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**AMENDMENT TO AN APPLICATION FOR PLANNING PERMIT  
Request Form**

**Privacy Information**

Any material submitted with this application, including plans and personal information, will be available for public viewing, including electronically, and copies may be made to interested parties for the purpose of enabling consideration and review as part of a planning process under the Planning and Environment Act 1987.

**DETAILS OF APPLICATION TO BE AMENDED**

Application Number:

Address of Land:

Under what section of the Planning and Environment Act 1987, is the amendment being sought:

☒ Section 50 – Amendment to the application prior to notice

☐ Section 57A – Amendment to the application after notice (Note – A fee of 40% of the original application fee is required with this request)

**THE APPLICANT**

Name:

Mrs Lilian Furnes De Murga

Organisation:

Address:

Contact Phone Number:

Email:

Are you the applicant of the original planning permit application? ☒ Yes ☐ No

(Note: Only the applicant of the original planning permit application may ask Council to amend the application)

**DETAILS OF THE PROPOSED CHANGES**

Is there a change to the description of the land?

☐ Yes ☒ No

Is there a change to the plans and/or other documents submitted with the application?

☒ Yes ☐ No

Is there a change to the use and/or development of the land?

☒ Yes ☐ No

List in detail the proposed changes (This can be listed on a separate page)

The development will increase from 11 units to 12 units.

**DECLARATION TO BE COMPLETED FOR APPLICATIONS**

I declare that all information I have given is true

Applicant Signature: .....

Date: ..... 14/6/19 .....

# Application for a Planning Permit

If you need help to complete this form, read MORE INFORMATION at the end of this form.

▲ Any material submitted with this application, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review as part of a planning process under the *Planning and Environment Act 1987*. If you have any questions, please contact Council's planning department.

▲ Questions marked with an asterisk (\*) must be completed.

▲ If the space provided on the form is insufficient, attach a separate sheet

■ Click for further information.

Clear Form

## The Land

Address of the land. Complete the Street Address and one of the Formal Land Descriptions.

**Street Address \***

Unit No.:	St. No.: <b>53 &amp; 34</b>	St. Name: <b>Wattle Road &amp; George Street</b>
Suburb/Locality: <b>MAIDSTONE</b>		Postcode: <b>3012</b>

**Formal Land Description \***  
Complete either A or B.

▲ This information can be found on the certificate of title.

If this application relates to more than one address, attach a separate sheet setting out any additional property details.

A	Lot No.:	<input type="radio"/> Lodged Plan	<input type="radio"/> Title Plan	<input type="radio"/> Plan of Subdivision	No.:
OR					
B	Crown Allotment No.:	Section No.:			
Parish/Township Name:					

## The Proposal

▲ You must give full details of your proposal and attach the information required to assess the application. Insufficient or unclear information will delay your application

■ For what use, development or other matter do you require a permit? \*

CITY OF MARIBYRNONG  
**RECEIVED**  
29/03/18  
URBAN PLANNING

The development of 11 dwellings.

■ Provide additional information about the proposal, including: plans and elevations; any information required by the planning scheme, requested by Council or outlined in a Council planning permit checklist; and if required, a description of the likely effect of the proposal.

Cost \$2,600,000.00

▲ You may be required to verify this estimate. Insert '0' if no development is proposed.

■ Estimated cost of any development for which the permit is required \*

If the application is for land within metropolitan Melbourne (as defined in section 3 of the *Planning and Environment Act 1987*) and the estimated cost of the development exceeds \$1 million (adjusted annually by CPI) the Metropolitan Planning Levy must be paid to the State Revenue Office and a current levy certificate must be submitted with the application. Visit [www.sro.vic.gov.au](http://www.sro.vic.gov.au) for information.



## Existing Conditions

Describe how the land is used and developed now \*

For example, vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing.

Factory and vacant land.

☒ Provide a plan of the existing conditions. Photos are also helpful.

## Title Information

Encumbrances on title \*

Does the proposal breach, in any way, an encumbrance on title such as a restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?

- ☐ Yes (If 'yes' contact Council for advice on how to proceed before continuing with this application.)
- ☒ No
- ☐ Not applicable (no such encumbrance applies).

☒ Provide a full, current copy of the title for each individual parcel of land forming the subject site. The title includes: the covering 'register search statement', the title diagram and the associated title documents, known as 'instruments', for example, restrictive covenants.

## Applicant and Owner Details

Provide details of the applicant and the owner of the land.

### Applicant \*

The person who wants the permit.

Name:

Title: MRS

First Name: LILIAN

Surname: FUNES DE MURGA

Organisation (if applicable):

Postal Address:

If it is a P.O. Box, enter the details here:

Unit No.:

St. No.:

St. Name:

Suburb/Locality:

State:

Postcode:

Please provide at least one contact phone number \*

### Contact information for applicant OR contact person below

Business phone: N/A

Email:

Mobile phone:

Fax:

Where the preferred contact person for the application is different from the applicant, provide the details of that person.

### Contact person's details\*

Same as applicant ☐

Name:

Title: Mr

First Name: Adam

Surname: Parker

Organisation (if applicable): Town Planning Group

Postal Address:

If it is a P.O. Box, enter the details here:

Unit No.:

St. No.: L24/570

St. Name: Bourke Street

Suburb/Locality: Melbourne

State: Vic

Postcode: 3000

### Owner \*

The person or organisation who owns the land

Where the owner is different from the applicant, provide the details of that person or organisation.

Same as applicant ☐

Name:

Title:

First Name:

Surname:

Organisation (if applicable):

Postal Address:

If it is a P.O. Box, enter the details here:

Unit No.:

St. No.:

St. Name:

Suburb/Locality:

State:

Postcode:


Owner's Signature (Optional):

Date: 22/3/2018

day / month / year

## Declaration

**This form must be signed by the applicant \***

 Remember it is against the law to provide false or misleading information, which could result in a heavy fine and cancellation of the permit.

I declare that I am the applicant; and that all the information in this application is true and correct; and the owner (if not myself) has been notified of the permit application.

Signature: 

Date:

day / month / year

## Need help with the Application?

General information about the planning process is available at [planning.vic.gov.au](http://planning.vic.gov.au)

Contact Council's planning department to discuss the specific requirements for this application and obtain a planning permit checklist. Insufficient or unclear information may delay your application

**Has there been a pre-application meeting with a council planning officer**

☐

No

☐

Yes

If 'Yes', with whom?:

Date:

day / month / year

## Checklist

**Have you:**



Filled in the form completely?



Paid or included the application fee?



Most applications require a fee to be paid. Contact Council to determine the appropriate fee.



Provided all necessary supporting information and documents?



A full, current copy of title information for each individual parcel of land forming the subject site.



A plan of existing conditions.



Plans showing the layout and details of the proposal.



Any information required by the planning scheme, requested by council or outlined in a council planning permit checklist.



If required, a description of the likely effect of the proposal (for example, traffic, noise, environmental impacts)



If applicable, a current Metropolitan Planning Levy certificate (a levy certificate expires 90 days after the day on which it is issued by the State Revenue Office and then cannot be used). Failure to comply means the application is void

☐

Completed the relevant council planning permit checklist?

☐

Signed the declaration?

## Lodgement

**Lodge the completed and signed form, the fee and all documents with:**

Maribyrnong City Council  
PO Box 58  
Footscray VIC 3011

Cnr Napier & Hyde Streets  
Footscray VIC 3011

### Contact information:

Phone: (03) 9688 0200

Email: [email@maribyrnong.vic.gov.au](mailto:email@maribyrnong.vic.gov.au)

DX: 81112

**Deliver application in person, by post or by electronic lodgement.**



## HOW TO REQUEST FOR AMENDMENT TO AN APPLICATION FOR PLANNING PERMIT

ALL OF THE INFORMATION OUTLINED BELOW MUST ACCOMPANY THIS APPLICATION.

### ALL REQUESTS SUBMIT:

1. Application form
2. A written statement detailing all alterations/amendment proposed
3. Application fee if required

### If you are amending the description of the land, please submit:

1. Provide the street number, street name, town, postcode, the lot number and lodged plan number or other title particulars
2. If you attach a plan, include:
  - The boundaries of the land and their measures;
  - The street it faces, the nearest intersecting street, the distance from this street and the name of all streets on the plan;
  - Reasons for the amendment

### If you are amending the use and/or development of the land, please submit:

1. Details of the changes to the use and development of the land;
2. Reasons for wishing to amend the use and/or development;

### If you are amending the plans, please submit:

1. An electronic copy of the plans (coloured to highlight the proposed amendments):
  - Site plan of the existing site and all amendments that are proposed;
  - Floor plans showing existing conditions, and all proposed amendments;
  - Elevation plans of the existing proposal, and all proposed amendments.



# town planning group

## **PLANNING REPORT**

**Amendment C158 to the Maribyrnong  
Planning Scheme**

**Subject Site**

53 Wattle Road and rear of 19 Smith  
Street (34 George Street), Maidstone

**Amendment Proponent**

L & M Murga

June 2019

**Town Planning Group Pty Ltd**

Level 24, 570 Bourke Street  
Melbourne VIC 3008  
Australia

[info@townplanninggroup.com.au](mailto:info@townplanninggroup.com.au)  
[www.townplanninggroup.com.au](http://www.townplanninggroup.com.au)





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## 1. INTRODUCTION

Town Planning Group Pty Ltd has been engaged to by L & M Murga to provide the planning justification to rezone land at 53 Wattle Road and rear of 19 Smith Street (34 George Street), Maidstone from Industrial 3 Zone to General Residential Zone and develop 12 dwellings.

The Amendment applies to 53 Wattle Road and rear of 19 Smith Street (34 George Street), Maidstone.

The proponents are the owners of 53 Wattle Road, Maidstone.

The land is bound by the unconstructed George Street to the west, Wattle Road to the north, rear of properties on Smith Street to the east and 60 Emu Road, Maidstone to the south.

The amendment will provide benefit to the community by:

- Removing industrial and residential land conflict on the interface.
- Provide for a clear boundary between Industrial land on the west of George Street and the Maidstone residential neighbourhood to the east.
- Enable the establishment of a buffer of roadway from the low density residential land to the east.

The report provides a description of the area and subject and policies and controls affecting the subject site, and assessment of the 12 dwelling development proposal.

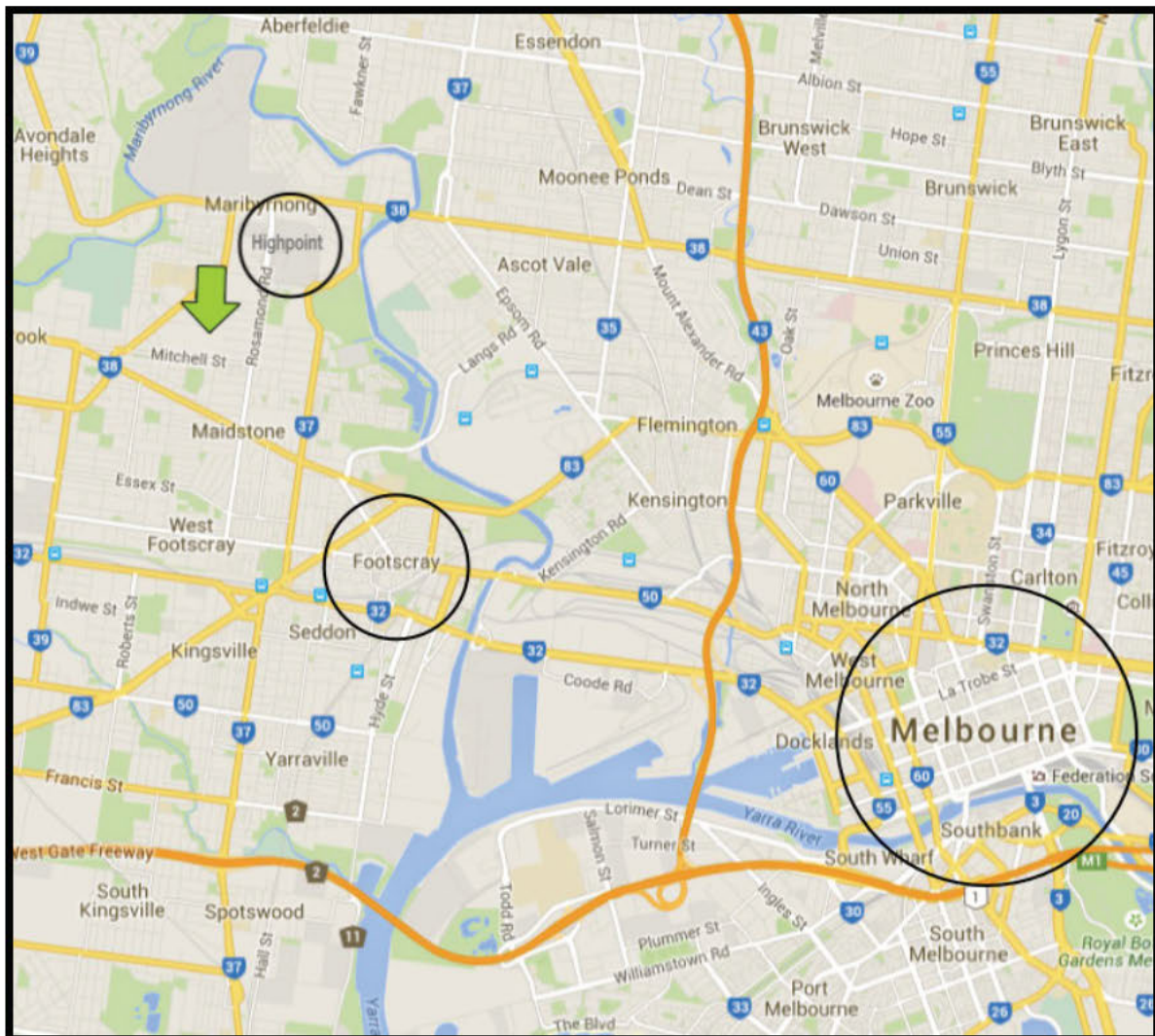




## 2. EXISTING CONDITIONS

### 2.1 Site Location

The subject site is located within Maidstone, to the northern sector of the City of Maribyrnong. The site is approximately 8 kilometres from the Melbourne Central Activities District (CAD), 2.8 kilometres from Footscray Activity Centre and 650 metres from the core of the Highpoint Activity Centre.



*Location of 53 Wattle Road and rear 19 Smith Street. (Google Maps)*

The site has good access to a variety of services, employment opportunities and transport routes within the area.

Highpoint Shopping Centre caters for all the retail needs of the local community, with full line supermarket, discount stores, two department stores and hundreds of speciality stores, within walking distance of the site.



There is a nearby tram route on Rosamond Road, and bus interchange at Highpoint Shopping Centre.

Easy access is available to Footscray Activity Centre and the Melbourne CAD by either public transport or car.

Maidstone has undergone a rejuvenation of redundant industrial land in the last ten years, particularly to the west of Hampstead Road. Maribyrnong to the north has undergone significant redevelopment of old defence sites and this will continue into the future, with the large Maribyrnong Defence Site. Rezoning in the City of Maribyrnong have sought to redevelopment these underutilised lands and improve the amenity of the area.





## 2.2 Site Details



*Map of Site location of 53 Wattle Road (Green) and rear of 19 Smith Street (34 George St) (Orange). (Google Maps)*

The site at 53 Wattle Road, Maidstone, is a long rectangular block with a frontage to Wattle Road of approximately 18.4 metres, a depth of approximately 82.4 metres and a site area of approximately 1516 square metres.

The site currently contains an industrial warehouse, which is constructed of brick veneer and metal sheeting roof, which was constructed line the late 1960's to early 1970's. The building has no historical significant. The remainder of the site is vacant of structures.

Three small lots make up Smith Street lots at 18.4 metres depth for George Street and 18 metres frontage to George Street. The site is vacant.



It is understood that the site has been used in the past for a variety of uses including:

- bus depot for Firefly Coaches (mid 1960's to 1970's);
- importation of grains & groceries;
- toy warehouse (2008 to 2011);
- t-shirt printing (2011 to 2013); and is
- currently used as a showroom for building suppliers.

Adjacent to the site are low density residential properties to the east, which consist of mainly single storey dwellings, with pitched hipped roofs, constructed of brick or timber. The majority of houses have medium setbacks and large backyards, with lot sizes of approximately 550 square metres.

To the west of the site is George Street. An industrial/warehouse unit complex is located on the west side of George Street, with the units having a high concrete wall to George Street, with access provided from Wattle Road. There is no passive surveillance of interface with George Street.

To the south of rear 19 Smith Street is 48 Emu Road. This site has a side boundary to George Street and frontage to Emu Road and is currently vacant. No. 48 Emu Road was granted a planning permit for a three storey residential development, with frontages to both Emu Road and George Street, in recent years. To gain access to the units, George Street is required to be sealed.

#### **Title**

53 Wattle Road, Maidstone is known as Plan CP150094

Rear 19 Smith Street, Maidstone (or 34 George Street, Maidstone) is known as Lot 205 LP1504



### 3. PROPOSAL

The proposal seeks to allow for residential redevelopment of the site for the development of 12 dwellings.

#### 3.1 Zoning

The site is currently zoned Industrial 3 Zone (IN3Z), which does not allow for residential redevelopment of the site.

It is intended to apply the General Residential Zone (GRZ1) to the site, to enable to residential redevelopment.



*Proposed Rezoning Map*



The purposes of the zone are:

*To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*

*To encourage development that respects the neighbourhood character of the area.*

*To encourage a diversity of housing types and housing growth particularly in locations offering good access to services and transport.*

*To allow educational, recreational, religious, community and a limited range of other non- residential uses to serve local community needs in appropriate locations.*

The use of the General Residential Zone is considered appropriate given the site is adjacent to this zone to the east and south, and the zone will allow for a variety of densities and dwelling typologies, consistent with the nearby dwelling stock and recent approval.

The 12 dwelling development seeks a planning permit.





### 3.2 Overlays

An Environmental Audit Overlay (EAO) will be applied to the site.



*Proposed Overlay Map*

The purposes of the Environmental Audit Overlay:

*To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*

*To ensure that potentially contaminated land is suitable for a use which could be*



*significantly adversely affected by any contamination.*

The Environmental Audit Overlay will ensure that the site is appropriately remediated to a level allowable for sensitive uses.



