SITE MANAGEMENT PLAN
SUNFIELD URBAN DEVELOPMENT AREA
PAPAKURA
AUCKLAND

For the Attention of:

Winton Land Limited

Reference: FES 1804.010 December 2023

Company Information

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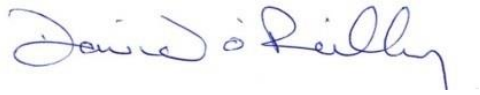

David O'Reilly
Principal Environmental Consultant

Distribution List

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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 prepare a Site Management Plan (SMP) for the proposed soil disturbance works associated with the Sunfield Urban Development Area, Papakura, Auckland.

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

This SMP has been prepared in general accordance with the requirements of the Ministry for the Environment's Contaminated Land Management Guidelines; No. 1 Reporting on Contaminated Sites in New Zealand. In addition, the sampling procedures referred to in the plan generally comply with the Ministry for the Environment's Contaminated Land Management Guidelines; No. 5 Site Investigation and Analysis of Soils.

The history of the nineteen sites comprising the Sunfield UDA has been described in detail in the Preliminary Site Investigations (PSIs) and Detailed Site Investigations (DSIs) completed for the Sunfield UDA prepared by Focus Environmental Services Limited.

In summary, during the review of the available information the following activities which appear on the Hazardous Activities and Industries List (HAIL), were identified at the sites within the Sunfield Urban Development Area, Papakura:

- Horticultural Activities and Pesticide Use;
- Maintenance and Use of Lead-based Paint;
- Demolition of Historic Structures Potentially Containing Asbestos, Products Potentially Containing Asbestos in a Degraded Condition, and Potentially Asbestos Containing Material intermixed with the Site Soils;
- Livestock Dip or Spray Race Operations;
- Bulk Tyre Storage;
- Bulk Storage of Petroleum;
- Bulk Storage of Chemicals;
- Treated Timber;
- Burning of Refuse;
- Potentially Uncertified Filling; and
- Burning of Buildings

Prior to the development of the sites where potentially contaminating land uses and/or activities have taken place and where only a PSI has taken place, an intrusive site investigation is recommended.

The intrusive site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements for these sites. Based on the findings of the PSIs for the Sunfield Urban Development Area, Papakura 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 of the (AUP: OP) may be triggered by future development of the area.

The environmental investigations 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 investigations will be prepared in accordance with Ministry for the Environment Contaminated Land Management Guideline No.1 "Reporting on Contaminated sites in New Zealand". The report will include:

- Recommendations for any additional investigations if required;
- A statement on whether or not any additional consents are required;
- Either confirmation that the controls outlined in this SMP are suitable to mitigate against the identified human health and or environmental effects associated with the site redevelopment works;
- Or recommend that a Site-Specific Remediation Action Plan is prepared.

If the controls outlined in this Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated. All contaminated materials removed from site will require disposal at a suitably licensed disposal facility.

Submitted By,

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 Limited Agreement ("Agreement").

1.2 The following report is based on:

- *Information provided by the client;*
- *The individual Detailed Site Investigations for each property within the Sunfield UDA; Focus Reference numbers 1443.008 – 1443.013 & 1686.001; and*
- *The individual Preliminary Site Investigations for each property within the Sunfield UDA; Focus Reference numbers 1804.002 – 1804.009 & 1443.019*

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 Limited.

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 Limited.

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 Sunfield Urban Development Area (UDA) consists of nineteen properties located across Cosgrave Road, Old Wairoa Road, Hamlin Road and Airfield Road, Papakura, Auckland as shown in Figure 1 attached. It is proposed that the site will be redeveloped for residential purposes.

The site identification details are provided in Table 1 below.

