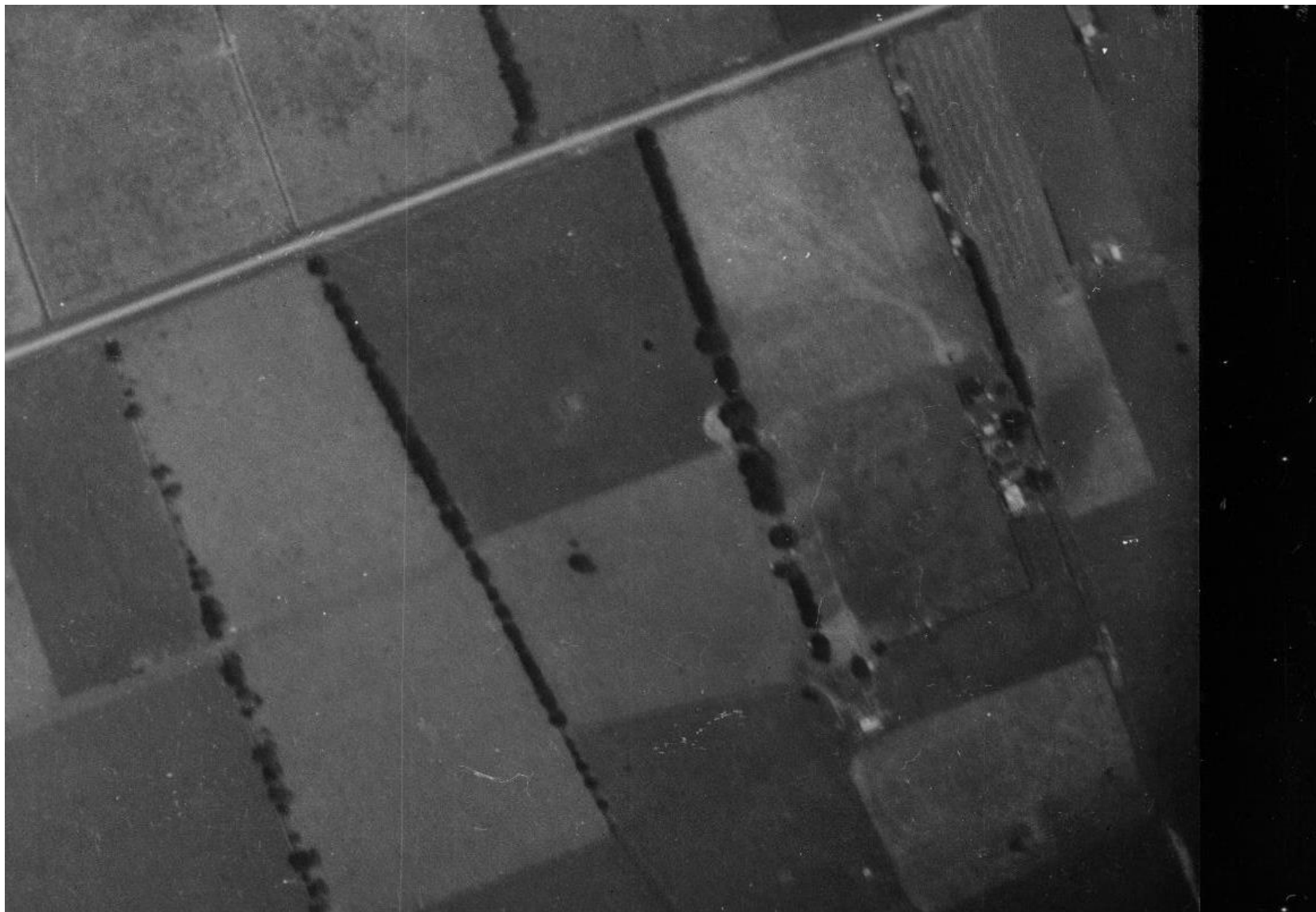


Historical Aerial Photographs

279 Airfield Road
Ardmore

by Focus Environmental Services Limited

1939 Historical Photograph

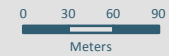


Source: NZ Aerial Mapping



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1959 Historical Photograph



Scale @ A4
= 1:5,000

Date Printed:
4/08/2022



1960 Historical Photograph



Source: NZ Aerial Mapping

1975 Historical Photograph



Source: NZ Aerial Mapping

1981 Historical Photograph



Source: NZ Aerial Mapping

1988 Historical Photograph

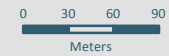


Source: NZ Aerial Mapping



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2001 Historical Photograph



Scale @ A4
= 1:5,000

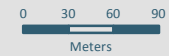
Date Printed:
4/08/2022





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2006 Historical Photograph



Scale @ A4 = 1:5,000

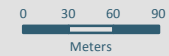
Date Printed: 4/08/2022





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2008 Historical Photograph



Scale @ A4 = 1:5,000

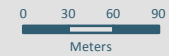
Date Printed: 4/08/2022





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2010 Historical Photograph



Scale @ A4 = 1:5,000

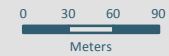
Date Printed: 4/08/2022





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2015 Historical Photograph



Scale @ A4 = 1:5,000

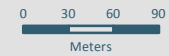
Date Printed: 4/08/2022





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2017 Historical Photograph



Scale @ A4 = 1:5,000

Date Printed: 4/08/2022



Appendix E - Historical Certificate of Title



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Historical Search Copy**




R.W. Muir
Registrar-General
of Land

Constituted as a Record of Title pursuant to Sections 7 and 12 of the Land Transfer Act 2017 - 12 November 2018

Identifier NA128A/553
Land Registration District North Auckland
Date Issued 24 January 2000

Prior References
NA1136/171

Estate Fee Simple
Area 14.4224 hectares more or less
Legal Description Lot 2 Deposited Plan 199521
Original Registered Owners
Airfield Farms Limited

Interests

Subject to a right of way over parts marked M, N and O on DP 199521 created by Conveyance 216692 (R.198/370)
Fencing Agreement in Conveyance 229476 (R.219/434)
Subject to an electric current transmission right (in gross) over parts marked B, C, G, I, J, K and N on DP 199521 in favour of The Auckland Electric Power Board created by Transfer 360785
Subject to an electricity right (in gross) over parts marked A, C, D, H, J and L on DP 199521 in favour of The Auckland Electric Power Board created by Transfer A444444 - 4.2.1970 at 9:00 am
941631.1 Proclamation (NZ Gazette 9 July 1981 No.80 P1899) defining the middle line of Oaonui - Auckland pipeline - 22.1.1981 at 2:33 pm
D472180.2 Consent Notice pursuant to Section 221 (1) Resource Management Act 1991 - 24.1.2000 at 3:01 pm
6397242.1 CAVEAT BY MICHAEL JAMES DRENNAN - 26.4.2005 at 3:49 pm
6420030.1 CAVEAT BY LING ZHANG AND JIONG HAO LIU - 13.5.2005 at 9:00 am
6444378.1 Lapse of Caveat 6397242.1 pursuant to Section 145 Land Transfer Act 1952 - produced 2.6.2005 at 9:00 am and entered 24.6.2005 at 9:01 am
6444378.2 Transfer to Jiong Hao Liu and Ling Ling Zhang - produced 2.6.2005 at 9:00 am and entered 24.6.2005 at 9:01 am
6518773.1 Lapse of Caveat 6420030.1 pursuant to Section 145 Land Transfer Act 1952 - produced 3.8.2005 at 9:00 am and entered 23.8.2005 at 9:01am
6518773.2 Mortgage to ASB Bank Limited - produced 3.8.2005 at 9:00 am and entered 23.8.2005 at 9:01am
6558915.1 Surrender of the right of way created by Conveyance 216692 (R.198/370) - 5.9.2005 at 9:00 am
Subject to a right of way over part marked A on DP 338941 created by Easement Instrument 6558915.2 - 5.9.2005 at 9:00 am
7724579.2 Transmission to Ling Ling Zhang - 22.2.2008 at 9:00 am
8655313.1 Discharge of Mortgage 6518773.2 - 25.2.2011 at 3:54 pm

8655313.2 Transfer to Ling Zhang and Serena Liu - 25.2.2011 at 3:54 pm

10379677.1 Mortgage to Westpac New Zealand Limited - 31.3.2016 at 4:29 pm

11486384.1 Discharge of Mortgage 10379677.1 - 8.7.2019 at 2:28 pm

11486384.2 Mortgage to ANZ Bank New Zealand Limited - 8.7.2019 at 2:28 pm

12519602.1 CAVEAT BY SUNFIELD DEVELOPMENTS LIMITED - 25.7.2022 at 6:44 pm

Reference:

Prior CT: 1136/171

Document No.: D472180.3



LT69

REGISTER**CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT 1952****128A/553**

This Certificate dated the 24th day of January Two Thousand under the seal of the Registrar-General of Land, New Zealand, for the Land Registration District of NORTH AUCKLAND

WITNESSETH that AIRFIELD FARMS LIMITED

is seised of an estate in **fee simple** (subject to such reservations, restrictions, encumbrances and interests as are notified by memorial endorsed hereon) in the land hereinafter described, delineated on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 14.4224 hectares, more or less being **LOT 2 DEPOSITED PLAN 199521**



Subject to a right of way easement over part herein marked M,N,O DP199521 appurtenant to part Allotment 30 Parish of Papakura CT 1194/99 created by Conveyance 216692 (R.198/370)

Fencing agreement in Conveyance 229476 (R.219/434)

Subject to an electric current transmission easement over part herein marked B,C,G,I,J,K,N DP199521 to The Auckland Electric Power Board created by Transfer 360785

Subject to an electricity easement in gross over the part herein marked A,C,D,H,J,L DP 199521 to The Auckland Electric Power Board created by Transfer A444444-4.2.1970 at 9.00

941631.1 Proclamation (NZ Gazette 9 July 1981 No.80 P 1899) defining the middle line of the Oaonui - Auckland pipeline - 22.1.1981 at 2.33

D472180.2 Consent Notice under Section 221(1) Resource Management Act 1991 by The Papakura District Council 24.1.2000 at 3.01

For RGL

128A/553

15 August 2022

Focus Environmental Services
PO Box 11455
AUCKLAND 1542

Attention: Cari Llewellyn

Dear Cari

Site Contamination Enquiry at 279 Airfield Road, Ardmore

This letter is in response to your enquiry requesting available site contamination information within Auckland Council records for the above site. Please note this report does not constitute a site investigation report; such reports are required to be prepared by a (third-party) Suitably Qualified and Experienced Practitioner.

The following details are based on information available to the Contamination, Air & Noise Team in the Resource Consent Department. The details provided may be from former regional council information, as well as property information held by the former district/city councils. For completeness the relevant property file should also be requested to obtain all historical records and reports via 09 3010101 or online at:

<https://www.aucklandcouncil.govt.nz/buying-property/order-property-report/Pages/order-property-file.aspx>.

1. Hazardous Activities and Industries List (HAIL) Information

This list published by the Ministry for the Environment (MfE) comprises activities and industries that are considered likely to cause land contamination as a result of hazardous substance use, storage, and/or disposal.

There is no contamination information within Council records for the site.

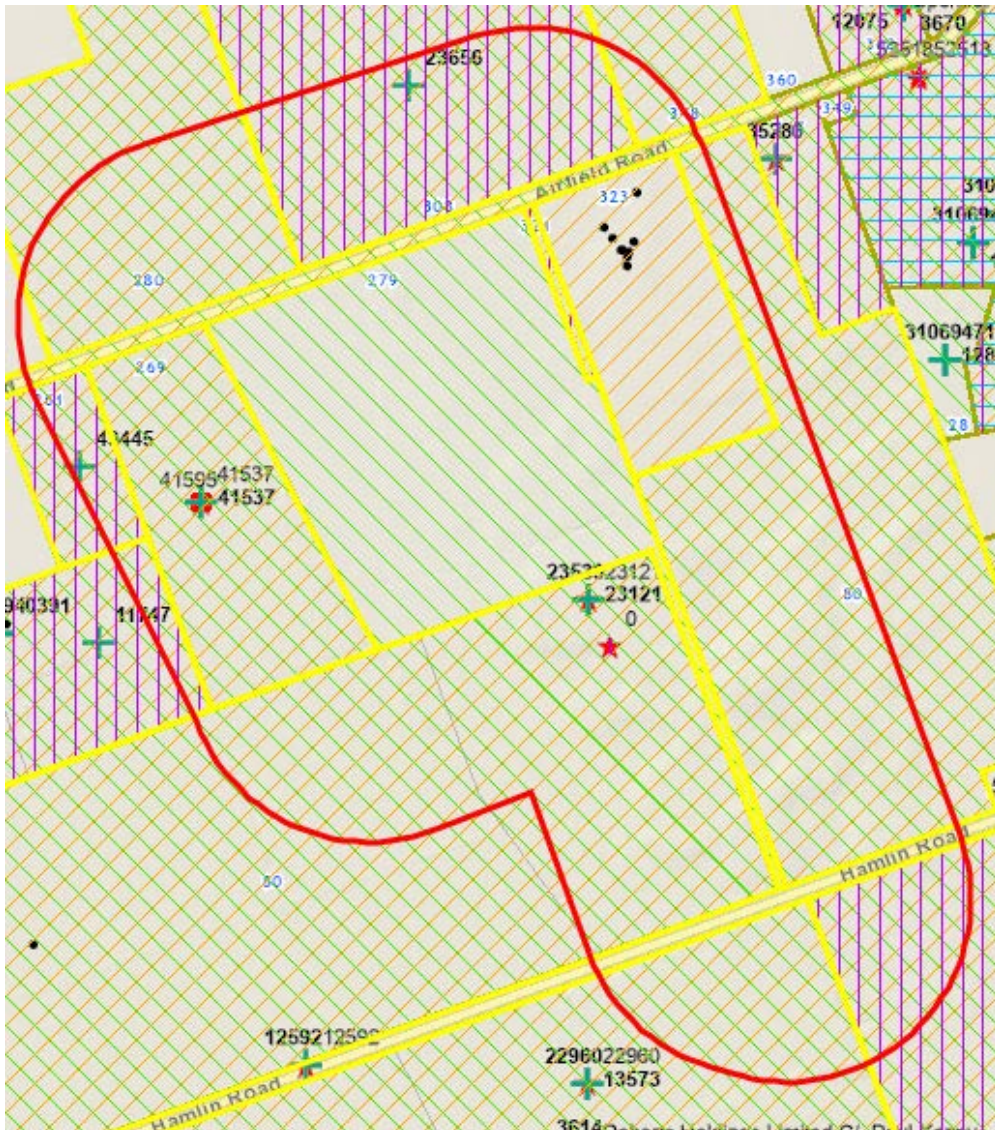
Please note:

- *If you are demolishing any building that may have asbestos containing materials (ACM) in it, you have obligations under the Health and Safety at Work (Asbestos) Regulations 2016 for the management and removal of asbestos, including the need to engage a Competent Asbestos Surveyor to confirm the presence or absence of any ACM.*
- *Paints used on external parts of properties up until the mid-1970's routinely contained lead, a poison and a persistent environmental pollutant. You are advised to ensure that soils affected by old, peeling or flaking paint are assessed in relation to the proposed use of the property, including high risk use by young children.*

2. Consents and Incidents Information (200m radius of the selected site)

The Council database was searched for records of the following activities within approximately 200 metres of the site:

- Pollution Incidents (including air discharges, oil or diesel spills)
- Bores
- Contaminated site and air discharges, and industrial trade process consents
- Closed Landfills
- Air quality permitted activities



Legend:

- | | |
|----------------------------|--|
| All Consents + | Closed Landfill (Auckland Council owned) □ |
| All Applications ■ | Closed Landfill (Privately owned) ■ |
| All Permitted Activities * | |
| All Bores ★ | |

Relevant details of any pollution incidents and consents are appended to this letter (Attachment A). Please refer to the column titled 'Property Address' on the spreadsheet to aid in identifying corresponding data on the map.

While the Auckland Council has carried out the above search using its best practical endeavours, it does not warrant its completeness or accuracy and disclaims any responsibility or liability in respect of the information. If you or any other person wishes to act or to rely on this information, or make any financial commitment based upon it, it is recommended that you seek appropriate technical and/or professional advice.

If you wish to clarify anything in this letter that relates to this site, please contact contaminatedsites@aucklandcouncil.govt.nz. Any follow up requests for information on other sites must go through the online order process.

Should you wish to request any of the files referenced above and/or listed in the attached spreadsheet for viewing, please contact the Auckland Council Call Centre on 301 0101 and note you are requesting former Auckland Regional Council records (the records department requires three working days' notice to ensure the files will be available).

Please note Auckland Council cost recovers officer's time for all site enquiries. As such an invoice for \$128 for the time involved in this enquiry will follow shortly.

Yours Sincerely,

**Contamination, Air and Noise Team
Specialist Unit | Resource Consents
Auckland Council**

Appendix G - Site Inspection Photographs

Site Inspection Photographs

279 Airfield Road
Ardmore

by Focus Environmental Services Limited



Site Entrance



Excavated Pit



Corrugated Metal Shed (1)



Corrugated Metal Shed (1) - Eastern Side



Contents of Corrugated Metal Shed (1)



Carport and Shed (2)



Contents of Shed (2)



Livestock Loading Area (1)



Toilet and Livestock Shed



Livestock Shed - Interior



Toilet Interior - PACM Fragments



Livestock Shed - Western Side



Livestock Spray Race/Loading Area (2)



Burn/ Refuse Pit



Stables (1)



Stables (1) Southern End



Stables (2)



Stables (2) Interior



Stables (2) - Minor Damage to PACM Cladding



Horse Arena



Garage (1)



Dwelling (1) Northern Side



Shipping Container



Burn Barrell



Garage (2)



Dwelling (2)



Dwelling (2) South Western Corner



Septic Tank Vent

Appendix H - RPD Calculations



RPD Calculations: 279 Airfield Road, Ardmore, Auckland

Parameter	Pb01	QC01	RPD (%)	Pb10	QC02	RPD (%)
Total Recoverable Lead	95	92	3.21	96	86	10.99

Note: Results in *italics* exceed 30% RPD. Results in **red** exceed 50% RPD

Appendix I - Laboratory Transcripts



Certificate of Analysis

Client:	Focus Environmental Services Limited	Lab No:	3056055	SPV1
Contact:	Cari Llewellyn	Date Received:	17-Aug-2022	
	C/- Focus Environmental Services Limited	Date Reported:	24-Aug-2022	
	PO Box 11455	Quote No:	80876	
	Ellerslie	Order No:		
	Auckland 1542	Client Reference:	1686.001	
		Submitted By:	Megan Thomas	

Sample Type: Soil

Sample Name:	SR01	BP01	BP02	Pb01	Pb02
	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022
Lab Number:	3056055.1	3056055.2	3056055.3	3056055.4	3056055.5

Individual Tests

Test	Unit	SR01	BP01	BP02	Pb01	Pb02
Dry Matter	g/100g as rcvd	46	52	57	-	-
Total Recoverable Arsenic	mg/kg dry wt	43	-	-	-	-
Total Recoverable Lead	mg/kg dry wt	-	-	-	95	25

Heavy Metals, Screen Level

Test	Unit	SR01	BP01	BP02	Pb01	Pb02
Total Recoverable Arsenic	mg/kg dry wt	-	58	68	-	-
Total Recoverable Cadmium	mg/kg dry wt	-	3.3	3.3	-	-
Total Recoverable Chromium	mg/kg dry wt	-	57	54	-	-
Total Recoverable Copper	mg/kg dry wt	-	83	104	-	-
Total Recoverable Lead	mg/kg dry wt	-	240	1,040	-	-
Total Recoverable Nickel	mg/kg dry wt	-	10	33	-	-
Total Recoverable Zinc	mg/kg dry wt	-	480	840	-	-

