DM McMahon Pty Ltd
6 Jones St (PO Box 6118)
Wagga Wagga NSW 2650
t (02) 6931 0510
www.dmmcmahon.com.au

23 September 2024

Attention:
Junee One Pty Ltd
PO Box 1446
Fyshwick ACT 2609
BY EMAIL

To whom it may concern

Re: Preliminary Site Investigation – 192 Waterworks Road Junee NSW 2663

I refer to the written request from yourself to prepare a Preliminary Site Investigation (PSI) report for a proposed rezoning of agricultural land at 192 Waterworks Road Junee NSW, the site. The intended recipient of this report is yourself, and Junee Shire Council in the case of a planning proposal being submitted to rezone the site.

1. Executive summary

The site has a historical agricultural land use as far as records can ascertain with sheds built on the site in the 1980s/1990s. Potential contamination sources include persistent agricultural chemicals used across the site, fill material from an unknown source, and scattered rubbish.

Site observations found grazing farmland to the north east of the town of Junee. Two sheds and sheepyards exist in the approximate centre of the site. Another shed lies approximately 500m south of the centre of the site. A large gully runs east-west in the south of the site. The gully has been filled in various places to create crossings for vehicles and stock. Some scattered rubbish can be seen across the site, mostly concentrated in the gully and to the north of the centre sheds. No asbestos containing material was observed in the gully or across the site.

This PSI has been conducted to assess the risk to future site users from potential contaminants across the site. This assessment includes soil sampling and analysis for potential chemical contaminants at twenty-one locations across the site, and an assessment of the results against the Residential A (residential with garden/accessible soil) land use criteria. Groundwater is at deep depths underneath the site and is assessed to not be a pathway for contamination exposure to future residents and was not investigated.

The soil analysis returned results below the adopted criteria for Residential A land use for pesticides, heavy metals, hydrocarbons and solvents. Therefore, it is assessed the site is suitable for the proposed rezoning given management strategies are implemented during development.

2. Objectives

To determine whether potential site contamination poses a risk to human health for under a Residential A land use scenario.

3. Scope of work

To conduct a desktop study and detailed site inspection with sampling, analyse the data reliability, and undertake a risk assessment to human health based on the results.

4. Site identification

Project area – 78ha (approximately).

Address – 192 Waterworks Road Junee 2663.

Real property description – Lot 1 Section 15 DP 10919.

Centre coordinates – 555144E 6142419N (MGA Zone 55).

Site maps and the supplied proposed rezoning map can be seen in **Attachment A**.

5. Site history

The site has a historical agricultural land use as far as records can ascertain. Three sheds were built on site in the 1980s and 1990s, **Attachment B**.

The planning proposal involves rezoning land from RU1 Primary Production to Residential (R5 Large Lot Residential and RU5 Village) with a corresponding minimum lot size being 700sqm and 1,500sqm for the RU5 Village zone and 4,000sqm for the R5 zone.

The site was owned by farmer Christopher William Crawley in 1912 (known as part of Portion 113). The site remained in the Crawley family until 1949. It was then owned by the Knight family (farmers and carriers) until 1975. Junee One Pty Ltd is the current owner.

6. Site condition and surrounding environment

The site is located to the north east of the town of Junee. The site has been divided into five paddocks and is currently used for sheep grazing. A large shearing shed with attached yards is located in the approximate centre of the site. A sheep drafting race can be seen in the yards. A small slab on grade garden shed can be seen on the western side of the shearing shed. It is assumed the shed is used for fuel and chemical storage, but it was inaccessible at the time of investigation. An overgrown vegetable garden can be seen to the west of the tin shed. Another tin shed with attached water tank can be seen further west of the garden. It was also inaccessible at the time of investigation. Some scattered rubbish can be seen around the sheds including oil drums and plastic fertiliser containers. Remnants of a small bonfire can be seen to the east of the shearing shed. A small yard is located to the north of the shearing shed. Some rubbish consisting of plastic fertiliser containers can be seen in the centre. Some scattered car parts can be seen to the north of the small yard.

A silo and auger are located to the north east of the shearing shed. The auger is powered by a small petrol engine. The soil beneath the engine was free from odours or staining. The silo stands on an octagonal concrete pad. A second octagonal pad lies behind the existing silo where a second silo once stood. As shown in the aerial photographs, the second silo was removed sometime between

2020 and 2023. Some scattered rubbish can be seen around the silo including tyres, plastic fertiliser containers and bricks. Fill can be seen around the silo. A small dam lies to the east of the silo. The dam appears to have been dry for some time. Fill has been placed around the dam.

A third shed lies approximately 500m south of the shearing shed. The portal frame shed is currently used to store a trailer and tow behind spreader. Two concrete water tanks are located on the western wall. A hose leads from one of the tanks to a water trough inside the shed. Some old steel drums can be seen around the shed along with plastic fertiliser containers. Some tin sheets have been discarded to the north east of the shed.

A large gully is located to the south of the third shed. The gully runs east west and has had trees planted in the gully. Old steel drums have been used as tree guards. Fill material has been placed in the gully to the south west of the third shed to create a crossing for vehicles and livestock. Another small crossing has been created to the west of the first crossing. The second crossing consists of concrete pipes, roof tiles, tin, bricks, concrete slabs and star pickets. No asbestos containing material was observed. A tree is located approximately 150m west of the dam and an old car has been discarded here. Another crossing has been created approximately 150m west of the tree. The third crossing has been covered over with grass and rocks have been piled on the western side of the third crossing. The gully continues off site, past the western boundary. A painted concrete tank lies on the western boundary.

Scattered rubbish can be seen across the site consisting mostly of timber, tin, steel drums and plastic fertiliser containers. No asbestos containing material was observed across the site or in the gully. The shed to the west of the shearing shed is assumed to be for limited quantities of fuel and chemical storage but this was unable to be confirmed. A map of the site features and site photographs can be seen in **Attachment C**.

The site lies mostly on undulating to rolling low hills formed on Silurian granites associated with the Wantabadgery Formation. Parent materials consist of granite and granodiorite. The site crests in the southern half of the site and granite outcrops can be seen across the site.

The site surface was covered in pasture grasses. The typical profile is topsoil underlain by brown sandy clay. Rabbit warrens were seen extensively across the site. Fill could be seen around the site adjacent to the driveway near the entrance to the site from Waterworks Road, around the dam, near the silo and in various places within the gully. The fill was visually assessed to be natural material aside from the fill used to make the second crossing. No asbestos containing material was observed in this fill, but asbestos finds are possible.

There are no registered groundwater bores on site however nearby groundwater bores suggest groundwater is >10m below ground level. Groundwater is likely to be a muted reflection of the surface topography in the underlying geology with flow to the south west. Groundwater is not considered a drinking water resource in the locale.

The surrounding land use is agricultural and some large lot residential. The Main Southern Railway Line is to the north of the site, across Waterworks Road. The Junee Golf Club is located 500m south

of the site, from the southern boundary. The site is not mapped as a natural resource sensitivity area or as being in a flood planning area.

Three sites in Junee are on the list of NSW contaminated sites notified to the EPA: an olive grove (located 1.4km south from the southern boundary of the site), the United service station (located 1.4km south west from the south west corner of the site); and the Junee railway workshops (located 2.7km south west from the south west corner of the site. Regulation under the Contaminated Lands Management Act 1997 is not required for any of these sites.

7. Sampling and Analysis Quality Plan and sampling methodology

The sampling plan includes an analysis of the Data Quality Objectives (DQOs) which have been developed to define the type and quality of data to meet the project objectives. The DQOs have been developed generally in accordance with the seven step DQO process as outlined in AS 4482.1:2005 and the USA EPA: Guidance on Systematic Planning Using the Data Quality Objectives Process (2006a) with the information inputs provided in this PSI. The DQOs can be provided upon request.

The following sampling is proposed for the assessment of in situ material for site suitability. These analytes are associated with the previous land use and potential contamination sources.

- A visual and tactile assessment in situ material, AS1726 (2017) Geotechnical Site Investigations.
- 15 systematic grid soil sample locations across the site. Samples will be tested for heavy metals and pesticides at a NATA accredited laboratory.
- 6 judgemental soil sample locations around the existing sheds and in the yards. Samples will be tested for hydrocarbons, solvents, heavy metals, and pesticides at a NATA accredited laboratory.
- Sampling was undertaken by reference to AS 4482.1:2005 - Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds (Withdrawn) and AS 4482.2:1999 - Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances (Withdrawn). Although these guidelines have recently been withdrawn, they have been used in the absence of other relevant Australian publications.
- A plan of the sampling locations can be seen in **Attachment D**.
- One duplicate and rinsate sample was taken for the sampling event.

A duplicate and rinsate sample was used to assess sampling quality assurance and quality control with relative percent differences of <30% expected for the duplicate and negligible levels of contamination expected for the rinsate.

The following will be used as an initial analytical screening of the data to determine whether further assessment is required:

- Residential A assessment criteria from Schedule B1 of the National Environment Protection (Assessment of Site Contamination) Measure 2013: Table 1A (1) Soils with 3m of surface and Table 1B (1-4) Soils within 2m of surface.

Where exceedances of these criteria indicate a risk to human health, further investigation, assessment, and remediation if required, will be carried out as appropriate.

8. Results

The sampling was conducted over one day on 11 September 2024. The weather was sunny with cool winds. Soils consisted of topsoil overlying brown sandy clay. A grab sample was taken at each of the twenty-one sampling locations to 0.3m depth in the topsoil. No chemical staining or odours were noted during the sampling. Sampling locations can be seen in **Attachment D**.

A summary of the analytical results are as follows:

- Heavy metals are below the limit of reporting or the adopted criteria.
- Pesticides are below the limit of reporting and the adopted criteria.
- Hydrocarbons are below the limit of reporting or the adopted criteria.
- Solvents are below the limit of reporting and the adopted criteria.

The tabulated results with a comparison to the adopted criteria can be seen in **Attachment E**. Laboratory reports can be seen in **Attachment F**.

9. Quality assurance/quality control data evaluation

The duplicate sample (sample 2) returned relative percent difference of <30% for all analytes. The rinsate sample returned results below the limit of reporting. No outliers exist in the laboratory testing aside from a matrix spike outlier for arsenic. This is considered to be of low significance as the arsenic results were well below the adopted criteria.

In consideration of the adopted QA/QC procedures and the results from their subsequent analysis, McMahon assesses the QA/QC results are suitable for the investigation undertaken and reflect the analytical data is of a suitable quality to determine contamination risk with an appropriate level of confidence.

10. Conceptual site model

The site has a historical agricultural land use as far as records can ascertain with sheds built on the site in the 1980s/1990s. persistent agricultural chemicals used across the site, fill material from an unknown source and scattered rubbish. Fill has been stockpiled around the site particularly around the dam and in the gully. Three crossings have been created in the gully using fill material from an unknown source. The second crossing has been built using concrete pipes, bricks, tin and concrete. Remnants of a small bonfire can be seen near the shearing shed. Rubbish scattered across the site consists mostly of empty oil drums, plastic fertiliser containers, tin and timber. Car parts can be seen in the north of the site with a wrecked car observed in the gully. Contamination pathways are primarily from soil disturbance during development and occupation. Receptors include future site users, construction workers, and the environment. Short to medium-term soil contact is likely for future construction workers, and long-term soil contact is possible for future site users. No asbestos containing material was observed in the fill, but asbestos finds are possible. The wrecked car and car parts could also potentially contain asbestos, and inhalation of asbestos fibres is possible if the asbestos containing material is disturbed during development

Based on the past uses and the sampling undertaken, it is assessed that widespread contamination from the contaminants of concern is not present at the site. There is a low risk of contamination from

the fill material and the scattered rubbish as they are considered aesthetic issues and can be managed during development, with care taken around unexpected asbestos finds.

Groundwater exposure pathways were assessed to be incomplete due deep depths (>10m below ground level) and limited access to groundwater. As such, groundwater investigations were not carried out.

There is a low risk of contamination from off-site sources as there are no known grossly contaminating activities nearby.

11. Conclusions and recommendations

This investigation met the objective of investigating and assessing potential contamination to determine whether potential site contamination in the soil poses a risk to human health for the proposed rezoning and subsequent Residential A land use.

The results of the investigation conclude that contamination from the contaminants of concern is not present at the site, and it is suitable for the proposed development given the following management strategies are adopted:

- Any material generated from the site should be managed in accordance with the NSW EPA Waste Classification Guidelines and Resource Recovery Orders, whichever is relevant. This is normally a standard development consent condition.
- The rubbish is recommended to be removed and disposed of at an appropriately licenced landfill, with care taken to identify potential asbestos containing material.
- Unexpected finds are possible especially around filled gullies and dams, including asbestos finds. Care must be taken to identify and evaluate unexpected finds such as these during development under an unexpected finds protocol.

If you have any queries about the contents of this report, please contact the undersigned.

Yours sincerely

David McMahon
Certified Professional Soil Scientist
Certified Environmental Practitioner (Site Contamination Specialist)
BAppSc (Ag) GradDip (Water) MEnvMgmt
MALGA MEIANZ MSSA

List of attachments

A. Site maps and supplied proposed rezoning map
B. Aerial photographs and satellite images
D. Map of site features and site photographs
E. Sampling locations
F. Tabulated results
G. Laboratory reports

Limitations and disclaimer

DM McMahon Pty Ltd has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Junee One Pty Ltd, Junee Shire Council and only those third parties who have been authorised by DM McMahon Pty Ltd to rely on this report.

The information contained in this report has been extracted from field and laboratory sources believed to be reliable and accurate. DM McMahon Pty Ltd does not assume any responsibility for the misinterpretation of information supplied in this report. The accuracy and reliability of recommendations identified in this report need to be evaluated with due care according to individual circumstances. It should be noted that the recommendations and findings in this report are based solely upon the said site location and conditions at the time of assessment. The results of the said investigations undertaken are an overall representation of the conditions encountered. The properties of the soil, vapour and groundwater within the location may change due to variations in ground conditions outside of the assessed area. The author has no control or liability over site variability that may warrant further investigation that may lead to significant design and land use changes.

Unexpected findings

If any unconsolidated, odorous, stained, or deleterious soils, or suspect bonded/friable/fibrous asbestos containing material, fuel tanks, or septic systems are encountered during any further excavation, suspected historical contaminating activities are encountered, or conditions that are not alike the above descriptions, the site supervisor should be informed, the work stopped, and this office be contacted immediately for further evaluation by an appropriately qualified environmental consultant. The unexpected findings may trigger the need for more investigation and assessment dependant on the scope and context of the unexpected finding.

Notice of Copyright

Attachment A : *Site maps and supplied proposed zoning map*

192 Waterworks Road Junee NSW 2663

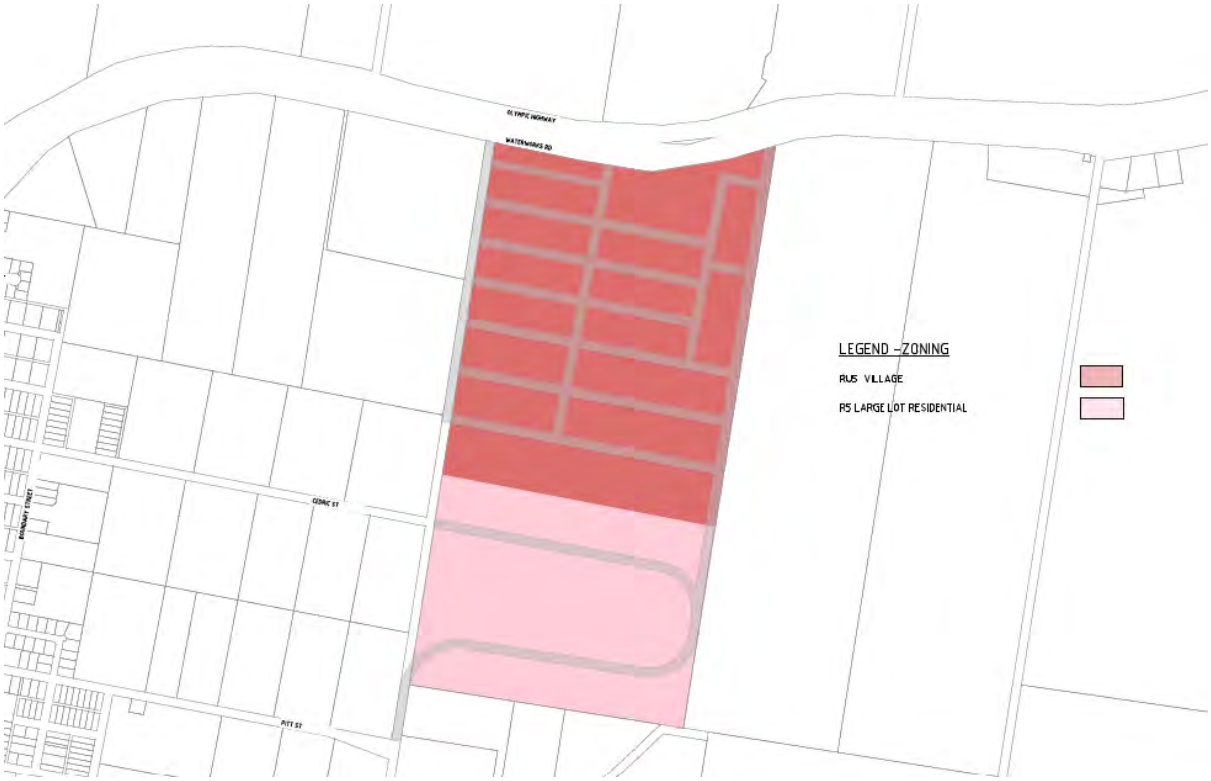
Preliminary Site Investigation
Report No. 10217
Google Earth image 2024

Legend
Boundary

Old Junee Rd
Danswans Rd
A41
Olympic Hwy
Lord St
Broadway
Junee
Gundagai Rd
Byrnes Rd
2 km
Google Earth
Image © 2024 Airbus

192 Waterworks Road Junee NSW 2663
Preliminary Site Investigation
Report No. 10217
Google Earth image 2024
Legend
Boundary
Olympic Hwy
A41
Waterworks Rd
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Boundary St
Cross St
Florence St
Edward St
Google Earth
Image © 2024 Airbus
600 m
N

Figure 7 Proposed Zones



Source: Landholder, Appendix A.

