

CSNDC Condition 59, Assessment of High-Risk Sites

Resource Consent CRC214226

23-Mar-2023
CSNDC Condition 59

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Resource Consent CRC214226

Client: Christchurch City Council

Co No.: N/A

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23-Mar-2023

Job No.: 60649177

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Quality Information

Document CSNDC Condition 59, Assessment of High-Risk Sites
Ref 60649177
Date 23-Mar-2023
Originator Ryan Lill
Checker/s Simon Hay
Verifier/s Terry Widdowson

Revision History




Rev	Revision Date	Details	Approved	
			Name/Position	Signature
0	9-Dec-2022	Final	Simon Hay Principal Environmental Scientist	
1	14-Dec-2022	Final, Revision 1	Simon Hay Principal Environmental Scientist	
2	17-Feb-2023	Final, Revision 2	Simon Hay Principal Environmental Scientist	
3	22-Mar-2023	Final, Revision 3	Simon Hay Principal Environmental Scientist	

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Executive Summary

AECOM New Zealand Limited (AECOM) was engaged by Christchurch City Council (CCC) to undertake a desktop assessment of four stormwater catchments that are non-compliant with Condition 59 of the Comprehensive Stormwater Network Discharge Consent (CSNDC), CRC214226. The four catchments are Heathcote, Curletts, Addington and Nottingham.

The following scope of work was completed:

- Review of potentially contaminating activities included on the Environment Canterbury (ECan) Listed Land Use Register (LLUR). The LLUR is based on the Ministry for the Environment (2011) Hazardous Activities and Industries List (HAIL).
- Review of CSNDC Schedule 1 sites (high-risk potentially contaminated sites that are excluded from the CSNDC and require a separate consent from ECan).
- Review of ECan discharge consents. Sites with ECan discharge consents are not authorised under the CSNDC.
- Identify potential 'high-risk' sites in each catchment.

A high-risk site was defined as:

A site that has potential to discharge contaminants to stormwater at concentrations that could result in exceedance of the Attribute Target Levels (ATL).

Sites considered potentially 'high risk' were those with sources of copper and/or zinc (and TSS for the Curletts catchment), as these contaminants exceeded the ATLs.

For each catchment, the number of high risk sites was:

- Heathcote catchment – 8 sites.
- Curletts catchment – 25 sites.
- Addington catchment – 16 sites.
- Nottingham catchment – 1 site.

The findings of the assessment should be considered in the context of other more obvious and widespread sources of copper and zinc within each catchment.

All four catchments are located within suburban Christchurch. Copper and zinc, which are responsible for the ATL exceedances, are present within motor vehicle brake pads (copper) and galvanised cladding on roofs of buildings (zinc). The widespread distribution of motor vehicles and metal roofs within each catchment is likely a major contributor to the copper and zinc loading within stormwater. The cumulative loading of copper and zinc from the road network and the built environment is likely to significantly exceed the combined loading from the high-risk sites identified in this assessment.

Recommendations for further investigation comprised:

- Passive inspection of the sites (i.e., completing observations from public areas) to note site layout, operations, type of ground cover, proximity to stormwater drains, etc.
- Spatial mapping of sites within each catchment to understand distribution and potential cumulative effects from grouping of sites.
- Identification of galvanised roofing on high-risk sites as an additional and potentially more likely source of zinc.

1.0 Introduction

AECOM New Zealand Limited (AECOM) was engaged by Christchurch City Council (CCC) to undertake a desktop assessment of four stormwater catchments that are non-compliant with Condition 59 of the Comprehensive Stormwater Network Discharge Consent (CSNDC), CRC214226.

The CSNDC requires monitoring of surface water to assess whether attribute target levels (ATL) specified in the consent are being met. Condition 59 of the CSNDC requires that exceedances of the ATL are investigated to determine if they are due to stormwater discharges authorised under the CSNDC.

Monitoring of stormwater catchments within the CCC boundaries identified 32 sites with exceedances of at least one ATL. CCC has initially prioritised four catchments for further investigation. The four sites, associated catchments and ATL exceedances are summarised in **Table 1**. The four catchment boundaries are presented in **Figures 1 to 4, Appendix A**.

Table 1 Monitoring Sites, Prioritised Catchments and ATL Exceedances

Site	Catchment	ATL Exceedance
Ōpāwaho-Heathcote River at Ferry Road Bridge (HEATH01)	Heathcote	Dissolved copper: limit exceeded Dissolved zinc: statistically significant increase
Curletts Stream at Motorway (HEATH14)	Curletts	Dissolved copper: limit exceeded and statistically significant increase Dissolved zinc: limit exceeded and statistically significant increase Total suspended solids (TSS): statistically significant increase
Addington Brook (AVON09)	Addington	Dissolved copper: limit exceeded Dissolved zinc: limit exceeded and statistically significant increase
Nottingham Stream at Candys Road (HALS03)	Nottingham	Dissolved copper: limit exceeded Dissolved zinc: limit exceeded and statistically significant increase

1.1 Objective

The CCC Statement of Work, September 2022, states that the objective of this project *'is to provide information on high-risk sites within the four priority catchments, to identify sites that should be considered for water quality site investigations.'* This is the basis for the work undertaken by AECOM and presented in this report.