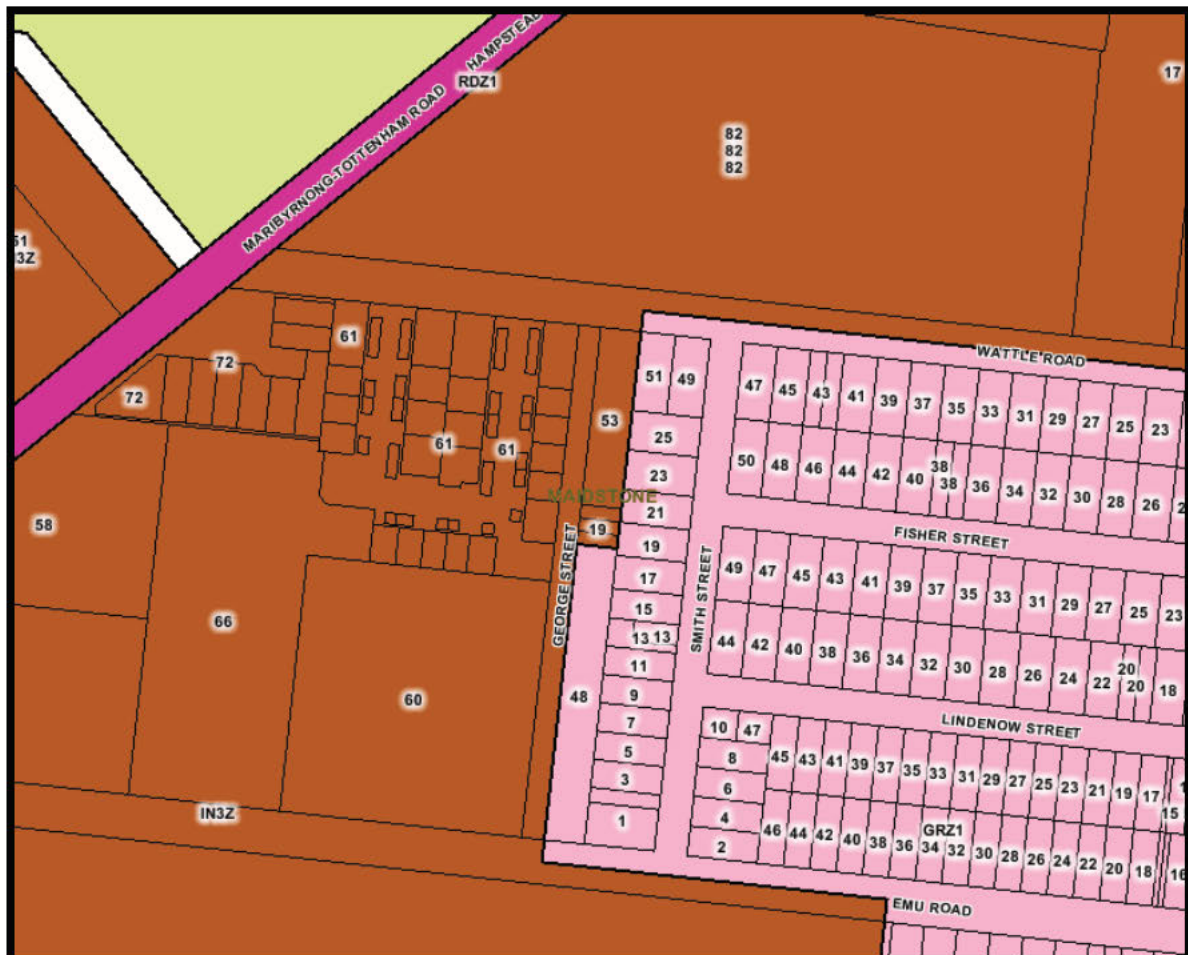
## 4. PLANNING ASSESSMENT

### 4.1 Scheme

The site is subject to the Maribyrnong Planning Scheme, with Maribyrnong City Council being the Planning Authority.

### 4.2 Current Zoning & Overlays

The site is currently zoned Industrial 3 Zone (IN3Z) under the Maribyrnong Planning Scheme. There are no overlays over the site.



Current Zoning Map, showing IN3Z over the subject site ([land.vic.gov.au](http://land.vic.gov.au))



### 4.3 Planning Policy Framework

Policies relevant to the assessment of the application include:

#### **Clause 11 - Settlement**

Seeks to ensure that appropriate land is available for the development of residential uses (and other uses). Relevant strategies include the consideration of redevelopment opportunities, intensification of existing urban areas, neighbourhood character and landscape.

#### **Clause 15 - Built Environment and Heritage**

##### Clause 15.01-2S Building design

- *To achieve building design outcomes that contribute positively to the local context and enhance the public realm.*

Strategies to achieve the objective include:

- *Require a comprehensive site analysis as the starting point of the design process.*
- *Ensure the site analysis provides the basis for the consideration of height, scale and massing of new development.*
- *Ensure development responds and contributes to the strategic and cultural context of its location.*
- *Minimise the detrimental impact of development on neighbouring properties, the public realm and the natural environment.*
- *Ensure the form, scale, and appearance of development enhances the function and amenity of the public realm.*
- *Ensure buildings and their interface with the public realm support personal safety, perceptions of safety and property security.*
- *Ensure development is designed to protect and enhance valued landmarks, views and vistas. Ensure development provides safe access and egress for pedestrians, cyclists and vehicles.*
- *Ensure development provides landscaping that responds to its site context, enhances the built form and creates safe and attractive spaces.*
- *Encourage development to retain existing vegetation.*

##### Clause 15.01-5S Neighbourhood character

- *To recognise, support and protect neighbourhood character, cultural identity, and sense of place.*

Strategies to achieve the objective include:





*Ensure development responds to cultural identity and contributes to existing or preferred neighbourhood character.*

*Ensure development responds to its context and reinforces a sense of place and the valued features and characteristics of the local environment and place by emphasising the:*

- *Pattern of local urban structure and subdivision.*
- *Underlying natural landscape character and significant vegetation.*
- *Heritage values and built form that reflect community identity.*

## **Clause 16 – Housing**

### **Clause 16.01-1S Integrated housing**

- *To promote a housing market that meets community needs.*

Strategies to achieve the objective include:

*Increase the supply of housing in existing urban areas by facilitating increased housing yield in appropriate locations, including under-utilised urban land.*

*Ensure that an appropriate quantity, quality and type of housing is provided, including aged care facilities and other housing suitable for older people, supported accommodation for people with disability, rooming houses, student accommodation and social housing.*

*Ensure housing developments are integrated with infrastructure and services, whether they are located in existing suburbs, growth areas or regional towns.*

*Facilitate the delivery of high quality social housing.*

Response:

The amendment will support the urban consolidation aspects of the SPPF, providing housing in short distance to major activity centres and the Principal Public Transport Network.



## 4.4 Local Planning Policy Framework

### ***Municipal Strategic Statement***

Council's Municipal Strategic Statement at **Clause 21.04 Settlement** provides policy directions for future land use and development.

Relevant clauses include:

#### ***Clause 21.04-2 Housing Growth***

*The city's population is growing and is forecast to reach 104,000 by 2031, an increase of 30,800 from 2011. It is anticipated that about 14,000 - 16,000 new dwellings will be needed to support this increase. With an increasing proportion of Melbourne's growth expected to occur within established suburbs and at higher densities, this forecast may increase in the future.*

*The population structure of the municipality will change depending upon the form of development, the increase in population and through ageing.*

*Council has developed a Housing Growth Area Framework (included at Clause 21.07) that indicates the opportunities for residential development to cater for the forecast population and housing increase over the next 20 years.*

#### ***Objective 5***

*To accommodate between 14,000 and 16,000 additional households by 2031.*

#### ***Strategies***

*Direct most of the residential development to identified substantial change areas, and substantial change activity centres.*

*Support incremental change across residential areas.*

*Limit change in established residential areas with heritage significance or an identified residential character, and areas with an identified constraint, such as inundation, that necessitate protection through a specific overlay.*

#### ***Clause 21.04-5 Strategic Investigation Areas***

*Three areas have been identified for further investigation to determine their future land use planning, transport and urban design directions. The areas have been identified due to uncertainties about their existing land use patterns, development potential and pressure for change. The findings of the investigations will provide strategic direction, certainty, encourage appropriate investment and development and determine whether land rezoning should occur. The three areas are:*



- *Braybrook (North)*
- *Hampstead Road (East), Maribyrnong*
- *South Francis Street, Yarraville*

*In addition to these three areas, the redevelopment of the Maribyrnong Defence Site provides an opportunity to potentially extend the tram route and further improve public transport access to this area.*

The site is located within the Hampstead Road (East) Maribyrnong Precinct

### ***Hampstead Road (East), Maribyrnong***

*The area east of Hampstead Road is a large established industrial and commercial precinct situated close to the Highpoint Principal Activity Centre. Surrounding residential redevelopment has led to speculation regarding the future of this precinct, including its residential potential. The precinct continues to be used and developed for industrial and commercial purposes.*

#### ***Objective 9***

*To manage the redevelopment of Strategic Investigations Areas and land along tram corridors in an integrated manner.*

#### ***Strategy***

*Ensure the Strategic Investigation Areas and land along tram corridors are appropriately planned and developed.*



## **Clause 21.07 - Housing**

Council's policy at Clause 21.07 provides direction on Housing issues.

*The City has opportunities for significant residential redevelopment for the next 20 years that will cater for the forecast population and housing increase.*

*Substantial, Incremental and Limited change areas are identified on the Framework Plan that forms part of this Clause.*

Under the Housing Framework Plan the site is located adjacent to 'Areas of Incremental Change'.

### **Objective 2**

*To provide incremental opportunities for new residential development in incremental change areas and incremental change activity centres.*

### **Strategies**

*Ensure development has regard to and clearly responds to preferred character statements and design guidelines for specific neighbourhood character precincts.*

*Ensure the siting and design of infill development respects the scale, form and siting of surrounding development.*

*Encourage residential development within incremental change areas to predominantly comprise of low and medium density housing in the form of separate and semi detached houses and in appropriate locations units, shop top dwellings and low scale apartments.*

*Support low scale apartment developments at locations within key Neighbourhood Activity Centres; they must reflect existing local character in terms of height, mass setbacks and building materials; and provide a sensitive and appropriate interface to adjoining streetscapes, buildings and residential areas.*

*Support gradual medium density 'infill' development, in the form of townhouses, units and shop-top dwellings, located close to transport, activity centres and community infrastructure.*

*Support smaller scale infill residential development in keeping with the streetscape and character of the centres and their adjacent residential in incremental change activity centres.*

*Encourage the retention of existing housing that positively contributes to preferred neighbourhood character.*





*Ensure development in activity centres follows relevant structure plans and urban design frameworks.*

*Protect areas that contribute to the range of housing choice especially for families and lifestyle choices.*

Response:

The proposed rezoning will allow for incremental redevelopment of the land, and support townhouse redevelopment.

The amendment is consistent with the Planning Scheme's strategic direction of this area. The Hampstead Road (East) precinct was reviewed in the Maribyrnong Economic and Industrial Land Strategy and the Maidstone Hampstead Road East Framework Plan, which intends to set the future through Amendment C108. The proposed rezoning of the land is consistent with the proposed amendment to the Maribyrnong Planning Scheme.



## 5. MINISTERIAL DIRECTIONS

### 5.1 Ministerial Direction 1: Potential Contaminated Land

The Ministerial Direction requires Planning Authorises to satisfy itself that the site is suitable for sensitive uses, which in this case is residential.

An Environmental Site Assessment has been carried out by Tonkin + Taylor dated February 2018, for 53 Wattle Road & 34 George Street (rear 19 Smith Street), Maidstone.

Tonkin & Taylor Pty Ltd concluded that:

Soil Assessment:

*Page 25:*

*For the site to be considered suitable for high density residential use, removal is required of the UST and the impacted soils exceeding the adopted ecological and human health criteria at locations BH1, BH06, BH08 and BH09 by removed from site, under supervision of a qualified environmental scientist. Any use would need to be considerate of the soils around BH01 which do not appear to be suitable for garden beds due to elevated BaP.*

*While the original desktop assessment identified a medium to high potential for contamination based on historical uses, the results of the testing have generally not indicated significant contamination of the site, other than at targeted areas as noted above. Given the impacts identified and that established remedial and management options are readily available for the types of impacts observed, these issues could potentially be addressed through the redevelopment and construction phase and a validation report provided as a condition of the planning approval rather than requirement for an Environmental Audit.*

*However, should any material be identified during the excavation works, that is not consistent with the representative samples (i.e. a change in soil types, presence of unknown fill or odorous or stained soils), or evidence of other pits or structures underlying the building that have not been previously observed, a review of that material and site suitability should be conducted to confirm whether the results reported above are still applicable.*

Groundwater Assessment:

*Page 26:*

*A physical groundwater assessment was not able to be undertaken at the site due to depth to groundwater being greater than 30 m bgl.*

*A total of two monitoring wells were installed on the site to depths of 20.5 m bgl and 30 m bgl. Gauging undertaken a week following well installation reported both wells*



*as dry, indicating groundwater is greater than 30 m bgl at the site. Information from previous investigations on sites in the area indicated groundwater in the region is likely to be impacted from dispersed point sources. However, the depth to groundwater is considered unlikely to present a significant risk in the context of the proposed high density residential use.*

The report concluded that the use of the site for the beneficial uses is considered acceptable provided certain works is undertaken and consideration of garden treatments and surfacing, which can be dealt with per a condition of any permit issued for the site.

## **5.2 Ministerial Direction 9: Metropolitan Strategy**

The amendment has been assessed against the current Metropolitan Strategy – Plan Melbourne. There are a number of Directions within the Strategy that the amendment will address.

### *Housing Choice and Affordability Directions*

- *Understand and plan for expected housing needs.*
- *Reduce the cost of living by increasing housing supply near services and public transport.*
- *Facilitate the supply of social housing.*
- *Facilitate the supply of affordable housing.*

The proposed rezoning will facilitate housing growth within the City of Maribyrnong and provides for a range of housing choices and improve housing affordability.

## **5.3 Ministerial Direction 16: Residential Zones**

The amendment is supports the introduction of the new Residential Zones across Maribyrnong. Council's Housing Strategy designates residential land adjacent to the site as "Incremental change" and therefore rezoning this land to General Residential Zone is considered an appropriate response as the site is an extension of the surrounding residential land to the east and south.



## 6 STRATEGIC DOCUMENTS

The development is consistent with a number Strategic Documents.

### 6.1 Maribyrnong Housing Strategy 2011

The Housing Strategy gives an understanding of the housing demand to be experienced in Maribyrnong until 2031, and sets out an implementation plan to guide Council actions.

*The population of the City of Maribyrnong is predicted to increase by approximately 30,800 people by the year 2031, to comprise a total of around 104,400 residents. The projections indicate that approximately 15,800 new dwellings will be needed between 2011 and 2031 to accommodate anticipated population growth.*

There are four main topics of discussion within the document:

- *Housing Diversity*
- *Housing Affordability*
- *Housing Location*
- *Housing Design*

With the Strategy the subject site is located adjacent to Incremental Change Policy Areas, which in turn has been reflected in the planning scheme.

The Policy objectives of this area are to:

*Support increased housing choice by providing a diversity of dwelling types, sizes and tenures*

*Ensure new development contributes to the preferred neighbourhood character of the area*

The rezoning will assist in the implementation of the Housing Strategy by providing more residential land, in the near term, that can be developed for infill housing, close to major activity centres and employment nodes. In total 11 townhouses are proposed.





## **6.2 Maribyrnong Economic and Industrial Development Strategy (MEIDS)**

The MEIDS has provided a review of the Maribyrnong economy and industrial land to determine the future and continued growth.

The Strategy reviewed Council's industrial precinct and categorised them into

- Core Industrial Precincts
- Secondary Industrial Precincts
- Economic Intensification Areas

The land was within the Maidstone Hampstead Road Precinct, and was designated as an Economic Intensification Area under MEIDS.

Though areas within the Economic Intensification Areas were subject to a Precinct Framework plan that would determine the land use and ongoing viability.

## **6.3 Maidstone Hampstead Road East Framework Plan**

Council undertook the Maidstone Hampstead Road East Framework Plan in October 2012, which was updated in May 2014.

This Framework Plan identified transitional issues between warehousing and industrial activity to the west and low density housing to the east. The proposed rezoning will help provide an opportunity to provide a transitional area between these to distinct precincts.

The site was also identified within the plan to be converted to residential purposes, for 2-3 storeys, utilising George Street as a buffer between the industrial and residential areas.

The proposed development will provided 11 townhouses, all of which are double storey.



## 7 STRATEGIC ASSESSMENT

The planning report has been undertaken in response to Ministerial Direction No. 11.

### **Why is the Amendment required?**

The sites in question forms one of the eastern edges of the industrial land in the Hampstead Road (East), Maribyrnong Strategic Investigation Area George Street, an unconstructed road, runs along the western property boundaries of 53 Wattle Road and rear of 19 Smith Street. George Street is also the only access to lots at rear of 19 Smith Street, as these lots are individually titled.

To the south of the rezoning sites is land formally known as 48 Emu Road, which has a side to George Street. This land was rezoned to residential some time ago, and a townhouse development constructed with frontage to George Street and George Street required to be sealed.

By rezoning the remaining eastern lots on George Street, it will separate residential activity from industrial activity, with George Street forming a spatial buffer between residential land to the east and industrial land to the west.

The Maidstone Hampstead Road East Framework Plan recommends this area to transition to residential.

### **How does the Amendment implement the objectives of planning in Victoria?**

The amendment implements the objectives of planning in Victoria by facilitating the fair, orderly, economic and sustainable use and development of the land that balances the present and future interests of the community.

The rezoning of the land to part General Residential Zone will facilitate additional housing to help meet future demand in Maidstone.

### **How does the Amendment address any environmental, social and economic effects?**

#### *Environmental Effects*

The amendment will generate a range of positive environmental effects, including:

- Supporting redevelopment of the site will provide for increased levels of amenity for nearby residential land to the east and provide a buffer to the industrial land, through the use of George Street;
- Assisting the urban consolidation objectives of the scheme by making efficient use of existing services and infrastructure, sustainable transport options, which include public transport, cycling and walking;



- Introducing an Environmental Audit Overlay (EAO) over the land to ensure that land previously used for industrial purposes is suitable for residential development, including carrying out any required environmental remediation works, thus enhancing the environmental conditions of the land.

### *Social Effects*

The proposed amendment is expected to have a number of positive social impacts including:

- Enabling the land to be redeveloped for a variety of dwelling sizes and layouts to meet the needs of the local community and contribute to housing diversity in this locality ;
- Growing the population of the area, supporting local jobs, services and community facilities;
- Redeveloping surplus industrial land, contributing to improved amenity for the community.

### *Economic Effects*

The amendment provides for a number of positive economic impacts including:

- Contributing population to the catchment to support the local economy;
- Making efficient use of surplus industrial land.

### **Does the Amendment address relevant bushfire risk?**

The amendments will not result in any increase to the risk to life as a priority, property, community infrastructure or the natural environment from bushfire.

### **Does the Amendment comply with the requirements of any Minister's Direction applicable to the amendment?**

The amendment is consistent with the Ministerial Direction on the Form and Content of Planning Schemes under Section 7(5) of the *Planning and Environment Act 1987* and meets the requirements of relevant Ministerial Direction No. 1 and No. 9.

#### *Ministerial Direction 1: Potentially Contaminated Land*

As the land is currently zoned 'Industrial 3 Zone' and part of the land was previously used for industrial purposes that may have contaminated the ground, therefore the amendment is affected by Ministerial Direction 1 (Potentially Contaminated Land). The purpose of this Direction is to ensure that potentially contaminated land (that is land with a history of industrial use) is suitable for a sensitive uses, which could be significantly adversely affected by any contamination.



The requirements of the Direction No. 1 are adequately satisfied by the inclusion of an Environmental Audit Overlay over the land as part of the amendment, which ensures that the site complies with the requirements of the *Environmental Protection Act 1970* prior to the commencement of a sensitive use.

An Environmental Site Assessment has been carried out on 53 Wattle Road and the three southern lots at 19 Smith Street (34 George St), Maidstone.

The site assessment found that a residential use is suitable for the site, given the understood environmental concerns of the land.

#### *Ministerial Direction 9: Metropolitan Strategy*

The amendment lends support to the Metropolitan Strategy and will not compromise its implementation.

#### *Ministerial Direction 16: Residential Zones*

The amendment is supported by the role out of the Residential Zones across Maribyrnong. Council's Housing Strategy designates residential land adjacent to the site as "Incremental change" and therefore rezoning this land to General Residential Zone is considered an appropriate response as the site is an extension of the surrounding residential land to the east and south.

#### **How does the Amendment support or implement the State Planning Policy Framework and any adopted State policy?**

The amendment is consistent with the State Planning Policy Framework, in particular the following:

- Clause 13 - Environmental Risks;
- Clause 16 – Housing;
- Clause 18 - Transport;
- Clause 19 - Infrastructure;

In particular, the proposed amendment achieves:

- Appropriate settlement objectives with the removal of existing conflict of land uses;
- Urban consolidation objectives by promoting population growth in close proximity to established services and facilities;
- Efficient use of existing transport and infrastructure for a residential community.

#### **How does the Amendment support or implement the Local Planning Policy Framework, and specifically the Municipal Strategic Statement?**

The proposed amendment addresses the relevant sections of the Local Planning Policy Framework in the following ways:



## ***Municipal Strategic Statement***

### ***Clause 21.04-2 Housing Growth***

The municipality needs to accommodate between 13,000 and 16,000 additional households by 2030. This site will contribute to additional housing within the municipality.

### ***Clause 21-07 Housing***

The proposal provides for an opportunity for new residential development in substantial change areas.

