[redacted] - Soil Contamination and Property Report

Section 1

Craigmoor Road Property	51 Tinja Lane Eurunderee Mudgee NSW 2850
Date/Time	16/09/2024
Part Craigmoor	Lot 1 DP 594499 and Lot 1 DP 549594

[redacted] - Soil Contamination and Property Report

Soil Contamination	For the purpose gaining dwelling entitlement consent from Mid Western Regional council PB Ag Consulting have conducted a preliminary contamination investigation on the area of an old vineyard site (removed) located at 51 Tinja Lane Eurunderee Mudgee NSW 2850, Lot 1 DP 594499 and Lot 1 DP 549594, which would be the proposed house site. Compliance with State Environmental Planning Policy (Resilience and Hazards) 2021 The subject site is located on an old vineyard site 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 was approximately (75x75m) (.562Ha) Number of sample sites required per site is 15 (EPA Sampling Design Contamination Guidelines) - Samples were taken at set intervals across the pre determined test area. See attached sample grid - 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 16th of September 2024 and samples delivered to Lab 16th of September 2024 Soil was tested for 8 minerals, OC, OP. PCB Soil Results (See appendix A for full soil Results) (See appendix Table 5-A - Soil Investigation Levels HILs)

[redacted] Soil Contamination and Property Report

	(See appendix Table 5-A - Soil Investigation Levels HILs) Summary of results 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 (OP) falls within safe guidelines for residential development Polychlorinated Biphenyls (PCB) falls within safe guidelines for residential development 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.
Current Property Status	The property located at 51 Tinja Lane Eurunderee Mudgee NSW 2850, Lot 1 DP 594499 and Lot 1 DP 549594 was originally used for premium wine grape production. The vineyard was removed approximately 10 years again 20214. Property is approximately 44.1 hectares Once vines removed the property has been used for grazing cattle. Pasture is native based being clover, medic, annual rye grass with red grass and sections of paspalum. Property is fenced into 3 main paddocks Existing bore in place

[redacted] Soil Contamination and Property Report

Property Potential	In conjunction with the preliminary contamination testing PB Ag has prepared the following report as per requirements of Mid Western Regional Council who require an agronomic report based on the introduction of intensive agriculture enterprise and the overall sustainability and profitability of this agribusiness. Proposal To gain building entitlement approval on the property located 51 Tinja Lane Eurunderee Mudgee NSW 2850, Lot 1 DP 594499 and Lot 1 DP 549594 Mid-Western Regional Development Control Plan Section 7.2 Rural Subdivision Primary Production Small Lots Development applications on land in the RU4 zone for the purpose of intensive agriculture and a dwelling will need to include: · Details of the proposed/existing intensive agricultural activity · Business plan prepared by a suitably qualified professional detailing production costs, harvesting potential and conservative market prices. · Evidence of water licenses satisfactory for the use · Evidence of commencement or intention to commence the activity. In Relation to Mid-Western Regional Development Control Plan Section 7.2 Rural Subdivision Primary Production Small Lots The land in 51 Tinja Lane Eurunderee Mudgee NSW 2850, Lot 1 DP 594499 and Lot 1 DP 549594 is zoned RU4 which is land suitable for the purpose of Intensive Agriculture and dwelling entitlement. Total area is approximately 44.1 hectares. Water Requirement A water license is held for the purpose of supplying irrigation to this property. The allocation is 60 megalitres with additional water available if required. - WAL 45210 - License 80AL727002 - 60 megalitre allocation (60 units) Water is sourced from an existing bore located on the property. The bore is equipped with electric submersible pump. Water is delivered to existing paddocks by a series of existing buried mainlines. With 60 megalitres available and an average 600 mm rainfall per annum there is sufficient water held to allow for the introduction of proposed intensive ag enterprise to be developed. Proposed Intensive Ag Enterprise and Main Activities of Project For the purpose of gaining dwelling entitlement on 51 Tinja Lane Eurunderee Mudgee NSW 2850, Lot 1 DP 594499 and Lot 1 DP 549594 a combination of irrigated lucerne and dry land lucerne will be established for the purpose of premium hay production. The proposed agricultural industry is in line with the RU4 zoning of the land and fits within the Mid-Western Regional Development Control Plan Section 7.2 Rural Subdivision Primary Production Small Lots The soil is suitable to establish lucerne with a PH range of 7.5 to 6.2, soil is classified as a medium soil type and consist of loam over medium clay. The proposed activity is the production of premium lucerne for the purpose of selling premium lucerne hay. The proposed activity of lucerne production meets the financial requirement of intensive agricultural in relation to income generated requirements and sustainability of the project. Areas to planted to lucerne are 12.1 hectares dryland, 10.6 hectares irrigated. See map attached. The main activities of this intensive ag project are •Sowing

[redacted] Soil Contamination and Property Report

•Sowing
•Irrigation
•Weed Control
•Pest Control
•Fertiliser application
•Mowing x 7
•Raking x 7
•Baling x 7
•Pick up x 7
•Stacking / Storage x 7
•Selling / Loading

Managing a premium lucerne operation is a 12-month operation with management programs as listed above requiring critical timing of each application which is required for the successful production of this crop.

Budget

A detailed budget estimation has been prepared to show the sustainability of this project. The Budget estimation takes into account the fact that lucerne production is a 5 year rotation before re planting is required. The profit and loss has been forecasted over a five year term. For purpose of report both irrigated and dryland production have been taken into account in relation to profitability and sustainability.