1.2 Scope of Works

The following scope of work was completed:

- Review of the Environment Canterbury (ECan) Listed Land Use Register (LLUR) which identifies sites where potentially contaminating activities have been, are being, or are likely to have been undertaken. The LLUR is based on the Ministry for the Environment (2011) Hazardous Activities and Industries List (HAIL).
- Review of the August 2022 version of the CSNDC Schedule 1 list for each catchment. Schedule 1 sites excluded from the CSNDC and require a separate consent from ECan.
- Review of ECan discharge consents within each of the four catchments. Sites with ECan discharge consents are not authorised under the CSNDC.
- Identify potential 'high-risk' sites in each catchment (further detailed in Section 4.2).
- Presentation of the findings.

The methodology for the above scope of work is described in **Section 2.0**.

2.0 Methodology

2.1 Desktop Assessment

The assessment of the four catchments was completed using ArcGIS Enterprise. The following spatial data was uploaded to ArcGIS and reviewed to identify HAIL sites, CSNDC Schedule 1 sites and ECan consented discharges:

- ECan secured LLUR Map Service - agreement provided by ECan to access database.
- CCC stormwater sub-catchment area shapefiles, provided by CCC on 11 October 2022 for the Addington, Curletts, Heathcote and Nottingham catchments.
- ECan 'Resource Consents Active' layer – accessed from Canterbury Maps and downloaded 28 September 2022. The data was sorted to identify only those consents authorising the discharge of stormwater to land or water.
- CCC three waters stormwater layer 'SwBasin' - accessed from CCC 3-waters Network Asset Map. Data downloaded 23 March 2021.
- Information relating to each identified HAIL site, Schedule 1 site and ECan discharge consent was extracted from the above ArcGIS layers and tabulated (presented in **Tables A to D, Appendix B**).

2.2 High Risk Classification Criteria

For this assessment, the definition of a high-risk site is:

A site that has potential to discharge contaminants to stormwater at concentrations that could result in exceedance of the ATL.

The sites identified in the desktop information review were screened for potential 'high risk' sites that could be sources of copper and/or zinc (and TSS for the Curletts catchment).

A site was deemed to be 'high risk' if one of the following was applicable:

1. The site was a confirmed HAIL site, and all the following were true:
 - The HAIL activity was currently occurring, or it was not known to have ceased.
 - The contaminants associated with the HAIL activity¹ included copper and zinc (and/or TSS for the Curletts catchment).
 - The site was not zoned residential.
 - The site presents a risk in dry weather (i.e., where chemicals were stored, and which could spill/discharge in normal dry conditions).
2. The site has existing CCC audit data suggesting it had previously been considered high risk by CCC.
3. The site was listed in Schedule 1 of the CSNDC.
4. The site held a current ECan stormwater discharge consent (not related to construction phase or discharge to land).

High risk sites identified for each catchment are presented in **Tables A to D, Appendix B**.

¹ As noted on the Ministry for the Environment (MfE) HAIL contaminants list in **Attachment C**.

3.0 Summary of Results

A total of 50 sites were identified as high risk following the assessment process summarised in **Section 2.2**. A summary of the high-risk sites for each of the four priority catchments is presented in **Sections 3.1 to 3.4**.

3.1 Heathcote Catchment

A total of eight sites were identified as high risk within the Heathcote catchment:

- Six sites were classed as high risk due to reported HAIL category A10 (pesticide use on a commercial scale). The sites were subject to horticultural activities.
- Two sites had an ECan discharge consents, both sites were commercial/industrial land use.

3.2 Curletts Catchment

A total of 25 sites were identified as high risk within the Curletts catchment. All were zoned commercial/industrial, of which:

- Nine sites were classed as high risk due to reported HAIL sites, as follows:
 - One site reported HAIL category A18 (commercial preparation and storage of treated timber).
 - Four sites reported HAIL category D3 (the treatment and/or coating of metal products).
 - Two sites reported HAIL category A17 (storage tanks or drums for fuel, chemicals or liquid waste).
 - One site reported HAIL category F3 (engineering reconditioning workshops).
 - One site reported HAIL category D5 (engineering workshops with metal fabrication).
- Fifteen sites had been subject to CCC audits.
 - Two sites were HAIL category D5 (Engineering workshops with metal fabrication).
 - Nine sites were HAIL category A17 (storage tanks or drums for fuel, chemicals or liquid waste).
- Two sites were classed as high risk for being listed in CSNDC Schedule 1.

3.3 Addington Catchment

A total of 16 sites were identified as high risk within the Addington catchment:

- Fourteen sites were classed as high-risk due to reported HAIL sites, as follows:
 - Five sites reported HAIL category F3² (engineering reconditioning workshops).
 - Three sites reported HAIL category A17² (storage tanks or drums for fuel, chemicals or liquid waste).
 - Two sites reported HAIL category A10 (pesticide use on a commercial scale).
 - One site reported HAIL category A18 (commercial preparation and storage of treated timber).
 - Two sites reported HAIL category D3 (the treatment and/or coating of metal products).
 - One site reported HAIL category D5 (engineering workshops with metal fabrication).
- Two sites had an ECan discharge consent all of which were HAIL category A17 (storage tanks or drums for fuel, chemicals or liquid waste).

² One site reported F3 and A17.

3.4 Nottingham Catchment

One site was identified as high-risk within the Nottingham catchment. The site operates as a service station and motor vehicle workshop with HAIL categories A17, F3 and 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).