Table 1: Site Identification Details

Physical Address	Legal Description	Area (ha)
55 Cosgrave Road	SECT 3 SO 495342, SECT 4 SO 495342	9.24
SECT 5/6 Old Wairoa Road	SECT 5 SO 495342, SECT 6 SO 495342	11.81
Lot 1 Cosgrave Road	Lot 1 DP 55480	5.80
Lot 4 Old Wairoa Road	Lot 4 DP 55480	10.36
508 Old Wairoa Road	DP 10383	23.63
85 Hamlin Road	Lot 8 Deeds Reg WHAU 38	22.52
80 Hamlin Road	PT Lot 2 DP 22141, Lot 2 DP 21397, Lot 1 DP 21397, Lot 5 DP 12961, Pt Lot 4 DP 12961	117.50
279 Airfield Road	Lot 2 BLK XV DP 199521	14.42
92 Hamlin Road	Lot 1 DP 46615	0.091
143 Cosgrave Road	Lot 1 DP 103787	3.04
131 Cosgrave Road	Lot 2 DP 103787	3.04
121A Cosgrave Road	Lot 3 DP 103787 – 1/3 SH In Lot 7 DP 103787	3.04
123 Cosgrave Road	Lot 4 DP 103787 - 1/3 SH In Lot 7 DP 103787	8.63
119A Cosgrave Road	Lot 5 DP 103787 - 1/3 SH In Lot 7 DP 103787	3.04
119A, 121A, 123 Cosgrave Road	Lot 7 DP 103787	-
119 Cosgrave Road	Lot 6 DP 103787	3.04
101 Cosgrave Road	PT ALLOT 1 DP 45156	1.94
103 Cosgrave Road	Lot 1 DP 62629	0.081
55A Cosgrave Road	SECT 1 SO 495342, SECT 2 SO 495342	2.93

The sites vary in shape from rectangular to irregular.

The properties within the south-west of the Sunfield UDA are zoned 'Future Urban Zone' while the properties in the north-east are zoned 'Rural – Mixed Rural Zone' under the Auckland Unitary Plan – Operative in Part (AUP: OP).

3.0 Geology and Hydrology

Published geological maps[1] indicate that the Sunfield UDA is typically underlain with Tauranga Group Holocene River Deposits to the south-west and sedimentary deposits of the Puketoka Formation to the north-east.

A description of the underlying geologies is presented in Table 2 below.

Table 2: Geology of Sunfield UDA, Papakura

	South-western Portion of Site	**North-eastern 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 completed as part of this investigation.

The nearest surface water bodies to the site are and two unnamed open streams which flow through the central and northern-central portions of the site and an unnamed open culvert which borders the western boundary of the Sunfield UDA.

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

4.0 Background

The history of the site has been described in detail in the individual PSIs and DSIs completed for each property within the Sunfield UDA.

In summary, during the review of the available information the following activities which appear on the Hazardous Activities and Industries List (HAIL), were identified at the sites within the Sunfield Urban Development Area, Papakura:

- Horticultural Activities and Pesticide Use;
- Maintenance and Use of Lead-based Paint;
- Demolition of Historic Structures Potentially Containing Asbestos, Products Potentially Containing Asbestos in a Degraded Condition, and Potentially Asbestos Containing Material intermixed with the Site Soils;
- Livestock Dip or Spray Race Operations;
- Bulk Tyre Storage;
- Bulk Storage of Petroleum;
- Bulk Storage of Chemicals;
- Treated Timber;
- Burning of Refuse;
- Potentially Uncertified Filling; and
- Burning of Buildings

Prior to the development of the sites where potentially contaminating land uses and/or activities have taken place and where a DSI has not taken place, an intrusive site investigation is recommended.

The intrusive site investigation would confirm if the identified land uses and/or activities have affected the site soils and will confirm the remediation requirements for these sites. Based on the findings of the PSIs for the Sunfield Urban Development Area, Papakura 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 of the (AUP: OP) may be triggered by future development of the area.

5.0 Regulatory Compliance

This Site Management Plan (SMP) has been prepared in general accordance with the requirements of the Ministry for the Environment's Contaminated Land Management Guidelines; No. 1 Reporting on Contaminated Sites in New Zealand. In addition, the sampling procedures referred to in the plan generally comply with the Ministry for the Environment's Contaminated Land Management Guidelines; No. 5 Site Investigation and Analysis of Soils.

6.0 Roles & Responsibilities

6.1 General

This SMP has been prepared to document the earthworks procedures, the monitoring requirements and the management and health and safety requirements relating to the disturbance and/or discharge of potentially contaminated soils and waters which are to be implemented during the site works development of the Sunfield UDA.

6.2 Distribution

A copy of the SMP shall be kept onsite at all times during the site works. It is the responsibility of Winton Land Limited (or their chosen representative) to distribute the plan to the contractor or contractors appointed to carry out the proposed site works.

