

# Selected Land Use Register Annual Report 2020-2021

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## 1. Introduction

The Selected Land Use Register (SLUR) is maintained by the Greater Wellington Regional Council (GWRC) on behalf of the eight Territorial Authorities (TA) within the Greater Wellington region. The purpose of the SLUR is to keep records of activities and industry listed under the Hazardous Activities and Industry List (HAIL). The SLUR helps GWRC manage potential human and environmental health risks associated with these hazardous sites. The SLUR is not complete in terms of identifying all hazardous industries and activities within the region, with sites being registered on the SLUR as they are identified. This report summarises the data from GWRC's SLUR for the period from 1 July 2020 to 30 June 2021 inclusive. The report also provides an overview of the SLUR and outlines GWRC's continued effort to improve the quality of information held within the database.

### 1.1 Overview of the Selected Land Use Register

The SLUR is a database of sites that have been historically or are currently occupied by activities or industries that have the potential to contaminate environmental media (soil, surface water and groundwater) through the use, storage or disposal of hazardous substances. Sites are included on the SLUR if they are known to have been, or are likely to have been occupied by an activity included on the Hazardous Activities or Industries List (HAIL) established by the Ministry for the Environment (MfE) in 2011 (Ministry for the Environment, 2011). The MfE HAIL includes 53 activities and industries that have the potential to cause environmental contamination from the use, storage or disposal of hazardous substances. A full list of the HAIL is provided in [Appendix A](#).

GWRC administers the SLUR on behalf of the eight TAs within the Greater Wellington Region.

Administration responsibilities of the SLUR include:

- The identification of new sites where HAIL activities are, or have been undertaken;
- Reviewing and updating details of current sites to incorporate incoming information such as site investigation reports;
- and responding to site enquiries.

## 1.2 SLUR classifications

The sites included on the SLUR are assigned a classification which defines the contamination status of the site and reflects the information held on file such as; site investigation reports, management plans or other data relevant to the site.

The six SLUR Classifications are as follows:

- Category I – Verified History of Hazardous Activity or Industry
- Category II – Unverified History of Hazardous Activity or Industry
- Category III – Contamination Confirmed
- Category IV – Contamination Acceptable, Managed/Remediated
- Category V – No Identified Contamination
- Category VI – Entered on Register in Error

Sites are classified on the SLUR depending on what information we hold for the site. A site may be reclassified if GWRC receives further information regarding site remediation or a site investigation into the extent of contamination. Detailed descriptions for each of the SLUR classifications can be found in [Appendix B](#).

SLUR sites can encompass multiple lots. This is because when the hazardous industry or activity occupied the land it will either have occupied multiple lots or it may have occupied one lot, which has since been subdivided. These different lots are captured under the same SLUR number (ie SN/02/\*\*\*/02) but may not have the same SLUR contamination category. **Figure 1.1** shows an example of an old landfill site that is captured under one SLUR number but with two lot groupings showing different SLUR categories (Category IV - Contamination Acceptable, Managed/Remediated and Category III – Contamination Confirmed).

SLUR sites can have multiple HAIL activities listed, for example, a motor vehicle workshop which also has an underground storage tank for fuel would have the classifications:



**Figure 1.1: An example of an old landfill site that has since been subdivided into multiple residential lots. The yellow area on the left of the old landfill site has land that has been made safe for residential housing, while the blue area on the right still has contamination confirmed.**

**Category F:** *Vehicle refuelling, service and repair*

**Activity 4:** *Motor vehicle workshops*

and

**Category A:** *Chemical manufacture, application and bulk storage*

**Activity 17:** *Storage tanks or drums for fuel, chemicals or liquid waste*

That same SLUR site which encompasses the motor vehicle workshop and underground storage tank may have multiple lots associated with it. The site may be divided into the area the motor vehicle workshop encompassed and the area the underground storage tank encompassed. For SLUR sites which have multiple HAILS (historical and current), the SLUR classification category is specific to the activity taking place onsite at the time. Therefore should a separate HAIL activity occupy the same site in the future, the site would be reclassified based on the new HAIL activity. For the purposes of the following breakdown of sites, SLUR site numbers have been broken down by the SLUR classification category or the number of HAILS encompassed under the SLUR number.

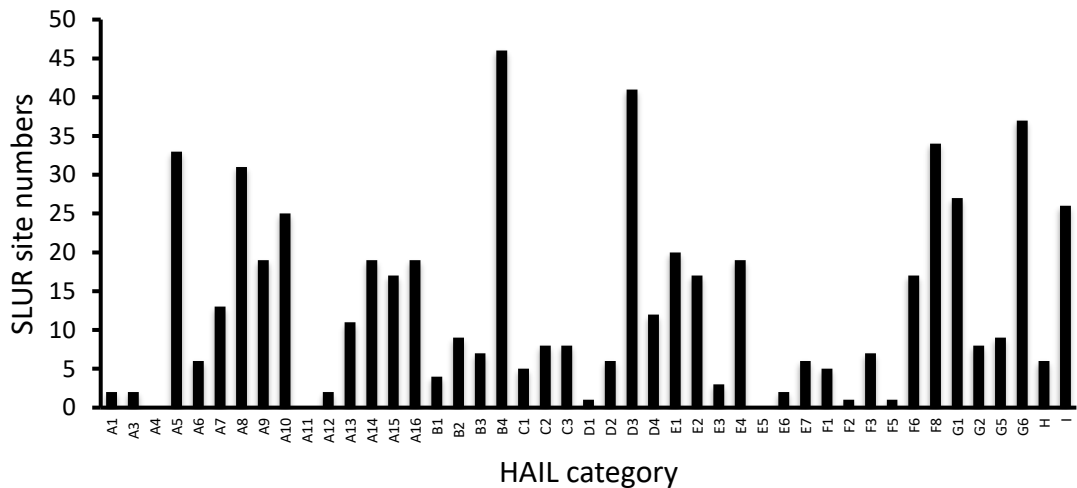
## 2. Selected Land Use Register Statistics for 2020-2021

### 2.1 SLUR data for 2020-2021 – HAIL and site classification

As of 30 June 2021, there were a total of 2,225 MfE HAIL activities/industries (MfE 2011) occurring across 2,242 lots. There were a total of 1,668 SLUR site numbers, many of which encompassed more than one HAIL activity, hence the difference between SLUR numbers and MfE HAIL activities. The majority of the SLUR listings had only one HAIL recorded (~68%). The most commonly occurring HAIL activities/industries recorded for the Wellington region during the 2020-2021 reporting period were:

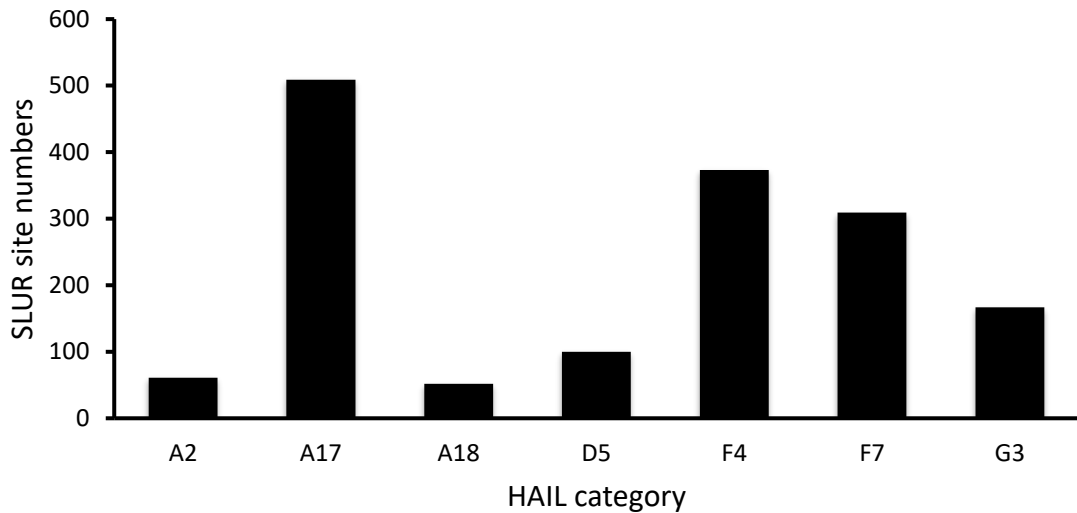
- A17 - Storage tanks or drums for fuel, chemicals or liquid waste (23%)
- F4 - Motor vehicle workshops (17%)
- F7 - Service stations including retail or commercial refuelling facilities (14%)
- G3 – Landfill sites (8%)

The frequency of HAIL activities/industries occurring across the Wellington region are shown in Figure 2.1 below.