Attachment B : *Aerial photographs and satellite images*

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
NSW Spatial Services image 1961

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Florence St
Boundary St
Edward St

Google Earth
Image © 2024 Maxar Technologies

N

600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
NSW Spatial Services image 1970

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Boundary St
Cross St
Florence St
Edward St
N
600 m
Google Earth
Image © 2024 Maxar Technologies

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
NSW Spatial Services image 1978

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Boundary St
Florence St
Edward St
N
600 m
Google Earth
Image © 2024 Maxar Technologies

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
NSW Spatial Services image 1986

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Boundary St
Cross St
Florence St
Elizabeth St
Edward St
Google Earth
Image © 2024 Maxar Technologies
N
600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
NSW Spatial Services image 1987

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Boundary St
Cross St
Florence St
Edward St
Google Earth
Image © 2024 Maxar Technologies
N
600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
NSW Spatial Services image 1991

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Boundary St
Florence St
Edward St
Google Earth
Image © 2024 Maxar Technologies
N
600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
NSW Spatial Services image 1994

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Boundary St
Florence St
Edward St
Google Earth
Image © 2024 Maxar Technologies
N
600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
NSW Spatial Services image 1998

Legend
Boundary

Olympic Hwy
A41
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Boundary St
Florence St
Elizabeth St
Edward St
Google Earth
Image © 2024 Maxar Technologies
N
600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Google Earth image 2006

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Boundary St
Cross St
Florence St
Edward St
Google Earth
Image © 2024 Maxar Technologies
N
600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Google Earth image 2012

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Boundary St
Florence St
Parkes St
N
600 m
Google Earth
Image © 2024 Maxar Technologies

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Google Earth image 2013

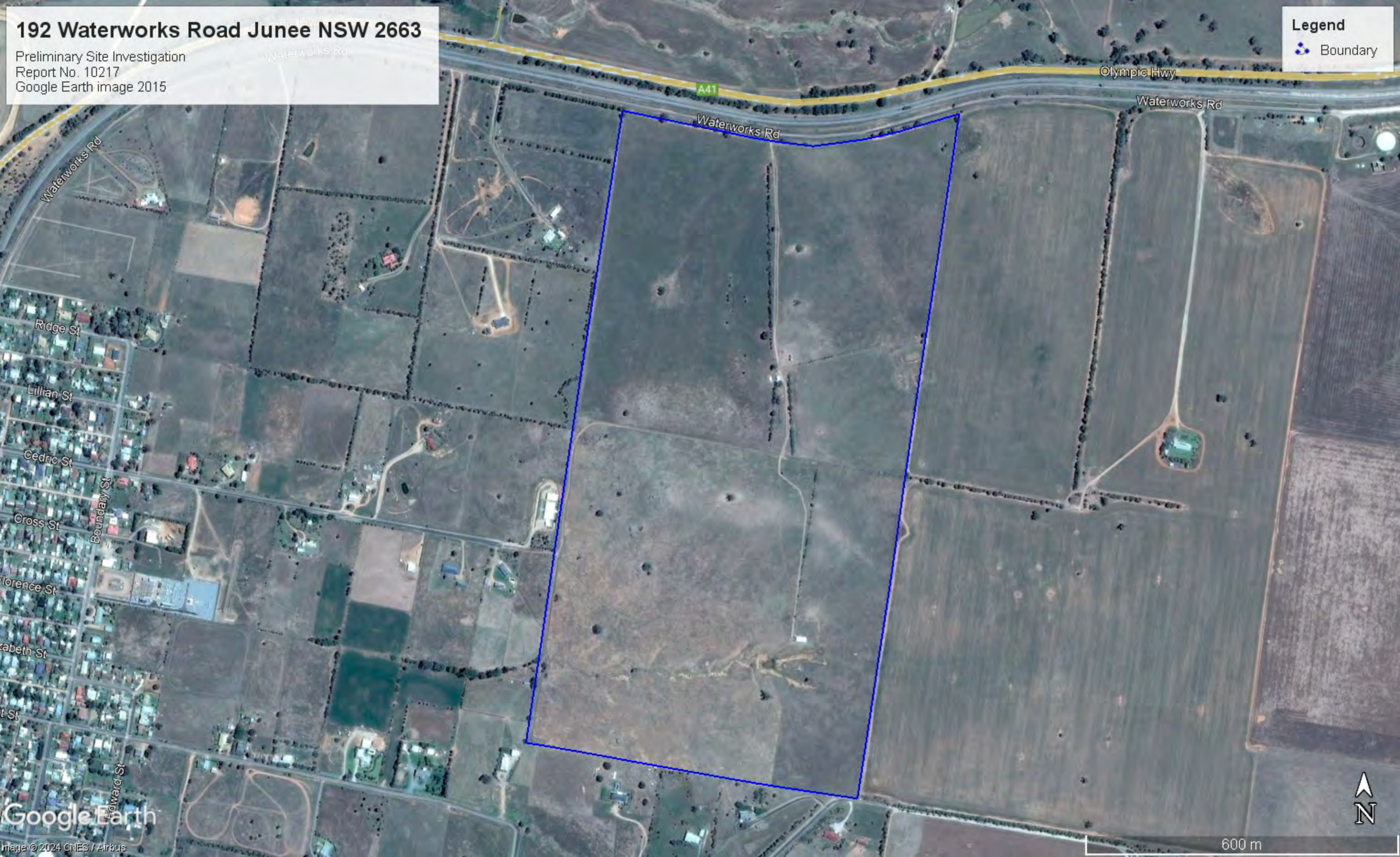
Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Florence St
Elizabeth St
Boundary St
Edward St
Google Earth
Image © 2024 CNES / Airbus
N
600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Google Earth image 2015

Legend
Boundary



192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Google Earth image 2018

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Florence St
Elizabeth St
Boundary St
Edward St
Google Earth
Image © 2024 CNES / Airbus
N
600 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Google Earth image 2020

Legend
Boundary

Waterworks Rd
A41
Olympic Hwy
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Cross St
Boundary St
Florence St
Elizabeth St
St Patrick's
Google Earth
Image © 2024 CNES / Airbus
N
600 m

192 Waterworks Road Junee NSW 2663
Preliminary Site Investigation
Report No. 10217
Google Earth image 2023
Legend
Boundary
Olympic Hwy
A41
Waterworks Rd
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Boundary St
Cross St
Howard St
Google Earth
Image © 2024 Airbus
600 m
N


192 Waterworks Road Junee NSW 2663
Preliminary Site Investigation
Report No. 10217
Google Earth image 2024
Legend
Boundary
Olympic Hwy
A41
Waterworks Rd
Waterworks Rd
Waterworks Rd
Waterworks Rd
Ridge St
Lillian St
Cedric St
Boundary St
Cross St
Edward St
Google Earth
Image © 2024 Airbus
600 m
N

Attachment C : *Map of site features and site photographs*

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Googel Earth image 2024

Legend
Boundary

Fill
Car parts
Silo
Rubbish
Oil drum
Vegetable garden
Fill
Dam
Fill

Google Earth
Image © 2024 Airbus

N

300 m

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Googel Earth image 2024

Legend

- Shearing shed
- Shed
- Slab on grade shed
- Yards

N

70 m

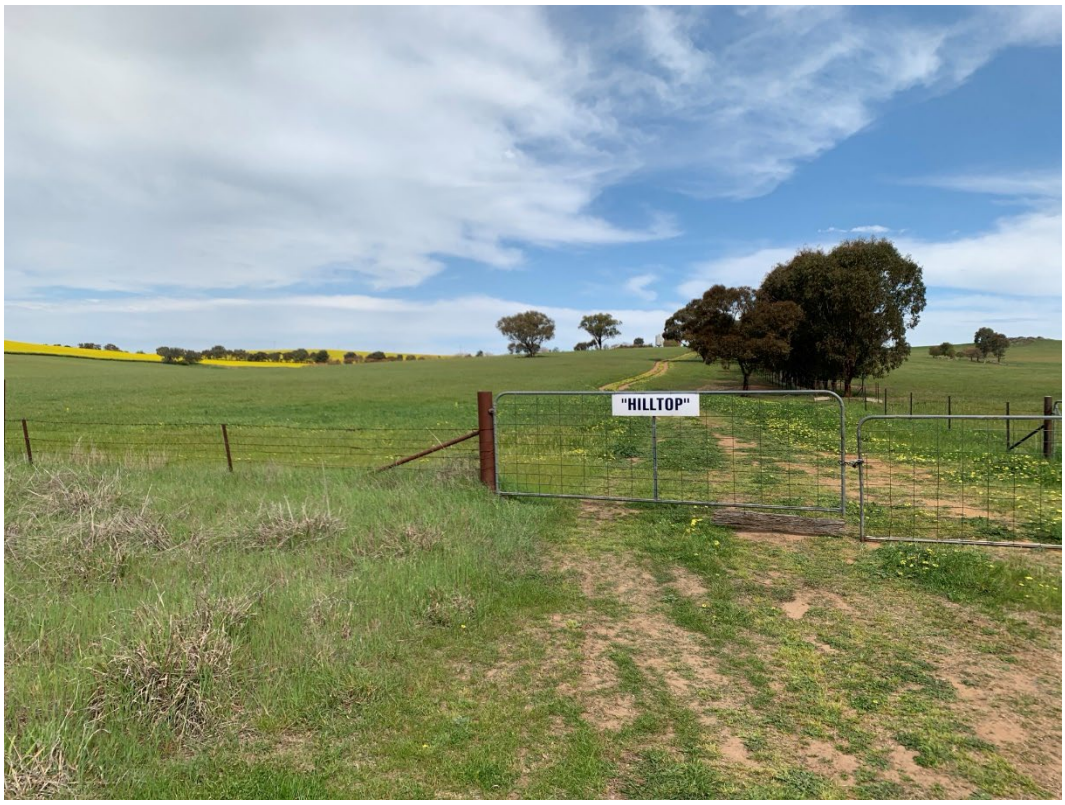
192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Googel Earth image 2024

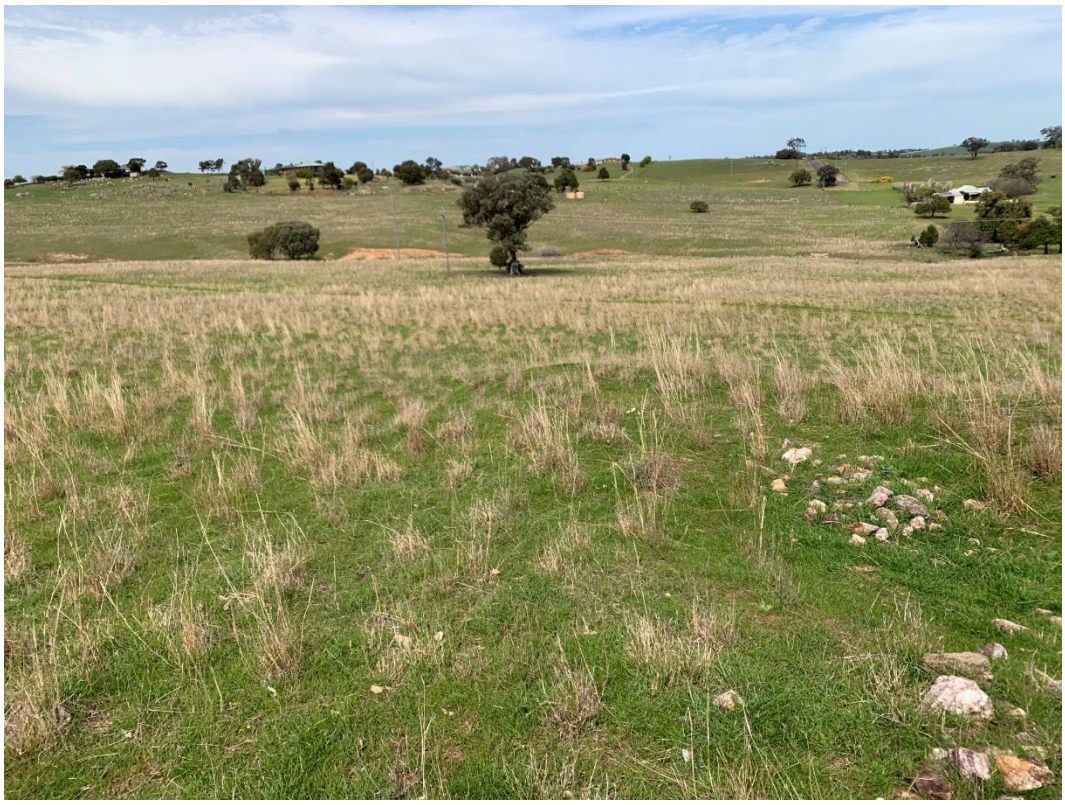
Legend

- Boundary
- Portal frame shed

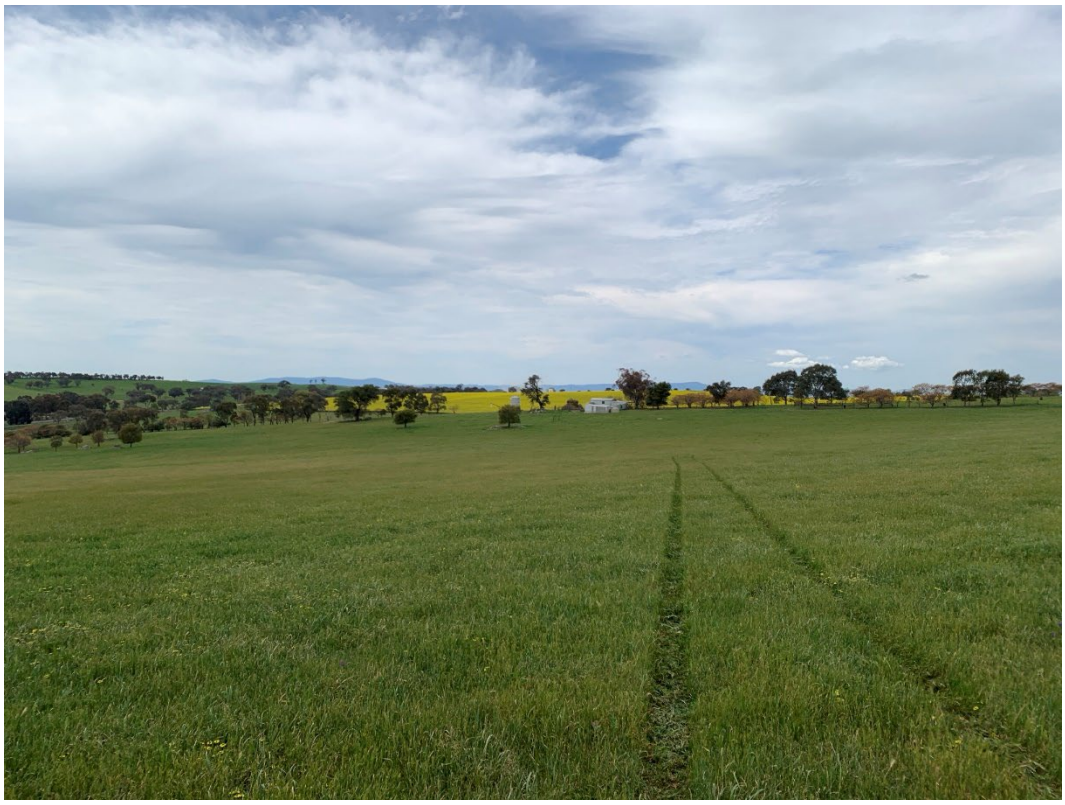
Third crossing
Car
First crossing
Second crossing
Fill
Kinvara Rd
200 m
N
Google Earth
Image © 2024 Airbus



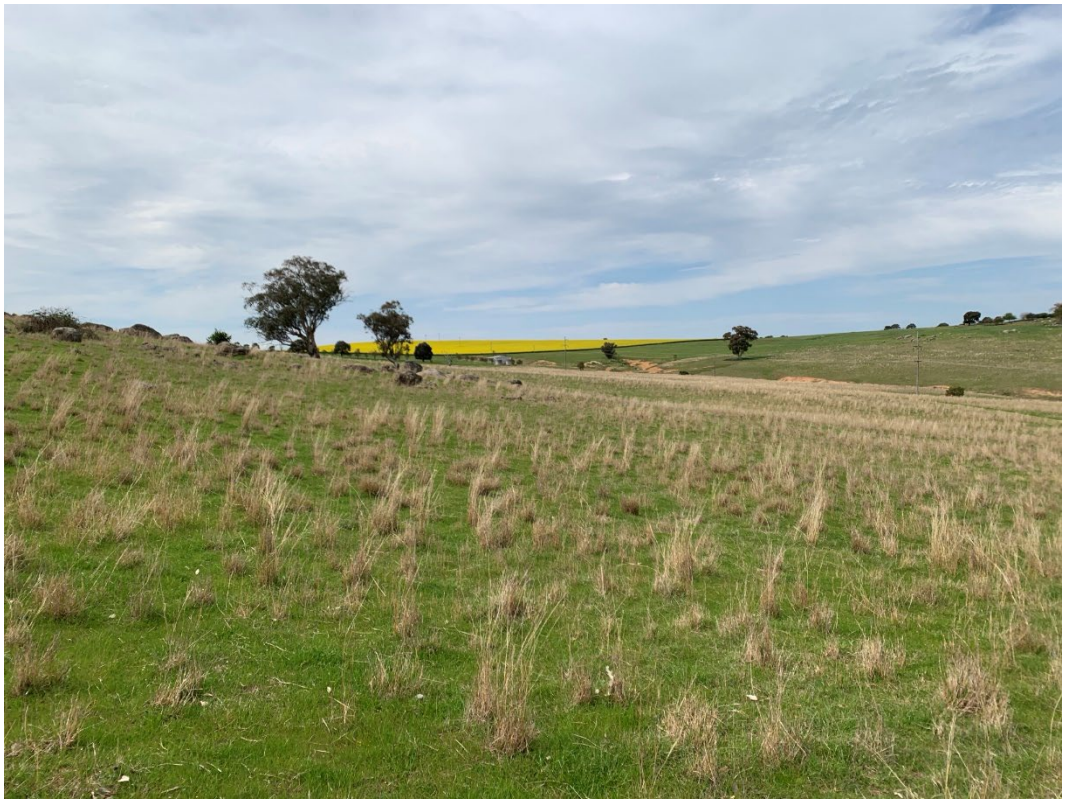
Photograph 1: The site. Photograph taken facing south from Waterworks Road.



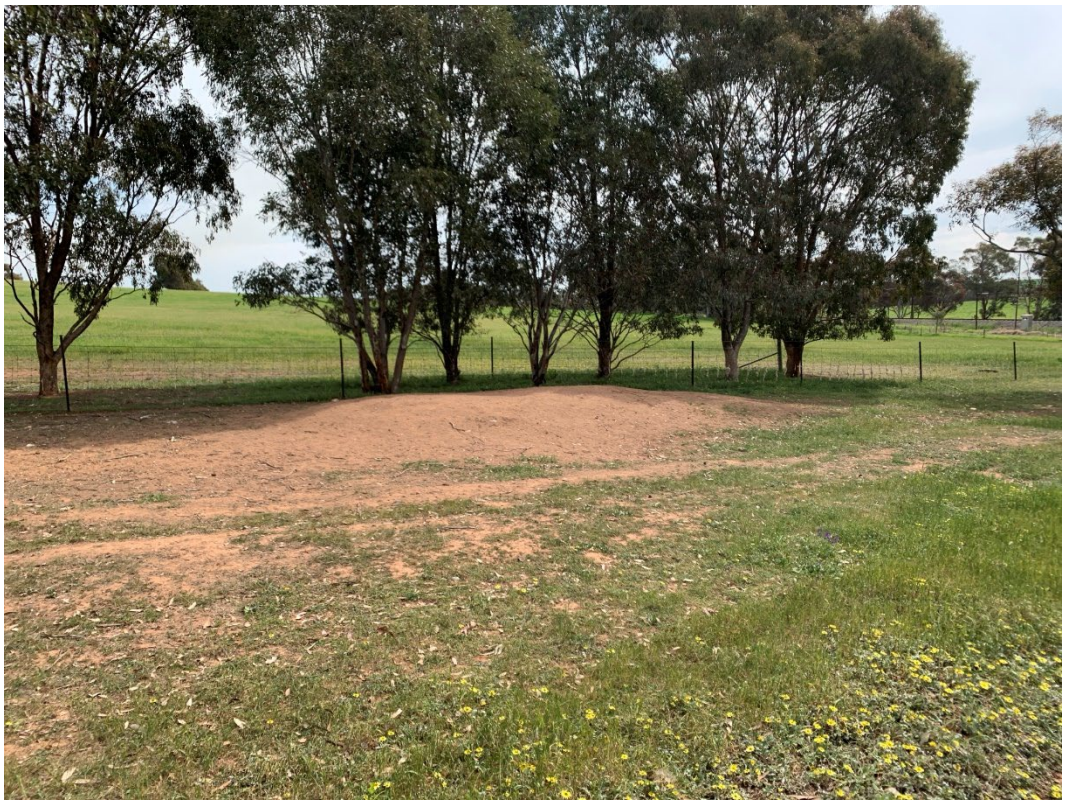
Photograph 2: The site. Photograph taken facing south from the crest. The gully is in the background.



