

Drury East Plan Change, Drury, Auckland

Preliminary Site Investigation

Prepared for: Fulton Hogan Land Development Limited C/o Mott MacDonald New Zealand Limited

By: EHS Support New Zealand Limited

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Executive Summary

Introduction

Fulton Hogan Land Development Limited (FHLD) engaged EHS Support New Zealand Limited (EHS Support) to undertake a Preliminary Site Investigation (PSI) to support the private plan change request made by FHLD to allow for development of approximately 2,800 dwellings in Drury East. The PSI was completed in accordance with the EHS proposal dated 30 January 2019.

This PSI has been prepared to inform the Drury East Residential Plan Change on behalf of FHLD.

Purpose and Scope

The PSI was completed to address regulations and rules within the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-CS) and the Auckland Unitary Plan, Operative in Part (AUP-OP). The NES-CS and AUP-OP must be considered as part of lodgement of a private plan change to a more sensitive land use. The PSI was also prepared to support the Assessment of Environmental Effects (AEE).

A key objective of the PSI was to determine if activities or industries on the Hazardous Activities and Industries List (HAIL) have been, are, or are more likely than not to have been undertaken on the land within the study area.

Findings and Conclusions

The PSI has identified the potential for soil contamination to exist within the proposed study area from a range of small activities and industries identified as HAIL, as defined by MfE, 2011¹. Therefore, further investigation of selected land parcels and resource consenting under the NES-CS will likely be necessary.

No land parcels were identified within the study area as having a significant risk of contamination that may impact the plan change rezoning to residential as sought.

From the available information obtained during the preparation of this report, the potential adverse effects related to the change in land use, associated development activities and future, ongoing residential land use are considered to be minor. This assumes that the management controls identified are implemented as outlined below in the Recommendation and Future Work Section.

The identified potentially contaminating activities and industries (with corresponding HAIL categories) are included in the summary below:

- Horticultural (Greenhouses, market gardens and orchards) - use of pesticides (Category A10).
- Petroleum/waste oil storage tanks or drums for fuel, chemicals or liquid waste (Category A17).
- Commercial concrete manufacture or commercial cement storage (Category E4).
- Garage/motor vehicle workshop activities (Category F4).
- Transport depots or yards including areas used for refuelling or bulk storage of hazardous substances (Category F8).

¹ <https://www.mfe.govt.nz/land/hazardous-activities-and-industries-list-hail>



- Dismantling/wrecking of farm machinery (Category G4).
- Waste disposal to land (Category G5).
- Wastewater treatment (Category G6).
- Open burning and soil stockpiling activities (Category I).

Possible activities which are unconfirmed include sheep dip/spray activities (Category A8).

It is anticipated that the number of HAIL categories identified may be reduced or rationalised with more detailed and accurate information. However, other HAIL categories may be identified when further detailed study is completed for the study area. These may include (but are not limited to):

- Agrichemicals including commercial premises used by spray contractors for filling, storing or washing out tanks for agrichemical application (Category A1).
- Asbestos products disposal, including sites with buildings containing asbestos products known to be in a deteriorated condition (Category E1).
- Privately owned closed landfill sites (Category G3).

Positive effects are likely in that contaminated soil may be managed and/or removed from the study area which will enhance the surrounding environment.

Potential adverse effects could arise from human or environmental exposure to contaminants from these activities during future construction. These include:

- Dermal, ingestion or inhalation exposure to construction workers or members of the public from contaminants carried in airborne dust or contact during excavation activities.
- Stormwater runoff carrying contaminated sediment could impact off-site areas.
- Uncontrolled disposal of excavated contaminated soil.

Recommended Future Work

Subsequent to completion of the plan change, the following presents an outline of the recommended approach to future work to enable consenting to meet contamination rules and regulations:

- Collection of more detailed information on activities and industries that have occurred within the study area – including site visits of individual properties and interviews with property owners and occupiers.
- Review the list of identified HAIL categories and the property addresses where these have been identified (from Table B.2, Appendix B).
- A DSI of potential soil (and groundwater) contamination may need to be undertaken on select land parcels subsequent to the plan change and prior to construction. This will enable the planning of appropriate management and mitigation measures and enable resource consenting for contamination, where required.
- Some remediation may be required to meet the selected land use and waste acceptance criteria. This will minimise risk to site workers, the public and the environment and ensure the site is suitable for the proposed residential/mixed land use. It will also enable appropriate and cost effective disposal and/or reuse of excavated soils.
- Provided that the proper controls are implemented, adverse effects can be mitigated with conventional construction management techniques including implementation of



dust and erosion control plans, stormwater management plans, and health and safety plans as part of a Remedial Action Plan (RAP)/Construction Environmental Management Plan (CEMP).

- Monitoring of surface water quality during construction may be required to meet future resource consent conditions.
- Safe site management practices during construction, will also reduce risks related to contamination, including restricting site access during construction etc.



1. Introduction

Fulton Hogan Land Development Limited (FHLd) engaged EHS Support New Zealand Limited (EHS Support) to undertake a Preliminary Site Investigation (PSI) to support the private plan change request made by FHLd to allow for the development of approximately 2,800 dwellings in Drury East. The PSI was completed in accordance with the EHS Support proposal dated 30 January 2019.

This PSI has been prepared to inform the Drury East Residential Plan Change on behalf of FHLd. The boundary of the Plan Change area is shown in Figure 1, Appendix A.

1.1 Background

The area subject to this Plan Change is located within Drury East and occupies a land area of approximately 200.2088 hectares (ha). Drury East is bounded by the Papakura urban area to the north, the Hunua foothills to the east, the Drury South Business zone to the south, and State Highway 1 to the west. FHLd has large landholdings within the Plan Change extent, which is bounded by Fitzgerald Road, Drury Hills Road and Waihoehoe Road a (defined as the study area). Fielding and Cossey Roads cross the study area and two additional properties form part of the study area to the north – one on either side of Cossey Road (on corners of Waihoehoe Road). Currently, the properties within the study area are predominantly used for farming, with some rural lifestyle blocks.

The Plan Change area is currently zoned Future Urban under the Auckland Unitary Plan (AUP). FHLd is seeking to rezone the land for residential development, with a range of densities proposed across two zones (Mixed Housing Urban and Mixed Housing Suburban zones). The Plan Change provides for mixed use, as well as a range of public open spaces. New roading and servicing infrastructure is proposed to service the development.

Once developed, it is anticipated that the Plan Change area could accommodate approximately 2,800 dwellings.

1.2 Purpose and Scope

The PSI was completed to address regulations and rules within the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-CS) and the Auckland Unitary Plan, Operative in Part (AUP-OP). The NES-CS and AUP-OP must be considered as part of lodgement of a private plan change to a more sensitive land use. The PSI was also prepared to support the Assessment of Environmental Effects (AEE).

A key objective of the PSI was to determine if activities or industries on the Hazardous Activities and Industries List (HAIL) have been, are, or are more likely than not to have been undertaken on the land within the study area. HAIL activities are defined in appendix c of the 'Users' Guide: NES for Assessing and Managing Contaminants in Soil to Protect Human Health, Ministry for the Environment (MfE), April 2012 (NES Users' Guide, MfE, 2012) and the MfE website².

The PSI was predominantly desk-based, comprising:

- Review of available technical reports (both environmental and geotechnical).
- Review of available historic aerial photographs (one for each decade back to 1940s).

² <https://www.mfe.govt.nz/land/hazardous-activities-and-industries-list-hail>



- Review available Auckland Council (AC) search information from property files, contaminated site enquiry records and GIS bore-search information.
- Obtain and review available NZ Fire Service records.
- Site walkover from accessible public roads and properties where permission was granted in order to inspect the current land-use activities.
- Preparation of this PSI report summarising the historic land use activities which may have resulted in contamination and may impact the proposed plan change.

2. Study Area Identification

The following table summarises the locality of study area:

Table 1: Study Area Description

Item	Description
Property Address	Bounded by Fitzgerald, Fielding, Waihoehoe and Drury Hills Roads in Drury East (refer to Figure 1, Appendix A) and comprises a total of 83 properties/allotments. The physical addresses and legal property descriptions are provided in Table B.1, Appendix B.
Lot and Deposition Plan Numbers	
Current owners	Various private owners
District	Franklin
Region	Auckland
Unitary Authority	AC
Current Zoning	Future Urban Zone
Planning Overlays	Natural Resources: High-Use Aquifer Management Areas Overlay – Drury Sand Aquifer. Natural Resources: Quality-Sensitive Aquifer management Areas Overlay - Drury Sand Aquifer. Controls: Macroinvertebrate Community Index – Urban and Rural. Designations: 9104, Pukekohe to East Tamaki Gas Pipeline Designation, First Gas Ltd.
Size of Study Area	200.2088 ha
Approximate Elevation (m AOD)	From approximately 15 to 50 m.
Study Area Location Plan	Refer to Figure 1, Appendix A.

Note: AOD = Above Ordinance Datum.

2.1 Environmental Setting

Drury East has an extensive stream and flood plain network which connects headwaters in the Hunua foothills, to the Manukau Harbour in the west. The study area is traversed by several large watercourses, within the Hingaia Stream catchment and which are discussed in more detail in the ecology report. The streams are highly modified and appear to be degraded. The Hingaia stream is one of six major streams in South Auckland which experience extremely high demand from water abstraction affecting stream flow³. Refer to the Ecology Report for more information on these streams. Figure 4, Appendix A shows the location of streams within the study area.

One small stand of native bush (approximately 0.5 ha in size) is present on the north eastern side of the study area (270 Drury Hills Road). This is believed to be protected under a covenant.

³ Adapted from Auckland Regional Council, 2002. Technical Publication (TP) 171 Auckland Water Quantity Statement, 2002, Part 3, Chapter 12 South Auckland Water Resource Area.



Several other very small pockets of native bush remain nearby. The native bush is understood to be dominated by Puriri trees. Refer to the Ecology Report for further information.

The overall topography of the area is relatively undulating, with several low ridgelines.

There is little information on filling and soil movement activities within the study area, although it is evident that streams have been modified, farm dams have been created and soil stockpiles have been formed on various properties.

2.1.1 Geology and Hydrogeology

A review of the Scale 1:250,000 geological map on the GNS-Science website identified that the underlying geology of the majority of the study area comprises Undifferentiated Kerikeri Volcanic Group basalt lava of South Auckland Volcanic Field, Early Pleistocene - Late Pleistocene. This group of basalt lava consists of fine-grained and coarse-grained, porphyritic, olivine basalt, basanite and hawaiite lava flows.

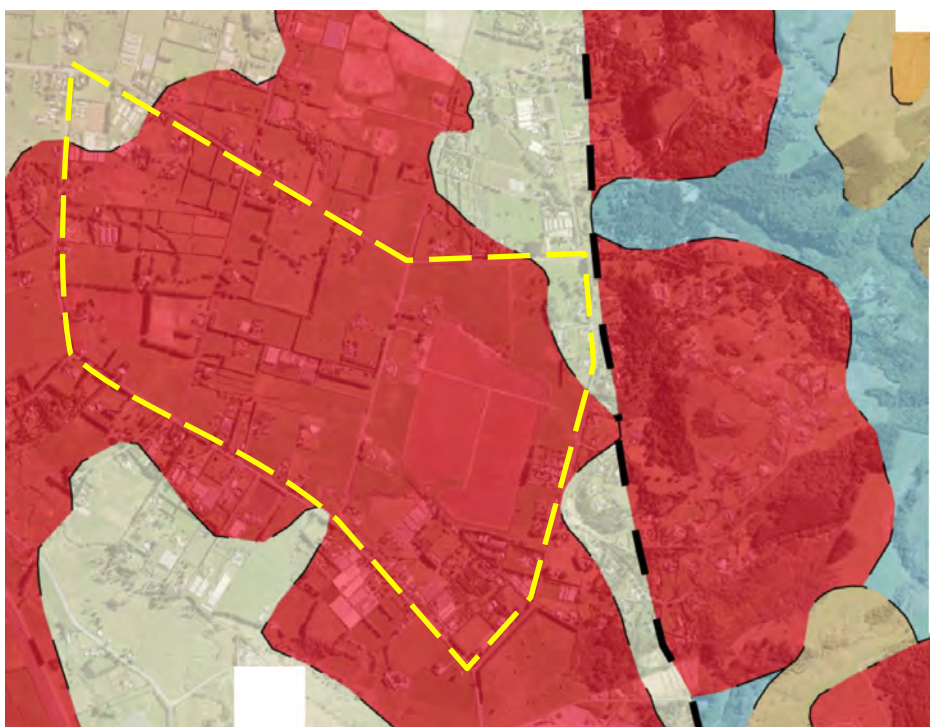


Plate 1: 1:250,000 Geological Map of Study Area

The study area is underlain by two unconfined aquifers: the Drury Volcanic and Drury Sand Aquifers. A third, much deeper (>100 m below ground surface) confined aquifer known as the Drury Waitemata Aquifer is also present⁴. The Drury Sand Aquifer is identified as a sensitive rural aquifer within the AUP-OP under Section D2. 'Quality-sensitive Aquifer Management Areas Overlay'. Rules controlling the taking of groundwater and drilling of bores in this area are specified under Section E7. 'Taking, using, damming and diversion of water and drilling'. Section D2.1 of the AUP-OP states that aquifers within this overlay are shallow and unconfined and therefore susceptible to pollution from sources such as excess fertiliser application or discharges of contaminants from stormwater or sewage discharges.

⁴ Adapted from Auckland Regional Council, TP171, 2002.



Three abstraction wells on Fielding Road are monitored by AC as part of the State of the Environment reporting programme. These wells are monitored regularly to determine the quality of the groundwater resource.

Use of the underlying groundwater resource for agricultural and horticultural activities is extensive. Refer to Section 4.3.3 for more information on review of available council records on groundwater use within the study area.

The proposed development includes significant movement of surface soils. Orientation of the draft indicative cut and fill layout, including anticipated changes in levels and finished contours is provided in Figures 2 and 3, Appendix A.

2.2 Current Land Use – Study Area and Surrounds

The land use within the study area is rural and is dominated by agricultural and horticultural activities as well as lifestyle blocks. Little commercial activity is evident.

The land use of the adjoining properties and surrounding area is very similar, although the hills to the east mean that this region is dominated more by bush than horticultural activities.

3. Applicable Standards and Plans

3.1 National Environmental Standard for Contaminated Soil

The NES-CS came into effect on 1 January 2012.

The NES-CS applies to land where an activity or industry described on the MfE's HAIL is being, or has been undertaken, or it is more than likely that such an activity or industry has been undertaken. The NES applies to HAIL sites where the following activities are occurring or planned:

- 1) Removal of underground fuel storage system(s).
- 2) Soil sampling.
- 3) Earthworks activities/soil disturbance.
- 4) Subdivision of land.
- 5) Change of land use.

With regard to earthworks activities and soil disturbance, specific activities which trigger the NES-CS include:

- Where soil disturbance is $>25 \text{ m}^3$ (in-situ volume) per 500 m^3 of land.
- Where soil removal is $>5 \text{ m}^3$ (in-situ volume) per 500 m^3 year.
- The period of soil disturbance is greater than 2 months.



3.2 Auckland Unitary Plan

The AUP-OP became operative in November 2016. FHLD is required to manage land containing elevated concentrations of contaminants and the discharge of contaminants from land containing elevated concentrations of contaminants under this plan. Contaminated land discharge rules fall under Chapter E (Auckland-wide rules), Section E30 Environmental Risk, Contaminated Land.

The following contamination rules are relevant for the proposed plan change and future resource consenting of the study area:

Permitted Activities:

- Rule E30.6.1.1 – Discharges of contaminants from intrusive investigations including soil sampling, chemical testing or monitoring.
- Rule E30.6.1.2 – Discharges of contaminants from disturbing soil on land containing elevated levels of contaminants.
- Rule E30.6.1.4 – Discharges of contaminants from land not used for rural production activities (proposed future residential, schools, commercial and public open spaces).
- Rule E30.6.1.5 – Discharges of contaminants from a fuel storage system.

In the event that permitted activities, can not be met, the following rules may be applicable depending on the extent of contamination.

Rule E30.6.2.1 – Discharges of contaminants from land not meeting permitted activity standards.

Rule E30.7 – Assessment – controlled activities (Council reserves its control on the adequacy of certain measures for contaminated land and assessment criteria).

No restricted discretionary or discretionary activities apply to section E30.

4. Methods of Assessment

To assemble the available current and historic information relating to land uses that are more likely than not to have been subjected to HAIL, requires an assessment using multiple lines of evidence. The following assessment has been completed in accordance with the Contaminated Land Management Guidelines (CLMG) No. 1: *Reporting on Contaminated Sites in New Zealand*, MfE, 2016A Revised Draft; and CLMG No. 5: *Site Investigation and Analysis of Soils*, MfE, 2016B Revised Draft.

4.1 Inspection of the Study Area

An inspection of the study area was completed on 14 February 2019. The visit primarily comprised viewing from the public roads bounding or traversing the study area. Due to access restrictions, only two properties were accessed (94 Fitzgerald Road and 148 Fielding Road). No residents or occupants were interviewed.

The study area was found to be generally flat, with gently undulating hills. A number of streams were present, the majority of which were dry due to the time of year (late summer). Several farm dams were also observed.

The inspection identified horticultural activities throughout the study area, including market gardens, greenhouses and cropping (primarily maize), areas of uncontrolled filling (110 Fitzgerald Road and 148 Fielding Road); and an aboveground storage tank (98 Fitzgerald Road).



