# Beveridge North West Precinct Structure Plan Area

METROPOLITAN PLANNING AUTHORITY

Site Suitability Assessment

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### Beveridge North West Precinct Structure Plan Area

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# List of abbreviations

AEP Annual Exceedance Probability

AHD Australian Height Datum
AMG Australian Map Grid

ANZECC Australian New Zealand Environment and Conservation Council

ARMCANZ Agriculture and Resource Management Council of Australia and New Zealand

AS Australian Standard

ASRIS Australian Soil Resources Information System

ATES Aquifer Thermal Energy Storage

BTEX Benzene, Toluene, Ethylbenzene and Xylene

BH Borehole

CoC Chain of Custody
DS Stock and Domestic

DM Domestic

DO Dissolved Oxygen
DQO Data Quality Objective

DY Dairy

EAO Environmental Audit Overlay

EC Electrical Conductivity

EHS Environment, Health and Safety

EIL Ecological Investigation Levels

EMP Environmental Management Plan

EPA Environment Protection Authority

ESA Environmental Site Assessment

FZ1 Farming Zone Schedule 1
GAA Growth Areas Authority

GME Groundwater Monitoring Event
GMS Groundwater Management System
GQO Groundwater Quality Objective

GWZ1 Green Wedge Zone 1
HIL Health Investigation Levels

IR Irrigation IV Investigation

LPP Local Planning Policies

LPPF Local Planning Policy Framework

mbgl Metres below ground level

MAH Monocyclic Aromatic Hydrocarbons

MAR Managed Aquifer Recharge

MI Miscellaneous

MPA Metropolitan Planning Authority
MSS Municipal Strategic Statement

MW Monitoring Well

NATA National Association of Testing Authorities, Australia

NEPC National Environment Protection Council
NEPM National Environment Protection Measure

# Desktop Environmental, Hydrological and Geotechnical Assessment



NKN Not known

OCP Organochlorine Pesticides
OPP Organophosphate Pesticides
PAH Polycyclic Aromatic Hydrocarbons
PASS Potential Acid Sulphate Soils

PSP Precinct Structure Plan
RWL Reduced Water Level
SAP Sampling & Analysis Plan

SB Soil Bore

SEPP State Environment Protection Policy

SKM Sinclair Knight Merz

SPPF State Planning Policy Framework

ST Stock

SWL Standing Water Level
TDS Total Dissolved Solids

TPH Total Petroleum Hydrocarbons UST Underground Storage Tank

UGZ Urban Growth Zone

WSPA Water Supply Protection Area



# **Executive summary**

### **Background and objectives**

Sinclair Knight Merz Pty Ltd (Jacobs SKM) was commissioned by Metropolitan Planning Authority (MPA), formerly Growth Areas Authority (GAA) to undertake a Desktop Environmental, Hydrogeological and Geotechnical Site Assessment of the Beveridge North West Precinct Structure Plan (PSP) area (reference D/13/4728), hereafter referred to as "the site" or "PSP area").

The Beveridge North West site has been identified as future land supply primarily for residential land use, although also with a view to various commercial and community land uses. The aim of this assessment is to identify opportunities and constraints to the proposed land development which may potentially be caused by existing or past land uses, and site and sub-surface conditions. The assessment comprised two stages; Stage 1 being a review of the history of land use at the site and a preliminary desktop review of information, with Stage 2 involving inspections of the properties within the PSP area identified as presenting a potential risk. Risk in this regard relates to potential contamination, hydrogeology and/or geotechnical issues. Intrusive site investigations were not conducted at this stage, although site inspections were conducted at selected properties, primarily for the purpose of assessing potential issues relating to contamination. This report includes the findings of both the Stage 1 and 2 assessment completed.

# **Scope of works**

The following scope of work was undertaken at the site:

- The Stage 1 assessment comprised the gathering of relevant information (including the use of literature sources) for the purposes of identifying potential sources of contamination, hydrogeological and geotechnical issues
- The Stage 2 assessment included inspecting the site for potential sources of contamination, and areas of geotechnical and hydrogeological significance (i.e. areas of water logging, existing groundwater bores, etc.) identified during the stage one assessment

The approach and findings of the assessment, together with supporting information, are documented within this report.

#### **Conclusions**

#### Site contamination assessment

Based on the information gathered during the Stage 1 & 2 assessments, the following conclusions can be made in relation to the Beveridge North West PSP area:

- The site history assessment found that the site has a long history of agricultural land uses, with much of the areas remaining under cultivation to the present day
- A groundwater quality assessment was recently undertaken by SKM (Jacobs SKM, 2014) which found
  that concentrations of heavy metals and nutrients such as ammonia, nitrite and nitrate were likely
  reflective of background / regional groundwater conditions. No beneficial uses of groundwater were
  found to be precluded. Therefore, the groundwater quality across the site is unlikely to pose a constraint
  to future development.
- Based on the available information, including a site walkover and site history assessment, the following primary potential sources of contamination have been identified:
  - Potentially contamination associated with general agricultural activity around the homesteads of properties 2, 6 and 22. At these sites, potential contamination is likely to be confined to a small number of localised areas (i.e. immediately around fuel storage tanks or stockyards) rather than distributed across a wide area).



- Highly localised areas of potential contamination associated with stockpiles and general dumped materials. In these locations contamination is likely to be localised to stockpiles themselves and in some instances shallow underlying soils which can be easily removed.
- Diffuse but low level sources of contamination associated with the widespread application of agricultural chemicals on farmland as well as tree plantations. These chemicals may include pesticides, herbicides, fungicides and fertilizers.
- A number of off-site sources of potential contamination have been identified in the vicinity of the PSP site. Based on the nature of the site uses as well as the environmental setting of the site (hydrological, hydrogeological and geological conditions), the greatest risk to the Beveridge North West PSP area is presented by two quarries; one to the east (property 17) and one to the south (property 12). The remaining properties were deemed to present either a low or very low potential for contamination of the PSP area. However, none of these off-site land uses are considered to present constraints to future site development.

Based on the information obtained from the sources described in this report, with the exception of highly localised areas of potential contamination associated with current and/or former land uses identified above, there do not appear to be any significant risks from a site contamination perspective which would render the land unsuitable for residential or other sensitive land uses. Any areas of localised contamination are likely to be able to be effectively managed or remediated during any future site development. However, it should be noted that the site has a long history of agricultural use. While unlikely, it is possible that the broad application of agricultural chemicals may have impacted upon soil at the site. Similarly, potential impacts by nutrients on groundwater as a result of irrigation may place restrictions on the use of groundwater at the site.

#### **Geotechnical assessment**

Based on the available geological information, the eastern half of the site is likely to be underlain by highly reactive residual basaltic clay overlying basalt rock, and the western half underlain by residual soils overlying weathered siltstone/sandstone. An indicative site classification of Class "H2 to E" has been assessed in accordance with Table D1, AS2870-2011.

Key geotechnical issues associated with development of the site include the depth and reactivity of the basaltic clay in terms of its influence on site classification, change and interface of variable ground conditions, foundation selection, differential settlement, subgrade performance, excavations and site accessibility. Fill material, if present, is expected to be uncontrolled and may not be suitable for development in its present state. Areas subject to poor drainage may comprise soft material which provides low bearing capacity for foundations.

### Hydrology assessment

The site is located at the headwaters of Kalkallo Creek and an unnamed waterway draining to Kalkallo Creek. Kalkallo Creek has its headwaters in the north west corner of the site, and drains to the south west corner. The unnamed waterway drains from the east of the site to the south of the site. The 100 year flood extent and floodway do not cross into the site, indicating no major flood risk. There is an area that is classified as the UFZ zone, which restricts the use of land because of high flood risk. This area is along Kalkallo Creek, with a buffer of approximately 100 m on each side of the waterway.

# Hydrogeological assessment

Based on the regional hydrogeological information and bore data in the vicinity of the site, the Newer Volcanics forms the major aquifer at the site, given the better quality (compared to the Kilmore Siltstone) and the number of users currently utilising it in the area.

The site is currently within a Salinity Management Overlay (SMO). Under the SMO, a planning permit will be required as part of the subdivision process, which will detail recommendations for land management practices. Jacobs SKM note that nearby areas have recently had the SMO removed (Mitchell Planning Scheme Amendment C93). Given the vicinity to the Beveridge North West PSP and the lack of observed salinity



affected area on this site, the SMO may also be removed from this PSP area upon application for removal (with applicable environmental assessment).

Over the majority of the site there does not appear to be any significant hydrogeological constraints which would render the land unsuitable for development. However, shallow depth to groundwater is likely to exist in some areas of the site. The following issues would need to be considered in the planning and design of any development:

- Shallow watertable may cause groundwater inflow to excavations and may impact on site drainage (i.e. cause waterlogging)
- Brackish nature of the groundwater may require careful monitoring if dewatering or extraction is required
- Decreased local groundwater recharge in winter and early spring as the result of dewatering or extraction associated with development has the potential to reduce discharge to nearby surface water features, which could potentially have a negative impact on the ecological health of local waterways
- There may be additional land management requirements imposed by council or other regulatory body (relating to the SMO), as part of any proposed subdivision for the site

Opportunities for potential use of extracted groundwater include garden watering and irrigation of parks and ovals, depending on the salinity of the groundwater the groundwater may need to be shandied with potable water to improve the salinity

It is recommended that a field investigation into groundwater elevation and quality be undertaken to confirm the findings of this desktop study. This may include:

- Sampling of existing local bores for quality and water level
- Drilling of narrow test bores for ongoing observation to determine seasonal fluctuations in water level and quality if required

### Recommendations

We understand that the proposed future use of the site is as a broad ranging urban development and is likely thus to include sensitive uses such as residential and community facilities in addition to open space, retail and a range of business uses such as offices, light industrial and manufacturing. However, since specific future land uses within the PSP boundary are yet to be confirmed, this assessment has been completed based on the assumption that residential or other sensitive uses will be the probable land future uses across the study area.

The following further works are recommended, including recommended timings:

- Assessment of potential contamination associated with general agricultural land uses around the homesteads of properties 2, 6 and 22. These sites are likely to present the greatest potential for contamination, albeit likely a small number of localised areas (i.e. around septic tanks, fuel storages, stockyards etc.). This process may be best undertaken through the preparation of a Sampling, Analysis and Quality Plan (SAQP) followed by a Phase 2 Environmental Site Assessment (which may include targeted sampling of soils and groundwater). Timing: It is recommended that this task be undertaken to coincide with the cessation or scaling down of current site operations at these sites and prior to the commencement of the proposed development and construction works.
- Completion of a hazardous materials assessment for properties 2 and 22 to confirm not only the extent of
  potential asbestos containing materials and lead based paints, but to identify controls that should be
  implemented during future development to prevent exposure by site workers or future users of the site.
  Timing: It is recommended that this task be undertaken to coincide with the cessation or scaling down of
  current site operations at these sites and prior to the commencement of the proposed development and
  construction works.
- Further drilling and collection of soil samples for the purposes of assessing the geotechnical soil properties for building foundation and road design. *Timing: This task should be undertaken on a site-by-site basis during future development as part of the building permit application process.*

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- Completion of aquifer hydraulics testing on existing groundwater bores to determine aquifer properties. This should also include assessment of depth to groundwater. This assumes existing wells are in a suitable condition for such an assessment. Timing: It is recommended that this task be undertaken to coincide with the cessation or scaling down of current site operations at these sites and prior to the commencement of the proposed development and construction works.
- Excavation and removal of underground storage tanks, soil remediation and tank pit validation if USTs are found on properties. *Timing: This task should be undertaken on a site-by-site basis during future site development.*
- Removal of other potentially contaminating infrastructure (e.g. septic tanks and above ground storage tanks) followed by soil validation. *Timing: This task should be undertaken on a site-by-site basis during future site development.*
- Classification and appropriate removal (if required) of various stockpiles and dumped materials observed at sites across the study area. This includes subsequent validation following removal. It is noted that sampling of some stockpiles of soil observed may indicate that the material is suitable for re-use as part of future development and as such removal may not be required in all instances. *Timing: This task should be undertaken on a site-by-site basis during future site development.*
- An application to have the salinity management overlay (SMO) removed from the PSP should also be undertaken, as per the recent Mitchell Planning Scheme Amendment C93 for a nearby development area. This will remove the requirement for an intensive planning permit application process for future development. Timing: This task should be undertaken prior to site development
- Consultation with YVW to establish their intentions in relation to the future use of the winter storage dams. If these structures are retained a buffer distance may need to be applied in accordance with EPA requirements. In their current form the basins would likely require a 50m buffer from the nearest sensitive land uses. Timing: This task should be undertaken prior to finalising future land use zones.



# 1. Introduction

### 1.1 Background and objectives

Sinclair Knight Merz Pty Ltd (Jacobs SKM) was commissioned by Metropolitan Planning Authority (MPA), formerly Growth Areas Authority (GAA) to undertake a Desktop Environmental, Hydrogeological and Geotechnical Site Assessment of the Beveridge North West Precinct Structure Plan (PSP) area (reference D/13/4728), hereafter referred to as "the site" or ("PSP area").

The Beveridge North West site has been identified as future land supply primarily for residential land use, although also with a view to various commercial and community land uses. The aim of this assessment is to identify opportunities and constraints to the proposed land development which may potentially be caused by existing or past land uses, and site and sub-surface conditions. The assessment comprised two stages; Stage 1 being a review of the history of land use at the site and a preliminary desktop review of information, with Stage 2 involving inspections of the properties within the PSP area identified as presenting a potential risk. Risk in this regard relates to potential contamination, hydrogeology and/or geotechnical issues. Intrusive site investigations were not conducted at this stage, although site inspections were conducted at selected properties, primarily for the purpose of assessing potential issues relating to contamination. This report includes the findings of both the Stage 1 and 2 assessment completed.

### 1.2 Scope of work

The following scope of work was undertaken at the site:

- The Stage 1 assessment comprised the gathering of relevant information (including the use of literature sources) for the purposes of identifying potential sources of contamination, hydrogeological and geotechnical issues
- The Stage 2 assessment included inspecting selected properties within the two PSP areas for potential sources of contamination and areas of geotechnical and hydrogeological significance (e.g. areas of water logging, existing groundwater bores, etc.) identified during the Stage 1 assessment.

The approach and findings of the assessment, together with supporting information, are documented within this report.

### 1.3 Statement of limitations

This Report has been prepared by Jacobs SKM for the sole use of Metropolitan Planning Authority ("the Client").

Undertaking an assessment or study of the on-site conditions may reduce the potential for exposure to the presence of contaminated or inadequate bearing ground and/or groundwater. All reports and conclusions that deal with sub-surface conditions are based on interpretation and judgement and as a result have uncertainty attached to them. It should be noted that this report contains interpretations and conclusions which are uncertain, due to the nature of the investigations. No study can completely eliminate risk, and even a rigorous assessment and/or sampling program may not detect all problem areas within a site. The following information sets out the limitations of the Report.

This Report should only be presented in full and should not be used to support any objective other than those detailed within the Agreement. In particular, the Report does not contain sufficient information to enable it to be used for any use other than the project specific requirements for which the Report was carried out, which are detailed in our Agreement. Jacobs SKM accepts no liability to the Client for any loss and/or damage incurred as a result of changes to the usage, size, design, layout, location or any other material change to the intended purpose contemplated under this Agreement.

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It is imperative to note that the Report only considers the site conditions current at the time of investigation, and to be aware that conditions may have changed due to natural forces and/or operations on or near the site. Any decisions based on the findings of the Report must take into account any subsequent changes in site conditions and/or developments in legislative and regulatory requirements. Jacobs SKM accepts no liability to the Client for any loss and/or damage incurred as a result of a change in the site conditions and/or regulatory/legislative framework since the date of the Report.

The Report is based on an interpretation of factual information available and the professional opinion and judgement of Jacobs SKM. Unless stated to the contrary, Jacobs SKM has not verified the accuracy or completeness of any information received from the Client or a third party during the performance of the services under the Agreement, and Jacobs SKM accepts no liability to the Client for any loss and/or damage incurred as a result of any inaccurate or incomplete information.

The Report is based on assumptions that the site conditions as revealed through selective sampling are indicative of conditions throughout the site. The findings are the result of standard assessment techniques used in accordance with normal practices and standards, and (to the best of our knowledge) they represent a reasonable interpretation of the current conditions on the site. However, these interpretations and assumptions cannot be substantiated until specifically tested and the Report should be regarded as preliminary advice only.

Any reliance on this Report by a third party shall be entirely at such party's own risk. Jacobs SKM provides no warranty or guarantee to any third party, express or implied, as to the information and/or professional advice indicated in the Report, and accepts no liability for or in respect of any use or reliance upon the Report by a third party.

This Report makes no comment on the presence of hazardous materials, unless specifically requested.



# 2. Methodology

### 2.1 General assessment approach

### 2.1.1 Stage 1 assessment

A Stage 1 assessment (also referred to as a Phase 1 Environmental Site Assessment (ESA)) is typically undertaken to establish site conditions, historical site uses and practices. As part of this Stage 1 assessment the following sources of information have been reviewed:

- Relevant reports
- EPA priority sites register
- EPA list of certificates and statements of environmental audit (current and completed audits)
- Topographical maps
- Groundwater management system (GMS) bore searches
- Geological maps
- Hydrogeological maps
- · Potential acid sulfate soils (pass) probability maps

The Stage 1 assessment seeks to identify if possible:

- The potential source(s) of on and off site contamination
- Pathways and receptors of contamination
- Areas of environmental concern (contamination, hydrogeological and geotechnical) which will form the basis of subsequent assessments at the site

### 2.1.2 Stage 2 assessment

For this particular investigation, the site inspection works are referred to as a Stage 2 assessment. The site inspections undertaken included an inspection of areas that were identified during the Stage 1 as presenting a low, medium or high risk from a contamination, hydrogeological and geotechnical perspective. Those properties identified during the Stage 1 assessment as presenting a very low risk were not inspected. Based on the findings of the site inspections, the need for further soil and groundwater investigation (typically by sampling and analysis) has been identified. While the completion of these further investigations does not form part of this scope of work, **Section 2.1.3**, **Section 2.1.4** and **Section 2.1.5** below provides an overview of the typical objectives/outcomes of such assessments.

### 2.1.3 Stage 3 assessment

The Stage 3 intrusive site investigation may be undertaken to characterise the site with respect to contamination, hydrogeology and geotechnical conditions. Note that this stage of site investigation is usually referred to as a Stage 2 (or Phase 2) ESA. With respect to each of the abovementioned disciplines, the following works may be undertaken as part of a Stage 3 assessment:

• A contamination assessment will typically seek to determine the level (if any) of contamination present on site, establish the lateral and vertical distribution of contamination and identify the source(s) of on-site and off-site contamination. Prior to undertaking any intrusive soil and/or groundwater investigation, a Sampling and Analysis Plan (SAQP) is generally prepared. The SAQP defines the intended sampling locations and the contaminants which will be tested for, based on the site characteristics as determined in a Phase 1 ESA.



- A geotechnical assessment will typically seek to obtain information on the sub-surface conditions at the
  site through a geotechnical site investigation comprising a series of boreholes and/or test pits and
  laboratory testing. Field and laboratory test data is used to develop a site model describing the soil and/or
  rock profile and the variability across the site. A geotechnical assessment would generally include advice
  on site classification and allowable bearing capacity for shallow foundation design and comments
  regarding excavations, foundation systems, pavement design and other items relevant to the proposed
  development.
- A hydrogeological assessment will typically include determination of the depth to the water table and
  the potentiometric surface of deeper confined aquifers through the installation of groundwater observation
  bores, assessment of groundwater and surface water interaction and assessment of aquifers suitability
  for managed aquifer recharge (MAR).

### 2.1.4 Remediation

If significant contamination is identified at a site, to a level where the beneficial uses of land, surface water or groundwater are at risk or precluded (described in further detail in **Section 3**), remediation of the identified contamination may be required in order to allow for a particular land use to continue or commence in future.

### 2.1.5 Environmental auditing

The environmental audit system under the Environment Protection Act 1970 is administered by the Victorian Environment Protection Authority. A statutory Environmental Audit of a site involves the appointment of an EPA accredited environmental auditor to undertake an independent assessment of the environmental condition of a site and provide an opinion regarding the site's suitability for feasible or proposed end uses. A range of information including a site history assessment and results of relevant soil and groundwater testing undertaken are evaluated by the environmental auditor when forming such an opinion. At the conclusion of the audit a certificate or statement of environmental audit may be issued. A certificate indicates that the use of the land is unrestricted, whereas a statement indicates that particular beneficial uses of the land or groundwater are either precluded or suitable only under specified conditions.



# 3. Regulatory framework for assessment

### 3.1 Legislation and policy

### 3.1.1 Planning and Environment Act 1987

The *Planning and Environment Act 1987* sets out the requirements of planning authorities when preparing planning schemes or amendments to planning schemes. The Act requires planning authorities to "take into account any significant effects which it considers the scheme or amendment might have on the environment or which it considers the environment might have on any use or development envisaged in the scheme or amendment".

Under Section 12 (2) (a) of the *Planning and Environment Act 1987*, the *Ministerial Direction No. 1 – Potentially Contaminated Land* requires planning authorities to satisfy themselves that the environmental conditions of land proposed to be used for a sensitive use, agriculture or public open space are, or will be, suitable for that use. This is generally done through the completion of an environmental site assessment and audit process.

#### 3.1.2 Environment Protection Act 1970

The *Environment Protection Act 1970* established the Victorian Environment Protection Authority (EPA) and made provisions with respect to the powers, duties, and functions of the EPA and the protection of the environment. The Act provides for environmental audits, which are used to provide an authoritative opinion on the suitability of potentially contaminated land for future use, and form an integral part of the land use planning and approval process. The Act also provides the basis for the various State Environment Protection Policies (outlined below) which provide the framework for the assessment and management of the environmental quality of land, surface waters and groundwater in Victoria.

#### 3.1.3 Land State Environment Protection Policy 2002

The State Environment Protection Policy (Prevention and Management of Contamination of Land) (Land SEPP) sets out the regulatory framework for the prevention and management of contaminated land within the State of Victoria. The intent of this framework is to maintain and maximise, to the extent practicable, the quality of the land environment in Victoria, in order to protect its existing and potential beneficial uses. The Land SEPP was declared in June 2002 in accordance with Section 16 of the *Environment Protection Act 1970*, and the Victorian EPA is responsible for its implementation.

The Land SEPP identifies a range of land use categories and a range of protected beneficial uses for each of these categories. The EPA considers that land (soil) is *polluted* where current and/or future protected beneficial uses for the relevant land use categories are precluded. Beneficial uses of land are considered to be precluded when relevant soil quality objectives set out in the Land SEPP for those beneficial uses have been exceeded. Further information on the beneficial uses of land with respect to specific land use categories can be found in **Appendix A**.

### 3.1.4 Groundwater State Environment Protection Policy 1997

The quality of groundwater in Victoria is protected under the 1997 State Environment Protection Policy (SEPP) 'Groundwaters of Victoria' (Groundwater SEPP), declared under the *Environment Protection Act 1970* and administered by the EPA. The groundwater SEPP defines a range of protected beneficial uses for defined segments of the groundwater environment, which are based on the total dissolved solids (TDS) content of the groundwater. The EPA considers that groundwater is *polluted* where protected beneficial uses for the relevant segment are precluded. Beneficial uses of groundwater are considered to be precluded when relevant groundwater quality objectives set out in the groundwater SEPP for those beneficial uses have been exceeded, or where non-aqueous phase liquid is present.



Where groundwater has been polluted, groundwater must be cleaned up such that the protection of beneficial uses is restored, or to be cleaned up the extent practicable. Further information on the beneficial uses of groundwater with respect to the various segments of groundwater can be found in **Appendix A** 

### 3.1.5 Surface Water State Environment Protection Policy 2003

The quality of Victoria's surface water environments are protected under the 2003 State Environment Protection Policy 'Waters of Victoria' (Surface Water SEPP) declared under the *Environment Protection Act 1970* and administered by the EPA. The Surface Water SEPP sets out the environmental values and beneficial uses of water which are to be protected for each segment of the surface water environment and includes schedules which cover some specific surface water catchments in Victoria. Beneficial uses of surface waters are considered to be precluded when relevant water quality objectives set out in the surface water SEPP for those beneficial uses have been exceeded.

In addition to assessment of surface water quality, the relevant water quality objectives stated in this SEPP are applied to groundwater at the point of groundwater discharge to a surface water system, to assess whether the maintenance of ecosystems beneficial use of groundwater is protected.

### 3.2 Guidelines and standards

# 3.2.1 National Environment Protection (Assessment of Site Contamination) Amendment Measure (NEPM) 2013

The NEPM is the national guideline for assessing contaminated sites and was prepared by the National Environment Protection Council (NEPC). The NEPM is implemented in each Australian jurisdiction under the *National Environment Protection Measures (Implementation) Act 1998 (Commonwealth)*. The NEPM document ensures there is a nationally consistent approach to the assessment of contamination. The NEPM provides guidance on the methods of site contamination assessment, environmental and health based investigation levels for soil and groundwater contaminants, human and environmental health risk assessment and reporting requirements. The original NEPM published in 1999 has been recently superseded by a version published in April 2013.

#### 3.2.2 Various EPA publications and guidelines

The following publications and guidelines from the Victorian and New South Wales Environment Protection Authorities are commonly applied and referenced for intrusive soil and groundwater site assessments:

- EPA Victoria, 2000. Groundwater Sampling Guidelines. Publication 669
- EPA Victoria, 2006. Hydrogeological assessment (groundwater quality) guidelines. Publication 668

### 3.2.3 Potentially Contaminated Land General Practice Note 2005

This general practice note was produced by the Department of Sustainability and Environment in conjunction with the Victorian EPA and provides guidance to the general public and planners on the identification of potentially contaminated land and the stages of assessment and audit required should a site be considered contaminated.

# 3.2.4 Australian Standard AS4482.1-2005: Guide to the investigation and sampling of sites with potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds

Australian Standard 4482.1 provides guidance on the collection of sufficient and reliable information when assessing potentially contaminated sites. In particular this standard focuses on the assessment of sites potentially contaminated with non-volatile and semi-volatile compounds. The standard covers key elements of preliminary site investigations (i.e. Stage 1 or Phase 1 ESAs), detailed site investigation methods (i.e. Phase 2 ESAs), data quality objectives (DQO), developing sampling strategies, the collection of samples and quality assurance procedures.



# 3.2.5 Australian Standard AS4482.2-1999: Guide to the sampling and investigation of potentially contaminated soil – Part 2: Volatile substances

This standard refers to AS448.1 regarding the establishment of preliminary site information, and provides more specific guidance on field screening and sample collection techniques when assessing sites that are potentially contaminated with volatile compounds.

### 3.2.6 Australian Standard AS1726-1993: Geotechnical Site Investigations

Australian Standard AS1726 sets out minimum requirements for a geotechnical site investigation, as a component in the engineering design, construction, commissioning and operation of civil engineering and building works.

The standard specifies considerations affecting the design and construction of works which must be made in a geotechnical site investigation. Assessment of these factors enables the identification of field and laboratory work to obtain the geotechnical data required to facilitate the engineering design and construction of the works. The standard provides guidance on suitable field and laboratory examination and testing of geotechnical materials and outlines a system of material classification.

The applications of this Standard include assessment of natural or filled ground, new construction, maintenance of existing facilities, the evaluation of post construction performance and the assessment of failure.

### 3.3 Regulatory framework in the context of this assessment

The acts, policies, guidelines and standards relevant for each stage of assessment are set out in Table 3.1.

Table 3.1: Acts, policies, guidelines and standards relevant for site assessments

Stage of Assessment	Relevant Acts and Policies	Relevant Guidelines and Standards	How the Regulatory Framework Applies
Proposed Change to Land Use	Planning and Environment Act 1987	Ministerial Direction No. 1 – Potentially Contaminated Land DSE Potentially Contaminated Land Practice Note 2005	The Planning and Environment Act requires planning authorities to satisfy themselves that the environmental conditions of land proposed to be used for a sensitive use, agriculture or public open space are, or will be, suitable for that use. This is generally done through the completion of an environmental site assessment and audit process (see below).
Desktop Investigation (Phase 1 ESA)	Environment Protection Act 1970 Planning and Environment Act 1987 National Environment Protection Measures (Implementation) Act 1998 (Commonwealth)	NEPM 1999 AS4482.1-2005 AS4482.2-1999	The Environment Protection Act and SEPPs provide the legislative basis and policy framework for the assessment and management of contaminated land and groundwater in Victoria.
Intrusive Soil, Groundwater and Geotechnical Assessments (Phase 2 ESA)	Environment Protection Act 1970 Land SEPP 2002 Groundwater SEPP 1997 Waters of Victoria SEPP 2003	NEPM 1999 AS4482.1-2005 AS4482.2-1999 AS1726-1993	The guidelines and standards provide guidance on the collection of reliable information in order to assess the environmental condition of a site appropriately.
Statutory Environmental Auditing	Environment Protection Act 1970 Planning and Environment Act 1987 Land SEPP 2002 Groundwater SEPP 1997 Waters of Victoria SEPP 2003	NEPM 1999 Various Victorian EPA Guidelines and Publications	The environmental audit system is provided for in the Environment Protection Act 1970 and the audit process is administered by the Victorian EPA.



# 4. Site description

General information relating to the Beveridge North West PSP area is presented in **Table 4.1** below. Refer to **Figure 1** for a site location map and **Figure 2** for a site plan, attached at the end of this report.

Table 4.1 : Details for Beveridge North West PSP area

Item	Beveridge North West PSP Area Description			
Location / Address	The Beveridge North West PSP area comprises a roughly square shaped area of land to the immediate northwest of the township of Beveridge. The PSP area is demarcated to the south by Camerons Lane and to the west by Old Sydney Road while the eastern edge of the site is bounded by the Hume Freeway and Northern Highway. There are no physical features that demarcate the northern extent of the PSP (except for field boundaries), however it does represent the most northerly extent of the wider Beveridge locality.			
Australian Map Grid Coordinates (MGA 55)	Centre at 319,120mE; 5,852,980mN  North-western extent at 317,570mE; 5,854,860mN  South-western extent at 316,570mE; 5,851,670mN  North-eastern extent at 321,080mE; 5,854,420mN  South-eastern extent at 320,610mE; 5,851,210mN			
Current Title Information	The Beveridge North West PSP area is divided into approximately 15 individual parcels of land. Current title information for selected parcels of land are summarised in <b>Appendix B</b> .			
Site Area (ha)	1,276 hectares			
Local Council	Mitchell Shire Council			
Current Land Zoning	Under the Mitchell Shire Planning Scheme, the majority of the PSP area is zoned as Urban Growth Zone (UGZ) with the following notable exceptions:			
	<ul> <li>An irregularly shaped area of land across the northern and eastern extents of the study area is zoned as Rural Conservation Zone (RCZ). A further irregular strip is also zoned as RCZ is located along the western extent of the PSP. These zones occupy an area of approximately 320 ha and 50 ha respectively.</li> <li>A narrow strip of land towards the western side of the PSP is zoned as Urban Floodway Zone (UFZ). This parcel is 65 ha in size and follows the route of the Kalkallo Creek that crosses the site.</li> </ul>			
	Figure 4 and 5 shows the land zoning for the Beveridge North West PSP study area.			
Zoning of Surrounding Land	Under the Mitchell Shire Planning Scheme, the PSP area is bounded variously by the following zones:  Road Zone 1 (RDZ1)  Comprehensive Development Zone – Schedule 2 (CDZ2)  Urban Floodway Zone (UFZ)  Farming Zone (FZ)  Figure 4 and 5 shows the land zoning relevant to the Beveridge North West PSP Area.			
Environmental Audit Overlay	There are no sites with an environmental audit overlay within the PSP area or within 200 m of the site.			
Site Layout	The site is moderately undulating with the Kalkallo Creek crossing the western extent of the site in a north/south orientation. The high points of the PSP are generally towards the north while the low point is towards the south-west.  While there are no public roads crossing the site, there are some private tracks providing access to existing residential properties and farms. To the east of the site is the Hume Freeway which is joined by the Northern Highway adjacent to the PSP.			
Current Land Uses	The site is primarily used for agricultural purposes with large areas of open farmland and associated infrastructure (farm buildings, water bores, farm dams etc.). However, there are also some rural residential properties. A large retention basin owned by Yarra Valley Water is also situated towards the centre of the PSP. This is used to irrigate some of the surrounding farmland.			



Item	Beveridge North West PSP Area Description
Proposed Land Uses	The proposed future use of the site is as future land supply for various land uses including sensitive uses such as residential and community facilities, in addition to open space, retail and a range of business uses such as office, light industrial and manufacturing.
	At present, no specific land uses have been allocated to individual parcels of land.  Jacobs SKM also understands that an application is intended to be submitted for part of the north-eastern most parcel of land within the PSP to be operated as a scoria/basalt quarry. This parcel is located at 175 Northern Highway. If such a land use were to be approved, a buffer distance of up to 500m between the quarry and sensitive land uses would be required in accordance with EPA Victoria publication 1518 Recommended Separation Distances for Industrial Residual Air Emissions (EPA, 2013)
Surrounding Land Uses	To the north and the west of the PSP, as well as to the east beyond the Hume Freeway is predominantly agricultural land. To the south of the PSP the area is undergoing significant residential development with a golf course also recently constructed. To the east of the site, around 500m from the edge of the PSP, is a scoria quarry set into the side of Mount Fraser which is a volcanic cone.



# 5. Environmental setting

Information on the general environmental setting of the Beveridge North West PSP area is outlined in the following sections.

### 5.1 Regional geology

The Department of Primary Industries (DPI) Online Geological Map (accessed in October 2013) was reviewed to determine the geological conditions at the Beveridge North West PSP area.

The main geological unit to be encountered during future development of the eastern half of the site is likely to be basalt and localised scoria of the Newer Volcanic Group (Neo and Neo2). However, towards the west the main geological units are likely to be siltstone with minor sandstone (Dxh) as well as alluvial/colluvial deposits of sand, gravels and silts along the Kalkallo Creek (Qa2 and Nc1).

The surface geology for the site and the immediate surrounding area is presented in **Figure 3** at the end of this report.

The site inspection confirmed the above in part, with rock outcropping (basalt) observed across the study area as well as eroded alluvial deposits along creek. These are illustrated in the images below.





Plate 5.1: Basalt quarried from a site to the south of the PSP

Plate 5.2: Eroded deposits of silt along the Kalkallo Creek

### 5.2 Soils and acid sulfate soils map review

A review of the Australian Soil Resources Information System (ASRIS) online map in October 2013 describes the subsoil at the Beveridge North West PSP site as clay (40%) with sand (20%) and silt (10%).

The ASRIS online map was also accessed for information regarding acid sulfate soils. The map indicates that soils within the Beveridge North West area can be classed as having an extremely low to low probability of acid sulfate soil occurrence (ASRIS, 2010).



# 5.3 Regional hydrology

The site is located at the headwaters of Kalkallo Creek and an unnamed waterway draining to Kalkallo Creek. Kalkallo Creek has its headwaters in the north west corner of the site, and drains to the south west corner. The unnamed waterway drains from the east of the site to the south of the site. There are several on stream farm dams on each of the waterways, particularly on Kalkallo Creek which would play a role in retarding flow and would change the natural flow conditions along the waterways. Kalkallo Creek is a tributary of Merri Creek, which is ultimately a tributary of the Yarra River.

The largest water body on the site is a wetland on the northern boundary of the site; it has a total area of 586,000 m<sup>2</sup>, but only 30% falls into the site boundary. There is also a reasonably sized water body just north of the middle of the site which has an area of 53,000 m<sup>2</sup>. Neither of these water bodies appear to be connected to any of the above mentioned waterways.

The 100 year flood extent and floodway do not cross into the site, they pass to the north east of the site and are approximately 500 m away from the site boundary at the closest point. There is an area that is classified as the UFZ zone, which restricts the use of land because of high flood risk. This area is along Kalkallo Creek, with a buffer of approximately 100 m on each side of the waterway.

# 5.4 Regional hydrogeology

The Beveridge North West PSP area is directly underlain by three aquifer units:

- The Silurian Kilmore Siltstone is the bedrock unit which forms a minor aquifer at the site. The aquifer is
  considered to be a fractured rock aquifer, with groundwater occurring within the joints and fractures of the
  rock mass. Groundwater yields from fractured rock aquifers are variable and largely a function of the
  degree of fracturing and extent of interconnection of fracture systems.
- The Newer Volcanics aquifer is also a fractured rock aquifer and forms a major regional aquifer. In this area, the Newer Volcanics produce can produce yields up to 6 L/s, with salinity ranging from 1500 5000 mg/L TDS. However Harris (1974) notes that the use of water from the aquifer in this area is restricted to stock supplies with bores typically drawing less than 1 L/s. The aquifer thickness is approximately 20 m across the site (University of Ballarat, 2013).
- The Quaternary Alluvium forms a minor aquifer at the site, with a thickness of approximately 7 m across the site (University of Ballarat, 2013). The Alluvium is comprised of a porous medium aquifer, in which groundwater flows through the gaps and pore spaces between the sand particles making up the aquifer.

The nature of recharge to the aquifer units of the area is direct infiltration via rainfall. Groundwater flow is expected to follow subdued topography and as such will flow from north east to south west.

Visualising Victoria's Groundwater (VVG) mapping (University of Ballarat, 2013) indicates that groundwater salinity to the west of the site varies from 3500 – 7000 mg/L (where the Kilmore Siltstone outcrops) and 1000 – 3500 mg/L TDS to the east (within the Newer Volcanics). Groundwater quality information specific to the Quaternary Alluvium was not available.

Local water level information was not available in the Victorian Groundwater Management System (GMS) database. However, depth to water table mapping **Figure 3** indicates depth to watertable is:

- < 5 m below surface within the Alluvium, along the course of Kalkallo Creek</li>
- Approximately 10 m below surface to the east of the site, where the Newer Volcanics outcrops
- 20 50 m below surface to the west of the site, where the Kilmore Siltstone outcrops

A review of the Atlas of Groundwater Dependent Ecosystems (GDEs) (BoM, 2012) was undertaken to determine any GDEs within the PSP area. The Atlas identifies that within the PSP area, Kalkallo Creek is listed as having a "high potential for groundwater interaction" indicating that the watertable is likely to be shallow in this area. Just north of the PSP area is an unnamed wetland, which is identified as having a "low potential for groundwater interaction".



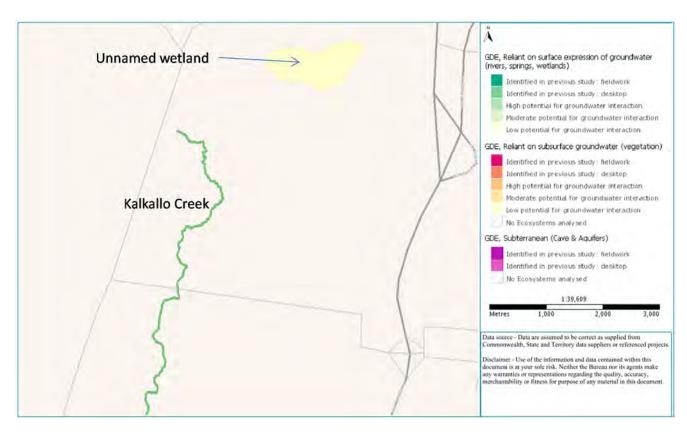


Figure 5.1: GDE identified within PSP area (BoM, 2012)

### 5.5 Local groundwater quality

The GMS database was accessed to identify the presence of any nearby registered groundwater bores. The extent of the search area is shown in **Figure 5.1**. Details of local bores are summarised in **Table 5.3**, **Table 5.4** and **Table 5.5**. Bore details are provided in **Appendix D**.

Of the local bores identified within the GMS, none are listed as State Observation Bores. As such, the only water quality information available in the GMS was collected at the time of drilling and this has variable reliability. A summary of available water quality results for the Newer Volcanics and Kilmore Siltstone are shown below in **Table 5.1**. No water quality information was available for bores associated with the Quaternary Alluvium.

TDS is approximately 1500 – 5000 mg/L in the regional basalt aquifer (Harris, 1974) and this is supported by salinity readings shown in GMS records.

The beneficial use of groundwater resources is defined in the State Environment Protection Policy (SEPP) - Groundwaters of Victoria (Victorian Government 1997) in terms of total groundwater salinity (TDS). Comparison of regional groundwater salinities (TDS) with beneficial use segments defined in the SEPP indicates that the beneficial uses of groundwater in the vicinity of the site fall within segment B and C. This indicates that the groundwater is suitable for all beneficial uses except for potable water use.

Table 5.1: Summary of available water quality data (GMS, 2013)

Parameter	Newer Volcanics Reported concentration (mg/L unless otherwise specified)	Kilmore Siltstone Reported concentration (mg/L unless otherwise specified)
TDS*	1469 – 6786	83 – 2243
рН	7.55 - 8.7 (dimensionless)	6.59 - 9.3



Parameter	Newer Volcanics Reported concentration (mg/L unless otherwise specified)	Kilmore Siltstone Reported concentration (mg/L unless otherwise specified)
Chloride (CI)	546 – 3260	11 – 785
Carbonate (CO3)	54	13 – 64
Bicarbonate (HCO3)	435 – 727	32 – 727
Total Alkalinity	-	-
Sulfate (SO4)	37 – 376	5 – 47
Nitrogen (N)	-	-
Calcium (Ca)	40 – 93	5 – 58
Magnesium (Mg)	127 – 627	5 – 216
Sodium (Na)	254 – 1755	14 – 389
Potassium (K)	5 – 33	2-8
Iron (Fe)	1 – 20	1 – 13

Notes: \* Converted from EC to TDS using a conversion factor of 0.65.

TDS - Total Dissolved Solids and EC - Electrical Conductivity

A Yarra Valley Water (YVW) report was prepared in 2008, which contained groundwater data from wells sampled onsite from 2002 - 2008 (see **Section 6.5.1** for further detail regarding this report). Results were generally consistent with the above, with data provided for the following additional analytes (2008 data provided):

Table 5.2: Summary of available water quality data (YVW, 2008)

Parameter	Geology of bores unknown (mg/L unless otherwise specified)
Nitrate	0.01 – 24
Nitrite	0.01 – 0.82
Ammonia	0 - 1 <sup>(1)</sup>

Notes: (1) Excludes two anomalous concentrations of 12 and 250 mg/L

# 5.6 Local groundwater use

The site is not currently represented by any Groundwater Management Areas, which are generally declared in response to significant groundwater use and declining water levels in the area.

The majority of known use is associated to the Newer Volcanics aquifer, likely due to the availability of groundwater quality and yield suitable to stock and domestic supply.

Table 5.3: Details of local bores known to intersect the Newer Volcanics (major aguifer at the site)

Number of bores	Uses	Bore depth range (m)	Bore yield (L/s)	Groundwater salinity (uS/cm EC)
16	Stock and domestic	16 - 80	0.2 – 2.5	1320 - 3450
1	Commercial	90	NA	NA
1	Observation	12	NA	NA



Table 5.4: Details of local bores known to intersect the Kilmore Siltstone (minor aquifer at the site)

Number of bores	Uses	Bore depth range (m)	Bore yield (L/s)	Groundwater salinity (uS/cm EC)
5	Stock and domestic	56 – 68	0.4 – 2.4	3100 - 8600

Table 5.5: Details of bores where the screened unit is unknown (not listed)

Number of bores	Uses	Bore depth range (m)	Bore yield (L/s)	Groundwater salinity (uS/cm EC)
29	Stock and domestic	14 - 76	0.4 - 22	1210- 10440

### 5.7 Ecology

### 5.7.1 Desktop assessment

A review of the following Victorian Department of Environment and Primary Industries (DEPI) and Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) databases and documentation was undertaken to provide information on wetlands and sites of national significance in proximity to the investigation area.

- Biodiversity Interactive Map (DEPI 2013)
- Protected Matters Search Tool (DSEWPaC, 2013)
- Melbourne Strategic Assessment The impact of Melbourne's grown on 'seasonal herbaceous wetlands (freshwater) of the temperate lowland plains' (DEPI, 2013)

### 5.7.2 Wetlands

A review of the Biodiversity Interactive Map identified one wetland in the vicinity of the Beveridge North West PSP as outlined in **Table 5.6**, below. The wetland identified is naturally occurring and not listed under the Ramsar Convention. It is recommended these areas be retained during development, including any native vegetation.

A review of the Melbourne Strategic Assessment document (DEPI, 2013) was also undertaken, identifying a single seasonal herbaceous freshwater wetland (SHW) area within the PSP. While the lateral extent of the wetland is not defined, it is broadly located within the volcanic crater towards the north east corner of the PSP (property 2\LP6746). While this site has previously been recorded as SHW, an inspection carried out in late 2012 confirmed that SHW was not identified at the site with evidence that the area had instead been recently ploughed and sown for grain crop. As such, DEPI recommended that the area be removed from the SHW dataset.

Table 5.6: Wetlands in proximity to Beveridge PSP site

Easting/Northing	Wetland ID	Wetland category	Area (Ha)	Subcategory	Proximity to site
319419mE, 5854708mN	70701	Freshwater Meadow	60.22	Herb	Within and along northern boundary of PSP
320742mE 5853708mN	Spring Hill Crater Wetland	Seasonal herbaceous wetland	N/A	N/A	Within parcel 2\LP6746 towards the north east corner of the PSP



### 5.7.3 Sites of national significance

A report was created using the EPBC Act PMST (DSEWPaC, 2013). This report highlighted any matters of NES (*i.e.* matters relevant to the EPBC Act) that are likely to occur within the investigation area. The information generated in this report is from modelled rather than derived data, meaning that threatened species lists supplied by DEPI are considered more accurate. However the PMST remains a useful tool for identifying potential values

#### Listed threatened communities

Five threatened ecological communities are modelled as potentially occurring at the site as documented in **Table 5.7**.

Table 5.7 : Conservation status and likelihood of occurrence of threatened ecological communities at the site (DSEWPaC, 2013).

Name	Status	PMST modelled likelihood of occurrence
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	Critically Endangered	Community known to occur within area
Grey Box ( <i>Eucalyptus microcarpa</i> ) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Community may occur within area
Natural Temperate Grassland of the Victorian Volcanic Plain	Critically Endangered	Community likely to occur within area
Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains	Critically Endangered	Community likely to occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area

Jacobs note that while DSEWPaC identify the potential presence of seasonal herbaceous wetlands within the study area, this community no longer appears to occur within the PSP (refer Section 5.7.2).

#### **Listed species**

Twenty-one EPBC listed threatened species are modelled as potentially occurring within the investigation area as described in **Table 5.8**.

Table 5.8 : Conservation status and likelihood of occurrence of threatened species at the investigation area (DSEWPaC, 2013).

Common name	Scientific name	EPBC status	PMST modelled likelihood of occurrence									
Birds												
Regent Honeyeater	Anthochaera phrygia	Endangered	Foraging, feeding or related behaviour likely to occur within area									
Australasian Bittern	Botaurus poiciloptilus	Endangered	Species or species habitat known to occur within area.									
Swift Parrot	Lathamus discolour	Endangered	Species or species habitat likely to occur within area									
Malleefowl	Leipoa ocellata	Vulnerable	Species or species habitat may occur within Area									
Plains-wanderer	Pedionomus torquatus	Vulnerable	Species or species habitat likely to occur within area									
Australian Painted Snipe	Rostratula australis	Endangered	Species or species habitat may occur within area									



Common name	Scientific name	EPBC status	PMST modelled likelihood of occurrence							
Fish										
Eastern Dwarf Galaxias	Galaxiella pusilla	Vulnerable	Species or species habitat likely to occur within area							
Australian Grayling	Prototroctes maraena	Vulnerable	Species or species habitat may occur within area							
Frogs										
Growling Grass Frog	Litoria raniformis	Vulnerable	Species or species habitat known to occur within area							
Insects										
Golden Sun Moth	Synemon plana	Critically Endangered	Species or species habitat may occur within area							
Mammals										
Grey-headed Flying-fox	Pteropus poliocephalus	Vulnerable	Species or species habitat likely to occur within area							
Plants										
Curly Sedge	Carex tasmanica	Vulnerable	Species or species habitat likely to occur within area							
Matted Flax-lily	Dianella amoena	Endangered	Species or species habitat likely to occur within area							
Clover Glycine, Purple Clover	Glycine latrobeana	Vulnerable	Species or species habitat likely to occur within area							
Basalt Pepper-cress	Lepidium hyssopifolium	Endangered	Species or species habitat likely to occur within area							
Plains Rice-flower, Spiny Rice-flower, Prickly Pimelea	Pimelea spinescens subsp. spinescens	Critically Endangered	Species or species habitat may occur within Area							
Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, French's Leek-orchid, Swamp Leekorchid	Prasophyllum frenchii	Endangered	Species or species habitat likely to occur within area							
Swamp Fireweed, Smooth-fruited Groundsel	Senecio psilocarpus	Vulnerable	Species or species habitat likely to occur within area							
Spiral Sun-orchid	Thelymitra matthewsii	Vulnerable	Species or species habitat may occur within area							
Swamp Everlasting	Xerochrysum palustre	Vulnerable	Species or species habitat likely to occur within area							
Reptiles										
Striped Legless Lizard	Delma impar	Vulnerable	Species or species habitat likely to occur within area							

# **Migratory species**

Thirteen migratory species are modelled as potentially occurring within the investigation area as described in **Table 5.9**.



Table 5.9: Migratory species modelled as likely to occur within the Woolshed Swamp Reserve

Scientific name	Common name	PMST modelled likelihood of occurrence
Apus pacificus	Fork-tailed Swift	Species or species habitat likely to occur within area
Ardea alba	Great Egret	Species or species habitat likely to occur within area
Ardea ibis	Cattle Egret	Species or species habitat likely to occur within area
Gallinago hardwickii	Latham's Snipe	Species or species habitat may occur within area
Haliaeetus leucogaster	White-bellied Sea-Eagle	Species or species habitat likely to occur within area
Hirundapus caudacutus	White-throated Needletail	Species or species habitat known to occur within area
Leipoa ocellata	Malleefowl	Species or species habitat may occur within area
Merops ornatus	Rainbow Bee-eater	Species or species habitat may occur within area
Monarcha melanopsis	Black-faced Monarch	Species or species habitat likely to occur within area
Myiagra cyanoleuca	Satin Flycatcher	Species or species habitat known to occur within area
Rhipidura rufifrons	Rufous Fantail	Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato)	Painted Snipe	Species or species habitat may occur within area
Xanthomyza phrygia	Regent Honeyeater	Foraging, feeding or related behaviour likely to occur within area



# 6. Information review

This section summarises the various sources of information, records and reports reviewed as part of the Stage 1 desktop assessment.

### 6.1 Current Certificate of title information

Certificates of title were reviewed to ascertain information on the current and historical land uses within and in the Beveridge North West PSP area. A summary of the title information is provided in **Appendix B** with locations illustrated in **Figure 8**. A review of the titles revealed the following information:

- The majority of historical title documents suggest that the area was used for agricultural purposes (as well as rural residential use), as anticipated.
- A large proportion of the PSP area is now owned by Yarra Valley Water, having been transferred from Elsberry Pty Ltd (5 parcels) and Goulburn Valley Regional Water Authority (2 parcels) in 2005.
- Current title documents suggest the remainder of the PSP area is used for agricultural purposes or rural residences. There is no suggesting that any other potentially contaminating land uses are present.

All title searches were conducted by Feigl and Newell Title Searchers. Where possible, the three most recent titles were reviewed for each identified parcel at the site.

### 6.2 EPA Priority Sites Register

A search of the EPA's Priority Sites Register (PSR), which lists those sites for which EPA has requirements for active management of land and groundwater contamination, was conducted. Sites within the Beveridge North West PSP area were not listed on the Register, nor were there any registered priority sites within a 5km radius of the area. A copy of the reviewed PSR (dated 31<sup>st</sup> August 2013) is provided in **Appendix C**.

# 6.3 EPA List of sites issued with Statements and Certificates of Environmental Audit

Under Victoria's *Environment Protection Act 1970*, statutory environmental audits of potentially contaminated land result in the issue of a Certificate of Environmental Audit if the site is considered suitable for any beneficial use (and land uses). Sites are issued a Statement of Environmental Audit if they are not found to be suitable for all beneficial uses (or land uses), as defined under Section 4 of the Act. Issue of a Statement indicates that some contamination remains at the site. A statement precludes one or more beneficial uses and/or requires management for the site to be suitable for one or more land uses.

The Victorian EPA maintains a list of all sites for which a Certificate or Statement of Environmental Audit has been issued. At the time of reporting no sites were identified within a 5km radius of the Beveridge North West PSP area as having been issued with either a Statement or Certificate of Environmental Audit.

### 6.4 EPA List of current environmental audit sites

The Victorian EPA also maintains a list of all sites which are currently subject to the environmental audit process. At the time of reporting there were no sites either within the PSP boundary or within a 5km radius of the area which are the subject of an ongoing audit.



# 6.5 Reviewed reports

Jacobs SKM was provided with two reports relating to the Wallan reclaimed water re-use scheme at Lot 8 and Lot 9, Camerons Lane (refer parcels 8/LP6746 and 9/LP6746 respectively in **Figure 8**). These reports are entitled:

- Yarra Valley Water, (YVW, 2008). Wallan Reclaimed Water Re-Use Scheme: Camerons Lane Lots 8 & 9
   Preliminary Assessment of Groundwater Monitoring Results. May 2008
- Arris Pty Ltd (Arris, 2008). Lots 8 & 9 Camerons Lane Reuse Scheme Assessment of Soil Monitoring Data for 2006 to 2007. May 2008.

These reports are discussed in the following sections and are provided in Appendix F and Appendix G respectively.

# 6.5.1 Yarra Valley Water, 2008: Wallan Reclaimed Water Re-Use Scheme: Camerons Lane Lots 8 & 9 – Preliminary Assessment of Groundwater Monitoring Results

In 2008 Yarra Valley Water undertook groundwater monitoring across a network of 18 groundwater monitoring bores and windmills. The purpose of the assessment was to confirm that the irrigation of the site using recycled water was not having a detrimental impact upon groundwater quality and the relevant beneficial use segments as defined in the State Environmental Protection Policy (SEPP). Refer to **Appendix A** for further information regarding groundwater beneficial use segments. Laboratory results were compared against background results obtained by SKM in 2005 prior to commencement of irrigation in order to assess groundwater quality trends. These results were also compared against the ANZECC & ARMCANZ (2000) assessment criteria for the relevant protected beneficial uses.

Yarra Valley Water concluded that the majority of parameters generally reported stable concentrations trends between pre and post irrigation monitoring. Where exceedances of the relevant criteria were observed, these were either:

- For analytes that also reported exceedances prior to irrigation commencing and were therefore deemed unlikely to have resulted from the irrigation itself (i.e. TDS)
- For analytes that were not tested for during pre-irrigation monitoring and therefore results could not be attributed to irrigation (i.e. sodium, chloride and pH)

The report also provides a summary of the water quality parameters for the recycled irrigation water, which was derived from the Wallan Sewage Treatment Plant. The discharged water is rated as Class C recycled water, which can be used for the following uses (as described by Yarra Valley Water):

'Class C may be used for a number of uses including for cooked or processed human food crops including wine grapes and olives. It can also be used for livestock grazing and fodder and for human food crops grown over a meter above the ground and eaten raw such as apples, pears, table grapes and cherries. It can be used by councils for specific purposes but there are restrictions around human contact'

While nutrient concentrations (nitrate, nitrite and ammonia) as well as E.coli are generally raised, concentrations of metals, selected solvents, volatile organics and monocyclic aromatic hydrocarbons (MAHs) were generally reported below laboratory limits of detection. As such, irrigation is unlikely to result in contamination of the soil or groundwater by these analytes.

# 6.5.2 Arris Pty Ltd, 2008: Lots 8 & 9 Camerons Lane Reuse Scheme – Assessment of Soil Monitoring Data for 2006 to 2007

In May 2008, Arris Pty Ltd (Arris) was commissioned by Yarra Valley Water to undertake an assessment of impacts on soils at the site as a result of irrigation using recycled water. This assessment focussed predominantly on agronomic impacts, rather than impacts to ecological or human health.



The investigation involved the collection of soil samples from 8 separate locations across the area to the south of the recycled water reservoir, where the lateral irrigation systems operate. Samples were collected at two depth intervals (namely 0.0-0.1mbgl and 0.2-0.3mbgl) in 2006 and 2007, with 32 samples collected in total. Soil samples were tested for a range of analytes used to measure soil health (predominantly from an agronomic perspective).

The report concluded that the irrigation of the site with recycled water 'has generally improved many indicators of soil health' over the monitoring period. Notable trends included:

- Increased pH
- Decreased total aluminium
- Increased cation exchange capacity

While minimal laboratory analysis was undertaken for contaminants of concern relevant to the protection of human health, it is noted that the reported analysis of the irrigation water indicated concentrations of metals, selected solvents, volatile organics and monocyclic aromatic hydrocarbons (MAHs) generally below the laboratory limits of detection or at low concentration. While this does not rule out the presence of such contaminants in the soil as a result of other anthropogenic sources (or in the case of metals in particular from naturally derived sources), it is highly unlikely that irrigation would result in the accumulation of such contaminants in the soil.

## 6.6 Historical aerial photography review

Aerial photographs from 1968 to 2013 were reviewed for land use changes. Observations are summarised in **Table 6.1** below. Refer to **Figure 6A** through **Figure 6F** for aerial photographs.

Table 6.1: Aerial photograph and historical plan summary

Date	Photo / Plan	Description	Source
1968	Aerial Photo	While some farm properties can be seen within the PSP, the vast majority of the study area appears to be agricultural land. There is no evidence of the Yarra Valley Water infrastructure, nor the Hume Freeway or Northern Highway.	DSE – LIC
1974	Aerial Photo	While only partial coverage of the study area is available for 1974, little has changed on site compared to 1968 and the site continues to be used as agricultural land.  Off site, the Hume Freeway has been constructed and it appears that the Northern Highway is under construction. Potential disturbance at Mount Fraser suggests quarrying may have commenced.	DSE – LIC
1977	Aerial Photo	Little appears to have changed between 1968 and 1977 within the PSP itself (where coverage is available) with the major land use still predominantly agricultural land and no additional farm homesteads appear. No notable offsite land uses appear to have changed.	DSE – LIC
1984	Aerial Photo	The PSP extent still appears to be used for agricultural purposes with no notable changes reported since 1977.  Some limited development (likely rural residences) are evident to the south of the site, but the surrounding area is otherwise unchanged.	DSE – LIC
1990	Aerial Photo	Once again, little has changed in the way of on-site land uses with still no evidence of the Yarra Valley Water reservoir. The area continues to be dominated by agricultural land uses.  There is evidence in increased development to the south of the site with various properties present including trotting tracks.	DSE – LIC
2013	Aerial Photo	2013 imagery suggests the majority of the site continues to be used for agricultural purposes, with irrigation noted towards the centre of the site, including lateral irrigators as well as circular. A reservoir is also present as well as a plantation towards the western boundary of the site. No other notable features are evident at the site with the exception of rare rural residences.	Vicmap



Date	Photo / Plan	Description	Source
		Off-site, some development has continued to the south of the site although few changes are notable elsewhere around the site perimeter with the quarry at Mount Fraser still operational.	

### 6.7 Historical zoning records review

The Department of Planning and Community Development (DPCD) website was accessed for historical zoning information in relation to the site. However, no information was available the study area.

### 6.8 Data integrity assessment

It is recognised that not all prior land use information has been identified, and given the resources provided for this investigation only a relatively general history of the site has been established. However, the completeness and quality of the historical data is considered to be sufficient for the purposes of the investigation.

The table below represents the years for which site use history data collected during this investigation was available.

Table 6.2 : Information availability

	18	80	- 19	000	19	00 -	- 19	20	19:	1920 - 1940			1940 - 1960					1960 – 1980					1980 - 2000					2000 -			
Historical Plans																															
Aerial Photographs																															
Historical Photos																															

Note: Blank boxes indicate no information was available.

Shaded Boxes indicate information was viewed.



# 7. Site characterisation

### 7.1 Site contamination assessment

Based on the information presented in the previous sections, a small number of potential sources of contamination were identified during the Stage 1 assessment of the Beveridge North West area. The potential sources of on-site contamination were assigned a qualitative level of risk based on the likelihood of the contamination representing a potential constraint to future development at the site. A site inspection was then undertaken (Stage 2 assessment) to verify the risk ranking. While the Stage 2 assessment focussed on those areas identified as presenting the greatest potential for contamination, SKM also assessed the wider site extent to confirm land uses.

Off-site potential sources of contamination were also inspected during the Stage 2 assessment (where possible). These too were assigned a qualitative risk level based on the likelihood of the contamination representing a potential constraint to future development of the Beveridge North West PSP area.

While each identified property is slightly different with respect to the potential for contamination, there are some land uses which recur across the PSP and are fairly typical of rural areas such as the Beveridge. The most common potential sources of contamination observed within the study area include farms residences and associated sheds, stockyards and imported fill (including tipped waste and miscellaneous stockpiles). While **Table 7.1** and **Table 7.2** identify potential contaminants of concern relevant to each parcel assessed, the presence of other contaminants of concern cannot be ruled out at this stage owing to the limited assessment of each individual property. These common land uses are discussed below as well as general comments relating to the PSP area and surrounding land use.

#### Farm residences and associated sheds

Farm residences and associated sheds are the most common potential source of contamination across the study area. These areas are typically used for storage of farm machinery (both operational and non-operational), materials, vehicles and many other miscellaneous items. These yards may also include fuel storage areas for refuelling farm machinery (typically in above-ground storage tanks) as well as storage areas for items such as agricultural chemicals (pesticides, herbicides etc.), oils, lubricants and solvents for machinery maintenance.

Since farm residences can be fairly isolated, the use of septic tanks for sewerage purposes rather than mains sewerage is fairly common. However, since these are underground they can be difficult to identify. However, conversation with residents suggests septic sewerage appears to be standard.

Storage shed construction can vary depending on their age and can be variously formed of timber, corrugated iron, asbestos cement sheeting, blocks/bricks and concrete. Some sheds may also incorporate concrete floor slabs while others do not.

Based on the above, the most likely sources of contamination include spillages of fuels as well as impacts on soils by metals resulting from general machinery/equipment storage and maintenance of farm vehicles. However, spillages of other agricultural chemicals may also impact upon soils. Given that such chemicals are typically stored in small volumes (less than 20L) impacts are therefore likely to be extremely localised in extent. Additional contaminants of concern can also include biological contaminants and nutrients associated with leakages from septic tank systems.

Asbestos was also commonly used as a building material with a number of applications in Australia as early as the 1880s (although more frequently in the mid to late 1900s). While asbestos presents a limited risk while it remain in a bonded matrix (i.e. as bonded asbestos cement sheeting), free fibres can present a greater potential risk. Mobilisation can occur through a number of processes including (but not limited to) abrasion, sanding and cutting.







Plate 7.1: Example of above ground storage tank

Plate 7.2: Example of typical farm machinery shed

### **Stockyards**

Stockyard structures were frequently noted across the PSP study area, typically close to the main farm homestead. These are used to hold livestock prior to loading on to trucks and typically form a number of small timber enclosures. These occasionally include small covered sheds used for storage purposes.

Stockyards can also be accompanied by adjacent sheep dips which are used to dose/treat sheep. Typically forming a narrow pit/channel, they are filled with a liquid formulation of fungicide/insecticide through which the sheep are passed before being held in an enclosure to allow surplus liquid to drain from the fleece.

While sheep dips can be permanent structures, the absence of a dedicated in-situ pit does not rule out such an activity taking place at a stockyard. Metals troughs were also used a mobile alternative.

Contamination of soil and groundwater can result from the above activities as the liquid formulation either leaks from defects in the dipping infrastructure (be it a permanent sheep dip or mobile trough) or drains from sheep while they are retained in the holding enclosures after dipping is completed.



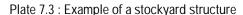




Plate 7.4: Example of typical sheep dip



### Imported fill, tipped waste and stockpiled material

The presence of imported fill can be difficult to identify without undertaking intrusive investigations, particularly in areas which are heavily vegetated. Fill material is most likely to be found in locations where previous construction/development works have been undertaken. Stockpiles of soil and tipped waste material were also noted frequently across the study areas, although mainly confined to areas around farm buildings.

Potential contaminants of concern associated with fill material, tipped waste and stockpiled materials can vary significantly depending on their source and time at which they were deposited. Since such information is rarely available specific contaminants of concern often cannot be adequately identified without laboratory analysis (although visual and olfactory observations can provide limited information). However, the most commonly encountered contaminant groups include total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs) and metals. However, asbestos is also a contaminant of concern, particularly in building rubble.

# General agricultural land use

Much of the land forming the PSP area has been used for agricultural purposes for an extended period of time. As such, there is likely to be a long history of general agricultural processes within the study area. The most notable of these is crop spraying. Contaminants of concern associated with this process typically include pesticides, herbicides and fungicides as well as potentially nutrients (from manure, slurry application and other fertilizers).

While this general use has not been explicitly identified in **Table 7.1** and **Table 7.2** owing to their site-wide relevance, this historical use is considered to present a low to moderate risk of causing contamination. On the basis of this risk ranking and broad-scale and historical nature of these potential sources it is considered likely that further assessment of the land (through intrusive soil assessment in the first instance) may be required at a later date, once more certainty regarding the proposed land uses is available and an informed sampling strategy can be prepared. Further discussion on this topic is provided in **Section 8**.

### 7.1.1 Potential sources of contamination on site and findings of site inspection

The potential on-site sources of contamination were targeted during the site inspection of the Beveridge North West PSP area on 17<sup>th</sup> October 2013. Each of the potential sources of on-site contamination identified during the Stage 1 and 2 assessments are presented in **Table 7.1** along with the findings of the Stage 2 site inspection. The original risk rankings have been re-evaluated following the site inspection with the revised risk rankings also provided.

The property numbers referred to in **Table 7.1** have been allocated to a particular part of a property parcel by SKM for the purposes of this investigation. **Figure 7** shows the allocated property number and the location of each of these identified potential sources of contamination where possible.

General farm homesteads were the most frequently observed potential contamination sources within the PSP area. As described previously, these typically included fuel storage as well as storage of other miscellaneous chemicals. Stockpiling was also noted around these areas and in some cases potential asbestos containing materials (in varying conditions) were also identified. Properties 2, 6 and 22 were three such properties and were allocated the highest risk rankings for the PSP, namely a moderate potential for contamination. In all three cases these properties reported multiple localised potential sources of contamination.

Properties 9, 10 and 11 are owned by Yarra Valley Water and irrigated using recycled water from the Wallan Sewage Treatment Plant. This use has the potential to impact upon underlying groundwater quality that may result in restriction of future beneficial uses of groundwater (a groundwater quality assessment was recently undertaken – Jacobs SKM, 2014).





Plate 7.5 : Potential asbestos cement sheet at property 2



Plate 7.6: Fuel storage tank at property 2



Plate 7.7 : Above ground diesel storage tank at property 6



Plate 7.8: Potential asbestos cement sheet at property 22



Plate 7.9: Typical miscellaneous stockpile at property 22



Plate 7.10: Glyphosate herbicide stored at property 22



Table 7.1 : Summary of potential on site sources of contamination

Property No.	Site Use/Activity	Potentially Contaminated Medium	Potential Contaminants of Concern	Findings of Site Inspection	Potential Contamination Risk	Further Site Specific Assessment *			
Beveridge	Beveridge North West PSP Area								
1	Tree plantation	Soil and groundwater	Nutrients, herbicides and pesticides	Christmas tree plantation occupies much of the site as well as a farm dam for water supply. No evidence of chemical storage on site, although this can't be ruled out. While a tanker was observed on site, it was most likely a water truck. Minor stockpiling was evident, but appeared to be site-won soil.	L – M	None			
2	Farm buildings including a stockyard and residence	Soil and groundwater	TPH and metals around farm buildings as well as herbicides, insecticides and fungicides around stockyards. Nutrients and biological contaminants around septic tanks. Potential asbestos also observed	Stockyard present, although no sign of dipping infrastructure.  General material stockpiles observed, mainly building materials (tiles, concrete, tin and timber).  Small amounts of potential asbestos containing materials observed in localised areas (likely historically removed from buildings) totalling less than 1m³. Highly fragmented.  Two fuel storage tanks were observed near farm buildings.  Both were disused. One was empty, the other appeared to be filled with water.  Numerous machinery sheds were noted as well as general farm infrastructure. A septic system was also noted at the property.	М	Targeted investigations around potential contamination sources such as stockyards, fuel storage areas and septic tanks Hazardous materials assessment to confirm the extent of asbestos and management requirements.			
3	Farm buildings and stockyard	Soil and groundwater	TPH and metals around farm buildings as well as herbicides, insecticides and fungicides around stockyards.	Hay shed present with various items of farm machinery/infrastructure present. A stockyard was also present with potential dipping infrastructure, although now appears disused.	L – M	None			
4	Residence and miscellaneous outbuildings	Soil	Nutrients and biological contaminants around septic tanks	Farm residence with various outbuildings, although used for domestic use rather than agricultural use. A swimming pool was also present in the back garden.  Septic tank likely present but couldn't be verified.	L	None			
5	Stockpile	Soil	Various associated with stockpiling	Small stockpile of gravel (less than 5m³) likely used to maintain the access road to the nearby properties/sheds.	VL	None			



Property No.	Site Use/Activity	Potentially Contaminated Medium	Potential Contaminants of Concern	Findings of Site Inspection	Potential Contamination Risk	Further Site Specific Assessment *
6	Farm buildings and stockyard	Soil and groundwater	TPH and metals around farm buildings as well as herbicides, insecticides and fungicides around stockyards. Nutrients and biological contaminants around septic tanks.	Farm residence surrounded by various farm buildings and infrastructure.  Two stockyards were noted, one with dipping infrastructure present. The sheep dip was full (likely rainwater rather than treatment). Neither stockyard appeared to have been used recently.  Nearby sheds used to store farm machinery as well as workshop. Various oils and chemicals were stored in the sheds including an above ground fuel storage tank containing diesel. No solid floor slab was present with minor localised staining observed.	М	Targeted investigations around observed sheep dips and stockyards as well as around fuel storage areas, septic tanks and buildings.
7	Stockyard	Soil and groundwater	Herbicides, insecticides and fungicides	Small farm shed noted along with a stockyard structure. No sheep dip was observed.	L – M	None
9	Irrigated farmland	Soil and groundwater	Nutrients and biological contaminants	Two adjacent fields, each with large irrigation systems present. The fields are irrigated using recycled water from the nearby Yarra Valley Water reservoir, derived from the Wallan Sewage Treatment Plant. Fields are lined either side by plantation trees, likely to reduce the effect of wind.  **A recent groundwater quality assessment was undertaken (Jacobs SKM, 2014) which found no beneficial uses of groundwater to be precluded	L	Periodic groundwater monitoring of the bore network should be undertaken (by YVW
10	Retention basin	Soil and groundwater	Nutrients and biological contaminants	Yarra Valley Water storage reservoir, fed by recycled water from the nearby Wallan Sewage Treatment Plant.  A nearby compound houses various pumps, a weather station, water tanks and other relevant infrastructure.  **A recent groundwater quality assessment was undertaken (Jacobs SKM, 2014) which found no beneficial uses of groundwater to be precluded	L	or other) on an ongoing basis
11	Irrigated farmland	Soil and	Nutrients and biological	Two circular irrigation systems also fed from the nearby Yarra	L	



Property No.	Site Use/Activity	Potentially Contaminated Medium	Potential Contaminants of Concern	Findings of Site Inspection	Potential Contamination Risk	Further Site Specific Assessment *
		groundwater	contaminants	Valley Water storage reservoir which in turn is derived from the Wallan Sewage Treatment Plant.  **A recent groundwater quality assessment was undertaken (Jacobs SKM, 2014) which found no beneficial uses of groundwater to be precluded		
15	Farm buildings and stockyard	Soil and groundwater	TPH and metals around farm buildings as well as herbicides, insecticides and fungicides around stockyards. Nutrients and biological contaminants around septic tanks.	Farm shed, now used primarily for garden machinery rather than for agricultural purposes. A stockyard is also present, although this now forms a garden feature and is not used for its original purpose. No redundant dipping infrastructure was observed.	L – M	None
22	Farm buildings including stockyard and residence	Soil and groundwater	TPH and metals around farm buildings as well as herbicides, insecticides and fungicides around stockyards. Nutrients and biological contaminants around septic tanks. Potential asbestos also observed as well as possible lead based paint.	Farm residence as well as sheds and associated infrastructure.  The sheds themselves were in varying conditions, some extremely dilapidated. Some potential asbestos fragments were also observed around one of the buildings. The paint on the timber was also flaking heavily (potentially lead based paint given the likely age of the building).  No fuel storage was noted on site with the exception of an LPG cylinder supplying the house. A diesel fuel tank was observed on the back of a ute, likely used to re-fuel machinery rather than a permanent above/below ground storage tank.  An extensive stockyard was noted with cattle crush, although no dipping infrastructure was observed. However, given the presence of a shearing shed it is likely that dipping will have historically taken place.  A septic system is also likely present.	M	Targeted investigations around potential contamination sources such as stockyards, septic tanks and around dilapidated buildings where potential asbestos and lead based paint was observed.  Hazardous materials assessment to confirm the extent of asbestos and potential lead based paint and management requirements.
23	Haulage company with	Soil	Various associated with stockpiling	While the site could not be accessed, parts of it could be	L – M	None



Property No.	Site Use/Activity	Potentially Contaminated Medium	Potential Contaminants of Concern	Findings of Site Inspection	Potential Contamination Risk	Further Site Specific Assessment *
	stockpiling		as well as TPH associated with possible fuel storage	viewed from the roadside. The eastern extent of the site appeared to be used for parking trucks with minor stockpiling while the west appeared to be a residence. No notable features were present towards the central portion of the site.		
				No fuel storage was observed but can't be ruled out at this stage.		