3.5 Closing Comments

The CCC Statement of Work, September 2022, states that the objective of this project *'is to provide information on high-risk sites within the four priority catchments, to identify sites that should be considered for water quality site investigations.'*

This qualitative assessment has identified high risk sites that could be a source of copper and zinc which are contributing to the exceedance of ATLs. The findings of this assessment should be considered in the context of other more obvious and widespread sources of copper and zinc within each catchment.

All four catchments are located within an urban environment (Christchurch City). Copper and zinc, which are responsible for the ATL exceedances, are present within motor vehicle brake pads and tyres cladding on roofs of buildings. The widespread distribution of motor vehicles and metal roofs within each catchment is likely a major contributor to the copper and zinc loading within stormwater. The cumulative loading of copper and zinc from the road network and the built environment is likely to significantly exceed the combined loading from the high-risk sites identified in this assessment.

To allow more definitive assessment of the significance of the high-risk sites in contributing to ATL exceedances, further investigation is required. These investigations could comprise:

- Passive inspection of the sites (i.e., completing observations from public areas) to note site layout, operations, type of ground cover, proximity to stormwater drains, etc.
- Spatial mapping of sites within each catchment to understand distribution and potential cumulative effects from groupings of sites.
- Identification of galvanised roofing on high-risk sites as an additional and potentially more likely source of zinc.

4.0 Limitations

All information in this Report are provided strictly in accordance with and subject to the following limitations and recommendations:

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- b) The findings in this report are based solely on the information reviewed as stated in this Report.
- c) The findings in this report are based solely on the scope of work agreed between AECOM and Christchurch City Council and described in **Section 1** of this Report.
- d) This Report has been prepared for the sole benefit of Christchurch City Council and neither the whole nor any part of this Report may be used or relied upon by any party other than Christchurch City Council.
- e) This Report is dated 4 November 2022. AECOM accepts no responsibility for any events arising from any changes in site conditions or in the information reviewed that have occurred after the completion of the report.
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Appendix A

Catchment Figures



PROJECT

CSNDC CONDITION 59 HIGH RISK SITES ANALYSIS

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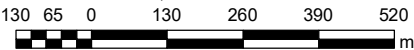
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Map features depicted in terms of NZTM 2000 projection.

Data Sources:
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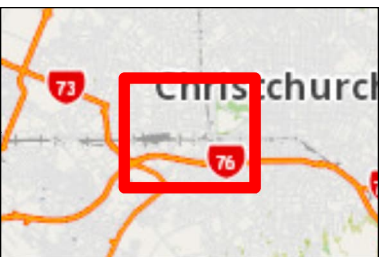
PROJECT MANAGEMENT

Approved	LR	Date	23/3/2023
Checked	LR	Date	23/3/2023
Designed	BC	Date	23/3/2023
Drawn	BC	Date	23/3/2023

ISSUE/REVISION

A	23/3/2023	FINAL
Rev	Date	Description

KEY PLAN



PROJECT NUMBER

60649117

SHEET TITLE









ADDINGTON CATCHMENT - HIGH RISK SITES

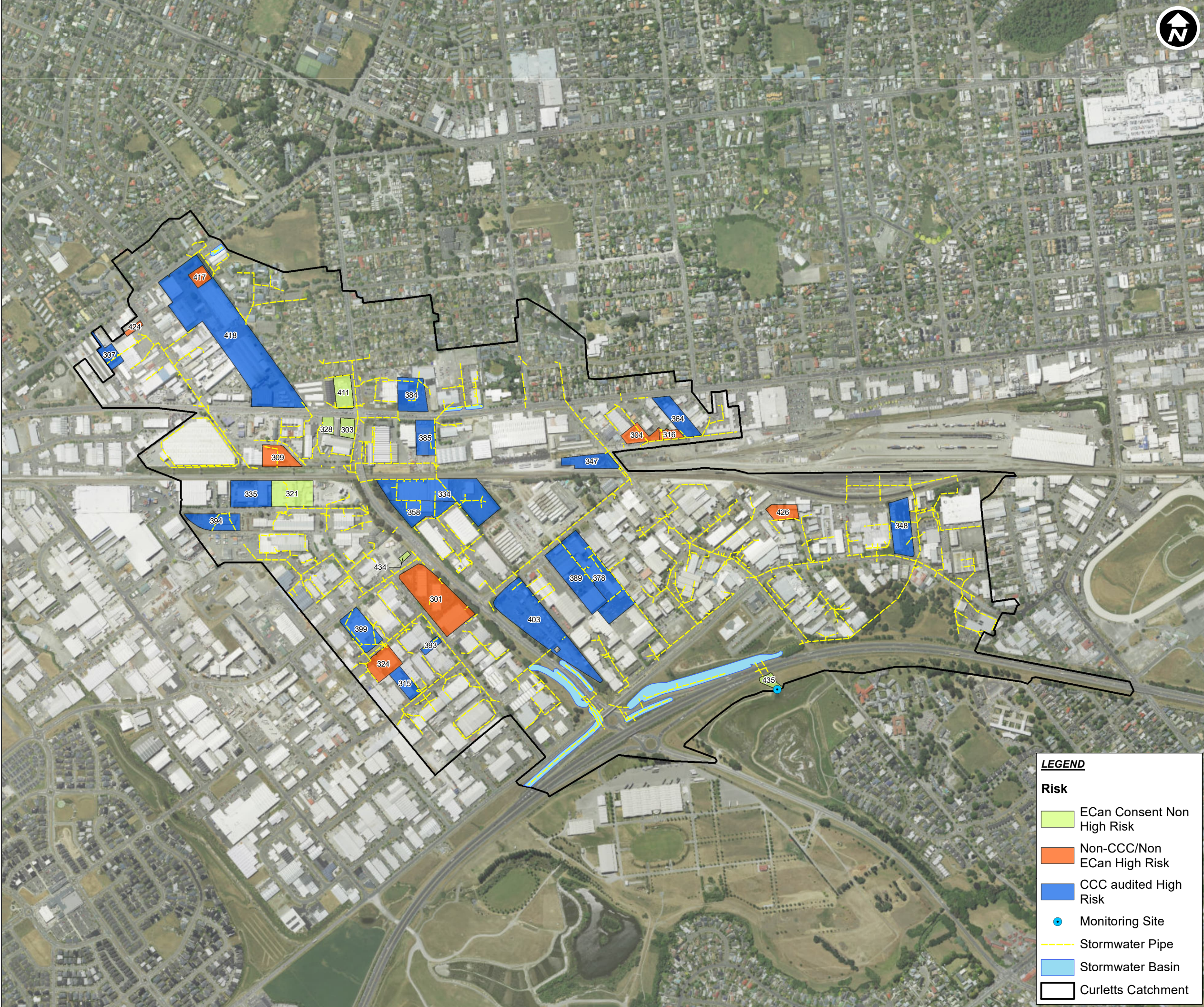
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FIGURE 1