Photograph 3: The site. Photograph taken facing east before the crest.

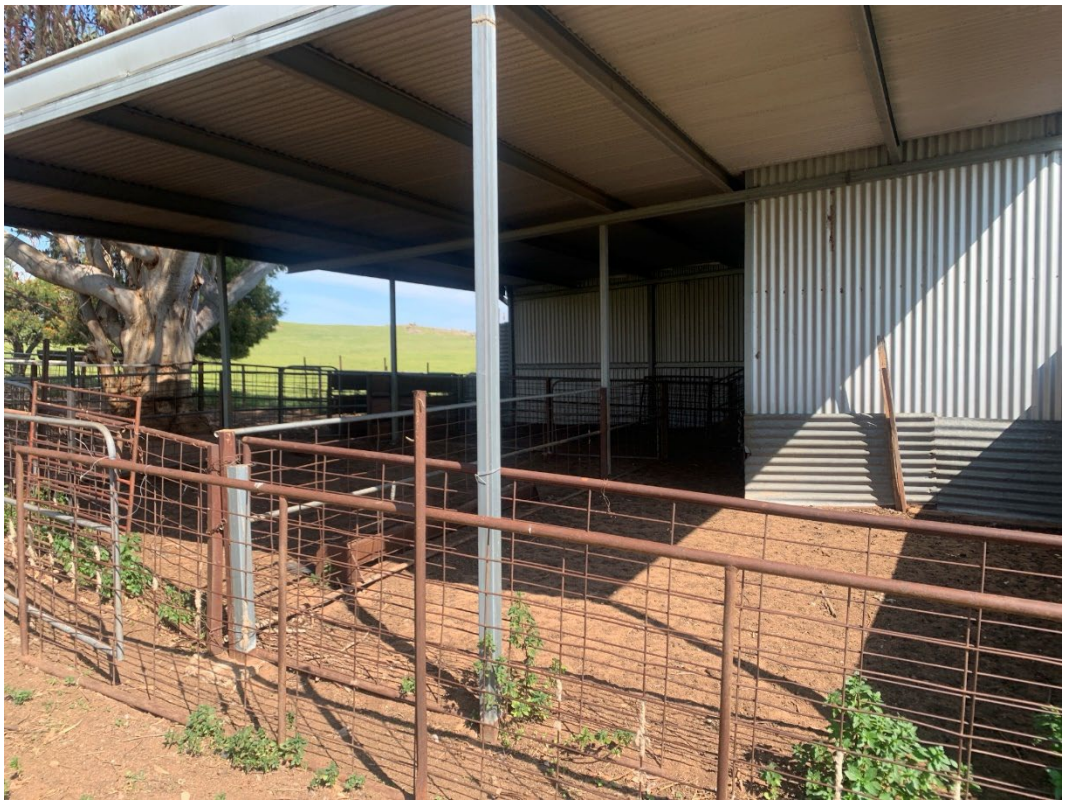


Photograph 4: The site. Photograph taken facing east from the southern side of the crest.

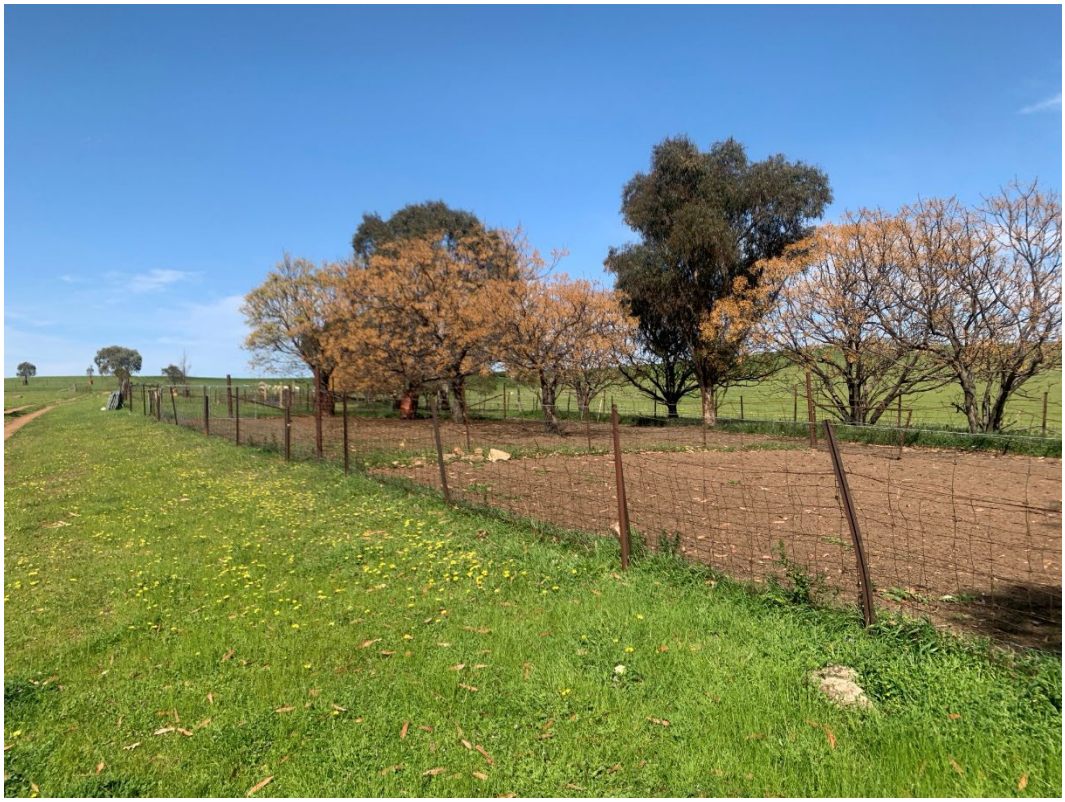


Photograph 5: Fill adjacent to the driveway. Photograph taken facing east.

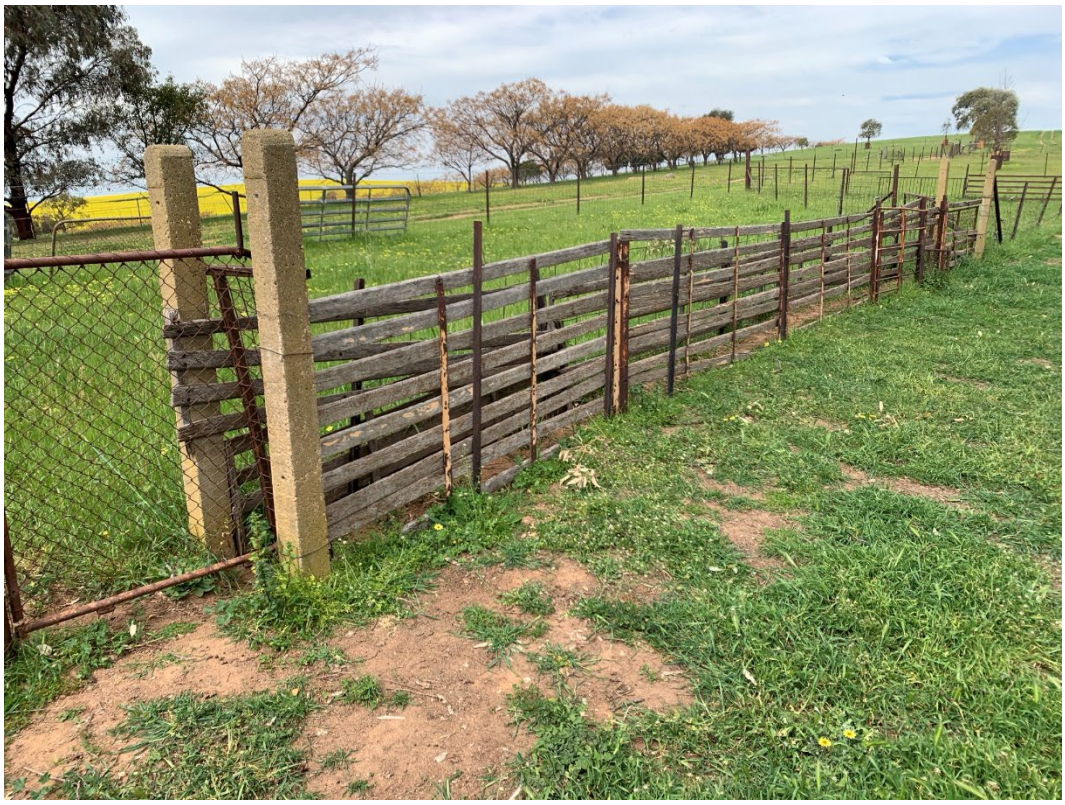
Photograph 6: The shearing shed. Photograph taken facing south.



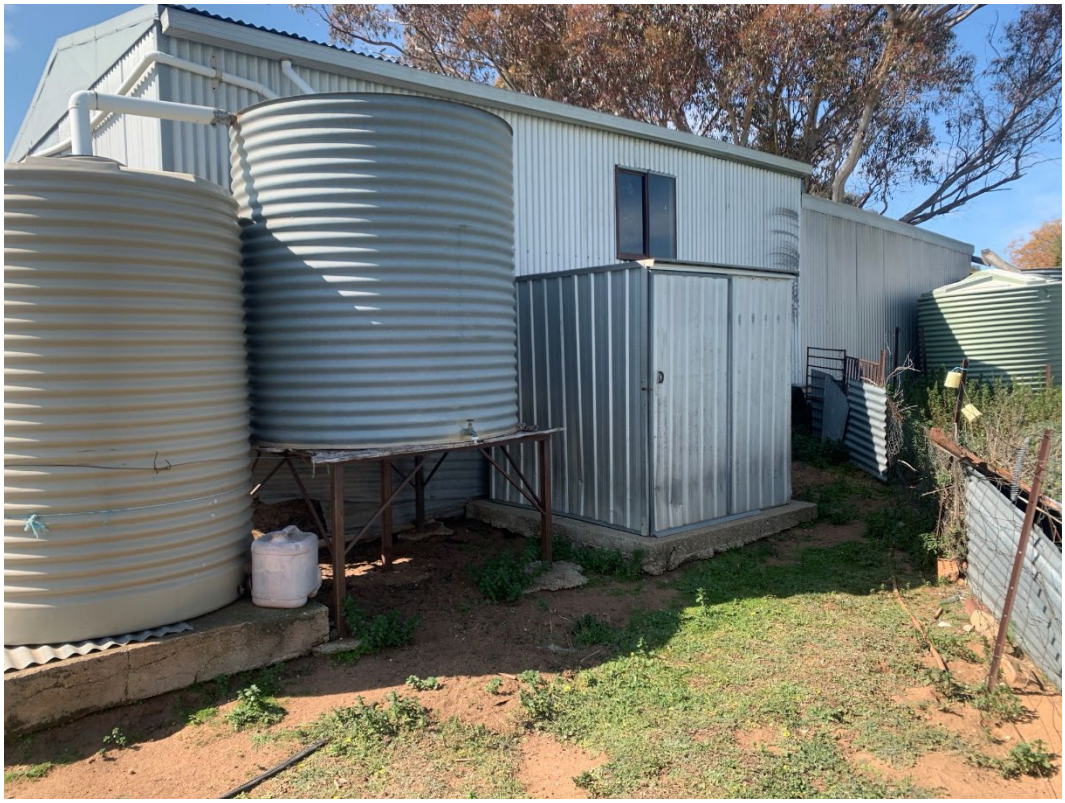
Photograph 7: The yards. Photograph taken facing south west.



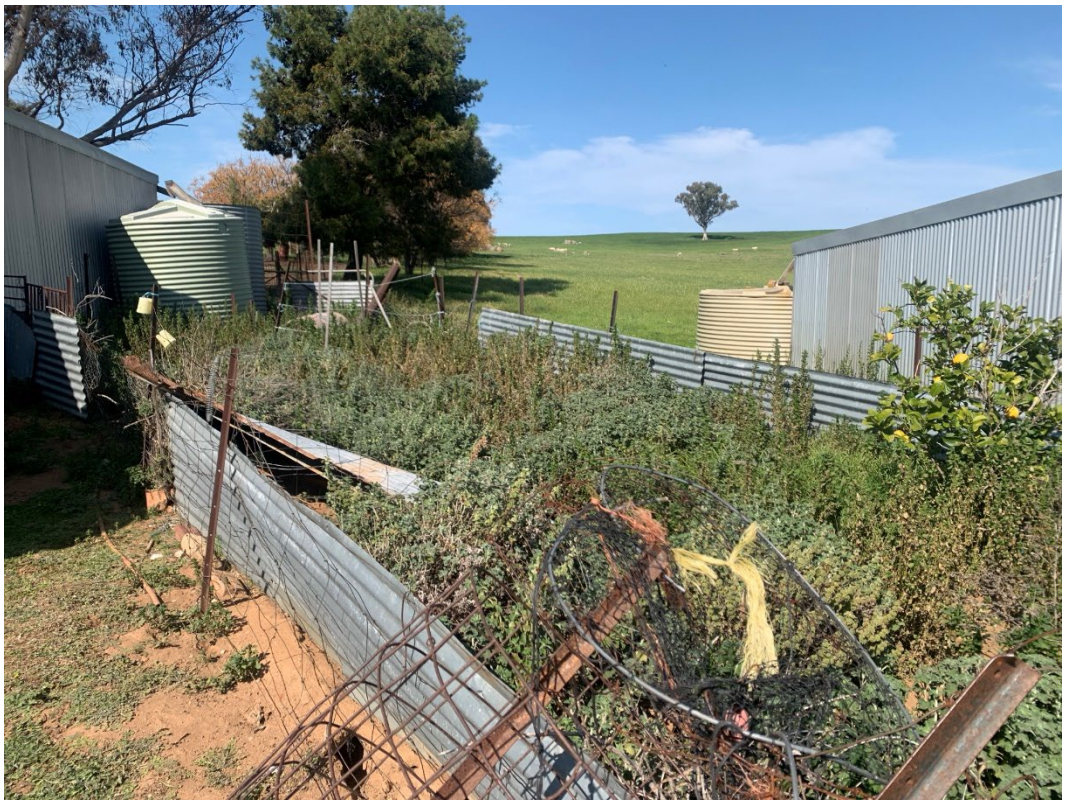
Photograph 8: The yards. Photograph taken facing south west.



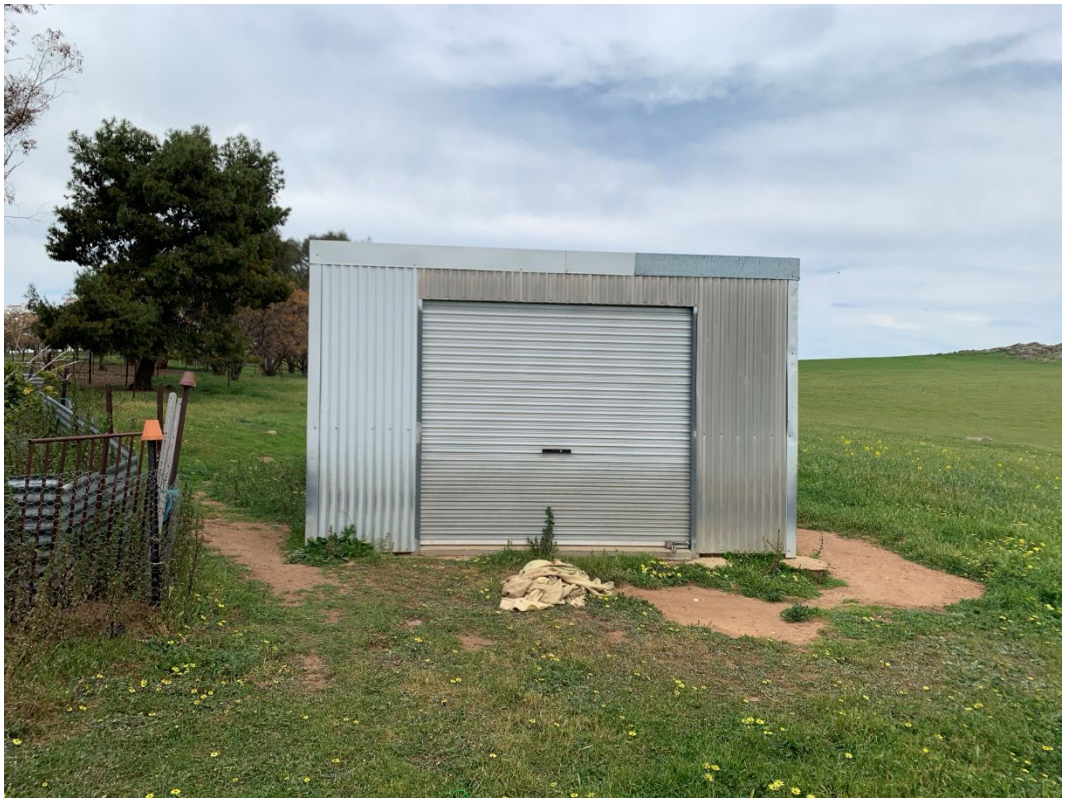
Photograph 9: The sheep drafting race. Photograph taken facing south.



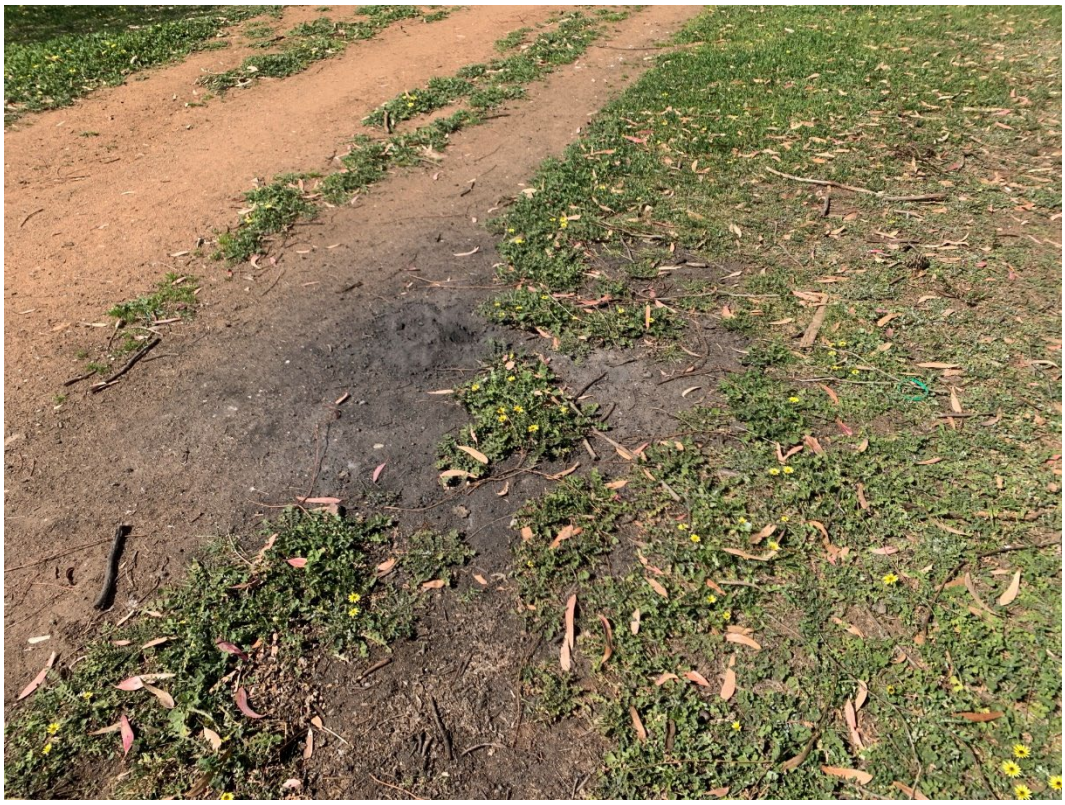
Photograph 10: Slab on grade garden shed. Photograph taken facing south east.