6.3 Review & Update

Any variations to the SMP proposed by the contractor must be approved by Winton Land Limited (or their chosen representative) and Auckland Council prior to the works commencing, or before the variation is implemented if the works have already commenced. It is the responsibility of the appointed contractor to distribute any changes to the SMP to the relevant parties and to update the site copy.

6.4 Implementation

The responsibility for the implementation of the SMP lies with Winton Land Limited's appointed contractor/s. Winton Land Limited (or their chosen representative) shall engage a contaminated land specialist to carry out inspection and provide advice as required during the works. The contaminated land specialist must be sufficiently experienced to comply with the "suitably experienced practitioner" as required by the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES).

7.0 Site Investigation and Reporting

During the desktop review of the available information, it was determined that an activity described in the HAIL has been, or is currently being, carried out on all of the properties within the Sunfield UDA, Papakura.

Therefore, it is considered that an intrusive site investigation is recommended prior to soil disturbance works at the sites where only PSIs have been undertaken thus far.

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

The environmental investigation will involve collecting the minimum of samples required to satisfy the both Auckland Council requirements and the Contaminated Land Management Guidelines No. 1 and No.5 (MfE, Revised 2021).

Samples collected will be sent under full chain of custody documentation to an IANZ accredited laboratory and pending visual/olfactory observations, analysed for a combination of:

- Total recoverable arsenic, cadmium, chromium, copper, nickel, lead, tin and zinc;
- Organo-chlorine pesticides;
- Polycyclic aromatic hydrocarbons;
- Total petroleum hydrocarbons;
- Semi-volatile Organic Compounds; and
- Semi-quantitative asbestos (BRANZ Method).

Following the receipt of the sampling results a technical report summarising the results of the investigations will be prepared in accordance with Ministry for the Environment Contaminated Land Management Guideline No.1 "Reporting on Contaminated sites in New Zealand". The report will include recommendations for the site development works.

8.0 Basis for Guideline Values

Winton Land Limited propose to undertake residential development of the site, therefore the guideline values of the Soil Contaminant Standards for health ($SCSs_{(health)}$) residential (10% produce) outlined in the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES), and the discharge criteria of the Auckland Unitary Plan: Operative in Part (AUP: OP) are considered relevant and have been adopted as the site assessment criteria.

In addition, as the NES does not contain a reference value for asbestos in soil, in accordance with the hierarchy described in the Contaminated Land Management Guidelines No. 2 – Hierarchy and Application in New Zealand of Environmental Guideline Values (MfE, 2011), the soil guideline value for asbestos in New Zealand, taken from the New Zealand Guidelines for Assessing and Manging Asbestos in Soil (BRANZ Limited, 2017) of 0.001% combined fibrous asbestos and asbestos fines (FA/AF) and/or 0.01% asbestos containing material (ACM) has been adopted as the site assessment criteria.

Furthermore, the concentrations of heavy metals detected will be compared to the maximum background levels for non-volcanic soils in Auckland[2] (TP153). The relevant values of the above guidelines have been reproduced in Table 3 below.

Table 3: Site Assessment Criteria: Sunfield UDA (mg/kg)

Parameter	NES ($SCSs_{(health)}$)	AUP: OP	TP153
Arsenic	20	100	12
Cadmium	3	7.5	0.65
Chromium	460	400	55
Copper	NL	325	45
Lead	210	250	65
Nickel	400[1]	105	35
Tin	47,000[2]	-	4
Zinc	7,400[1]	400	180
Total DDT	70	12	-
Dieldrin	2.6	0.5[1]	-
BaP eq.	10	20	-
TPH (C_7-C_9)	2700[4]	710[5]	-
TPH (C_{10}-C_{14})	560[4]	1,500[5]	-
TPH (C_{15}-C_{36})	NA[4]	NA[5]	-
Asbestos	0.001%[6]/0.01%[7]	-	-
Visual ACM	No Visual Evidence of ACM[8]	-	-

[2] Background Concentrations of Inorganic Elements in Soils from the Auckland Region, Technical Publication No.153, Auckland Regional Council, 2001.