Irrigated Lucerne profit and Loss

Year 1 - $83,399.74
Year 2 - $86,685.74
Year 3 - $86,685.74
Year 4 - $86,685.74
Year 5 - $86,685.74

Dryland Lucerne profit and Loss

Year 1 - $1,257.19
Year 2 - $3,713.49
Year 3 - $3,713.49
Year 4 - $3,713.49
Year 5 - $3,713.49

Total annual profit estimation $90,399.23

See budget estimations at back of report

Environmental Effects

In Relation to Mid-Western Regional Council Statement of Environmental Effects the below comments address the components directly related to the intensive Ag development

•The proposal is looking at the sustainability of an intensive agriculture enterprise for the purpose of gaining approval and consent for a dwelling (house) to be built on 51 Tinja Lane Eurunderee Mudgee NSW 2850, Lot 1 DP 594499 and Lot 1 DP 549594 .The land is currently zone RU4 and meets the requirements of intensive agriculture development. Due to the intensive nature of this crop on farm accommodation is required.

•The area of the overall property is approximately approximately 44.1 hectares. The proposal is to conduct extensive agriculture production of premium lucerne production on 10.1 hectares. Premium lucerne production meets the requirements of extensive agriculture

•The property is mostly flat with good sections of the property having gentle slopes. The entire property is cleared

•The present and previous use of the land located 51 Tinja Lane Eurunderee Mudgee NSW 2850, Lot 1 DP 594499 and Lot 1 DP 549594 is currently dryland grazing and previous uses include irrigated wine grape production

•Adjoining land use in relation to this submission for approval / consent dwelling application will not be affected by the development of this intensive Ag project. Current land uses adjoining this site are on RU4 zoned land in the area and are

[redacted] Soil Contamination and Property Report

	Current land uses adjoining this site are on RU4 zoned land in the area and are Lucerne Hay production, Forage Cropping, Viticulture, Horticulture and Grazing. Within the immediate area multiple intensive Ag enterprises are in place. In relation to this proposal and submission for approval / consent dwelling application the proposed application will have no effect on the adjoining land and residences and will be compatible with all current and existing land uses allowable on land zoned RU4 •Machinery required to support this intensive Ag project is a tractor, mower conditioner, rake and baler. Machinery required is no different to existing machinery currently used in that area •Traffic will not be increased due to the establishment of this intensive Ag project. Peak periods of activity are from September to April with loading of hay for markets carried out over a 12 month period. No special transport or loading facilities are required.
Summary	The application for the proposed dwelling approval / consent for 51 Tinja Lane Eurunderee Mudgee NSW 2850, Lot 1 DP 594499 and Lot 1 DP 549594 to support this intensive Ag project should be granted. Water availability and quantity is in line with what is required. Land is currently zoned RU4. The proposed project is in line with what adjoining properties are doing and this project will have no increased effect on traffic, noise of affect any of the existing neighbour's farming operations.
Photo Gallery	 Proposed House site