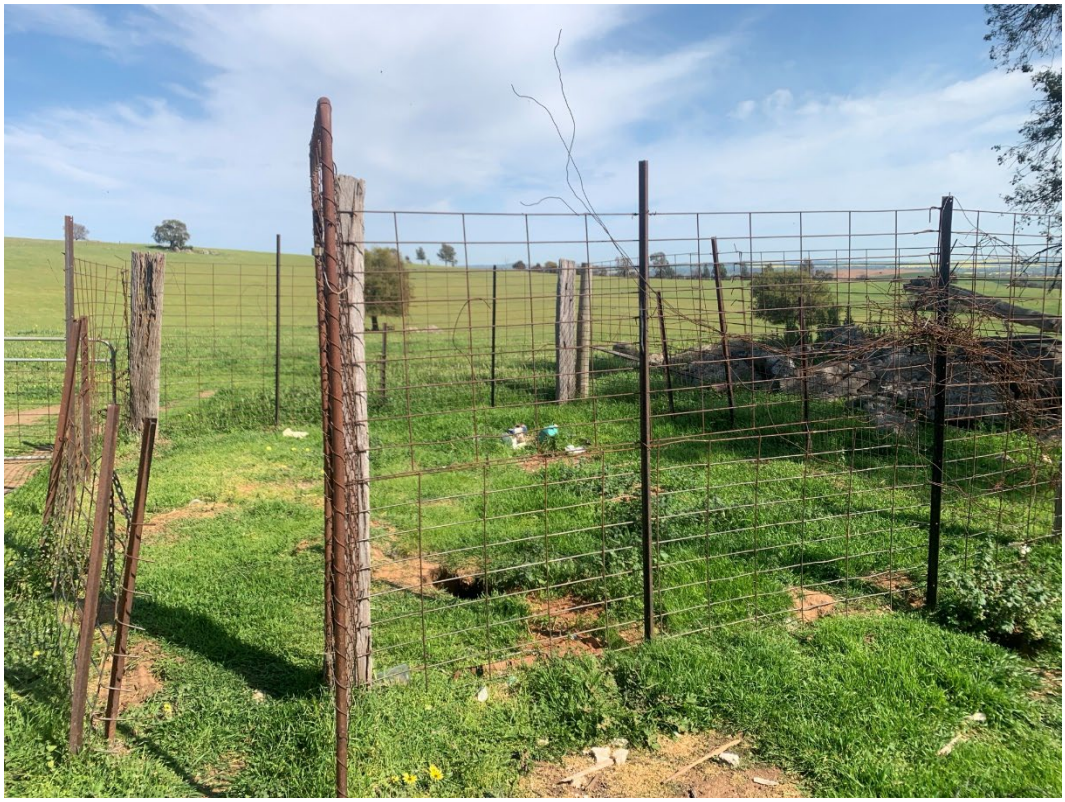
Photograph 11: Vegetable garden. Photograph taken facing south.



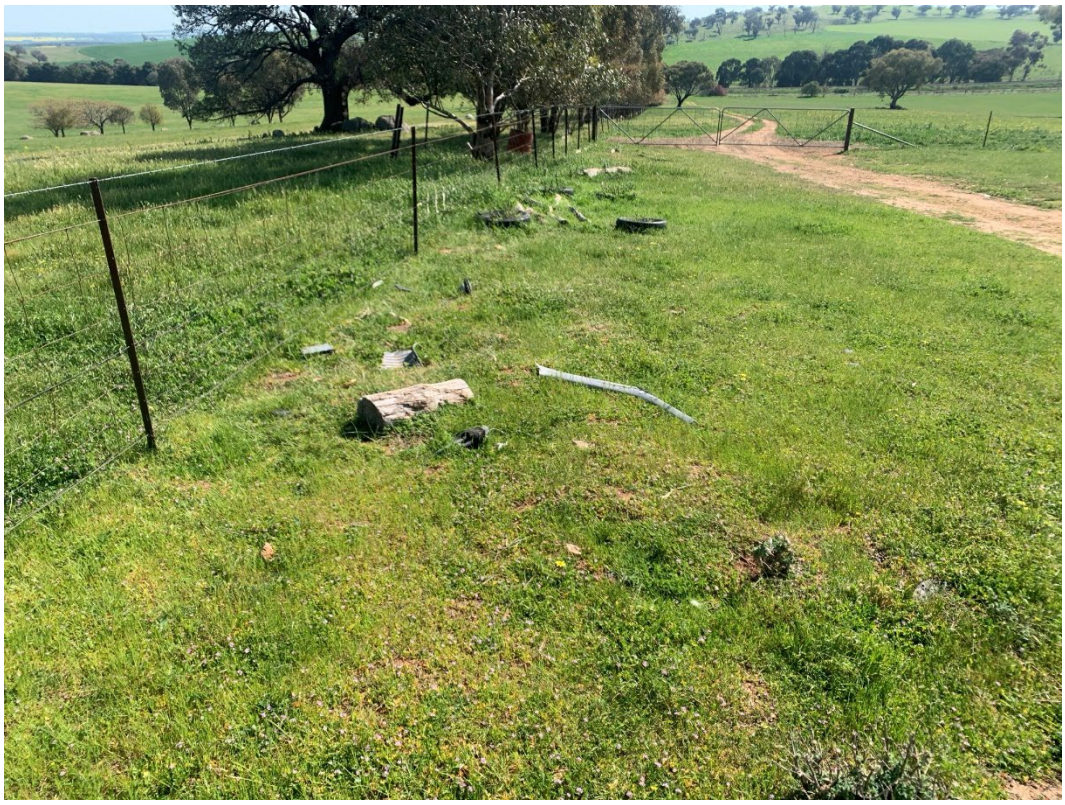
Photograph 12: Shed to the west of the vegetable garden. Photograph taken facing south.



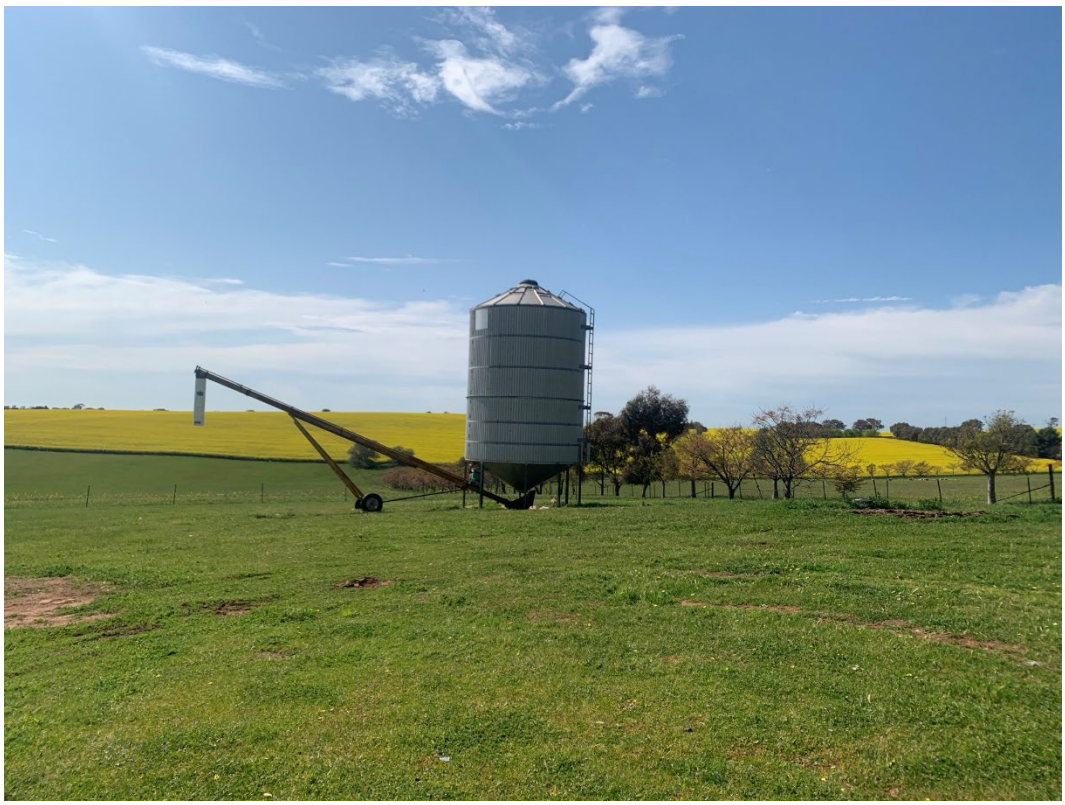
Photograph 13: Bonfire remnants to the east of the shearing shed. Photograph taken facing south.



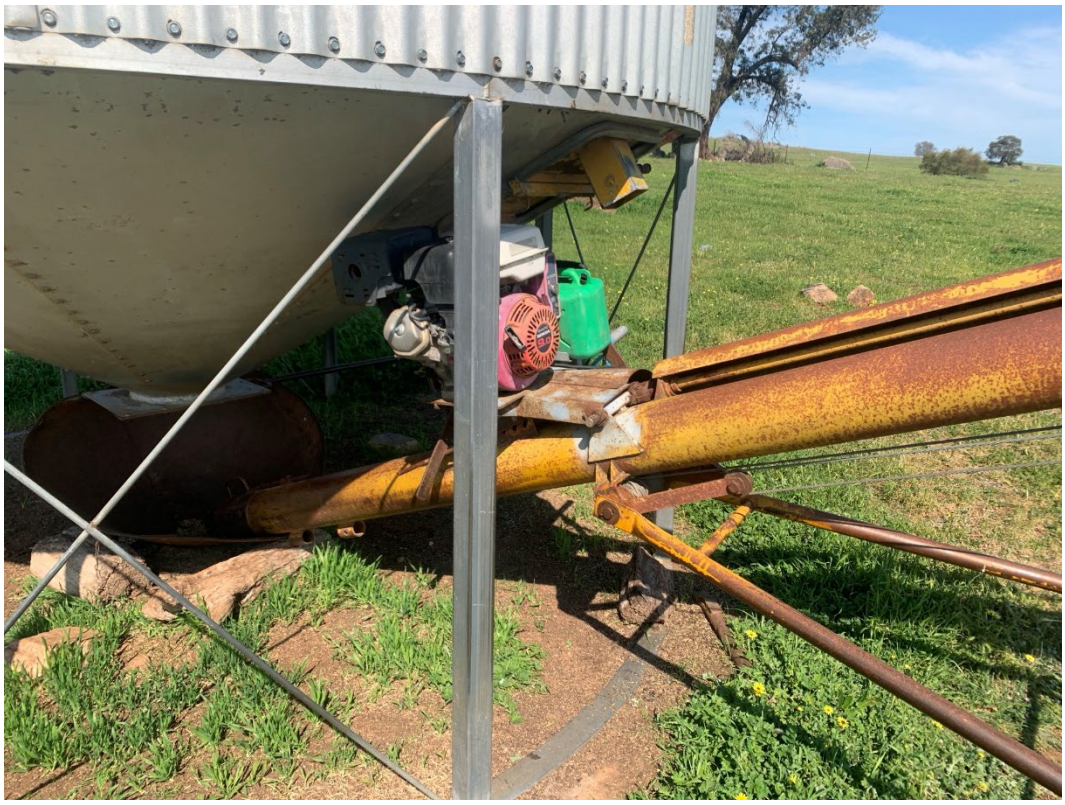
Photograph 14: The small yard to the north of the shearing shed. Photograph taken facing north west.



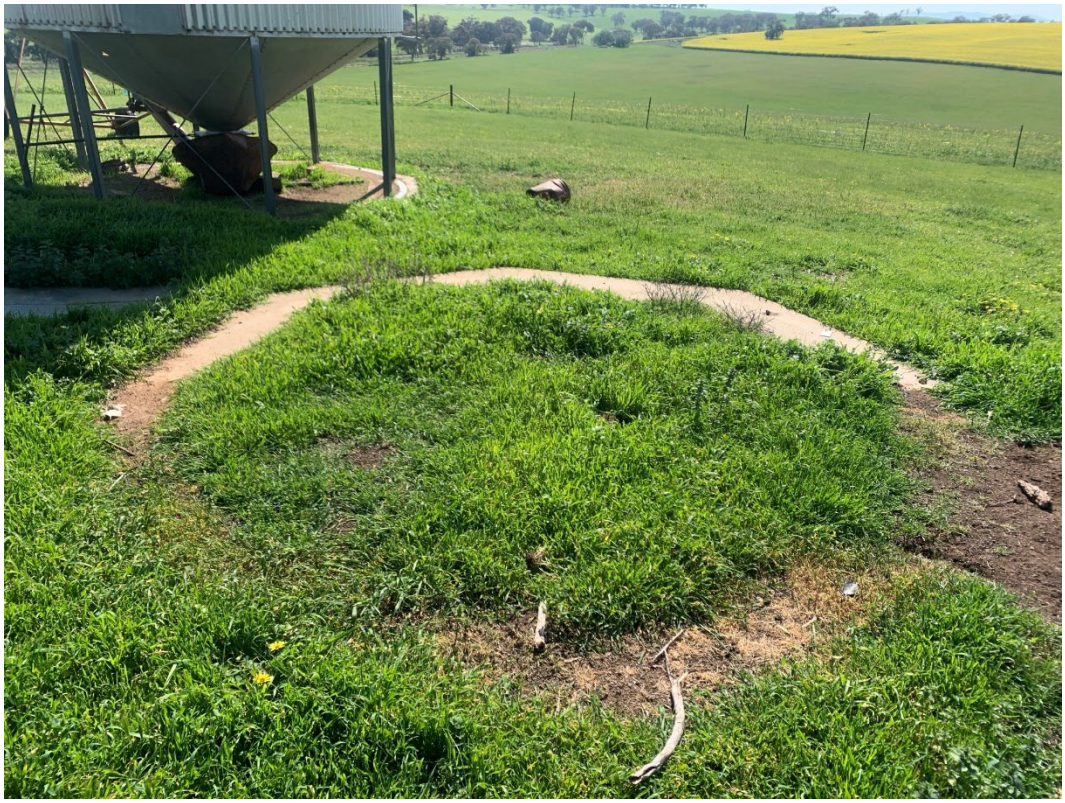
Photograph 15: Scattered car parts. Photograph taken facing north.



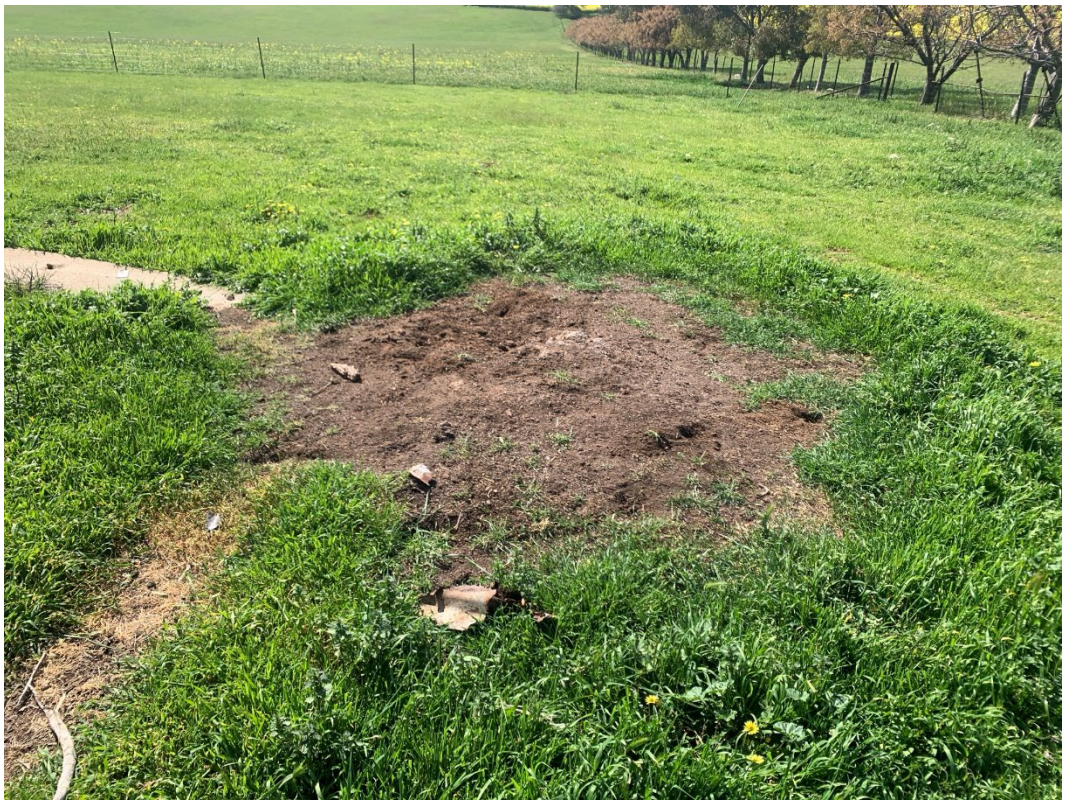
Photograph 16: The silo and auger. Photograph taken facing east.



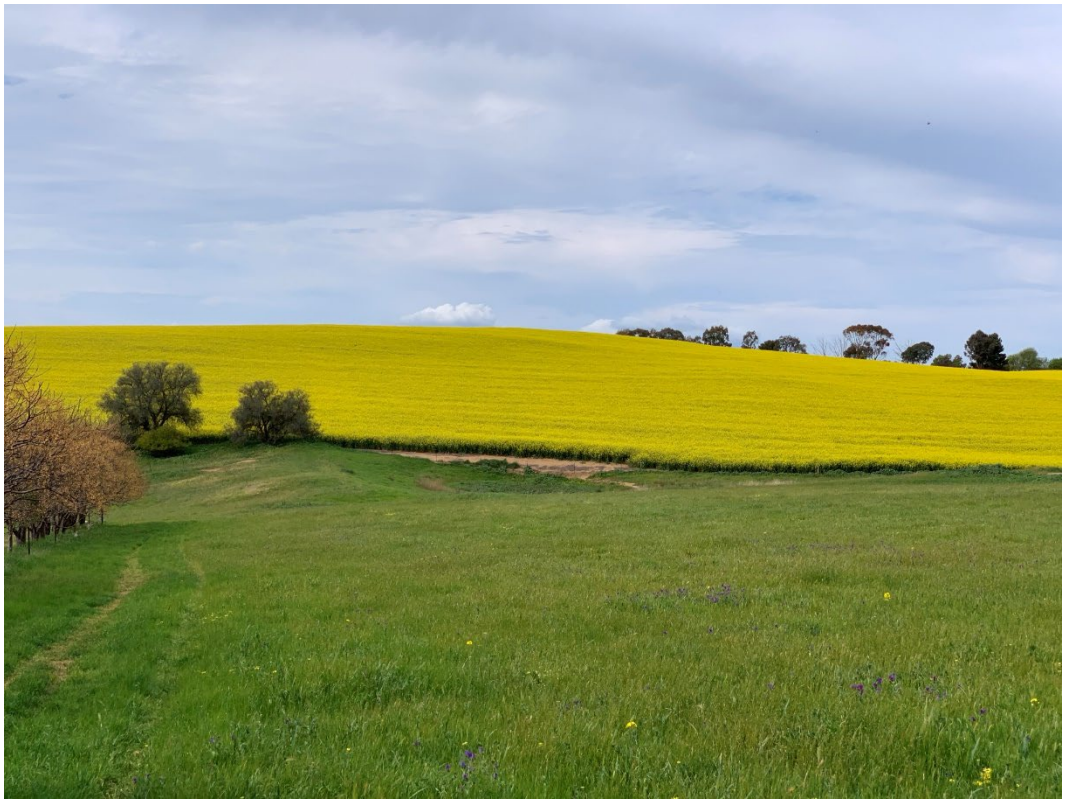
Photograph 17: Engine used to power auger. Photograph taken facing south west.



