PRELIMINARY SITE INVESTIGATION
PREPARED FOR
WINTERGREEN FARM PTY LTD
3,329 OXLEY HWY SOMERTON NSW 2340

Prepared for: Wintergreen Farm Pty Ltd
Department of Planning, Housing and Infrastructure
NSW EPA
Tamworth Regional Council

Prepared by: [redacted], Senior Engineer
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Benbow ENVIRONMENTAL

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EXECUTIVE SUMMARY

Benbow Environmental (BE) was engaged by Wintergreen Farm Pty Ltd to prepare a Preliminary Site Investigation (PSI) report for 3,329 Oxley Highway, Somerton NSW, 2340, (legally described as Lot 175 DP755340). This report has been prepared in accordance with the *Consultants Reporting on Contaminated Land; Contaminated Land Guidelines (NSW EPA 2020)* and *The National Environment Protection (Assessment of Site Contamination) Measure 1999* (the ASC NEPM) *amended 2013*. A review of all available relevant, current and historical documents has been carried out in order to gain a comprehensive understanding of the history of the site.

A conceptual site model has been developed for the site to identify any potential contaminants of concern, any contamination sources and any potentially impacted media and exposure pathways for human and environmental receptors.

The key findings of the PSI are summarised as follows:

- No evidence of significant contamination from past or current operations;
- Minor fuel staining observed beneath the fuel bowser and superficial vegetation dieback around stored IBCs indicates localised surface soil contamination;
- High likelihood of asbestos-containing materials (ACMs) are contained within the farm structures built before 1990;
- Recent history (post 2000) of pesticide/herbicide application indicate only limited use, pertaining to the poultry sheds and associated structures – all chemicals are stored and managed in compliance with applicable standards;
- No indication of discharges to air, land, or water from current activities;
- The type and extent of historical pesticide use is unknown but is believed to have been used and highly likely included DDT derivatives and arsenic, as was typical for the time period, the local area and the land parcel's sheep grazing use.
- Areas identified that potentially could contain elevated pesticide levels include soils beneath and surrounding the farm's historical structures erected before 1980. The precise locations for historical chemical storage and applications (such for sheep dipping), are unknown but appears most likely to be within or in close proximity to the farm's historical structures and well away from the current and proposed poultry sheds, their associated work areas and infrastructure.
- The risk of contamination to soils from legacy pesticide chemicals is considered *medium* within the area containing the farm's pre-1980 structures and *low* for the remainder of the land parcel, including the current and proposed locations of the poultry sheds and associated work areas;
- Risk of contamination to soils from lead-based paints is considered low to medium, with soils most at risk located beneath and immediately surrounding the farm's historical pre-1980 structures. The medium risk applies to children who are more likely to accidently ingest or inhale such soils, during play. Soils within the area of the proposed development and across the farm generally, are not expected to be at risk from historical use of lead-based paint and therefore their risk is *low*.

The following is recommended:

- Removal of the top 0.5 m of surface soil beneath the two aboveground fuel tanks, with the soils either retained elsewhere on site and treated with BioSolve® Hydrovent™ (per manufacturer instructions) or sent to landfill with an appropriate waste classification;

- Undertake a Hazardous Building Materials Survey prior to any future refurbishments or demolition of any historical (pre 1990) structure; and
- Have surface soils located alongside the historical structures, including gardens, assessed for their lead content.

Based on the PSI, the soils most at risk from historical contamination, are soils within the area containing the farm's historical structures with these soils considered as having a medium risk of contamination. Soils outside of this area, including soils beneath and surrounding the current and proposed poultry sheds, the associated work areas and its infrastructure, and the farm paddocks generally, have a low risk of soil contamination. A detailed site investigation (DSI) is not considered warranted.

[redacted]	[redacted]	[redacted]
Environmental Scientist	Senior Engineer	Principal Consultant

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1. INTRODUCTION

Benbow Environmental (BE) was engaged by Wintergreen Farm Pty Ltd to prepare a Preliminary Site Investigation (PSI) report for 3329 Oxley Highway, Somerton NSW, 2340, legally described as Lot 175, DP755340.

This report has been prepared in accordance with the *Consultants Reporting on Contaminated Land; Contaminated Land Guidelines (NSW EPA 2020)* and *The National Environment Protection (Assessment of Site Contamination) Measure 1999* (the ASC NEPM) *amended 2013*.

A review of all available relevant, current and historical documents have been carried out in order to gain a comprehensive understanding of the history of the site.

1.1 SCOPE OF WORK

The scope of this PSI is as follows:

- Review site history including:
  - Land Titles search;
  - Obtain and examine Council records;
  - Examine historical aerial photographs of the site and surrounding area;
  - NSW EPA Records;
- Undertake a site inspection to identify any potential contaminants and areas impacted by contamination;
- Identify potential contamination and areas of potential contamination from an interpretation of the currently available information;
  - Determine the potential pathways contaminants may take to reach subsoil and groundwater;
- Identify if a Detailed Site Investigation (DSI) is warranted; and
- Provide recommendations in relation to additional investigations if any are considered necessary.

1.2 RELEVANT LEGISLATION AND GUIDELINES

The PSI has been carried out in accordance with the following relevant NSW EPA or NSW EPA recognised guidelines:

- Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (NSW EPA, April 2020);
- Guidelines for the NSW Site Auditor Scheme (3rd Edition) (NSW EPA, October 2017);
- Contaminated Land Management Act 1997; and
- NEPM Assessment of Site Contamination (NEPM, 1999) amended 2013.

1.3 ASSESSMENT OF ISSUES

This PSI provides an assessment of the following issues:

- Hazardous materials (such as asbestos, lead-based paints, chemicals/fuels etc);
- Structures and storage areas;

- Air emissions of pollutants;
- Soils, surface water and/or groundwater pollution;
- Pesticide and herbicide usage and/or contamination;
- Electromagnetic fields;
- Wastewater treatment;
- Potable water sources;
- Waste disposal; and
- Dams/ponds.

2. SITE IDENTIFICATION

2.1 SITE INFORMATION AND LAND USE SUMMARY

The Site's identification and land use is summarised below in Table 2-1.

Table 2-1: Site Identification

Site Address	3,329 Oxley Highway, Somerton NSW, 2340,
Lot and DP Numbers	Lot 175, DP755340
Approximate Site Area (Ha)	210.33 Ha
Local Government Area	Tamworth Regional Council
Parish of	Somerton
County of	Parry
Current Land Zoning	RU1 - *Primary Production*
Nearest SCIMS Survey Mark ID	SS 1385 N
SCIMS Latitude **SCIMS Longitude**	150.58 -30.94
SCIMS Altitude (AHD71) metres	32.004
Geocentric Datum	GDA2020

The Site location is presented below in Figure 2-1 with an aerial photograph of the Site displaying the lot boundary shown in Figure 2-2. The Site's land use zoning is presented below in Figure 2-3.

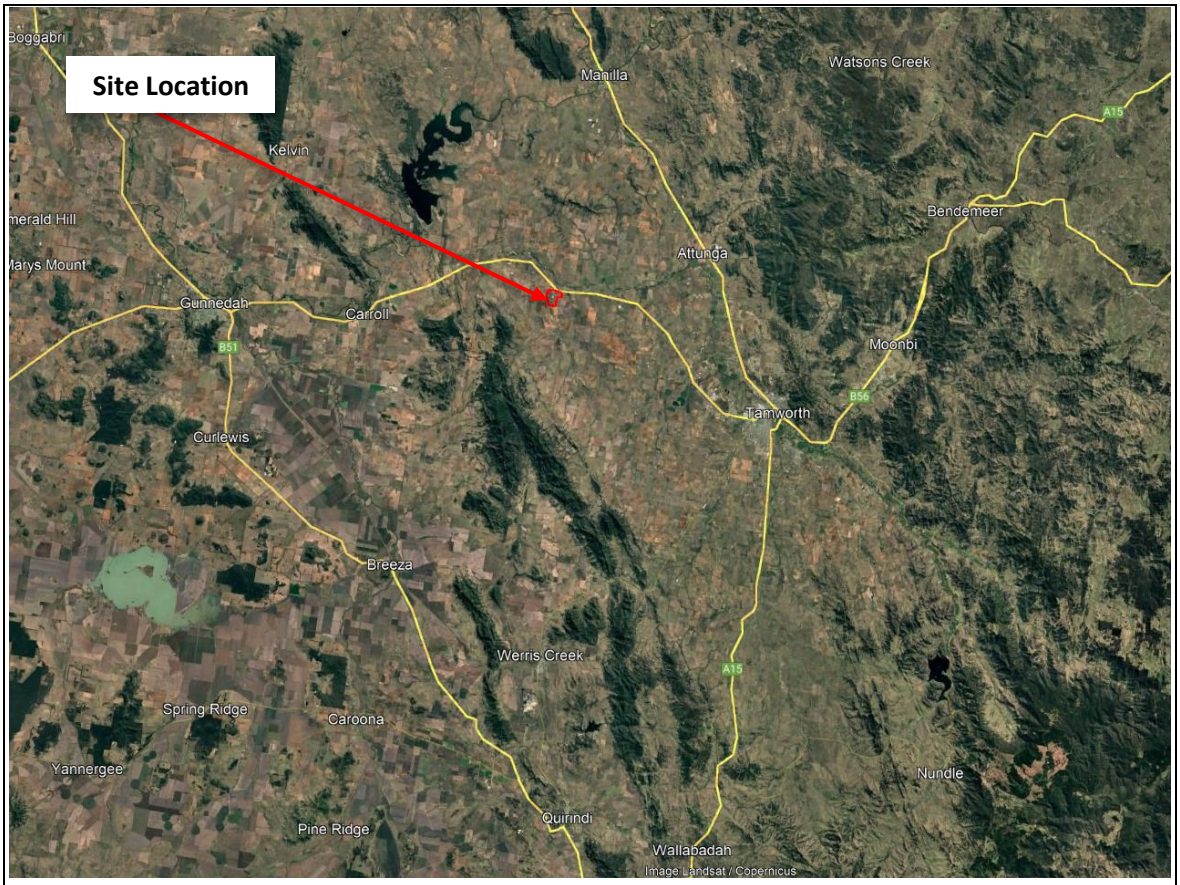
The Survey Control Information Management System (SCIMS) is a database listing coordinates, heights and related attributes for Permanent Survey Marks (PSMs). It is maintained for the purposes of cadastral boundary definition, engineering surveys, mapping and other spatial applications. A report detailing the attributes of the closest survey point to the subject site including a map of its location is included in the attachments (Attach_6).

