

**Before the Hearing Panel appointed by the
Christchurch City Council**

In the Matter of

the Resource Management Act
1991 (**Act**)

And

In the Matter of

Proposed Plan Change to the
Christchurch City Council: Marshs
Road Industrial

Statement of Evidence of
Guy Anthony Chatterton Knoyle
(Contaminated Land) for
Calder Stewart Development Limited

Dated: 2 October 2026

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INTRODUCTION

Qualifications and Experience

1. My name is Guy Anthony Chatterton Knoyle. I am a Technical Director – Contaminated Land and have been employed at Pattle Delamore Partners Ltd (**PDP**), an environmental consultancy practice for the last 30 years.
2. I hold a MSc (1994) and a BSc (Joint Hons; 1990), both from the University of Wales, College of Cardiff, and I specialise in contaminated land assessment, including site investigation, risk assessment, and compliance with the Resource Management Act 1991 (**RMA**) and the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (**NES-CS**).
3. I have been instructed by Calder Stewart Development Limited (**Calder Stewart**) to give expert contaminated land evidence in respect of Private Plan Change 19: Marshs Road Industrial (**PC19**), being a private plan change application to rezone approximately 19.5 hectares (**ha**) of land zoned Rural Urban Fringe Zone (**RUFZ**) to Industrial Heavy Zone (**IHZ**) and Industrial General Zone (**IGZ**). The residential properties fronting Main South Road and Marshs Road that are contiguous to the proposed IHZ and IGZ will remain as RUFZ (**Site**).
4. I am familiar with the Site as a result of my role in overseeing site investigations with regards to identifying possible land contamination, as detailed in paragraphs 17 to 29.

Code of Conduct

5. While this is not an Environment Court hearing I have read and agree to comply with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023. This evidence is within my area of expertise, except where I state that I am relying on material produced by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

SCOPE OF EVIDENCE

6. My evidence will deal with the following:
 - (a) executive summary;
 - (b) background and role;

- (c) the contaminated land-related effects of PC19;
- (d) response to contaminated land issues raised in submissions;
- (e) response to contaminated land issues raised in section 42A report; and
- (f) conclusions.

EXECUTIVE SUMMARY

7. I oversaw the preparation of a Preliminary Site Investigation (**PSI**; site history review) for the approximately 19.5ha area subject to PC19, which seeks to rezone land at Marshs Road and Main South Road, Hornby, from RUFZ to IHZ and IGZ. The residential properties fronting Main South Road and Marshs Road are to remain as RUFZ.
8. The PSI involved a review of historical land use information, regulatory databases, historical aerial photography, landowner interviews and site inspections. The investigation found that the Site has predominantly been used for pastoral farming, grazing and general cropping since at least 1941, with no evidence of intensive horticultural activities requiring persistent pesticide use.
9. A limited number of isolated Hazardous Activities and Industries List (**HAIL**; Ministry for the Environment (**MfE**), 2011) activities were identified, including areas of fill and waste disposal, vehicle and tyre storage, and the potential presence of asbestos-containing materials and lead-based paint associated with older buildings. Some of these identified HAIL activities were in the residential properties fronting Main South Road (i.e. outside of the proposed PC19 Site). These activities indicate the potential for contamination but do not confirm contamination is present.
10. The PSI concluded that any contamination risks are localised and can be appropriately assessed and managed through the existing contaminated land regulatory framework. Where required, a Detailed Site Investigation (**DSI**; soil sampling investigation), soil management and validation works can be undertaken in accordance with the NES-CS regulations and MfE guidelines.
11. In my opinion, contaminated land does not present a constraint to the proposed rezoning. Any identified contamination can be appropriately investigated and managed during future development, with residual risks to site users, neighbouring properties and the environment expected to be acceptably low. Accordingly, there is no contaminated land reason why PC19 should not proceed.