Stockyards were also observed in several farm paddocks which appeared to be primarily for loading cattle. Property access restrictions prevented possible sheep-dip activities being observed/noted. Electrical transformers were also observed within the road easement at several locations. It is understood Poly Chlorinated Biphenyls (PCBs) were used in transformers in New Zealand up until the late 1970s and a program to withdraw PCBs from service came into effect in the mid-1980s. From the aerial photographs, the identified transformers located on the ground within the road easements appear to have been installed after 2000. Prior to this, smaller transformers appear to have been installed at height on power poles. Potential contamination from electrical transformers (as part of the reticulated network) are therefore unlikely to require further consideration.

The majority of the domestic water supply is from local rainwater tanks and bores. However, any aged subsurface pipes used for water reticulation and stormwater may be constructed of asbestos cement/Asbestos Containing Materials (ACM). A review of the Auckland GIS database indicated that the nearest reticulated subsurface water pipe was on the opposite side of Fitzgerald Road (from 1-15 Fitzgerald Road).

A summary of observations during the site inspection is provided in Table B.2, Appendix B ('Site visit observations' column). Photographs taken during the inspection are available in Appendix C.

4.2 Historical Aerial Photographs

Historical aerial photographs were obtained from 1942, 1960, 1969, 1981, 1988, 1996, 2006, 2017 using the Retrolens website (www.retrolens.nz/map/) and AC Geomap website. Copies of these aerial photographs are available in Appendix D.

In summary, a review of these aerial photos indicated:

- The study area has been dominated by open farmland since the earliest available image (1940), with some isolated pockets of bushland and some homesteads (approximately 10-15)/farm buildings visible. Large, open fields observed with very few windbreaks evident.
- From the 1960 image, fields were more developed and more intensified, with young trees frequently planted for windbreaks. A similar number of homesteads and farm buildings were present, although some had been demolished and others built elsewhere. One small orchard is visible (164 Fitzgerald Road).
- The 1969 image shows further development of fields for agriculture (cropping/market gardening).
- A number of greenhouses, windbreaks and market gardens (possibly including a kiwifruit orchard) had been constructed in the southeast corner and northwest side of the study area from the 1981 image (predominantly along Fitzgerald Road). A number of additional homesteads were present across the wider study area and further clearing of trees was evident.
- The 1988 image indicates significant intensification of agricultural activities, including additional greenhouses, market gardens, orchards and general cropping within the study area.
- The 1996 colour, low-quality resolution image indicates some further construction activity for farm buildings, although the intensity of market garden activity may have reduced slightly (depending on the season the image was taken). Earthworks evident at 320 Fitzgerald Road. Macadamia nut orchard visible at 524 Fitzgerald Road.



- The 2006 colour, low quality resolution image shows minor changes in agricultural activities across the study area. One group of greenhouses has been removed from 383 Waihoehoe Road. Several new residential houses have been constructed.
- The 2017 colour image is of reasonable quality and shows little change in land use activities to the 2006 image.

The AC Geomap website provided several additional images, including 2003/2004, 2008, 2010/2011 and 2015/2016. Further observations noted on the aerial photographs for each property are available in the 'Historic Aerial Photo Observations' column, Table B.2, Appendix B. Note that the quality of several images was insufficient to draw conclusions on some activities, particularly the 1996 and 2003/2004. The aerial images were black and white from 1942 to 1988 and colour from 1996 to 2017.

4.3 Auckland Council Information

A number of databases and information sources held by AC were searched. The data has been compiled and summarised in Table B.2, Appendix B to provide multiple lines of available evidence.

4.3.1 Auckland Council HAIL Search Information

AC offer a new search option via the Contamination, Air & Noise Specialist Input Unit, Resource Consents. This information has been summarised in the 'Auckland Council HAIL search information' column, Table B.2, Appendix B. The summary contains available database information from the former Auckland Regional Council.

A number of the council records for properties where HAIL was identified do not always align with aerial photos. These are discussed further in Section 5.

4.3.2 Property File Search

A total of 80 property files were viewed within the study area to identify potential incidents and land use activities to provide an additional line of evidence that may indicate HAIL at each property. The information reviewed was held by the former Papakura District Council (and Franklin County Council) and was viewed electronically at the AC Property File viewing desk in Henderson.

The file viewing identified a number of HAIL activities consistent with the other available records. In some cases, the property files provided additional information not available from other record sources, including:

- The type of horticultural activities which occurred at various properties.
- Non-complying earthworks activities and uncontrolled fill.

This information has been summarised in the 'Former Papakura District Council – property file information' column of Table B.2, Appendix B.

4.3.3 Site Contamination Enquiry Report

A Site Contamination Enquiry was completed by AC's Contamination, Air and Noise Specialist Unit, Resource Consents Division. This comprised a search of the former Auckland Regional Council's record system and information currently held by the AC Natural Resources and



Specialist Input Unit (excluding site visit file for catchment # 732-734, which contain non-site specific pollution incident information or where no follow-up was required).

The search completed as part of this enquiry comprised a review of AC's GIS database holding contaminated land information and resource consents relating to the study area, including a buffer of up to 200 m beyond the study area. Records of potential contaminated land activities falling within the definition of HAIL were interrogated by AC under the following:

- Pollution incidents (including air discharges, oil or diesel spills).
- Bores.
- Contaminated site, air discharge and industrial trade process consents.
- Closed landfills (council-owned closed landfill sites only).
- Air quality permitted activities.
- Environmental assessments.

A copy of the cover letter report and associated maps produced by AC is available in Appendix E. The raw search data is available on request. In summary:

- Two pollution incidents were reported outside the study area to the north, relating to a fertiliser release to a stream and dust from lime application to a field. The nature and location of these incidents mean they are unlikely to have impacted the study area and were not investigated any further.
- Two datasets of consented bore information were provided:
 - 60 water or land use consents relating to the installation and use of groundwater bores in the 'Drury sand volcanic aquifer' were recorded for agricultural activities (irrigation, stock watering), horticultural activities (market garden, greenhouses and nurseries) and domestic supply within the study area and surrounds. Forty-six consents were for taking water, and 14 were for drilling/installing bores – generally to a depth of 40 – 120 m. Of the 60 consents, 34 were 'replacement applications'. Three monitoring wells were identified for assessing water quality for the three main aquifers underlying the site. These are monitored by AC.
 - A separate bore search report was provided as part of the AC contaminated sites enquiry which identified 11 bore consents. Of these, two consents were described as being for monitoring/investigation purposes. Both related to permit 40317, consented as LUC60271969 (496 Waihoehoe Road) and LUC60272614 (adjacent stream near Drury Hills Road). Both bores were installed in 2014 and relate to properties nearby to the northeast of the study area. No further information was obtained. A copy of the bore search map supplied by AC is provided in Figure E.1, Appendix E.
- 32 resource consents within the study area related to contamination, primarily indicating horticultural activity – for greenhouses, orchards and market gardens. A summary of the consent descriptions are provided in the column 'Auckland Council contaminated site enquiry – consent descriptions extract', Table B.2, Appendix B. One pollution incident was noted from September 2000 at 486 Fitzgerald Road (CSI60074696) relating to a release of approximately 400 L of waste oil from a burst hose on a 7,000 L aboveground tank for a 'hothouse' burner. The spill flowed over ground to a local stream. The pollution incident file was obtained and reviewed and is available on request. A clean-up was completed by a spill response contractor, although the



inspector noted that some residual contamination was likely, and that the property was to be recorded on the Auckland Regional Council files as 'contaminated' as a result. However, no results or reporting of soil or surface water sampling and analysis was identified on the file.

A map showing the properties holding consents relating to contaminated sites is located in Figure E.2, Appendix E.

- Seven separate discharge consents relating to: the discharge of stormwater diverted from a greenhouse, dairy farm washwater, glasshouse nutrient discharge, wastewater discharge and contaminated site discharge were identified by the search. Of these, only two related to properties within the study area as follows:
 - 108 Cossey Road (Consent # DIS60267315) to '*To discharge and divert stormwater from a proposed new glasshouse*'.
 - Fitzgerald Road (unconfirmed property address – Consent # DIS60267698) to '*Land application of farm dairy washwater*'.

As these discharge consents did not indicate HAIL, these files were not obtained/reviewed.

- Council-owned closed landfills – Refer to Section 4.3.4.
- No air quality permitted activities or consents were identified.
- No environmental assessments were identified in the search information.

Horticultural activities were identified in the surrounding area. A hazard note on the file of 219 Drury Hills Road from 1994 indicates that a sawmill previously operated at the front of the property. The former sawmill was located adjacent to a stream upgradient to the study area on the east side of Drury Hills Road.

4.3.4 Landfill Enquiry

No council-owned closed landfills were identified within a 1 km radius of the study area. A search completed by the closed landfill team (from the Engineering & Technical Services Unit, Infrastructure & Environmental Services Department) at AC indicated that the closest AC-owned or managed closed landfill was over 2.5 km to the north. Note that the search excluded privately owned closed landfills. Refer to Appendix E for a copy of the correspondence from AC.

4.4 NZ Fire Service

An official information request was made to the New Zealand Fire Service for contaminated land related incidents on 25 February 2019. A total of 63 incidents were recorded in the wider area between 1 August 1998 and 18 December 2018. Of these, 14 were confirmed to be within the study area and a further 16 were at non-descript property addresses on Waihoehoe, Fitzgerald, Drury Hills, Cossey and Appleby Roads, potentially within the study area. A copy of the report from the fire service is located in Appendix F.

Two of the incidents at non-descript addresses were identified as 'major hazardous substances incidents' involving:

- Approximately 11 – 30 L of petroleum oil/fuel (UN 1993 - likely diesel), this was removed and disposed – located at Fitzgerald Road.
- Approximately 1 – 10 L of flammable liquid (UN 1270 - unknown), this was absorbed and removed – located at Waihoehoe and Fitzgerald Roads.



From the above information, it is unlikely that the NZ Fire Service holds any information of potential or identified HAIL.

4.5 Summary of Assessment Findings

From the above available historical search information and site inspection, the study area has been dominated by agricultural activities from at least the 1940s. Horticultural activities have intensified from 1980s. The study area requires more detailed assessment to better understand the nature of potential and identified HAIL.

The following is a summary of potential and identified HAIL categories within the study area:

- Category A10: Horticultural (Greenhouses, market gardens and orchards).
- Category A17: Storage tanks or drums for fuel, chemicals or liquid waste.
- Category E4: Commercial concrete manufacture or commercial cement storage.
- Category F4: Garage/motor vehicle workshop activities.
- Category F8: Transport depots or yards including areas used for refuelling or bulk storage of hazardous substances.
- Category G4: Dismantling/wrecking of farm machinery.
- Category G5: Waste disposal to land.
- Category G6: Wastewater treatment.
- Category I: Open burning and soil stockpiling activities.

Possible activities which are unconfirmed include sheep dip/spray activities (Category A8).

Other HAIL categories may be identified when further detailed study is completed for the study area. These may include:

- Category A1: Agrichemicals including commercial premises used by spray contractors for filling, storing or washing out tanks for agrichemical application.
- Category E1: Asbestos products disposal, including sites with buildings containing asbestos products known to be in a deteriorated condition.
- Category G3: Privately owned closed landfill sites.

5. Risk Assessment

A summary of key data records used to complete the above desk-based reviewed has been recorded in Table B.2, Appendix B. This data indicates that from a total of 84 identified lots/land parcels, a total of 63 properties may either currently or historically have had an activity or industry undertaken on them described on the HAIL.

Some uncertainty was noted for several properties which have been included as having HAIL activities or industries undertaken with little basis for the information – particularly from some council records. However, more detailed study is needed to rule these properties out as not having had HAIL undertaken. An example of this is where wastewater effluent has been discharged at the property, or where a greenhouse or market garden was proposed but does not appear to have been built.

Based on the available information, contamination within the properties of the study area is potentially comprised of (but not limited to):

- Use of pesticides:
 - OrganoChlorine Pesticides (OCPs).



- OrganoPhosphorus Pesticides (OPPs).
 - DDT (pre-1980s).
 - Inorganic pesticides (metals such as: arsenic, copper and lead).
- Petroleum hydrocarbons relating to fuels and lubricants.
- Historic unconsented movement and disposal of soils/fill and rubbish.
- Historic demolition of structures or water, stormwater and sewage reticulation systems containing hazardous materials (namely ACMs).

Additionally, hazardous materials such as asbestos and lead paint are likely to have been used in pre-2000 houses and farm structures which may have impacted surrounding soils, predominantly from disposal, or deteriorating surfaces. Abatement of hazardous materials is required under the Health and Safety at Work Act, 2015 prior to demolition of these structures in addition to NES-CS requirements.

While sewage discharges from septic tank systems have the potential to locally impact shallow unconfined groundwater, it is unlikely that impacts will be significant once the treatment systems from each property have been removed. This will be reviewed as part of future contamination investigations (and depending on the nature of the property the septic systems serviced).

5.1 Key Data Gaps

Due to the nature of the investigation, a number of information gaps in understanding the nature and extent of potential HAIL were identified. These include:

- The majority of properties that were not able to be physically inspected.
- Not being able to interview landowners/occupants with connections to the activities or industries at each property (e.g. landowner, tenants, workers, neighbours).
- Further review and interrogation of AC-held contaminated land information.
- Uncertainty in some information provided by AC which appears to not align directly with aerial photos and site visit information.
- Depth to groundwater.
- Location of farm dumps and areas of infilling.
- Subsurface pipe infrastructure.
- No Preliminary or Detailed Site Investigations (PSI/DSIs) for individual property lots were available within the study area or immediate surrounds. This meant no information was available on the concentrations in soil of any of the above identified contaminants of potential concern (CoPC) listed above.

6. Assessment of Environmental Effects and Options for Avoiding, Remedying or Mitigating Adverse Effects

This section describes likely positive and adverse potential contamination effects on land parcels related to construction and future mixed residential land use. Table 2 lists likely activities/locations, CoPC, potential environmental effects and options for avoiding, remedying and mitigating potential adverse effects related to construction.

As the access to individual land parcels was limited, and in the absence of intrusive and analytical soil data for this evaluation, the assessment of effects is preliminary, pending collection of future site investigation data on selected land parcels.



6.1 Positive Effects

If identified, the removal, capping or management of contaminated soil will have a positive effect that will improve human health and the surrounding environment. These will include: improvement to stormwater and groundwater quality.

6.2 Adverse Effects – Construction

Potential adverse effects during construction have been outlined in Table 2, based on identified HAIL categories. The table provides a framework and options for avoiding, remedying and mitigating these potential adverse effects. Only those potential adverse effects which are considered likely to occur during the development are addressed (based on the PSI findings from Section 10). Any additional effects identified (i.e. outside what is described below) will need to be managed as part of a Remedial Action Plan (RAP) and or a Construction Environmental Management Plan (CEMP). Where appropriate, they will also need to be considered in future resource consents.



Table 2: Land use Activities and Contaminants of Potential Concern – Assessment of Adverse Construction Effects

Land use Activity	Contaminants of Potential Concern (CoPC)	Available Information	Potential Effects	Options for Avoiding, Remedy or Mitigating Effects
Possible [livestock] dip/spray activities.	Arsenic, DDT, aldrin and lindane.	Stockyards observed from the road (dip activities remain unconfirmed).	<ul style="list-style-type: none"> - Dermal and ingestion exposure to workers. - Contaminated stormwater run-off. - Uncontrolled disposal of excavated soil. 	<ul style="list-style-type: none"> - Complete a site inspection and interviews to confirm dip and spray activities. If presence suspected, complete a DSI[#]. - RAP/CEMP to control exposure if contamination identified (hierarchy of control, soil classification and management) and identify protocols for accidental discovery. - Implement dust, erosion and stormwater control plans.
Horticultural (Greenhouses, market gardens and orchards) - use of pesticides.	OCPs, OPPs, (DDT pre-1980s), arsenic, copper and lead.	Extensive horticultural activities identified from aerial photos, council records and field observations.	<ul style="list-style-type: none"> - Dermal and ingestion exposure to workers. - Contaminated stormwater run-off. - Uncontrolled disposal of excavated soil. 	<ul style="list-style-type: none"> - Complete a site inspection and interviews to compile more accurate information. Complete a DSI[#]. - CEMP to control exposure if contamination identified (hierarchy of control, soil classification and management) and identify protocols for accidental discovery. - Implement dust, erosion and stormwater control plans.
Petroleum/waste oil storage tanks or drums for fuel, chemicals or liquid waste.	TPH, BTEX, PAHs, phenols, OCPs & OPPs.	Limited information from aerial photos and council records.	<ul style="list-style-type: none"> - Dermal and ingestion exposure to workers. - Contaminated stormwater run-off - Uncontrolled disposal of excavated soil. 	<ul style="list-style-type: none"> - Complete a site inspection and interviews to compile more accurate information. Complete a DSI[#]. - Confirm management action for development based on DSI findings.
Commercial concrete manufacture or commercial cement storage	High pH and sediment in stormwater discharge	Limited information from council records.	<ul style="list-style-type: none"> - Dermal and ingestion exposure to workers and members of the public. - Contaminated stormwater run-off 	<ul style="list-style-type: none"> - Complete a site inspection and interviews to compile more accurate information. Complete a DSI[#]. - Confirm management action for development based on DSI findings.