2.2 CURRENT USE

The Site's current use is as an existing poultry farm that accommodates 240,000 birds in six (6) tunnel-ventilated sheds. The birds are raised for meat consumption (not for egg production). Each existing shed has an internal floor area of 2,323 m^2 with a stocking density of approximately 34 kg per m^2. Each shed goes through a 9-10-week production cycle, consisting of approximately 7-8 weeks of the growing phase and 2 weeks for cleaning and the preparation for the next growth cycle of new birds.

Also, the Site is undertaking small-scale agricultural activities, such as raising a few cows, likely for milk production.

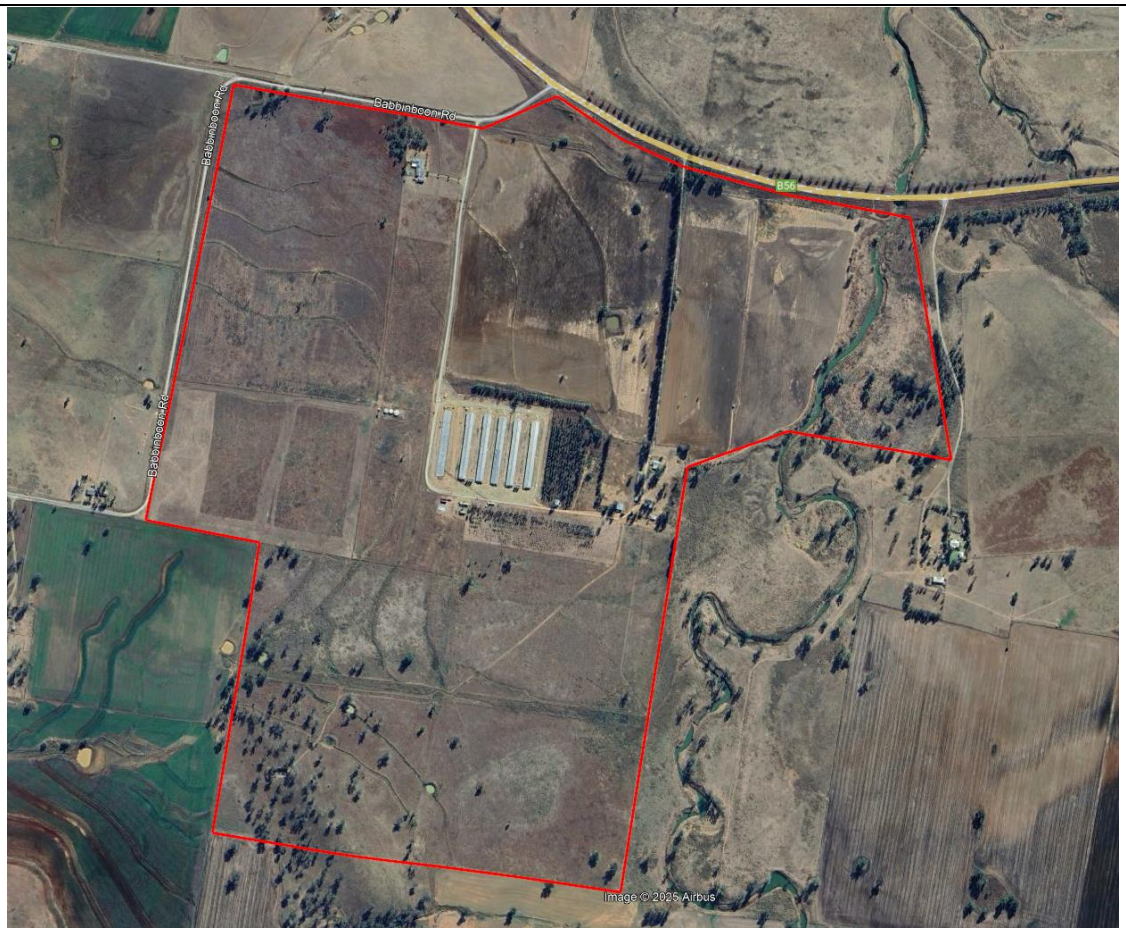
Figure 2-1: The Site in a Regional Context



Source: Google Maps 2025

N Not to scale	**LEGEND** Site Boundary	Benbow Environmental 27-29 Sherwood Street, Northmead NSW 2152

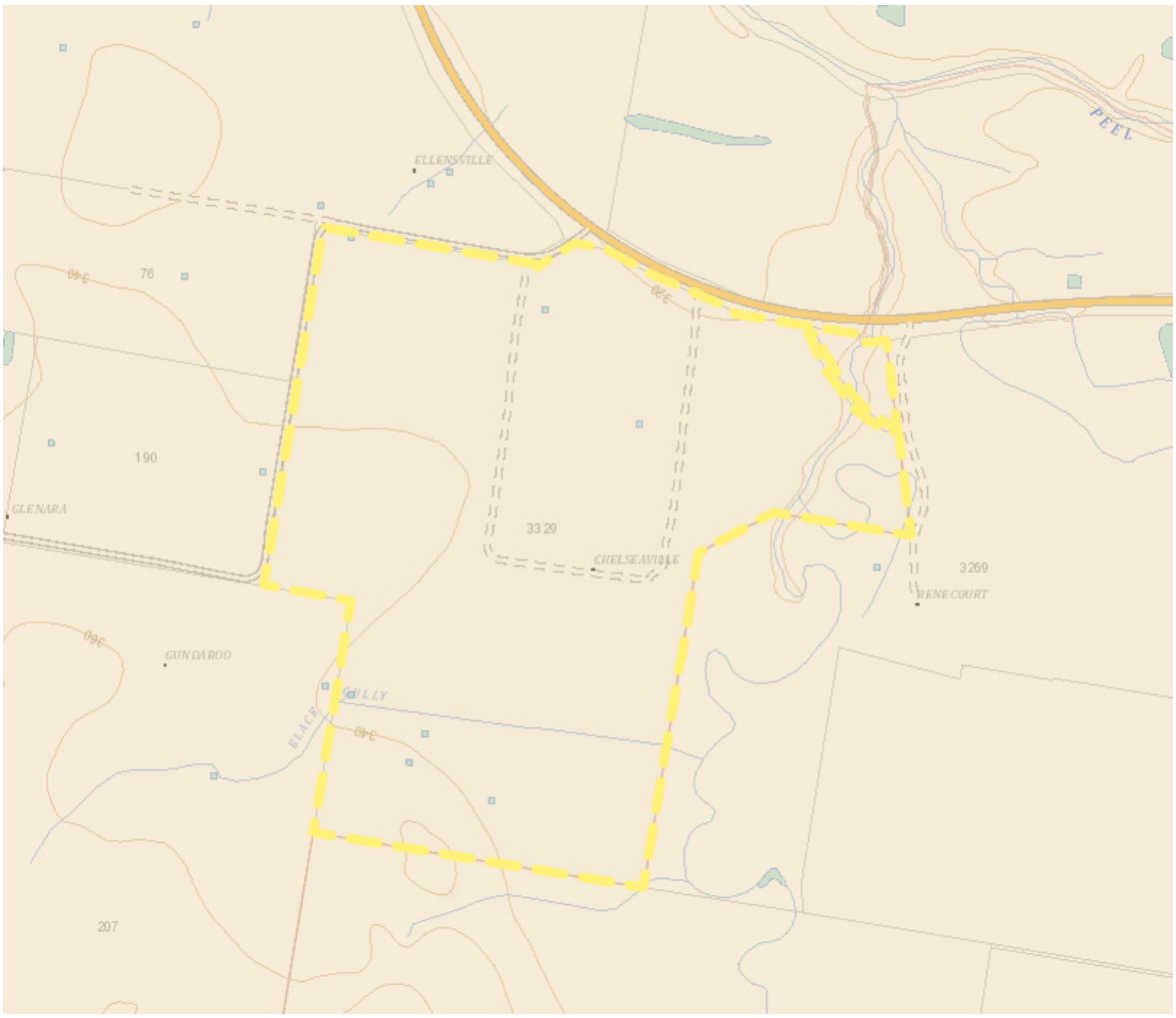
Figure 2-2: Aerial Image of the Site. Red Box Denotes Lot Boundary.