*“Other smaller sites across the municipality will also contribute to the supply of new housing”*

### ***Clause 21.08 Economic Development***

The proposal appropriately facilitates the reuse of the site for residential purposes. The change in use of the site reflects the changing nature of the municipality as industrial uses decline in non core industrial areas. Under the Industrial Framework Plan of the Clause the site is located in Strategic Investigation Area for further study to determine the appropriate planning response for these lands.

The Maribyrnong Economic and Industrial Development Strategy proposed that the precinct undergo an Economic Intensification Area Framework Plan.

Council undertook the Maidstone Hampstead Road East Framework Plan in October 2012, which was subsequently updated in May 2014. The Framework Plan noted the interface issues surrounding the sites proposed for rezoning, and considered that a rezoning would provide opportunity to *“...create a transition in scale easing the dramatic shift from small residential subdivision to large warehouse.”*

The “Preferred Framework Plan” nominates the amendment sites for residential purposes at 2-3 storeys. The proposed development proposes 11 townhouses at 2 storeys.

The MEIDS is proposed to be incorporated into the Planning Scheme as part of Amendment C108, as is the Maidstone Hampstead Road East Framework Plan 2014.

The future residential development of the site will complement and enhance the existing residential community, and provide a transition in height and buffer the adjacent low density residential areas to the east, from the light industrial area to the west.

### ***Clause 21.09 Transport***





The development will support the use of sustainable transport alternatives, and is in walking distance to variety of public transport options, and local services and facilities.

**How does the amendment support or implement the Municipal Planning Strategy?**

This strategic consideration only applies if the planning scheme includes an MPS at Clause 02.

No Municipal Planning Strategy is included as part of the scheme.

**Does the Amendment make proper use of the Victoria Planning Provisions?**

The proposed amendment makes appropriate use of the Victoria Planning Provisions through the implementation of the General Residential Zone and the Environmental Audit Overlay.

The General Residential Zone (GRZ) encourages a variety of housing types, with moderate growth, while respecting neighbourhood character. The GRZ is the most utilized residential zone in Maribyrnong, and the zone is consistent with the neighbouring residential properties to the south and east.

The introduction of an Environmental Audit Overlay, will ensure that any contamination of the land is appropriately considered.

**How does the Amendment address the views of any relevant agency?**

Relevant agencies will be notified as part of the exhibition process for the amendment and their views will be considered as part of Council's assessment of the amendment.

**Does the Amendment address relevant requirements of the Transport Integration Act 2010?**

The *Transport Integration Act 2010* establishes a framework for the provision of an integrated and sustainable transport system in Victoria. The Act provides for a system in which all transport activities and modes work together and recognises the interdependency of transport and land use.

The amendment will facilitate development, which integrates with and promotes a sustainable transport system and provides a requirement for the preparation of an Integrated Transport Plan and implementation plan for the site.

**Resource and administrative costs**

**What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?**



*It is not expected that the amendment will give rise to any unreasonable resource or administrative costs for Maribyrnong City Council.*



## 8. PROPOSED DEVELOPMENT

The proposed seeks to undertake the development of 12 townhouses on the subject site.

The development proposes the development of 11 townhouses that will front the George Street, and 1 townhouse to Wattle Road. As part of the proposal the development will construct the George Street in front of the subject site.

The proposed setback of the development will be 6.973 metres from Wattle Road for Unit 1, 2.1 metres from George Street for Units 2 to 10, 1.92 metres for Unit 11 and 1.85 metres for Unit 12 from George Street.

Unit 1 is the only dwelling to front to Wattle Road. The ground floor areas will contain open plan living room, dining and kitchen, laundry, separate toilet, and a study. At first floor is Bedroom 1 with walk in robe and ensuite, two other bedrooms, separate bathroom, toilet and sitting room. A single car garage, with tandem space in front will be provided access from George Street. Private open space is provided on the western elevation with northerly sunlight access. A large front garden is found at the front of the dwelling fronting Wattle Road.

Unit 2 to 10 are located south of Unit 1. The dwellings are equal in size, and similar in design, with the dwellings being a mirrored down George Street, with shared walls. At ground floor the dwellings will contain a study at the front, an open plan kitchen, dining and living room at the rear, with separate laundry and toilet. At first floor will be three bedrooms, Bedroom 1 with ensuite and walk in robe, a separate bathroom and toilet. A single car garage is provided, with tandem space in front, accessing George Street. Private open space is provided on the eastern elevation with northerly sunlight access.

Unit 11 is located south of Unit 10. At ground floor the dwellings will contain a living room at the front, an open plan kitchen and dining at the rear, with separate laundry and toilet. At first floor will be three bedrooms, Bedroom 1 with ensuite and walk in robe, a separate bathroom, toilet and rumpus room. A single car garage is provided, with tandem space in front, accessing George Street. Private open space is provided on the eastern elevation with northerly sunlight access.

Unit 12 is located south of Unit 11. At ground floor the dwellings will contain an open plan kitchen, dining and living room at the rear, with separate laundry and toilet, and Bedroom 1 with walk in robe and ensuite. At first floor will be Bedroom 2 with ensuite and walk in robe, Bedroom 3, a separate bathroom and rumpus room. A double car garage is provided, accessing George Street. Private open space is provided on the eastern elevation with northerly sunlight access.

Ground levels will be constructed of predominantly brick, weatherboard cladding and selected scyon board finish, with some architectural rendering, and upper floors of rendered cladding, scyon board, feature timber screens. Roofing is in metal sheets. Roofing will be 25 degrees gable, part flat roof 7 degrees skillion roofing, on the different dwellings.



The overall height of the development will be at 7.765 metres.

The total site coverage is 58.56 percent, with a permeable area of 35.14 percent.

Garden area of 35%.

### Clause 52.06 – Car parking

The clause provides car parking rates for use of land.

#### Purpose

- *To ensure that car parking is provided in accordance with the State Planning Policy Framework and Local Planning Policy Framework.*
- *To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.*
- *To support sustainable transport alternatives to the motor car.*
- *To promote the efficient use of car parking spaces through the consolidation of car parking facilities.*
- *To ensure that car parking does not adversely affect the amenity of the locality.*
- *To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.*

Under Clause 52.06-3 a planning permit is required for car parking in association with the development of more than one dwelling on a lot. Under the planning scheme the following rates apply.

Use	Rate	Rate	Car Parking Measure
	Column A	Column B	Column C
	Applies the standard rate to all zones	Applies the standard rate to all zones	
Dwelling	1	1	To each one or two bedroom



		dwelling, plus
2	2	To each three or more bedroom dwelling (with studies or studios that are separate rooms counted as a bedrooms) plus
1	0	For visitors to every 5 dwellings for developments of 5 or more dwellings

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#### Response:

The dwellings will be provided with the required amount of car parking, with two spaces for each three-bedroom dwelling.

Car parking areas meet the minimum dimensional requirements.

The required two visitor spaces have not been provided, as the site is located in the Principal Public Transport Network, the site is subject to Column B. Therefore zero visitor parking is required.

Given that nearby dwellings are to be serviced by the to be constructed George Street, adequate on-street parking will be provided, due to relatively low level of on-street parking demand seen in nearby residential streets.

#### Waste Management Plan

A Waste Management Plan has been provided by Northern Environmental Design.

The waste management plan notes that waste will be intended to be collected by Maribyrnong City Council on George Street curb side. There will be a 120lt garage and 240lt recycling bin provided per dwelling.

#### Sustainable Management Plan

A Sustainable Management Plan has been provided by Northern Environmental Design.

The key environmental suitable design features of the site include: efficient air conditioning; appropriate materials selection in accordance with ESD principles; rainwater harvesting for toilet flushing; renewable solar hot water system. The site meets a BESS score of 50% meeting the best practice.





## Acoustic Report

An acoustic report has been provided by Audiometric & Acoustic Services. The report reviewed industrial noise sources from the local area to determine the appropriateness of the development and any noise mitigation requirements.

The report found that the site was not affected significantly by nearby industrial noise sources.

The report noted the light weight construction of the western wall, and that this wall is most likely to be exposed to industrial walls. Recommended that all light weight walls on the western elevation should use sound reducing R2.5 fibrous insulation.

All glazing on the western façade for windows and doors, should achieve a noise level of  $R_w=32$ .



## **9. CLAUSE 55 ASSESSMENT FOR TWO OR MORE DWELLINGS ON A LOT AND RESIDENTIAL BUILDINGS**

Clause 32.08-5 of the Maribyrnong Planning Scheme requires that a planning application for two or more dwellings meet the requirements of Clause 55.

### **Purpose**

*To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*

*To achieve residential development that respects the existing neighbourhood character or which contributes to a preferred neighbourhood character.*

*To encourage residential development that provides reasonable standards of amenity for existing and new residents.*

*To encourage residential development that is responsive to the site and the neighbourhood.*

Each planning application must meet the objectives of the clause and should meet all the standards as specified by the planning scheme.

### **Clause 55.01 Neighbourhood and site description and design response.**

An application must provide a neighbourhood and site description and design response.

A neighbourhood and site description and design response have been provided as part of the plans with the planning permit application. The plans show the context of the site and how the design considers the site constraints. This report should be read as part of the design response.



## CLAUSE 55.02 NEIGHBOURHOOD CHARACTER AND INFRASTRUCTURE

### Clause 55.02 -1 Neighbourhood Character Objectives

*To ensure that the design respects the existing neighbourhood character or contributes to a preferred neighbourhood character.*

*To ensure that development responds to the features of the site and the surrounding area.*

#### Standard B1

*The design response must be appropriate to the neighbourhood and the site.*

*The proposed design must respect the existing or preferred neighbourhood character and respond to the features of the site.*

#### Response

The neighbourhood character of the area as described as a garden setting neighbourhood with modest homes throughout.

Dwellings are a mixture of single and double storey, but new developments within the area are generally double storey in nature.

The main character qualities of the area include:

- front and side setbacks, driveways on one side of the dwelling, with car parking and garages available behind the main building line;
- brick veneer and rendered elements;
- pitched hipped roofing and a dominant feature;
- private open space at the rear;
- Sites fairly similar in size.

The proposed development will sit comfortably with the neighbourhood character. The size and scale of the development is proportional with nearby homes and the industrial development nearby, while providing for a landscaped frontage and opportunity for canopy tree plantings.

The development has sympathetic building materials to the surrounding building stock. The upper storey cladding material will differentiate from the lower storey brick veneer elements and cladding, breaking up the built form. Roof forms provide for a mix of types, including gable pitched roofing, skillion roofing and some flat roof elements. This will sit comfortably with the approved multi-unit development to the south, with has both flat and skillion roof forming, and the rear pitched roof elements of the established residential to the east.

Appropriate car parking arrangements have been provided for the dwellings.



#### Clause 55.02-2 Residential policy objectives

*To ensure that residential development is provided in accordance with any policy for housing in the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*

*To support medium densities in areas where development can take advantage of public transport and community infrastructure and services.*

##### Standard B2

*An application must be accompanied by a written statement to the satisfaction of the responsible authority that describes how the development is consistent with any relevant policy for housing in the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*

##### Response

An assessment of the relevant State Planning Policy Framework, Local Planning Policy Framework and Municipal Strategic Statement has been provided above in this report.

The development is supported strongly by the urban consolidation policies outlined in the SPPF and LPPF of the planning scheme. The responses to the clauses provide the basis for the planning applications compliance with the scheme.

There are various public and private amenities and infrastructure in the immediate area. Local shops are located within 400 metres of the site on the corner of Williamson Road and Wests Road, and Highpoint Shopping Centre within 800 metres. Local parking is located at Robert Barrett Reserve, which includes the Maribyrnong Aquatic Centre 500 metres to the west.

Maribyrnong College is within 800 metres, and the Footscray North Primary School is within 2 kilometres.

Public transport can be found on Emu Road, with bus stops, and Tram Stop is approximately 500 metres to the east.

#### Clause 55.02-3 Dwelling diversity objectives

*To encourage a range of dwelling sizes and types in developments of ten or more dwellings.*





<b>Standard B3</b>	<p><i>Developments of ten or more dwellings should provide a range of dwelling sizes and types, including:</i></p> <ul style="list-style-type: none"> <li><i>Dwellings with a different number of bedrooms.</i></li> <li><i>At least one dwelling that contains a kitchen, bath or shower, and a toilet and wash basin at ground floor level.</i></li> </ul>
<b>Response</b>	<p>The dwellings provide a variety of sizes.</p> <p>Units 1 to 10 provide for as smaller floor plate, with 3 bedrooms, providing flexible living arrangements for families, singles or couples.</p> <p>Dwelling 11 &amp; 12 are slightly larger. Dwelling 12 has downstairs bedrooms, providing flexible options for people with limited mobility.</p>

<b>Clause 55.02-4 Infrastructure objectives</b>	
<p><i>To ensure development is provided with appropriate utility services and infrastructure.</i></p> <p><i>To ensure development does not unreasonably overload the capacity of utility services and infrastructure.</i></p>	
<b>Standard B4</b>	<p><i>Development should be connected to reticulated services, including reticulated sewerage, drainage, electricity and gas, if available.</i></p> <p><i>Development should not unreasonably exceed the capacity of utility services and infrastructure, including reticulated services and roads.</i></p> <p><i>In areas where utility services or infrastructure have little or no spare capacity, developments should provide for the upgrading of or mitigation of the impact on services or infrastructure.</i></p>
<b>Response</b>	<p>The site is located in an infrastructure rich environment, with all the reticulated services provided.</p> <p>The development will not place an unreasonable burden on the capacity of the infrastructure services, and the road network will easily accommodate the limited amount of vehicle movements that will be generated by the proposed development. The proposed George Street once constructed, will adequately service the additional</p>





	12 dwellings which have access to it, and provide a needed link between Wattle Road and Emu Road.
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Clause 55.02-5 Integration with the street objectives	
<i>To integrate the layout of development with the street.</i>	
<b>Standard B5</b>	<p><i>Developments should provide adequate vehicle and pedestrian links that maintain or enhance local accessibility.</i></p> <p><i>Development should be oriented to front existing and proposed streets.</i></p> <p><i>High fencing in front of dwellings should be avoided if practicable.</i></p> <p><i>Development next to existing public open space should be laid out to complement the open space.</i></p>
<b>Response</b>	<p>The proposal development is orientated towards Wattle Road and Georg Street, with a landscape opportunity provided in the frontage of all dwellings. Unit 1 will have a larger setback to better integrate with the Wattle Road streetscape. Units 2 to 12 will have reduced setbacks consistent with the neighbouring southern sites setbacks, and provide a more inner urban feel, given their industrial interface. A 1.5 m high fence will be provided for Unit 1, consistent with the more trafficked Wattle Road, and a small fence of 800mm will be provided to the remaining dwellings. Fencing will be rendered pillars with tubular infills.</p> <p>The new dwellings will have appropriate pedestrian and vehicle access. Crossovers will be provided on George Street, allowing for on-street car parking on Wattle Road, within the frontage.</p>



## CLAUSE 55.03 SITE LAYOUT AND BUILDING MASSING

### Clause 55.03-1 Street setback objective

*To ensure that the setbacks of buildings from a street respect the existing or preferred neighbourhood character and make efficient use of the site.*

#### Standard B6

*Walls of buildings should be set back from streets:*

- *At least the distance specified in a schedule to the zone, or*
- *If no distance is specified in a schedule to the zone, the distance specified in Table B1.*

*Porches, pergolas and verandahs that are less than 3.6 metres high and eaves may encroach not more than 2.5 metres into the setbacks of this standard.*

#### Response

There is no altered specification to the schedule of the Zone, so the Clause 55 standard applies.

The development will provide a setback of the 6.965 metres to Unit 1 on Wattle Road. This is slightly forward of the dwelling to the east at 7,526 metres.

Units 2 to 10 will be setback at 2.1 metres. Unit 11 will be 1.92 metre setback, and Unit 12 will be setback 1.85 metres.

The George Street dwellings are further setback than the dwellings to the south of the site, which have a setback of 1.5 metres per the endorsed plans for planning permit TP487/2016.

### Clause 55.03-2 Building height objective

*To ensure that the height of buildings respects the existing or preferred neighbourhood character.*

#### Standard B7

*The maximum building height should not exceed the maximum height specified in the zone, schedule to the zone or an overlay that applies to the land.*

*If no maximum height is specified in the zone, schedule to the zone or an overlay, the*



	<p><i>maximum building height should not exceed 9 metres, unless the slope of the natural ground level at any cross section wider than 8 metres of the site of the building is 2.5 degrees or more, in which case the maximum building height should not exceed 10 metres.</i></p> <p><i>Changes of building height between existing buildings and new buildings should be graduated.</i></p>
<b>Response</b>	The building will be below at maximum 7.765 metres, meeting the objective.

Clause 55.03-3 Site coverage objective	
<p><i>To ensure that the site coverage respects the existing or preferred neighbourhood character and responds to the features of the site.</i></p>	
<b>Standard B8</b>	<p><i>The site area covered by buildings should not exceed:</i></p> <ul style="list-style-type: none"> <li><i>The maximum site coverage specified in a schedule to the zone, or</i></li> <li><i>If no maximum site coverage is specified in a schedule to the zone, 60 per cent.</i></li> </ul>
<b>Response</b>	<p>There is no site coverage specified in the schedule to the zone, so the maximum is at 60 percent.</p> <p>The site coverage of the development is at 58.56 percent, complying with the standard.</p>

Clause 55.03-4 Permeability objective	
<p><i>To reduce the impact of increased stormwater run-off on the drainage system.</i></p> <p><i>To facilitate on-site stormwater infiltration.</i></p>	
<b>Standard B9</b>	<p><i>The site area covered by the pervious surfaces should be at least:</i></p>





	<ul style="list-style-type: none"> <li>• <i>The minimum area specified in a schedule to the zone, or</i></li> <li>• <i>If no minimum is specified in a schedule to the zone, 20 percent of the site.</i></li> </ul>
<b>Response</b>	The proposal complies with the standard with 35.14 percent of the site having permeability.

Clause 55.03-5 Energy efficiency objective	
<p><i>To achieve and protect energy efficient dwellings and residential buildings.</i></p> <p><i>To ensure the orientation and layout of development reduce fossil fuel energy use and make appropriate use of daylight and solar energy.</i></p>	
<b>Standard B10</b>	<p><i>Buildings should be:</i></p> <ul style="list-style-type: none"> <li>• <i>Oriented to make appropriate use of solar energy.</i></li> <li>• <i>Sited and designed to ensure that the energy efficiency of existing dwellings on adjoining lots is not unreasonably reduced.</i></li> </ul> <p><i>Living areas and private open space should be located on the north side of the development, if practicable.</i></p> <p><i>Developments should be designed so that solar access to north-facing windows is maximised.</i></p>
<b>Response</b>	<p>The proposed dwellings seek to make use of appropriate solar access across the site. All internal living areas have good access to sunlight.</p> <p>Unit 1 has northern orientated living areas.</p> <p>Unit 2 to 12 will achieve good light access, with east-west orientation of internal living areas.</p> <p>All private open space areas of the dwellings will receive good northern light throughout the day.</p>

Clause 55.03-6 Open space objective
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*To integrate the layout of development with any public and communal open space provided in or adjacent to the development.*

**Standard  
B11**

*If any public or communal open space is provided on site, it should:*

- *Be substantially fronted by dwellings, where appropriate.*
- *Provide outlook for as many dwellings as practicable.*
- *Be designed to protect any natural features on the site.*
- *Be accessible and useable.*

**Response**

The standard is not applicable, so there is no public or communal open space provided.

**Clause 55.03-7 Safety objective**

*To ensure the layout of development provides for the safety and security of residents and property.*

**Standard  
B12**

*Entrances to dwellings and residential buildings should not be obscured or isolated from the street and internal accessways.*

*Planting which creates unsafe spaces along streets and accessways should be avoided.*

*Developments should be designed to provide good lighting, visibility and surveillance of car parks and internal accessways.*

*Private spaces within developments should be protected from inappropriate use as public thoroughfares.*

**Response**

The design of the proposal seeks to ensure the safety and security of the dwellings.