Land use Activity	Contaminants of Potential Concern (CoPC)	Available Information	Potential Effects	Options for Avoiding, Remedy or Mitigating Effects
Garage/motor vehicle workshop activities.	TPH, BTEX, PAHs and heavy metals.	Council records	<ul style="list-style-type: none"> - Dermal, ingestion exposure to workers and members of the public - Contaminated stormwater run-off - Uncontrolled disposal of excavated soil/waste. 	<ul style="list-style-type: none"> - Complete a site inspection and interviews to compile more information. Complete a DSI#. - Confirm management action for development based on DSI findings.
Transport depots or yards including areas used for refuelling or bulk storage of hazardous substances.		Council records, aerial photos and field observations.		
Dismantling/wrecking of farm machinery.				
Waste disposal to land.	TPH, PAH, heavy metals, asbestos and landfill gas.	Council records, aerial photos and field observations.	<ul style="list-style-type: none"> - Dermal, ingestion and inhalation exposure to workers and members of the public - Contaminated stormwater run-off - Uncontrolled disposal of excavated soil/waste. 	<ul style="list-style-type: none"> - Complete a site inspection and interviews to compile more information. Complete a DSI#. - Confirm management action for development based on DSI findings.
Wastewater treatment	Nitrates, heavy metals.	Council records.	<ul style="list-style-type: none"> - Dermal, ingestion exposure to workers and members of the public - Contaminated stormwater run-off - Uncontrolled disposal of excavated soil/waste. 	<ul style="list-style-type: none"> - Complete a site inspection and interviews to compile more information. - Review need for further investigation and management if industrial activities and chemical use is identified.
Open burning of refuse and soil stockpiling activities	TPH, PAH, heavy metals, asbestos.	Council records, aerial photos and field observations.	<ul style="list-style-type: none"> - Dermal, ingestion exposure to workers and members of the public - Contaminated stormwater run-off - Uncontrolled disposal of excavated soil/waste. 	<ul style="list-style-type: none"> - Complete a site inspection and interviews to compile more information. Complete a DSI# (near surface). - Review need for further investigation and management.

Notes:

Further investigations as part of future DSIs to support preliminary and/or detailed design and resource consents.



Abbreviations: Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, Ethyl benzene, Xylene (BTEX) , Polycyclic Aromatic Hydrocarbons (PAH), Benzo(a)Pyrene (BaP), Organochlorine Pesticides (OCP), Organophosphorus Pesticides (OPP) Poly Chlorinated Biphenyls (PCBs) and Dichlorodiphenyltrichloroethane (DDT). Heavy metals include 8 priority metals unless stated (arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc).

A number of other potential sources, which were not specifically identified but which could be present, include activities such as small quantities of dangerous goods, asbestos in building materials and other historic activities. Effects from these contaminants would be addressed subsequent to further investigation should they be identified. These effects are not considered for Plan Change as their presence was not verified during the PSI.

The above identified effects will be mitigated to address the health and safety of construction workers and the general public, together with environmental considerations for construction and ongoing residential/mixed land use. Basic principles required for a RAP/CEMP will be provided at the time of construction once additional data is gathered during detailed design.



6.3 Adverse Effects – Future Mixed Residential Land Use

Mitigation measures to manage potential contaminated land issues for the proposed mixed residential land use will be developed under the framework of the monitoring and management programme implemented during the construction phase. This will address worker and public protection for areas where contaminated soil may be excavated, re-used/retained onsite or disposed of appropriately off-site.

7. Conclusions and Recommendations

The PSI has identified the potential for soil contamination to exist within the proposed study area from a range of activities and industries identified as HAIL, as defined by MfE, 2011. Therefore, further investigation and resource consenting under the NES-CS will likely be necessary.

No land parcels were identified within the study area as having a significant risk of contamination that may impact the proposal to rezone land to a mixture of residential and business zones.

From the available information obtained during the preparation of this report, the potential adverse effects related to the change in land use, associated development activities and future, ongoing residential land use are considered to be minor. This assumes that the management controls identified are implemented as outlined below.

The identified potentially contaminating activities and industries (with corresponding HAIL categories) are included in the summary below:

- Horticultural (Greenhouses, market gardens and orchards) - use of pesticides (Category A10).
- Petroleum/waste oil storage tanks or drums for fuel, chemicals or liquid waste (Category A17).
- Commercial concrete manufacture or commercial cement storage (Category E4).
- Garage/motor vehicle workshop activities (Category F4).
- Transport depots or yards including areas used for refuelling or bulk storage of hazardous substances (Category F8).
- Dismantling/wrecking of farm machinery (Category G4).
- Waste disposal to land (Category G5).
- Wastewater treatment (Category G6).
- Open burning and soil stockpiling activities (Category I).

Possible activities which are unconfirmed include sheep dip/spray activities (Category A8).

It is anticipated that the number of HAIL categories triggered may be reduced with more detailed and accurate information. In particular, there are a number of categories with very similar CoPC, such as garage/workshops and maintenance of farm machinery activities (Categories F4 and G4); and storage of petroleum, chemicals etc and transport depots/yards (Categories A17 and F8). However, other HAIL categories may be identified when further detailed study is completed for the study area. These may include (but are not limited to):

- Agrichemicals including commercial premises used by spray contractors for filling, storing or washing out tanks for agrichemical application (Category A1).



- Asbestos products disposal, including sites with buildings containing asbestos products known to be in a deteriorated condition (Category E1).
- Privately owned closed landfill sites (Category G3).

Positive effects are likely in that contaminated soil may be managed and/or removed from the study area which will enhance the surrounding environment.

Potential adverse effects could arise from human or environmental exposure to contaminants from these activities during future construction. These include:

- Dermal, ingestion or inhalation exposure to construction workers or members of the public from contaminants carried in airborne dust or contact during excavation activities.
- Stormwater runoff carrying contaminated sediment could impact off-site areas.
- Uncontrolled disposal of excavated contaminated soil.

7.1 Recommended Future Work

Subsequent to completion of the plan change, the following presents an outline of the recommended approach to future work to enable consenting to meet contamination rules and regulations:

- Collection of more detailed information on activities and industries that have occurred within the study area – including site visits of individual properties and interviews with property owners and occupiers.
- Review the list of identified HAIL categories and the property addresses where these have been identified (from Table B.2, Appendix B).
- A DSI of potential soil (and groundwater) contamination may need to be undertaken on select land parcels subsequent to the plan change and prior to construction. This will enable the planning of appropriate management and mitigation measures and enable resource consenting for contamination, where HAIL has been identified. The DSI will need to take account of the proposed location of roads, utilities and cut and fill design. The proposed cut and fill layout and finished contours is provided in Figures 2 and 3, Appendix A.
- Some remediation may be required to meet the selected land use and waste acceptance criteria. This will minimise risk to site workers, the public and the environment and ensure the site is suitable for the proposed residential/mixed land use. It will also enable appropriate and cost effective disposal and/or reuse of excavated soils.
- Provided that the proper controls are implemented, adverse effects can be mitigated with conventional construction management techniques including implementation of dust and erosion control plans, stormwater management plans, and health and safety plans as part of a RAP/CEMP.
- Monitoring of surface water quality during construction may be required to meet future resource consent conditions.
- Safe site management practices during construction, will also reduce risks related to contamination, including restricting site access during construction etc.

8. SQEP Sign-off Statement

This PSI has been prepared by a Suitably Qualified and Experienced Practitioner (SQEP) as required by the NES-CS. David Dangerfield has almost 20 years of experience in contaminated



land and is a Certified Environmental Practitioner in Contaminated Land through the CEnvP accreditation scheme. A CV is available on request.

9. References

Auckland Council (2016). Auckland Unitary Plan, Operative in Part, September 2016:

Section D2. Quality-sensitive Aquifer Management Areas Overlay.

Section E7. Taking, using, damming and diversion of water and drilling.

Section E30. Contaminated Land Rules (AUP-OP, E30).

Auckland Regional Council (2002). Auckland Water Quantity Statement, TP171, Auckland Regional Council (now Auckland Council), 2002, Part 3.

GNS Science (2012): Scale 1:250,000 Geological Map of New Zealand (QMAP), accessed online at: www.data.gns.cri.nz on 13 February 2019.

Ministry for the Environment (2016A). Contaminated Land Management Guidelines (CLMG) No. 1: *Reporting on Contaminated Sites in New Zealand*, MfE, 2016 Revised Draft.

Ministry for the Environment (2016B). CLMG No. 5: *Site Investigation and Analysis of Soils*, MfE, 2016 Revised Draft.

Ministry for the Environment (2011). Hazardous Activities and Industries List (HAIL), October 2011. <https://www.mfe.govt.nz/land/hazardous-activities-and-industries-list-hail>.

Ministry for the Environment (2012). Users' Guide: NES for Assessing and Managing Contaminants in Soil to Protect Human Health, MfE, April 2012 (NES-CS Users' Guide, MfE, 2012).

Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations, 2011 (NES-CS).

10. Limitations Statement

This report is intended for the sole use of Fulton Hogan Land Development Ltd (FHLD). The scope of services performed during this investigation may not be appropriate to satisfy the needs of other users, and any use or re-use of this document or of the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

Background information, design bases, and other data have been furnished to EHS Support New Zealand Ltd (EHS Support) by FHLD and/or third parties, which EHS Support has used in preparing this report. EHS Support has relied on this information as furnished and is neither responsible for nor has confirmed the accuracy of this information.

Opinions presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which EHS Support is unaware and has not had the opportunity to review. Changes in the condition of this property may occur with time due to natural processes or works of man at the site or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond our control.



Appendices

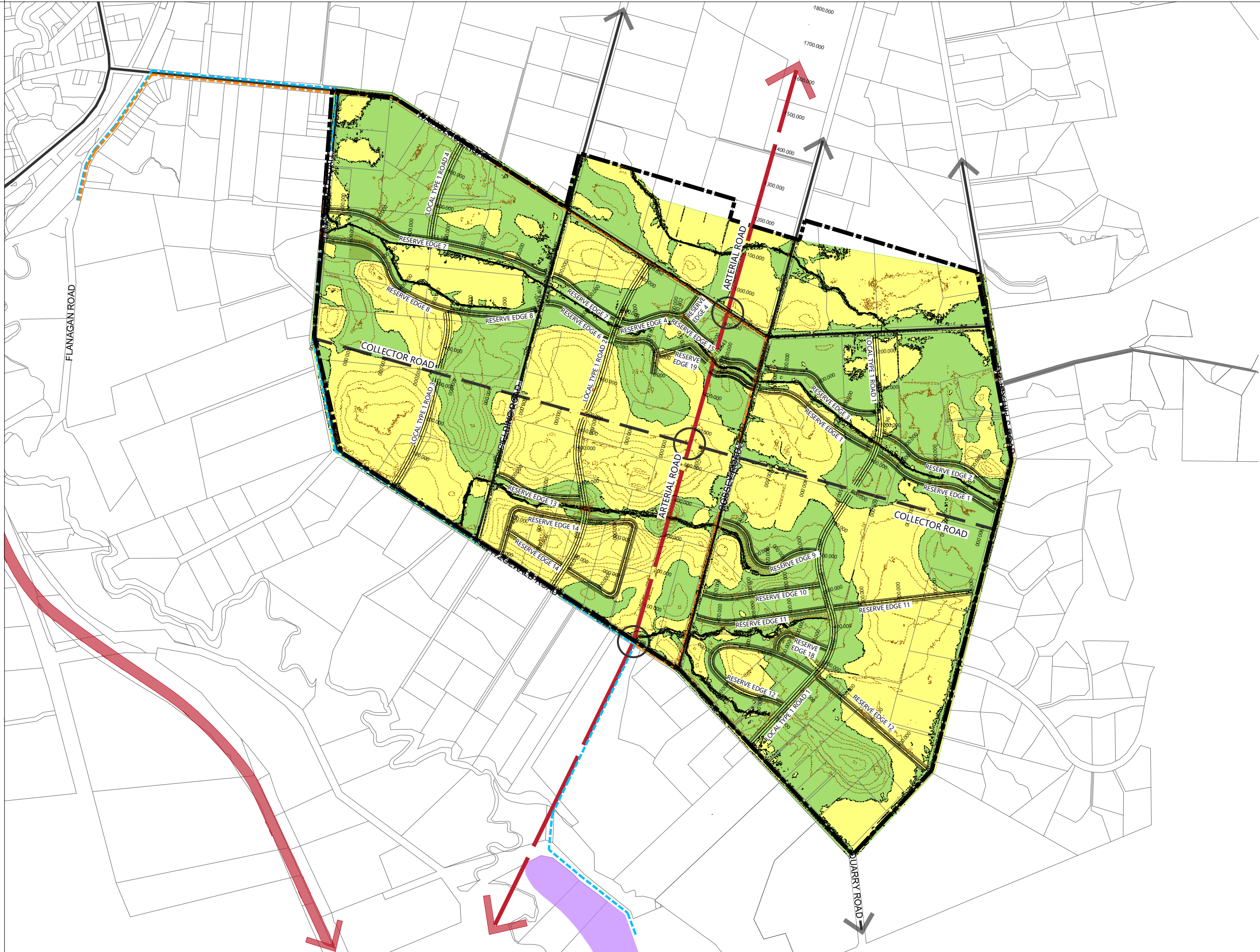


Appendix A - Figures



KEY

PLAN CHANGE AREA



REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR INFORMATION	BP	03/04/2019	DESIGNED	BP
				DRAWN	RP
				CHECKED	
				APPROVED	

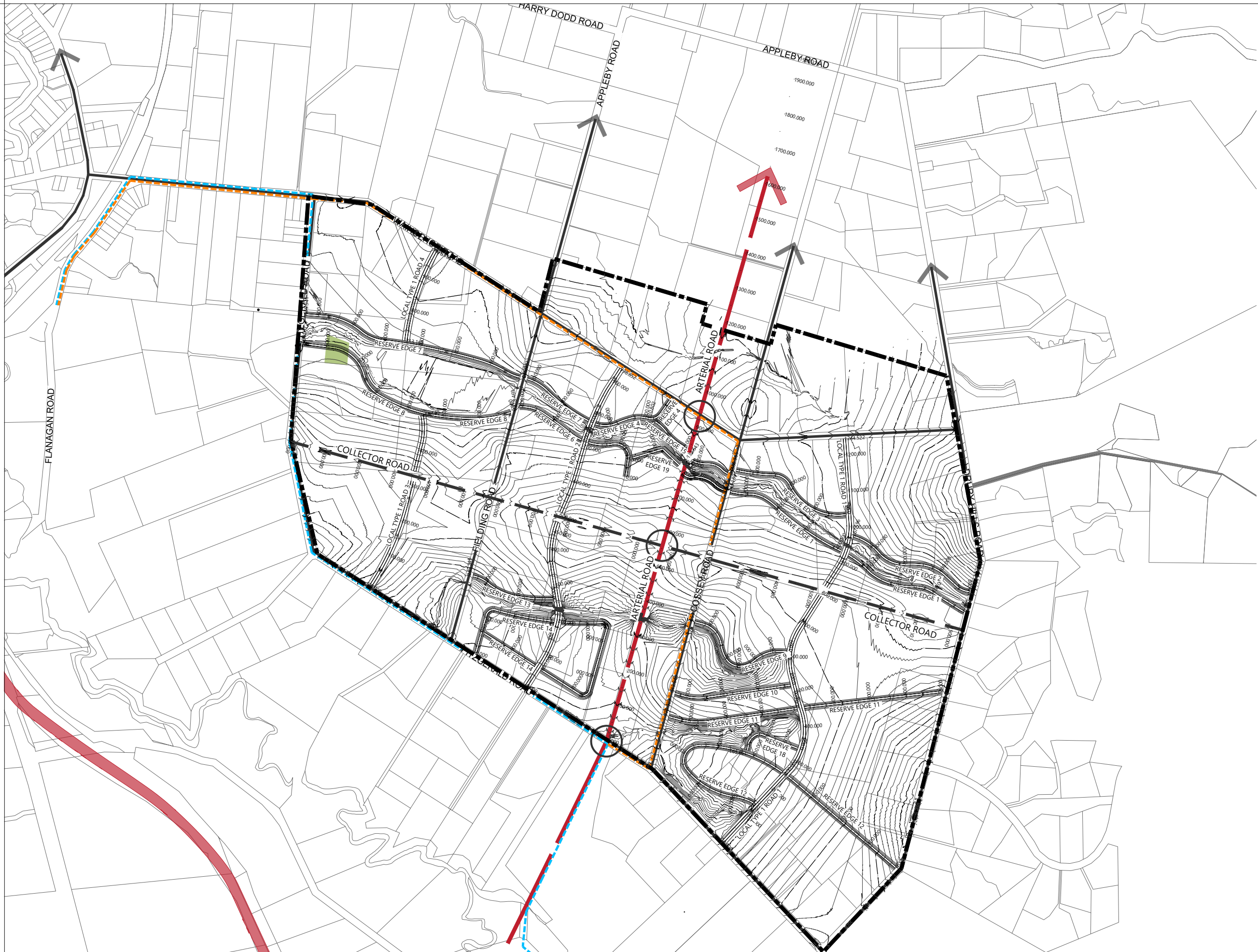
WOODS.CO.NZ

DRURY EAST
CUT/ FILL
OVERALL PLAN



SCALEBAR (m) 0 50 100 250
SCALE | 1:5000 @A3 | 1:2500 @A1

STATUS	ISSUED FOR INFORMATION	REV
SCALE	1:5,000 @ A1	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P16-335-00-121-EW	