Organochlorine Pesticides Screening in Soil

Test	Unit	SR01	BP01	BP02	Pb01	Pb02
Aldrin	mg/kg dry wt	< 0.03	-	-	-	-
alpha-BHC	mg/kg dry wt	< 0.03	-	-	-	-
beta-BHC	mg/kg dry wt	< 0.03	-	-	-	-
delta-BHC	mg/kg dry wt	< 0.03	-	-	-	-
gamma-BHC (Lindane)	mg/kg dry wt	< 0.03	-	-	-	-
cis-Chlordane	mg/kg dry wt	< 0.03	-	-	-	-
trans-Chlordane	mg/kg dry wt	< 0.03	-	-	-	-
2,4'-DDD	mg/kg dry wt	< 0.03	-	-	-	-
4,4'-DDD	mg/kg dry wt	< 0.03	-	-	-	-
2,4'-DDE	mg/kg dry wt	< 0.03	-	-	-	-
4,4'-DDE	mg/kg dry wt	< 0.03	-	-	-	-
2,4'-DDT	mg/kg dry wt	< 0.03	-	-	-	-
4,4'-DDT	mg/kg dry wt	0.02	-	-	-	-
Total DDT Isomers	mg/kg dry wt	< 0.13	-	-	-	-
Dieldrin	mg/kg dry wt	< 0.03	-	-	-	-
Endosulfan I	mg/kg dry wt	< 0.03	-	-	-	-
Endosulfan II	mg/kg dry wt	< 0.03	-	-	-	-
Endosulfan sulphate	mg/kg dry wt	< 0.03	-	-	-	-
Endrin	mg/kg dry wt	< 0.03	-	-	-	-
Endrin aldehyde	mg/kg dry wt	< 0.03	-	-	-	-
Endrin ketone	mg/kg dry wt	< 0.03	-	-	-	-
Heptachlor	mg/kg dry wt	< 0.03	-	-	-	-
Heptachlor epoxide	mg/kg dry wt	< 0.03	-	-	-	-
Hexachlorobenzene	mg/kg dry wt	< 0.03	-	-	-	-
Methoxychlor	mg/kg dry wt	< 0.03	-	-	-	-



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Soil						
Sample Name:	SR01	BP01	BP02	Pb01	Pb02	
	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	
Lab Number:	3056055.1	3056055.2	3056055.3	3056055.4	3056055.5	
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	-	< 0.5	1.1	-	-
1-Methylnaphthalene	mg/kg dry wt	-	< 0.02	0.025	-	-
2-Methylnaphthalene	mg/kg dry wt	-	< 0.02	0.027	-	-
Acenaphthylene	mg/kg dry wt	-	< 0.02	0.039	-	-
Acenaphthene	mg/kg dry wt	-	< 0.02	< 0.018	-	-
Anthracene	mg/kg dry wt	-	< 0.02	0.027	-	-
Benzo[a]anthracene	mg/kg dry wt	-	< 0.02	0.044	-	-
Benzo[a]pyrene (BAP)	mg/kg dry wt	-	< 0.02	0.044	-	-
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	-	< 0.05	0.08	-	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	-	< 0.05	0.08	-	-
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	-	< 0.02	0.083	-	-
Benzo[e]pyrene	mg/kg dry wt	-	< 0.02	0.037	-	-
Benzo[g,h,i]perylene	mg/kg dry wt	-	< 0.02	0.038	-	-
Benzo[k]fluoranthene	mg/kg dry wt	-	< 0.02	0.021	-	-
Chrysene	mg/kg dry wt	-	< 0.02	0.046	-	-
Dibenzo[a,h]anthracene	mg/kg dry wt	-	< 0.02	< 0.018	-	-
Fluoranthene	mg/kg dry wt	-	< 0.02	0.100	-	-
Fluorene	mg/kg dry wt	-	< 0.02	0.041	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	-	< 0.02	0.044	-	-
Naphthalene	mg/kg dry wt	-	< 0.10	0.14	-	-
Perylene	mg/kg dry wt	-	< 0.02	< 0.018	-	-
Phenanthrene	mg/kg dry wt	-	0.03	0.22	-	-
Pyrene	mg/kg dry wt	-	< 0.02	0.085	-	-
Sample Name:	Pb03	Pb04	Pb05	Pb06	Pb07	
	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	
Lab Number:	3056055.6	3056055.7	3056055.8	3056055.9	3056055.10	
Individual Tests						
Total Recoverable Lead	mg/kg dry wt	81	470	116	1,420	1,730
Sample Name:	Pb08	Pb09	Pb10	HB01	HB02	
	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	
Lab Number:	3056055.11	3056055.12	3056055.13	3056055.26	3056055.27	
Individual Tests						
Total Recoverable Lead	mg/kg dry wt	33	113	96	61	34
Sample Name:	HB03	HB04	HB05	QC01	QC02	
	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	
Lab Number:	3056055.28	3056055.29	3056055.30	3056055.31	3056055.32	
Individual Tests						
Total Recoverable Lead	mg/kg dry wt	32	23	480	92	86
Sample Name:	Composite of Comp01 A, Comp01 B, Comp01 C & Comp01 D		Composite of Comp02 A, Comp02 B, Comp02 C & Comp02 D		Composite of Comp03 A, Comp03 B, Comp03 C & Comp03 D	
Lab Number:	3056055.33		3056055.34		3056055.35	
Individual Tests						
Dry Matter	g/100g as rcvd	61		64		53
Total Recoverable Arsenic	mg/kg dry wt	5		4		5
Total Recoverable Copper	mg/kg dry wt	19		16		29
Total Recoverable Lead	mg/kg dry wt	22		23		28
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.016		< 0.016		< 0.019
alpha-BHC	mg/kg dry wt	< 0.016		< 0.016		< 0.019
beta-BHC	mg/kg dry wt	< 0.016		< 0.016		< 0.019
delta-BHC	mg/kg dry wt	< 0.016		< 0.016		< 0.019

Sample Type: Soil			
Sample Name:	Composite of Comp01 A, Comp01 B, Comp01 C & Comp01 D	Composite of Comp02 A, Comp02 B, Comp02 C & Comp02 D	Composite of Comp03 A, Comp03 B, Comp03 C & Comp03 D
Lab Number:	3056055.33	3056055.34	3056055.35
Organochlorine Pesticides Screening in Soil			
gamma-BHC (Lindane)	mg/kg dry wt	< 0.016	< 0.016
cis-Chlordane	mg/kg dry wt	< 0.016	< 0.016
trans-Chlordane	mg/kg dry wt	< 0.016	< 0.016
2,4'-DDD	mg/kg dry wt	< 0.016	< 0.016
4,4'-DDD	mg/kg dry wt	< 0.016	< 0.016
2,4'-DDE	mg/kg dry wt	< 0.016	< 0.016
4,4'-DDE	mg/kg dry wt	< 0.016	0.048
2,4'-DDT	mg/kg dry wt	< 0.016	< 0.016
4,4'-DDT	mg/kg dry wt	< 0.016	0.035
Total DDT Isomers	mg/kg dry wt	< 0.10	< 0.11
Dieldrin	mg/kg dry wt	< 0.016	< 0.016
Endosulfan I	mg/kg dry wt	< 0.016	< 0.016
Endosulfan II	mg/kg dry wt	< 0.016	< 0.016
Endosulfan sulphate	mg/kg dry wt	< 0.016	< 0.016
Endrin	mg/kg dry wt	< 0.016	< 0.016
Endrin aldehyde	mg/kg dry wt	< 0.016	< 0.016
Endrin ketone	mg/kg dry wt	< 0.016	< 0.016
Heptachlor	mg/kg dry wt	< 0.016	< 0.016
Heptachlor epoxide	mg/kg dry wt	< 0.016	< 0.016
Hexachlorobenzene	mg/kg dry wt	< 0.016	< 0.016
Methoxychlor	mg/kg dry wt	< 0.016	< 0.016

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%.	-	1-13, 26-35
Environmental Solids Sample Preparation	Air dried at 35°C and sieved, <2mm fraction. Used for sample preparation May contain a residual moisture content of 2-5%.	-	1, 4-13, 26-35
Total of Reported PAHs in Soil	Sonication extraction, GC-MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	2-3
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion US EPA 200.2. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required.	0.10 - 4 mg/kg dry wt	2-3
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	1, 33-35
Polycyclic Aromatic Hydrocarbons Screening in Soil*	Sonication extraction, GC-MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.002 - 0.05 mg/kg dry wt	2-3
Dry Matter (Env)	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	1-3, 33-35
Total Recoverable digestion	Nitric / hydrochloric acid digestion. US EPA 200.2.	-	1, 4-13, 26-35
Total Recoverable Arsenic	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2.	2 mg/kg dry wt	1, 33-35
Total Recoverable Copper	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2.	2 mg/kg dry wt	33-35
Total Recoverable Lead	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2.	0.4 mg/kg dry wt	4-13, 26-35

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.002 mg/kg dry wt	2-3
Benzo[a]pyrene Toxic Equivalence (TEF)*	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.002 mg/kg dry wt	2-3

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 18-Aug-2022 and 24-Aug-2022. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental



Certificate of Analysis

Client:	Focus Environmental Services Limited	Lab No:	3056335	A2Pv1
Contact:	Cari Llewellyn C/- Focus Environmental Services Limited PO Box 11455 Ellerslie Auckland 1542	Date Received:	17-Aug-2022	
		Date Reported:	20-Aug-2022	
		Quote No:	80876	
		Order No:		
		Client Reference:	1686.001	
		Add. Client Ref:	Sampled: 16/08/22	
		Submitted By:	Megan Thomas	

Sample Type: Soil

Sample Name:	Asb01 16-Aug-2022	Asb02 16-Aug-2022	Asb03 16-Aug-2022	HB01 16-Aug-2022	HB02 16-Aug-2022
Lab Number:	3056335.1	3056335.2	3056335.3	3056335.4	3056335.5
Asbestos Presence / Absence	Asbestos NOT detected.	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	-	Loose fibres, ACM debris	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	0.022	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	0.022	< 0.001	< 0.001	< 0.001
As Received Weight	g 634.3	590.2	612.0	644.9	600.5
Dry Weight	g 433.2	396.6	560.7	428.0	358.4
Moisture	% 32	33	8	34	40
Sample Fraction >10mm*	g dry wt 36.5	6.4	103.9	21.8	4.2
Sample Fraction <10mm to >2mm*	g dry wt 172.0	145.8	222.7	254.4	166.6
Sample Fraction <2mm*	g dry wt 223.8	243.4	233.7	151.7	187.3
<2mm Subsample Weight*	g dry wt 54.9	55.8	57.6	55.3	51.8
Weight of Asbestos in ACM (Non-Friable)	g dry wt < 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)*	g dry wt < 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt < 0.00001	0.08616	< 0.00001	< 0.00001	< 0.00001

Sample Name:	HB03 16-Aug-2022	HB04 16-Aug-2022	HB05 16-Aug-2022
Lab Number:	3056335.6	3056335.7	3056335.8
Asbestos Presence / Absence	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001
As Received Weight	g 604.9	549.6	527.5
Dry Weight	g 396.1	353.7	306.3
Moisture	% 35	36	42



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Sample Type: Soil				
Sample Name:		HB03 16-Aug-2022	HB04 16-Aug-2022	HB05 16-Aug-2022
Lab Number:		3056335.6	3056335.7	3056335.8
Sample Fraction >10mm*	g dry wt	11.2	10.5	< 0.1
Sample Fraction <10mm to >2mm*	g dry wt	240.3	218.0	99.7
Sample Fraction <2mm*	g dry wt	144.5	125.1	205.6
<2mm Subsample Weight*	g dry wt	51.5	55.5	54.9
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
 - Trace - Trace levels of asbestos, as defined by AS4964-2004.
- For further details, please contact the Asbestos Team.

Please refer to the **BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil**.
<https://www.branz.co.nz/asbestos>

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland.	0.1 g	1-8
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland.	0.1 g	1-8
Moisture	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-8
Sample Fraction >10mm*	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland.	0.1 g dry wt	1-8
Sample Fraction <10mm to >2mm*	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland.	0.1 g dry wt	1-8
Sample Fraction <2mm*	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland.	0.1 g dry wt	1-8
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-8
Description of Asbestos Form	Description of asbestos form and/or shape if present. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland.	-	1-8
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-8

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-8
Weight of Asbestos as Fibrous Asbestos (Friable)*	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-8
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-8
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; 28 Heather Street, Auckland. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-8
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-8
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-8

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 19-Aug-2022 and 20-Aug-2022. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Danielle Carter BSc, PGDipSci, MSc
Laboratory Technician - Asbestos



Certificate of Analysis

Client:	Focus Environmental Services Limited	Lab No:	3056484	A2Pv1
Contact:	Cari Llewellyn C/- Focus Environmental Services Limited PO Box 11455 Ellerslie Auckland 1542	Date Received:	17-Aug-2022	
		Date Reported:	18-Aug-2022	
		Quote No:	80876	
		Order No:		
		Client Reference:	1686.001	
		Submitted By:	Megan Thomas	

Sample Type: Building Material

Sample Name	Lab Number	Sample Category*	Sample Weight on receipt (g)	Asbestos Presence / Absence	Description of Asbestos in Non Homogeneous Samples
PACM01	3056484.1	Fibre Cement	16.04	Asbestos NOT detected. Organic fibres detected.	N/A
PACM02	3056484.2	Fibre Cement	10.11	Chrysotile (White Asbestos) detected. Organic fibres detected.	N/A
PACM03	3056484.3	Fibre Cement	12.19	Chrysotile (White Asbestos) detected.	N/A

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
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- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Building Material

Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category*	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	-	1-3
Sample Weight on receipt	Sample weight. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	0.01 g	1-3
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-3
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1-3



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These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed on 18-Aug-2022. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Zandra Fenton BSc
Laboratory Technician - Asbestos

PRELIMINARY SITE INVESTIGATION
101 & 103 COSGRAVE ROAD
ARDMORE
AUCKLAND

For the Attention of:

Winton Land Limited

Reference: FES 1443.019 December 2023 (R2)





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Quality Information

Project Name Preliminary Site Investigation

101 & 103 Cosgrave Road, Ardmore

Project Number 1443.019 (R2)

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Date Issued March 2023

Date Revised December 2023

Author

Megan Thomas
Environmental Scientist

Reviewed

Claire Johnson
Environmental Scientist

Authorised

David O'Reilly
Principal Environmental Consultant

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Focus Environmental Services Limited	1

Preliminary Site Investigation

Winton Land Limited - 101 & 103 Cosgrave Road, Ardmore

December 2023



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Figure 1 - Site Location Plan

Figure 2 - Site Features Plan

Figure 3 - Surrounding Environment

Appendices

Appendix A - Illustrative Masterplan

Appendix B - Site Contour Plan

Appendix C - Environmental HAIL

Appendix D - Historical Aerial Photographs

Appendix E - Site Contamination Enquiry

Appendix F - Historical Certificate of Title

Executive Summary

This Focus Environmental Services Limited report is produced under a management system certified as complying with ISO 45001:2018 by SGS New Zealand.

Focus Environmental Services Limited was contracted by Winton Land Limited to carry out a Preliminary Site Investigation (PSI) at 101 and 103 Cosgrave Road, Ardmore, Auckland. The legal descriptions of the site are PT ALLOT 1 DP 45156 and Lot 1 DP 62629 with areas of 1.94 ha and 0.08 ha respectively.

It should be noted that this report has been revised following the request of the client.

The Sunfield Urban Development Area (UDA) consists of nineteen properties located across Cosgrave Road, Old Wairoa Road, Hamlin Road and Airfield Road, Papakura, Auckland.

The scope of this report is limited to the properties of 101 and 103 Cosgrave Road, Ardmore (henceforth referred to as the site), and should be read in conjunction with the cover letter summarising the findings of the PSIs and DSIs completed for the Sunfield UDA.

This PSI has been prepared in general accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (Ministry for the Environment, Revised 2021).

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site, a review of the Auckland Council property file, a contaminated sites inquiry to Auckland Council and a review of the historical certificate of title. During the review of the available information any potentially contaminating activities or land uses were identified.

During the review of the available information, it was noted that due to the age of the current and former site buildings, the potential for ground contamination associated with the historic maintenance and use of lead-based paints, and the demolition of historic buildings potentially constructed of asbestos containing materials was identified. The site contamination enquiry stated that there is no contamination information within council records for the site. However, the enquiry continues to state that, due to the age of the dwelling on site the potential for asbestos and/or lead paint may need to be considered.

The information obtained of the sites history was assessed to determine if any potentially hazardous activities listed on the Hazardous Activities and Industries List (HAIL) had occurred on site as a result of historic and/or current land use.

A walkover and site inspection were not possible as access to the property was not permitted at the time of writing this report. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is granted, it is recommended that a site walkover take place to identify any additional potentially contaminating land uses and/or activities that have not been identified in the information made available.

Based on the results of this preliminary site investigation, it is considered that an activity described in the HAIL has been, or is more likely than not to have been, carried out on the piece of land.

Furthermore, as the impact of the HAIL activities identified on the site soils has not been determined, it is recommended that, prior to any earthworks occurring onsite, a

detailed site investigation is completed on the properties found at 101 and 103 Cosgrave Road, Ardmore, located in the north-western portion of the plan change area.

The detailed site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements, if any, for the site.

Based on the findings of the preliminary site investigation for the site, it is considered that the regulations of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contaminated land rules as outlined in Chapter E30 of the Auckland Unitary Plan: Operative in Part (AUP: OP), need to be considered and consents under these regulations may be triggered by future development of the site.

The detailed site investigation shall be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

Following the receipt of the sampling results a technical report summarising the results of the investigation shall be prepared. The report will be prepared in accordance Contaminated Land Management Guidelines No. 1(MfE, Revised 2021). The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;
- Recommendations that a Site-Specific Management/Remediation Action Plan is prepared in order to provide controls to mitigate against the potential risks to human health and/or the environment as a result of the effects associated with the site redevelopment works.

All works should be carried out in accordance with the global Site Management Plan titled '*Site Management Plan, Sunfield Urban Development Area*' dated December 2023 and prepared by Focus Environmental Services. If the controls outlined in the Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated.

This report is certified by David O'Reilly, Suitability Qualified and Experienced Practitioner (SQEP):



Principal Environmental Consultant
Focus Environmental Services Limited

1.0 Scope

- 1.1 This report has been prepared at the request of Winton Land Limited (“the Client”) in terms of the Focus Environmental Services Agreement (“Agreement”).
- 1.2 The following report is based on:
 - *Information provided by the client;*
 - *A review of historical aerial photographs available for the site;*
 - *A search of the Auckland Council Property File;*
 - *A search of the Auckland Council Contaminated Sites Database; and*
 - *A review of the Historical Certificate of Title.*
- 1.3 We have not independently verified the information provided to us by the Client or its completeness. We do not express an opinion on the accuracy or the reliability of such information.
- 1.4 No warranties are given, intended or implied.
- 1.5 Opinion, inferences, assumptions and interpretations made in this report should not be construed as legal opinion.
- 1.6 Where an assessment is given in this report, the Client must also rely upon their own judgement, knowledge and assessment of the subject of this report before undertaking any action.
- 1.7 This report must not be used in any other context or for any other purpose other than that for which it has been prepared without the prior written consent of Focus Environmental Services.
- 1.8 This report is strictly confidential and intended for the sole use of the Client and shall not be disclosed without the prior written consent of Focus Environmental Services.
- 1.9 This Focus Environmental Services Limited report is produced under a management system certified as complying with ISO 45001:2018 by SGS New Zealand.

2.0 Site Identification

The property is located at 101 and 103 Cosgrave Road, Ardmore, Auckland as shown in Figure 1 attached. The legal descriptions of the site are PT ALLOT 1 DP 45156 and Lot 1 DP 62629 with areas of 1.94 ha and 0.08 ha respectively. The site is located at national grid reference 1773913mE and 5898133mN and 1773829mE and 5898161mN.

The site is largely rectangular in shape and is zoned 'Future Urban Zone' under the Auckland Unitary Plan – Operative in Part (AUP: OP).

The site location plan is presented as Figure 1.

3.0 Proposed Site Redevelopment Activity

It is proposed that the site will be redeveloped for residential purposes. As part of the redevelopment, the site will undergo subdivision, a change of land use and disturbance of soils.

The illustrative masterplan is attached as Appendix A.

4.0 Site Topography

The properties at 101 and 103 Cosgrave Road, Ardmore have a relatively flat landscape.

The site contour plan is presented in Appendix B.

5.0 Geology and Hydrology

Published geological maps¹ indicate that the subject sites are underlain with Holocene deposits of the Tauranga Group.

A description of the underlying geologies is presented in Table 1 below.

Table 1: Geology: 101 & 103 Cosgrave Road, Ardmore

Key name	OIS1 (Holocene) river deposits
Simple name	Holocene river deposits
Main rock name	Mud
Description	Sand, silt mud and clay with local gravel and peat beds
Subsidiary rocks	Sand silt clay peat
Key group	Holocene sediments
Stratigraphic lexicon name	Tauranga Group
Absolute age (min)	0.0 million years
Absolute age (max)	0.014 million years
Rock group	mudstone
Rock class	Clastic sediment

No groundwater investigation was completed as part of this investigation.

The nearest surface water body to the site is the Awakeri Wetlands located approximately 305m west of the site.

¹ Geology of the Auckland Area (Institute of Geological & Nuclear Sciences 1:250,000 geological map 3, 2011)

6.0 Regulatory Framework

6.1 The National Environmental Standard

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES) came into effect on the 1st of January 2012 and supersedes any District Plan rules that related to contaminated land. Any Regional Plan rules relating to contaminated land are still applicable.