The dwellings provide for surveillance of car parks and accessways.

**Clause 55.03-8 Landscaping objective**





*To encourage development that respects the landscape character of the neighbourhood.*

*To encourage development that maintains and enhances habitat for plants and animals in locations of habitat importance.*

*To provide appropriate landscaping.*

*To encourage the retention of mature vegetation on the site.*

### Standard B13

*The landscape layout and design should:*

- *Protect any predominant landscape features of the neighbourhood.*
- *Take into account the soil type and drainage patterns of the site.*
- *Allow for intended vegetation growth and structural protection of buildings.*
- *In locations of habitat importance, maintain existing habitat and provide for new habitat for plants and animals.*
- *Provide a safe, attractive and functional environment for residents.*

*Development should provide for the retention or planting of trees, where these are part of the character of the neighbourhood.*

*Development should provide for the replacement of any significant trees that have been removed in the 12 months prior to the application being made.*

*The landscape design should specify landscape themes, vegetation (location and species), paving and lighting.*

*Development should meet any additional landscape requirements specified in a schedule to the zone.*

*Change to Schedule: Incremental Change Areas of Schedule 1 of the GRZ.*

*A minimum of 1 medium-sized tree of 6-12 metres (at maturity) should be provided in the front setback.*

*A minimum of 1 small to medium sized tree up to 6 metres (at maturity) should be provided in private or secluded private open space greater than 25 square metres in area.*

*Planting to be provided along the length of any driveway.*

*Where new building bulk visually impacts on adjoining dwellings, a landscaped vertical screen should be provided.*



**Response**

The site will provide adequate landscaping opportunity, with room for canopy tree planting in the front yard of Unit 1 and rear yards of Unit 2 to 12. In Unit 2 to 12 will be able to provide for a small to medium tree within the front open space areas.

**Clause 55.03-9 Access objective**

*To ensure the number and design of vehicle crossovers respects the neighbourhood character.*

**Standard B14**

*The width of accessways or car spaces should not exceed:*

- 33 per cent of the street frontage, or
- if the width of the street frontage is less than 20 metres, 40 per cent of the street frontage.

*No more than one single-width crossover should be provided for each dwelling fronting a street.*

*The location of crossovers should maximise the retention of on-street car parking spaces.*

*The number of access points to a road in a Road Zone should be minimised.*

*Developments must provide for access for service, emergency and delivery vehicles.*

**Response**

The development will provide crossovers to George Street only.

The street frontage to George Street will be 100.27 metres. The crossovers for George street will equate to 40 percent. Though this is lightly over the 33 percent, it is considered acceptable given the road will be newly constructed, and appropriate landscaping and street trees will be provided.

**Clause 55.03-10 Parking location objective**

*To provide convenient parking for resident and visitor vehicles.*

*To protect residents from vehicular noise within developments.*



<b>Standard B15</b>	<p><i>Car parking facilities should:</i></p> <ul style="list-style-type: none"><li>• <i>Be reasonably close and convenient to dwellings and residential buildings.</i></li><li>• <i>Be secure.</i></li><li>• <i>Be well ventilated if enclosed.</i></li></ul> <p><i>Shared accessways or car parks of other dwellings and residential buildings should be located at least 1.5 metres from the windows of habitable rooms. This setback may be reduced to 1 metre where there is a fence at least 1.5 metres high or where window sills are at least 1.4 metres above the accessway.</i></p>
<b>Response</b>	<p>The car parking standard has been met. The parking for all dwellings is convenient and provides for good visibility for windows within the development.</p>





## CLAUSE 55.04 AMENITY IMPACTS

### Clause 55.04-1 Side and rear setback objective

*To ensure that the height and setback of a building from a boundary respects the existing or preferred neighbourhood character and limits the impact on the amenity of existing dwellings.*

#### Standard B17

*A new building not on or within 200mm of a boundary should be set back from side or rear boundaries:*

- *At least the distance specified in a schedule to the zone, or*
- *If no distance is specified in a schedule to the zone, 1 metre, plus 0.3 metres for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres.*

*Sunblinds, verandahs, porches, eaves, fascias, gutters, masonry chimneys, flues, pipes, domestic fuel or water tanks, and heating or cooling equipment or other services may encroach not more than 0.5 metres into the setbacks of this standard.*

*Landings having an area of not more than 2 square metres and less than 1 metre high, stairways, ramps, pergolas, shade sails and carports may encroach into the setbacks of this standard.*

#### Response

The application is setback from the east boundary in accordance with the standard.

### Clause 55.04-2 Walls on boundary objective

*To ensure that the location, length and height of a wall on a boundary respects the existing or preferred neighbourhood character and limits the impact on the amenity of existing dwellings.*

#### Standard B18

*A new wall constructed on or within 200mm of a side or rear boundary of a lot or a carport constructed on or within 1 metre of a side or rear boundary of lot should not abut the boundary:*

- *For a length of more than the distance specified in a schedule to the zone; or*



	<ul style="list-style-type: none"> <li>• <i>If no distance is specified in a schedule to the zone, for a length of more than:</i> <ul style="list-style-type: none"> <li>– <i>10 metres plus 25 per cent of the remaining length of the boundary of an adjoining lot, or</i></li> <li>– <i>Where there are existing or simultaneously constructed walls or carports abutting the boundary on an abutting lot, the length of the existing or simultaneously constructed walls or carports,</i></li> </ul> <p><i>whichever is the greater.</i></p> <p><i>A new wall or carport may fully abut a side or rear boundary where slope and retaining walls or fences would result in the effective height of the wall or carport being less than 2 metres on the abutting property boundary.</i></p> <p><i>A building on a boundary includes a building set back up to 200mm from a boundary.</i></p> <p><i>The height of a new wall constructed on or within 200mm of a side or rear boundary or a carport constructed on or within 1 metre of a side or rear boundary should not exceed an average of 3.2 metres with no part higher than 3.6 metres unless abutting a higher existing or simultaneously constructed wall.</i></p> </li> </ul>
<b>Response</b>	<p>The dwelling (Unit 12) abutting the southern end will be built to the boundary at a double storey height. Though the dwelling will not meet the setback requirements, the non abutting double storey wall is next to a carpark on the southern development, and the proposal replicates the pattern of development on the southern site. Therefore, it is considered an acceptable design response.</p>

<b>Clause 55.04-3 Daylight to existing window objective</b>	
<i>To allow adequate daylight into existing habitable room windows.</i>	
<b>Standard B19</b>	<p><i>Buildings opposite an existing habitable room window should provide for a light court to the existing window that has a minimum area of 3 square metres and minimum dimension of 1 metre clear to the sky. The calculation of the area may include land on the abutting lot.</i></p> <p><i>Walls or carports more than 3 metres in height opposite an existing habitable room window should be set back from the window at least 50 per cent of the height of the new wall if the wall is within a 55 degree arc from the centre of the existing window. The arc may be swung to within 35 degrees of the plane of the wall containing the existing window.</i></p>





	<i>Where the existing window is above ground floor level, the wall height is measured from the floor level of the room containing the window.</i>
<b>Response</b>	The building complies with this standard.

<b>Clause 55.04-4 North-facing windows objective</b>	
<i>To allow adequate solar access to existing north-facing habitable room windows.</i>	
<b>Standard B20</b>	<i>If a north-facing habitable room window of an existing dwelling is within 3 metres of a boundary on an abutting lot, a building should be setback from the boundary 1 metre, plus 0.6 metres for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres, for a distance of 3 metres from the edge of each side of the window. A north-facing window is a window with an axis perpendicular to its surface oriented north 20 degrees west to north 30 degrees east.</i>
<b>Response</b>	No northern windows nearby. The windows on the southern development front to the east and west. The Standard is complied with.

<b>Clause 55.04-5 Overshadowing open space objective</b>	
<i>To ensure buildings do not significantly overshadow existing secluded private open space.</i>	
<b>Standard B21</b>	<p><i>Where sunlight to the secluded private open space of an existing dwelling is reduced, at least 75 per cent, or 40 square metres with minimum dimension of 3 metres, whichever is the lesser area, of the secluded private open space should receive a minimum of five hours of sunlight between 9 am and 3 pm on 22 September.</i></p> <p><i>If existing sunlight to the secluded private open space of an existing dwelling is less than the requirements of this standard, the amount of sunlight should not be further reduced.</i></p>
<b>Response</b>	The development will not provide for any unreasonable shadow of open space. The standard is complied with.



## Clause 55.04-6 Overlooking objective

*To limit views into existing secluded private open space and habitable room windows.*

### Standard B22

*A habitable room window, balcony, terrace, deck or patio should be located and designed to avoid direct views into the secluded private open space of an existing dwelling within a horizontal distance of 9 metres (measured at ground level) of the window, balcony, terrace, deck or patio. Views should be measured within a 45 degree angle from the plane of the window or perimeter of the balcony, terrace, deck or patio, and from a height of 1.7 metres above floor level.*

*A habitable room window, balcony, terrace, deck or patio with a direct view into a habitable room window of existing dwelling within a horizontal distance of 9 metres (measured at ground level) of the window, balcony, terrace, deck or patio should be either:*

- *Offset a minimum of 1.5 metres from the edge of one window to the edge of the other.*
- *Have sill heights of at least 1.7 metres above floor level.*
- *Have fixed, obscure glazing in any part of the window below 1.7 metre above floor level.*
- *Have permanently fixed external screens to at least 1.7 metres above floor level and be no more than 25 per cent transparent.*

*Obscure glazing in any part of the window below 1.7 metres above floor level may be openable provided that there are no direct views as specified in this standard.*

*Screens used to obscure a view should be:*

- *Perforated panels or trellis with a maximum of 25 per cent openings or solid translucent panels.*
- *Permanent, fixed and durable.*
- *Designed and coloured to blend in with the development.*

*This standard does not apply to a new habitable room window, balcony, terrace, deck or patio which faces a property boundary where there is a visual barrier at least 1.8 metres high and the floor level of the habitable room, balcony, terrace, deck or patio is less than 0.8 metres above ground level at the boundary.*

### Response

The development will provide obscured glazing to 1.7 metres above first floor level, or highlight windows at 1.7 metres to ensure that there is no overlook from first floor windows.





	The standard is complied with.
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Clause 55.04-7 Internal views objective	
<i>To limit views into the secluded private open space and habitable room windows of dwellings and residential buildings within a development.</i>	
<b>Standard B23</b>	<i>Windows and balconies should be designed to prevent overlooking of more than 50 per cent of the secluded private open space of a lower-level dwelling or residential building directly below and within the same development.</i>
<b>Response</b>	The development has been designed to ensure secluded private open space and habitable room windows of each dwelling are not overlooked internally. The standard is complied with.

Clause 55.04-8 Noise impacts objective	
<p>To contain noise sources in developments that may affect existing dwellings.</p> <p>To protect residents from external noise.</p>	
<b>Standard B24</b>	<p><i>Noise sources, such as mechanical plant, should not be located near bedrooms of immediately adjacent existing dwellings.</i></p> <p><i>Noise sensitive rooms and secluded private open spaces of new dwellings and residential buildings should take account of noise sources on immediately adjacent properties.</i></p> <p><i>Dwellings and residential buildings close to busy roads, railway lines or industry should be designed to limit noise levels in habitable rooms.</i></p>
<b>Response</b>	There are no significant noise sources in the area, and the development does not propose any fittings, fixtures or mechanical equipment that is not normal to a dwelling. The standard is complied with.



## CLAUSE 55.05 ON-SITE AMENITY AND FACILITIES

### Clause 55.05-1 Accessibility objective

To encourage the consideration of the needs of people with limited mobility in the design of developments.

#### Standard B25

*The dwelling entries of the ground floor of dwellings and residential buildings should be accessible or able to be easily made accessible to people with limited mobility.*

#### Response

The new dwellings will allow for visitors with limited mobility. The standard is complied with.

### Clause 55.05-2 Dwelling entry objective

*To provide each dwelling or residential building with its own sense of identity.*

#### Standard B26

*Entries to dwellings and residential buildings should:*

- *Be visible and easily identifiable from streets and other public areas.*
- *Provide shelter, a sense of personal address and a transitional space around the entry.*

#### Response

The dwellings will easily be identifiable from the street. Shelter and a sense of personal address will be provided, with projected building form above the doorways and numbering.

### Clause 55.05-3 Daylight to new windows objective

*To allow adequate daylight into new habitable room windows.*



<b>Standard B27</b>	<p><i>A window in a habitable room should be located to face:</i></p> <ul style="list-style-type: none"> <li><i>An outdoor space clear to the sky or a light court with a minimum area of 3 square metres and minimum dimension of 1 metre clear to the sky, not including land on an abutting lot, or</i></li> <li><i>A verandah provided it is open for at least one third of its perimeter, or</i></li> <li><i>A carport provided it has two or more open sides and is open for at least one third of its perimeter.</i></li> </ul>
<b>Response</b>	<p>All windows within the development will have adequate daylight and meet the standard of this clause.</p>

<p><b>Clause 55.05-4 Private open space objective</b></p>	
<p><i>To provide adequate private open space for the reasonable recreation and service needs of residents.</i></p>	
<b>Standard B28</b>	<p><i>A dwelling or residential building should have private open space of an area and dimensions specified in a schedule to the zone.</i></p> <p><i>If no area or dimensions are specified in a schedule to the zone, a dwelling or residential building should have private open space consisting of:</i></p> <ul style="list-style-type: none"> <li><i>An area of 40 square metres, with one part of the private open space to consist of secluded private open space at the side or rear of the dwelling or residential building with a minimum area of 25 square metres, a minimum dimension of 3 metres and convenient access from a living room, or</i></li> <li><i>A balcony of 8 square metres with a minimum width of 1.6 metres and convenient access from a living room, or</i></li> <li><i>A roof-top area of 10 square metres with a minimum width of 2 metres and convenient access from a living room.</i></li> </ul>
<b>Response</b>	<p>Private open space is as follows:</p> <p>Unit 1 will be provided with 36.37 square metres of SPOS; Unit 2 to 9 will be provided with 35.82 square metres of SPOS; Unit 10 will be provided with 36.44 square metres of SPOS;</p>





	<p>Unit 11 will be provided with 29.44 square metre of SPOS; Unit 12 will be provided with 37.43 square metres of SPOS;</p> <p>Each SPOS will meet the minimum area of 25 square metres within a dimension of 3 metres.</p> <p>Further areas of private open space will be provided to the frontages of each dwelling, which ensure that each dwelling has over 40 sqm of private open space in total.</p> <p>This proposal meets the standard.</p>
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Clause 55.05-5 Solar access to open space objective	
<i>To allow solar access into the secluded private open space of new dwellings and residential buildings.</i>	
<b>Standard B29</b>	<p><i>The private open space should be located on the north side of the dwelling or residential building, if appropriate.</i></p> <p><i>The southern boundary of secluded private open space should be set back from any wall on the north of the space at least <math>(2 + 0.9h)</math> metres, where 'h' is the height of the wall.</i></p>
<b>Response</b>	The standard is complied with.

Clause 55.05-6 Storage objective	
<i>To provide adequate storage facilities for each dwelling.</i>	
<b>Standard B30</b>	<i>Each dwelling should have convenient access to at least 6 cubic metres of externally accessible, secure storage space.</i>
<b>Response</b>	The units are provided with 6 cubic metres of externally accessible storage. The standard is complied with.



## CLAUSE 55.06 DETAILED DESIGN

### Clause 55.06-1 Design detail objective

*To encourage design detail that respects the existing or preferred neighbourhood character.*

#### Standard B31

*The design of buildings, including:*

- *Facade articulation and detailing,*
- *Window and door proportions,*
- *Roof form, and*
- *Verandahs, eaves and parapets,*

*should respect the existing or preferred neighbourhood character.*

*Garages and carports should be visually compatible with the development and the existing or preferred neighbourhood character.*

#### Response

The new dwellings respect the existing and emerging neighbourhood character by providing built form consistent with existing building stock within the area and sympathetic materials, including brick, render, scyon board finish cladding, weatherboard sheeting, timber screens, with metal roofing. The dwellings address the street, and is consistent with the streetscape elements, which included pitched gabled roof forms, skillion roofing and flat roof forms. The development provides a modern contemporary design consistent with the approved development to the south. The standard is complied with.

### Clause 55.06-2 Front fence objective

*To encourage front fence design that respects the existing or preferred neighbourhood character.*

#### Standard B32

The design of front fences should complement the design of the dwelling or residential building and any front fences on adjoining properties.

A front fence within 3 metres of a street should not exceed:

- The maximum height specified in a schedule to the zone, or



	<ul style="list-style-type: none"> <li>If no maximum height is specified in a schedule to the zone, the maximum height specified in Table B3.</li> </ul>
<b>Response</b>	A 1.5 mm high fence is proposed to Wattle Road, and a lower 800 mm fence for George Street. The Standard is complied with.

#### Clause 55.06-3 Common property objective

*To ensure that communal open space, car parking, access areas and site facilities are practical, attractive and easily maintained.*

*To avoid future management difficulties in areas of common ownership.*

<b>Standard B33</b>	<p><i>Developments should clearly delineate public, communal and private areas.</i></p> <p><i>Common property, where provided, should be functional and capable of efficient management.</i></p>
<b>Response</b>	No common property is proposed. Each dwelling will have direct street access.

#### Clause 55.06-4 Site services objective

*To ensure that site services can be installed and easily maintained.*

*To ensure that site facilities are accessible, adequate and attractive.*

<b>Standard B34</b>	<p><i>The design and layout of dwellings and residential buildings should provide sufficient space (including easements where required) and facilities for services to be installed and maintained efficiently and economically.</i></p> <p><i>Bin and recycling enclosures, mailboxes and other site facilities should be adequate in size, durable, waterproof and blend in with the development.</i></p> <p><i>Bin and recycling enclosures should be located for convenient access by residents. Mailboxes should be provided and located for convenient access as required by Australia Post.</i></p>
<b>Response</b>	All services can be installed and maintained with the proposed layout provided. Mailboxes and bins can be accommodated on the site within the exiting design.



## 10. CONCLUSION

The proposed Planning Scheme amendment has been assessed against the Maribyrnong Planning Scheme, Council's relevant Strategic Policies and the Ministerial Directions, and found to be compliant.

The amendment will facilitate the rezoning of underutilised industrial land for residential use, utilising George Street as an appropriate buffer for both the industrial precinct to the west and residential precinct to the east.

The development has been assessed against the requirements of the Maribyrnong Planning Scheme, and found to be compliant with the Planning Policy Framework, Local Planning Policy Framework and the Municipal Strategic Statement. The Clause 55 assessment demonstrates the proposal's ability to generally comply with the scheme. The dispensation of two visitor spaces is considered appropriate given the relative on-street parking demand seen within the area s, providing the necessary capacity.

The zoning choice is reflective of the surrounding residential land, zoned General Residential Zone, and the Environmental Audit Overlay will ensure appropriate clean up of the site, before any redevelopment and use of the land for sensitive uses.





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LEGEND

- 1. NOISE DIRECTION
- 2. MELBOURNE CBD - 10.4kms
- 3. SCHOOL 1.5k
- 4. PUBLIC TRANSPORT 270m
- 5. ROBERT BARRET RESERVE 800m
- 6. SHOPS 800m
- 7. ADJOINING B/V RESIDENCE
- 8. ADJOINING W/B RESIDENCE
- 9. ADJOINING RENDERED B/V
- 10. VACANT LAND
- S. SINGLE STOREY
- D. DOUBLE STOREY
- T. TRIPPLE STOREY
- V VERANDAH
- PER PERGOLA
- SH SHED
- G GARAGE
- CP CAR PORT
- CS CAR SPACE
- P.F : PAILING FENCE
- SF: STEEL FENCE
- BF: BRICK FENCE
- CF: CYCLONE FENCE
- NF: NO FENCE
- TF: TIMBER FENCE
- FF: FOLIAGE FENCE
- > EXISTING VEHICLE CROSSING
- 5.25m SET BACK
- P.O.S - private open space
- (HW) HABITABLE WINDOWS
- (NHW) NON HABITABLE WINDOWS
- P.P POWER POLE
- EXISTING TREES

NEIGHBOURHOOD  
& SITE DESCRIPTION  
SCALE 1:500

NOTE:  
SITE IS FLAT

NOTE:  
ADJACENT P.O.S TO BE PROTECTED FROM  
OVER VIEWING WITH A 1800H TIMBER  
PAILING FENCE.