SCALEBAR (m) 0 50 100 250
SCALE | 1:5000 @A3 | 1:2500 @A1

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR INFORMATION	RP	03/04/2019	DESIGNED	BP
				DRAWN	RP
				CHECKED	
				APPROVED	

WOODS.CO.NZ

DRURY EAST
FINISHED CONTOURS
OVERALL PLAN

Figure 3



STATUS	ISSUED FOR INFORMATION	REV
SCALE	1:5,000 @ A1	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P16-335-00-120-EW	



REVISION DETAILS		BY	DATE	SURVEYED	-	DRURY EAST, AUCKLAND	WOODS.CO.NZ	STATUS	ISSUED FOR HUI DISCUSSION	REV
A	PRELIMINARY ISSUE	SW	29/03/2019	DESIGNED	AZG & SW					
				DRAWN	SW					
				CHECKED	SW					
				APPROVED	PE			DWG NO	04	



Appendix B - Tables


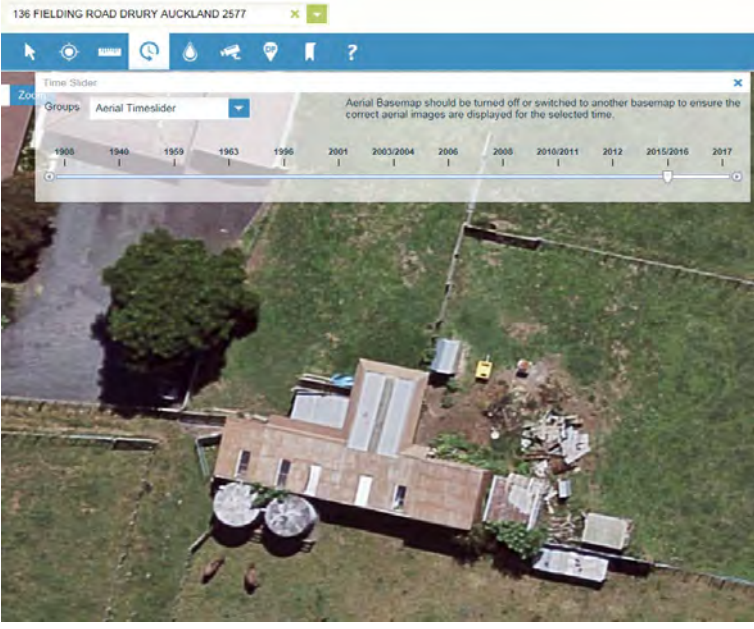
Table B.1: Property Addresses and Legal Descriptions

ADDRESSINONELINE	PROPERTYDESCRIPTION	FORMATTEDTITLE	PROPERTYNAME	PROPERTYTYPE	PROPERTYSTATUS	PROPERTYAREA	AREAUNIT	BOARDNAME	WARDNAME	PROPERTYID	ACRATEACCOUNTKEY	VALUATIONREF
1 228 Cossey Road Drury Auckl	Lot 2 DP 125763	NA73B/613		Site (Property)	Current	4.3192	HA	Franklin		11313531	12343782177	37401-00000027321
2 412 Waihoehoe Road Drury	Lot 1 DP 67193	NA24C/450		Site (Property)	Current	1.6794	HA	Franklin		11297791	12343261649	37401-00000027600
3 260 Drury Hills Road	LOT 6 DP 185120					54670	M					
4 220 Drury Hills Road	LOT 5 DP 185120					32423	M					
5 Cossey Road	LOT 53 DP 119	NA56B/858?				64117	M					
6 45 Cossey Road Drury Auckl	Lot 1 DP 487007	695904		Site (Property)	Current	4.807	HA	Franklin		11314896	12344086441	37401-00000027323
7 37 Cossey Road Drury Auckl	Lot 2 DP 487007	695905		Site (Property)	Current	4.5876	HA	Franklin		11314918	12344086735	37401-00000027324
8 Cossey Road	LOT 56 DP 119	NA56B/861				141134	M					
9 Drury Hills Road	PT ALLOT 57 DP 119	NA31B/839				113318	M					
10 152 Drury Hills Road Drury	Lot 2 DP 170153	NA103D/298		Site (Property)	Current	1.1636	HA	Franklin		11301652	12343595377	37401-00000028005
11 144 Drury Hills Road Drury	Lot 1 DP 170153	NA103D/297		Site (Property)	Current	6030	M	Franklin		11300319	12343262432	37401-00000028000
12 132 Drury Hills Road Drury	Lot 2 DP 102638	NA56C/819		Site (Property)	Current	1.1999	HA	Franklin		11300344	12343594826	37401-00000028001
13 120 Drury Hills Road Drury	Lot 2 DP 157934	NA94D/332		Site (Property)	Current	1.64	HA	Franklin		11300370	12343657771	37401-00000028002
14 460 Fitzgerald Road Drury	Lot 1 DP 82423	NA39A/310		Site (Property)	Current	9416	M	Franklin		11309482	12343609262	37401-00000028203
15 27 Cossey Road Drury Auckl	Lot 1 DP 104277	NA57C/918		Site (Property)	Current	3.1033	HA	Franklin		11309425	12343599569	37401-00000028201
16 9 Cossey Road Drury Auckla	Lot 2 DP 104277	NA57C/919		Site (Property)	Current	3.1033	HA	Franklin		11309535	12343658824	37401-00000028205
17 Cossey Road	LOT 6 DP 19939	NA75A/311				20234	M					
18	LOT 7 DP 19939					20930	M					
19	LOT 2 DP 128680					24056	M					
20 368 Fitzgerald Road Drury	Lot 2 DP 96407	NA52A/1372		Site (Property)	Current	8573	M	Franklin		11322128	12343214101	37401-00000031700
21 380 Fitzgerald Road Drury	Lot 1 DP 96407	NA52A/1371		Site (Property)	Current	1.1662	HA	Franklin		11322042	12343355333	37401-00000031605
22 360 Fitzgerald Road Drury	Lot 4 DP 19939	NA38A/1127		Site (Property)	Current	2.0236	HA	Franklin		11322100	12343595369	37401-00000031607
23 334 Fitzgerald Road Drury	Lot 3 DP 19939	NA38A/1126		Site (Property)	Current	2.0234	HA	Franklin		11322072	12343314203	37401-00000031606
24 330 Fitzgerald Road Drury	Lot 2 DP 115613	NA65D/193		Site (Property)	Current	1.0243	HA	Franklin		11320785	12343580094	37401-00000031601
25 320 Fitzgerald Road Drury	Lot 1 DP 115613	NA65D/192		Site (Property)	Current	1	HA	Franklin		11320760	12343579819	37401-00000031600
26 310 Fitzgerald Road Drury	Lot 1 DP 19939	NA38A/1124		Site (Property)	Current	2.0336	HA	Franklin		11320812	12343673845	37401-00000031602
27 230 Fitzgerald Road Drury	Lot 1 DP 61791	NA18C/68		Site (Property)	Current	4.0555	HA	Franklin		11333169	12343223879	37401-00000026405
28 178 Fitzgerald Road Drury	Lot 1 DP 135882	NA80A/631		Site (Property)	Current	1	HA	Franklin		11333239	12343646532	37401-00000026410
29 164 Fitzgerald Road Drury	Lot 2 DP 135882	NA80A/632		Site (Property)	Current	6.583	HA	Franklin		11333144	12343374745	37401-00000026404
30 114 Fitzgerald Road Drury	Lot 2 DP 62165	NA21D/540		Site (Property)	Current	4.0008	HA	Franklin		11333121	12343257102	37401-00000026403
31 110 Fitzgerald Road Drury	Lot 1 DP 107220	NA67C/738		Site (Property)	Current	9530	M	Franklin		11333218	12343396900	37401-00000026409
32 98 Fitzgerald Road Drury	Lot 2 DP 107220	NA59D/462		Site (Property)	Current	9350	M	Franklin		11333097	12343396315	37401-00000026402
33 94 Fitzgerald Road Drury	Lot 2 DP 103102	NA56D/839		Site (Property)	Current	2.158	HA	Franklin		11331941	12343382551	37401-00000026100
34 65 Fielding Road Drury Auckl	Lot 4 DP 62165	NA21D/542		Site (Property)	Current	4.3081	HA	Franklin		11331962	12345483347	37401-00000026101
35 75 Fielding Road Drury Auckl	Lot 3 DP 62165	NA21D/541		Site (Property)	Current	3.9616	HA	Franklin		11333190	12343594311	37401-00000026407
36 111 Fielding Road Drury Auckl	Lot 2 DP 61791	NA18C/69		Site (Property)	Current	4.063	HA	Franklin		11333059	12343383701	37401-00000026400
37 148 Fielding Road Drury Auckl	Lot 2 DP 92454, Lot 1 DP 128680	NA75A/310		Site (Property)	Current	3.2477	HA	Franklin		11334592	12343397516	37401-00000026700
38 136 Fielding Road Drury Auckl	Lot 1 DP 92454	NA48D/1290		Site (Property)	Current	2.4194	HA	Franklin		11338452	12343638386	37401-00000027302
39 108 Fielding Road Drury Auckl	Lot 2 DP 207189	NA135C/44		Site (Property)	Current	14.0626	HA	Franklin		11336942	12343483048	37401-00000027103
40 96 Fielding Road Drury Auckl	Lot 1 DP 207189	NA135C/43		Site (Property)	Current	8100	M	Franklin		11320707	12343259431	37401-00000031400
41 26 Fielding Road Drury Auckl	Lot 1 DP 68163	NA23C/720		Site (Property)	Current	1.1792	HA	Franklin		11320733	12343355066	37401-00000031500
42 297 Waihoehoe Road Drury	Lot 1 DP 199719	NA128B/8		Site (Property)	Current	1.0367	HA	Franklin		11336901	12343400029	37401-00000027101
43 319 Waihoehoe Road Drury	Lot 1 DP 154964	NA92C/448		Site (Property)	Current	1.0009	HA	Franklin		11337075	12343638076	37401-00000027110
44 383 Waihoehoe Road Drury	Lot 2 DP 154964	NA92C/449		Site (Property)	Current	7.138	HA	Franklin		11336919	12343412302	37401-00000027102
45 120 Cossey Road Drury Auckl	Lot 2 DP 61859	NA18A/296		Site (Property)	Current	4.0468	HA	Franklin		11336966	12343568949	37401-00000027104
46 112 Cossey Road Drury Auckl	Lot 1 DP 151876	NA90C/76		Site (Property)	Current	1.8272	HA	Franklin		11338517	12343309528	37401-00000027305
47 108 Cossey Road Drury Auckl	Lot 2 DP 151876	NA90C/77		Site (Property)	Current	2.2183	HA	Franklin		11338476	12343413694	37401-00000027303
48 251 Waihoehoe Road Drury	Pt Lot 5 DP 122231, 1/4 SH Lot 9 DP 122231	NA71A/902		Site (Property)	Current	4.2955	HA	Franklin		11331986	12343448323	37401-00000026200
49 86 Fitzgerald Road Drury Auckl	PT ALLOT 3 DP 119, Lot 1 DP 51324	NA26C/575		Site (Property)	Current	4.6805	HA	Franklin		11333081	12343384058	37401-00000026401
50 233 Waihoehoe Road Drury	Lot 7 DP 139286, 1/2 SH Lot 9 DP 122231	NA82D/96		Site (Property)	Current	2.0078	HA	Franklin		11333016	12343704028	37401-00000026211
51 211 Waihoehoe Road Drury	Lot 4 DP 106617	NA59C/38		Site (Property)	Current	1.145	HA	Franklin		11332946	12343383434	37401-00000026208
52 2 Drury Hills Road Drury Auckl	Lot 3 DP 106723	NA59C/220		Site (Property)	Current	1.6587	HA	Franklin		11301680	12343402536	37401-00000028100
53 32 Drury Hills Road Drury Auckl	Lot 2 DP 106723	NA59C/219		Site (Property)	Current	8000	M	Franklin		11301948	12343595962	37401-00000028110
54 32A Drury Hills Road	DRURY 2577			Occupancy (Proper	Current	0	M	Franklin		30065205	Unknown	
55 50 Drury Hills Road Drury Auckl	Lot 1 DP 106723	NA59C/218		Site (Property)	Current	8000	M	Franklin		11301975	12343653105	37401-00000028111
56 76 Drury Hills Road Drury Auckl	Lot 1 DP 92997	NA49B/1351		Site (Property)	Current	8763	M	Franklin		11301921	12343595660	37401-00000028109

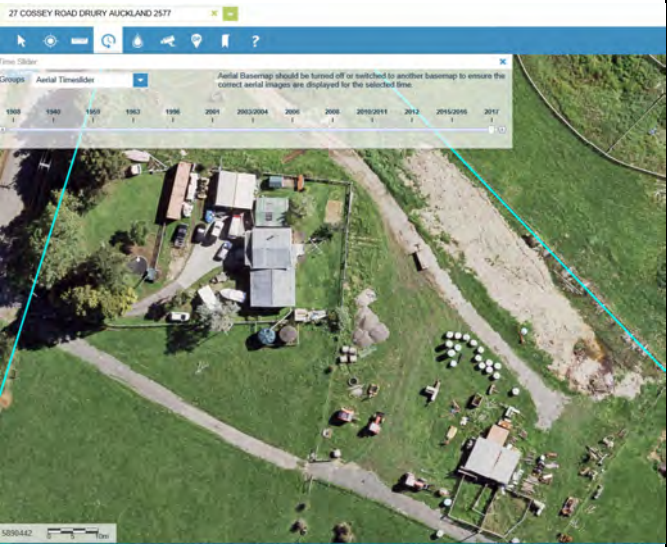
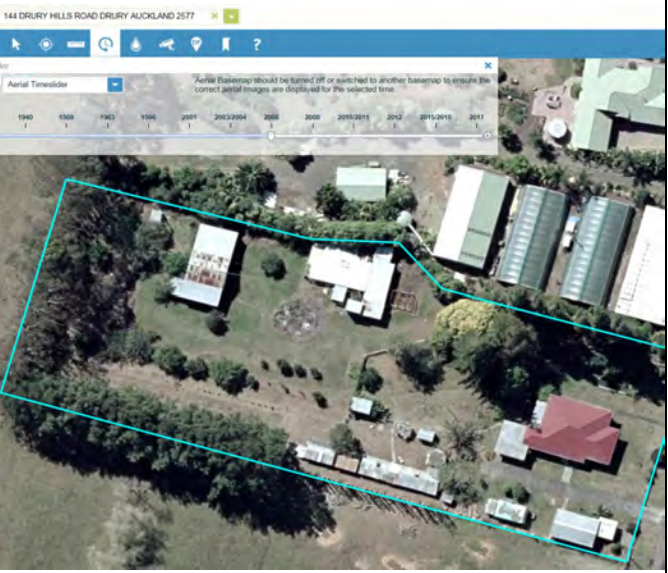
Table B.1: Property Addresses and Legal Descriptions