#### Notes:

TPH – Total Petroleum Hydrocarbons

Nutrients - Ammonia, nitrate, nitrite, phosphate

<sup>\*</sup>Note this excludes further broad-acre sampling recommended to assess potential soil contamination resulting from the historic uses of agricultural chemicals across farmland in general. Such an assessment would not target individual properties; rather representative samples would be collected across the wider extent of the PSP study area. Refer to **Section 9** for further details.



#### 7.1.2 Potential off-site sources of contamination

Sites located outside of the PSP study area boundary were also considered during the Stage 1 assessment in order to identify any potentially contaminating land uses that may impact upon the future uses of land within the PSP study area itself. Off-site sources identified in the vicinity of the PSP area are summarised in **Table 7.2** and illustrated in **Figure 7**. Sites listed in this table were inspected from the closest publicly accessible areas during the Stage 2 assessment.

The sites located outside of the Beveridge North West PSP area with the highest risk rankings were properties 12 and 17, both allocated a risk ranking of low to moderate. These two sites are existing quarries- property 12 a scoria quarry and in the case of 17 a basalt (bluestone) quarry.

The remaining off-site properties generally comprised small farms with some areas of minor disturbance or stockpiling. Based on their proximity to the PSP as well as the nature of the operations observed, the potential for contamination of the PSP study area was perceived to be either low or very low.



Table 7.2 : Summary of potential off site sources of contamination

Property No.	Site Use/Activity	Potentially Contaminated Medium	Potential Contaminants of Concern	Findings of Site Inspection	Potential Contamination Risk	Further Site Specific Assessment
Beveridge	North West PSP Area					
8	Farm sheds and possible stockpiles	Soil	Various associated with stockpiles as well as TPH and metals around farm buildings.	Single shed present with likely water storage tanks present. Imagery also suggest some stockpiling and possible stockyard structures.	L	None
12	Quarry	Soil and groundwater	TPH and metals associated with maintenance and refuelling of machinery	Scoria quarry set in the nearby hill side. The site was not accessed, but it appears to be a fairly significant operation with various infrastructure present in order to support the quarry (i.e. buildings and a weighbridge). Fuel storage is also likely given the number of machines present.	L – M	None
13	Dilapidated farm buildings and a water bore	Soil	TPH and metals around farm buildings	Buildings are almost completely demolished. A water bore remains at the site along with a water storage tank.	VL	None
14	Farm residence and stockyard	Soil and groundwater	Herbicides, insecticides and fungicides around the stockyard and nutrient and biological contaminants around septic systems	Residential property with what appears to be a redundant stockyard in the adjacent paddock.	VL	None
16	Golf course	Soil and groundwater	Nutrients, herbicides and pesticides	Newly constructed golf course.	VL	None
17	Quarry	Soil and groundwater	Various associated with stockpiling and TPH associated with potential fuel storage	The quarry itself appears to occupy much of the site, although the most significant area is a disturbed area towards the north east extent. While this could not be viewed from the road, imagery suggest general dumping of material and stockpiling. A few permanent structures appear to be present.	L – M	None



Property No.	Site Use/Activity	Potentially Contaminated Medium	Potential Contaminants of Concern	Findings of Site Inspection	Potential Contamination Risk	Further Site Specific Assessment
18	Residence and general stockpiling	Soil	Various associated with stockpiling	Residence with apparent limited stockpiling around the property. Could not be viewed from the road, but imagery suggests a number of outbuildings also located at the property.	VL	None
19	Residence with possible workshop	Soil	Metals and TPH	Residence with a number of outbuildings also present. Also numerous cars located at the property as well as a few trucks. This possibly suggests a workshop may also be present.	VL	None
20	General surficial waste and disturbed ground	Soil	Metals and TPH as well as various associated with stockpiling	Numerous vehicles are present at the site. It is not clear whether these have been abandoned or are being maintained. Imagery also suggests a number of buildings are also present, although it is unclear what they are used for. Possibly a workshop.	VL	None
21	Residence and general stockpiling	Soil	Various associated with stockpiling	A residence is present at the site with a large outbuilding. Behind the outbuilding there appears to be stockpiles.	VL	None

#### Notes:

TPH – Total Petroleum Hydrocarbons

Nutrients – Ammonia, nitrate, nitrite, phosphate



#### 7.1.3 Potential receptors of contamination

Potential receptors of contamination (should any exist) at or near the site include:

- Site workers at the site
- Residents at the site
- Future construction workers at the site
- Visitors to the site
- Underground utilities located on and around the site (including easements)
- Surrounding residents and occupants and visitors (via windblown contamination during excavation works)
- Sensitive land based ecosystems on and near the site
- The nearest surface water bodies (including aquatic ecosystems), namely Kalkallo Creek
- · Beneficial users of groundwater

#### 7.1.4 Exposure pathways & routes

These potential receptors may be impacted through ingestion, inhalation or dermal contact with potentially contaminated soil (on site) and groundwater (on and off site). Off-site receptors (including humans and aquatic and land based ecosystems) may be impacted through the transport of contamination via a number of pathways such as trenches/conduits containing underground services (from the site to off-site locations), storm water drainage networks, surface drainage via overland flow (runoff), groundwater flow and surface water transport (e.g. to and in the nearest surface water bodies to the site, namely an unnamed creek along the southern site boundary and Kalkallo Creek).

#### 7.2 Geotechnical assessment

Based on the geological map indicators, an indicative site classification of Class "H2 to E" is likely to be applicable to these conditions in accordance with Table D1 of AS2870-2011 Residential slabs and footings - construction. This classification would depend on the depth, thickness and reactivity of the clay material in this area.

The thickness of the residual soil profile in the Newer Volcanics is likely to be highly variable, and it is our experience in this area and with this geological unit that the depth to basalt can vary significantly over relatively short horizontal distances.

The above site classification is based on regional geological information and is intended for preliminary consideration only. Site specific geotechnical site investigations which may include soil sampling and laboratory testing should be undertaken prior to the design and construction of any footing systems, pavements and associated civil infrastructure as part of any future building permit application.

#### 7.3 Hydrogeological general

Based on the available hydrogeological information and bore data in the vicinity of the site, a summary of the conceptual hydrogeological model for the site is detailed below:

- The local geology of the Beveridge North West PSP area is defined by three units the outcropping bedrock of the Kilmore Siltstone, the overlying basalt of the Newer Volcanics and the Quaternary Alluvium that is associated with the course of Kalkallo Creek
- The Newer Volcanics forms the major aquifer at the site, given the better quality (compared to the Kilmore Silstone) and the number of users currently utilising it in the area
- Groundwater is likely to be intersected within 10 m of the surface, but may be as shallow as 5 m in some areas

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- Groundwater quality is likely to vary from 3500 7000 mg/L TDS within the Kilmore Siltstone (west of the site) and 1000 3500 mg/L TDS within the Newer Volcanics (east of site)
- Local aquifers are recharged by direct infiltration of rainfall through the soil. As such, all areas of the site
  are potential groundwater recharge areas
- The Atlas of Groundwater Dependent Ecosystems (BoM, 2012) identifies Kalkallo Creek as having "high
  potential for groundwater interaction" and therefore it is likely that the depth to groundwater in vicinity of the
  Creek will be shallow
- Available bore data registered in the GMS indicates that the majority of users intersect the Newer Volcanics
  aquifer with low yield, indicating poorly connected fractures within the basalt

Groundwater quality in the regional aquifer can range from 1500 – 5000mg/L TDS and is therefore brackish. Based on the beneficial use segments defined in the SEPP, the groundwater is suitable for all



# 8. Development opportunities and constraints

#### 8.1 Site contamination

Based on the information described in this report, there do not appear to be any significant constraints from a site contamination perspective which would render the land unsuitable for any feasible land use. However, there are particular areas which have been identified as presenting a potentially moderate risk of contamination (see **Table 7.1**). It is likely that the identified areas of concern will comprise discrete or localised areas of contamination that can be cost-effectively remediated or managed as part of the development process. These areas will need to be assessed in greater detail through intrusive soil and groundwater sampling before a more robust conclusion regarding those particular site's suitability for a specific land use can be made. These risks are typically associated with general agricultural activities around the main homesteads at properties 2, 6 and 22. However, the potential presence of hazardous materials (asbestos at property 2 and lead based paint and asbestos at property 22) were also influencing factors.

A long history of agricultural land use has been identified within the Beveridge North West PSP area. The DSE (2005) *Potentially Contaminated Land General Practice Note* recommends that such land undergo detailed Phase (Stage) 1 and 2 environmental site assessments prior to change of land use to a more sensitive receptor. This is based on the potential contamination which may have resulted from such land uses. Therefore, further and more detailed site specific investigations would be required prior to change of land use to accommodate more sensitive end uses.

Subject to the findings of the further assessments identified above (and, if required, the implementation of any remedial measure or ongoing management requirements) the land may then be considered suitable for proposed sensitive end uses.

Alternatively, the Stage 1 and 2 assessments may be completed as part of a statutory Environmental Audit prior to the re-zoning of land to a more sensitive use in accordance with Environment Protection Act 1970. This may be considered a potential constraint due to the time and costs required to complete an Environmental Audit. If an audit results in a Statement of Audit being issued (not a Certificate of Audit), the Statement may also specify a number of site management measures that may constrain future development.

#### 8.2 Geotechnical

The following issues requiring consideration in the planning and design of any development and should be assessed through a geotechnical site investigation.

- The depth and reactivity of the Newer Volcanics residual clay which forms the surface geology across eastern part of the site would govern the site classification for foundation design in this area. It is expected that the site would be considered highly reactive (Class "H2 to E"). A more favourable site classification may be applicable to the western half of the site, which is mapped as Humevale Formation. It is noted that a geotechnical site investigation is required to characterise the site classification across the site.
- The variable thickness of the clay horizon over relatively short horizontal distances can lead to differential settlement of structures. As such, a geotechnical investigation is required to assess the depth to rock across the site.
- The variable geological conditions across the site can lead sudden change ground conditions for
  excavation. Excavation in sand, gravel and fill or excavations extending below the water table will be
  unstable and should be battered or shored. This will need to be assessed at the time of construction;
  however, a conservative approach should be adopted when considering stability of short term batter
  slopes.
- Excavations in Newer Volcanics and can vary between relatively easy excavations in residual soils to difficult excavation in weathered rock. It is expected that the existing natural soils may be excavated using conventional excavation equipment such as tracked excavators. Excavators equipped with ripper attachments or hydraulic impact breakers may be required to loosen any weathered basalt that is encountered, prior to excavation. Blasting may be required for excavation in very high strength basalt rock.



- Construction in low lying areas may be difficult during wet months
- Dispersive soils may be encountered at the vicinity of the creek. Dispersive soils are easily revelled, and are susceptible to erosion and washing away. Theses soils may not be suitable for use as fill material as part of an engineered fill to support foundations or pavements.
- Design of roads, drainage works and underground assets would require consideration of the highly reactive nature of the clays to ensure serviceable performance and minimise on-going maintenance requirements.
- Fill material, which may be present on site, is expected to be uncontrolled and may not be suitable as a founding material in its current state.
- Areas subject to poor drainage may comprise soft material which provides low bearing capacity for foundations.

### 8.3 Hydrological

The location of the site at the headwaters of minor drainage lines results in low flood risk across most of the site prior to PSP development. All of the site is situated above the 1% AEP flood level.

Integrated water cycle management could potentially be utilised to harvest stormwater from the developed area. It is unlikely that any of the waterbodies within the site would have benefit in reducing peak flows, however this option could be further assessed. This is likely to have the benefit of reducing flood peaks, as well as improving the quality of stormwater runoff to Kalkallo Creek, and ultimately Merri Creek and the Yarra River.

### 8.4 Hydrogeological

The site is within a Salinity Management Overlay (SMO), which has the following associated objectives:

- To implement the SEPP Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies
- To identify areas subject to saline ground water discharge or high ground water recharge
- To facilitate the stabilisation of areas affected by salinity
- To encourage revegetation of areas which contribute to salinity
- To encourage development to be undertaken in a manner which brings about a reduction in salinity recharge
- To ensure development is compatible with site capability and the retention of vegetation, and complies with the objectives of any salinity management plan for the area
- To prevent damage to buildings and infrastructure from saline discharge and high watertable

Under the SMO, a planning permit will be required as part of the subdivision process. This application will include information such as regional geology, soil types, high groundwater recharge areas, groundwater levels, sources of water, vegetation proposed to be removed and recommendations for land management practices.

Under the applicable Schedule to the SMO (13/8/2009-C47), once the subdivision has been approved, individual planning permits will not be required to construct individual buildings or other structures on the site.

Jacobs SKM notes that two development areas to the south of site (Springridge Residential Estate & Newbridge Estate) were successful in having a SMO removed from their site areas (Mitchell Planning Scheme Amendment C93). Jacobs SKM understand this was based on both areas presenting a low salinity risk, and the lack of any salinity affected areas on either site. Given the vicinity to the Beveridge NW PSP and the lack of observed salinity affected area on this site, the SMO may also be removed from this PSP area upon application for removal (in conjunction with applicable environmental assessment).



Over the majority of the site, there does not appear to be any significant hydrogeological constraints which would render the land unsuitable for development. However, shallow depth to groundwater is likely to exist in some areas of the site.

The following issues require consideration in the planning and design of any development:

- Shallow watertable may cause groundwater inflow to excavations and may impact on site drainage (i.e. cause waterlogging)
- The brackish nature of the groundwater may require careful monitoring if dewatering or extraction is required
- Decreased local groundwater recharge in winter and early spring as the result of dewatering or extraction
  associated with development has the potential to reduce discharge to nearby surface water features, which
  could potentially have a negative impact on the ecological health of local waterways
- There may be additional land management requirements imposed by council or other regulatory body (relating to the SMO), as part of any proposed subdivision for the site

Opportunities for potential use of extracted groundwater include garden watering and irrigation of parks and ovals, depending on the salinity of the groundwater the groundwater may need to be shandied with potable water to improve the salinity.

### 8.5 Future quarrying

Jacobs understands that an application is intended to be submitted for the future use of the western half of 175 Northern Highway, Wallan (property plan number 2/LP6746) as a basalt and scoria quarry. The Work Authority reference that relates to this application is WA1473. The timing of the submission of this application is not yet known.

The approval process for the quarry depends upon the proposed extent of the quarry as well as the nature of the intended works. A flow chart illustrating the approval process is presented in **Appendix E**. Jacobs estimates that the extent of the property that will be used for quarrying will likely exceed 5 hectares (i.e. the threshold area above which the Code of Practice for Small Quarries does not apply). As such, the applicant is likely to require an approved Work Plan.

The Department of Primary Industries document entitle *Extractive Industry Work Plan Guideline: Mineral Resources (Sustainable Development) Act 1990* published in September 2010 provides applicants with guidelines for the preparation of a Work Plan. These guidelines require the applicant to submit information for approval by DPI relating to:

- Site plans (surface facilities, processing facilities, sequencing, stockpiling areas, water dams, access roads etc.)
- Processing methods (power supplies, fuel storage, water supplies, weighbridges, labs, workshops, offices etc.)
- Stability (i.e. address potential safety concerns relating to geotechnical risks associated with extraction)
- Environmental management (disposal of effluent, protection of groundwater, drainage, erosion, dust, odour and vibration control, waste management as well as ongoing monitoring commitments)
- Rehabilitation plans (concepts for end use, plans for progressive rehabilitation, landscaping provisions to minimise visual impact, provisions to protect native vegetation during operation and a plan for the final rehabilitation and revegetation for the site)
- Community engagement (identification of affected communities and processes for documenting and responding to complaints)

Only once the Department of Environment and Primary Industries (DEPI – formerly DPI) is satisfied that the above requirements will be met during the establishment, operation and post-closure of the quarry will the Work Plan be approved.

# Desktop Environmental, Hydrological and Geotechnical Assessment



Council planning approval will also be required by the prospective applicant in order to allow commencement of activities at the site. It is likely that this will include the re-zoning of the affected quarry pit to Special Use Zone (SUZ) which will also likely include the application of a buffer zone around the quarry. In accordance with EPA Victoria publication 1518 *Recommended Separation Distances for Industrial Residual Air Emissions* (EPA, 2013) a buffer distance of 500m would be required between the quarry and the nearest sensitive land uses. This assumes blasting would be necessary and would be consistent with the 500m buffer that has been applied to the nearby scoria quarry at Mount Fraser. Future potential quarrying activities that would not require blasting may allow the buffer distance to be reduced to 250m. In the case of the Mount Fraser quarry the buffer zone has had its zoning retained as Farming Zone (FZ) and has not been rezoned as Urban Growth Zone (UGZ) as much of the surrounding area has.



# 9. Conclusion and recommendations

#### 9.1 Conclusions

#### Site contamination assessment

Based on the information gathered during the Stage 1 & 2 assessments, the following conclusions can be made in relation to the Beveridge North West PSP area:

- The site history assessment found that the site has a long history of agricultural land uses, with much of the areas remaining under cultivation to the present day
- A groundwater quality assessment was recently undertaken by Jacobs (Jacobs SKM, 2014) which found
  that concentrations of heavy metals and nutrients such as ammonia, nitrite and nitrate were likely reflective
  of background / regional groundwater conditions. No beneficial uses of groundwater were found to be
  precluded. Therefore, the groundwater quality across the site is unlikely to pose a constraint to future
  development.
- Based on the available information, including a site walkover and site history assessment, the following primary potential sources of contamination have been identified:
  - Potentially contamination associated with general agricultural activity around the homesteads of properties 2, 6 and 22. At these sites, potential contamination is likely to be confined to a small number of localised areas (i.e. immediately around fuel storage tanks or stockyards) rather than distributed across a wide area).
  - Highly localised areas of potential contamination associated with stockpiles and general dumped materials. In these locations contamination is likely to be localised to stockpiles themselves and in some instances shallow underlying soils which can be easily removed.
  - Diffuse but low level sources of contamination associated with the widespread application of agricultural chemicals on farmland as well as tree plantations. These chemicals may include pesticides, herbicides, fungicides and fertilizers.
- A number of off-site sources of potential contamination have been identified in the vicinity of the PSP site. Based on the nature of the site uses as well as the environmental setting of the site (hydrological, hydrogeological and geological conditions), the greatest risk to the Beveridge North West PSP area is presented by two quarries; one to the east (property 17) and one to the south (property 12). The remaining properties were deemed to present either a low or very low potential for contamination of the PSP area. However, none of these off-site land uses are considered to present constraints to future site development.

Based on the information obtained from the sources described in this report, with the exception of highly localised areas of potential contamination associated with current and/or former land uses identified above, there do not appear to be any significant risks from a site contamination perspective which would render the land unsuitable for residential or other sensitive land uses. Any areas of localised contamination are likely to be able to be effectively managed or remediated during any future site development. However, it should be noted that the site has a long history of agricultural use. While unlikely, it is possible that the broad application of agricultural chemicals may have impacted upon soil at the site. Similarly, potential impacts by nutrients on groundwater as a result of irrigation may place restrictions on the use of groundwater at the site.

#### Geotechnical assessment

Based on the available geological information, the eastern half of the site is likely to be underlain by highly reactive residual basaltic clay overlying basalt rock, and the western half underlain by residual soils overlying weathered siltstone/sandstone. An indicative site classification of Class "H2 to E" has been assessed in accordance with Table D1, AS2870-2011.

Key geotechnical issues associated with development of the site include the depth and reactivity of the basaltic clay in terms of its influence on site classification, change and interface of variable ground conditions,



foundation selection, differential settlement, subgrade performance, excavations and site accessibility. Fill material, if present, is expected to be uncontrolled and may not be suitable for development in its present state. Areas subject to poor drainage may comprise soft material which provides low bearing capacity for foundations.

Subsurface conditions may present a critical issue for design of the structures and foundations, and therefore there is be a cost-benefit in obtaining geotechnical data at targeted locations.

The results of the geotechnical investigation would form the basis of the geotechnical model for the site, which would be used to assess subgrade conditions, confirm the site classes, foundation design parameters, excavations and recommendations on earthworks.

### **Hydrology assessment**

The site is located at the headwaters of Kalkallo Creek and an unnamed waterway draining to Kalkallo Creek. Kalkallo Creek has its headwaters in the north west corner of the site, and drains to the south west corner. The unnamed waterway drains from the east of the site to the south of the site. The 100 year flood extent and floodway do not cross into the site, indicating no major flood risk. There is an area that is classified as the UFZ zone, which restricts the use of land because of high flood risk. This area is along Kalkallo Creek, with a buffer of approximately 100 m on each side of the waterway.

### Hydrogeological assessment

Based on the regional hydrogeological information and bore data in the vicinity of the site, the Newer Volcanics forms the major aquifer at the site, given the better quality (compared to the Kilmore Siltstone) and the number of users currently utilising it in the area.

The site is currently within a Salinity Management Overlay (SMO). Under the SMO, a planning permit will be required as part of the subdivision process, which will detail recommendations for land management practices. Jacobs SKM note that nearby areas have recently had the SMO removed (Mitchell Planning Scheme Amendment C93). Given the vicinity to the Beveridge NW PSP and the lack of observed salinity affected area on this site, the SMO may also be removed from this PSP area upon application for removal (with applicable environmental assessment).

Over the majority of the site there does not appear to be any significant hydrogeological constraints which would render the land unsuitable for development. However, shallow depth to groundwater is likely to exist in some areas of the site. The following issues would need to be considered in the planning and design of any development:

- Shallow watertable may cause groundwater inflow to excavations and may impact on site drainage (i.e. cause waterlogging)
- Brackish nature of the groundwater may require careful monitoring if dewatering or extraction is required
- Decreased local groundwater recharge in winter and early spring as the result of dewatering or extraction
  associated with development has the potential to reduce discharge to nearby surface water features, which
  could potentially have a negative impact on the ecological health of local waterways
- There may be additional land management requirements imposed by council or other regulatory body (relating to the SMO), as part of any proposed subdivision for the site

Opportunities for potential use of extracted groundwater include garden watering and irrigation of parks and ovals, depending on the salinity of the groundwater the groundwater may need to be shandled with potable water to improve the salinity

It is recommended that a field investigation into groundwater elevation and quality be undertaken to confirm the findings of this desktop study. This may include:

Sampling of existing local bores for quality and water level



 Drilling of narrow test bores for ongoing observation to determine seasonal fluctuations in water level and quality if required

#### 9.2 Recommendations

We understand that the proposed future use of the site is as a broad ranging urban development and is likely thus to include sensitive uses such as residential and community facilities in addition to open space, retail and a range of business uses such as offices, light industrial and manufacturing. However, since specific future land uses within the PSP boundary are yet to be confirmed, this assessment has been completed based on the assumption that residential or other sensitive uses will be the probable land future uses across the study area.

The following further works are recommended, including recommended timings:

- Assessment of potential contamination associated with general agricultural land uses around the homesteads of properties 2, 6 and 22. These sites are likely to present the greatest potential for contamination, albeit likely a small number of localised areas (i.e. around septic tanks, fuel storages, stockyards etc.). This process may be best undertaken through the preparation of a Sampling, Analysis and Quality Plan (SAQP) followed by a Phase 2 Environmental Site Assessment (which may include targeted sampling of soils and groundwater). Timing: It is recommended that this task be undertaken to coincide with the cessation or scaling down of current site operations at these sites and prior to the commencement of the proposed development and construction works.
- Completion of a hazardous materials assessment for properties 2 and 22 to confirm not only the extent of
  potential asbestos containing materials and lead based paints, but to identify controls that should be
  implemented during future development to prevent exposure by site workers or future users of the site.
  Timing: It is recommended that this task be undertaken to coincide with the cessation or scaling down of
  current site operations at these sites and prior to the commencement of the proposed development and
  construction works.
- Further drilling and collection of soil samples for the purposes of assessing the geotechnical soil properties for building foundation and road design. *Timing: This task should be undertaken on a site-by-site basis during future development as part of the building permit application process.*
- Completion of aquifer hydraulics testing on existing groundwater bores to determine aquifer properties. This should also include assessment of depth to groundwater. This assumes existing wells are in a suitable condition for such an assessment. Timing: It is recommended that this task be undertaken to coincide with the cessation or scaling down of current site operations at these sites and prior to the commencement of the proposed development and construction works.
- Excavation and removal of underground storage tanks, soil remediation and tank pit validation if USTs are found on properties. *Timing: This task should be undertaken on a site-by-site basis during future site development.*
- Removal of other potentially contaminating infrastructure (e.g. septic tanks and above ground storage tanks) followed by soil validation. Timing: This task should be undertaken on a site-by-site basis during future site development.
- Classification and appropriate removal (if required) of various stockpiles and dumped materials observed at sites across the study area. This includes subsequent validation following removal. It is noted that sampling of some stockpiles of soil observed may indicate that the material is suitable for re-use as part of future development and as such removal may not be required in all instances. Timing: This task should be undertaken on a site-by-site basis during future site development.
- An application to have the salinity management overlay (SMO) removed from the PSP should also be undertaken, as per the recent Mitchell Planning Scheme Amendment C93 for a nearby development area. This will remove the requirement for an intensive planning permit application process for future development. *Timing: This task should be undertaken prior to site development*
- Consultation with YVW to establish their intentions in relation to the future use of the winter storage dams. If these structures are retained a buffer distance may need to be applied in accordance with EPA requirements. In their current form the basins would likely require a 50m buffer from the nearest sensitive land uses. Timing: This task should be undertaken prior to finalising future land use zones.



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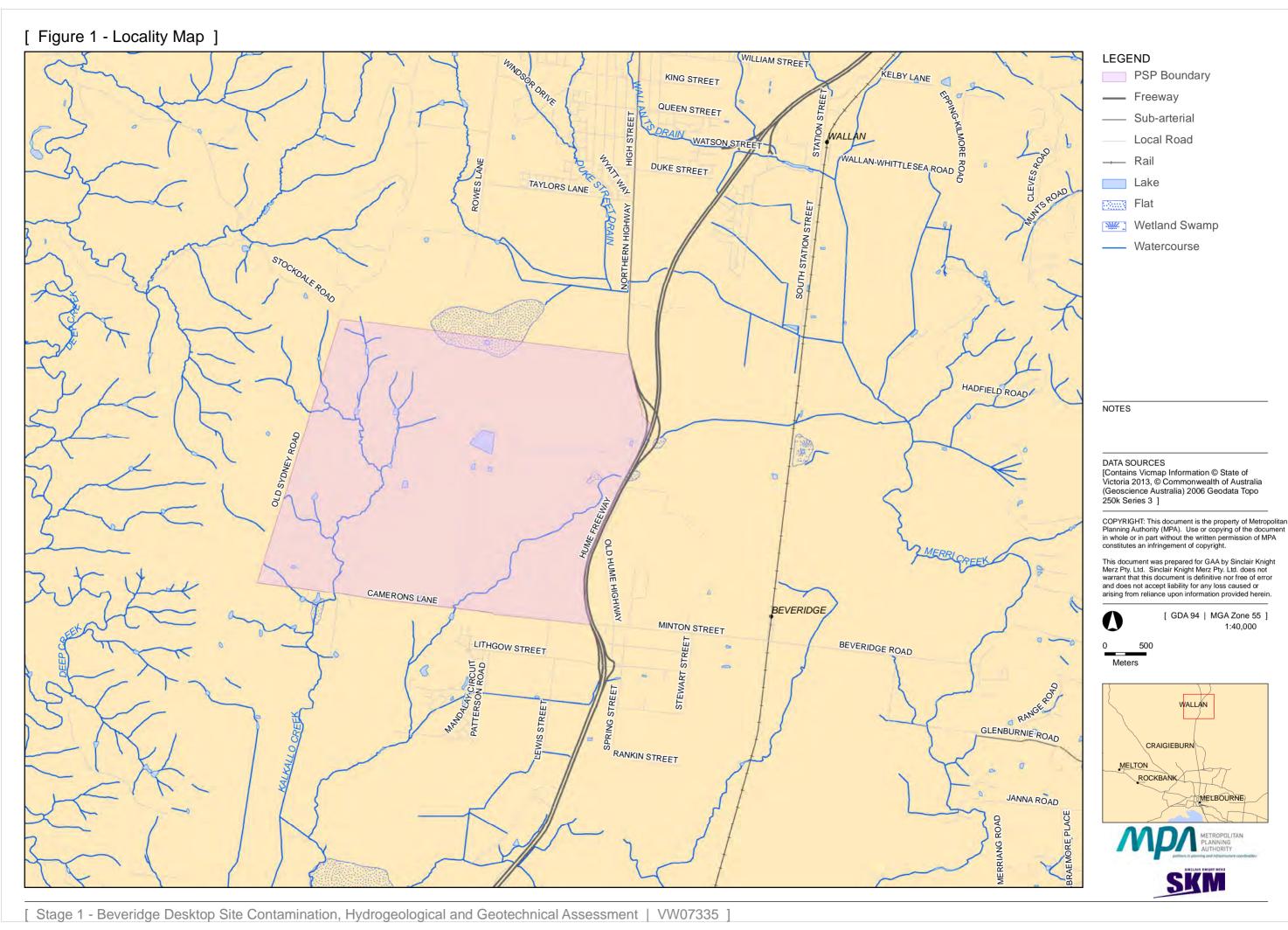
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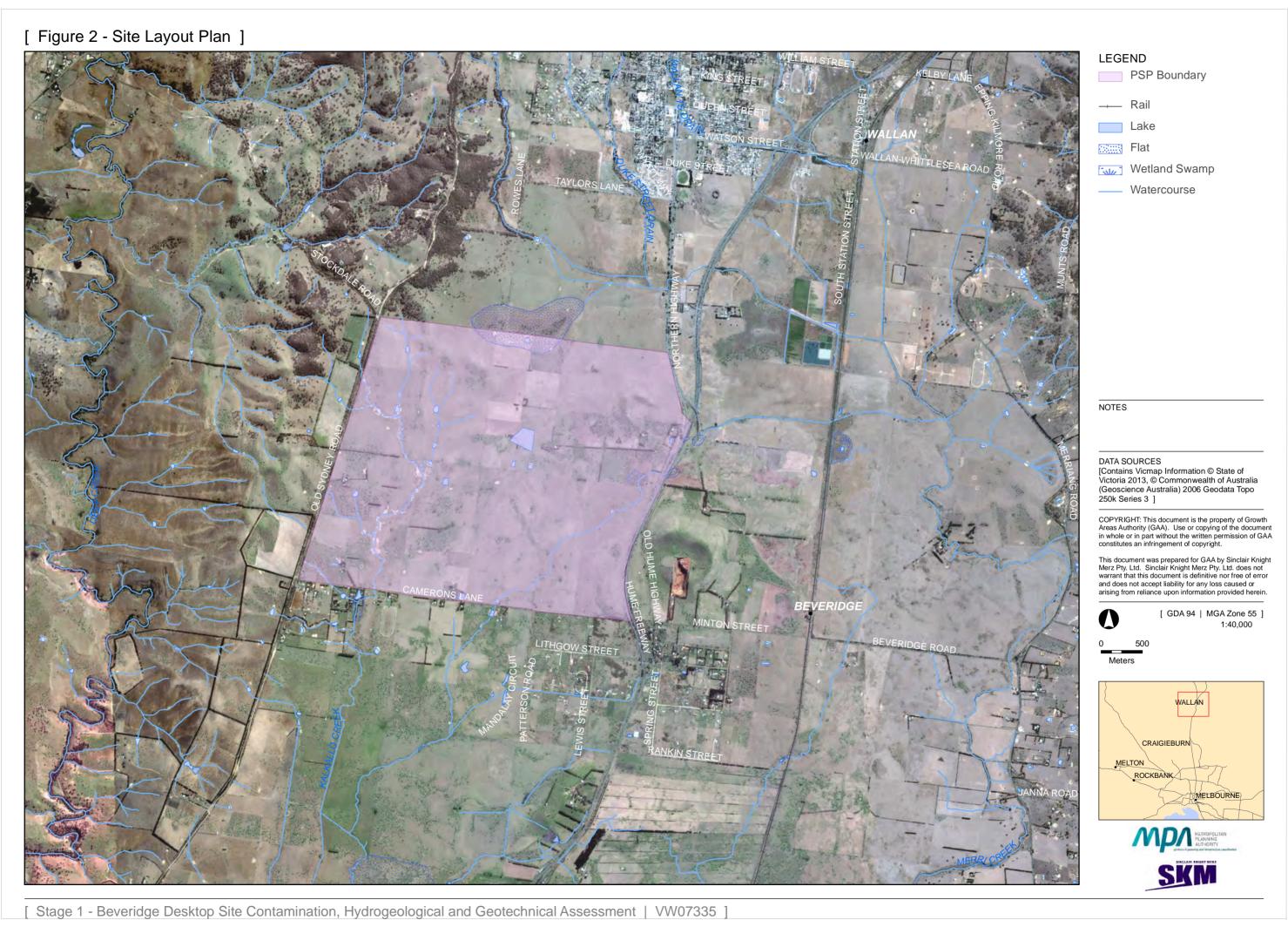
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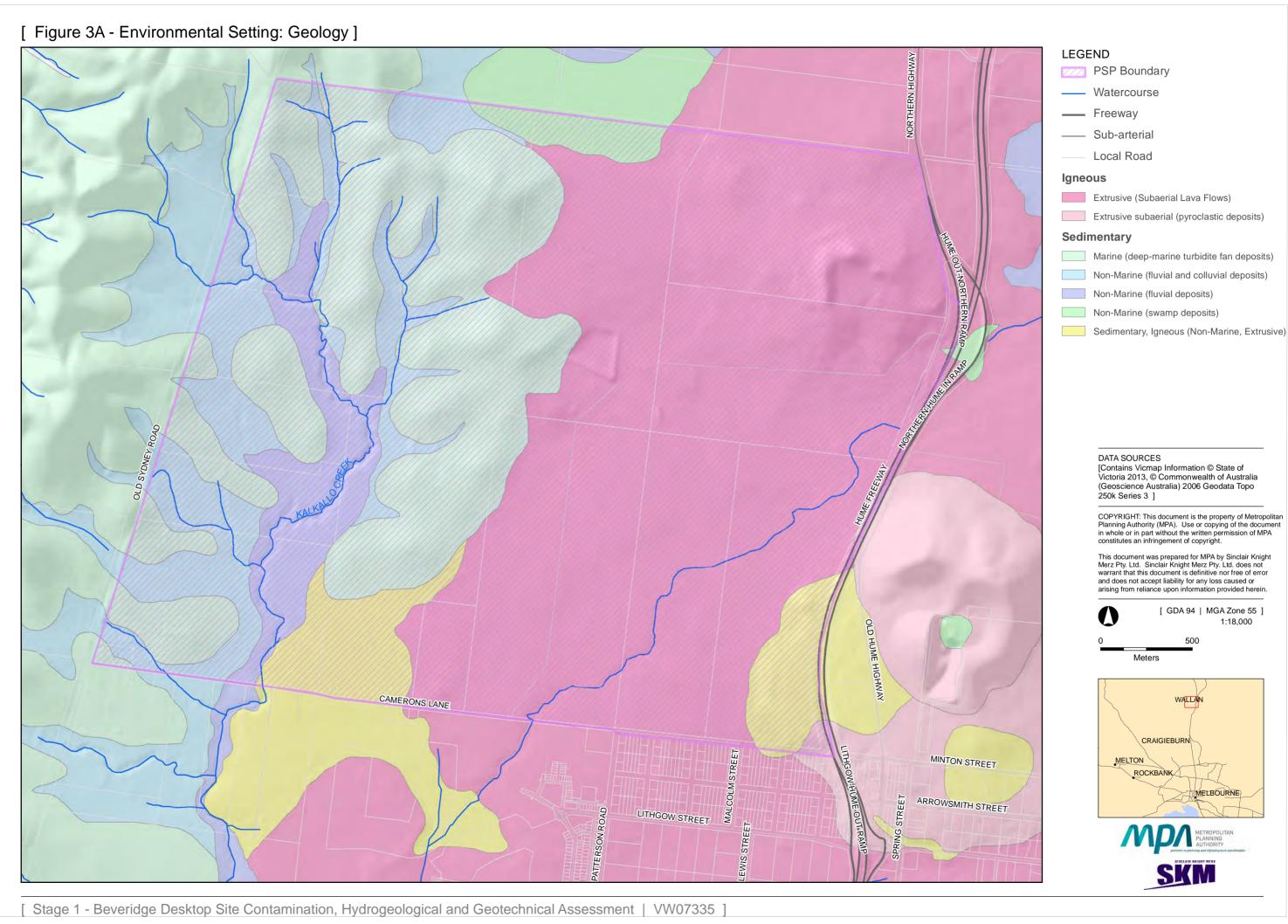
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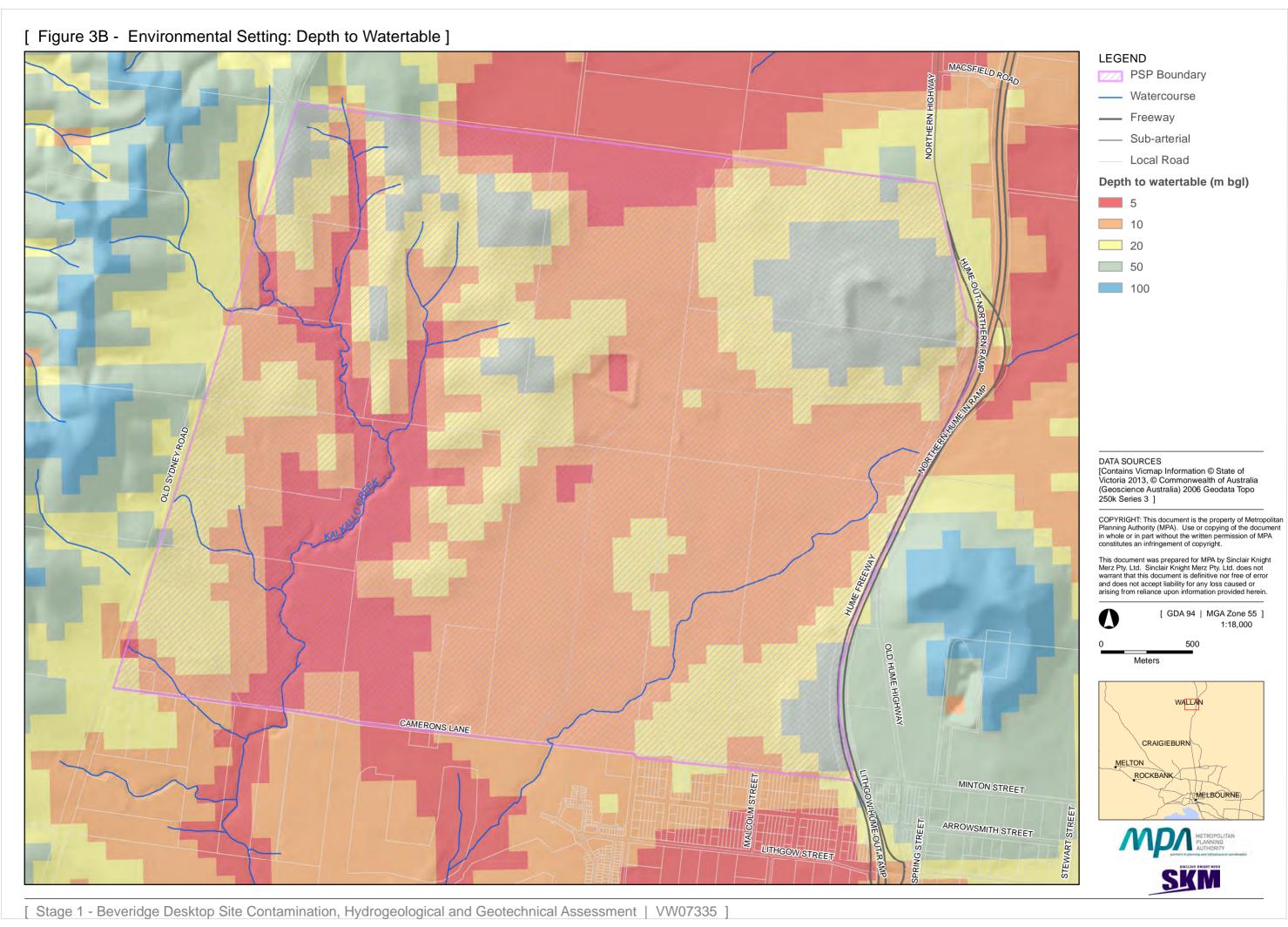


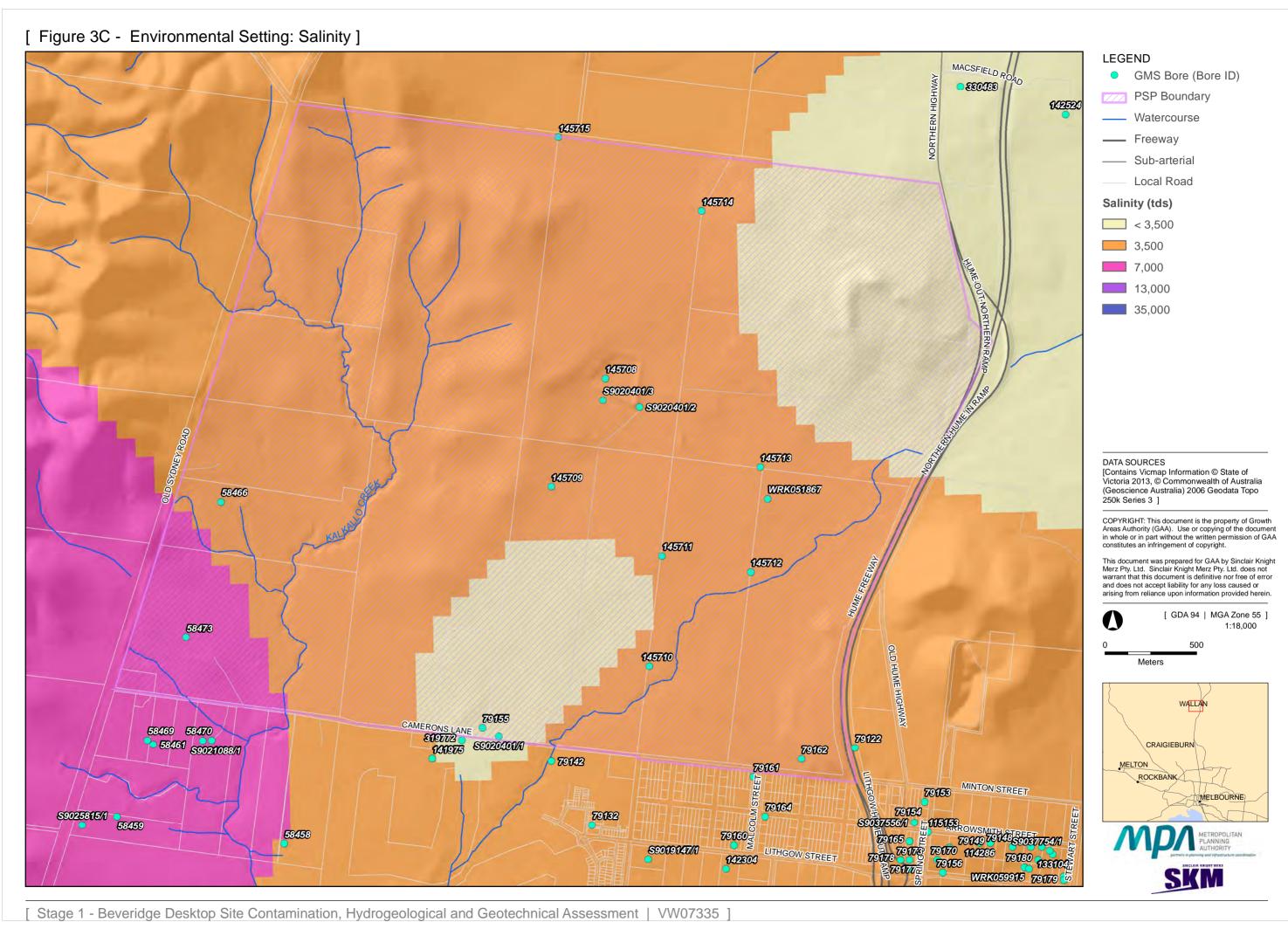
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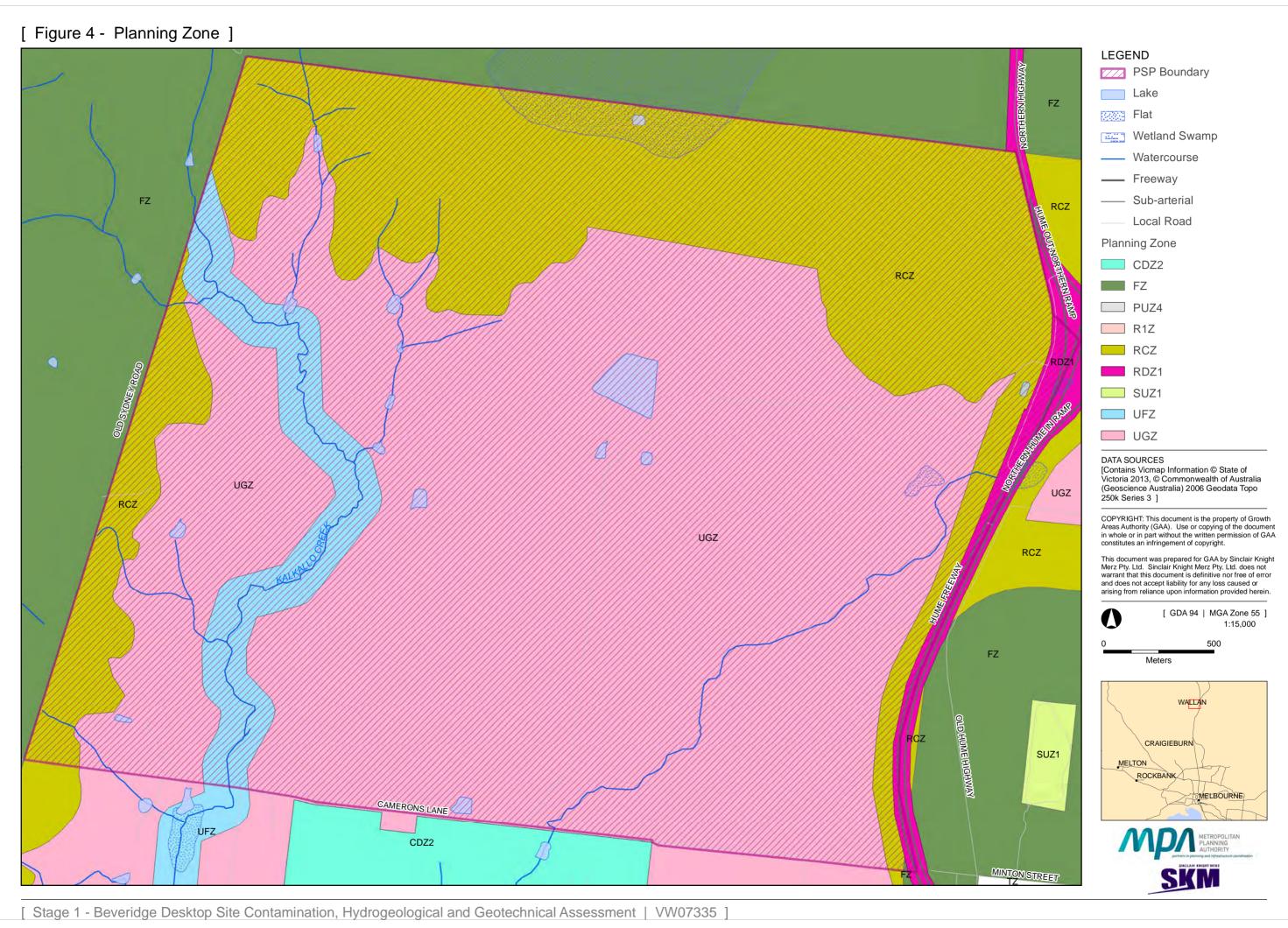