DESCRIPTION OF PLAN CHANGE 19

12. I understand that Calder Stewart has requested PC19 to rezone approximately 19.5ha of RUFZ to IHZ and IGZ and for the residential properties fronting Main South Road and Marshs Road to remain as RUFZ. The request includes the rezoning of five large lifestyle blocks ranging from 2ha to 4ha in size.
13. The Site is located at the intersection of Marshs Road and Main South Road (State Highway 1 (**SH1**)) in Hornby.
14. PC19 proposes to extend the South-West Hornby Industrial Area Outline Development Plan (**ODP**) and to service the area via a new minor arterial road. The proposed road would provide access to the area from the SH1/Pound Road intersection.
15. The request also proposes changes to the provisions of Chapter 16.5.4 Industrial Heavy Zone (South-West Hornby) Area Specific Rules. The key proposed change is the addition of Rule 16.5.4.2.3 (a)(iii)(A) and (B), which would require a 20 m building setback of industrial heavy activities from residential properties.
16. In response to the section 42A officer's report (refer to paragraph 44) I note that Calder Stewart has amended the PC19 application and the current RUFZ zoning has now been revised to a combination of IHZ (southern portion of the Site) and IGZ (central/northern portion of the Site). The residential properties fronting Main South Road and Marshs Road are to remain as RUFZ.

BACKGROUND AND ROLE

17. To assist with PC19, I directed and oversaw the preparation of a PSI report for the land covered by this plan change. The report was entitled '*Preliminary Site Investigation – Corner of Marshs Road and Main South Road (State Highway 1), Hornby, Christchurch*', dated 12 April 2023 and prepared for Calder Stewart. The report was prepared in accordance with the MfE '*Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand (Revised 2021)*'.
18. The objective of the investigation was to identify any potential sources of contamination from past and/or present land use activities at the Site, which could be listed on the HAIL. If HAIL activities were identified within the Site, then the NES-CS regulations, administered by Christchurch City Council (**CCC**), would need to be taken into consideration for bulk development earthworks, change in land use and subdivision where HAIL activities were present.

19. The HAIL is a compilation of activities and industries that are considered likely to cause land contamination resulting from hazardous substance use, storage or disposal. The HAIL is intended to identify most situations in New Zealand where hazardous substances could cause, and in many cases have caused, land contamination. However, it is important to note that appearing on the HAIL does not mean a property is definitely contaminated; it only indicates a higher probability of past or present risk requiring further site investigation.
20. The investigation comprised a review of the Site history including CCC property files, interviews with selected landowners and Site inspections for the five land parcels associated with the proposed plan change area. It also included a review of historical aerial photographs, the Environment Canterbury (**ECan**) Listed Land Use Register (**LLUR**) and CCC database holding information on Hazardous Substances information for the entire approximate 19.5ha Site.
21. Suitably trained PDP staff undertook a review of the available Site history information and Site inspections over the PC19 land area. For completeness, the PSI also included the private residential properties that front Main South Road and Marshs Road.
22. My role was to manage the overall investigation process and to peer review the PSI report to ensure that it was factually correct and prepared in accordance with the relevant MfE Guidelines to meet the applicability of the NES-CS regulations. A summary of the report findings is presented in paragraphs 23 to 29.

PRELIMINARY SITE INVESTIGATION REPORT FINDINGS

23. In summary, the available historical information for the overall Site shows that it was in pasture or used for cropping activities from at least 1941 (earliest aerial image). Residential development progressively occurred along the northern Site boundary (Main South Road) and along the northern part of Marshs Road. The five large properties associated with the proposed plan change (occupying approximately 19.5 ha), predominantly comprised paddocks used for grazing livestock, a horse training track, and rural residential properties.
24. Through the process of this review, HAIL activities were identified to have occurred within parts of the PC19 Site area, as follows:
 - (a) HAIL reference G3 - Waste disposal and uncontrolled or imported fill (i.e. located at 679 Main South Road, 53 Marshs Road, 689 Main South Road and 27 & 29 Marshs Road) (note that the report identified HAIL activity G5, however G3 is the correct HAIL reference).