**Figure 2.1: HAIL categories with less than 50 occurrences across the Wellington region (See Appendix C for HAIL categories)**





**Figure 2.2: HAIL categories with more than 50 occurrences across the Wellington region (A2 = Chemical manufacture, formulation or bulk storage; A17 = Storage tanks or drums for fuel, chemicals or liquid waste; A 18 = Wood treatment or preservation including the commercial use of anti-sapstain chemicals during milling, or bulk storage of treated timber outside; D5 = Engineering workshops with metal fabrication; F4 = Motor vehicle workshops; F7 = Service stations including retail or commercial refuelling facilities; G3 = Landfill sites)**

## 2.2 Site Classification overall

Any activity or industry prescribed on the HAIL poses a risk of contamination. Therefore, any site identified as carrying out such activity or industry should be added to the SLUR. Reclassification between the six SLUR categories is possible following an investigation into the extent of contamination, or following the remediation of any contamination at the site. Reclassification of a SLUR category is specific to the activity taking place onsite at the time. Therefore, should a separate HAIL activity occupy the same site in the future, the site would be reclassified based on the new HAIL activity.

**Table 2.1: Numbers of lots or sites registered under each of the SLUR categories reflecting activities/industries on the HAIL. Note that the number of lots or sites in Category VI - Entered on Register in Error (148 lots or sites) is not displayed.**

Category	Number of lots or sites	Percentage of total lots or sites (%)
Category I – Verified History of Hazardous Activity or Industry	1662	74
Category II – Unverified History of Hazardous Activity or Industry	21	1
Category III – Contamination Confirmed	96	4
Category IV – Contamination Acceptable, Managed/Remediated	427	19
Category V – No Identified Contamination	36	2
<b>Total</b>	<b>2,242</b>	

Verified History of Hazardous Activity or Industry (74 percent, Category I) was the most commonly occurring category across the region, while Unverified History of Hazardous Activity or Industry (1 percent, Category II) was the least common. Both are categories where there has been/or is suspected that a HAIL has occurred but GWRC is unaware of the current contamination status. Contamination Confirmed (4 percent, Category III), is classified when GWRC has received a Preliminary Site Investigation or Detailed Site Investigation indicating contamination of environmental media has/ or is occurring on site above relevant guidelines. Sites classified as Contamination Acceptable, Managed/Remediated (19 percent, Category IV) must receive a report indicating:

- The level of contaminant on the site is below the relevant guideline values for the intended use of the property (ie residential, commercial, industrial and recreational); or
- The level of contaminant is below the relevant guideline values for the intended use of the property and the contaminant has been managed in a way that mitigates the risk to future users and environmental receptors; or
- The level of contaminant is below the relevant guideline values for the intended use of the property and the site has been remediated and validation samples have been collected to confirm that the site now presents a low risk to future users and environmental receptors.

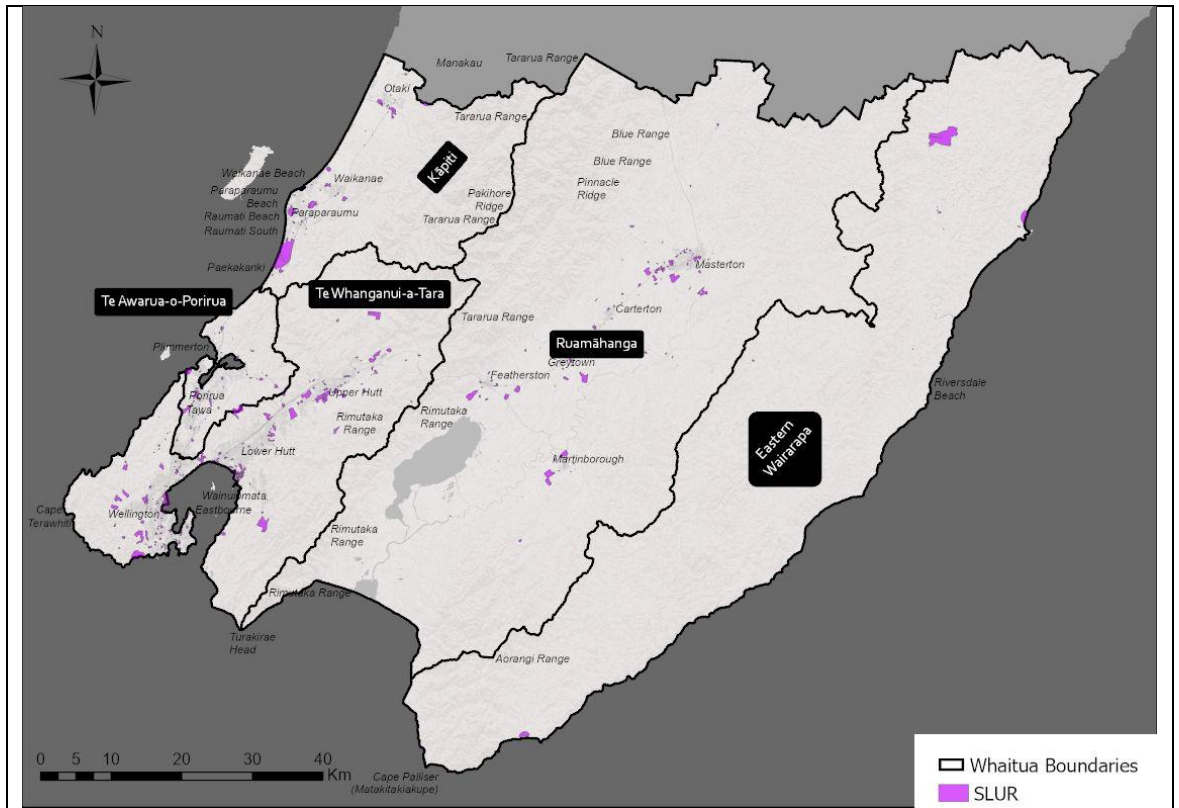
Sites are categorised as No Identified Contamination (2 percent, Category V) if they have not previously been registered on the SLUR, or if the site was registered as Category I or II and a site investigation report identifies that no contamination is present on site. Sites cannot be reclassified to Category V if remedial activities have taken place on site. There are 148 entries categorised as Entered on Register in Error (Category VI). This category captures sites that were initially recorded on the database under a different category, but a subsequent review or additional information resulted in the site being reclassified to Category VI, as no HAIL activity/industry had been undertaken on the site. The category also includes administration errors as per guidance within Section 3.3 of the MfE Contaminated Land Management Guideline No.4 (MfE 2006).

