HUNTER
ENVIRONMENTAL CONSULTING

Preliminary Site Investigation

Proposed Residential Development

18-50 Mayne Drive, Westdale

[redacted]

SUSTAINABLE
CERTIFICATION
ISO 9001
AS/NZS 4801
ISO 14001

27 March 2024

Prepared for

[redacted]

Prepared by

[redacted]

Project Details

Site Address:	18-50 Mayne Drive, Westdale
Project Type:	Proposed Residential Development

Project no	Report type	Report no
E0177	PSI	001

Report Register

Revision Number	Reported By	Reviewed By	Date
Rev0	[redacted]	[redacted]	27/03/2024

We confirm that the following report has been produced for [redacted], based on the described methods and conditions within.

For and on behalf of Hunter Environmental Consulting,

[redacted]

Environmental Scientist

Executive Summary

Hunter Environmental Consulting (HEC) was engaged by [redacted] to undertake a Preliminary Site Investigation (PSI) at the Site located at 18-50 Mayne Drive, Westdale (herein after referred to as "the Site").

The Site is currently proposed to undergo redevelopment to incorporate a low density residential subdivion. The PSI is required for due diligence purposes as part of the development application.

This PSI includes the following elements:

- Review of historical aerial images of the Site and surrounding area
- Compilation of a historical title summary
- Review of a Section 10.7 Planning Certificate
- Review of publicly available environmental databases and legislative instruments
- Site inspection and interview with knowledgeable Site representative (if available)
- A preliminary Conceptual Site Model (CSM) with assessment of contamination and source-pathway-receptor linkages
- Recommendations for further investigation, any management requirements and/or any ongoing management, monitoring or remedial works that may be required

The detailed desktop review of available information and thorough Site walkover have enabled the development of a preliminary CSM allowing assessment of potential health and environmental issues relating to the Site. Key findings were:

1. Potential contamination sources at the Site are limited based on historical land use; and
2. Visible signs of gross contamination were not observed during Site inspection.

In summary, based on the desktop study and site walkover conducted at the Site, no potential contamination sources or indication of gross contamination has been identified which would constrain the Site for the proposed low density residential development.

Given the preliminary nature of the investigation an unexpected finds protocol should be utilised during any proposed future earthworks at the Site.

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1 Introduction

1.1 Background

Hunter Environmental Consulting (HEC) was engaged by [redacted] to undertake a PSI at 18-50 Mayne Drive, Westdale (herein after referred to as "the Site").

The Site is currently proposed to undergo redevelopment to incorporate a low density residential subdivion. The PSI required for due diligence purposes as part of the development application.

A Site Plan is presented as Figure 1 of **Annex A**.

1.2 Objectives

The objectives of this PSI were to investigate potential contaminant sources, pathways and receptors in relation to the Site as well as inform preliminary consideration of potential risks to human health and/or the environment within the context of the most sensitive potential land use.

This report has been prepared in general accordance with provisions for a PSI as defined within the NSW EPA (2020) Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 2020) and National Environment Protection (Assessment of Site Contamination) Measure (National Environmental Protection Council (NEPC), 2013).

All information collected informed the development of the preliminary CSM which provides a representation of potential sources of contamination and evaluate the CoPC; areas of potential contamination; potential human and ecological receptors; and potentially affected media (such as soil and groundwater).

1.3 Scope of Works

1.3.1 Preliminary Site Investigation

This PSI includes the following elements:

- Review of historical aerial images of the Site and surrounding area
- Compilation of a historical title summary
- Review of a Section 10.7 Planning Certificate
- Review of publicly available environmental databases and legislative instruments
- Site inspection and interview with knowledgeable Site representative (if available)
- A preliminary CSM with assessment of source-pathway-receptor linkages
- Recommendations for further investigation, any management requirements and/or any ongoing management, monitoring or remedial works that may be required

Preparation of this report includes recommendations for further investigation, any management requirements and/or any ongoing management, monitoring or remedial works that may be required.