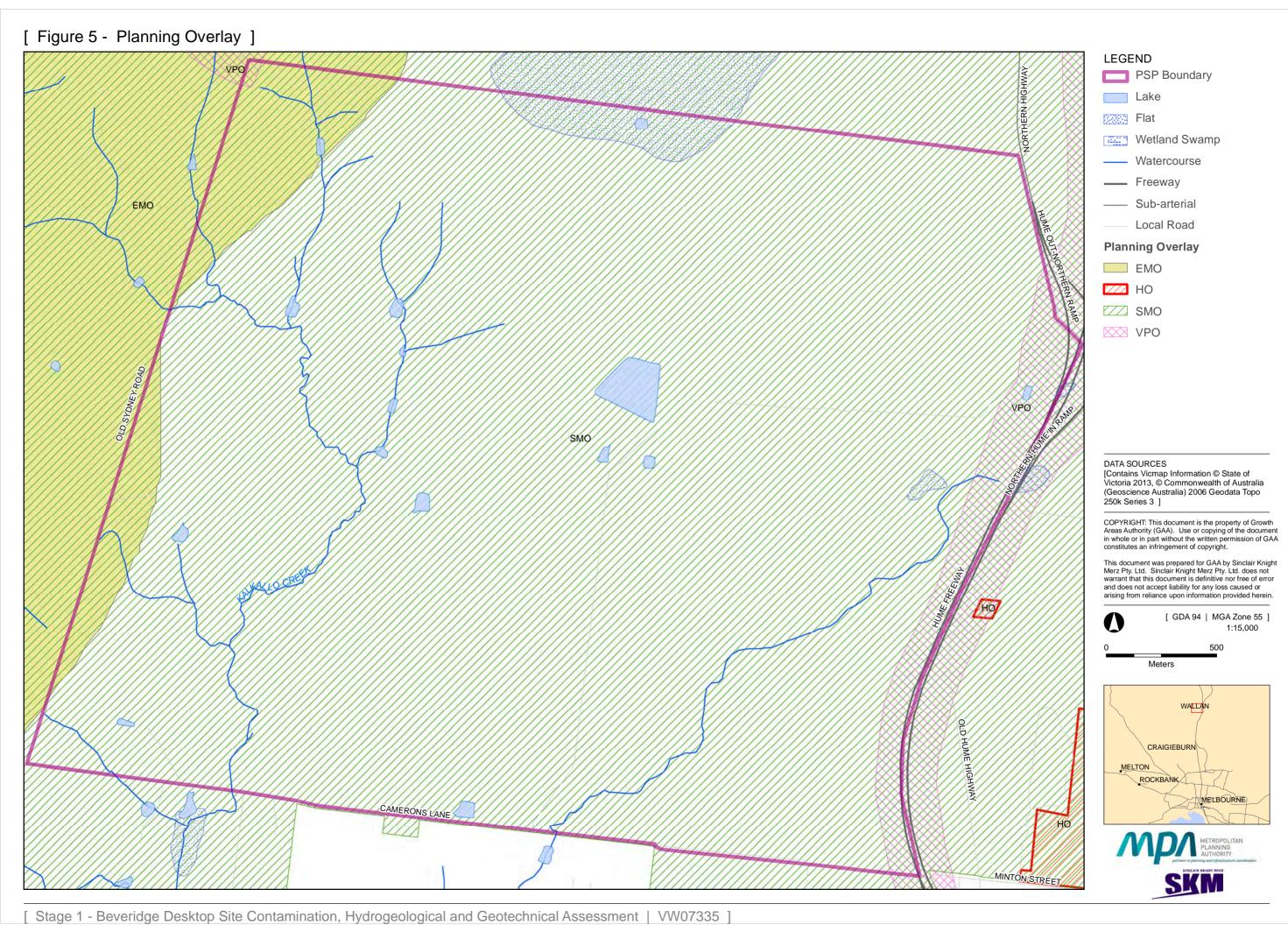


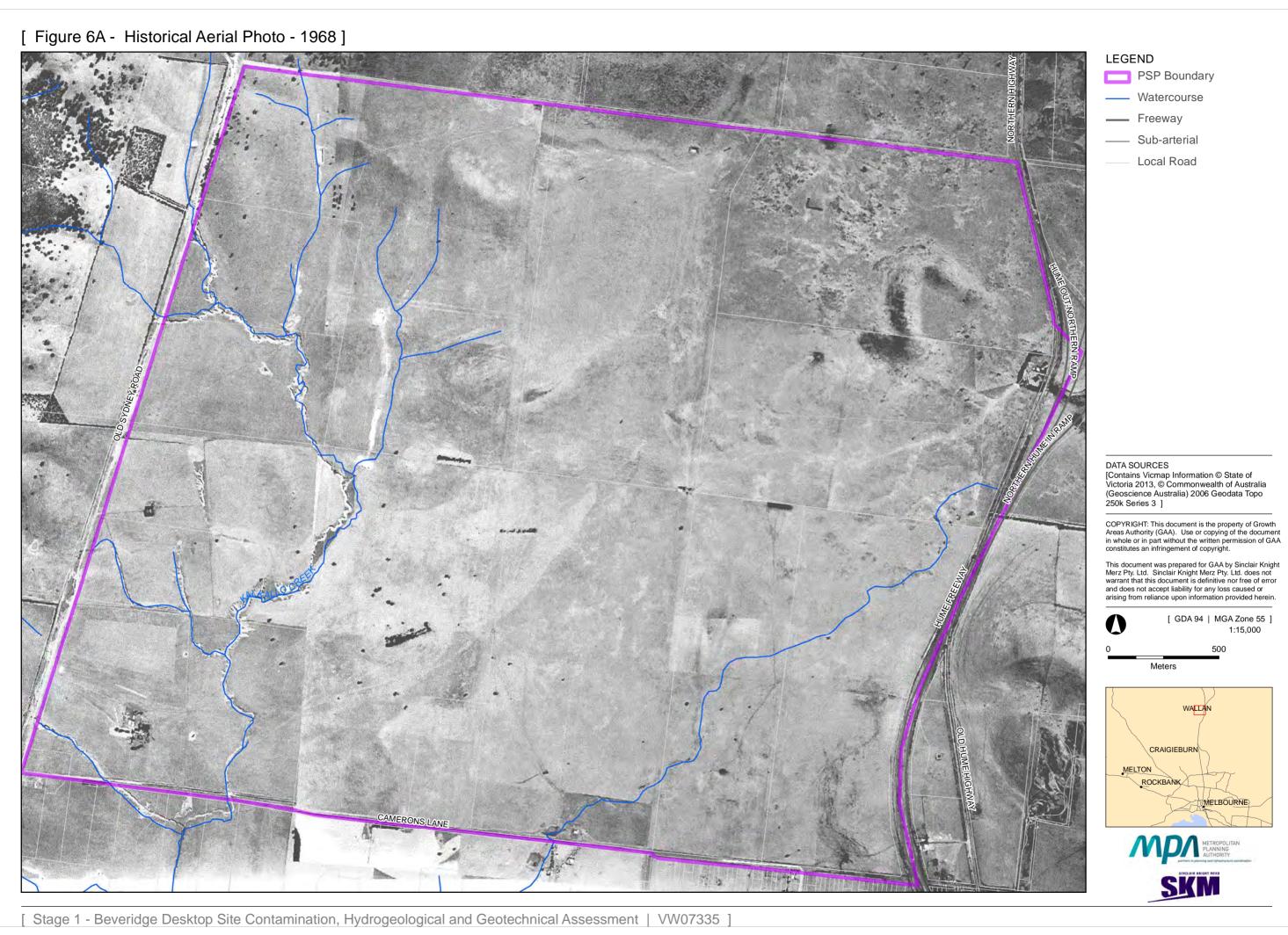


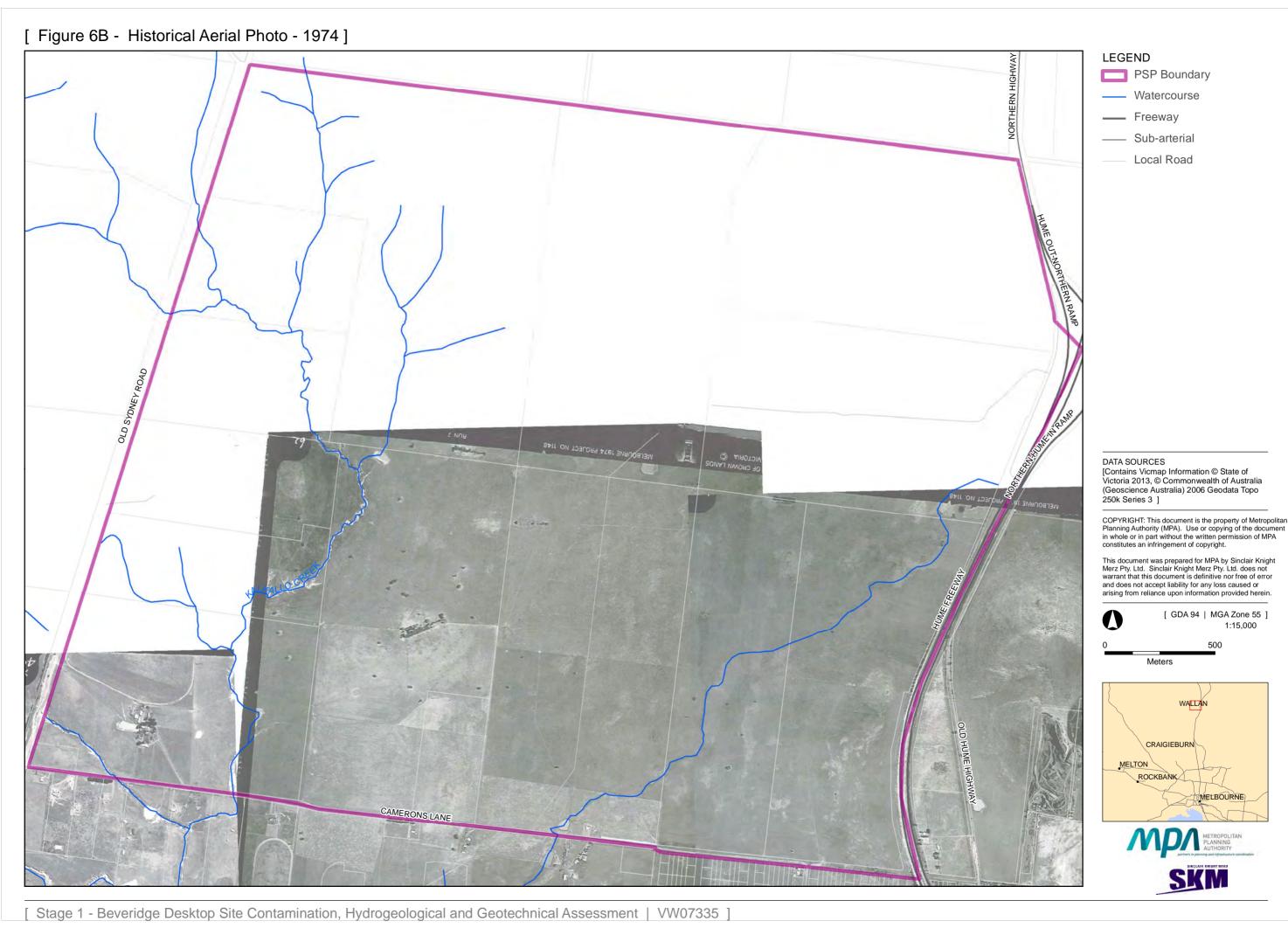


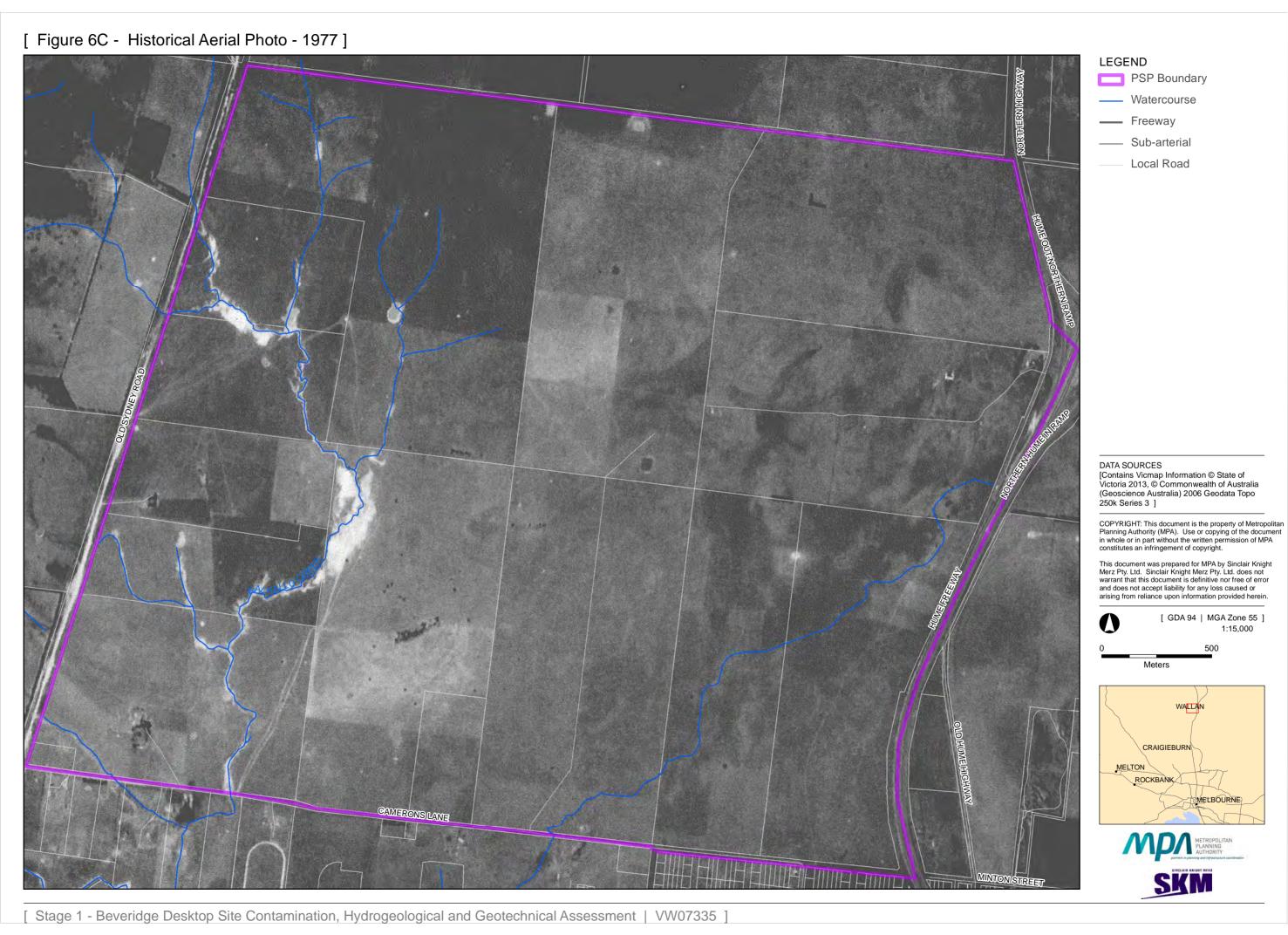


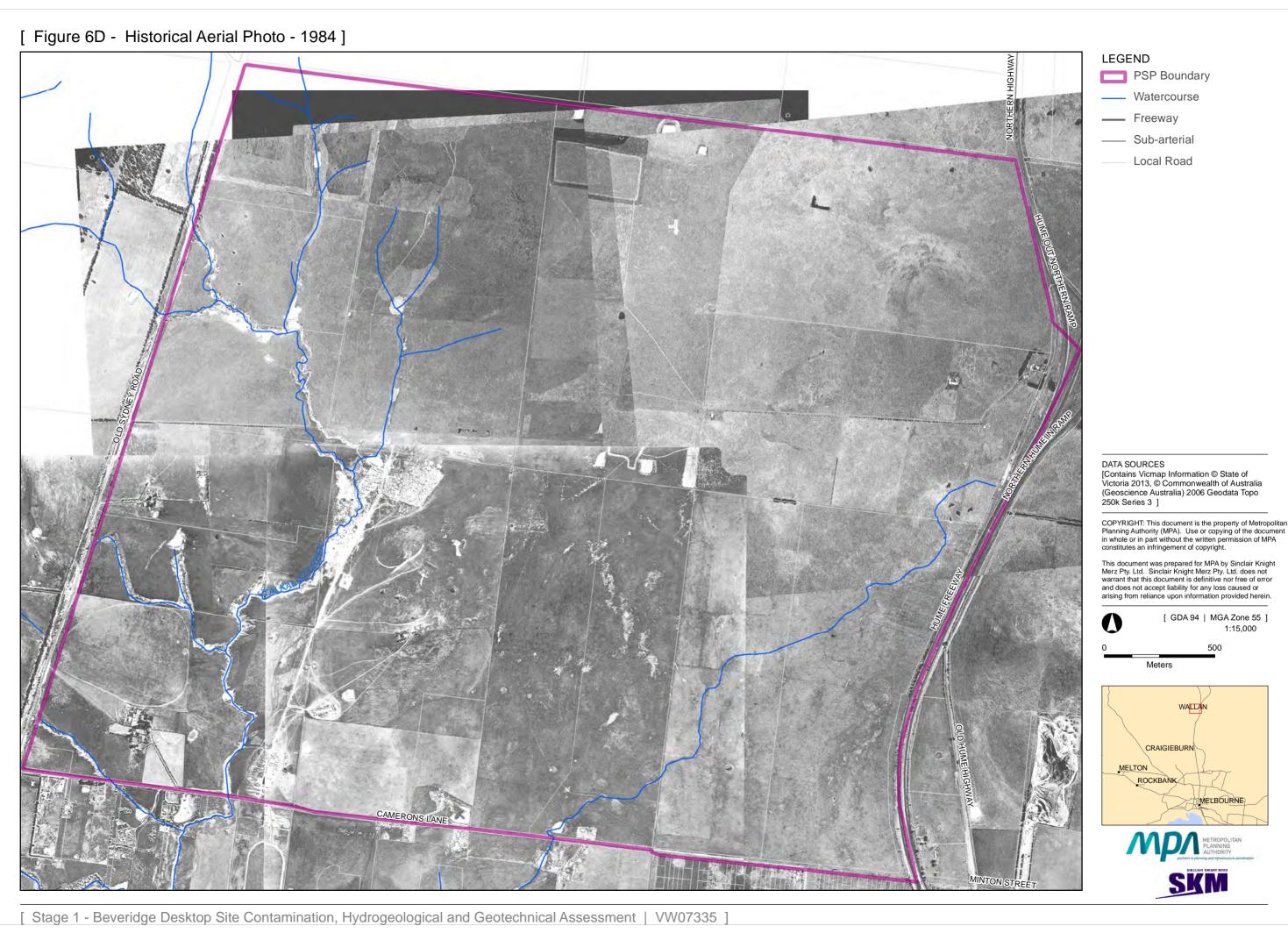


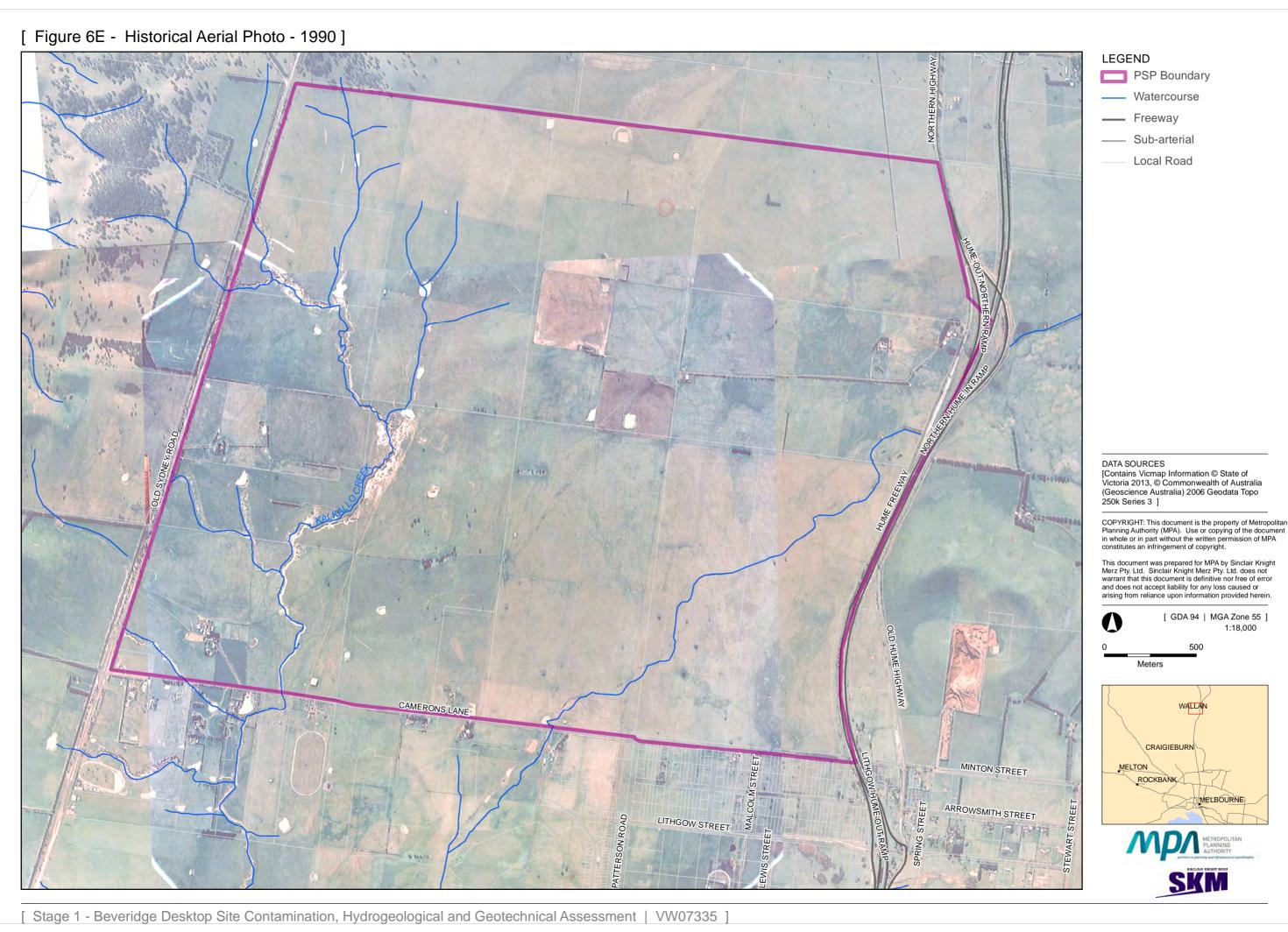


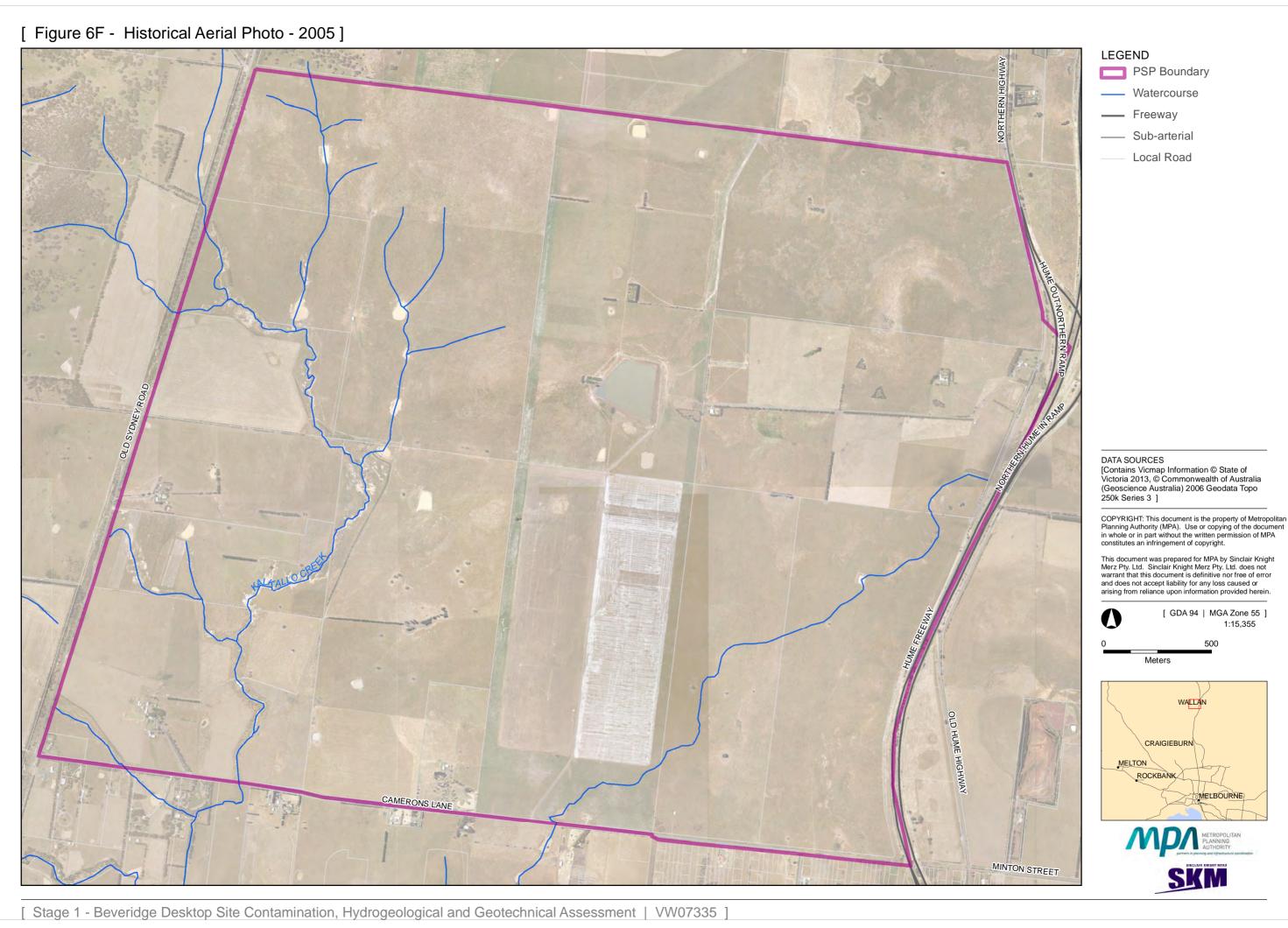


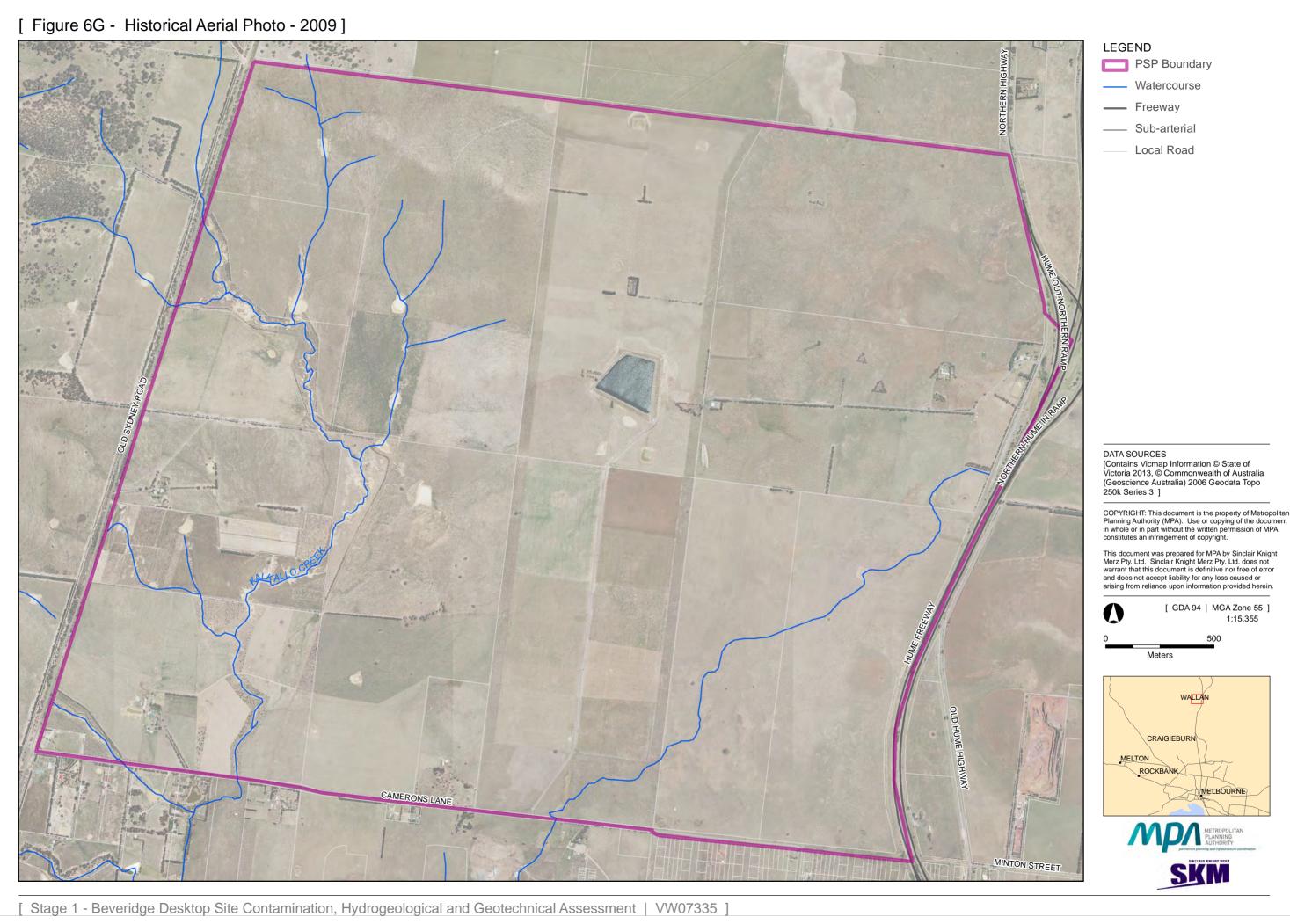


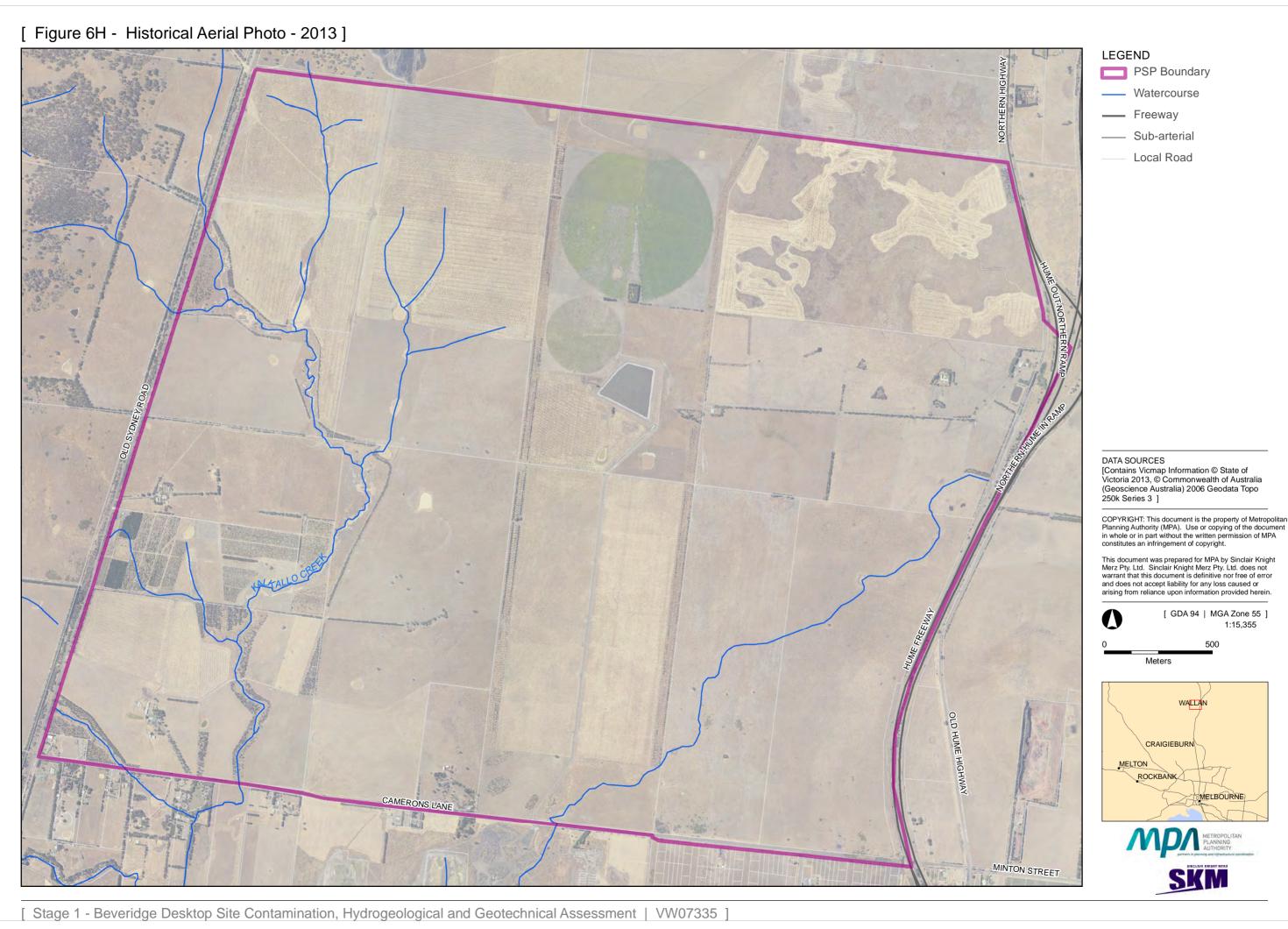


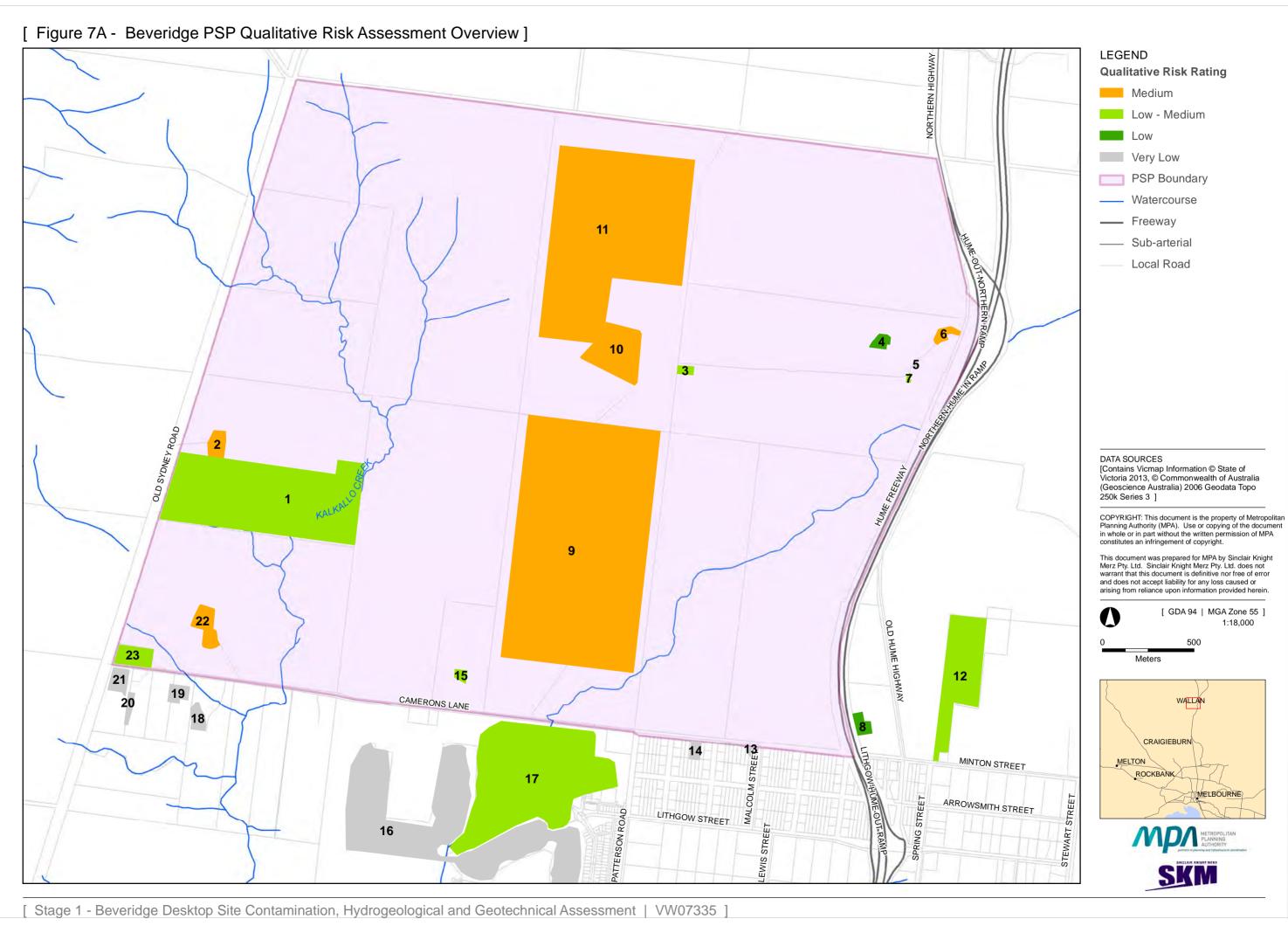


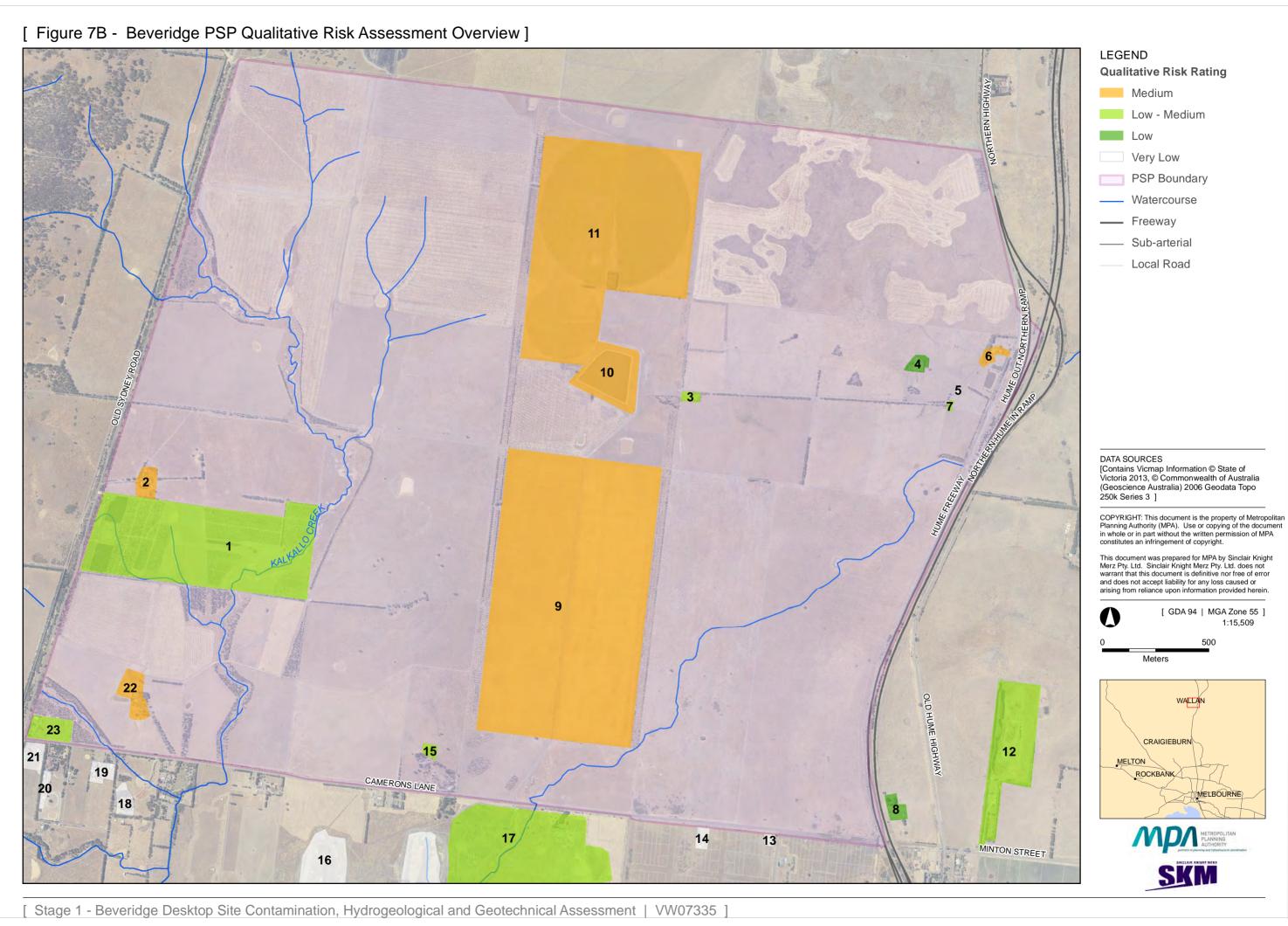


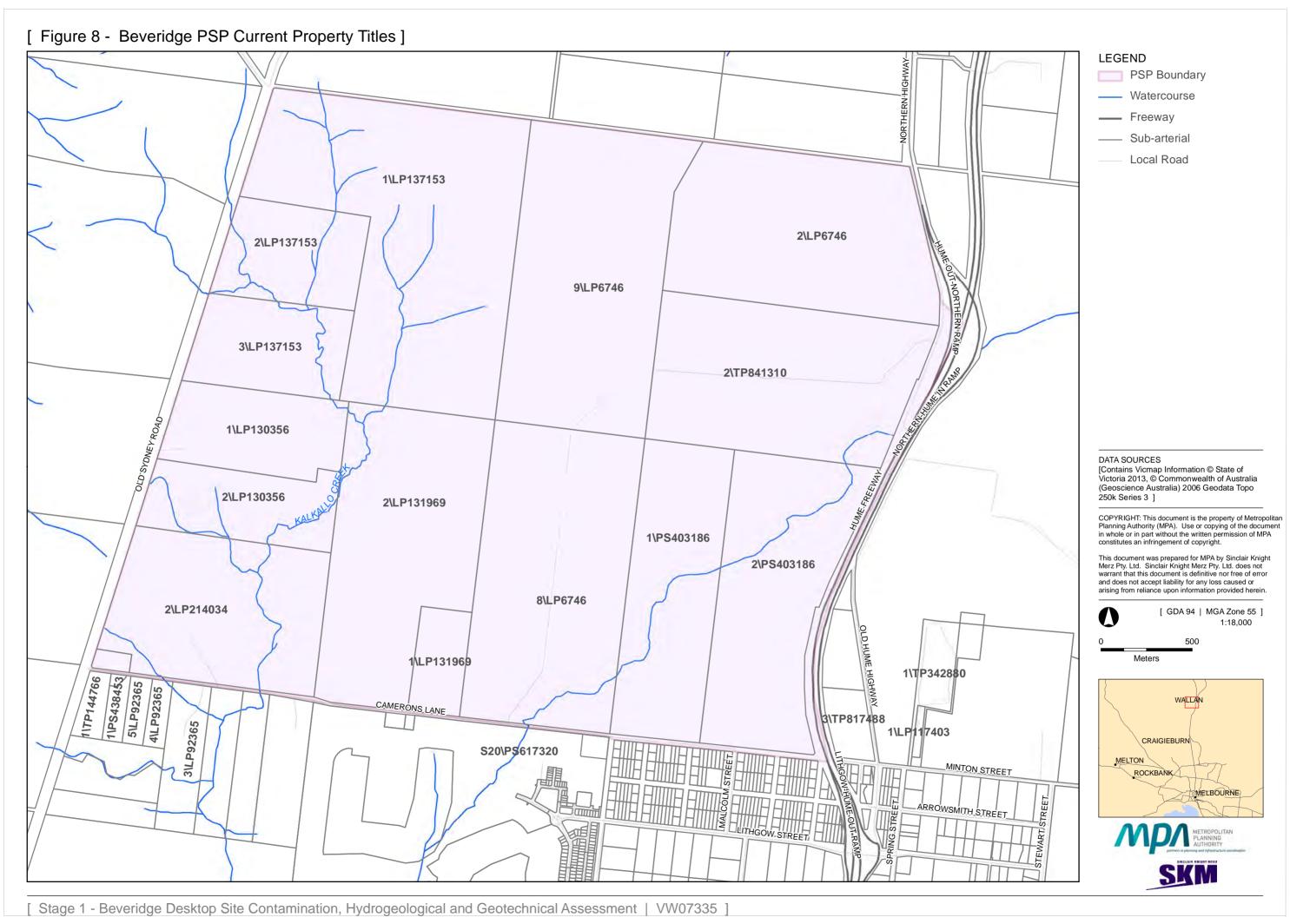














### **Appendix A. SEPP information**



### A.1 Land SEPP

### A.1.1 Land use categories

The following land use categories are defined in Clause 9(1) of the Land SEPP:

- "Sensitive uses: consisting of land used for residential use, a child care centre, pre-school, or primary school. A sensitive use may occur in an area of high density )where development makes maximum use of available land space and there is minimal access to soil) or in Other low density areas (where there is generally substantial access to soil)";
- "Agricultural: consisting of rural areas involved in agricultural or horticultural practices"
- "Parks and Gardens: consisting of parks and forested area as defined in any Victorian or Commonwealth legislation or subordinate legislation, or any regions designated by the Authority or Department of Natural Resources and Environment"
- "Recreation / Open Space: consisting of general open space and public recreation areas";
- "Commercial: consisting of a range of commercial and business activities"; and
- "Industrial: consisting of utilities and a range of industrial activities".

We understand that the end use of the site is yet to be determined and may comprise one or more of the above land uses.

### A.1.2 Beneficial uses of land to be protected

The Land SEPP (2002) states that the following beneficial uses must be protected for the following land uses:

Table A.1: Beneficial uses of land

	Parks &		Sensitive Use		Recreation /	Commercial	Industrial
Land Use/ Beneficial Use	Reserves Agricultural		High Density	Other	Open Space		
Maintenance of Ecosystems							
Natural Ecosystems	✓						
Modified Ecosystems	✓	✓		✓	✓		
Highly Modified Ecosystems		<b>✓</b>	✓	<b>√</b>	✓	<b>√</b>	<b>✓</b>
Human Health	✓	✓	✓	✓	✓	✓	✓
Buildings and Structures	✓	✓	✓	✓	✓	✓	✓
Aesthetics	✓		✓	✓	✓	✓	
Production of food, flora & fibre	✓	<b>√</b>		✓			



### A.2 Groundwater SEPP

### A.2.1 Beneficial uses of groundwater to be protected

Table A.2 : Beneficial uses of groundwater

Segment (TDS)							
Segment / Beneficial Use	Segment A1 (0-500 mg//L)	Segment A2 (501-1000 mg//L)	Segment B (1001-3500 mg//L)	Segment C (3501-13000 mg/L)	Segment D (> 13,000 mg/L)		
Maintenance of Ecosystems	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>		
Potable Water Supply							
a) Desirable	✓						
b) Acceptable		✓					
Potable Mineral Water Supply	✓	<b>√</b>	<b>√</b>				
Agricultural, parks & gardens	✓	<b>✓</b>	<b>✓</b>				
Stock Watering	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>			
Industrial Water Use	✓	✓	✓	✓	✓		
Primary Contact Recreation	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>			
Buildings and Structures	✓	<b>✓</b>	<b>√</b>	<b>√</b>	<b>*</b>		



### **Appendix B. Certificate of title information**



### **B.1** Summary of Title information

Refer to Figure 8 for land parcel locations.

Parcel	No.	Volume	Folio	Registered Proprietors	Date	Status			
				Yarra Valley Water Ltd	25/5/05	Current			
	9634	398	Elsberry Pty Ltd	11/6/96	Historical				
			D. L. Starbuck Properties Proprietary Limited	29/08/85	Historical				
1/LP137153	1	8601	999	D. L. Starbuck Properties Proprietary Limited	19/11/64	Historical			
1/21 13/ 133	'	4007	070	Helene Margaret Ethel Cameron	4/03/64	Historical			
		4837	272	Alasdair Cameron, Grazier	20/03/24	Historical			
		3887	352	Philip William Must Solicitor The Trustees Executors and Agency Company Limited	9/09/15	Historical			
				Yarra Valley Water Ltd	25/5/05	Current			
0/1 D407450		9634	399	Elsberry Pty Ltd	11/6/96	Historical			
2/LP137153	2			D. L. Starbuck Properties Proprietary Limited	29/08/85	Historical			
		8601	999	See No 1 for continuation					
				Yarra Valley Water Ltd	25/5/05	Current			
2/LD427452		9634	400	Elsberry Pty Ltd	11/6/96	Historical			
3/LP137153	3			D. L. Starbuck Properties Proprietary Limited	29/08/85	Historical			
			999	See No 1 for continuation					
		9488	220A	Whisky Hill Pty Ltd	13/12/82	Current			
				Ronald Samuel Angel, Farmer Catherine Mary Angel Christine Mary Angel	13/08/82	Historical			
				John Graeme Milburn Partridge, Manager	22/08/72	Historical			
1/LP130356	4	4	4	4			Jessie Condon	18/05/72	Historical
		4638	/110	John Patrick Condon, Builder	24/09/42				
		4030	418	Maurice Anthony Kearney, Bank Manager Reginald Gerard Hoban, Solicitor	23/08/42	Historical			
				William Bonefield , Farmer	13/01/23	Historical			
				Fabio and Christian Partners Pty Ltd (Interest)	26/05/03	Current			
		10374	688	Emanuelle Di Parsia Pina Di Parsia Rosalba Di Parsia (Interest	20/02/98	Historical			
2/LP130356	5		9503 461A	Antonio Di Parsia, Butcher Rosa Di Parsia	13/08/82	Historical			
		9503		Ronald Samuel Angel, Farmer Catherine Mary Angel Christine Mary Angel	13/08/82	Historical			
		4638	418	See No 4 for continuation					
				Yarra valley water ltd	25/5/05	Current			
0/LD044004		6 9997 135	135	Elsberry Pty Ltd	11/6/96	Historical			
2/LP214034	٥			D.L.Starbuck Properties Proprietary Limited	7/1/91	Historical			
		4712	309	D.L.Starbuck Properties Proprietary Limited	5/5/65	Historical			



Parcel	No.	Volume	Folio	Registered Proprietors	Date	Status		
				Helene Margaret Ethel Cameron	4/3/64	Historical		
				Alasdair Cameron,Farmer	3/1/23	Historical		
		3887	352	See No.1 for continuation				
				Vince Martino Stella Martino	5/09/06	Current		
				Hanaaomara	26/07/05	Historical		
		9997	134	Malcolm Douglas Bayley Kathryn Anne Isbister	26/06/00	Historical		
1/LP214034	7			Carlo Mascitti Janine Fae Mascitti	31/07/91	Historical		
				D.L.Starbuck Properties Proprietary Limited	7/01/91	Historical		
		4712	309	See N0.6 for continuation				
				Yarra Valley Water Ltd	25/05/05	Current		
		10290	892	Elsberry Pty Ltd	11/06/96	Historical		
2/LP131969	8	8572	969	D.L.Starbuck Properties Proprietary Limited	5/05/65	Historical		
		4837	272	See N0.1 for continuation				
				John Edwin Storer Catherine Jane Storer	14/02/97	Current		
		9399	692	Susan Carey	24/05/89	Historical		
1/LP131969	9			David Stuart Starbuck, Contractor Pamela Anne Starbuck	2/10/80	Historical		
		8572	969	See N0.8 For Continuation				
		10915	748	Yarra Valley Water Ltd	28/11/05	Current		
				Goulburn Valley Region Water Authority	28/11/05	Historical		
			602 1	John James Mooney	21/05/03	Historical		
				Francis William Mooney John James Mooney	13/02/02	Historical		
8/LP6746	10			James Francis Lewis, Farmer William John Lewis, Farmer	28/02/69	Historical		
0/LI 0/40		8602		David Edward Ellis Leighton, Farmer	28/02/69	Historical		
				Joseph Ignatius Bernard Butler, Cartage Contractor Mary Irene Butler Joseph Stanley Butler, Cartage Contractor	24/11/65	Historical		
		4837	272	See N0.1 For Continuation				
		10685	10685	10685	975	Bryan Francis Mooney Bernard John Mooney Claire Elizabeth Mooney Kathryn Anne Mooney Leo Vincent Mooney Peter Damian Mooney Stephen Matthew Mooney	19/05/08	Current
1/PS403186	11			Bernard John Mooney	28/08/06	Historical		
				John James Mooney	8/10/02	Historical		
		6603	414	Francis William Mooney John James Mooney	10/10/01	Historical		
		4787	293	George Thompson Kilroy	25/06/23	Historical		
		10685	10685 976	Dulcie Mooney	16/08/06	Current		
2/PS403186	12			Francis William Mooney	8/10/02	Historical		
		6603	414	See N0.11 For Continuation				
2/TP841310	13	8772	323	William Barry Gilbo, Veterinary Surgeon Mary Gilbo	10/02/69	Current		
		4787	293	See N0.11 For Continuation				
2/LP6746	14	3948	518	Crystal Creek Properties Pty Ltd	21/01/04	Current		

## Desktop Environmental, Hydrological and Geotechnical Assessment



Parcel	No.	Volume	Folio	Registered Proprietors	Date	Status
				Dorothea Helena Connors Gerard Francis Laffan Francis Ronald Laffan Margaret Mary Hollien	17/01/03	Historical
				Dorothea Helena Connors	17/01/03	Historical
				James Leo Laffan,Grazier Dora Ellen Laffan	21/03/74	Historical
				John Ambrose Laffan, Grazier James Leo Laffan, Grazier Dora Ellen Laffan	23/12/32	Historical
				John Francis Laffan	24/01/16	Historical
		3887	352	See N0.1 For Continuation		
		40000		Yarra Valley Water Ltd	1/06/05	Current
9/LP6746	15	10880	694	Goulburn Valley Region Water Authority	1/06/05	Historical
		8772	323	See N0.13 For Continuation		

Desktop Environmental, Hydrological and Geotechnical Assessment



### B.2 Copies of title documents

Refer to enclosed CD for copies of title documents. Chain of custody documentation



### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 09634 FOLIO 398

Security no : 124047766073J Produced 15/10/2013 12:37 pm

### LAND DESCRIPTION

Lot 1 on Plan of Subdivision 137153.

PARENT TITLE Volume 08601 Folio 999

Created by instrument LP137153 29/08/1985

#### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987
AH462111E 30/08/2010

### DIAGRAM LOCATION

SEE LP137153 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT------

Additional information: (not part of the Register Search Statement)

Street Address: 180 CAMERONS LANE BEVERIDGE VIC 3753

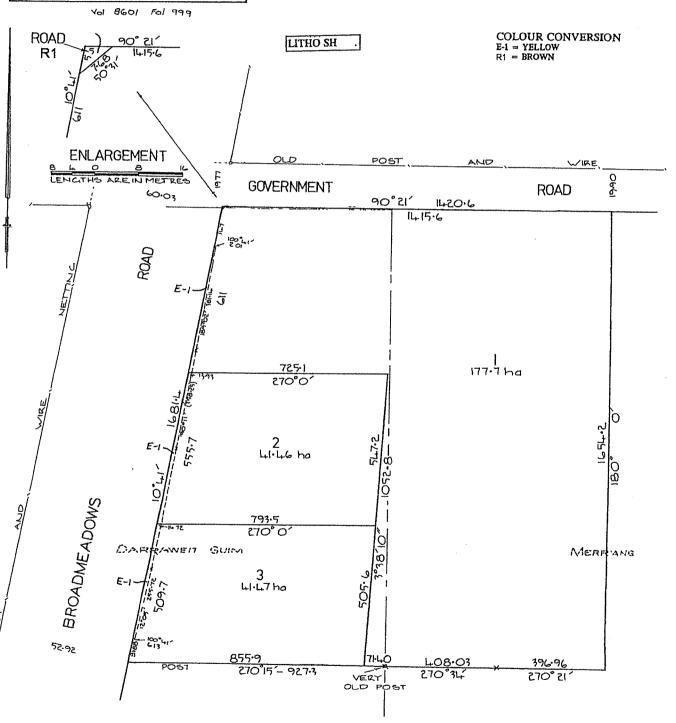
DOCUMENT END

FEIGL & NEWELL
Title Searchers
GPO BOX 2343
Lifelb 3001
(DX 901)
Ph. 9629 3011



Account: 13500 Order: 15358364

PLAN OF SUBDIVISION OF:	APPROPRIATIONS	ENCUMBRANCES & OTHER NOTATIONS
PART OF CROWN ALLOTMENT 25		
PARISH OF MERRIANG AND	BROWN - WAY	
CROWN ALLOTMENTS 18 & 19	YELLOW-ELECTRICITY SUPPLY PURPOSES	NOTI-
PARISH: DARRAWEIT GUIM		ROAD WIDTHS ARE NOT TO SCALE
COUNTY: BOURKE		
160 80 0 160 320		
V-1 86 D1 Fol 800	•	





### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:42 PM

Volume 09634 Folio 398

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 08601 Folio 999

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

25/05/2005 25/05/2005 AD639411S Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

ELSBERRY PTY LTD

TO:

YARRA VALLEY WATER LIMITED

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

YARRA VALLEY WATER LIMITED OF LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

Account: 13500 Order: 15358445

30/08/2010 31/08/2010 AH462111E Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010



Title 9634/398



### HISTORICAL SEARCH STATEMENT

STATEMENT END VOTS Snapshot

Volume 09634 Folio 398 124014227979J Produced 25/05/2005 11:21 am

#### LAND DESCRIPTION

Lot 1 on Plan of Subdivision 137153.

PARENT TITLE Volume 08601 Folio 999

Created by instrument LP137153 29/08/1985

### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

ELSBERRY PTY LTD of OFFICE AT ERNST & YOUNG 34TH FLOOR CENTRAL PARK 152-158 ST GEORGES TC PERTH WESTERN AUSTRALIA 6000 U258030X 11/06/1996

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

### DIAGRAM LOCATION

SEE LP137153 FOR FURTHER DETAILS AND BOUNDARIES

Paper Title Images

9634/398 - Version 0, Date 22/03/1999



Account: 13500 Order: 15358445 Title 9634/398

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## **VICTORIA** Gertificate

UNDER THE "TRANSFER OF LAND ACT

STARBUCK PROPERTIES PROPRIETARY LIMITED of 824 Sydney Road North Coburg is the proprietor of an estate in fee simple subject to the encumbrances notified hereunder in all that land in the Parishes of Darraweit - Guim and Merriang County of Bourke being Lot 1 on Plan of Subdivision -No.137153 which land is shown enclosed by continuous lines on the map hereon andidentified by that lot number

Issued under Regulation 10 -

Derived From Vol.8601 Fol.999 29/8/'85



Assistant Registrar of Titles

### **ENCUMBRANCES**

MORTGAGE C547516 Commonwealth Trading Bank of Australia Registered 25/7/'66 -

MORTGAGE J393192 Australian European Finance Corporation Limited Registered 24/3/'81 -

As to any part of the land marked E-1 on the map that lies within the above-mentioned Lot -

THE EASEMENTS (if any) existing over the same by virtue of Section 98 of the Transfer of Land Act -

J393192 THE ABOVE MORTGAGE IS DISCHARGE

1 8 OCT 1991



THE ABOVE MORTGAGE IS DISCHARGED

4258028 B

1 1 JUN 1996



THE MAP ABOVE REFERRED TO IS ON THE SHEET ANNEXED TO THIS CERTIFICATE OF TITLE



T09634-398-1-3

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THE REGISTER. ]

Both text Folio.

and

diagram for

this

PROPRIETOR

ELSBERRY PTY LTD

OFFICE AT ERNST & YOUNG, 34TH FLOOR

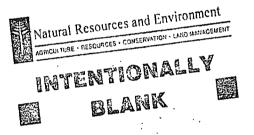
CENTRAL PARK 152-158 ST. GEORGES TC.

PERTH WESTERN AUSTRALIA 6000

U258030X 11/6/96



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### HISTORICAL SEARCH STATEMENT

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Volume 08601 Folio 999 Folio Creation: Details Unknown Parent title Volume 04837 Folio 272

STATEMENT END

Paper Title Images

8601/999 - Version 0, Date 13/01/2000



Account: 13500 Order: 15358489 Title 8601/999

### ORIGINAL.

NOT TO BE TAKEN FROM THE OFFICE OF TITLES



register book vol. 8601 fol. 999

# Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

D.L. STARBUCK PROPERTIES PROPRIETARY LIMITED of 824 Sydney Road North Coburg is now the proprietor of an estate in fee simple subject to the encumbrances — notified hereunder in <u>ALL THAT</u> piece of land delineated and coloured red on — the map in the margin containing Six hundred and Forty four acres One rood and—Thirty three perches or thereabouts being Lots 10 and Eleven on Plan of — — Subdivision No.6746 Parishes of Darraweit Guim and Merriang County of Bourke—

DATED the 19th day of November 1965.

Assistant Registrar of Titles

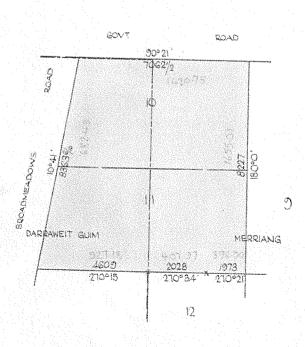
OFFICE OF TITLES

VICTORIA

ENCUMBRANCES REFERRED TO

PLAN 187.63 AFFECTS LAND HEREIN

SCOT FOL



MEASUREMENTS ARE IN LINKS

Derived from Vol.4837(Rol.272

### MORTGAGE

to COMMONWEALTH TRADING

BANK OF AUSTRALIA

Registered 25th July 1966 No.C547516



### WORTGAGE

to AUSTRALIAN EUROPEAN

FINANCE CORPORATION LIMITED

Registered 24th March 1981

No.J393192



### CANCELLED

The following Titles have been issued Furament to Regulation 12 of the Francter of Land Act

100 29-8-1985 0.63 Fol.

... v9634FnL

398

400

Pursuant to Section 32 of the Transfer of Land Act BEING

LAND APPROP. FOR EASEMENTS OF WAY

IN Vol. 9634 Fol. 401

00 LP137153



# CANCELLO





### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 04837 Folio 272

Folio Creation: Details Unknown

Parent title Volume 03887 Folio 352

### STATEMENT END

Paper Title Images

4837/272 - Version 0, Date 24/12/1999



Account: 13500 Order: 15358491 Title 4837/272

Entered in the Register Book

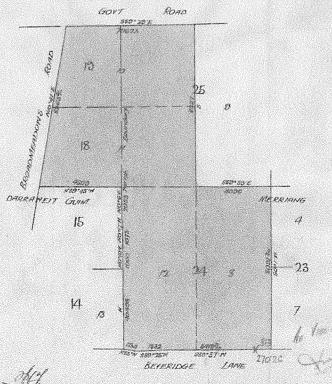
VICTORIA.

UNDER THE "TRANSFER OF LAND ACT 1916."

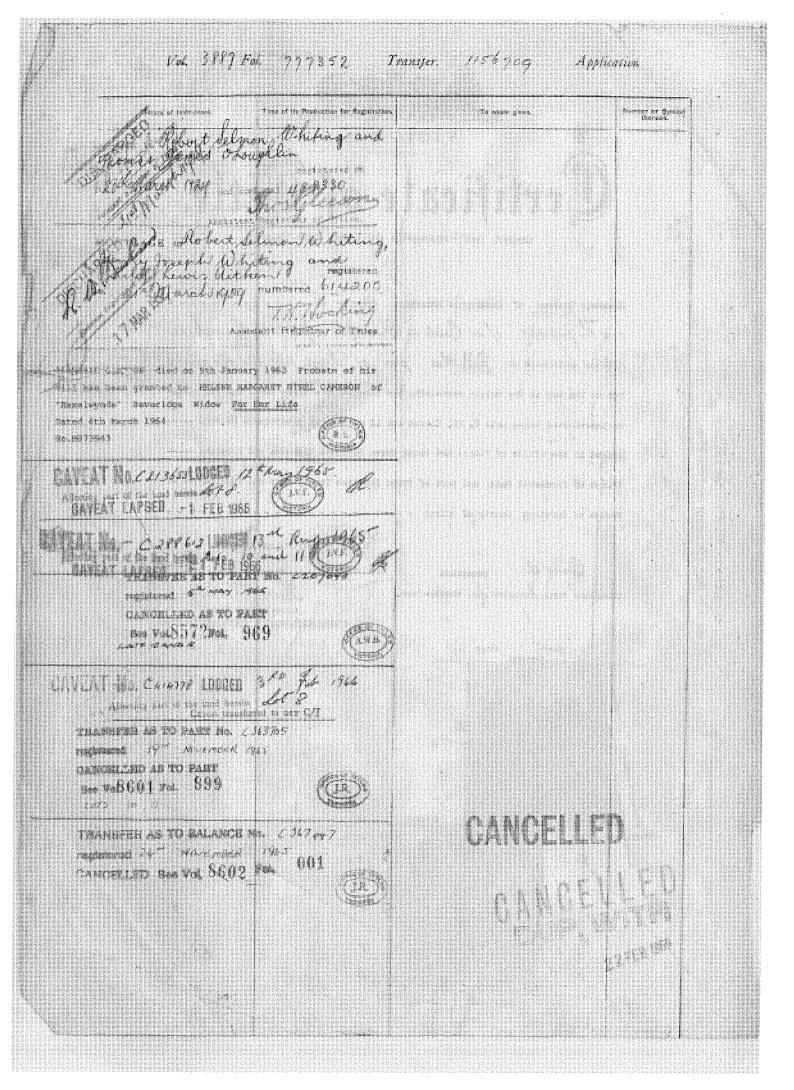
Alazdair Cameron of Hazelwynde Beveridge Grazier is now the proprietor of an Estate in Gresimple, subject to the Encumbrances notified hereunder in All that piece of Land, delineated and coloured ...three hundred-red on the map in the margin containing One thousand/and three acres and Two roodsor thereabouts being Lots 8, 10, Eleven and 12 on Plan of Subdivision No. 6746 ----lodged in the Office of Titles and being Crown Portions Eighteen and Mineteen ----Parish of Darraweit Guim and part of Crown Portions Twenty-four and Twenty-five Parish of Marrians County of Pourks

Dated the thousand neve hundred and wenty-four.

ENCUMBRANCES REFERRED

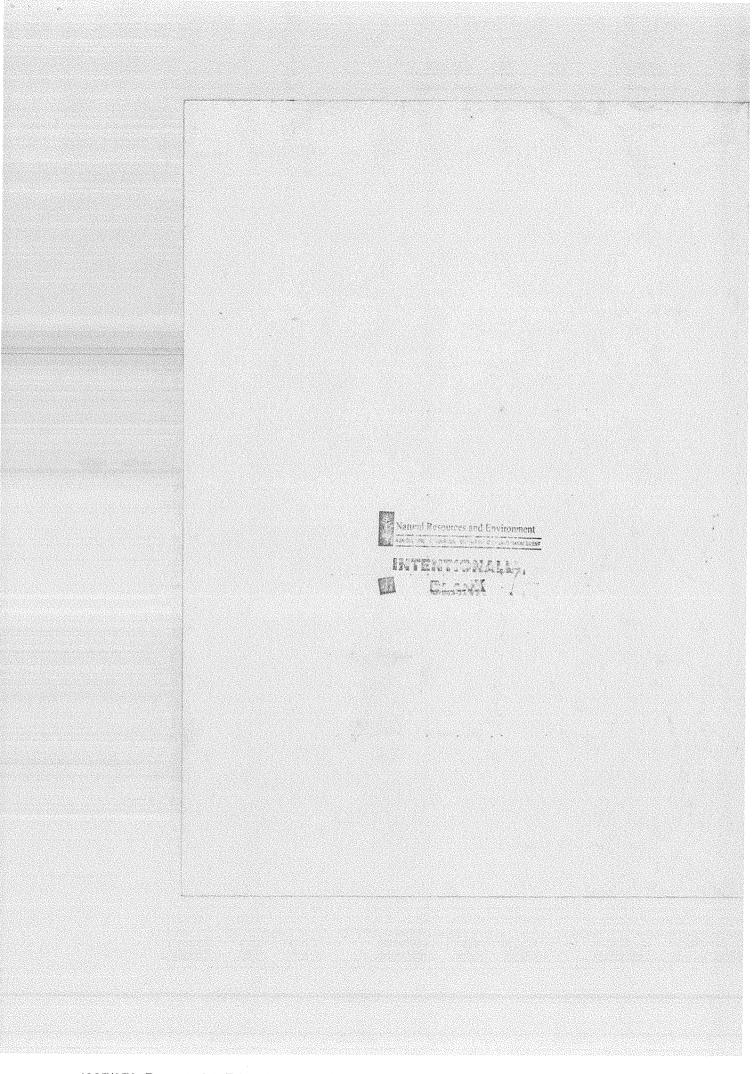






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4837/272, Page 3 of 4, Printed 12:42 15/10/2013, Search Enquiry 5358491, Customer 13500





### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 03887 Folio 352 Folio Creation: Details Unknown

STATEMENT END

Paper Title Images

3887/352 - Version 0, Date 16/02/2000



Account: 13500 Order: 15358493 Title 3887/352

vol3887\*\*\* 777352

VICTORIA.

UNDER THE "TRANSFER OF LAND ACT 1890,"

Philip William Nust of Lydiard Street Ballarat in the County of Grenville Solicitor and The Trustees Executors and Agency Company Limited of 412 Collins Street Melbourne in the County of Bourks are now joint proprietors of an Estate in Fee-simple, subject to the Encumbrances All those pieces of Land, delineated and coloured notified hereunder in red on the map in the margin containing Four thousand one hundred and thirtyone acres and Eighteen perches or thereabouts being Crown Portion Twentyfive and parts of Crown Portions Twentythree Twentyfour and Twentysix at Beveridge Parish of Merriang Crown Portions Twelve Thirteen Fourteen Eighteen and Mineteen Parish of Darraweit Guim all in the County of Bourke - - -

Dated the Ninth thousand nine hundred and fifteen

Assistant Registrar of Titles. **ENCUMBRANCES REFERRED** 

1. As to Portions Twelve This Parish of Darraweit Guim -Thirteen Eighteen

SPECIAL RAILWAY CONDITIONS contained in the Crown --- Grants to William Murray--

As to Portion Fourteen ---Parish of Darraweit Guim--

SPECIAL RAILWAY CONDITION contained in the Crown --Grant to William John ---Turner Clarke -----

As to all the land -----

THE RIGHTS OF PERSONS Z. THE RIGHTS OF PERSONS
claiming under the will and
bodicil of William Murray who
2 died on the 20th. -Junuary 1671 Probate
whereof was granted
on the 25th. May -1871 to Thomas Must
leave being reserved
to John Matheson -to John Matheson --- and Morton Allport--

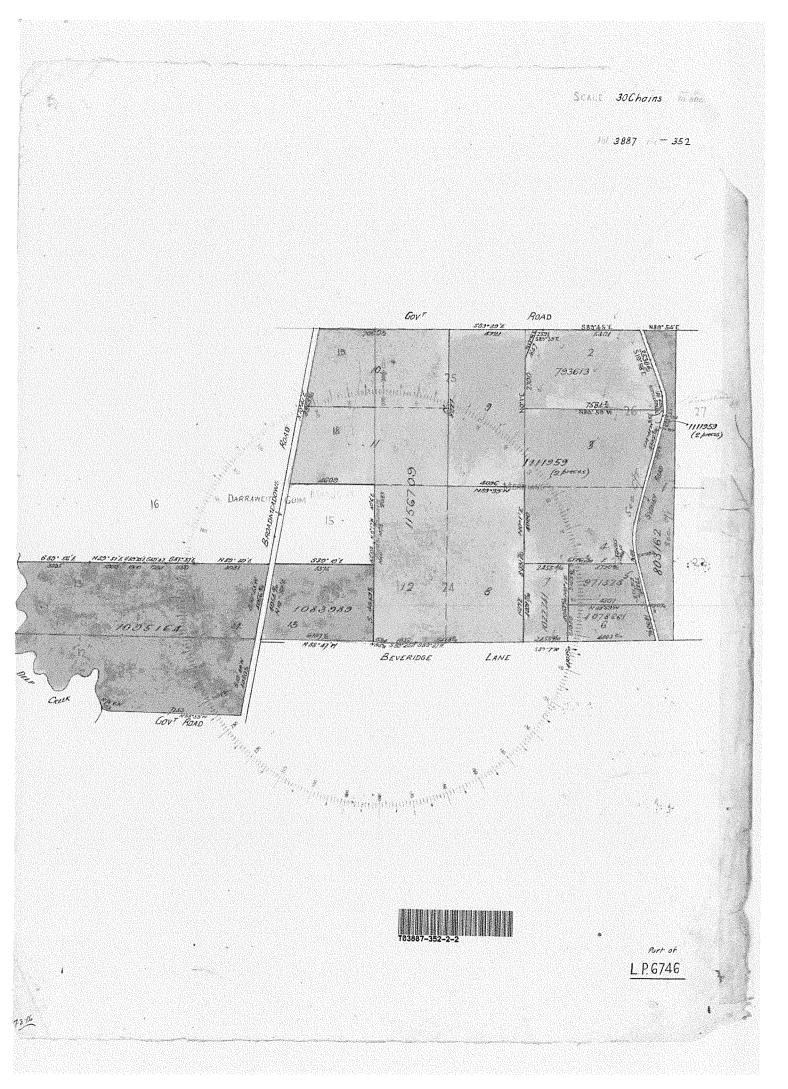
to come in and prove the said Will and --Codicil

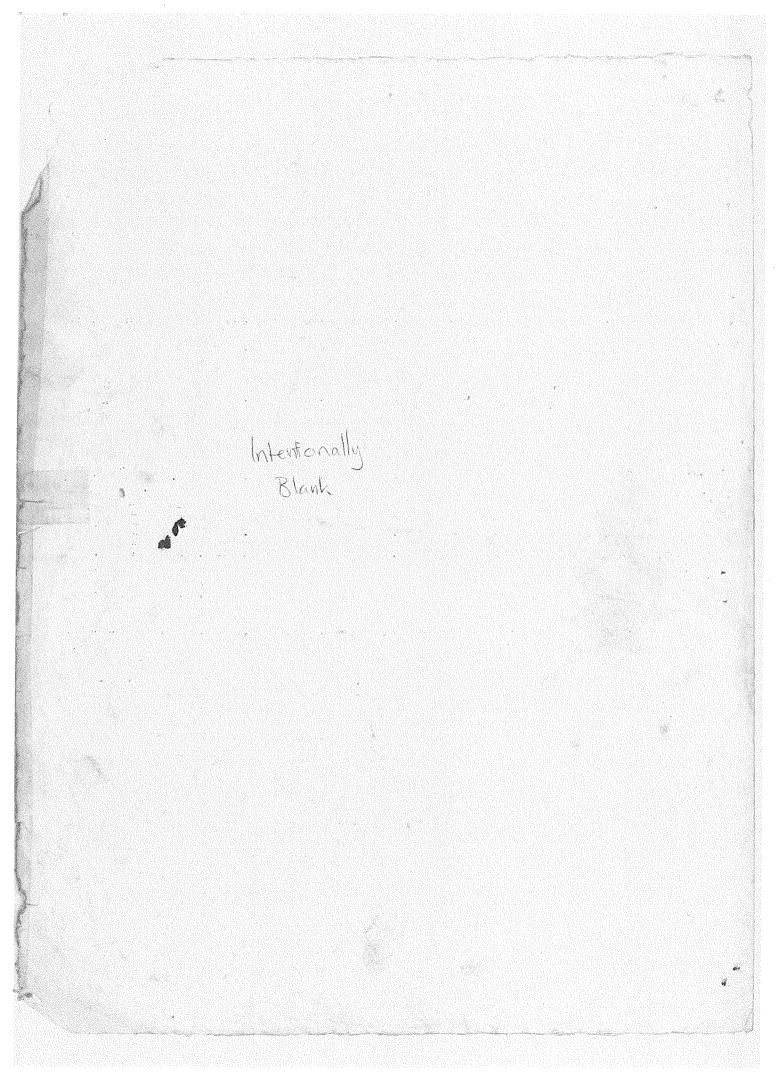
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	Midanuan	THE TRUSTED CARPITORS AND ALL SHOOLS IN LIGHTER	marin
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100010	Mark is jui	To A water	
drea 29/ac/ri-9/w	(4/6/0	The Industry William Must and The Industry General Market State John Francis Laffan Tolkatele Assistant Registrar of Titles	Party and the second se
	1/1	Philip William Must and Milliam Must and Milliam Must and Milliam Must and Milliam Must and Marie John Baird.  Jamuel John Baird.  Assistant Registrar of Tilles.	1/
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		Assistant Registrar of Titles.	Page 1
TRANSPER as to part to	B. J.	TRANSPER as to part to Sydney Yuan	le
Anthony George register	ed on 25. Rovembe	registered on 22 nd	March 1923
192/and numbered 1022	441	end numbered 1005 1 € 14	-
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		1 2 - 7 - 27	/1
registered b	n 5 h December		cene 1923
1922 1078661		and numbered 1/1/959.	*** 1 to
4676 935079	cate of Title	vol. 4787 Pol. 957 3 1	s security
	Francisco Carlo Barbon	. 111.0.2.1.7	
Dea 84a, 3x, 36p, sometime	gietrar of Miles.	area 87/ac 3 1 12 A About the State of Titles.	
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		alasdair Came	
registered on	3rd January 1923.	registered on 20th March 1924 or	d munber <b>ed</b>
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3887/352, Page 4 of 4, Printed 12:43 15/10/2013, Search Enquiry 5358493, Customer 13500



### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 09634 FOLIO 399

Security no : 124047766085V Produced 15/10/2013 12:38 pm

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 137153.

PARENT TITLE Volume 08601 Folio 999

Created by instrument LP137153 29/08/1985

### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

### DIAGRAM LOCATION

SEE LP137153 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

--------END OF REGISTER SEARCH STATEMENT-------

Additional information: (not part of the Register Search Statement)

Street Address: 180 CAMERONS LANE BEVERIDGE VIC 3753

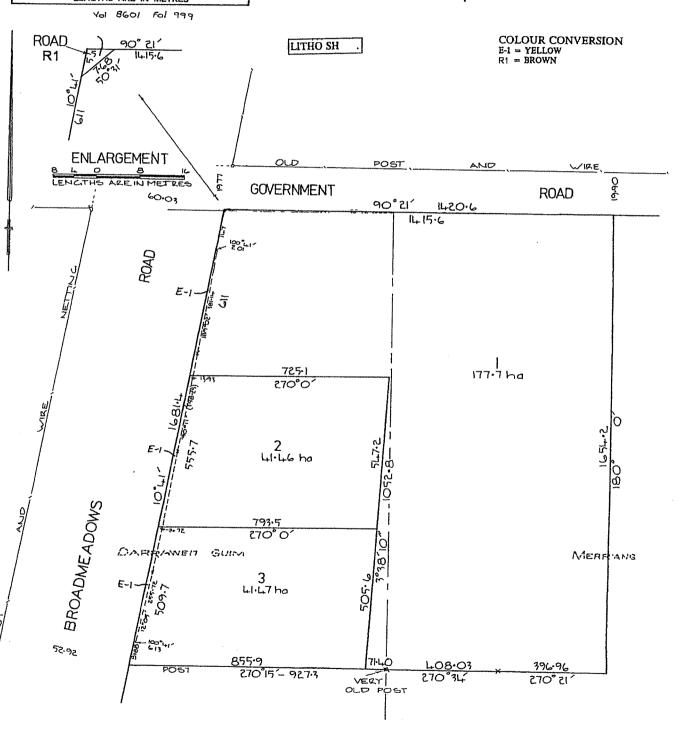
DOCUMENT END

FEIGL & NEWELL
Title Searchers
GPO BOX 2348
Iffelb 3001
(DX 901)
Ph. 9629 (011



Account: 13500 Order: 15358370

PLAN OF SUBDIVISION OF:	APPROPRIATIONS	ENCUMBRANCES & OTHER NOTATIONS	
PART OF CROWN ALLOTMENT 25			
PARISH OF MERRIANG AND	BROWN - WAY		
CROWN ALLOTMENTS 18 & 19	YELLOW-ELECTRICITY SUPPLY PURPOSES	NOTH	
PARISH: DARRAWEIT GUIM		ROAD WIDTHS ARE NOT TO SCALE	
COUNTY: BOURKE			
LENGTHS ARE IN METRES			
Vol 8601 Fol 999	-		
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### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:42 PM

Volume 09634 Folio 399

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 08601 Folio 999

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged Dealing Type and

Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged

Registration

Registration

on Register

on Register

25/05/2005

25/05/2005

AD639411S

Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

ELSBERRY PTY LTD

TO:

YARRA VALLEY WATER LIMITED

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

YARRA VALLEY WATER LIMITED of LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

30/08/2010

31/08/2010

AH462111E

Y

Account: 13500 Order: 15358447

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010



Title 9634/399



### HISTORICAL SEARCH STATEMENT

STATEMENT END VOTS Snapshot

Volume 09634 Folio 399 124014227981G Produced 25/05/2005 11:21 am

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 137153.

PARENT TITLE Volume 08601 Folio 999

Created by instrument LP137153 29/08/1985

### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

ELSBERRY PTY LTD of OFFICE AT ERNST & YOUNG 34TH FLOOR CENTRAL PARK 152-158 ST GEORGES TC PERTH WESTERN AUSTRALIA 6000 U258029X 11/06/1996

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

### DIAGRAM LOCATION

SEE LP137153 FOR FURTHER DETAILS AND BOUNDARIES

### Paper Title Images

9634/399 - Version 0, Date 22/03/1999



Account: 13500 Order: 15358447 Title 9634/399

NOT TO BE TAKEN FROM THE OFFICE OF TITLES



REGISTER BOOK

## **VICTORIA** ertificate of

UNDER THE "TRANSFER OF LAND ACT

STARBUCK PROPERTIES PROPRIETARY LIMITED of 824 Sydney Road North Coburg is the proprietor of an estate in fee simple subject to the - - encumbrances notified hereunder in all that land in the Parishes of Darraweit Guim and Merriang County of Bourke being Lot 2 on Plan of Subdivision on Plan of Subdivision -No.137153 which land is shown enclosed by continuous lines on the map hereon andidentified by that lot number

Issued under Regulation 10 -

Derived From Vol.8601 Fol.999 29/8/185



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converted

Assistant Registrar of Titles

### **ENCUMBRANCES**

MORTGAGE C547516 Commonwealth Trading Bank of Australia Registered 25/7/'66 -

MORTGAGE J393192 Australian European Finance Corporation Limited Registered 24/3/'81 -

As to any part of the land marked E-1 on the map that lies within the above-mentioned Lot

THE EASEMENTS (if any) existing over the same by virtue of Section 98 of the Transfer of Land Act -

J393192 THE ABOVE MORTGAGE, IS DISCHARGE 1 8 OCT 1991



THE ABOVE MORTGAGE IS DISCHARGED 42580%B

1 1 JUN 1996



THE MAP ABOVE REFERRED TO IS ON THE SHEET ANNEXED TO THIS CERTIFICATE OF TITLE



converted to

have

 $\text{vol.}\,9634 \quad \text{fol.}\,\,399$ 

PROPRIETOR ELSBERRY PTY LTD OFFICE AT ERNST & YOUNG, 34th FLOOR CENTRAL PARK 1526458 ST. GEORGES TC. PERTH WESTERN AUSTRALIA 6000 U258029X 11/6/96



TITLE

0

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ANNEXED SHEET REFERRED TO IN

CERTIFICATE OF TITLE VOL

REGISTRAR OF TITLES

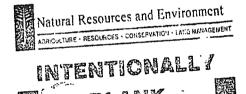
**GOVERNMENT ROAD** ROAD 13 OF PARISH OF DARRAWEIT **GUIM MERRIANG** C.A. 25 18 BROADMEADOWS ( 793.5) 3 41.47 ha 855·9 270°15

MEASUREMENTS ARE IN METRES



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#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 08601 Folio 999 Folio Creation: Details Unknown Parent title Volume 04837 Folio 272

STATEMENT END

Paper Title Images

8601/999 - Version 0, Date 13/01/2000



Account: 13500 Order: 15358489 Title 8601/999

#### OWIGHNI

NOT TO BE TAKEN FROM THE OFFICE OF TITLES



VOL. 8601 FOL.

VICTORIA

UNDER THE "TRANSFER OF LAND ACT

D.L. STARBUCK PROPERTIES PROPRIETARY LIMITED of 824 Sydney Road North Coburg is now the proprietor of an estate in fee simple subject to the encumbrances -notified hereunder in ALL THAT piece of land delineated and coloured red on -the map in the margin containing Six hundred and Forty four acres One rood and-Thirty three perches or thereabouts being Lots 10 and Eleven on Plan of - - -Subdivision No.6746 Parishes of Darraweit Guim and Merriang County of Bourke-

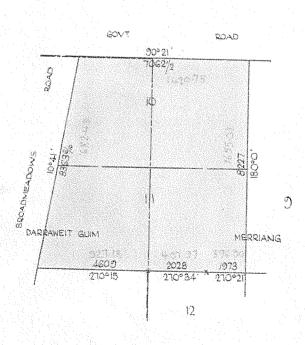
DATED the 19th day of November 1965.

9. The Days Assistant Registrar of Titles

ENCUMBRANCES REFERRED

AREA CAN CORRE 183163 4

SCOT FOL



MEASUREMENTS ARE IN LINKS

Derived from Vol. 48371Ecl. 272

## MORTGAGE

to COMMONWEALTH TRADING

BANK OF AUSTRALIA

Registered 25th July 1966 No.C547516



### WORTGAGE

to AUSTRALIAN EUROPEAN

FINANCE CORPORATION LIMITED

Registered 24th March 1981

No.J393192



#### CANCELLED

The following Titles have been issued Furament to Regulation 12 of the Francter of Land Act

10 29-8-1985 063 Fol.

232

10 v9634ml

400

Pursuant to Section 32 of the Transfer of Land Act BEING

LAND APPROP. FOR EASEMENTS OF WAY

IN Vol. 9634 Fol. 401

où LP137153



## CANCELLED





#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 09634 FOLIO 400

Security no : 124047766090Q Produced 15/10/2013 12:38 pm

#### LAND DESCRIPTION

Lot 3 on Plan of Subdivision 137153.

PARENT TITLE Volume 08601 Folio 999

Created by instrument LP137153 29/08/1985

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132
AD639411S 25/05/2005

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987
AH462111E 30/08/2010

#### DIAGRAM LOCATION

NIL

SEE LP137153 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

-----END OF REGISTER SEARCH STATEMENT------

Additional information: (not part of the Register Search Statement)

Street Address: 180 CAMERONS LANE BEVERIDGE VIC 3753

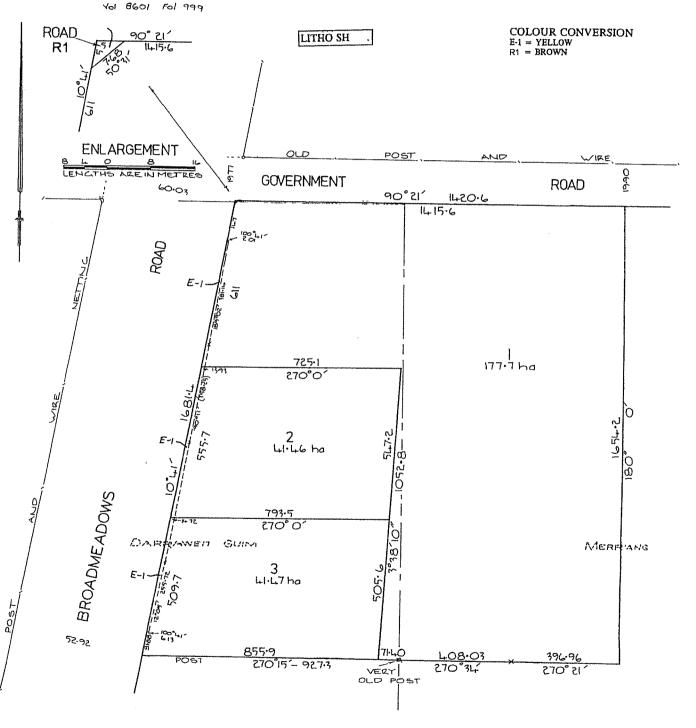
DOCUMENT END

FEIGL & NEWELL Title Searchers GPO BOX 2243 (Jelb 3001 (DX 301) Ph. 9629 3011



Account: 13500 Order: 15358373

PLAN OF SUBDIVISION OF:	APPROPRIATIONS	ENCUMBRANCES & OTHER NOTATIONS
PART OF CROWN ALLOTMENT 25		
PARISH OF MERRIANG AND	BROWN - WAY	
CROWN ALLOTMENTS 18 & 19	YELLOW-ELECTRICITY SUPPLY PURPOSES	NOTE
PARISH: DARRAWEIT GUIM		ROAD WIDTHS ARE NOT TO SCALE
COUNTY: BOURKE		
160 80 0 160 370		





#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:42 PM

Volume 09634 Folio 400

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 08601 Folio 999

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged Dealing Type and

Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged

Registration

Registration

on Register

on Register

25/05/2005

25/05/2005

AD639411S

TRANSFER OF LAND BY ENDORSEMENT

FROM:

ELSBERRY PTY LTD

TO:

YARRA VALLEY WATER LIMITED

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

YARRA VALLEY WATER LIMITED OF LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

30/08/2010

31/08/2010

AH462111E

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Account: 13500 Order: 15358448

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987 NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010



Title 9634/400



#### HISTORICAL SEARCH STATEMENT

STATEMENT END VOTS Snapshot

Volume 09634 Folio 400 124014227982F Produced 25/05/2005 11:21 am

#### LAND DESCRIPTION

Lot 3 on Plan of Subdivision 137153.

PARENT TITLE Volume 08601 Folio 999

Created by instrument LP137153 29/08/1985

#### REGISTERED PROPRIETOR

Estate Fee Simple

Sole Proprietor

ELSBERRY PTY LTD of OFFICE AT ERNST & YOUNG 34TH FLOOR CENTRAL PARK 152-158 ST GEORGES TC PERTH WESTERN AUSTRALIA 6000 U258033N 11/06/1996

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP137153 FOR FURTHER DETAILS AND BOUNDARIES

#### Paper Title Images

9634/400 - Version 0, Date 22/03/1999



Account: 13500 Order: 15358448

#### ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES



REGISTER BOOK

VOL.9634 FOL.400

# Certificate of Citle

UNDER THE "TRANSFER OF LAND ACT"

Issued under Regulation 10 -Derived From Vol.8601 Fol.999

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Assistant Registrar of Titles

#### **ENCUMBRANCES**

MORTGAGE C547516 Commonwealth Trading Bank of Australia Registered 25/7/'66 -

MORTGAGE J393192 Australian European Finance Corporation Limited Registered 24/3/'81 -

As to any part of the land marked E-1 on the map that lies within the above-mentioned Lot -

 $\frac{\text{THE}; \text{EASEMENTS}}{\text{Section 98 of the Transfer of Land Act}}$  (if any) existing over the same by virtue of

THE ABOVE MORTGAGE IS

DISCHARGED

1 8 OCT 1991



THE ABOVE MORICAGE IS
DISCHARGED

U258028B

11 JUN 1996





T09634-400-1-8

THE MAP ABOVE REFERRED TO IS ON THE SHEET ANNEXED TO THIS CERTIFICATE OF TITLE PROPRIETOR

ELSBERRY PTY LTD

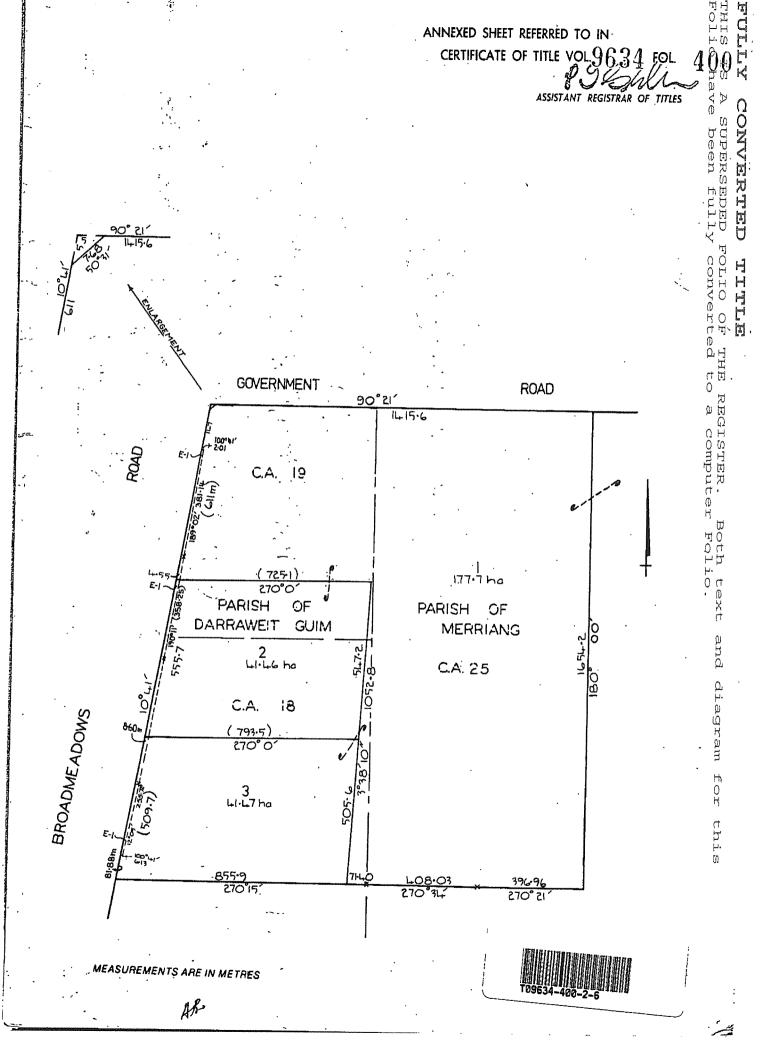
OFFICE AT ERNST & YOUNG, 34TH FLOOR

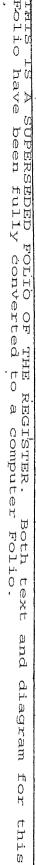
CENTRAL PARK 152-158 ST. GEORGES TC.

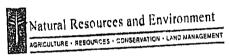
PERTH WESTERN AUSTRALIA 6000

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#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 08601 Folio 999 Folio Creation: Details Unknown Parent title Volume 04837 Folio 272

STATEMENT END

Paper Title Images

8601/999 - Version 0, Date 13/01/2000



Account: 13500 Order: 15358489 Title 8601/999

#### ORIGINAL.

NOT TO BE TAKEN FROM THE OFFICE OF TITLES



register book vol.  $8601\,$  fol.  $999\,$ 

## Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

D.L. STARBUCK PROPERTIES PROPRIETARY LIMITED of 824 Sydney Road North Coburg is now the proprietor of an estate in fee simple subject to the encumbrances — notified hereunder in <u>ALL THAT</u> piece of land delineated and coloured red on — the map in the margin containing Six hundred and Forty four acres One rood and—Thirty three perches or thereabouts being Lots 10 and Eleven on Plan of — — Subdivision No.6746 Parishes of Darraweit Guim and Merriang County of Bourke—

DATED the 19th day of November 1965.