In brief, the objective of the NES is to ensure that land affected by contaminants is identified and assessed and, if necessary, remediated or managed to protect human health. The NES only applies to the activities: removing or replacing all, or part of, a fuel storage system; sampling the soil; disturbing the soil; subdividing the land; and changing the land use, and where an activity or industry described in the Hazardous Activities and Industries List (HAIL) is being, has been, or is more likely than not to have been undertaken on the piece of land.

The NES also contains reference to the soil contaminant standards for human health (SCS_(health)), for a variety of land use scenarios along with reference to best practice reporting documents.

The environmental HAIL is attached as Appendix C.

6.2 Auckland Unitary Plan: Operative in Part

The contaminated land rules of the Auckland Unitary Plan: Operative in Part (AUP: OP) have immediate legal effect following its notification. As the AUP: OP was notified on the 15th of November 2016 the contaminated land rules must be considered.

In brief, the objective of the AUP: OP is to manage land containing elevated levels of contaminants to protect human health and the environment and to enable the effective use of the land.

The contaminated land rules of the AUP: OP apply when the land contains contaminants above those levels specified in Table E30.6.1.4.1 of Chapter E30 of the AUP: OP.

7.0 Site History

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs for the site, a review of the Auckland Council property file, a contaminated site enquiry to Auckland Council, and a review of the historical certificate of title.

7.1 Historical Aerial Photographs

Descriptions of the historical aerial photographs for the subject site is presented in Tables 2 & 3 below.

The historical aerial photographs for the site are presented in Appendix D.

Table 2: Historical Photographs: 101 Cosgrave Road, Ardmore

Date	Description
1959 - 1960	The 1959 - 1960 historical photographs show the subject site forming part of a larger parcel of land in use for rural purposes. No structures can be observed on the subject site. Shelter belts are present along the northern, eastern and western boundaries of the site. Cosgrave Road can be observed along the western boundary of the site. The surrounding properties also appear in use for rural purposes.
1975 - 1988	The 1975 - 1980 historical photographs show the subject site has undergone subdivision, and a change of use, and is now in use for rural-residential purposes. A driveway has been constructed in the south-western portion of the site heading east towards a dwelling along the southern boundary of the site. An additional structure is visible along the southern boundary, east of the dwelling. Two further ancillary buildings are visible to the north-east of dwelling in the central southern portion of the site. The 1988 historical photograph shows another structure (HB01) to the west of these buildings. The shelter belts have been removed. The surrounding properties remain in use for rural and rural - residential purposes.
1996 - 2017	The 1996 - 2017 historical photographs show the site to be relatively unchanged. The 2015 historical photograph shows a structure (HB02) has been constructed near the southern boundary of the site and another structure (HB03) is visible to the north of the driveway. The 2017 historical photograph shows both of the structures have been removed. Shelter belts have been replanted along all boundaries of the subject site. The remaining balance of the site appears to be covered with pasture. The surrounding properties remain in use for rural and rural-residential purposes.

Table 3: Historical Photographs: 103 Cosgrave Road, Ardmore

Date	Description
1959 - 1960	The 1959 - 1960 historical photograph shows the subject site forming part of a larger parcel of land and in use for rural purposes. A shelter belt runs through the centre of the site. Cosgrave Road can be seen along the western boundary of the site. The surrounding properties also appear in use for rural purposes.
1975 - 1996	The 1975 - 1996 historical photographs show the subject site has undergone subdivision and a change of land use, and is now in use for residential purposes. A dwelling has been constructed in the central portion of the site. The site remains unchanged through to 1996. The surrounding properties are in use for rural and rural-residential purposes.
2001 - 2017	The 2001 - 2017 historical photographs show the site to be relatively unchanged. The 2001 historical photograph shows a structure (HB04) has been constructed near the northern side of the dwelling. The 2008 historical photograph shows that this structure has been removed. A shed is also visible in the south-eastern corner from 2001 and remains throughout. The surrounding properties remain in use for rural and rural-residential purposes.

Due to the age of the current and former site buildings (pre-1988), it is considered that there is the potential for lead-based paint to have been used on the external building materials and therefore there is the potential for lead contamination to be present in the soils surrounding these structures.

It is also considered likely that, due to the age of the current and former site buildings (pre-2000), there is the potential that asbestos containing materials may have been used in the construction materials of these buildings.

7.2 Previous Investigations

There are no previous environmental investigations relating to soil or groundwater contamination associated with the sites at 101 and 103 Cosgrave Road, Ardmore on file with Auckland Council.

In addition, at the time of writing, the results of a geotechnical investigation covering the site was not available. If future geotechnical investigations identify uncertified fills, these shall be investigated as part of any Detailed Site Investigation completed accordingly.

7.3 Auckland Council Property File Search

The results of the council search showed multiple consents relating to the property at 101 Cosgrave Road, Ardmore. The relevant details of the Property File search are presented in Table 4 below.

Table 4: Relevant Property File Information: 101 Cosgrave Road, Ardmore

Proposed Activity	Applicant	Reference	Date
Construct a dwelling	J.D. Stackpolo	135719	09/08/1962
Construct a double garage	Mr Stackpolo	136055	11/09/1962
Construct stables	K.M. Stackpolo	PER21353765	05/03/1963
Construct a dwelling	K.M. Stackpolo	PER21353764	25/11/1969
Application to carry out plumbing and drainage works	Murray Thomas	-	02/03/1970
Application to carry out plumbing and drainage works - installation of septic tank	H & H Contractors	-	12/03/1970
Addition of ensuite to bedroom	Robert Geoffrey Carr & Coralee June Carr	19168	01/11/2002
Installation of solid fuel heater	Robert Geoffrey Carr & Coralee June Carr	BCO30260662	01/07/2003

In addition, a general property document was included within the property files obtained from Auckland Council that identifies the property at 101 Cosgrave Road as being within one or more defined noise contour boundaries surrounding the Ardmore Aerodrome.

It should be noted that, as the site at 103 Cosgrave Road, Ardmore is a small residential property an Auckland Council property file search was deemed unnecessary for the site.

7.4 Auckland Council Site Contamination Enquiry

An enquiry to Auckland Council's Contamination, Air & Noise Team in the Resource Consent Department was conducted for the property of 101 Cosgrave Road, Ardmore.

The response concluded that there is no contamination information within council records for the site. However, due to the age of the dwelling on site the potential for asbestos and/or lead paint may need to be considered.

The site contamination enquiry response is presented in full as Appendix E.

7.5 Historical Certificate of Title Review

The historical certificate of title review was completed for the properties at 101 & 103 Cosgrave Road, Ardmore.

Following the review of the historical certificate of title no companies/entities were listed that would suggest that the site has been utilised for an activity described in the HAIL.

The historical certificate of title is presented in full as Appendix F.

8.0 Site Walkover and Inspection

A walkover and site inspection were not possible at the time of writing as access to the property was not permitted. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is received, a walkover should take place to identify any additional potentially contaminating land uses and/or activities that have not been identified as part of the desk top assessment.

The site features able to be identified as part of the desk top assessment are presented as Figure 2.

9.0 Surrounding Environment

The surrounding environment appeared to be predominantly rural in use for grazing paddocks to the north, south and east of the site. The property to the north of the subject site is in use for horticultural purposes. However, due to the presence of the shelter between the properties, the topography of the site and the confined nature of the horticultural activities in the greenhouse, any potential migration of contaminants onto the subject site associated with the surrounding land use is considered negligible. The properties bordering the west of the site (on the opposite side of Cosgrave Road) appeared all in use for residential land use.

At the time of the site walkover and inspection no activities or land uses described in the HAIL were observed on the properties that bordered the subject site.

The surrounding environment is presented as Figure 3.

10.0 Asbestos Management

Due to the age of the current and historical site buildings (pre-1996), external PACM products are likely to be present in the construction materials.

Any removal of asbestos materials from the site will need to be conducted in accordance with the Health and Safety at Work (Asbestos) Regulations (MBIE, 2016) and the Approved Code of Practice for the Management and Removal of Asbestos (WorkSafe New Zealand, 2016) by a licensed asbestos removals specialist under an approved asbestos removal control plan.

It should be noted that ACM, other than that described, may also be present at the site and a thorough inspection should be carried out by a suitably qualified and competent asbestos surveyor prior to any demolition activities at the site.

11.0 Potentially Contaminating Activities or Land Uses

Following a review of the history and the available information relating to the subject site, the potentially contaminating land uses and/or activities identified have been summarised in Table 5 below.

Table 5: Potential Contaminating Activities and/or Land Uses: 101 and 103 Cosgrave Road, Ardmore

Activity Description	HAIL Category
Maintenance and Use of Lead Based Paint	I
Demolition of Historic Structures Potentially Containing Asbestos	E1
Wastewater Treatment	G6

12.0 Conceptual Model of Exposure Pathways

The assessment provided in Table 6 below expands on the potential sources of contamination and exposure pathways identified within the site and was based on the potential effects of the change of land use and soil disturbance activities on human health and the environment associated with future residential development.

Table 6: Conceptual Site Model: 101 & 103 Cosgrave Road, Ardmore

Potential Source	Potential Pathways	Potential Receptors	Assessment
Contaminated Soil	Dermal Contact with Contaminated Soils	Human Health - Residential Land Use	Potentially Complete: Sampling and analysis is recommended to confirm the concentrations of contaminants in soil.
		Human Health - Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis is recommended to confirm the concentrations of contaminants in soil.
	Ingestion of Contaminated Soils	Human Health - Residential Land Use	Potentially Complete: Sampling and analysis is recommended to confirm the concentrations of contaminants in soil.
		Human Health - Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis is recommended to confirm the concentrations of contaminants in soil.
	Inhalation of Vapours/Fibres	Human Health - Residential Land Use	Potentially Complete: Sampling and analysis is recommended to confirm the concentrations of contaminants in soil.
		Human Health - Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis is recommended to confirm the concentrations of contaminants in soil.
	Surface Water Run-off	Ecological Receptors - Awakeri Wetlands	Potentially Complete: Sampling and analysis is recommended to confirm the concentrations of contaminants in soil.
	Migration of Groundwater	Ecological Receptors - Awakeri Wetlands	Potentially Complete: Sampling and analysis is recommended to confirm the concentrations of contaminants in soil.

13.0 Regulatory Requirements

13.1 The National Environmental Standard

Potentially contaminating activities and/or land uses were identified across the site, therefore it is considered that consent under the regulations of the NES may be triggered by future development of the site.

Prior to the development of the site, for all areas of the site where potentially contaminating land uses and/or activities have taken place, a detailed site investigation is recommended. The detailed site investigation (DSI) would confirm if the identified land uses and/or activities have affected the site soils and will confirm the consenting requirements for these areas of the site. The DSI shall be prepared in general accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

13.2 Auckland Unitary Plan (Operative in Part)

The contaminated land rules of the Auckland Unitary Plan - Operative in Part (AUP OP) have immediate legal effect following its notification. As the AUP OP was notified on the 15th of November 2016 the contaminated land rules must be considered.

As potentially contaminating activities and/or land uses were identified across the site, the contaminated land rules of the AUP: OP may be triggered by future development of the site.

14.0 Conclusions and Recommendations

This PSI has been prepared in general accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (Ministry for the Environment, Revised 2021).

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site, a review of the Auckland Council property file, a contaminated sites inquiry to Auckland Council and a review of the historical certificate of title. During the review of the available information any potentially contaminating activities or land uses were identified.

During the review of the available information, it was noted that due to the age of the current and former site buildings, the potential for ground contamination associated with the historic maintenance and use of lead-based paints, and the demolition of historic buildings potentially constructed of asbestos containing materials was identified. The site contamination enquiry stated that there is no contamination information within council records for the site. However, the enquiry continues to state that, due to the age of the dwelling on site the potential for asbestos and/or lead paint may need to be considered.

The information obtained of the sites history was assessed to determine if any potentially hazardous activities listed on the Hazardous Activities and Industries List (HAIL) had occurred on site as a result of historic and/or current land use.

A walkover and site inspection were not possible as access to the property was not permitted at the time of writing this report. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is granted, it is recommended that a site walkover take place to identify any additional potentially contaminating land uses and/or activities that have not been identified in the information made available.

Based on the results of this preliminary site investigation, it is considered that an activity described in the HAIL has been, or is more likely than not to have been, carried out on the piece of land.

Furthermore, as the impact of the HAIL activities identified on the site soils has not been determined, it is recommended that, prior to any earthworks occurring onsite, a detailed site investigation is completed on the properties found at 101 and 103 Cosgrave Road, Ardmore, located in the north-western portion of the plan change area.

The detailed site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements, if any, for the site.

Based on the findings of the preliminary site investigation for the site, it is considered that the regulations of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contaminated land rules as outlined in Chapter E30 of the Auckland Unitary Plan: Operative in Part (AUP: OP), need to be considered and consents under these regulations may be triggered by future development of the site.

The detailed site investigation shall be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

Following the receipt of the sampling results a technical report summarising the results of the investigation shall be prepared. The report will be prepared in accordance

Contaminated Land Management Guidelines No. 1(MfE, Revised 2021). The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;
- Recommendations that a Site-Specific Management/Remediation Action Plan is prepared in order to provide controls to mitigate against the potential risks to human health and/or the environment as a result of the effects associated with the site redevelopment works.

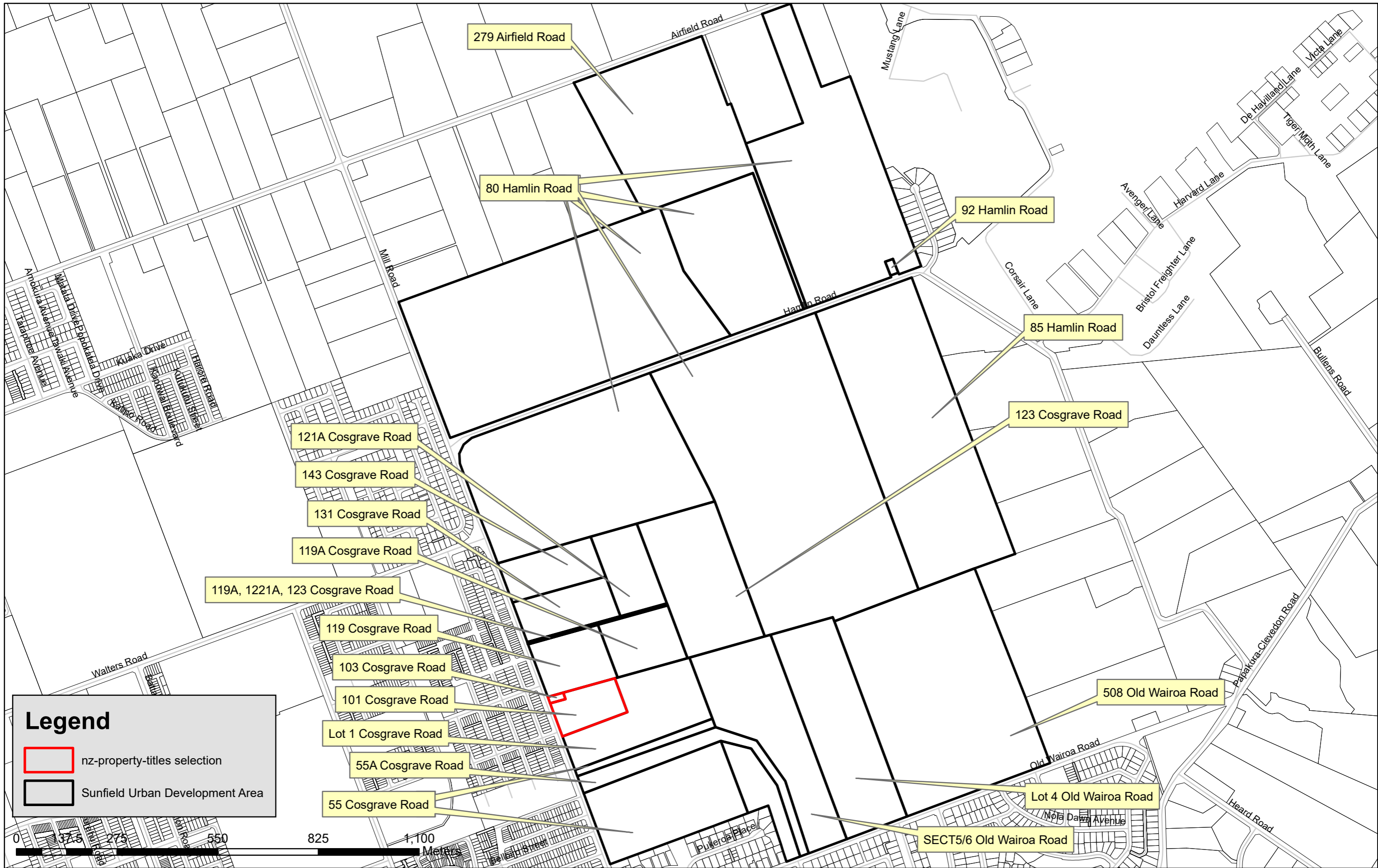
All works should be carried out in accordance with the global Site Management Plan titled '*Site Management Plan, Sunfield Urban Development Area*' dated December 2023 and prepared by Focus Environmental Services. If the controls outlined in the Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated.

Figures

Figure 1 - Site Location Plan

Figure 2 - Site Features Plan

Figure 3 - Surrounding Environment



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 PO Box 11455
 Ellerslie
 Auckland 1542

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www.focusenvironmental.co.nz

Winton Land Limited
 101 & 103 Cosgrave Road
 Sunfield Urban Development Area
 Papakura
 Auckland

Figure 1: Site Location Plan
 Preliminary Site Investigation



1443.019 (R2)

Drawing Number: 1443.019.01

Drawn By: MT

Checked By: DO'R

Date: 20/12/2023



Legend

- Site Features
- Historical Building Location
- Site Boundary

Site Features	Description
1	Site Entrance
2	Dwelling
3	Garage
4	Small Shed
5	Large Shed
6	Small Shed
7	Site Entrance
8	Dwelling
9	Small Shed
10	Burn Pile





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Winton Land Limited
 101 & 103 Cosgrave Road
 Sunfield Urban Development Area
 Papakura
 Auckland

Figure 2: Site Features Plan

Preliminary Site Investigation



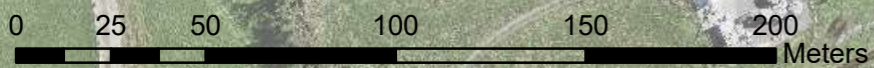
1443.019 (R2)	Drawing Number: 1443.019.02
	Drawn By: MT
	Checked By: DO'R
	Date: 20/12/2023





Cosgrave Road

Legend

Site Boundary



 <p>Focus Environmental Services Limited PO Box 11455 Ellerslie Auckland 1542</p> <p>Ph: +64 9 579 4155 www.focusenvironmental.co.nz</p>	<p>Winton Land Limited 101 & 103 Cosgrave Road Sunfield Urban Development Area Papakura Auckland</p>	<p>Figure 3: Surrounding Environment</p> <p>Preliminary Site Investigation</p>		<p>Drawing Number: 1443.019.03</p>
				<p>Drawn By: MT</p>
			<p>1443.019 (R2)</p>	<p>Checked By: DO'R</p>
				<p>Date: 20/12/2023</p>

Appendices

Appendix A - Illustrative Masterplan



Appendix B - Site Contour Plan



public

DISCLAIMER:
This map/plan is illustrative only and all information should be independently verified on site before taking any action.
Copyright Auckland Council. Land Parcel Boundary information from LINZ (Crown Copyright Reserved). Whilst due care has been taken, Auckland Council gives no warranty as to the accuracy and plan completeness of any information on this map/plan and accepts no liability for any error, omission or use of the information. Height datum: Auckland 1946.