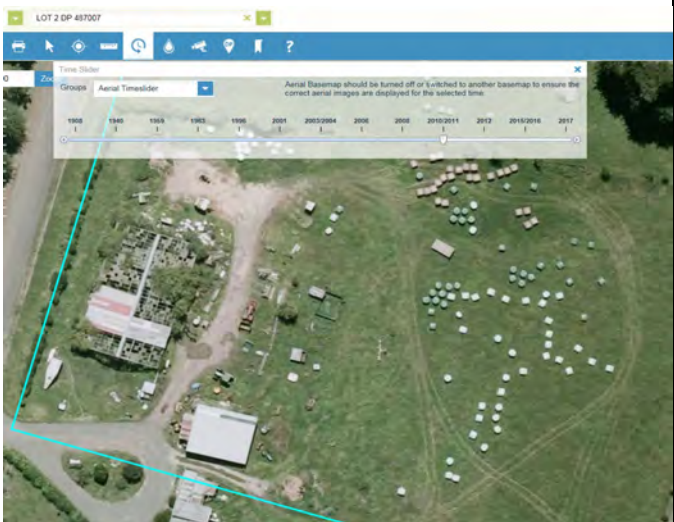
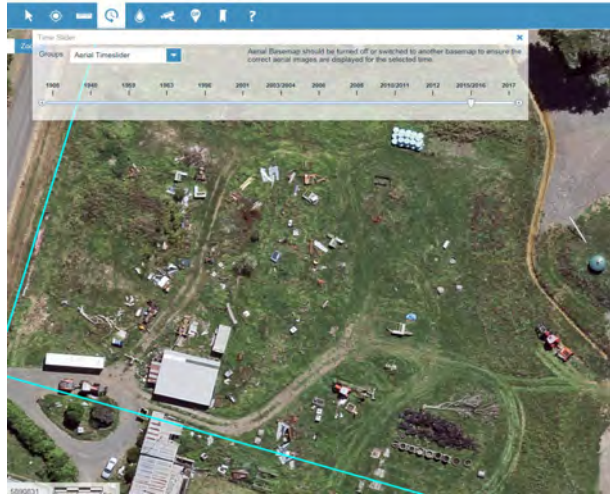
ADDRESSINONELINE	PROPERTYDESCRIPTION	FORMATTEDTITLE	PROPERTYNAME	PROPERTYTYPE	PROPERTYSTATUS	PROPERTYAREA	AREAUNIT	BOARDNAME	WARDNAME	PROPERTYID	ACRATEACCOUNTKEY	VALUATIONREF
57 80 Drury Hills Road Drury A Lot 3 DP 157934		NA94D/333		Site (Property)	Current	1.514	HA	Franklin		11300426	12343257323	37401-00000028004
58 90 Drury Hills Road Drury A Lot 1 DP 157934		NA94D/331		Site (Property)	Current	1.044	HA	Franklin		11300398	12343388495	37401-00000028003
59 534 Fitzgerald Road Drury A Lot 1 DP 121094		NA70B/512		Site (Property)	Current	6280	M	Franklin		11311010	12343670026	37401-00000028402
60 524 Fitzgerald Road Drury A Lot 2 DP 121094		NA70B/513		Site (Property)	Current	2.4749	HA	Franklin		11310954	12343289411	37401-00000028400
61 512 Fitzgerald Road Drury A Lot 2 DP 209974		NA137C/893		Site (Property)	Current	4171	M	Franklin		11311038	12343277367	37401-00000028403
62 504 Fitzgerald Road Drury A Lot 1 DP 209974		NA137C/892		Site (Property)	Current	5203	M	Franklin		11310981	12343659626	37401-00000028401
63 494 Fitzgerald Road Drury A Lot 1 DP 90676		NA47D/970		Site (Property)	Current	9270	M	Franklin		11301892	12343278657	37401-00000028108
64 490 Fitzgerald Road Drury A Lot 2 DP 90676		NA47D/971		Site (Property)	Current	9683	M	Franklin		11301836	12343535145	37401-00000028106
65 486 Fitzgerald Road Drury A Lot 3 DP 90676		NA47D/972		Site (Property)	Current	1.1246	HA	Franklin		11301864	12343652850	37401-00000028107
66 478 Fitzgerald Road Drury A Lot 1 DP 86442		NA44A/899		Site (Property)	Current	1.012	HA	Franklin		11301783	12343467077	37401-00000028104
67 468 Fitzgerald Road Drury A Lot 1 DP 78904		NA34D/901		Site (Property)	Current	8149	M	Franklin		11309453	12343701725	37401-00000028202
68 458 Fitzgerald Road Drury A Lot 2 DP 93164		NA49D/352		Site (Property)	Current	1.0645	HA	Franklin		11309509	12343388401	37401-00000028204
69 448 Fitzgerald Road Drury A Lot 1 DP 93164		NA49D/351		Site (Property)	Current	1.2144	HA	Franklin		11309400	12343669656	37401-00000028200
70 60 Fitzgerald Road Drury A Pt Lot 3 DP 4248		NA50C/1330		Site (Property)	Current	3875	M	Franklin		11333038	12343636605	37401-00000026300
71 46 Fitzgerald Road Drury A Lot 1 DP 131892		NA77B/246		Site (Property)	Current	5160	M	Franklin		11332027	12343382861	37401-00000026203
72 40 Fitzgerald Road Drury A Lot 2 DP 131892		NA77B/247		Site (Property)	Current	9603	M	Franklin		11332993	12343649523	37401-00000026210
73 28 Fitzgerald Road Drury A Lot 2 DP 91744		NA48A/943		Site (Property)	Current	1.4761	HA	Franklin		11332009	12343448544	37401-00000026202
74 6 Fitzgerald Road Drury A Lot 1 DP 91744		NA48A/942		Site (Property)	Current	1.213	HA	Franklin		11332849	12343745964	37401-00000026204
75 171 Waihoehoe Road Drury Lot 1 DP 103511		NA57A/525		Site (Property)	Current	1.1	HA	Franklin		11332894	12343383140	37401-00000026206
76 185 Waihoehoe Road Drury Lot 2 DP 102933		NA56D/214		Site (Property)	Current	1	HA	Franklin		11332872	12343237047	37401-00000026205
77 201 Waihoehoe Road Drury Lot 3 DP 105579		NA59A/70		Site (Property)	Current	1.0455	HA	Franklin		11332919	12343576593	37401-00000026207
78 215 Waihoehoe Road Drury Lot 6 DP 122231, 1/4 SH Lot 9 DP 122231		NA71A/903		Site (Property)	Current	1.499	HA	Franklin		11332971	12343303864	37401-00000026209
79 276 Drury Hills Road Drury A Lot 2 DP 157361		NA94C/231		Site (Property)	Current	1.0689	HA	Franklin		11337052	12343308971	37401-00000027109
80 270 Drury Hills Road Drury A Lot 1 DP 157361, Lot 4 DP 185120		NA115C/406		Site (Property)	Current	8042	M	Franklin		11337096	12343309242	37401-00000027111
81 250 Drury Hills Road Drury A Lot 3 DP 185120		NA115C/405		Site (Property)	Current	1.2679	HA	Franklin		11338556	12343253670	37401-00000027307
82 240 Drury Hills Road Drury A Lot 1 DP 185120		NA115C/403		Site (Property)	Current	1.0067	HA	Franklin		11337232	12343577697	37401-00000027301
83 230 Drury Hills Road Drury A Lot 2 DP 185120		NA115C/404		Site (Property)	Current	1.3299	HA	Franklin		11338539	12343401939	37401-00000027306

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A10	86 Fitzgerald Road Drury Auckland 2113	PT ALLOT 3 DP 119, Lot 1 DP 51324	Council's records show this site has been used for horticultural activity, including glasshouses [greenhouses].		Consent #: CSI60074716 This property is operating as a horticultural business - glasshouses [greenhouses].	Two greenhouses present running east/west from 1981. Removed between 2010 and 2016.	
A10?	94 Fitzgerald Road, Drury	Lot 2 DP 103102	Council's records show this site has been and is currently used for horticultural activity, including an orchard and glasshouses [greenhouses].	No additional information.		No evidence of orchards or greenhouses observed.	
A10, A17	98 Fitzgerald Road, Drury	Lot 2 DP 107220	Council's records show this site has been and is currently used for horticultural activity, including glasshouses [greenhouses] and a packing shed.	Greenhouses used for growing cut flowers and persimmons, originally proposed in 1985.	Consent #: CSI60074732 This site is operating as a horticultural business. There are building consents on the property file for glasshouses [greenhouses] and a packing shed.	Three greenhouses present (north/south) from 1981 and 2017.	Aboveground Storage Tank present (~20,000L) observed from adjoining property.
G5	110 Fitzgerald Road, Drury	Lot 1 DP 107220	There is no contamination information held within Council's records for this site.	Greenhouses used for growing tomatoes in 1984. Record of non-complying earthworks in 2009 of >100 m ³ .		Soil stockpiles evident across property in 2010/11. Soil disturbance adjacent southern boundary evident from 2003/04.	Transformer present on the road easement.
	114 Fitzgerald Road, Drury	Lot 2 DP 62165	There is no contamination information held within Council's records for this site.	No information.		House being rebuilt in 2003/04 photo. Little change to pasture throughout period.	
A10, E4, I	164 Fitzgerald Road, Drury	Lot 2 DP 135882	Council's records indicate this site has been subject to open burning activities and possibly used for horticultural activity.	A 2018 Council report identifies market gardens present and a 2018 consultant planner's review stated NES-CS not triggered for retrospective consent (LUC60315424) for operation of a concrete paving business (I Pave Ltd). Complaints of pig farming were observed in 1980.		Intensive cropping evident from 2003/04 to present. Some possible horticultural activities in 1940s aerial but unclear.	
A10?	178 Fitzgerald Road, Drury	Lot 1 DP 135882	Council's records show this site has possibly been used for horticultural activity.	No additional information.	Consent #: CSI60074749 The 'Release Of Economic Use Encumbrance' document dated 22 February 1993, on the property file, states that this site was being used for the propagation of Statice and Gypsophila flowers.	Pasture, little change observed throughout period.	
	230 Fitzgerald Road, Drury	Lot 1 DP 61791	There is no contamination information held within Council's records for this site.	No additional information.		Pasture, little change observed throughout period. Stockyards present adj. to an old shed since 2006 at least, but likely earlier although resolution is insufficient prior to this.	
A10	310 Fitzgerald Road, Drury	Lot 1 DP 19939	Council's records show this site has possibly been used for horticultural activity.	No additional information.		Predominantly pasture. Small orchard visible from 2008 to 2011.	
A8, A10	320 Fitzgerald Road, Drury	Lot 1 DP 115613	Council's records show this site has been used for horticultural activity, including a greenhouse, and possible dip/spray operations.	Evidence of building consents for greenhouses. 'no contamination' statement was reported.	Consent #: CSI60074139 There is a Building Permit dated 9 September 1985 (Permit No: D17507) for the erection of a greenhouse, for the purpose of growing flowers, on the property file for this site.	Greenhouse present from 1996 and removed by 2008. Soil disturbance evident in northern area in 1996 for construction of house. 2006 image clearly shows some orchard activity in southern area.	
G4, G5, I	330 Fitzgerald Road, Drury	Lot 2 DP 115613	Council's records show this site has been subject to possible stockpiling activities of unidentified materials and possible motor vehicles, as shown below (2015/2016).	An application viewed for greyhound breeding and training unit for 15 dogs in 1986. Intentions of purchasing the land for apple orchards from 1979.		2017 pile of timber (possibly from cutting down of surrounding windbreak trees) likely to be burnt. 2015/16 untidy rubbish around building in central part of property. Soil stockpiles visible in 2006 image.	
							

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A10	334 Fitzgerald Road, Drury	Lot 3 DP 19939	Council's records show this site has possibly been used for horticultural activity.	No additional information.		Small orchard visible at north end of property from 2006 to present.	
A10, G5	360 Fitzgerald Road, Drury	Lot 4 DP 19939	Council's records show this site has been used for horticultural activity, including a greenhouse.	No additional information.	Consent #: CSI60074184 There is a Building Consent dated 6/8/86 (Consent No: E277) on the property file for this site to erect a greenhouse.	Small stockyard/holding pen present on southern boundary adj. entrance from prior to 2006 to present. A stockpile of unknown material is evident in yard to south at least from 2006 to present (possible burning area).	
A10	368 Fitzgerald Road, Drury	Lot 2 DP 96407	Council's records show this site has possibly been used for horticultural activity including a shade house.	Evidence of land use as market garden. 2,500 m ² shade houses present after 1982 plus orchard plants.	Consent #: CSI60074203 There is a Building Consent dated 1/12/83 (Consent No: B74244) on the property file for this site to erect a shade house for the purpose of growing orchids.	Possible burning area identified in centre of southeast field from 2015. Stockyards or holding pens visible adjacent to main shed. Shade houses not identified from quality of images pre 2006. No shade houses identified from 2006 to present.	
A10	380 Fitzgerald Road, Drury	Lot 1 DP 96407	Council's records show this site has possibly been used for horticultural activity including a tunnel house.	Multi-dog facility. Greenhouse plans observed from 2009.	Consent #: CSI60074165 There is a building permit on the property file (Permit No: A56075) dated 23/9/82 for the erection of a tunnel house for the purpose of growing plants	Multiple sheds/structures observed from 1996 onwards. However, no greenhouse structure identified. Likely fruit trees present but on residential scale.	
	65 Fielding Road, Drury	Lot 4 DP 62165	There is no contamination information held within Council's records for this site.	No additional information.		Generally open pasture with one small farm shed present since 1996. Draining channels evident.	
A10	75 Fielding Road, Drury	Lot 3 DP 62165	Council's GIS aerial records show possible historical glasshouses [greenhouses] located in the north-western corner of the site.	No additional information.		Two large old sheds were present in northwest corner from 1981. One shed was removed prior to 2006, the second remains. A grid-based arrangement of polls with a possible horticultural application was observed in place of the removed shed. Other small sheds observed on the western side of the property.	
	111 Fielding Road, Drury	Lot 2 DP 61791	There is no contamination information held within Council's records for this site.	No additional information.		Pasture.	
G5	148 Fielding Road, Drury	Lot 2 DP 92454, Lot 1 DP 128680	There is no contamination information held within Council's records for this site.	No additional information.		Disturbance evident adjacent filling activities on southern boundary in 2010/11. Disturbance likely to pre-date 2006 aerials, however resolution of earlier aerials is insufficient.	Filling observed adjacent to a stream, along the southern boundary (northern bank), primarily east of the farm shed. Waste observed to comprise concrete boulders, pipes and timber where cover was incomplete.
G5	136 Fielding Road, Drury	Lot 1 DP 92454	Council's records show the storage of unidentified materials and possibly waste deposition to the site as below.	Agricultural/horticultural land use identified in 1981. Application for greenhouses on file from 1980. Correspondence re Angora goat stud observed from 1979.		Rubbish/waste observed as per council notes from 2006. No greenhouse identified.	
							

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G5, I	108 Fielding Road, Drury	Lot 2 DP 207189	There is no contamination information held within Council's records for this site.	File information indicates a red deer farm was present at some point.		Stream identified running east to west. General surficial waste/refuse visible adjacent house from 2010/11 to present. Predominantly pasture.	
G6, I	96 Fielding Road Drury Auckland 2577	Lot 1 DP 207189	Council's records indicate this site has been subject to onsite wastewater treatment.	No additional information.		Burn area visible in southeast corner of site from 2006 to present.	
F4, G5	26 Fielding Road Drury Auckland 2577	Lot 1 DP 68163	There is no contamination information held within Council's records for this site.	No additional information.		A shed visible in the southeast corner possibly used for automotive repair or similar from 2010/11 to present. Rubbish also evident to west of shed during same period.	
A8, I	251 Waihoehoe Road, Drury	Pt Lot 5 DP 122231, 1/4 SH Lot 9 DP 122231	Council's GIS aerial records show possible dip/spray race operations in the north-western portion of the site. The roadway in the northwest corner of the site is identified as potentially contaminated.	No additional information.		Stockyards likely present prior to 1981 aerial to present. Predominantly pasture.	
A10	233 Waihoehoe Road, Drury	Lot 7 DP 139286, 1/2 SH Lot 9 DP 122231	Council's records show this site has possibly been used for horticultural activity including a farm packing shed.	Records of a 'Plastic house' being built in 1991.		A greenhouse or similar appears to be present in the 1996 aerial but not in 2003/04 although this image quality is poor.	
G6.	211 Waihoehoe Road, Drury	Lot 4 DP 106617	Council's records indicate this site has been subject to onsite wastewater treatment, and possible substation activities at the front of the site, adjacent to Waihoehoe Road.	No additional information.		Predominantly pasture/lifestyle activities.	Gas transmission/booster station (not electrical substation).
	412 Waihoehoe Road, Drury	Lot 1 DP 67193	There is no contamination information held within Council's records for this site.	No additional information.		Predominantly pasture/lifestyle activities.	
	297 Waihoehoe Road Drury Auckland 2113	Lot 1 DP 199719	There is no contamination information held within Council's records for this site.	No additional information.		Predominantly pasture/lifestyle activities.	
A10, F4	319 Waihoehoe Road Drury Auckland 2113	Lot 1 DP 154964	Council's records show this site has been used for horticultural activity, including glasshouses [greenhouses], and a garage workshop on site.	Record of greenhouses being present.	Consent #: CSI60074093 The Subdivision Report dated March 1990 and prepared by Ministry of Agriculture and Fisheries (MAF) stated that at the time of the report this property was being used for horticultural activities. [text incomplete]	Two greenhouse-like structures present in 1988 and 1996 aerals to the northwest. Replaced by orchid visible in 2003/04 to 2010/11 (possibly kiwifruit). Piles of vegetation rubbish and soil visible in 2015/16 and 2017 from clearing various fences.	
A10	Cossey Road, Drury	Lot 2 DP 128680	Council's records show this site has possibly been used for horticultural activity.	No property file information.		Used for cropping in 2006. Remaining photos show pasture/hay.	
A10		Lot 6 DP 19939				Used for cropping/market gardening in 2006. Remaining photos show pasture/hay.	
A10		Lot 7 DP 19939					
A10, A17, G5	108 Cossey Road, Drury	Lot 2 DP 151876	Council's records show this site has been and is currently being used for horticultural activity, including glasshouses [greenhouses].	Greenhouses consented in 1994. Relocation of greenhouse in 2012, NES-CS not triggered from a planning report. Information from Lot 1 (DP 151876) property file indicates property used for growing various types of melons for export and tomatoes for local market in 1989 - both indoor and outdoor.	Consent #: CSI60074185 This property is operating as a horticultural site growing fruit and vegetables. There are several glasshouses [greenhouses] on the property.	Majority of usable land is taken up by greenhouses or other horticultural/market garden activities from 1988 to present. General rubbish build-up around greenhouses evident from 2015 to present.	Levelling of site evident for construction of greenhouses.
	112 Cossey Road, Drury	Lot 1 DP 151876		Property file indicates proposal to grow melons for export. A planner's report states 'no HAIL' identified at this property.		Burning piles evident in 2008 - likely from removal of N/S windrows.	
A10	120 Cossey Road Drury Auckland 2577	Lot 2 DP 61859	Council's records indicate this site has been used for horticultural activity.	No additional information.		Market garden activity evident from 2003/04 to 2006.	
A10	383 Waihoehoe Road, Drury	Lot 2 DP 154964	Council's records show this site has been used for horticultural activity.	No additional information.	Consent #: CSI60073446 The Subdivision Report dated March 1990 and prepared by Ministry of Agriculture and Fisheries (MAF) stated that at the time of the report this property was being used for horticultural activities. [text incomplete]	Stockyards visible adjacent Waihoehoe Rd from approx. 2006 and possibly earlier. Burning visible in southwestern paddock in 2006. Stockpiles of soil and soil disturbance around stream evident in 2010/11 aerial, northeast boundary hedge cleared at same time. 1988 aerial shows horticultural/orchard activities in southern fields.	
	Cossey Road, Drury (Area 5)	Lot 56 DP 119	Council's records show this site has possibly been used for horticultural activity.	No additional information.		Pasture throughout period.	
A10?, G4	27 Cossey Road, Drury	Lot 1 DP 104277	Council's records indicate this site has been subject to horticultural activity, stockpiling and motor vehicle activities, as shown below.	No additional information.	Consent #: CSI60074780 There is correspondence on the subdivision file 6/14/704 dated 20 July 1984 that indicates that this property had extensive plastic houses on it for the propagation of flowers and vegetables.	Water course runs along the southern boundary. Evidence of farm machinery/tractors present in 2017 aerial. No evidence of greenhouses.	

