

BEFORE THE SELWYN DISTRICT COUNCIL

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| Under | the Resource Management Act 1991 |
| In the matter of | Proposed Plan Change 72 to the Operative Selwyn District Plan: Prebbleton |
| And | Trices Road Rezoning Group (the Applicant) |

**BRIEF OF EVIDENCE OF SEAN MATTHEW FINNIGAN
(CONTAMINATED LAND)**

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QUALIFICATIONS AND EXPERIENCE

1. My name is Sean Matthew Finnigan, I hold the degree of Bachelor of Engineering (Chemical and Materials) from the University of Auckland, a Masters in Engineering Science (Hydrology and Waste Management) from the University of New South Wales, and a PhD in membrane filtration from the University of Bath, UK. I am a Chartered Professional Engineer, a Chartered Member of Engineering New Zealand and a Certified Environmental Practitioner in Contaminated Land (since May 2016). I specialise in Environmental Engineering and Contaminated Land work. I have 25 years experience in contaminated land, hydrology, stormwater, wastewater and solid waste.
2. I am a Senior Environmental Engineer and a director of Fraser Thomas Ltd where I have worked in the Environmental Engineering section of the practice since 1996. Fraser Thomas is a company of professionally qualified structural, geotechnical, civil and environmental engineers and land surveyors. Fraser Thomas is a multi-disciplinary consulting firm that has been in operation for 52 years, with wide ranging experience and expertise in the management, engineering, contaminated land and surveying industry.
3. I am a Suitably Qualified and Experienced Practitioner in Contaminated Land work (**SQEP**), as defined under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (**NESCS**), as stated under paragraph 1 of my evidence. I have undertaken and been responsible for over 300 Contaminated Land projects to date, including a large number of projects directly by myself and the remaining projects by staff under my supervision. This includes the following contaminated land investigations within the Selwyn District relevant to the rezoning proposal:
 - (a) Undertaking various soil contamination and environmental investigations for the Te Whāriki, Lincoln subdivision over the last 3-4 years, including review of contamination reports by others, overseeing minor contaminated soil remedial works, responding to accidental discovery events and validation sampling and reporting.
 - (b) Review of contamination reports by others for Arāria Springs Primary school, including site validation reports relating to remediation of asbestos contaminated soil from historic buildings and providing advice to the Ministry of Education.
 - (c) Multiple contamination investigations for similar zoning plan changes or rural or rural residential zoned land in the Canterbury region including:
 - 8 Lot, 17.25 ha block of land along Allendale Lane, Lincoln,
 - Single lot, 1.12 ha block of land on Selwyn Road, Rolleston
 - 3 Lot, 13 ha block of land along East Maddisons Road, Prebbleton.
4. I have also undertaken multiple contaminated land investigations of existing rural land for major residential developments in west Auckland (13.6ha and 50ha) and south Auckland (50ha) in support of zoning plan changes including preliminary site investigations, detailed site investigations, site management plans, preparation of

evidence for Council hearings and ongoing engagement during site redevelopment works, including observation and validation of remedial works relating to soil contamination and accidental contamination discoveries.

5. I confirm that I have prepared this evidence in accordance with the Code of Conduct for Expert Witnesses. Code of Conduct for Expert Witnesses contained in Part 7 of the Environment Court Practice Note 2014. The issues addressed in this statement of evidence are within my area of expertise except where I state that I am relying on the evidence or advice of another person. The data, information, facts and assumptions I have considered in forming my opinions are set out in the part of the evidence in which I express my opinions. I have not omitted to consider material facts known to me that might alter or detract from the opinions I have expressed.
6. I have managed, reviewed and approved preparation of the Preliminary Site Investigation (PSI) report (attached as **Appendix A**) dated 25 February 2021, which incorporates our response to Council's request for further information dated 2 February 2021.