Source: Google Earth 2023

↑N Not to scale	**LEGEND** Site cadastral boundary	Benbow Environmental 27-29 Sherwood Street, Northmead NSW 2152

Figure 2-3: The Site and Surrounding Land Zones



Source: NSW Government ePlanning Spatial Viewer

N Not to scale	**LEGEND** Site cadastral boundary (approx.) RU1 - Primary Production	Benbow Environmental 27-29 Sherwood Street, Northmead NSW 2152

3. REGIONAL AND LOCAL GEOLOGY, HYDROLOGY AND CLIMATE

3.1 GEOLOGY AND SOIL CLASSIFICATION

The NSW Government eSpade interactive web portal provides the following information for the regional area's geology and soil landscape (Reference: Kovac and Lawrie 1991).

3.1.1 Geological Unit

The area is underlain by andesitic alluvium and colluvium derived from Carboniferous andesite members of the Merlewood and Namoi Formations. Andesite is a type of volcanic rock. Carboniferous rocks originated during the Carboniferous geological period (approx. between 359 to 299 million year ago).

3.1.2 Parent Rock

The underlying geology of the site comprises *Carboniferous andesite*, a fine-grained parent rock indicative of historic igneous activity in the region.

3.1.3 Soils

The Site's soils are predicted to be Red-brown earths (chromosols) in the land parcel northern half and Black earths (vertosols) in the lower (southern) half. Chromosol soils are characterised as having a strong texture contrast between the A and B horizons. This contrast is defined by a sandy or loamy surface layer over a clay-rich subsoil. The subsoil is not strongly acidic (pH > 5.5) and not sodic in the upper 0.20 m. Typically, chromosols have moderate soil fertility and slow water infiltration.

Vertosols soils have a higher clay content (>35 %) and are also known as cracking clay soils. This is due to their properties to shrink and crack (when very dry) or swell when wet. Vertosols have higher inferred soil fertility with very slow water infiltration due to their high clay content. Soil colour is typically brown, grey or black in appearance.

Due to the region's geology, it seems likely the soil materials is derived from andesite and unconsolidated sediment material from sedimentary layers from nearby and distant hill slopes.

3.1.4 Limitations to Development

The following are the primary limitations to development given the sites geology and soil classification:

- Localised dieback;
- Localised poor drainage;
- Engineering hazard;
- Gully erosion risk;
- Inherent erosion risk;
- Localised permanently high watertables;
- Known discharge area;
- Potential recharge area;

- High run-on;
- Localised dryland salinity;
- Localised seasonal waterlogging; and
- Sheet erosion risk.

3.2 ACID SULFATE SOILS (ASS)

The NSW Government eSPADE interactive web portal shows the site is not located on or near expected acid sulfate soil. The site has a very low risk from ASS.

Acid Sulfate Soils (ASS) are naturally occurring soils and sediments that have primarily formed within the last 10,000 years. At the end of the last Ice Age, rising sea-levels caused the formation of new coastal and in-land landscapes through sedimentation. The waterlogged sediments were organically rich and contained bacteria that converted sulfate from tidal waters, and iron from the sediments, into iron disulfide (predominantly iron pyrite). When exposed to air, iron sulfides oxidise and produce sulfuric acid.

If left undisturbed ASS remain benign. However, if drained, excavated or exposed to air (such as by a lowering of the water table), oxygen reacts with the soil's pyrite to form sulfuric acid, sometimes in very large quantities (for every 1 tonne of completely oxidised sulfidic material, 1.6 tonnes of pure sulfuric acid are produced). Within ASS are naturally occurring traces of metals such as iron, aluminium and arsenic. If acid forms, it can dissolve these metals and move them into the surrounding environment. Rainfall can aid this process moving acid and dissolved metals into adjoining land and nearby waterways. Accumulation of acids and metals becomes toxic to plants and animals, especially aquatic organisms (can cause massive fish kills). Human built structures are highly susceptible to ASS, as acid will slowly corrode timber, concrete, steel, roads and building foundations.

ASS occur predominantly on coastal lowlands, with elevations generally below 5 m Australian Height Datum (AHD). The presence of ASS generally indicates potential risks to surface and or groundwater quality, soil strength, stability, habitat character and agricultural productivity on adjoining lands, as well as presenting challenges for the design and maintenance of infrastructure in acid sulfate environments.

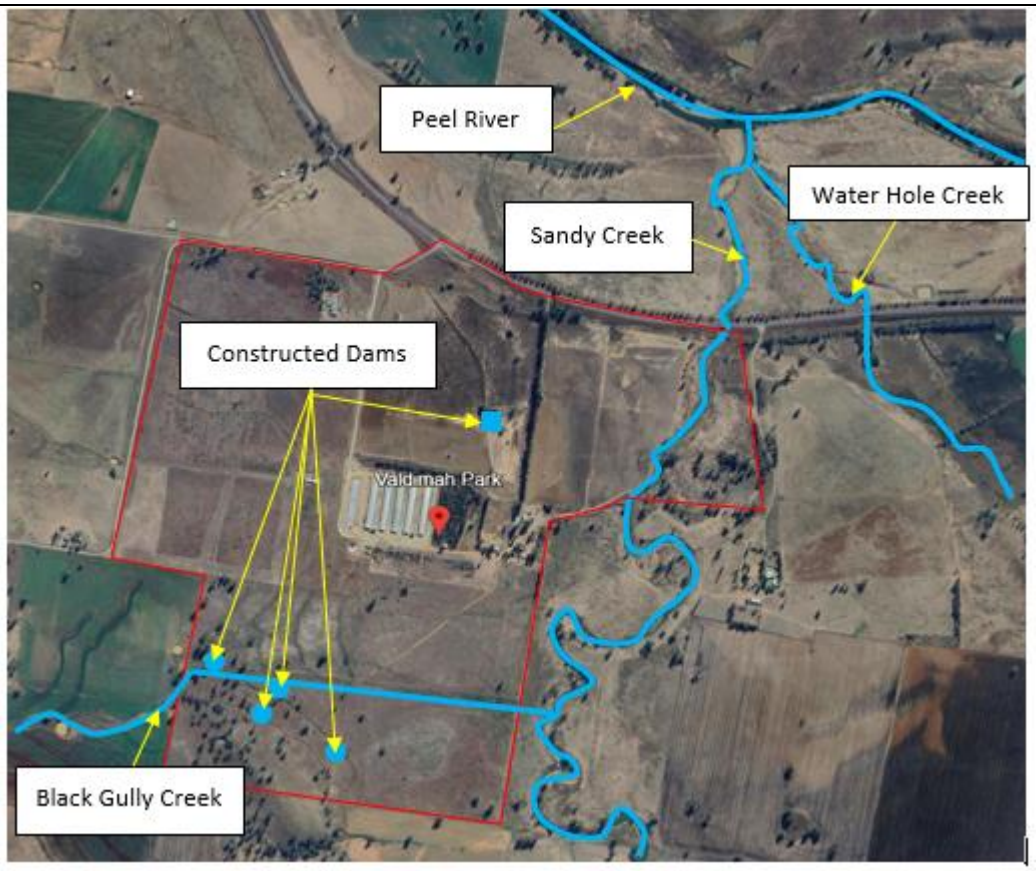
3.3 SURFACE AND LOCAL HYDROGEOLOGY

The Site contains five (5) earthen dams to the south, southeast and north and a man-made drainage channel termed Black Gully which runs from the Site's western boundary to its eastern boundary in the land parcel's south and enters the Site's only natural creek, Sandy Creek.

Sandy Creek's headwaters begin in the Melville Range Nature Reserve, some thirteen kilometres south of the Site. The northly flowing creek meanders through the Site's northeastern corner until it discharges into the Peel River approximately 700 m north of the site. The westerly flowing Peel River eventually joins the Namoi River. Waterhole Creek is another tributary of Sandy Creek. It is located east of the Site's northeastern area see

Figure 3-1 below.

Figure 3-1: Location of the Nearest Waterbodies to the Site



N
Not to scale

LEGEND
Site cadastral boundary

Benbow Environmental
27-29 Sherwood Street,
Northmead NSW 2152

3.3.1 Hydrogeology

According to Geoscience Australia's *Map of the Hydrogeology of Australia*, the regional aquifers underlying the Site are described as being porous, extensive, and highly productive [Geoscience Australia].

3.3.2 Groundwater Bore Search

A search was undertaken to identify registered groundwater bores located within a 500 m radius from the site's boundary, using the Australian Groundwater Explorer by the Australian Bureau of Meteorology and the groundwater monitoring overview map by the NSW Office of Water.

According to these resources, there are seven (7) groundwater monitoring bores within 500 m of the subject site. A summary of available information for each bore is provided below in Table 3-1.

Table 3-1: Available Data for Groundwater Bores Within 500 m of the Subject Site's Boundaries.

