Date Submitted: 19/07/2024 06:21 AM Submitted By: paul@pbag.com.au



G Dowker - PB Ag Soil Contamination Report

Section 1

Client	G Dowker
Date/Time	17/07/2024
Property Name	

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Methodology

Mid Regional Council have requested that a preliminary contamination investigation is conducted on the area around existing vineyard of 253 Burrundulla Road, Burrundulla, NSW 2850 Lot 1 DP 198755.

Compliance with State Environmental Planning Policy (Resilience and Hazards) 2021

The subject site is located next to an existing vineyard which may result in the site being contaminated as a result of the current and historic horticultural practices, as noted within Table 1 of the contaminated land planning guidelines.

Pursuant to Clause 4.6(2) of State Environmental Planning Policy (Resilience and Hazards) 2021, Council must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines where there is change of use on land (in this case for residential, commercial purposes) where development for horticulture is being, or is known to have been carried out on the land.

The preliminary contamination investigation is to be prepared by a suitably qualified consultant and must include soil testing of the site. Where the report finds that contamination exists on the site, the report is to provide recommendations for remediation work required before the land may be suitable to be used for residential and commercial purposes.

Methodology

Systematic sampling is a probabilistic strategy that involves selecting points at regular intervals over an area, for example, grid intersections, or time.

Systematic sampling does not generate clusters of sampling locations but ensures an even coverage of the site or decision area, which makes this approach ideal for characterising sites or decision areas. Systematic sampling is statistically unbiased as long as the coordinates of the first sampling location are determined randomly.

Area of Site A was approximately 80m^2 (10x8m) (0.08 Ha)

Area of Site B was approximately 120m² (13x9m)(0.120 Ha)

Number of sample sites required per site is 8 (EPA Sampling Design Contamination Guidelines)

- Samples were taken at set intervals across the pre determined test area. See attached sample grid (Appendix C)
- Soil was collected using a soil sample probe which was washed with distilled water and dried prior to collecting soil from each site. Soil was collected at a depth of 20 cm
- Soil was immediately placed into labelled 250 ml glass jars, sealed with lid, 16 sample jars per site (2 jars per sampled location within each site) were supplied by ASL Laboratory Mudgee
- Each sample jar was clearly labelled identifying sample site, sample number, date and time of sampling.
- Once soil collected the jars were immediately placed in a chilled car fridge and delivered to ALS Mudgee NSW for required testing to be carried out.
- All samples were collected by Paul Baguley of PB ag Consulting Pty Ltd
- Preliminary investigation soil was tested to a depth of 20 cm

The areas were tested on the 25th of June 2024 and samples delivered to Lab 25th June 2024

Soil was tested for 8 minerals, OC, OP. PCB



Soil Results and Comments

(See appendix A for full soil Results)

(See appendix Table 5-A - Soil Investigation Levels HILs)

Summary of Results Site A:

Heavy Metals

Arsenic falls in within safe guidelines for residential development Cadmium falls within safe guidelines for residential development Chromium falls within safe guidelines for residential development Copper falls within safe guidelines for residential development Lead falls within safe guidelines for residential development Nickel falls within safe guidelines for residential development Zinc falls within safe guidelines for residential development Mercury falls within safe guidelines for residential development

OC, OP, PCB

Organochlorine Pesticides (OC) falls within safe guidelines for residential development

Organophosphorus Pesticides ($\ensuremath{\mathsf{OP}}$) falls within safe guidelines for residential development

Polychlorinated Biphenyls (PCB) falls within safe guidelines for residential development

Summary of Results Site B:

Heavy Metals

Arsenic falls in within safe guidelines for residential development Cadmium falls within safe guidelines for residential development Chromium falls within safe guidelines for residential development Copper falls within safe guidelines for residential development Lead falls within safe guidelines for residential development Nickel falls within safe guidelines for residential development Zinc falls within safe guidelines for residential development Mercury falls within safe guidelines for residential development

OC, OP, PCB

Organochlorine Pesticides (OC) falls within safe guidelines for residential development

Organophosphorus Pesticides ($\ensuremath{\mathsf{OP}}$) falls within safe guidelines for residential development

Polychlorinated Biphenyls (PCB) falls within safe guidelines for residential development

The preliminary contamination investigation has been conducted on the areas of adjacent land proposed for dwelling development next to the existing vineyard of 253 Burrundulla Road, Burrundulla, NSW 2850 Lot 1 DP 198755. The results clearly demonstrate that soil contamination is not an issue and in the case of dwelling consent this should be approved in-line with the Development Application (DA)

No remedial soil works are required or recommended.



Additional Comments

Vineyards, orchards, and market garden soils have a typical background concentration of selected contaminants, and these would be expected to be found in any contaminant soil testing conducted on these sites.

Contaminants typical background concentration (mg/kg)

Arsenic1 to 50 mg/kg Cadmium1 mg/kg Copper2 to 100 mg/kg Lead2 to 200 mg/kg Zinc10-300 mg/kg Nickle5-200 mg/kg Mercury .03 mg/kg

(Reference Table 5 -A Soil Investigation Levels mg/kg)

Results from preliminary contamination testing fall within these ranges.

Photo Gallery



Site A





Sample Site A location -1 of 8



Site A Sample Grid 900 x 900

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Site A Sample Grid 900 x 900



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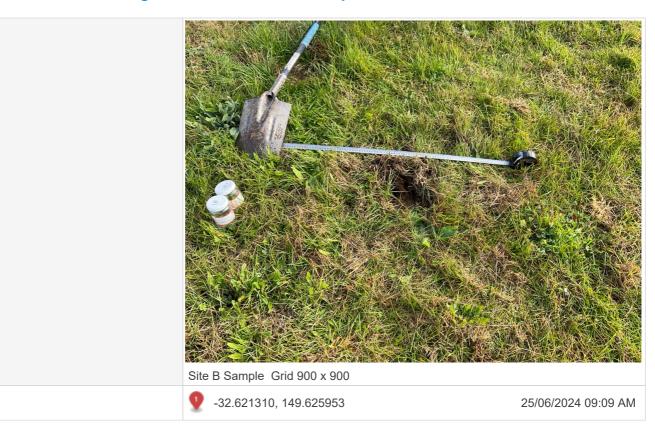
Sample Site B location - 1 of 8



Site B Sample Grid 900 x 900

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Form Locations