Note: NL = Not Limited. This is where the derived values exceed 10,000mg/kg; 1= No Soil Contaminant Standards for health ($SCS_{(health)}$) given, guideline values derived in accordance with the Contaminated Land Management Guidelines number 2 – Hierarchy and Application in New Zealand of Environmental Guideline Values (MfE, 2011), and taken from the National Environment Protection (Assessment of Site Contamination) Measure 1999 for Commercial/Industrial land use; 2= Regional screening levels for chemical contaminants at superfund sites (US EPA regions 3, 6 and 9 (Accessed Oct 2012); 3 =Soil Guideline Values to protect on-site ecological receptors taken from Ministry for the Environment Guidelines for Identifying, Investigating and Managing Risks Associated with Former Sheep-dip Sites, November 2006; 4 = Ministry for the Environment Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand – Tier 1 Soil Acceptance Criteria, Module 4, August 1999 for Commercial/Industrial (silty clay) all pathways with contamination at the surface (<1.0m); 5 = Ministry for the Environment Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand – Tier 1 Soil Acceptance Criteria, Module 4, August 1999 for the Protection of Groundwater Quality for silty clay soils with contamination at the surface (<1.0m) with shallow groundwater; 6 = Soil guideline values for asbestos in Soil of 0.001% combined fibrous asbestos and asbestos fines (FA/AF), taken from the New Zealand Guidelines for Assessing and Managing Asbestos in Soil (BRANZ Limited, 2017); 7 = Soil guideline values for asbestos in Soil of 0.01% asbestos containing material (ACM), taken from the New Zealand Guidelines for Assessing and Managing Asbestos in Soil (BRANZ Limited, 2017) 8= No visual evidence of asbestos containing material in the upper 0.1m of soil in accordance with New Zealand Guidelines for Assessing and Managing Asbestos in Soil (BRANZ Limited, 2017).

Furthermore, the natural background levels of organo-chlorine pesticides, polycyclic aromatic hydrocarbons, total petroleum hydrocarbons and asbestos fibres are considered to be below the analytical levels of detection and hence the detection of these analytes would restrict material from being classified as cleanfill material.

9.0 Site Management Plan

In the event that soils are found to contain concentrations of contaminants elevated above those values outlined in Table 3 (above) the site soils will require management to ensure that any adverse human health and/or environmental effects from contaminated soil materials, will be effectively mitigated during the disturbance works.

During the site works, the quality of soils exposed may vary from soils containing natural background levels to soils where visible contamination may be present.

The procedures outlined below are soil related earthworks procedures for managing the effects of contaminated soils, dust, sediment and water. The procedures include actions to be taken by the contractor should visible or olfactory evidence of contamination be identified during the site works.

If the controls outlined in this Site Management Plan are implemented during the development works, the effects on the environment are likely to be effectively mitigated. All contaminated materials removed from site will require disposal at a suitably licensed disposal facility.

In the event that asbestos containing materials (ACM) are identified, its removal/disturbance from the site shall 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).

In order to meet the requirements of the Health and Safety at Work (MBIE, 2016), it is recommended that the selected contractor incorporates the procedures set out in this SMP into site-specific asbestos removal control plan and that the works are carried out in accordance with the Approved Code of Practice for the Management, Removal of Asbestos (WorkSafe New Zealand, 2016).

In the event that soils do not contain concentrations of contaminants elevated above those values outlined in Table 3 (above) then the procedures and controls outlined in this Site Management Plan likely do not apply to the site and the works can likely be undertaken with the standard earthwork's controls under the existing consent.

Furthermore, if the site investigation identifies contamination that has not been outlined in the site assessment criteria Table 3 (above) then a Site-Specific Remediation Action Plan may need to be prepared for the site.

9.1 Erosion and Sediment Control Procedures

When carrying out any earthworks where soils are disturbed there is a risk of erosion and pollution by sediment being emitted to the receiving water courses. This type of pollution can have a negative effect on the water quality and the ecosystems effecting both plant and fish life.

Install sediment and erosion controls for the development works in accordance with the Auckland Councils Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland region, Guideline Document GD2016/005 (Auckland Council, 2016) [3].