2 Site Description

2.1 Site & Lot Identification

The Site is located at 18-50 Mayne Drive, Westdale, legally identified as Lot 1 on Deposited Plan (DP) 1017953. The Site forms an irregular shaped block of approximately 289,178.3 m^2.

A summary of Site information is provided in **Table 2.1** below.

Table 2.1 - Site identification

Item	Description
Current Site Owner	[redacted]
Site Address	18-50 Mayne Drive, Westdale
Current Zoning	R2 Low Density Residential RU4 Primary Production Small Lots
Legal Description	Lot 1 DP 1017953
Local Government Authority	Tamworth Regional Council
Site Area	Approximately 289,178m^2
Elevation	~390m Above Sea Level (ASL)
Geographical Location (GDA94-MGA56)	E 297621.766 N 6556979.455

Review of Tamworth Regional Local Environmental Plan (LEP) 2010 (2011 EPI 27) together with the Planning Certificate under Section 10.7 Part 2 and 5 of the Environmental Planning and Assessment Act 1979 (attached as **Annex B**) provides the following information:

1. The Site is not affected by heritage items
2. The Site and/or adjacent lots are not affected by land reserved for acquisition
3. The Site is not affected by environmentally sensitive land or critical habitat
4. There are no prescribed matters under section 59(2) of the Contaminated Land Management Act 1997 to be disclosed
5. The land is identified as "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.
6. 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).

2.2 Surrounding Land Use

The Site is located predominantly within a rural/residential area of Westdale, NSW. Review of satellite imagery identified surrounding land uses as summarised in **Table 2.2** below.

Table 2.2 - Summary of surrounding land use

Direction	Land Use	Distance
North	Light Residential	Adjacent
East	Rural Residential	Adjacent
South	Undeveloped Land	Adjacent
West	Undeveloped Lan / Rural Residential	Adjacent

3 Background Data Review & Database Searches

3.1 Historical Photographs

Historical aerials and satellite images dating 1965-2023 provide a summary of development at the Site and within the surrounding area. Historical images are presented as part of **Annex D** and a summary of review in **Table 3.1** below.

Table 3.1 - Historical aerial review

Date	Summary
1965	Low resolution, black and white aerial. At this time the Site appears to be undeveloped. A number of small sheds and an orchid is evident adjacent West of the Site boundary. The surrounding area consists of residential development to the North.
1976	Low resolution, black and white aerial. The Site and surrounding area appears mostly consistent with the previous aerial.
1989	Low resolution, colour aerial. The Site appears consistent with the previous aerial. Light residential subdivision development is evident adjacent North of the Site.
1998	Low resolution, colour aerial. The Site and surrounding areas appear mostly consistent with the previous aerial. Further residential development is evident to the North of Site.
2006	Moderate resolution, colour image. At this time the dwelling, detached shed and driveway can be seen onsite, along with the dam located Southeast of the dwelling. Further residential development is evident to the surrounding areas.

Date	Summary
2012	Moderate resolution, colour image. At this time the site appears mostly consistent with the previous aerial. Further residential development evident to the surrounding areas.
2015	Moderate resolution, colour image. The Site and surrounding area appears mostly consistent with the previous aerial.
2017	High resolution, colour image. The Site and surrounding area appears mostly consistent with the previous aerial.
2020	High resolution, colour image. The Site and surrounding area appears mostly consistent with the previous aerial.
2023	High resolution, colour image. The Site and surrounding area appears mostly consistent with the previous aerial.

3.2 Topography & Hydrology

Topography of the area is characterised by Extensive rolling to undulating hills and low hills on Devonian and Carboniferous sedimentary rocks of the Duri Hills. The closest surface water body identified is the Timbumburi Creek located approximately 92m to the East of Site.

3.2.1 Lithology & Geology

Review of the NSW Office of Environment and Heritage soil landscape database– indicates that the Site falls within the Duri and Warral Station Soil Landscapes.

Review of the NSW Department of Industry, Resources & Energy database Geological Sheet indicates that the Site lies on the Mandowa Mudstone units. Typical lithology includes Grey, thin-bedded, laminated and massive mudstone with subordinate, thin siltstone and fine sandstone.