Assistant Registrar of Titles

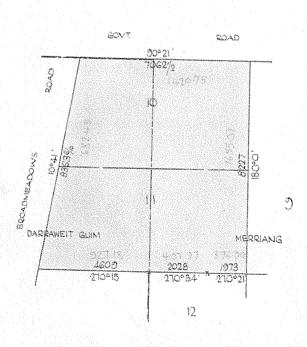
OFFICE OF TITLES

VICTORIA

ENCUMBRANCES REFERRED TO

PLAN 187.63 AFFECTS LAND HEREIN

SCOT FOL



MEASUREMENTS ARE IN LINKS

Derived from Vol.4837LRol.272

## MORTGAGE

to COMMONWEALTH TRADING

BANK OF AUSTRALIA

Registered 25th July 1966 No.C547516



### WORTGAGE

to AUSTRALIAN EUROPEAN

FINANCE CORPORATION LIMITED

Registered 24th March 1981

No.J393192



#### CANCELLED

The following Titles have been issued Furament to Regulation 12 of the Francter of Land Act

1012 ONE to 3 in VO. 63 Fol.

398

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400

Pursuant to Section 32 of the Transfer of Land Act BEING

LAND APPROP. FOR EASEMENTS OF WAY

IN Vol. 9634 Fol. 401

00 LP137153



## CANCELLED





#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 09488 FOLIO 220A

Security no : 124047766096J Produced 15/10/2013 12:38 pm

#### LAND DESCRIPTION

Lot 1 on Plan of Subdivision 130356.

PARENT TITLE Volume 04638 Folio 418

Created by instrument K046967 13/08/1982

#### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

WHISKY HILL PTY LTD of 13TH FLOOR 257 COLLINS STREET MELBOURNE K194461 13/12/1982

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

#### DIAGRAM LOCATION

SEE LP130356 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

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------END OF REGISTER SEARCH STATEMENT------

Additional information: (not part of the Register Search Statement)

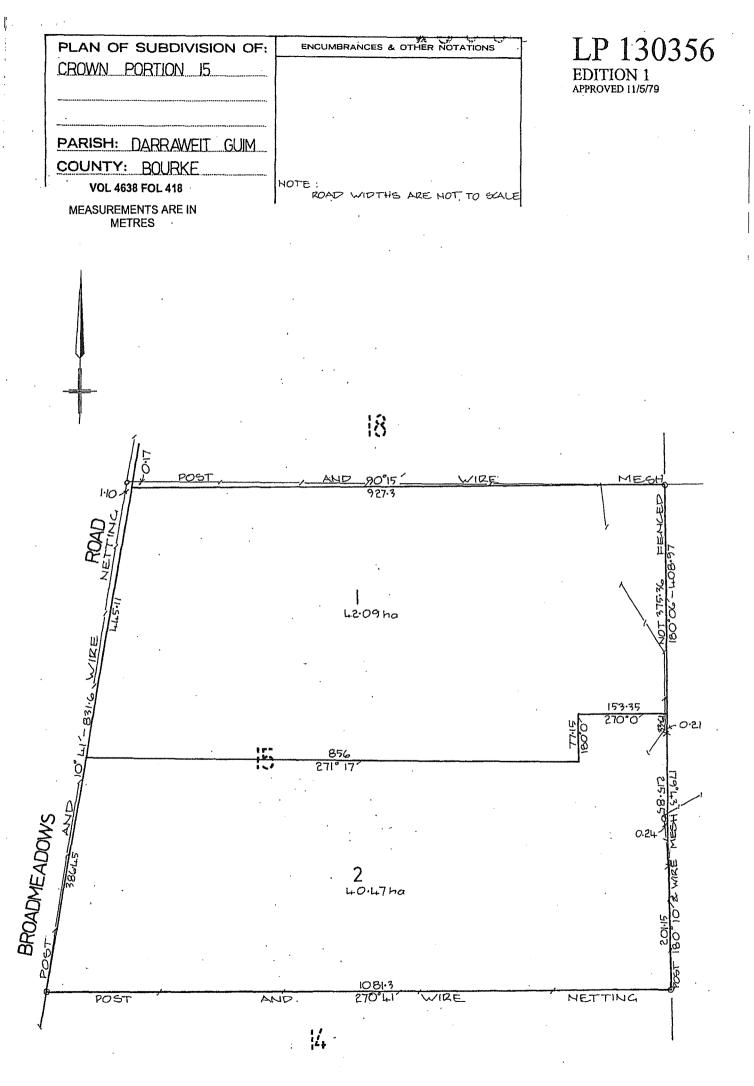
Street Address: 1010 OLD SYDNEY ROAD BEVERIDGE VIC 3753

DOCUMENT END

FEIGL & NEWELL
Title Searchers
GPO BOX 2243
[3elb 3601
(DX 901)
Ph. 9629 6011



Account: 13500 Order: 15358378



LP130356, Page 1 of 1, Printed 12:36 15/10/2013, Search Enquiry 5358378, Customer 13500



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:42 PM

Volume 09488 Folio 220A

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04638 Folio 418

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged Dealing Type and

Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded

Dealing

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Registration

Registration

on Register

on Register

30/08/2010

31/08/2010

AH462111E

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NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010

STATEMENT END

VOTS Snapshot

VOLUME 09488 FOLIO 220A 124035015714U Produced 31/08/2010 01:58 pm

#### LAND DESCRIPTION

Lot 1 on Plan of Subdivision 130356.

PARENT TITLE Volume 04638 Folio 418

Created by instrument K046967 13/08/1982



Account: 13500 Order: 15358451 Title 9488/220A



#### HISTORICAL SEARCH STATEMENT

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
WHISKY HILL PTY LTD of 13TH FLOOR 257 COLLINS STREET MELBOURNE
K194461 13/12/1982

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP130356 FOR FURTHER DETAILS AND BOUNDARIES

#### Paper Title Images

9488/220A - Version 0, Date 03/05/1999



Account: 13500 Order: 15358451 Title 9488/220A

K.46967

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE



REGISTER BOOK

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ertificate

UNDER THE "TRANSFER OF LAND ACT"

RONALD SAMUEL ANGEL Farmer and CATHERINE MARY ANGEL Married Woman and CHRISTINE MARY ANGEL Student all of 1048 Mount Alexander Road North Essendon are JOINT PROPRIETORS of an estate in fee simple subject to the encumbrances notified hereunder in all that piece of land in the Parish of Darraweit Guim County of Bourke being Lot One on Plan of Subdivision No. 130356 and being part of Crown Portion 15 which land is shown enclosed by continuous; lines on the map hereon REGISTER a compu

DATED the 13th day of August 1982

Assistant Registrar of Titles

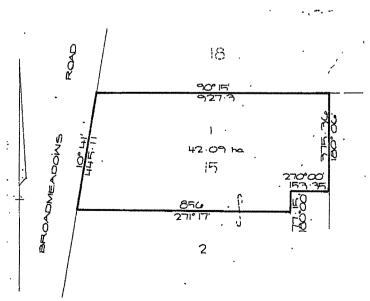
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ENCUMBRANCES REFERRED





Derived from Vol.4638 Fol.418 K46967

MEASUREMENTS ARE IN

WHISKY HILL PTY. LTD. of 13th Floor No.257 Collins Street Melbourne is now the proprietor

Registered 13th December 1982 No.K194461

OFFICE OF THE C. B.

Morigage

to RONALD SAMUEL

ANGEL CATHERINE MARY ANGEL and CHRISTINE

MARY ANGEL

Registered 13th December 1982

C. B.

MORTGAGE

to WESTPAC BANKING

CORPORATION

Registered 30th Dec



MORTGAGE

to WESTPAC BANKING

CORPORATION

Registered 13th Wanuar

No.K228017



F. D. Atkinton, Government Princer, Malbourn



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 04638 Folio 418 Folio Creation: Details Unknown

STATEMENT END

Paper Title Images

4638/418 - Version 0, Date 14/12/1999



Account: 13500 Order: 15358496 Title 4638/418

Vol. 4638 Fol. 927418

CARGELLED

# Gertificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1915."

william Bonfield of Beveridge in the County of Bourke Farmer is ---now the proprietor of an Estate in Fee-simple, subject to the Encumbrances
notified hereunder in All that piece of Land, defineated and coloured
red on the map in the margin containing Two hundred and four acres and Ten perches or thereabouts being Crown Portion Fifteen Parish of Darraweit Guim County of ---Bourke -----

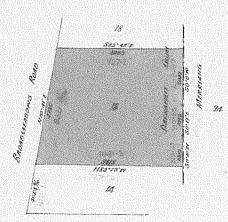
Daled the Thirteenth thousand nine hundled and twenty-three.

day of January

- 1/24. Compart.

Assistant Resistant of Titles

ENCUMBRANCES REFERRED TO.



BETERIOGE LONE

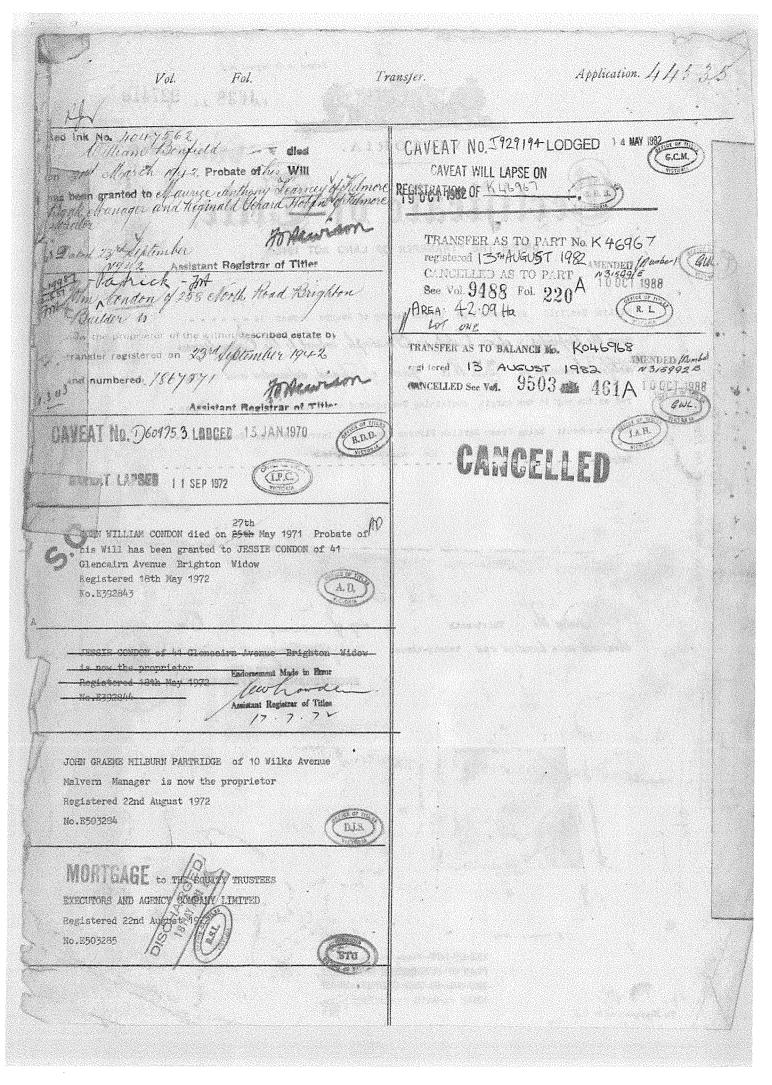
PLAN OF SUBDIVISION No. 130-35-6
REMAINS IN THIS CERTIFICATE OF
THEE DATE. 4.0-37

PLAN ISOSS & AFFECTS LAND HEREIN

ORIGINAL GERTIFICATE.



f.s.





#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10374 FOLIO 688

Security no: 124047766098G Produced 15/10/2013 12:38 pm

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 130356. PARENT TITLE Volume 09503 Folio 461A Created by instrument V274935J 20/02/1998

#### REGISTERED PROPRIETOR

Estate Fee Simple As to 9 of a total of 10 equal undivided shares Sole Proprietor

FABIO AND CHRISTIAN PARTNERS PTY LTD of 30 AMAROO ROAD CRAIGIEBURN VIC 3064

AC088112F 26/05/2003

#### ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AC088113D 26/05/2003

AUSTRALIA AND NEW ZEALAND BANKING GROUP LTD

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP130356 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

\_\_\_\_\_\_EDD OF REGISTER SEARCH STATEMENT-----------

Additional information: (not part of the Register Search Statement)

OTHER TITLES WITH INTERESTS AFFECTING THE FEE SIMPLE IN THIS LAND 10374/689

Street Address: 1000 OLD SYDNEY ROAD BEVERIDGE VIC 3753

FEIGL & NEWELL Title Searchers GPO BOX 2343 1303b 3801 (DX 301) Ph. 0629 3011



Account: 13500 Order: 15358379 Title 10374/688

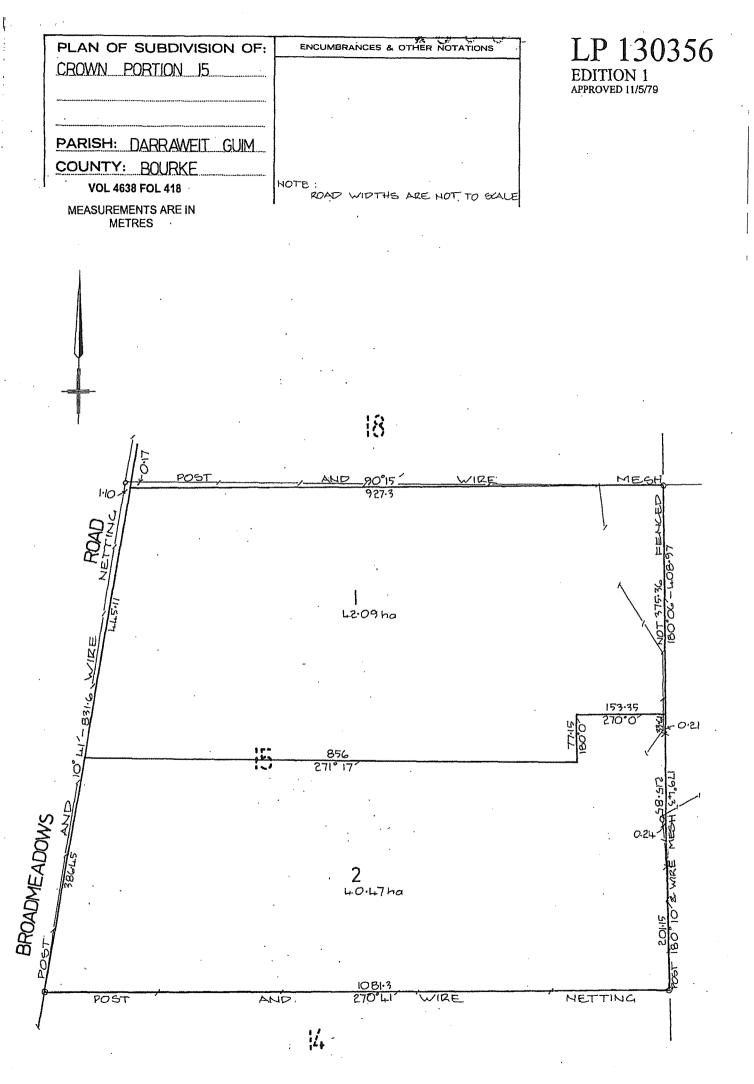


#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

DOCUMENT END



Account: 13500 Order: 15358379 Title 10374/688



LP130356, Page 1 of 1, Printed 12:36 15/10/2013, Search Enquiry 5358378, Customer 13500



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:42 PM

Volume 10374 Folio 688

Folio Creation: Created as a computer folio

Parent title Volume 09503 Folio 461A

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged Dealing Type and

Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged

Registration

Registration

on Register

on Register

26/05/2003

28/05/2003

AC088112F

Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

EMANUELLE DI PARSIA

PINA DI PARSIA

ROSALBA DI PARSIA

TO:

FABIO AND CHRISTIAN PARTNERS PTY LTD

RESULTING PROPRIETORSHIP:

Estate Fee Simple

As to 9 of a total of 10 equal undivided shares

Sole Proprietor

FABIO AND CHRISTIAN PARTNERS PTY LTD of 30 AMAROO ROAD CRAIGIEBURN

VIC 3064

AC088112F 26/05/2003

26/05/2003

28/05/2003

AC088113D

Y

MORTGAGE OF LAND

MORTGAGE AC088113D 26/05/2003



Account: 13500 Order: 15358453



#### HISTORICAL SEARCH STATEMENT

AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

18/12/2006

18/12/2006

AE794766Y

Y

CAVEAT

CAVEAT AE794766Y 18/12/2006

Caveator

PATRICIA MARGARET COMAN

Capacity SEE CAVEAT

Lodged by

GRICE & GRICE

Notices to

GRICE & GRICE of 1/283 WHITEHORSE ROAD BALWYN VIC 3103

18/12/2006

18/12/2006

AE794809H

Y

RECTIFICATION MODIFY CAVEAT

CAVEAT AE794766Y 18/12/2006

Caveator

PATRICIA MARGARET ANN COMAN

Capacity SEE CAVEAT

Lodged by

GRICE & GRICE

Notices to

GRICE & GRICE of 1/283 WHITEHORSE ROAD BALWYN VIC 3103

02/08/2010

14/09/2010

AH400708R

Y

APPLICATION TO REMOVE CAVEAT

CAVEAT AE794766Y REMOVED

STATEMENT END

VOTS Snapshot

Volume 10374 Folio 688 124006020944Y

Produced 28/05/2003 11:28 am



Account: 13500 Order: 15358453



#### HISTORICAL SEARCH STATEMENT

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 130356.

PARENT TITLE Volume 09503 Folio 461A

Created by instrument V274935J 20/02/1998

#### REGISTERED PROPRIETOR

Estate Fee Simple
TENANTS IN COMMON
As to 3 of a total of 10 equal undivided shares
Sole Proprietor

EMANUELLE DI PARSIA of 7 BERRINGA COURT BUNDOORA As to 3 of a total of 10 equal undivided shares Sole Proprietor

PINA DI PARSIA of 7 BERRINGA COURT BUNDOORA As to 3 of a total of 10 equal undivided shares Sole Proprietor

ROSALBA DI PARSIA Of 7 BERRINGA COURT BUNDOORA V274935J 20/02/1998

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP130356 FOR FURTHER DETAILS AND BOUNDARIES



Account: 13500 Order: 15358453 Title 10374/688



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 09503 Folio 461A

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04638 Folio 418

#### RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded	Dealing	Imaged De	aling Type and
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Registration on Register Details

20/02/1998 26/03/1998 V274935J Y Cancelled as to the

remaining 1 equal undivided 10 parts

or shares.

See C/T 10374/689

#### RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

STATEMENT END

Paper Title Images

9503/461A - Version 0, Date 09/03/1999



Account: 13500 Order: 15358501

#### ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES



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REGISTER

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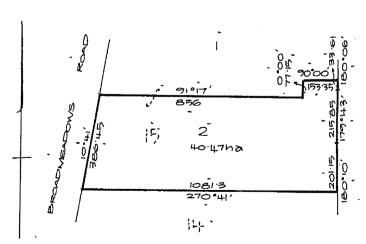
**VICTORIA** 

UNDER THE "TRANSFER OF LAND ACT

RONALD SAMUEL ANGEL Fermer CATHERINE MARY ANGEL Married\_Women\_end\_CHRISTINE\_ MARY ANGEL Student all of 1048 Mount Alexander Road North Essendon are JOINT-PROPRIETORS of an estate in fee simple subject to the encumbrances notified hereunder in all that piece of land in the Parish of Darraweit Guim-County of Bourke being Lot 2 on Plan of Subdivision No. 130356 and being partof Crown Portion 15 which land is shown enclosed by continuous lines on the map hereon-

DATED the 13th day of August 1982

ENCUMBRANCES





Derived from Vol. 4638 Fol. 418 K46968

REGISTER.

diagram

computer

ANTONIO DI PARSIA Butcher and ROSA DI PARSIA Married Woman both of 7 Berringa Court Bundoora are now JOINT PROPRIETORS Registered 13th August 1982 No.K46969

M. E. A.

TRANSFER No. 274935 registered 20/02/98 CANCELLED See Vol. 10374 Fol. 689



CAROLLL)

F. D. Atkinson, Government Printer, Melbour



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 04638 Folio 418 Folio Creation: Details Unknown

STATEMENT END

Paper Title Images

4638/418 - Version 0, Date 14/12/1999



Account: 13500 Order: 15358496 Title 4638/418

vol 1638 Fol. 927418

## ertificate of

William Bonfield of Beveridge in the County of Bourke Farmer is - - now the proprietor of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All that piece of Land, delineated and coloured red on the map in the margin containing Two hundred and four acres and Ten perches or thereabouts being Crown Portion Pifteen Parish of Darraweit Guim County of

Daled the thousand nine hundled and twenty-three.

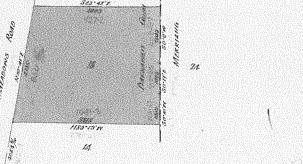
ENCUMBRANCES REFERRED TO

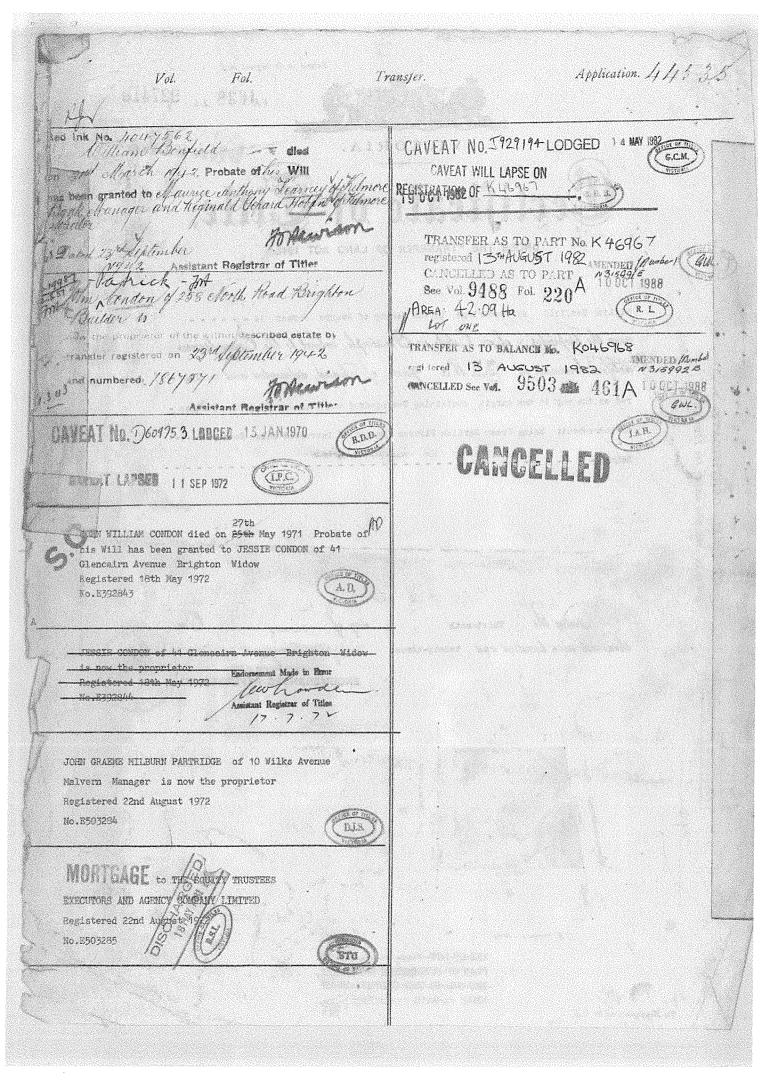
BETERIDGE LANE

SUBBLUSION No. 12

PLAN 1303S.6. AFFECTS LAND HERDIN

ORIGINAL GERTIFICATE.







#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 09997 FOLIO 135

Security no : 124047766106X Produced 15/10/2013 12:38 pm

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 214034F.

PARENT TITLE Volume 04712 Folio 309

Created by instrument LP214034F 07/01/1991

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132
AD639411S 25/05/2005

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

#### DIAGRAM LOCATION

SEE LP214034F FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL				
TIME	Λ.F.	DECTORED	CENDCU	CTATEMENT
END	OF.	REGISTER	SEARCH	STATEMENT

Additional information: (not part of the Register Search Statement)

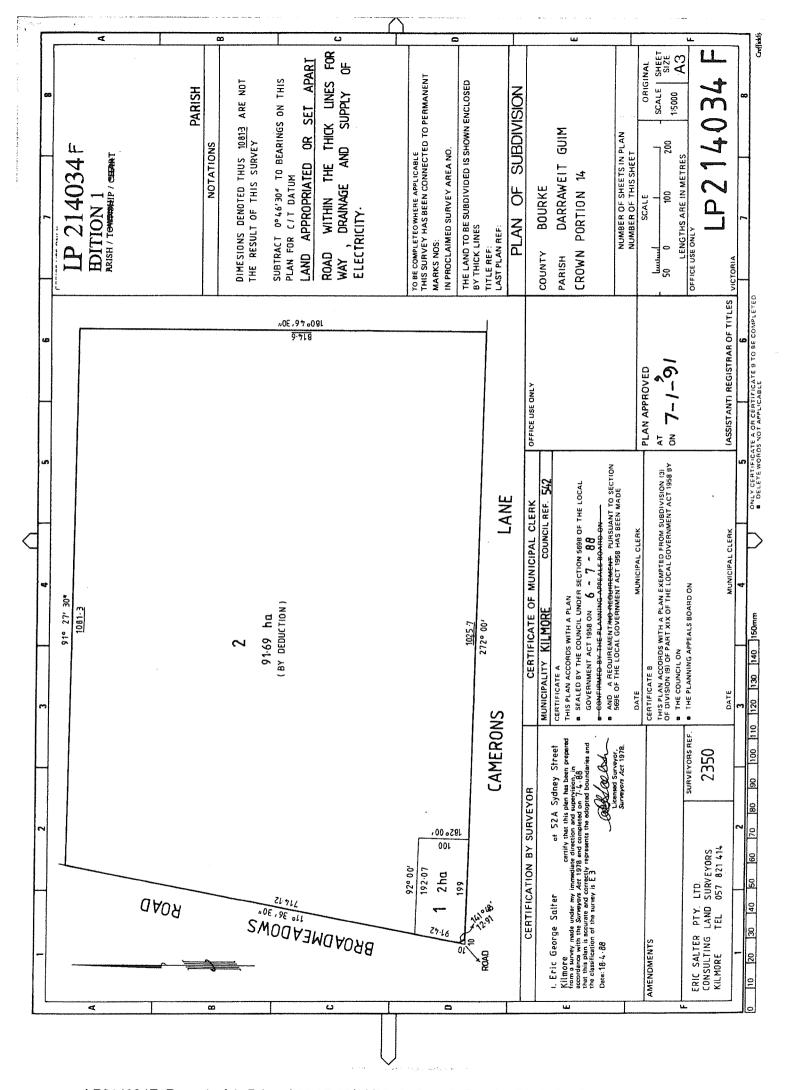
Street Address: 180 CAMERONS LANE BEVERIDGE VIC 3753

DOCUMENT END

FEIGL & NEWELL
Title Searchers
GPO ISOX 2343
Idelb 3301
(DX 831)
Ph. 9529 3011



Account: 13500 Order: 15358385



LP214034F, Page 1 of 1, Printed 12:37 15/10/2013, Search Enquiry 5358385, Customer 13500



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:42 PM

Volume 09997 Folio 135

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04712 Folio 309

#### RECORD OF ALTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
11/06/1996	23/07/1996	U258031U	N	TRANSFER ELSBERRY PTY LTD
11/06/1996	23/07/1996	U258028B	N	DISCHARGE OF MORTGAGE C547516

#### RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing	Imaged
---------------------------------------	--------

Registration on Register

25/05/2005 25/05/2005 AD639411S Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

ELSBERRY PTY LTD

TO:

YARRA VALLEY WATER LIMITED

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

YARRA VALLEY WATER LIMITED OF LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

30/08/2010

31/08/2010

AH462111E

Υ



Account: 13500 Order: 15358462 Title 9997/135



#### HISTORICAL SEARCH STATEMENT

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987
NOTICE Section 201UB Planning and Environment Act 1987
AH462111E 30/08/2010

STATEMENT END VOTS Snapshot

Volume 09997 Folio 135 124014227983E Produced 25/05/2005 11:21 am

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 214034F.

PARENT TITLE Volume 04712 Folio 309

Created by instrument LP214034F 07/01/1991

#### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

ELSBERRY PTY LTD of AT THE OFFICE OF ERNTS & YOUNG, 34TH FLOOR CENTRAL PARK,

152-158 ST GEORGES TC. PERTH WA 6000 U258031U 11/06/1996

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP214034F FOR FURTHER DETAILS AND BOUNDARIES

Paper Title Images

9997/135 - Version 0, Date 13/04/1999



Account: 13500 Order: 15358462 Title 9997/135

### ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES



CONTINUED AS A COMPUTER FOLIO

REGISTER BOOK

VOL.

THIS :

ONV

UNDER THE "TRANSFER OF LAND AC

STARBUCK PROPERTIES PTY. LTD. o f Camerons Lane Beveridge P-S proprietor of an estate in fee simple subject to the encumbrances notified on Plan of Subdivision No. 214034F which land is shown continuous lines on the map hereon and identified by that lot hereunder enclosed number -

Issued under Regulation 10 -

Derived From Vol. 4712 Fol. 309

7/1/91

ENCUMBRANCES.

MORTGAGE C547516 Trading Commonwealth of <u>Australia</u>-Registered 25/7/66-MORTGAGE J393192 Australian

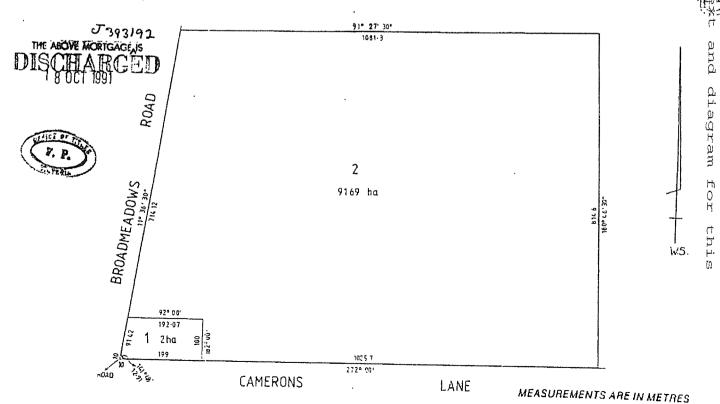
Finance

Limited-

European Corporation

Registered 24/3/81-

T09997-135-1-0



CONTINUED AS A COMPUTER FOLIO



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 04712 Folio 309

Folio Creation: Details Unknown

Parent title Volume 03887 Folio 352

STATEMENT END

Paper Title Images

4712/309 - Version 0, Date 17/12/1999



Account: 13500 Order: 15358503 Title 4712/309

VICTORIA.

UNDER THE "TRANSFER OF LAND ACT 1915."

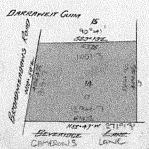
now the proprietor of an Estate in Freesimple, subject to the Encumbrances notified hereunder in All that piece of Land, defineated and coloured red on the map in the margin containing Two hundred and thirty-one acres Two roods-

Daled the

thousand nine hundred and twenty-three. Co

AFFECTS LAND MERBIN

ONIGINAL CENTIFICATE,



T04712-309-1-9

Nature of Instrument	fims of its Production for Registration.	To whom given.	Number or Symbol thereon.
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	Toughlin (		
1. 28 Warth 1924 and matter	1 4 1 9 3 3 n		
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Assistant Regi	87732		
of fire brench wh	etinoand		
SO White Lewis ait	registeres /		
March 1934	- 14605		
September 1980	M. Hocking		
(A. S.	ent registrar of inves	•	
/)		r .	
LAGRATE CAMERON died on 5th January 19			
as been granted to HELENE MARGARET ETH Mazelwynde' Beveridge Widow For Her			7 2
ated 4th March 1964	(Carlos)		*
o.B873943	E 810512		
D.L. STARBUCK PROPERTIES PROPRIETARY Lin Sydney Road North Coburg is now the p			
Registered 5th May 1965	· PER		
No.C207695	(Corone		
37067616I			
Registered 25th July 1966	NG BANK OF AUSTRALIA		
No.C547516	OF THE REAL PROPERTY.		
	Victoria		
MORTGAGE to AUSTRALIAN EUROPE	AN FINANCE		
CORPORATION LIMITED			
Registered 24th March 1981	A STATE OF THE STA		
No.J393192	537		
AMAPILEM			
CANCELLED The following Titles have been issued			
Pursuant to Regulation 10 of the Transfer of Land Act			
ca - 7 JAN 1991 Loss one to 2 in Vol. 9997 Fol. 134			
a Va. 9997 For 135	# E		
Persons to Section 32 of the Tomobs of Land Aca Going the Roads			
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#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 03887 Folio 352 Folio Creation: Details Unknown

STATEMENT END

Paper Title Images

3887/352 - Version 0, Date 16/02/2000



Account: 13500 Order: 15358493 Title 3887/352

vol3887#4 777352

VICTORIA.

# Certificate of Citle,

UNDER THE "TRANSFER OF LAND ACT 1890,"

CANCEL

Qated the Ninth
thousand nine hundred and fifteen

16

LOVO crements are in link LLA 15

day of September

MATING

Assistant Registrar of Titles. \
ENCUMBRANCES REFERRED

1. As to Portions Twelve Thirteen Eighteen and Nineteen Parish of Darraweit Guim - Nava Special Railway CONDIFIC

SPECIAL RAILWAY CONDITIONS contained in the Crown ---Grants to William Murray--

As to Portion Fourteen ---Parish of Darraweit Guim--

SPECIAL RAILWAY CONDITION contained in the Crown -- Grant to William John --- Turner Clarke -----

 $\overline{As}$  to all the land -----

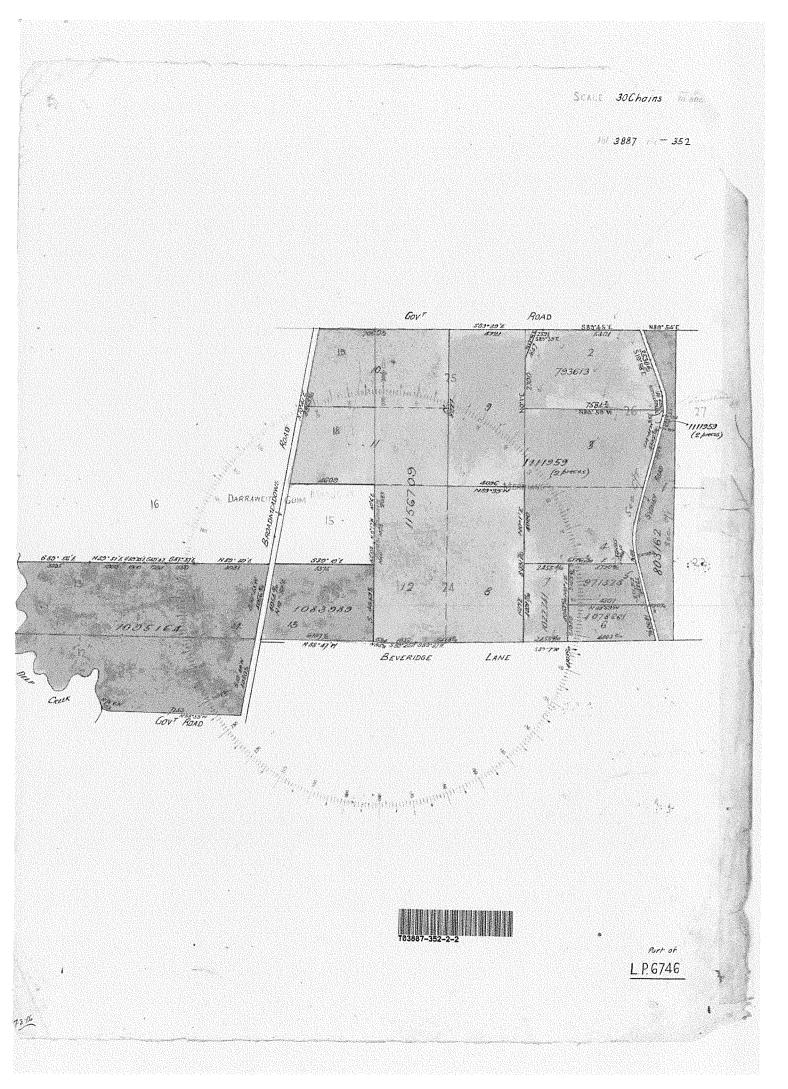
2. THE RIGHTS OF PERSONS claiming under the will and bodicil of William Murray who is 2 died on the 20th. -- I January 1871 Probate whereof was granted on the 25th. May --- 1871 to Thomas Must leave being reserved to John Matheson ---

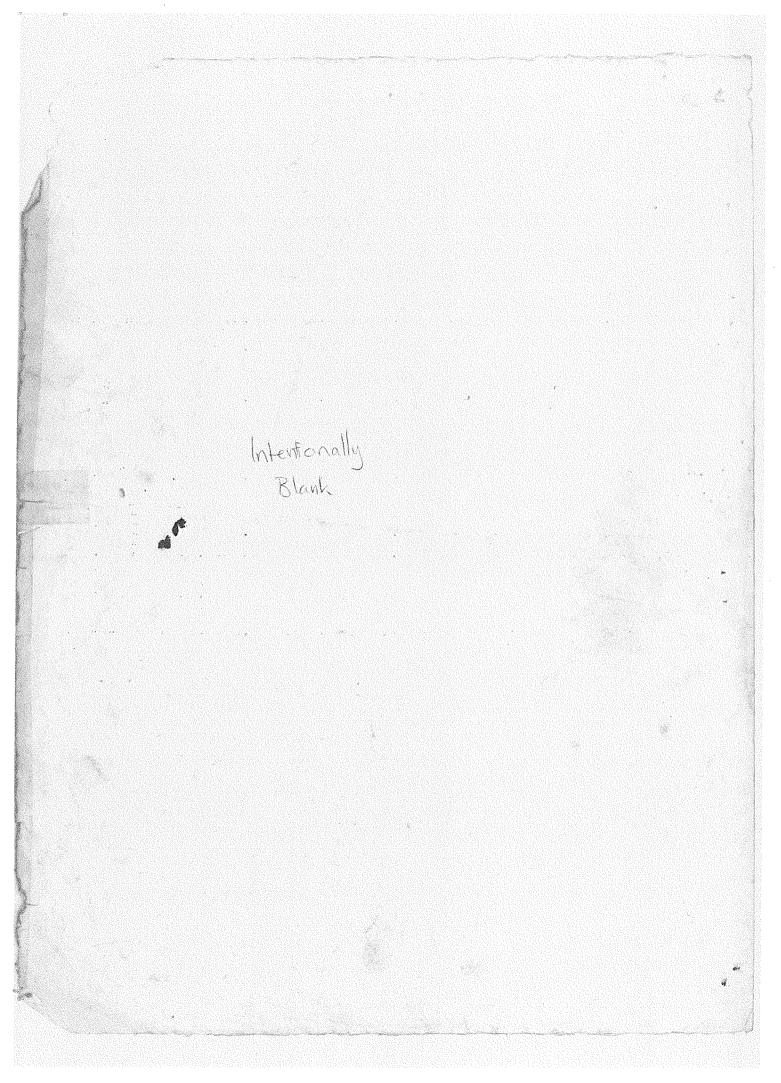
to John Matheson --- and Morton Allport-to come in and nrows
the said Will and -Codicil -----

T03887-352-1-4

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

<u> </u>	T.		1
Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
	They was	Philip William Must and	to the second
	My January	THE TRUTTED EXECUTION AND ALL IS ASSESSED IN MITTER	102/10
Transfer as to part.	10 7	John Francis Laffan  Mancis Laffan  Mancis Laffan  Mancis Laffan  Assistant Registrar of Titles.	1726/3.
Carrelled as to pass	1976	John hances Laffan	
3948 789518	At 2 25 him	JY 00	
drea 29/ac /re 9/w	V 88.	MATTER	
	The same	Assistans Registrar of Titles.	
	16	Philip William Must an	W
	7th June	THE TAUGISES CALEGRED AND ACCUSY COMPANY LYMITED	000 110
Transfer as to part	1. 1. 2. 2.	I Lope M.	803/62
Cancelled as to party See Certificate of Title	1916	Samuel John Baird	
v. 3975 at 794934	1 43.29 hu	1 To mediation	
Area 211 ac. 3rds 2	prev.	Philip William Must no THE TOUGHES CRESSION DAILY CONTROL LAMITED Samuel John Baird Matery Assistant Registrar of Titles.	
Transfer as to part	jst .	6	
Cancelled as to part;	November	anthony George	971328
See Certificate of Title Vid401Fol 880007	wulmter	Barbar	
-101 000001	1920	anthony George Barber.	
Area - 86.1.31			
Grea - 86./13/	American St.	the the Boles work	
TRANSFER as to part to		Assistant Registrar of Titles.	1
anthon Genna	Barber	TRANSPER as to part to Sydney Quay	
anthony George			March 1923,
1921 and numbered 1022		and numbered 1005 18 14	
vol.4528 Fol. 905508	tificate of Title	Val. 4712 Fol. 942310	2.14
4	W. Blayer	I i a conferment	moorh
Urea - 100 acres	nt negistrar of Titles.	Aug 949-2-25 Assistant Registrar of Titles.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
TRANSFER BE to part to Willia	melatrick	THANSFER as to part to Jeorge Thomas	spoon
Lewis	5 Becember	Kiloy registered on 25 12	une 1923.
1922 - 1078661		and numbered 1111989.	
CANCELLED as to past Son General	pare of Title	CANCULAR to part. See Certificate of	Title
*** 40.40*** ASSOCIA		vol. 4787 Post Vol Jus Cleen	10000
ana 84a, 3x, 36p, 400 100 100	e inter of litter.	Quea 87/ac 3 12 Assistant Registrate of Titles.	of little*.
Mansysh as to part to Alosdain			
more so to part to nausolavi	/ -WUNWECTE/	TRANSPER as to Balance to alasdair Came	ron 1
registered on	3rd January 1923.	registered on 20th Narch 1924 of	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Wanter age	1156709 CANCELLED, See Certifica	
712 942309	te of Titls	vol 4837 Fol. 967272	2
The A CU	はびがっつん	Assistant Registrar	CEARNO OF THE CO
Addistant Re	istrar of Tivies.	CAN Mentale Registral of Africa.	1)
	1	WARE STATE	





3887/352, Page 4 of 4, Printed 12:43 15/10/2013, Search Enquiry 5358493, Customer 13500



#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 09997 FOLIO 135

Security no : 124047766106X Produced 15/10/2013 12:38 pm

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 214034F.

PARENT TITLE Volume 04712 Folio 309

Created by instrument LP214034F 07/01/1991

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132
AD639411S 25/05/2005

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

#### DIAGRAM LOCATION

SEE LP214034F FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL				
TIME	Λ.F.	DECTORED	CENDCU	CTATEMENT
END	OF.	REGISTER	SEARCH	STATEMENT

Additional information: (not part of the Register Search Statement)

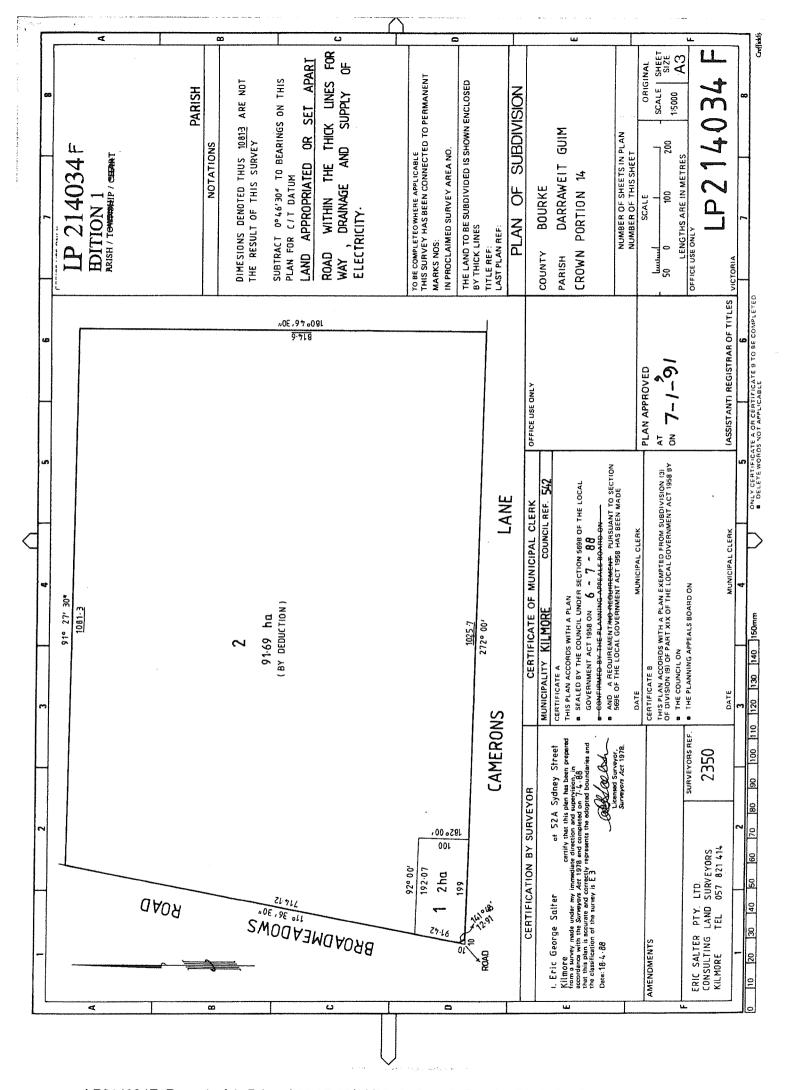
Street Address: 180 CAMERONS LANE BEVERIDGE VIC 3753

DOCUMENT END

FEIGL & NEWELL
Title Searchers
GPO ISOX 2343
Idelb 3301
(DX 831)
Ph. 9529 3011



Account: 13500 Order: 15358385



LP214034F, Page 1 of 1, Printed 12:37 15/10/2013, Search Enquiry 5358385, Customer 13500



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:42 PM

Volume 09997 Folio 135

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04712 Folio 309

#### RECORD OF ALTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
11/06/1996	23/07/1996	U258031U	N	TRANSFER ELSBERRY PTY LTD
11/06/1996	23/07/1996	U258028B	N	DISCHARGE OF MORTGAGE C547516

#### RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing	Imaged
---------------------------------------	--------

Registration on Register

25/05/2005 25/05/2005 AD639411S Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

ELSBERRY PTY LTD

TO:

YARRA VALLEY WATER LIMITED

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

YARRA VALLEY WATER LIMITED OF LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

30/08/2010

31/08/2010

AH462111E

Υ



Account: 13500 Order: 15358462 Title 9997/135



#### HISTORICAL SEARCH STATEMENT

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987
NOTICE Section 201UB Planning and Environment Act 1987
AH462111E 30/08/2010

STATEMENT END VOTS Snapshot

Volume 09997 Folio 135 124014227983E Produced 25/05/2005 11:21 am

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 214034F.

PARENT TITLE Volume 04712 Folio 309

Created by instrument LP214034F 07/01/1991

#### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

ELSBERRY PTY LTD of AT THE OFFICE OF ERNTS & YOUNG, 34TH FLOOR CENTRAL PARK,

152-158 ST GEORGES TC. PERTH WA 6000 U258031U 11/06/1996

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP214034F FOR FURTHER DETAILS AND BOUNDARIES

Paper Title Images

9997/135 - Version 0, Date 13/04/1999



Account: 13500 Order: 15358462 Title 9997/135

### ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES



CONTINUED AS A COMPUTER FOLIO THIS :

ONV

REGISTER BOOK

VOL.

UNDER THE "TRANSFER OF LAND AC

STARBUCK PROPERTIES PTY. LTD. o f Camerons Lane Beveridge P-S proprietor of an estate in fee simple subject to the encumbrances notified on Plan of Subdivision No. 214034F which land is shown continuous lines on the map hereon and identified by that lot hereunder enclosed number -

Issued under Regulation 10 -

Derived From Vol. 4712 Fol. 309

7/1/91

ENCUMBRANCES.

MORTGAGE C547516 Trading Commonwealth of <u>Australia</u>-Registered 25/7/66-MORTGAGE J393192 Australian

Finance

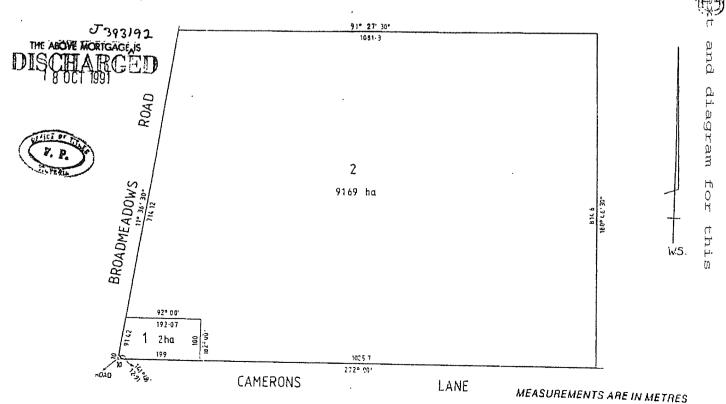
Limited-

European Corporation

Registered 24/3/81-



T09997-135-1-0



CONTINUED AS A COMPUTER FOLIO



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 04712 Folio 309

Folio Creation: Details Unknown

Parent title Volume 03887 Folio 352

STATEMENT END

Paper Title Images

4712/309 - Version 0, Date 17/12/1999



Account: 13500 Order: 15358503 Title 4712/309

VICTORIA.

UNDER THE "TRANSFER OF LAND ACT 1915."

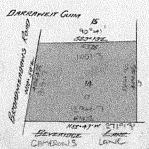
now the proprietor of an Estate in Freesimple, subject to the Encumbrances notified hereunder in All that piece of Land, defineated and coloured red on the map in the margin containing Two hundred and thirty-one acres Two roods-

Daled the

thousand nine hundred and twenty-three. Co

AFFECTS LAND MERBIN

ONIGINAL CENTIFICATE,



T04712-309-1-9

Nature of Instrument	fims of its Production for Registration.	To whom given.	Number or Symbol thereon.
Mobert Selmon	~ Whiting		
	Toughlin (		
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March 1934	- 14605		
September 1980	M. Hocking		
(A. S.	ent registrar of inves	•	
/)		r .	
LAGRATE CAMERON died on 5th January 19			
as been granted to HELENE MARGARET ETH Mazelwynde' Beveridge Widow For Her			7 2
ated 4th March 1964	(Carlos)		*
o.B873943	E 810512		
D.L. STARBUCK PROPERTIES PROPRIETARY Lin Sydney Road North Coburg is now the p			
Registered 5th May 1965	· PER		
No.C207695	(Corone		
37067616I			
Registered 25th July 1966	NG BANK OF AUSTRALIA		
No.C547516	OF THE REAL PROPERTY.		
	Victoria		
MORTGAGE to AUSTRALIAN EUROPE	AN FINANCE		
CORPORATION LIMITED			
Registered 24th March 1981	A STATE OF THE STA		
No.J393192	537		
AMAPILEM			
CANCELLED The following Titles have been issued			
Pursuant to Regulation 10 of the Transfer of Land Act			
ca - 7 JAN 1991 Loss one to 2 in Vol. 9997 Fol. 134			
a Va. 9997 For 135	# E		
Persons to Section 32 of the Tomobs of Land Aca Going the Roads			
un Vol. 9997 Fol. 136			
LP214034F	MLP		
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#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10290 FOLIO 892

Security no : 124047766114P Produced 15/10/2013 12:38 pm

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 131969.

PARENT TITLE Volume 08572 Folio 969

Created by instrument U258032R 11/06/1996

#### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

### DIAGRAM LOCATION

SEE LP131969 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 180 CAMERONS LANE BEVERIDGE VIC 3753

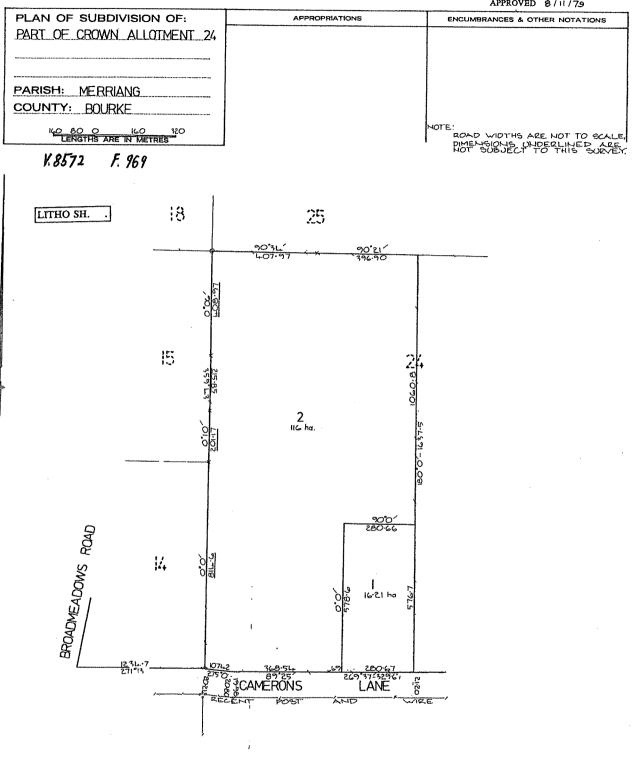
DOCUMENT END

FEIGL & NEWELL
Title Searchers
GPO MOX 2243
Táctb 3801
(DX 801)
Ph. 9629 6011



Account: 13500 Order: 15358390

EDITION 1
APPROVED 8/11/79





#### **HISTORICAL SEARCH STATEMENT**

Produced 15/10/2013 12:43 PM

Volume 10290 Folio 892

Folio Creation: Created as a computer folio

Parent title Volume 08572 Folio 969

RECORD OF ALTS DEALINGS

Imaged Dealing Type and Date Lodged for Date Recorded Dealing

Details Registration on Register

RECORD OF VOTS DEALINGS

Imaged Date Lodged for Date Recorded Dealing

on Register Registration

AD639411S γ 25/05/2005 25/05/2005

TRANSFER OF LAND BY ENDORSEMENT

FROM:

ELSBERRY PTY LTD

TO:

YARRA VALLEY WATER LIMITED

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

YARRA VALLEY WATER LIMITED of LUCKNOW STREET MITCHAM VIC 3132 AD639411S 25/05/2005

31/08/2010 AH462111E Y 30/08/2010

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987 NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010



Account: 13500 Order: 15358467 Title 10290/892



#### HISTORICAL SEARCH STATEMENT

STATEMENT END VOTS Snapshot

Volume 10290 Folio 892 124014227984D Produced 25/05/2005 11:21 am

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 131969.

PARENT TITLE Volume 08572 Folio 969

Created by instrument U258032R 11/06/1996

#### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

ELSBERRY PTY LTD of AT THE OFFICE OF ERNST & YOUNG, 34TH FLOOR CENTRAL PARK,

152-158 ST GEORGES TC. PERTH WA 6000 U258032R 11/06/1996

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP131969 FOR FURTHER DETAILS AND BOUNDARIES



Account: 13500 Order: 15358467 Title 10290/892



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 08572 Folio 969

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04837 Folio 272

#### RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

23/07/1996 LP131969 Y Cancelled by

U258032R

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

STATEMENT END

Paper Title Images

8572/969 - Version 0, Date 08/01/2000



Account: 13500 Order: 15358507 Title 8572/969

### ORIGINAL

NOT TO IS TAKEN FROM THE OFFICE



VOL 8572 FOL.

## Certificate of Citle

UNDER THE "TRANSFER OF LAND ACT"

DATED the 5th day of May 1965

R. G. The Derich

Computer Follows

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SUPERSEDED FOLIO

converted

OF

THE REGISTER.

Both

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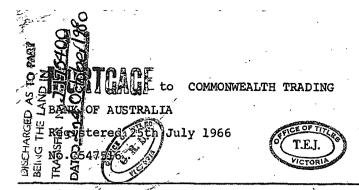
ENCUMBRANCES REFERRED TO

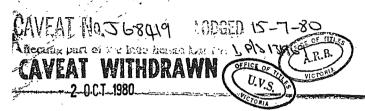
PLAN 2766 AFFECTS LAND HEREIN

MEASUREMENTS ARE IN JOYES

Derived from Vol.4837 Fol.272

C207695





TRANSFER AS TO PART No. J. 175400
registered 2nd October 1980
CANCELLED AS TO PART

1500 Vol9399



## MORTGAGE

to AUSTRALIAN EUROPEAN.

FINANCE CORPORATION LEMETED
Registered 24th March 1981

No.J393192



· PROPRIETOR

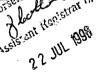
ELSDERRY PTY LTD

OFFICE AT ERNST & YOUNG, 34TH FLOOR

CENTRAL PARK 152-158 ST. GEORGES TC.

PERTH WESTERN AUSTRAL JACK 5000 N. Title

<del>U258032R 11/6/96</del>



CANCELLED
APPLICATION No. u258032R
Registered 11 JUN 1996
See Vol. 10290 Fol. 892





T08572-969-1-1

V.8572

F, 969



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 04837 Folio 272

Folio Creation: Details Unknown

Parent title Volume 03887 Folio 352

#### STATEMENT END

Paper Title Images

4837/272 - Version 0, Date 24/12/1999



Account: 13500 Order: 15358491 Title 4837/272

Entered in the Register Book

Vol. 4837 Fol. 167272

VICTORIA.

# Certificate of Bitle,

UNDER THE "TRANSFER OF LAND ACT 1916."

Alasadair Cameron of Hazelwynde Beveridge Grazier is ----
nam the proprietor of an Estate in Greesimple, subject to the Encumbrances

notified hereunder in All that piece of Sound, delineated and colouted

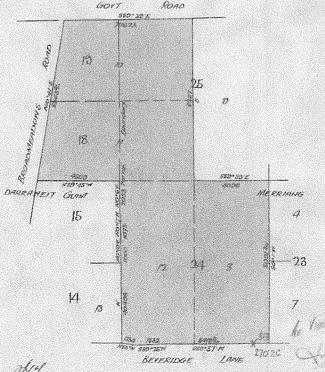
-three hundredred on the map in the margin containing One thousand/and three acres and Two roods
or thereabouts being Lots 8, 10, Eleven and 12 on Plan of Subdivision No. 6746 ---
lodged in the Office of Titles and being Crown Portions Eighteen and Nineteen ---
Parish of Darraweit Guim and part of Crown Portions Twenty-four and Twenty-five ---

Dated the Twentieta thousand nene hundred and twenty-four.

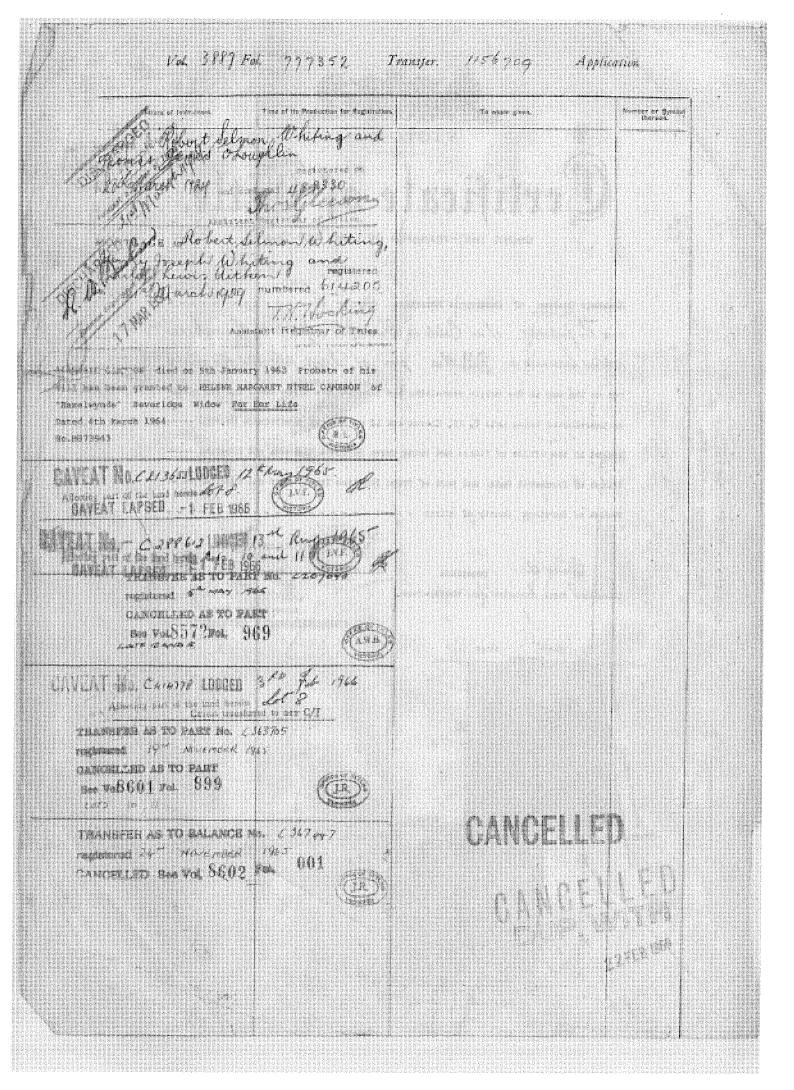
day of need

Assessed Engineer of Titles.

ENCUMBRANCES REFERRED

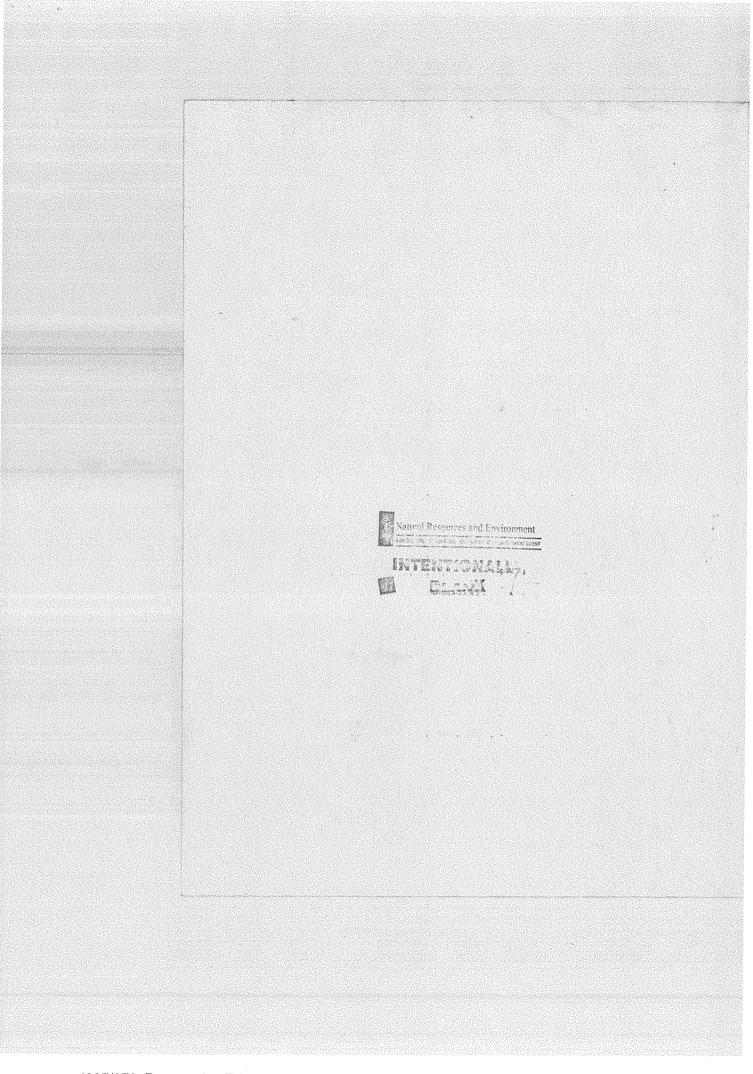






30 Chains 4337 15 - 272 continuous monten la continuo la continuo de la continuo del continuo de la continuo de la continuo del continuo de la continuo del continuo de la continuo de la continuo del continuo de la continuo del continuo de la continuo del continuo de la DARRAWEIT Ю 9 П MERRIANG 13 G/372 27113 70% BEYER/DGE LANE

4837/272, Page 3 of 4, Printed 12:42 15/10/2013, Search Enquiry 5358491, Customer 13500





#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 09399 FOLIO 692

Security no : 124047766118K Produced 15/10/2013 12:38 pm

#### LAND DESCRIPTION

Lot 1 on Plan of Subdivision 131969.

PARENT TITLE Volume 08572 Folio 969

Created by instrument J175400 02/10/1980

#### REGISTERED PROPRIETOR

Estate Fee Simple

Joint Proprietors

JOHN EDWIN STORER

CATHERINE JANE STORER both of 5 DALEY ST PASCOE VALE 3044

U637428R 14/02/1997

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

#### DIAGRAM LOCATION

SEE LP131969 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

------STATEMENT-----END OF REGISTER SEARCH STATEMENT------

Additional information: (not part of the Register Search Statement)

Street Address: 10 CAMERONS LANE BEVERIDGE VIC 3753

DOCUMENT END

FEIGL & NEWELL
Title Searchers
GFO BOX 2243
Lifelib 2561
(DX 201)
Ph. 9829 5011



Account: 13500 Order: 15358392

EDITION 1
APPROVED 8/11/79

	<del>-</del>		AFFROVED 8/11/19
PLAN OF SUBDIVISION OF:		APPROPRIATIONS	ENCUMBRANCES & OTHER NOTATIONS
PART OF CROWN ALLOTME  PARISH: MERRIANG  COUNTY: BOURKE  LENGTHS ARE IN METRES  V. 8572 F. 969			NOTE:  ROAD WIDTHS ARE NOT TO SCALE,  DIMENSIONS UNDERLINED ARE  NOT SUBJECT TO THIS SURVEY.
LITHO SH.	8	25	
	<u> </u>	90°21' 1-07°97 396°90  2 116 hq.	10000-1637-5
Eabows Roap	<u>7, 718</u>	90066 28066	

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#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:43 PM

Volume 09399 Folio 692

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 08572 Folio 969

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

05/03/2002 05/03/2002 AB118330R Y

DISCHARGE OF MORTGAGE

MORTGAGE(S) REMOVED

U637429N

30/08/2010 31/08/2010 AH462111E Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010

STATEMENT END

VOTS Snapshot

Volume 09399 Folio 692 124000722689W

Produced 05/03/2002 11:54 am



Account: 13500 Order: 15358468 Title 9399/692



#### HISTORICAL SEARCH STATEMENT

#### LAND DESCRIPTION

Lot 1 on Plan of Subdivision 131969.

PARENT TITLE Volume 08572 Folio 969

Created by instrument J175400 02/10/1980

#### REGISTERED PROPRIETOR

Estate Fee Simple

Joint Proprietors

JOHN EDWIN STORER

CATHERINE JANE STORER both of 5 DALEY ST PASCOE VALE 3044

U637428R 14/02/1997

#### ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE U637429N 14/02/1997
WESTPAC BANKING CORPORATION

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP131969 FOR FURTHER DETAILS AND BOUNDARIES

#### Paper Title Images

9399/692 - Version 1, Date 26/05/1999



Account: 13500 Order: 15358468 Title 9399/692

# ORIGINAL

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REGISTER BOOK

VOL. 9399 FOL. 692

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# Certificate of Citle

UNDER THE "TRANSFER OF LAND ACT"

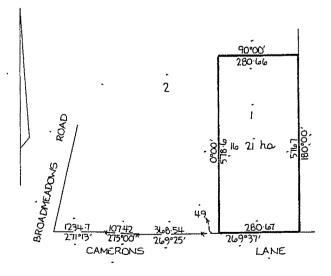
DATED the 2nd day of October 1980

Refores

Assistant Registrar of Titles



### ENCUMBRANCES REFERRED TO





T09399-692-1-4

Derived from Vol.8572 Fol.969

XA

AREA IS IN HECTARES (ha) MEASUREMENTS ARE IN METRES to AUSTRALIA AND

NEW ZEALAND SAKINGS BANK LIMITED

Registered 2nd October 1980

No.J175401



PROPRIETOR

SUSAN CAREY OF SOMERTON RD. GREENVALE

REGISTERED 24/5/89

P211011D



MORTGAGI

WESTPAC SATINGS

REGISTERED 157/5

P211012A



CAVEAT

CAVEATOR: GATZKA HOLDINGS PTY.LTD.

CAPACITY: CHARGEE

DATE OF CLAIM DOCUMENT: 11/3/89

LODGED BY: COLE & CO -3 STATION STREET, OAKLEIGH, 3166-

NOTICE TO: AS ABOVE

NO: S734351M

DATE: 12/10/93



arear williaman







CAVEAT

CAVEATOR: GREGORY CARL JUCKERT

CAPACITY: FEE SIMPLE

DATE OF CLAIM DOCUMENT: SEE CAVEAT

LODGED BY: RYAN MACKEY & MCCLELLAND

NOTICE TO: 65 MAIN ST. GREENSBOROUGH 3088

NO: T953278A

DATE: 10/11/95

U986899D CAVEAT WITHDRAWN 16 SEP 1997

AGL STORIA

CAVEAT

CAVEATOR: GATZKA HOLDINGS PTY. LTD.

CAPACITY: CHARGEE

DATE OF CLAIM DOCUMENT: 2/3/89 -

LODGED BY: COLE & CO.

NOTICE TO: 3 STATION ST. OAKLEIGH. 3166

NO: U354685U DATE: 13/8/96

CAVEAT WILL LAPSE ON

REGISTRATION OF U637478R.

18-2-07

D.C.S.

JOINT PROPRIETORS

JOHN EDWIN STORER & CATHERINE JANE STORER

5 DALEY ST. PASCOE VALE 3044

U637428R 14/2/97

MORTGAGE

WESTPAC BANKING CORPORATION

U637429N 14/2/97





#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 08572 Folio 969

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04837 Folio 272

#### RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

23/07/1996 LP131969 Y Cancelled by

U258032R

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

STATEMENT END

Paper Title Images

8572/969 - Version 0, Date 08/01/2000



Account: 13500 Order: 15358507 Title 8572/969

## ORIGINAL

TAKEN FROM THE OFFICE



# VICTORIA

UNDER THE "TRANSFER OF LAND A

D.L. STARBUCK PROPERTIES PROPRIETARY LIMITED of 824 Sydney Road Borth Coburgis now the proprietor of an estate in fee simple subject to the encumbrances --notified hereunder in ALL THAT piece of land delineated and coloured red on the map in the margin containing Three hundred and Twenty Six acres Three roods and Fifteen perches or thereabouts being Lot 12 on Plan of Subdivision No.6746 Parish of Merriang County of Bourke

DATED the 5th day of May 1965

computer

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SUPERSEDED FOLIO

converted

OF

THE REGISTER.

Both

and diagram

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ENCUMBRANCES REFERRED

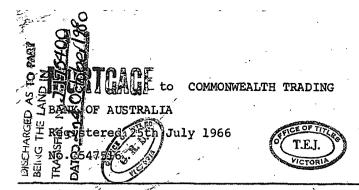
ATT ON COURT 

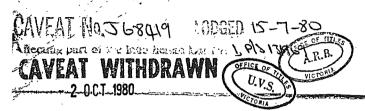
BENERI DGE

MEASUREMENTS ARE IN LOUKS

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C207695





TRANSFER AS TO PART No. J. 175400
registered 2nd October 1980
CANCELLED AS TO PART

1500 Vol9399



# MORTGAGE

to AUSTRALIAN EUROPEAN.

FINANCE CORPORATION LEMETED
Registered 24th March 1981

No.J393192



· PROPRIETOR

ELSDERRY PTY LTD

OFFICE AT ERNST & YOUNG, 34TH FLOOR

CENTRAL PARK 152-158 ST. GEORGES TC.

PERTH WESTERN AUSTRAL JACK 5000 N. Title

<del>U258032R 11/6/96</del>



CANCELLED
APPLICATION No. u258032R
Registered 11 JUN 1996
See Vol. 10290 Fol. 892





T08572-969-1-1

V.8572

F, 969



#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10915 FOLIO 748

Security no : 124047766143H Produced 15/10/2013 12:40 pm

#### LAND DESCRIPTION

Lot 8 on Plan of Subdivision 006746.