Erosion and sediment controls measures at the site shall include, but not be limited to the following:

- Earthworks shall not to be carried out during periods of significant rainfall;
- Where possible excavation shall be carried out a rate that matches the rate at which soil can be carted off the site;
- Excavations shall be backfilled as soon as possible;
- Cesspits will be protected using filter socks (and other methods e.g. catch drains if required) and silt fences, diversion bunds and stabilised entrances shall be used where required;
- Excavated soil shall, where possible be placed directly on a truck and stockpiling shall be avoided where possible. If required, stockpiles shall be contained within the footprint of the environmental controls; and
- Erosion and sediment control measures shall remain in place until the surface reinstatement and site cover is established.

9.2 Dust Control Procedures

Site earthworks have the potential to generate dust which could impact the local environment. If conditions are dry during earthworks works, dust deposition could occur. Dust will be controlled in accordance with the Good Practice Guidelines for Assessing and Managing the Environmental Effects of Dust Emissions, Ministry for the Environment (2016).

To avoid dust generation the following controls shall be put in place:

- Frequent spraying of water over the excavation and truck loading area during dry, windy periods; and
- Use of a water truck or portable water sprays in trafficked areas to dampen dusts.

[3] Auckland Council, Erosion & Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Guideline Document 2016/005.

9.3 Health and Safety Measures

All personnel likely to come into contact with contaminated soils during the site works shall be provided with and wear the following PPE at all times:

- Dust masks (to be worn in particularly dry weather conditions);
- Approved safety footwear (rubber boots, work boots with toe protection);
- Gloves (if handling any contaminated soils is required);
- Hard Hat (if working around plant and excavators);
- Hearing protection (if required);
- Safety Glasses (to be worn in particularly dry weather conditions); and
- Safety Visibility Vest.

All meal breaks are to be taken in designated clean areas or off site, with all personnel washing their hands and mouth area prior to eating, drinking or smoking. Used PPE is to be doffed by all personnel before leaving the site.

The removal/disturbance of any asbestos containing material from the site shall be conducted in accordance with the Health and Safety at Work (Asbestos) Regulations (MBIE, 2016), the Approved Code of Practice for the Management and Removal of Asbestos (WorkSafe New Zealand, 2016) and the New Zealand Guidelines for Assessing and Manging Asbestos in Soil (BRANZ Limited, 2017)

The level of asbestos specific PPE and RPE shall be determined by either the contaminated land specialist or the licensed asbestos removalist (if works are considered to be Class A: Friable or Class B: non-friable.)

9.4 Excavation, Transportation and Disposal Procedures

The following shall be adhered to during the excavation and transportation of excavated soils across the site:

- Sediment and erosion controls shall be in place prior to the commencement of earthworks;
- Trucks shall be loaded within the confines of the environmental controls, where runoff and potential spills during loading are able to be controlled and contained;
- Trucks wheels shall be cleaned following loading and/or splash boards used during loading. There shall be no tracking of materials onto the road network or the footpaths;
- All contaminated materials removed from site will be transported to a suitably licensed facility for disposal;
- All trucks will be securely covered with close fitting tarpaulins;
- All trucks and/or trailers transporting asbestos contaminated soils will have sealed tail gates and be lined internally with 200-micron polyethylene sheeting and taped over each seam with heavy duty PVC tape; and
- All contaminated materials leaving the site will be tracked by way of weighbridge dockets which include the disposal location and the weight of the load.

9.5 Odour Control

It is considered unlikely that nuisance odour will be an issue on site. However, in the event that there may be odorous materials encountered, where possible these will be loaded as soon as possible onto the removal trucks. If this is not possible, the odorous material will be covered with non-odorous material prior to being loaded.

9.6 Imported Materials Procedures

Any materials imported onto the site if required to reinstate the ground will have to be tested to ensure their suitability as clean fill materials. Any soil material imported to the site shall comply with the definition of 'cleanfill material', as per the Auckland Unitary Plan: Operative in Part.

All imported materials shall be sourced from a site which has been determined by a Suitably Qualified Contaminated Land Professional to have had no known history of potentially contaminating activities, as detailed on the Ministry for the Environment's Hazardous Activities and Industries List (HAIL); or adequately investigated by a Suitably Qualified Contaminated Land Professional, in accordance with Contaminated Land Management Guidelines (Ministry for the Environment, Revised 2021) to meet the 'Cleanfill material' definition as prescribed in the AUP: OP.