### 2.3 Whaitua

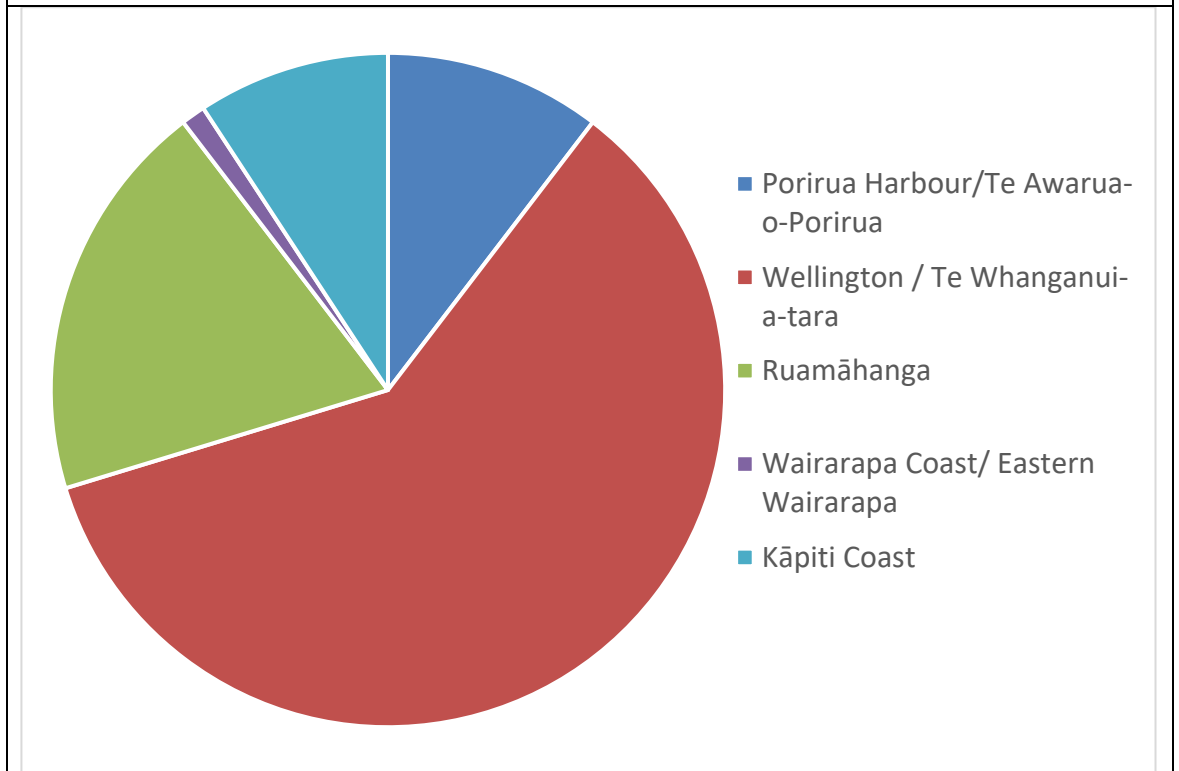
The Wellington Region has been divided into five whaitua (catchments), as shown in Figure 2.3. The number of sites registered on SLUR in each of the whaitua is shown in Table 2.2 below, with the relative proportion of SLUR site shown in Figure 2.4.

**Table 2.2: Numbers of SLUR sites or lots in each whaitua of the Wellington region**

Whaitua	Number of sites or lots
Porirua Harbour/Te Awarua-o-Porirua	233
Wellington / Te Whanganui-a-tara	1,343
Ruamāhanga	433
Wairarapa Coast/ Eastern Wairarapa	26
Kāpiti Coast	207



**Figure 2.3: Distribution of SLUR sites across the five whitua of the Wellington region**



**Figure 2.4: Proportion of SLUR sites or lots in each whitua of the Wellington region**

2.3.1 Te Whanganui-a-Tara Whaitua

A total of 1,343 lots on the SLUR are within the boundary of the Te Whanganui-a-Tara whaitua that includes the majority of Wellington City, Lower Hutt City and Upper Hutt City Councils Territorial Authorities (Figure 2.5). This whaitua represents the majority (59%) of the total number of sites recorded on the SLUR. The high percentage of HAIL activities located within the whaitua is attributable to the large extent of industrial land located within it. The most commonly occurring HAIL activities/industries in this whaitua are A17 - storage tanks or drums for fuel, chemicals or liquid waste (290 sites), F4 - motor vehicle workshops (225 sites) and F7 - service stations including retail or commercial refuelling facilities (158 sites). The number of sites in each category is shown in Table 2.3.

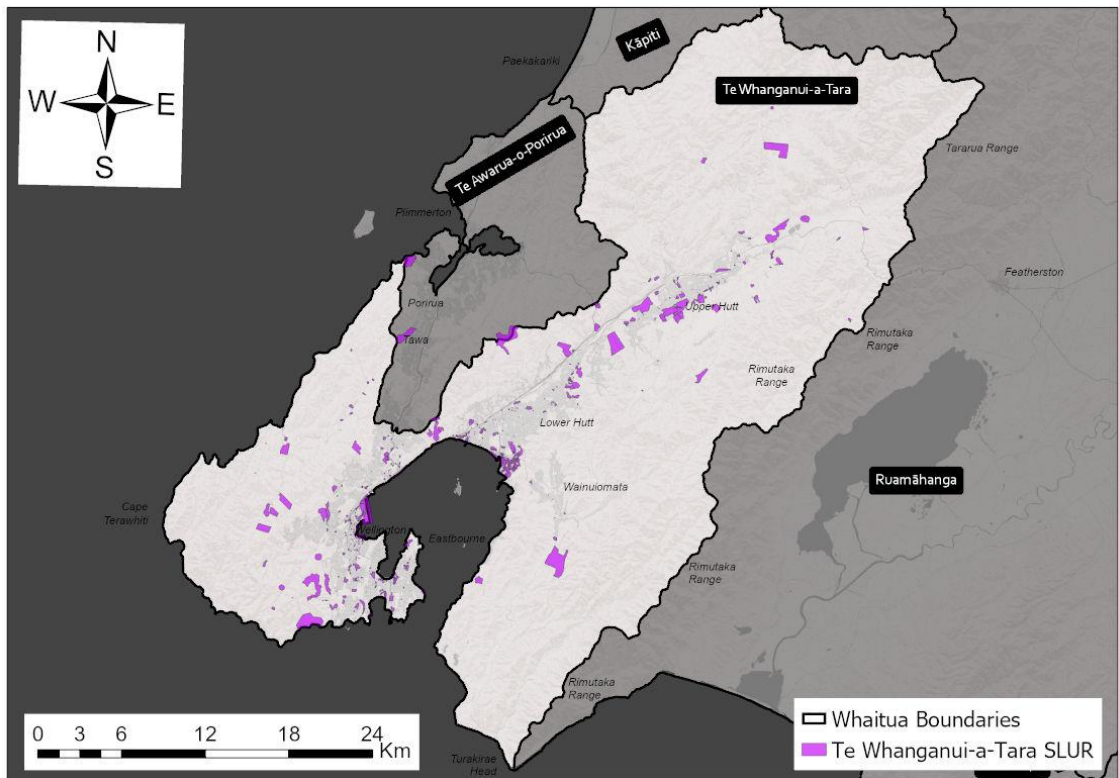


Figure 2.5: Distribution of SLUR sites across the Wellington harbour / Te Whanganui-a-Tara whaitua

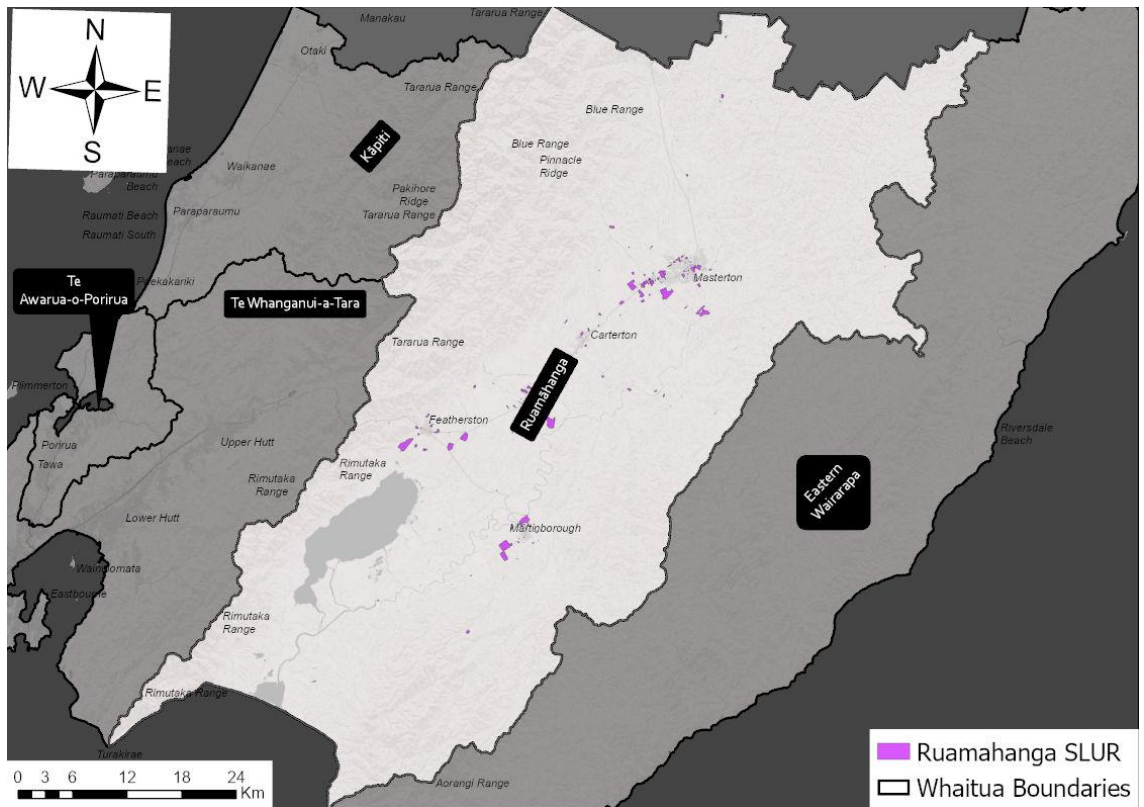
Table 2.3: Numbers of SLUR sites or lots in the Wellington harbour / Te Whanganui-a-Tara whaitua