Bore ID	Bore depth (m)	Purpose	Standing water level (m)	Salinity	Latitude	Longitude	Distance from Site boundary (m)
GW048098	28	Water supply	Unknown	Unknown	-30.970092	150.65113	448 m W
GW054816	59.4	Water supply	Unknown	Unknown	-30.972592	150.654186	105.9 m SW
GW048911	36.6	Stock and Domestic	Unknown	Unknown	-30.970092	150.655019	76 m w
GW022779	15.2	Unknown	Unknown	Unknown	-30.965091	150.660019	232.2 m N
GW901521	30	Stock and Domestic	Unknown	Unknown	-30.97325	150.660297	South of the site
GW023576	7.6	Irrigation	Unknown	Unknown	-30.970647	-30.970647	20.4 m E
GW901520	8	Water supply	Unknown	Unknown	-30.974278	150.666197	Southeast of the site

3.3.3 Flood Risk

According to the land parcel's Planning Certificate 10.7, the land is within a flood planning area and subject to flood related development controls set out in the provisions of the Tamworth Regional Local Environmental Plan (LEP) 2010 (Clause 5.21) and the Tamworth Regional Development Control Plan (DCP) 2010 (Development on Flood Affected Land).

However, information obtained from the recently published *Tamworth Flood Risk Management Plan 2024*, available on Council's website, reveals the site is not expected to be flood-impacted. This is based the modelling undertaken by the report's authors and the highest historical flood

event recorded, the 1955 flood of the Peel River, which impacted Somerton and Moore townships. Only one house in the Somerton area was reported to have been impacted, as most buildings in the area were located above the 1955 peak flood level (*Assessment of Flood Risk in Various Towns and Villages – Final Draft, February 2007 Tamworth Regional Council*).

3.4 OTHER NATURAL RISKS

3.4.1 Bushfire

Where a Bush Fire Risk Management Plan applies, Section 146 of the Environmental Planning and Assessment Act 1979 (EP&A Act) requires councils to record land at risk from bushfires land and provide maps of their locations after consultation with the Commissioner of the NSW Rural Fire Services. Complying development is permitted on bushfire prone land for the lower risk bushfire attack levels (Australian Standard 3959 BAL levels 12.5, 19, and 29).

Such development is required to meet development standards complying with *Planning for Bush Fire Protection 2019*. Maps can be viewed on-line either through the NSW Government's SEED (Sharing and Enabling Environmental Data) portal or the NSW ePlanning Spatial viewer.

According to data from the SEED portal, the Site's bush fire risk is classified as *Category 3* which is defined as containing vegetation having a medium bush fire risk. However, the Site's Planning Certificate 10.7 states the land is identified as being "bushfire prone land" (either whole or part) on the Bushfire Prone Land Map, certified by the NSW Rural Fire Service on 28 July 2022. However, Council has not, by resolution, adopted a policy to restrict development on the land in respect to the bushfire risk for that reason.

3.4.2 Salinity

Salinity causes damage to urban infrastructure such as roads, buildings, paving, and service utilities as well as impacting areas containing vegetation. Symptoms of urban salinity include: bare patches in lawns / sports fields; rising damp in buildings; salt crusting on bricks, concrete, and pavers; and continual fracturing of road surfaces and constant damp areas.

Information from the NSW Government's eSpade portal, indicates that the land parcel overall has a low risk of soil salinity. However, localised salting may occur.

3.5 LOCAL CLIMATE

The closest Bureau of Meteorology (BOM) weather station to the Site is located at Tamworth Airport (Automatic Weather Station #055325), approximately 26 km east of the Site. The Site's predictive climate data (see Table 3-2 below) is based on results from this station.

Data supplied by this station reveals the annual mean maximum temperature is 25°C and the mean minimum temperature is 9.8°C. The hottest month is January (avg. 33°C) and coldest is July (avg. 16.5°C). Annual average rainfall is 656 mm.
Table 3-2: Summary of the Site Climate Statistics from Tamworth Airport AWS (055325)

Climate Descriptors	Site Predictive Results
Mean max. temp. (°C)	25
Mean min. temp. (°C)	9.8
Hottest month	Jan
Coldest month	July
Annual average rainfall (mm)	656
Dominate wind direction (9:00 am)	Southeast
Dominate wind direction (3:00 pm)	West

4. SITE HISTORY

The objective of the site history review is to ensure that there are no gaps in the information obtained which is relied upon to document the activities conducted at the site.

A review of the site history was carried out and comprised the following:

- Review of current and historical land title search;
- Review of historical aerial photographs;
- Review of NSW EPA records;
- Review of Tamworth Regional Council records;
- Review of Section 10.7 planning certificate; and
- Search of the Aboriginal Heritage Information Management System (AHIMS).

It is noted that a search of the Safe Work Hazardous Chemical Registry was unable to be performed.

4.1 TITLE SEARCH

A title search was undertaken for the land holding at Lot 175, DP755340. These are presented in Attachment 1. For this land holding there are two (2) notifications:

1. Reservations and conditions in the Crown Grant(s); and
2. Ar624818 mortgage to the National Australia Bank Limited.

4.2 HISTORICAL TITLE SEARCH

A Historical Land Title Search was conducted for the land holding Lot 175, DP755340. The findings are presented in Table 4-1 below. The Historical Land Title Search documents have been included in Attachment 4.

Table 4-1: Historical Land Title Findings

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987	-	Title automation project	Lot recorded Folio not created
3/8/1987	-	Converted to computer folio	Folio created Ct not issued
25/8/1988	X791316	Transfer	Edition 1
11/10/2001	8018579	Transfer	-
11/10/2001	8018580	Mortgage	Edition 2
13/10/2003	AA57060	Discharge of mortgage	-
13/10/2003	AA57061	Transfer	Edition 3
3/9/2004	AA924037	Departmental dealing	-
14/10/2005	AB839432	Mortgage	Edition 4
2/4/2009	AE591335	Notice of death	Edition 5
15/3/2013	AH611490	Discharge of mortgage	-
15/3/2013	AH611491	Mortgage	Edition 6

Recorded	Number	Type of Instrument	C.T. Issue
22/9/2018	AN730158	Departmental dealing	Edition 7, Cord issued
17/11/2021	AR624816	Discharge of mortgage	-
17/11/2021	AR624817	Transfer	-
17/11/2021	AR624818	Mortgage	Edition 8

4.3 INDIGENOUS OR HERITAGE ARTEFACTS

Indigenous artefacts (also referred as Aboriginal objects) and places are protected under the National Parks and Wildlife Act 1974 even if they are not listed as a heritage site on the Aboriginal Heritage Information Management System (AHIMS). Heritage NSW hosts the web based AHIMS, which is a searchable database that lists known Aboriginal Objects and Places. A search of AHIMS is required when it is likely or known that Aboriginal objects and/or places are present within the area of a proposed activity (such as greenfield sites).

The investigation and assessment of Aboriginal cultural heritage is undertaken to:

- Identify whether Aboriginal cultural values and objects are present;
- Assess the nature and extent Aboriginal cultural values and objects; and
- Assess the harm a proposed activity may cause to Aboriginal Objects and declared Aboriginal Places.

This process provides a way to clearly identify the potential and or real harm that an activity may cause to Aboriginal heritage items and places.

A search of the AHIMs data base was undertaken on the 08/03/2025. No heritage items were returned from this search. Search results are provided in Attachments 5.

4.4 AERIAL PHOTOGRAPHS

Aerial photographs obtained from the NSW Department of Lands and Google Earth for the following years, were reviewed to describe the site features and surrounding areas at various timelines:

- 1961
- 1968
- 1974;
- 1986;
- 1991
- 1997
- 2006
- 2016 and
- 2023

The historical aerial photographs have been included in Attachment 2. The approximate Site boundaries are shown on the photographs. A summary of the Site review is presented below in Table 4-2.

Table 4-2: Summary of Observations From Historical Aerial Photographs

Year	Site	Surrounding Areas
1961	The Site has been cleared of most woody vegetation with the occasional solitary tree dotting the cleared landscape. An exception to this is the Site's long driveway neatly lined by small trees from the main road until a cluster of farm buildings (approx. ten) of various sizes in halfway into the Site and located east. Surface erosion is quite apparent throughout with much soil scouring and gullying evident from overland flow. Where Sandy Creek passes through the land parcel's northeastern corner, riparian vegetation has mostly been cleared. There are signs of channel scouring.	The surrounding rural landscape has been largely cleared for agriculture and has the familiar patchwork appearance. An occasional farmhouse and farm sheds are scattered across the region. Mostly singles trees with small canopies dot the landscape. Roads are long and narrow. The small hamlet of Somerton is visible to the Site's northwest. It contains only a small number of roads and about two dozen buildings.
1968	The site appears to have less woody vegetation, than before. Large sections of land have been divided into cleared paddocks, with fences or unsealed roads separating each. Across each paddock is the appearance of prominent wavey lines. These may be sheep trails worn into the slopes or fencing following the land's contours. A straight unsealed road, across the width of the land parcel in the Site's southern half is now visible. This later becomes the drainage line titled "Black Gully Creek".	The surrounding rural area remains much the same and is still characterised by large tracts of cleared vacant land. Singles trees with small canopies are visible across the landscape.
1974	The Site remains largely unchanged. More trees have appeared along the southern side of the Site.	No change.
1986	The previous structures and pathways still remain.	No significant development has occurred in the surrounding area, which remains largely comprised of expansive land used for agricultural or farming purposes, interspersed with a few small structures.
1991	No significant changes can be seen on Site.	More structures have been developed in surrounding area. The areas mostly unchanged in terms of vegetation and industrial/agricultural activities.
1997	No significant changes can be seen on Site.	The surrounding area of the site remains unchanged.