Site Contour Plan

0 6.5 13 19.5
Meters

Scale @ A4
= 1:1,000

Date Printed:
27/02/2023





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

Appendix D - Historical Aerial Photographs

Historical Aerial Photographs

101 & 103 Cosgrave Road
Ardmore
Auckland

by Focus Environmental Services Limited

1959 Historical Photograph



1960 Historical Photograph



Source: NZ Aerial Mapping

1975 Historical Photograph



Source: NZ Aerial Mapping

1980 Historical Photograph



Source: NZ Aerial Mapping

1988 Historical Photograph



Source: NZ Aerial Mapping

1996 Historical Photograph



2001 Historical Photograph



2006 Historical Photograph



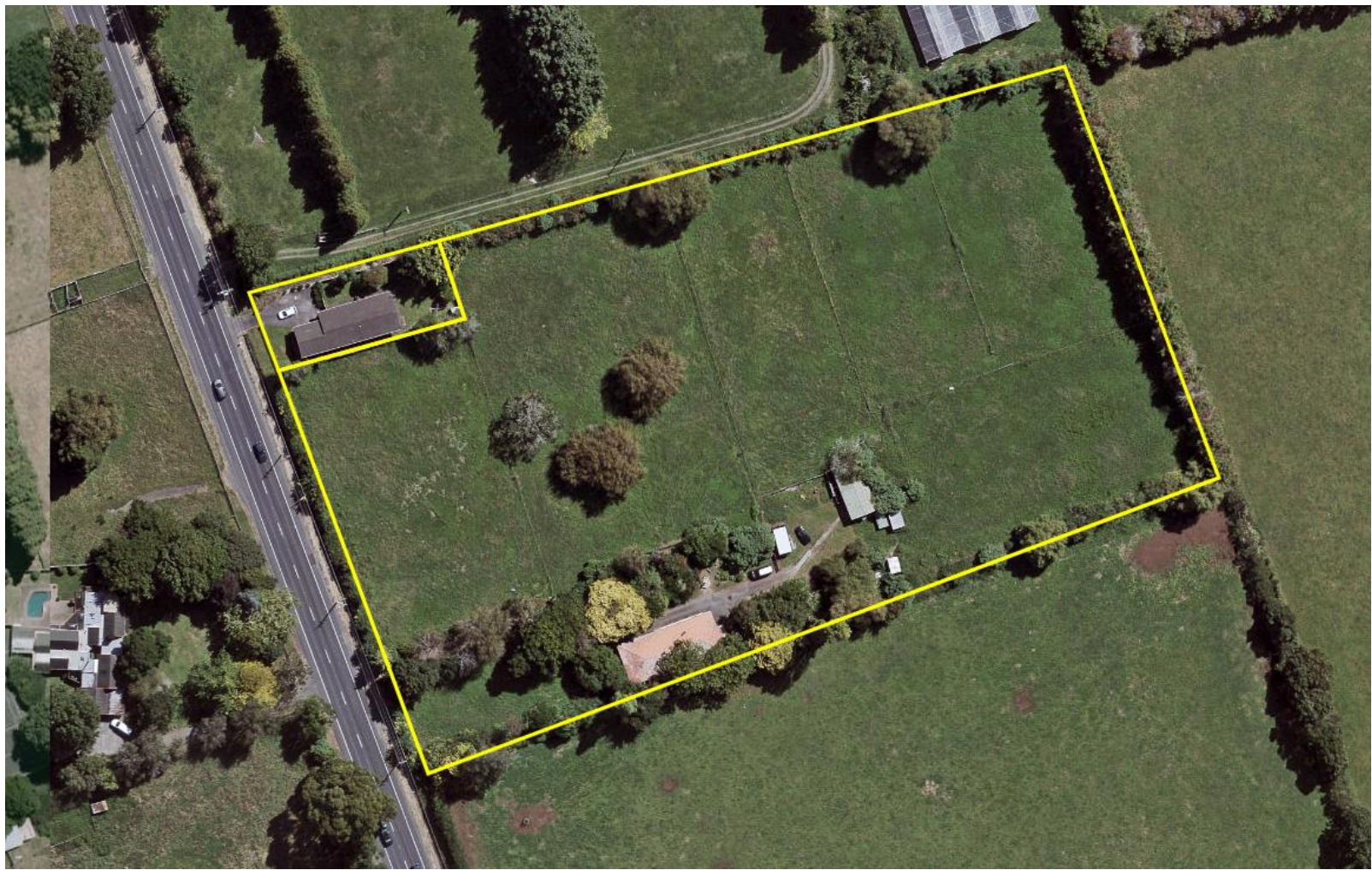
2008 Historical Photograph



2010 Historical Photograph

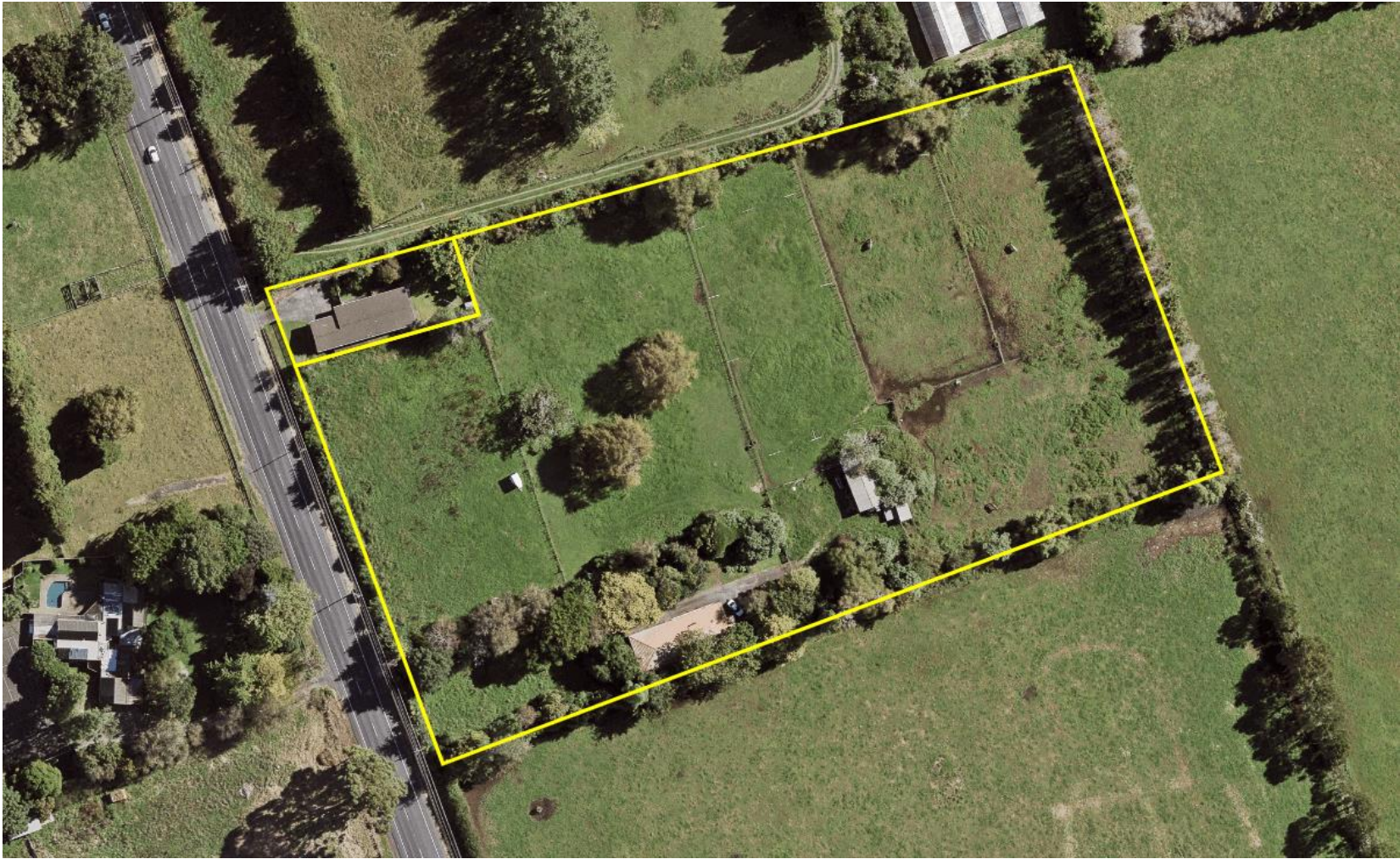


2015 Historical Photograph



Source: Auckland Council GeoMaps

2017 Historical Photograph



Source: Auckland Council GeoMaps

Appendix E - Site Contamination Enquiry

6 March 2023

Focus Environmental Services
PO Box 11455
AUCKLAND 1542

Attention: Belinda O'Reilly

Dear Belinda

Site Contamination Enquiry – 101 Cosgrave Road, Ardmore

This letter is in response to your enquiry requesting available site contamination information within Auckland Council records for the above site. Please note this report does not constitute a site investigation report; such reports are required to be prepared by a (third-party) Suitably Qualified and Experienced Practitioner.

The following details are based on information available to the Contamination, Air & Noise Team in the Resource Consent Department. The details provided may be from former regional council information, as well as property information held by the former district/city councils. For completeness the relevant property file should also be requested to obtain all historical records and reports via 09 3010101 or online at:

<https://www.aucklandcouncil.govt.nz/buying-property/order-property-report/Pages/order-property-file.aspx>.

1. Hazardous Activities and Industries List (HAII) Information

This list published by the Ministry for the Environment (MfE) comprises activities and industries that are considered likely to cause land contamination as a result of hazardous substance use, storage, and/or disposal.

There is no contamination information within Council records for the site.

Due to the age of the dwelling on site the potential for asbestos and/or lead paint may need to be considered.

Please note:

- *If you are demolishing any building that may have asbestos containing materials (ACM) in it, you have obligations under the Health and Safety at Work (Asbestos) Regulations 2016 for the management and removal of asbestos, including the need to engage a Competent Asbestos Surveyor to confirm the presence or absence of any ACM.*
- *Paints used on external parts of properties up until the mid-1970's routinely contained lead, a poison and a persistent environmental pollutant. You are advised to ensure that soils affected by old, peeling or flaking paint are assessed in relation to the proposed use of the property, including high risk use by young children.*

2. Consents and Incidents Information (200m radius of the selected site)

The Council database was searched for records of the following activities within approximately 200 metres of the site:

- Pollution Incidents (including air discharges, oil or diesel spills)
- Bores
- Contaminated site and air discharges, and industrial trade process consents
- Closed Landfills
- Air quality permitted activities
- Identified HAIL activities



Figure 1: Selected Consents, Incidents and HAIL activities within approximately 200m of the subject site

Legend:

All Consents 	Closed Landfill (Auckland Council owned) 
All Applications 	Closed Landfill (Privately owned) 
All Permitted Activities 	All Incidents 
All Bores 	HAIL activities 

Relevant details of any pollution incidents and consents and HAIL activities are appended to this letter (Attachment A). Please refer to the column titled 'Property Address' on the spreadsheet to aid in identifying corresponding data on the map.

For any identified HAIL sites, please refer to the tab "HAIL activities" for more information (Column C and D include HAIL activity details where these are available).

Please note:

The HAIL activity hatching in Figure 1 only reflects whether a site has been identified as a HAIL site (both verified and non-verified) by the Council and the type of HAIL associated with the site. This does not confirm whether the site has been formally investigated or the contamination status of the property (e.g. contaminated, remediated etc.). Additionally, due to limitations within Council's records, the specific HAIL activity is not included in the data for all properties. For further information on any of these known HAIL sites, a subsequent site contamination enquiry can be lodged for the specific property (up to 5 adjacent properties can be covered in one request).

While the Auckland Council has carried out the above search using its best practical endeavours, it does not warrant its completeness or accuracy and disclaims any responsibility or liability in respect of the information. If you or any other person wishes to act or to rely on this information, or make any financial commitment based upon it, it is recommended that you seek appropriate technical and/or professional advice.

If you wish to clarify anything in this letter that relates to this site, please contact contaminatedsites@aucklandcouncil.govt.nz. Any follow up requests for information on other sites must go through the online order process.

Should you wish to request any of the files referenced above and/or listed in the attached spreadsheet for viewing, please contact the Auckland Council Call Centre on 301 0101 and note you are requesting former Auckland Regional Council records (the records department requires three working days' notice to ensure the files will be available).

Please note Auckland Council cost recovers officer's time for all site enquiries. As such an invoice for the time involved in this enquiry will follow shortly.

Yours Sincerely,

**Contamination, Air and Noise Team
Specialist Unit | Resource Consents
Auckland Council**

Appendix F - Historical Certificate of Title



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Historical Search Copy**




R.W. Muir
Registrar-General
of Land

Constituted as a Record of Title pursuant to Sections 7 and 12 of the Land Transfer Act 2017 - 12 November 2018

Identifier NA24C/216
Land Registration District North Auckland
Date Issued 27 September 1972

Prior References
NA1837/35

Estate Fee Simple
Area 1.9425 hectares more or less
Legal Description Part Lot 1 Deposited Plan 45156
Original Registered Owners
Robert Geoffrey Carr and Coralee June Carr

Interests

Fencing Agreement in Transfer 639672
C836591.3 Mortgage to ANZ Banking Group (New Zealand) Limited - 28.4.1995 at 12:39 pm
7183242.1 Discharge of Mortgage C836591.3 - 4.1.2007 at 9:00 am
7183242.2 Transfer to Vijay Ranchhod and Subhash Ranchhod (1/2 share) and Vijay Ranchhod and Subhash Ranchhod (1/2 share) - 4.1.2007 at 9:00 am
7183242.3 Mortgage to ASB Bank Limited - 4.1.2007 at 9:00 am
10865098.1 CAVEAT BY JERMYN CHIU-MING HSU - 2.8.2017 at 9:06 am
11167356.1 Withdrawal of Caveat 10865098.1 - 31.7.2018 at 3:16 pm
11167356.2 Discharge of Mortgage 7183242.3 - 31.7.2018 at 3:16 pm
11167356.3 Transfer to Jermyn Chiu-Ming Hsu and Lily Ling-Li Hsu - 31.7.2018 at 3:16 pm

References
Prior C/T 1837/35

Land and Deeds 69

Transfer No. 017519.2
N/C. Order No.



REGISTER

No. 24 C / 216

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 27th day of September one thousand nine hundred and Seventy-Two under the seal of the District Land Registrar of the Land Registration District of NORTH AUCKLAND

WITNESSETH that ALEXANDER ROBERT HAMILTON DONALD of Papakura, Company Director

is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 4 acres part 3 rods 8 perches more or less being/Lot 1 Deposited Plan 45156 and being part Allotments 30 and 43A Parish of Papakura



wahrod
Assistant Land Registrar

METRIC AREA IS

1.9424ha
Conversion Factors:
1 Acre = 4046m²
1 Perch = 25.29m²
1 Link = .2012 metres

Fencing agreement in Transfer 639672

wahrod
A.L.R.

MEH

Marukau City

118151.1 Settled under the Joint Family Homes Act 1964 on Alexander Robert Hamilton Donald abovenamed and Helen Dulcie Donald his wife on 11.10.1972 at 2.530 o/c.

G. K. Williams

A.L.R.

969947.1 CAVEAT BY BROADLANDS FINANCE LIMITED - 10.3.1981 at 2.17 o/c

John
A.L.R.

B.132432.2 Transfer to Donald Andrew Ross of Papakura real estate manager and Colleen Marjory Ross his wife - 3.12.1982 at 12.17 o/c

C. Moyner
A.L.R.

B.132432.3 Mortgage to Alexander Robert Hamilton Donald and Helen Dulcie Donald - 3.12.1982 at 12.17 o/c

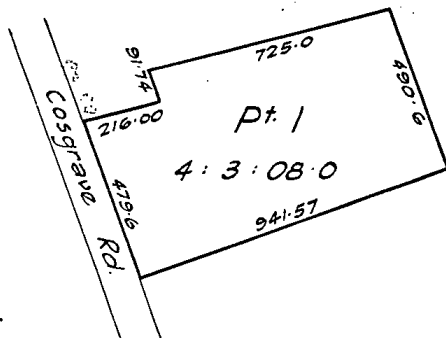
C. Moyner
A.L.R.

B.139277.1 Mortgage to Lenby Grove Limited - 23.12.1982 at 1.35 o/c

William
A.L.R.

B.139277.2 Mortgage to Lenby Group New Zealand Limited - 23.12.1982 at 1.35 o/c

William
A.L.R.



Scale: 1 inch = 4 chains.

DISCHARGED
27 MAR 1986
A.L.R.

OVER

Register copy for L. & D. 69, 71, 72

No. 24 C / 216

24C/216

B.171588.3 Mortgage to Countrywide Building Society - 5.5.1983 at 9.15 o/c

DISCHARGED
28/11/95
A.L.R.

B.171588.4 Memorandum of Priority making mortgage B.171588.3 a first mortgage and mortgage B.139277.1 a second mortgage - 5.5.1983 at 9.15 o/c

DISCHARGED
28/11/95
A.L.R.

B.520306.3 Mortgage to Westpac Banking Corporation - 27.3.1986 at 11.16 o/c

C.304351.2 Mortgage to Trust Bank Auckland Limited - 12.9.1991 at 2.24 o/c

A.L.R.

C.818218.2 Transfer to Robert Geoffrey Carr of Auckland Company director and Coralee June Carr of Auckland marketing assistant - 3.3.1995 at 1.34 o/c

DISCHARGED
28/11/95
A.L.R.

C.818218.3 Mortgage to ANZ Banking Group (New Zealand) Limited - 28.4.1995 at 1.34 o/c

DISCHARGED
28/11/95
A.L.R.

C.836591.2 Transfer to Robert Geoffrey Carr company director and Coralee June Carr marketing assistant both of Auckland - 28.4.1995 at 12.39 oc

DISCHARGED
28/11/95
A.L.R.

C.836591.3 Mortgage to ANZ Banking Group (New Zealand) Limited - 28.4.1995 at 12.39 oc

DISCHARGED
28/11/95
A.L.R.



PRELIMINARY SITE INVESTIGATION
85 HAMLIN ROAD
ARDMORE
AUCKLAND

For the Attention of:

Winton Land Limited

Reference: FES 1804.002 December 2023





Company Information

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Quality Information

Project Name Preliminary Site Investigation
85 Hamlin Road, Ardmore, Auckland
Project Number 1804.002
File Reference M:\2023 Jobs\Winton\Sunfield Development\85 Hamlin Road\01
Report\1804.002_PSI_MT.docx
Date December 2023

Author

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Environmental Scientist

Reviewed

Claire Johnson
Environmental Scientist

Authorised

David O'Reilly
Principal Environmental Consultant

Distribution List

Parties	Copies
Winton Land Limited	1
Focus Environmental Services Limited	1



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Executive Summary

This Focus Environmental Services Limited report is produced under a management system certified as complying with ISO 45001:2018 by SGS New Zealand.

Focus Environmental Services Limited was contracted by Winton Land Limited to carry out a Preliminary Site Investigation (PSI) at 85 Hamlin Road, Ardmore, Auckland. The legal description of the site is Lot 8 Deeds Reg WHAU 38 with an area of 22.52ha.

The Sunfield Urban Development Area (UDA) consists of nineteen properties located across Cosgrave Road, Old Wairoa Road, Hamlin Road and Airfield Road, Papakura, Auckland.

The scope of this report is limited to the property at 85 Hamlin Road, and should be read in conjunction with the covering letter summarising the findings of the PSIs and DSIs completed for the Sunfield UDA.

This PSI has been prepared in accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (Ministry for the Environment, Revised 2021).

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site.

During the review of the available information, the following potentially contaminating activities or land uses were identified:

- Demolition of historic structures potentially containing asbestos; and
- The use and maintenance of lead-based paints.

The information obtained of the site's history was assessed to determine if any potentially hazardous activities listed on the Hazardous Activities and Industries List (HAIL) had occurred on site as a result of past or current land use.

A walkover and site inspection were not possible, as access to the property was not permitted at the time of writing this report. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is granted, it is recommended that a site walkover take place to identify any additional potentially contaminating land uses and/or activities that have not been identified in the information made available.

Based on the results of this Preliminary Site Investigation, it is considered that an activity described in the HAIL has been, or is more likely than not to have been, carried out on the site.

Furthermore, as the impact of the HAIL activities identified on the site soils has not been determined, it is recommended that, prior to any earthworks occurring onsite, a detailed site investigation is completed on the properties found at 101 and 103 Cosgrave Road, Ardmore, located in the north-western portion of the plan change area.

The detailed site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements, if any, for the site.

Based on the findings of the preliminary site investigation for the site, it is considered that the regulations of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contaminated land

rules as outlined in Chapter E30 of the Auckland Unitary Plan: Operative in Part (AUP: OP), need to be considered and consents under these regulations may be triggered by future development of the site.

The detailed site investigation shall be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

Following the receipt of the sampling results, a technical report summarising the results of the investigation shall be prepared. The report will be prepared in accordance Contaminated Land Management Guidelines No. 1(MfE, Revised 2021). The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;
- Recommendations that a Site-Specific Management/Remediation Action Plan is prepared in order to provide controls to mitigate against the potential risks to human health and/or the environment as a result of the effects associated with the site redevelopment works.

All works should be carried out in accordance with the global Site Management Plan titled '*Site Management Plan, Sunfield Urban Development Area*' dated December 2023 and prepared by Focus Environmental Services. If the controls outlined in the Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated.