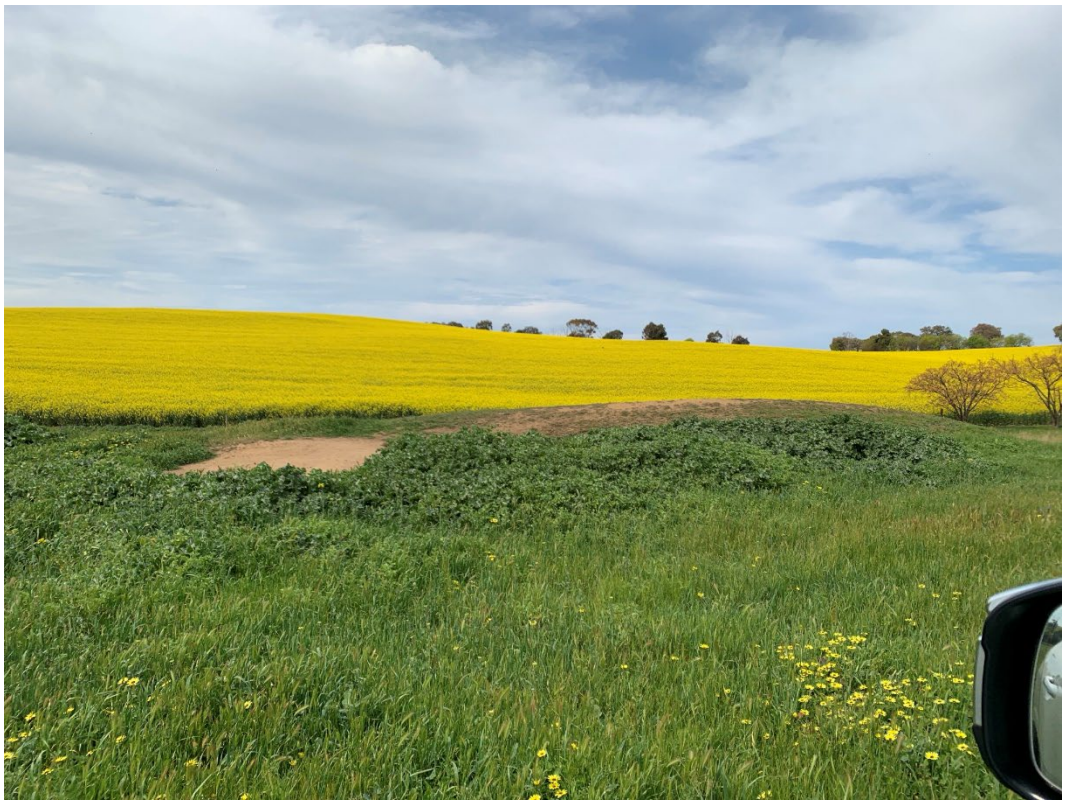
Photograph 18: Location of removed silo. Photograph taken facing north east.



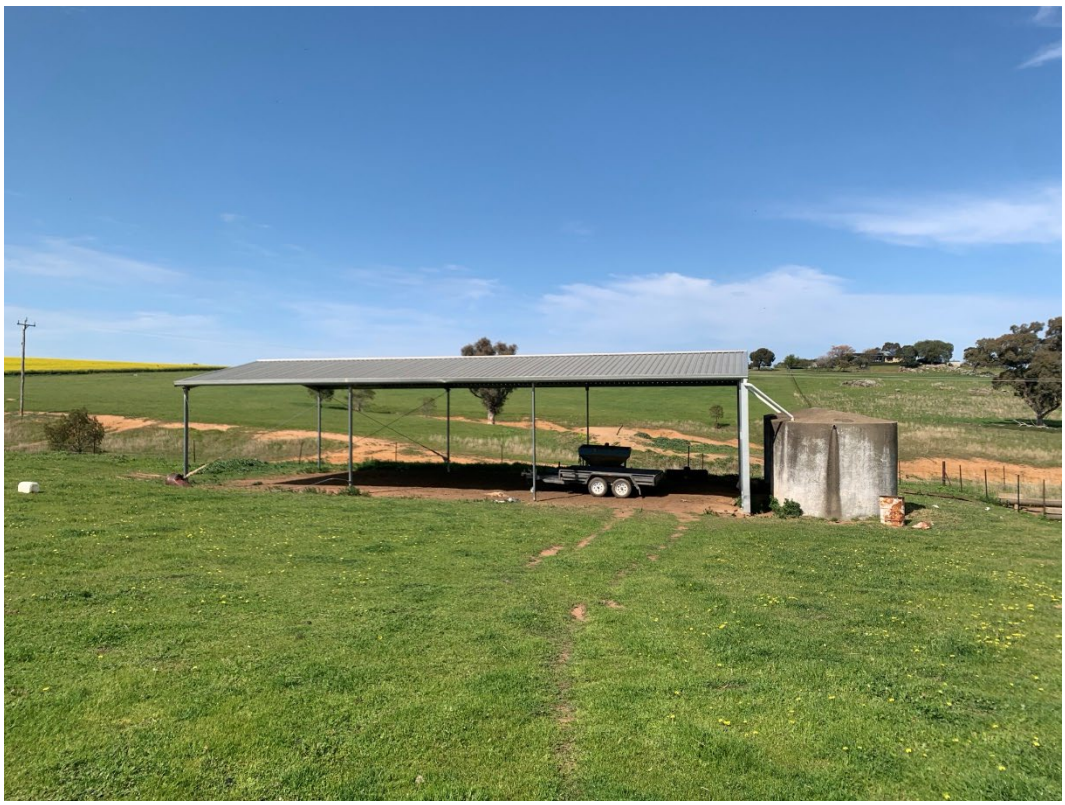
Photograph 19: Fill near the silo. Photograph taken facing east.



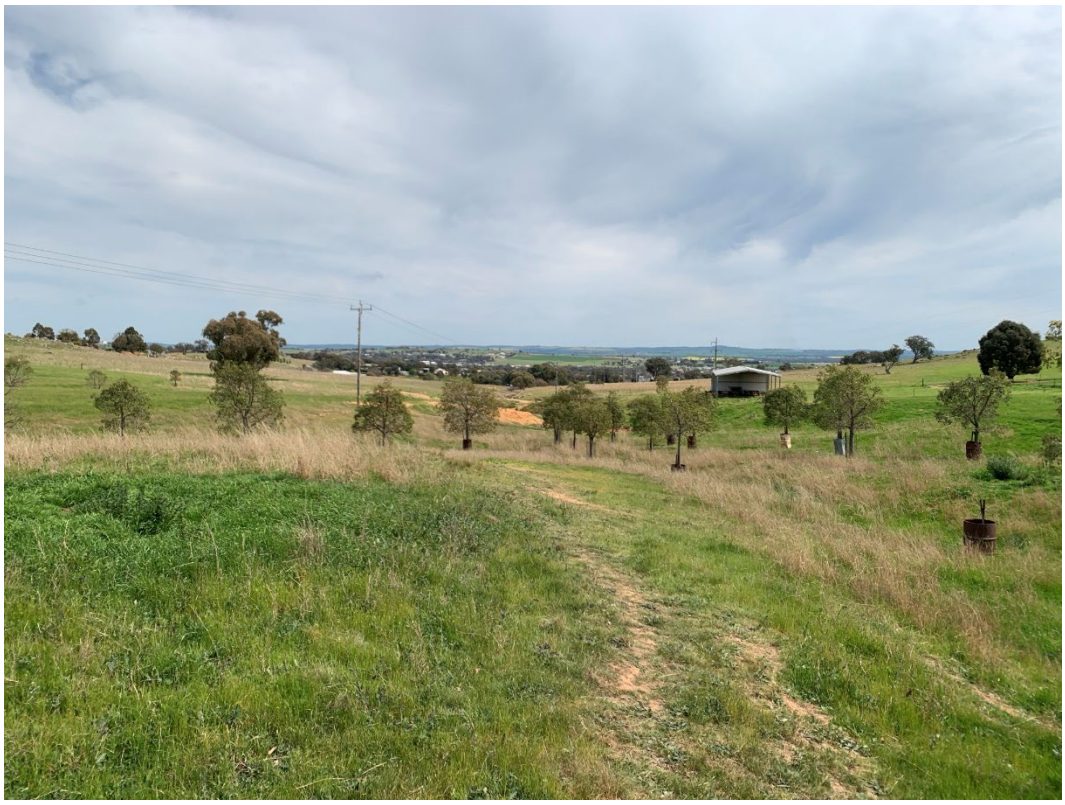
Photograph 20: The dam. Photograph taken facing west.



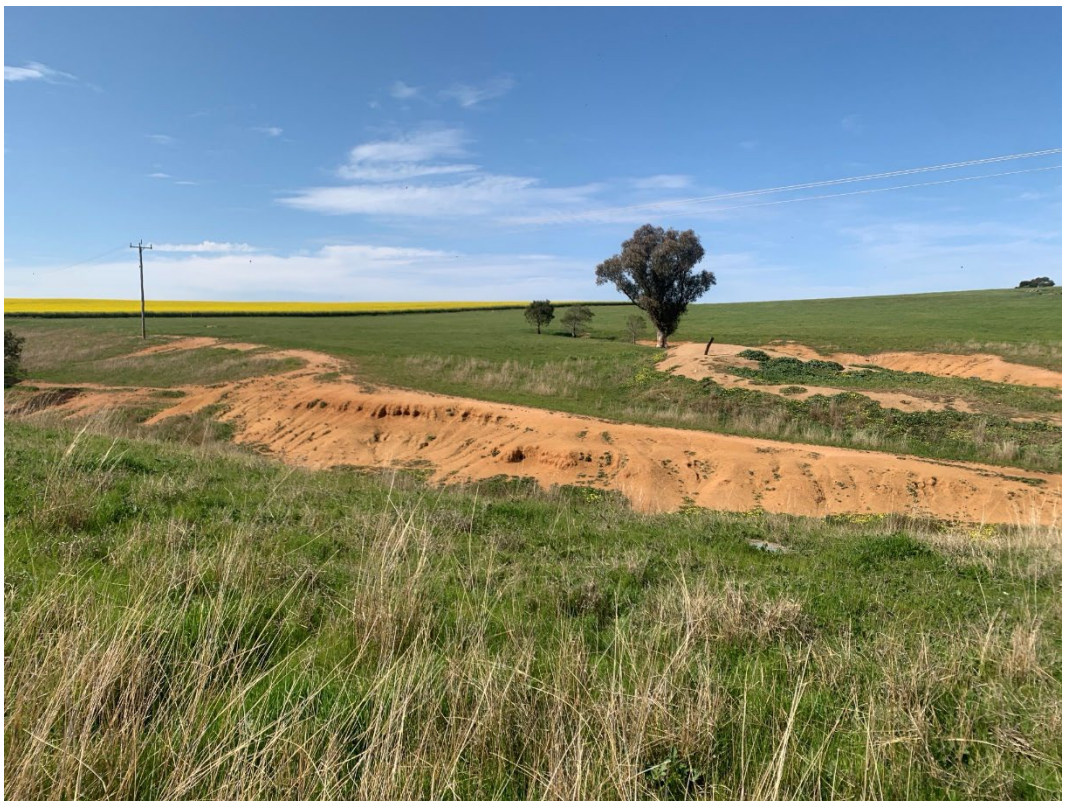
Photograph 21: Fill around the dam. Photograph taken facing west.



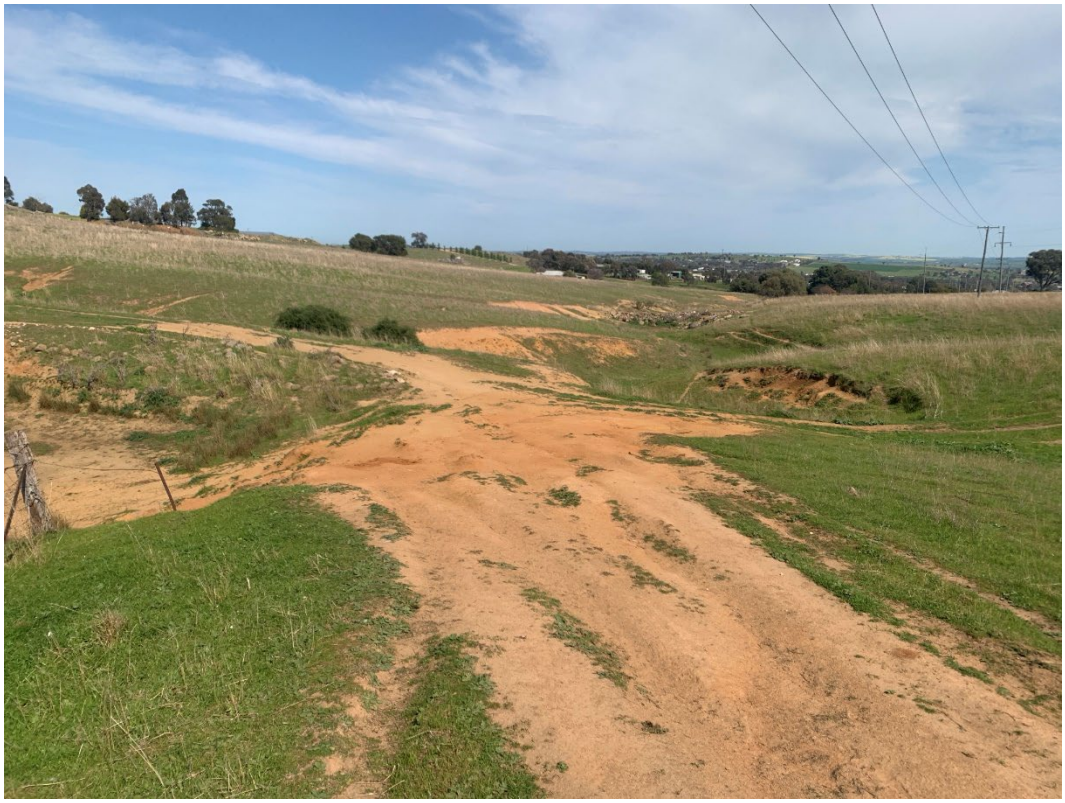
Photograph 22: The third shed. Photograph taken facing south.



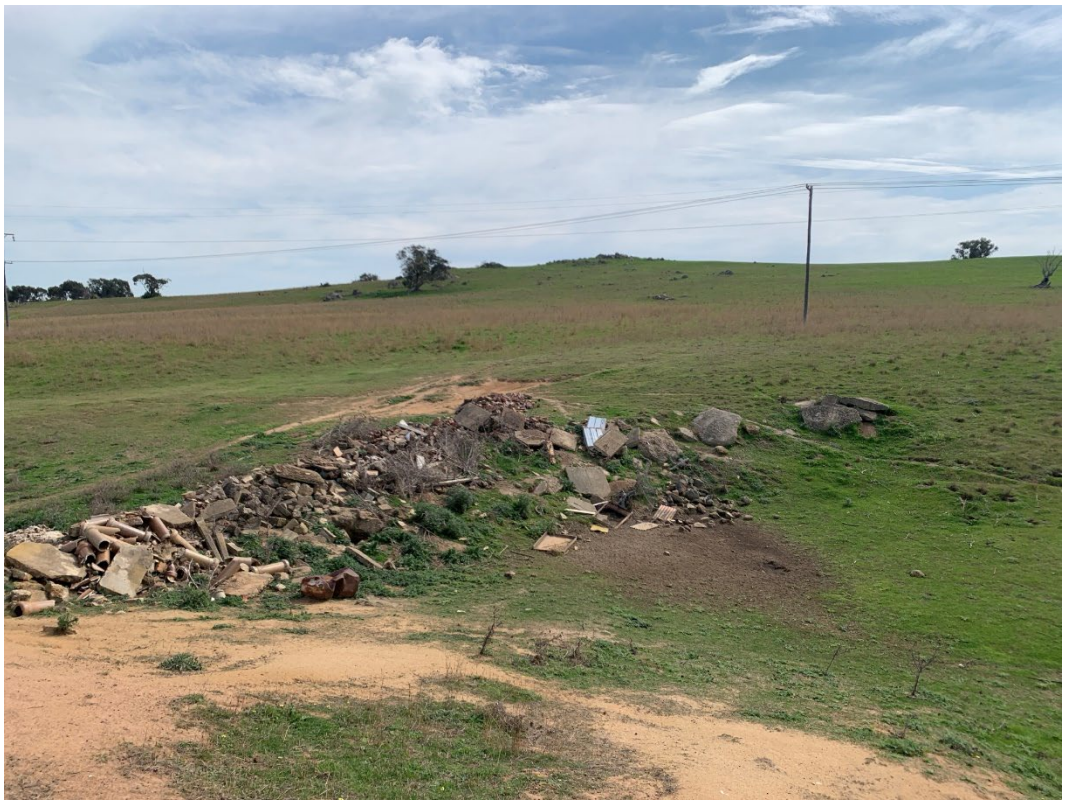
Photograph 23: The gully. Photograph taken facing west.