Classification	Number of sites or lots
Category I – Verified History of Hazardous Activity or Industry	926
Category II – Unverified History of Hazardous Activity or Industry	3
Category III – Contamination Confirmed	58
Category IV – Contamination Acceptable, Managed/Remediated	334
Category V – No Identified Contamination	22

### 2.3.2 Ruamāhanga Whaitua

A total of 433 lots on the SLUR are within the boundary of the Ruamāhanga whaitua which includes the western portion of South Wairarapa District Council, Carterton District Council and Masterton District Council (Figure 2.6). This represents 19.3% of the total number of sites recorded on the SLUR.

Within the Ruamāhanga whaitua boundary, the most commonly occurring HAIL activities/industries were A17 - storage tanks or drums for fuel, chemicals or liquid waste (109 sites), F4 - motor vehicle workshops (62 sites) and F7 - service stations including retail or commercial refuelling facilities (74 sites) and G3 - Landfill sites (50 sites). The greatest number of sites are in Category I (Table 2.4).



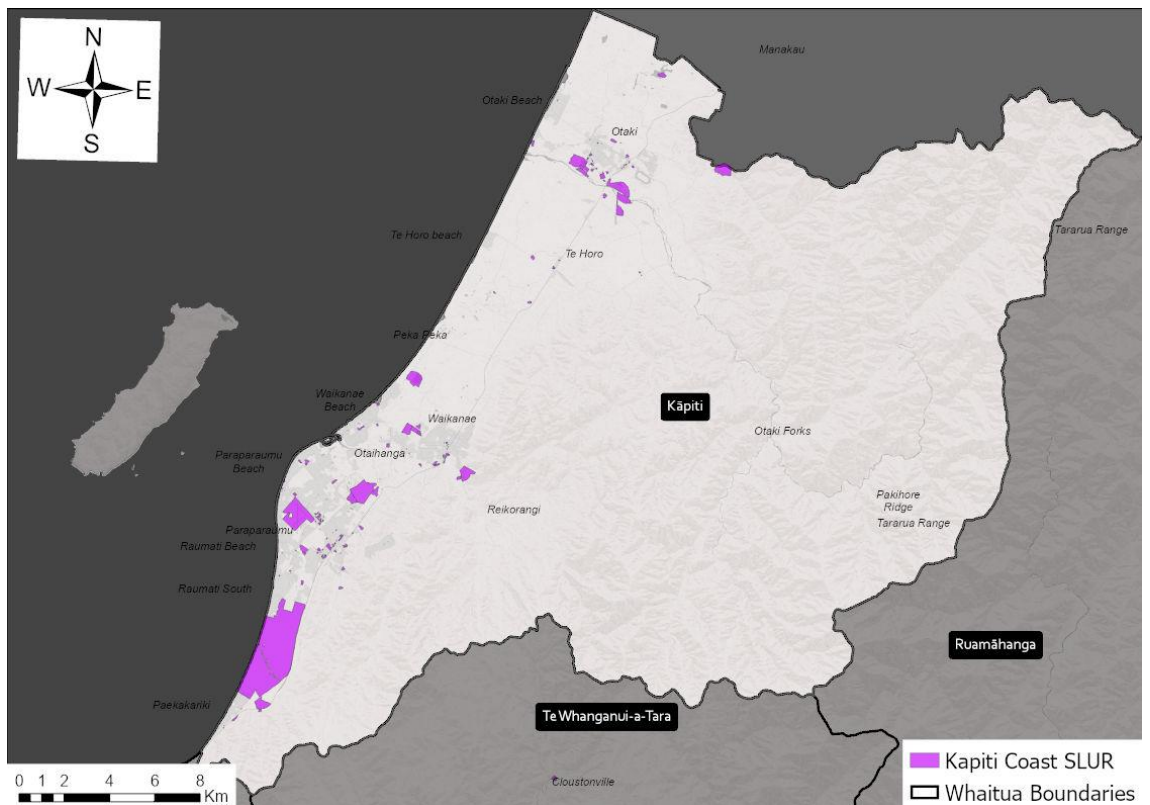
**Figure 2.6: Distribution of SLUR sites across the Ruamāhanga whaitua**

**Table 2.4: Numbers of SLUR sites or lots in the Ruamāhanga whaitua**

Classification	Number of sites or lots
Category I – Verified History of Hazardous Activity or Industry	341
Category II – Unverified History of Hazardous Activity or Industry	3
Category III – Contamination Confirmed	23
Category IV – Contamination Acceptable, Managed/Remediated	63
Category V – No Identified Contamination	3

### 2.3.3 Kāpiti Coast Whaitua

A total of 207 lots registered on the SLUR have been recorded within the Kāpiti Coast whaitua. This whaitua includes the coastal area from Paekākāriki north to the Manawatū-Wanganui regional boundary, and extends east to meet the Wairarapa whaitua boundary in the Tararua Forest Park (Figure 2.7). This represents 9.2% of the total number of sites recorded on the SLUR. Within the Kāpiti Coast whaitua boundary, the most commonly occurring HAIL activities/industries were A17 - storage tanks or drums for fuel, chemicals or liquid waste (56 sites), F4 - motor vehicle workshops (40 sites) and F7 - service stations including retail or commercial refuelling facilities (36 sites). The number of sites recorded in each category is shown in Table 2.5.



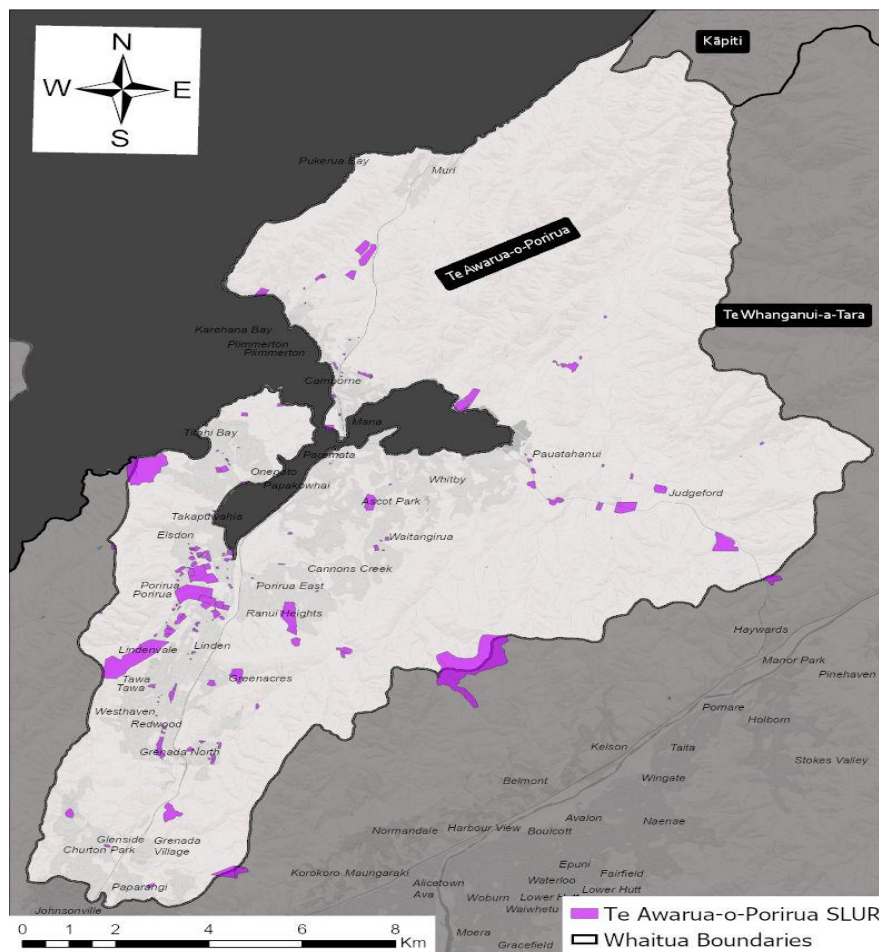
**Figure 2.7: Distribution of SLUR sites across the Kāpiti Coast whaitua**