LEGEND

Risk

-  ECan Consent Non High Risk
-  Non-CCC/Non ECan High Risk
-  CCC audited High Risk
-  ECan Consent High Risk
-  Monitoring Site
-  Stormwater Pipe
-  Stormwater Basin
-  Addington Catchment



PROJECT
CSNDC CONDITION 59 HIGH
RISK SITES ANALYSIS

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Data Sources:
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PROJECT MANAGEMENT

Approved	LR	Date	23/3/2023
Checked	LR	Date	23/3/2023
Designed	BC	Date	23/3/2023
Drawn	BC	Date	23/3/2023

ISSUE/REVISION

A	23/3/2023	FINAL
Rev	Date	Description

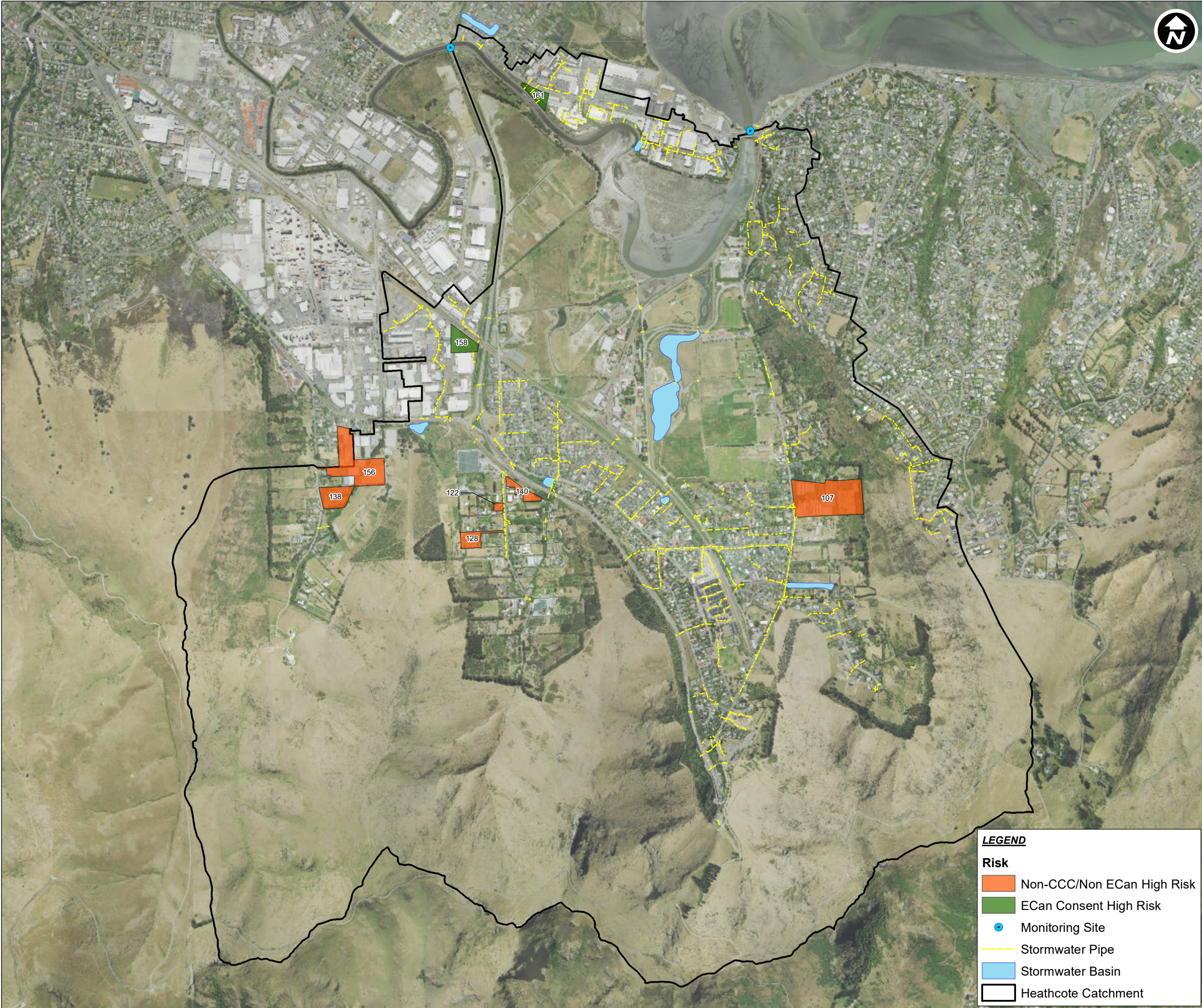


PROJECT NUMBER
60649117
SHEET TITLE
CURLETTS CATCHMENT -
HIGH RISK SITES
MAP NUMBER
FIGURE 2

LEGEND

Risk

- ECan Consent Non High Risk
- Non-CCC/Non ECan High Risk
- CCC audited High Risk
- Monitoring Site
- Stormwater Pipe
- Stormwater Basin
- Curletts Catchment



LEGEND

Risk

Non-CCC/Non ECan High Risk

ECan Consent High Risk

Monitoring Site

Stormwater Pipe

Stormwater Basin

Heathcote Catchment



PROJECT

CSNDC CONDITION 59 HIGH RISK SITES ANALYSIS

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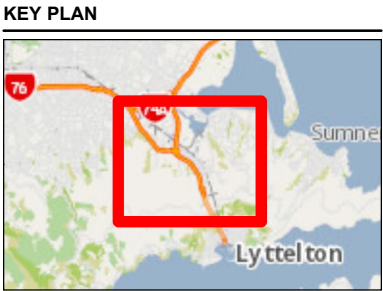
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Data Sources:
Cadastral Boundaries – LINZ NZ Cadastral Dataset

PROJECT MANAGEMENT			
Approved	LR	Date	23/3/2023
Checked	LR	Date	23/3/2023
Designed	BC	Date	23/3/2023
Drawn	BC	Date	23/3/2023

ISSUE/REVISION		
A	23/3/2023	FINAL
Rev	Date	Description



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60649117

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HEATHCOTE CATCHMENT - HIGH RISK SITES

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FIGURE 3

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LEGEND

Risk

Non-CCC/Non ECan High Risk


Monitoring Site

Stormwater Pipe

Stormwater Basin

Nottingham Catchment

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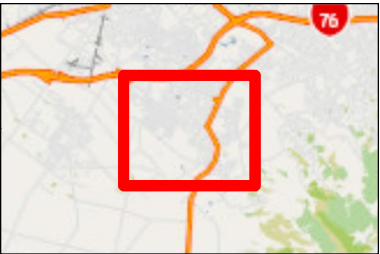
PROJECT MANAGEMENT

Approved	LR	Date	23/3/2023
Checked	LR	Date	23/3/2023
Designed	BC	Date	23/3/2023
Drawn	BC	Date	23/3/2023

ISSUE/REVISION

A	23/3/2023	FINAL
Rev	Date	Description

KEY PLAN



PROJECT NUMBER