9.7 Dewatering Procedures

If ground water or surface water collects within the excavation during the works, this water shall be allowed to soak into the ground. Any perched groundwater, groundwater, or surface run-off exiting the remediation area that requires removal shall be considered as potentially contaminated, and shall either:

- Be disposed of by a licensed liquid waste contractor; or
- Pumped to sewer, provided relevant permits have been obtained; or
- Discharged to the stormwater system or surface waters provided testing demonstrates compliance with the Australian and New Zealand Environment Conservation Council (ANZECC) Guidelines for Fresh and Marine Water Quality (2000) for the protection of 95 percent of species.

9.8 Contingency Measures

The following contingency measures have been developed to support the contractor should the underlying contamination conditions vary significantly from the conditions outlined following the site investigation.

If any unexpected materials are identified during the excavation process, which differ from previous observations, and the site soil assessment (i.e. odorous, unusually coloured), the contractor shall immediately contact the environmental specialist to inspect the material and provide advice for the safe handling and disposal of the material.

Visual and olfactory indicators of contamination include the following:

- Asbestos containing materials (ACM) (board, pipe, free fibres or fragments);
- Demolition debris (polystyrene, steel and timber);
- Refuse materials (other than concrete or brick);
- Odour (petroleum, oil, creosote, solvent, sulphur, landfill gas);
- Discoloured soil (black/green staining is most common);
- Incinerator ash (black coarse sand);
- Gasworks wastes (clinker – black gravel, blue billy, black tar); and
- Harmful non Cleanfill materials.

If any potential ACM or unexpected materials are identified during site works, the area shall immediately be fenced off (barrier tape) with a 2.0m buffer zone, photographs taken and the Contaminated Land Specialist contacted. The Contaminated Land Specialist will then inspect the material and provide advice for the sampling and analysis, safe handling and disposal of the material

Following the discovery of any unexpected materials any environmental investigation is to be carried out in general accordance with the Contaminated Land Management Guidelines No. 1 and No.5 (MfE, Revised 2021).

In the event that soils are found to contain concentrations of contaminants elevated above the relevant site acceptance criteria, the site soils will require remediation and subsequent validation.

All contaminated materials removed from site will require disposal at a suitably licensed disposal facility and site validation sampling is to be completed at a frequency sufficient to meet the requirements of the Contaminated Land Management Guidelines No.5 (MfE, Revised 2021).

In the event that asbestos containing materials are identified at the site, its removal from the site shall 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).

Following the removal of any ACM, a certificate of clearance is to be produced by a suitably licensed asbestos assessor.

In the event that unexpected materials are encountered within the Sunfield UDA, Papakura, Auckland Council are to be notified of the nature and extent of the contamination along and provided with details of the management procedures undertaken at the site.

10.0 Site Closure Report

Where remedial works are not required on a site, following the proposed works, it is recommended that a site closure report shall be prepared. The site closure report should contain sufficient detail to address the following matters:

- A summary of the works undertaken, including a statement confirming whether the excavation of the site has been completed in accordance with the approved Site Management Plan;
- A summary of all additional soil sampling undertaken, tabulated analytical results, and interpretation of the results in the context of the current contaminated land regulatory requirements;
- Copies of the disposal dockets for the material removed from the site;
- Details of any fill materials imported to the site for reinstatement;
- Records of any unexpected contamination encountered during the works, if applicable; and
- Details of any complaints and/or breaches of the procedures set out in the approved Site Management Plan and the conditions of this consent.