Year	Site	Surrounding Areas
2007	The Site had been further cleared of vegetation with the addition of five long poultry sheds, situated west of the main farm buildings	Some development occurred in the surrounding area, with two poultry farms visible nearby. The remaining land predominantly used for agriculture and remained largely unchanged.
2016	A vegetation buffer near the poultry sheds has matured over time, also, new vegetation buffer established along the northern side of the poultry sheds. Additional water storage (dams) have been constructed on the property. The rest of the site remains clear of vegetation.	Agricultural activity becoming more prominent, especially to the north and west of the Site, where large areas clearly show signs of cultivation and structured land use. These changes reflect a gradual shift toward more intensive farming.
2023	A concrete constructed on-site to accommodate an additional poultry shed. A new pond also established, along with additional water storage tanks, located on the western side of the poultry sheds. A small structure built in the north-western corner of the site. The vegetation buffer around the poultry sheds grew well. Most of the western and southern portions of the site, however, remained largely clear of vegetation.	Significant agricultural activities stablished in western and north-east areas of the site.

4.5 NSW EPA Records

4.5.1 CLM Act 1997

The NSW EPA publishes records of contaminated sites under Section 58 of the Contaminated Land Management (CLM) Act 1997. The notices relate to investigation and/or remediation of site contamination considered to pose a significant risk of harm under the definition in the CLM Act. However, it should be noted that the EPA record of Notices for Contaminated Land *does not* provide a record of *all* contaminated land in NSW. Land may be contaminated but not listed in the EPA record of Notices.

A search of the EPA database was made on the 22/04/2025 of the most recent listing (released 09/04/2025), which revealed no locations in Somerton NSW is listed as contaminated.

4.5.2 POEO Register

The NSW EPA publishes records under the Protection of the Environmental Operations (POEO) Act 1997 (as amended 2011). Records include licences, applications, notices served, and penalties issued.

A search of the POEO Register conducted on the 22/04/2025 revealed that the subject site is not listed.

4.6 Hazardous Chemicals Registry

Business that store, handle or process Schedule 11 hazardous chemicals (dangerous goods) that exceed the quantities specified in NSW legislation, are required to be licenced for such use and storage and must notify Safe Work NSW. This information is held on file in Safe Works' Stored Chemical Information Database (SCID). The database also includes abandoned tanks (storage tanks no longer used or in service).

A search of the Storage of Hazardous Chemicals Licenses by SafeWork NSW was unable to be conducted.

4.7 Site Product Spill and Loss History

Site product and loss history was not available for either the current landowner or previous tenants and owners.

4.8 Previous Site Investigations

No records could be found of any previous investigations undertaken for the site.

4.9 Tamworth Regional Council

The Site is within the Tamworth Regional Council area. Past consents for development applications, and pertinent information from the Site's Section 10.7 Planning Certificate, is contained in the following sub-sections.

4.9.1 Past Consents

Information acquired from Tamworth Regional Council regarding past, refused and approved development applications at the site is summarised below in Table 4-3.

Table 4-3: Past Consents (Development Applications)

DA #	Address	Development Description	Determination Date	Determination
CC0617/2005	Valdimah Park, 3329 Oxley Highway Somerton NSW 2340	Shed- Rural Construction of 5 Chicken sheds	02/09/2005	Approved
CC0636/2005	Valdimah Park 3329 Oxley Highway Somerton NSW 2340	Dwelling - New	15/06/2005	Approved
MOD0093/2015	Valdimah Park 3329 Oxley Highway SOMERTON NSW 2340	Allow spreading of poultry litter	-	-

PrivCD2018-0013	Valdimah Park 3329 Oxley Highway SOMERTON NSW 2340	Solar Panel Installation	20/07/2017	Approved

4.9.2 Section 10.7 (2 & 5) Planning Certificate

Planning certificates under section 10.7 (2) and (5) of the Environmental Planning and Assessment Act 1979 were obtained (Attachment 3) from Tamworth Regional Council on 22/04/2025 for the land holdings as detailed below:

- **Address**: Valdimah Park, 3329 Oxley Highway SOMERTON NSW 2340;
- **Land Description**: Lot 175, DP 755340;
- **Applicant Ref**: 251021;
- **Certificate No.**: PC2025-2632; and
- **Issue date**: 22/04/2025.

The Planning Certificate does not state any matters arising under Section 59(2) of the Contaminated Land Management Act 1997. The Planning Certificate states two main hazards to the site development and these are as follows:

Flood related development control information

> ***33**. The land is within the flood planning area and subject to flood related development controls set out in the provisions of the Tamworth Regional Local Environmental Plan 2010 (Clause 5.21) and the Tamworth Regional Development Control Plan 2010 (Development on Flood Affected Land).*
>
> ***Note**: It is unknown to Council the full extent of land affected by the flood planning area and therefore you should conduct investigations necessary for determining flood levels in relation to the land. At this time Council adopts 1:100 + 0.5m freeboard as the Flood Planning Level.*

Bushfire Prone Land

> ***35**. The land is identified as being "bushfire prone land" (either whole or part) on the Bushfire Prone Land Map, certified by the NSW Rural Fire Service on 28 July 2022. Council has not, by resolution, adopted a policy to restrict development on the land in respect to bushfire for that reason.*

The planning certificates are included as Attachment 3.

4.10 Site History

Little information is available regarding the history of the Site. However, some information can be gleaned from notices in the NSW Government Gazette held in the National Library of Australia (TROVE)

The property was called "Chelseaville". In a gazetted notice issued in March 1920 (issue #54), reveals the property at that time was owned by William Henry Roach, who was a sheep grazier. It also recorded the branding mark (applied by paint or tar) placed on one ear of each sheep.

The property appeared to suffer financial hardship during the late 1930s (presumedly due to lingering effects of the Great Depression and the onset of the 1937 – 1941 drought) and was granted (along with many other farmers) a *stay of orders* under the NSW Government's Farmers Relief Act 1932 -1940, in late 1939. The Act was a set of legislative and financial measures to assist farmers that were suffering due to the Great Depression. The stay of orders is a legal suspension or temporary halt of court or enforcement actions usually related to debt recovery. The stay for the property was removed in Sept 1941.

The final gazette document relating to the property refers to the "estate of the late WH Roach" and was issued in July 1960 (#86). It records the sheep branding mark (now slightly altered).

4.11 Local History

The surrounding area of the Site has a history of irrigated and dryland farming associated with livestock enterprises. Aerial imagery confirms that agriculture and farming have historically been, and continues to be, a major focus of investment in the area. Historical information shows that in 1900s, the area surrounding the site had 7,854 hectares of wheat which producing 273,906 bushels [Manilla Express 1911], with reports suggesting incredible growth and diversification was happening at the time.

4.12 Summary of Site Occupational History

A summary of the Site's occupational history as is available from Council records is summarised below in Table 4-4. It should be noted that the available information is limited, and some data gaps remain, as indicated by the empty boxes in the table. Additionally, some information was found in the TROVE archive in the National Library of Australia

Table 4-4: Site Occupational History Summary

Date		Tenant/Business	Description of Activities
Start	Finish		
?	1920	William Henry Roach (Chelseaville)	Sheep grazing
1920	1960	Chelseaville	Sheep grazing
2005	2021	Carl Sydney Roach (Valdimah Poultry)	Poultry Farm
2021	Current	Wintergreen Farm	Poultry Farm

5. SITE CONDITION AND SURROUNDING ENVIRONMENT

5.1 SITE DESCRIPTION

The Site is situated in Somerton NSW, a rural zoned area within the Tamworth Regional Council's local government area (LGA) and is approx. 30 km northwest of Tamworth's Central Business District. The Site is accessible via a gravel road, entering from the north-eastern corner, which connects to the Oxley Highway (B56).

The Site currently contains a poultry meat farm and covers an area of approximately 2,150,000 m^2 (215 ha). The poultry farm footprint is quite small in comparison to the land parcel's total area (approx. 2,323 m^2) and contains six (6) sheds positioned in the parcel's centre. The proposed sheds will have an internal floor area of 2,970 m^2. Most of the Site has been cleared for previous agricultural use which, according to NSW Government Gazetted documents was for sheep grazing until at least the 1960s.

Existing vegetation consists mainly of long grasses with established trees lining the length of the main access road. Most other large woody vegetation is confined to areas immediately south and east of the current poultry sheds, including the Site's principal dwelling and ancillary structures. Established trees sporadically line the banks of the Site's only natural water course Sandy Creek.

The north flowing Sandy Creek runs through the Site's northeastern corner before discharging into the Peel River some 700 m further north. Approximately 350 m above the southern boundary and across the width of the land parcel, is a man-made drainage channel titled Black Gully Creek. This channel (when flowing) sends water into Sandy Creek.