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A10?	Drury Hills Road, Drury (Area 6)	Part Allot 57 DP 119	Council's records show this site has possibly been used for horticultural activity.	No additional information.		Pasture or broad acre crops (e.g. Maize) throughout period.	
A10, G6	152 Drury Hills Road, Drury	Lot 2 DP 170153	Council's records show this site has been and is currently used for horticultural activity, including glasshouses [greenhouses], and onsite wastewater treatment including an effluent disposal field on site.	Drury Hill wines and orchard door sales occurred on this property.	Consent #: CSI60074254 There is a letter on the property file dated 8 March 1996 and prepared by Grayson Design and Developments Ltd regarding effluent disposal. The letter states that there are several plastic greenhouses	Three greenhouses and a packing shed in southeast corner present since 1996. Numerous trees present in rows to north from 2003/04 to present. Horticultural activities on western side in rows visible in 1988 aerial only.	Nursery for succulents (Yuccas, Aloes and Bromeliads).
A10, G5	144 Drury Hills Road, Drury	Lot 1 DP 170153	Council's GIS aerial records show this site has possibly been subject to the deposition of waste/fill material, and/or outdoor burning, as shown below.	No additional information.		Numerous sheds and buildings present from 1996, becoming more over-grown through to present visible in 1988 aerial only. Orchard-like plantation and timber/waste stockpiles present in southwest portion of site visible in 2015/16 and 2017 aerials.	
							
A10	132 Drury Hills Road, Drury	Lot 2 DP 102638	Council's records indicate this site has been used for horticultural activity.	Evidence of the growing of rhododendrons, passionfruit. A proposal to build greenhouses was received by council in 1983 for intensive horticulture.	Consent #: CSI60074174 There is a building permit on the property file to erect a plastic tunnel house dated 24 June 1985.	Horticultural activities on western side of property in rows running north/south in 1988 aerial. Small orchard visible in central east from 2015/16.	
A10	120 Drury Hills Road, Drury	Lot 2 DP 157934	Council's records show this site has possibly been used for horticultural activity.	No additional information.	Consent #: CSI60074195 There is a building permit on the property file to erect a plastic tunnel house dated 14 September 1984.	Five greenhouses present in 1988 aerial on western side of property.	

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A10	Waihoehoe Road, Drury (Area 8)	Lot 53 DP 119	Council's records show this site has possibly been used for horticultural activity.	No additional information.		Predominantly pasture and some market gardening/cropping south of the small stream.	
							
A10, G4, G5	37 Cossey Road, Drury	Lot 2 DP 487007	Council's records show this site has been used for horticultural activity, including glasshouses [greenhouses], and unidentified materials stockpiled on site, as shown below.	Auckland Council issued an abatement notice to Evergreen Landcare Ltd for unconsented depot activity at the property in September 2018. The activities of the hydroseeding and erosion control business resulted in the release of a blue dye to stormwater which entered the Hingaia Stream. A fine of \$750 was imposed. There was no evidence of any remediation being required.		Extensive clean-up evident in 2017 aerial. Rubbish, including old farming machinery and building materials present from early 2000s to 2015/16. Two greenhouses visible from 1988 to 1996. One greenhouse removed prior to 2003/04; the second removed prior to 2015/16.	1,000 L and 200 L plastic drums, old backhoe, timber and general rubbish visible.
							
	45 Cossey Road, Drury	Lot 1 DP 487007	There is no contamination information held within Council's records for this site.	Site activities referred to on file as 'intensive horticultural use'.		Homestead visible since 1960 aerial. No evidence of horticultural activities.	
	412 Waihoehoe Road, Drury	Lot 1 DP 67193	There is no contamination information held within Council's records for this site. Council's records indicate the adjacent site has been used for horticultural activity.	No information.		Stockpiles of tree cuttings/timber for burning evident. Farm machinery (tractors etc) present in yard. Homestead observed from 1942 to present.	
	260 Drury Hills Road, Drury	Lot 6 DP 185120	There is no contamination information held within Council's records for this site.	No information.		Pasture throughout period.	
A10	220 Drury Hills Road, Drury	Lot 5 DP 185120	There is no contamination information held within Council's records for this site.	No information.		Predominantly pasture throughout period, with the exception of the south-western side of property between 2015/16 and 2017 which was used for cropping/market gardening.	
	228 Cossey Road, Drury	Lot 2 DP 125763	Council's records show this site has possibly been used for horticultural activity.	No information.		Pasture throughout period. No buildings evident.	
A10?	9 Cossey Road, Drury	Lot 2 DP 104277	Council's records indicate this site has been used for horticultural activity (flowers and vegetables).	Proposals on property file for a 500 m ² greenhouse for growing cut flowers (chrysanthemums & gypsophila) and 0.5 ha of strawberries in 1984.	Consent #: CSI60074838 There is correspondence on the subdivision file 6/14/704 dated 20 July 1984 that indicates that this property was operating as a horticultural site for the propagation of flowers and vegetables.	Predominantly pasture throughout period. No evidence of horticultural activity.	

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	2 Drury Hills Road Drury Auckland 2577	Lot 3 DP 106723	There is no contamination information held within Council's records for this site.	Proposal to build 'tunnel houses' for cut flowers and rock melons appears to relate to Lots 1 and 2 (32 and 50 Drury Hills Rd), although no evidence found of these activities occurring.		Four shipping containers present along Drury Hills Road boundary in 2017 aerial. Pasture and homestead visible from 1942 to 2017. Transformer visible after 2008.	Transformer present in Fitzgerald Road easement.
	32 Drury Hills Road Drury Auckland 2577	Lot 2 DP 106723	There is no contamination information held within Council's records for this site.	See above comments for 2 Drury Hills Road.		Pasture and homestead visible from 1942 to 2017.	
	32A Drury Hills Road DRURY 2577		There is no contamination information held within Council's records for this site.	No file.		Property location could not be found.	
A10?	50 Drury Hills Road Drury Auckland 2577	Lot 1 DP 106723	Council's records indicate this site has been used for horticultural activity – market garden.	See above comments for 2 Drury Hills Road.		Pasture and homestead visible from 1942 to 2017. No horticultural activities observed from aerials.	
A10	76 Drury Hills Road Drury Auckland 2577	Lot 1 DP 92997	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Reference made to the growing of kiwifruit.	Consent #: CSI60074730 A geotechnical report dated 4 November 1997 and prepared by Chambers Consultants (Ref: 970707) located on subdivision file 16/97/1 41 states that there are green houses on the site and there are bui [text incomplete].	Pasture from 1942 to 1960. From 1981 to 1988, two greenhouses were present on the southwestern boundary, with the remainder planted in orchards (possibly Kiwifruit). From 1996 to present, majority of site built out with greenhouses.	
A10, I	80 Drury Hills Road Drury Auckland 2577	Lot 3 DP 157934	Council's records indicate this site has been used for horticultural activity – flower growing business.	No information.	Consent #: CSI60074236 There is a plan dated February 1993 and prepared by Brian Foote & Associates (Registered Surveyors) detailing the plastic houses and packing sheds on this property and various correspondence which re [text incomplete].	Pasture from 1942 to 1960. Orchard planting or similar from 1981 to 1988. One greenhouse visible in 1996, two more visible from 2003/04 along northern boundary. Another area to the south planted and covered in bird netting from 2003/04 to present. Stockpiles of tree cuttings/timber for burning evident in western corner.	
A10, F4	90 Drury Hills Road Drury Auckland 2577	Lot 1 DP 157934	Council's records indicate this site has been used for historical horticultural activity – kiwifruit orchard.	Plastic houses' for cut flowers. Kiwi fruit growing was abandoned in 1993 due to poor yield.	Consent #: CSI60074217 The geotechnical investigations report dated 11 April 1994, prepared by Earthtech Consulting Ltd (Ref; PS/1317-2/clm) states that there was an old disused kiwifruit orchard located to the west of [text incomplete].	Dominated by pasture from 1942 to 1981. Possible small greenhouses (approx. five) visible in 1988. An area to the southwest is sheltered in 1996 - possibly for Kiwifruit? Approx. 30 Fruit trees present along northern boundary from 2006 to present. Farm machinery, stockpiles of dirt and waste visible in central portion of property adjacent to sheds.	
A10	534 Fitzgerald Road Drury Auckland 2113	Lot 1 DP 121094	Council's records indicate this site has been used for horticultural activity – plastic glasshouse [greenhouse] and agricultural building.	Correspondence present about a proposal to farm Macadamia nuts. A proposal to build 'plastic houses' from 1969 and 1972 were observed. These may relate to 512 Fitzgerald Rd.		Orchard present in northeast half of site from 1981 to present, although appears unkept from 2015/16. Large farm sheds present from 1981 to present.	
A10	524 Fitzgerald Road Drury Auckland 2113	Lot 2 DP 121094	Council's records indicate this site has been used for horticultural activity.	Reference made to a Macadamia nut farm.	Consent #: CSI60074846 There are historic building permits for greenhouses on the property file for this site but looking at the aerial photos (Intramax) the greenhouses appear to be gone and the property is now being util [text incomplete].	Pasture evident from 1942 to 1960. Orchard visible from 1981 to 1988 - possibly different to Macadamia orchard visible from 1996 to present.	
A10	512 Fitzgerald Road Drury Auckland 2113	Lot 2 DP 209974	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Property file makes reference to 5 acres of Kiwifruit and greenhouses in 1974. The kiwifruit orchard likely refers to 524 Fitzgerald Rd (information held prior to subdivision).		Pasture from 1942 to 1960. Two greenhouses present from 1981 to present.	
A10	504 Fitzgerald Road Drury Auckland 2113	Lot 1 DP 209974	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Indicates a greenhouse was present since 1975.		Primarily pasture from 1942 to 1996 with possible small greenhouse to the northeast. Greenhouses present from 2003/04 across more than 50% of the property to the northeast.	
A10	494 Fitzgerald Road Drury Auckland 2113	Lot 1 DP 90676	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Planning documents evident in 1979 and 1980 for construction of greenhouses for growing vegetables and cut flowers.	Consent #: CSI60074715 There are extensive glasshouses [greenhouses] on this site.	Two large greenhouses present from 1981 aerial. Stockpiles of soil and vegetation present near the north-eastern boundary.	
A10?	490 Fitzgerald Road Drury Auckland 2113	Lot 2 DP 90676	Council's records indicate this site has been used for horticultural activity and a garage/workshop on site.	Neighbour complaints recorded of use of a pesticide spray 'Phorate' due to inappropriate application in greenhouse. [Note: this may relate to an adjoining property as no greenhouses observed in aerial photos].		Pasture and gardens throughout period of aerials.	
A10, A17 or F8	486 Fitzgerald Road Drury Auckland 2113	Lot 3 DP 90676	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses]. A pollution incident was recorded in 2000 indicating waste oil from a burst hose on the hothouse burner had flowed across the yard on site, and into the local stream. 400 L of waste oil was lost.	No information.	Consent #: CSI60074696 There are extensive glasshouses [greenhouses] on this site. Cleansed - There is a letter on the property file for this site dated 3 October 2000 from The Pollution Control Officer (ARC) regarding a pollution Incident.	Pasture from 1942 to 1981. 1988 aerial indicates market garden. Greenhouse footprint covers almost 50% of the property from 1988 to 2010/11. Residual rubbish visible from greenhouse activities to 2017.	

HAIL Category	Address	Parcel Description	Auckland Council HAIL search information	Former Papakura District Council - property file information	Auckland Council contaminated site enquiry - consent descriptions extract	Historic aerial photo observations	Site inspection observations - 14 February 2019
A10	478 Fitzgerald Road Drury Auckland 2113	Lot 1 DP 86442	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses] and orchard.	No information.	Consent #: CSI60074273 There are building permits on the property file for this site for multiple glasshouses [greenhouses] and packing sheds etc. Aerial photos (GIS) also show an orchard.	Pasture from 1942 to 1960. 1981 and 1988 aerial indicates market garden and likely one greenhouse. Large greenhouse along northwest boundary visible in 1996 but reduced in size from 2003/04 to present. Orchard or nursery visible from 2006 to 2017 in north-eastern half of property.	
A10, F4	468 Fitzgerald Road Drury Auckland 2113	Lot 1 DP 78904	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses], and a garage workshop on site.	Evidence of building consents for greenhouses.	Consent #: CSI60074800 There are building permits on the property file for this site for multiple glasshouses [greenhouses] and packing sheds etc.	Greenhouses present in the northeast from 1988 to 1996 with waste/remains visible until 2006. A greenhouse in the southwest corner visible from 1996 to 2017 but in a poor condition from 2006. Electrical transformer present on road easement visible from 2006.	Transformer present in road easement.
B2, F4	460 Fitzgerald Road, Drury	Lot 1 DP 82423	Council's records show this site has been used for horticultural activity, including glasshouses [greenhouses], and a garage/workshop present on site.	Garage/vehicle workshop activities identified on property file. Application for a cattery also present.	Consent #: CSI60074814 There is on the property file a Building Permit dated 30/11/78 (Permit No:I00193) for the erection of a glasshouse [greenhouse], but there is also a letter from the present owner (Ms. Jane Whitworth) dated January [incomplete record].	Predominantly pasture throughout period. No evidence of greenhouses. Small animal enclosures visible from 2008 at southwestern end of property (likely relate to cattery). General rubbish appears to be accumulating around the residence from 2008.	
A10	458 Fitzgerald Road Drury Auckland 2113	Lot 2 DP 93164	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Applications for construction of greenhouses present on file.	Consent #:CSI60074826 This property is operating a horticultural business with multiple glasshouses [greenhouses] and a packing shed on site.	Primarily pasture from 1942 to 1981 aerials. Greenhouses present across majority of site from 1988 to present.	
A10	448 Fitzgerald Road Drury Auckland 2113	Lot 1 DP 93164	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Record of greenhouses and coal bunker being present.	Consent #: CSI60074765 This property is operating a horticultural business with multiple glasshouses [greenhouses] and packing sheds on site.	Five main greenhouses present at northeast side of site, progressively constructed from 1981 to 1996 and visible to 2017.	
	60 Fitzgerald Road Drury Auckland 2113	Pt Lot 3 DP 4248	There is no contamination information held within Council's records for this site.	Reference to boarding kennels on the property.		Non-specific agricultural use from 1960. Large shed to the east was present from 1960 to 2008 but demolished prior to 2010/11 aerial.	
A10	46 Fitzgerald Road Drury Auckland 2113	Lot 1 DP 131892	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Record of greenhouses being present.	Consent #: CSI60074695 There is various correspondence about and photos of glasshouses [greenhouses] and shade houses on the property file for this site .	Greenhouses present from 1988 to 2017, although deteriorating from 2015/16 onwards.	
A10	40 Fitzgerald Road Drury Auckland 2113	Lot 2 DP 131892	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Record of two greenhouses being present which had created a flooding problem.	Consent #: CSI60074234 There is various correspondence on the property file for this site indicating that it is operating as a horticultural business (glasshouses) [greenhouses].	One greenhouse which runs the length of the western boundary has been present since 1981 which was added to from 1996. The eastern side of the property has a mix of greenhouses and open market gardens from 1996 to present.	
A10, A17/F8	28 Fitzgerald Road Drury Auckland 2113	Lot 2 DP 91744	Council's records indicate this site has been used for horticultural activity – plastic house, and a workshop on site.	Record of greenhouses present for cut flowers. Notes indicate property is prone to flooding due to raised land surface at the front of the property. Notice of oil spills, old car parts, machinery present onsite during a site visit by council on 28/5/2008. A subdivision application was on file from 1980 for pip-fruit and vegetables (pumpkins).	Consent #: CSI60074218 There is on the property file for this site a building permit for a plastic house dated 13 September 1982 (permit No: A44564).	Appears to be pasture from 1942 to 1960. A small greenhouse present in the southeast corner from 1988 to 1996. Market garden activities evident from 2003/04 to present. A number of vehicles and machinery present from 2003/04. An aboveground storage tank appears to be present west of the packing shed, south of the water tanks - between 2006 and 2008 (& possibly earlier). Transformer present on ground from 2010/11 aerial - previously on nearby power pole.	Transformer present in road easement.
A10, G6	6 Fitzgerald Road Drury Auckland 2113	Lot 1 DP 91744	Council's records indicate this site has been subject to onsite wastewater treatment and effluent disposal.	Handwritten note from 2008 referring to leasing of property for market garden activities, although indicates the gardening activities were not as active as intended.		Pasture from 1942 to 1988. Market garden activities evident on eastern side of property from 2006 to 2008. 1996 and 2003/04 images are insufficient quality to determine if market garden activities were occurring.	
A10	171 Waihoehoe Road Drury Auckland 2113	Lot 1 DP 103511	Council's records indicate this site has been used for historical horticultural activity – glasshouses [greenhouses].	An application for six greenhouses and a packing shed was on file.	Consent #:CSI60074270 Glasshouses [greenhouses] have been present on this property since 1889 [1989?].	Three greenhouses present from 1988. A fourth present from 1996 to the southwest, with one greenhouse removed in the southeast corner.	