**Table 2.5: Numbers of SLUR sites or lots in the Kāpiti Coast whaitua**

Classification	Number of sites or lots
Category I – Verified History of Hazardous Activity or Industry	187
Category II – Unverified History of Hazardous Activity or Industry	1
Category III – Contamination Confirmed	8
Category IV – Contamination Acceptable, Managed/Remediated	10
Category V – No Identified Contamination	1

### 2.3.4 Te Awarua-o-Porirua Whaitua

The Te Awarua-o-Porirua whaitua is located south of the Kāpiti Coast whaitua, with the Te Whanganui-a-Tara whaitua bordering the southern and eastern boundaries (Figure 2.8). This whaitua encompasses the Porirua City Territorial Authority and a small section of the Wellington City Council Territorial Authority. A total of 233 SLUR sites were recorded within the Te Awarua-o-Porirua whaitua for the 2020-2021 reporting period, accounting for 10.4% of the total number of sites recorded on the SLUR. Within the Te Awarua-o-Porirua whaitua boundary, the most commonly occurring HAIL activities/industries were A17 - storage tanks or drums for fuel, chemicals or liquid waste (51 sites), F4 - motor vehicle workshops (49 sites), F7 - service stations including retail or commercial refuelling facilities (36 sites), and G3 - Landfill sites (18 sites). Verified History of Hazardous Activity or Industry (Category I) is the dominant site category (Table 2.6).



**Figure 2.8: Distribution of SLUR sites across the Te Awarua-o-Porirua whaitua**

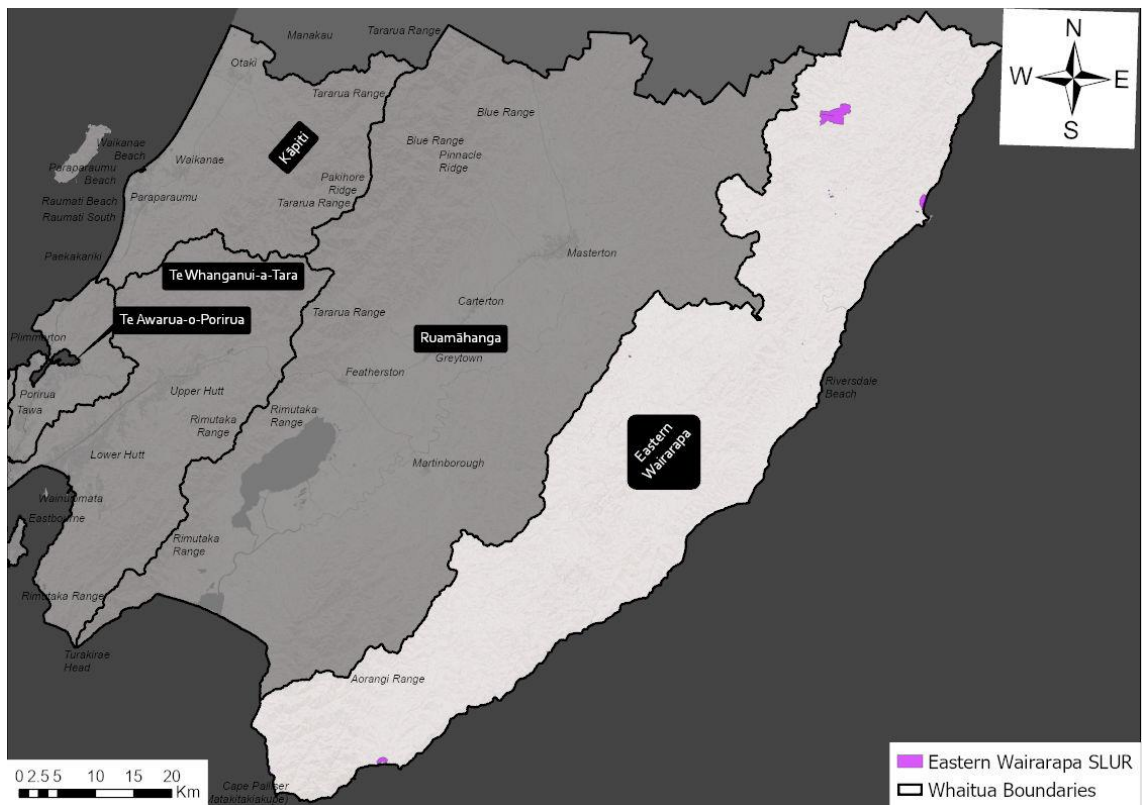


**Table 2.6: Numbers of SLUR sites or lots in the Te Awarua-o-Porirua whaitua**

Classification	Number of sites or lots
Category I – Verified History of Hazardous Activity or Industry	186
Category II – Unverified History of Hazardous Activity or Industry	14
Category III – Contamination Confirmed	5
Category IV – Contamination Acceptable, Managed/Remediated	18
Category V – No Identified Contamination	10

2.3.5 Wairarapa Coast Whaitua

A total of 26 SLUR lots were recorded within the Wairarapa Coast whaitua; the lowest number of lots out of the five whaitua. The Wairarapa Coast whaitua does not include any major townships or cities and instead is made up of a significant amount of land associated with rural land use (Figure 2.9). Within the Wairarapa Coast whaitua boundary, the most commonly occurring HAIL activities/industries are A17 - storage tanks or drums for fuel, chemicals or liquid waste (5 sites), B4 - Power stations, substations or switchyards (3 sites), G3 - Landfill sites (6 sites) and F7 - service stations including retail or commercial refuelling facilities (4 sites). The number of sites recorded in each category is shown in Table 2.7.



**Figure 2.9: Distribution of SLUR sites across the Wairarapa Coast whaitua**

**Table 2.7: Numbers of SLUR sites or lots in the Wairarapa Coast whitua**

<b>Classification</b>	<b>Lot groupings</b>
Category I – Verified History of Hazardous Activity or Industry	22
Category II – Unverified History of Hazardous Activity or Industry	0
Category III – Contamination Confirmed	2
Category IV – Contamination Acceptable, Managed/Remediated	2
Category V – No Identified Contamination	0

### 3. SLUR site updates and amendments

Over the past year, 261 edits were completed within the SLUR database (Table 3.1). Edits and updates are completed when further information, such as a site investigation report is received for a site. They are also completed when a discrepancy is found in the site details recorded on the SLUR, including spelling and grammar corrections.

**Table 3.1: Summary of updates completed on the SLUR database from 1 July 2020 to 30 June 2021, inclusive**

<b>Update completed</b>	<b>Number</b>
Address/site details amended	18
Classification changed	25
Comments amended	143
Hail amended/added	14
New site added	19
Site released	42
Total	261

#### 4. SLUR enquiry responses

Information relating to a SLUR site that is held on file by GWRC is publically available under the Local Government Official Information and Meetings Act 1987. Enquiries relating to SLUR sites are predominantly managed through the SLUR email inbox and the call centre. A public mapping service is available on the GWRC website, which allows users to determine whether or not a property is included on the SLUR. If the property is on the register, users can request the SLUR information by emailing the SLUR inbox ([slur@gw.govt.nz](mailto:slur@gw.govt.nz)).

The majority of enquiries are received from the general public, property valuation companies and environmental consultants for information regarding sites that are registered on the SLUR. Roughly 264 SLUR enquiries were answered from 1 July 2020 to 30 June 2021, however the emails have come through multiple channels such as the SLUR inbox, personal GWRC emails and Ozone, so it is likely these numbers were higher. Additional information encompasses sending through reports, specialist opinions and answering queries outside what is provided in letter reports.