PARENT TITLE Volume 08602 Folio 001

Created by instrument AE024606W 28/11/2005

#### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132 AE024606W 28/11/2005

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

#### DIAGRAM LOCATION

SEE LP006746 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-------END OF REGISTER SEARCH STATEMENT-------

Additional information: (not part of the Register Search Statement)

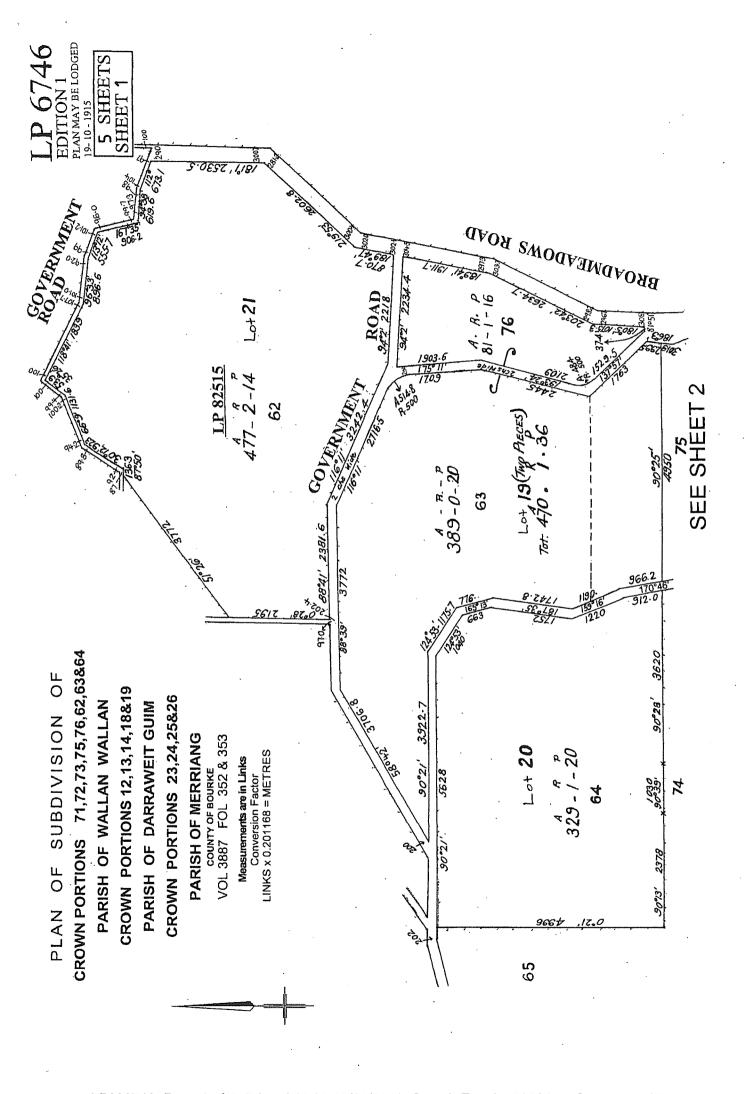
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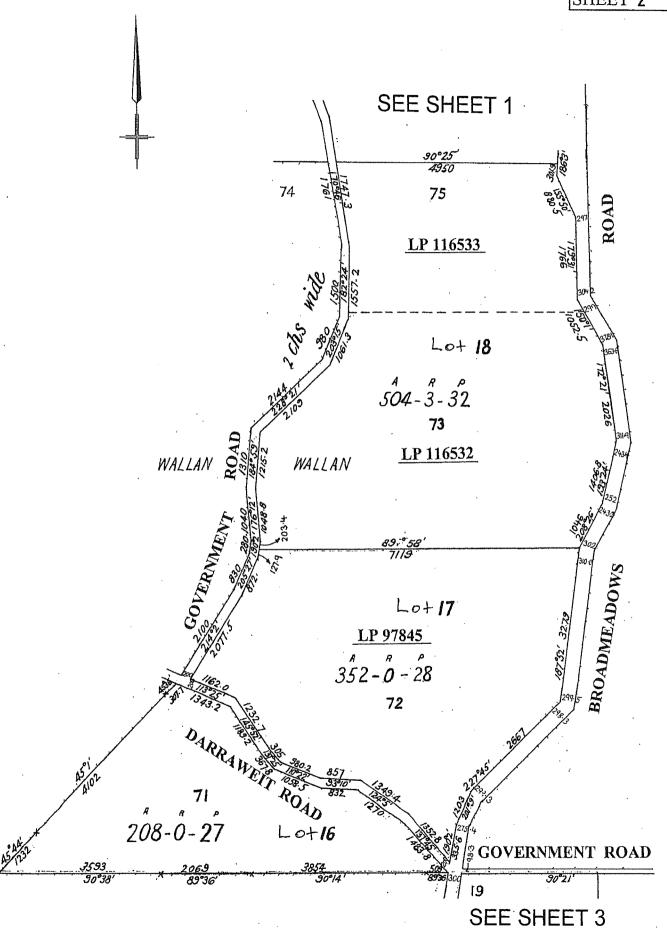
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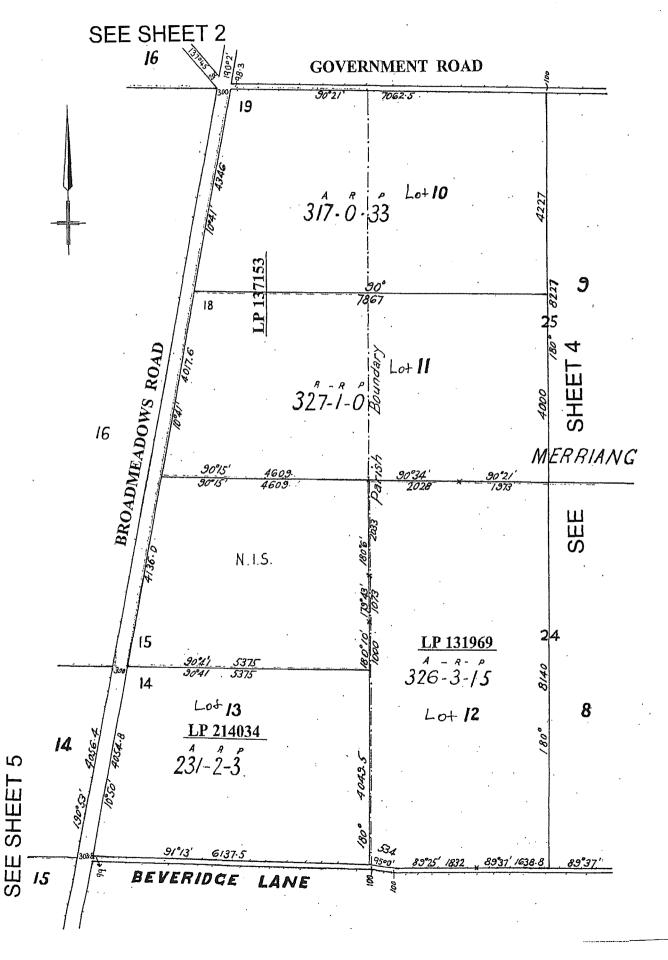
FEIGL & NEWELL
Title Searchers
GPO BOX 2243
Litelb 2001
(DX 001)
Ph. 9829 5011

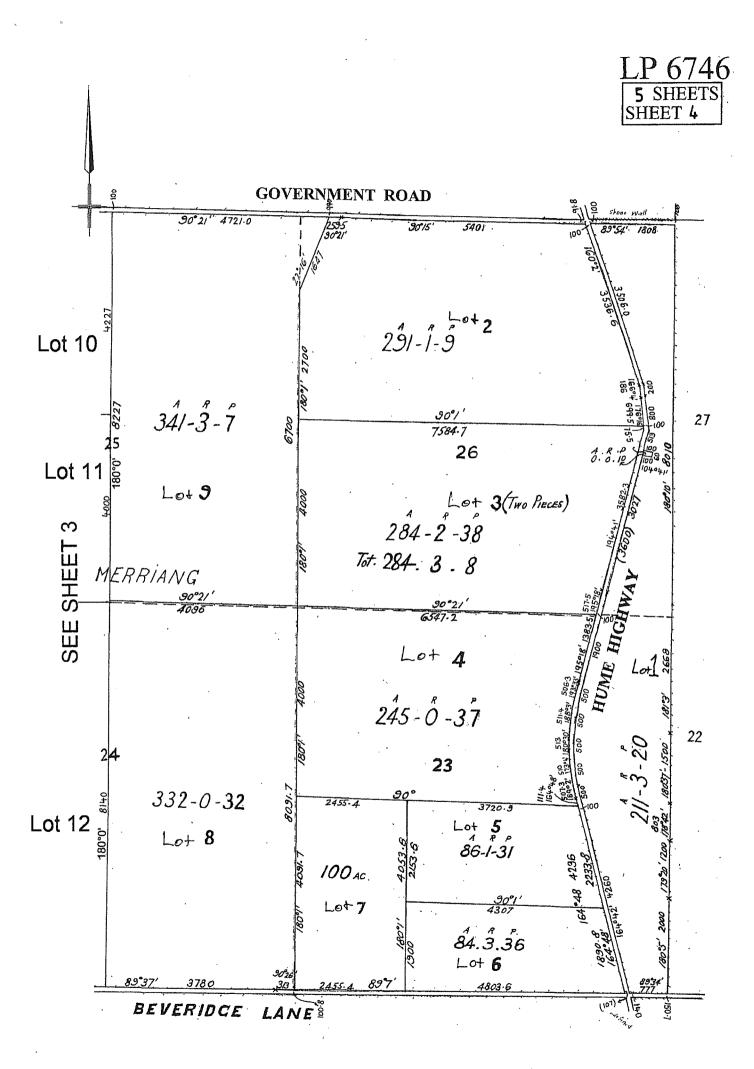


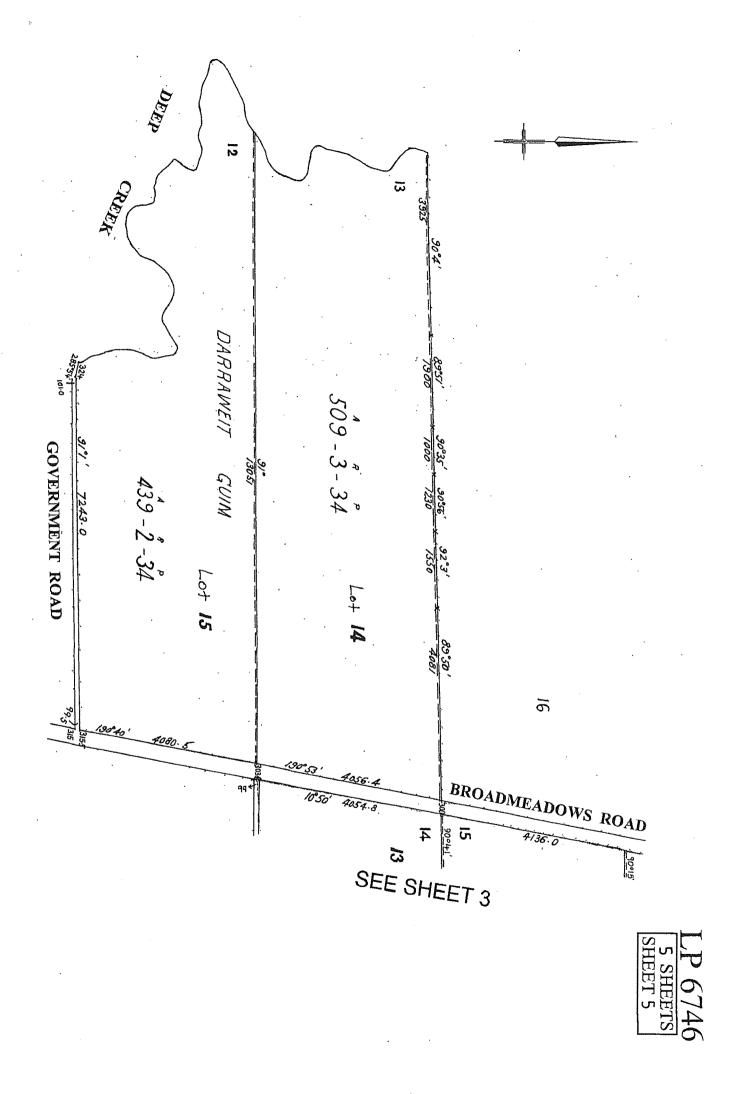
Account: 13500 Order: 15358410













#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:43 PM

Volume 10915 Folio 748

Folio Creation: Created as a computer folio

Parent title Volume 08602 Folio 001

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

29/06/2007 04/07/2007 AF172477S Y

AMEND PROPRIETOR NAME

FROM:

TO:

RESULTING PROPRIETORSHIP:

Estate Fee Simple Sole Proprietor

YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132

AE024606W 28/11/2005

30/08/2010 31/08/2010 AH462111E Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010

STATEMENT END

VOTS Snapshot



Account: 13500 Order: 15358470 Title 10915/748



#### HISTORICAL SEARCH STATEMENT

Volume 10915 Folio 748 124016251021A Produced 06/12/2005 05:59 pm

#### LAND DESCRIPTION

Lot 8 on Plan of Subdivision 006746.

PARENT TITLE Volume 08602 Folio 001

Created by instrument AE024606W 28/11/2005

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
GOULBURN VALLEY REGION WATER AUTHORITY
AE024606W 28/11/2005

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP006746 FOR FURTHER DETAILS AND BOUNDARIES



Account: 13500 Order: 15358470 Title 10915/748



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 08602 Folio 001

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04837 Folio 272

THE IMAGE OF THE FOLIO CEASED TO BE THE DIAGRAM LOCATION ON 11/05/2005 09:20 AM

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged Dealing Type and

Details

Registration on Register

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged

Registration

on Register

13/02/2002

13/02/2002

AB073977H

TRANSMISSION APPLICATION

FROM:

JAMES FRANCIS LEWIS WILLIAM JOHN LEWIS

TO:

FRANCIS WILLIAM MOONEY

JOHN JAMES MOONEY

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Joint Proprietors

FRANCIS WILLIAM MOONEY of 7126 SYDNEY ROAD CAMPBELLFIELD VIC 3061 JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal Representative(s) of JAMES FRANCIS LEWIS who died on 31/08/1984 AB073977H 13/02/2002

21/05/2003

03/06/2003

AC081743F

γ

TRANSFER OF LAND BY ENDORSEMENT



Account: 13500 Order: 15358518



#### HISTORICAL SEARCH STATEMENT

FROM:

FRANCIS WILLIAM MOONEY JOHN JAMES MOONEY

TO:

JOHN JAMES MOONEY

RESULTING PROPRIETORSHIP:

Estate Fee Simple Sole Proprietor

JOHN JAMES MOONEY of MARKWOOD VIA WANGARATTA AC081743F 21/05/2003

01/07/2004

01/07/2004

AC953794C

Y

APPLICATION RE NOTICE OF INTENTION TO ACQUIRE LAND

NOTICE Section 10(1) Land Acquisition and Compensation Act 1986
GOULBURN VALLEY REGION WATER AUTHORITY
ADDRESS FOR SERVICE OF NOTICES
GOULBURN VALLEY REGION WATER AUTHORITY of 104-110 FRYERS STREET SHEPPARTON
3630

AC953794C 01/07/2004

28/11/2005

06/12/2005

AE024606W

Y

Cancelled by AE024606W

STATEMENT END VOTS Snapshot

Volume 08602 Folio 001 124000470798R Produced 13/02/2002 12:38 am

#### LAND DESCRIPTION

Lot 8 on Plan of Subdivision 006746.

PARENT TITLE Volume 04837 Folio 272

Created by instrument C367447 24/11/1965



Account: 13500 Order: 15358518 Title 8602/001



#### HISTORICAL SEARCH STATEMENT

#### REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
JAMES FRANCIS LEWIS
WILLIAM JOHN LEWIS both of BEVERIDGE
D327476 28/02/1969

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE DIAGRAM ON IMAGED FOLIO VOLUME 8602 FOLIO 001 FOR FURTHER DETAILS AND BOUNDARIES

#### Paper Title Images

8602/001 - Version 0, Date 15/01/2000



Account: 13500 Order: 15358518 Title 8602/001

## ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES

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REGISTER BOOK 8602<sub>FOL</sub> VOL

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# VICTORIA

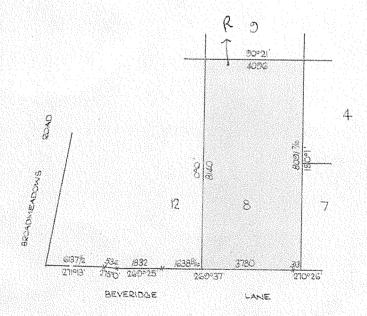
UNDER THE "TRANSFER OF LAND ACT

JOSEPH IGNATIUS BERNARD BUTLER Cartage Contractor and MARY IRENE BUTLER - -Married Woman as joint proprietors as to Two equal undivided third parts or and JOSEPH STANLEY BUTLER Cartage Contractor as to One equal - - -undivided third part or share all of 43 Warrick Street Ascot Vale are nowthe proprietors as tenants in common of an estate in fee simple subject to the encumbrances notified hereunder in ALL THAT piece of land delineated and - -coloured red on the map in the margin containing Three hundred and Thirty twoacres and Thirty two perches or thereabouts being Lot 8 Subdivision No.6746 Parish of Merriang County of Bourke -

DATED the 24th day of November 1965.

Assistant Registrar of Titles

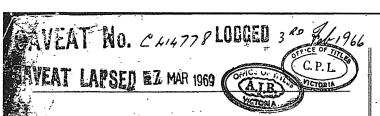
ENCUMBRANCES REFERRED



MEASUREMENTS ARE IN

LINKS

Derived from Vol.4837 Fol.272 0367447



DAVID EDWARD ELLIS LEIGHTON of Milky
Lane Whittlesea Farmer is now the
proprietor

Registered 28th February 1969

No. D327475



JAMES FRANCIS LEWIS Farmer and WILLIAM.

JOHN LEWIS Farmer both of Beveridge

are now JOINT PROPRIETORS

Registered 28th February 1969

JR.T.

No. D327476



T08602-001-1-2

V.8602 F. 001



#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 04837 Folio 272

Folio Creation: Details Unknown

Parent title Volume 03887 Folio 352

#### STATEMENT END

Paper Title Images

4837/272 - Version 0, Date 24/12/1999



Account: 13500 Order: 15358491 Title 4837/272

Entered in the Register Book

Vol. 4837 Fol. 167272

VICTORIA.

# Certificate of Bitle,

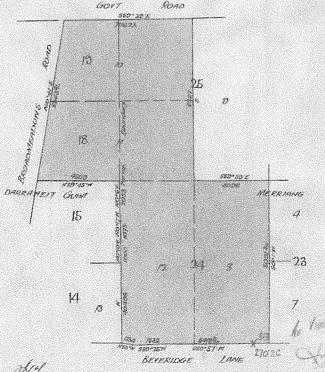
UNDER THE "TRANSFER OF LAND ACT 1916."

Dated the Twentieta thousand nene hundred and twenty-four.

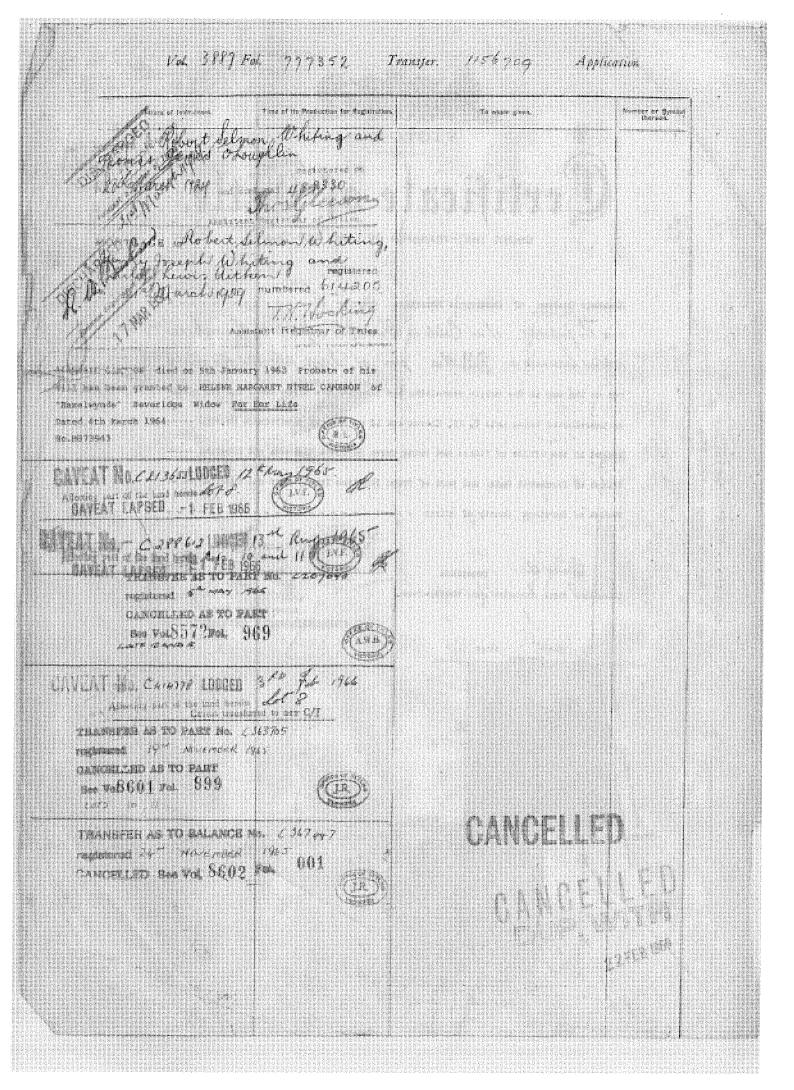
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ENCUMBRANCES REFERRED

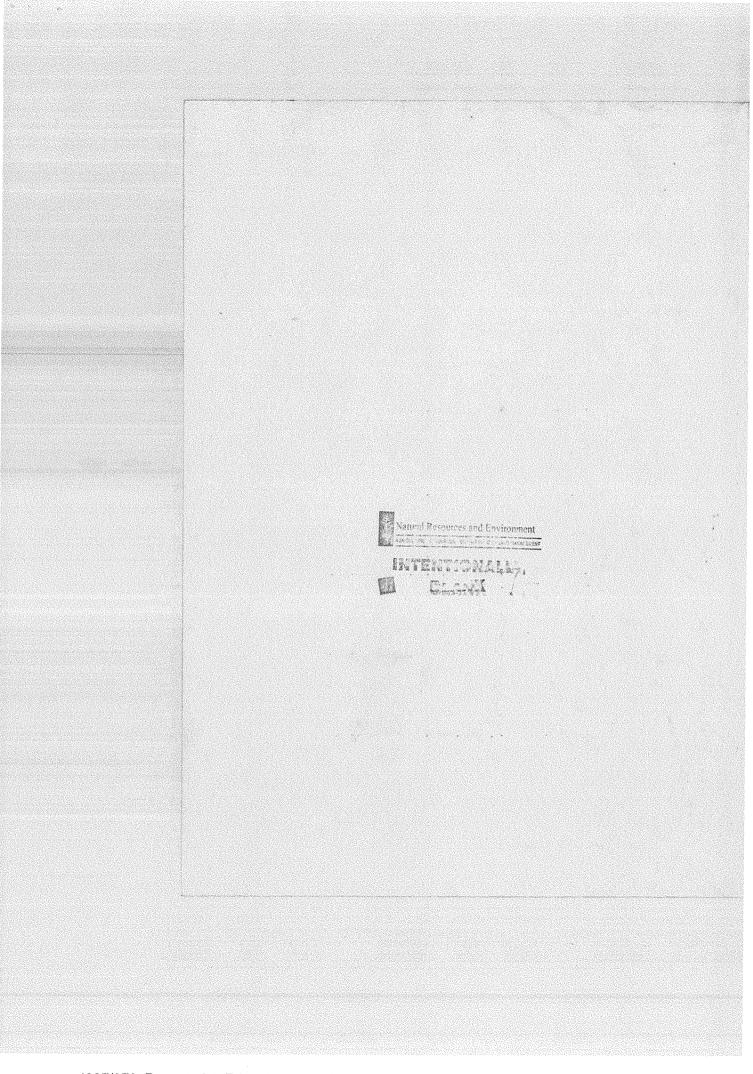






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4837/272, Page 3 of 4, Printed 12:42 15/10/2013, Search Enquiry 5358491, Customer 13500





### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10685 FOLIO 975

Security no : 124047766179T

Produced 15/10/2013 12:40 pm

#### LAND DESCRIPTION

Lot 1 on Plan of Subdivision 403186M.

PARENT TITLES :

Volume 04401 Folio 007

Volume 04528 Folio 508

Volume 04676 Folio 079

Volume 06603 Folio 414

Created by instrument PS403186M 06/11/2002

#### REGISTERED PROPRIETOR

Estate Fee Simple

TENANTS IN COMMON

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

BRYAN FRANCIS MOONEY of 2 BUNYARRA COURT GREENSBOROUGH VIC 3088

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

BERNARD JOHN MOONEY of 312 MARKWOOD - TARRAWINGEE ROAD MARKWOOD VIC 3678

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

CLAIRE ELIZABETH MOONEY of 2/46 BELMONT ROAD IVANHOE VIC 3079

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

KATHRYN ANNE MOONEY of 92 KEARNEY DRIVE ASPENDALE GARDENS VIC 3195

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

LEO VINCENT MOONEY of 13 JACKEL STREET WANGARATTA VIC 3677

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

PETER DAMIAN MOONEY of 26 RAEBURN STREET PASCOE VALE VIC 3044

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

STEPHEN MATTHEW MOONEY of 2021 GREAT ALPINE ROAD EVERTON VIC 3678

AF849900M 19/05/2008

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the



Account: 13500 Order: 15358421



#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

plan set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

### DIAGRAM LOCATION

SEE PS403186M FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

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-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: CAMERONS LANE BEVERIDGE VIC 3753

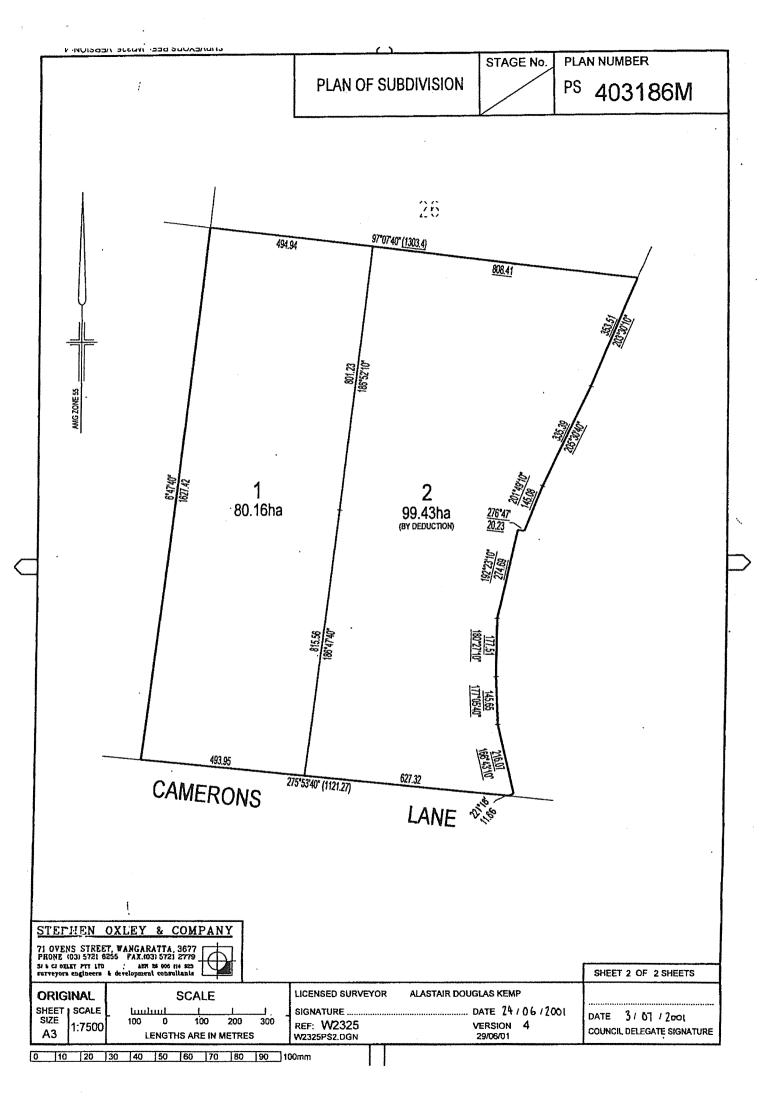
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TEIGL & NEWELL
Title Searchers
GPO BOX 2243
Litelb 2001
(DX 201)
Th. 9529 3011



Account: 13500 Order: 15358421

	STA	AGE No.	LTO USE ONLY	PLAN NUMBER		
PLAN OF SUBD	1 -			}		
PLAN OF SUBDI	VISION		EDITION 7	PS 403186M		
LOCATION OF LAND		COUNCIL CERTIFICATION AND ENDORSEMENT				
PARISH: MERRIANG .	СО	COUNCIL NAME: MITCHELL SHIRE COUNCIL REF: \$100026				
	1.	THIS PLAN IS CERTIFIED UNDER SECTION 6 OF THE SUBDIVISION ACT 1988.				
TOWNSHIP:	<del>-2.</del>					
SECTION:	·	DATE OF THE ORIGINAL CERTIFICATION UNDER SECTION 8 - / /				
CROWN ALLOTMENT:	<del>- 3.</del>	3THIS IS A STATEMENT OF COMPLIANCE ISSUED UNDER SECTION 21 OF THE				
CROWN PORTION: 23(PART)	OP	OPEN SPACE				
LTO BASE RECORD: DCMB  TITLE REFERENCES: VOL.6603 FOL.414 (PART), VOI.4401 FOL.007 (PART)	4528 FOL.508 (i)	(f) A REQUIREMENT FOR PUBLIC OPEN SPACE UNDER SECTION 18 OF THE SUBDIVISION ACT 1988 HAS/ HAS NOT BEEN MADE.				
VOL.4676 FOL.079 (PART)	1	(ii) THE REQUIREMENT HAS BEEN SATISFIED.				
LAST PLAN REFERENCE: LP 6746 (LOTS 4(PART),5(P/	(iii)	(iii) THE REQUIREMENT IS TO BE SATISFIED IN STAGE				
POSTAL ADDRESS: CAMERONS LANE, (at time of subdivision) BEVERIDGE, 3753			LEGATE			
		COUNCIL DE				
AMG CO-ORDINATES: E 320100 (of approximate centre of N 5851900 Z0	- ONE: 55	COUNCIL SE				
land in plan)		DATE 3/	07 /2001			
VESTING OF ROADS OR RESERVES  IDENTIFIER COUNCIL/BOD	Y/PERSON	RE-CERTIFIED UNDER SECTION 11(7) OF THE SUBDIVISION ACT 1988				
NIL NIL		COUNCIL DE	LEGATE	,		
		COUNCIL SEAL				
		DATE / /				
		OTATIONS				
	I N	NOTATIONS  THIS \$57S NOT A STAGED SUBDIVISION				
DEPTH LIMITATION DOES NOT APPLY		STAGING PLANNING PERMIT No. P302391				
		THE DIMENSIONS UNDERLINED ARE BASED ON TITLE AND ARE NOT THE RESULT OF THIS SURVEY				
	SUBT	SUBTRACT 6°46'40" FOR TITLE				
		LAND BEING SUBDIVIDED IS ENCLOSED WITHIN THICK CONTINUOUS LINES				
		SURVEY THIS PLAN IS/IS-MOT BASED ON SURVEY				
			BEEN CONNECTED TO PERMAN IRVEY AREA No. 53	ENT MARKS NO(S). 5, 32, 46		
· EASEME	NT INFORMATIO	ИС		LTO USE ONLY		
LEGEND: A - APPURTENANT EASEMENT E - ENCUME	ERING EASEMENT R	- ENCUMBERI	NG EASEMENT (ROAD)			
				STATEMENT OF COMPLIANCE/ EXEMPTION STATEMENT		
EASEMENT PURPOSE MIDTI-		LAN	D BENEFITED/IN FAVOUR OF	RECEIVED 🔽		
				DATE 17/09/2002		
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				PLAN REGISTERED		
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				DATE 6 / 11 / 02		
				Hostone.		
				ASSISTANT REGISTRAR OF TITLES		
				SHEET 1 OF 2 SHEETS		
STEPHEN OXLEY & COMPANY	CENSED SURVEYOR	ALASTAIR E	OUGLAS KEMP			
71 AVENC CTREET WANCADATTA 3677			n 0h . 01 . 0	DATE 3 / 07 / 2001		
PHONE (03) 5721 5255 FAX.(03) 5721 2779	GNATURE EF: <b>W2325</b>		DATE 24/06/2004	COUNCIL DELEGATE SIGNATURE		
anti-shots engineers a describittent consultants	2325PS1.DGN		6/01	ORIGINAL SHEET SIZE A3		





#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:43 PM

Volume 10685 Folio 975

Folio Creation: Created as a computer folio

Parent titles :

Volume 04401 Folio 007 Volume 04528 Folio 508 Volume 04676 Folio 079 Volume 06603 Folio 414

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

08/10/2002 23/12/2002 AB612500M Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

FRANCIS WILLIAM MOONEY

JOHN JAMES MOONEY

FRANCIS WILLIAM MOONEY

JOHN JAMES MOONEY

FRANCIS WILLIAM MOONEY

JOHN JAMES MOONEY

TO:

JOHN JAMES MOONEY

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677

AB612500M 08/10/2002



Account: 13500 Order: 15358472 Title 10685/975



#### HISTORICAL SEARCH STATEMENT

28/08/2006

28/08/2006

AE571366L

Y

TRANSMISSION APPLICATION

FROM:

JOHN JAMES MOONEY

TO:

BERNARD JOHN MOONEY

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

BERNARD JOHN MOONEY of 1 WILLIS STREET WANGARATTA VIC 3677 Legal

Personal Representative(s) of JOHN JAMES MOONEY who died on

02/05/2006

AE571366L 28/08/2006

19/05/2008

19/05/2008

AF849900M

Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

BERNARD JOHN MOONEY

TO:

BRYAN FRANCIS MOONEY

BERNARD JOHN MOONEY

CLAIRE ELIZABETH MOONEY

KATHRYN ANNE MOONEY

LEO VINCENT MOONEY

PETER DAMIAN MOONEY

STEPHEN MATTHEW MOONEY

RESULTING PROPRIETORSHIP:

Estate Fee Simple

TENANTS IN COMMON

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

BRYAN FRANCIS MOONEY of 35 SHAKESPEARE GROVE HEIDELBERG HEIGHTS

VIC 3081

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

BERNARD JOHN MOONEY of 1 WILLIS STREET WANGARATTA VIC 3677



Account: 13500 Order: 15358472 Title 10685/975



#### HISTORICAL SEARCH STATEMENT

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

CLAIRE ELIZABETH MOONEY of 3/19 RATHMINES STREET FAIRFIELD VIC 3078

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

KATHRYN ANNE MOONEY of 92 KEARNEY DRIVE ASPENDALE GARDENS VIC 3195

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

LEO VINCENT MOONEY of 13 JACKEL STREET WANGARATTA VIC 3677

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

PETER DAMIAN MOONEY of 26 RAEBURN STREET PASCOE VALE VIC 3044

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

STEPHEN MATTHEW MOONEY of 9 MILAWA-BOBINWARRAH ROAD MILAWA VIC

3678

AF849900M 19/05/2008

30/08/2010

31/08/2010

AH462111E

Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010

18/07/2011

18/07/2011

AJ076596K

Y

AMENDMENT OF ADDRESS ON FOLIO

RESULTING PROPRIETORSHIP:

Estate Fee Simple

TENANTS IN COMMON

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

BRYAN FRANCIS MOONEY of 2 BUNYARRA COURT GREENSBOROUGH VIC 3088

As to 1 of a total of 7 equal undivided shares

Sole Proprietor

BERNARD JOHN MOONEY of 312 MARKWOOD - TARRAWINGEE ROAD MARKWOOD

VIC 3678

As to 1 of a total of 7 equal undivided shares

Sole Proprietor



Account: 13500 Order: 15358472 Title 10685/975



#### HISTORICAL SEARCH STATEMENT

CLAIRE ELIZABETH MOONEY of 2/46 BELMONT ROAD IVANHOE VIC 3079
As to 1 of a total of 7 equal undivided shares
Sole Proprietor

KATHRYN ANNE MOONEY of 92 KEARNEY DRIVE ASPENDALE GARDENS VIC 3195 As to 1 of a total of 7 equal undivided shares Sole Proprietor

LEO VINCENT MOONEY of 13 JACKEL STREET WANGARATTA VIC 3677
As to 1 of a total of 7 equal undivided shares
Sole Proprietor

PETER DAMIAN MOONEY of 26 RAEBURN STREET PASCOE VALE VIC 3044 As to 1 of a total of 7 equal undivided shares Sole Proprietor

STEPHEN MATTHEW MOONEY of 2021 GREAT ALPINE ROAD EVERTON VIC 3678 AF849900M 19/05/2008

STATEMENT END VOTS Snapshot

Volume 10685 Folio 975 124003721742G Produced 06/11/2002 12:40 pm

#### LAND DESCRIPTION

Lot 1 on Plan of Subdivision 403186M.

PARENT TITLES :

Volume 04401 Folio 007 Volume 04528 Folio 508 Volume 04676 Folio 079

Volume 06603 Folio 414

Created by instrument PS403186M 06/11/2002

#### REGISTERED PROPRIETOR

Estate Fee Simple

As to the land formerly contained in Volume 04528 Folio 508

Joint Proprietors

FRANCIS WILLIAM MOONEY of MINTON STREET BEVERIDGE VIC 3753

JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677

Legal Personal Representative(s) of JAMES FRANCIS LEWIS who died on 08/02/1989

Account: 13500 Order: 15358472



Title 10685/975



### HISTORICAL SEARCH STATEMENT

As to the land formerly contained in Volume 06603 Folio 414 As to 1 of a total of 2 equal undivided shares Joint Proprietors

FRANCIS WILLIAM MOONEY of MINTON STREET BEVERIDGE VIC 3753

JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal

Representative(s) of WILLIAM JOHN LEWIS who died on 31/08/1984

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

FRANCIS WILLIAM MOONEY OF MINTON STREET BEVERIDGE VIC 3753
JOHN JAMES MOONEY OF "MARKWOOD" WANGARATTA 3677 Legal Personal
Representative(s) of JAMES FRANCIS LEWIS who died on 08/02/1989
PS403186M 06/11/2002

## ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

### DIAGRAM LOCATION

SEE PS403186M FOR FURTHER DETAILS AND BOUNDARIES

../ 2



Account: 13500 Order: 15358472 Title 10685/975



### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 06603 Folio 414

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04787 Folio 293

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged Dealing Type and

Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged

Registration

Registration

on Register

on Register

17/09/2002

06/11/2002

PS403186M

PLAN OF SUBDIVISION, SUBDIVISION ACT 1988 Cancelled by PS403186M

STATEMENT END

VOTS Snapshot

Volume 06603 Folio 414

124003721704X

Produced 06/11/2002 12:39 pm

### LAND DESCRIPTION

Lot 1 on Title Plan 815153S (formerly known as part of Lot 4 on Plan of Subdivision 006746).

PARENT TITLE Volume 04787 Folio 293

Created by instrument 1877199 02/02/1943



Account: 13500 Order: 15358510



### HISTORICAL SEARCH STATEMENT

### REGISTERED PROPRIETOR

Estate Fee Simple TENANTS IN COMMON

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

FRANCIS WILLIAM MOONEY of 1726 SYDNEY ROAD CAMPBELLFIELD 3061 JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal Representative(s) of WILLIAM JOHN LEWIS who died on 31/08/1984 X803527R 10/10/2001

As to 1 of a total of 2 equal undivided shares Joint Proprietors

FRANIS WILLIAM MOONEY of 1726 SYDNEY ROAD CAMPBELLFIELD 3061 JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal Representative(s) of JAMES FRANCIS LEWIS who died on 08/02/1989 X803528N 10/10/2001

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

### DIAGRAM LOCATION

SEE DIAGRAM ON IMAGED FOLIO VOLUME 6603 FOLIO 414 FOR FURTHER DETAILS AND BOUNDARIES

### Paper Title Images

6603/414 - Version 1, Date 29/11/2001



Account: 13500 Order: 15358510 Title 6603/414

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UNDER THE "TRANSFER OF LAND ACT 1928."

William John Lewis and James Francis Lewis both of Beveridge Dairy Farmers are now the proprietors as tenants in common in equal shares- - of an Estate in Tee simple, subject to the Encumbrances All that piece of Land, delineated and coloured notified hereunder in red on the map in the margin containing Two hundred and forty-three acres One rood and Sixteen perches or thereabouts being part of Lot 4 on Plan of Subdivision----No.6746 lodged in the Office of Titles and being part of Crown Portion Twenty-three Parish of Merriang County of Bourke-

Dated the

be dealt with outside the Titles Office.

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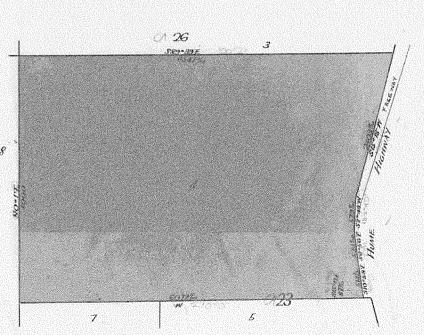
CERTIFICATE

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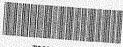
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Assistant Registrar of Titles.

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thousand nine hundred and forty-three.



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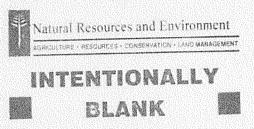
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TITLE





### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 04787 Folio 293

Folio Creation: Details Unknown

Parent title Volume 03887 Folio 352

STATEMENT END

Paper Title Images

4787/293 - Version 1, Date 19/09/2003



Account: 13500 Order: 15358512 Title 4787/293



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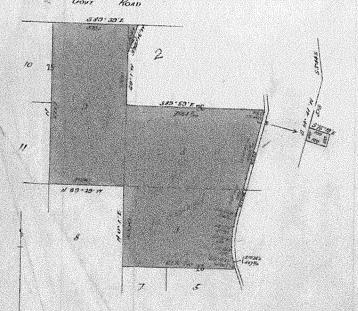
# Certificate of Citle,

UNDER THE "TRANSFER OF LAND ACT 1915."

Dated the Twenty-fifth thousand nine hundred and twenty-three.

day of June
Thus Gleenon
Assistant Begistrar of Titles.

ENCUMBRANCES REFERRED TO

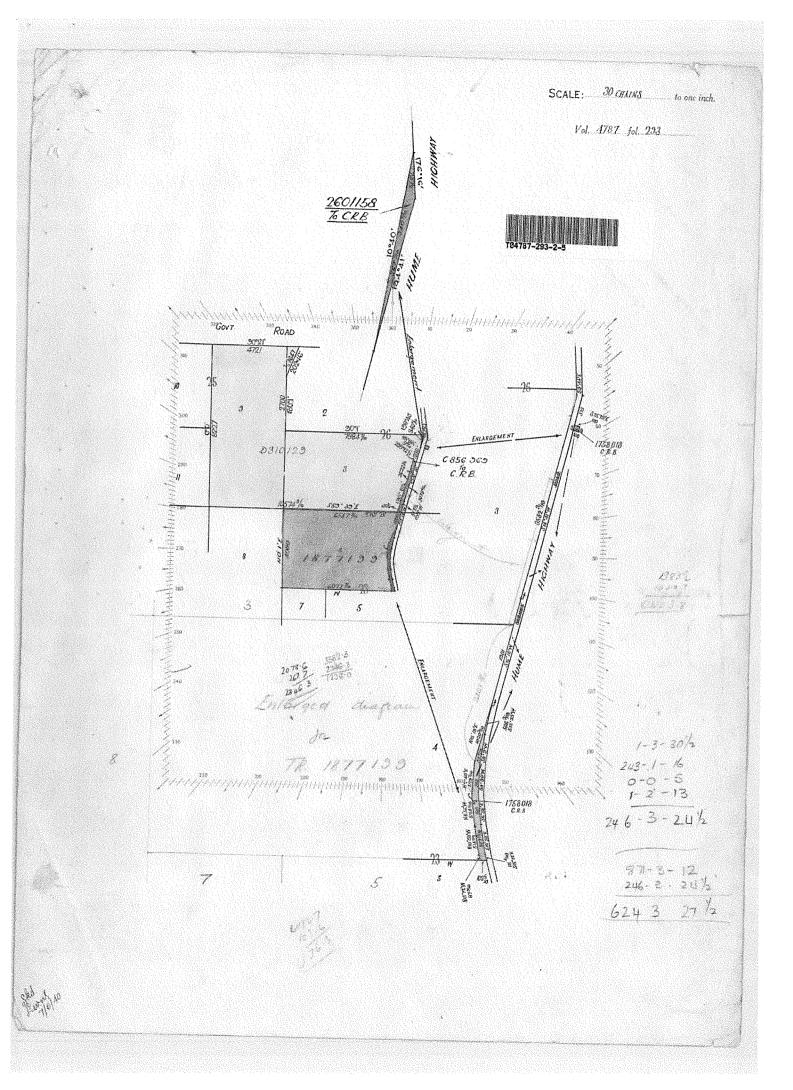




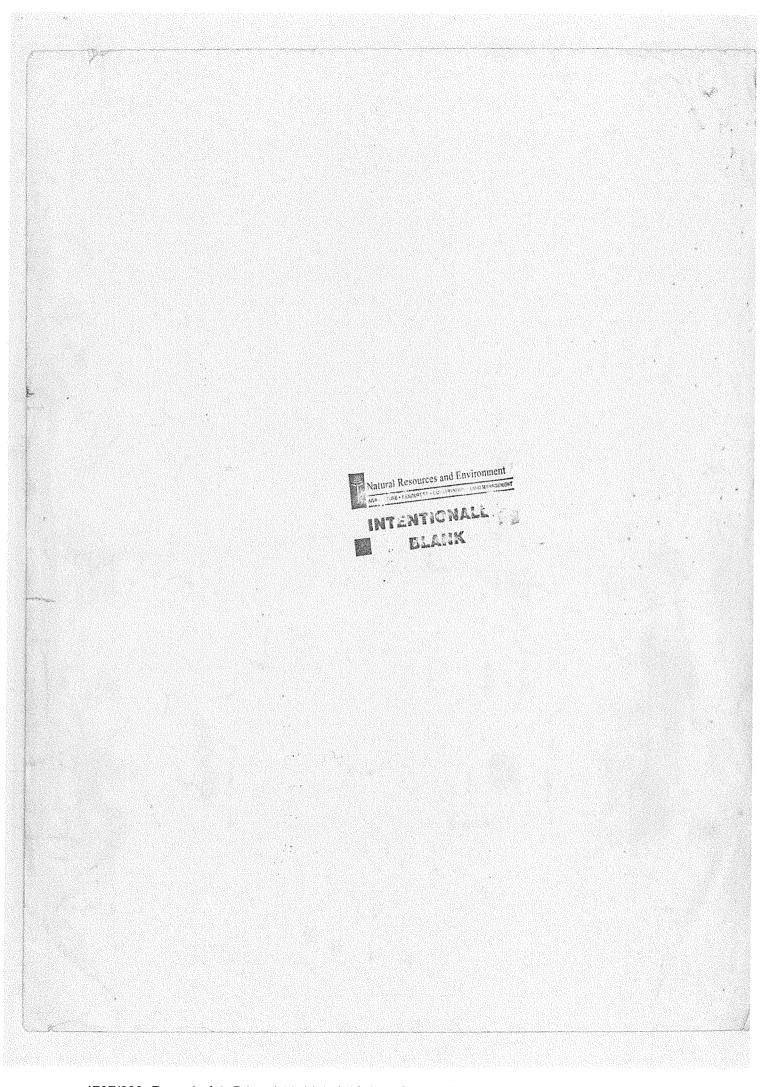
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4787/293, Page 3 of 4, Printed 12:44 15/10/2013, Search Enquiry 5358512, Customer 13500





### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10685 FOLIO 976

Security no : 124047766182Q

Produced 15/10/2013 12:40 pm

### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 403186M.

PARENT TITLES :

Volume 04401 Folio 007

Volume 04528 Folio 508 Volume 04676 Folio 079

Volume 06603 Folio 414

Created by instrument PS403186M 06/11/2002

### REGISTERED PROPRIETOR

Estate Fee Simple

Sole Proprietor

DULCIE MOONEY of 86 MINTON STREET BEVERIDGE VIC 3753

AE548088U 16/08/2006

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

## DIAGRAM LOCATION

SEE PS403186M FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-------END OF REGISTER SEARCH STATEMENT--------

Additional information: (not part of the Register Search Statement)

Street Address: 615 OLD HUME HIGHWAY BEVERIDGE VIC 3753

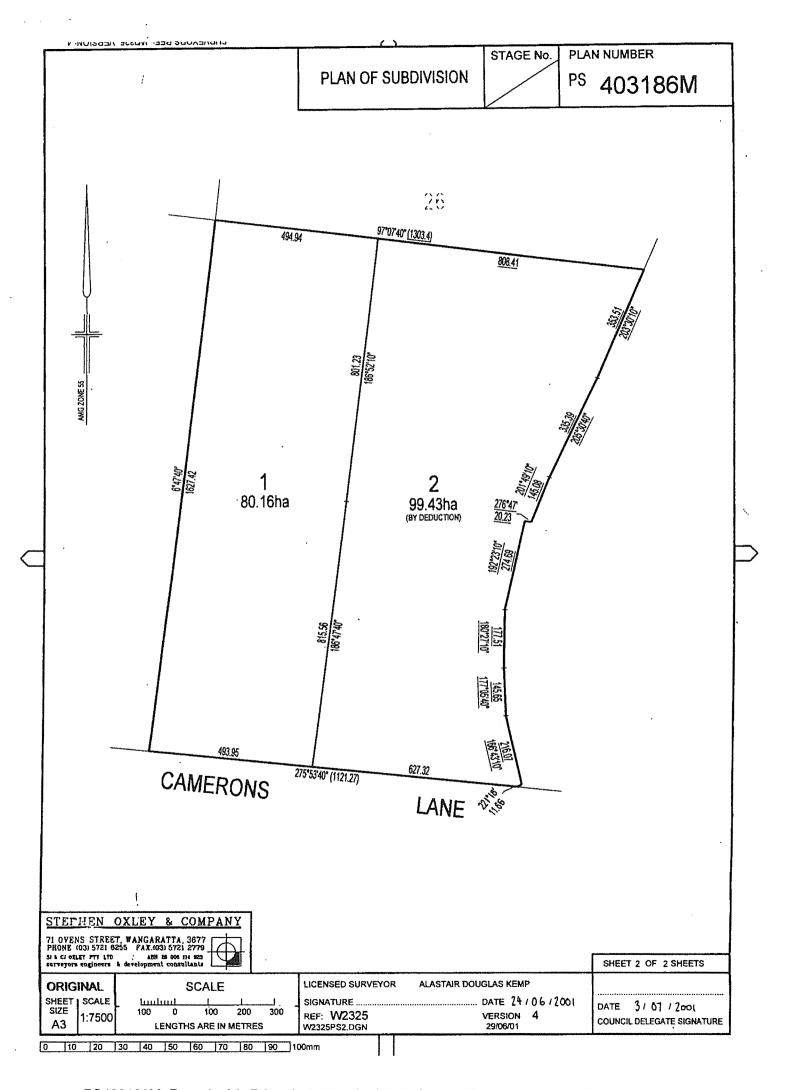
DOCUMENT END

FEIGL & NEWELL Title Searchers GPO BOX 2248 Rich stot (DX 301) Ph. 9629 3011



Account: 13500 Order: 15358422

				STAGE	No.	LTO USE ONLY	PLAN NUMBER	
	PLAN OF SUBDIVISION				EDITION 1	PS 403186M		
LOCATION OF LAND					COUNCIL CERTIFICATION AND ENDORSEMENT			
PARISH: MERRIANG .					COUNCIL NAME: MITCHELL SHIRE COUNCIL REF: \$200026			
					1. THIS PLAN IS CERTIFIED UNDER SECTION 6 OF THE SUBDIVISION ACT 1988.			
TOWNSHIP:					-2. THIS PLAN IS CERTIFIED UNDER SECTION 11(7) OF THE SUBDIVISION ACT 1988.			
SECTION:					DATE OF THE ORIGINAL GERTIFICATION UNDER SECTION 6 / /			
CROWN ALLOTMENT: ——					-3. THIS IS A STATEMENT OF COMPLIANCE ISSUED UNDER SECTION 21 OF THE - -SUBDIVISION ACT 1998.			
CROWN PORTION: 23(PART)					OPEN SPACE			
LTO BASE RECORD: DCMB   TITLE REFERENCES: VOL.6603 FOL.414 (PART), VOL.4528 FOL.508					(i) A REQUIREMENT FOR PUBLIC OPEN SPACE UNDER SECTION 18 OF THE SUBDIVISION ACT 1988 HAS/ HAS NOT BEEN MADE.			
VOL.4676 FOL.079 (PART)				(ii) THE REQUIREMENT HAS BEEN SATISFIED.				
LAST PLAN REFERENCE: LP 6746 (LOTS 4(PART),5(PART),6(PART),7) POSTAL ADDRESS: CAMERONS LANE.					(iii) -THE REQUIREMENT IS TO BE SATISFIED IN STAGE -			
(et time of subdivision) BEVERIDGE, 3753					COUNCIL DELEGATE			
AMG CO-ORDINATES: E 320100								
(of approximate centre of N 5851900 ZONE: 55 land in plan)				DATE 3 / 07 /2001				
VESTING OF ROADS OR RESERVES				DATE 11 UT 1 TOOL				
IDENTIFIER COUNCIL/BODY/PERSON			RE-CERTIFIED UNDER SECTION 11(7) OF THE SUBDIVISION ACT 1988					
NIL NIL				cou	JNCIL [	DELEGATE	•	
			COUNCIL SEAL					
				DATE / /				
					NOTATIONS			
DEPTH LIMITATION DOES NOT APPLY					THIS #S/IS NOT A STAGED SUBDIVISION STAGING PLANNING PERMIT No. P302391			
					THE DIMENSIONS UNDERLINED ARE BASED ON TITLE AND ARE NOT			
1					THE RESULT OF THIS SURVEY			
1					SUBTRACT 6°46'40" FOR TITLE			
					LAND BEING SUBDIVIDED IS ENCLOSED WITHIN THICK CONTINUOUS LINES			
					SURVEY THIS PLAN IS/IS NOT BASED ON SURVEY			
					THIS SURVEY HAS BEEN CONNECTED TO PERMANENT MARKS No(s). 5, 32, 46			
EASEMENT INFORM					IN PROCLAIMED SURVEY AREA No. 53  MATION  LTO USE ONLY			
LEGEND: A - APPURTE	NANT EASEMEN			ENT R - ENCUMBERING EASEMENT (ROAD)			LTO USE ONLY	
						STATEMENT OF COMPLIANCE/ EXEMPTION STATEMENT		
		WIDTH (METRES)			SIN LAND BENEFITED/IN FAVOUR OF			
MELEVERAGE		(air:14E2)		***************************************			RECEIVED [	
							DATE 17/09/2002	
							LTO USE ONLY .	
							PLAN REGISTERED	
						TIME 12-30		
						DATE 6 / 11 / 02		
						Hostone.		
							ASSISTANT REGISTRAR OF TITLES	
							SHEET 1 OF 2 SHEETS	
STEPHEN OXLEY & COMPANY LICENSED SURVEYOR ALASTAIR DOUGLAS KEMP								
71 OVENS STREET, WANGARATTA, 3677					DATE 74/06/2009 DATE 3/07/2001			
PHONE (03) 5721 6255 FAX.(03) 5721 2779  31 & CLOSLEY PTI LTD  AND 25 000 114 623  SIGNATURE  REF: W2325				VERSION 4			COUNCIL DELEGATE SIGNATURE	
antanhors suffineers a constitution of persons				25/PS1.DGN 28/06/01			ORIGINAL SHEET SIZE A3	





### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:43 PM

Volume 10685 Folio 976

Folio Creation: Created as a computer folio

Parent titles :

Volume 04401 Folio 007 Volume 04528 Folio 508 Volume 04676 Folio 079 Volume 06603 Folio 414

### RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

08/10/2002 23/12/2002 AB612499S Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

FRANCIS WILLIAM MOONEY

JOHN JAMES MOONEY

TO:

FRANCIS WILLIAM MOONEY

RESULTING PROPRIETORSHIP:



Account: 13500 Order: 15358474 Title 10685/976
Page 1 of 4



### HISTORICAL SEARCH STATEMENT

Estate Fee Simple Sole Proprietor

FRANCIS WILLIAM MOONEY of MINTON STREET BEVERIDGE VIC 3753 AB612499S 08/10/2002

16/08/2006

16/08/2006

AE548087W

v

TRANSMISSION APPLICATION

FROM:

FRANCIS WILLIAM MOONEY

TO:

DULCIE MOONEY

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

DULCIE MOONEY of 86 MINTON STREET BEVERIDGE VIC 3753 Legal Personal Representative(s) of FRANCIS WILLIAM MOONEY who died on 12/11/2005
AE548087W 16/08/2006

16/08/2006

16/08/2006

AE548088U

Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

DULCIE MOONEY

TO:

DULCIE MOONEY

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

DULCIE MOONEY of 86 MINTON STREET BEVERIDGE VIC 3753 AE548088U 16/08/2006

30/08/2010

31/08/2010

AH462111E

Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010



Account: 13500 Order: 15358474 Title 10685/976



### HISTORICAL SEARCH STATEMENT

STATEMENT END VOTS Snapshot

Volume 10685 Folio 976 124003721746B Produced 06/11/2002 12:40 pm

### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 403186M.

PARENT TITLES :

Volume 04401 Folio 007 Volume 04528 Folio 508

Volume 04676 Folio 079

Volume 06603 Folio 414

Created by instrument PS403186M 06/11/2002

### REGISTERED PROPRIETOR

Estate Fee Simple

As to the land formerly contained in Volume 04401 Folio 007 Joint Proprietors

FRANCIS WILLIAM MOONEY of MINTON STREET BEVERIDGE VIC 3753

JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677

Legal Personal Representative(s) of JAMES FRANCIS LEWIS who died on 08/02/1989

As to the land formerly contained in Volume 04676 Folio 079

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

FRANCIS WILLIAM MOONEY of MINTON STREET BEVERIDGE VIC 3753

JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal

Representative(s) of WILLIAM JOHN LEWIS who died on 31/08/1984

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

FRANCIS WILLIAM MOONEY of MINTON STREET BEVERIDGE VIC 3753

JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal

Representative(s) of JAMES FRANCIS LEWIS who died on 08/02/1989

As to the land formerly contained in Volume 06603 Folio 414

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

FRANCIS WILLIAM MOONEY of MINTON STREET BEVERIDGE VIC 3753



Account: 13500 Order: 15358474 Title 10685/976



### HISTORICAL SEARCH STATEMENT

JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal Representative(s) of WILLIAM JOHN LEWIS who died on 31/08/1984 As to 1 of a total of 2 equal undivided shares
Joint Proprietors

FRANCIS WILLIAM MOONEY of MINTON STREET BEVERIDGE VIC 3753
JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal
Representative(s) of JAMES FRANCIS LEWIS who died on 08/02/1989
PS403186M 06/11/2002

../ 2

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

Account: 13500 Order: 15358474

### DIAGRAM LOCATION

SEE PS403186M FOR FURTHER DETAILS AND BOUNDARIES



Title 10685/976



### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 06603 Folio 414

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04787 Folio 293

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged Dealing Type and

Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged

Registration

Registration

on Register

on Register

17/09/2002

06/11/2002

PS403186M

PLAN OF SUBDIVISION, SUBDIVISION ACT 1988 Cancelled by PS403186M

STATEMENT END

VOTS Snapshot

Volume 06603 Folio 414

124003721704X

Produced 06/11/2002 12:39 pm

### LAND DESCRIPTION

Lot 1 on Title Plan 815153S (formerly known as part of Lot 4 on Plan of Subdivision 006746).

PARENT TITLE Volume 04787 Folio 293

Created by instrument 1877199 02/02/1943



Account: 13500 Order: 15358510



### HISTORICAL SEARCH STATEMENT

### REGISTERED PROPRIETOR

Estate Fee Simple TENANTS IN COMMON

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

FRANCIS WILLIAM MOONEY of 1726 SYDNEY ROAD CAMPBELLFIELD 3061 JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal Representative(s) of WILLIAM JOHN LEWIS who died on 31/08/1984 X803527R 10/10/2001

As to 1 of a total of 2 equal undivided shares Joint Proprietors

FRANIS WILLIAM MOONEY of 1726 SYDNEY ROAD CAMPBELLFIELD 3061 JOHN JAMES MOONEY of "MARKWOOD" WANGARATTA 3677 Legal Personal Representative(s) of JAMES FRANCIS LEWIS who died on 08/02/1989 X803528N 10/10/2001

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

### DIAGRAM LOCATION

SEE DIAGRAM ON IMAGED FOLIO VOLUME 6603 FOLIO 414 FOR FURTHER DETAILS AND BOUNDARIES

### Paper Title Images

6603/414 - Version 1, Date 29/11/2001



Account: 13500 Order: 15358510 Title 6603/414

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UNDER THE "TRANSFER OF LAND ACT 1928."

William John Lewis and James Francis Lewis both of Beveridge Dairy Farmers are now the proprietors as tenants in common in equal shares- - of an Estate in Tee simple, subject to the Encumbrances All that piece of Land, delineated and coloured notified hereunder in red on the map in the margin containing Two hundred and forty-three acres One rood and Sixteen perches or thereabouts being part of Lot 4 on Plan of Subdivision----No.6746 lodged in the Office of Titles and being part of Crown Portion Twenty-three Parish of Merriang County of Bourke-

Dated the

be dealt with outside the Titles Office.

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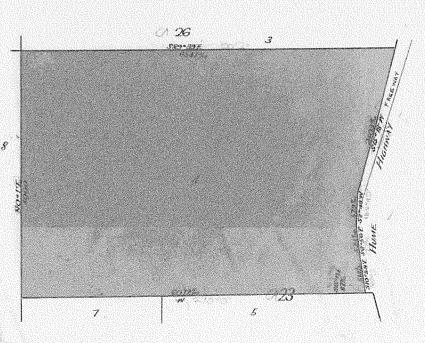
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Assistant Registrar of Titles.

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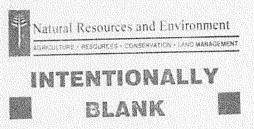
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TITLE



### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 08772 FOLIO 323

Security no : 124047766189H Produced 15/10/2013 12:41 pm

### LAND DESCRIPTION

Lot 2 on Title Plan 841310F (formerly known as part of Lot 3 on Plan of Subdivision 006746).

PARENT TITLE Volume 04787 Folio 293 Created by instrument D310129 10/02/1969

### REGISTERED PROPRIETOR

Estate Fee Simple
TENANTS IN COMMON
As to 1 of a total of 2 equal undivided shares
Sole Proprietor
WILLIAM BARRY GILBO of 1146 SYDNEY ROAD FAWKNER
As to 1 of a total of 2 equal undivided shares
Sole Proprietor
MARY GILBO of 1146 SYDNEY ROAD FAWKNER
D310129 10/02/1969

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

### DIAGRAM LOCATION

SEE TP841310F FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

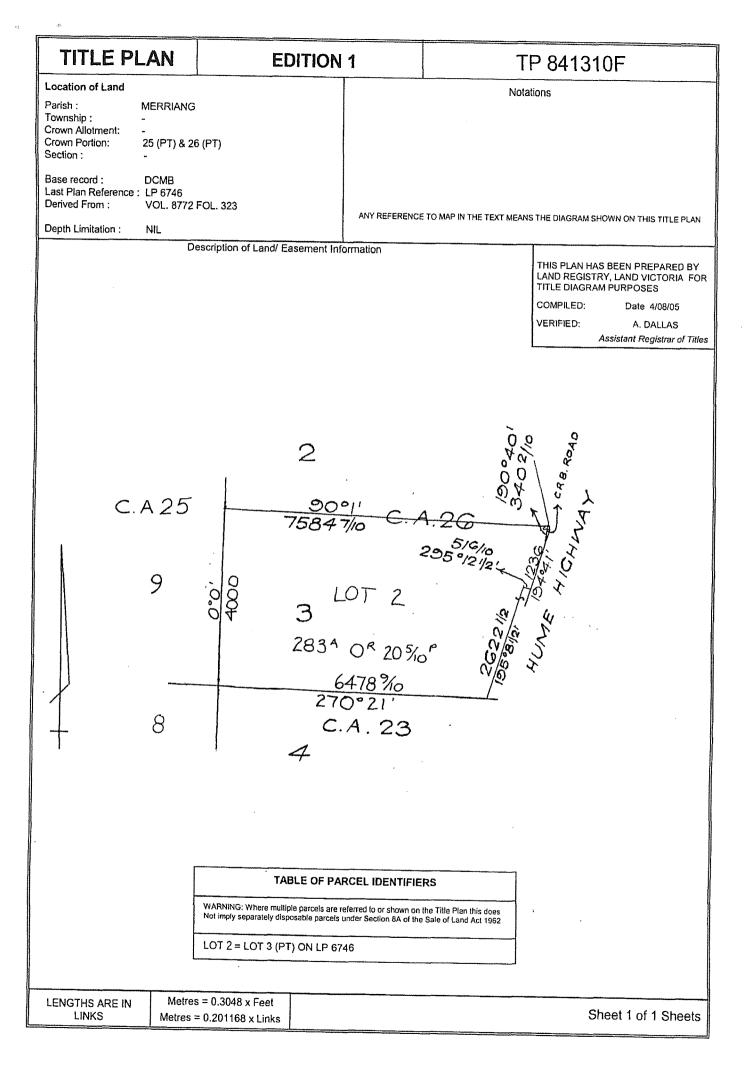
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Title Searchers
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(DIF 901)
ITH, 9628 8011



Account: 13500 Order: 15358427 Title 8772/323





### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:43 PM

Volume 08772 Folio 323

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04787 Folio 293

THE IMAGE OF THE FOLIO CEASED TO BE THE DIAGRAM LOCATION ON 16/08/2005 02:39 PM

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

03/06/2004 21/06/2004 AC900877W Y

APPLICATION RE NOTICE OF INTENTION TO ACQUIRE LAND

NOTICE as to part Section 10(1) Land Acquisition and Compensation Act 1986

GOULBURN VALLEY REGION WATER AUTHORITY

ADDRESS FOR SERVICE OF NOTICES

GOULBURN VALLEY REGION WATER AUTHORITY of 104-110 FRYERS STREET SHEPPARTON

VIC 3630

AC900877W 03/06/2004

01/06/2005 08/06/2005 AD655957D Y

Land Removed:

Lot 1 on Title Plan 841310F

AND REMOVAL OF NOTICE AC900877W

Partially Cancelled by AD655957D

Remaining Land: Lot 2 on Title Plan 841310F

30/08/2010 31/08/2010 AH462111E Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987



Account: 13500 Order: 15358477 Title 8772/323



### HISTORICAL SEARCH STATEMENT

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

STATEMENT END VOTS Snapshot

Volume 08772 Folio 323 124010702334G Produced 21/06/2004 10:55 am

### LAND DESCRIPTION

Lots 1 and 2 on Title Plan 841310F (formerly known as part of Lot 3 on Plan of Subdivision 006746, Lot 9 on Plan of Subdivision 006746).

PARENT TITLE Volume 04787 Folio 293

Created by instrument D310129 10/02/1969

### REGISTERED PROPRIETOR

Estate Fee Simple
TENANTS IN COMMON
As to 1 of a total of 2 equal undivided shares
Sole Proprietor
WILLIAM BARRY GILBO of 1146 SYDNEY ROAD FAWKNER
As to 1 of a total of 2 equal undivided shares
Sole Proprietor
MARY GILBO of 1146 SYDNEY ROAD FAWKNER
D310129 10/02/1969

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

### DIAGRAM LOCATION

SEE DIAGRAM ON IMAGED FOLIO VOLUME 8772 FOLIO 323 FOR FURTHER DETAILS AND BOUNDARIES



Account: 13500 Order: 15358477 Title 8772/323



### HISTORICAL SEARCH STATEMENT

Paper Title Images

8772/323 - Version 0, Date 08/02/2000



Account: 13500 Order: 15358477 Title 8772/323

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## VICTORIA

UNDER THE "TRANSFER OF LAND A

WILLIAM BARRY GILBO Veterinary Surgeon and MARY GILBO Married Woman both of 1146 Sydney Road Fawkner are now proprietors as tenants in common in equal shares of an estate in fee simple subject to the encumbrances notified - - - -hereunder in ALL THAT piece of land delineated and coloured red on the map in the margin containing Six hundred and Twenty four acres Three roods ~ Twenty seven perches and Five tenths of a perch or thereabouts being Lot 9 and--part of Lot 3 on Plan of Subdivision No.6746 and being part of Crown Portions -25 and 26 Parish of Merriang County of Bourke -

DATED the 10th day of Pebruary 1969

ROAD



Assistant Registrar of Titles

ENCUMBRANCES REFERRED

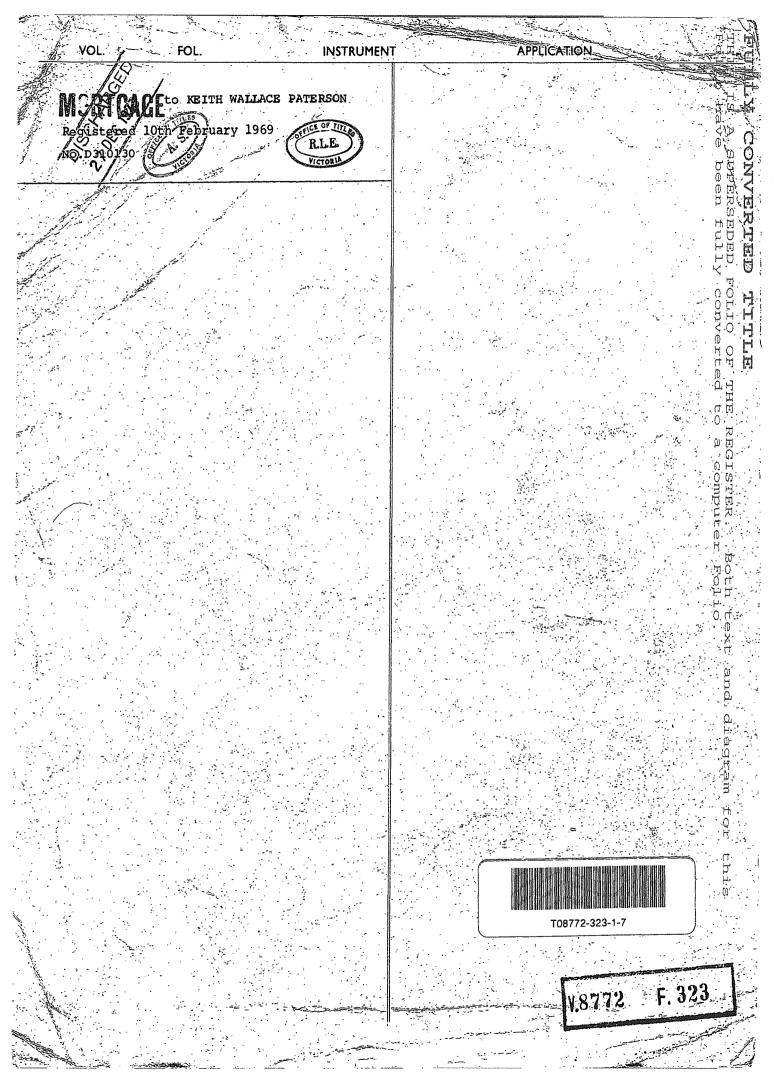
90°21' 4.72 C.Al 25 10 2 75847/10 3 105749/10 C.A. 23

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Derived from Vol.4787 Fol.293

D310129





### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:45 PM

Volume 04787 Folio 293

Folio Creation: Details Unknown

Parent title Volume 03887 Folio 352

STATEMENT END

Paper Title Images

4787/293 - Version 1, Date 19/09/2003



Account: 13500 Order: 15358512 Title 4787/293



va. 4787 ra. 957999

VICTORIA.

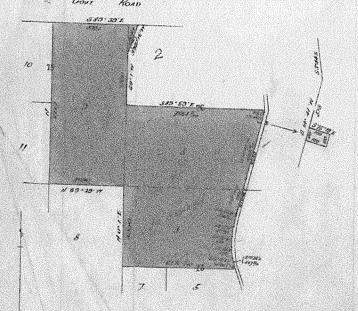
# Certificate of Citle,

UNDER THE "TRANSFER OF LAND ACT 1915."

Dated the Twenty-fifth thousand nine hundred and twenty-three.

day of June
Thus Gleenon
Assistant Begistrar of Titles.