3.2.2 Hydrogeology

Review of the NSW Department of Primary Industries – Office of Water / Water Administration Ministerial Corporation database identified fourteen (14) registered bores within 500m of the Site. Bore details are presented in **Table 3.22** below.

Table 3.2 - Groundwater bore details

NGIS Bore ID	NSW Bore ID	Bore Type	Bore Depth (m)	SWL (mbgl)	Distance	Direction
10029393	GW969893	Water Supply			24m	East
10036832	GW969699	Stock and Domestic	30	29	102m	North West
10028418	GW968445	Water Supply	30.5	13.1	125m	North
10015147	GW027681	Irrigation	22.3		139m	North
10029214	GW969502	Water Supply	12	4.7	209m	North East
10036220	GW900425	Other	31		226m	North
10145883	GW007262	Water Supply	13.3		251m	North
10042532	GW967300	Irrigation	67	18.9	286m	South East
10052093	GW048004	Commercial and Industrial	13		286m	North East
10140392	GW016392	Water Supply	12.2		314m	North
10094378	GW045359	Water Supply	15.8		318m	North
10033471	GW900876	Water Supply	14.6		335m	North East
10002197	GW049638	Water Supply	15.2		416m	East
10041829	GW900276	Water Supply	13.7		442m	North East

3.3 Chemical Storage & Waste Production / Disposal

The results of the SafeWork Dangerous Goods Search were not considered necessary due to the historical and current land use of the Site.

3.4 Onsite Database Searches

3.4.1 Current & Former Environment Protection Licences

A review of the licenced activities under the Protection of the Environment Operations Act 1997 was completed on the 18th of March, 2024.

No NSW EPA licensed activities are currently conducted within a 1km radius of the Site. Error! Reference source not found.**3** below lists former licensed activities and the type of licensed activity conducted within 1km of the Site.

Table 3.3 - Delicenced and former licenced EPA activities

Licence No	Organisation	Location	Activity	Location Confidence	Distance (m)	Direction
4653	[redacted]	Waterways Throughout NSW	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0	On-site
4838	[redacted]	Various Waterways Throughout New South Wales - Sydney NSW 2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0	On-site
6630	[redacted]	Waterways Throughout NSW - Prospect, NSW, 2148	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0	On-site

3.4.2 Heritage

Review of the Heritage Data Source - Planning & Environment, indicates the Site is not affected by heritage items, similarly there are no registered heritage items within 1km of the Site.

A figure detailing locations of heritage items listed above is presented within LotSearch Report in **Annex D**.

3.4.3 Contaminated Land Records

A review of the NSW EPA Contaminated Land Record of Notices was completed on 18th of March 2024. This review identified that the Site is not subject to regulation by the NSW EPA under Section 60 of the *Contaminated Land Management (CLM) Act 1997* and similarly that there are no Sites within 1km of the Site subject to regulation under the *CLM Act 1997*.

A review of the NSW EPA List of Contaminated Sites was completed 18th of March 2024. This review identified that the Site has not been notified to the EPA as a contaminated Site and similarly that there are no Sites within 1km of the Site that have been notified. The findings of these reviews indicate that the Site is unlikely to be impacted by contamination known to the EPA.

3.4.4 Naturally Occurring Asbestos

NSW Department of Industry, Resources & Energy (2024) identifies that the Site does not fall in an area known to contain naturally occurring asbestos.

3.4.5 Acid Sulfate Soils

Review of the ePlanning Spatial Viewer online database (2020) and the eSPADE online database (2024) identifies the Site as being situated within an area of no known acid sulfate occurrence.

4 Site Inspection

HEC attended the Site on the 18th of March 2024 to consolidate the desktop review described in the sections above. The Site visit included a detailed visual inspection of the Site surface and infrastructure. Key findings are presented below:

At the time of investigation, the Site consisted of a single-story residential dwelling with detached garage and storage area. A small orchid belonging to the Site owner was identified adjacent East of the dwelling. It is understood that the dwelling and associated infrastructure is to remain at the Site following the subdivision of remaining land.