**Table 4.1: Summary of SLUR enquiry responses from 1 July 2020 to 30 June 2021, inclusive**

Task	Number
Emails received	264
Sites queried in emails	350
Additional info (In addition to letter reports, file notes or basic answers)	169

## 5. SLUR projects

### 5.1 Quality control projects

In order to maintain the integrity of the SLUR database it is important that the data is accurately collated and represented. Part of maintaining the database is checking that the site details, spelling and categorisation are correct for each SLUR site. Towards the end of the 2020-2021 period it was decided that instead of being conducted randomly, quality checks should instead move through each HAIL category. Quality checks were aimed at activities/industries on HAIL for which polygons were likely to be able to be refined pending more information. The first HAIL category selected was A17 - *Chemical manufacture, application and bulk storage, Storage tanks or drums for fuel, chemicals or liquid waste*. Initial quality checks were completed during the 2020-2021 financial year. The next step is to determine the size/type of underground storage tanks/aboveground storage tanks based on site comments and track down location of the tanks with the territorial authorities where GWRC does not hold this information. Underground storage tanks/aboveground storage tanks that GWRC do not have location details for can be followed up with relevant territorial authorities. Once category A17 is completed the next category planned for quality checking is A8 - *Chemical manufacture, application and bulk storage, Livestock dip or spray race operations* as often these sites encompass large sites.

### 5.2 National Data Consistency project

The Contaminated Land and Waste Special Interest Group is currently working toward national data consistency for contaminated site registers throughout New Zealand. This involves reclassifying sites from the existing classifications to a nationally consistent set of classifications. This project has a deadline of **18 October 2026** however there is a significant amount of work required, so initial steps have been undertaken. The following are the new classifications and descriptions:

- **Unverified HAIL** (Information sources suggest a HAIL land use has occurred, however the reported use has not been confirmed.)
- **Verified Non-HAIL** (Information shows that the site has never been associated with any of the activities or industries on the HAIL.)
  - Admin error
  - or
  - HAIL did not occur
- **Verified HAIL – Risk Not Quantified** (Insufficient information to quantify adverse effects or risks to people or the environment from known HAIL activity. The site may not have been investigated, or if it has, sampling may be inadequate to assess risk, or some activities on site may not have been investigated. Contamination may have occurred, but should not be assumed to have occurred.)
- **Verified HAIL – at or below background levels** (The site has been investigated or remediated. The investigation or post remediation validation results confirm there are no hazardous substances above local

background concentrations other than those that occur naturally in the area. The investigation or validation sampling has been sufficiently detailed to characterise the site.)

– Remediated

or

– Natural State

- **Verified HAIL – suitable for land use** (The site has been investigated. Results show that there are hazardous substances present at the site but indicate that any adverse effects or risks to people and/or the environment are considered to be so low as to be acceptable. The site may have been remediated to reduce contamination to this level, and samples taken after remediation confirm this. Land use scenarios = residential / rural res / high density residential / industrial commercial / agricultural / other.)

– Remediated

or

– Natural State

- **Verified HAIL – managed for land use** (The site has been investigated. Results show that there are hazardous substances present at the site in concentrations that have the potential to cause adverse effects or risks to people and/or the environment. However these risks are considered managed because; the nature of the use of the site prevents human and/or ecological exposure to the risks, and/or the land has been altered in some way, and/or restrictions have been placed on the way it is used which prevent human and/or ecological exposure to the risks. Land use scenarios = residential / rural res / high density res / industrial commercial / agricultural / other.)

- **Verified HAIL – contaminated for land use** (The site has been investigated. Results show that the site has a hazardous substance in or on it, or in groundwater or surface water that:

1. has significant adverse effects on human health and/or the environment; and/or
2. is reasonably likely to have significant adverse effects on human health and/or the environment.

Land use scenarios = residential / rural residential / high density residential / industrial commercial / agricultural / other

– Environment

And/or

– Human Health)

[Environmental Canterbury Regional Council, 2016].

Philippa Crisp and Erin Berry met with GWRC's Information Technology Department to discuss the required changes to the SLUR on Tuesday, 1 September 2020. At the time of the discussion, Information Technology were in the process of employing a new developer. All existing sites have been reclassified to the new classifications in a spreadsheet. The original plan was to update the database with a dropdown for the new classifications and move through each site updating it. However concern was raised as the classification

for sites was technically being changed, the affected landowners would need to be advised of the changes prior to them being made. The project may instead benefit from a “Go live” date where the new drop down classifications are added and updated on the GWRC database (not on the public platform). Landowners will be sent a generic letter/ email advising of the change and the “Go live” date (when then changes will be on the public platform) and give them an option on submissions. This needs to be discussed with the Contaminated Land and Waste SIG to whether other councils followed a similar process.

#### 5.2.1 Method 16 of the Proposed Natural Resources Plan

GWRC and the Territorial Authorities need to work together to develop and implement a Wellington Regional contaminated lands management strategy (Greater Wellington Regional Council, 2021). As a part of this process, GWRC to date has met with the following territorial authorities: WCC, HCC, SWDC and KCDC. Remaining TA appointments were disrupted due to COVID, so will need to be rescheduled (UHCC, MDC, CDC, PCC). This project was also put on hold due to the changes to the classifications of SLUR with the National Consistency Project, as it was hoped the two could be discussed in the same meeting. The Territorial Authority contact list has been updated and a PowerPoint will be made to explain both.

## 6. Contaminated Sites Remediation Fund (CSRF)

The Ministry for the Environment manages a fund to remediate historic contamination of land throughout New Zealand, with \$2.63 million made available in this financial year. Applications for funding can be submitted to the Ministry for the Environment by regional councils and territorial authorities for sites which are believed to be a priority for remediation or further investigation into the extent of the contamination of the site

Applications for the Contaminated Sites Remediation Fund are assessed by Ministry for the Environment with an emphasis on the risks to human and environmental health. The sites on this list are nationwide and are used to make funding recommendations to the Minister for the Environment. Placement on the Contaminated Sites Remediation Fund does not result in immediate funding for a project, and a site may remain on the list throughout new application funding rounds.

The Contaminated Sites Remediation Fund is not a list of the most contaminated sites in New Zealand, but rather a list of sites that have been identified as a priority for investigation or remediation funding. An important aspect to note is that not all contaminated sites will be eligible for funding by the Contaminated Sites Remediation Fund. Should a site receive funding for remediation or investigation which results in the site no longer being a priority for further funding, the site will be removed from the Contaminated Sites Remediation Fund and replaced by a new priority site. There are currently three sites within the Wellington region on the Contaminated Sites Remediation Fund

priority list, discussed below (Ministry for the Environment, 2021; Ministry for the Environment, 2011).

### **6.1 Miramar Gasworks, Wellington**

Selected Land Use Register classification:

*HAIL Category A – Chemical manufacture, application and bulk storage.*

*HAIL Activity 7 – Gasworks including the manufacture of gas from coal or oil feedstocks.*

This site was previously part of the Miramar gasworks in Wellington City. The Wellington Gas Company purchased 14 acres of land in Miramar in 1907. In 1912, a gas holder with 1.5 million cubic feet capacity was erected along with a carbonising plant. In 1922 and 1926 a Glover-West Vertical System was erected along with a 2 million cubic feet capacity gas holder. In 1961 a third gas holder was erected to meet the needs of the Hutt Valley after the Petone gas works closed down. Coal gas was replaced by natural gas in 1972 leading to the manufacture being shut down the same year.

An investigation of the gasworks site in 1996 showed significant concentrations of contaminants to be present both in the soil and groundwater beneath the site. The investigation also identified the potential for offsite migration of contaminants via groundwater.

A further investigation undertaken in February/March 2005 showed that the contamination present did not pose a significant risk to the occupants of the site in its current state. The site was covered by an impermeable barrier which prevented direct contact with the contaminants present on the site and minimised the risk of vapour migration into the building. The barrier also prevented ingress of water, reducing the potential for offsite migration of the contaminants. The investigation concluded that it will be necessary to ensure that any site development/modification does not reduce or in any way diminish the protection provided to site users and the environment.