[redacted] Soil Contamination and Property Report

Typical Pasture

Proposed Paddock 1- Lucerne

[redacted] - Soil Contamination and Property Report

Proposed Paddock 2 - Lucerne

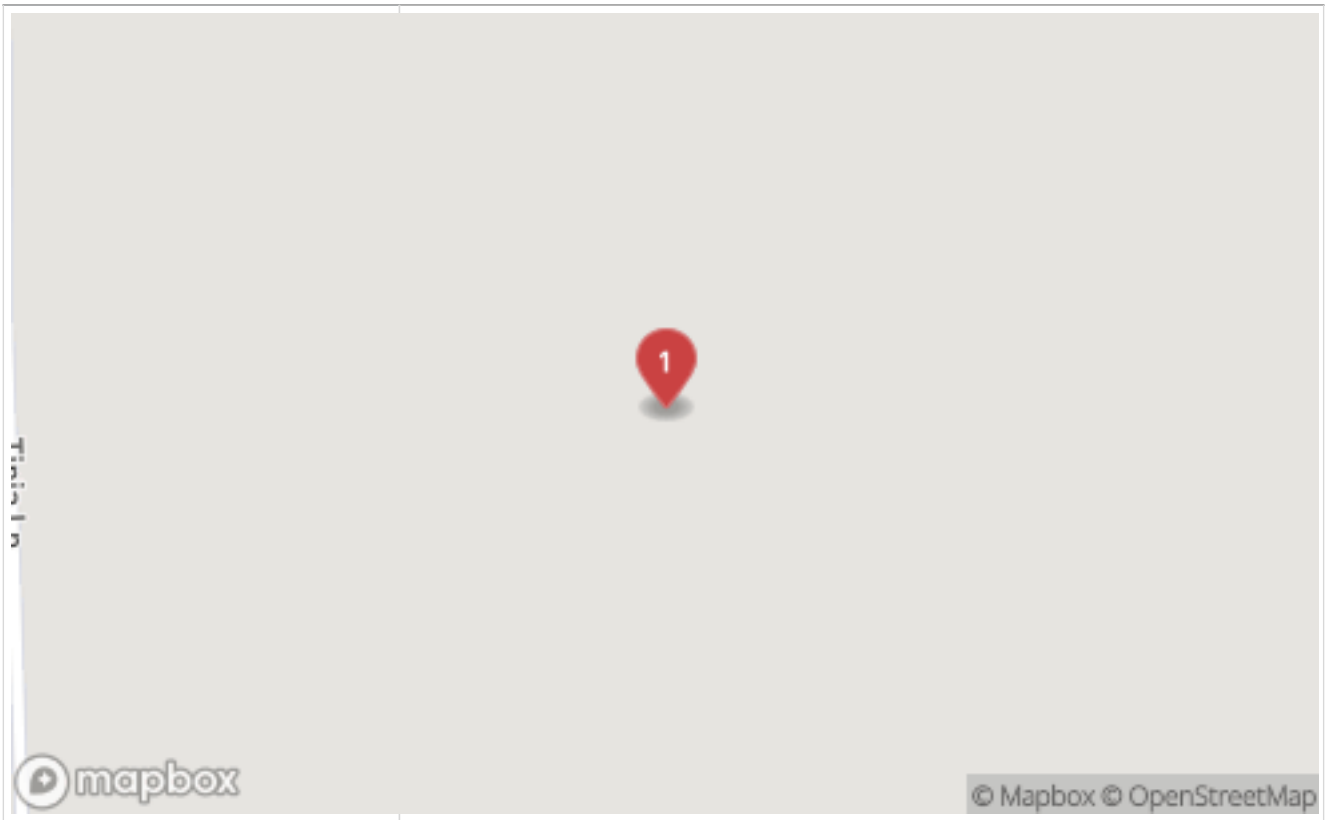
Small scale grazing Paddock

[redacted] - Soil Contamination and Property Report

	 Bore
	-32.548535, 149.593356 16/09/2024 03:31 PM
Video	
Video	
Video	
Disclaimer and PPE Comment	Carefully read all information before commencing any treatment program. Whilst all care has been taken in the provision of this recommendation, environmental, seasonal and other conditions can affect performance of treatment. Accordingly PB Ag and / or any of its agents will not be liable in any way whatsoever for the failure of the treatment where environmental, seasonal or other conditions have changed since the date of the record. If chemicals are not used according to label recommendations you do so at your own risk. Always read the label before use. PPE to be worn as per label instructions.

[redacted] - Soil Contamination and Property Report

Form Locations



Lane - Google

google.com/maps/d/edit?hl=en&mid=1qjBlTwasGoJUgNlcILY20WT6JvIJKWM&ll=-32.54586561777204%2C149.59734145000002&z=16

a Lane

s ago

Share Preview

yles

ne, 2850 - 44.1 Ha

ouse site

nsive Agriculture

yles

12.1 ha

10.6 ha

Tinja Ln

Westcourt Ln

Craigmoor Rd

Trelawney

Henry Lawson Dr

Highgrove Cottage

Paddock 2 - 10.6 ha

Paddock 1 - 12.1 ha

51 Tinja Lane, 2850 - ...

Eurunderee Ln

Eurunderee House

Old Post Office Cottage Mudgee

Roth Family Orch

Proposed house site

10'S Estate

YEATES Wines

Google My Maps

Keyboard shortcuts

Map data ©2024 Imagery ©2024 Airbus, CNES / Air

Search

ENG US

BOX 47V
(AU148710)

NEW SOUTH WALES

CERTIFICATE OF TITLE

WATER MANAGEMENT ACT, 2000

WAL TITLE REFERENCE	
WAL45210	
EDITION	DATE OF ISSUE
1	5/7/2024
CERTIFICATE AUTHENTICATION CODE	
3R9Z-2N-MC5V	

This certificate is issued under s87B of the Water Management Act, 2000.

ANY ATTEMPT TO ALTER THIS CERTIFICATE COULD RESULT IN HEAVY FINES OR IMPRISONMENT (S.141 REAL PROPERTY ACT).

WARNING NOTE: INFORMATION ON THIS REGISTER IS NOT GUARANTEED

TENURE TYPE: CONTINUING

HOLDER(S)

BPI PROPERTY INVESTMENTS PTY LTD

ENCUMBRANCES
---
1. TERM TRANSFER: NIL

ACCESS LICENCE DETAILS

CATEGORY: AQUIFER

SHARE COMPONENT:
SHARE - 60 UNITS
WATER SOURCE - LACHLAN FOLD BELT MDB GROUNDWATER SOURCE
WATER SHARING PLAN - NSW MURRAY DARLING BASIN FRACTURED ROCK GROUNDWATER SOURCES 2020

EXTRACTION COMPONENT:
TIMES/RATES/CIRCUMSTANCES - SUBJECT TO THE CONDITIONS OF THE WATER ACCESS LICENCE
EXTRACTION FROM - AQUIFER
EXTRACTION ZONE - LACHLAN FOLD BELT MDB (MUDGEE) MANAGEMENT ZONE

NOMINATED WORKS:
WORK APPROVAL NUMBER(S) - NIL
INTERSTATE TAGGING ZONE - NIL

CONDITIONS

LICENCE CONDITIONS FORM A PART OF THIS LICENCE AND AFFECT THE SHARE AND EXTRACTION COMPONENTS. CONDITION STATEMENTS ARE AVAILABLE FROM WATERNSW

NOTES

A WATER LICENCE INFORMATION SHEET IS AVAILABLE FROM THE WATERNSW WEBSITE AND SHOULD BE REFERRED TO IN INTERPRETING THIS LICENCE.
WATERNSW PHONE 1300 662 077, EMAIL CUSTOMER.HELPDESK@WATERNSW.COM.AU
LICENCE REFERENCE NUMBER: 80AL727002

**** END OF CERTIFICATE ****

Irrigated Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	10.6		Seed	$ 280.00		Irrigation	$ 180.00
Yield per cut tonne	2.15		Fertiliser	$ 55.00		Hay Making	$ 320.00
Yield per year tonne	18	Bales / ha	Sowing	$ 65.00		Pick Up	$ 60.00
Premium Hay	$ 25.00	62	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	18	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	9	Insecticide	$ 8.50			
			Application	$ 65.00			