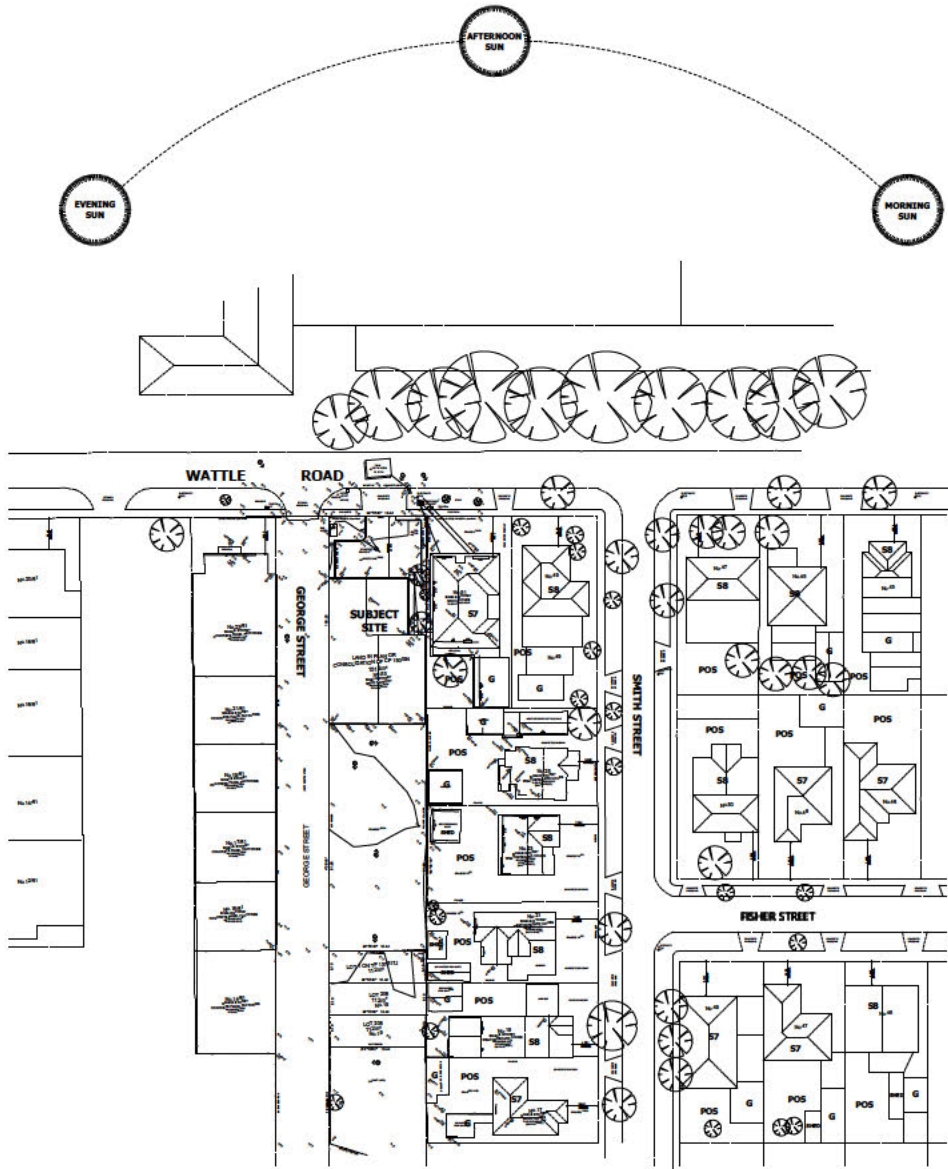
NOTE:  
MATERIALS, COLOURS AND TEXTURES ARE  
SELECTED TO HIGHLIGHT THE ARCHITECTURAL  
FORMS AND REFLECT THE ADJACENT DWELLINGS

NOTE:  
BREAK UP LARGE FORMS WITH  
ARTICULATED DIMENTIONS IN PLAN AND  
ELEVATION, TO MAINTAIN A SCALE RELEVANT TO  
THE ADJOINING BUILDING.

Prior to commencemnt of works, the following provisions relating to the protection of  
existing street trees must be undertaken to the satisfaction of the Responsible Authority:

- i) A suitable Tree Protection Zone of 2.0m-metre radius with barrier fence must be  
established around the street tree/s on the WATTLE RD street frontage.
- ii) The Protection Zone must be enclosed using a 2 metre high temporary cyclone fence or similar,  
which must remain in place through all stages of the development. This fence must not enclose  
the footpath, which must be kept clear for pedestrian access, and a sign must be erected on  
the fence informing that the fence is a Tree Protection Zone'.
- iii) The Area within the Tree Protection Zone must not be disturbed by any means including,  
parking of vehicals or storage of plant and equipment, materials, soil or waste.
- iv) No excavation is allowed within the Tree Protection Zone except with the consent of  
Council's Town Planning Department and under the supervision of a qualified Arborist.

All grass and weed within the Tree Protection Zone must be removed and the area mulched and irrigated.



LEGEND

- 1. NOISE DIRECTION
- 2. MELBOURNE CBD - 10.4kms
- 3. SCHOOL 1.5k
- 4. PUBLIC TRANSPORT 270m
- 5. ROBERT BARRET RESERVE 800m
- 6. SHOPS 800m
- 7. ADJOINING B/V RESIDENCE
- 8. ADJOINING W/B RESIDENCE
- 9. ADJOINING RENDERED B/V
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- NF: NO FENCE
- TF: TIMBER FENCE
- FF: FOLIAGE FENCE
- > EXISTING VEHICLE CROSSING
- 5.25m SET BACK
- P.O.S - private open space
- (HW) HABITABLE WINDOWS
- (NHW) NON HABITABLE WINDOWS
- P.P POWER POLE
- EXISTING TREES

DESIGN RESPONSE PLAN  
SCALE 1:500



IMAGE 1

IMAGE 2

IMAGE 3

IMAGE 4

IMAGE 5



IMAGE 6



IMAGE 7



IMAGE 8

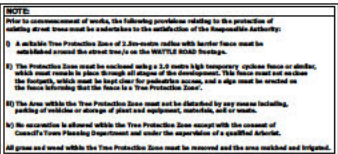


IMAGE 9

M7 Design Group Pty. Ltd. building designers 1500/1561 12.04.19	UNIT DEVELOPMENT 53 WATTLE ROAD & 19 GEORGE STREET, MAIDSTONE LATIN AMERICA PTY LTD & BROTHERS PTY LTD 1500/1561 12.04.19	drawn by: 01
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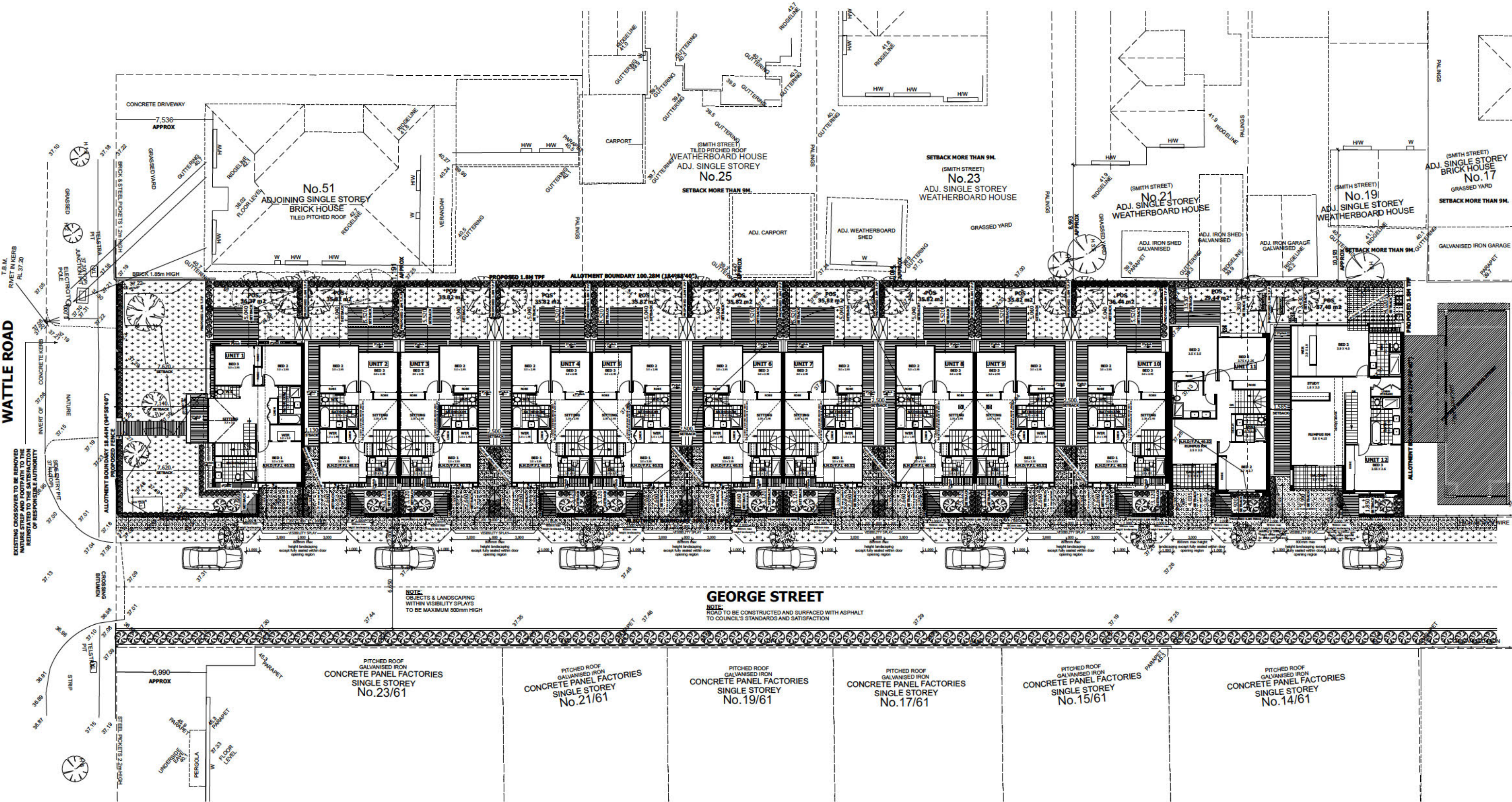


<b>LEDGEND</b>	
	LETTER BOX
	HOT WATER SERVICE
	MAIL BOX
	RUBBISH BIN
	RECYCLE BIN
	HABITAT WINDOW
	NON HABITAT WINDOW
	GAS METER
	CLOTHES LINE
	RAIN WATER TANK
	AIRCONDITIONING / HEATING UNIT
	SOLAR PANELS
<b>NOTE:</b>	
<p>The building has been designed to achieve a 6 STAR ENERGY rating and includes a 20kW solar RUSH HYDRO panel array. Installation of SolarI connected air conditioning, heating systems or hot water service will require additional solar generation.</p> <p>Source: Energy Design Solutions Pty Ltd</p>	





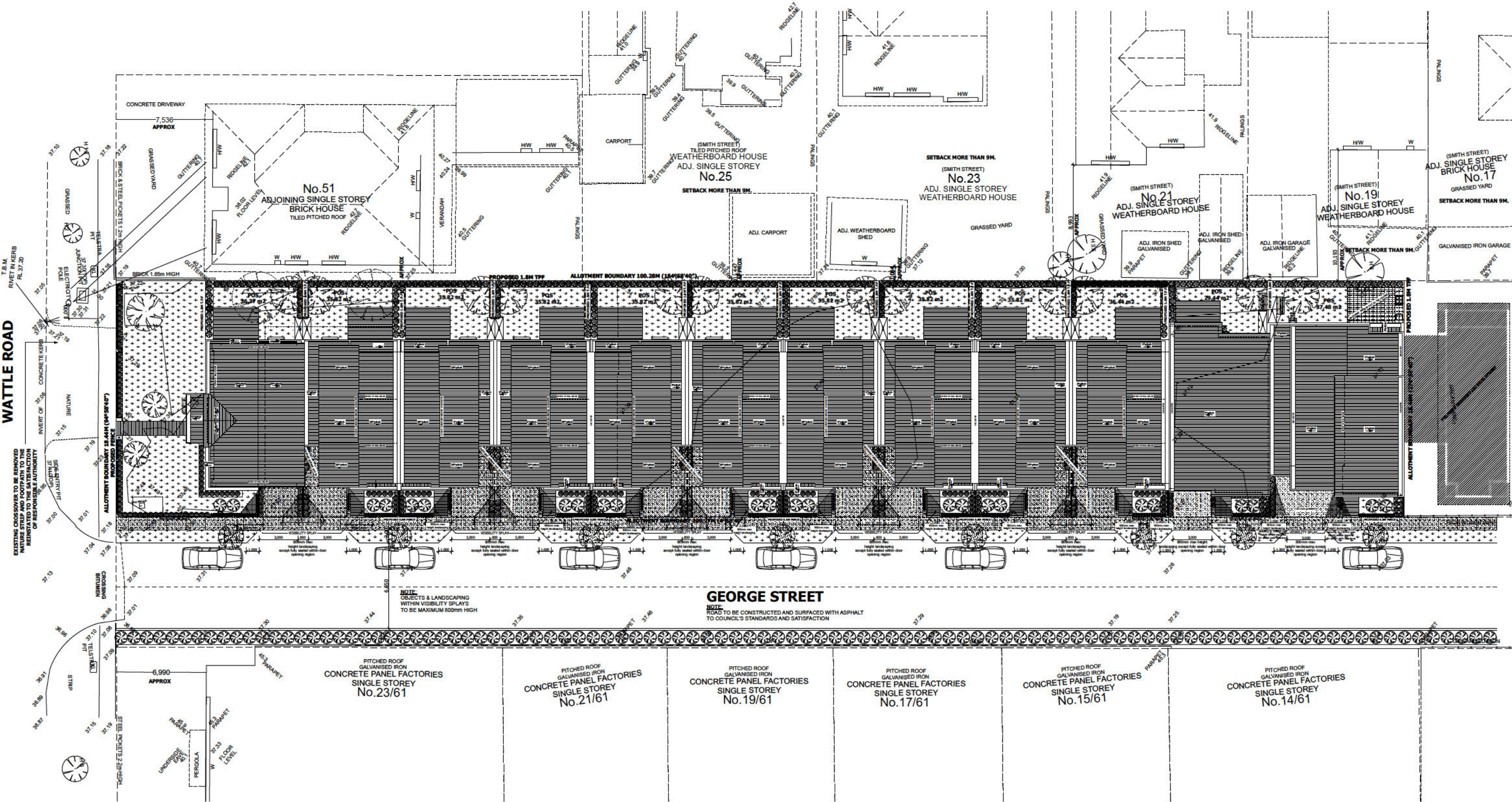
AREA ANALYSIS					AREA ANALYSIS				
UNIT 1	UNIT 2 - 9	UNIT 10	UNIT 11	UNIT 12	UNIT 13	UNIT 14	UNIT 15	UNIT 16	UNIT 17
AREA: ground floor: 52.24m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 144.30m <sup>2</sup>	AREA: ground floor: 52.12m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 144.18m <sup>2</sup>	AREA: ground floor: 51.82m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.88m <sup>2</sup>	AREA: ground floor: 51.82m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.88m <sup>2</sup>	AREA: ground floor: 51.82m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.88m <sup>2</sup>	AREA: ground floor: 51.82m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.88m <sup>2</sup>	AREA: ground floor: 51.82m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.88m <sup>2</sup>	AREA: ground floor: 51.82m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.88m <sup>2</sup>	AREA: ground floor: 51.82m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.88m <sup>2</sup>	AREA: ground floor: 51.82m <sup>2</sup> garage: 2.50m <sup>2</sup> porch: 1.50m <sup>2</sup> patio: 6.75m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.88m <sup>2</sup>



NOTE:  
Prior to commencement of works, the following provisions relating to the protection of existing and proposed works must be observed:  
1. A suitable Tree Protection Zone of 2.0m radius shall be established for all trees to be retained.  
2. The Tree Protection Zone must be enclosed with a 1.8m high light green plastic fence or other suitable material to prevent access to the Tree Protection Zone.  
3. The Tree Protection Zone must be maintained at all times during the construction period.  
4. The Tree Protection Zone must be maintained at all times during the construction period.  
5. The Tree Protection Zone must be maintained at all times during the construction period.  
6. The Tree Protection Zone must be maintained at all times during the construction period.  
7. The Tree Protection Zone must be maintained at all times during the construction period.  
8. The Tree Protection Zone must be maintained at all times during the construction period.  
9. The Tree Protection Zone must be maintained at all times during the construction period.  
10. The Tree Protection Zone must be maintained at all times during the construction period.

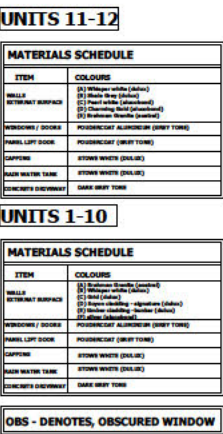
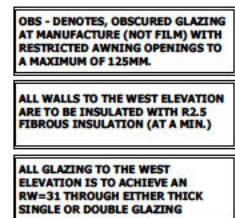
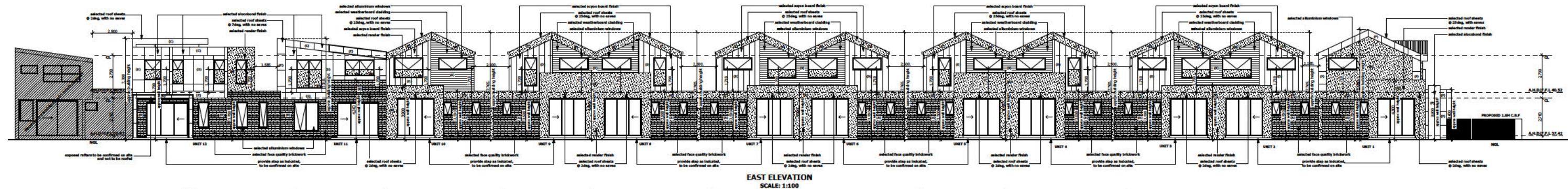
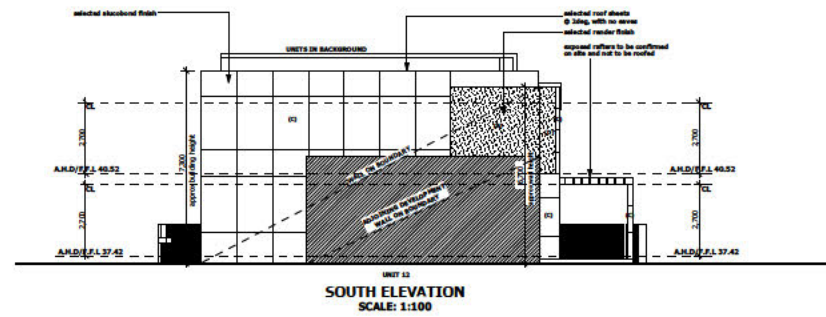


AREA ANALYSIS					AREA ANALYSIS				
UNIT 1	UNIT 2-9	UNIT 10	UNIT 11	UNIT 12	UNIT 13	UNIT 14	UNIT 15	UNIT 16	UNIT 17
AREA: ground floor: 52.24m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.91m <sup>2</sup>	AREA: ground floor: 52.12m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.79m <sup>2</sup>	AREA: ground floor: 51.83m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 143.49m <sup>2</sup>	AREA: ground floor: 51.03m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 142.69m <sup>2</sup>	AREA: ground floor: 50.75m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 142.41m <sup>2</sup>	AREA: ground floor: 50.75m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 142.41m <sup>2</sup>	AREA: ground floor: 50.75m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 142.41m <sup>2</sup>	AREA: ground floor: 50.75m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 142.41m <sup>2</sup>	AREA: ground floor: 50.75m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 142.41m <sup>2</sup>	AREA: ground floor: 50.75m <sup>2</sup> garage: 2.05m <sup>2</sup> porch: 1.52m <sup>2</sup> patio: 6.79m <sup>2</sup> upper floor: 81.31m <sup>2</sup> TOTAL: 142.41m <sup>2</sup>

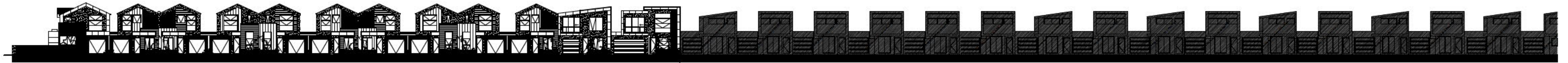


NOTE:  
Prior to commencement of works, the following provisions relating to the protection of existing trees and vegetation must be observed:  
1) A suitable Tree Protection Zone of 2.0m radius shall be established around each tree to be retained.  
2) The Tree Protection Zone must be enclosed with a 1.2m high light green plastic fence or other suitable means to prevent access to the zone.  
3) No excavation or other works shall be carried out within the Tree Protection Zone.  
4) The Tree Protection Zone must be maintained throughout the construction period.  
5) The Tree Protection Zone must be removed and the area reinstated upon completion of works.