60649117

SHEET TITLE

NOTTINGHAM CATCHMENT - HIGH RISK SITES

MAP NUMBER

FIGURE 4

Appendix B

Catchment Data Tables

Table A - Heathcote Catchment - All Sites

Site ID	Address	Business/ Holder Name	NZTM - N	NZTM - E	Activity type	HAIL Classification	Relevant CoPCs (MfE HAIL)	Active HAIL?	CCC		Ecan	Risk Rating
									CSNDC Schedule 1	CCC Audit?	ECan Consent (no or CRC number)	
107	116 Bridle Path Road, Heathcote, Christchurch	Aromaunga Flowers	1576722	5175412	Horticultural	A10 - Persistent pesticide bulk storage or use	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk
112	14B Horotane Valley Road	n/a	1575310	5175414	Residential	A10 - Persistent pesticide bulk storage or use	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk
128	26 Horotane Valley Road	n/a	1575176	5175224	Horticultural	A10 - Persistent pesticide bulk storage or use	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk
138	41 Avoca Valley Road	n/a	1574495	5175406	Horticultural	A10 - Persistent pesticide bulk storage or use	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk
140	5 & 6 Horotane Valley Road	n/a	1575328	5175525	Horticultural	A10 - Persistent pesticide bulk storage or use	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk
156	8 Vega Place and 33A Avoca Valley Road	Zealandia Horticulture	1574613	5175644	Horticultural	A10 - Persistent pesticide bulk storage or use	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk
158	9 Mary Muller Drive, Christchurch	On Gas (Vector Limited)	1575126	5176153	Industrial	G3 - landfill sites	Copper, Zinc	NA	No	No	CRC182554 (Discharge contaminants to land from closed landfill)	ECan Consent High Risk
											CRC215092 (Stormwater from roof and hardstand areas to Avoca Diversion Drain)	
161	950 Ferry Road, Woolston	Clarkmead Properties Limited	1575481	5177331	Commercial	G3 - landfill sites	Copper, Zinc	NA	No	No	CRC144244 (Stormwater from roof and hardstand to CCC stormwater drain)	ECan Consent High Risk

Key:
Non-CCC/Non ECan High Risk: Orange
CCC audited Non High Risk: Light Blue
CCC audited High Risk: Blue
ECan Consent Non High Risk: Light Green
ECan Consent High Risk: Olive