This report is certified by David O'Reilly, Suitability Qualified and Experienced Practitioner (SQEP):



Principal Environmental Consultant
Focus Environmental Services Limited

1.0 Scope

- 1.1 This report has been prepared at the request of Winton Land Limited (“the Client”) in terms of the Focus Environmental Services Agreement (“Agreement”).
- 1.2 The following report is based on:
 - *Information provided by the Client; and*
 - *A review of historical aerial photographs available for the site;*
- 1.3 We have not independently verified the information provided to us by the Client or its completeness. We do not express an opinion on the accuracy or the reliability of such information.
- 1.4 No warranties are given, intended or implied.
- 1.5 Opinion, inferences, assumptions and interpretations made in this report should not be construed as legal opinion.
- 1.6 Where an assessment is given in this report, the Client must also rely upon their own judgement, knowledge and assessment of the subject of this report before undertaking any action.
- 1.7 This report must not be used in any other context or for any other purpose other than that for which it has been prepared without the prior written consent of Focus Environmental Services.
- 1.8 This report is strictly confidential and intended for the sole use of the Client and shall not be disclosed without the prior written consent of Focus Environmental Services.
- 1.9 This Focus Environmental Services Limited report is produced under a management system certified as complying with ISO 45001:2018 by SGS New Zealand.

2.0 Site Identification

The property is located at 85 Hamlin Road, Ardmore, Auckland as shown in Figure 1 attached. The legal description of the site is Lot 8 Deeds Reg WHAU 38 with an area of 22.52ha. The site is located at national grid reference 1747788mE and 5898913mN.

The site is rectangular in shape and is zoned 'Rural - Mixed Rural Zone' under the AUP: OP.

The site location plan is presented as Figure 1.

3.0 Proposed Site Redevelopment Activity

It is proposed that the site will be redeveloped for residential purposes. As part of the redevelopment, the site will undergo subdivision, a change of land use and disturbance of soils.

The illustrative masterplan is attached as Appendix A.

4.0 Site Topography

The property at 85 Hamlin Road, Ardmore has a generally flat landscape.

The site contour plan is presented in Appendix B.

5.0 Geology and Hydrology

Published geological maps¹ indicate the site is typically underlain with Tauranga Group Holocene River Deposits to the south and alluvial deposits of the Puketoka Formation to the north. A description of the underlying geologies is presented in Table 1 below.

Table 1: Geology of 85 Hamlin Road, Ardmore.

	Southern Portion of Site	Northern Portion of Site
Key name	OIS1 (Holocene) river deposits	Late Pliocene to Middle Pleistocene pumiceous river deposits
Simple name	Holocene river deposits	Neogene sedimentary rocks
Main rock name	Mud	Sand
Description	Sand, silt, mud and clay with local gravel and peat beds.	Pumiceous mud, sand and gravel with muddy peat and lignite; rhyolite pumice, including non-welded ignimbrite, tephra and alluvial pumice deposits
Subsidiary rocks	Sand, silt, clay, peat	Mud, gravel, peat, lignite, tephra, pumice
Key group	Holocene sediments	Late Pliocene to Middle Pleistocene sediments
Stratigraphic lexicon name	Tauranga Group	Puketoka Formation
Absolute age (min)	0.0 million years	0.071 million years
Absolute age (max)	0.014 million years	3.599 million years
Rock group	Mudstone	Sandstone
Rock class	Clastic sediment	Clastic sediment

No groundwater investigation was carried out as part of this investigation.

The nearest surface water body is the unnamed, open stream which flows along the western boundary of the site before passing through the centre of the site.

¹ Geology of the Auckland Area (Institute of Geological & Nuclear Sciences 1:250,000 geological map 3, 2011)

6.0 Regulatory Framework

6.1 The National Environmental Standard

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES) came into effect on the 1st of January 2012 and supersedes any District Plan rules that related to contaminated land. Any Regional Plan rules relating to contaminated land are still applicable.

In brief, the objective of the NES is to ensure that land affected by contaminants is identified and assessed and, if necessary, remediated or managed to protect human health. The NES only applies to the activities: removing or replacing all, or part of, a fuel storage system; sampling the soil; disturbing the soil; subdividing the land; and changing the land use, and where an activity or industry described in the Hazardous Activities and Industries List (HAIL) is being, has been, or is more likely than not to have been undertaken on the piece of land.

The NES also contains reference to the Soil Contaminant Standards for human health (SCS_(health)), for a variety of land use scenarios along with reference to best practice reporting documents.

The environmental HAIL is attached as Appendix C.

6.2 Auckland Unitary Plan: Operative in Part

The contaminated land rules of the Auckland Unitary Plan: Operative in Part (AUP: OP) have immediate legal effect following its notification. As the AUP: OP was notified on the 15th of November 2016 the contaminated land rules of the AUP: OP must be considered.

In brief, the objective of the AUP: OP is to manage land containing elevated levels of contaminants to protect human health and the environment and to enable the effective use of the land.

The contaminated land rules of the AUP: OP apply when the land contains contaminants above those levels specified in Table E30.6.1.4.1 of Chapter E30 of the AUP: OP.

7.0 Site History

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site.

7.1 Historical Aerial Photographs

Descriptions of the historical aerial photographs for the subject site are presented in Table 2 below. The historical aerial photographs are presented in Appendix D.

Table 2: Historical Photographs: 85 Hamlin Road, Ardmore.

Date	Description
1960 - 1981	The 1960 - 1981 historical photographs show the subject site is in use for rural - residential purposes. A dwelling is located adjacent to the eastern boundary of the site. A second structure is located in the central northern portion of the site with a further structure (HB01) directly to the south. A shed (HB02) is located in the central southern portion of the subject site. Various shelter belts are present across the site. Hamlin Road is visible to the north of the site. A racing oval is present to the east of the site from the 1981 historical photograph onwards. The surrounding properties are in use for rural and rural-residential purposes.
1996	The 1996 historical photograph shows the subject site is relatively unchanged from the 1981 historical photograph. However, several dirt tracks can be observed across the site. Most of the shelter belts have been removed. The surrounding properties remain in use for rural and rural - residential purposes. Ardmore Airfield is located to the north-east of the subject site.
2001 - 2017	The 2001 - 2017 historical photographs show the subject site remains in use for rural-residential purposes. The 2001 historical photograph shows that the structure (HB01) has been removed. A shelter belt is now present across the full width of the site in the northern portion of the site. The 2003 historical photograph shows that the south-western corner of the site has been cleared/ ploughed. This area is recovered in vegetation by the 2008 historical photograph. The shed (HB02) is also removed by this time period.

Due to the age of the current and former (HB01 & HB02) site buildings (pre-1988) located across the site, it is considered likely that lead-based paints would have been utilised in the external building materials.

In addition, it is considered likely that potentially asbestos containing materials would have been used in the construction of the current and former site buildings (pre-2000).

7.2 Previous Investigations

At the time of writing this report, the results of a geotechnical investigation covering the site was not available. If future geotechnical investigations identify uncertified fills, these shall be investigated as part of any Detailed Site Investigation completed accordingly.

8.0 Site Walkover and Inspection

A walkover and site inspection were not possible at the time of writing the report as access to the property was not permitted. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is received, a walkover should take place to identify any additional potentially contaminating land uses and/ or activities that have not been identified as part of the desktop assessment.

The site features able to be identified as part of the desktop assessment are presented as Figure 2.

9.0 Surrounding Environment

The surrounding environment appeared to be predominantly in use for rural and rural-residential purposes. Ardmore Aerodrome is observed to the north-east of the site. Residential properties were observed further south-west in the wider area.

No significant horticultural land use can be observed on the properties neighbouring the subject site.

The surrounding environment is presented as Figure 3.

10.0 Asbestos Management

Due to the age of the current and historical site buildings (pre-1996), external PACM products are likely to be present in the construction materials.

Any removal of asbestos materials from the site will need to be conducted in accordance with the Health and Safety at Work (Asbestos) Regulations (MBIE, 2016) and the Approved Code of Practice for the Management and Removal of Asbestos (WorkSafe New Zealand, 2016) by a licensed asbestos removals specialist under an approved asbestos removal control plan.

It should be noted that ACM, other than that described, may also be present at the site and a thorough inspection should be carried out by a suitably qualified and competent asbestos surveyor prior to any demolition activities at the site.

11.0 Potentially Contaminating Activities or Land Uses

Following a review of the history and the available information relating to the site located at 85 Hamlin Road, Ardmore the potentially contaminating land uses and/or activities identified have been summarised in Table 3 below.

Table 3: Potential Contaminating Activities and/or Land Uses: 85 Hamlin Road, Ardmore.

Activity Description	HAIL Category
Demolition of Historic Structures Potentially Containing Asbestos	E1
Maintenance and Use of Lead-based Paint	I

12.0 Conceptual Model of Exposure Pathways

The assessment provided in Table 4 below expands on the potential sources of contamination identified within the site and was based on the potential effects of the subdivision, change of land use and soil disturbance activities on human health and the environment associated with future residential development.

Table 4: Conceptual Site Model: 85 Hamlin Road, Ardmore.

Potential Source	Potential Pathways	Potential Receptors	Assessment
Contaminated Soil	Dermal Contact with Contaminated Soils	Human Health – Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health – Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Ingestion of Contaminated Soils	Human Health – Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health – Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Inhalation of Vapours/Fibres	Human Health – Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health – Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Surface Water Run-off	Ecological Receptors - Unnamed Open Stream	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.

	Migration of Groundwater	Ecological Receptors - Unnamed Open Stream	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
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13.0 Regulatory Requirements

13.1 The National Environmental Standard

Potentially contaminating activities and/or land uses were identified across the site, and in the area of proposed development, therefore it is considered that consent under the regulations of the NES may be triggered by future development of the site.

Prior to the development of the site where potentially contaminating land uses and/or activities have taken place, a detailed site investigation (DSI) is recommended. The DSI would confirm if the identified land uses and/or activities have affected the site soils and will confirm the consenting requirements for these areas of the site. The DSI shall be prepared in general accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

13.2 Auckland Unitary Plan (Operative in Part)

The contaminated land rules of the Auckland Unitary Plan - Operative in Part (AUP OP) have immediate legal effect following its notification. As the AUP OP was notified on the 15th of November 2016 the contaminated land rules must be considered.

As potentially contaminating activities and/or land uses were identified across the site, the contaminated land rules of the AUP: OP may be triggered by future development of the site.

14.0 Conclusions and Recommendations

This PSI has been prepared in accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (Ministry for the Environment, Revised 2021).

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site.

During the review of the available information, the following potentially contaminating activities or land uses were identified:

- Demolition of historic structures potentially containing asbestos; and
- The use and maintenance of lead-based paints.

The information obtained of the site's history was assessed to determine if any potentially hazardous activities listed on the Hazardous Activities and Industries List (HAIL) had occurred on site as a result of past or current land use.

A walkover and site inspection were not possible, as access to the property was not permitted at the time of writing this report. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is granted, it is recommended that a site walkover take place to identify any additional potentially contaminating land uses and/or activities that have not been identified in the information made available.

Based on the results of this Preliminary Site Investigation, it is considered that an activity described in the HAIL has been, or is more likely than not to have been, carried out on the site.

Furthermore, as the impact of the HAIL activities identified on the site soils has not been determined, it is recommended that, prior to any earthworks occurring onsite, a detailed site investigation is completed on the properties found at 101 and 103 Cosgrave Road, Ardmore, located in the north-western portion of the plan change area.

The detailed site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements, if any, for the site.

Based on the findings of the preliminary site investigation for the site, it is considered that the regulations of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contaminated land rules as outlined in Chapter E30 of the Auckland Unitary Plan: Operative in Part (AUP: OP), need to be considered and consents under these regulations may be triggered by future development of the site.

The detailed site investigation shall be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

Following the receipt of the sampling results, a technical report summarising the results of the investigation shall be prepared. The report will be prepared in accordance Contaminated Land Management Guidelines No. 1(MfE, Revised 2021). The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;

- Recommendations that a Site-Specific Management/Remediation Action Plan is prepared in order to provide controls to mitigate against the potential risks to human health and/or the environment as a result of the effects associated with the site redevelopment works.

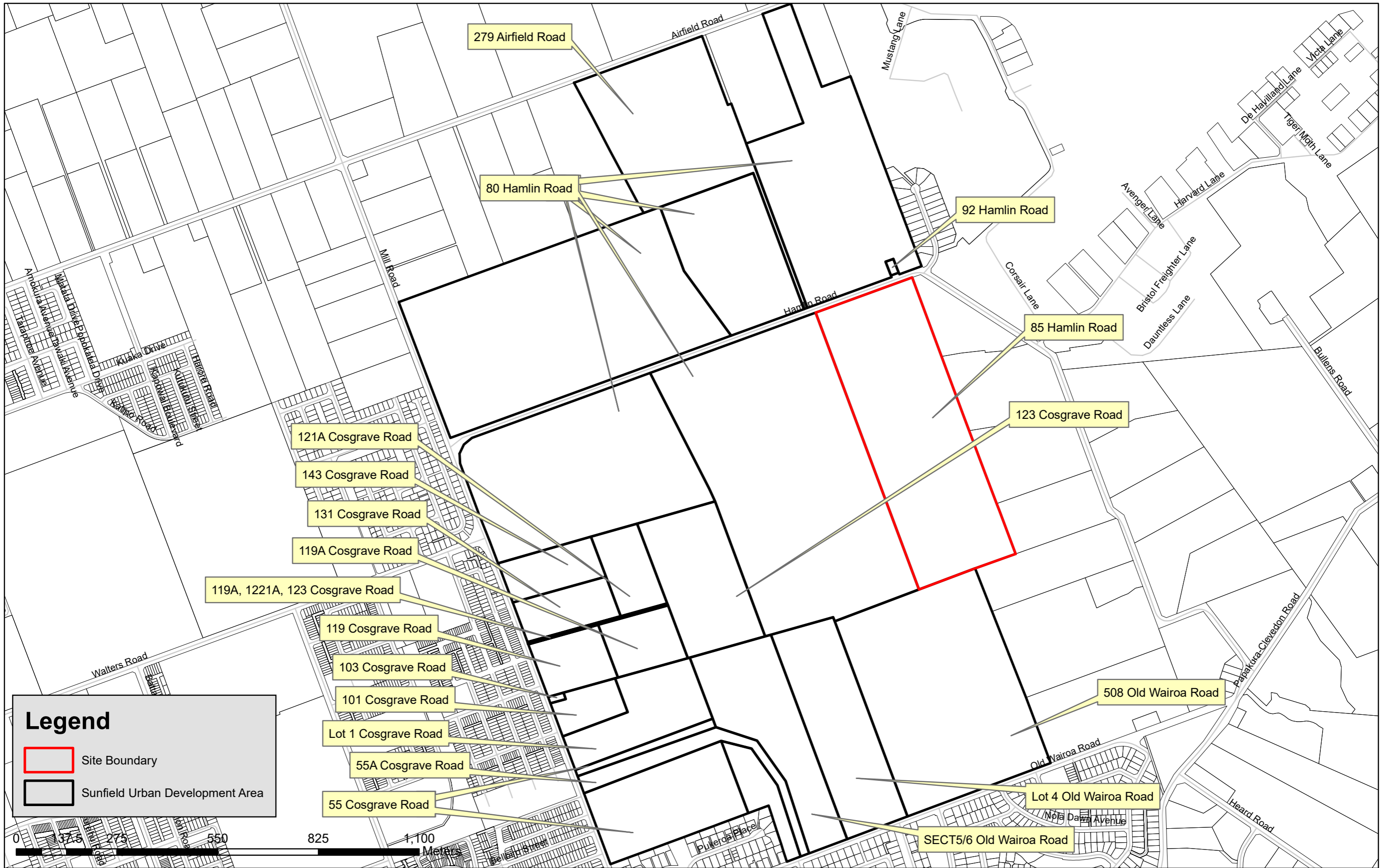
All works should be carried out in accordance with the global Site Management Plan titled '*Site Management Plan, Sunfield Urban Development Area*' dated December 2023 and prepared by Focus Environmental Services. If the controls outlined in the Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated.

Figures

Figure 1 - Site Location Plan

Figure 2 - Site Features Plan


Figure 3 - Surrounding Environment




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Winton Land Limited
 85 Hamlin Road
 Sunfield Urban Development Area
 Papakura
 Auckland

Figure 1: Site Location Plan
 Preliminary Site Investigation


 1804.002

Drawing Number: 1804.002.01
 Drawn By: MT
 Checked By: DO'R
 Date: 06/11/2023



Legend

- Site Features
- Site Boundary


Site Features	Description
1	Site Entrance
2	Dwelling
3	Shed
4	Shed (2)
5	Stream




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 Sunfield Urban Development Area
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 Auckland

Figure 2: Site Features Plan
 Preliminary Site Investigation



1804.002	Drawing Number: 1804.002.02
	Drawn By: MT
	Checked By: DO'R
	Date: 06/11/2023



Legend

- Site Boundary
- Sunfield Urban Development Area


0 180 360 720 1,080 Meters



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Winton Land Limited
 85 Hamlin Road
 Sunfield Urban Development Area
 Papakura
 Auckland

Figure 3: Surrounding Environment
 Preliminary Site Investigation



1804.002

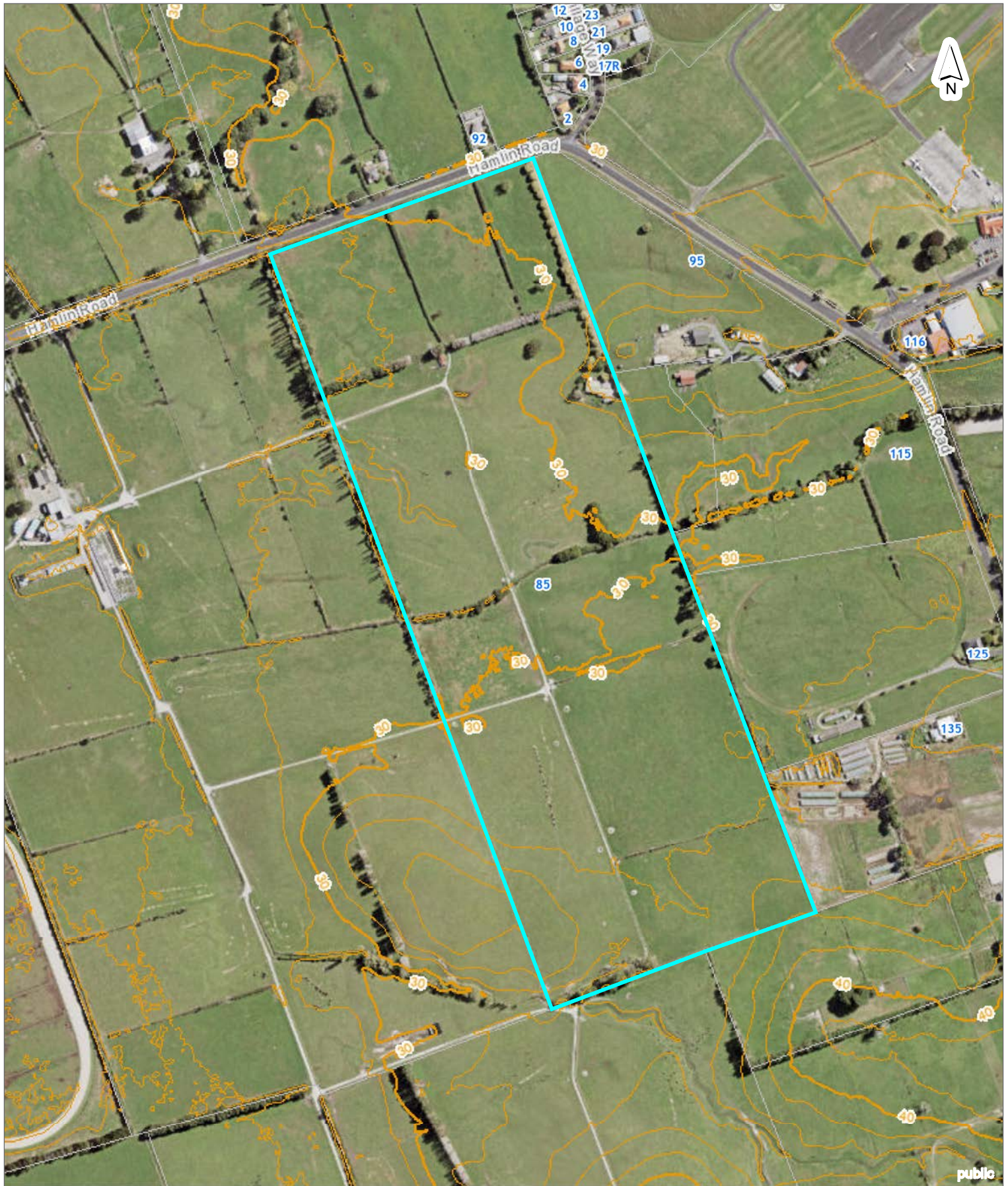
Drawing Number: 1804.002.03
Drawn By: MT
Checked By: DO'R
Date: 07/11/2023

Appendices

Appendix A - Illustrative Masterplan



Appendix B - Site Contour Plan



DISCLAIMER:
This map/plan is illustrative only and all information should be independently verified on site before taking any action. Copyright Auckland Council. Land Parcel Boundary information from LINZ (Crown Copyright Reserved). Whilst due care has been taken, Auckland Council gives no warranty as to the accuracy and plan completeness of any information on this map/plan and accepts no liability for any error, omission or use of the information. Height datum: Auckland 1946.