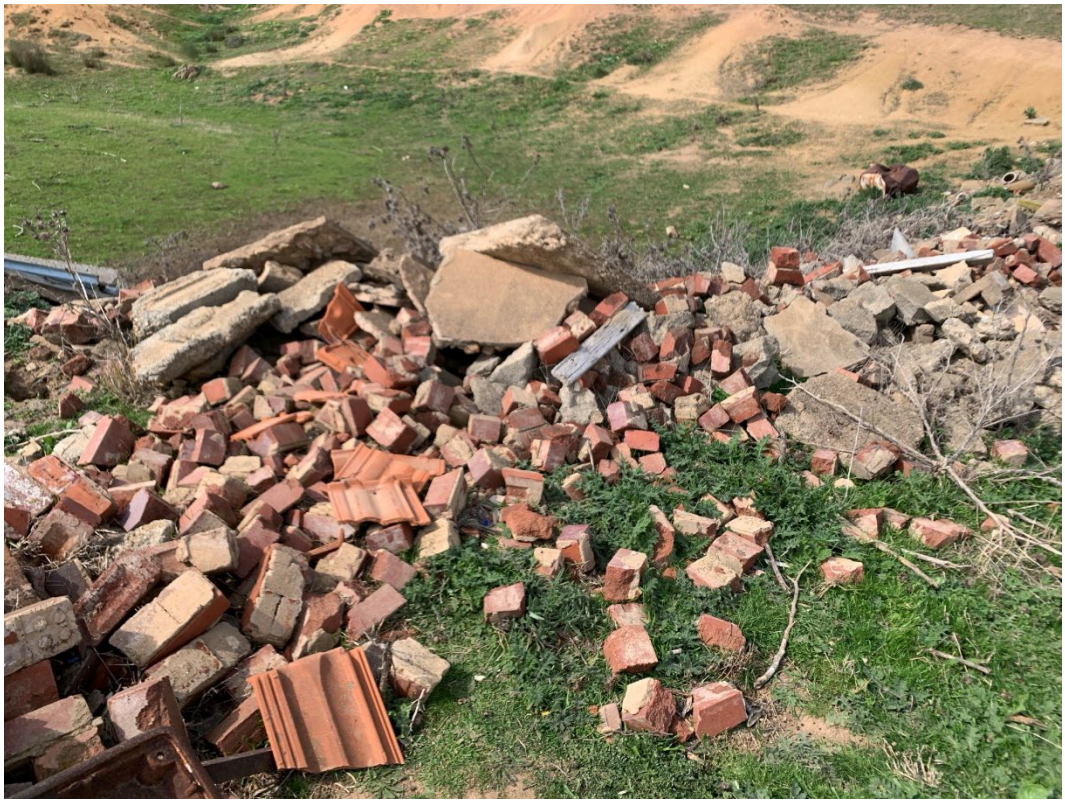
Photograph 24: The gully. Fill material can be seen on the right hand side of the photograph. Photograph taken facing south east.



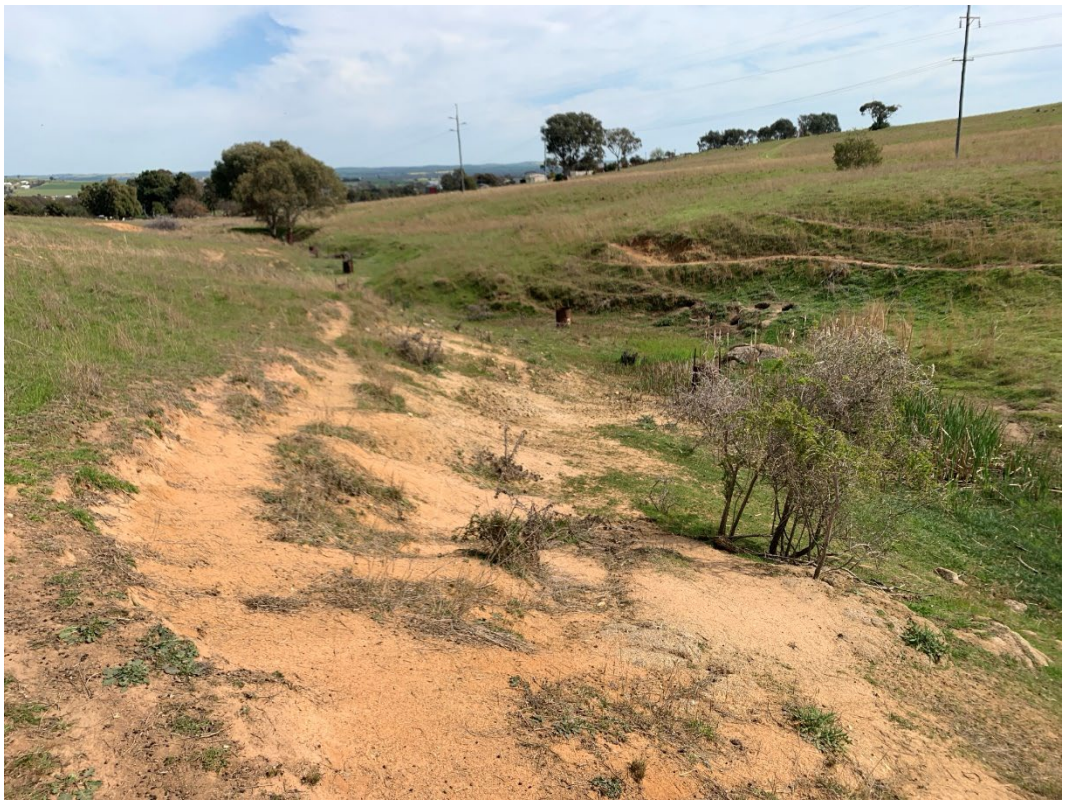
Photograph 25: The first crossing. Photograph taken facing south west.



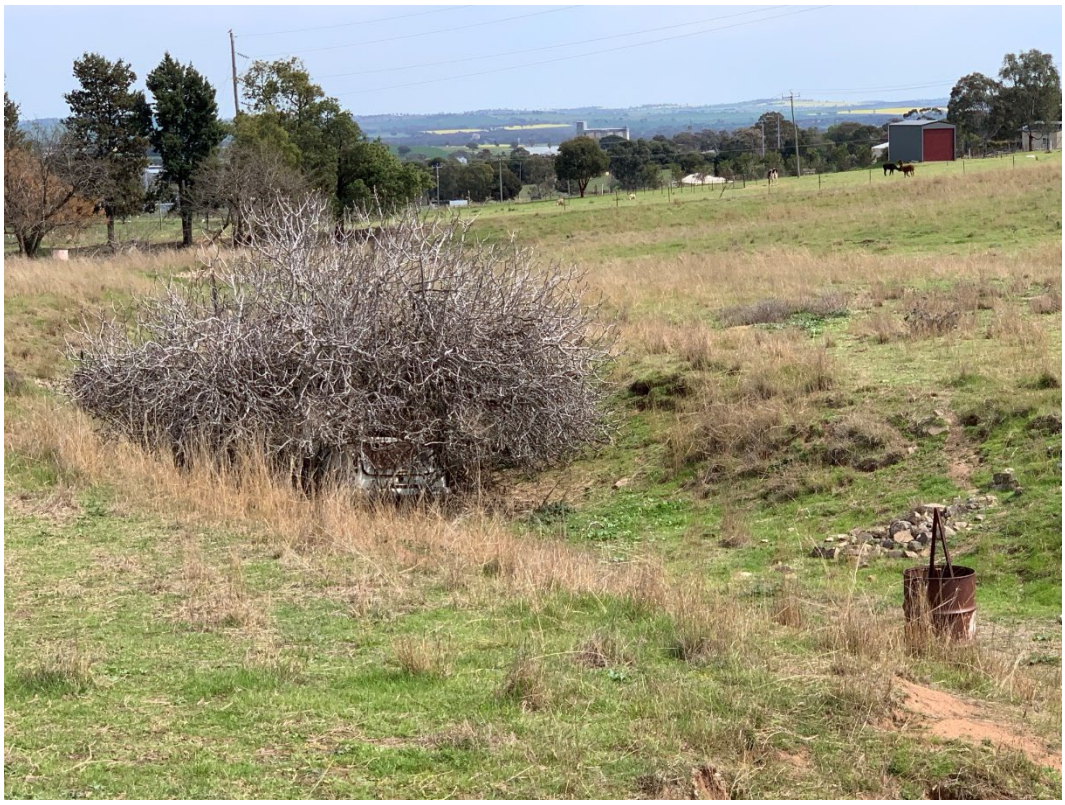
Photograph 26: The second crossing. Photograph taken facing north.



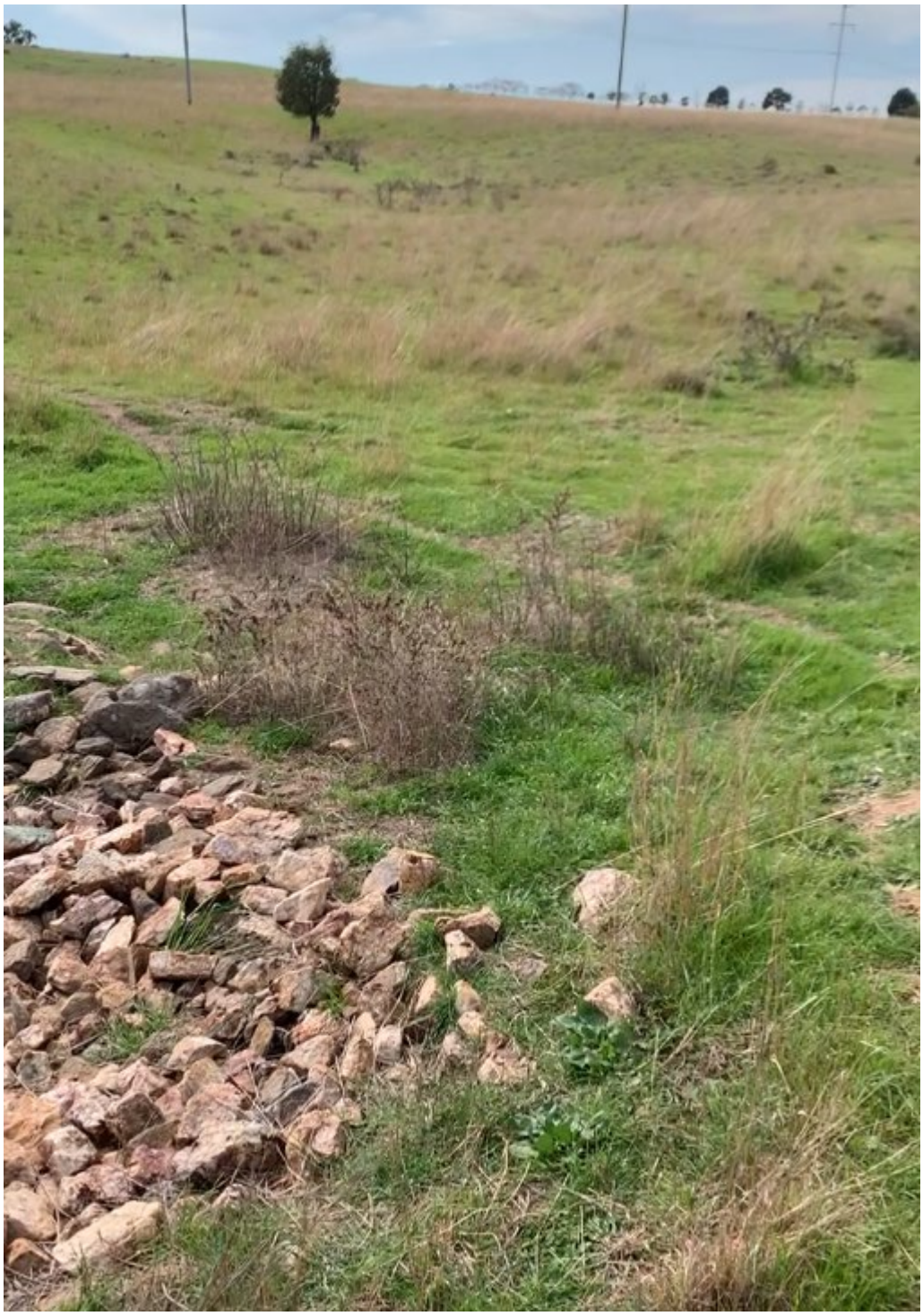
Photograph 27: Material used for the second crossing. Photograph taken facing east.



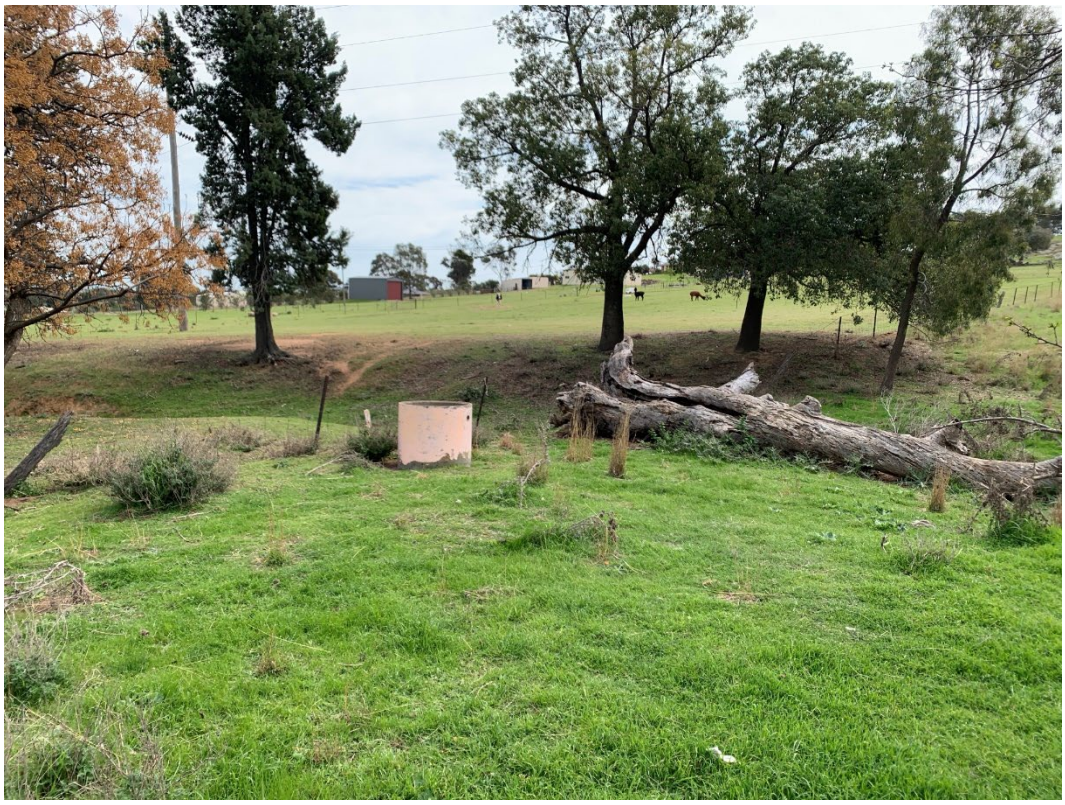
Photograph 28: The gully. Photograph taken facing west.



Photograph 29: Wrecked car. Photograph taken facing north west.

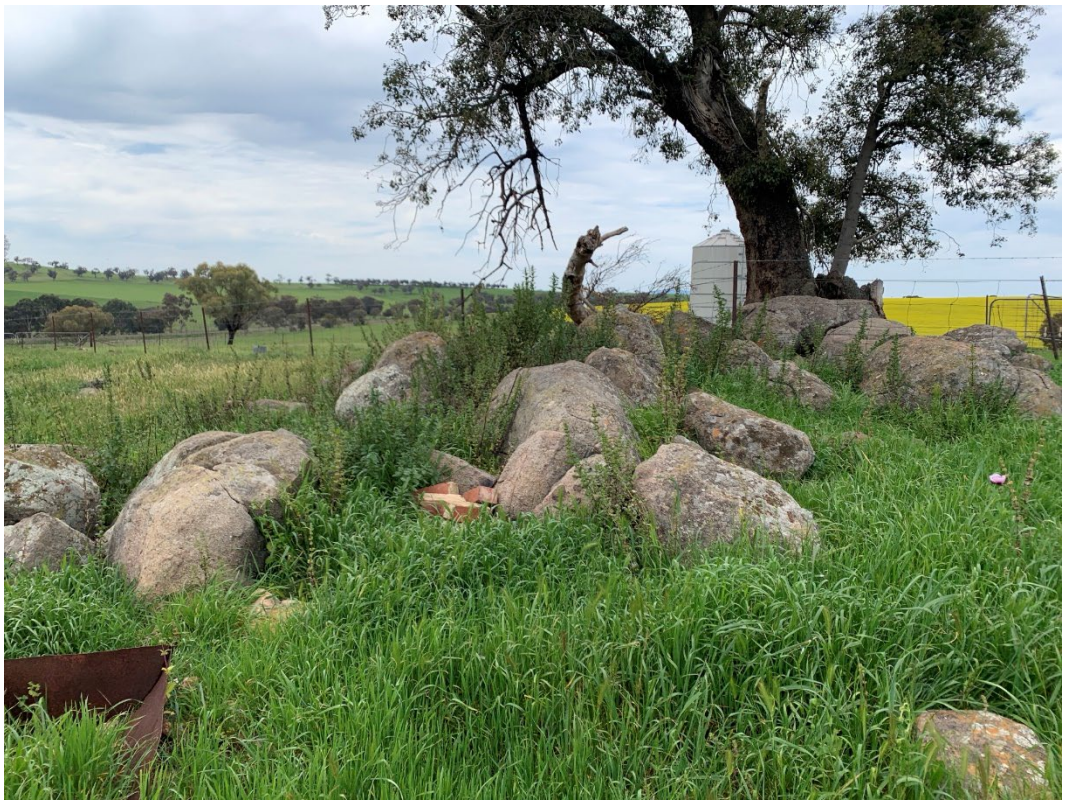


Photograph 30: The third crossing. Photograph taken facing north.

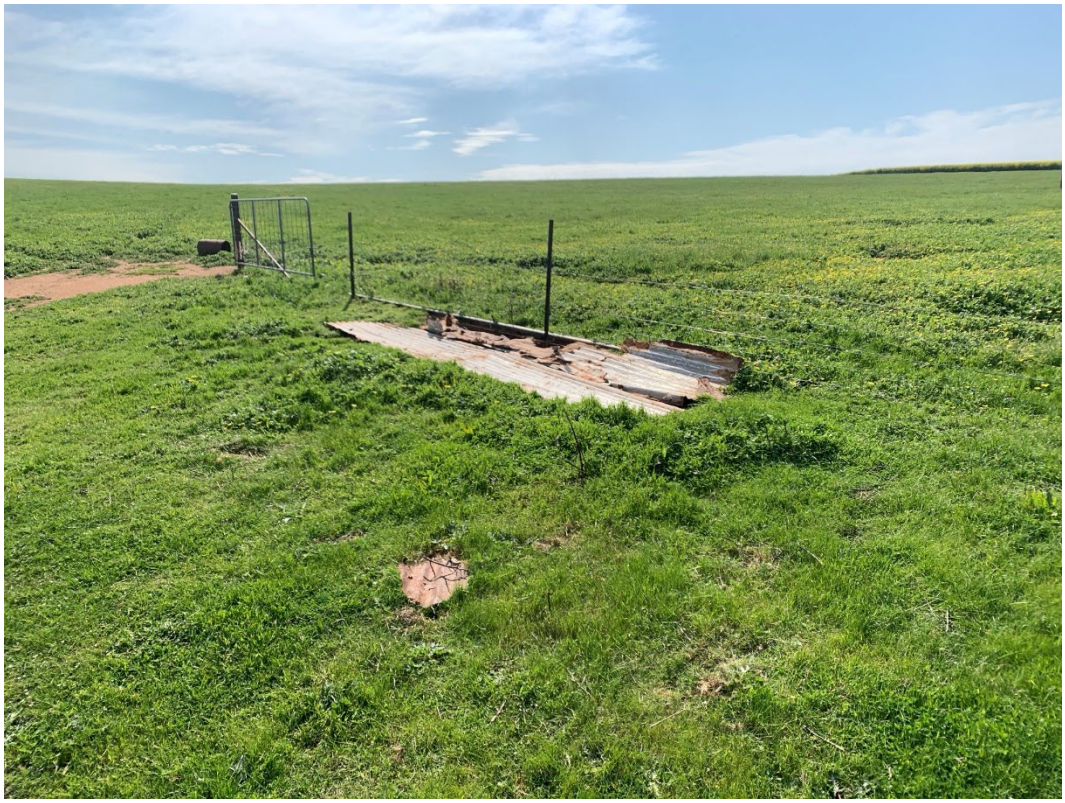


Photograph 31: Concrete tank. Photograph taken facing north west.