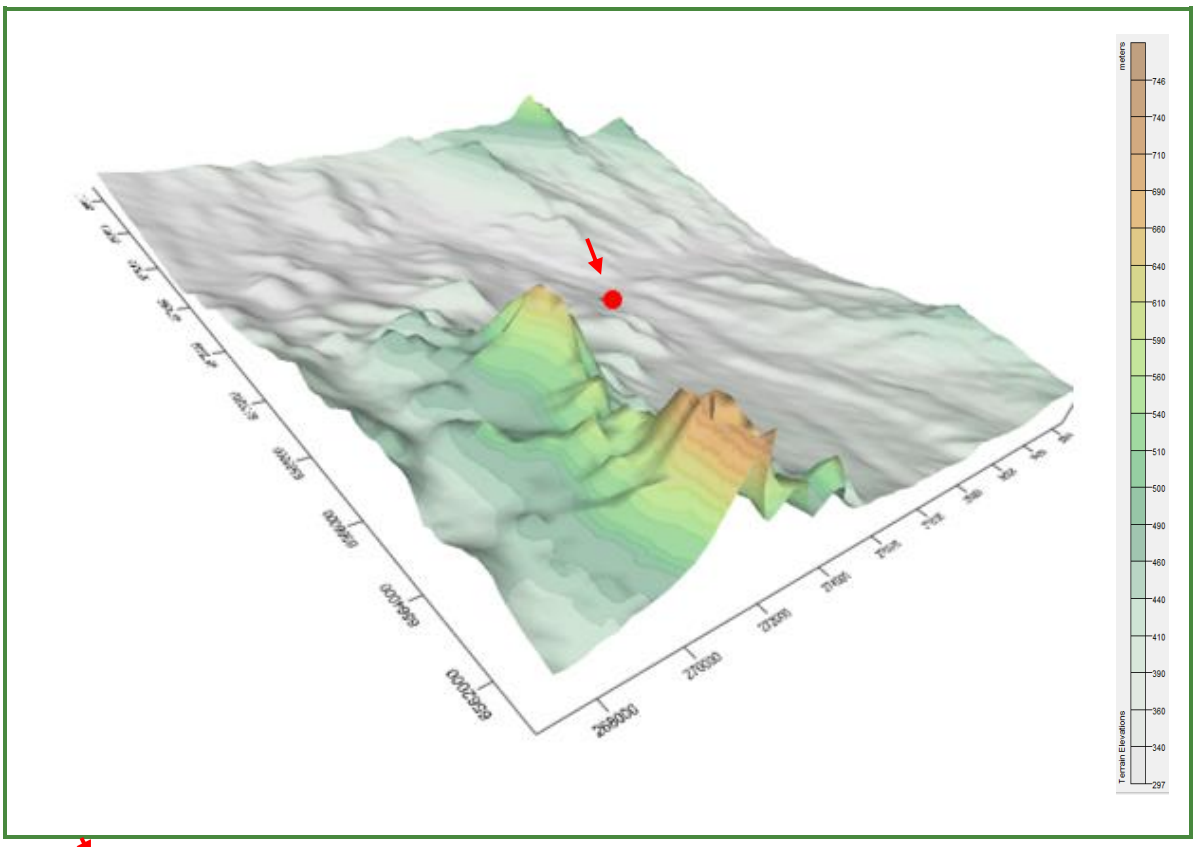
The Site's topography presents an overall, gently falling slope from its highest elevation of 350 m at its southwestern corner, towards the Site's north-east and south-east boundaries, with an elevation decline of 25-30 m.

The Site is zoned as RU1 - *Primary Production* under the Tamworth Regional LEP 2010 and is surrounded by existing agricultural producing properties consistent with the region's primary production land usage.

5.2 LOCAL TOPOGRAPHY

A three-dimensional view of the local topography surrounding the site has been provided in Figure 5-1 with the terrain/vertical axis exaggerated by a factor of 10. It should be noted that this figure approximates the actual terrain, based on information that has been digitised from local contour maps.

Figure 5-1: Local Topography with a Vertical Exaggeration Factor of 10



***Note**: = Approximate location of site*

5.3 SITE WALKOVER – PHOTOGRAPHIC SECTION

A site walkover was carried out on Thursday 03/04/2025 to verify the Site's condition, identify potential contamination sources, pathways and any discernible evidence of contamination. This section presents the findings of the walkover, accompanied by photographs taken during the site visit.

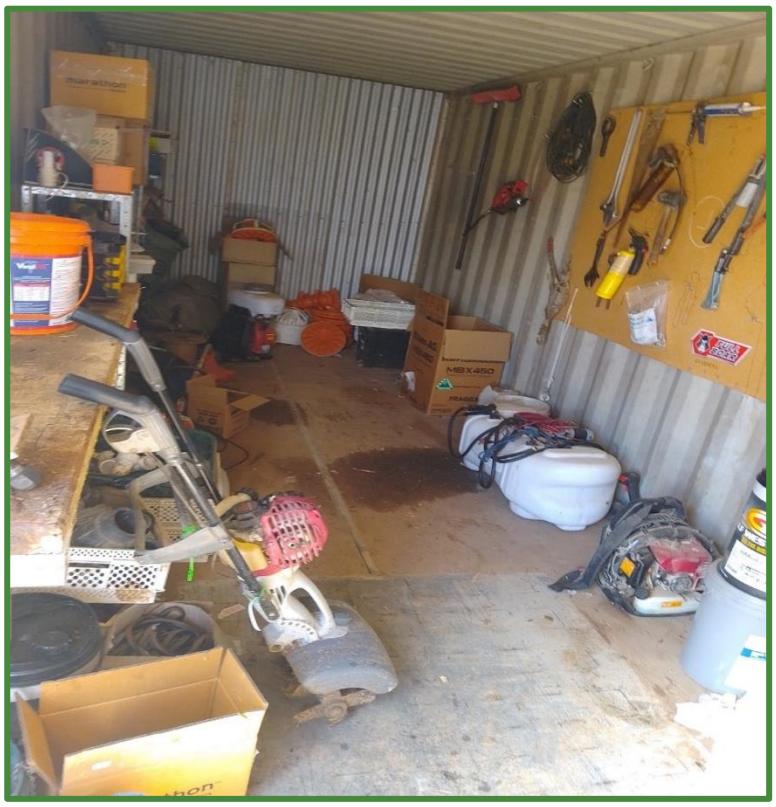
Photograph 1: Rear of existing farm (Viewer is facing NW)

Photograph 2: Rear of existing farm (Viewer is facing NE)

Photograph 3: Closeup of small road base stockpile (location in photograph 2 above)

Photograph 4: Between sheds (viewer is facing S)

Photograph 5: Existing Tools Shed



Photograph 6: Chemical Storage

Photograph 7: Empty Containers

Photograph 8: Diesel/Petrol Tanks (superficial surface contamination beneath bowser)

Photograph 9: IBC Corrosive Chemicals

Photograph 10: Dead bird cold storage

Photographs 11: View of the NE Corner of the proposed expansion area

Photographs 12: Proposed expansion area (Viewer is facing N)

Photographs 13: Proposed expansion area (Viewer is facing SW)

Photograph 14: Ants nest found on proposed expansion area

Photograph 15: Close up of typical side of driveway

5.4 POTENTIAL CONTAMINATION ISSUES

A PSI involves obtaining a thorough understanding of the site history as best as possible with the available documents and public registries. Based on available information collected for the site, an assessment of its potential contamination issues and status has been carried out. Details are presented in the following sections. Legacy contamination issues remain for many older buildings constructed in NSW.

These are assessed in the following sub-sections.

5.4.1 Hazardous Materials

Depending on the history and use of a property, hazardous materials may be present in structures or stockpiled materials on site. Hazardous materials include asbestos containing materials (ACM), lead-based paints, radioactive materials, chemicals/fuels and other potentially contaminating materials that may pose a hazard to human health or the environment.

5.4.1.1 Asbestos Containing Materials (ACM)

Asbestos Containing Materials (ACM) were used extensively in NSW in all types of construction between the 1920s and late 1980s, when ACM began to be phased out in favour of asbestos-free products. However, the total ban on ACM use did not come into force until 31st December 2003. Building constructed before 1985 almost certainty contain ACM, while those built between 1985 and 2003 may contain ACM. Areas within buildings where ACM is often found includes the eaves,

internal and external wall cladding, ceilings, downpipes and guttering and particularly in internal wet areas such as bathrooms, laundries and kitchens. Often the sheeting is hidden beneath wall tiles. This list is not exhaustive. Asbestos was used in some types of window putty, floor adhesives and carpet underlay in Australia.

No visible ACMs was identified during the walkover (private dwelling were *not* assessed). The viewed existing structures appear to have been constructed from the late 1980s onward, when ACMs was being phased out in NSW. However, as the complete ban on the use and importation of ACM did not occur until 2001, it is possible that some cement sheeting installed containing "low" levels of asbestos may have been used. Typically, these are found in wet areas such as amenity blocks. If not disturbed, the risk from asbestos to human health in these areas is low.

Based on aerial imagery, structures are visible on Site from at least 1968. The age of these structures is unknown, but it seems quite likely that these structures would contain in part some level of ACM.

