

BEFORE THE HEARING PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Proposed Plan Change 37 - Nukuhau (private) by AN Rajasingham LPT Trustees No 124 Limited anors to the Taupo District Council to rezone c.78ha of land in the Nukuhau area from Rural Environment to a mix of General Residential and Mixed Density Residential with a Neighbourhood Shopping Centre overlay.

STATEMENT OF EVIDENCE OF JAMES WILLIAM GLADWIN

Dated 20 OCTOBER 2021

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INTRODUCTION

1. My full name is James William Gladwin.
2. I hold a BSc (Hons) in Environmental Science, and a PgDip in Soil Science.
3. I have been engaged by the applicant to provide evidence in respect of site soil contamination, soils and geology relating to Private Plan Change 37: Nukuhau Private Plan Change (**PC37**).

CODE OF CONDUCT

4. I have read the Environment Court Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014 and agree to comply with it. I confirm that the opinions expressed in this statement are within my area of expertise except where I state that I have relied on the evidence of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

SCOPE OF EVIDENCE

5. My evidence will address geology and hydrology, soil contamination and human health and environmental soil and water contaminant standards.

SUMMARY OF EVIDENCE

6. Although having detected some contaminants associated with the possible HAIL activities identified by the PSI, I did not find any contamination that exceeds the human health SCSs specified in section 8.1. There were no asbestos fibres found in the soils surrounding the residential foundations.

It is therefore highly unlikely that the areas investigated will be a risk to human health given the intended activity.

7. Material within 5m radius of the old shed and Foundation 2 does not exceed the human health SCSs. However, if it is to be removed from site, it should be disposed at a Class A Landfill because there is exceedance of the Class B landfill acceptance criteria and predicted background levels.
8. Although the fill material that was investigated adjacent to the old shed was found to be uncontaminated and it is reasonable to assume the remaining areas subject to fill and land disturbance will be of similar nature, a site management plan including an unexpected discovery protocol should be developed for the site.

ANALYSIS

9. I attended a site visit to the land which is the subject of PC37 on 21 February 2019. In September 2019. I produced a detailed site report on my findings (**Report**) which is set out at Appendix H to the Plan Change Application documents.
10. As HAIL activities were identified as part of the Preliminary Site Investigation (PSI), the Report was conducted and laboratory analysis completed to determine the contamination risk to human health and the environment and possible remedial actions.
11. The investigation and Report was completed in general accordance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) and the Ministry for the Environment Contaminated Land Management Guidelines No. 1 and No. 5.

12. From assessing the available information gathered as part of the PSI and the laboratory analysis completed as part of the Report the following has been determined:
- a) Some low levels of PAHs and one low level detection of OCP was detected around the old shed. The levels of contamination were however below the human health soil contaminant standards.
 - b) Parameters in the buried woodwaste were all at or below the 95% upper limit for background. It is likely that other fill areas will be of similar nature.
 - c) Zinc was above background around the old shed with one sample being equal to the ANZECC 'upper' guideline values for sediment quality. This is a reflection of the galvanized steel used in the sheds construction. Nickel was above background and the ANZECC 'upper' guideline values for sediment quality at Foundation 2. No human health SCSs were exceeded.
 - d) There were no asbestos fibres detected in the soil surrounding the old residential foundations. It is highly unlikely that this soil poses a risk to human health.
 - e) Cadmium levels in the pasture areas although elevated compared to non-pasture levels were just below the 95% upper limit for background. No human health SCSs were exceeded.
13. The Report, although having detected some contaminants associated with the possible HAIL activities identified by the PSI, did not find any contamination that exceeds the human health SCSs specified in section 8.1. There were no asbestos fibres found in the soils surrounding the residential

foundations. It is therefore highly unlikely that the areas investigated will be a risk to human health given the intended activity.

14. There were metals above the predicted background levels (Table 5, Section 8.2). The material in these locations are therefore not suitable for use as cleanfill offsite. Although some of these levels are at or above the ANZECC 'upper' guideline values for sediment quality, the small size of the areas combined with the distance and vegetation cover between the sites and receiving waters are likely to result in very large dilution before water is discharged. The well drained nature of the soils means that under normal conditions it is unlikely that there will be much in the way of stormwater runoff.

RESPONSE TO SUBMISSIONS

15. I note only one submission has been made with regard to the Detailed Site Investigation and it is in support.

CONCLUSION

16. Based on the findings in the Report, the following recommendations are therefore made:
 - a) Material within 5m radius of the old shed and Foundation 2 does not exceed the human health SCSs. However, if it is to be removed from site, it should be disposed at a Class A Landfill because there is exceedance of the Class B landfill acceptance criteria and predicted background levels.
 - b) Although the fill material that was investigated adjacent to the old shed was found to be uncontaminated and it is reasonable to assume the remaining areas subject to fill and land disturbance will be of similar nature, a site management plan including an unexpected

discovery protocol should be developed for the site. This is so appropriate steps are in place to detect unidentified buried material that may be hazardous to human health or the environment during earthworks. The document should also specify appropriate controls and steps to be taken in the event that hazardous material is exposed. The plan should pay particular attention to the areas that have been identified as historic fill / soil disturbance. - Possible ACM fragments identified during the PSI walkover should be handpicked, double bagged and taken to an appropriate facility for disposal.

James Gladwin

20 October 2021