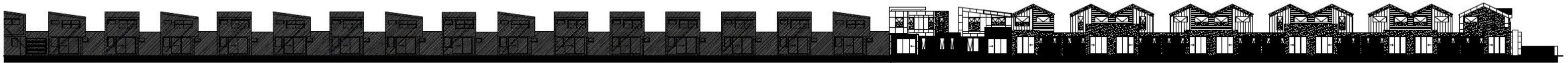




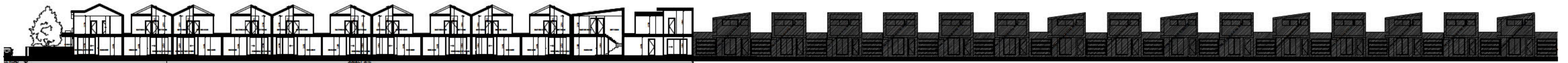




STREETSCAPE ELEVATION VIEW  
FROM GEORGE ROAD  
SCALE: 1:200

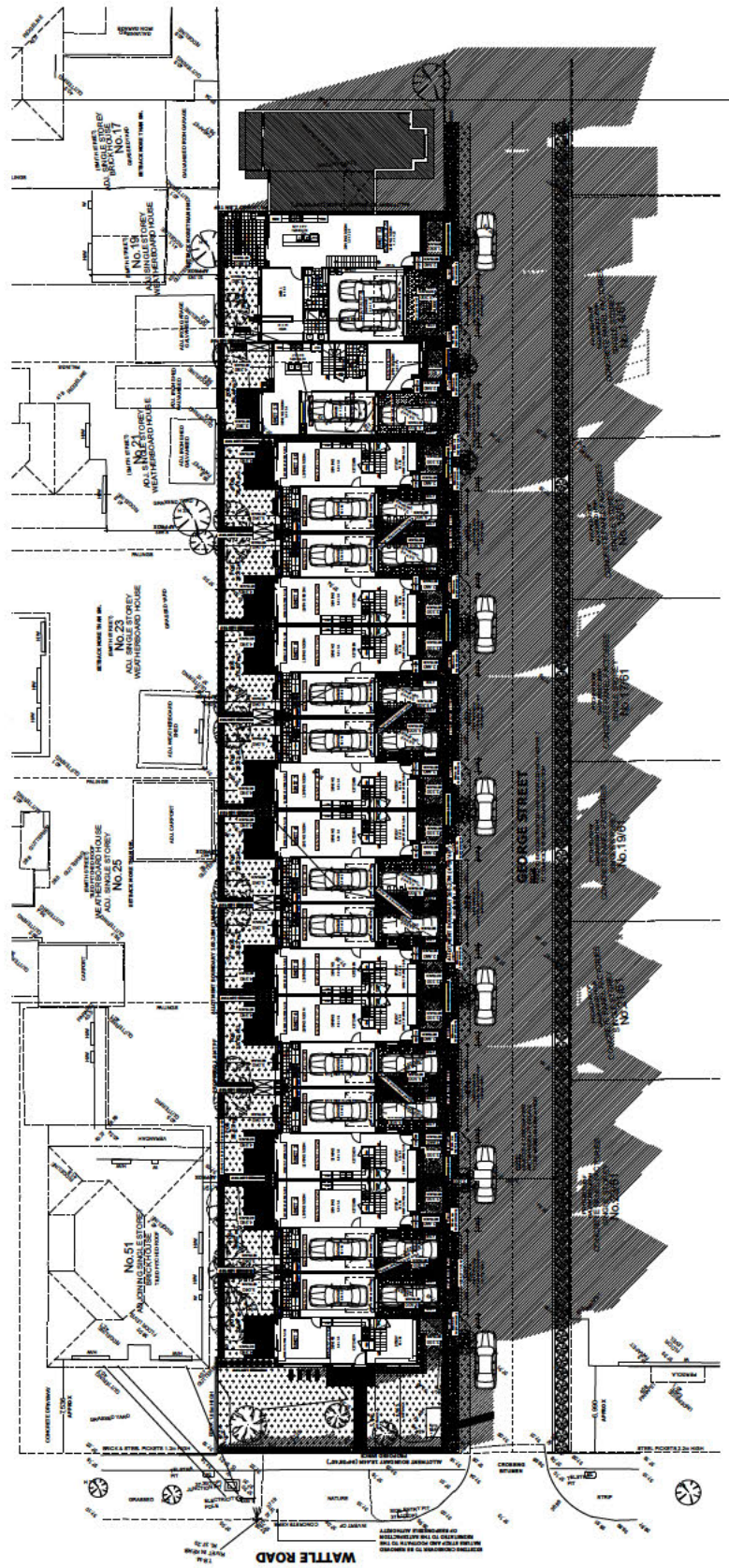


STREETSCAPE ELEVATION VIEW  
FROM GEORGE ROAD REAR  
SCALE: 1:200

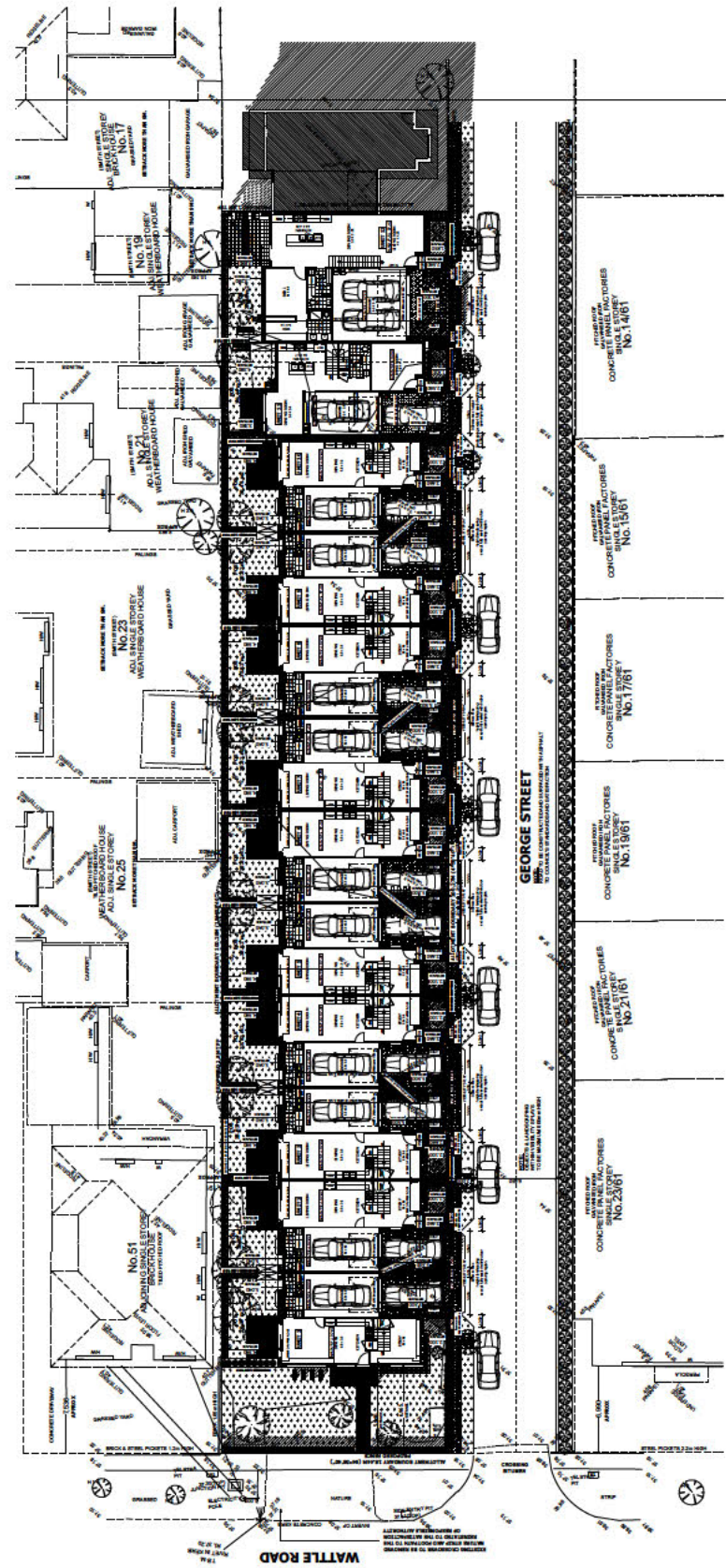


SECTION ELEVATION VIEW  
FROM GEORGE ROAD  
SCALE: 1:200

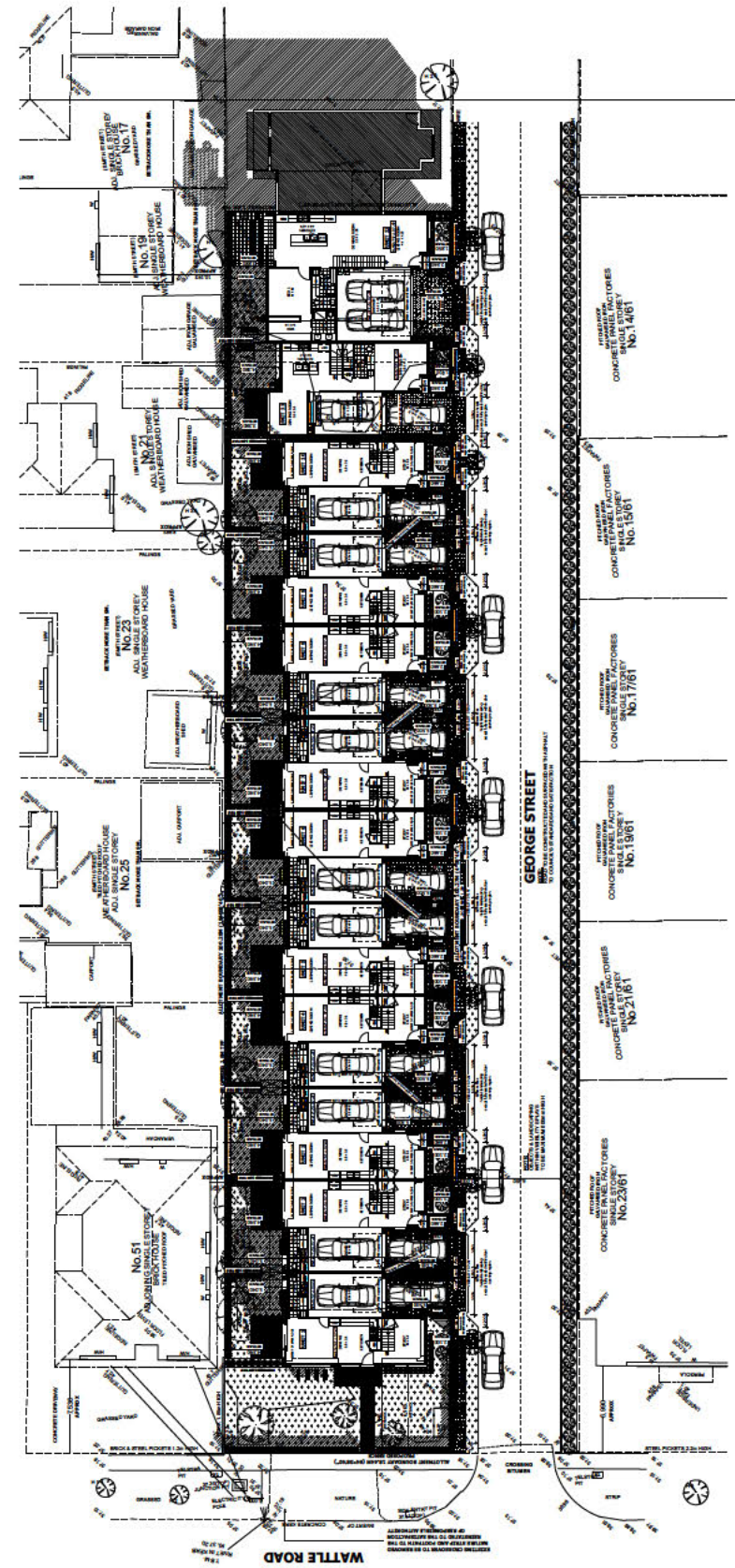




SUN SHADE DIAGRAM :  
SEPTEMBER 22 - 9AM  
SCALE: 1:200



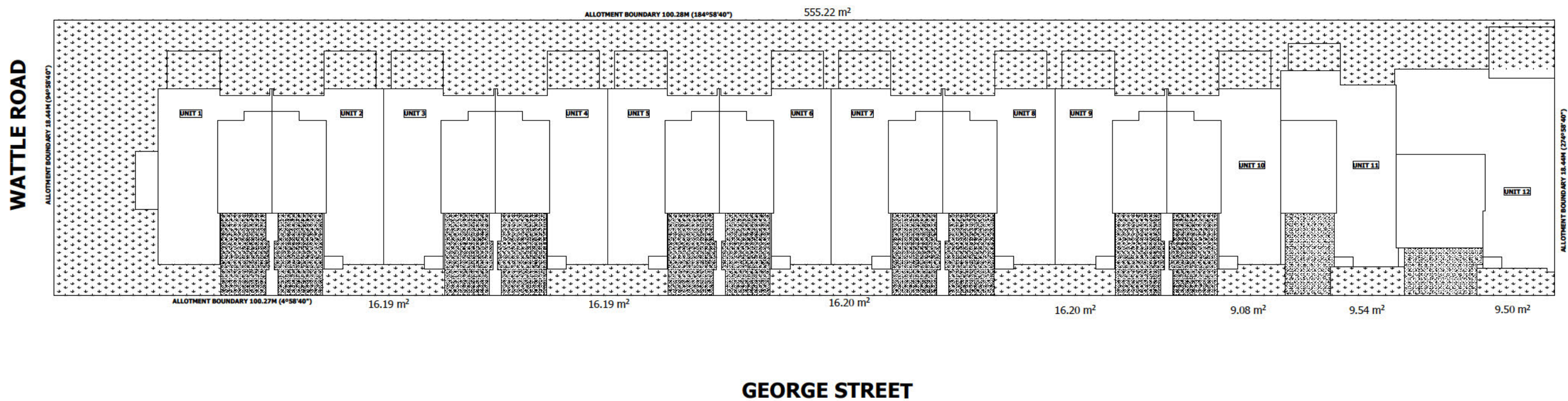
SUN SHADE DIAGRAM :  
SEPTEMBER 22 - 12PM  
SCALE: 1:200



SUN SHADE DIAGRAM :  
SEPTEMBER 22 - 3PM  
SCALE: 1:200



**NOTE:**  
The dwelling has been designed to achieve a 4-STAR ENERGY RATING and includes a 200-litre 50°C HOT WATER tank (not included) or 120-litre continuous or 100-litre tanking system or 120-litre 60°C tank system with 60% solar gain.  
In consideration of the dwelling, the value and present in the National Building Survey for New Sale Compliance Report.



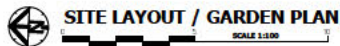
## GEORGE STREET

**NOTE:**

Prior to commencement of work, the following provisions relating to the protection of existing assets must be adhered to in accordance with the authorities of the Responsible Authority:

- (A) A suitable Tree Protection Zone of 2.25-metre width with barrier fence must be established around the base of the tree to be protected.
- (B) The Protective Zone must be enclosed with a 2.25 m high temporary cyclone fence or similar, which must remain in place through all stages of the development. The fence must not enclose the footpath, which must be kept clear for pedestrian access, and a sign must be erected on the fence informing that the fence is a Tree Protection Zone.
- (C) The area within the Tree Protection Zone must not be disturbed by any means including parking of vehicles or storage of plant and equipment, materials, soil, or waste.
- (D) No excavation is allowed within the Tree Protection Zone except with the consent of Council's Tree Planting Department and under the supervision of a qualified Arborist.

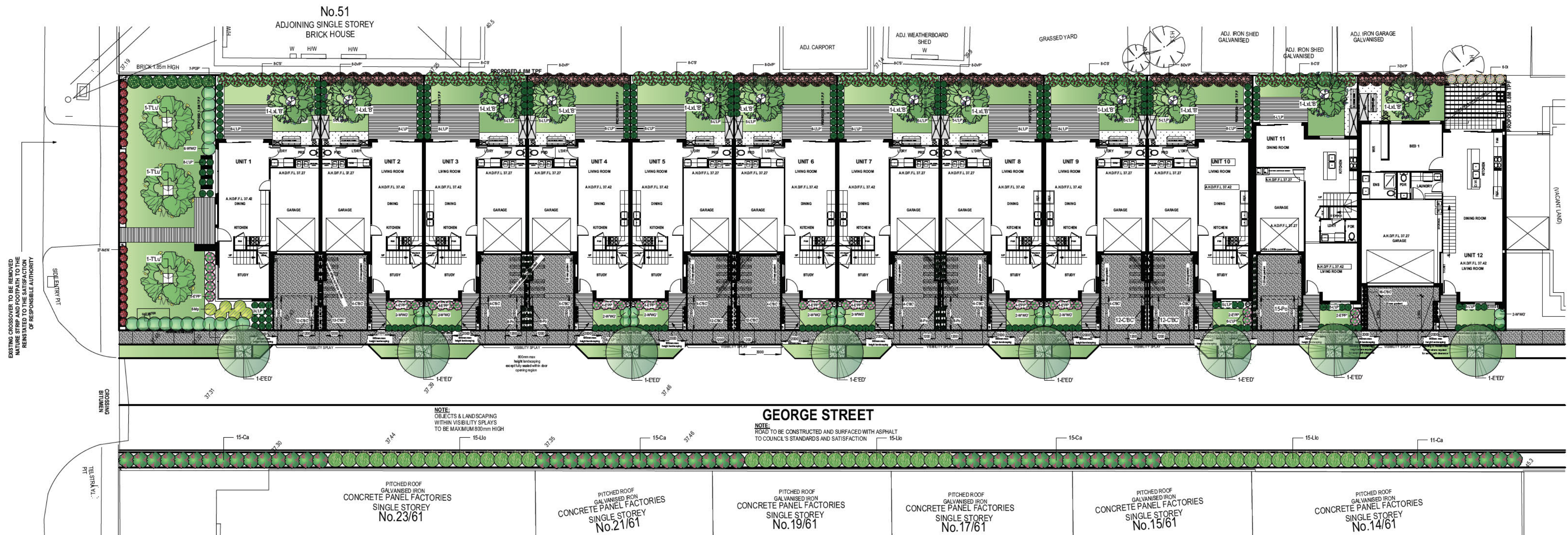
All grass and/or weed within the Tree Protection Zone must be removed and the area mulched and irrigated.