Year 1	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ 2,968.00								
Fertiliser				$ 583.00								
Sowing				$ 689.00								$ 455.80
Winter Herbicide												$ 455.80
Application								$ 689.00				
Summer Herbicide								$ 228.96				
Application												
Insecticide		$ 90.10										
Application		$ 689.00										
Irrigation				$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Hay Making				$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00		
Pick Up				$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00		
Irrigation			$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Total	$ -	$ 779.10	$ 1,908.00	$ 12,084.00	$ 7,844.00	$ 7,844.00	$ 7,844.00	$ 8,761.96	$ 7,844.00	$ 7,844.00	$ -	$ 911.60

Total Cost	$	63,664.66	
		Profit and loss	$ 83,399.74

Return by Cut

Premium H	$	16,430.00
2nd Grade	$	3,434.40
Mulch Hay	$	1,144.80
	$	21,009.20

Total over 7 cuts

Premium Hay	$	115,010.00
2nd Grade Hay	$	24,040.80
Mulch Hay	$	8,013.60
	$	147,064.40

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Irrigated Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	10.6		Seed	$ -		Irrigation	$ 180.00
Yield per cut tonne	2.15		Fertiliser	$ 100.00		Hay Making	$ 320.00
Yield per year tonne	18	Bales / ha	Sowing			Pick Up	$ 60.00
Premium Hay	$ 25.00	62	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	18	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	9	Insecticide	$ 8.50			
			Application	$ 60.00			

Yerar 2	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ -								
Fertiliser				$ 1,060.00								
Sowing				$ -								$ 455.80
Winter Herbicide												$ 455.80
Application								$ 636.00				
Summer Herbicide								$ 228.96				
Application												
Insecticide		$ 90.10										
Application		$ 636.00										
Irrigation				$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Hay Making				$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00		
Pick Up				$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00		
Irrigation			$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Total	$ -	$ 726.10	$ 1,908.00	$ 8,904.00	$ 7,844.00	$ 7,844.00	$ 7,844.00	$ 8,708.96	$ 7,844.00	$ 7,844.00	$ -	$ 911.60

Total Cost	$ 60,378.66

Profit and loss	$ 86,685.74

Return by Cut

Premium H	$ 16,430.00
2nd Grade	$ 3,434.40
Mulch Hay	$ 1,144.80
	$ 21,009.20

Total over 7 cuts

Premium Hay	$	115,010.00
2nd Grade Hay	$	24,040.80
Mulch Hay	$	8,013.60
	$	147,064.40

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Irrigated Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	10.6		Seed	$ -		Irrigation	$ 180.00
Yield per cut tonne	2.15		Fertiliser	$ 100.00		Hay Making	$ 320.00
Yield per year tonne	18	Bales / ha	Sowing			Pick Up	$ 60.00
Premium Hay	$ 25.00	62	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	18	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	9	Insecticide	$ 8.50			
			Application	$ 60.00			

Year 3	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ -								
Fertiliser				$ 1,060.00								
Sowing				$ -								$ 455.80
Winter Herbicide												$ 455.80
Application								$ 636.00				
Summer Herbicide								$ 228.96				
Application												
Insecticide		$ 90.10										
Application		$ 636.00										
Irrigation				$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Hay Making				$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00		
Pick Up				$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00		
Irrigation			$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Total	$ -	$ 726.10	$ 1,908.00	$ 8,904.00	$ 7,844.00	$ 7,844.00	$ 7,844.00	$ 8,708.96	$ 7,844.00	$ 7,844.00	$ -	$ 911.60

Total Cost	$ 60,378.66

Profit and loss	$ 86,685.74

Return by Cut

Premium H	$ 16,430.00
2nd Grade	$ 3,434.40
Mulch Hay	$ 1,144.80
	$ 21,009.20

Total over 7 cuts

Premium Hay	$	115,010.00
2nd Grade Hay	$	24,040.80
Mulch Hay	$	8,013.60
	$	147,064.40

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Irrigated Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	10.6		Seed	$ -		Irrigation	$ 180.00
Yield per cut tonne	2.15		Fertiliser	$ 100.00		Hay Making	$ 320.00
Yield per year tonne	18	Bales / ha	Sowing			Pick Up	$ 60.00
Premium Hay	$ 25.00	62	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	18	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	9	Insecticide	$ 8.50			
			Application	$ 60.00			

Year 4	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ -								
Fertiliser				$ 1,060.00								
Sowing												$ 455.80
Winter Herbicide												$ 455.80
Application								$ 636.00				
Summer Herbicide								$ 228.96				
Application												
Insecticide		$ 90.10										
Application		$ 636.00										
Irrigation				$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Hay Making				$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00		
Pick Up				$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00		
Irrigation			$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Total	$ -	$ 726.10	$ 1,908.00	$ 8,904.00	$ 7,844.00	$ 7,844.00	$ 7,844.00	$ 8,708.96	$ 7,844.00	$ 7,844.00	$ -	$ 911.60

Total Cost	$	60,378.66

Profit and loss	$	86,685.74

Return by Cut

Premium H	$	16,430.00
2nd Grade	$	3,434.40
Mulch Hay	$	1,144.80
	$	21,009.20

Total over 7 cuts

Premium Hay	$	115,010.00
2nd Grade Hay	$	24,040.80
Mulch Hay	$	8,013.60
	$	147,064.40

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Irrigated Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	10.6		Seed	$ -		Irrigation	$ 180.00
Yield per cut tonne	2.15		Fertiliser	$ 100.00		Hay Making	$ 320.00
Yield per year tonne	18	Bales / ha	Sowing			Pick Up	$ 60.00
Premium Hay	$ 25.00	62	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	18	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	9	Insecticide	$ 8.50			
			Application	$ 60.00			

