Civilians Assisted

Civilians Evacuated 8

Origin

Location

Level

Equipment Used

Quantity	Equipment
2	Hose reel, high pressure delivery
1	Low pressure delivery
2	
3	

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition	
Heat Source	Outside fire for cooking
Termination Stage	
First Object Ignited	Grass (living or dead)
First Object Material	Grass
Second Object Ignited	
Second Object Material	
Indicated Cause	Lawful
Certainty of Cause	
Age of Person	Persons: 19 - 64 yrs
Ethnicity	[redacted]
Gender	
FAIP Service Offered	Unknown

Vegetation

Gorse Area	m²	**Forest Danger**	3
Grassland Area	150 m²	**Grassland Danger**	2
Native Forest Area	m²	**Scrubland Danger**	5
Exotic Forest Area	m²		
Scrub Area	m²	**BUI**	144.1
Tussock Area	m²	**DC**	644.09
Wetland Area	m²	**DMC**	100.03
Crop Area	m²	**FFMC**	87.394
Total Vegetation Area	150 m²	**FWI**	20.402
		ISI	4.3186
Map Grid N	5784706		
Map Grid E	1804091	**Wind Speed**	2km/hr
		Wind Direction	160'
Closest Weather Station	Hamilton Aero (HNA)	**Rainfall**	0mm
Fire Season Status	Restricted	**Humidity**	60%
Rural Fire Permit	R	**Temperature**	21'C

SMS Incident Report

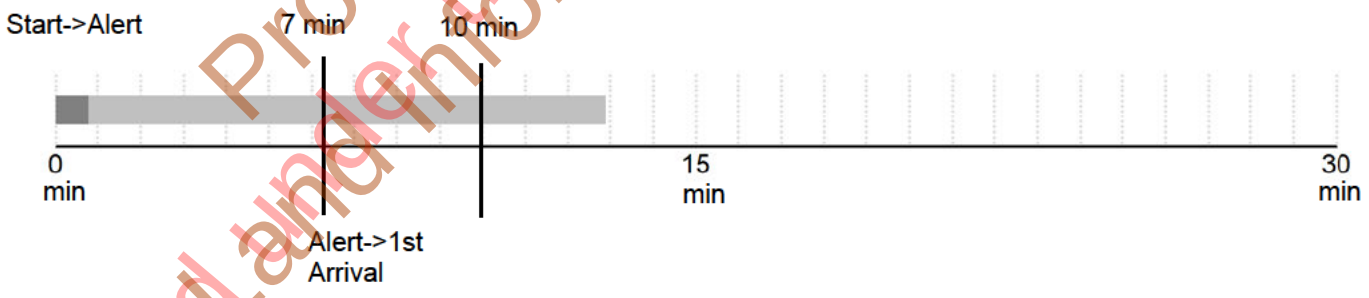
26/04/2022 14:54:30

Summary

CAD Number	F1457686	**Status**	Closed
Station	Te Awamutu Volunteer Fire Brigade		
Incident Started	10/09/2013 20:24:51	**Incident Ended**	10/09/2013 20:58:12
Incident Type	1104: Chimney fire		
Common Name			
Address	239 TE MAWHAI ROAD TOKANUI		
Alarm Method	111 Telephone	**Alarm Level**	1
PFA Number			
Zone	164520		
Map Grid E	1803226	**Map Grid N**	5784999
First Caller	[redacted]	**First Caller Contact**	[redacted]
Incident Closed	11/09/2013 01:12:31		
Report Completed	14:24, Thur 12 Sep 2013 by [redacted]		

Responses

Call Sign	Type	Station Alert	Enroute Time	Arrival Time	Departed
TEAW451	P1	20:25:37 10 Sep 2013	20:29:16 10 Sep 2013	20:37:44 10 Sep 2013	20:58:43 10 Sep 2013



Elapsed Times

Call Sign	Start To Alert	Alert To Arrival	Start To Arrival	Start To Departed
TEAW451	00:00:46	00:12:07	00:12:53	00:33:52

Message Log

Time	Message
20:25:24	INC INFO: CHIMNEY FIRE
20:25:31	** LOI search completed at 10/09/13 20:25:31
20:25:33	** Recommended unit TEAW451 for requirement PUMP (>5.4 km)
20:29:16	Unit TEAW451 [K1 : PROCEEDING TO INCIDENT]
20:37:45	Unit TEAW451 [K88 : PROPERTY SMALL]
20:40:03	Unit TEAW451 [KC : UNIT CALLING]
20:40:28	Unit TEAW451 [SITREP :] BRIGADE INV CHIMNEY FIRE 1 GARDEN HR IN USE
20:57:49	Unit TEAW451 [KC : UNIT CALLING]
20:58:12	Unit TEAW451 [K47 : STOP MESSAGE: MESSAGE UNCHANGED FROM INFORMATIVE]
20:58:44	Unit TEAW451 [K4 : ON RT INSIDE NORMAL TURNOUT AREA]
01:12:31	** Assigned Result Code: MIN, Detailed Event Type: 1100, Qualifier 1: Q1,
01:12:31	Qualifier 2:

Incident

CAD Number F1457686

Incident Reporter [redacted]

Incident Controller [redacted]