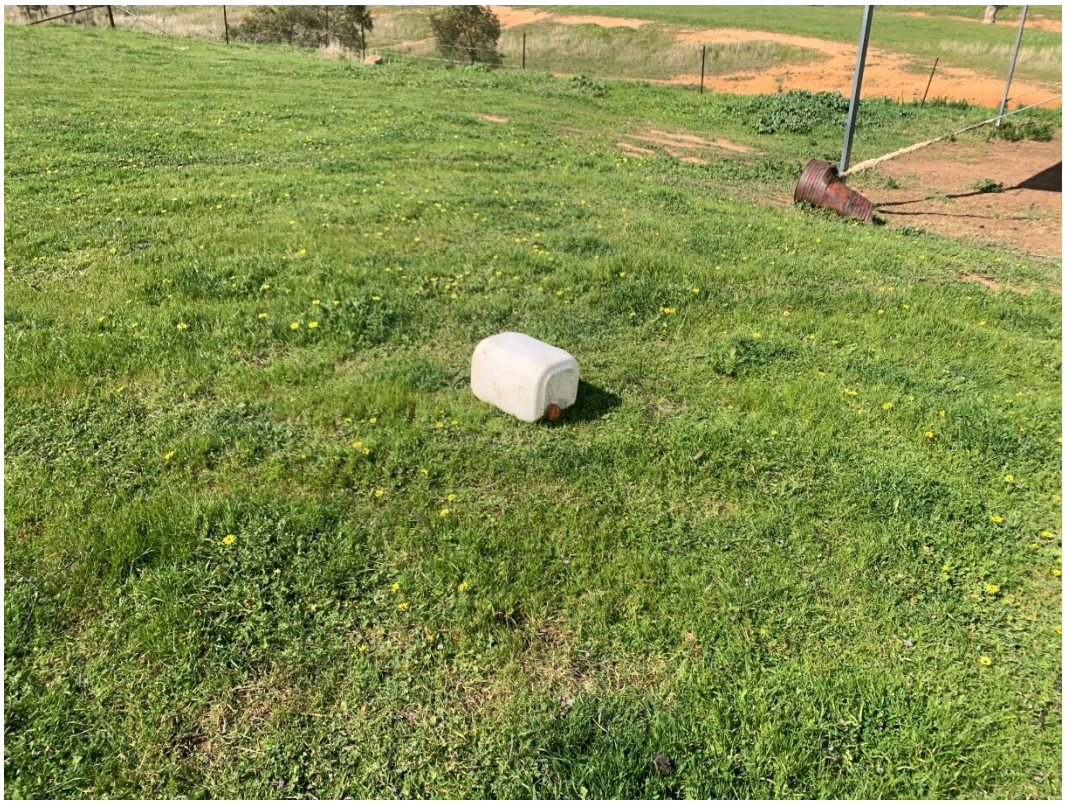
Photograph 32: Scattered rubbish around the site. Photograph taken facing north.



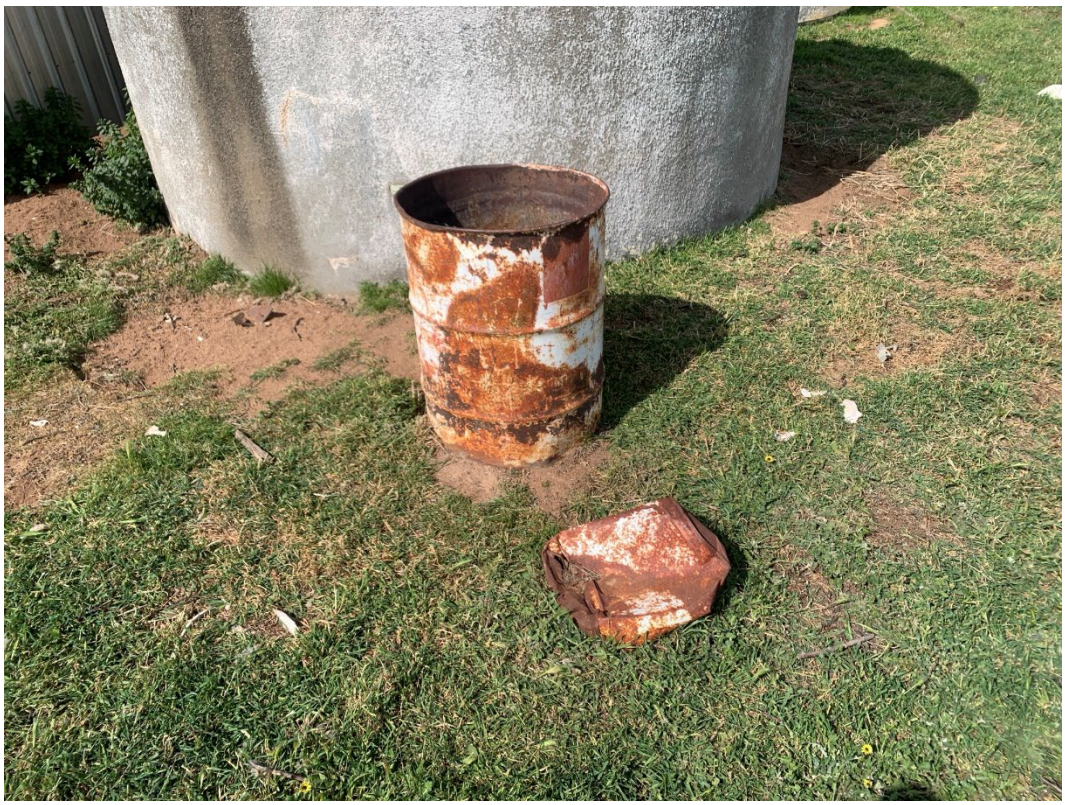
Photograph 33: Scattered rubbish around the site. Photograph taken facing north east.



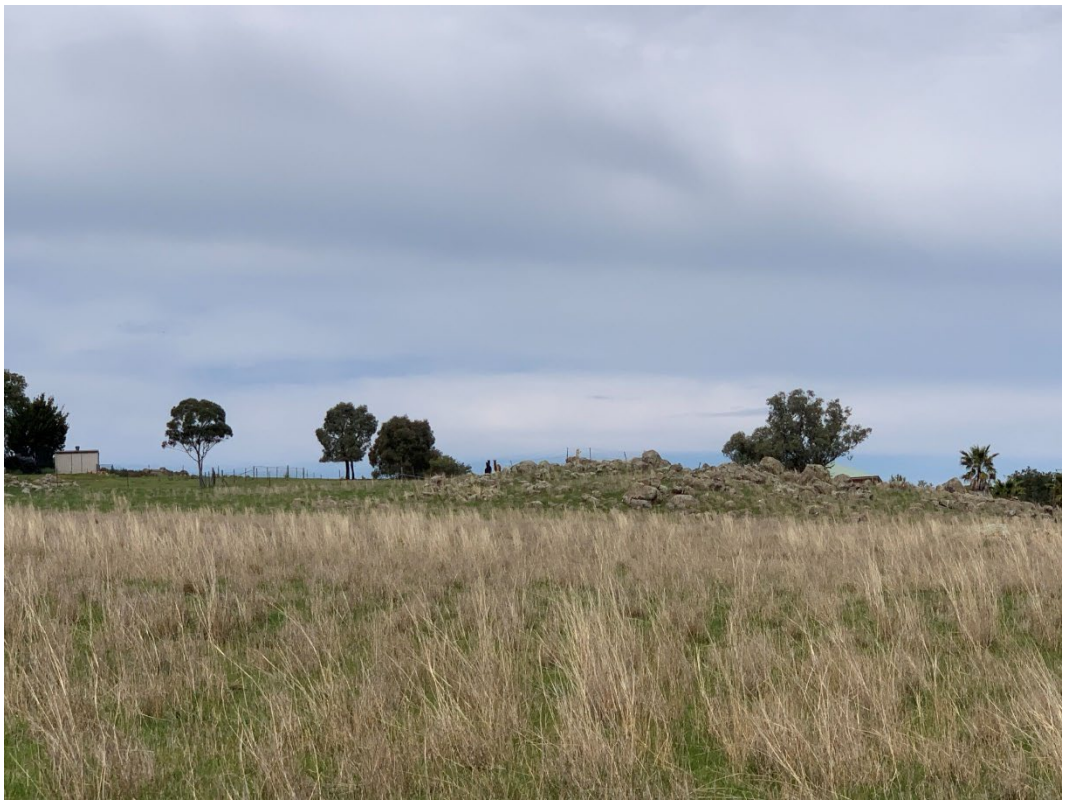
Photograph 34: Scattered rubbish around the site. Photograph taken facing north east.



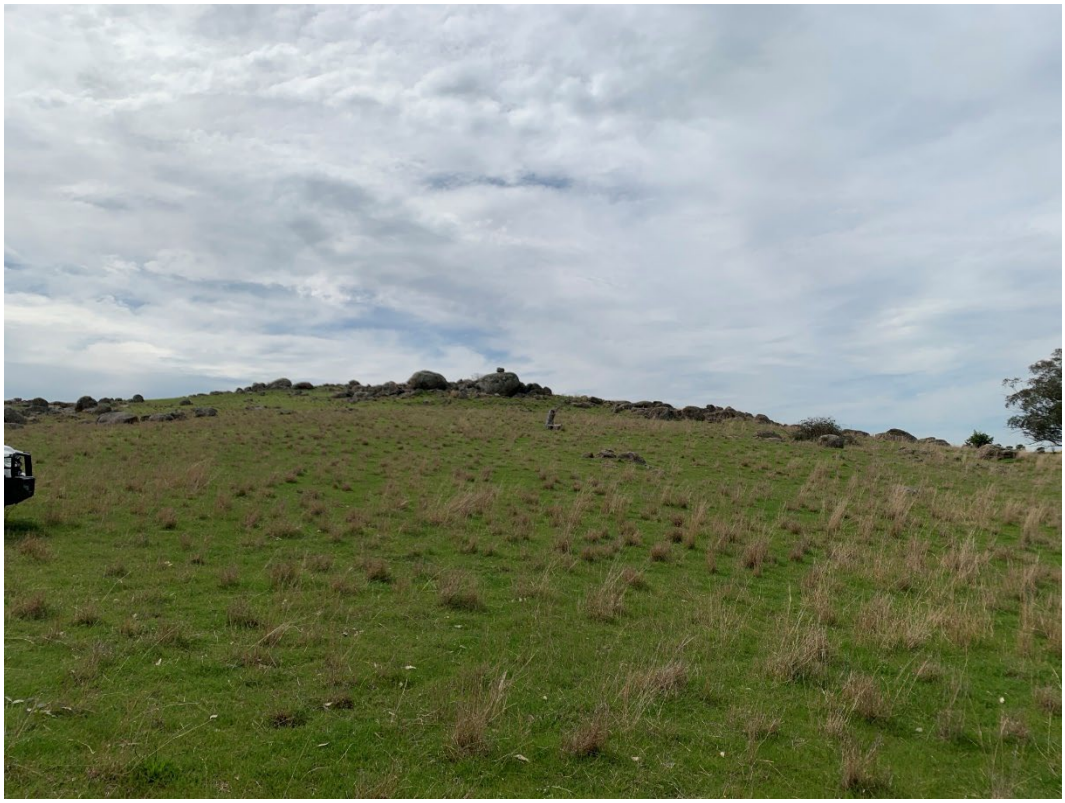
Photograph 35: Scattered rubbish around the site. Photograph taken facing south east.



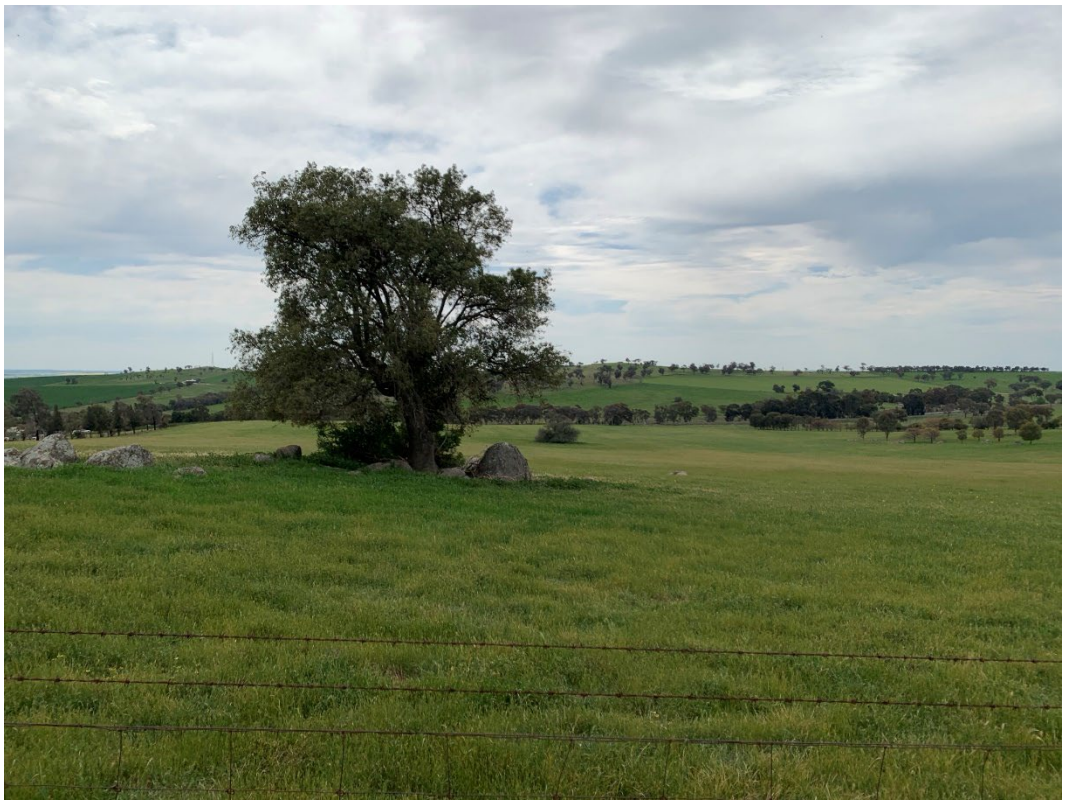
Photograph 36: Scattered rubbish around the site. Photograph taken facing south east.



Photograph 37: Granite outcrop in the south of the site. Photograph taken facing south.



Photograph 38: Granite outcrop in the approximate centre of the site. Photograph taken facing north east.



Photograph 39: Granite outcrop in the approximate centre of the site. Photograph taken facing east.

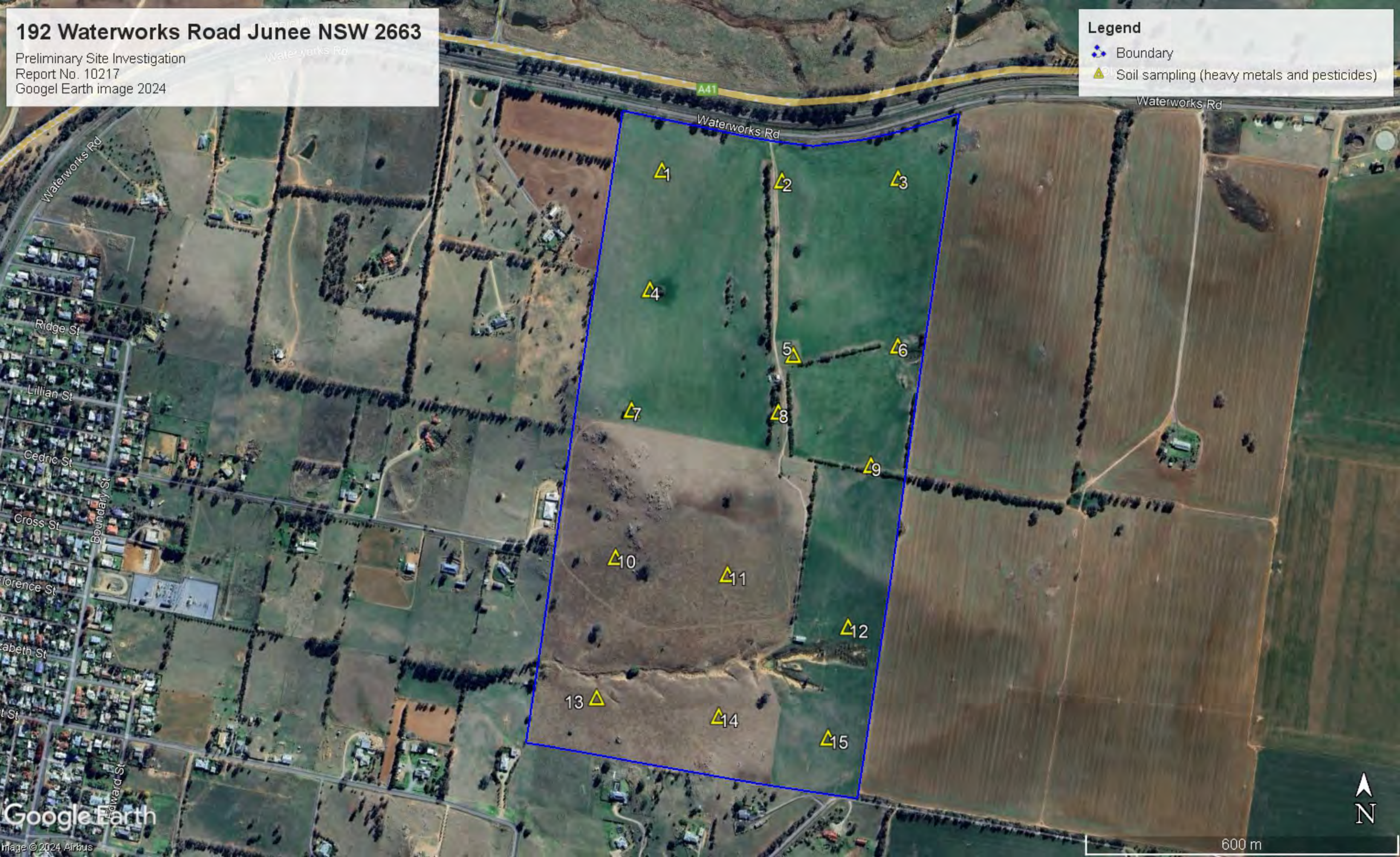
Attachment D : *Sampling map*

192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Googel Earth image 2024

Legend

- Boundary
- Soil sampling (heavy metals and pesticides)



192 Waterworks Road Junee NSW 2663

Preliminary Site Investigation
Report No. 10217
Googel Earth image 2024

Legend

- Boundary
- Soil sampling (hydrocarbons, solvents, heavy metals, and pesticides)

16 17 18 19 20 21

N

200 m

Google Earth

Attachment E : *Tabulated results*

Page: 1 of 3
Job number: 10217
Project: Preliminary Site Investigation - 192 Waterworks Road Junee NSW