HAIL Category	Address	Parcel Description	Auckland Council HAIL search information	Former Papakura District Council - property file information	Auckland Council contaminated site enquiry - consent descriptions extract	Historic aerial photo observations	Site inspection observations - 14 February 2019
A10	185 Waihoehoe Road Drury Auckland 2113	Lot 2 DP 102933	Council's records indicate this site has been used for historical horticultural activity – glasshouses [greenhouses].	Proposal for a total of five greenhouses and a packing shed on file - one was already present at the time. The certificate of title indicates the purchaser in 1984 was an auto electrician by trade. A resource consent application was also on file from 2005 for a 30,000 L/day water bottling plant using an existing bore.	Consent #: CSI60074252 Glasshouses [greenhouses] have been present on this property since the 1980's.	Predominantly pasture from 1942 to 1981. Mixture of greenhouses (from 1988 along western boundary), small packing shed and market gardens (from 2010/11) to present. The proposed bottling plant appears to have not been built based on a review of the plans from the property file.	
	201 Waihoehoe Road Drury Auckland 2113	Lot 3 DP 105579	There is no contamination information held within Council's records for this site.	No information.		Open pasture from 1942 to present.	
A10, G5/I	215 Waihoehoe Road Drury Auckland 2113	Lot 6 DP 122231, 1/4 SH Lot 9 DP 122231	Council's records indicate this site has been used for horticultural activity – glasshouses [greenhouses].	Plans for greenhouses on file. A dwelling, packing shed and two greenhouses were documented by a council planner. The growing of strawberries or similar was also observed.	Consent #: CSI60074287 This property is operating as a horticultural business. There have been green houses on this site since 1993.	Pasture evident from 1942 to 1981. Earthworks visible for greenhouses in 1988 aerial. Two large greenhouses present from 1996 to present. Stockpiles of soil and waste evident to east of greenhouses between 2015/16 and 2017. Open burning evident in southwest portion of property - likely from extensive cutting down of vegetation.	
	276 Drury Hills Road Drury Auckland 2577	Lot 2 DP 157361	There is no contamination information held within Council's records for this site.	No information. A note on file from 1993 relates to the adjoining stand of trees to the west which have a covenant placed on them by Franklin County Council (Puriri, Tairere, Kahikhatea - native bush). The owners had sought permission to rehabilitate and further preserve the bush area. The owners also indicated that they had constructed several dams on the wider property to mitigate flooding.		Pasture and other non-descript agricultural activities. A small domestic greenhouse present from 1996.	
	270 Drury Hills Road Drury Auckland 2577	Lot 1 DP 157361, Lot 4 DP 185120	There is no contamination information held within Council's records for this site.	Resource consent in 2002 granted for 180 m ³ of earthworks for stormwater piping relating to construction of a dwelling.		Majority of property comprises original stand of trees from 1942 to present.	
	250 Drury Hills Road Drury Auckland 2577	Lot 3 DP 185120	There is no contamination information held within Council's records for this site.	No information.		Pasture from 1942 to present.	
G3	240 Drury Hills Road Drury Auckland 2577	Lot 1 DP 185120	There is no contamination information held within Council's records for this site.	Uncontrolled fill placed on this property, recorded in 1998 - unknown volume or origin.		Pasture from 1942 to present. A pond is visible on the western boundary from 1996 to present, although a depression noted in this area since 1942.	
G3	230 Drury Hills Road Drury Auckland 2577	Lot 2 DP 185120	There is no contamination information held within Council's records for this site.	No information.		Pasture from 1942 to present. A pond on the northern boundary appears to have been infilled progressively from 2010/11 to 2015/16.	



Appendix C – Photo Log



PHOTOGRAPHIC LOG





Client Name:		Site Location:	Project No.
Fulton Hogan Land Development Ltd		Drury East	NZ1902003
Photo No.	1.		
Direction Photo Taken: Toward the southeast			
Description: 148 Fielding Road, Mounding from uncontrolled fill is evident in foreground in front of trees. Stockpile of concrete evident to the right.			
Photo No.	2.		
Direction Photo Taken: View to the east			
Description: Dammed stream on boundary of 148 Fielding and 330 Fitzgerald Roads.			



Photo No.	3.	
Direction Photo Taken: View to the southeast		
Description: 35 Cossey Road – view of typical homestead.		
Photo No.	4.	
Direction Photo Taken: View to the west		
Description: 45 Cossey Road – view of stream surrounded by maize crop.		



Appendix D – Historical Aerial Photographs



<div>EHS  Support</div>	Project PSI - Drury East		Client		Figure 1	
	Title Historical Aerial Photograph - 1940		Fulton Hogan Land Development Ltd		Drawn: JH	Checked: DD
					Date: 4 April 2019	For Information Only




	Project PSI - Drury East		Client		Figure 2	
	Title Historical Aerial Photograph - 1960		Fulton Hogan Land Development Ltd		Drawn: JH	Checked: DD
					Date: 4 April 2019	For Information Only



	Project PSI - Drury East		Client		Figure 3	
	Title Historical Aerial Photograph - 1969		Fulton Hogan Land Development Ltd		Drawn: JH	Checked: DD
					Date: 4 April 2019	For Information Only



	Project	PSI - Drury East	Client Fulton Hogan Land Development Ltd	Figure 4	
	Title	Historical Aerial Photograph - 1981		Drawn: JH	Checked: DD
				Date: 4 April 2019	For Information Only











Appendix E – Council-Issued Reports and Figures

4 March 2019



EHS Support New Zealand Ltd
51A Hamlin Road
Mount Wellington
Auckland 1060
Attention: Jimmy Huang

Dear Jimmy

Site Contamination Enquiry – Large Site - Fitzgerald Rd, Waihoehoe Rd, Appleby Rd, Drury Hills Rd and Cossey Rd, Drury

This letter is in response to your enquiry requesting available site contamination information for the above site. The following details are based on information available from the former Auckland Regional Council records system and information currently held by the Auckland Council Natural Resources and Specialist Input Unit. The details provided below exclude any property information held by the former district/city councils.

The general catchment file and site visit file for the catchment 732-734 were not searched. These files contain pollution incidents where the source of pollution was not traced to a particular site, site visits where no follow-up correspondence was required and some information from archived files.

If the above site is coastal or beside a river, it is possible that historic, unconsented reclamation may have occurred. The Auckland Council Specialists Unit Coastal Team may be able to provide further information.

The records reviewed as part of this Site Contamination Enquiry search do not identify individual horticultural sites in the region. However, there is a possibility that horticultural activities may have occurred at the site. The local Auckland Council customer service centre, specific to the area of the site may be able to provide relevant information where former horticultural sites have been mapped.

If you are concerned that a historic land use (such as filling) may have caused the underlying soils to become contaminated, it is recommended that you obtain an independent environmental assessment of the site. Staff from the Auckland Council Earthworks and Contaminated Land Team can provide advice on the results of any evaluation in terms of site remediation and/or potential consent requirements.

The former Auckland Regional Council and current databases were searched for records of closed landfills, bores, air discharge, industrial and trade process consents, contaminated site discharge consents, and environmental assessments within approximately 200 metres of the site. Relevant details of the pollution incidents and identified consents are appended to this letter as an excel spreadsheet. **Please refer to the column labelled 'Property Address' and Incident/Consent/Bored ID (where applicable) on the attached spreadsheet to aid in identifying corresponding data on the map.**

The details provided are in accordance with the obligation to make information publicly available upon request. While the Auckland Council has carried out the 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.

In addition, further site specific pollution incidents may be held at area office below. It is recommended that you contact the local customer service centre of the Auckland Council, specific to

the site being investigated: Ground Floor, Kotuku House, 4 Osterley Way, Manukau Central/ 25 Coles Crescent, Papakura/ 82 Manukau Road, Pukekohe as they also may hold files with further relevant information.

I trust that this answers your query. If you wish to discuss the matter further, please contact Andrew Kalbarczyk on 301 0101. Should you wish to request any of the files listed above 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 files will be available).

Please note: the Auckland Council cost recovers officer's time for all site enquiries. A basic enquiry takes approximately 1 - 2.5 hours to search the files and databases in which information is held. As such an invoice for the time involved in this enquiry will follow shortly.

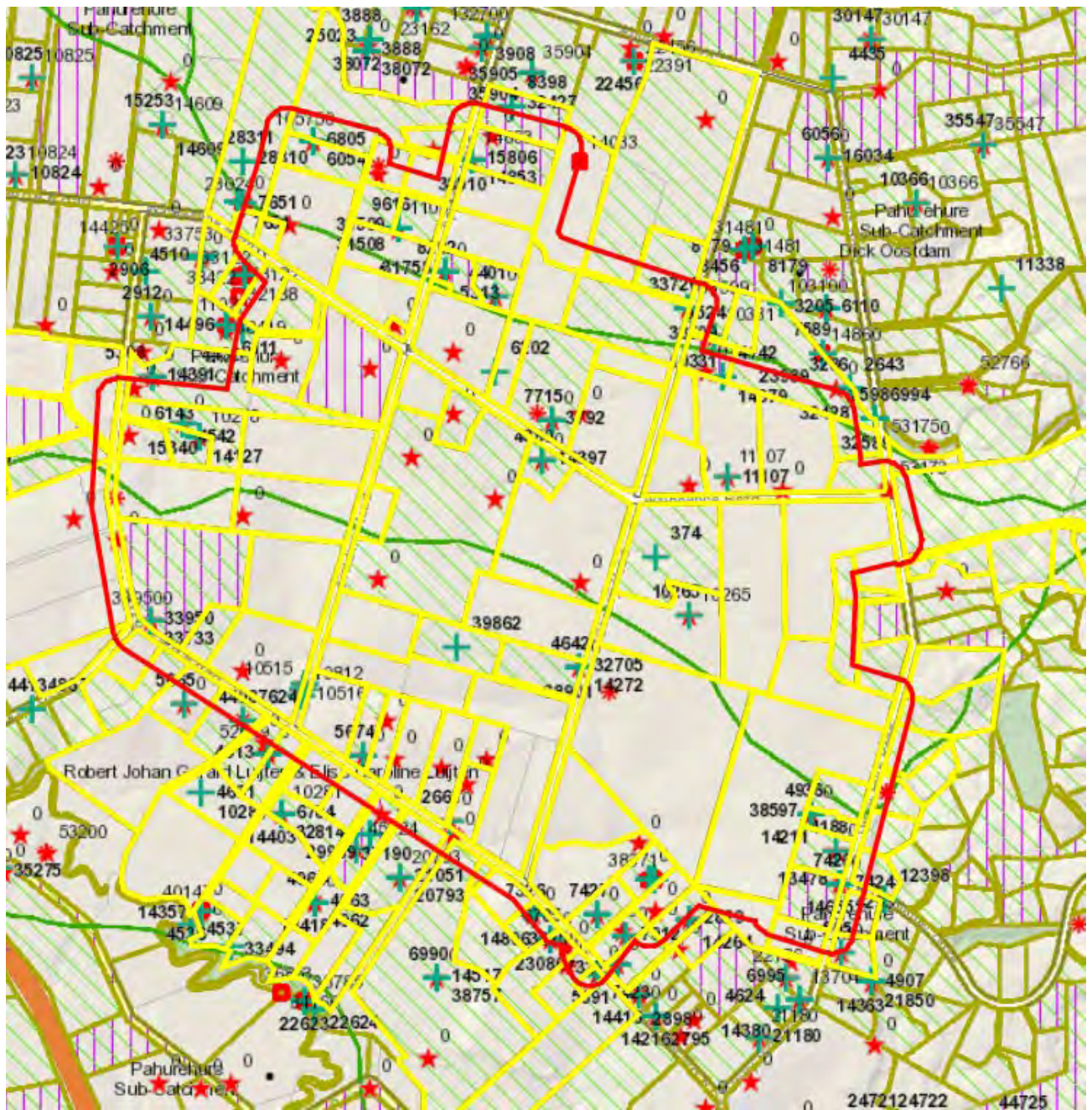
Yours sincerely

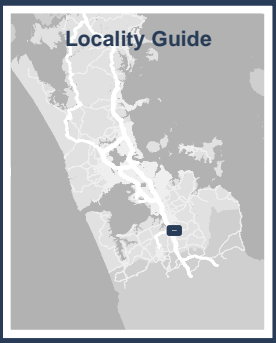
pp. SR

Jared Osman

**Team Leader – Contaminated Air, Noise
Specialist Unit | Resource Consents**

Please refer to the column labelled 'Property Address' and Incident/Consent/Bored ID (where applicable) on the attached spreadsheet to aid in identifying corresponding data on the map.





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.

Large Site - Drury East

0 100 200 300
Meters

Scale @ A4
= 1:15,500

Date Printed:
27/03/2019



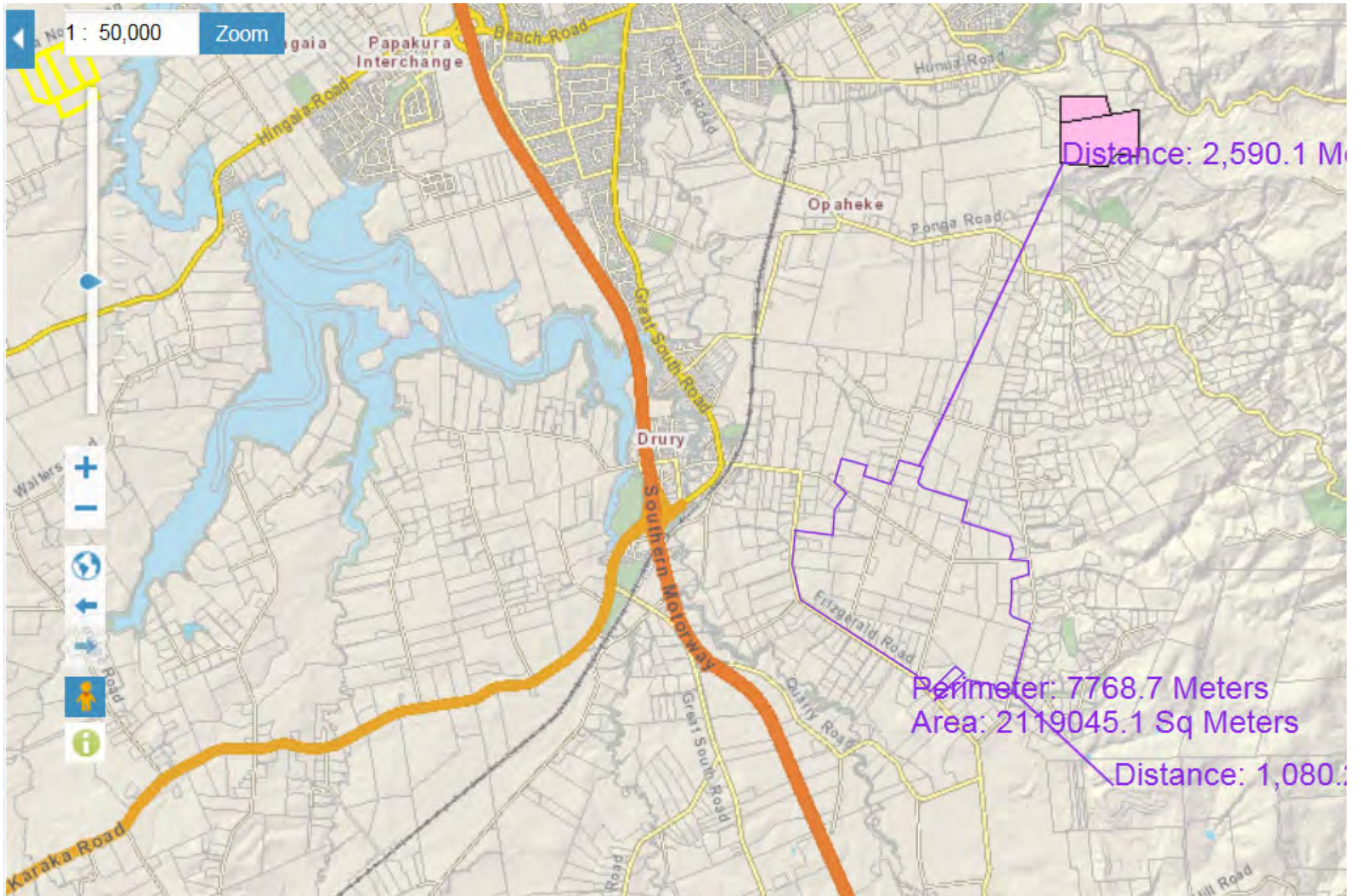
David Dangerfield

From: Lorraine Hamilton <lorraine.hamilton@aucklandcouncil.govt.nz> on behalf of closedlandfills <closedlandfills@aklc.govt.nz>
Sent: Thursday, 21 February 2019 1:23 PM
To: Jimmy Huang
Subject: RE: Closed landfills - Drury East

Hi Jimmy,

I can confirm there are no Auckland Council owned or managed closed landfills within 1 km of your subject area. The closest is approximately 2.6 km away (see the map below)

It is possible that there could be a privately owned closed landfill closer to your site.