Site Contour Plan

0 25 50 75
Meters

Scale @ A4
= 1:5,000

Date Printed:
7/11/2023



public



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

Appendix D - Historical Aerial Photographs

Historical Aerial Photographs

85 Hamlin Road
Ardmore
Auckland

by Focus Environmental Services Limited

1960 Historical Photograph



1975 Historical Photograph



Source: NZ Aerial Mapping

1981 Historical Photograph



Source: NZ Aerial Mapping

1996 Historical Photograph



Source: Auckland Council GeoMaps

2001 Historical Photograph

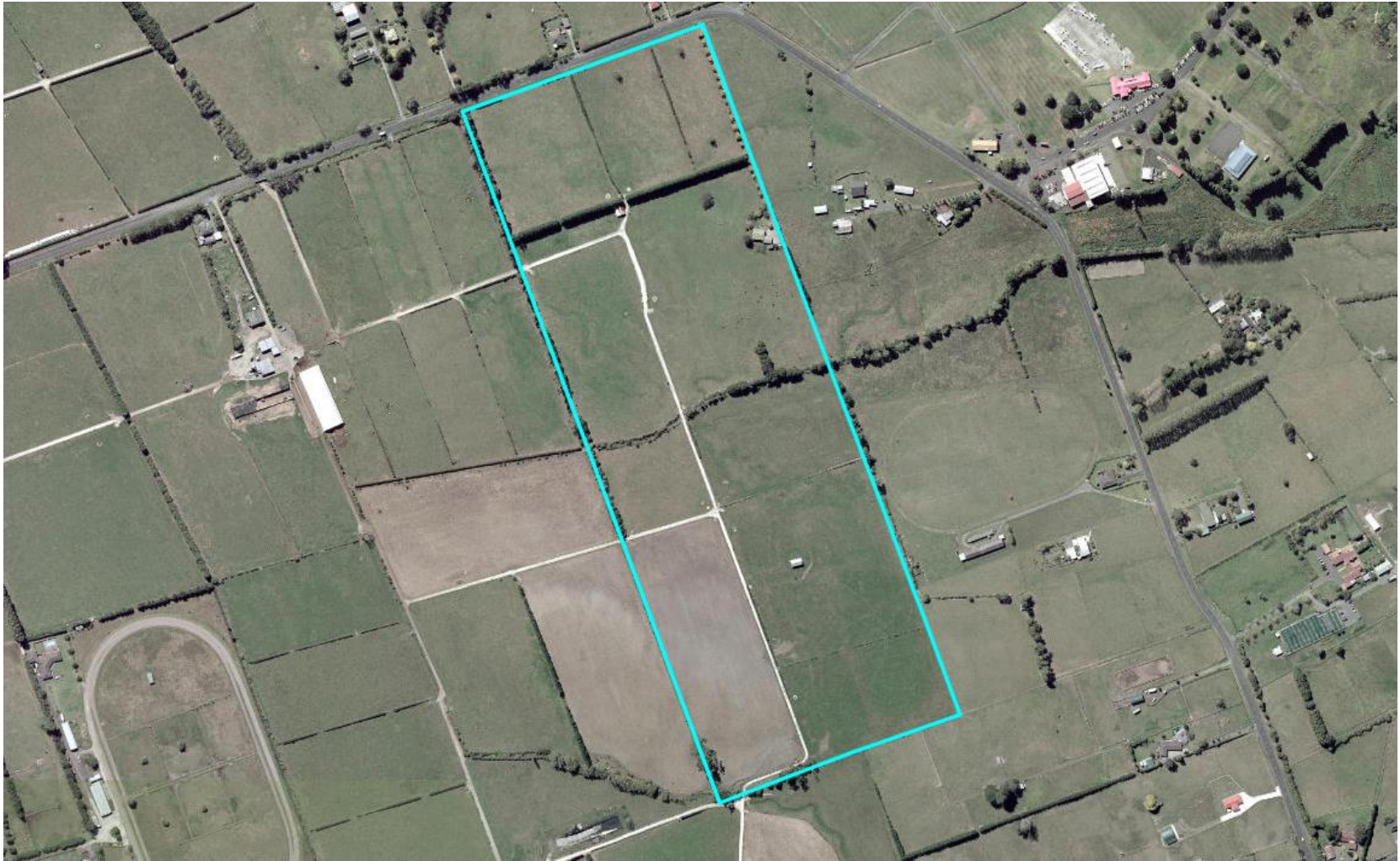


Source: Auckland Council GeoMaps

2003 Historical Photograph



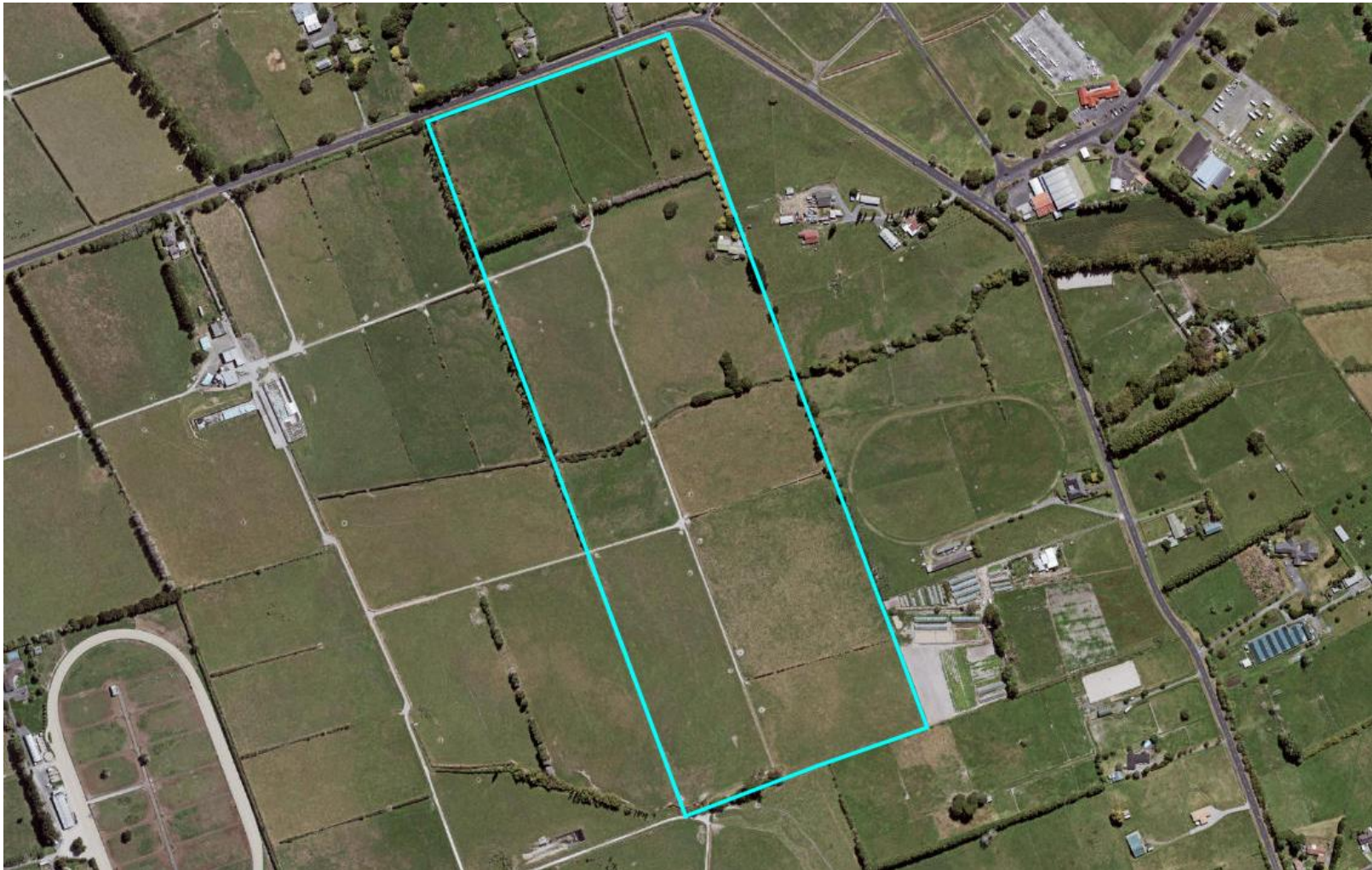
2006 Historical Photograph



2008 Historical Photograph



2015 Historical Photograph



Source: Auckland Council GeoMaps

2017 Historical Photograph



Source: Auckland Council GeoMaps

PRELIMINARY SITE INVESTIGATION
92 HAMLIN ROAD
ARDMORE
AUCKLAND

For the Attention of:

Winton Land Limited

Reference: FES 1804.003 December 2023





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Distribution List

Parties	Copies
Winton Land Limited	1
Focus Environmental Services Limited	1



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- Appendix B – Site Contour Plan
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- Appendix D – Historical Aerial Photographs

Executive Summary

This Focus Environmental Services Limited report is produced under a management system certified as complying with ISO 45001:2018 by SGS New Zealand.

Focus Environmental Services Limited was contracted by Winton Land Limited to carry out a Preliminary Site Investigation (PSI) at 92 Hamlin Road, Ardmore, Auckland. The legal description of the site is Lot 1 DP 46615 with an area of 0.091ha.

The Sunfield Urban Development Area (UDA) consists of nineteen properties located across Cosgrave Road, Old Wairoa Road, Hamlin Road and Airfield Road, Papakura, Auckland.

The scope of this report is limited to the property at 92 Hamlin Road, and should be read in conjunction with the covering letter summarising the findings of the PSIs and DSIs completed for the Sunfield UDA.

This PSI has been prepared in accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (Ministry for the Environment, Revised 2021).

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site and a review of the Auckland Council property file.

During the review of the available information, the following potentially contaminating activities or land uses were identified:

- Demolition of historic structures potentially containing asbestos;
- The use and maintenance of lead-based paints; and
- The bulk storage of construction materials/ scrap materials.

The information obtained of the site's history was assessed to determine if any potentially hazardous activities listed on the Hazardous Activities and Industries List (HAIL) had occurred on site as a result of past or current land use.

A walkover and site inspection were not possible, as access to the property was not permitted at the time of writing this report. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is granted, it is recommended that a site walkover take place to identify any additional potentially contaminating land uses and/or activities that have not been identified in the information made available.

Based on the results of this Preliminary Site Investigation, it is considered that an activity described in the HAIL has been, or is more likely than not to have been, carried out on the site.

Furthermore, as the impact of the HAIL activities identified on the site soils has not been determined, it is recommended that, prior to any earthworks occurring onsite, a detailed site investigation is completed on the property found at 92 Hamlin Road.

The detailed site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements, if any, for the site.

Based on the findings of the preliminary site investigation for the site, it is considered that the regulations of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contaminated land

rules as outlined in Chapter E30 of the Auckland Unitary Plan: Operative in Part (AUP: OP), need to be considered and consents under these regulations may be triggered by future development of the site.

The detailed site investigation shall be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

Following the receipt of the sampling results, a technical report summarising the results of the investigation shall be prepared. The report will be prepared in accordance Contaminated Land Management Guidelines No. 1(MfE, Revised 2021). The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;
- Recommendations that a Site-Specific Management/Remediation Action Plan is prepared in order to provide controls to mitigate against the potential risks to human health and/or the environment as a result of the effects associated with the site redevelopment works.

All works should be carried out in accordance with the global Site Management Plan titled '*Site Management Plan, Sunfield Urban Development Area*' dated December 2023 and prepared by Focus Environmental Services. If the controls outlined in the Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated.

This report is certified by David O'Reilly, Suitability Qualified and Experienced Practitioner (SQEP):



Principal Environmental Consultant
Focus Environmental Services Limited

1.0 Scope

- 1.1 This report has been prepared at the request of Winton Land Limited (“the Client”) in terms of the Focus Environmental Services Agreement (“Agreement”).
- 1.2 The following report is based on:
 - *Information provided by the Client;*
 - *A review of historical aerial photographs available for the site; and*
 - *A search of the Auckland Council Property File.*
- 1.3 We have not independently verified the information provided to us by the Client or its completeness. We do not express an opinion on the accuracy or the reliability of such information.
- 1.4 No warranties are given, intended or implied.
- 1.5 Opinion, inferences, assumptions and interpretations made in this report should not be construed as legal opinion.
- 1.6 Where an assessment is given in this report, the Client must also rely upon their own judgement, knowledge and assessment of the subject of this report before undertaking any action.
- 1.7 This report must not be used in any other context or for any other purpose other than that for which it has been prepared without the prior written consent of Focus Environmental Services.
- 1.8 This report is strictly confidential and intended for the sole use of the Client and shall not be disclosed without the prior written consent of Focus Environmental Services.
- 1.9 This Focus Environmental Services Limited report is produced under a management system certified as complying with ISO 45001:2018 by SGS New Zealand.

2.0 Site Identification

The property is located at 92 Hamlin Road, Ardmore, Auckland as shown in Figure 1 attached. The legal description of the site is Lot 1 DP 46615 with an area of 0.091ha. The site is located at national grid reference 1774745mE and 5899334mN.

The site is rectangular in shape and is zoned 'Rural - Mixed Rural Zone' under the AUP: OP.

The site location plan is presented as Figure 1.

3.0 Proposed Site Redevelopment Activity

It is proposed that the site will be redeveloped for residential purposes. As part of the redevelopment, the site will undergo subdivision, a change of land use and disturbance of soils.

The illustrative masterplan is attached as Appendix A.

4.0 Site Topography

The property at 92 Hamlin Road, Ardmore has a generally flat landscape.

The site contour plan is presented in Appendix B.

5.0 Geology and Hydrology

Published geological maps¹ indicate the site is typically underlain with alluvial deposits of the Puketoka Formation. A description of the underlying geology is presented in Table 1 below.

Table 1: Geology of 92 Hamlin Road, Ardmore.

Key name	Late Pliocene to Middle Pleistocene pumiceous river deposits
Simple name	Neogene sedimentary rocks
Main rock name	Sand
Description	Pumiceous mud, sand and gravel with muddy peat and lignite; rhyolite pumice, including non-welded ignimbrite, tephra and alluvial pumice deposits
Subsidiary rocks	Mud, gravel, peat, lignite, tephra, pumice
Key group	Late Pliocene to Middle Pleistocene sediments
Stratigraphic lexicon name	Puketoka Formation
Absolute age (min)	0.071 million years
Absolute age (max)	3.599 million years
Rock group	Sandstone
Rock class	Clastic sediment

No groundwater investigation was carried out as part of this investigation.

The nearest surface water body is the unnamed, open stream located approximately 253m to the south-west of the site.

¹ Geology of the Auckland Area (Institute of Geological & Nuclear Sciences 1:250,000 geological map 3, 2011)

6.0 Regulatory Framework

6.1 The National Environmental Standard

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES) came into effect on the 1st of January 2012 and supersedes any District Plan rules that related to contaminated land. Any Regional Plan rules relating to contaminated land are still applicable.

In brief, the objective of the NES is to ensure that land affected by contaminants is identified and assessed and, if necessary, remediated or managed to protect human health. The NES only applies to the activities: removing or replacing all, or part of, a fuel storage system; sampling the soil; disturbing the soil; subdividing the land; and changing the land use, and where an activity or industry described in the Hazardous Activities and Industries List (HAIL) is being, has been, or is more likely than not to have been undertaken on the piece of land.

The NES also contains reference to the Soil Contaminant Standards for human health (SCS_(health)), for a variety of land use scenarios along with reference to best practice reporting documents.

The environmental HAIL is attached as Appendix C.

6.2 The National Environmental Standard

The contaminated land rules of the Auckland Unitary Plan: Operative in Part (AUP: OP) have immediate legal effect following its notification. As the AUP: OP was notified on the 15th of November 2016 the contaminated land rules of the AUP: OP must be considered.

In brief, the objective of the AUP: OP is to manage land containing elevated levels of contaminants to protect human health and the environment and to enable the effective use of the land.

The contaminated land rules of the AUP: OP apply when the land contains contaminants above those levels specified in Table E30.6.1.4.1 of Chapter E30 of the AUP: OP.

7.0 Site History

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site, a review of the Auckland Council property file and a review of the Historical Certificate of Title.

7.1 Historical Aerial Photographs

Descriptions of the historical aerial photographs for the subject site are presented in Table 2 below. The historical aerial photographs are presented in Appendix D.

Table 2: Historical Photographs: 92 Hamlin Road, Ardmore.

Date	Description
1959	The 1959 historical photograph shows that the subject site is part of a larger parcel of land in use for rural purposes. In the area of the subject site a large pile of construction debris is observed. Hamlin road is visible directly to the south of the subject site. The surrounding properties appear to be in use for a mix of rural and rural-residential purposes. Ardmore Aerodrome is visible to the north-east of the site.
1960	The 1960 historical photograph shows the subject site has been subdivided from the larger parcel of land and is now in use for residential purposes. A dwelling has been constructed in the centre of the site. The surrounding properties remain in use for rural and rural – residential purposes.
1975 - 2008	The 1975 – 2008 historical photographs show the subject site remains in use for residential purposes. A garage (HB01) has been constructed in the north-eastern corner of the site accessed by a driveway leading from the south-eastern corner of the site. A shed and attached carport have also been constructed in the north-western corner of the site. The 1981 historical photograph shows that a driveway has been constructed along the western boundary of the site leading to the shed. The 2008 historical photograph shows that the two driveways have been connected by a hard-seal area to the south of the dwelling.
2008 - 2017	The 2010 – 2017 historical photographs show the subject relatively unchanged from the previous time period. The 2010 historical photograph shows that all of the site buildings have been re-roofed. In addition, the garage has been replaced with a smaller structure in the same location. The original footprint is still visible. The surrounding properties remain in use for rural and rural – residential purposes.

Due to the age of the current and former (HB01) site buildings (pre-1988) located across the site, it is considered likely that lead-based paints would have been utilised in the external building materials.

In addition, it is considered likely that potentially asbestos containing materials would have been used in the construction of the current and former site buildings (pre-2000).

7.2 Previous Investigations

At the time of writing this report, the results of a geotechnical investigation covering the site was not available. If future geotechnical investigations identify uncertified fills, these shall be investigated as part of any Detailed Site Investigation completed accordingly.

7.3 Auckland Council Property File Search

The results of the council search showed one consent relating to the site at 92 Hamlin Road, Ardmore. The relevant details of the Property File search are presented in Table 3 below.

Table 3: Relevant Property File Information: 92 Hamlin Road, Ardmore

Proposed Activity	Applicant	Reference	Date
Building Consent – Conservatory on existing concrete deck	Priscilla Edbrooke	22523	29/11/2006

8.0 Site Walkover and Inspection

A walkover and site inspection were not possible at the time of writing the report as access to the property was not permitted. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is received, a walkover should take place to identify any additional potentially contaminating land uses and/ or activities that have not been identified as part of the desktop assessment.

The site features able to be identified as part of the desktop assessment are presented as Figure 2.

9.0 Surrounding Environment

The surrounding environment appeared to be predominantly in use for rural and rural-residential purposes. Ardmore Aerodrome is observed to the north-east of the site. Residential properties were observed further south-west in the wider area.

No significant horticultural land use can be observed on the properties neighbouring the subject site.

The surrounding environment is presented as Figure 3.

10.0 Asbestos Management

Due to the age of the current and historical site buildings (pre-1996), external PACM products are likely to be present in the construction materials.

Any removal of asbestos materials from the site will need to be conducted in accordance with the Health and Safety at Work (Asbestos) Regulations (MBIE, 2016) and the Approved Code of Practice for the Management and Removal of Asbestos (WorkSafe New Zealand, 2016) by a licensed asbestos removals specialist under an approved asbestos removal control plan.

It should be noted that ACM, other than that described, may also be present at the site and a thorough inspection should be carried out by a suitably qualified and competent asbestos surveyor prior to any demolition activities at the site.

11.0 Potentially Contaminating Activities or Land Uses

Following a review of the history and the available information relating to the site located at 92 Hamlin Road, Ardmore the potentially contaminating land uses and/or activities identified have been summarised in Table 3 below.

Table 3: Potential Contaminating Activities and/or Land Uses: 92 Hamlin Road, Ardmore.