Year 5	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ -								
Fertiliser				$ 1,060.00								
Sowing												$ 455.80
Winter Herbicide												$ 455.80
Application								$ 636.00				
Summer Herbicide								$ 228.96				
Application												
Insecticide		$ 90.10										
Application		$ 636.00										
Irrigation				$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Hay Making				$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00	$ 3,392.00		
Pick Up				$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00	$ 636.00		
Irrigation			$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00	$ 1,908.00		
Total	$ -	$ 726.10	$ 1,908.00	$ 8,904.00	$ 7,844.00	$ 7,844.00	$ 7,844.00	$ 8,708.96	$ 7,844.00	$ 7,844.00	$ -	$ 911.60

Total Cost	$ 60,378.66

Profit and loss	$ 86,685.74

Return by Cut

Premium H	$ 16,430.00
2nd Grade	$ 3,434.40
Mulch Hay	$ 1,144.80
	$ 21,009.20

Total over 7 cuts

Premium Hay	$	115,010.00
2nd Grade Hay	$	24,040.80
Mulch Hay	$	8,013.60
	$	147,064.40

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Dryland Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	12.1		Seed	$ 168.00		Irrigation	$ -
Yield per cut tonne	2		Fertiliser	$ 60.00		Hay Making	$ 320.00
Yield per year tonne	6	Bales / ha	Sowing	$ 65.00		Pick Up	$ 60.00
Premium Hay	$ 25.00	33	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	12	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	5	Insecticide	$ 8.50			
			Application	$ 65.00			

Year 1	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ 2,032.80								
Fertiliser				$ 726.00								
Sowing				$ 786.50								$ 520.30
Winter Herbicide												$ 520.30
Application								$ 786.50				
Summer Herbicide								$ 261.36				
Application												
Insecticide		$ 102.85										
Application		$ 786.50										
Irrigation				$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Hay Making				$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00		
Pick Up				$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00		
Irrigation			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Total	$ -	$ 889.35	$ -	$ 8,143.30	$ 4,598.00	$ 4,598.00	$ 4,598.00	$ 5,645.86	$ 4,598.00	$ 4,598.00	##	$ 1,040.60

Total Cost	$ 38,709.11

Profit and loss	$ 1,257.19

Return by Cut

Premium H	$ 9,982.50
2nd Grade	$ 2,613.60
Mulch Hay	$ 726.00
	$ 13,322.10

Total over 3 cuts

Premium Hay	$	29,947.50
2nd Grade Hay	$	7,840.80
Mulch Hay	$	2,178.00
	$	39,966.30

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Dryland Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	12.1		Seed	$ -		Irrigation	
Yield per cut tonne	5		Fertiliser	$ 100.00		Hay Making	$ 320.00
Yield per year tonne	6	Bales / ha	Sowing			Pick Up	$ 60.00
Premium Hay	$ 25.00	33	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 16.00	12	Summer Herbicide	$ 21.60			
Mulch Hay	$ 9.00	5	Insecticide	$ 8.50			
			Application	$ 60.00			

Yerar 2	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ -								
Fertiliser				$ 1,210.00								
Sowing												$ 520.30
Winter Herbicide												$ 520.30
Application								$ 726.00				
Summer Herbicide								$ 261.36				
Application												
Insecticide		$ 102.85										
Application		$ 726.00										
Irrigation				$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Hay Making				$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00		
Pick Up				$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00		
Irrigation			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Total	$ -	$ 828.85	$ -	$ 5,808.00	$ 4,598.00	$ 4,598.00	$ 4,598.00	$ 5,585.36	$ 4,598.00	$ 4,598.00	##	$ 1,040.60

Total Cost	$ 36,252.81

Profit and loss	$ 2,297.79

Return by Cut

Premium H	$ 9,982.50
2nd Grade	$ 2,323.20
Mulch Hay	$ 544.50
	$ 12,850.20

Total over 3 cuts

Premium Hay	$	29,947.50
2nd Grade Hay	$	6,969.60
Mulch Hay	$	1,633.50
	$	38,550.60

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Dryland Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	12.1		Seed	$ -		Irrigation	
Yield per cut tonne	2		Fertiliser	$ 100.00		Hay Making	$ 320.00
Yield per year tonne	6	Bales / ha	Sowing			Pick Up	$ 60.00
Premium Hay	$ 25.00	33	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	12	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	5	Insecticide	$ 8.50			
			Application	$ 60.00			

Year 3	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ -								
Fertiliser				$ 1,210.00								
Sowing				$ -								$ 520.30
Winter Herbicide												$ 520.30
Application								$ 726.00				
Summer Herbicide								$ 261.36				
Application												
Insecticide		$ 102.85										
Application		$ 726.00										
Irrigation				$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Hay Making				$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00		
Pick Up				$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00		
Irrigation			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Total	$ -	$ 828.85	$ -	$ 5,808.00	$ 4,598.00	$ 4,598.00	$ 4,598.00	$ 5,585.36	$ 4,598.00	$ 4,598.00	##	$ 1,040.60

Total Cost	$ 36,252.81

Profit and loss	$ 3,713.49

Return by Cut

Premium H	$ 9,982.50
2nd Grade	$ 2,613.60
Mulch Hay	$ 726.00
	$ 13,322.10

Total over 3 cuts

Premium Hay	$	29,947.50
2nd Grade Hay	$	7,840.80
Mulch Hay	$	2,178.00
	$	39,966.30

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Dryland Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	12.1		Seed	$ -		Irrigation	
Yield per cut tonne	2		Fertiliser	$ 100.00		Hay Making	$ 320.00
Yield per year tonne	6	Bales / ha	Sowing			Pick Up	$ 60.00
Premium Hay	$ 25.00	33	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	12	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	5	Insecticide	$ 8.50			
			Application	$ 60.00			