In 2019 GWRC engaged Jacobs to conduct an investigation to determine the offsite migration of contaminants from the former Miramar Gasworks site. The investigation involved the establishment of eight monitoring wells and the refurbishment of a single monitoring well which resulted in the successful collection and analysis of soil and groundwater samples. A second Groundwater monitoring event was undertaken in April/May 2021 to compare with the 2019 GME to determine any potential contamination plume migration offsite. The groundwater quality results from the April/May 2021 testing found broadly similar groundwater quality and contaminants cyanide, sulphate and ammoniacal-nitrogen when compared to the 2019 report. Although there was movement in the contaminant plume, it was deemed that there was no significant risk to offsite receptors. Recommendations included management of dewatering of trenches around the project site, as the water would need to



be assessed to determine if it is safe to discharge. In addition to this, it was recommended that groundwater monitoring events should be undertaken every two to five years to help understand the migration of the contaminants and risk to the receiving environment (Hampton & Tearney, 2021).

## 6.2 Te Mome Stream

Selected Land Use Register classification:

*HAIL Category I - Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment.*

On the CSRF website it is under:

*HAIL Category: B-Electrical and electronic works, power generation and transmission HAIL Activity 1- Batteries including the commercial assembling, disassembling, manufacturing or recycling of batteries (but excluding retail battery stores)*

Comments from SLUR:

*The Te Mome Stream has received storm water discharges from the adjacent industrial properties. This has resulted in high concentration of heavy metal accumulating in the stream sediments. Investigations undertaken by Greater Wellington have shown that the concentrations of heavy metals exceeding guideline values are present in the stream sediments.*

The Greater Wellington Regional Council reviewed the risks associated with the site and it was deemed to be a low risk to environmental health due to the heavy metals being immobilised in the river sediment. There are no recreational activities regularly undertaken in the stream meaning there are limited exposure pathways for people, so the heavy metal contamination was deemed a low risk to public health. Monitoring of heavy metal presence in Wellington harbour is undertaken every five years in order to determine whether heavy metals are migrating from the Hutt River catchment. The most recent monitoring was conducted in November 2020. Two of the subtidal sampling sites are located in the harbour at the mouth of the Hutt River. Compared to the previous monitor in 2016, the 2020 results indicated that majority of heavy metals and arsenic appear to be stable. There were fluctuations in zinc, chromium and cadmium however insufficient data is available to determine any trends and these fluctuations were not at the sites of interest for Te Mome stream (Hewitt, 2019; Olsen et al, 2021).

## 6.3 Premier Pine

Selected Land Use Register classification:

*HAIL Category A – Chemical Manufacture, application and bulk storage.*

*HAIL Activity 18 - Wood treatment or preservation including the commercial use of anti-sapstain chemicals during milling, or bulk storage of treated timber outside.*

Comments from SLUR in regards to A18:

*This site has been used as a sawmill since 1909. During this time these operations have included the treatment of timber using chemical preservatives and antisapstains. A number of oil and timber treatment chemicals spills occurred at the site between 1977 and 1987, which may have resulted in significant contamination of the site. Investigations undertaken at the site have shown elevated concentrations of arsenic to be present in the groundwater.*

The site holds a consent to discharge to land and has been investigated both in terms of soil and groundwater by GWRC and the site owners. Arsenic was found to be present at a shallow depth and a concrete pad was placed over the area of higher contamination. The groundwater contamination monitoring indicated that arsenic levels appear to be reducing over time. It would be useful to complete a detailed site investigation in future. The site is also registered as *HAIL Category A- Chemical manufacture, application and bulk storage, HAIL Activity 18- Storage tanks or drums for fuel, chemicals or liquid waste* however A18 is the main focus for the CSRF.

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## Appendices

### Appendix A – Hazardous Activities and Industries List

#### A. Chemical manufacture, application and bulk storage

1. Agrichemicals including commercial premises used by spray contractors for filling, storing or washing out tanks for agrichemical application
2. Chemical manufacture, formulation or bulk storage
3. Commercial analytical laboratory sites
4. Corrosives including formulation or bulk storage
5. Dry-cleaning plants including dry-cleaning premises or the bulk storage of dry-cleaning solvents
6. Fertiliser manufacture or bulk storage
7. Gasworks including the manufacture of gas from coal or oil feedstocks
8. Livestock dip or spray race operations
9. Paint manufacture or formulation (excluding retail paint stores)
10. Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds
11. Pest control including the premises of commercial pest control operators or any authorities that carry out pest control where bulk storage or preparation of pesticide occurs, including preparation of poisoned baits or filling or washing of tanks for pesticide application
12. Pesticide manufacture (including animal poisons, insecticides, fungicides or herbicides) including the commercial manufacturing, blending, mixing or formulating of pesticides
13. Petroleum or petrochemical industries including a petroleum depot, terminal, blending plant or refinery, or facilities for recovery, reprocessing or recycling petroleum-based materials, or bulk storage of petroleum or petrochemicals above or below ground
14. Pharmaceutical manufacture including the commercial manufacture, blending, mixing or formulation of pharmaceuticals, including animal remedies or the manufacturing of illicit drugs with the potential for environmental discharges
15. Printing including commercial printing using metal type, inks, dyes, or solvents (excluding photocopy shops)
16. Skin or wool processing including a tannery or fellmongery, or any other commercial facility for hide curing, drying, scouring or finishing or storing wool or leather products
17. Storage tanks or drums for fuel, chemicals or liquid waste
18. Wood treatment or preservation including the commercial use of anti-sapstain chemicals during milling, or bulk storage of treated timber outside

#### B. Electrical and electronic works, power generation and transmission

1. Batteries including the commercial assembling, disassembling, manufacturing or recycling of batteries (but excluding retail battery stores)

2. Electrical transformers including the manufacturing, repairing or disposing of electrical transformers or other heavy electrical equipment

3. Electronics including the commercial manufacturing, reconditioning or recycling of computers, televisions and other electronic devices

4. Power stations, substations or switchyards

### **C. Explosives and ordnance production, storage and use**

1. Explosive or ordnance production, maintenance, dismantling, disposal, bulk storage or re-packaging

2. Gun clubs or rifle ranges, including clay targets clubs that use lead munitions outdoors

3. Training areas set aside exclusively or primarily for the detonation of explosive ammunition

### **D. Metal extraction, refining and reprocessing, storage and use**

1. Abrasive blasting including abrasive blast cleaning (excluding cleaning carried out in fully enclosed booths) or the disposal of abrasive blasting material

2. Foundry operations including the commercial production of metal products by injecting or pouring molten metal into moulds

3. Metal treatment or coating including polishing, anodising, galvanising, pickling, electroplating, or heat treatment or finishing using cyanide compounds

4. Metalliferous ore processing including the chemical or physical extraction of metals, including smelting, refining, fusing or refining metals

5. Engineering workshops with metal fabrication

### **E. Mineral extraction, refining and reprocessing, storage and use**

1. Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition

2. Asphalt or bitumen manufacture or bulk storage (excluding single-use sites used by a mobile asphalt plant)

3. Cement or lime manufacture using a kiln including the storage of wastes from the manufacturing process

4. Commercial concrete manufacture or commercial cement storage

5. Coal or coke yards

6. Hydrocarbon exploration or production including well sites or flare pits

7. Mining industries (excluding gravel extraction) including exposure of faces or release of groundwater containing hazardous contaminants, or the storage of hazardous wastes including waste dumps or dam tailings

### **F. Vehicle refuelling, service and repair**

1. Airports including fuel storage, workshops, washdown areas, or fire practice areas

2. Brake lining manufacturers, repairers or recyclers

3. Engine reconditioning workshops
4. Motor vehicle workshops
5. Port activities including dry docks or marine vessel maintenance facilities
6. Railway yards including goods-handling yards, workshops, refuelling facilities or maintenance areas
7. Service stations including retail or commercial refuelling facilities
8. Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances

**G. Cemeteries and waste recycling, treatment and disposal**

1. Cemeteries
2. Drum or tank reconditioning or recycling
3. Landfill sites
4. Scrap yards including automotive dismantling, wrecking or scrap metal yards
5. Waste disposal to land (excluding where biosolids have been used as soil conditioners)
6. Waste recycling or waste or wastewater treatment

**H. Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment**

**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**

## **Appendix B – SLUR Classifications**

### **Category I – Verified History of Hazardous Activity or Industry**

A site classified as ‘Verified History of Hazardous Activity or Industry’ is a site for which a past or present use has been confirmed as falling within one of the definitions on the Hazardous Activities and Industries List (HAIL). Assignment to this category does not imply the site is contaminated, but merely that hazardous substances have been used, stored or disposed of on the site and therefore there is a potential for site contamination to have occurred.