Activity Description	HAIL Category
Demolition of Historic Structures Potentially Containing Asbestos	E1
Maintenance and Use of Lead-based Paint	I
Bulk Storage of Construction Materials/ Scrap Material	

12.0 Conceptual Model of Exposure Pathways

The assessment provided in Table 4 below expands on the potential sources of contamination identified within the site and was based on the potential effects of the subdivision, change of land use and soil disturbance activities on human health and the environment associated with future residential development.

Table 4: Conceptual Site Model: 92 Hamlin Road, Ardmore.

Potential Source	Potential Pathways	Potential Receptors	Assessment
Contaminated Soil	Dermal Contact with Contaminated Soils	Human Health - Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health - Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Ingestion of Contaminated Soils	Human Health - Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health - Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Inhalation of Vapours/Fibres	Human Health - Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health - Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Surface Water Run-off	Ecological Receptors - Unnamed Open Stream	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.

	Migration of Groundwater	Ecological Receptors - Unnamed Open Stream	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
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13.0 Regulatory Requirements

13.1 The National Environmental Standard

Potentially contaminating activities and/or land uses were identified across the site, and in the area of proposed development, therefore it is considered that consent under the regulations of the NES may be triggered by future development of the site.

Prior to the development of the site where potentially contaminating land uses and/or activities have taken place, a detailed site investigation (DSI) is recommended. The DSI would confirm if the identified land uses and/or activities have affected the site soils and will confirm the consenting requirements for these areas of the site. The DSI shall be prepared in general accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

13.2 Auckland Unitary Plan (Operative in Part)

The contaminated land rules of the Auckland Unitary Plan - Operative in Part (AUP OP) have immediate legal effect following its notification. As the AUP OP was notified on the 15th of November 2016 the contaminated land rules must be considered.

As potentially contaminating activities and/or land uses were identified across the site, the contaminated land rules of the AUP: OP may be triggered by future development of the site.

14.0 Conclusions and Recommendations

This PSI has been prepared in accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (Ministry for the Environment, Revised 2021).

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site and a review of the Auckland Council property file.

During the review of the available information, the following potentially contaminating activities or land uses were identified:

- Demolition of historic structures potentially containing asbestos;
- The use and maintenance of lead-based paints; and
- The bulk storage of construction materials/ scrap materials.

The information obtained of the site's history was assessed to determine if any potentially hazardous activities listed on the Hazardous Activities and Industries List (HAIL) had occurred on site as a result of past or current land use.

A walkover and site inspection were not possible, as access to the property was not permitted at the time of writing this report. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is granted, it is recommended that a site walkover take place to identify any additional potentially contaminating land uses and/or activities that have not been identified in the information made available.

Based on the results of this Preliminary Site Investigation, it is considered that an activity described in the HAIL has been, or is more likely than not to have been, carried out on the site.

Furthermore, as the impact of the HAIL activities identified on the site soils has not been determined, it is recommended that, prior to any earthworks occurring onsite, a detailed site investigation is completed on the property found at 92 Hamlin Road.

The detailed site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements, if any, for the site.

Based on the findings of the preliminary site investigation for the site, it is considered that the regulations of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contaminated land rules as outlined in Chapter E30 of the Auckland Unitary Plan: Operative in Part (AUP: OP), need to be considered and consents under these regulations may be triggered by future development of the site.

The detailed site investigation shall be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

Following the receipt of the sampling results, a technical report summarising the results of the investigation shall be prepared. The report will be prepared in accordance Contaminated Land Management Guidelines No. 1(MfE, Revised 2021). The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;

- Recommendations that a Site-Specific Management/Remediation Action Plan is prepared in order to provide controls to mitigate against the potential risks to human health and/or the environment as a result of the effects associated with the site redevelopment works.

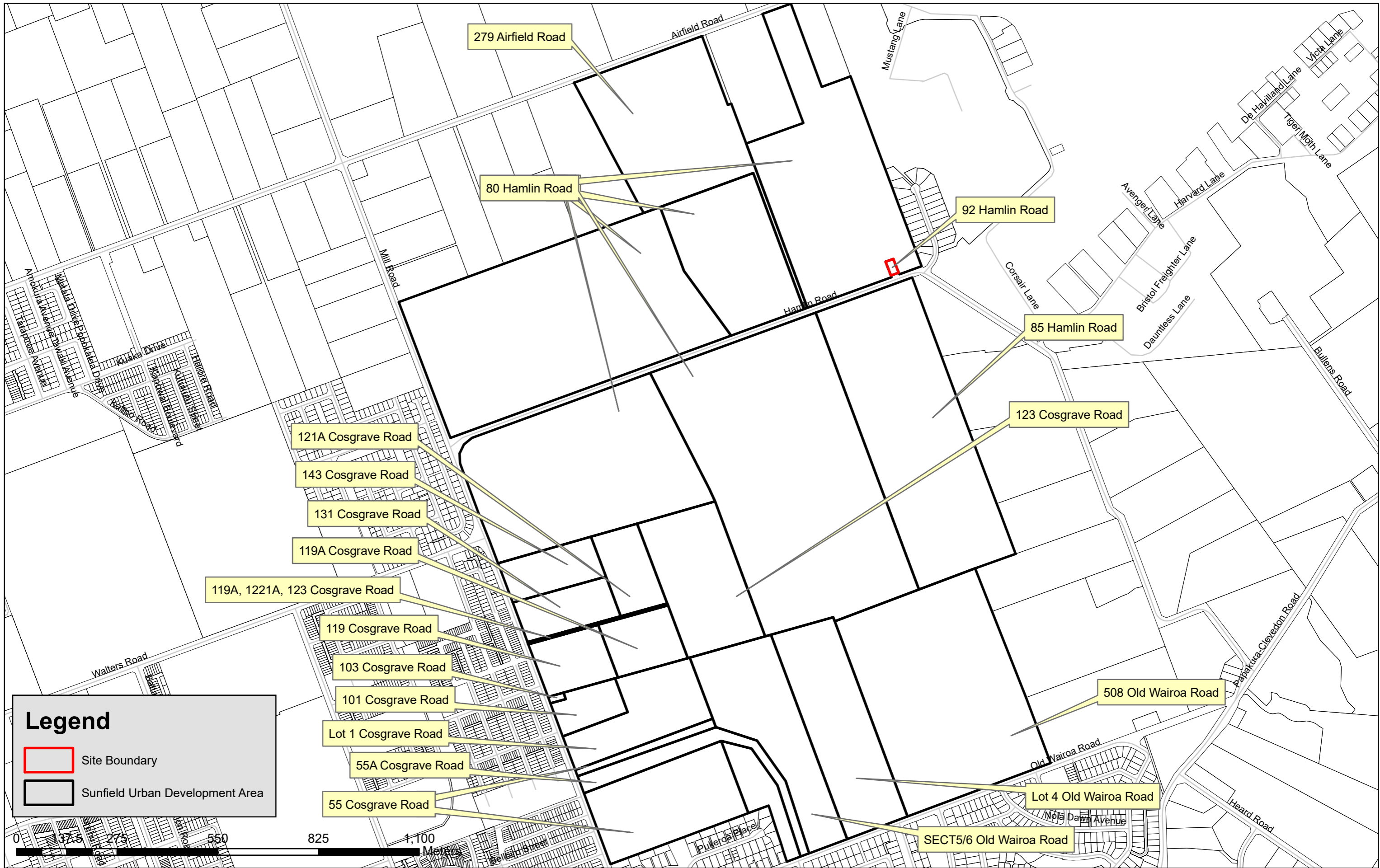
All works should be carried out in accordance with the global Site Management Plan titled '*Site Management Plan, Sunfield Urban Development Area*' dated December 2023 and prepared by Focus Environmental Services. If the controls outlined in the Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated.

Figures

Figure 1 - Site Location Plan

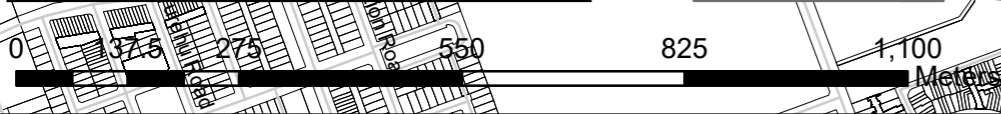
Figure 2 - Site Features Plan

Figure 3 - Surrounding Environment



Legend


- Site Boundary
- Sunfield Urban Development Area




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Winton Land Limited
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 Sunfield Urban Development Area
 Papakura
 Auckland

Figure 1: Site Location Plan
 Preliminary Site Investigation


 1804.003

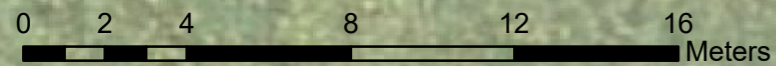
Drawing Number: 1804.003.01
 Drawn By: MT
 Checked By: DO'R
 Date: 05/12/2023



Legend

- Site Features
- Approximate Location of Historic Structures
- Site Boundary

Site Features	Description
1	Site Entrance (1)
2	Site Entrance (2)
3	Dwelling
4	Garage
5	Shed
6	Attached carport



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Figure 2: Site Features Plan
 Preliminary Site Investigation



1804.003

Drawing Number: 1804.003.02

Drawn By: MT

Checked By: DO'R

Date: 05/12/2023



Legend


Site Boundary




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Figure 3: Surrounding Environment
 Preliminary Site Investigation


 1804.003

Drawing Number: 1804.003.03 Drawn By: MT
Checked By: DO'R Date: 05/12/2023

Appendices

Appendix A - Illustrative Masterplan



Appendix B - Site Contour Plan



DISCLAIMER:
This map/plan is illustrative only and all information should be independently verified on site before taking any action. Copyright Auckland Council. Land Parcel Boundary information from LINZ (Crown Copyright Reserved). Whilst due care has been taken, Auckland Council gives no warranty as to the accuracy and plan completeness of any information on this map/plan and accepts no liability for any error, omission or use of the information. Height datum: Auckland 1946.

Site Contour Plan

0 2.5 5 7.5
Meters

Scale @ A4
= 1:500

Date Printed:
5/12/2023





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

Appendix D - Historical Aerial Photographs

Historical Aerial Photographs

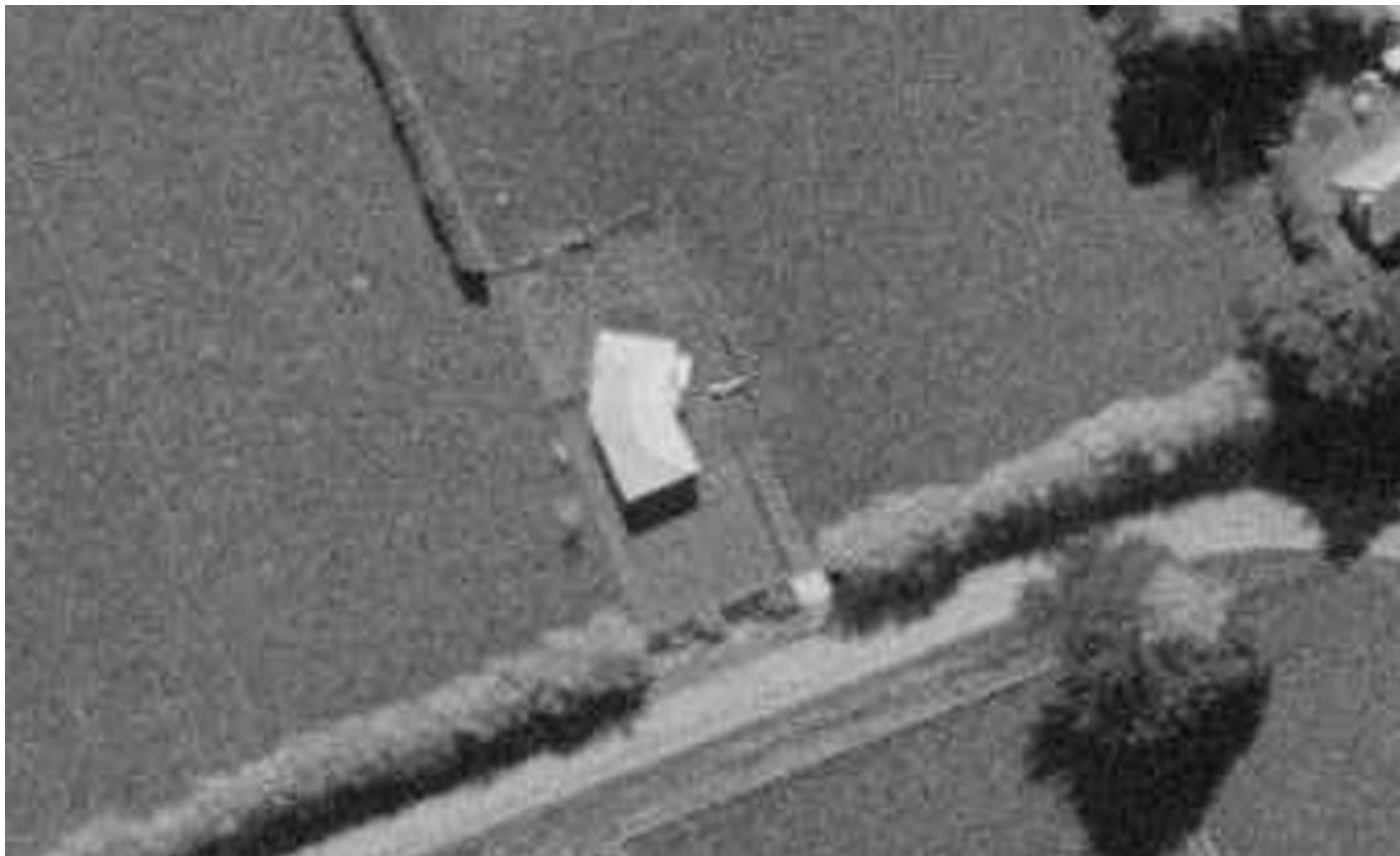
92 Hamlin Road
Ardmore
Auckland

by Focus Environmental Services Limited

1959 Historical Photograph



1960 Historical Photograph



Source: NZ Aerial Mapping

1975 Historical Photograph



Source: NZ Aerial Mapping

1981 Historical Photograph



Source: NZ Aerial Mapping

1988 Historical Photograph



Source: NZ Aerial Mapping

2001 Historical Photograph



Source: Auckland Council GeoMaps

2006 Historical Photograph



2008 Historical Photograph



2010 Historical Photograph



Source: Auckland Council GeoMaps

2015 Historical Photograph



Source: Auckland Council GeoMaps

2017 Historical Photograph



Source: Auckland Council GeoMaps

PRELIMINARY SITE INVESTIGATION
119 COSGRAVE ROAD
ARDMORE
AUCKLAND

For the Attention of:

Winton Land Limited

Reference: FES 1804.004 December 2023





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Authorised

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Distribution List

Parties	Copies
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Executive Summary

This Focus Environmental Services Limited report is produced under a management system certified as complying with ISO 45001:2018 by SGS New Zealand.

Focus Environmental Services Limited was contracted by Winton Land Limited to carry out a Preliminary Site Investigation (PSI) at 119 Cosgrave Road, Ardmore, Auckland. The legal description of the site is Lot 6 DP 103787 with an area of 3.036ha.

The Sunfield Urban Development Area (UDA) consists of nineteen properties located across Cosgrave Road, Old Wairoa Road, Hamlin Road and Airfield Road, Papakura, Auckland.

The scope of this report is limited to the property at 119 Cosgrave Road, and should be read in conjunction with the covering letter summarising the findings of the PSIs and DSIs completed for the Sunfield UDA.

This PSI has been prepared in accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (Ministry for the Environment, Revised 2021).

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site and a review of the Auckland Council property file.

During the review of the available information, the following potentially contaminating activities or land uses were identified:

- Horticultural activities;
- Demolition of historic structures potentially containing asbestos; and
- The use and maintenance of lead-based paints.

The information obtained of the site's history was assessed to determine if any potentially hazardous activities listed on the Hazardous Activities and Industries List (HAIL) had occurred on site as a result of past or current land use.

A walkover and site inspection were not possible, as access to the property was not permitted at the time of writing this report. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is granted, it is recommended that a site walkover take place to identify any additional potentially contaminating land uses and/or activities that have not been identified in the information made available.

Based on the results of this Preliminary Site Investigation, it is considered that an activity described in the HAIL has been, or is more likely than not to have been, carried out on the site.

Furthermore, as the impact of the HAIL activities identified on the site soils has not been determined, it is recommended that, prior to any earthworks occurring onsite, a detailed site investigation is completed on the property found at 119 Cosgrave Road.

The detailed site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements, if any, for the site.

Based on the findings of the preliminary site investigation for the site, it is considered that the regulations of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contaminated land

rules as outlined in Chapter E30 of the Auckland Unitary Plan: Operative in Part (AUP: OP), need to be considered and consents under these regulations may be triggered by future development of the site.

The detailed site investigation shall be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

Following the receipt of the sampling results a technical report summarising the results of the investigation shall be prepared. The report will be prepared in accordance Contaminated Land Management Guidelines No. 1(MfE, Revised 2021). The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;
- Recommendations that a Site-Specific Management/Remediation Action Plan is prepared in order to provide controls to mitigate against the potential risks to human health and/or the environment as a result of the effects associated with the site redevelopment works.

All works should be carried out in accordance with the global Site Management Plan titled '*Site Management Plan, Sunfield Urban Development Area*' dated December 2023 and prepared by Focus Environmental Services. If the controls outlined in the Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated.

This report is certified by David O'Reilly, Suitability Qualified and Experienced Practitioner (SQEP):



Principal Environmental Consultant
Focus Environmental Services Limited

1.0 Scope

- 1.1 This report has been prepared at the request of Winton Land Limited (“the Client”) in terms of the Focus Environmental Services Agreement (“Agreement”).
- 1.2 The following report is based on:
 - *Information provided by the Client;*
 - *A review of historical aerial photographs available for the site; and*
 - *A search of the Auckland Council Property File.*
- 1.3 We have not independently verified the information provided to us by the Client or its completeness. We do not express an opinion on the accuracy or the reliability of such information.
- 1.4 No warranties are given, intended or implied.
- 1.5 Opinion, inferences, assumptions and interpretations made in this report should not be construed as legal opinion.
- 1.6 Where an assessment is given in this report, the Client must also rely upon their own judgement, knowledge and assessment of the subject of this report before undertaking any action.
- 1.7 This report must not be used in any other context or for any other purpose other than that for which it has been prepared without the prior written consent of Focus Environmental Services.
- 1.8 This report is strictly confidential and intended for the sole use of the Client and shall not be disclosed without the prior written consent of Focus Environmental Services.
- 1.9 This Focus Environmental Services Limited report is produced under a management system certified as complying with ISO 45001:2018 by SGS New Zealand.

2.0 Site Identification

The property is located at 119 Cosgrave Road, Ardmore, Auckland as shown in Figure 1 attached. The legal description of the site is Lot 6 DP 103787 with an area of 3.036ha. The site is located at national grid reference 1773873mE and 5898252mN.

The site is rectangular in shape and is zoned 'Rural - Mixed Rural Zone' under the AUP: OP.

The site location plan is presented as Figure 1.

3.0 Proposed Site Redevelopment Activity

It is proposed that the site will be redeveloped for residential purposes. As part of the redevelopment, the site will undergo subdivision, a change of land use and disturbance of soils.

The illustrative masterplan is attached as Appendix A.

4.0 Site Topography

The property at 119 Cosgrave Road, Ardmore has a generally flat landscape.

The site contour plan is presented in Appendix B.

5.0 Geology and Hydrology

Published geological maps¹ indicate the site is typically underlain with Tauranga Group Holocene River Deposits. A description of the underlying geology is presented in Table 1 below.

Table 1: Geology of 119 Cosgrave Road, Ardmore.

Key name	OIS1 (Holocene) river deposits
Simple name	Holocene river deposits
Main rock name	Mud
Description	Sand, silt, mud and clay with local gravel and peat beds.
Subsidiary rocks	Sand, silt, clay, peat
Key group	Holocene sediments
Stratigraphic lexicon name	Tauranga Group
Absolute age (min)	0.0 million years
Absolute age (max)	0.014 million years
Rock group	Mudstone
Rock class	Clastic sediment

No groundwater investigation was carried out as part of this investigation.

The nearest surface water body is the unnamed, open culvert which flows along the western boundary of the site.

¹ Geology of the Auckland Area (Institute of Geological & Nuclear Sciences 1:250,000 geological map 3, 2011)

6.0 Regulatory Framework

6.1 The National Environmental Standard

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES) came into effect on the 1st of January 2012 and supersedes any District Plan rules that related to contaminated land. Any Regional Plan rules relating to contaminated land are still applicable.