Year 4	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ -								
Fertiliser				$ 1,210.00								
Sowing												$ 520.30
Winter Herbicide												$ 520.30
Application								$ 726.00				
Summer Herbicide								$ 261.36				
Application												
Insecticide		$ 102.85										
Application		$ 726.00										
Irrigation				$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Hay Making				$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00		
Pick Up				$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00		
Irrigation			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Total	$ -	$ 828.85	$ -	$ 5,808.00	$ 4,598.00	$ 4,598.00	$ 4,598.00	$ 5,585.36	$ 4,598.00	$ 4,598.00	##	$ 1,040.60

Total Cost	$ 36,252.81

Profit and loss	$ 3,713.49

Return by Cut

Premium H	$ 9,982.50
2nd Grade	$ 2,613.60
Mulch Hay	$ 726.00
	$ 13,322.10

Total over 3 cuts

Premium Hay	$	29,947.50
2nd Grade Hay	$	7,840.80
Mulch Hay	$	2,178.00
	$	39,966.30

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Dryland Lucerne Hay Production Budget Estimation

Premium Lucerne Hay Production

Hectares	12.1		Seed	$ -		Irrigation	
Yield per cut tonne	2		Fertiliser	$ 100.00		Hay Making	$ 320.00
Yield per year tonne	6	Bales / ha	Sowing			Pick Up	$ 60.00
Premium Hay	$ 25.00	33	Winter Herbicide	$ 43.00			
2nd Grade Hay	$ 18.00	12	Summer Herbicide	$ 21.60			
Mulch Hay	$ 12.00	5	Insecticide	$ 8.50			
			Application	$ 60.00			

Year 5	Jul	Aug	Sep	Oct	Nov	Dec	jan	Feb	Mar	Apr	May	Jun
Seed				$ -								
Fertiliser				$ 1,210.00								
Sowing												$ 520.30
Winter Herbicide												$ 520.30
Application								$ 726.00				
Summer Herbicide								$ 261.36				
Application												
Insecticide		$ 102.85										
Application		$ 726.00										
Irrigation				$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Hay Making				$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00	$ 3,872.00		
Pick Up				$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00	$ 726.00		
Irrigation			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Total	$ -	$ 828.85	$ -	$ 5,808.00	$ 4,598.00	$ 4,598.00	$ 4,598.00	$ 5,585.36	$ 4,598.00	$ 4,598.00	##	$ 1,040.60

Total Cost	$ 36,252.81

Profit and loss	$ 3,713.49

Return by Cut

Premium H	$ 9,982.50
2nd Grade	$ 2,613.60
Mulch Hay	$ 726.00
	$ 13,322.10

Total over 3 cuts

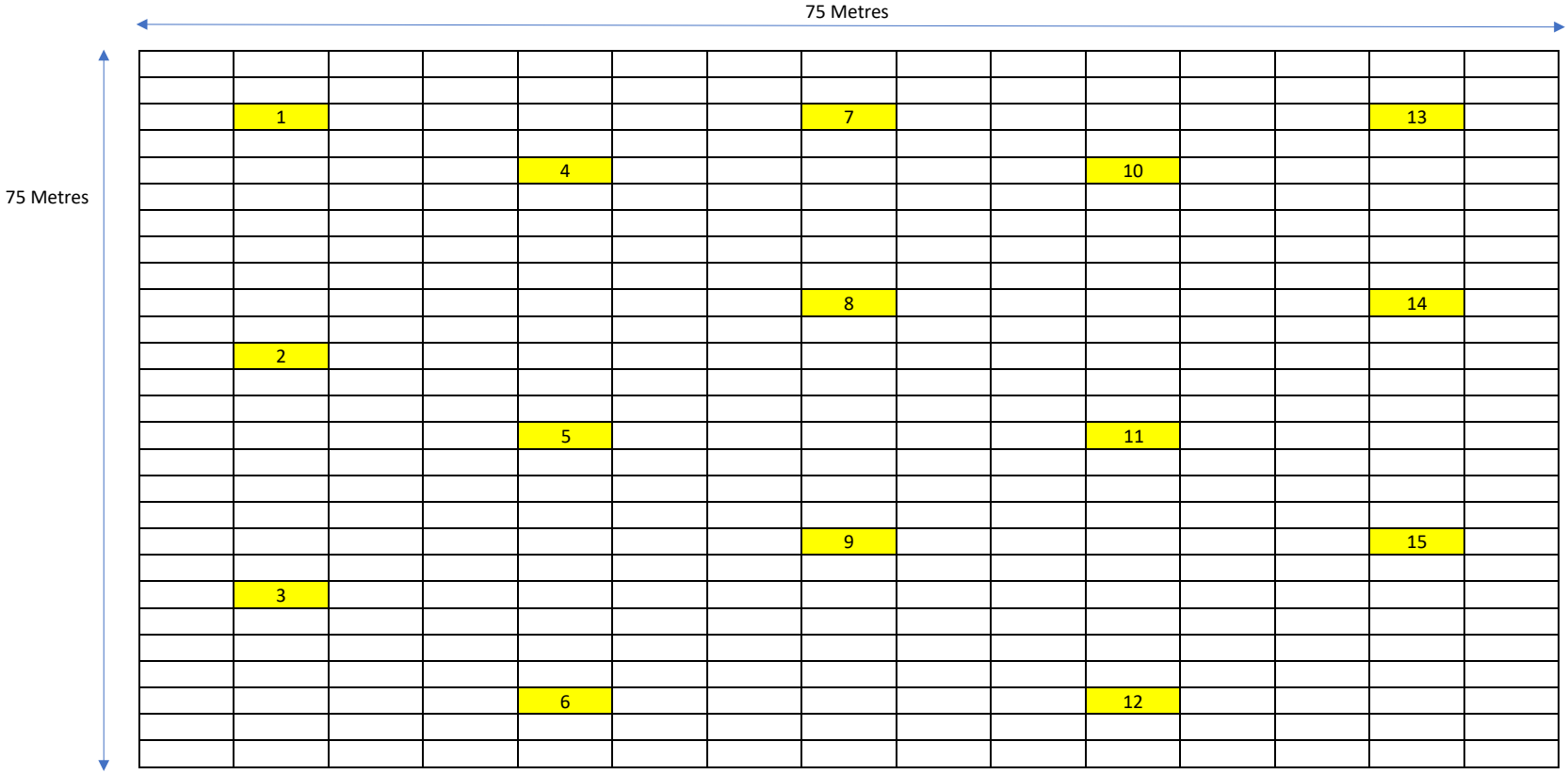
Premium Hay	$	29,947.50
2nd Grade Hay	$	7,840.80
Mulch Hay	$	2,178.00
	$	39,966.30