The remaining land at the Site was visibly undeveloped at the time of investigation and showed no signs of prior land use or development. Speaking with the Site owner, it is understood that the land has only been utilised as horse paddocks/grazing land during their ownership and used similarly prior to ownership.

No visual evidence of contamination or potential contamination sources were observed during the site walkover.

No suspected Asbestos containing material (ACM) was observed during the site walkover.

No visible ecological stress was observed during the Site walkover.

A Photographic Log of the inspection is presented as **Annex E**.

5 Conceptual Site Model

A CSM is a representation of site related information regarding contaminant sources, exposure pathways and human and environmental receptors. A CSM facilitates consideration of risks to human health and the environment associated with site contamination through assessment of source – pathway – receptor linkages. A CSM based on the understanding of site history and environmental setting is presented in **Table 5.1**.

Table 5.1 - Conceptual Site Model

Primary Sources	CoPC	Secondary Sources	Transport Mechanisms	Exposure Route	Receptors
Application of Pesticide / Herbicides	• Heavy Metals • OC/OP Pesticides	• Impacted soils at depth	Leaching to underlying surrounding soils	• Dermal Contact or incidental ingestion of soil • Plant uptake	• Current and future site users • Future construction/maintenance workers • Ecological (Uptake of terrestrial Flora)

5.1 SPR Linkage Assessment

A source-pathway-receptor (SPR) linkage is present when a pathway links a source with a receptor. These linkages are considered complete where a risk to the identified receptors may exist, now or in the future as presented in **Table 5.2.**

Table 5.2 – SPR Linkage Assessment

Receptor/Media	Exposure Pathway	Comments
Human	Incomplete	Human receptors at the site are currently limited to future construction / maintenance workers disturbing the soil. Potential exposure to future sensitive human receptors is considered to be low to no risk on completion of the proposed development.
Ecological	Incomplete	Ecological receptors at the site are considered to be limited to the uptake of terrestrial flora and intake of fauna. Based on the extensive Site walkover and inspection, no visual signs of ecological stress were observed.

6 Conclusions

The detailed desktop review of available information and thorough Site inspection has enabled the development of a preliminary CSM allowing assessment of potential health and environmental issues relating to the Site. Key findings were:

1. Potential contamination sources at the Site are limited based on historical land use; and
2. Visible signs of gross contamination were not observed during Site inspection.

In summary, based on the desktop study and site walkover conducted at the Site, no potential contamination sources or indication of gross contamination has been identified which would constrain the development of the Site for the proposed low density residential development.

HEC recommends no further assessment in context of the proposed development.

Given the preliminary nature of the investigation an unexpected finds protocol should be utilised during any proposed future earthworks at the Site.

7 Unexpected Finds

The presence of any unexpected finds would be highlighted during development works by the observation of any unusual physical (e.g. staining, fill material, asbestos-containing material) or sensory characteristics of the soil. In the event that any significant unknown type of material is identified, site

works should be stopped in that area and an assessment of the material and its likely impact on the CSM would be undertaken by an appropriately qualified environmental consultant immediately to prepare a suitable response to the occurrence. All additional works should be documented and detailed in the validation report.

8 Report Limitations

HEC considers that the objectives of the original scope as presented in quote EQ0446_Rev1 of the investigation have been achieved.

The analytical data and recommendations within the above report are subjected to the specific sampling and testing that was undertaken at the time of the current investigation. It should be noted that underlying Site soil conditions can vary significantly across a Site and the environment can change over time. If conditions encountered during intrusive works are different to those contained in this report HEC should be contacted immediately for Site reassessment.

If you have any further questions about this report, please contact the undersigned.

For and on behalf of

Hunter Environmental Consulting

Reported by:

[redacted]

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Reviewed by:

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References

National Environment Protection Council (NEPC), (2013) *National Environment Protection (Assessment of Site Contamination) Measure 1999, NEPM, Canberra. Schedule B2: Guideline On-site Characterisation*.

NSW EPA (2020) *Contaminated Land Guidelines: Guidelines for Consultants Reporting on Contaminated Land*.

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