<b>M7 Design Group Pty. Ltd.</b>	<b>Project</b>	<b>UNIT DEVELOPMENT</b>	<b>Date</b>	<b>amendment no.</b>
<b>building designers</b>	Tel: 08 9367 8100 Fax: 08 9367 8100 PO Box 100 St Albans SA 5015	<b>53 WATTLE ROAD &amp; 19 GEORGE STREET, MAIDSTONE</b>		
		<b>Client</b>		
		<b>LATIN AMERICA PTY LTD &amp; ASSOCIATES</b>		
<b>registered building practitioner</b>		<b>Job No</b>	<b>1560 / 1561</b>	<b>Date</b>
			<b>12.04.19</b>	
		<small>Copyright © This drawing is not to be copied or reproduced without written permission from M7 Design Group Pty. Ltd.</small>		<b>Sheet no.</b>
				<b>08</b>



WATTLE ROAD



#### LANDSCAPE CONSTRUCTION SPECIFICATIONS

##### SUBGRADE PREPARATION:

Site preparation to be carried out under suitable conditions and in accordance with standard horticultural practice. The use of machinery and tools that may damage soil structure is not acceptable. Garden bed and lawn sub-grade is to be cultivated to a depth of 150mm and shaped to achieve drainage falls prior to adding topsoil. If gypsum is required, this is to be distributed and cultivated into the sub-grade as per the manufacturer's instructions. Weeds are to be removed prior to sub-grade preparation, top-soiling and planting.

##### SOIL PREPARATION:

Imported topsoil is to be supplied by an approved supplier to a depth of approximately 150-300mm (as required) for garden beds. Do not spread in muddy conditions. The topsoil is to be a light to medium friable loam (capable of being compressed into a ball by hand when moist yet can be broken apart immediately after). Its pH will be 6.0 - 7.0 and free from perennial weeds and building rubble. The finished top level after settlement should be 75mm below the edging level to allow for mulch. Imported topsoil for lawn areas is to be supplied to a depth of approximately 100mm (or as required).

##### TIMBER EDGING:

Timber edging is to be installed to separate all lawn, planting areas and laydole topping / pebble areas. The treated pine timber (or similar) is to be 75mm x 25mm in size, secured with 300mm long stakes at 1000mm spacings.

##### PLANTS AND PLANTING:

Trees and plants supplied are to be healthy and free from insects, diseases and weeds. The pot sizes indicated in the plant schedule are the minimum size to be supplied and installed.

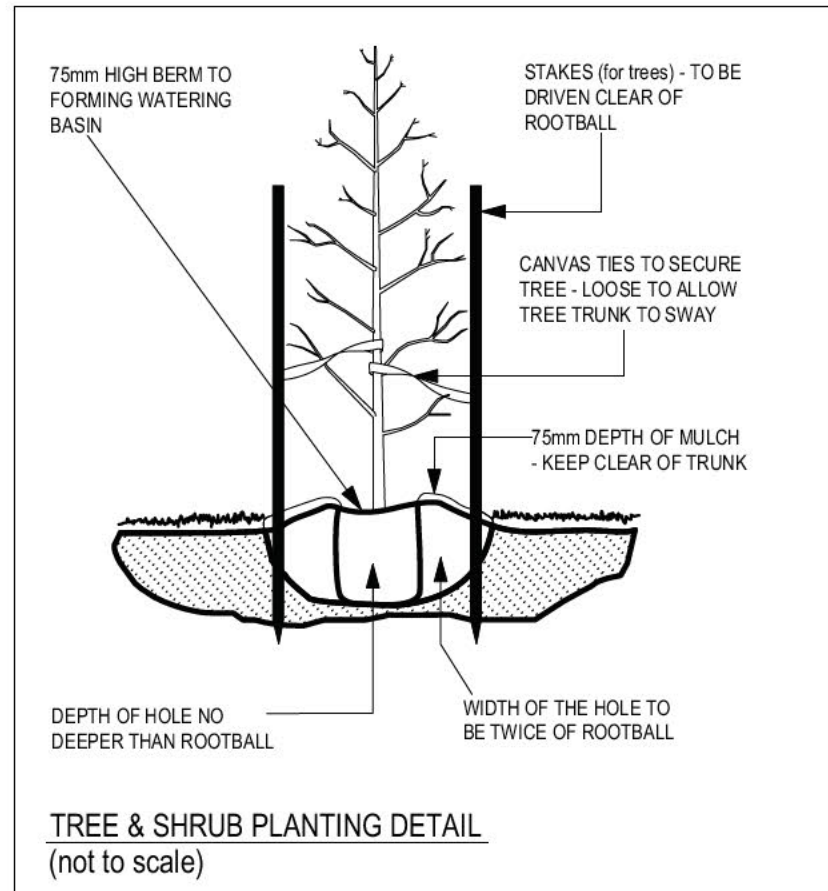
When each planting area is prepared, if soil is dry, fill with water and allow to drain away completely. Plant roots are to be teased outwards if roots are matted in pot. Place plant in centre of hole and ensure that the top of the rootball is flush with the surrounding soil surface and the trunk is vertical.

Soil is to be backfilled firmly into the hole and thoroughly watered in. Trees are to be staked with two hardwood stakes driven firmly into the ground but not through the rootball. Trees are to be secured to the stakes with strong but flexible tree ties that are tight enough to support the trees in windy conditions but loose enough to stimulate good tree growth and development. The tree ties must not injure tree bark or restrict tree growth for at least the first three years of tree growth.

A slow release fertiliser (e.g. Osmocote or similar) is to be applied to all garden beds as specified by the manufacturer and be kept away from the plant trunks and then watered immediately. A layer of aged organic mulch to a minimum depth of 75mm is to be applied to all planting areas after planting is completed.

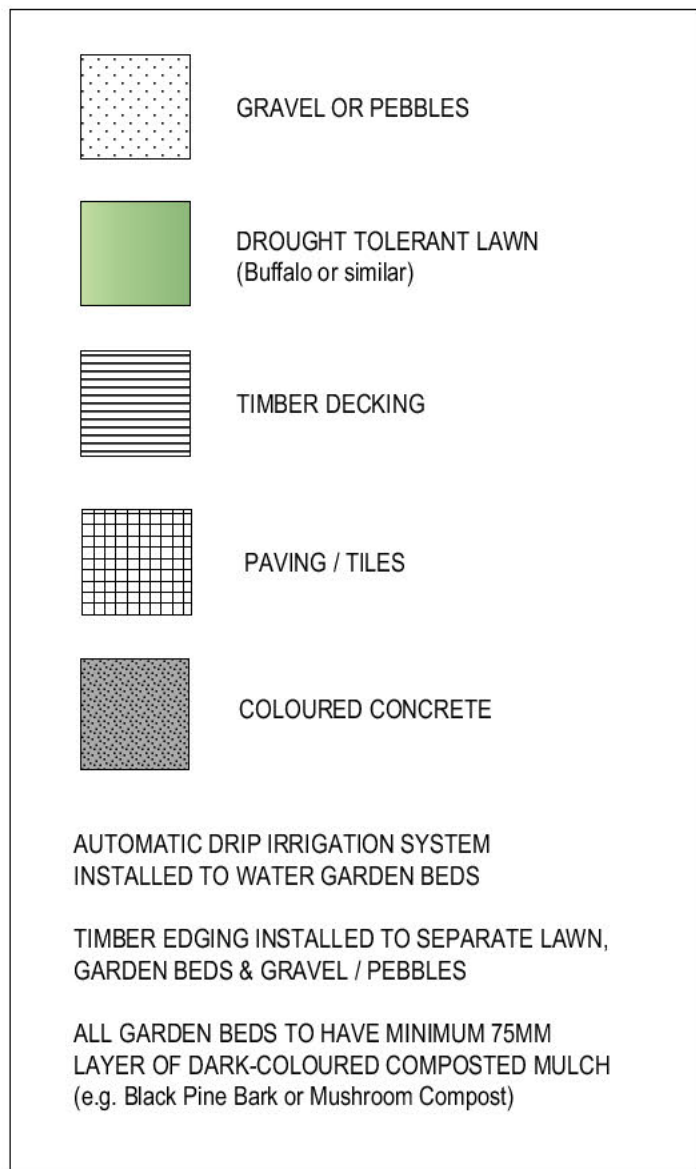
##### IRRIGATION:

An automatic drip irrigation system is to be installed to water all planting areas.



#### PLANTING SCHEDULE

	ID	Qty	Common Name	Botanical Name	Height @ Maturity (m)	Width @ Maturity (m)	Pot Size @ Install (cm)
<b>Trees</b>							
	E'ED'	8	Euky Dwarf	Eucalyptus 'Euky Dwarf' (or similar street tree as selected by the Responsible Authority)	7.0m	4.0m	30
	LxL'B'	12	Crepe Myrtle	Lagerstroemia indica 'X L. fauriei 'Biloxi'	6.0m	3.5m	30
	T'Lu'	3	Water Gum	Tristanopsis laurina 'Luscious'	8.0m	4.0m	30
<b>Shrubs &amp; Groundcovers</b>							
	C'S'	48	Slim	Callistemon 'Slim'	2.0m	1.0m	20
	Ca	56	White Correa	Correa alba	1.5m	1.2m	14
	DvP'	47	Purple Hop Bush	Dodonaea viscosa 'Purpurea'	2.5m	1.0m	20
	E'PP'	41	Pink Pixie	Escallonia 'Pink Pixie'	0.8m	0.8m	14
	Mp	6	Carpet Spreading Myoporum	Myoporum parvifolium	0.1m	1.0m	Tubestock
	Nd'N'	27	Dwarf Sacred Bamboo	Nandina domestica 'Nana'	0.6m	0.6m	14
	P'GP'	7	Green Pillar	Pittosporum 'Green Pillar'	3.0m	1.0m	20
	WWG'	35	Wynabbie Gem	Westringia 'Wynabbie Gem'	1.2m	1.0m	14
<b>Grasses</b>							
	C'BC'	124	Bronze Curls	Carex 'Bronze Curls'	0.3m	0.3m	Tubestock
	Dt	6	Flax Lily	Dianella tasmanica	1.0m	0.8m	14
	L'LP'	239	Little Pal	Lomandra 'Little Pal'	0.5m	0.5m	Tubestock
	Llo	45	Spiny-headed Mat-Rush	Lomandra longifolia	1.2m	1.0m	Tubestock
	Po	47	Purple Flag	Paterosia occidentalis	0.4m	0.5m	Tubestock



A 05/19 Design 1

#### NO. DATE NOTE

THE BUILDER IS RESPONSIBLE FOR THE SETTING OUT OF THE WORKS, THE CHECKING OF ALL DIMENSIONS AND LEVELS ON SITE, AND THE REPORTING OF ANY DISCREPANCIES TO THE PROPRIETOR PRIOR TO COMMENCEMENT OF WORK. DO NOT SCALE FROM DRAWINGS.

Client

Latin America P/L & Bosko Gajic

Address

53 Wattle Rd & 19 George St, Maidstone

Project

Proposed Unit Development

Drawing

Landscape Plan

Zenith Concepts  
Landscape Design  
171 Abbott Street, Sandringham  
PO Box 9087  
P 03 9598 2129  
M 0411 399 937  
E landscapes@zenithconcepts.com

Scale

1:200

Date

May 2019

Rev.

A

Dwg No.

Sheet 1 of 1  
(A1)





## Environmental Site Assessment

53 Wattle Road & 34 George Street,  
Maidstone

Prepared for  
Latin America Pty Ltd

Prepared by  
Tonkin & Taylor Pty Ltd

Date  
February 2018

Job Number  
1003973.v01



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## Document Control

Title: Environmental Site Assessment					
Date	Version	Description	Prepared by:	Reviewed by:	Authorised by:
16/2/18	01	Final Report	T. Madill	R. Owen	T. Vass

### Distribution:

Latin America Pty Ltd

1 copy

Tonkin & Taylor Pty Ltd (FILE)

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# 1 Introduction

Tonkin & Taylor Pty Ltd (T+T) was commissioned by Latin America Pty Ltd (the client) to undertake an Environmental Site Assessment (ESA) of land encompassing 53 Wattle Road and 34 George Street, Maidstone, Victoria (the Site). The regional site location is shown in Figure 1, Appendix A.

The property at 53 Wattle Road is currently occupied by a factory style building, while 34 George Street (comprising three separate lots) is currently vacant land. The site has an area of 1,848 m<sup>2</sup>, with individual areas for 53 Wattle Road and 34 George Street of 1,512 m<sup>2</sup> and 336 m<sup>2</sup>, respectively.

T+T has previously provided a preliminary site investigation on the northern section of the property 53 Wattle Road, Maidstone<sup>1</sup>. The report concluded the site generally has a moderate to high potential for contamination, particularly relating to impacts from storage and handling of petroleum products. In accordance with the Department of Sustainability and Environment (DSE) General Practice Note (June 2005), sites with a high potential for contamination that are proposed for rezoning to sensitive use require an Environmental Audit.

T+T understands the client is seeking to develop the site for a high density residential housing. The site is currently zoned for industrial use, and therefore will require rezoning to allow the proposed development. We understand in lieu of a statutory environmental audit of the site, Council has indicated a detailed investigation of the site would be required to facilitate the proposed development.

These works were undertaken in accordance with the scope outlined in our letter of engagement dated 21 July 2017.

## 1.1 Objectives

The objective of the ESA was to complete a detailed investigation of the potential for contamination at the site in the context of the proposed re-zoning of the property from industrial to residential and evaluate whether an Environmental Audit would be recommended, having regard to the previous assessment of the site as having a 'medium to high' potential for contamination.

## 1.2 Scope of Work

- T+T conducted this ESA in general accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013 ('ASC NEPM') and Australian Standard 4482.1 2005, which included:
- An inspection of the site and surrounds to confirm the current layout and land use(s), the presence of potential contamination sources, indicators of historical contamination; such as remnant infrastructure, stressed vegetation or staining of soils, waste handling practices, fuel storage, chemical use etc.
- Grid based and targeted sampling of soils from nine locations across the site to screen for potential contaminants of concern based on past site uses.
- Installation and development of two groundwater wells to depths of 20.5 to 30 m bgl (below ground level). While groundwater sampling of these wells was to be undertaken these wells were found to be dry upon monitoring approximately one week after installation.
- Preparation of this report summarising the findings, and relevance for the site's proposed future use.

---

<sup>1</sup> T+T Preliminary Site Investigation – 53 Wattle Road, Maidstone (December 2014).



- A desktop investigation for the property at 34 George Street including a review of historical certificates of title, historical aerial photographs and local historical information (utilising information from the prior T+T investigation where applicable).

## 2 Site Information

The Site is located at 53 Wattle Road and 34 George Street, Maidstone (Figure 1). Refer to Table 2.1 for general information about the Site.

Table 2.1: Site identification

Site Address	53 Wattle Road and 34 George Street, Maidstone
Total Site Area	1,848 m <sup>2</sup>
Title Identification Details	CP150094 (53 Wattle Road) and Lot 205/206 plus LP1504 and Lot 1 on TP137517 (34 George Street) - Refer to Appendices E and H.
Site Centroid Co-ordinate (MGA Zone 55)	313277 Easting / 5816716 Northing (MGA55)
Current Zoning – Planning Zone	Industrial 3 Zone (INW3Z) for 53 Wattle Road and General Residential 1 Zone (GRZ1) for 34 George Street. A 'Development Contribution Plan' Overlay is in place at the Site. An Environmental Audit Overlay applies to a property approximately 20 m south of the site, at 48 Emu Road. Refer to Appendix B.
Former Use	The Wattle Road site was previously used as a bus depot until the late 1980's and may have remained vacant for up to 20 years before it was redeveloped for its current use. The Georges Road property appear to have been vacant from as early as 1945.
Current Site Use	The property at 53 Wattle Road is currently occupied by a factory style building (a kitchen showroom and warehouse), while 19 George Street is currently vacant land.
Proposed Site Use	High-density Residential*
Ownership	Latin America Pty Ltd (53 Wattle Road) and Bosko and Mileva Gajic (34 George Street)

\*Residential land use descriptions' of EPA Publication 759.3, 'Guidelines for issue of certificates and statements of environmental audit', December 2015

### 2.1 Site layout and structures

The site comprises a rectangular block stretching in a north-south orientation, with a brick warehouse/showroom located in the northern portion of the site. The building has a large roller door accessing the front of the building off Wattle Road. The rear of the site is vacant grassed yard and the front of the property has a small concrete car parking area.

Refer Figure 2 in Appendix A for site layout.

### 2.2 Regional hydrogeology

The Geological Survey of Victoria *Melbourne* Mapsheet (1:63,360), 1974 (Vandenburg et al, 1974) describes the local geology as Newer Volcanics comprising '*olivine basalt, olivine labradorite basalt, dark to light grey, coarsely vesicular, minor interbedded silty sand and baked soils*'.

A review of the Victorian Groundwater Beneficial Use map series<sup>2</sup> indicates that the water table is most likely present in the Quaternary aged volcanic aquifer, and yields moderate to poor quality groundwater (Segment C 3,501 – 13,000 mg/L total dissolved solids (TDS) as defined in the *State Environment Protection Policy Groundwaters of Victoria*). Desktop information suggests

<sup>2</sup> Department of Natural Resources and Environment, 1995. *Victorian Beneficial Use Map Series, South Western Victoria Aquifer Tables*.

groundwater in the local area is likely to be present at depths of approximately 10-20 meters bgl, however onsite bores indicate groundwater beneath the site is greater than 30m bgl.

Local groundwater flow is expected to be in a north easterly direction, toward the Maribyrnong River.

### 2.3 Site specific hydrogeology

The soil investigation indicated that the majority of locations consisted of a layer of sandy CLAY (fill) overlying natural CLAY, which overlies basalt, which was encountered to termination depth in the deeper boreholes (30 m bgl). Table 2.2 provides a general outline of the soil profiles encountered.

Table 2.2: Site geology

Approx. depth range	Description	Characteristics
0 – 0.5 m	Sandy, gravelly CLAY (Fill)	Brown, low plasticity, fine to medium grained sand.
0 – 1.5	Clay/ Sandy Clay	Brown, low plasticity, fine to medium grained sand, some minor gravels.
1 – 30 m	BASALT	Pale grey/brown, hard.

Two groundwater wells (MW01 and MW02) were installed to a depth 20.5 and 30 m bgl as part of the field work. However, both wells were found to be dry following their installation. Groundwater is therefore expected to be encountered in the bedrock aquifer at a depth greater than 30 m bgl.

### 2.4 Natural watercourses, surface runoff and drainage

No natural watercourses are present at the site. The closest surface water is the Maribyrnong River, approximately 850 m northwest of the site

### 2.5 Underground conduits, utilities and pipelines

Plans for the location of on-site and off-site utilities (obtained by completing a “Dial Before You Dig” search) have been provided by public utility companies and other entities, including Maribyrnong City Council, Citipower, Pipe Networks, NBN Co., Multinet, Telstra VICTAS, Optus, Yarra Valley Water.

Details of the utilities are provided in Appendix F.



### 3 Desktop investigations

#### 3.1 Summary of investigation of 53 Wattle Road

T+T undertook a preliminary site investigation of the site at 53 Wattle Road in December 2014<sup>3</sup>. The investigation identified a number of potential sources of contamination at the site:

- The storage and handling of petroleum products during operation of the site as a bus depot.
- Abandoned storage tanks viewed in historical aerials photographs at the southern portion of the property.
- Remnant UST infrastructure in the north eastern portion of the property.
- Historical chemical storage in the northern portion of the property.
- Site filling and historical inert material dumped on George Street adjacent to the site.

Potential offsite sources of groundwater contamination include regional groundwater conditions from regional land use as industrial, and nearby properties to the north east and south.

The report concluded the site generally has a moderate to high potential for contamination, particularly relating to impacts from storage and handling of petroleum products.

Details of site history review and potential contamination sources are provided in T+T's PSI report included in Appendix H.