													Residential A Criteria			
Sample date			11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24				
Sample location			1	2	3	4	5	6	7	8	9	10				
Sample ID			1	2	3	4	5	6	7	8	9	10				
Sample depth (m)			0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3				
Compound	**LOR**	**Unit**	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	**HILs**	**HSLs**	**ACLs**	**EILs**	**ESLs**
Arsenic	1	mg/kg	2	1	2	1	3	2	1	2	2	1	100	-	-	100	-
Cadmium	0.3	mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	20	-	-	-	-
Chromium	0.5	mg/kg	15	14	16	13	18	16	17	23	15	28	-	-	130	-	-
Copper	0.5	mg/kg	5.0	4.3	5.8	5.0	10	7.3	7.9	9.4	5.3	9.7	6000	-	190	-	-
Lead	1	mg/kg	6	5	8	8	30	10	8	12	7	11	300	-	1100	-	-
Nickel	0.5	mg/kg	4.9	4.7	7.4	4.0	8.6	6.9	7.5	11	5.6	12	400	-	170	-	-
Zinc	2	mg/kg	10	11	17	15	150	25	29	78	21	54	7400	-	400	-	-
Mercury	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	40	-	-	-	-
Chromium (VI)	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-
PCBs	1	mg/kg	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
HCB	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	10	-	-	-	-
Heptachlor	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	6	-	-	-	-
Chlordane	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	50	-	-	-	-
Endrin	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	10	-	-	-	-
Endosulfan	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	270	-	-	-	-
Mirex	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	10	-	-	-	-
Aldrin+dieldrin	0.3	mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	1.2	<0.3	<0.3	<0.3	6	-	-	-	-
DDT+DDE+DDD	0.3	mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	240	-	-	-	-
Chlorpyrifos	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	160	-	-	-	-
Atrazine	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	320	-	-	-	-
Bifenthrin	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	600	-	-	-	-
Phenols	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	3000	-	-	-	-
PAHs	0.8	mg/kg	-	-	-	-	-	-	-	-	-	-	300	-	-	-	-
Benzo(a)pyrene TEQ (half LOR)	0.2	mg/kg	-	-	-	-	-	-	-	-	-	-	3	-	-	-	0.7
TRH C6-C10 minux BTEX (F1)	25	mg/kg	-	-	-	-	-	-	-	-	-	-	-	45	-	-	180
TRH C10-C16 minus napthalene (F2)	25	mg/kg	-	-	-	-	-	-	-	-	-	-	-	110	-	-	120
TRH C16-C34 (F3)	90	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
TRH C34-C40 (F4)	120	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2800
Benzene	0.1	mg/kg	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	50
Toluene	0.1	mg/kg	-	-	-	-	-	-	-	-	-	-	-	160	-	-	85
Ethylbenzene	0.1	mg/kg	-	-	-	-	-	-	-	-	-	-	-	55	-	-	70
Xylenes	0.3	mg/kg	-	-	-	-	-	-	-	-	-	-	-	40	-	-	105
Napthalene	0.1	mg/kg	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
Asbestos detected	0.1	g/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Job number: 10207
Project: Preliminary Site Investigation - Federation Way Urana NSW 2645

			Sample date	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24	11/9/24					
			Sample location	11	12	13	14	15	16	17	18	19	20		**Residential A Criteria**			
			Sample ID	11	12	13	14	15	16	17	18	19	20					
			Sample depth (m)	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3	0.0-0.3					
Compound	**LOR**	**Unit**		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	**HILs**	**HSLs**	**ACLs**	**EILs**	**ESLs**
Arsenic	1	mg/kg		2	2	2	2	2	3	3	2	4	3	100	-	-	100	-
Cadmium	0.3	mg/kg		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	20	-	-	-	-
Chromium	0.5	mg/kg		17	14	13	13	15	24	22	21	20	19	-	-	130	-	-
Copper	0.5	mg/kg		8.4	5.4	4.9	5.9	5.1	9.9	9.7	16	9.9	8.1	6000	-	190	-	-
Lead	1	mg/kg		12	8	8	8	8	11	10	11	14	8	300	-	1100	-	-
Nickel	0.5	mg/kg		8.8	6.4	5	6.1	5.6	13	11	12	11	8.1	400	-	170	-	-
Zinc	2	mg/kg		30	15	15	19	15	48	78	250	140	36	7400	-	400	-	-
Mercury	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	40	-	-	-	-
Chromium (VI)	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	100	-	-	-	-
PCBs	1	mg/kg		-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
HCB	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	10	-	-	-	-
Heptachlor	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	6	-	-	-	-
Chlordane	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	50	-	-	-	-
Endrin	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	10	-	-	-	-
Endosulfan	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	270	-	-	-	-
Mirex	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	10	-	-	-	-
Aldrin+dieldrin	0.3	mg/kg		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	6	-	-	-	-
DDT+DDE+DDD	0.3	mg/kg		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	240	-	-	-	-
Chlorpyrifos	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	160	-	-	-	-
Atrazine	0.05	mg/kg		-	-	-	-	-	-	-	-	-	-	320	-	-	-	-
Bifenthrin	0.05	mg/kg		-	-	-	-	-	-	-	-	-	-	600	-	-	-	-
Phenols	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	3000	-	-	-	-
PAHs	0.8	mg/kg		-	-	-	-	-	-	-	-	-	-	300	-	-	-	-
Benzo(a)pyrene TEQ (half LOR)	0.2	mg/kg		-	-	-	-	-	-	-	-	-	-	3	-	-	-	0.7
TRH C6-C10 minux BTEX (F1)	25	mg/kg		-	-	-	-	-	<25	<25	<25	<25	<25	-	45	-	-	180
TRH C10-C16 minus napthalene (F2)	25	mg/kg		-	-	-	-	-	<25	<25	26	<25	<25	-	110	-	-	120
TRH C16-C34 (F3)	90	mg/kg		-	-	-	-	-	<90	<90	150	<90	130	-	-	-	-	300
TRH C34-C40 (F4)	120	mg/kg		-	-	-	-	-	<120	<120	<120	<120	<120	-	-	-	-	2800
Benzene	0.1	mg/kg		-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.5	-	-	50
Toluene	0.1	mg/kg		-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	160	-	-	85
Ethylbenzene	0.1	mg/kg		-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	55	-	-	70
Xylenes	0.3	mg/kg		-	-	-	-	-	<0.3	<0.3	<0.3	<0.3	<0.3	-	40	-	-	105
Napthalene	0.1	mg/kg		-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	3	-	-	-
Asbestos detected	0.1	g/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Page: 3 of 3
Job number: 10207
Project: Preliminary Site Investigation - Federation Way Urana NSW 2645

													Residential A Criteria			
Sample date			11/9/24	-	-	-	-	-	-	-	-	-				
Sample location			21	-	-	-	-	-	-	-	-	-				
Sample ID			21	-	-	-	-	-	-	-	-	-				
Sample depth (m)			0.0-0.3	-	-	-	-	-	-	-	-	-				
Compound	**LOR**	**Unit**	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	**HILs**	**HSLs**	**ACLs**	**EILs**	**ESLs**
Arsenic	1	mg/kg	1	-	-	-	-	-	-	-	-	-	100	-	-	100	-
Cadmium	0.3	mg/kg	<0.3	-	-	-	-	-	-	-	-	-	20	-	-	-	-
Chromium	0.5	mg/kg	11	-	-	-	-	-	-	-	-	-	-	-	130	-	-
Copper	0.5	mg/kg	10	-	-	-	-	-	-	-	-	-	6000	-	190	-	-
Lead	1	mg/kg	6	-	-	-	-	-	-	-	-	-	300	-	1100	-	-
Nickel	0.5	mg/kg	5.8	-	-	-	-	-	-	-	-	-	400	-	170	-	-
Zinc	2	mg/kg	74	-	-	-	-	-	-	-	-	-	7400	-	400	-	-
Mercury	0.05	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	40	-	-	-	-
Chromium (VI)	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-
PCBs	1	mg/kg	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
HCB	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	10	-	-	-	-
Heptachlor	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	6	-	-	-	-
Chlordane	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	50	-	-	-	-
Endrin	0.2	mg/kg	<0.2	-	-	-	-	-	-	-	-	-	10	-	-	-	-
Endosulfan	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	270	-	-	-	-
Mirex	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	10	-	-	-	-
Aldrin+dieldrin	0.3	mg/kg	<0.3	-	-	-	-	-	-	-	-	-	6	-	-	-	-
DDT+DDE+DDD	0.3	mg/kg	<0.3	-	-	-	-	-	-	-	-	-	240	-	-	-	-
Chlorpyrifos	0.2	mg/kg	<0.2	-	-	-	-	-	-	-	-	-	160	-	-	-	-
Atrazine	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	320	-	-	-	-
Bifenthrin	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	600	-	-	-	-
Phenols	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	3000	-	-	-	-
PAHs	0.8	mg/kg	-	-	-	-	-	-	-	-	-	-	300	-	-	-	-
Benzo(a)pyrene TEQ (half LOR)	0.2	mg/kg	-	-	-	-	-	-	-	-	-	-	3	-	-	-	0.7
TRH C6-C10 minux BTEX (F1)	25	mg/kg	<25	-	-	-	-	-	-	-	-	-	-	45	-	-	180
TRH C10-C16 minus napthalene (F2)	25	mg/kg	<25	-	-	-	-	-	-	-	-	-	-	110	-	-	120
TRH C16-C34 (F3)	90	mg/kg	180	-	-	-	-	-	-	-	-	-	-	-	-	-	300
TRH C34-C40 (F4)	120	mg/kg	<120	-	-	-	-	-	-	-	-	-	-	-	-	-	2800
Benzene	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	-	0.5	-	-	50
Toluene	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	-	160	-	-	85
Ethylbenzene	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	-	55	-	-	70
Xylenes	0.3	mg/kg	<0.3	-	-	-	-	-	-	-	-	-	-	40	-	-	105
Napthalene	0.1	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	-	3	-	-	-
Asbestos detected	0.1	g/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment F : *Laboratory reports*

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Admin
Client	DM MCMAHON
Address	6 Jones Street Wagga Wagga PO Box 6118 WAGGA WAGGA NSW 2650
Telephone	61 2 69310510
Facsimile	(Not specified)
Email	admin@dmmcmahon.com.au
Project	**10217 Junee**
Order Number	**10217**
Samples	23

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE271015 R0**
Date Received	13/9/2024
Date Reported	20/9/2024

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

Shane MCDERMOTT
Laboratory Manager

Teresa NGUYEN
Organic Chemist

VOC's in Soil [AN433] Tested: 16/9/2024

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Naphthalene (VOC)*	mg/kg	0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 16/9/2024

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C9	mg/kg	20	<20
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 16/9/2024

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
TRH C10-C14	mg/kg	20	<20	<20	**22**	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	**60**	<45	**67**
TRH C29-C36	mg/kg	45	<45	<45	**110**	<45	**80**
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	**26**	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	**26**	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	**150**	<90	**130**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	**190**	<110	**150**
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021
TRH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	**68**
TRH C29-C36	mg/kg	45	**130**
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16	mg/kg	25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	**180**
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	**200**
TRH >C10-C40 Total (F bands)	mg/kg	210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 16/9/2024

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8

Speciated Phenols in Soil [AN420] Tested: 16/9/2024

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021
Phenol	mg/kg	0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1
Total Cresol	mg/kg	1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5
4-nitrophenol	mg/kg	1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1
Pentachlorophenol	mg/kg	0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2
4-chloro-3-methylphenol	mg/kg	2	<2

OC Pesticides in Soil [AN420] Tested: 16/9/2024

PARAMETER	UOM	LOR	1 SOIL - 11/9/2024 SE271015.001	2 SOIL - 11/9/2024 SE271015.002	3 SOIL - 11/9/2024 SE271015.003	4 SOIL - 11/9/2024 SE271015.004	5 SOIL - 11/9/2024 SE271015.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 16/9/2024 (continued)

PARAMETER	UOM	LOR	6 SOIL - 11/9/2024 SE271015.006	7 SOIL - 11/9/2024 SE271015.007	8 SOIL - 11/9/2024 SE271015.008	9 SOIL - 11/9/2024 SE271015.009	10 SOIL - 11/9/2024 SE271015.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 16/9/2024 (continued)

PARAMETER	UOM	LOR	11 SOIL - 11/9/2024 SE271015.011	12 SOIL - 11/9/2024 SE271015.012	13 SOIL - 11/9/2024 SE271015.013	14 SOIL - 11/9/2024 SE271015.014	15 SOIL - 11/9/2024 SE271015.015
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 16/9/2024 (continued)

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 16/9/2024 (continued)

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

OP Pesticides in Soil [AN420] Tested: 16/9/2024

PARAMETER	UOM	LOR	1 SOIL - 11/9/2024 SE271015.001	2 SOIL - 11/9/2024 SE271015.002	3 SOIL - 11/9/2024 SE271015.003	4 SOIL - 11/9/2024 SE271015.004	5 SOIL - 11/9/2024 SE271015.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	6 SOIL - 11/9/2024 SE271015.006	7 SOIL - 11/9/2024 SE271015.007	8 SOIL - 11/9/2024 SE271015.008	9 SOIL - 11/9/2024 SE271015.009	10 SOIL - 11/9/2024 SE271015.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	11 SOIL - 11/9/2024 SE271015.011	12 SOIL - 11/9/2024 SE271015.012	13 SOIL - 11/9/2024 SE271015.013	14 SOIL - 11/9/2024 SE271015.014	15 SOIL - 11/9/2024 SE271015.015
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 16/9/2024 (continued)

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

PCBs in Soil [AN420] Tested: 16/9/2024

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 16/9/2024

PARAMETER	UOM	LOR	1 SOIL - 11/9/2024 SE271015.001	2 SOIL - 11/9/2024 SE271015.002	3 SOIL - 11/9/2024 SE271015.003	4 SOIL - 11/9/2024 SE271015.004	5 SOIL - 11/9/2024 SE271015.005
Arsenic, As	mg/kg	1	2	1	2	1	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	15	14	16	13	18
Copper, Cu	mg/kg	0.5	5.0	4.3	5.8	5.0	10
Lead, Pb	mg/kg	1	6	5	8	8	30
Nickel, Ni	mg/kg	0.5	4.9	4.7	7.4	4.0	8.6
Zinc, Zn	mg/kg	2	10	11	17	15	150

PARAMETER	UOM	LOR	6 SOIL - 11/9/2024 SE271015.006	7 SOIL - 11/9/2024 SE271015.007	8 SOIL - 11/9/2024 SE271015.008	9 SOIL - 11/9/2024 SE271015.009	10 SOIL - 11/9/2024 SE271015.010
Arsenic, As	mg/kg	1	2	1	2	2	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	17	23	15	28
Copper, Cu	mg/kg	0.5	7.3	7.9	9.4	5.3	9.7
Lead, Pb	mg/kg	1	10	8	12	7	11
Nickel, Ni	mg/kg	0.5	6.9	7.5	11	5.6	12
Zinc, Zn	mg/kg	2	25	29	78	21	54

PARAMETER	UOM	LOR	11 SOIL - 11/9/2024 SE271015.011	12 SOIL - 11/9/2024 SE271015.012	13 SOIL - 11/9/2024 SE271015.013	14 SOIL - 11/9/2024 SE271015.014	15 SOIL - 11/9/2024 SE271015.015
Arsenic, As	mg/kg	1	2	2	2	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	14	13	13	15
Copper, Cu	mg/kg	0.5	8.4	5.4	4.9	5.9	5.1
Lead, Pb	mg/kg	1	12	8	8	8	8
Nickel, Ni	mg/kg	0.5	8.8	6.4	5.9	6.1	5.6
Zinc, Zn	mg/kg	2	30	15	15	19	15

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Arsenic, As	mg/kg	1	3	3	2	4	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	24	22	21	20	19
Copper, Cu	mg/kg	0.5	9.9	9.7	16	9.9	8.1
Lead, Pb	mg/kg	1	11	10	11	14	8
Nickel, Ni	mg/kg	0.5	13	11	12	11	8.1
Zinc, Zn	mg/kg	2	48	78	250	140	36

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 16/9/2024 (continued)

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021	Duplicate SOIL - 11/9/2024 SE271015.022
Arsenic, As	mg/kg	1	**1**	**2**
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	**11**	**15**
Copper, Cu	mg/kg	0.5	**10**	**4.8**
Lead, Pb	mg/kg	1	**6**	**5**
Nickel, Ni	mg/kg	0.5	**5.8**	**5.1**
Zinc, Zn	mg/kg	2	**74**	**12**

Mercury in Soil [AN312] Tested: 16/9/2024

PARAMETER	UOM	LOR	1 SOIL - 11/9/2024 SE271015.001	2 SOIL - 11/9/2024 SE271015.002	3 SOIL - 11/9/2024 SE271015.003	4 SOIL - 11/9/2024 SE271015.004	5 SOIL - 11/9/2024 SE271015.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	6 SOIL - 11/9/2024 SE271015.006	7 SOIL - 11/9/2024 SE271015.007	8 SOIL - 11/9/2024 SE271015.008	9 SOIL - 11/9/2024 SE271015.009	10 SOIL - 11/9/2024 SE271015.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	11 SOIL - 11/9/2024 SE271015.011	12 SOIL - 11/9/2024 SE271015.012	13 SOIL - 11/9/2024 SE271015.013	14 SOIL - 11/9/2024 SE271015.014	15 SOIL - 11/9/2024 SE271015.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021	Duplicate SOIL - 11/9/2024 SE271015.022
Mercury	mg/kg	0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 16/9/2024

PARAMETER	UOM	LOR	1 SOIL - 11/9/2024 SE271015.001	2 SOIL - 11/9/2024 SE271015.002	3 SOIL - 11/9/2024 SE271015.003	4 SOIL - 11/9/2024 SE271015.004	5 SOIL - 11/9/2024 SE271015.005
% Moisture	%w/w	1	3.1	1.7	7.5	5.1	9.6

PARAMETER	UOM	LOR	6 SOIL - 11/9/2024 SE271015.006	7 SOIL - 11/9/2024 SE271015.007	8 SOIL - 11/9/2024 SE271015.008	9 SOIL - 11/9/2024 SE271015.009	10 SOIL - 11/9/2024 SE271015.010
% Moisture	%w/w	1	2.5	3.3	4.6	2.4	6.7

PARAMETER	UOM	LOR	11 SOIL - 11/9/2024 SE271015.011	12 SOIL - 11/9/2024 SE271015.012	13 SOIL - 11/9/2024 SE271015.013	14 SOIL - 11/9/2024 SE271015.014	15 SOIL - 11/9/2024 SE271015.015
% Moisture	%w/w	1	10.6	5.8	5.4	7.5	3.6

PARAMETER	UOM	LOR	16 SOIL - 11/9/2024 SE271015.016	17 SOIL - 11/9/2024 SE271015.017	18 SOIL - 11/9/2024 SE271015.018	19 SOIL - 11/9/2024 SE271015.019	20 SOIL - 11/9/2024 SE271015.020
% Moisture	%w/w	1	3.7	5.3	3.6	4.7	3.7

PARAMETER	UOM	LOR	21 SOIL - 11/9/2024 SE271015.021	Duplicate SOIL - 11/9/2024 SE271015.022
% Moisture	%w/w	1	11.2	1.6

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 19/9/2024

PARAMETER	UOM	LOR	Rinsate WATER - 11/9/2024 SE271015.023
Arsenic	µg/L	1	<1
Cadmium	µg/L	0.1	<0.1
Copper	µg/L	1	<1
Chromium	µg/L	1	<1
Nickel	µg/L	1	<1
Lead	µg/L	1	<1
Zinc	µg/L	5	<5

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 16/9/2024

PARAMETER	UOM	LOR	Rinsate WATER - 11/9/2024 SE271015.023
Mercury	mg/L	0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.