ENCUMBRANCES REFERRED TO

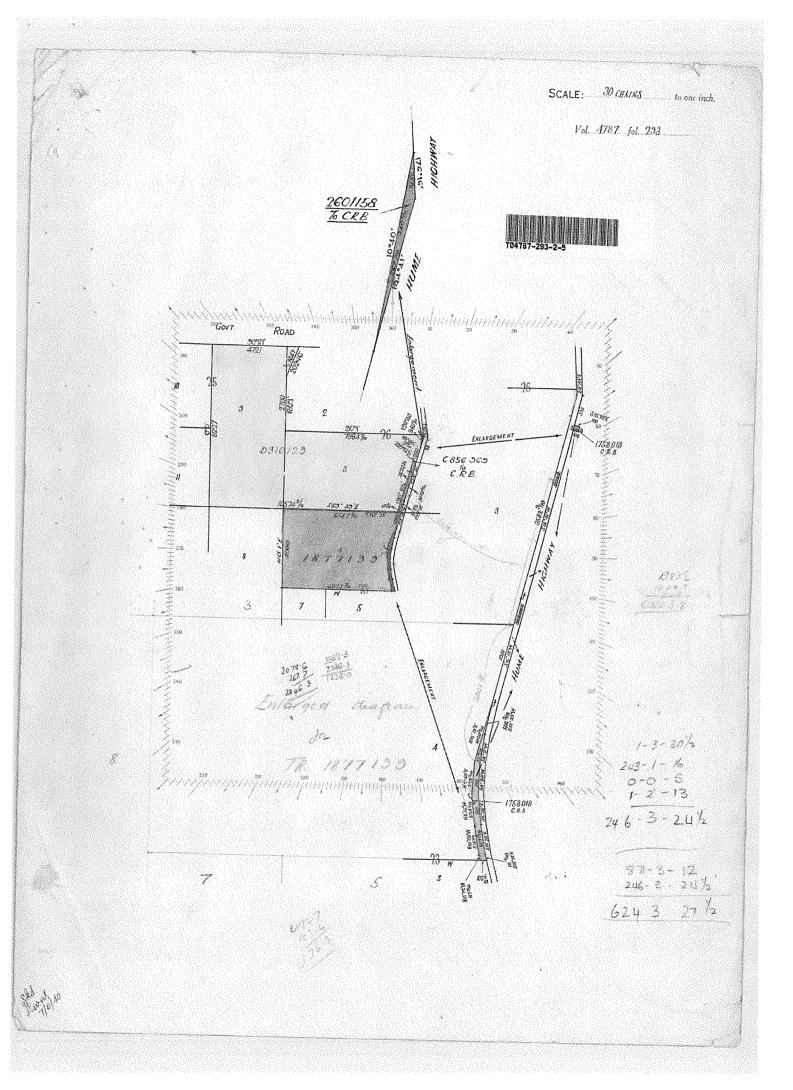




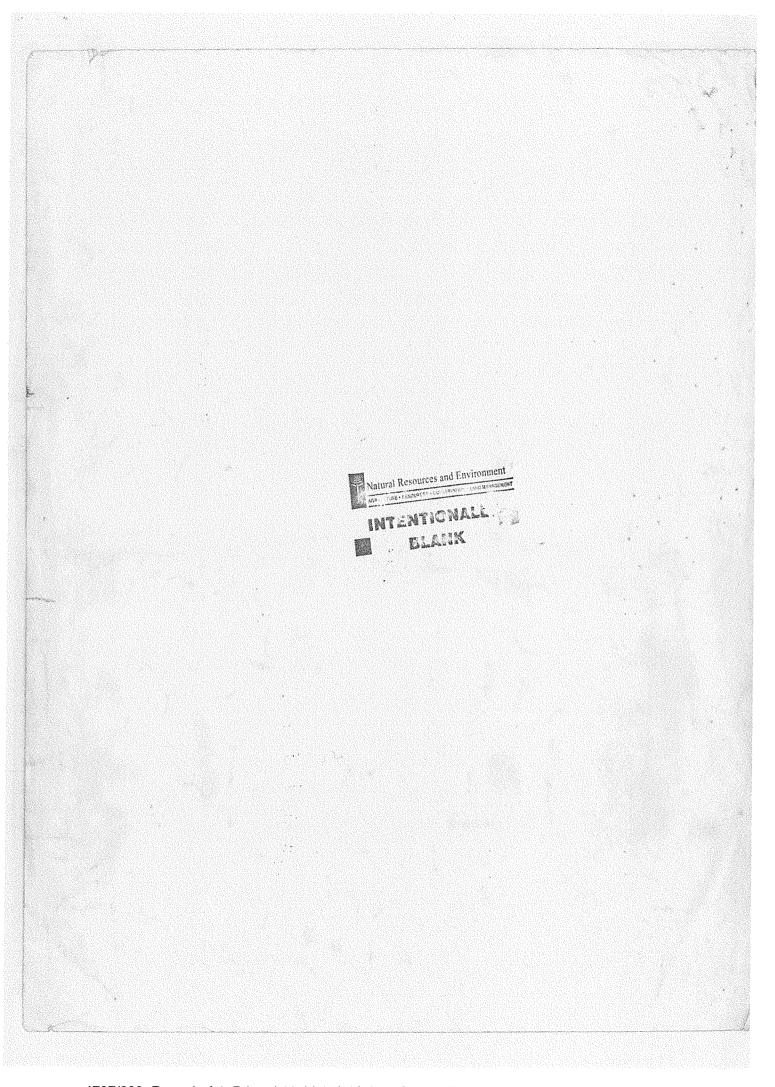
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4787/293, Page 3 of 4, Printed 12:44 15/10/2013, Search Enquiry 5358512, Customer 13500





## REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 03948 FOLIO 518

Security no : 124047766196A Produced 15/10/2013 12:41 pm

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 006746.

PARENT TITLE Volume 03887 Folio 352

Created by instrument 0793613 24/01/1916

#### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor

CRYSTAL CREEK PROPERTIES PTY LTD of 3/22 CHURCH STREET WHITTLESEA VIC 3757 AC616968C 21/01/2004

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

#### DIAGRAM LOCATION

SEE LP006746 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

----END OF REGISTER SEARCH STATEMENT-----END OF REGISTER SEARCH

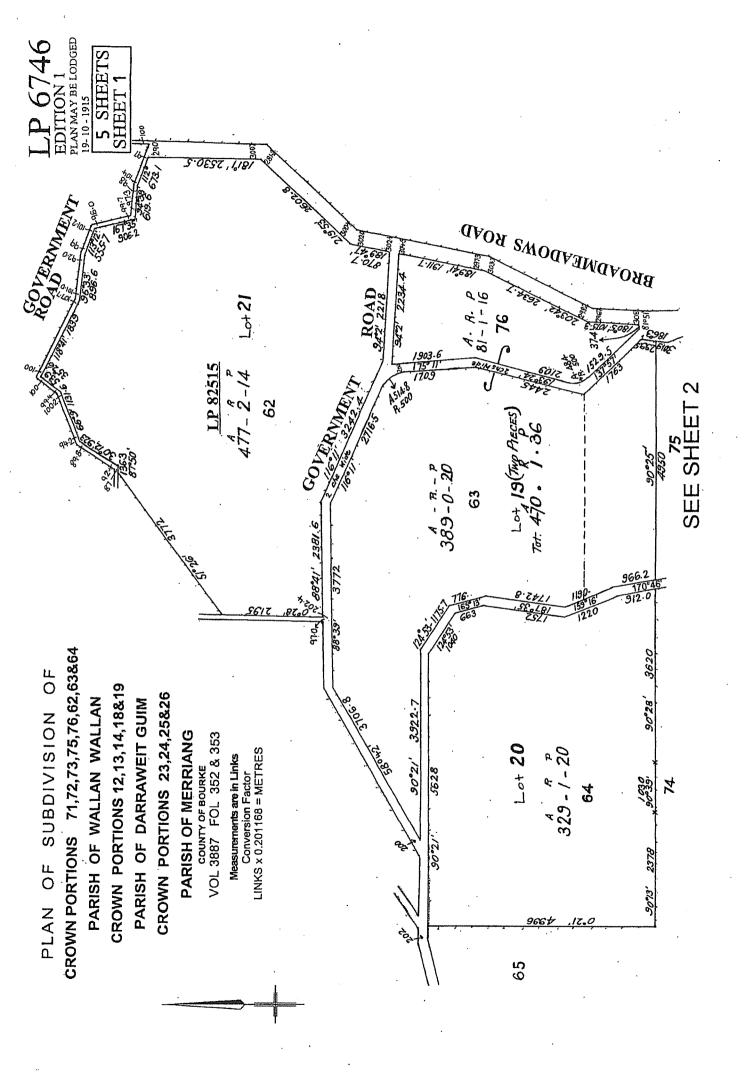
Additional information: (not part of the Register Search Statement)

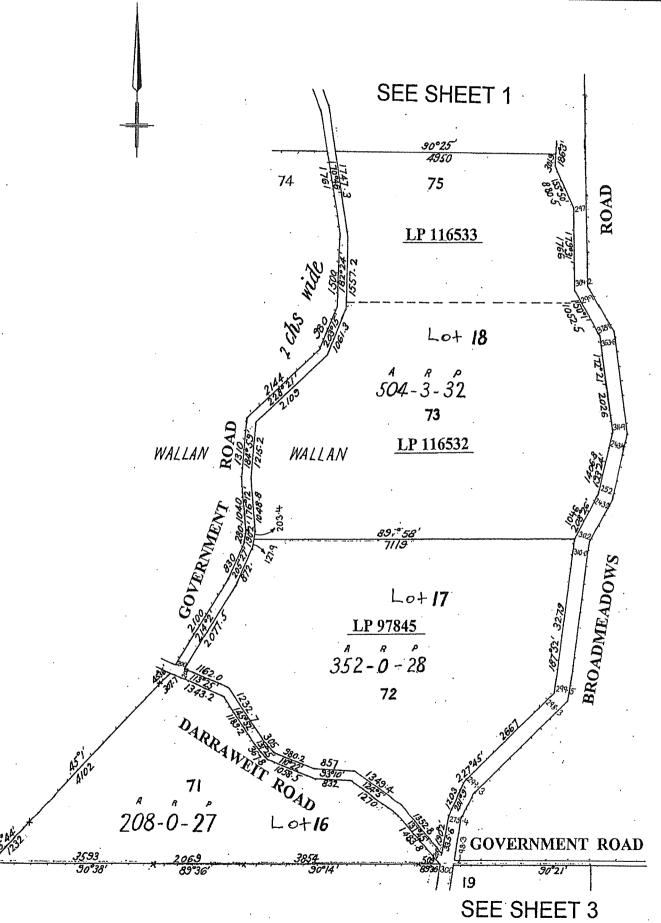
Street Address: 175 NORTHERN HIGHWAY WALLAN VIC 3756

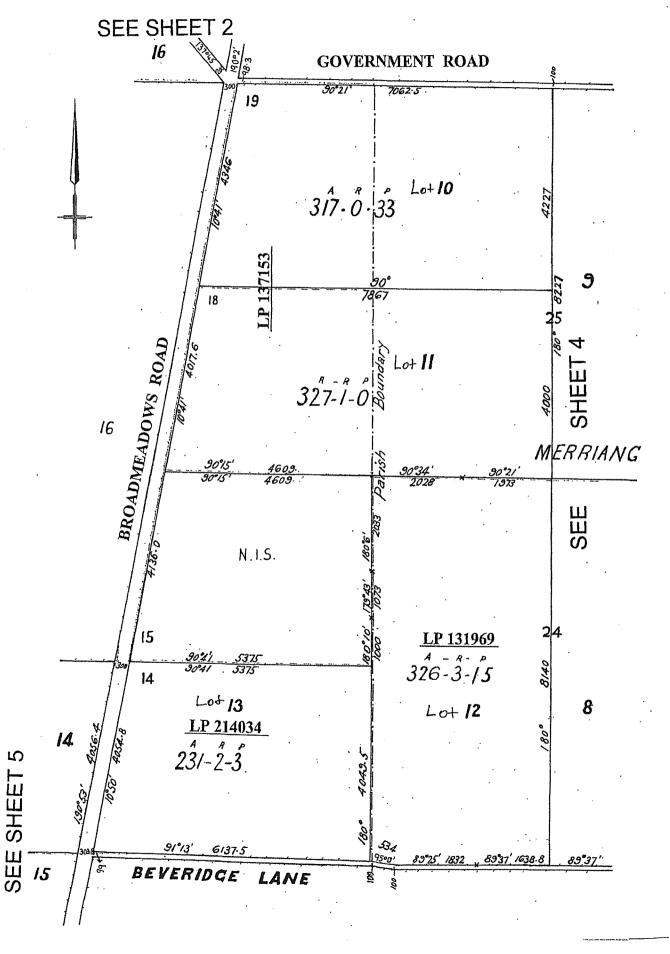
DOCUMENT END

FEIGL & NEWELL
Title Seerchers
GPG BOX 2246
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(DX 901)
Dh. 9628 8911

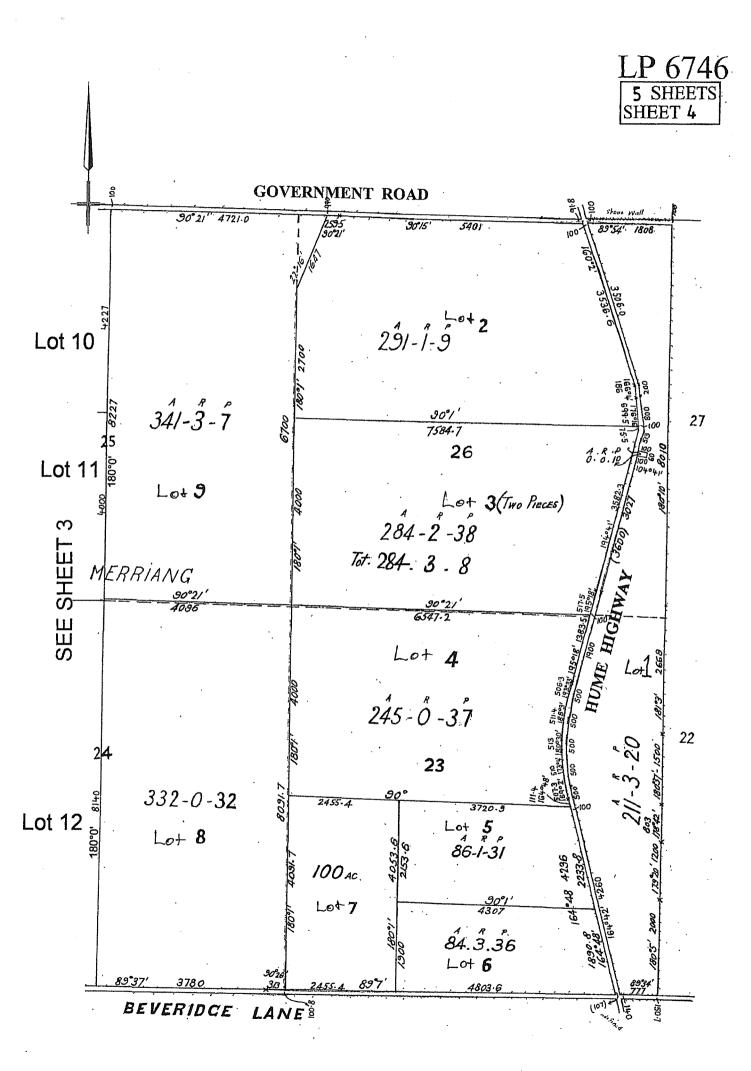


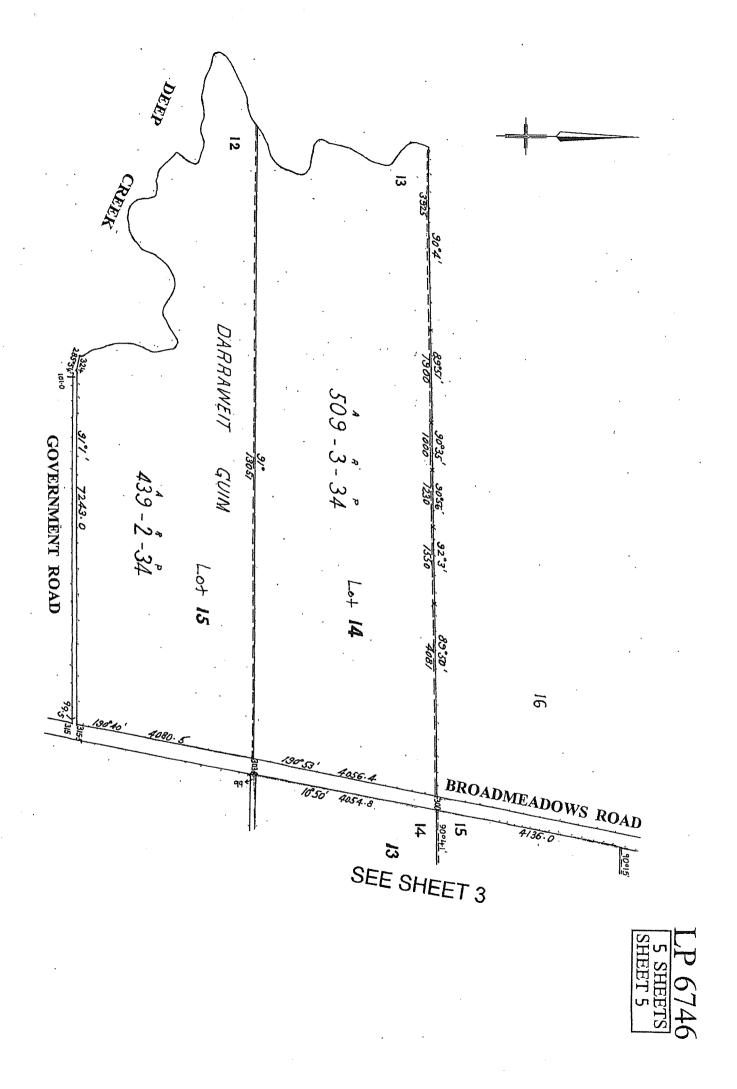






LP006746, Page 3 of 5, Printed 12:38 15/10/2013, Search Enquiry 5358410, Customer 13500







#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:43 PM

Volume 03948 Folio 518

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 03887 Folio 352

THE IMAGE OF THE FOLIO CEASED TO BE THE DIAGRAM LOCATION ON 11/05/2005 09:20 AM

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged Dealing Type and

on Register

Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded

Dealing

Imaged

Registration

Registration

on Register

20/12/2002

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AB773099H

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CAVEAT

CAVEAT AB773099H 20/12/2002

Caveator

WALTER HILAIRE MOTT

Capacity PURCHASER/FEE SIMPLE

Lodged by

MCCUBBIN I J

Notices to

IAN MCCUBBIN & ASSOCIATES of 40 CHUTE STREET DIAMOND CREEK VIC 3089

17/01/2003

10/06/2003

AB818586A

V

TRANSMISSION APPLICATION

FROM:

JAMES LEO LAFFAN

DORA ELLEN LAFFAN

TO:

DOROTHEA HELENA CONNORS





#### HISTORICAL SEARCH STATEMENT

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

DOROTHEA HELENA CONNORS of 11 MCPHILLIPS ROAD BANNOCKBURN VIC 3331 Legal Personal Representative(s) of DORA ELLEN LAFFAN who died on 24/08/1990

AB818586A 17/01/2003

17/01/2003

10/06/2003

AB818587X

v

TRANSFER OF LAND BY ENDORSEMENT

FROM:

DOROTHEA HELENA CONNORS

TO:

DOROTHEA HELENA CONNORS

GERARD FRANCIS LAFFAN

FRANCIS RONALD LAFFAN

MARGARET MARY HOLLIEN

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Joint Proprietors

DOROTHEA HELENA CONNORS of 11 MCPHILLIPS ROAD BANNOCKBURN VIC 3331 GERARD FRANCIS LAFFAN of 5 YEOVIL COURT CRAIGIEBURN VIC 3064 FRANCIS RONALD LAFFAN of 135 WINDHAM STREET WALLAN VIC 3756 MARGARET MARY HOLLIEN of 81 DENYS STREET FAWKNER VIC 3060 AB818587X 17/01/2003

21/01/2004

21/01/2004

AC616967E

Y

WITHDRAWAL OF CAVEAT

CAVEAT AB773099H REMOVED

21/01/2004

21/01/2004

AC616968C

TRANSFER OF LAND BY ENDORSEMENT

FROM:

DOROTHEA HELENA CONNORS

GERARD FRANCIS LAFFAN

FRANCIS RONALD LAFFAN

MARGARET MARY HOLLIEN





#### HISTORICAL SEARCH STATEMENT

TO:

CRYSTAL CREEK PROPERTIES PTY LTD

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

CRYSTAL CREEK PROPERTIES PTY LTD of 3/22 CHURCH STREET WHITTLESEA

VIC 3757

AC616968C 21/01/2004

30/08/2010

31/08/2010

AH462111E

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NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010

STATEMENT END **VOTS Snapshot** 

Volume 03948 Folio 518 124004287155B Produced 20/12/2002 02:23 pm

#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 006746.

PARENT TITLE Volume 03887 Folio 352

Created by instrument 0793613 24/01/1916

#### REGISTERED PROPRIETOR

Estate Fee Simple

Joint Proprietors

JAMES LEO LAFFAN of 45 STUDLEY ROAD IVANHOE

DORA ELLEN LAFFAN of BANNOCKBURN

F243974 21/03/1974

ENCUMBRANCES, CAVEATS AND NOTICES





#### **HISTORICAL SEARCH STATEMENT**

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

Account: 13500 Order: 15358486

#### DIAGRAM LOCATION

SEE DIAGRAM ON IMAGED FOLIO VOLUME 3948 FOLIO 518 FOR FURTHER DETAILS AND BOUNDARIES

Paper Title Images

3948/518 - Version 0, Date 18/02/2000



Title 3948/518

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UNDER THE "TRANSFER OF LAND ACT 1915.

John Francis Laffan of "Inverlochy" Wallan Grazier is now the proprietor of an Estate in Tee-simple, subject to the Encumbrances notified hereunder in "All that" piece of Land, delineated and coloured red on the map in the margin containing Two hundred and ninety-one acres one rood and nine perches or thereabouts being Lot 2 on Plan of Subdivision No. 6746 lodgedin the Office of Titles and being part of Crown Portion Twenty-six at Beveridge Parish of Merriang County of Bourke --

Dated the thousand nine hundred and

ENCUMBRANCES REFERRED

CERTIFICATE

ORIGINAL





#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:44 PM

Volume 03887 Folio 352 Folio Creation: Details Unknown

STATEMENT END

Paper Title Images

3887/352 - Version 0, Date 16/02/2000



Account: 13500 Order: 15358493 Title 3887/352

vol3887\*\*\* 777352

VICTORIA.

UNDER THE "TRANSFER OF LAND ACT 1890,"

Philip William Nust of Lydiard Street Ballarat in the County of Grenville Solicitor and The Trustees Executors and Agency Company Limited of 412 Collins Street Melbourne in the County of Bourks are now joint proprietors of an Estate in Fee-simple, subject to the Encumbrances All those pieces of Land, delineated and coloured notified hereunder in red on the map in the margin containing Four thousand one hundred and thirtyone acres and Eighteen perches or thereabouts being Crown Portion Twentyfive and parts of Crown Portions Twentythree Twentyfour and Twentysix at Beveridge Parish of Merriang Crown Portions Twelve Thirteen Fourteen Eighteen and Mineteen Parish of Darraweit Guim all in the County of Bourke - - -

Dated the Ninth thousand nine hundred and fifteen

Assistant Registrar of Titles. **ENCUMBRANCES REFERRED** 

1. As to Portions Twelve This Parish of Darraweit Guim -Thirteen Eighteen

SPECIAL RAILWAY CONDITIONS contained in the Crown --- Grants to William Murray--

As to Portion Fourteen ---Parish of Darraweit Guim--

SPECIAL RAILWAY CONDITION Contained in the Crown --Grant to William John ---Turner Clarke -----

As to all the land -----

THE RIGHTS OF PERSONS Z. THE RIGHTS OF PERSONS
claiming under the will and
bodicil of William Murray who
2 died on the 20th. -Junuary 1671 Probate
whereof was granted
on the 25th. May -1871 to Thomas Must
leave being reserved
to John Matheson -to John Matheson --- and Morton Allport--

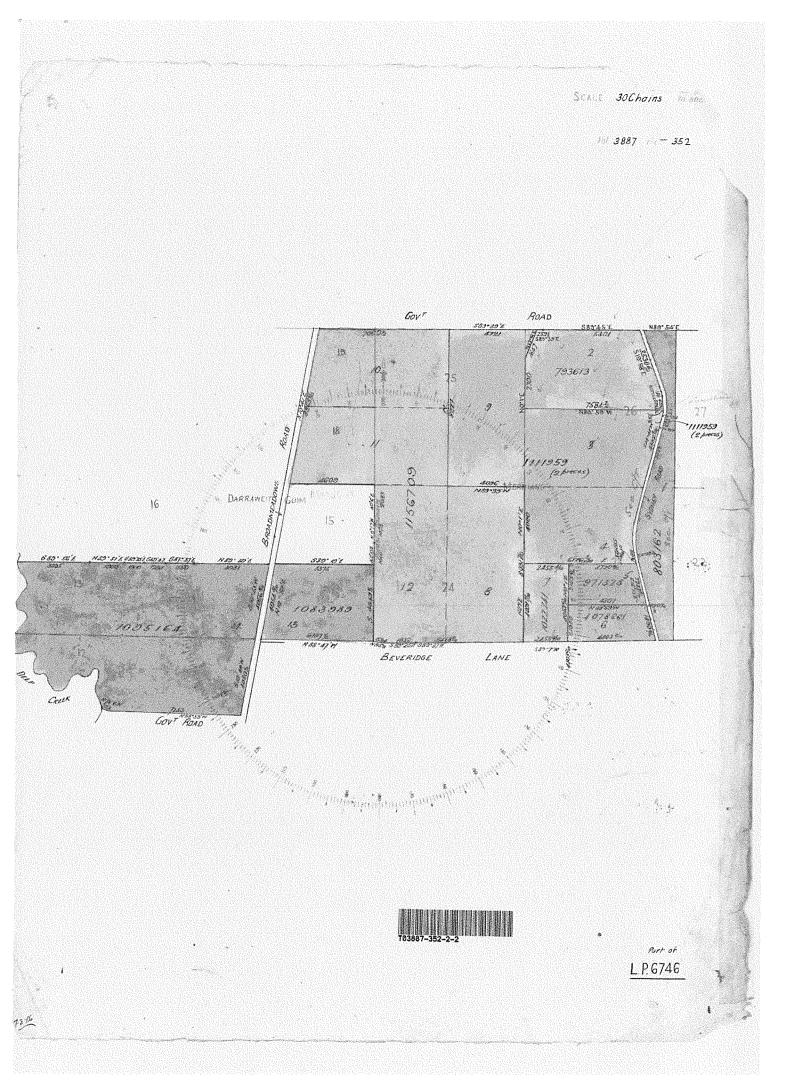
to come in and prove the said Will and --Codicil

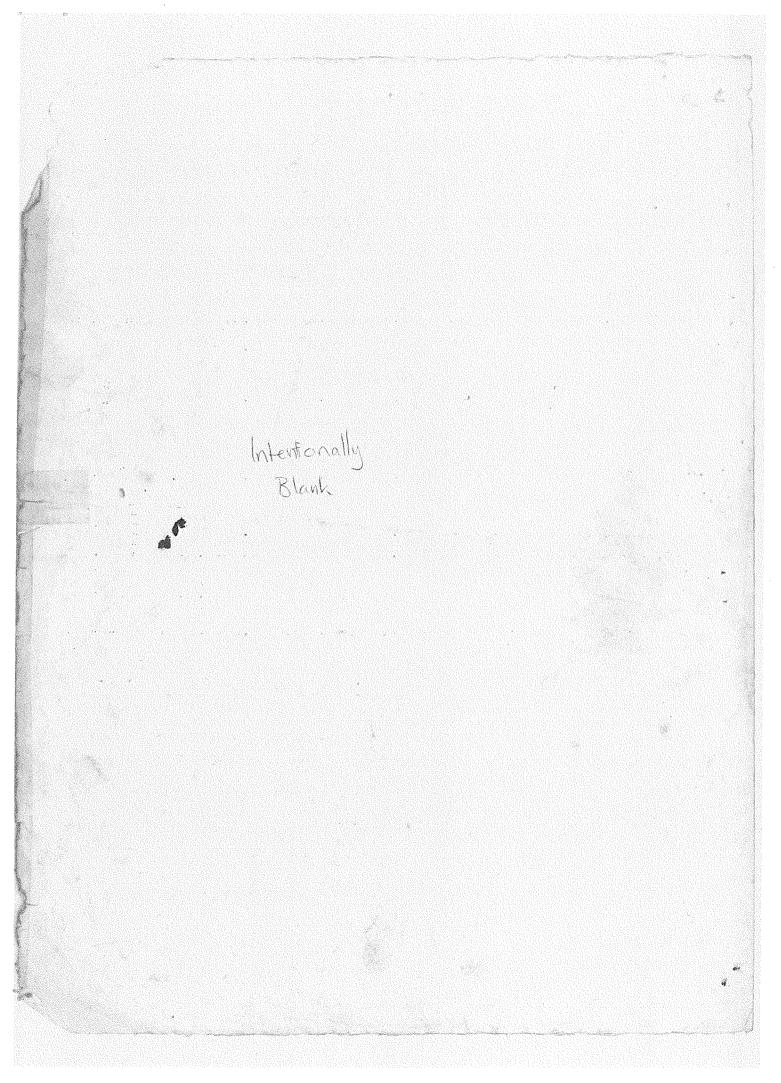
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Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symb thereon.
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	Midanuan	The reported explicitly are also constituting	marin
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	1/1	Philip William Must and THE TRUSTESS CLASSICAL CLASSICAL CLASSICAL AND AGAIN AMERICAN SAIR ASSISTANCE OF THE ASSISTANCE	1/
	the stall	THE THEATER SAMEATERS AND ACTION ATTACHMENT AND THE	~~
Transfer as to part	1 June	(CL STOCKER CONTROL FOR STOCKER STOCKE	803/62
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3887/352, Page 4 of 4, Printed 12:43 15/10/2013, Search Enquiry 5358493, Customer 13500



## REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10880 FOLIO 694

Security no : 124047798553E Produced 17/10/2013 09:05 am

#### LAND DESCRIPTION

Lot 9 on Plan of Subdivision 006746.

PARENT TITLE Volume 08772 Folio 323

Created by instrument AD655957D 01/06/2005

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132
AD655957D 01/06/2005

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987
AH462111E 30/08/2010

#### DIAGRAM LOCATION

SEE LP006746 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

Additional information: (not part of the Register Search Statement)

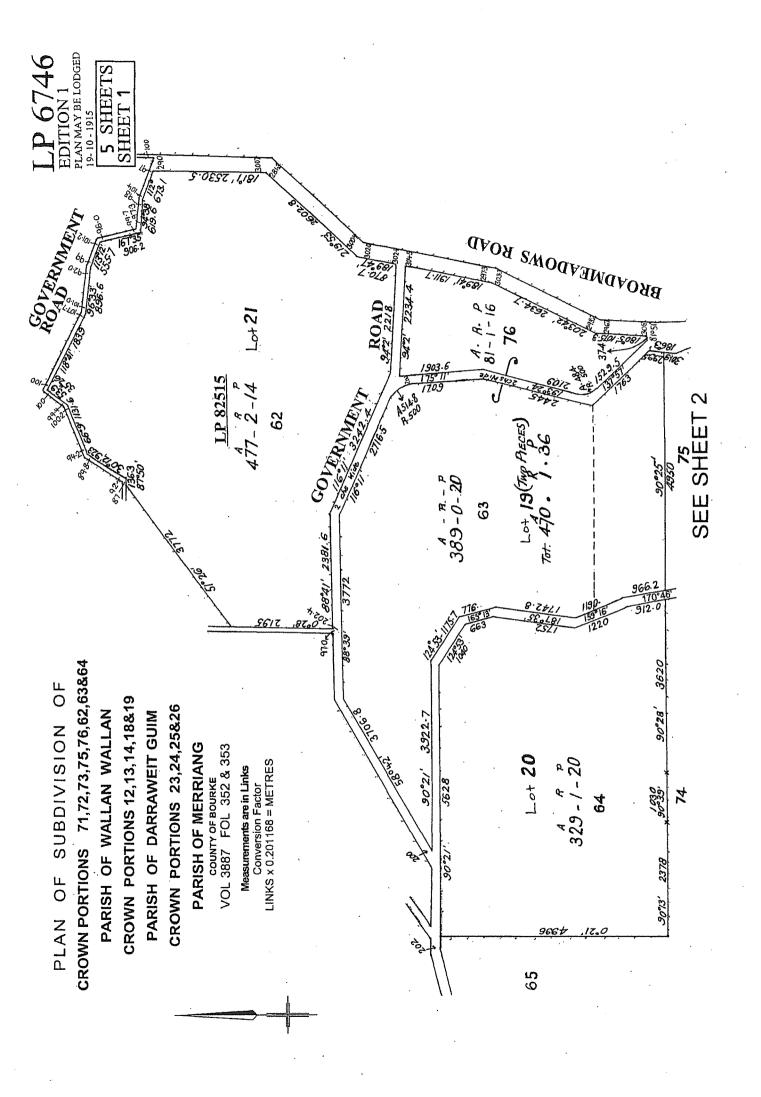
Street Address: CAMERONS LANE BEVERIDGE VIC 3753

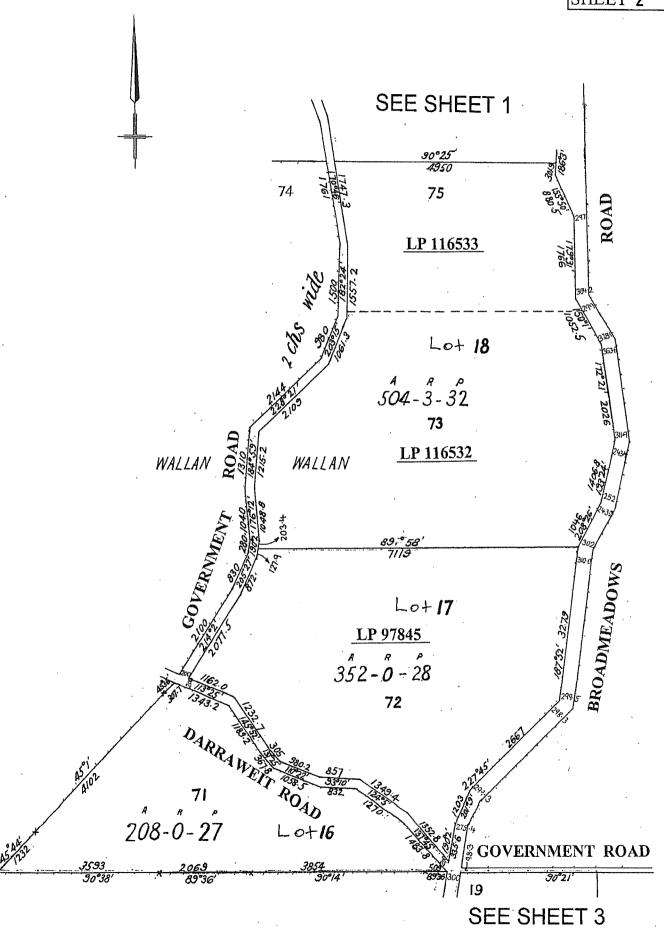
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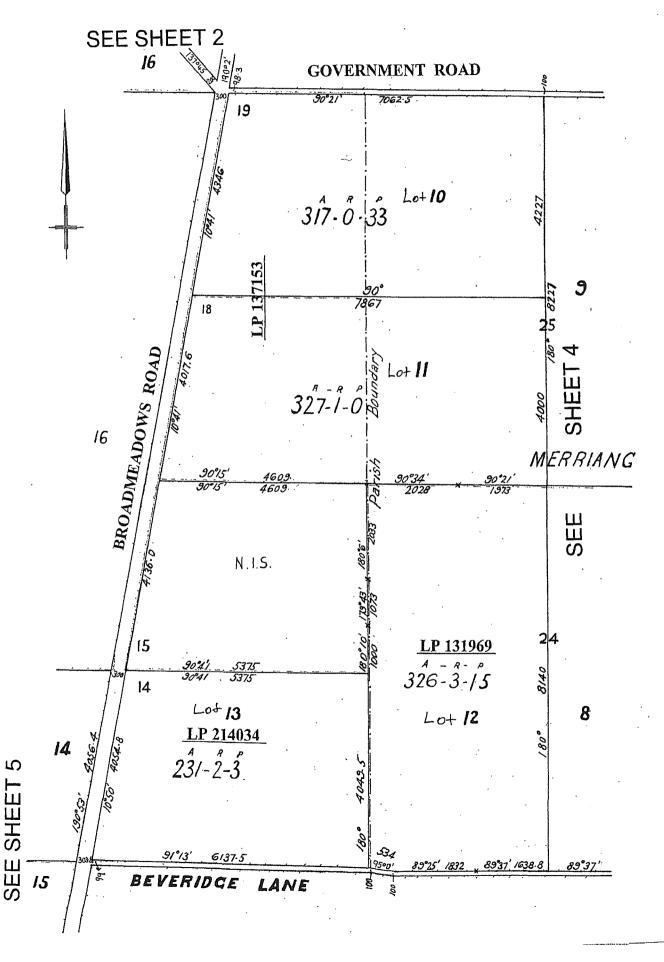
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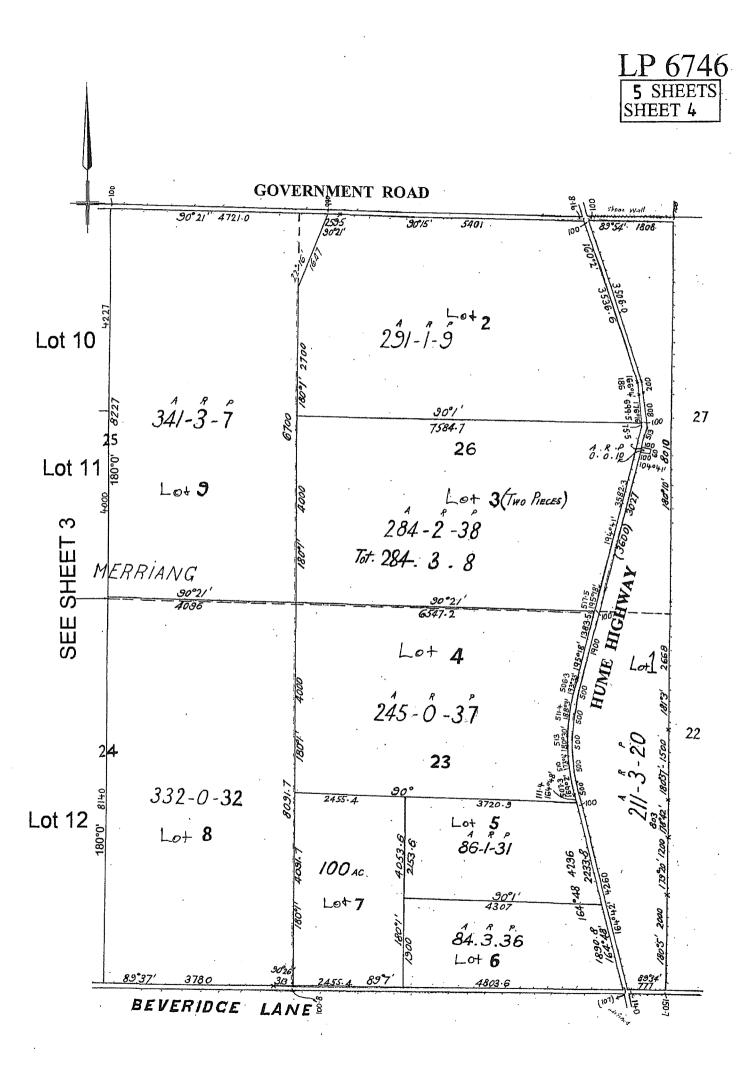


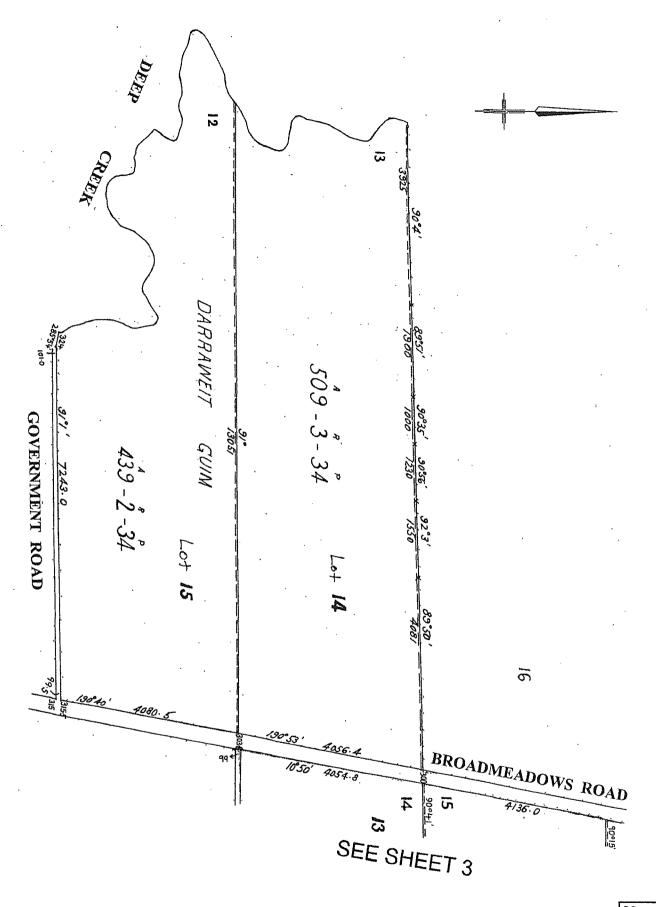
Account: 13500 Order: 15375025 Title 10880/694











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#### HISTORICAL SEARCH STATEMENT

Produced 17/10/2013 09:07 AM

Volume 10880 Folio 694

Folio Creation: Created as a computer folio

Parent title Volume 08772 Folio 323

RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

29/06/2007 04/07/2007 AF172477S Y

AMEND PROPRIETOR NAME

FROM:

TO:

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

YARRA VALLEY WATER LTD of LUCKNOW STREET MITCHAM VIC 3132

AD655957D 01/06/2005

30/08/2010 31/08/2010 AH462111E Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987

NOTICE Section 201UB Planning and Environment Act 1987

AH462111E 30/08/2010

STATEMENT END VOTS Snapshot



Account: 13500 Order: 15375061 Title 10880/694



#### HISTORICAL SEARCH STATEMENT

Volume 10880 Folio 694 124014375272H Produced 08/06/2005 09:05 am

#### LAND DESCRIPTION

Lot 9 on Plan of Subdivision 006746.

PARENT TITLE Volume 08772 Folio 323

Created by instrument AD655957D 01/06/2005

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
GOULBURN VALLEY REGION WATER AUTHORITY of 104-110 FRYERS STREET SHEPPARTON
VIC 3630
AD655957D 01/06/2005

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP006746 FOR FURTHER DETAILS AND BOUNDARIES



#### REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 08772 FOLIO 323

Security no : 124047766189H Produced 15/10/2013 12:41 pm

#### LAND DESCRIPTION

Lot 2 on Title Plan 841310F (formerly known as part of Lot 3 on Plan of Subdivision 006746).

PARENT TITLE Volume 04787 Folio 293 Created by instrument D310129 10/02/1969

#### REGISTERED PROPRIETOR

Estate Fee Simple
TENANTS IN COMMON
As to 1 of a total of 2 equal undivided shares
Sole Proprietor
WILLIAM BARRY GILBO of 1146 SYDNEY ROAD FAWKNER
As to 1 of a total of 2 equal undivided shares
Sole Proprietor
MARY GILBO of 1146 SYDNEY ROAD FAWKNER
D310129 10/02/1969

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section

24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

#### DIAGRAM LOCATION

SEE TP841310F FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

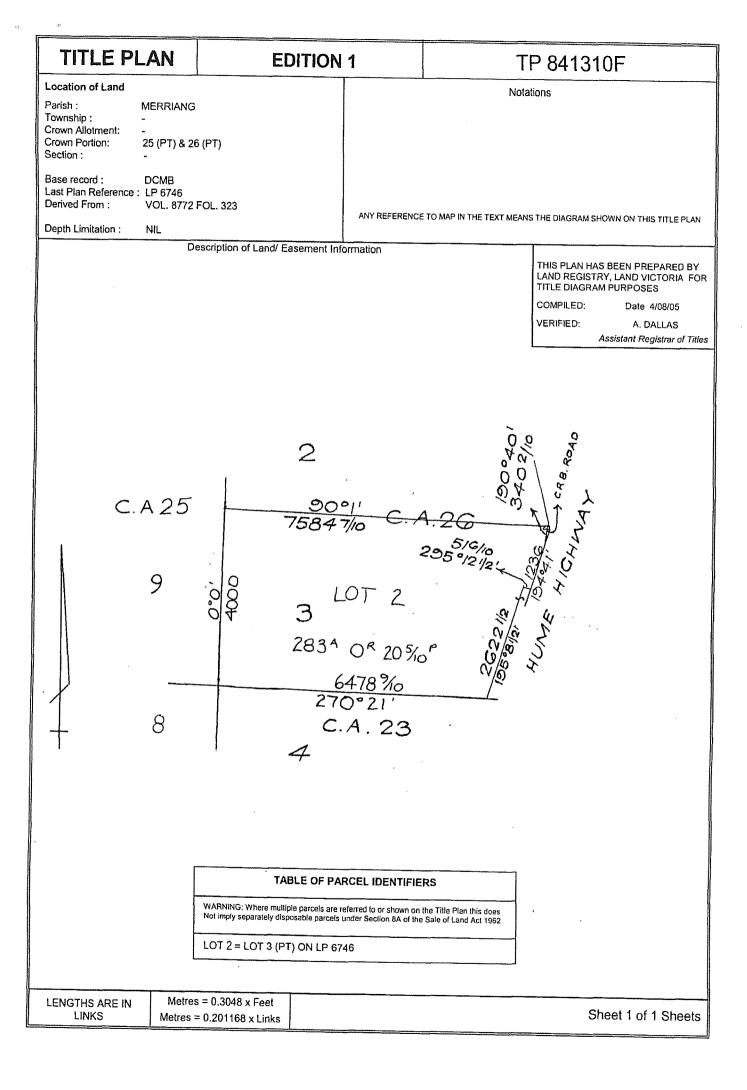
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(D14 901)
ITH: 9628 3011



Account: 13500 Order: 15358427 Title 8772/323





#### HISTORICAL SEARCH STATEMENT

Produced 15/10/2013 12:43 PM

Volume 08772 Folio 323

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04787 Folio 293

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RECORD OF ALTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged Dealing Type and

Registration on Register Details

RECORD OF VOTS DEALINGS

Date Lodged for Date Recorded Dealing Imaged

Registration on Register

03/06/2004 21/06/2004 AC900877W Y

APPLICATION RE NOTICE OF INTENTION TO ACQUIRE LAND

NOTICE as to part Section 10(1) Land Acquisition and Compensation Act 1986

GOULBURN VALLEY REGION WATER AUTHORITY

ADDRESS FOR SERVICE OF NOTICES

GOULBURN VALLEY REGION WATER AUTHORITY of 104-110 FRYERS STREET SHEPPARTON

VIC 3630

AC900877W 03/06/2004

01/06/2005 08/06/2005 AD655957D Y

Land Removed:

Lot 1 on Title Plan 841310F

AND REMOVAL OF NOTICE AC900877W

Partially Cancelled by AD655957D

Remaining Land: Lot 2 on Title Plan 841310F

30/08/2010 31/08/2010 AH462111E Y

NOTICE SECTION 201UB PLANNING AND ENVIRONMENT ACT 1987



Account: 13500 Order: 15358477 Title 8772/323



#### HISTORICAL SEARCH STATEMENT

NOTICE Section 201UB Planning and Environment Act 1987 AH462111E 30/08/2010

STATEMENT END VOTS Snapshot

Volume 08772 Folio 323 124010702334G Produced 21/06/2004 10:55 am

#### LAND DESCRIPTION

Lots 1 and 2 on Title Plan 841310F (formerly known as part of Lot 3 on Plan of Subdivision 006746, Lot 9 on Plan of Subdivision 006746).

PARENT TITLE Volume 04787 Folio 293

Created by instrument D310129 10/02/1969

#### REGISTERED PROPRIETOR

Estate Fee Simple
TENANTS IN COMMON
As to 1 of a total of 2 equal undivided shares
Sole Proprietor
WILLIAM BARRY GILBO of 1146 SYDNEY ROAD FAWKNER
As to 1 of a total of 2 equal undivided shares
Sole Proprietor
MARY GILBO of 1146 SYDNEY ROAD FAWKNER
D310129 10/02/1969

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE DIAGRAM ON IMAGED FOLIO VOLUME 8772 FOLIO 323 FOR FURTHER DETAILS AND BOUNDARIES



Account: 13500 Order: 15358477 Title 8772/323



#### HISTORICAL SEARCH STATEMENT

Paper Title Images

8772/323 - Version 0, Date 08/02/2000



Account: 13500 Order: 15358477 Title 8772/323

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WILLIAM BARRY GILBO Veterinary Surgeon and MARY GILBO Married Woman both of 1146 Sydney Road Fawkner are now proprietors as tenants in common in equal shares of an estate in fee simple subject to the encumbrances notified - - - -hereunder in ALL THAT piece of land delineated and coloured red on the map in the margin containing Six hundred and Twenty four acres Three roods ~ Twenty seven perches and Five tenths of a perch or thereabouts being Lot 9 and--part of Lot 3 on Plan of Subdivision No.6746 and being part of Crown Portions -25 and 26 Parish of Merriang County of Bourke -

DATED the 10th day of Pebruary 1969



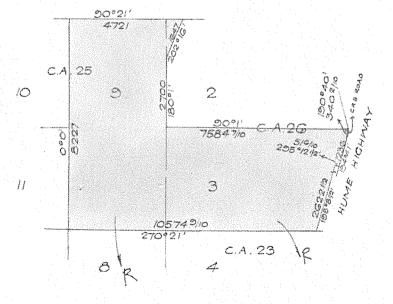
Assistant Registrar of Titles

ENCUMBRANCES REFERRED

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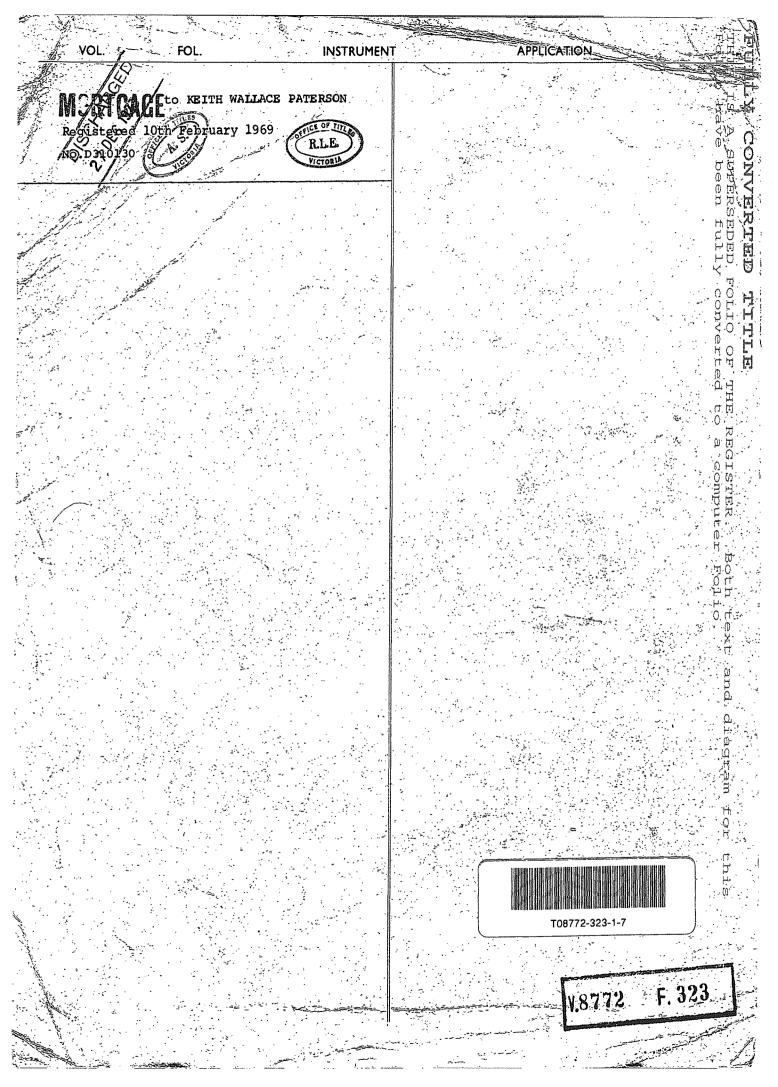
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D310129





# **Appendix C. Priority sites register**

# PRIORITY SITES REGISTER

Information as at 31 August 2013

#### **BACKGROUND**

EPA has a key responsibility in protecting beneficial uses of land. Many of these uses are regulated or controlled through a range of measures to prevent contamination of land and groundwater. Land contaminated by former waste disposal, industrial and similar activities is frequently discovered during changes to land use - for example, from industrial to residential use. In most cases these can be managed at the time that the change of land use occurs. Some sites however, present a potential risk to human health or to the environment and must be dealt with as a priority. Such sites are typically subject to clean-up and/or management under EPA directions.

#### WHAT ARE PRIORITY SITES?

Priority Sites are sites for which EPA has issued a Cleanup Notice pursuant to section 62A, or a Pollution Abatement Notice pursuant to section 31A or 31B (relevant to land and/or groundwater) of the Environment Protection Act 1970. Typically these are sites where pollution of land and/or groundwater presents a potential risk to human health or to the environment. The condition of these sites is not compatible with the current or approved use of the site without active management to reduce the risk to human health and the environment. Such management can include cleanup, monitoring and/or institutional controls.

The Priority Sites Register does not list sites managed by voluntary agreements or sites subject to management by planning controls (eg. sites managed in accordance with a section 173 agreement under the Planning and Environment Act 1987). Land purchasers should be aware of these limitations and make their own enquiries. A site is listed on the Priority Sites Register when EPA issues a CleanupNotice or a Pollution Abatement Notice (relevant to land and/or groundwater). A notice is a means by which EPA formalises requirements to manage pollution. Sites are removed from the Priority Sites Register once all conditions of a Notice have been complied with. This is formalised through a Notice of Revocation pursuant to section 60B of the Act.

### **FURTHER INFORMATION**

Additional information is available from: EPA Information Centre 200 Victoria Street Carlton VIC 3053

Tel: 1300 EPA VIC (1300 372 842) EPA internet site: www.epa.vic.gov.au

Municipality	Suburb	Address	Issue	Notice Number
Alpine Shire Council	POREPUNKAH	Part There Of Allot. 8 Sec. 8 Parish Of Porepunkah	Former Landfill. Requires ongoing management	0090003842
Alpine Shire Council	POREPUNKAH	Part There Of Allot. 8 Sec. 8 Parish Of Porepunkah	Former Landfill. Requires ongoing management	0090003843
Ararat Rural City Council	ARARAT	26 Grano ST	Former Industrial Site. Requires assessment and/or clean up	0090001739
Ararat Rural City Council	ARARAT	Mclellan ST	Railway yard. Requires assessment and/or clean up	0090001744
Ballarat City Council	BALLARAT	Canadian Gully Reserve Geelong RD	Historical deposit of mine tailings. Requires assessment and/or clean up	0090000494
Ballarat City Council	BALLARAT	1003 Humffray ST	Former Industrial Site. Requires assessment and/or clean up	0090001857
Ballarat City Council	BALLARAT	Volume 6747 Folio 250	Current Industrial Site. Requires assessment and/or clean up	0090001913
Ballarat City Council	SANDHILL LAKE	C/a 14 Section A - Parish Of Bael Bael	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090002097
Ballarat City Council	WARRENHEIP	Ballarat-Burrumbeet RD	Accidental spill/leak (non-industrial site). Requires ongoing management	0090002430
Ballarat City Council	MOUNT CLEAR	3 WHITEHORSE RD	Former Landfill. Requires ongoing management	0090003912
Ballarat City Council	BROWN HILL	211 MELBOURNE RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090004145
Banyule City Council	GREENSBOROUGH	131 Grimshaw ST	Current Service Station. Requires assessment and/or clean up	0090002585
Bass Coast Shire Council	WONTHAGGI	C/a 15 Section 58 Cameron St	Former Landfill. Requires ongoing management	0090003536
Bass Coast Shire Council	COWES	CROWN ALLOTMENT 104 PARISH OF PHILLIP ISLAND	Illegal dumping. Requires assessment and/or clean up	0090004251
Baw Baw Shire Council	TRAFALGAR SOUTH	200 Giles RD	Former Landfill. Requires ongoing management	0090003781
Baw Baw Shire Council	TRAFALGAR SOUTH	200 Giles RD	Former Landfill. Requires ongoing management	0090003781
	BRIGHTON	601 Hampton ST	Current Service Station. Requires ongoing management	0090003782
Bayside City Council		18 Hamlet ST	Current Industrial Site. Requires ongoing management	
Bayside City Council	CHELTENHAM	316 New ST	Former Service Station. Requires assessment and/or clean up	0090001671
Bayside City Council	BRIGHTON	Part Lot 1/TP125095-excludes Scout Hall Lot	Former Industrial Site. Requires assessment and/or clean up	0090001698
Bayside City Council	Sandringham	2/LP62334 49 Mcintyre RD	Current Industrial Site. Requires assessment and/or clean up	0090002548
Brimbank City Council	SUNSHINE	362 SYDENHAM RD	Former Landfill. Requires assessment and/or clean up	0090000284
Brimbank City Council	SYDENHAM	47 Mcintyre RD	Former Industrial Site. Requires ongoing management	0090000921
Brimbank City Council	SUNSHINE			0090001549
Brimbank City Council	DEER PARK	765 BALLARAT RD	Current Industrial Site. Requires assessment and/or clean up	0090001886
Brimbank City Council	SUNSHINE NORTH	56 Spalding AV	Current Industrial Site. Requires assessment and/or clean up	0090002269
Brimbank City Council	SUNSHINE NORTH	56 Spalding AV	Current Industrial Site. Requires assessment and/or clean up	0090002270
Brimbank City Council	BROOKLYN	Bunting RD	Former Landfill. Requires ongoing management	0090002743
Brimbank City Council	BROOKLYN	69 BUNTING RD	Illegal dumping. Requires assessment and/or clean up	0090003179
Brimbank City Council	SUNSHINE	16 THIRD AV	Current Industrial Site. Requires assessment and/or clean up	0090003227
Brimbank City Council	SUNSHINE NORTH	51 Mcintyre RD	Current Industrial Site. Requires assessment and/or clean up	0090003274
Brimbank City Council	BROOKLYN	594 Geelong RD	Former Landfill. Requires ongoing management	0090003478
Brimbank City Council	KEILOR DOWNS	Green Gully RD	Former Landfill. Requires ongoing management	0090003524
Brimbank City Council	BROOKLYN	44 Mcdonald RD	Former Landfill. Requires ongoing management	0090003591
Brimbank City Council	SUNSHINE	Hulett ST	Former Landfill. Requires assessment and/or clean up	0090003670
Brimbank City Council	SUNSHINE	Hulett ST	Former Landfill. Requires assessment and/or clean up	0090003671
Brimbank City Council	SUNSHINE	49 Mcintyre RD	Current Industrial Site. Requires assessment and/or clean up	0090003897
Campaspe Shire Council	BAMAWM	Lot 2 Plan Of Subdivision 544316m Parish Of Torrumburry	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001745
Campaspe Shire Council	KYABRAM	Graham RD	Former Landfill. Requires ongoing management	0090003563

Campaspe Shire Council	ECHUCA	Echuca Landfill Echuca-Kyabram RD	Former Landfill. Requires ongoing management	0090003569
Campaspe Shire Council	DIGGORA	ODONNELL RD	Former Landfill. Requires ongoing management	0090003588
Cardinia Shire Council	NAR NAR GOON	Five Mile RD	Former Landfill. Requires ongoing management	0090003597
Cardinia Shire Council	TYNONG NORTH	25 MINTERN RD	Illegal dumping. Requires assessment and/or clean up	0090003945
Casey City Council	CRANBOURNE	Lot 7, 9, 10, 11 & 12 Stevensons Rd	Former Landfill. Requires ongoing management	0090000281
Casey City Council	NARRE WARREN NOR	- Quarry RD	Former Landfill. Requires ongoing management	0090003600
Central Goldfields Shire Council	CARISBROOK	Potts LANE	Former Landfill. Requires ongoing management	0090003566
Colac-Otway Shire Council	COLAC	Bruce ST	Former Landfill. Requires ongoing management	0090001464
·	COROROOKE	Factory RD	Current Industrial Site. Requires assessment and/or clean up	
Colac-Otway Shire Council		Roberts RD	Former Landfill. Requires ongoing management	0090002082
Colac-Otway Shire Council	MARENGO	Bruce ST	Former Landfill. Requires ongoing management	0090003634
Colac-Otway Shire Council	COLAC			0090003696
Corangamite Shire Council	COBRICO	County Boundary RD	Current landfill. Requires ongoing management	0090000292
Corangamite Shire Council	GLENORMISTON	Terang-Mortlake RD	Former Landfill. Requires ongoing management	0090003622
Darebin City Council	PRESTON	62 Albert ST	Current Industrial Site. Requires ongoing management	0090000535
Darebin City Council	PRESTON	140 High ST	Former Industrial Site. Requires assessment and/or clean up	0090000660
Darebin City Council	PRESTON	67 High ST	Former Service Station. Requires assessment and/or clean up	0090001449
Darebin City Council	PRESTON	194 Bell ST	Former Industrial Site. Requires assessment and/or clean up	0090002088
Darebin City Council	PRESTON	140 High ST	Former Industrial Site. Requires assessment and/or clean up	0090002948
Darebin City Council	PRESTON	3 & 7 NEWMAN ST	Former Industrial Site. Requires assessment and/or clean up	0090003150
Darebin City Council	NORTHCOTE	Clifton ST	Former Landfill. Requires ongoing management	0090003493
Darebin City Council	RESERVOIR	87 Newlands RD	Former Landfill. Requires ongoing management	0090003508
·		349 Swifts Creek East RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	
East Gippsland Shire Council	SWIFTS CREEK	201 Main ST	Former Service Station. Requires assessment and/or clean up	0090000114
East Gippsland Shire Council	BAIRNSDALE			0090001552
East Gippsland Shire Council	BAIRNSDALE	205 Main ST	Former Service Station. Requires assessment and/or clean up	0090001553
East Gippsland Shire Council	ORBOST	44 Salsibury ST	Former Service Station. Requires assessment and/or clean up	0090001588
East Gippsland Shire Council	BAIRNSDALE	BOSWORTH RD	Former Landfill. Requires ongoing management	0090003783
East Gippsland Shire Council	BAIRNSDALE	BOSWORTH RD	Former Landfill. Requires ongoing management	0090003784
Frankston City Council	FRANKSTON	3 Rosella ST	Former Industrial Site. Requires assessment and/or clean up	0090003211
Frankston City Council	FRANKSTON	3 Rosella ST	Former Industrial Site. Requires assessment and/or clean up	0090003212
Frankston City Council	FRANKSTON	3 Rosella ST	Former Industrial Site. Requires assessment and/or clean up	0090003213
Frankston City Council	Frankston	McClelland DR	Former Landfill. Requires ongoing management	0090003594
Glen Eira City Council	CAULFIELD SOUTH	371 Hawthorn RD	Former Service Station. Requires assessment and/or clean up	0090001532
•		818 Glen Huntly RD	Former Service Station. Requires assessment and/or clean up	
Glen Eira City Council	CAULFIELD SOUTH	210 Cape Nelson RD	Current landfill. Requires ongoing management	0090001761
Glenelg Shire Council	PORTLAND	1053 Mt Mercer-Meredith RD	Illegal dumping. Requires assessment and/or clean up	0090001966
Golden Plains Shire Council	Meredith			0090003410
Greater Bendigo City Council	West Bendigo	Liddell's Calcine Sands Derwent Gully Road	Historical deposit of mine tailings. Requires assessment and/or clean up	0090003327
Greater Bendigo City Council	West Bendigo	Liddell's Calcine Sands Derwent Gully Road	Historical deposit of mine tailings. Requires assessment and/or clean up	0090003884
Greater Bendigo City Council	Eppalock	118 Fitzgibbon Road, Eppalock VIC 3551 CA 7, 7A & 8 Sec 14	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003976
Greater Bendigo City Council	CALIFORNIA GULLY	45 Sandhurst RD	Current petroleum storage site. Requires assessment and/or clean up	0090004091
Greater Dandenong City Council	DANDENONG	2 Hazel AV	Current Industrial Site. Requires assessment and/or clean up	0090000108
Greater Dandenong City Council	SPRINGVALE SOUTH	East Side Of Clarke RD	Former Landfill. Requires ongoing management	0090000608
Greater Dandenong City Council	SPRINGVALE	917 Princes HWY	Former Industrial Site. Requires assessment and/or clean up	0090001557
Greater Dandenong City Council	SPRINGVALE	310 Springvale RD	Former Service Station. Requires ongoing management	0090001607
	DANDENONG SOUTH	20 Cahill ST	Former Industrial Site. Requires assessment and/or clean up	0090002115
Greater Dandenong City Council		790 FRANKSTON-DANDENONG RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	
Greater Dandenong City Council	BANGHOLME	230 Frankston-Dandenong RD	Current Service Station. Requires assessment and/or clean up	0090002377
Greater Dandenong City Council	DANDENONG			0090002792
Greater Dandenong City Council	DANDENONG SOUTH	125 COLEMANS RD	Former Landfill. Requires assessment and/or clean up	0090003201
Greater Dandenong City Council	SPRINGVALE SOUTH	East Side Of Clarke RD	Former Landfill. Requires ongoing management	0090003691
Greater Dandenong City Council	SPRINGVALE SOUTH	East Side Of Clarke RD	Former Landfill. Requires ongoing management	0090003692
Greater Dandenong City Council	SPRINGVALE SOUTH	East Side Of Clarke RD	Former Landfill. Requires ongoing management	0090003693
Greater Dandenong City Council	SPRINGVALE SOUTH	Clarke RD	Former Landfill. Requires ongoing management	0090003850
Greater Geelong City Council	NORLANE	5 PRINCES HWY	Former Industrial Site. Requires assessment and/or clean up	0090000011
Greater Geelong City Council	CORIO	Refinery RD	Current petroleum storage site. Requires ongoing management	0090000024
Greater Geelong City Council	WAURN PONDS	5 Katelyn CT	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000113
ů ,		246 Princes HWY	Current Service Station. Requires assessment and/or clean up	
Greater Geelong City Council	CORIO	Foreshore Area At End Of Crowle ST	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000150
Greater Geelong City Council	NORTH GEELONG	Hearne PDE		0090000226
Greater Geelong City Council	GEELONG EAST		Gun, pistol or rifle range. Requires assessment and/or clean up	0090000498
Greater Geelong City Council	CORIO	Off Harpur RD	Former Service Station. Requires assessment and/or clean up	0090000782
Greater Geelong City Council	LARA	Princes HWY	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	0090001012
Greater Geelong City Council	GEELONG NORTH	1 Roseneath ST	Former chemical storage facility. Requires assessment and/or clean up	0090001664
Greater Geelong City Council	MANIFOLD HEIGHTS	35 Shannon AV	Current Service Station. Requires assessment and/or clean up	0090001688
Greater Geelong City Council	DRYSDALE	97 High ST	Current Service Station. Requires ongoing management	0090001808
Greater Geelong City Council	MOOLAP	132 Point Henry RD	Current Industrial Site. Requires assessment and/or clean up	0090001832
Greater Geelong City Council	MOOLAP	132 Point Henry RD	Current Industrial Site. Requires assessment and/or clean up	0090001833
		1 Roseneath ST	Current Industrial Site. Requires assessment and/or clean up	
Greater Geelong City Council	North Geelong	391 Princes HWY	Former Service Station. Requires assessment and/or clean up	0090001994
Greater Geelong City Council	CORIO			0090002217
Greater Geelong City Council	GEELONG WEST	151 Church ST	Former Service Station. Requires assessment and/or clean up	0090002218
Greater Geelong City Council	BELMONT	180 Barwon Heads RD	Former Service Station. Requires assessment and/or clean up	0090002289
Greater Geelong City Council	CORIO	83 Purnell RD	Current Service Station. Requires ongoing management	0090002343
		1500 Biddlecombe AV	Current landfill. Requires assessment and/or clean up	