Provided that ACM is left undisturbed (is not broken, punctured or sanded), and if exposed to weathering the material is painted, the risk from asbestos to the site would be considered as being moderate. It is highly recommended that any modification or demolition of the farm's pre-1990 structures first be assessed for their potential hazardous material content prior to work commencing.

The health risk from asbestos is serious, with inhalation of asbestos fibres, even at low levels, can lead to mesothelioma (an incurable form of lung cancer) in susceptible adults and children with such cases documented in Australia.

5.4.1.2 Lead Based Paints

Historically, paint containing lead was found to be very durable for protecting surfaces from the effects of weathering. Some paints in Australia *before* 1969 contained 50% lead (or more) by weight. In 1969 the Australian Uniform Paint Standard was amended with allowable lead levels reduced to 1%. This was due to the serious health risks lead poses (especially to children). Over the subsequent 50 years, allowable levels have been gradually reducing (0.25% in 1992, 0.01% in 1997 and 0.009% in 2021).

The risk arises when weathered or old lead-based paint flakes or crumbles and releases lead dust into the air and onto the ground. External lead-painted surfaces can contaminate soils immediately below, either from the paint crumbling or from when the paint was first applied from drips or spills falling onto uncovered soils. Dust containing lead can accumulate in ceiling spaces, wall cavities or under carpet. Lead can enter the body if contaminated soil or dust is accidently inhaled or swallowed. Children are especially at risk.

Based on aerial imagery, historical structures are visible from at least 1961 when lead-based paint was frequently used due to its durable properties. It is likely that old layers of lead-based paint remain under newer paint more recently applied. Additionally, soil immediately below external walls where lead-based paint was historically applied, may contain elevated levels of lead from paint drips or aged flaking paint falling onto the soil surface below. The risk arises mainly from ingesting or inhalation of soils contaminated by lead. The risk is more elevated for children (medium) rather than adults (low), as children typically come into contact with soils

during play and can inadvertently ingest or inhale such soils. This risk would almost be exclusively restricted to soils located alongside historical structures and is unlikely to be widespread across the rest of the land parcel, including the area where poultry sheds are currently located and are proposed to be located.

The potential risk from lead-based paints to the land parcel's soils is considered low to medium.

5.4.1.3 Polychlorinated Biphenyls (PCBs)

PCBs pose a risk to human health and the environment and are part of a broader group of banned chemicals termed Persistent Organic Pollutants (POPs). This group includes DDT and some PFAS chemicals. POPs are toxic to living organisms and do not readily break down in the environment. They accumulate within plants and animals and are found in higher concentrations up the food chain. Since POPs remain in the environment for very long periods of time, historical spillage on soils can still pose a health risk decades later.

Historically, PCBs were used as coolants and lubricants in electrical components (such as transformers and capacitors), hydraulic fluids, additives in paint, sealants and caulking compounds and other uses. Legacy equipment potentially containing PCBs today include old electrical transformers, old electrical equipment, and fluorescent lighting fixtures. Australia banned the importation of PCBs in 1975 and equipment containing PCBs in 1986.

No evidence of historical use of PCBs was observed during the walkover or from the site history. It seems unlikely that PCBs would have been used in historical farm equipment or that such equipment was stored.

5.4.2 Structures / Storage Areas

The poultry farm's main structures includes six (6) poultry sheds, an office, amenities and a number of storage structures (such as for tools or chemicals). Following observations during the site walkover, the external aspects of the administration building appeared to be constructed from brick and masonry.

The poultry sheds are of steel-framed construction with corrugated steel walls and a concrete floor. The roofs are made from metal sheeting, with solar panels installed on one roof. Each shed is equipped with exhaust fans to maintain air quality.

The chemical storage area consists of a truncated corrugated iron water tank with an elevated pitched corrugated iron roof. A section of the tank has been removed at its front to allow access to the stored chemicals inside, with the entrance covered and secured by chain-link fencing. The structure is built on a circular concrete slab. The existing tool shed is a modified shipping container with an internal wooden floor.

The farm's historical structures, most built prior to 1961 (based on aerial images), are located in the land parcel's midpoint, closer to parcel's eastern boundary. These structures were not assessed during the Site walkover.

5.4.3 Air Emissions of Pollutants

The area of land containing the poultry farm, does not emit any pollutants that contribute to air pollution in the form of hazardous or regulated airborne substances. However, it is acknowledged that poultry farming activities can produce odour as a result of organic matter such as manure and litter.

Appropriate management practices have been implemented onsite to control and minimize odour emissions.

5.4.4 Soil, Surface Water and/or Groundwater Pollution

Minor soil staining from fuels spills was observed beneath the bowser at the existing fuel storage area. This consists of two above ground storage tanks (of approximately of 2 – 3,000 litre storage capacity). Small patches of dead grass surrounding two unsecured Intermediate Bulk Container (IBCs) containing corrosive solutions (likely bleach and an acidic chemical), indicate superficial contamination of surface soils. It is understood these IBCs are to be removed. Furthermore, the fuel tanks are to be replaced by self-bunded tanks. It is recommended the top 0.5 m of surface soil beneath the two fuel tanks be retained elsewhere on site and treated with BioSolve® Hydrovent™ as per the manufacturer's instructions.

Any contaminated soils sent for disposal to an off-site waste facility must be classified in accordance with the NSW Waste Classification Guidelines prior to their removal from the farm.

Land surrounding and within the area containing the historical structures was not assessed during the site walkover.

5.4.5 Pesticide and Herbicide Usage and/or Contamination

While the primary operations of the poultry farm do not involve extensive use of pesticides or herbicides, a limited number of chemical products are stored and used on-site for specific purposes related to biosecurity, pest management, and weed control. These include BIOSOLVE HDD and VIRKON S for sanitation and disinfection of equipment and facilities; Larvabeta (beta-cyfluthrin + pyriproxyfen) for insect control in litter management; Roundup (glyphosate) for targeted weed management applied around the perimeter of the sheds; and SureFire Block Baits (brodifacoum) for vermin control.

All chemicals are stored securely in designated, clearly labelled storage areas that comply with relevant safety standards and regulations. Usage is strictly controlled and only carried out by trained personnel following manufacturer guidelines and accompanying safety data sheets (SDS). These practices ensure that the risk of environmental contamination through improper use, handling, or disposal is low. The farm maintains detailed records of chemical usage and conducts regular inspections to ensure ongoing compliance and environmental responsibility.

Due to these controls, the risk of pesticide or herbicide contamination to soils in the area surrounding the current poultry sheds is considered low.

5.4.6 Historical Chemical Use

Historically, chlorohydrocarbon (organochloride) based pesticides (DDT, dieldrin, chlordane, heptachlor, aldrin etc.), were used extensively in Australia during the 1950s and 1970s. Due to their harmful effects on human health and the environment, they were systematically banned from the 1970s with DDT totally banned in 1987. These historical compounds persist in the environment, often for decades since they are slow to naturally degrade and can accumulate in the food chain. Historical contamination typically occurs with heavy and long-term pesticide/herbicide use, leaks and spills during storage and handling, and improper disposal practises. Land-use changes can be an historical reason for urban sources of pesticide or herbicide contamination when former agricultural land, once located on a city fringe, becomes rezoned for residential or industrial use.

The extent and type of historical pesticide use at the Site is unknown but likely to have been prolonged and applied widely. It highly likely these included DDT derivatives and arsenic as these chemicals were extensively used in the local area and during the time period. According to documents found in the National Library of Australia (TROVE), the farm was used for sheep grazing between at least 1920 and into the 1960s. Chemicals commonly used to control sheep parasites, lice and flystrike, included arsenic-based chemicals. Later other insecticides used included (the now banned) organochlorides (OC), such as DDT, heptachlor and dieldrin, which were later replaced by organophosphates (OP). Sheep are typically treated either by full body immersion (dipping), spraying or a combination of both. This typically occurs soon after shearing.

Arsenic and OC chemicals are persistent in the environment, with residual levels typically lasting decades. Arsenic was also frequently applied beneath and around wooden structures to control termites.

Due to the farm's sheep grazing history, it is almost certain pesticides would have been applied to soils, weeds and farm animals. Areas of farm soils generally at risk from residual historical chemicals include:

- Buildings, yards, fences, stumps, and power poles treated for termite control;
- Sheep dip sites used before 1963;
- Historical farm rubbish dumps sites (especially with old chemicals containers);
- Chemical storage, mixing and possible disposal sites;

It is assumed dipping was practiced but where this occurred is not known. However, assuming that shearing was practised onsite, dipping is usually undertaken a few days after this. Typically, shorn sheep are kept in pens within close proximity of the dipping bath, dipped and returned to the pen for a few days before their release into a larger paddock for grazing. While no aerial images of the land parcel exist prior to 1961, all site structures of significance are clustered together in the parcel's midway point, towards the eastern boundary. Additionally, the storage, mixing and filling of historical chemicals is also likely to be within this area for practical reasons.

The use of OC based herbicides to treat weeds in paddocks may have occurred. As the farm was used for grazing, largescale application of herbicides or pesticides seems highly unlikely since cropping does not appear to have been practised. OC-based herbicides used for targeted weed control in patches is quite possible. However, unlike dipping, where soils are repeatably exposed to OC chemicals over decades, potential residual levels in paddocks, would likely be low.