Table B - Curletts Catchment - All Sites

Site ID	Address	Business/ Holder Name	NZTM - N	NZTM - E	Activity type	HAIL Classification	Relevant CoPCs (MfE HAIL)	Active HAIL?	CCC		Ecan	Risk Rating
									CSNDC	CCC Audit?	ECan Consent (no or CRC)	
301	1 Treffers Road, Christchurch	CityFitness and others	1565313	5178682	Commercial	D5 - Engineering workshops with metal fabrication	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk
303	1/455 Blenheim Road, Christchurch	n/a	1565088	5179171	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Ceased 1994	No	No	CRC200673 (Stormwater-commercial roof area to land and CCC system when capacity exceeded)	ECan Consent Non High Risk
304	10,12 Penn Place, Christchurch	Goldpine Industries Limited	1566004	5179118	Industrial	A18 - Wood treatment or preservation and bulk storage of treated timber	Copper	Unknown	No	No	No	Non-CCC/Non ECan High Risk
307	115A Main South Road, Sockburn, Christchurch	Taha Auto	1564351	5179395	Industrial	G4 - Scrap yards	Copper, Zinc	Current	No	yes, audited risk status Extreme	No	CCC audited High Risk
309	12-16 Cable St, Christchurch	Collins Carriers Ltd / Rooney Holdings Limited	1564869	5179094	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Ceased 1994	No	Yes, audited risk status high, mitigated risk status low	No	Non-CCC/Non ECan High Risk
315	14 Sonter Road, Sockburn	New Zealand Car Parts	1565242	5178406	Industrial	G4 - Scrap yards	Copper, Zinc	Current	No	yes, audited risk status extreme	No	CCC audited High Risk
316	15 Penn Place, Riccarton, Christchurch	R.J Kingston Ltd	1566044	5179156	Industrial	D3 - Metal treatment or coating	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
321	18 McAlpine Street, Wigram	Allied Concrete Limited	1564887	5178943	Industrial	E4 - Concrete manufacture and bulk cement storage	NA	Current	Yes	No	CRC181624 (Stormwater - roofs, road, hardstand, previous areas to land and CCC system)	ECan Consent Non High Risk
324	19 Kotzikas Place, Wigram, Christchurch	Warner Fencing and Gates	1565168	5178412	Industrial	D3 - Metal treatment or coating	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
328	2/455 Blenheim Road, Christchurch	n/a	1565023	5179167	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Ceased 2011	No	No	CRC200673 (Stormwater-commercial roof area to land and CCC system when capacity exceeded)	ECan Consent Non High Risk
334	22 Baigent Way, Middleton, Christchurch	Owens Transport and Halls Refrigerated Transport	1565319	5178942	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Current	No	yes, audited risk status high	No	CCC audited High Risk
335	22 McAlpine St, Wigram	n/a n/a	1564775	5178938	Industrial	D5 - Engineering workshops with metal fabrication F6 - Railway yards	Copper Copper, Zinc	Current Ceased 1984	No	yes, audited risk status high	No	CCC audited High Risk
347	257 Annex Road, Middleton, Christchurch	Annex Road Metals Leopard Coachlines Limited	1565883	5179058	Industrial	E1 - Asbestos products manufacture or disposal G4 - Scrap yards A17 - Storage tanks or drums for fuel, chemicals or liquid waste	NA Copper, Zinc Copper, Zinc	Ceased 2012 Unknown Current	No	yes, audited risk status extreme, mitigated risk status medium	No	CCC audited High Risk
348	26 Birmingham Drive, Middleton, Christchurch	Leopard Coachlines Limited	1566799	5178772	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Current	No	yes, audited risk status high, mitigated risk status medium	No	CCC audited High Risk
358	31 Baigent Way, Middleton, Christchurch	Owens Transport and Halls Refrigerated Transport	1565319	5178942	Industrial	F8 - Transport depots	Copper, Zinc	Current	No	yes, audited risk status high, mitiagted risk status medium	No	CCC audited High Risk
364	333 Blenheim Road, Christchurch	Dominion Trading Metal Buyers - Scrap Yards	1566096	5179203	Industrial	G4 - Scrap yards	Copper, Zinc	Current	No	yes, audited risk extreme	No	CCC audited High Risk
378	39 Lunns Road, Middleton	AW Fraser Ltd (Nor West Arch No 2 Limited.- consent holder)	1565766	5178820	Industrial	D2 - Foundry operations	Copper, Zinc	Current	No	yes, audited risk status extreme	CRC223517 (Construction phase stormwater to land)	CCC audited High Risk
384	412 Blenheim Rd (Cnr Curletts Rd), Christchurch	Meadow Fresh Limited	1565254	5179263	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Ceased 1995 Ceased 2012 Ceased 2013	Yes	No	No	CCC audited High Risk
385	421 Blenheim Rd, Christchurch	Southern International Ltd	1565326	5179118	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Ceased 1998	No	yes, audited risk status Extreme	No	CCC audited High Risk
389	45-53 Lunns Road, Upper Riccarton, Christchurch	Mercer Stainless Steel Ltd	1565790	5178715	Industrial	D5 - Engineering workshops with metal fabrication A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper Copper, Zinc	Ceased 1999 Current	No	Yes, audited risk status high	No	CCC audited High Risk
393	48-50 TREFFERS ROAD	n/a	1565362	5178481	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Unknown	No	yes, audited risk status high	No	CCC audited High Risk
394	49 Mcalpine Street, Middleton-Sockburn	Transpacific Recycling	1564711	5178876	Industrial	G6 - Waste recycling or waste or wastewater treatment	Copper, Zinc	Current	Yes	No	No	CCC audited High Risk
399	50-58 Parkhouse Road, Sockburn, Christchurch	United Fisheries Ltd	1565167	5178566	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste G4 - Scrap yards	Copper, Zinc Copper, Zinc	Current Current	No	yes, audited risk status extreme, mitigated risk status medium	No	CCC audited High Risk
403	57 Lunns Road, Middleton	Mobil Lunns Road Truck Stop	1565575	5178623	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste F8 - Transport depots F7 - Service stations	Copper, Zinc Copper, Zinc NA	Current Unknown Ceased 2008	No	yes, audited risk status high, mitigated risk status low AND site 2106 - audited risk status extreme	No	CCC audited High Risk
411	68 Curletts Rd (Cnr Blenheim Rd), Christchurch	Shell Curletts Rd	1565101	5179277	Industrial	F7 - Service stations	NA	Current	No	No	CRC161831 (Stormwater - roof, pervious and hardstan areas to CCC system)	ECan Consent Non High Risk
417	75 Main South Road, Sockburn	General Cable - Main Processing Buildings	1564619	5179645	Industrial	D3 - Metal treatment or coating	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
418	75-89 Main South Road, Riccarton, Christchurch	BICC Cables New Zealand Ltd	1564614	5179604	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste B3 - Electronics	Copper, Zinc Copper, Zinc	Ceased 1996 Current	No	Yes, audited risk status high	No	CCC audited High Risk
424	8 Watts Rd, Upper Riccarton	Continental Panel Repairs (CHCH) Ltd	1564459	5179473	Industrial	F3 - Engine reconditioning workshops	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
426	9 (Unit 11) Craft Place, Middleton	Invensys-APV NZ Limited	1566428	5178899	Industrial	D3 - Metal treatment or coating	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
434	Cnr Curletts & Parkhouse Roads, CHRISTCHURCH	Orion New Zealand Limited	1565261	5178768	Industrial	NA	-	Unknown	No	No	CRC961469.1 (Stromwater - transformer bunds to land and to CCC Curletts utility waterway when capacity exceeded)	ECan Consent Non High Risk
435	Curletts Stream, Hillmorton	CCC	1566407	5178361	Industrial	NA	-	Unknown	No	No	CRC190719 (land drainage water from stormwater basins to stormwater system and curletts stream)	ECan Consent Non High Risk