Based on 70% premium Hay, 20 % 2nd grade hay and 10 % mulch Hay. Hay making includes Tractor, Driver, Mowing, raking, Baling and accumulating. Irrigation includes power ,labour and water cost

Prepared by PB Ag Consulting

Sample Site 51 Tinja Lane, Eurunderee nSW 2850, LOT 1 DP 594499 LOT 1 DP549594

Proposed Dwelling Site - (.562 ha)



Note -Grid not to scale

Note - Not to scale

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

Substances	Health Investigation Levels (HILs)						Ecological Investigation Levels (EILs)		Background Ranges[6]
	A[1]	B[2]	C[3]	D	E	F	REIL[4]	Interim Urban[5]	
METALS/METALLOIDS									
Arsenic (total)	100			400	200	500		20	1 - 50
Barium								300	100 - 3000
Beryllium	20			80	40	100			
Cadmium	20			80	40	100		3	1
Chromium (III)	12%			48%	24%	60%		400	
Chromium (VI)	100			400	200	500		1	
Chromium (Total)*[7]									5 - 1000
Cobalt	100			400	200	500			1 - 40
Copper	1000			4000	2000	5000		100	2 - 100
Lead	300			1200	600	1500		600	2 - 200
Manganese	1500			6000	3000	7500		500	850
Methyl mercury	10			40	20	50			
Mercury (inorganic)	15			60	30	75		1	0.03
Nickel	600			2400	600	3000		60	5 - 500
Vanadium								50	20 - 500
Zinc	7000			28000	14000	35000		200	10 - 300
ORGANICS									
Aldrin + Dieldrin	10			40	20	50			
Chlordane	50			200	100	250			
DDT + DDD + DDE	200			800	400	1000			
Heptachlor	10			40	20	50			
Polycyclic aromatic hydrocarbons (PAHs)	20			80	40	100			
Benzo(a)pyrene	1			4	2	5			
Phenol	8500			34000	17000	42500			
PCBs (Total)	10			40	20	50			
Petroleum Hydrocarbon Components (constituents): • >C16 – C35 Aromatics[8]	90			360	180	450			
• >C16 – C35 Aliphatics	5600			22400	11200	28000			
• >C35 Aliphatics	56000			224000	112000	280000			
OTHER									
Boron	3000			12000	6000	15000			
Cyanides (Complexed)	500			2000	1000	2500			
Cyanides (free)	250			1000	500	1250			
Phosphorus								2000	
Sulfur								600	
Sulfate[9]								2000	

1 Human exposure settings based on land use have been established for HILs (see Taylor and Langley 1998). These are:
- **A.** 'Standard' residential with garden/accessible soil (home-grown produce contributing less than 10% of vegetable and fruit intake; no poultry): this category includes children's day-care centres, kindergartens, preschools and primary schools.
- **B.** Residential with substantial vegetable garden (contributing 10% or more of vegetable and fruit intake) and/or poultry providing any egg or poultry meat dietary intake.
- **C.** Residential with substantial vegetable garden (contributing 10% or more of vegetable and fruit intake); poultry excluded.
- **D.** Residential with minimal opportunities for soil access: includes dwellings with fully and permanently paved yard space such as high-rise apartments and flats.
- **E.** Parks, recreational open space and playing fields: includes secondary schools.
- **F.** Commercial/Industrial: includes premises such as shops and offices as well as factories and industrial sites.

(For details on derivation of HILs for human exposure settings based on land use see Schedule B(7A).

2 Site and contaminant specific: on site sampling is the preferred approach for estimating poultry and plant uptake. Exposure estimates may then be compared to the relevant ADIs, PTWIs and GDs.

3 Site and contaminant specific: on site sampling is the preferred approach for estimating plant uptake. . Exposure estimates may then be compared to the relevant ADIs, PTWIs and GDs.

4 These will be developed for regional areas by jurisdictions as required.

5 Interim EILs for the urban setting are based on considerations of phytotoxicity, ANZECC B levels, and soil survey data from urban residential properties in four Australian capital cities.

6 Background ranges, where HILs or EILs are set, are taken from the Field Geologist's Manual, compiled by D A Berkman, Third Edition 1989. Publisher – The Australasian Institute of Mining & Metallurgy. This publication contains information on a more extensive list of soil elements than is included in this Table. Another source of information is Contaminated Sites Monograph No. 4: Trace Element Concentrations in Soils from Rural & Urban Areas of Australia, 1995. South Australian Health Commission.