In brief, the objective of the NES is to ensure that land affected by contaminants is identified and assessed and, if necessary, remediated or managed to protect human health. The NES only applies to the activities: removing or replacing all, or part of, a fuel storage system; sampling the soil; disturbing the soil; subdividing the land; and changing the land use, and where an activity or industry described in the Hazardous Activities and Industries List (HAIL) is being, has been, or is more likely than not to have been undertaken on the piece of land.

The NES also contains reference to the Soil Contaminant Standards for human health (SCS_(health)), for a variety of land use scenarios along with reference to best practice reporting documents.

The environmental HAIL is attached as Appendix C.

6.2 The National Environmental Standard

The contaminated land rules of the Auckland Unitary Plan: Operative in Part (AUP: OP) have immediate legal effect following its notification. As the AUP: OP was notified on the 15th of November 2016 the contaminated land rules of the AUP: OP must be considered.

In brief, the objective of the AUP: OP is to manage land containing elevated levels of contaminants to protect human health and the environment and to enable the effective use of the land.

The contaminated land rules of the AUP: OP apply when the land contains contaminants above those levels specified in Table E30.6.1.4.1 of Chapter E30 of the AUP: OP.

7.0 Site History

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site and a review of the Auckland Council property file.

7.1 Historical Aerial Photographs

Descriptions of the historical aerial photographs for the subject site are presented in Table 2 below. The historical aerial photographs are presented in Appendix D.

Table 2: Historical Photographs: 119 Cosgrave Road, Ardmore.

Date	Description
1959 - 1981	The 1959 - 1981 historical photographs show that the subject site is part of a larger parcel of land in use for rural purposes. A small structure, possibly a holding pen (HB01), is visible in the north-western corner of the site. Cosgrave Road can be observed bordering the western boundary of the site. A shared driveway has been constructed along the northern boundary of the site from the 1981 historical photograph. The surrounding properties are in use for rural and rural - residential purposes with increasing residential development throughout the time period.
1988	The 1988 historical photograph shows the subject site has been subdivided from the larger parcel of land and is now in use for residential purposes. A driveway leading to a small structure (HB02) in the centre of the site has been constructed. The surrounding properties remain in use for rural and rural - residential purposes.
1996 - 2017	The 1996 - 2017 historical photographs show the subject site is now in use for horticultural purposes. Several large greenhouses have been constructed near the eastern boundary of the site. This boundary is lined with a shelter belt throughout the time period. A large shed (1) has also been constructed to the west of the greenhouses. The 2001 historical photograph shows a second shed (2) has been constructed in the same area along with two water tanks (1 & 2). The 2010 historical photograph shows a pond/well has been constructed near the north-eastern corner of the site. The remaining balance is grassed with shelter belts across the site.

Due to the age of the former (HB02) site building (pre-1988) located at the site, it is considered likely that lead-based paints would have been utilised in the external building materials.

In addition, it is considered likely that potentially asbestos containing materials would have been used in the construction of the current and former site buildings (pre-2000).

7.2 Previous Investigations

At the time of writing this report, the results of a geotechnical investigation covering the site was not available. If future geotechnical investigations identify uncertified fills, these shall be investigated as part of any Detailed Site Investigation completed accordingly.

7.3 Auckland Council Property File Search

The results of the council search showed multiple consents relating to the site at 119 Cosgrave Road, Ardmore. The relevant details of the Property File search are presented in Table 3 below.

Table 3: Relevant Property File Information: 119 Cosgrave Road, Ardmore

Proposed Activity	Applicant	Reference	Date
Application for Permit for Sanitary Plumbing or Drainage Work	David Wighton	5/827	4/12/1987
Building Permit Application - Implement Shed	David Wighton	E 053892	6/01/1988
Building Permit Application - Greenhouse	David Wighton	F 33245	8/03/1988
Building Permit Application - Extension to existing Greenhouse	David Wighton	C1/124	10/11/1988
Building Permit Application - Greenhouse	David Wighton	2986809	8/11/1989
Vehicle Crossing Application - Culvert Upgrade	W S Bird	4037/8	29/11/1989
Building Permit Application - Farm Building to store Implements	David Wighton	H003984	5/02/1990
Building Permit Application - Packing Shed	David Wighton	5660	23/04/1992
Building Consent - Greenhouse	David Wighton	10307	4/06/1993

8.0 Site Walkover and Inspection

A walkover and site inspection were not possible at the time of writing the report as access to the property was not permitted. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is received, a walkover should take place to identify any additional potentially contaminating land uses and/ or activities that have not been identified as part of the desktop assessment.

The site features able to be identified as part of the desktop assessment are presented as Figure 2.

9.0 Surrounding Environment

The surrounding environment appeared to be predominantly in use for rural and rural-residential purposes. Ardmore Aerodrome is observed to the north-east of the site. Residential properties were observed further south-west in the wider area. An area of large - scale earthworks is visible to the north-west of the site, likely to facilitate future residential development.

No significant horticultural land use can be observed on the properties neighbouring the subject site.

The surrounding environment is presented as Figure 3.

10.0 Asbestos Management

Due to the age of the current and historical site buildings (pre-1996), external PACM products are likely to be present in the construction materials.

Any removal of asbestos materials from the site will need to be conducted in accordance with the Health and Safety at Work (Asbestos) Regulations (MBIE, 2016) and the Approved Code of Practice for the Management and Removal of Asbestos (WorkSafe New Zealand, 2016) by a licensed asbestos removals specialist under an approved asbestos removal control plan.

It should be noted that ACM, other than that described, may also be present at the site and a thorough inspection should be carried out by a suitably qualified and competent asbestos surveyor prior to any demolition activities at the site.

11.0 Potentially Contaminating Activities or Land Uses

Following a review of the history and the available information relating to the site located at 119 Cosgrave Road, Ardmore the potentially contaminating land uses and/or activities identified have been summarised in Table 3 below.

Table 3: Potential Contaminating Activities and/or Land Uses: 119 Cosgrave Road, Ardmore.

Activity Description	HAIL Category
Horticultural Activities	A10
Demolition of Historic Structures Potentially Containing Asbestos	E1
Maintenance and Use of Lead-based Paint	I

12.0 Conceptual Model of Exposure Pathways

The assessment provided in Table 4 below expands on the potential sources of contamination identified within the site and was based on the potential effects of the subdivision, change of land use and soil disturbance activities on human health and the environment associated with future residential development.

Table 4: Conceptual Site Model: 119 Cosgrave Road, Ardmore.

Potential Source	Potential Pathways	Potential Receptors	Assessment
Contaminated Soil	Dermal Contact with Contaminated Soils	Human Health – Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health – Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Ingestion of Contaminated Soils	Human Health – Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health – Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Inhalation of Vapours/Fibres	Human Health – Residential Land Use	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
		Human Health – Commercial/Industrial Outdoor Worker	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
	Surface Water Run-off	Ecological Receptors - Unnamed Open Stream	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.

	Migration of Groundwater	Ecological Receptors - Unnamed Open Stream	Potentially Complete: Sampling and analysis are recommended to confirm the concentrations of contaminants in soil.
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13.0 Regulatory Requirements

13.1 The National Environmental Standard

Potentially contaminating activities and/or land uses were identified across the site, and in the area of proposed development, therefore it is considered that consent under the regulations of the NES may be triggered by future development of the site.

Prior to the development of the site where potentially contaminating land uses and/or activities have taken place, a detailed site investigation (DSI) is recommended. The DSI would confirm if the identified land uses and/or activities have affected the site soils and will confirm the consenting requirements for these areas of the site. The DSI shall be prepared in general accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

13.2 Auckland Unitary Plan (Operative in Part)

The contaminated land rules of the Auckland Unitary Plan - Operative in Part (AUP OP) have immediate legal effect following its notification. As the AUP OP was notified on the 15th of November 2016 the contaminated land rules must be considered.

As potentially contaminating activities and/or land uses were identified across the site, the contaminated land rules of the AUP: OP may be triggered by future development of the site.

14.0 Conclusions and Recommendations

This PSI has been prepared in accordance with the requirements of the Contaminated Land Management Guidelines No. 1 and No. 5 (Ministry for the Environment, Revised 2021).

The history of the site was researched by Focus Environmental Services Limited personnel, which involved a review of the available historical aerial photographs of the site and a review of the Auckland Council property file.

During the review of the available information, the following potentially contaminating activities or land uses were identified:

- Horticultural activities;
- Demolition of historic structures potentially containing asbestos; and
- The use and maintenance of lead-based paints.

The information obtained of the site's history was assessed to determine if any potentially hazardous activities listed on the Hazardous Activities and Industries List (HAIL) had occurred on site as a result of past or current land use.

A walkover and site inspection were not possible, as access to the property was not permitted at the time of writing this report. Therefore, the identification of any potential HAIL activities carried out at the site was limited to a desktop assessment. Once access is granted, it is recommended that a site walkover take place to identify any additional potentially contaminating land uses and/or activities that have not been identified in the information made available.

Based on the results of this Preliminary Site Investigation, it is considered that an activity described in the HAIL has been, or is more likely than not to have been, carried out on the site.

Furthermore, as the impact of the HAIL activities identified on the site soils has not been determined, it is recommended that, prior to any earthworks occurring onsite, a detailed site investigation is completed on the property found at 119 Cosgrave Road.

The detailed site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements, if any, for the site.

Based on the findings of the preliminary site investigation for the site, it is considered that the regulations of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contaminated land rules as outlined in Chapter E30 of the Auckland Unitary Plan: Operative in Part (AUP: OP), need to be considered and consents under these regulations may be triggered by future development of the site.

The detailed site investigation shall be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No. 5 (MfE, Revised 2021).

Following the receipt of the sampling results a technical report summarising the results of the investigation shall be prepared. The report will be prepared in accordance Contaminated Land Management Guidelines No. 1(MfE, Revised 2021). The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;

- Recommendations that a Site-Specific Management/Remediation Action Plan is prepared in order to provide controls to mitigate against the potential risks to human health and/or the environment as a result of the effects associated with the site redevelopment works.

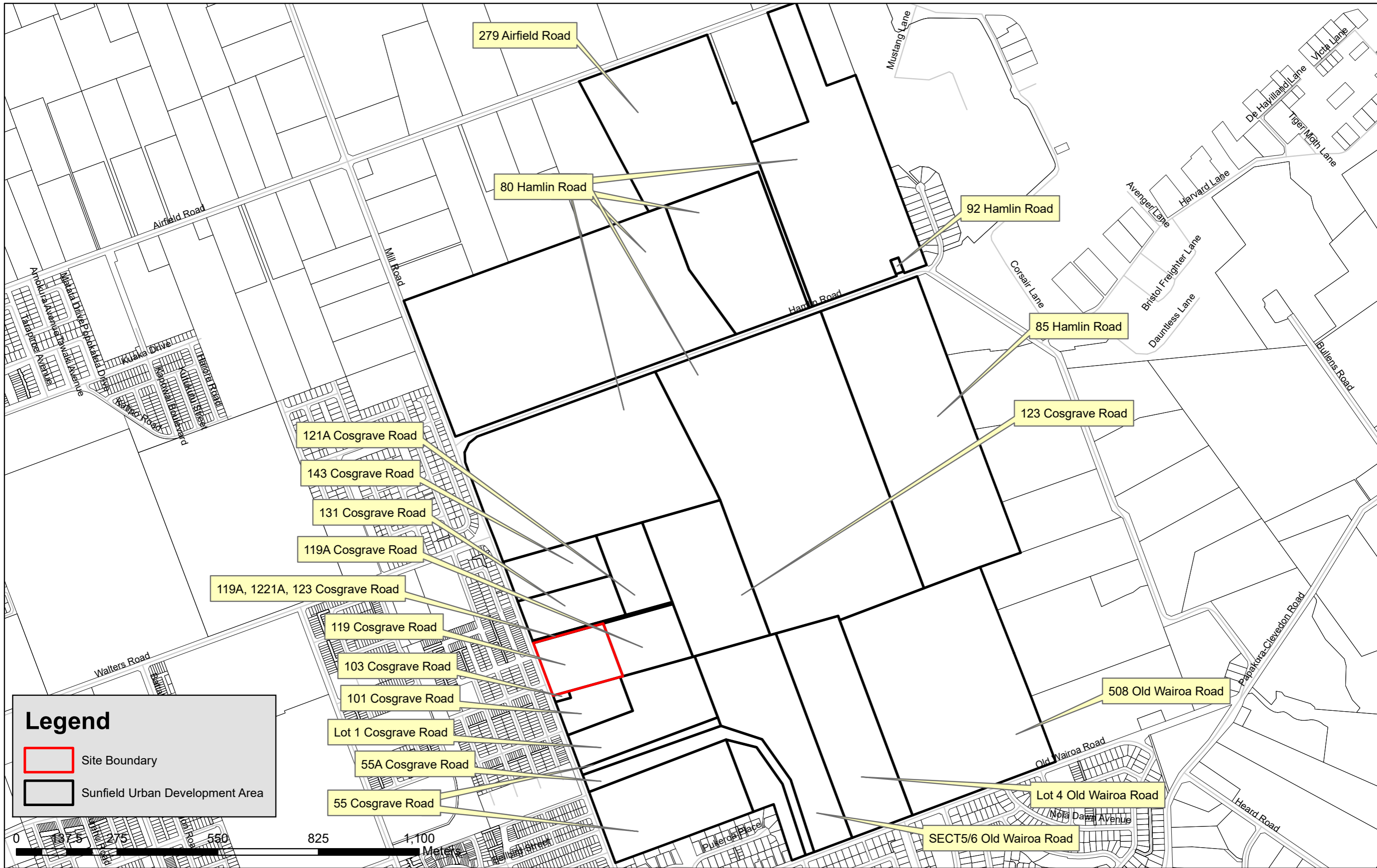
All works should be carried out in accordance with the global Site Management Plan titled '*Site Management Plan, Sunfield Urban Development Area*' dated December 2023 and prepared by Focus Environmental Services. If the controls outlined in the Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated.

Figures

Figure 1 - Site Location Plan

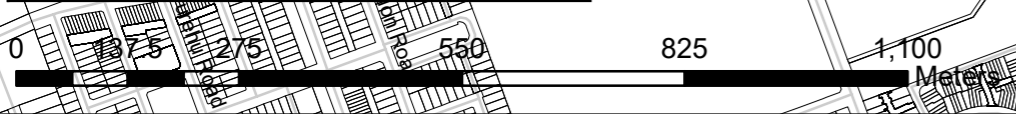
Figure 2 - Site Features Plan

Figure 3 - Surrounding Environment



Legend


- Site Boundary
- Sunfield Urban Development Area




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Winton Land Limited
 119 Cosgrave Road
 Sunfield Urban Development Area
 Papakura
 Auckland

Figure 1: Site Location Plan
 Preliminary Site Investigation


 1804.004

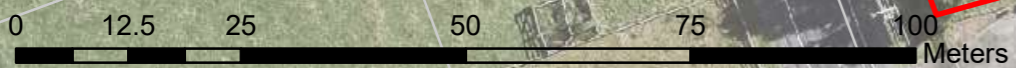
Drawing Number: 1804.004.01
 Drawn By: MT
 Checked By: DO'R
 Date: 06/12/2023



Legend

- Site Features
- Approximate Location of Historic Structures
- Site Boundary


Site Features	Description
1	Site Entrance
2	Greenhouse (1)
3	Greenhouse (2)
4	Water tank (1)
5	Pond/ Well
6	Shed (1)
7	Water tank (2)
8	Shed (2)
9	Shed (3)




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Figure 2: Site Features Plan
 Preliminary Site Investigation



1804.004

Drawing Number: 1804.004.02
Drawn By: MT
Checked By: DO'R
Date: 06/12/2023



Legend


Site Boundary




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Figure 3: Surrounding Environment
 Preliminary Site Investigation


 1804.004

Drawing Number: 1804.004.03 Drawn By: MT
Checked By: DO'R Date: 06/12/2023

Appendices

Appendix A - Illustrative Masterplan

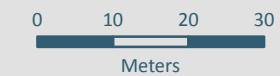


Appendix B - Site Contour Plan



DISCLAIMER:
 This map/plan is illustrative only and all information should be independently verified on site before taking any action. Copyright Auckland Council. Land Parcel Boundary information from LINZ (Crown Copyright Reserved). Whilst due care has been taken, Auckland Council gives no warranty as to the accuracy and plan completeness of any information on this map/plan and accepts no liability for any error, omission or use of the information. Height datum: Auckland 1946.

Site Contour Plan



Scale @ A3
 = 1:1,000

Date Printed:
 6/12/2023





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 ordnances 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

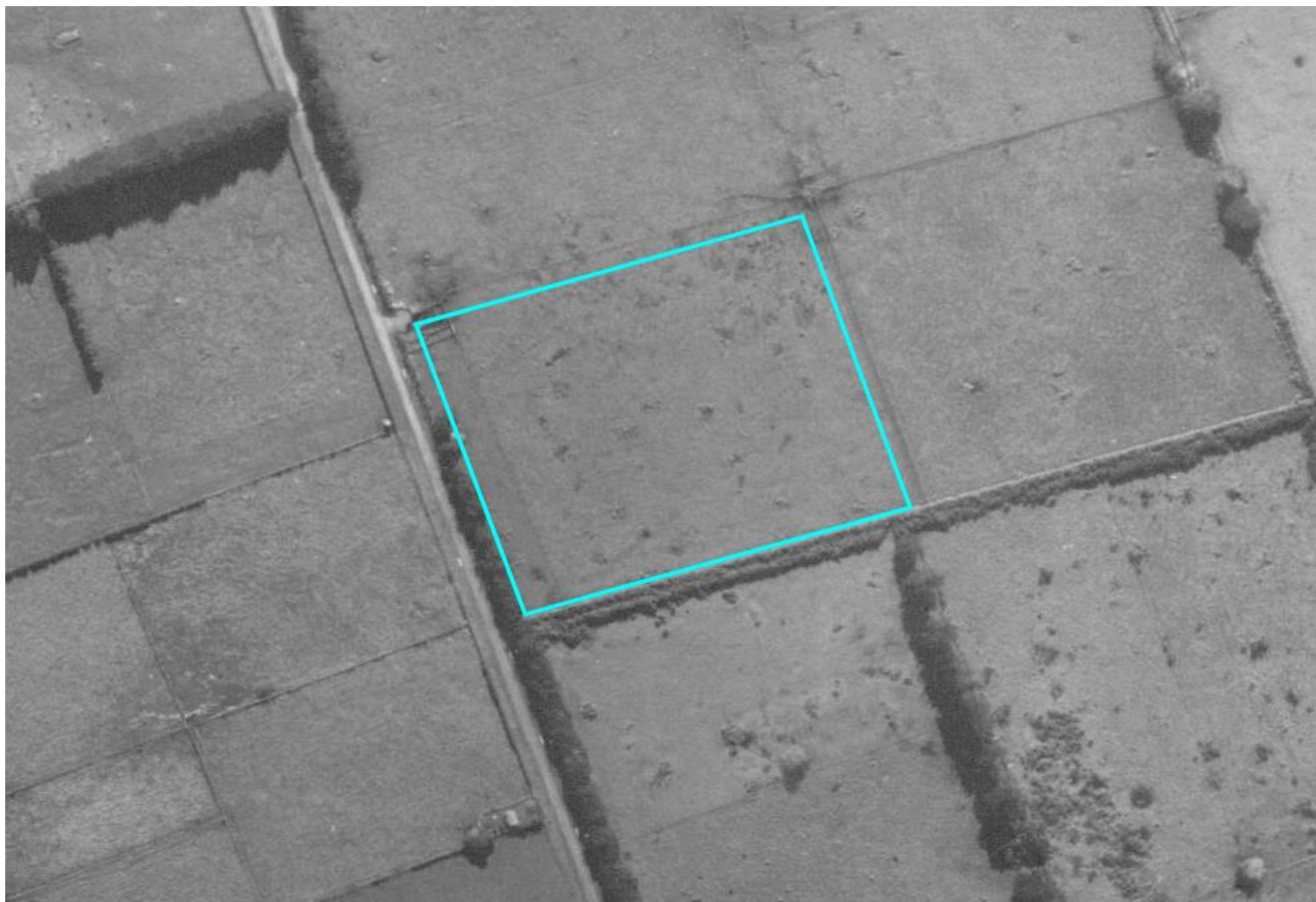
Appendix D - Historical Aerial Photographs

Historical Aerial Photographs

119 Cosgrave Road
Papakura
Auckland

by Focus Environmental Services Limited

1959 Historical Photograph



1960 Historical Photograph



Source: NZ Aerial Mapping

1975 Historical Photograph



Source: NZ Aerial Mapping

1981 Historical Photograph



Source: NZ Aerial Mapping

1988 Historical Photograph



Source: NZ Aerial Mapping

1996 Historical Photograph



2001 Historical Photograph



2006 Historical Photograph



2008 Historical Photograph



2010 Historical Photograph



2015 Historical Photograph



2017 Historical Photograph