Key:
Non-CCC/Non ECan High Risk: Orange
CCC audited Non High Risk: Light Blue
CCC audited High Risk: Blue
ECan Consent Non High Risk: Light Green
ECan Consent High Risk: Olive

Table C - Addington Catchment - All Sites

Site ID	Address	Business/ Holder Name	NZTM - N	NZTM - E	Activity type	HAIL Classification	Relevant CoPCs (MfE HAIL)	Active HAIL?	CCC		Ecan	Risk Rating
									CSNDC Schedule 1	CCC Audit?	ECan Consent (no or CRC number)	
505	121-123 Blenheim Rd, Christchurch	AB Kennedy Ltd	1567672	5179411	Commercial	F3 - Engine reconditioning workshops	Copper, Zinc	Unknown	No	No	No	Non-CCC/Non ECan High Risk
512	14-20 Moorhouse Avenue, Christchurch	Temperature Controlled Distribution Ltd (TCD) Consent holder - SSF One Limited	1568760	5179077	Commercial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Ceased 1994	No	No	CRC145004 (Stormwater from commercial roof and hardstand areas to Addington main drain via CCC system)	ECan Consent Non High Risk
516	15 Matipo St., Christchurch	Part of Goldpine Industries	1567413	5179290	Commercial	A18 - Wood treatment or preservation and bulk storage of treated timber	Copper	current	No	No	No	Non-CCC/Non ECan High Risk
520	16-18 Lowe Street, Riccarton, Christchurch	Matipo Garage	1568397	5179371	Commercial/Industrial	F3 - Engine reconditioning workshops	Copper, Zinc	current	No	No	No	Non-CCC/Non ECan High Risk
529	2 Dalgety Street, Riccarton, Christchurch	Thorpe Engineering	1567763	5179316	Commercial/Industrial	F3 - Engine reconditioning workshops	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
542	297 Lincoln Road, Addington, Christchurch	BB Auto Electrical	1568605	5178744	Commercial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Ceased 1994	No	No	No	Non-CCC/Non ECan High Risk
						F3 - Engine reconditioning workshops	Copper, Zinc	Unknown				
543	30 Clarence St, Addington	M. O'Donoghue	1568414	5178879	Industrial	D3 - Metal treatment or coating	Copper, Zinc	Unknown	No	No	No	Non-CCC/Non ECan High Risk
544	30 Lowe St, Riccarton, Christchurch	Central Auto Wreckers	1568342	5179430	Industrial	F3 - Engine reconditioning workshops	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
549	32 Clarence St., Addington	Mainland Metals Ltd.	1568401	5178894	Industrial	D3 - Metal treatment or coating	Copper, Zinc	Unknown	No	No	No	Non-CCC/Non ECan High Risk
						G4 - Scrap yards	Copper, Zinc	Current				
551	33 Princess Street, Addington	Transpower, Addington Warehouse	1567880	5179263	Industrial	B4 - Power stations, substations or switchyards	Copper, Zinc	Ceased 2011	No	No	CRC176398 (Stormwater from transformer substation to CCC system at Princess St)	ECan Consent Non High Risk
553	335 Lincoln Rd., Christchurch	Formerly Hannah Motor Services and Diamond Dismantlers Consent holder - Cadaques Investments Limited	1568757	5178867	Commercial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Ceased 1999	No	No	CRC122494 (Stormwater fromm roof, garden, carpark and hardstand area to Avon River via CCC system)	ECan Consent Non High Risk
						F3 - Engine reconditioning workshops	Copper, Zinc	Ceased 1999				
						G4 - Scrap yards	Copper, Zinc	Unknown				
554	35 Princess St, Riccarton, Christchurch	Transpower NZ Ltd - Addington Electricity Substation	1567912	5179264	Industrial/Substation	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Current	No	No	CRC183054 (Stormwater from road, hardstand and previous areas at substation site to CCC system) and CRC183053 (Construction phase stormwater and dewatering)	ECan Consent High Risk
						B4 - Power stations, substations or switchyards	Copper, Zinc	Current				
559	38 Hands Road, Middleton	Evco Ltd	1567131	5178875	Commercial/Industrial	D3 - Metal treatment or coating	Copper, Zinc	Current	No	Yes, audited risk status high, mitigated risk low	No	CCC audited Non High Risk