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Greater Geelong City Council	NORLANE	60 NORTH SHORE RD	Current Industrial Site. Requires assessment and/or clean up	0090002362
Greater Geelong City Council	NORTH GEELONG	343 MELBOURNE RD 452 MOORABOOL ST	Former Industrial Site. Requires assessment and/or clean up	0090003650
Greater Geelong City Council	SOUTH GEELONG	360 MELBOURNE RD	Former petroleum storage site. Requires assessment and/or clean up	0090003682
Greater Geelong City Council	NORTH GEELONG	7358 Goulburn Valley HWY	Former Landfill. Requires assessment and/or clean up	0090003888
Greater Shepparton City Council	KIALLA WEST		Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000083
Greater Shepparton City Council	SHEPPARTON NORTH	280 Daldy RD	Former Industrial Site. Requires assessment and/or clean up	0090001776
Greater Shepparton City Council	COSGROVE	205 COSGROVE-LEMNOS RD	Former Landfill. Requires ongoing management	0090003551
Hepburn Shire Council	CRESWICK	18 Clunes RD	Former Service Station. Requires assessment and/or clean up	0090000263
Hepburn Shire Council	CRESWICK	C/a 45a Parish Of Creswick County Of Talbot	Former Landfill. Requires ongoing management	0090003560
Hepburn Shire Council	DAYLESFORD	47 RAGLAN ST	Current Service Station. Requires assessment and/or clean up	0090004071
Hobsons Bay City Council	ALTONA	401 Kororoit Creek RD	Current Industrial Site. Requires assessment and/or clean up	0090000009
Hobsons Bay City Council	ALTONA	541 Kororoit Creek RD	Current chemical storage facility. Requires assessment and/or clean up	0090000425
Hobsons Bay City Council	ALTONA	351 MILLERS RD	Current Industrial Site. Requires assessment and/or clean up	0090000597
Hobsons Bay City Council	SPOTSWOOD	512 Melbourne RD	Railway yard. Requires assessment and/or clean up	0090000799
Hobsons Bay City Council	NEWPORT	Burleigh ST Underground Section Of Petroleum Pipelines That	Current petroleum storage site. Requires assessment and/or clean up	0090001325
Hobsons Bay City Council	NEWPORT	Run Under Champion Rd	Current Industrial Site. Requires assessment and/or clean up	0090001459
Hobsons Bay City Council	SPOTSWOOD	18 Drake ST	Current petroleum storage site. Requires assessment and/or clean up	0090001709
Hobsons Bay City Council	SOUTH KINGSVILLE	22 New ST	Former Landfill. Requires assessment and/or clean up	0090001727
Hobsons Bay City Council	NEWPORT	411 DOUGLAS PDE	Current Industrial Site. Requires assessment and/or clean up	0090002086
Hobsons Bay City Council	SPOTSWOOD	42 Simcock AV	Former Industrial Site. Requires assessment and/or clean up	0090002179
Hobsons Bay City Council	ALTONA MEADOWS	306 Queen ST	Current Service Station. Requires assessment and/or clean up	0090002186
Hobsons Bay City Council	SOUTH KINGSVILLE	38 Blackshaws RD	Former Industrial Site. Requires ongoing management	0090002381
Hobsons Bay City Council	WILLIAMSTOWN	12 Seaview PDE	Current Industrial Site. Requires ongoing management	0090002444
Hobsons Bay City Council	ALTONA	Elfield Meadows Estate Defined By Volume 10426	Waste Acid Sulfate Soils. Requires ongoing management	0090002765
Hobsons Bay City Council	SPOTSWOOD	144 HALL ST	Current Industrial Site. Requires assessment and/or clean up	0090003301
Hobsons Bay City Council	ALTONA	401 Kororoit Creek RD	Current Industrial Site. Requires assessment and/or clean up	0090003368
Hobsons Bay City Council	ALTONA	Queen ST	Former Landfill. Requires ongoing management	0090003472
Hobsons Bay City Council	BROOKLYN	Hardie RD	Former Landfill. Requires ongoing management	0090003487
Hobsons Bay City Council	ALTONA NORTH	Kyle RD	Former Landfill. Requires ongoing management	0090003527
Hobsons Bay City Council	ALTONA NORTH	Mobil Crude Oil Transfer pipe Churchill St to South Crude Tk Farm ROSS RD	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	0090004074
Horsham Rural City Council	HORSHAM	15 MILL ST	Former petroleum storage site. Requires assessment and/or clean up	0090003761
Hume City Council	DIGGERS REST	50 Edwards RD	Illegal dumping. Requires assessment and/or clean up	0090000070
Hume City Council	BULLA	315 Loemans RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000177
Hume City Council	GREENVALE	100 OAKLANDS RD	Illegal dumping. Requires ongoing management	0090001856
Hume City Council	CAMPBELLFIELD	1735 Sydney RD	Current Industrial Site. Requires assessment and/or clean up	0090002373
Hume City Council	SOMERTON	Cliffords RD	Former Industrial Site. Requires assessment and/or clean up	0090002446
Hume City Council	CRAIGIEBURN	Craigieburn RD	Former Landfill. Requires ongoing management	0090003107
Hume City Council	CAMPBELLFIELD	5 Reo CR	Current Industrial Site. Requires assessment and/or clean up	0090003276
Hume City Council	CAMPBELLFIELD	26 GLENBARRY RD	Illegal dumping. Requires assessment and/or clean up	0090003380
Hume City Council	CRAIGIEBURN	Craigieburn RD	Former Landfill. Requires ongoing management	0090003475
Hume City Council	CAMPBELLFIELD	Mahoneys RD	Former Landfill. Requires ongoing management	0090003496
Hume City Council	TULLAMARINE	Western AV	Former Landfill. Requires ongoing management	0090003530
Hume City Council	DIGGERS REST	65 EDWARDS RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003640
Hume City Council	KEILOR	Annandale RD	Former Landfill. Requires ongoing management	0090003689
Hume City Council	DIGGERS REST	95 MCLEODS RD	Illegal dumping. Requires assessment and/or clean up	0090003710
Hume City Council	KEILOR	Annandale RD	Former Landfill. Requires ongoing management	0090003730
Hume City Council	CAMPBELLFIELD	Bolinda RD	Former Landfill. Requires ongoing management	0090003793
Hume City Council	CAMPBELLFIELD	Bolinda RD	Former Landfill. Requires ongoing management	0090003793
Hume City Council	CRAIGIEBURN	54 RUSHWOOD DR	Illegal dumping. Requires assessment and/or clean up	0090003794
Hume City Council	CAMPBELLFIELD	26 GLENBARRY RD	Illegal dumping. Requires assessment and/or clean up	0090003863
Kingston City Council	CLAYTON SOUTH	654 Clayton RD	Current landfill. Requires ongoing management	0090003863
Kingston City Council	CHELSEA	Former Chelsea Landfill Mulkarra DR	Former Landfill. Requires ongoing management	0090000043
Kingston City Council	CHELSEA	476 Nepean HWY	Former Service Station. Requires assessment and/or clean up	0090000311
Kingston City Council Kingston City Council	Dingley Village	Waterway East of Boundary Road	Former Industrial Site. Requires assessment and/or clean up	0090001389
	MORDIALLOC	78 White ST	Former Industrial Site. Requires assessment and/or clean up	
Kingston City Council  Kingston City Council	MOORABBIN	1/ 10 Ebden ST	Former Industrial Site. Requires ongoing management	0090002256
,		17 BALCOMBE RD	Former petroleum storage site. Requires assessment and/or clean up	0090002273
Kingston City Council	MENTONE CLAYTON SOUTH	Fraser RD	Current landfill. Requires ongoing management	0090003219
Kingston City Council	CLAYTON SOUTH	RYANS RD	Former Landfill. Requires ongoing management	0090003226
Kingston City Council	CLAYTON SOUTH	Ryans RD	Former Landfill. Requires ongoing management	0090003604
Kingston City Council	CLAYTON SOUTH	8 Elder ST	Former Landfill. Requires ongoing management	0090003607
Kingston City Council	CLAYTON SOUTH	Scotch PDE	Former Landfill. Requires ongoing management	0090003610
Kingston City Council	CHELSEA	Cnr Deals RD & Heatherton RD	Former Landilli. Requires ongoing management	0090003613
Kingston City Council	CLAYTON SOUTH			0090003759
Kingston City Council	CLAYTON SOUTH	Cnr Deals RD & Heatherton RD	Former Landfill. Requires ongoing management	0090003780
Kingston City Council	DINGLEY VILLAGE	370 Old Dandenong RD	Former Landfill. Requires ongoing management	0090003831
3 ,	DINGLEY VILLAGE	370 Old Dandenong RD	Former Landfill. Requires ongoing management	0090003832
Kingston City Council	D1110221 1122102	ZOC DODONIA DD	Want diversing Description 1	
	WANTIRNA	706 BORONIA RD	Illegal dumping. Requires assessment and/or clean up	0090000181
Kingston City Council		Cathies LANE	Former Landfill. Requires ongoing management	0090000181 0090000475
Kingston City Council Knox City Council	WANTIRNA			

Laterba O'to Occasil	TRABALOON	3 / 4 Bench Bartons LANE	Ash pond with a Groundwater Attenuation Zone. Requires ongoing management	000000004
Latrobe City Council	TRARALGON	Haunted Hills RD	Former Landfill. Requires ongoing management	0090002894
Latrobe City Council	NEWBOROUGH	Haunted Hills RD	Former Landfill. Requires ongoing management	0090003785
Latrobe City Council	NEWBOROUGH			0090003786
Latrobe City Council	MORWELL	PT CA 86B & CA 104A Parish of Maryvale	Former Landfill. Requires ongoing management	0090003787
Latrobe City Council	MORWELL	PT CA 86B & CA 104A Parish of Maryvale	Former Landfill. Requires ongoing management	0090003788
Macedon Ranges Shire Council	KYNETON	Redesdale RD	Former Landfill. Requires ongoing management	0090003557
Macedon Ranges Shire Council	BULLENGAROOK	Hobbs RD	Former Landfill. Requires ongoing management	0090003582
Macedon Ranges Shire Council	KYNETON	Redesdale RD	Former Landfill. Requires ongoing management	0090004058
Macedon Ranges Shire Council	WOODEND	130 High ST	Current Service Station. Requires assessment and/or clean up	0090004073
Macedon Ranges Shire Council	SPRINGFIELD	130 Toomeys LANE	Illegal dumping. Requires assessment and/or clean up	0090004085
Macedon Ranges Shire Council	SPRINGFIELD	130 Toomeys LANE	Illegal dumping. Requires assessment and/or clean up	0090004114
-		Monkey Gully RD	Former Landfill. Requires ongoing management	
Mansfield Shire Council	MANSFIELD	Monkey Gully RD	Former Landfill. Requires ongoing management	0090003844
Mansfield Shire Council	MANSFIELD			0090003845
Maribyrnong City Council	YARRAVILLE	1 High ST	Former Industrial Site. Requires ongoing management	0090000134
Maribyrnong City Council	WEST FOOTSCRAY	1 Graingers RD	Current chemical storage facility. Requires assessment and/or clean up	0090000266
Maribyrnong City Council	YARRAVILLE	Yarraville Terminal Francis ST	Current petroleum storage site. Requires assessment and/or clean up	0090000989
Maribyrnong City Council	YARRAVILLE	2A FRANCIS ST	Current Industrial Site. Requires assessment and/or clean up	0090001122
Maribyrnong City Council	MAIDSTONE	9 WILLIAMSON RD	Former Industrial Site. Requires assessment and/or clean up	0090001771
Maribyrnong City Council	Yarraville	325 Whitehall Street	Former Industrial Site. Requires ongoing management	0090001941
Maribyrnong City Council	Yarraville	325 Whitehall Street	Former Industrial Site. Requires assessment and/or clean up	0090001942
		550 Geelong RD	Former Industrial Site. Requires assessment and/or clean up	
Maribyrnong City Council	BROOKLYN	Somerville RD	Former Industrial Site. Requires assessment and/or clean up	0090002056
Maribyrnong City Council	WEST FOOTSCRAY			0090002163
Maribyrnong City Council	BRAYBROOK	30 SOUTH RD	Former Industrial Site. Requires assessment and/or clean up	0090002547
Maribyrnong City Council	FOOTSCRAY	Farnsworth AV	Former Landfill. Requires ongoing management	0090003484
Maribyrnong City Council	MAIDSTONE	9 WILLIAMSON RD	Former Industrial Site. Requires assessment and/or clean up	0090003767
Maroondah City Council	RINGWOOD EAST	18 Mount Dandenong RD	Current Service Station. Requires assessment and/or clean up	0090001804
Maroondah City Council	CROYDON	Mt Dandenong RD	Former Service Station. Requires ongoing management	0090002862
Maroondah City Council	RINGWOOD	385 Canterbury RD	Current Service Station. Requires assessment and/or clean up	0090002884
Melbourne City Council	YARRAVILLE	295 WHITEHALL STREET	Former Industrial Site. Requires ongoing management	0090003351
		1 Holden RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	
Melton Shire Council	PLUMPTON		Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090000159
Melton Shire Council	PLUMPTON	627 Plumpton RD		0090000300
Melton Shire Council	MOUNT COTTRELL	180 Faulkners RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090000416
Melton Shire Council	RAVENHALL	53 Rebecca DR	Industrial waste has been dumped at the site. Requires ongoing management	0090001469
Melton Shire Council	RAVENHALL	53 Rebecca DR	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001470
Melton Shire Council	RAVENHALL	48A ORBIS DR	Illegal dumping. Requires assessment and/or clean up	0090003361
Melton Shire Council	MELTON SOUTH	2 FERRIS RD	Former Landfill. Requires ongoing management	0090003479
		2 FERRIS RD	Former Landfill. Requires ongoing management	
Melton Shire Council	MELTON SOUTH	Ferris RD		0090003480
Melton Shire Council	MELTON		Former Landfill. Requires ongoing management	0090003481
Melton Shire Council	PLUMPTON	1 HOLDEN RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090003652
Melton Shire Council	PLUMPTON	627 PLUMPTON RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090003861
Melton Shire Council	PLUMPTON	627 PLUMPTON RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090003893
Mildura Rural City Council	MILDURA	42 NINTH ST	Current Service Station. Requires assessment and/or clean up	0090001869
Mildura Rural City Council	OUYEN	48 FARRELL ST	Former petroleum storage site. Requires assessment and/or clean up	0090003224
Mildura Rural City Council	KOORLONG	Twentieth ST	Former Landfill. Requires ongoing management	0090003585
·		117 Wimble ST	Current Industrial Site. Requires assessment and/or clean up	
Mitchell Shire Council	SEYMOUR			0090001737
Mitchell Shire Council	BROADFORD	High ST	Former Landfill. Requires ongoing management	0090003542
Mitchell Shire Council	KILMORE	Walders RD	Former Landfill. Requires ongoing management	0090003834
Mitchell Shire Council	KILMORE	Walders RD	Former Landfill. Requires ongoing management	0090003835
Mitchell Shire Council	SEYMOUR	HUME AND HOVELL ROAD	Former Landfill. Requires ongoing management	0090003836
Mitchell Shire Council	SEYMOUR	HUME AND HOVELL ROAD	Former Landfill. Requires ongoing management	0090003837
Mitchell Shire Council	NORTHWOOD	1630 Northwood RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090004152
Mitchell Shire Council	NORTHWOOD	1630 Northwood RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	
		81 Channel RD	Former Landfill. Requires ongoing management	0090004153
Moira Shire Council	YARRAWONGA			0090003539
Moira Shire Council	NUMURKAH	Parish Of Katunga C/a 14 Sect D Naring Rd	Former Landfill. Requires ongoing management	0090003545
Monash City Council	GLEN WAVERLEY	310 SPRINGVALE RD	Current Industrial Site. Requires assessment and/or clean up	0090002027
Monash City Council	OAKLEIGH	1386 Dandenong RD	Current Service Station. Requires assessment and/or clean up	0090003887
Monash City Council	CLAYTON	1555 Centre RD	Current Industrial Site. Requires assessment and/or clean up	0090003892
Moonee Valley City Council	MOONEE PONDS	783 Mt Alexander RD	Current Service Station. Requires assessment and/or clean up	0090000664
Moonee Valley City Council	ASCOT VALE	421 Mt Alexander RD	Former Service Station. Requires assessment and/or clean up	0090002031
•		Mt Alexander RD	Current Service Station. Requires assessment and/or clean up	
Moonee Valley City Council	ASCOT VALE	Cnr Yendon-Egerton Rd & Ballan-Egerton Rd	Former Landfill. Requires ongoing management	0090002299
Moorabool Shire Council	MOUNT EGERTON			0090001283
Moorabool Shire Council	BACCHUS MARSH	End of Halletts WAY  C/a 5e Section 13 Parish Of Gorrockburkgap	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001880
Moorabool Shire Council	ROWSLEY	C/a 5e Section 13 Parish Of Gorrockburkgap County Of Grant	Gun, pistol or rifle range. Requires ongoing management	0090002652
Moorabool Shire Council	FISKVILLE	Geelong-Ballan RD	Current Industrial Site. Requires assessment and/or clean up	0090003174
Moorabool Shire Council	FISKVILLE	Geelong-Ballan RD	Current Industrial Site. Requires assessment and/or clean up	0090003319
Moorabool Shire Council	MADDINGLEY	Side Of Kerrs RD	Former Landfill. Requires ongoing management	0090003631
		227 Barkly ST	Former Industrial Site. Requires assessment and/or clean up	
Moreland City Council	BRUNSWICK		·	0090000624
Moreland City Council	BRUNSWICK	225 Barkly ST	Former Industrial Site. Requires assessment and/or clean up	0090000747
Moreland City Council	BRUNSWICK	227 Barkly ST	Former Industrial Site. Requires assessment and/or clean up	0090001205
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Moreland City Council	COBURG NORTH	737 Sydney RD	Former Service Station. Requires assessment and/or clean up	0090001860
Moreland City Council	PASCOE VALE	512 PASCOE VALE RD	Current Service Station. Requires assessment and/or clean up	0090001860
Moreland City Council	COBURG NORTH	46 Newlands RD	Current Service Station. Requires assessment and/or clean up	0090003800
Mornington Peninsula Shire Council	SOMERVILLE	182 Eramosa RD	Illegal dumping. Requires assessment and/or clean up	0090000097
Mornington Peninsula Shire Council	MOUNT ELIZA	250 Moorooduc HWY	Former Landfill. Requires ongoing management	0090000477
Mornington Peninsula Shire Council	RYE	Point Nepean RD	Current Service Station. Requires ongoing management	0090000658
Mornington Peninsula Shire Council	CRIB POINT	The ESPLANADE	Former Industrial Site. Requires ongoing management	0090000897
•	ROSEBUD WEST	119 Truemans RD	Former Landfill. Requires ongoing management	0090002837
Mornington Peninsula Shire Council		2 Lens ST	Former Landfill. Requires ongoing management	
Mornington Peninsula Shire Council	CRIB POINT	250 Moorooduc HWY	Former Landfill. Requires ongoing management	0090003619
Mornington Peninsula Shire Council	MOUNT ELIZA	20 CENTRE RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003744
Mount Alexander Shire Council	WALMER	5331 Great Ocean RD		0090004101
Moyne Shire Council	ALLANSFORD	Portion 10(pt) Parish Of Koroit Property Number	Current Industrial Site. Requires ongoing management	0090002367
Moyne Shire Council	PORT FAIRY	506450 Allotment 36a (pt) Parish Of Koroit Township Of	Former Landfill. Requires assessment and/or clean up	0090003335
Moyne Shire Council	PORT FAIRY	Port Fairy -	Former Landfill. Requires assessment and/or clean up	0090003337
Moyne Shire Council	PORT FAIRY	Badhams LANE	Former Landfill. Requires ongoing management	0090003625
Moyne Shire Council	YARPTURK	146 MAILORS FLAT-KOROIT RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003656
Nillumbik Shire Council	ELTHAM	197 Sherbourne RD	Former Industrial Site. Requires assessment and/or clean up	0090000158
Nillumbik Shire Council	PANTON HILL	165 MOTSCHALL RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090002083
Nillumbik Shire Council	DIAMOND CREEK	50 Fraser ST	Historical deposit of mine tailings. Requires assessment and/or clean up	0090002671
Villumbik Shire Council	PANTON HILL	165 MOTSCHALL RD	Current Industrial Site. Requires ongoing management	0090002787
Willumbik Shire Council	YARRAMBAT	Yan Yean RD	Former Landfill. Requires ongoing management	0090003407
Nillumbik Shire Council	YARRAMBAT	Yan Yean RD	Former Landfill. Requires ongoing management	0090003407
		105 GRAHAM RD	Former Landfill. Requires ongoing management	
Nillumbik Shire Council	KANGAROO GROUND	105 GRAHAM RD	Former Landfill. Requires ongoing management	0090003503
Nillumbik Shire Council	KANGAROO GROUND	105 GRAHAM RD	Former Landfill. Requires ongoing management	0090003504
Nillumbik Shire Council	KANGAROO GROUND			0090003505
Northern Grampians Shire Council	STAWELL	25 Horsham RD	Former Industrial Site. Requires ongoing management	0090002140
Port Phillip City Council	ELWOOD	54A MARINE PDE	Current Service Station. Requires assessment and/or clean up	0090000663
Port Phillip City Council	PORT MELBOURNE	14 Woodruff ST	Former Industrial Site. Requires assessment and/or clean up	0090003384
South Gippsland Shire Council	FOSTER	4090 SOUTH GIPPSLAND HWY	Former Landfill. Requires ongoing management	0090003533
South Gippsland Shire Council	FOSTER	4090 SOUTH GIPPSLAND HWY	Former Landfill. Requires ongoing management	0090003747
South Gippsland Shire Council	KOONWARRA	Rougheads RD	Former Landfill. Requires ongoing management	0090003789
South Gippsland Shire Council	KOONWARRA	Rougheads RD	Former Landfill. Requires ongoing management	0090003790
Stonnington City Council	PRAHRAN	549 High ST	Current Service Station. Requires assessment and/or clean up	0090000662
Strathbogie Shire Council	VIOLET TOWN	190 Mcdiarmids RD	Former Landfill. Requires ongoing management	0090003846
Strathbogie Shire Council	VIOLET TOWN	190 Mcdiarmids RD	Former Landfill. Requires ongoing management	0090003847
•		SITE GOULBURN VALLEY HWY	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	
Strathbogie Shire Council	NAGAMBIE	114 Trebeck CT	Illegal dumping. Requires assessment and/or clean up	0090003956
Surf Coast Shire Council	WINCHELSEA	450 Hendy Main RD	Former Industrial Site. Requires assessment and/or clean up	0090001935
Surf Coast Shire Council	MOUNT MORIAC			0090003712
Swan Hill Rural City Council	TOL TOL	3216 Murray Valley HWY	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000256
Swan Hill Rural City Council	ROBINVALE	HAPPY VALLEY TRACK	Illegal dumping. Requires assessment and/or clean up	0090003340
Towong Shire Council	BETHANGA	4 MARTIN ST	Former Landfill. Requires ongoing management	0090003554
Wangaratta Rural City Council	NORTH WANGARATTA	150 STAMPS LANE	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003900
Wangaratta Rural City Council	NORTH WANGARATTA	150 STAMPS LANE	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003901
Warrnambool City Council	ALLANSFORD	137 Ziegler PDE	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up	0090000492
Warrnambool City Council	WARRNAMBOOL	Braithwaite ST	Former Landfill. Requires ongoing management	0090003637
Wellington Shire Council	COWWARR	Part C/a 41 Parish Of Toongabbie Nth Cert Of Title Vol 8713 Folio 830	Former Landfill. Requires assessment and/or clean up	0090000036
Wellington Shire Council	MAFFRA	57 Johnson ST	Current Industrial Site. Requires assessment and/or clean up	0090001587
Wellington Shire Council	YARRAM	Off Yarram-Traralgon RD	Former Landfill. Requires ongoing management	0090001387
		746 LONGFORD-LOCH SPORT RD	Former Landfill. Requires ongoing management	
Wellington Shire Council	LONGFORD	746 LONGFORD-LOCH SPORT RD	Former Landfill. Requires ongoing management	0090003791
Wellington Shire Council	LONGFORD	2 Central RD	Former Service Station. Requires assessment and/or clean up	0090003792
Whitehorse City Council	BLACKBURN		·	0090002076
Whitehorse City Council	BLACKBURN	21 Blackburn RD	Current Service Station. Requires ongoing management	0090002839
Whitehorse City Council	BLACKBURN	21 Blackburn RD	Current Service Station. Requires ongoing management	0090003034
Vhitehorse City Council	BOX HILL	14 Federation ST	Former Landfill. Requires ongoing management	0090003134
Whitehorse City Council	BLACKBURN	24 Blackburn RD	Former Service Station. Requires assessment and/or clean up	0090003153
Whitehorse City Council	BOX HILL	14 Federation ST	Former Landfill. Requires ongoing management	0090003499
Nhittlesea City Council	KEON PARK	6 Dunstans CT	Former Industrial Site. Requires assessment and/or clean up	0090000016
Vhittlesea City Council	THOMASTOWN	342 Settlement RD	Former Service Station. Requires assessment and/or clean up	0090001959
Vhittlesea City Council	EPPING	215 COOPER ST	Current landfill. Requires ongoing management	0090003348
Vhittlesea City Council	EPPING	500 Cooper ST	Former Landfill. Requires ongoing management	0090003490
Vhittlesea City Council	EPPING	490 COOPER ST	Former Landfill. Requires ongoing management	0090003502
·		219 & Part Of 221 Whytes Rd	Current Industrial Site. Requires ongoing management	
Vodonga Rural City Council	BARANDUDA	3437 Beechworth-Wodonga RD	Former Landfill. Requires ongoing management	0090003307
Vodonga Rural City Council	WODONGA			0090003548
Vyndham City Council	LAVERTON NORTH	19 Little Boundary RD	Current Industrial Site. Requires assessment and/or clean up	0090000003
Vyndham City Council	LAVERTON NORTH	41 LEAKES RD	Former Industrial Site. Requires assessment and/or clean up	0090000864
Wyndham City Council	LAVERTON NORTH	87 Pipe RD	Current Industrial Site. Requires assessment and/or clean up	0090002450
Vyndham City Council	TRUGANINA	99 Palmers RD	Solid inert waste has been dumped at the site. Requires ongoing management	0090002914
Wyndham City Council	LAVERTON NORTH	142 Fitzgerald RD	Current chemical storage facility. Requires assessment and/or clean up	0090004097
Vyndham City Council	LAVERTON NORTH	3 PROGRESS CT	Illegal dumping. Requires assessment and/or clean up	0090004121
		3-21a Kent St & 1/4-14/4 Little Buckingham St		

Yarra Ranges Shire Council	KILSYTH	1/76 Fussell RD	Former Industrial Site. Requires assessment and/or clean up	0090000004
Yarra Ranges Shire Council	KILSYTH	2 /76 Fussell RD	Former Industrial Site. Requires assessment and/or clean up	0090000005
Yarra Ranges Shire Council	KILSYTH	1/76 Fussell RD	Former Industrial Site. Requires assessment and/or clean up	0090000006
Yarra Ranges Shire Council	KILSYTH	2/76 Fussell RD	Former Industrial Site. Requires assessment and/or clean up	0090000007
Yarra Ranges Shire Council	GRUYERE	108 Killara RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001184
Yarra Ranges Shire Council	BELGRAVE	2 Monbulk RD	Former petroleum storage site. Requires assessment and/or clean up	0090002405
Yarra Ranges Shire Council	COLDSTREAM	Ingram RD	Former Landfill. Requires ongoing management	0090003838
Yarra Ranges Shire Council	COLDSTREAM	Ingram RD	Former Landfill. Requires ongoing management	0090003839
Yarra Ranges Shire Council	HEALESVILLE	Mt Riddel RD	Former Landfill. Requires ongoing management	0090003840
Yarra Ranges Shire Council	HEALESVILLE	Mt Riddel RD	Former Landfill. Requires ongoing management	0090003841



# **Appendix D. Groundwater bores**



SITE NO	MGA ZONE	EAST	NORTH	DATE COMPLETED	TOTAL DEPTH (m)	RLNS	USES
58458	55	317507	5850821	11.01.1971	19.81	258.82	Stock and domestic
58459	55	316596	5850970	17.03.1973	39.62	268.35	Stock and domestic
58461	55	316795	5851361	27.01.1977	32.7	271.31	Stock and domestic
58466	55	317163	5852684	04.12.1984	68	284.33	Stock and domestic
58469	55	316763	5851384	21.02.1987	56	272.89	Domestic
58470	55	317113	5851384	03.02.1988	56	261.33	Stock and domestic
58473	55	316973	5851944	05.02.1981	36.5	281.15	Stock and domestic
79122	55	320615	5851343	31.12.1969	70.71	300.27	Stock and domestic
79132	55	319183	5850922	31.12.1970	0	268.75	Unknown
79142	55	318963	5851269	14.03.1972	16.15	265.53	Stock
79146	55	321633	5850804	29.09.1974	27.43	299.49	Stock and domestic
79147	55	321573	5850804	01.09.1974	41.45	297.85	Stock and domestic
79148	55	321473	5850804	10.10.1974	55.47	300.65	Stock and domestic
79149	55	321353	5850824	23.10.1974	27.43	302.69	Stock and domestic
79153	55	320994	5851049	01.05.1976	73.15	309.03	Stock and domestic
79154	55	320833	5850944	12.08.1975	64	288.87	Stock and domestic
79155	55	318587	5851452	15.03.1977	14.63	264.22	Stock and domestic
79156	55	321093	5850664	22.03.1978	22	277.27	Domestic
79159	55	321433	5850564	21.01.1981	17	281.75	Stock and domestic
79160	55	319957	5850812	04.07.1981	33.5	263.79	Stock and domestic
79161	55	320062	5851185	29.06.1981	35	273.03	Stock and domestic
79162	55	320324	5851282	03.07.1981	16.5	281.89	Stock and domestic
79164	55	320126	5850969	20.11.1981	36	267.13	Domestic
79165	55	320913	5850834	03.12.1981	21	287.46	Domestic
79166	55	320913	5850684	02.12.1981	26	274.58	Stock and domestic
79170	55	321063	5850734	21.02.1983	76.2	285.23	Domestic
79173	55	320913	5850834	15.12.1982	79.25	287.46	Domestic
79176	55	321563	5850484	01.06.1983	20	282.79	Stock and domestic
79177	55	320913	5850734	18.01.1982	75	277.92	Stock and domestic
79178	55	320863	5850734	01.03.1983	23	278.08	Domestic
79179	55	321753	5850644	27.10.1985	30	289.61	Domestic
79180	55	321613	5850734	20.11.1983	30	292.96	Unknown
79181	55	321563	5850684	20.11.1983	25	289.12	Domestic
79186	55	321753	5850624	17.02.1988	50	288.77	Domestic
79187	55	321753	5850544	30.03.1988	19.8	286.44	Domestic
114286	55	321293	5850824	29.10.1992	34.5	302.48	Stock and domestic
115153	55	321013	5850884	30.01.1993	76.5	295.13	Domestic
133104	55	321693	5850764	22.01.1998	25	296.69	Stock and domestic
141647	55	319400	5850551	05.05.1997	20	261.16	Domestic
141812	55	321613	5850484	18.09.1998	23	283.72	Domestic



SITE NO	MGA ZONE	EAST	NORTH	DATE COMPLETED	TOTAL DEPTH (m)	RLNS	USES
141975	55	318313	5851284	22.04.1999	57	261.65	Stock and domestic
142304	55	319913	5850684	22.04.2000	32	261.91	Domestic
142524	55	321763	5854794	21.12.1998	48	304.1	Stock and domestic
145708	55	319256	5853356	01.03.2002	16	298.54	Investigation
145709	55	318962	5852765	01.03.2002	9.7	283.45	Investigation
145710	55	319496	5851788	01.03.2002	13.7	278.81	Investigation
145711	55	319564	5852388	01.03.2002	15.8	288.57	Investigation
145712	55	320048	5852301	01.03.2002	12.3	288.6	Investigation
145713	55	320100	5852872	01.03.2002	15.85	296.51	Investigation
145714	55	319781	5854267	01.03.2002	20.6	310.29	Investigation
145715	55	319001	5854668	01.03.2002	18.2	304.39	Investigation
146719	55	321433	5850564	05.11.2001	21.5	281.75	Domestic
319772	55	318474	5851386	18.04.1974	23.46	264.65	Not groundwater
330483	55	321190	5854946	10.05.1974	37.49	304.18	Not groundwater
S9019147/1	55	319490	5850737	18.12.2004	22	264.92	Stock and domestic
S9019706/1	55	321423	5850535		25	280.57	Unknown
S9020401/1	55	318676	5851406	22.11.2004	15	266.24	Unknown
S9020401/2	55	319442	5853198	17.06.2007	25	293.53	Stock and domestic
S9020401/3	55	319243	5853237	17.06.2007	100	294.7	Unknown
S9021088/1	55	317064	5851382	04.11.2004	48	262.93	Stock and domestic
S9025815/1	55	316407	5850923	12.11.2006	45	274.79	Stock and domestic
S9037556/1	55	320939	5850936		150	295.91	Unknown
S9037754/1	55	321676	5850784	11.04.2009	50	298.45	Domestic
WRK051867	55	320140	5852700	29.10.2009	12	295.62	Observation
WRK059915	55	321538	5850692		0		Stock and domestic
WRK060082	55	321131	5850801	12.10.2010	90		Commercial

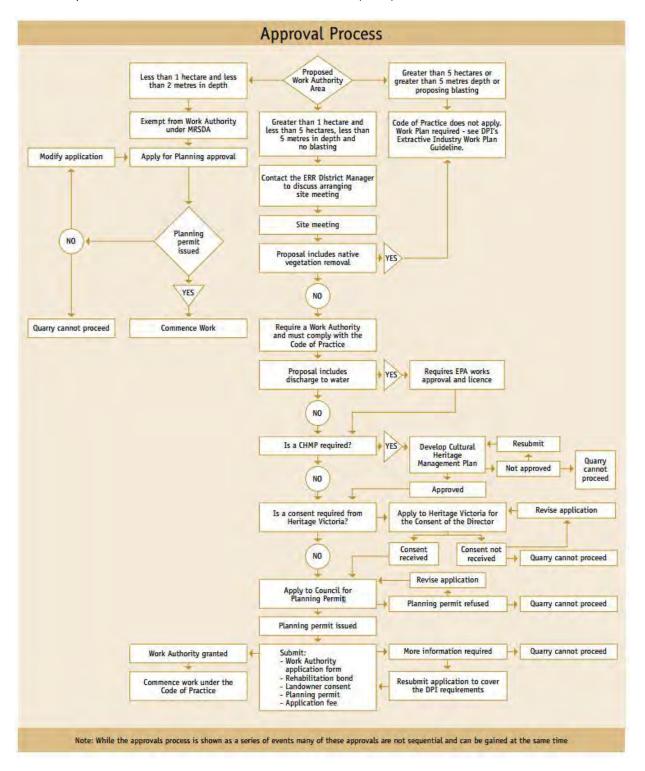


# **Appendix E. Approval process for extractive industries**



# E.1 Flow chart for approval process

The following flow chart presents the approval process for quarries taken from the Department of Primary Industries publication *Code of Practice for Small Quarries* (2010).





# E.2 Work Authority approval process likely to apply for 175 Northern Highway

The following flow chart presents the approval process likely to apply to the 175 Northern Highway site at the north east corner of the Beveridge North West PSP. The flow chart is taken from the Department of Primary Industries publication *Extractive Industry Work Plan Guideline: Mineral Resources (Sustainable Development) Act 1990* published in September 2010.

#### Stage one work plan approval

#### Initial contact with department

Contact a DPI inspector to organise site meeting (send inspector site map/location to enable inspector to meet proponent)

#### Site meeting with inspector

Site meeting with inspector and other relevant agencies to discuss proposal

Receive copy of the Extractive Industry Work Plan Guideline ('the guideline') (this document)

Following this meeting the DPI sends a letter to the applicant with a proposal number

#### Draft work plan

Submit draft work plan to inspector based on inspector's comments and information provided in the guideline

Re-submit draft work plan (if required to do so) for assessment by inspector

#### **Endorsed work plan**

Once acceptable, inspector will endorse work plan and send to proponent

Receive notification of rehabilitation bond assessment – do NOT submit bond at this stage

Apply for planning permit; send planning permit application to the DPI on the same day.

Start compiling information required for "information package" (see below)

#### Approved work plan

The DPI receives all items required in Information Package including planning permit (see below)

The DPI approves (endorsed work plan & bond assessment)

The DPI forwards to proponent Work Authority
Application Form for completion

Go to stage 2...

#### "Information Package" required to obtain approved work plan

- . Land owner's consent for private land
- · Land manager's consent (for Crown land) native title issues may need to be addressed
- Other consents may be required (easement, EL/MIN holder etc...)
- Current public liability insurance
- Three copies of endorsed work plan
- · Fee for lodging a work plan
- An additional fee is required to approve (grant) a work authority you may wish to submit this fee at the same time.
- Please be aware that the relevant fees are based on the size and depth of your operation. For assistance contact your DPI tenements officer.
- · Planning Permit

(Go to "approved work plan" stage once all information obtained)

# Desktop Environmental, Hydrological and Geotechnical Assessment



### Stage two: work authority application and grant

### **Lodge Application**

Complete and submit Work Authority Application Form

Submit required bond (in the form of a bank guarantee) (Section 80 of the Act)

Submit fee to approve a work authority

Submit index map

#### **Granted work authority**

Work authority granted

Department forwards work authority document, approved work plan and work plan conditions

The department wishes you every success with your operation



# Appendix F. Yarra Valley Water (2008) report for Lot 8 & 9 Camerons Lane



# Wallan Reclaimed Water Re-Use Scheme

# Camerons Lane Lots 8 & 9

**Preliminary Assessment of Groundwater Monitoring Results** 



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# 1. Introduction

The Camerons Lane Reuse Scheme was developed as part of Goulburn Valley Water's (GVW) re-use strategy for effluent from the Wallan Sewage Treatment Plant (STP). Stage 1 of the scheme has been completed and covers 92 ha. Stage 2 will develop the remaining 66 ha of the site in the future. The reuse scheme is located at Lots 8 and 9 of Camerons Lane, located south of Wallan, on the western side of the Hume Freeway. The ownership of the Wallan STP and Camerons Lane Lots 8 and 9 was transferred from GVW to Yarra Valley Water (YVW) in January 2006. Irrigation with recycled water of Class C standard commenced at Lots 8 and 9 in early 2006 for pasture establishment for cattle grazing purposes. Approximately 360 ML of Class C water has been utilised for irrigation at the site from early 2006 to March 2008.

Prior to the commencement of irrigation with Class C recycled water, GVW commissioned Sinclair Knight Merz (SKM) in 2005 to conduct a hydrogeological assessment to determine background groundwater conditions at Lots 8 and 9. SKM performed an evaluation of sampling results with a focus on the protection of beneficial use segments as defined in the State Environment Protection Policy (SEPP) (EPA 1997). The SEPP stipulates that groundwater quality should be maintained to protect existing and potential beneficial uses of groundwater resources. The evaluation by SKM indicated that beneficial uses of groundwater in the vicinity of the site are predominately in segments B to C. Segments B to C includes irrigation water, stock water, industry, ecosystem protection, and buildings and structures. As the most likely uses of the groundwater in the area would involve irrigation and stock watering, the relevant guidelines in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000) were utilised as an indication of the quality limits to which the groundwater should be maintained (from here onwards, these guidelines shall be referred to as the 'Guidelines').

This report aims to provide a preliminary assessment of groundwater monitoring data obtained since irrigation with Class C water commenced against background conditions as determined by SKM in 2005, and the relevant guideline values. A more detailed independent assessment of the groundwater monitoring results is planned after additional data is collected following the 2008 irrigation period. Therefore, this report includes:

- a brief background of the groundwater monitoring network and Class C water quality;
- groundwater level monitoring results, and a comparison of post January 2006 groundwater levels with background levels;
- groundwater quality results, and a comparison of groundwater quality results against relevant guidelines and background levels.

# 2. Background

# 2.1 Groundwater monitoring

The groundwater monitoring network for Lots 8 and 9 consisted of 21 boreholes and windmills in 2002, of which 12 are still in operation in 2008 (see Appendix 1 for location of borehole sampling sites). Over this period, boreholes and windmills have been removed from operation for various reasons, including boreholes deteriorating or being destroyed during construction of the irrigation scheme. Groundwater levels and quality have been monitored at least annually at the site since 2002. YVW commenced quarterly monitoring in October 2006.

# 2.2 Class C recycled water for irrigation

The Class C water supplied from the Wallan STP for irrigation at Lots 8 and 9 Camerons Lane contains various parameters for which relevant guidelines values are specified by ANZECC & ARMCANZ (2000). A summary of Class C water quality from the Wallan STP in 2006/07 is given in Table 1. Approximately 360 ML of Class C water was utilised for irrigation at Lots 8 and 9 from early 2006 when irrigation started to April 2008.

Table 1: Wallan Class C water quality results for 2006/07

Parameter	Units	Median
рН	Units	7.9
Biological Oxygen Demand (BOD)	mg/L	12
Suspended Solids (SS)	mg/L	31
Total Phosphorus (TP)	mg/L	12.5
Total Nitrogen (TP)	mg/L	32
Nitrite (NO <sub>2</sub> )	mg/L	0.32
Nitrate (NO <sub>3</sub> )	mg/L	2.45
Ammonia (NH <sub>3</sub> )	mg/L	20
Organic Nitrogen	mg/L	10
Total Kjeldahl Nitrogen (TKN)	mg/L	31
Total Dissolved Solids (TDS)	mg/L	820^
Electrical Conductivity (EC)	uS/cm	825
Sodium Adsorption Ratio (SAR)	Units	6^
E. coli	orgs/100mL	132

<sup>^</sup> Single annual result.

# 3. Analysis of monitoring data

# 3.1 Groundwater standing water levels

Of the 21 boreholes in the monitoring network in 2002, standing water levels were recorded for 12 boreholes in both the pre and post-irrigation periods (Figure 1). A relatively consistent slight downward trend in groundwater standing water levels over time has been detected spanning both the pre and post irrigation periods for these 12 boreholes. The standing water levels at the commencement of monitoring in 2002 ranged from 3.47 m to 10.3 m. The standing water level is measured from the top of borehole casing to the water top level in the bore. In March 2008, the groundwater levels generally dropped, with the standing water levels ranging from 3.63 m to 10.91 m. This slight drop in groundwater levels could possibility be due to the dry conditions experienced between 2002 and 2008.

Boreholes 5, 6 and 10 showed increases in groundwater levels. For borehole 5 (BH5), the reported standing water level changed from 9.7 m in 2004 to 7.8 m in 2007. This result can be attributed to an alteration of the well head fitting of BH5 and removal of the post to enable the lateral irrigator to operate in 2006. BH5 was previously surveyed to the Australian Height Datum in March 2002 and this was used to estimate the water levels although alterations of the well head fitting could change the height of the casing. Therefore the elevation to top of casing will need to be re-surveyed and results should be adjusted accordingly. The latest results for boreholes 6 and 10 indicated an increase in groundwater levels.

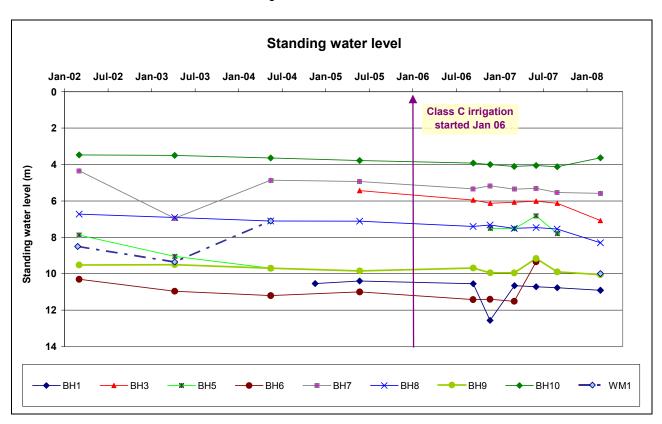


Figure 1: Groundwater levels from on-site bores with data in the pre and post irrigation periods

Groundwater standing water level data for all 21 groundwater bores are shown in Appendix 2 and depicted in Figure 2. For windmill 3 (WM3), the low groundwater level of 26.21m in 2003 may have occurred due to the bore being in operation at the time of monitoring. Groundwater levels could not be recorded for all operational bores over the monitoring period for reasons such as unable to pass equipment through the tops of bores, monitoring equipment could not reach the water table or the bores were dry.

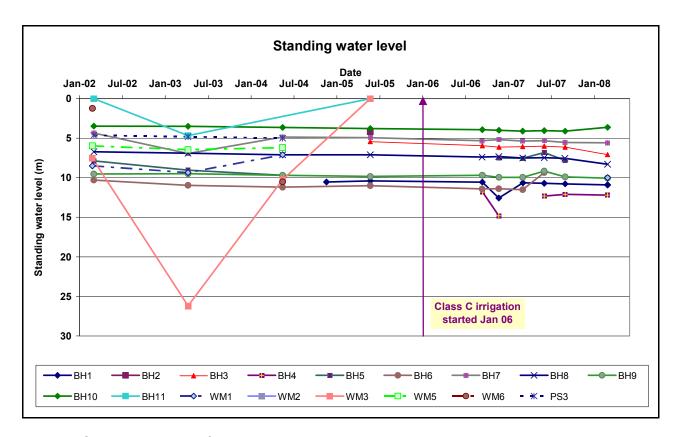


Figure 2: Groundwater levels from all on-site bores

### 3.2 Groundwater quality

Groundwater sampling from bores has occurred at the site since 2002 with the latest sample results from March 2008. A total of 36 water quality parameters were tested, and these results are shown in Appendix 2.

Eight of the 36 parameters were assessed by SKM in 2005 to establish background conditions and are discussed in the next section. Thirteen of the 36 parameters which have trigger values in the Guidelines for irrigation and stock water are shown below in Table 2 together with the maximum results in the pre and post-irrigation periods.

Table 2: Groundwater quality results and trigger values

		Trigger values		Maximur	n results	
Parameter	Unit	Irrigation water*	Stock water	Pre- irrigation^	Post- irrigation	Comments
Calcium (Ca)	mg/L		1,000	NA	100	Maximum result(s) below trigger value(s).
Sodium (Na)	mg/L	230 - 460 moderately tolerant crops		NA	1,000	Median value of 270 mg/L within the guidelines. Results above 460 mg/L from BH3, 5 & 10. BH 3 & 10 located north of irrigation area. Only BH5 located within irrigation area. No pre-irrigation data available.
Chloride (CI)	mg/L	350 - 700 moderately tolerant crops		NA	2,300	Median value of 590 mg/L within the guidelines. Results above 700 mg/L from BH3, 5, 9 & 10. BH 3, 9 & 10 located north of irrigation area. Only BH5 located within irrigation area. No pre-irrigation data available.
Sulphate (SO <sub>4</sub> )	mg/L		1,000	NA	160	Maximum result(s) below trigger value(s).
Cadmium (Cd)	mg/L	STV 0.05; LTV 0.01	0.01	NA	0.002	Maximum result(s) below trigger value(s).
Copper (Cu)	mg/L		0.4 (most sensitive livestock - sheep)	NA	0.04	Maximum result(s) below trigger value(s).
Mercury (Hg)	mg/L		0.002	NA	<0.001	Maximum result(s) below trigger value(s).
Zinc (Zn)	mg/L		20	NA	0.75	Maximum result(s) below trigger value(s).
Arsenic (As)	mg/L	STV 2.0; LTV 0.1	0.5 - 5	NA	0.02	Maximum result(s) below trigger value(s).
Chromium (Cr)	mg/L	STV 0.1; LTV 1	1	NA	0.02	Maximum result(s) below trigger value(s).
Molybdenum (Mo)	mg/L	STV 0.2; LTV 10	0.15	NA	<0.01	Maximum result(s) below trigger value(s).
Selenium (Se)	mg/L	STV 0.02; LTV 0.05	0.02	NA	0.015	Maximum result(s) below trigger value(s).
рН	pH units	Guidance range 6 - 8.5 to limit corrosion & fouling of pumping, irrigation & stock watering systems		12.1	9.3	pH 9.0 - 9.3 from WM2, 5 & 6. WM2 & 6 located on eastern boundary of site. WM5 located north of irrigation area. Maximum pH results of Class C water in 2006/07 and 2007/08 (year to March 2008) was pH 8.1.

<sup>\*</sup> STV – Short-term Trigger Value (short-term use – up to 20 years). LTV - Long-term Trigger Value (short-term use – up to 100 years). Moderately tolerant crops classification selected by SKM to establish background conditions.

<sup>^</sup> NA – Not applicable, background condition in pre-irrigation period not assessed.

Majority of results for the thirteen parameters in Table 2 were within the Guidelines. Three parameters (sodium, chloride and pH) recorded maximum results above the trigger values. However, for two of the parameters (sodium and chloride), no pre-irrigation data was available and therefore a comparison with pre-irrigation conditions cannot be made. SKM (2005) concluded that the groundwater flow direction is generally to the south. Thus elevated results for sodium and chloride from boreholes north of the irrigated area are unlikely to be caused by irrigation with Class C water. The guidance range for pH of 6 – 8.5 is to limit the corrosion and fouling of pumping, irrigation and stock watering systems. The slightly elevated pH levels of 9.0 – 9.3 was recorded for three windmills, however a general increase in pH for all boreholes in the irrigated area was not observed (Figure 3). Maximum pH results recorded for Class C water in 2007/08 and 2008/09 (to March 2008) was 8.1. Future monitoring results for Sodium, Chloride and pH should be assessed to determine if irrigation with Class C water is the cause of the elevated results.

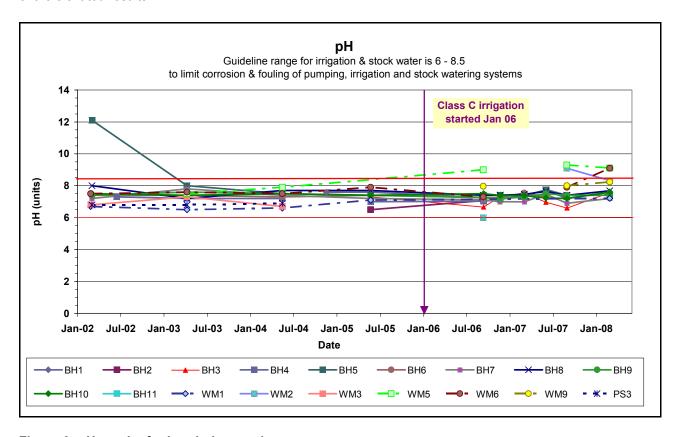


Figure 3: pH results for borehole samples

# 3.2.1 Comparison with background levels

An assessment by SKM in 2005 aimed to provide an indication of background conditions for eight groundwater quality parameters of particular significance to the beneficial reuse potential of the groundwater in the area. Five parameters are assessed against trigger levels in the Guidelines as listed in Table 3, and a further three parameters without trigger levels (ammonia, Biological Oxygen Demand, Total Kjeldahl Nitrogen) are analysed. The relevant trigger values in Table 3 from the Guidelines for the site were determined by SKM (2005).

Table 3: Guideline trigger values for selected parameters

Parameter	Trigger values				
	Irrigation water	Stock water			
Total Dissolved	1,140-2,700 mg/L, av. 1,920	2,000 mg/L (no adverse effect for all			
Solids	mg/L (root zone salinity for	livestock)			
	moderately tolerant crops)				
Thermotolerant	Median <10 orgs/100 mL water	Median <100 orgs/100 mL water			
coliforms,					
including E. coli					
Nitrate as N	Not specified	< 90 mg/L			
(nitrogen)					
Nitrite as N	Not specified	< 9 mg/L			
(nitrogen)					
Total Phosphorus	Short-term trigger value (up to 20	Not specified			
	years): 0.8 - 12 mg/L				
	Long-term trigger value (up to				
	100 years): 0.05 mg/L (to minimize				
	bioclogging of irrigation equipment only)				

### **Total Dissolved Solids**

Total Dissolved Solids (TDS) is a measure of organic and inorganic matter, and ions dissolved in solution. It is often used to give an indication of salinity. High salinity levels in soils can reduce plant productivity and in extreme cases cause die off of crops or native vegetation.

The TDS values were found to range 300-5,000 mg/L and 400-7,300 mg/L from bores samples in the pre and post-irrigation periods respectively (Figure 4). The value of 7,300 mg/L from borehole 6 (BH6) in March 2007 was an extreme outlier and the subsequent TDS result from June 2007 was 1,100 mg/L, which is within the pre-irrigation TDS range of 1,100-1,400 mg/L. In the post-irrigation period, the majority of the bores sampled had TDS values below the recommended trigger values of 2,700 mg/L for irrigation water and 2,000 mg/L for stock watering. TDS results exceeding guideline trigger values appear unlikely to be related to irrigation, as the exceedence results originated from bores which also showed high TDS results prior to irrigation.

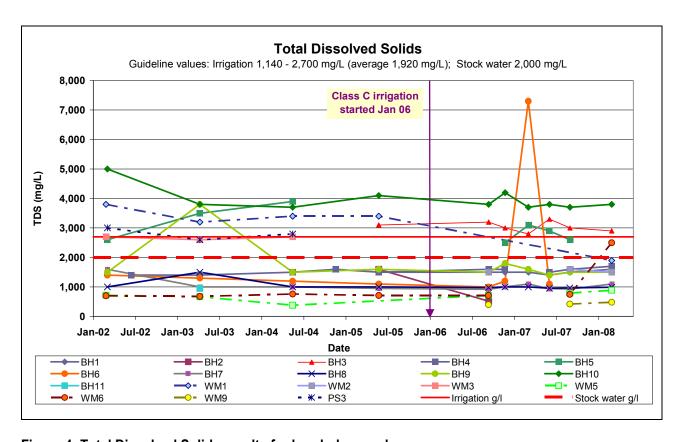


Figure 4: Total Dissolved Solids results for borehole samples

## **Ammonia**

Ammonia is produced from the breakdown of organic nitrogen derived from animal or plant material. Ammonia is used as an indicator of organic nitrogen, and exists as either the ammonium ion (NH<sub>4</sub>\*) or ammonia (NH<sub>3</sub>).

Trigger values for irrigation water and stock water for ammonia are not specified in the Guidelines. The concentration of ammonia as nitrogen (N) was found to be less than 1 mg/L in all bores for the entire monitoring period with the exception of two results (Figure 5). The value of 12.0 mg/L for borehole 4 in June 2002 was anomalous as all subsequent readings were less than 1 mg/L. A reading of 250 mg/L from windmill 1 (WM1) in March 2008 is unusual because all previous readings dating back to 2002 were 0.1 mg/L or less. Windmill 1 is located north of the irrigated area, however the ammonia result from the next quarterly sample from this borehole should be assessed to determine if this high reading indicates an upwards trend or was a one-off anomaly. The ammonia concentrations have remained relatively stable over the monitoring period, with the median and 75th percentile value for ammonia in both the pre and post-irrigation periods at 0.1 mg/L.

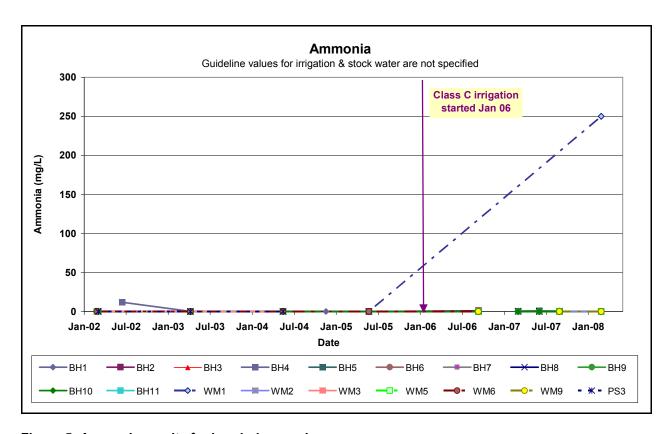


Figure 5: Ammonia results for borehole samples

## **Nitrate and Nitrite**

Nitrate is formed from the oxidation of organic wastes by bacteria. Intensive farming practices can lead to increasing amounts of nitrate in some waters, particularly groundwater. The nitrite ion can be formed by the reduction of nitrate in poorly oxygenated waters and is relatively unstable. Chemical and biological processes can result in further reduction of nitrite to various compounds including ammonia, or oxidation back to nitrate.

Both nitrate and nitrite can be toxic to animals, and nitrite is more toxic than nitrate. The trigger values for nitrite and nitrate as nitrogen (N) in stock water are less than 9 and 90 mg/L respectively. No guideline values have been specified for irrigation waters.

The nitrite as N (nitrogen) concentration was found to range from below 0.01 mg/L to 0.82 mg/L in bores sampled over the pre-irrigation period, and below 0.01 mg/L to 0.42 mg/L in the post-irrigation period (Figure 6). Thus, the concentrations have been relatively stable and well below the recommended trigger value of 9 mg/L for stock water.

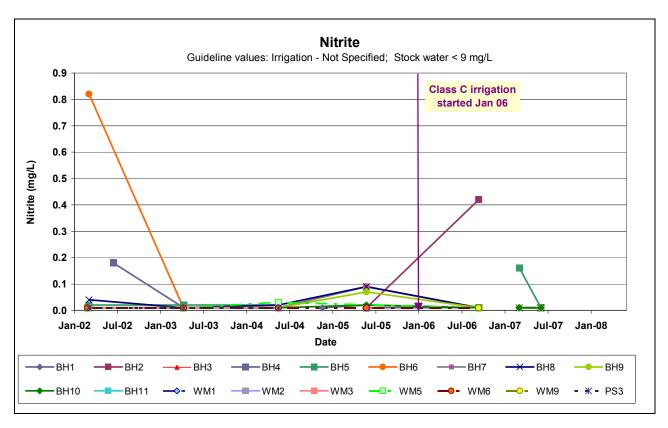


Figure 6: Nitrite as N results for borehole samples

The nitrate as N (nitrogen) concentration measured in groundwater ranged from below 0.01 mg/L to 9.7 mg/L in bores sampled over the pre-irrigation period, and below 0.01 mg/L to 24 mg/L in the post-irrigation period (Figure 7). The 24 mg/L result is unlikely to be related to irrigation with Class C water as it was recorded at borehole 2 (BH2) given that SKM (2005) concluded groundwater is flowing south from the site and BH2 is located north of the irrigated area. These concentrations are well below the trigger value of 90 mg/L for stock water. Excluding three outlying values, the nitrate results across the site have remained relatively stable over the monitoring period.

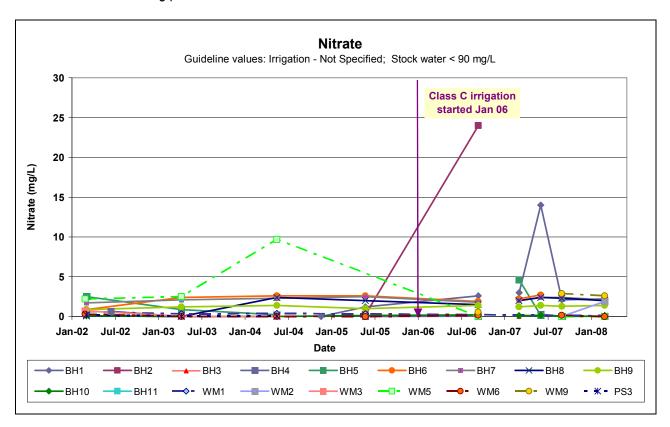


Figure 7: Nitrate as N results for borehole samples

## Total Kjeldahl Nitrogen

Total Kjeldahl Nitrogen (TKN) gives an indication of the total organic nitrogen and ammonia present in a solution. A trigger value for irrigation water or stock watering water quality for TKN is not specified in the Guidelines.

With the exception of one outlier in each of the pre and post-irrigation periods, the TKN values were found to range from below 0.3 to 4.7 mg/L in bores sampled over the pre-irrigation period, and below 0.1 to 3.1 mg/L in the post-irrigation period (Figure 8). TKN concentrations have remained relatively low at the site over the monitoring period, with all but two samples collected having TKN concentrations of less than 5.0 mg/L. The 250 mg/L result was recorded for windmill 1 (WM1) which is located north of the irrigated area, however future TKN results for WM1 should be monitored to determine if the 250 mg/L was an anomaly or an indication of an upwards trend.

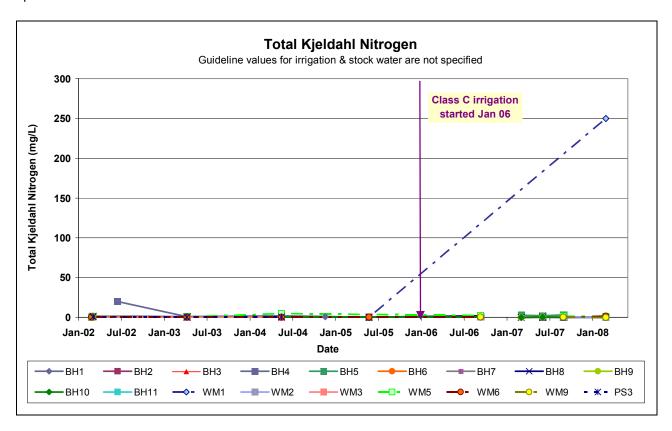


Figure 8: Total Kjeldahl Nitrogen results for borehole samples

## **Total Phosphorus**

Total Phosphorus is the sum of organic and inorganic phosphorus. Phosphorus is a nutrient that can stimulate rapid growth of microorganisms and excessive Phosphorus concentrations can lead to algae blooms in surface water. According to the Guidelines for irrigation waters, the short-term (up to 20 years) trigger range for phosphorus is 0.8-12 mg/L. The long-term (up to 100 years) trigger value of 0.05 mg/L is for the purposes of minimising bioclogging of irrigation equipment only.

Apart from two outliers of 7.6 mg/L in March 2008 and 10 mg/L in October 2006, the range of Total Phosphorus concentrations recorded across the site has remained fairly stable since 2002. In the pre-irrigation period, the Total Phosphorus values ranged from less than 0.01 to 1.3 mg/L. In the post- irrigation period, the majority of values ranged from less than 0.05 to 1.1 mg/L (Figure 9). The two outlying values of 7.6 and 10 mg/L originated from borehole 2 and windmill 1, both located north of the Wallan Recycled Reservoir Storage and outside of the irrigated area. All concentrations, including outliers, were within the short-term trigger values of 0.8 to 12 mg/L for irrigation water.

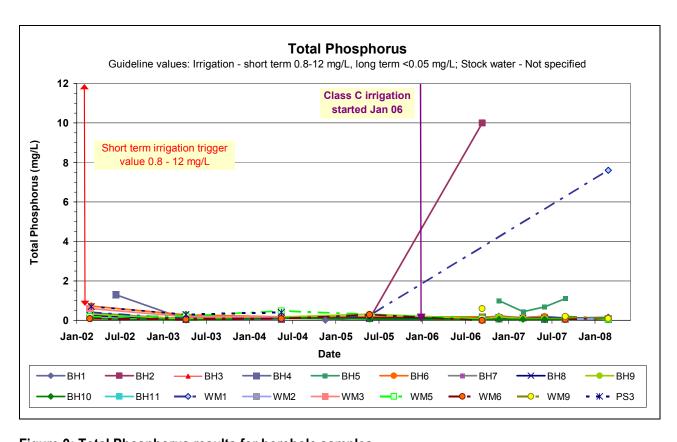


Figure 9: Total Phosphorus results for borehole samples

### **Biochemical Oxygen Demand**

Biochemical Oxygen Demand (BOD) is the amount of oxygen required by microorganisms to decompose the organic matter in a sample of water. A BOD level of 1-2 mg/L is considered very good, 3-5 mg/L moderately clean, 6-9 mg/L somewhat polluted and at levels greater than 100 mg/L, the water supply is considered very polluted with organic waste (SKM 2005).

A BOD median value of less than 2 mg/L and a 75<sup>th</sup> percentile value of 5 mg/L for the sample set taken over the monitoring period indicates that the majority of samples can be considered very good to moderately clean (Figure 10). Five samples with outlier values greater than 100 mg/L, which indicates highly polluted groundwater, were recorded prior to the commencement of irrigation in 2006. In the post-irrigation period, about 12% (8 out of 64) samples taken had BOD values of greater than 6 mg/L, indicating somewhat polluted groundwater samples from borehole BH3 and windmills WM1, WM5 and WM6. Of these boreholes, BH3 and WM5 also recorded BOD values greater than 6 in the pre-irrigation period. Windmill 1 is located north of the irrigated area. Windmill 6 is located on the eastern boundary of the irrigated area and should be monitored to determine if BOD levels remain elevated in the future.

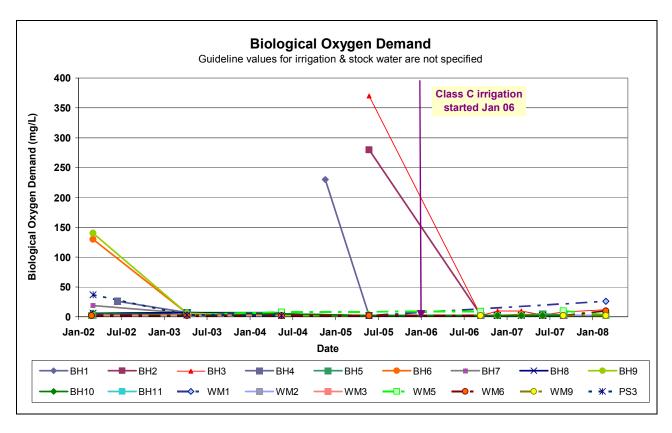


Figure 10: Biological Oxygen Demand results for borehole samples

#### E. coli

*E. coli* is a thermotolerant coliform (also known as faecal coliform) predominately found in the faeces of humans and other warm-blooded animals. The detection of E. *coli* is commonly used as an indication of faecal contamination, and therefore the possible presence of microbial pathogens. However, the detection of E. *coli* does not specifically indicate the presence of pathogenic organisms. The E. *coli* guideline trigger median value for irrigation water of 10 orgs/100mL applies to the highest beneficial use of irrigation water, the irrigation of raw human food crops. In comparison, the trigger median value for irrigation of pasture and fodder for dairy animals (without withholding period) is 100 orgs/100mL. For stock watering purposes, the trigger median value is 100 orgs/100 mL. The Guidelines state that investigations of likely causes of elevated thermotolerant coliforms levels are warranted when 20% of results exceed four times the median guideline value.

Median values were calculated per sampling interval and are shown in Table 4. A sampling interval includes the days over which sampling was conducted for the set of boreholes, and spans a maximum of three consecutive days. In the pre-irrigation period, the median value ranged from 0 to 74 orgs/100 mL. Two median values exceeded the trigger value for irrigation water (10 orgs/100 mL), however no values exceeded the trigger value for stock water (100 orgs/100 mL). In the post-irrigation period, the median values ranged from 0 to 9.99 orgs/mL, and hence no exceedence of the trigger values for irrigation or stock water were recorded for the post-irrigation period.

Table 4: Median E.coli results for borehole samples

Sampling Interval	E. coli median value* (orgs/100mL)
26/02/02	9.99
4/03/02	0
17/06/02	74
14/04/03	9.99
26/05/04	47.5
1/12/04	9.99
8/06/05	0
January 20	006 – Irrigation commenced
3-5/10/06	0
2/03/07	9.99
27-28/03/07	9.99
28/06/07	10
25-26/09/07	9.99
27/03/08	2

<sup>\*</sup> Laboratory results recorded as <10 orgs/ mL was regarded as 9.99 orgs/mL for the purposes of calculating the median value.

Individual data points for E. *coli* samples showed high variability in the pre and post irrigation periods (Figure 11). The individual data points have also been graphed excluding outliers to highlight the variability (Figure 12). In the post-irrigation period, two extreme outlier results were recorded, 5,800 and 780 orgs/100mL from at borehole 5 in March and June 2007 respectively. These results do not appear to indicate an ongoing elevated trend at borehole 5 as 10 orgs/100mL was recorded in September 2007.

No particular trends in *E. coli* levels are apparent at the site that can be attributed to irrigation with Class C water, and median values have not exceeded trigger values for irrigation and stock water in the post-irrigation period.

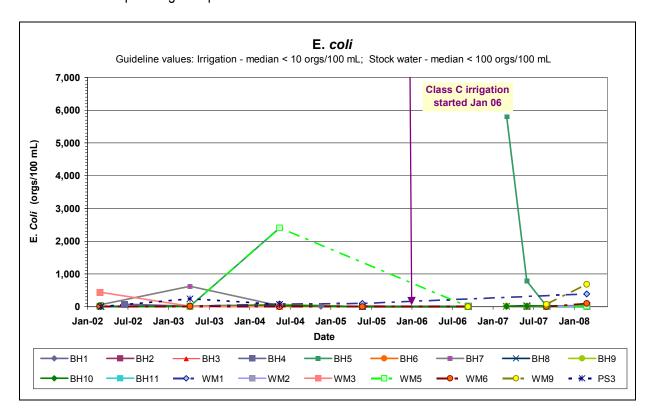


Figure 11: E. coli results for borehole samples

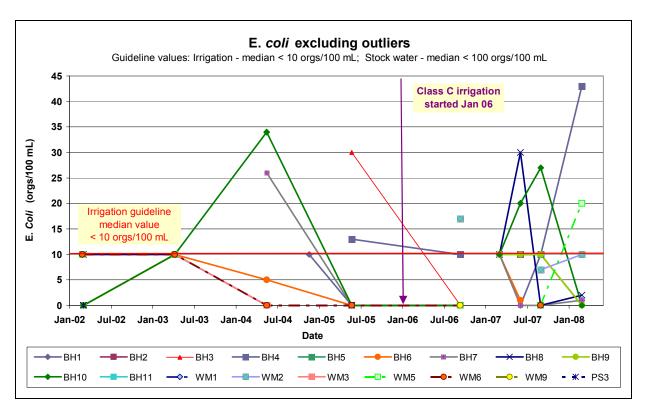


Figure 12: E. coli results for borehole samples excluding outliers

## 4. Conclusions

The main findings from this preliminary assessment of groundwater data from the postirrigation period are summarised below:

 The slight downward trend in groundwater levels recorded in the pre-irrigation period has continued.

For groundwater quality parameters where the background conditions were assessed by SKM (2005) with trigger values in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000), the following were found:

- Majority of TDS results in the post-irrigation period are below the recommended trigger values. TDS results exceeding trigger values appear unlikely to be related to irrigation, as the exceedence results originated from bores which also showed high TDS results prior to irrigation.
- Nitrite and nitrate as N (nitrogen) concentrations have remained relatively stable, and well below the recommended trigger values.
- Total Phosphorus concentrations recorded across the irrigated area has stayed fairly steady, and were within the short-term trigger values for irrigation water.
- The median E. *coli* concentration results have not exceeded trigger values for irrigation and stock water in the post-irrigation period.

For the other thirteen groundwater quality parameters with trigger values in the Guidelines, the main findings were:

- Ten of the thirteen parameters complied with the Guidelines.
- Results for Sodium, Chloride and pH were recorded above trigger values, however no definite trend due to irrigation could be deduced.

For additional parameters analysed by SKM previously, the following were found:

- Ammonia concentrations have remained relatively stable.
- TKN concentrations have stayed low at the site, with majority of TKN concentrations less than 5.0 mg/L.
- BOD levels showed high variability in the pre and post-irrigation periods, and no significant change in BOD levels in the post-irrigation period was observed. Majority of samples taken indicate the groundwater samples were very good to moderately clean.

Recommendations from this preliminary assessment are:

- Assess the current borehole network for monitoring effectiveness, and determine any changes necessary.
  - If borehole 5 is assessed to remain in the monitoring network, re-survey elevation to top of casing of borehole 5.
- Monitor water levels for boreholes 6 and 10 to determine if an upwards trend is occurring.

- Future monitoring results for Sodium, Chloride and pH should be assessed to determine if irrigation with Class C water was the cause of the elevated results observed.
- TKN for windmill 1 should be monitored to determine if the 250 mg/L result was an anomaly or an indication of an upwards trend.
- Windmill 6 should be monitored to determine if BOD levels remain elevated in the future.
- Future ammonia results for windmill 1 should be evaluated to determine if the high reading of 250 mg/L indicates an upwards trend or was a one-off anomaly.

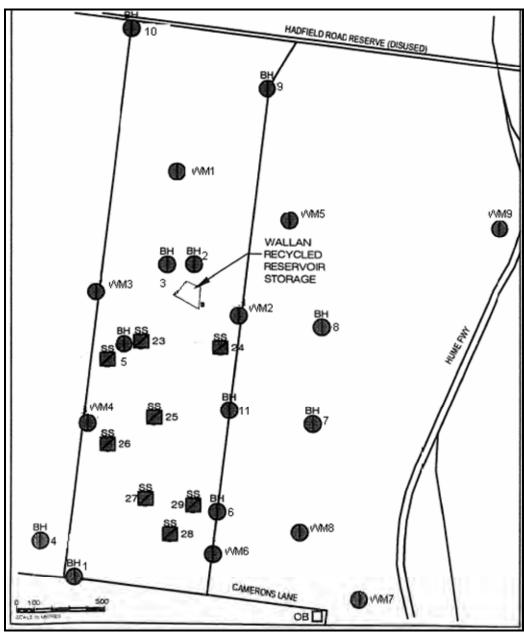
The recommendations listed above shall be considered for inclusion in the scope of the independent assessment to be conducted after additional data is available following the 2008 irrigation period.

# References

ANZECC & ARMCANZ (Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand) 2000, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*.

Environmental Protection Authority 1997, *State Environment Protection Policy (Groundwaters of Victoria)*, Publication 592.

SKM 2005, Wallan Reclaimed Water Re-Use Site – Hydrological Assessment.



Note: Round symbols indicate borehole sampling sites. Square symbols indicate soil sampling sites.