- (b) HAIL reference G4 - Tyres, multiple storage containers and cars is varying states of condition at 693 Main South Road.
 - (c) HAIL reference I - The potential of asbestos containing building materials and/or lead-based paint used for any structures (i.e. dwellings, garages or sheds) constructed prior to 2000 (i.e. the applicability of this HAIL activity would need to be determined via post demolition surveys and soil sampling).
25. It is to be noted that the above HAIL activities G4 (693 Main South Road) and G3 (679 Main South Road), whilst identified as part of the PSI, are located outside of the proposed PC19 development area and are therefore not applicable.
 26. The Site history information showed that a large percentage of the Site was historically in the ownership of Wattie's and used for general cropping purposes. It is important to note that general cropping is not classified as a HAIL activity (i.e. HAIL reference A10) and there was no evidence to indicate that intensive cropping occurred that required the application of persistent pesticides. Likewise, the presence of '*residential*' scale glasshouses identified at some of the properties does not constitute a HAIL activity (i.e. HAIL reference A10).
 27. Based on a review of the available Site history information, due to the presence of identified HAIL activities over parts of the Site, the PSI noted that a potential risk exists to human health (albeit a low risk noting the proposed change in land use to a '*less sensitive*' commercial/industrial). Furthermore, the PSI stated that resource consent would be required following the completion of the plan change process and for activities covered by the NES-CS (i.e. land use change, subdivision and/or soil disturbance).
 28. The report further stated that, in particular, if a land use change, subdivision and/or soil disturbance was proposed within the areas of the Site where HAIL activities had been identified or likely to occur, then in accordance with the NES-CS further investigations would likely be required (i.e. soil sampling forming part of a DSI).
 29. Whilst noting the above applicability of the NES-CS, the PSI report concluded that there was no reason from a contamination perspective why the proposed plan change from RUFZ to industrial zones (in this case IHZ and IGZ) for the approximate 19.5ha Site could not proceed.

CONTAMINATED LAND EFFECTS

30. Based on the findings of the PSI, and the presence of HAIL activities over isolated areas of the Site, the NES-CS regulations require that a DSI is undertaken in the

event that soil disturbance, change of land use and/or subdivision is undertaken within the HAIL areas.

31. As such, I understand that in the event of PC19 being granted by CCC, Calder Stewart will undertake the required DSI over the identified HAIL areas, in accordance with the NES-CS regulations and MfE guidelines to characterise soils for the likely contaminants of concern.
32. The results of the investigation will determine if the tested soils pose a risk to contractors undertaking the Site development bulk earthworks and any future Site users in the context of a commercial/industrial land use setting. In addition, the results of the investigation will determine the most appropriate offsite disposal facility for these soils in the event they are removed from the Site. The results of the DSI will also assist in the resource consenting process in accordance with the NES-CS regulations.
33. Noting the proposed future use of the Site for commercial/industrial land use, there will be the requirement to undertake bulk earthworks as part of land preparation, primarily for geotechnical purposes and to attain the correct Site elevations. As such, surplus topsoil over the wider Site and any identified unsuitable soils/waste materials may need to be removed to approved disposal facilities, or suitably managed onsite (e.g. landscaping bunds for non-contaminated/low-level contaminated soils and/or encapsulation for higher-level contaminated soils).
34. Once bulk earthworks have been completed and any unsuitable soils/waste materials within the identified HAIL areas have been removed or appropriately managed (e.g. encapsulation), then validation soil sampling may be required over parts of the Site to confirm that remaining unencapsulated soils meet commercial/industrial land use criteria.
35. From my experience of undertaking similar investigations, the process described above to characterise contaminants in soils within identified HAIL areas and managing these soils appropriately to ensure that soils remaining at the Site either meet the applicable land use criteria or are suitably managed onsite (e.g. encapsulation) is a typical process and in accordance with the MfE guidelines and NES-CS regulations.
36. Furthermore, in addition to meeting soil acceptance criteria in the context of a commercial/industrial land use setting, it is expected that any risk posed existing neighbouring properties and to the receiving environment will be acceptably low.