The risk to the farm's soils from historical chemicals is likely to be no different than from other local farms used for grazing and is not expected to be elevated in the surrounding paddocks but limited to the areas described above.

Organophosphate (OP) based pesticides and herbicides, which replaced arsenic and OC based pesticides/herbicides, when used appropriately, are believed to breakdown in the environment over time. As the farm's more recent agricultural history (since early 2000s), is of poultry farming, the potential use of OP based chemicals would be limited. This would allow any residual soil levels, from the earlier farming practises, to have been completely degraded through natural processes, and thus pose only a very low risk if at all.

5.4.7 Wastewater Treatment System

The land parcel does not have wastewater treatment system. Wastewater from the poultry farm wash bay area, along with sewage from associated facilities, is directed to a septic system and managed through a pump-out system collected by a licensed contractor.

5.4.8 Potable Water Source

The farm operates under the Namoi Alluvial Groundwater Sources 2020 Water Sharing Plan, with water typically pumped from a groundwater bore, located onsite, into storage above ground tanks for use in daily operations. Water is made potable by onsite chlorination.

5.4.9 Waste Disposal

Waste generated from the poultry operation primarily consists of chicken litter and deceased birds, both of which are removed and disposed of by a licensed contractor. Wastewater from the wash bay area, along with sewage from the poultry farm facilities, is directed to a septic system and managed through a pump-out system outside by licensed contractor.

Waste litter and manure is not stockpiled onsite, therefore the risk of soil contamination from this waste is considered as low.

An EIS is being prepared to allow the Site to expand its operations. The EIS will include detailed information regarding future waste management.

5.4.10 Dams and Ponds

The land parcel contains five (5) earthen dams to the south, southeast and north. These are used for water storage and management, contributing to the farm's water needs and environmental management practices. A man-made drainage channel, termed Black Gully, runs the width of the land parcel's southern half, from its western to eastern boundary, exiting before later entering Sandy Creek. The Site's only naturally occurring water body is the northly flowing Sandy Creek, which enters and flows through the parcel's northeastern area.

5.4.11 Discharges to Land, Water or Air

No evidence of discharge to land, water or air

5.4.12 Data Gaps

- There are no sewage plans available;
- There is no product spill and loss history for the land parcel's current or previous owners or tenants;
- There is no Hazardous Substances Management Plan or Waste Management Plan available; and
- There are gaps in the land parcel's occupancy history.

5.4.13 Summary of Potential Contamination

There is a moderate risk associated with potential asbestos material within the farm's original structures especially (but not limited to) internal wet areas (bathroom, kitchens etc) which may be hidden beneath wall tiles. Non-friable asbestos materials are a risk only if disturbed (such as by puncture, sanding or demolition). Asbestos may be in historical window putty, which is a potential risk if, due to age or weathering, it becomes friable (powdery).

Historical pesticide use on the farm's lands is unknown, but highly likely due to its history of sheep grazing (believed to have occurred from at least between 1920 and into the early 1960s). These would highly likely include arsenic and organochloride based pesticides such as DDT.

Chemical storage, handling and applications that could lead to potential soil contamination, are likely to be limited to the soils within the area surrounding and containing the land parcel's historical structures. This area has a medium risk for soil contamination from historical pesticides.

Soils potentially impacted from lead-based paints are also most likely to be limited to areas alongside the same historical structures.

Based on discussion with the client, it is understood that IBCs will be removed, and the aboveground fuel tanks will be replaced with safer, self-bunded tanks.

The small area believed impacted from diesel and petrol spills beneath the current aboveground fuel tanks, are recommended to be excavated with treated with BioSolve® Hydrovent™ as per the manufacturer's instructions.

Accordingly, the risk to the soils from fuels spills is considered low.

6. CONCEPTUAL SITE MODEL

A conceptual site model (CSM) has been prepared in accordance with the National Environment Protection (Assessment of Site Contamination) Measure as amended in 2013.

The CSM is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors.

The CSM is presented below in Table 6-1.

Table 6-1: Conceptual Site Model

Known and Potential Primary Sources of Contamination	Primary Release Mechanism	Potentially Impacted Media	Contaminants of Potential Concern	Potential Receptors		Exposure Pathways		Risk of Contamination
				Human	Environment	Human	Environment	
Use and storage of hazardous materials (fuels, oils, paints, chemicals etc)	spills/leaks	soil, ground and surface water	hydrocarbons, heavy metals	site personnel, neighbouring premises if contaminants migrate off-site	soil, waterways, native habitats	dermal contact, inhalation of dust and vapours, ingestion	soil, ground and surface water	Low to Moderate
Vehicles / machinery parked/stored onsite	spills/leaks	soil, ground and surface water	hydrocarbons, heavy metals	site personnel, neighbouring premises if contaminants migrate off-site	soil, waterways, native habitats	dermal contact, inhalation of dust and vapours, ingestion	surface and ground water	Low
Historical use of agricultural pesticides	disturbance of soil	soil, ground and surface water	heavy metals, organochlorine (op) and organophosphate (op) pesticides	site personnel, neighbouring premises if contaminants migrate off-site	soil, waterways, native habitats	dermal contact, dust inhalation, ingestion	soil, ground and surface water	Low to Moderate
Legacy contaminants Lead-based paint, ACM, PCBs	disturbance of soils, disturbance of lead-paint surfaces, disturbance of historical appliances containing PCBs	soil and surface water	Lead, ACM polychlorinated biphenyls	site personnel (including non-workers), neighbouring premises if contaminants migrate off-site	soil, waterways, native habitats	dermal contact, inhalation (dust or soil), ingestion	Soils, surface and ground water	Low to Moderate
Offsite contaminant sources	Migration via groundwater or surface water	Soil, Groundwater, Surface water	Fertilizers, Pesticides	site personnel	Site environment (water courses & vegetation)	dermal contact, dust inhalation, ingestion	Soils, surface and ground water	Low to Moderate

7. CONCLUSION AND RECOMMENDATION

The findings of the Preliminary Site Investigation are as follows:

- There is no evidence of significant chemical contamination resulting from past or present farm activities, but data gaps exist regarding historical chemical applications;

- Minor fuel staining was observed beneath the bowser at the existing fuel storage area, and localised vegetation dieback was noted near corrosive liquids stored in IBCs. Both suggest superficial soil contamination;

- It is understood that the IBCs will be removed, and the existing aboveground fuel tanks will be replaced with self-bunded units, thereby mitigating any further potential for soil contamination;

- Recent history (post 2000) of pesticide/herbicide application indicate only limited use, pertaining to the poultry sheds and associated structures – all chemicals are stored and managed in compliance with applicable standards;

- Areas identified that potentially could contain elevated pesticide levels include soils surrounding and beneath the farm's historical structures erected prior 1980. The precise locations for historical chemical storage and places of application (such for sheep dipping), are unknown but appears most likely to be within or in close proximity to the farm's historical structures and well away from the current and proposed poultry sheds, their associated work areas and infrastructure.

- The risk of contamination to soils from legacy pesticide chemicals is considered *medium* within the area containing the farm's pre-1980 structures and *low* for the remainder of the land parcel, including the current and proposed locations of the poultry sheds and associated work areas;

- Risk of contamination to soils from lead-based paints is considered low to medium, with soils most at risk located beneath and immediately surrounding the farm's historical pre-1980 structures. The medium risk applies to children who are more likely to accidently ingest soils impacted from historical use of lead-based paints within this area, during play. Soils within the area of the proposed development and across the farm generally, are not expected to be impacted from historical use of lead-based paint and have a low risk.

- The presence of non-friable asbestos containing materials (ACM) is quite likely to be within the farm's original buildings. These materials pose a low risk unless disturbed or damaged. The deterioration of externally used ACM from weathering, can pose a risk with the material becoming friable and releasing fibres into the environment. This may include the use of window putty containing asbestos (historically used in NSW). Such putty has the potential to become friable (powdery) due to age and weathering. The health risk from asbestos is serious, with inhalation of asbestos fibres even at low levels can lead to mesothelioma, an incurable form of lung cancer.

    ▸ Prior to any refurbishment or demolition, a hazardous building materials survey should be conducted by a suitably qualified licensed professional to identify ACM use such as, eaves,

carpet underlay, glues under vinyl flooring, power boxes, internal bathroom walls, beneath wall tiles, roof insulation, putty etc.

This concludes the report.

[redacted]	[redacted]	[redacted]
Environmental Scientist	Senior Engineer	Principal Consultant

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9. LIMITATIONS

Our services for this project are carried out in accordance with our current professional standards for site assessment investigations. No guarantees are either expressed or implied.

This report has been prepared solely for the use of Wintergreen Farm Pty Ltd as per our agreement for providing environmental services. Only Wintergreen Farm Pty Ltd is entitled to rely upon the findings in the report within the scope of work described in this report. Otherwise, no responsibility is accepted for the use of any part of the report by another in any other context or for any other purpose.

Although all due care has been taken in the preparation of this study, no warranty is given, nor liability accepted (except that otherwise required by law) in relation to any of the information contained within this document. We accept no responsibility for the accuracy of any data or information provided to us by Wintergreen Farm Pty Ltd for the purposes of preparing this report.

Any opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal advice.