		G Milne Collision Repair Centre Gordon Milne Collision Repair				F4 - Motor vehicle workshops	Copper, Zinc	Current				
564	44 Clarence Street South, Addington	Shape Technologies Ltd	1568364	5178989	Commercial/Industrial	D3 - Metal treatment or coating	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
						A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Current				
567	47-51 Whiteleigh Ave, Riccarton	Addington Acomodation Park Ltd. Consent holder - Park Lane Retirement Village Limited	1568135	5178762	Residential	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Current	No	No	CRC173426 (Stormwater from roofs, hardstand, pervious areas and construction phase to land and CCC system when capacity exceeded)	ECan Consent High Risk
571	55 Jack Hinton Drive, Addington	Orangetheory Stadium	1567999	5178715	Commercial	A10 - Persistent pesticide bulk storage or use	Copper	Current	No	No	No	Not High Risk
579	6 Wise Street, Addington	Christchurch Industrial Powder Coaters	1568611	5178815	Industrial/commercial	D3 - Metal treatment or coating	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
584	7 Matipo Street, Middleton, Christchurch (258 Annex Road)	Tranz Rail Middleton Yard Consent holder - KiwiRail Holdings Limited	1566237	5179084	Industrial - railway	A18 - Wood treatment or preservation and bulk storage of treated timber	Copper	Unknown	No	Yes, audited risk status medium, mitigated risk low	CRC168444 (Stormwater from roof area and construction phase stormwater to land) and application in process - CRC230830 (roof stormwater and construction phase stormwater to land)	Non-CCC/Non ECan High Risk
						F6 - Railway yards	Copper, Zinc	Current				
						G3 - Landfill sites	Copper, Zinc	Current				
						A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Current				
600	Cnr. Moorhouse Ave. & Lincoln Rd., Christchurch (399 Lincoln Road)	Mobil Hagley South - Consent holders - Gull New Zealand Limited / Mobil Oil New Zealand Limited / Consent holder - Lumo Digital Outdoor Limited	1569062	5179118	Industrial/commercial	F7 - Service stations	NA	Current	No	No	CRC210193 (Construction phase stormwater to land) and application in process - CRC220026 (Passive discharge) AND CRC221119 (Construction phase stormwater to land)	ECan Consent Non High Risk
606	Princess Street, Riccarton, Christchurch	Skope Industries Ltd	1567574	5179317	Industrial	D5 - Engineering workshops with metal fabrication	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk
609	South Hagley Park	South Hagley Park (A10)	1569065	5179546	Open space	A10 - Persistent pesticide bulk storage or use	Copper	Current	No	No	No	Non-CCC/Non ECan High Risk

Key:
Non-CCC/Non ECan High Risk: Orange
CCC audited Non High Risk: Light Blue
CCC audited High Risk: Blue
ECan Consent Non High Risk: Light Green
ECan Consent High Risk: Olive

Table D - Nottingham Catchment - All Sites

Site ID	Address	Business/ Holder Name	NZTM - N	NZTM - E	Activity type	HAIL Classification	Relevant CoPCs (MfE HAIL)	Active HAIL?	CCC		Ecan	Risk Rating
									CSNDC Schedule 1	CCC Audit?	ECan Consent (no or CRC number)	
705	345 Halswell Road	Nicholl Bros. (Halswell Garage) Ltd	1565219	5174405	Industrial	A17 - Storage tanks or drums for fuel, chemicals or liquid waste	Copper, Zinc	Current	No	No	No	Non-CCC/Non ECan High Risk
						F3 - Engine reconditioning workshops	Copper, Zinc	Current				
						I - any other land	Copper, Zinc	Current				

Key:
Not high risk; White
Non-CCC/Non ECan High Risk: Orange
CCC audited Non High Risk: Light Blue
CCC audited High Risk: Blue
ECan Consent Non High Risk: Light Green
ECan Consent High Risk: Olive

Appendix C

Ministry of the
Environment HAIL
Contaminants List



Hazardous Activities and Industries List (HAIL)

October 2011

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 ordinances production, storage and use

1. Explosive or ordinance 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