RESPONSE TO SUBMISSIONS

37. I concur with the conclusions made by the Canterbury Regional Council (**CRC**) in its submission, whereby it states that issues related to existing contamination, raised in the PSI report, can be readily addressed through implementing industry best practice methods and therefore is not a significant concern to CRC. I have addressed the process of how contaminated land will be investigated and subsequently managed in paragraphs 30 to 36 above.
38. I also concur with the conclusions made by the CRC in its submission, whereby it states the new HAIL activities that would be enabled on the Site must be appropriately controlled and monitored to prevent potential adverse effects on land and groundwater quality.
39. Any future HAIL activities could be managed through the implementation of site-specific environmental management procedures, including the appropriate storage and handling of hazardous substances, secondary containment for fuels and chemicals, spill prevention and response measures, routine inspection and maintenance of infrastructure. Groundwater and/or soil quality monitoring could also be undertaken, with monitoring results reviewed periodically to identify any emerging contamination issues.
40. I have considered the submission from Mr Bateria who raised concern that rezoning the Site from RUFZ to IZH may expose residents to potentially hazardous activities that are incompatible with healthy living conditions. From a contaminated land perspective, while the new industrial zoning may enable HAIL activities, the presence of a HAIL activity does not, in itself, result in adverse effects on human health or the environment. In part, the HAIL is simply a screening tool identifying activities with the potential to cause contamination and does not indicate that contamination will occur or that adverse effects are unavoidable.
41. HAIL activities are subject to a range of regulatory controls, including requirements relating to hazardous substance management, contaminated land assessment, discharge management, and resource consenting where relevant. Future commercial/industrial activity at the Site would still need to comply with the relevant provisions of the applicable legislation, national direction and planning documents, including the District Plan. Any adverse effects on human health will be managed through that process.

42. Relevant objectives and policies in the Christchurch District Plan, Chapter 4 (Hazardous Substances and Contaminated Land) that seek to prevent adverse effects on human health are as follows (my emphasis underlined).

Objective 4.2.2.1 – Contaminated land – managing effects

Land containing elevated levels of contaminants is managed to protect human health and the environment, which includes significant natural and Ngāi Tahu cultural values from the adverse effects of subdivision, development and use of contaminated land and natural hazards, including from site investigations, earthworks and soil disturbance, and to enable the land to be use in the future.

Policy 4.2.2.1.1 – Best practice approach

Require any proposal to subdivide, use or develop contaminated land or potentially contaminated land to apply a best practice approach to investigate the risks, and either remediate the contamination or manage activities on contaminated land to protect people and the environment.

Policy 4.2.2.1.2 – Remediation

Remediation of contaminated land should not pose a more significant risk to human health or the environment than if remediation had not occurred.

RESPONSE TO SECTION 42A REPORT

43. I have reviewed the CCC officer's section 42A report and in particular in relation to any direct references to contaminated land that may have an impact with regards to the proposed PC19 plan change.
44. In response to the section 42A officer's report I note that Calder Stewart has amended the PC19 application and the current RUFZ zoning has now been revised to a combination of IHZ (southern portion of the Site) and IGZ (central/northern portion of the Site). The residential properties fronting Main South Road and Marshs Road are to remain as RUFZ.
45. I concur with the section 42A officer's report where they note that the NES-CS regulations do not apply to a zone change.
46. From a review of the section 42A officer's report information there are no direct references to contaminated land and therefore any impediment to the rezoning of approximately 19.5ha of land from RUFZ to IHZ and IGZ.

CONCLUSION

47. A PSI has previously been undertaken for the area of land covered by this plan change. From the findings of the PSI, a number of discrete HAIL activities were identified over parts of the Site. In accordance with the NES-CS regulations, due to the presence of discrete HAIL activities a DSI will need to be carried out over the HAIL identified areas to assess soil contaminant concentrations.
48. The results of the DSI investigation will assist in gaining the appropriate resource consents for any subsequent commercial/industrial development. In addition, the investigation findings will also assess any risk to future Site users in the context of a commercial/industrial land use setting, any resultant and appropriate mitigation measures, and for determining the most suitable offsite disposal facilities for any surplus development soils.
49. In conclusion, based on the findings of the PSI, there is no reason from a contaminated land perspective why the proposed plan change from RUFZ to IHZ and IGZ (with the residential properties fronting Main South Road and Marshs Road remaining as RUFZ) for the approximate 19.5ha Site could not proceed.



Guy Anthony Chatterton Knogle

2 October 2026