Distance Travelled (km) 9

Delay In Receiving Call

Property Details

Occupant

Building Owner

General Property Use Single house

Special Property Use Single house

Purpose Group

Actions

Persons Reported Trapped

Evacuation Status

Action Prior 1

Action Prior 2

Action Taken Extinguishment, salvage and ventilation

Origin

Location

Level

Equipment Used

Quantity	Equipment
1 1 1 3	Ladder for Rescue

Equipment Involved

Equipment Involved

Year

Make

Model

Fire

Arrival Condition

Heat Source

Termination Stage

First Object Ignited

First Object Material

Second Object Ignited

Second Object Material

Indicated Cause Lack of maintenance

Certainty of Cause Medium

Age of Person Persons: 19 - 64 yrs

Ethnicity [redacted]

Gender [redacted]

FAIP Service Offered Unknown

SITE MANAGER INTERVIEW

GHD undertook an interview on 8 June 2022 with the former site manager who worked at the site between 1976 and 1996 and resides near the site. The interview was designed to attempt to fill the identified data gaps and obtain further information on the HAIL activities identified during the assessment.

Notes from the interview are below:

Fire station

– The suspected fire station was confirmed to have existed, and had a small truck associated with it.

– The truck only used water and was designed to contain fires to allow evacuation, until brigades from off-site appeared.

– Exercises undertaken on abandoned buildings at the site but not set on fire.

– Extinguishers at the site were mostly CO2 and powder.

Farming/Gardening

In regard to the small-scale horticulture/agriculture activity:

– A market garden was present at the site and was tended to by patients at the hospital. All work was done manually, and little pesticide was said to have been to have been applied to it.

– Vegetables, fruit trees, and nuts were grown at the site in the 1980s, located on the north-east area of the Site. The fruit trees are still present.

– A greenhouse operated at the site in the gardener's area. These were gone by the 1980s.

In addition, the interviewee identified that:

– A butcher, piggery, bakery and other food processing occurred at the site. The location of these activities has not been established. However, they are expected to be within the known buildings of the Site.

– The farm, which is now the AgResearch Tokanui Dairy Research Farm to the south-east of the Hospital Site, used much of the land currently located in the hospital boundary until the 1970s . The Demolished Structures and cropping area, observed in the aerial photography and discussed in Section 4.2.2 may have been associated with this farming.

– Paraquat based pesticide was used at the Hospital site, but the full extent of pesticide use was not known.

Laundry

During the interview it was mentioned that "basically everything [laundry related]" was done there but did not specifically mention dry cleaning. Laundry services ceased in 1994.

Workshops

Workshops used by maintenance workers for plumbing, metalworking, etc. The garage in this area was used for truck parking and maintenance. Other buildings were used for storage. These workshops operated until 1992 or 1994. Buildings with "concrete block, solid doors with locks" likely to have been used for chemical storage.

Dentist and pharmacist

– Waste from the dentist and pharmacist are likely to have been disposed of into drains and into wastewater treatment or stormwater drains. Some waste may have been burned.

– Some medications manufactured offsite/came in bulk but site “had capacity to do things”.

Recreational areas

– A bowling green (near the chapel) and a tennis court (near the trade entrance) were present at the site. The tennis court was filled in in the 1960s.

– The playing field was frequently used by the local cricket club. A concrete pitch was installed.

Drainage

– Site drainage was extensively upgraded in the 1980s by the Waikato DHB.

– A lot of drainage work has occurred, including the installation of culverts causing it to drain across the road onto the adjacent land to the north.

– A totara stand was planted near the trade entrance, to assist with drainage.

– The playing field used to constantly flood until tile drainage was installed.

– There is a large stormwater outlet by the doctor’s flats.

– A stormwater discharge to the gully between Wards 4, 5, and 6 into a “natural swale” related to the original wetland

– There is a stormwater discharge point to the right of the morgue where it discharges into the stream

Groundwater

The site has a very high water table and was formerly swamp. A “six foot deep groundwater table was noted.”

Waste Management

– Ash from the boiler was disposed of in the landfill to the east of the spring.

– “Whatever” was disposed of into the landfill, including paint, pesticides, ash and cars.

– He could not recall any dumping at the hospital site between 1974 – 1996.

– Sterilisation occurred on the wards and associated water was discharged down into the drains to the treatment plant.

Earthworks and demolition

– When required, aggregate was brought on site, and demolition material was taken off site.

– Rubble wasn’t dumped anywhere at the site.

– Ward 3 was demolished in 1998.

– A road was present east of the main entrance near ward 3, the nurses education building and bowling green.

– A road was carved by the nurse’s home, wards 8 and 9.

Chemical use and storage

– It is unknown which chemicals or the volumes of chemicals stored on site. Waikato DHB may have these records.

– Embalming did not occur at the morgue from the 1970s onwards, when funeral directors were engaged instead.

Wetland area (to North-East of the site, offsite)

– Works occurred in this area in the 1980s.

– Vegetation clearance occurred.

– Earthworks, including digging occurred.

– Rubble (concrete) from the piggeries was disposed of here.

Site wide comments

– Site closure began in 1950/60, and large parts of the site shut.

– Tree felling occurred at the site for firewood.