Figure 13: Location of sampling sites



Appendix 2 - Groundwater level and quality monitoring results

					BOREHOL	LE WALRRSB	H1 (S9020401	-01)		
										27/03/2008
		1/12/2004	8/06/2005	4/10/2006	14/12/2006	28/03/2007	28/06/2007	26/09/2007	27/03/2008	duplicate
Damana dan	11:4									
Parameter	Unit									
Water level	m ma/l	10.54	10.4	10.55 44	12.56 42	10.65 41	10.71	10.77	10.91	10.91
Calcium (Ca) Magnesium	mg/L			44	42	41	42	40 170		
(Mg)	mg/L			160	180	170	170	170		
Potassium (K)	mg/L			5.1	5.8	3.3	4.4	4.5		
Sodium (Na)	mg/L			280	290	290	320	290		
Bicarbonate	J							560		
(HCO <sub>3)</sub>	mg/L			700	690	710	730			
Chloride (CI)	mg/L			670	560	500	590	600		
, ,								29		
Sulphate (SO <sub>4)</sub>	mg/L			28	29	41	66			
Cadnium (Cd)	mg/L			<0.001	<0.001	<0.001	<0.002	<0.002		
Copper (Cu)	mg/L			<0.01	<0.01	<0.01	<0.01	<0.01		
Mercury (Hg)	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001		
Iron (Fe)	mg/L			0.11	0.23	0.54	0.3	<0.2		
Tin (Sn)	mg/L			<0.01	<0.01	<0.01	<0.01	<0.01		
Zinc (Zn) Arsenic (As)	mg/L mg/L			0.05 <0.001	0.04 0.001	<0.01 0.002	<0.02 <0.01	0.03 <0.01		
Chromium (Cr)	mg/L			<0.001	<0.001	< 0.002	<0.01	<0.01		
Molybdenum	mg/L			10.01	10.01	10.01	10.01	<0.01		
(Mo)	mg/L			<0.01	<0.01	<0.01	<0.01	0.0.		
Selenium (Se)	mg/L			0.004	0.005	0.011	<0.01	<0.01		
TDS	mg/L		1,500	1,500	1,500	1,500	1,400	1,500	1,600	1,500
BOD	mg/L	230	<2	<2	<2	<2	<2	<2	<2	<2
Total P	mg/L	<0.01	0.14	0.15	0.21	0.14	0.2	0.12	0.16	0.16
Nitrate N	mg/L	<0.01	1.2	2.6		3	14	2.1	2.2	2.4
Nitrite N Ammonia	mg/L mg/L	<0.01 <0.1	0.02 <0.1	<0.01 <0.1		<0.01 <0.1	<0.01 <0.1	<0.1	<0.1	<0.1
TKN	mg/L	0.9	0.1	0.6		<0.1	0.1	0.1	<0.1 <0.1	<0.1 <0.1
Total coliforms	Orgs/100mL	0.9	0.4	0.0		390	580	100	310	270
E.Coli	Orgs/100mL	<10	0	Ö		<10	0	<10	0	1
pН	pH units	7.59	7.6	7.26	7.15	7.4	7.72	7.2	7.6	7.6
EC	uS/cm	3,340	2,830	2,703	2,750	2,700	2,714	2,700	2,587	2,587
Redox	mV			288	206.8	213	413	416	316	316
Dissolved		1.89	5.42					4.6	4.7	4.7
Oxygen (DO)	mg/L			6	6.1	6.8	2.8	<b>-</b> 0		
Turbidity	NTU	47.0	40.0	6.9	6.58	1.5	12.3	7.9	44.00	44.00
Temperature	°C	17.3	18.3	15.3	19.1	18.1	12.3	14.6	14.06	14.06
Hardness CO3 as	mg/L							800 170		
CaCO3	mg/L							170		
OH as CaCO3	mg/L							<2		
Alkalinity	9, ⊏							730		
(CaCO3)	mg/L									

Appendix 2 - Groundwater level and quality monitoring results

			BOREHOLE	WALRRSBH2	(S9020401-02	)			BOREHOLE	WALRRSBH	3 (S9020401-03	3)	
		8/06/2005	4/10/2006	15/12/2006	27/03/2007	28/06/2007	8/06/2005	4/10/2006	15/12/2006	27/03/2007	28/06/2007	26/09/2007	27/03/2008
Parameter Water level	<b>Unit</b> m	4.18	No Depth				5.43	5.951	6.125	6.07	6.01	6.13	7.08
Calcium (Ca) Magnesium	mg/L	4.10	12				0.40	100	100	97	92	94 290	7.00
(Mg)	mg/L		12					290	300	300	280		
Potassium (K)	mg/L		15					14	17	17	11	13	
Sodium (Na) Bicarbonate	mg/L		130					880	820	720	700	710 1300	
(HCO <sub>3)</sub>	mg/L		81					1300	1200	1300	1300		
Chloride (CI)	mg/L		130					1700	1400	1300	1500	1500 31	
Sulphate (SO <sub>4)</sub>	mg/L		60					55	6	<1	33		
Cadnium (Cd)	mg/L		<0.001					<0.001	0.002	<0.001	<0.002	<0.002	
Copper (Cu)	mg/L		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	
Mercury (Hg)	mg/L		<0.001					< 0.001	<0.001	<0.001	<0.001	<0.001	
Iron (Fe)	mg/L		0.3					0.32	0.35	0.46	1.3	1.2	
Tin (Sn)	mg/L		<0.01					< 0.01	<0.01	<0.01	<0.01	<0.01	
Zinc (Zn)	mg/L		0.09					0.08	0.06	<0.01	0.02	<0.02	
Arsenic (As)	mg/L		0.002	ing	ing	ing		0.001	0.001	0.001	<0.01	<0.01	
Chromium (Cr) Molybdenum	mg/L		<0.01	Tap not working	No sample. Tap not working	No sample. Tap not working		0.02	<0.01	<0.01	<0.01	<0.01 <0.01	
(Mo)	mg/L		<0.01	OL .	OL .	ou		<0.01	<0.01	<0.01	<0.01		
Selenium (Se)	mg/L		<0.001	ар	ар	ар		0.006	0.006	0.003	<0.01	<0.01	
TDS	mg/L	1,600	520	⊢.	⊢.	Η.	3,100	3,200	3,000	2,800	3,300	3,000	2,900
BOD	mg/L	280	3	sample.	ple	ple	370	<2	10	10	3	8	12
Total P	mg/L	0.08	10	au	an	am	0.04	0.03	0.25	0.09	<0.05	0.07	0.07
Nitrate N	mg/L	0.23	24	S C	S C	S.C	0.02	0.23		0.02	0.18	<0.01	<0.01
Nitrite N	mg/L	<0.01	0.42	N <sub>0</sub>	ž	ž	<0.01	<0.01		<0.01	<0.01		
Ammonia	mg/L	<0.1	<1				<0.1	<0.1		0.2	<0.1	0.4	0.6
TKN	mg/L	<0.3	<1				1	<0.3		0.4	<0.3	0.5	0.6
Total coliforms	Orgs/100mL		1600					0		<10	440	63	2000
E.Coli	Orgs/100mL	0	0				30	0		<10	<10	<10	0
pН	pH units	6.5	7.07				7.3	6.66	7.32	7.5	6.97	6.6	7.56
EC	uS/cm	2,940	825				5,310	5,699	5,250	5,400	5,460	5,600	4,876
Redox	mV		192				_	86	-242.1	-176	170	122	138
Dissolved		2.18	_				2.22	_				0.3	2.2
Oxygen (DO)	mg/L		3.5					3.3	1	1.6	1.6		
Turbidity	NTU		9.9					600	15.4	5	7.1	11	
Temperature	°C	6	21.41				15.4	15.53	23.2	16.5	14.2	14.5	13.93
Hardness CO3 as	mg/L											1400 <2	
CaCO3	mg/L												
OH as CaCO3 Alkalinity	mg/L											<2 1300	
(CaCO3)	mg/L												

Appendix 2 - Groundwater level and quality monitoring results

					во	REHOLE W	ALRRSBH4 (	141975)			
		17/06/2002	14/04/2003	26/05/2004	1/12/2004	8/06/2005	5/10/2006	14/12/2006	28/06/2007	26/09/2007	27/03/2008
		1110012002	1-1/0-1/2000	20/00/2004	17 12/2004	0/00/2000	0/10/2000	14/12/2000	20/00/2007	20/00/2007	21700/2000
Parameter	Unit										
Water level	m						11.82	14.8	12.31	12.11	12.21
Calcium (Ca)	mg/L						49	36	45	44	
Magnesium	_									130	
(Mg)	mg/L						130	100	130		
Potassium (K)	mg/L						11	11	9.5	13	
Sodium (Na)	mg/L						370	290	420	370	
Bicarbonate										710	
(HCO <sub>3)</sub>	mg/L						810	800	800		
Chloride (CI)	mg/L						610	630	610	580	
										46	
Sulphate (SO <sub>4)</sub>	mg/L						46	57	54		
Cadnium (Cd)	mg/L						<0.001	< 0.001	<0.002	<0.002	
Copper (Cu)	mg/L						<0.01	<0.01	<0.01	<0.01	
Mercury (Hg)	mg/L						<0.001	<0.001	<0.001	<0.001	
Iron (Fe)	mg/L						0.94	2.2	8.0	0.6	
Tin (Sn)	mg/L						<0.01	<0.01	<0.01	<0.01	
Zinc (Zn)	mg/L						0.13	0.06	0.05	<0.02	
Arsenic (As)	mg/L						<0.001	0.002	<0.01	<0.01	
Chromium (Cr)	mg/L						<0.01	<0.01	<0.01	<0.01	
Molybdenum							10.04	10.04	-0.04	<0.01	
(Mo)	mg/L						<0.01 0.002	<0.01 0.003	<0.01 <0.01	<0.01	
Selenium (Se) TDS	mg/L mg/L	1,400	1 400	1 500	1,600	1 500	1,600	1,600	1,500	1600	1700
BOD	mg/L	26	1,400 7	1,500 3	1,600	1,500 <2	<2	1,000 <2	1,500 <2	<2	<2
Total P	mg/L	1.3	0.05	0.04		0.11	0.18	0.1	<0.05	<0.05	0.06
Nitrate N	mg/L	0.67	0.03	0.02		<0.01	0.10	0.1	0.29	0.02	0.06
Nitrite N	mg/L	0.18	0.01	<0.01		<0.01	0.01		<0.01	0.02	0.00
Ammonia	mg/L	12	0.3	<0.1		<0.1	<0.1		<0.1	0.1	0.3
TKN	mg/L	20	0.8	<0.3		<0.3	0.4		<0.3	0.1	0.3
Total coliforms	Orgs/100mL						<10		280	99	>2400
E.Coli	Orgs/100mL	74	10	0		13	<10		10	<10	43
рН	pH units	7.3	7.2	7.2		7	7.03	7.14	7.76	7.4	7.4
EC	uS/cm	2,001	2,200	2,530		2,940	2,899	2,900	2,850	2800	2911
Redox	mV						177	174.3	286	313.0	318
Dissolved			1.15	9.11		2.07				1.3	3.8
Oxygen (DO)	mg/L						3	4.4	2.4		
Turbidity	NTU	1					130	22	5.8	16	
Temperature	°C	14.8	17.3	13.7		18.6	15.19	19.9	13.3	15.1	12.38
Hardness	mg/L									660	
CO3 as										90	
CaCO3	mg/L									_	
OH as CaCO3	mg/L									<2	
Alkalinity	ma e: //									800	
(CaCO3)	mg/L										

Appendix 2 - Groundwater level and quality monitoring results

				ВО	REHOLE W	/ALRRSBH5 (	145709)					В	DREHOLE V	VALRRSBH6	(145710)		
		4/03/2002	14/04/2003	26/05/2004	8/06/2005	15/12/2006	28/03/2007	28/06/2007	26/09/2007	4/03/2002	14/04/2003	26/05/2004	8/06/2005	3/10/2006	14/12/2006	27/03/2007	28/06/2007
Parameter	Unit																
Water level Calcium (Ca) Magnesium (Mg) Potassium (K) Sodium (Na) Bicarbonate (HCO <sub>3</sub> ) Chloride (Cl) Sulphate (SO <sub>4</sub> ) Cadnium (Cd) Copper (Cu) Mercury (Hg)	m mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	7.87	9.04	9.7	0	7.5 77 170 17 790 530 1300 160 <0.001 <0.01	7.52 87 220 11 830 690 1500 120 <0.001 0.02 <0.001	6.81 87 220 12 720 760 1500 81 <0.002 <0.01 <0.001	7.80 71 180 14 660 520 1300 82 <0.002 <0.01 <0.001	10.3	10.96	11.2	11	11.42 30 110 3.4 230 580 400 34 <0.001 <0.01 <0.001	11.4 29 110 4.6 250 570 390 37 <0.001 <0.001	11.51 29 110 4.7 270 600 380 37 <0.001 <0.001	9.34 29 110 4.3 270 580 360 23 <0.002 <0.01 <0.001
Iron (Fe) Tin (Sn) Zinc (Zn) Arsenic (As) Chromium (Cr) Molybdenum (Mo) Selenium (Se) TDS BOD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	2,600 <2	3,500 7	3,900 7		1.1 <0.01 0.12 0.02 <0.01 <0.01 0.01 2,500 <2	2.1 <0.01 0.08 0.015 <0.01 <0.01 0.015 3,100 3	2.1 <0.01 <0.02 0.01 <0.01 <0.01 <0.01 2,900 5	2.4 <0.01 0.03 0.01 <0.01 <0.01 <0.01 2600 3	1,400 130	1,300	1,200 <2	1,100 <2	0.07 <0.01 0.13 <0.001 <0.01 <0.01 0.003 1,000 <2	0.15 <0.01 0.14 <0.001 <0.01 <0.01 0.004 1,200 <2	<0.05 <0.01 <0.01 0.001 <0.01 <0.01 0.001 7,300 4	0.4 <0.01 <0.02 <0.01 <0.01 <0.01 <0.01 1,100 <2
Total P Nitrate N Nitrite N Ammonia TKN Total coliforms E.Coli pH EC Redox Dissolved	mg/L mg/L mg/L mg/L Orgs/100mL Orgs/100mL pH units uS/cm mV	0.38 2.5 0.02 0.5 1.5 0 12.1 5,170	0.05 0.86 0.02 <0.1 0.4 10 8 6,180	0.12 0.24 0.02 0.1 0.7 2400 7.5 6,960		7.42 4,470 -86.2	0.44 4.6 0.16 0.7 2.7 >24000 5800 7.4 5,500 -31	0.68 0.17 0.01 0.9 2 20000 780 7.72 5,160 260	1.1 <0.01 0.6 3.1 52 10 7.3 4700 210.0 0.7	0.72 0.88 0.82 <0.1 1.7 0 7.4 2,320	0.28 2.4 <0.01 <0.1 <0.3 <10 7.4 2,130	0.18 2.6 <0.01 <0.1 1.3 5 7.3 2,330 6.54	0.19 2.6 0.09 <0.1 <0.3 0 7.4 2,020	0.17 1.9 <0.01 <0.1 2.1 2 0 7.26 2,055 253	7.25 2,080 187.1	0.14 2.2 <0.01 <0.1 <0.1 <10 <10 7.54 2,100 232.6	0.2 2.7 <0.01 <0.1 <0.3 17 1 7.3 2,242 414
Oxygen (DO) Turbidity Temperature Hardness CO3 as CaCO3 OH as CaCO3 Alkalinity (CaCO3)	mg/L NTU °C mg/L mg/L mg/L	16.1	15.9	14.5		1.6 27.5 15.7	3.2 51.3 16.6	3.5 96.8 13.1	140 14.2 920 150 <2 670	17.8	16.2	14.7	17.1	8.7 15 17.91	7.2 3.28 20.4	9.6 3.4 17.8	5.7 22.8 12.4

Appendix 2 - Groundwater level and quality monitoring results

					В	OREHOLE W	ALRRSBH7 (1	l <b>45712</b> )			
		4/03/2002	14/04/2003	26/05/2004	8/06/2005	3/10/2006	14/12/2006	27/03/2007	28/06/2007	25/09/2007	27/03/2008
Parameter	Unit										
Water level	m	4.34	6.95	4.86	4.93	5.33	5.165	5.35	5.31	5.54	5.58
Calcium (Ca) Magnesium	mg/L					46	40	48	46	43 95	
(Mg)	mg/L					97	89	97	98		
Potassium (K)	mg/L					6.5	7.6	8.1	5.4	7.2	
Sodium (Na)	mg/L					170	160	200	190	160	
Bicarbonate										340	
(HCO <sub>3)</sub>	mg/L					390	380	420	400		
Chloride (CI)	mg/L					410	370	410	390	420	
	3. =									18	
Sulphate (SO <sub>4)</sub>	mg/L					15	21	20	16		
Cadnium (Cd)	mg/L					<0.001	<0.001	<0.001	<0.002	<0.002	
Copper (Cu)	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	
Mercury (Hg)	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	
Iron (Fe)	mg/L					0.12	0.22	<0.05	0.4	0.3	
Tin (Sn)	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc (Zn)	mg/L					0.06	0.11	<0.01	0.05	0.02	
Arsenic (As)	mg/L					<0.001	<0.001	0.002	<0.01	<0.01	
Chromium (Cr)	mg/L					< 0.01	<0.01	<0.01	<0.01	<0.01	
Molybdenum	Ŭ									<0.01	
(Mo)	mg/L					<0.01	<0.01	<0.01	<0.01		
Selenium (Se)	mg/L					0.002	0.003	0.004	<0.01	<0.01	
TDS	mg/L	1,600	1,000	1,000	950	920	1,000	1,100	940	930	1,100
BOD	mg/L	19	6	3	<2	<2	<2	<2	<2	<2	<2
Total P	mg/L	0.19	0.12	0.1	0.09	0.09	0.11	0.12	0.11	0.1	0.11
Nitrate N	mg/L	1.7	2.1	2.3	2.5	1.8		2	2.4	2.4	2.1
Nitrite N	mg/L	<0.01	<0.01	<0.01	0.09	<0.01		0.01	<0.01		
Ammonia	mg/L	0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1
TKN	mg/L	1.1	<0.3	1.4	<0.3	1.9		<0.1	<0.3	<0.1	0.1
Total coliforms	Orgs/100mL				_	0		10	25	1	88
E.Coli	Orgs/100mL	61	620	26	0	0	_	<10	0	0	1
pH	pH units	7.2	7.8	7.4	7.2	7.12	7	6.99	7.47	6.9	7.2
EC	uS/cm	2,500	1,806	2,030	1,787	1,799	1,760	1,900	1,831	1,800	1,731
Redox	mV	- 0-	4.00			251	214.1	251	416	377	261
Dissolved	(I	5.27	1.66	5.3	5.1	4.0	4.0	0.0	4.7	2	2.8
Oxygen (DO)	mg/L					4.8	4.2	3.6	1.7	44	
Turbidity	NTU	47.0	45.7	40	47.7	2.6	6.29	3	13.7	11	40.7
Temperature	°C	17.3	15.7	13	17.7	14.86	18.2	15.7	12.2	17	13.7
Hardness	mg/L									500	
CO3 as										36	
CaCO3	mg/L										
OH as CaCO3	mg/L									<2	
Alkalinity	me/l									380	
(CaCO3)	mg/L										

Appendix 2 - Groundwater level and quality monitoring results

					=	OREHOLE W	ALRRSBH8 (1	l <b>45713</b> )							В	OREHOLE W	ALRRSBH9 (	145714)			
		4/03/2002	14/04/2003	26/05/2004	8/06/2005	3/10/2006	14/12/2006	27/03/2007	28/06/2007	25/09/2007	27/03/2008	4/03/2002	14/04/2003	26/05/2004	8/06/2005	4/10/2006	15/12/2006	27/03/2007	28/06/2007	26/09/2007	27/03/2008
_						0.10.200															
Parameter	Unit																				
Water level	m <sub>,,</sub>	6.72	6.91	7.1	7.11	7.4	7.326	7.51	7.46	7.54	8.3	9.52	9.5	9.7	9.84	9.688	9.946	9.95	9.16	9.9	10.05
Calcium (Ca) Magnesium	mg/L					39	38	36	36	36 85						65	65	58	65	60 170	
(Mg)	mg/L					88	93	82	84							160	180	160	170		
Potassium (K)	mg/L					3.8	7.4	3.8	3.3	4.9						6.5	13	9	4.8	5.6	
Sodium (Na) Bicarbonate	mg/L					220	230	230	230	200 380						260	270	260	260	260 560	
(HCO <sub>3)</sub>	mg/L					440	440	430	430							600	560	650	640		
Chloride (CI)	mg/L					400	400	390	370	420						750	730	610	640	650	
Sulphate (SO <sub>4)</sub>	mg/L					16	17	18	14	17						17	15	19	14	17	
Cadnium (Cd)	mg/L					<0.001	<0.001	<0.001	<0.002	<0.002						< 0.001	0.002	< 0.001	<0.002	<0.002	
Copper (Cu)	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01						<0.01	<0.01	<0.01	<0.01	<0.01	
Mercury (Hg)	mg/L					<0.001	<0.001	< 0.001	< 0.001	<0.001						<0.001	<0.001	<0.001	<0.001	<0.001	
Iron (Fe)	mg/L					0.1	0.2	< 0.05	0.2	0.4						0.18	0.35	0.29	0.3	0.3	
Tin (Sn)	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01						<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc (Zn)	mg/L					0.08	0.09	<0.01	< 0.02	<0.02						0.2	0.001	<0.01	<0.02	0.08	
Arsenic (As)	mg/L					<0.001	< 0.001	0.002	<0.01	<0.01						< 0.001	0.001	0.002	<0.01	<0.01	
Chromium (Cr) Molybdenum	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01 <0.01						<0.01	<0.01	<0.01	<0.01	<0.01 <0.01	
(Mo)	mg/L					<0.01	<0.01	<0.01	<0.01							<0.01	<0.01	<0.01	<0.01		
Selenium (Se)	mg/L					0.003	0.003	<0.001	<0.01	<0.01						0.004	0.006	0.004	<0.01	<0.01	
TDS `´	mg/L	1,000	1,500	1,000	1,000	980	1,000	1,000	960	970	990	1,500	3,800	1,500	1,600	1,500	1,800	1,600	1,400	1,500	1,500
BOD	mg/L	6	7	5	<2	<2	<2	<2	<2	<2	<2	140	6	<2	<2	<2	<2	<2	<2	<2	<2
Total P	mg/L	0.26	0.05	0.12	0.12	0.11	0.15	0.12	0.13	0.11	0.09	0.32	0.06	0.17	0.31	0.09	0.17	0.1	0.1	0.08	0.1
Nitrate N	mg/L	0.07	<0.01	2.4	2	1.5		2	2.4	2.3	2	0.88	1.2	1.4	1	1.4		1.2	1.4	1.3	1.4
Nitrite N	mg/L	0.04	<0.01	0.02	0.09	<0.01		<0.01	<0.01			<0.01	0.01	<0.01	0.07	<0.01		<0.01	<0.01		
Ammonia	mg/L	0.3	0.3	0.2	<0.1	<0.1		<0.1	<0.1	<0.1	0.3	0.2	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	0.2	<0.1
TKN	mg/L	1.3	8.0	1.7	<0.3	1.9		<0.1	<0.3	<0.1	0.3	1	<0.3	0.6	<0.3	<0.3		<0.1	<0.3	0.2	<0.1
Total coliforms	Orgs/100mL					0		>24000	160	0	>2400					0		<10	10	140	53
E.Coli	Orgs/100mL	<10	<10	68	0	0		<10	30	0	2	0	<10	61	0	0		<10	10	<10	0
pH	pH units	8	7.2	7.7	7.7	7.4	7.4	7.46	7.64	7.4	7.68	7.4	7.6	7.5	7.4	7.26	7.18	7.3	7.5	7.4	7.41
EC	uS/cm	2,001	2,200	1,910	1,901	1,877	1,857	1,900	1,802	1,800	1,730	2,610	7,050	2,510	2,850	2,804	2,780	2,800	2,747	2,700	2,578
Redox	mV					260	140	212	413	378	253					253	194.5	238.3	308	274	289
Dissolved			1.15	7.31	6.71				_	6.2	6.1	5.1	1.85	7.11	6.53					2.6	6
Oxygen (DO)	mg/L	4.8				4.9	7.8	6.5	3							7.6	6.5	5.8	5.2	4.0	
Turbidity	NTU		47.0	45.5	40.5	18.2	3.83	1.8	11.3	11	44.0	47.4	40.4	40.0	40.5	12.8	4.61	5.1	16.5	10	44.55
Temperature	°C	15.8	17.3	15.5	16.5	14.35	18.4	16.7	12.9	15	14.2	17.1	16.1	13.8	16.5	18.07	14.6	17.3	14.4	15.2	14.55
Hardness CO3 as	mg/L									440 50										840 72	
CaCO3	mg/L																				
OH as CaCO3	mg/L									<2										<2	
Alkalinity										430										630	
(CaCO3)	mg/L																				

Appendix 2 - Groundwater level and quality monitoring results

					В	OREHOLE W	ALRRSBH10 (	145715)				BOREH	OLE WALRF (145711)	RSBH11
		4/03/2002	14/04/2003	26/05/2004	8/06/2005	4/10/2006	15/12/2006	27/03/2007	28/06/2007	26/09/2007	27/03/2008	4/03/2002	·	8/06/2005
Parameter	Unit													
Water level Calcium (Ca) Magnesium	m mg/L	3.47	3.5	3.64	3.78	3.92 49	4 48	4.1 42	4.05 47	4.12 45 330	3.63	0	4.69	0
(Mg)	mg/L					320	340	310	320					
Potassium (K)	mg/L					14	14	14	9.1	13				
Sodium (Na) Bicarbonate	mg/L 					1000	1000	930	890	920 840				
(HCO <sub>3)</sub>	mg/L					850	870	890	900					
Chloride (CI)	mg/L					2300	2300	1900	2000	2100 130				
Sulphate (SO <sub>4)</sub>	mg/L					120	110	120	82					
Cadnium (Cd)	mg/L					<0.001	<0.001	<0.001	<0.002	<0.002				
Copper (Cu)	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01				
Mercury (Hg)	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001				
Iron (Fe)	mg/L					0.16	0.6	0.41	0.7	0.8				
Tin (Sn)	mg/L					< 0.01	<0.01	<0.01	<0.01	<0.01				
Zinc (Zn) Arsenic (As)	mg/L					0.17 0.004	0.23 0.005	0.03 0.004	<0.02 <0.01	0.04				
Chromium (Cr)	mg/L mg/L					< 0.004	< 0.005	< 0.004	<0.01	<0.01 <0.01				
Molybdenum	_									<0.01				
(Mo)	mg/L					<0.01	< 0.01	<0.01	<0.01	.0.04				
Selenium (Se)	mg/L	5,000	0.000	0.700	4.400	0.007	0.012	0.007	<0.01	<0.01	0.000		050	
TDS BOD	mg/L	5,000 6	3,800	3,700	4,100	3,800 <2	4,200 <2	3,700	3,800	3,700	3,800		950	
Total P	mg/L	0.08	3 0.02	5 0.12	<2 0.07		0.05	<2 0.05	2 <0.05	<2	<2 0.06		4 0.12	
Nitrate N	mg/L mg/L	0.06	<0.02	<0.12	0.07	0.03 0.21	0.05	0.05 0.1	0.05	<0.05 0.03	0.06		2.4	
Nitrite N	mg/L	<0.11	<0.01	<0.01	0.13	<0.01		<0.01	<0.01	0.03	0.03		<0.01	
Ammonia	mg/L	0.2	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1		<0.1	
TKN	mg/L	0.8	0.4	<0.3	<0.3	<0.3		<0.1	<0.3	0.2	0.2		<0.3	
Total coliforms	Orgs/100mL	0.0	0.1	.0.0	0.0	0		<10	74	2400	160		.0.0	
E.Coli	Orgs/100mL	0	<10	34	0	0		<10	20	27	0		<10	
рН	pH units	7.5	7.4	7.5	7.4	7.5	7.39	7.38	7.23	7.2	7.6		7.6	
EC	uS/cm	8,500	6,760	7,140	6,870	6,843	6,870	7,000	6,250	6,600	6,274		1,703	
Redox	mV					225	199.9	60	296	170	290			
Dissolved			2.15	6.52	5.26					0.6	2.6		1.54	
Oxygen (DO)	mg/L	6.43				6.6	3.2	2.4	1.9					
Turbidity	NTU					42.3	22.6	15.7	18.7	23				
Temperature	°C	16.8	15.9	13.5	16.4	16.36	15.1	16.5	14.2	14.6	14.64		17.7	
Hardness	mg/L									1500				
CO3 as										70				
CaCO3	mg/L													
OH as CaCO3 Alkalinity	mg/L									<2 910				
(CaCO3)	mg/L													

Appendix 2 - Groundwater level and quality monitoring results

			BOREHOLE	WALLRRS	BHWM1 (W	M1)		BORE	HOLE WALRE	RSBHWM2 (W	M2)	
		26/02/2002	14/04/2003	26/05/2004	8/06/2005	27/03/2008	3/10/2006	14/12/2006	27/03/2007	27/06/2007	25/09/2007	27/03/2008
					0.00.200	2770072000	0.10.2000			2170072001	20/00/2001	
Parameter	Unit											
Water level Calcium (Ca) Magnesium	m mg/L	8.5	9.35	7.1		10	No Depth 35	No Depth	No Depth	No Depth	None taken 8.7 130	
(Mg) Potassium (K) Sodium (Na)	mg/L mg/L mg/L						130 4.8 360				6.7 400	
Bicarbonate (HCO <sub>3)</sub> Chloride (CI)	mg/L mg/L						770 560				580 640	
Sulphate (SO <sub>4)</sub>	mg/L						27				27	
Cadnium (Cd) Copper (Cu) Mercury (Hg)	mg/L mg/L mg/L						<0.001 0.01 <0.001				<0.002 0.02 <0.001	
Iron (Fe) Tin (Sn) Zinc (Zn)	mg/L mg/L mg/L						0.1 <0.01 0.03				<0.2 <0.01 <0.02	
Arsenic (As) Chromium (Cr) Molybdenum	mg/L mg/L						<0.001 <0.01				<0.01 <0.01 <0.01	
(Mo) Selenium (Se) TDS	mg/L mg/L mg/L	3,800	3,200	3,400	3,400	1,900	<0.01 0.003 1,500				<0.01 1,600	1,500
BOD Total P Nitrate N	mg/L mg/L mg/L	<5 0.41 0.62	<2 0.09 0.34	3 0.11 0.36	<2 0.24 0.33	26 7.6 0.1	3 0.03 0.1				3 <0.05 <0.01	<2 0.08 1.9
Nitrite N Ammonia TKN	mg/L mg/L mg/L	<0.01 0.1 <0.3	<0.01 <0.1 <0.3	<0.01 <0.1 <0.3	<0.01 <0.1 <0.3	250 250	<0.01 <0.1 0.8				<0.1 0.8	<0.1 0.1
Total coliforms E.Coli pH	Orgs/100mL Orgs/100mL pH units	10 6.7	<10 6.5	79 6.6	100 7.1	16000 390 7.21	>2400 17 6.01				160 7 9.1	170 <10 8.32
EC Redox Dissolved	uS/cm mV	8,450 2.97	5,700	6,200 4.18	6,520 2.78	4,374 108 1.9	2,848 252	2,920	2,910	2,520	2,800 387 16.1	2,456 242 7.7
Oxygen (DO) Turbidity	mg/L NTU		2.33				18.6 1.1				10	
Temperature Hardness CO3 as	°C mg/L	15.2	15.7	12.1	15.6	12.91	13.11	15.1	15	7.6	16.5 580 180	13.74
CaCO3 OH as CaCO3 Alkalinity	mg/L mg/L										<2 750	
(CaCO3)	mg/L											

Appendix 2 - Groundwater level and quality monitoring results

		BORE	IOLE WALR	RSBHWM3	(WM3)			BOR	EHOLE WAL	.RRSBHWM5	(WM5)		
		26/02/2002	14/04/2003	26/05/2004	8/06/2005	26/02/2002	14/04/2003	26/05/2004	3/10/2006	27/03/2007	27/06/2007	25/09/2007	27/03/2008
Parameter	Unit												
Water level	m	7.55	26.21	10.24	0	5.97	6.45	6.2	No Depth	No Depth	No Depth	None taken	
Calcium (Ca) Magnesium	mg/L								16			15 79	
(Mg)	mg/L								78				
Potassium (K)	mg/L								5.4			7.2	
Sodium (Na)	mg/L								170			150	
Bicarbonate												330	
(HCO <sub>3)</sub>	mg/L								330				
Chloride (CI)	mg/L								290			280	
Officiac (OI)	mg/L								200			14	
Sulphate (SO <sub>4)</sub>	ma/l								9			1-7	
	mg/L											.0.000	
Cadnium (Cd)	mg/L								<0.001			<0.002	
Copper (Cu)	mg/L								<0.01			<0.01	
Mercury (Hg)	mg/L								<0.001			<0.001	
Iron (Fe)	mg/L								<0.05			<0.2	
Tin (Sn)	mg/L								<0.01			<0.01	
Zinc (Zn)	mg/L								<0.01			0.03	
Arsenic (As)	mg/L								<0.001			<0.01	
Chromium (Cr)	mg/L								<0.01			<0.01	
Molybdenum												<0.01	
(Mo)	mg/L								<0.01				
Selenium (Se)	mg/L								0.001			<0.01	
TDS	mg/L	2,700	2,600	2,700		720	670	380	710			790	890
BOD	mg/L	<2	3	2		<2	3	8	9			10	3
Total P	mg/L	0.61	0.19	0.18		0.18	0.22	0.48	0.09			0.12	<0.05
Nitrate N	mg/L	0.72	0.02	<0.01		2.2	2.5	9.7	<0.01			<0.01	<0.01
Nitrite N	mg/L	<0.01	< 0.01	<0.01		<0.01	<0.01	0.03	<0.01				
Ammonia	mg/L	< 0.3	<0.1	<0.1		<0.1	<0.1	0.1	<0.1			<0.1	<0.1
TKN	mg/L	< 0.3	< 0.3	< 0.3		<0.3	0.8	4.7	2.3			1.7	1
Total coliforms	Orgs/100mL								1			91	24000
E.Coli	Orgs/100mL	440	<10	0		<10	<10	2,400	0			0	20
pH	pH units	6.8	7.3	6.7			7.5	7.9	9			9.3	9.11
EC	uS/cm	4,750	4,470	4,720		1,525	1,342	744	1,367	1,488	1,260	1,400	1,481
Redox	mV	4,700	7,770	7,720		1,320	1,072	, -,-	219	1,100	.,_00	414	274
Dissolved		4.87	1.86	3.2			1.3	6.05	210			17.6	10.2
Oxygen (DO)	mg/L	7.07	1.00	0.2		6.5	1.0	0.00	13.6			17.0	10.2
Turbidity	NTU					0.5			9.9			38	
Temperature	°C	17.2	17.9	12.5		15.0	17	13.4		14.6	7.5	14.7	13.31
		17.4	17.9	12.5		15.9	17	13.4	18	14.6	7.5		13.31
Hardness	mg/L											360	
CO3 as												72	
CaCO3	mg/L											_	
OH as CaCO3	mg/L											<2	
Alkalinity												400	
(CaCO3)	mg/L												

Appendix 2 - Groundwater level and quality monitoring results

					ВС	REHOLE WA	LRRSBHWM6	6 (WM6)			
		26/02/2002	14/04/2003	26/05/2004	8/06/2005	3/10/2006	14/12/2006	27/03/2007	27/06/2007	25/09/2007	27/03/2008
Parameter	Unit										
Water level Calcium (Ca) Magnesium	m mg/L	1.24		10.53		No Depth 23	No Depth	No Depth	No Depth	None taken 21 34	
(Mg) Potassium (K) Sodium (Na) Bicarbonate	mg/L mg/L mg/L					36 3.6 230				4.6 200 450	
(HCO <sub>3)</sub> Chloride (CI)	mg/L mg/L					510 180				170 9	
Sulphate (SO <sub>4)</sub> Cadnium (Cd) Copper (Cu) Mercury (Hg) Iron (Fe) Tin (Sn) Zinc (Zn) Arsenic (As) Chromium (Cr) Molybdenum (Mo) Selenium (Se) TDS BOD Total P Nitrate N Nitrite N	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	700 <2 0.09 0.3 <0.01	680 <2 0.05 0.02 <0.01	760 <2 0.09 0.02 <0.01	710 2 0.29 <0.01 <0.01	8 <0.001 0.04 <0.001 0.09 <0.01 0.75 <0.001 <0.01 <0.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001 <10.001				9 <0.002 0.02 <0.001 0.3 <0.01 0.34 <0.01 <0.01 <0.01 <750 <2 0.05 0.16	2,500 10 0.11 <0.01
Ammonia TKN Total coliforms E.Coli pH EC Redox Dissolved	mg/L mg/L Orgs/100mL Orgs/100mL pH units uS/cm mV	0.2 <0.3 <10 7.5 1,435	<0.1 <0.3 <10 7.6 1,191	0.2 <0.3 0 7.5 1,337 3.69	<0.1 <0.3 0 7.9 1,315 7.31	<0.1 <0.3 0 0 7.3 1,290 240	1,280	1,360	1,270	<0.1 <0.1 0 0 7.9 1,300 370 10.9	<0.1 1.6 960 98 9.1 3,917 314 6.2
Oxygen (DO) Turbidity Temperature Hardness CO3 as	mg/L NTU °C mg/L	16.6	18.4	13.8	18.2	12.1 23.4 16.3	19.8	18.1	8.8	8.5 15.3 190 62	9.41
CaCO3 OH as CaCO3 Alkalinity (CaCO3)	mg/L mg/L mg/L									<2 510	

Appendix 2 - Groundwater level and quality monitoring results

			BOREHOLE	WALRRSBHW	/M9 (WM9)		BORE	HOLE 14570	8 (PS 3)
		3/10/2006	14/12/2006	27/03/2007	25/09/2007	27/03/2008	4/03/2002	14/04/2003	26/05/2004
Parameter	Unit								
Water level Calcium (Ca) Magnesium	m mg/L	No Depth 21	No Depth	No Depth	None taken 21 42		4.64	4.81	5
(Mg) Potassium (K)	mg/L mg/L	42 5.1			6.4				
Sodium (Na) Bicarbonate	mg/L 	81			65 180				
(HCO <sub>3)</sub> Chloride (CI)	mg/L mg/L	440 160			150				
Sulphate (SO <sub>4)</sub> Cadnium (Cd)	mg/L mg/L	7 <0.001			8 <0.002				
Copper (Cu) Mercury (Hg)	mg/L mg/L	<0.01 <0.001			<0.01 <0.001				
Iron (Fe) Tin (Sn) Zinc (Zn)	mg/L mg/L mg/L	0.06 <0.01 0.05			<0.2 <0.01 0.02				
Arsenic (As) Chromium (Cr) Molybdenum	mg/L mg/L	<0.001 <0.01			<0.01 <0.01 <0.01				
(Mo) Selenium (Se)	mg/L mg/L	<0.01 0.001			<0.01				
TDS BOD Total P	mg/L mg/L mg/L	400 <2 0.1			420 <2 0.14	480 <2 0.15	3,000 37 0.13	2,600 3 0.02	2,800 <2 0.1
Nitrate N Nitrite N	mg/L mg/L	0.58 <0.01			2.9	2.6	0.2 <0.01	0.04 <0.01	0.04 <0.01
Ammonia TKN Total coliforms	mg/L mg/L Orgs/100mL	<0.1 0.6 1			<0.1 0.2 170	<0.1 <0.1 1200	0.1 0.7	<0.1 <0.3	<0.1 0.4
E.Coli pH	Orgs/100mL pH units	0 7.97			71 8	680 8.24	0 6.8	240 6.8	65 6.9
EC Redox	uS/cm mV	818 247	848	752	800 374	786 268	5,340	4,540	4,920
Dissolved Oxygen (DO) Turbidity	mg/L NTU	10.6 15.3			11.2 7.2	9.2	7.57	1.71	5.9
Temperature Hardness	°C mg/L	17.49	18.4	28.6	15.5 230	15.49	16.9	16.4	12.9
CO3 as CaCO3 OH as CaCO3	mg/L mg/L				16 <2				
Alkalinity (CaCO3)	mg/L				200				



# Appendix G. Arris Pty Ltd (2008) report for Lot 8 & 9 Camerons Lane

# Lots 8 & 9 Camerons Lane Reuse Scheme

May 12

2008

Assessment of soil monitoring data for 2006 to 2007

By Arris Pty Ltd

Arris Project: H0509ds

Project Leader: Dr Daryl Stevens

12 May 2008

For Yarra Valley Water



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## **BRIEF**

Assess current soils data for the Wallan recycled water scheme at Lots 8 and 9 Camerons Lane to identify any detrimental agronomic or environmental impacts on soils and plants irrigated with recycled water.

## **BACKGROUND**

#### Site size

The recycled water irrigation site investigated in this report is located at Lots 8 & 9 Camerons Lane. Lot 8 is located south of Lot 9. Lots 8 & 9 are split in the centre approximately and referred to as the eastern & western side.

The ultimate irrigation scheme will comprise of 158 ha of land. Stage 1 of the scheme has been completed and covers 92 ha. Stage 2 will develop the remaining 66 ha in the future.

Irrigation commenced in January 2006 approximately.

#### Soil types

The irrigation area consists of a number of soil types formed primarily on basalt formations. A small area of the western portion of the site is located on the sedimentary Kilmore siltstone formation. Soil texture in the top soils is predominantly a light to medium clay with some loamy components. Soil texture in the subsoil is generally a medium to heavy clay.

#### Plants grown

The eastern side of the Wallan recycled water irrigation site has predominately perennial ryegrass. On the western side, there is predominately perennial ryegrass with some clovers, phalaris, fescue and paspalum.

### Recycled water use

Summary of water used for irrigation:

- 2006 142.8 ML
- 2007 165.6 ML
- 2008 51 ML (Jan April)

On average this equates to approximately 2 ML/ha/year across the whole site.



#### **Recycled water quality**

Table 1 Summary of Class C water quality from Wallan Sewage Treatment Plant 2006/07

Parameter	Units	Median	90th Percentile	Average
рН	Units	7.9	8	7.9
Biological Oxygen Demand (BOD)	mg/L	12	31	18
Suspended Solids (SS)	mg/L	31	72	40
Total Phosphorus (TP)	mg/L	12.5	15.9	13.2
Total Nitrogen (TN)	mg/L	32	44	34
Nitrite (NO2)	mg/L	0.32	0.69	0.41
Nitrate (NO3)	mg/L	2.45	4.6	2.61
Ammonia (NH3)	mg/L	20	26	20
Organic Nitrogen (ORG N)	mg/L	10	20.7	11.4
Total Kjeldahl Nitrogen (TKN)	mg/L	31	40	33
Electrical Conductivity (EC)	uS/cm	825	930	832
Sodium Adsorption Ratio (SAR)	Units	6	6	6

Effluent from Wallan Sewage Treatment Plant transferred to Wallan Recycled Reservoir Storage for irrigation'

See Appendix – Table 3 for detailed (Heavy Metals and Volatile Organic Compounds) water quality data (three samples). These data indicate that the total aluminium concentrations in recycled water range from 1.5 to 7.2 mg/L (Table 3). Two of these readings are above the long term trigger value (LTV) of 5 mg/L (ANZECC and ARMCANZ 2000). Given the low pH of the soil (Aluminium is more plant available and toxic at pH <5.5) the form of aluminium in water should be determined (i.e. will it be plant available or is it soil mineral not available or toxic to plants?). A measure of phytotoxic aluminium (Al) in the soil should also be integrated into the soil analysis program.



# **SOIL ANALYSIS**

A summary of soil data for 2006 and 2007 is listed below:

Table 2 Soil analysis for sample from the Camerons Lane Reuse Scheme (2006 and 2007)

			EC	ECe	рН	TN	NOx	TKN	TP	OM	CI	S	Al	CEC	ESP	SAR
Sample	Year	Depth			CaCI				m	g/L		_		meq/100g	%	mmol/L) <sup>0.5</sup>
WAL5	2006	0-10	600	4.2	4.5	2700			190	6	85	870	6200	12	10	30
WAL5	2007	0-10	290	2.0	4.9	2300	1	2300	170	5	82	550	3900	13	9.1	1.8
WAL5	2006	20-30	150	0.8	4.6	1100			86	3	110	260	6100	8	7	38
WAL5	2007	20-30	180	0.9	4.9	900	1.7	900	78	<2	62	270	3000	12	6.6	2.4
WAL6	2006	0-10	490	3.4	4.4	3100			230	6	89	830	12000	14	10	29
WAL6	2007	0-10	240	1.7	4.9	2500	0.6	2500	170	5	84	510	5200	21	6.1	2.1
WAL6	2006	20-30	200	1.0	4.6	1500			97	4	110	230	15000	17	7	32
WAL6	2007	20-30	210	1.1	4.4	1600	2.1	1600	73	3	70	310	7800	21	8.9	4.7
WAL7	2006	0-10	440	3.1	4.4	2800			200	7	67	580	14000	19	6	25
WAL7	2007	0-10	210	1.5	4.8	2100	11	2100	130	5	39	380	7700	26	4.3	1.7
WAL7	2006	20-30	170	0.9	4.4	910			93	4	200	360	24000	15	7	29
WAL7	2007	20-30	160	0.8	4.7	1600	8.2	1600	59	4	60	310	10000	32	5.3	2.9
WAL8	2006	0-10	430	3.0	4.3	2800			200	7	71	660	14000	14	8	29
WAL8	2007	0-10	160	1.1	5.1	2100	9.8	2100	47	5	130	250	12000	24	7.2	3
WAL8	2006	20-30	120	0.6	4.5	1000			83	3	150	110	15000	13	6	20
WAL8	2007	20-30	130	0.7	4.7	1200	8.2	1200	61	3	72	260	8400	32	6.1	2.3
WAL9	2006	0-10	380	2.7	4.5	260			230	6	43	590	12000	13	7	22
WAL9	2007	0-10	180	1.3	4.9	2200	1.9	2200	120	5	68	280	8200	25	5.9	3.5
WAL9	2006	20-30	130	0.7	4.8	900			88	3	150	130	19000	22	4	24
WAL9	2007	20-30	140	0.7	4.8	1300	2.6	1300	53	3	87	360	11000	21	9.5	3.3
WAL10	2006	0-10	670	4.7	4.5	3600			270	7	35	820	13000	18	6	28
WAL10	2007	0-10	250	1.8	4.7	3900	39	3900	240	7	17	490	8300	37	2.2	0.93
WAL10	2006	20-30	280	1.4	4.7	1700			130	5	21	470	19000	25	4	32
WAL10	2007	20-30	190	1.0	4.9	1300	26	1300	47	4	17	330	9400	28	2.7	1.4
WAL11	2006	0-10	290	2.0	4.7	2500			180	5	31	470	19000	21	4	33
WAL11	2007	0-10	200	1.4	5.1	2900	21	2900	170	6	29	520	7700	29	1.7	0.51
WAL11	2006	20-30	160	0.8	4.9	1500			110	4	140	220	19000	26	3	41
WAL11	2007	20-30	110	0.6	5.3	1200	7.1	1200	74	4	7	160	12000	31	3	1.4
WAL12	2006	0-10	860	6.0	4.5	3800			230	7	53	2000	13000	22	4	28
WAL12	2007	0-10	300	2.1	5	2400	16	2400	140	5	33	730	7100	22	1.8	0.44
WAL12	2006	20-30	510	2.6	4.6	1500			120	5	19	690	20000	24	4	31
WAL12	2007	20-30	120	0.6	5.1	1500	10	1500	50	4	17	290	7600	32	1.9	0.84
		verage	280	1.8	4.7	1958	10.4	1937	132	4.8	70.3	478	11550	22	5.6	2.1
		Median	205	1.3	4.7	1650	8.2	1850	120	5.0	67.5	370	11500	22	6.0	2.0
		95%ile	632	4.4	5.1	3690	29.3	3150	235	7.0	150.0	848	19450	32	9.7	3.8

Sampled dates: 4/07/2006 & 4/9/2007. Data supplied by Yarra Valley Water

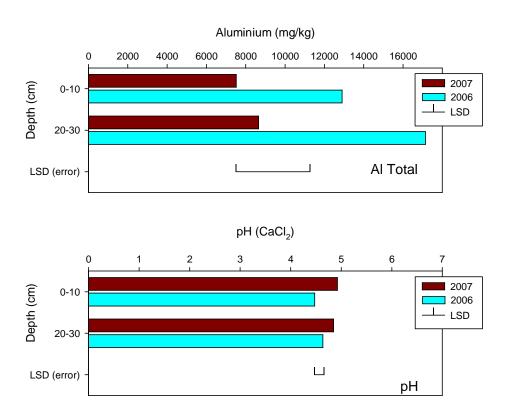
Note: EC – Electrical conductivity soil:water 1:5 extract; ECe – Soil salinity electrical conductivity, calculated us a factor of 7 for 0-10 cm soil depth and 5 for 20-30 cm soil depth (Cass *et al.* 1995); pH – a measure of acidity or alkalinity; TN - Total Nitrogen; NOx – Nitrate and Nitrite; TKN - Total Kjeldahl Nitrogen; TP - Total Phosphorus; OM – Organic matter; CI – Chloride; Sulphate - S; Al – Aluminium; CEC – Cation Exchange Capacity; SAR – Sodium Adsorption Ratio.



Statistical and graphical software were used to determine analysis of variance (ANOVA) at p <0.05. That is, if there was a 95% probability that the means were different this was considered significantly different. A least significance difference (LSD) has been drawn on all graphs to indicate how great the difference between years and depths needs to be before it is considered significantly different relative to the variability of the soil sampling area (see graphs below).

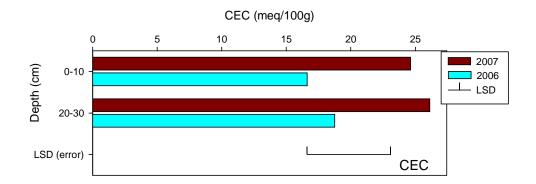
#### These data indicate:

- Total soil aluminium (AI) has decreased significantly from 2006 to 2007 (see graphs below). This is the measure of total aluminium in the soil and not relevant as a measure of AI toxicity. There is no rationale for this change other than the soil pH has increased on average from 4.5 to 5 (pH CaCl<sub>2</sub>). The increase in soil pH is mostly likely due to the pH of the recycled water used (7.9 Table 1) or any lime amendment applied to the irrigated pasture. Theoretically, an increase in soil pH should only decrease the amount of AI in soil solutions (plant available) and have little effect on total Aluminium in soils (Peverill et al. 1999).
- The increase in soil pH is beneficial as soil pH should ideally be above 5.5 (CaCl₂) and lime should be applied to increase soil pH to avoid Al and Manganese (Mn) toxicity. If the current rate of pH change continues due to recycled water use, one more year of recycled water use may also achieve ideal soil pH values.



• The cation exchange capacity (CEC) has increased significantly in 2007 compared with 2006 (see graph below). Increased CEC is usually beneficial for soils as it helps hold nutrients to make them accessible to the plants. This increase suggests laboratory variability in analysis.



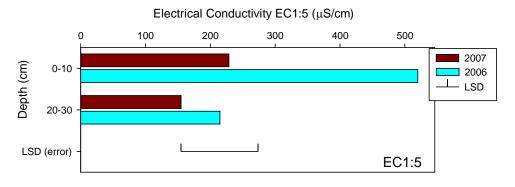


 Electrical conductivity has decreased significantly in 2007 from 2006 in the top 0-10cm (see graphs below). Decreases at 20-30cm were not considered significant and averages are within the variance found across the field site. Overall, soil electrical conductivity is relatively low and suitable in soil textures of light to heavy clays for production of the pastures specified in the area.

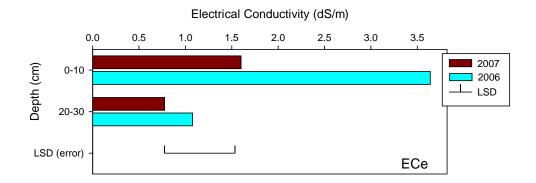
The soil salinity electrical conductivity (ECe) threshold for yield reduction (NRMMC and EPHC 2006) for ryegrass, clovers, phalaris, fescue and paspalum are:

- o Perennial ryegrass 5.6 dS/m
- o Clover 2 to 8 dS/m depending on species
- o Phalaris 4 dS/m
- o Fescue 2 to 8 dS/m depending on species
- Paspalum 3 to 40 dS/m depending on species
- On average the soil ECe in 2007 was below the most salt sensitive pasture species irrigated with recycled water (see graphs below). However, on average some 0 10 cm depth soil samples exceed these in 2006 (outliners shown in Appendix Figure 8). These observations suggest that irrigation with recycled water may have improved soil salinity by leaching salts below the 20-30cm depth. It could also mean that rainfall was greater leading to increased leaching in 2007 compared with 2006. Estimates of rainfall at the study site were 285mm in 2006 and 490mm in 2007, supporting this theory. Addition of fertiliser, lime or gypsum in 2006 could also explain the higher EC in the top soil in 2006.

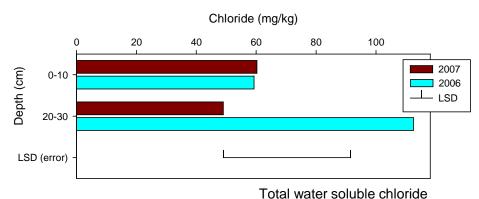
If increased leaching is responsible then deeper leaching of N and P may be an ongoing monitoring requirement if there are risks of N and P moving offsite or into groundwater where N and P could pose environmental risks in aquatic systems.



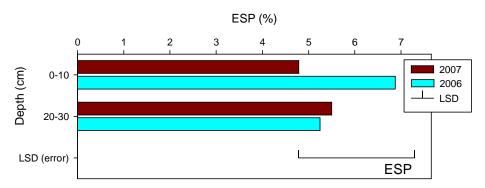




• Chloride concentrations in soils were below levels which may impact on plants grown on site (see graph below). There were no significant changes between 2006 to 2007 in the 0-10cm soil sample, however, there was a significant decrease in the 20-30cm sample.



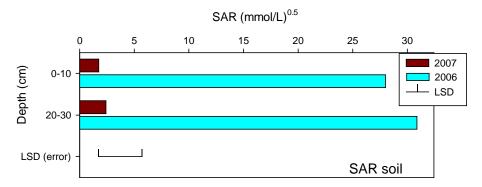
• Difference in Exchangeable Sodium Percentage (ESP) were not considered significant (see graph below), however a similar trend to EC was noted for the top soil (0-10cm lower in 2007). On average, these ESPs are below what is considered sodic (6% - ANZECC and ARMCANZ 2000). However, some soils gave a reading above 6% in 2007 (Table 2) indicating addition of lime may be required to manage sodicity in these soils. The SAR of the recycled water is 6 (Table 1) which is reaching a level that may have a detrimental impact on sensitive soils so changes in soil ESP over the next 2 years should be monitored closely.



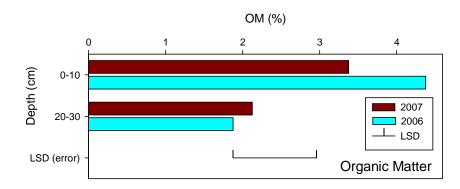
• Soil Sodium Adsorption Ratio (SAR) was much lower for 2007 (see graph below). However, the raw data was not available to check for 2006. These data indicate that there may have been an analytical error in 2006. The 2007 data are on average low and considered suitable



for soil with texture medium to heavy clay. Soil SAR is an indirect measure of ESP and these differences between SAR do not reflect the findings for ESP above; which on the sample soil will have a good correlation. The 2006 SAR has been ignored as it is considered an analytical error. Yarra Valley Water has checked the 2006 lab report and these data are as reported.

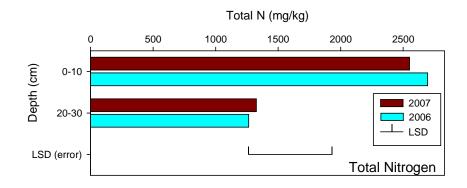


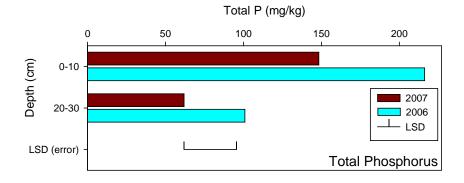
Organic matter (OM) concentrations have not changed significantly from the 2006 to 2007 sampling (see graph below). As expected, OM was lower in the lower soil depths, which is typical of pasture production systems. The trend of lower OM in 2007 may also be related to an increased pH, which would increase the functionality of soil microbes that breakdown OM.



• Total N and P concentrations have not significantly increased from 2006 to 2007 (see graphs below), indicating the irrigation systems are not overloading soils with N and P (NRMMC and EPHC 2006). In fact, total P concentrations decreased significantly across the sample site. This suggests that the P balance overall is negative and sufficient P to meet pasture requirements may not be applied with the current use of recycled water and any fertilisation program. Ideally, plant available N and P in soil should be measured in the future, as this can be used for agronomic advice regarding fertiliser requirements and, if excessive, could pose a risk to the nearby environment.









### **SUMMARY**

This preliminary assessment of soils data from the Wallan recycled water irrigation site indicates:

- Recycled water has generally improved many indicators of soil health measured as part of the monitoring program from 2006 to 2007.
- Addition of lime may be required to manage sodicity in the future a watching brief is required at this stage.
- Soil pH may rise to desired levels through the use of recycled water. This could also be managed through the addition of lime.
- The risks from deep leaching of N and P may need to be considered, and if appropriate soil sampling modified to manage these risks.

Some soil tests currently undertaken should be stopped and more appropriate tests adopted to manage the risks associated with recycled water use. This includes:

- Changing the aluminium test to phytotoxic aluminium concentrations in soils NOT total aluminium.
- Changing to plant available N and P concentrations in soils NOT total N and P concentrations.
- If measuring ESP don't measure soil SAR as it measures the same soil parameter.

# REFERENCES

ANZECC, ARMCANZ (2000) 'Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Volume 3, Chapter 9. Primary Industries — Rationale and Background Information (Irrigation and general water uses, stock drinking water, aquaculture and human consumers of aquatic foods).' (National Water Quality Management Strategy (NWQMS). Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australia and New Zealand: Canberra, Commonwealth of Australia).

Cass A, Walker RR, Fitzpatrick RW (1995) Vineyard soil degradation by salt accumulation and the effect on the performance of the vine. In '9th Australian Wine Industry Technical Conference (1995)'. Adelaide, Australia. Published 1996. pp. 153-160. (Australian Wine Industry Technical Conference Inc., Glen Osmond, SA.).

NRMMC, EPHC (2006) Australian Guidelines for Water Recycling. Managing Health and Environmental Risks. Phase 1. National Water Quality Management Strategy 21. Natural Resource Management Ministerial Council. Environment Protection and Heritage Council Australian Health Ministers' Conference, Canberra, Australia.

Peverill KI, Sparrow LA, Reuter DJ (1999) 'Soil Analysis: An Interpretation Manual.' (CSIRO Publishing: Collingwood, Victoria, Australia).



# **APPENDIX**

# Boreholes and soil sample sites

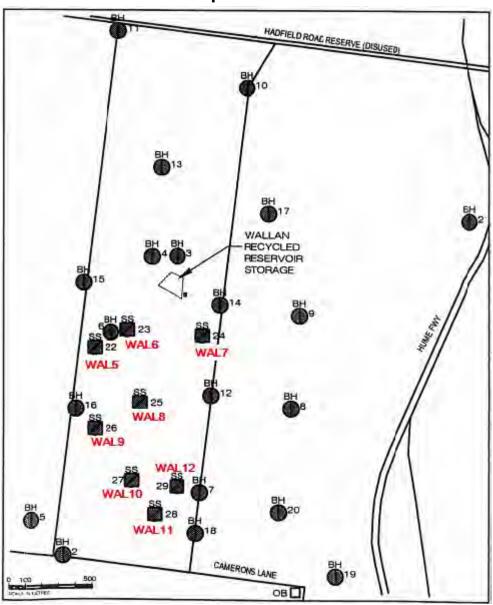


Figure 1 Soil sampling points relative to Wallan Recycled Water Reservoir. Soil sample points in red with prefix WAL.



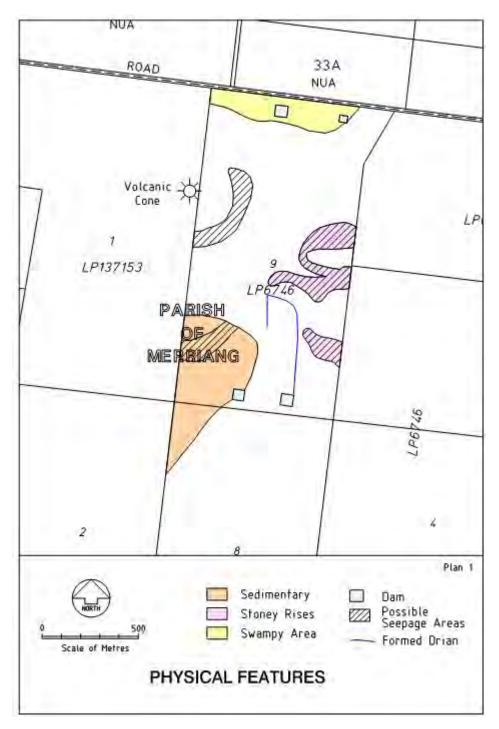


Figure 2 Lot 9 – Physical features of soil irrigation with recycled water at Wallan



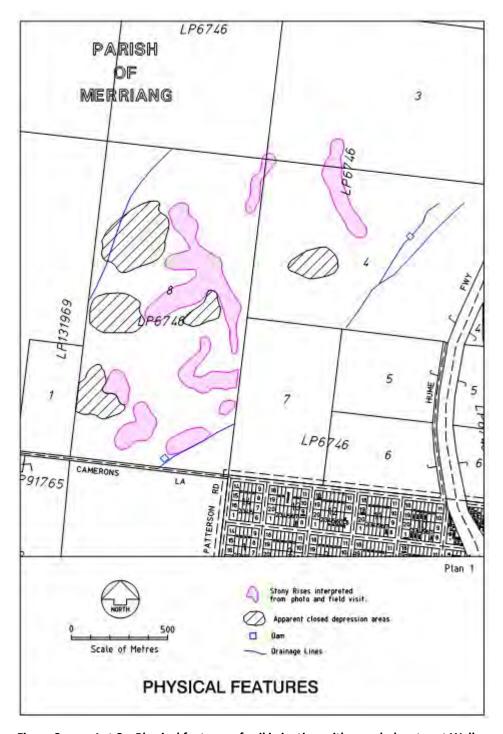


Figure 3 Lot 8 – Physical features of soil irrigation with recycled water at Wallan



# Soil pits

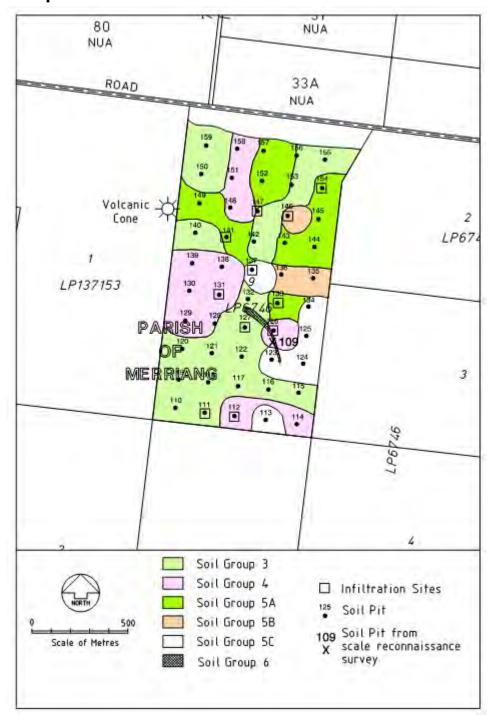


Figure 4 Lot 9 - Soil pit location and soil grouping



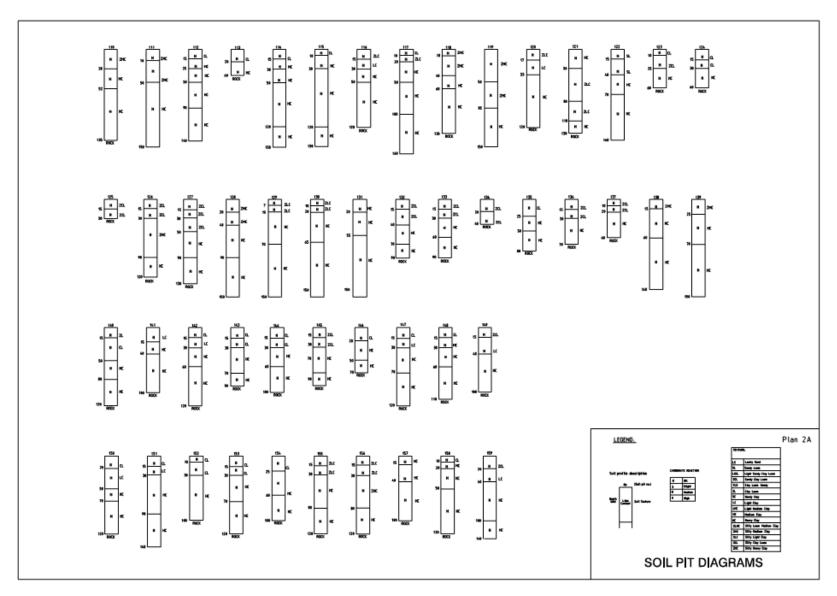


Figure 5 Lot 9 - Soil pit descriptions





Figure 6 Lot 8 - Soil pit location and soil grouping



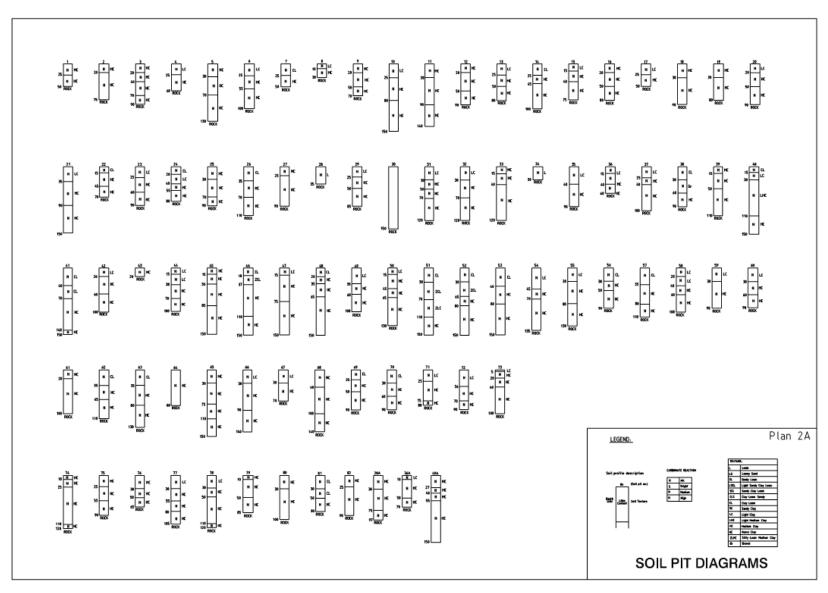


Figure 7 Lot 8 - Soil pit descriptions



# Detailed analysis of recycled water quality at Wallan irrigation site

Table 3 Summary of detailed analysis of recycled water quality supplied to Wallan irrigation site

Parameter	Unit	Value and date sampled				
		27/04/07	12/10/2007	16/4/2008		
pH - pH, Units	Units	8.1	7.6	#N/A		
BOD5 - Biochemical Oxygen Demand, 5 Day	mg/L	9	13	#N/A		
BOD5 Filt - BOD 5 Day (Filt)	mg/L	3	10	#N/A		
TKN/TP (HL) - Phosphorus, total as P	mg P / L	17	12	#N/A		
SS - Suspended solids	mg/L	19	5	#N/A		
EC - Electrical Conductivity @ 25C	uS/cm	1100	830	#N/A		
SO4 DA - Sulphate, as SO4	mg/L	58	60	#N/A		
TCN - Total Combined Nitrogen	mg/L	23	30	#N/A		
NH3 as N (SFA) - Ammonia, as N	mg N / L	13	11	#N/A		
MS Total Metals - Aluminium	mg/L	1.5	7.2	5.5		
MS Total Metals - Antimony	mg/L	<0.01	<0.01	<0.01		
MS Total Metals - Arsenic	mg/L	0.005	<0.01	<0.01		
MS Total Metals - Barium	mg/L	0.08	0.05	0.04		
MS Total Metals - Beryllium	mg/L	<0.01	<0.01	<0.01		
MS Total Metals - Boron  MS Total Metals - Cadmium	mg/L	0.22 <0.001	<0.5 <0.002	<0.2 <0.002		
MS Total Metals - Cadmium  MS Total Metals - Chromium	mg/L mg/L	<0.001	0.002	0.002		
MS Total Metals - Cobalt	mg/L	<0.01	<0.02	<0.01		
MS Total Metals - Copper	mg/L	<0.01	0.01	<0.01		
MS Total Metals - Copper  MS Total Metals - Iron	mg/L	1.2	5.8	3.0		
MS Total Metals - Lead	mg/L	<0.01	<0.01	<0.01		
MS Total Metals - Manganese	mg/L	0.08	0.02	<0.01		
MS Total Metals - Mercury	mg/L	<0.001	<0.001	<0.001		
MS Total Metals - Molybdenum	mg/L	<0.01	<0.01	<0.01		
MS Total Metals - Nickel	mg/L	0.01	0.01	<0.01		
MS Total Metals - Selenium	mg/L	<0.001	<0.01	<0.01		
MS Total Metals - Silver	mg/L	<0.01	<0.05	<0.01		
MS Total Metals - Strontium	mg/L	0.13	0.08	0.08		
MS Total Metals - Thallium	mg/L	<0.01	<0.01	<0.01		
MS Total Metals - Tin	mg/L	<0.01	<0.01	<0.01		
MS Total Metals - Titanium	mg/L	0.03	0.04	0.27		
MS Total Metals - Vanadium	mg/L	0.01	0.01	0.02		
MS Total Metals - Zinc	mg/L	0.01	0.02	<0.01		
MAH - Benzene	mg/L	<0.001	<0.001	<0.001		
MAH - Toluene	mg/L	<0.001	<0.001	<0.001		
MAH - Ethyl Benzene	mg/L	<0.001	<0.001	<0.001		
MAH - Xylenes	mg/L	<0.003	<0.003	<0.003		
MAH - Styrene	mg/L	<0.001	<0.001	<0.001		
MAH - Cumene	mg/L	<0.001	<0.001	<0.001		
MAH - 1,2,4-Trimethylbenzene	mg/L	<0.001	<0.001	<0.001		
HVOL - 1,1,1,2-Tetrachloroethane  HVOL - 1,1,2,2-Tetrachloroethane	mg/L	<0.001	<0.1	<0.001		
HVOL - 1,1,2,2-1 etrachioroethane  HVOL - 1,1- Dichloroethane	mg/L mg/L	<0.001 <0.001	<0.1 <0.1	<0.001 <0.001		
HVOL - 1,1-Dichloroethene	mg/L	<0.001	<0.1	<0.001		
TIVOL - 1,1-DICHIOTOETHENE	IIIg/L	<0.001	<0.1	<0.001		



Parameter	Unit	Value and date sampled				
		27/04/07	12/10/2007	16/4/2008		
HVOL - 1,1-Dichloropropene	mg/L	<0.001	<0.1	<0.001		
HVOL - 1,2,3-Trichloropropane	mg/L	<0.001	<0.1	<0.001		
HVOL - 1,2-Dibromo-3-chloropropane	mg/L	<0.001	<0.1	<0.001		
HVOL - 1,2-Dibromoethane	mg/L	<0.001	<0.1	<0.001		
HVOL - 1,2-Dichloroethene [cis]	mg/L	<0.001	<0.1	<0.001		
HVOL - 1,2-Dichloroethene [trans]	mg/L	<0.001	<0.1	< 0.001		
HVOL - 1,2-Dichloroethane	mg/L	< 0.001	<0.1	< 0.001		
HVOL - 1,2-Dichloropropane	mg/L	<0.001	<0.1	< 0.001		
HVOL - 1,3-Dichloropropane	mg/L	<0.001	<0.1	< 0.001		
HVOL - 1,3-Dichloropropene [cis]	mg/L	<0.001	<0.1	< 0.001		
HVOL - 1,3-Dichloropropene [trans]	mg/L	< 0.001	<0.1	<0.001		
HVOL - 2,2-Dichloropropane	mg/L	< 0.001	<0.1	< 0.001		
HVOL - 2-Chlorotoluene	mg/L	<0.001	<0.1	< 0.001		
HVOL - 4-Chlorotoluene	mg/L	< 0.001	<0.1	< 0.001		
HVOL - Bromochloromethane	mg/L	<0.001	<0.1	< 0.001		
HVOL - Bromodichloromethane	mg/L	<0.001	<0.1	< 0.001		
HVOL - Bromobenzene	mg/L	<0.001	<0.1	< 0.001		
HVOL - Bromoform (Tribromomethane)	mg/L	<0.001	<0.1	< 0.001		
HVOL - Carbon Tetrachloride	mg/L	< 0.001	<0.1	< 0.001		
HVOL - Chloroform (Trichloromethane)	mg/L	<0.001	<0.1	<0.001		
HVOL - Chlorobenzene	mg/L	<0.001	<0.1	< 0.001		
HVOL - Dibromochloromethane	mg/L	<0.001	<0.1	<0.001		
HVOL - Dibromomethane	mg/L	<0.001	<0.1	<0.001		
HVOL - Dichloromethane	mg/L	<0.005	<0.5	< 0.005		
HVOL - Trichlorofluoromethane (CFC11)	mg/L	<0.002	<0.2	< 0.002		
HVOL - Tetrachloroethene	mg/L	<0.001	<0.1	<0.001		
HVOL - Vinyl Chloride (Monomer)	mg/L	<0.002	<0.2	< 0.002		
HVOL - 1,1,1-Trichloroethane	mg/L	<0.001	<0.1	<0.001		
HVOL - 1,1,2-Trichlorethane	mg/L	<0.001	<0.1	<0.001		
HVOL - Trichloroethene	mg/L	<0.001	<0.1	<0.001		
SOLVENTS - Acetone	mg/L	<0.01	<0.01	<0.01		
SOLVENTS - Acrylonitrile	mg/L	<0.01	<0.01	<0.01		
SOLVENTS - Ethylhexyl Acrylate	mg/L	<0.01	<0.01	<0.01		
SOLVENTS - Isopropanol (Isopropyl Alcohol)	mg/L	<0.01	<0.01	<0.01		
SOLVENTS - Methylethyl Ketone	mg/L	<0.01	<0.01	<0.01		
SOLVENTS - Methyl Isobutyl Ketone	mg/L	<0.01	<0.01	<0.01		
Alg. ScCnt - Algal analyses		#N/A	NR IND	#N/A		
Colilert - E.coli MPN Colilert	orgs/100mL	#N/A	<10	#N/A		

#N/A = not available



#### $\begin{tabular}{ll} \textbf{Variability of ECe} \\ \hline \end{tabular}$ ECe 16 2.0 14 1.5 Simple residuals 12 1.0 10 0.5 8 0.0 6 -0.5 -1.0 -1.5 1.5 2.0 2.5 Fitted values Simple residuals ECe ECe 2.5 2.0 1.5 Simple residuals Simple residuals 1.0 0.5 0.0 -0.5 0.5 -1.0 -1.5 0.0 1.0

Figure 8 Residual plots for soil ECe values indicating outliners

Half-Normal plot

Normal plot