For information about contaminated sites or privately owned closed landfills, I recommend you complete a contamination enquiry:

How to apply for a Contaminated Sites Enquiry Response:

To apply online follow this link --> <https://www.aucklandcouncil.govt.nz/building-and-consents/types-resource-consents/earthworks/Pages/order-site-contamination-enquiry-report.aspx>

Please take note of the following:-

Apply under the Company Name if request is on behalf of the company.

Legal Description(s) of the physical site(s) is/are stated clearly. This is to ensure accurate representation of data.

When applying online, please enter preferred Postal Address or PO Box instead of physical address of company.

HAIL, Soil Contamination and impact on Human Health:

The Ministry for the Environment has put together a [Hazardous Activities and Industries List](#) to help identify sites where the soil may be contaminated.

If you want to enquire about soil contamination or to enquire on whether we may have record of HAIL activity at a site, email recontamination@aucklandcouncil.govt.nz

[More information can be found on our website](#)

There also may be further information the the LIM report and property files for the area.

Kind regards,

Lorraine Hamilton | Closed Landfills and Contaminated Land Response Specialist

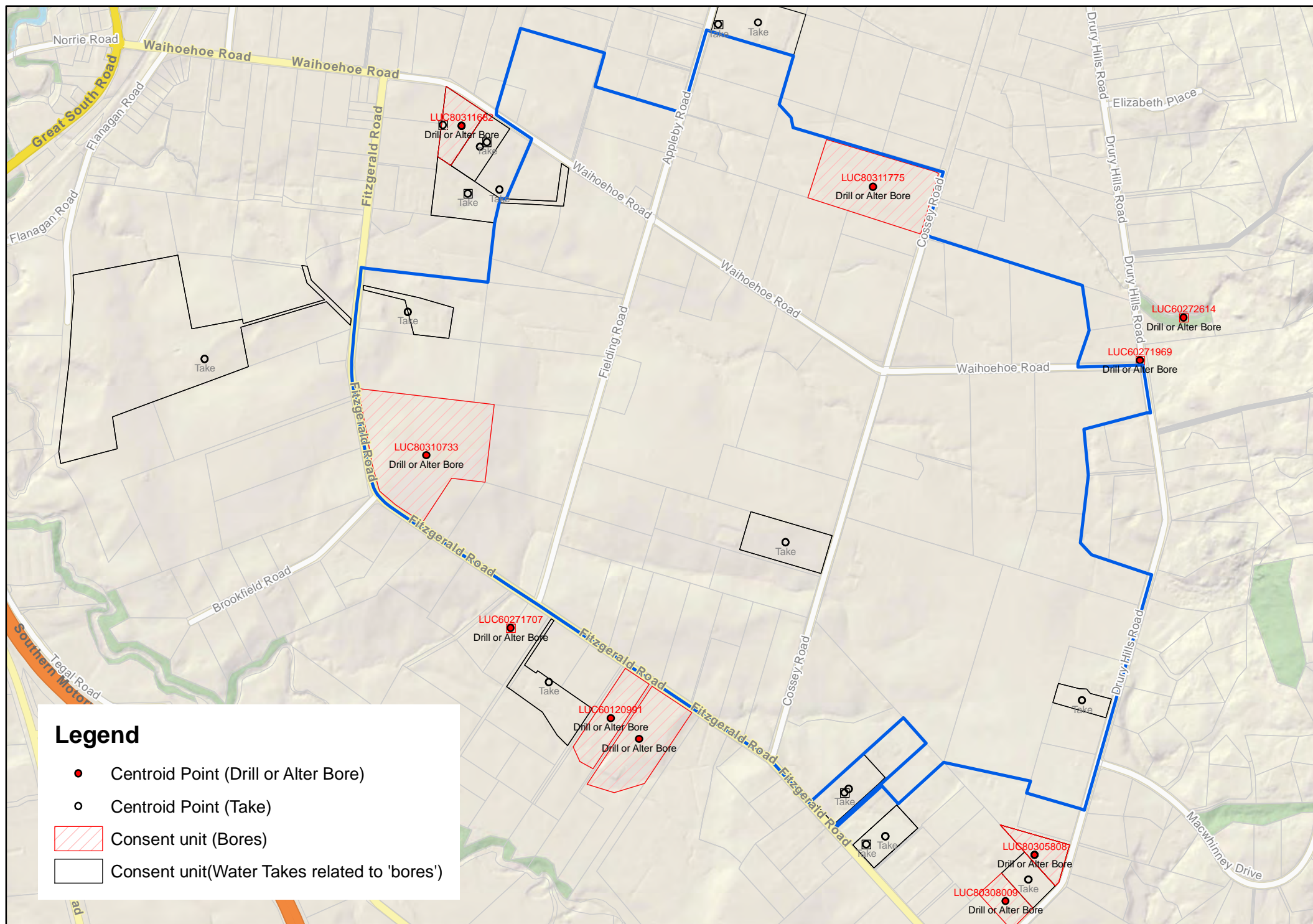
Engineering & Technical Services Unit

Infrastructure & Environmental Services Department

Mobile 021 838 943

Auckland Council, Level 2 North, Bledisloe House, 24 Wellesley St, Auckland Central, Auckland 1010

Visit our website: www.aucklandcouncil.govt.nz



Legend

- Centroid Point (Drill or Alter Bore)
- Centroid Point (Take)
- Consent unit (Bores)
- Consent unit(Water Takes related to 'bores')

Figure E.1: Bore Consents

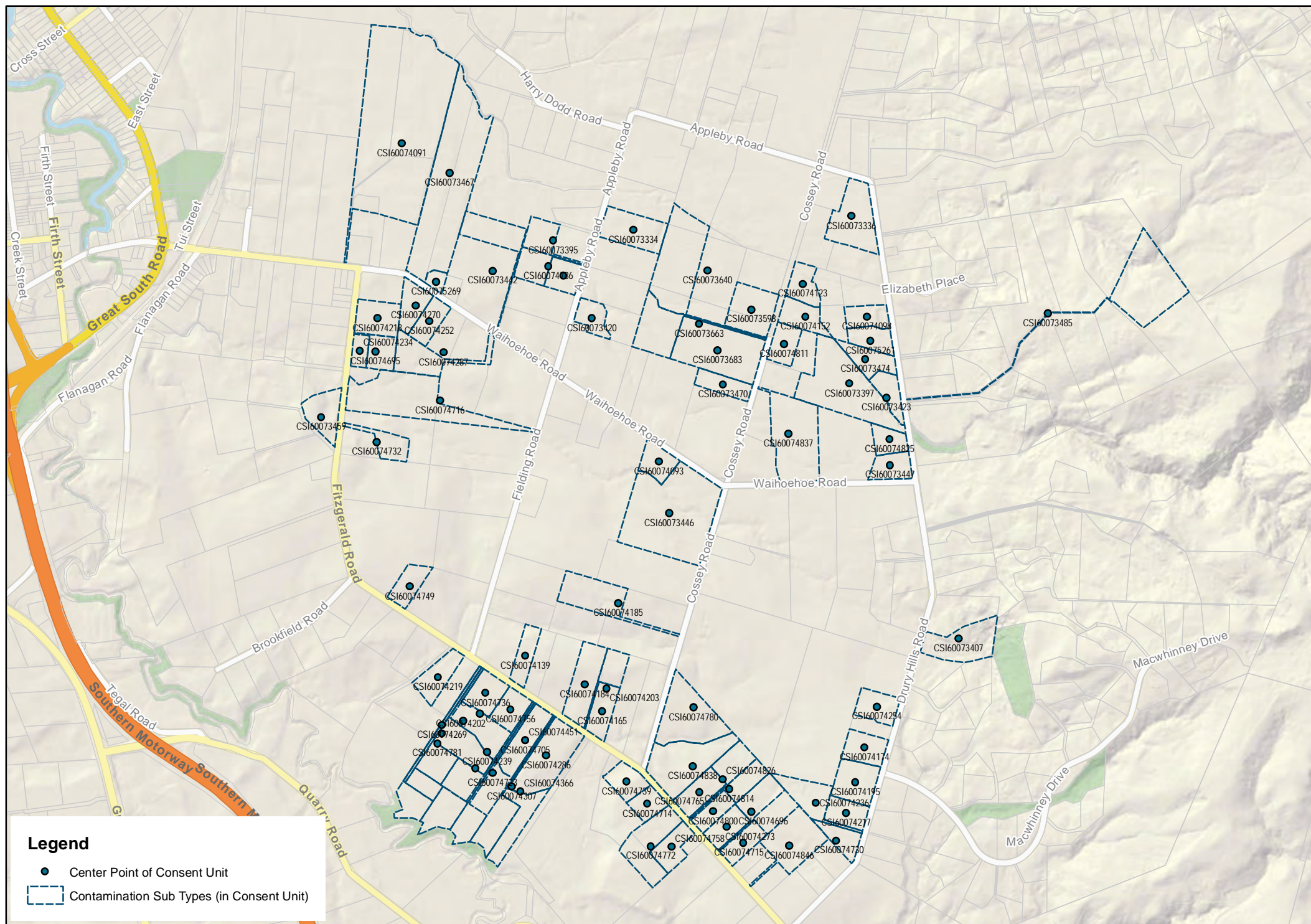


Figure E.2: Contaminated Sites Consent Map



Appendix F – NZ Fire Service Response to Information Request



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

Phone +64 4 496 3600

25 February 2019

Jimmy Huang
Environmental Consultant
By email: jimmy.huang@ehs-support.com

Dear Jimmy

Information Request – contaminated land investigation for a site that is bound by Waihoehoe Road, Fielding Road, Fitzgerald Road and Drury Hills Road in Auckland

I refer to your official information request dated 13 February 2019 regarding contaminated land investigation for a site that is bound by Waihoehoe Road, Fielding Road, Fitzgerald Road and Drury Hills Road in Auckland.

In accordance with the provisions of the Official Information Act 1982, I enclose the information you requested. As the area of interest and search provided was very large and uneven, the boundaries for the incident search were extended to assist with the search.

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

Yours sincerely

Bella Sutherland
Director, Office of the Chief Executive

encl

CAD#	Date/Time	Address	Incident Type	Unsi	Trade Name	Quantity Leaked		Disposal Method	
						QL Code	QL Description	DM Code	DM Description
F2674458	18/12/18 23:53		Outside Rubbish bin, Skip fire						
F2657885	24/11/18 22:14		Mobile Property Fire						
F2624521	4/10/18 1:14	Appleby Road, Drury	Other Fire - not classified above						
F2542912	13/05/18 15:35	Fitzgerald Road, Drury	Vegetation Fire						
F2500400	12/03/18 15:42	Fielding Road, Drury	Vegetation Fire						
F2354100	31/07/17 14:17	Waihoehoe Road, Drury	Other Fire - not classified above						
F2263059	10/03/17 5:29	APPLEBY ROAD, DRURY	Structure fire with damage						
F2238172	2/02/17 12:09	Drury Hills Road, Drury	Other Fire - not classified above						
F2230664	21/01/17 23:04	APPLEBY ROAD, DRURY	Vegetation Fire						
F2230497	21/01/17 21:52	FITZGERALD ROAD, DRURY	Vegetation Fire						
F2113894	13/07/16 19:19	FIELDING ROAD, DRURY	Other Fire - not classified above						
F1992778	5/01/16 21:49	WAIHOEHOE ROAD, DRURY	Other Fire - not classified above						
F1958337	14/11/15 11:39	WAIHOEHOE ROAD, DRURY	Mobile Property Fire						
F1958337	14/11/15 11:39	WAIHOEHOE ROAD, DRURY	Structure fire with damage						
F1831336	23/04/15 6:32	APPLEBY ROAD, DRURY	Structure fire with no damage						
F1744359	9/12/14 22:51	FITZGERALD ROAD, DRURY	Structure fire with no damage						
F1661968	1/08/14 13:30	FITZGERALD ROAD, DRURY	Other Fire - not classified above						

CAD#	Date/Time	Address	Incident Type	Unsi	Trade Name	Quantity Leaked		Disposal Method	
						QL Code	QL Description	DM Code	DM Description
F1563398	26/02/14 11:58	WAIHOEHOE ROAD, DRURY	Vegetation Fire						
F1527374	29/12/13 23:01	DRURY HILLS RD and ELIZABETH PL, DRURY	Outside Rubbish bin, Skip fire						
F1483555	20/10/13 19:51	APPLEBY ROAD, DRURY	Other Fire - not classified above						
F1470181	28/09/13 22:05	COSSEY ROAD, DRURY	Mobile Property Fire						
F1358682	25/03/13 17:36	DRURY HILLS ROAD, DRURY	Other Fire - not classified above						
F1209054	16/07/12 7:21	FITZGERALD ROAD, DRURY	Structure fire with no damage						
F1150634	29/03/12 10:52	FITZGERALD ROAD, DRURY	Other Fire - not classified above						
F0971034	9/05/11 14:04	DRURY HILLS ROAD, DRURY	Structure fire with damage						
F0906135	12/02/11 0:49	FITZGERALD ROAD, DRURY	Structure fire with damage						
F0860889	21/12/10 16:11	WAIHOEHOE ROAD, DRURY	Other Fire - not classified above						
F0816518	5/11/10 20:33	WAIHOEHOE ROAD, DRURY	Vegetation Fire						
F0662969	18/04/10 15:04	WAIHOEHOE ROAD, DRURY	Other Fire - not classified above						
F0660822	15/04/10 11:26	FITZGERALD ROAD, DRURY	Vegetation Fire						
F0580637	28/12/09 10:55	FITZGERALD ROAD, DRURY	Other Fire - not classified above						
F0425145	13/05/09 19:15	WAIHOEHOE RD and FITZGERALD RD, DRURY	Major Hazardous Substance Incident	1270	PETROLEUM OIL or PETROLEUM FUEL (1270)	11	1 to 10 litres	11	Removed and disposed
F0371317	4/03/09 9:52	FITZGERALD ROAD, DRURY	Other Fire - not classified above						
F177462	13/06/08 20:36	WAIHOEHOE ROAD, DRURY	Mobile Property Fire						

CAD#	Date/Time	Address	Incident Type	Unsi	Trade Name	Quantity Leaked		Disposal Method	
						QL Code	QL Description	DM Code	DM Description
F123384	29/03/08 19:37	APPLEBY RD and WAIHOEHOE RD, DRURY	Other Fire - not classified above						
F114119	18/03/08 12:49	COSSEY ROAD, DRURY	Vegetation Fire						
A751347	10/10/07 20:27	WAIHOEHOE ROAD, DRURY	Structure fire with damage						
A709909	10/05/07 3:43	WAIHOEHOE ROAD, DRURY	Structure fire with damage						
A628358	10/07/06 15:08	APPLEBY ROAD, DRURY	Major Hazardous Substance Incident	1971	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED (1971)	25	Unknown	12	Evaporated
A591860	14/02/06 5:08	FITZGERALD ROAD, DRURY	Structure fire with damage						
A502036	16/01/05 19:18	FITZGERALD ROAD, DRURY	Other Fire - not classified above						
A464073	18/07/04 4:07	COSSEY ROAD, DRURY	Mobile Property Fire						
A438087	12/03/04 13:01	WAIHOEHOE ROAD, DRURY	Major Hazardous Substance Incident	1202	GAS OIL or DIESEL FUEL or HEATING OIL LIGHT (1202)	11	1 to 10 litres	14	Absorbed and removed
A436980	7/03/04 14:44	APPLEBY ROAD, DRURY	Structure fire with no damage						
A435173	28/02/04 21:45	COSSEY ROAD, DRURY	Vegetation Fire						
A401991	3/10/03 21:51	FITZGERALD ROAD, DRURY	Other Fire - not classified above						
A399554	21/09/03 23:04	FIELDING ROAD, DRURY	Mobile Property Fire						
A391881	10/08/03 18:59	FITZGERALD ROAD, DRURY	Structure fire with no damage						
A372953	3/05/03 21:35	WAIHOEHOE ROAD, DRURY	Mobile Property Fire						
A344562	21/12/02 17:17	COSSEY ROAD, DRURY	Mobile Property Fire						
A270539	14/01/02 10:41	FITZGERALD ROAD, DRURY	Structure fire with no damage						

CAD#	Date/ Time	Address	Incident Type	Unsi	Trade Name	Quantity Leaked		Disposal Method	
						QL Code	QL Description	DM Code	DM Description
A173117	17/11/00 21:42	WAIHOEHOE ROAD, DRURY	Mobile Property Fire						
A162118	6/10/00 5:41	FITZGERALD ROAD, DRURY	Structure fire with damage						
A152201	26/08/00 19:45	APPLEBY ROAD, PAKAPURA	Structure fire with no damage						
A116410	6/05/00 13:27	FITZGERALD ROAD, DRURY	Vegetation Fire						
A107617	5/04/00 12:51	DRURY HILL ROAD, DRURY	Mobile Property Fire						
A096817	20/02/00 2:05	FIELDING ROAD, DRURY	Mobile Property Fire						
A093980	7/02/00 11:31	FITZGERALD ROAD, DRURY	Major Hazardous Substance Incident	1993	FLAMMABLE LIQUID, N.O.S. (1993)	12	11 - 30 litres	14	Absorbed and removed
A065028	2/09/99 15:48	COSSEY ROAD, DRURY	Structure fire with damage						
A055370	3/07/99 15:31	WAIHOEHOE ROAD, DRURY	Major Hazardous Substance Incident	1971	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED (1971)	16	Above 10,000 litres	12	Evaporated
A000509	1/08/98 10:37	WAIHOEHOE ROAD, DRURY	Structure fire with no damage						