7 Valence state not distinguished – expected as Cr (III).

8 The carbon number is an 'equivalent carbon number' based on a method that standardises according to boiling point. It is a method used by some analytical laboratories to report carbon numbers for chemicals evaluated on a boiling point GC column.

9 For protection of built structures.

Table 5-B

Groundwater Investigation Levels

SETTING[10]	Aquatic Ecosystems[11]		Drinking Water	Agricultural[9]	
	Marine Waters µg/L	Fresh Waters µg/L	Health[10]/ Aesthetic[11] mg/L	Irrigation (mg/L)	Livestock (mg/L)
METALS/METALLOIDS					
Aluminium		<5 (if pH <6.5) <100(if pH >6.5)	(0.2)	5.0	5.0
Antimony		30	0.003		
Arsenic (total)	50.0	50	0.007	0.1	0.5
Barium			0.7		
Beryllium		4		0.1	0.1
Boron			0.3	0.5-6.0	5.0
Cadmium	2.0	0.2-2.0	0.002	0.01	0.01
Chromium (Total)	50.0	10		1.0	
Chromium (VI)			0.05	0.1	1.0
Cobalt				0.05	1.0
Copper	5.0	2.0-5.0	2.0 (1.0)	0.2	0.5
Iron		1000	(0.3)	1.0	
Lead	5.0	1.0-5.0	0.01	0.2	0.1
Lithium				2.5	
Manganese			0.5 (0.1)	2.0	
Mercury (total)	0.1	0.1	0.001	0.002	0.002
Molybdenum			0.05	0.01	0.01
Nickel	15.0	15.0-150.0	0.02	0.02	1.0
Selenium	70.0	5.0	0.01	0.02	0.02
Silver	1.0	0.1	0.1		
Thallium	20.0	4.0			
Tin (tributyltin)	0.002	0.008			
Vanadium				0.1	0.1
Zinc	50.0	5.0-50.0	(3.0)	2.0	20.0
ORGANICS					
1,2-dichloroethane			0.003		
Benzo(a)pyrene			0.00001		
Carbon tetrachloride			0.003		
Chlorobenzene			0.3 (0.01)		
Dichloromethane (methylene chloride)			0.004		
Ethylbenzene			0.3 (0.003)		
Ethylenediamine tetracetic acid (EDTA)			0.25		
Hexachlorobutadiene	0.3	0.1	0.0007		

[10] Levels for recreational and industrial uses have not been set. For guidance on Recreational levels, see NHMRC/ARMCANZ, 1996. For recreational uses, toxic substances should, in general, not exceed the concentrations given for drinking water. For guidance on Industrial levels, see ANZECC, 1992. Industrial settings include: generic processes, hydro-electric power generation, textiles, chemical and allied industries, food and beverage, iron and steel, tanning and leather, pulp and paper, petroleum.

[11] Taken from Australian Water Quality Guidelines for Fresh and Marine Waters (AWQG) (ANZECC 1992)

SETTING[10]	Aquatic Ecosystems[11]		Drinking Water	Agricultural[9]	
	Marine Waters µg/L	Fresh Waters µg/L	Health[10]/ Aesthetic[11] mg/L	Irrigation (mg/L)	Livestock (mg/L)
ORGANICS (cont..)					
Monocyclic aromatic compounds					
Benzene	300.0	300.0	0.001		
Chlorinated benzenes		0.007-15.0[12]			
Chlorinated phenols	0.2-8.0	0.05-18.0[13]	0.04-1.5		
Phenol	50.0	50.0			
Toluene		300.0	0.8 (0.025)		
Xylene			0.6 (0.02)		
Pesticides	Footnote[14]	Footnote[15]	Footnote[16]		See guidelines for raw water for drinking water supply (AWQG, ANZECC 1992)
Aldrin	10.0 ng/L	10.0 ng/L	0.0003		
Chlordane	4.0 ng/L	4.0 ng/L	0.001		
DDT	1.0 ng/L	1.0 ng/L	0.02		
Dieldrin	2.0 ng/L	2.0 ng/L	0.0003		
Heptachlor	10.0 ng/L	10.0 ng/L	0.0003		
Phthalate esters					
di-n-butylphthalate		4.0			
di(2-ethylhexyl)phthalate		0.6			
other phthalate esters		0.2			
Polyaromatic hydrocarbons					
Polychlorinated biphenyls	0.004	0.001			
Polycyclic aromatic hydrocarbons	3.0	3.0			
Styrene (vinylbenzene)			0.03 (0.004)		
Tetrachloroethene			0.05		
Trichlorobenzenes (total)			0.03 (0.005)		
Vinyl chloride			0.0003		
OTHER					
Calcium					1,000.0
Chloride			(250.0)	30.0 700.0[17]	
Cyanide	5	0.005	0.08		
Fluoride			1.5	1.0	2.0
Nitrate-N			50.0		30.0
Nitrite-N			3.0		10.0
AESTHETIC PARAMETERS					
Colour and clarity	< 10% change in euphotic depth	< 10% change in euphotic depth			

[12] See table 2.8, p.2-49 AWQG (ANZECC 1992) for further information
[13] see table 2.9, p2-50 AWQG (ANZECC 1992) for further information
[14] see table 2.10 also, p.2-55 (ANZECC 1992) for further information
[15] see table 2.10 also, p.2-55 (ANZECC 1992) for further information
[16] see table on p32 (Guidelines for Pesticides), p32 (NHMRC/ARMCANZ 1996)
[17] Maximum chloride concentration should be set according to the sensitivity of the crop. For further information. (See Tables 5.1, 5.2, 5.3, 5.4, ANZECC 1992)