### **Category II – Unverified History of Hazardous Activity or Industry**

A site classified as ‘Unverified History of Hazardous Activity or Industry’ is a site for which its past or present use is the subject of an unconfirmed report that indicates that it falls within one of the definitions on the HAIL. Assignment to this category does not imply the site is contaminated, but merely that there is a possibility that hazardous substances have been used, stored or disposed of on the site and site contamination may have occurred. The reports could be from an external source or from a general information search carried out by Greater Wellington. A site remains under this category until further information is available that enables it to be transferred to another category.

### **Category III – Contamination Confirmed**

A site classified as ‘Contamination Confirmed’ is a site where there is evidence that hazardous substances exist above background concentrations AND it is a likely that adverse effects on human health (subject to exposure path) or the environment will occur based on the current or foreseeable site use. This category is for sites that the council holds information on, typically as a result of a site investigation that shows contaminants are present on the site at concentrations that exceed relevant guidelines. A site remains in this category until it is remediated or managed in such a way that it can be transferred to Category IV.

### **Category IV – Contamination Acceptable, Managed/Remediated**

A site classified as ‘Contamination Acceptable, Managed/Remediated’ is a site where there is clear evidence that residues of hazardous substances exist above background concentrations BUT the level of risk of adverse effects on human health or the environment is shown to be acceptable for the particular land use. Either the concentrations are below relevant guideline levels OR remedial or management action has been taken to reduce the risks to an acceptable level. Sites may be placed in this category either because an investigation report has been received that shows the site has contaminants present in environmental media but the concentrations are below relevant guideline values, or the site has previously been registered in Category I or III and further investigation or remediation has been undertaken.

### **Category V – No Identified Contamination**

Sites are placed in the ‘No Identified Contamination’ category when an investigation report has been received that demonstrates an absence of contaminants above background concentrations. The investigation will have considered contaminants that could have resulted from the past or present use. Sites would be placed in this category



either because the site had not been previously registered on SLUR, but an investigation report has been received, or the site had previously been registered as Category I or II and further investigation was undertaken.

**Category VI – Entered on Register in Error**

A site classified as ‘Entered on Register in Error’ is a site that has been classified under any other category, but subsequent investigation has found that the site has never been associated with any of the uses on the HAIL and there is no possibility of contamination of the site. This category is used for sites entered onto the SLUR or into the initial registration category as a result of incorrect information. The site is not removed from the register; it remains on SLUR to correctly record the sites history. The reasons for the original entry and reasons for the change to this category are recorded. The site is not released for external viewing on the public or territorial authority portal.

## Appendix C – SLUR Data Summary Table

Total MfE HAILS	Total lots/sites effected	Total SLUR numbers (excluding added in error)
2,225	2,242	1,668

The following breakdown is done by lot groups (for explanation refer to Section 3.2)

A. Chemical manufacture, application and bulk storage	1. Agrichemicals including commercial premises used by spray contractors for filling, storing or washing out tanks for agrichemical application	2
	2. Chemical manufacture, formulation or bulk storage	61
	3. Commercial analytical laboratory sites	2
	4. Corrosives including formulation or bulk storage	0
	5. Dry-cleaning plants including dry-cleaning premises or the bulk storage of dry-cleaning solvents	33
	6. Fertiliser manufacture or bulk storage	6
	7. Gasworks including the manufacture of gas from coal or oil feedstocks	13
	8. Livestock dip or spray race operations	31
	9. Paint manufacture or formulation (excluding retail paint stores)	19
	10. Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds	25
	11. Pest control including the premises of commercial pest control operators or any authorities that carry out pest control where bulk storage or preparation of pesticide occurs, including preparation of poisoned baits or filling or washing of tanks for pesticide application	0
	12. Pesticide manufacture (including animal poisons, insecticides, fungicides or herbicides) including the commercial manufacturing, blending, mixing or formulating of pesticides	2
	13. Petroleum or petrochemical industries including a petroleum depot, terminal, blending plant or refinery, or facilities for recovery, reprocessing or recycling petroleum-based materials, or bulk storage of petroleum or petrochemicals above or below ground	11
	14. Pharmaceutical manufacture including the commercial manufacture, blending, mixing or formulation of pharmaceuticals, including animal remedies or the manufacturing of illicit drugs with the potential for environmental discharges	19
	15. Printing including commercial printing using metal type, inks, dyes, or solvents (excluding photocopy shops)	17
	16. Skin or wool processing including a tannery or fellmongery, or any other commercial facility for hide curing, drying, scouring or finishing or storing wool or leather products	19
	17. Storage tanks or drums for fuel, chemicals or liquid waste	509
	18. Wood treatment or preservation including the commercial use of anti-sapstain chemicals during milling, or bulk storage of treated timber outside	52
Total	821	

B. Electrical and electronic works, power generation and transmission	1. Batteries including the commercial assembling, disassembling, manufacturing or recycling of batteries (but excluding retail battery stores)	4
	2. Electrical transformers including the manufacturing, repairing or disposing of electrical transformers or other heavy electrical equipment	9
	3. Electronics including the commercial manufacturing, reconditioning or recycling of computers, televisions and other electronic devices	7
	4. Power stations, substations or switchyards	46
	Total	66

C. Explosives and ordinances production, storage and use	1. Explosive or ordinance production, maintenance, dismantling, disposal, bulk storage or re-packaging	5
	2. Gun clubs or rifle ranges, including clay targets clubs that use lead munitions outdoors	8
	3. Training areas set aside exclusively or primarily for the detonation of explosive ammunition	8
	Total	21

D. Metal extraction, refining and reprocessing, storage and use	1. Abrasive blasting including abrasive blast cleaning (excluding cleaning carried out in fully enclosed booths) or the disposal of abrasive blasting material	1
	2. Foundry operations including the commercial production of metal products by injecting or pouring molten metal into moulds	6
	3. Metal treatment or coating including polishing, anodising, galvanising, pickling, electroplating, or heat treatment or finishing using cyanide compounds	41
	4. Metalliferous ore processing including the chemical or physical extraction of metals, including smelting, refining, fusing or refining metals	12
	5. Engineering workshops with metal fabrication	100
	Total	160

E. Mineral extraction, refining and reprocessing, storage and use	1. Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition	20
	2. Asphalt or bitumen manufacture or bulk storage (excluding single-use sites used by a mobile asphalt plant)	17
	3. Cement or lime manufacture using a kiln including the storage of wastes from the manufacturing process	3
	4. Commercial concrete manufacture or commercial cement storage	19
	5. Coal or coke yards	0
	6. Hydrocarbon exploration or production including well sites or flare pits	2
	7. Mining industries (excluding gravel extraction) including exposure of faces or release of groundwater containing hazardous contaminants, or the storage of hazardous wastes including waste dumps or dam tailings	6
	Total	67

F. Vehicle refuelling, service and repair	1. Airports including fuel storage, workshops, washdown areas, or fire practice areas	5
	2. Brake lining manufacturers, repairers or recyclers	1
	3. Engine reconditioning workshops	7
	4. Motor vehicle workshops	373
	5. Port activities including dry docks or marine vessel maintenance facilities	1
	6. Railway yards including goods-handling yards, workshops, refuelling facilities or maintenance areas	17
	7. Service stations including retail or commercial refuelling facilities	309
	8. Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances	34
	Total	747

G. Cemeteries and waste recycling, treatment and disposal	1. Cemeteries	27
	2. Drum or tank reconditioning or recycling	8
	3. Landfill sites	167
	4. Scrap yards including automotive dismantling, wrecking or scrap metal yards	63
	5. Waste disposal to land (excluding where biosolids have been used as soil conditioners)	9
	6. Waste recycling or waste or wastewater treatment	37
	Total	311

H. Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment	6
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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	26
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