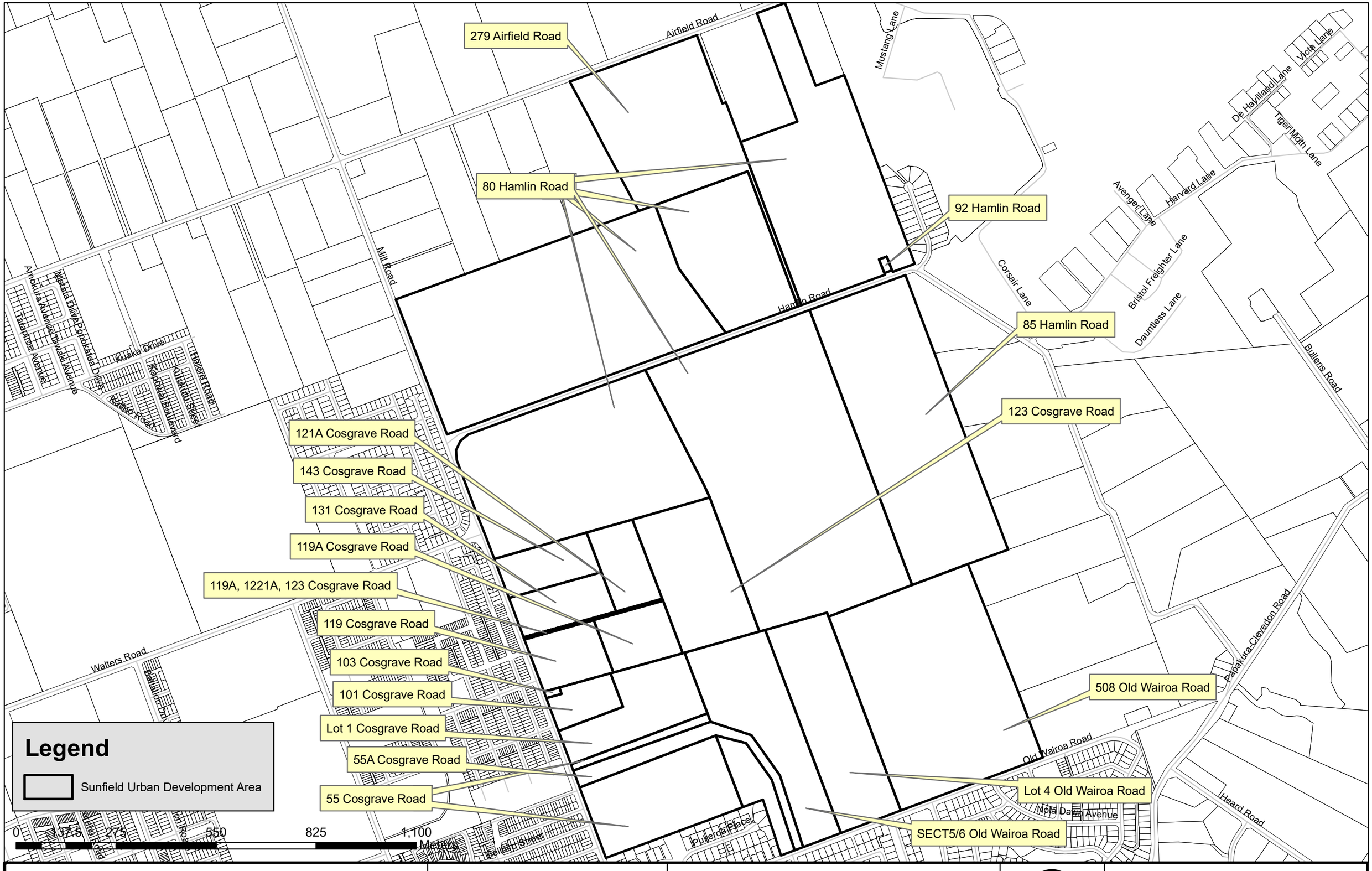
11.0 Site Validation Report

Where remedial works are required on a site, following the remedial works, a site validation shall be prepared. The site validation report should contain sufficient detail to address the following matters:

- A summary of the works undertaken, including a statement confirming whether the remedial works have been completed in accordance with the approved Site Management Plan and/or a Site-Specific Remediation Action Plan;
- A summary of all additional soil sampling undertaken, tabulated analytical results, and interpretation of the results in the context of the current contaminated land regulatory requirements;
- Copies of the disposal dockets for the material removed from the site;
- Details of any fill materials imported to the site for reinstatement;
- Records of any unexpected contamination encountered during the works, if applicable;
- Copies of the Clearance Certificates for the removal of any asbestos; and
- Details of any complaints and/or breaches of the procedures set out in the approved Site-Specific Remediation Action Plan and the conditions of this consent.

Figures

Figure 1 – Sunfield Urban Development Area Location Plan



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Winton Land Limited

Sunfield Urban Development Area
Papakura
Auckland

Figure 1: Site Location Plan

Site Management Plan

1804.010

Drawing Number: 1804.010.01
Drawn By: MT
Checked By: DO'R
Date: 12/12/2023