SUMMARY STATEMENT

7. In summary, our PSI investigation found:
 - (a) The subject site comprises Lot 1 DP 73583, Lot 2 73583, Part RS 3122, RS 39794, Lot 1 DP 3896, Lot 1 DP 5284, Lot 1 78905, Lot 1 DP 360577, Lot 2 360577, Part RS 2423 ('site'). The site comprises eight properties (10 separate Records of Title) and is located between Trices Road and Hamptons Road to the north and south, and Birchs Road and rural properties to the west and east, respectively.
 - (b) This PSI investigation involved a desktop study, site walkover, and reporting associated with potential land contamination issues. It was undertaken by suitably experienced staff from our Christchurch office, under my direction and supervision. I reviewed draft and final reports and supporting documentation, including site photographs, historical aerials, and other relevant information.
 - (c) The main rationale and objectives for this investigation were:
 - To identify the main actual or potential contamination issues due to ongoing and historic use of land within the site.
 - To confirm that the site is suitable or can be made suitable for the proposed rezoning.
 - (d) The NESCS governs a number of activities, including soil sampling, soil disturbance, subdivision and changes of land use on potentially contaminated land in New Zealand. In general, the rules of the NESCS apply to sites on which it is "more likely than not" that a HAIL (Hazardous Activities and Industries List) activity has occurred or is occurring (Regulation 5(7)).

(e) This investigation has confirmed that the subject site has only been used for rural/residential and grazing purposes and identified the following potential or actual HAIL activities:

- *Activity A10: Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glasshouses or spray sheds.* This relates to persistent pesticide use associated with the former poultry farm (no longer present on site), orchards, and vegetable growing on Lot 1 and 2 73583, Lot 1 DP 3896, Lot 1 DP 5284. Additionally, an orchard spraying apparatus was observed being stored in a paddock on Lot 1 DP 360577.
- *Activity A17: Storage tanks or drums for fuel, chemicals or liquid waste.* This relates to above ground fuel storage tanks and oil drums being stored in paddocks in Lots 1 and 2 DP 360577.
- *Activity G5: Waste disposal to land (excluding where biosolids have been used as soil conditioners).* This relates to general refuse being observed stored on existing ground surface on Lots 1 and 2 DP 360577 and Pt RS 2423.
- *Activity I: Land subject to intentional or accidental release of hazardous substances in sufficient quantity that it could be a risk to human health or the environment.* This applies to:
 - Historical railway along the western boundary of Lots 1 & 2, DP73583, Pt RS3122 and RS39794.
 - Existing stockpiles on Pt RS 2423. The stockpiled soil appeared to be silts and sands and occasional gravel, with some demolition materials (concrete blocks) of unknown origin. Soil sampling may be required by Council to confirm the stockpile soils and underlying ground are not contaminated.
 - Existing stockpiles on Lots 1 and 2 DP 360577. The stockpiles generally comprised soil and plant material. The soil appeared to be silts and sands and occasional gravel. Soil sampling may be required by Council to confirm the stockpile soils and underlying ground are not contaminated.
 - Rubbish and old machinery/car body remains on Lot 1 DP 73583, Lots 1 and 2 DP 360577, Pt RS 2423 (historical) These areas need to be cleared of rubbish and then the underlying ground inspected for signs of contamination (staining or odour). Soil sampling is likely to be required at this time to confirm the presence or absence of soil contamination.
 - Other activities such as potential lead-based paint use on older buildings, historical fires and burn piles on Lots 1 and 2 DP 73583, Pt RS 3122, Lot 1 3896, Lot 1 DP 5284, Lot 1 DP 360577 and Pt RS 2423.

- *Activity E1: Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition.* ACM demolition material from historical buildings (HAIL activity E1) on Lots 1 and 2 DP 73583, Pt RS 3122, Lot 1 3896, Lot 1 DP5284, Lot 1 DP360577, and Pt RS 2423. A review of the available historical aerials of these sites show that several small sheds/buildings have been historically present at least since 1940. Asbestos based products were prominent in New Zealand homes and other buildings from the 1920s to the mid-1980s. Therefore, it is likely that these soils could potentially be contaminated with asbestos from prior demolition activities.
- (f) The location and approximate extent of these features are shown on drawing E00417-01 attached to my evidence. The potential for soil contamination at these locations is considered minor based on the information available, but can not be ruled out without soil sampling.
- (g) In summary, based on the information presented in the PSI report, whilst it is clear that historic HAIL activities have occurred at the site, it is uncertain what effects, if any, they have had on site soils. Therefore, in accordance with NESCS requirements, a Detailed Site Investigation (DSI) is required in order to assess site soils to determine environmental effects, or otherwise. It is recommended this work be done at the subdivision resource consent application stage. If further investigation is not undertaken prior to lodging for resource consent, then the proposed subdivision would be a discretionary activity under Regulation 11 of the NESCS.

Sean Finnigan

14 January 2021

Appendix A

Fraser Thomas Ltd “Preliminary Investigation Report”,
dated 25 February 2021