#### 3.2 Desktop investigation of 34 George Street

A desktop review of site history, including a review of historical titles and historical aerial photographs was undertaken for the parcel of land located at 34 George Street (southern portion of the site).

The site is described as Lot 205/206 plus LP1504 and Lot 1 on TP137517. The oldest records for the site date back to 1882. Table 3.2 summarises current and historical title ownership for the site. Historical certificates of title are included in Appendix E.

Table 3.2: Review of historical certificates of title for 34 George St

Year	Proprietor	Volume - Folio
2017	Bosko and Mileva Gajic	10707/718
2017	Bosko and Mileva Gajic	8349/417
2014	Ljiljana and Bosko Gajic	10707/718
2014	Ljiljana and Bosko Gajic	8349/417
2004	Hanh Thi Thu Nguyen	8349/417
2003	Hanh Thi Thu Nguyen	10707/718
2003	Desmond Thomas Kelly	9759/371
2002	Stephanie Olver	8349/417
1991	Philip George Cobby	8349/417
1987	Bryan Joseph Kelly	9759/371
1987	John Raymond Cobby	8349/417
1977	John Raymond Cobby (Crane Driver) and Felicity Cobby	8349/417

<sup>3</sup> (T+T) Preliminary Site Investigation – 53 Wattle Road, Maidstone, Vic (December 2014).

1974	Salvatore Camarda and Giovanni Rosso (Labourers)	8349/417
1961	John William Allison	8349/417
1887	Anthony Kennedy	1943/424
1882	George Sutton	1359/235-236

Historical titles from 1882 refer to the site as part of a larger parcel of land. The original block of land was held by the Sutton family and sold to Anthony Kennedy in 1887. The parcel of land located at 34 George Street was owned by various private individuals since this time. The site in its current layout has been owned by the Gajic Family since 2014 and is currently defined on two distinct Certificates of Titles (CoT) Vol. 10707 Fol. 718 and Vol. 8349 Fol. 417. No information on potential site contaminating activities were identified within the titles in relation to the previous and current site owners.

A review of the aerial photograph was undertaken. Aerial photographs suggest no development occurred at the site since earliest observations in 1945. The site appears to remain vacant land with no structure or infrastructures visible, with the exception of fencing that appears to be associated with the property to the immediate south. Copies of the aerial photographs are provided in Appendix J.

### 3.3 Site inspection of 34 George Street

An initial inspection of the site was undertaken on 23 October 2017. Information considered during the site inspection included, but was not limited to, the following:

- Buildings / structures;
- Surface coverage;
- Lack of vegetation / poorly growing or deformed vegetation;
- Surface staining / discoloured soil / waste materials;
- Distinctive odours;
- Surface drainage / storm water system;
- Presence of underground structures (e.g. USTs, triple interceptor traps); and
- Adjoining land uses immediately surrounding the site.

General site inspections were also undertaken during field work events, to assess whether any significant changes to the above (such as presence of waste materials) had occurred.

The site is a vacant block of land. The rear section has a lot of overgrown vegetation and grass cover across the entire site. Some evidence of rubbish dumping was observed during the site inspection. The site inspection did not reveal any indicators of gross contamination at the site surface, such as significant staining or odours.

There was no significant fuel or chemical storage was observed whilst onsite. No asbestos review was conducted as part of this site inspection, however no obvious signs of asbestos containing material was observed.

## 4 Potential for Contamination

### 4.1 Onsite

Based on a review of the site history, the site inspection and other sources of information the following conclusions were made with respect to the potential for on-site contamination.

- Petroleum related infrastructure was noted at the site during the site inspection and on aerial imagery. Three storage tanks were identified on the ground in the rear (southern) section of the property. A review of titles also indicated that the site (excluding the portion of land located on the George Street property) operated as a bus depot from between 1967 and 1980 by occupants including G.S. Bono & F. Bono and Neesons bus services. Firefly Coaches was also noted as a previously operating bus depot at the site until the late 1980's, but this may have been an operating name of the formerly mentioned title holders. On-site petroleum hydrocarbon storage and handling (most likely diesel) is therefore a potential on-site source of contamination.
- The presence of the UST within the carpark in the north of the site is considered a potential source of hydrocarbon contamination of soils surrounding the USTs and underlying groundwater.
- Storage of drums and containers noted in the Google street view image dated 2009 may have resulted in on-site contamination.

### 4.2 Offsite

The site is located in a wider industrial setting, and there is therefore potential for regional contamination of groundwater from current and past industrial activities. The following activities in vicinity of the site were noted as potential off-site sources of contamination:

- The property located at 48 Emu Road, Maidstone, to the adjacent south of the site, which was on the list of issued Certificates and Statements of Environmental Audit, reported contamination above investigation levels within shallow soils. The report concluded that impact was limited to the fill soils at the property and no impact was identified within deeper natural silty clay soils. Groundwater was considered unlikely to be polluted given its depth and the low leachability of contaminants in the fill soils.
- A potential off-site source of groundwater impact is from the former industrial site requiring assessment and/or clean-up, located at 9-15 Williamson Road, Maidstone, approximately 250 m northeast of the site. Given this property is likely to be located cross-gradient of the site, groundwater impact beneath the site from this property is considered unlikely. It is noted however, a Groundwater Quality Restricted Use Zone (GQRUZ) relating to groundwater impact from this site stretches to the immediate north of the site.

In summary there was no significant offsite sources of potential contamination that are considered likely to have impacted the subject site.

### 4.3 Summary

Potential sources of onsite contamination and contaminants of potential concern (COPC) identified through the site history review are summarised in Table 4.1.



Table 4.1: Summary of Contaminants of Potential Concern

Source/Area	Media in which COPC may be present	CoPC	Receptors
On-site			
Petroleum storage and handling on Wattle Rd property. Potential for former UST locations south of on-site building, and an existing UST in north-east corner of site.	Soil	TPH, BTEX, PAHs, phenols, lead.	If the site is developed for residential use, with open space/garden areas, residents may be exposed to potentially contaminated soils through ingestion, inhalation of dusts or dermal contact. Potential for inhalation of vapours emanating from contaminated groundwater; generally considered to be a lower risk noting the expected depth to groundwater.
Operation of a bus depot, point and diffuse source of contamination across the site.	Soils	TPH, BTEX, PAHs, metals, solvents.	
Unknown chemical drum storage at front of building.	Soils	Organic contaminants.	
Fill material and dumped material historically imported to site.	Soils	Solid inert waste imported to site, including potential contaminants metals and PAHs.	
Off-site			
Industrial land setting; known contamination in groundwater to the north, east and west	Groundwater	A variety of potential contaminants, notably chlorinated hydrocarbons.	GQRUZ does not cover the site, and there is a low potential for exposure to users of the site from contaminated groundwater extending from offsite.

## 5 Methodology

Outlined in the following sections are the methodologies employed for the intrusive investigations.

### 5.1 Soil assessment

#### 5.1.1 Field work activities

A summary of the field work activities for the soil assessment undertaken at the Site is provided in Table 5.1.

Table 5.1: Field work activities

Date	Activity	Summary Details
23/10/2017	Site Inspection	Site walk over completed to identify potential diffuse and/or point sources of contamination.
23/10/2017, 24/10/2017 and 12/12/2017	Soil Sampling	Soil sampling at 7 grid based and 2 targeted locations

Soil description and geological log information for the sampling undertaken is contained in Appendix I.

The locations of the grid and targeted sampling points are shown on Figure 3.

#### 5.1.2 Soil sampling strategy

##### 5.1.2.1 Grid

Australian Standard AS4482.1–2005 provides guidance on the minimum number of grid sample locations required to detect certain sized contamination hotspots with 95% confidence depending on the size of the property. In this case, the area of the site is 1,848 m<sup>2</sup>. In accordance with AS4482.1 – 2005, 7 grid based locations are recommended. Sampling was undertaken at 7 grid-based locations (BH01-BH07) using a drilling rig to a nominal depth of 1 m or a minimum 0.5 m into natural soil.

##### 5.1.2.2 Target

In accordance with AS4482.1, target sampling was also conducted at the site where potential sources of contamination were identified.

Additional targeted soil sampling was undertaken for the remnant UST infrastructure located in north east corner of site. Samples were collected at two locations (BH08 and BH09) thought to be representative of the area of concern.

#### 5.1.3 Field methodology

A summary of the methodologies of various aspects of the soil assessment is provided in Table 5.2.

Table 5.2: Soil assessment methodology

Activity	Details/Comments	Appendix
Review of Service Plans	Underground utility plans were reviewed on site prior to commencing intrusive works. Information on the location of services was also provided by the site owner.	F
Decontamination of soil sampling equipment	Decontamination procedure was completed in general accordance with AS4482.1-2005 in order to minimise cross-contamination of samples from sampling equipment: <ul style="list-style-type: none"> <li>Removal of soil adhering to sampling equipment</li> <li>Washing equipment in a bucket using potable water with Decon 90 and then rinsing with deionised water.</li> <li>Repeating the above steps where all potentially contaminating material was not removed.</li> </ul>	-
Soil collection	A drilling rig was used to excavate boreholes across the Site. Samples were collected using undisturbed sampling techniques (i.e. direct push tube). Soil samples were collected at routine depth intervals or where changes of lithology were noted. All boreholes were terminated in natural soils or where refusal was encountered. All collected samples were placed in new 250 mL glass sample jars provided by the laboratory and disposable gloves were used.	-
Sample logging	The lithology encountered at each location was documented in log sheets.	I
Sample preservation	Samples were stored in chilled containers while on site and in transit to the laboratory per the requirements as stated in EPA Publication IWRG 701, June 2009.	D
COC documentation	Chain-of-Custody (COC) documentation was prepared for sample transfer from the site to the laboratory.	D

#### 5.1.4 Laboratory analysis

A total of 36 samples were recovered and submitted to the laboratory. Of the 36 samples submitted to the laboratory, 12 samples were analysed for various COPC.

Laboratory analysis was undertaken by the primary laboratory Eurofins|mgt (Eurofins). Quality control samples were analysed by the secondary laboratory Australian Laboratory Services (ALS).

All soil samples recovered were submitted with Chain of Custody documentation to laboratories accredited by the National Association of Testing Authorities (NATA) to perform all analyses as described in Table 5.3.

Table 5.3: Analytical schedule

Type	Analysis	No. of Samples Analysed
Target (BH08-BH09) - UST in north east corner	BTEX, TRH, PAH, phenols, lead, pH	2
Grid (BH01-BH07)	Metals screen <sup>1</sup> , PAH, TRH, pH	6
QC Duplicate samples	Metals screen, BTEX, TRH, PAHs, phenols, pH	2

1. As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Mo, Pb, Ni, Mn, Sb, Se, Sn, V, Zn

2. As per analytes listed in Table 1A(1) of NEPM Schedule B 1 - Guideline on Investigation Levels for Soil and Groundwater



Quality control and quality assurance samples, including two blind duplicates (QC1 and QC2) and two split duplicates (QC1A and QC2A) were also collected and submitted for analysis.

## 5.2 Groundwater assessment

### 5.2.1 Field work activities

A summary of the fieldwork activities for the groundwater assessment is provided in Table 5.4.

Table 5.4: Groundwater assessment – field work activities

Date	Activity	Summary Details
23/10/2017 24/10/2017	Well installation	Installation of groundwater monitoring wells MW01 (BH03) and MW02 (BH04)
24/10/2017 12/12/2017	Well monitoring and surveying	Wells were surveyed for coordinates and elevation. Gauging of the groundwater level in monitoring wells MW01 (BH03) and MW02 (BH04) – Both wells found to be dry.

### 5.2.2 Groundwater monitoring well installation

Two monitoring wells, MW01 and MW02, were drilled at the site to a depth of 20.5 and 30 m bgl, respectively. The wells were installed using a Hanjin D&B-8D model multi-purpose drill rig supplied and operated by Chadwick Geotechnics. Drilling was carried out using solid auger within soil and down-hole hammer in rock. During drilling, conditions of the subsurface were recorded on monitoring well log sheets (presented in Appendix I). The installation of the wells was licensed under a Bore Construction Licence issued by Southern Rural Water (Appendix K).

The two wells (MW01-MW02) were constructed of 50mm Class 18 PVC and slotted screen. A graded sand pack extended to approximately 1 m above the slotted screen at each well and a bentonite seal was installed above the sand pack and then grouted to surface. The wells were covered with gatic covers. Well drilling and construction was undertaken in accordance with the Minimum Construction Requirements for Bores in Australia, Edition 3 (February 2012).

Following installation each well was surveyed to determine geographical location and depth to groundwater from top of casing. According to the online VVG database<sup>4</sup>, groundwater is likely to be present within the quaternary aged volcanic aquifer at depths of approximately 10-20 meters below ground surface. However, the wells installed onsite up to a depth of 30 m bgl were found to be dry when gauged in October and December 2017. Due to the absence of groundwater in the wells installed, no sampling was undertaken at the site.

Table 5.5 summarises the groundwater well construction details of the two wells installed by T+T onsite.

Table 5.5: Well construction details for onsite wells

Well ID	MW01	MW02
Drilled Depth (m bgl)	20.5	30
Easting	313274	313277
Northing	5816709	5816665
RL m AHD (TOC)	37.2	37.0

<sup>4</sup> <http://www.vvg.org.au/VVG>

Well ID	MW01	MW02
Screen Interval (m bgl)	14.5-20.5	27-30
Lithology	Basalt	Basalt

Note: bgl = below ground level, RL = reduced level, TOC = top of casing.

## 6 Soil Assessment Guidelines

The State Environment Protection Policy (Prevention and Management of Contamination of Land) (SEPP PMCL) 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 SEPP PMCL was declared in June 2002 in accordance with Section 16 of the Environment Protection Act 1970.

The SEPP PMCL identifies specific land use categories as well as a number of protected beneficial uses associated with each of the land use 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 SEPP PMCL, for those beneficial uses, have been exceeded.

Based on current zoning of the site, which is Industrial 3 Zone ('INW3Z'), the land use for the site would be defined as 'Sensitive Use – High Density'.

**Table 6.1: Protected beneficial uses of land**

Beneficial Uses	Land Use						
	Parks & Reserves	Agri-cultural	Sensitive Use		Recreational /Open Space	Commercial	Industrial
			High Density	Other			
Maintenance of Ecosystems							
- Natural Ecosystems	✓						
- Modified Ecosystems	✓	✓		✓	✓		
- Highly Modified Ecosystems		✓	✓	✓	✓	✓	✓
Human Health	✓	✓	✓	✓	✓	✓	✓
Buildings & Structures	✓	✓	✓	✓	✓	✓	✓
Aesthetics	✓		✓	✓	✓	✓	
Production of Food, Flora & Fibre	✓	✓		✓			

Note: The above table is a reproduction of 'Table 1' from the SEPP PMCL.

Based on the relevant beneficial uses (as highlighted in Table 6.1), the adopted criteria for protection of each of these beneficial uses are discussed in the following sections. Where the listed guidelines do not provide criteria for specific analytes, alternative criteria have been adopted.

In order to discuss the protection of all potential land uses applicable to the proposed development of the site, an assessment of all beneficial uses that apply for sensitive land use has been undertaken.

### 6.1.1 Maintenance of (highly modified) ecosystems

Ecological Investigation Levels (EIL) and Ecological Screening Levels (ESL) contained within the ASC NEPM (National Environment Protection (Assessment of Site Contamination) Measure 1999 amended 2013), were adopted for determining whether or not this beneficial use is precluded by site conditions.



Information on derivation of EILs is provided within the ASC NEPM. For this assessment, T+T have used the EIL calculation spreadsheet provided in the ASC NEPM Toolbox on the Environment Protection and Heritage Council (EPHC) website. The ASC NEPM EILs require inputs with respect to age of contamination, cation exchange capacity (CEC) of the soils, percentage clay of the soils (%Clay), State (or closest State) the site is in and traffic volume of roads adjacent the site.

A summary of information associated with the inputs is provided in Table 6.2.

Table 6.2: Inputs to EIL Derivation

Parameter	Value	Basis
Profile	-	Near surface soils
Soil Type	-	Sandy, gravelly CLAY (Fill)
Age of contamination	>2 years (i.e., 'Aged')	Given the recent site uses and the presence of hardstand surfacing across much of the site it is considered any application of chemicals is unlikely to have resulted in pollution within the last 2 years.
Soil CEC (cmolc/kg dwt)	10	Conservative value based on characteristic of fill soils at the site.
%Clay	>10%	With reference to sample description and testing undertaken.
pH	8.8	Median concentration from samples analysed
Organic Carbon (%)	1	Conservative value adopted
% Fe	-	Not applicable since the contamination is considered 'aged'.
State	Victoria	-
Traffic volume	High	Site is adjacent a road and industrial area.

EILs were derived as summarised in Table 6.3.

Table 6.3: Derived EILs and ESLs

Analyte	Adopted and/ or Derived EILs (mg/kg)
Arsenic	100
DDT	180
Naphthalene	170
Lead	1,100
Copper	200
Chromium III	410
Nickel	180
Zinc	460
TPH F1 (C6-C10)	180
TPH F2 (>C10-C16)	120
TPH F3 (>C16-C34)	1,300
TPH F4 (>C34)	5,600
Benzene	65
Toluene	105
Ethylbenzene	125

Analyte	Adopted and/ or Derived EILs (mg/kg)
Xylene	45
Benzo(a)pyrene	0.7

The EIL derivation sheets are provided in Appendix L.

### 6.1.2 Human health

The Health Investigation Levels (HILs) and Health Screening Levels (HSL) contained within the ASC NEPM were adopted for the purposes of determining whether this beneficial use is precluded by site conditions. The 'B' HILs provide criteria to assess risk to human health for 'High Density' residential land use, which applies to sites with limited to no access to site soils. The 'A' HILs provide criteria to assess risk to human health for 'Low Density' residential land use.

Where the NEPM does not provide HILs alternative guidelines have been referenced such as US EPA Region 9, May 2016, Regional Screening Levels, Residential Soil, noting that these values are typically based on a lower risk target than adopted in Australian guidance.

Where the alternative guidelines and the NEPM provide screening levels for a given analyte, only the NEPM screening level has been considered.

### 6.1.3 Buildings and structures

For the protection of buildings and structures at the site, consideration will be given to the potential for the land to be corrosive to or adversely affect the integrity of structures or building materials. Specifically, consideration was given to pH and sulphate and the concentration of any other chemical substances that may have a detrimental impact on the integrity of structures or building materials. In evaluating the conditions of site soils with respect to the potential impacts to buildings and structures, criteria from Australian Standard AS2159 '*Piling Design and Installation*' (2009) were adopted.

Table 6.4 provides a copy of the criteria provided in Table 6.2.4(C) of AS2159.

Table 6.4: Exposure classification results

Exposure conditions				Exposure classification	
Sulphates (expressed as SO <sub>4</sub> )		pH	Chlorides in groundwater ppm	Soil conditions A (high permeability soils)	Soil conditions B (low permeability soils)
In Soil ppm	In groundwater ppm				
<5,000	<1,000	>5.5	<6,000	Mild	Non-aggressive
5,000 – 10,000	1,000 – 3,000	4.5 – 5.5	6,000 – 12,000	Moderate	Mild
10,000 – 20,000	3,000 – 10,000	4 – 4.5	12,000 – 30,000	Severe	Moderate
>20,000	>10,000	<4	>30,000	Very Severe	Severe

The ASC NEPM also provides 'Management Limits' which are to be applied after consideration of the relevant ESLs and HSLs. The management limits are used to consider the formation of phase separated hydrocarbons, fire and explosion risks, damage to buried infrastructure and aesthetics.

Table 6.5 lists criteria adopted for the management limits as provided in Table 1 B(6) of the ASC NEPM.

Table 6.5: Adopted management limits

Analyte	Adopted criteria (mg/kg)
TPH F1 (C6-C10)	800
TPH F2 (>C10-C16)	1,000
TPH F3 (>C16-C34)	3,500
TPH F4 (>C34)	10,000

#### 6.1.4 Aesthetics

The SEPP PMCL states that “contamination must not cause the land to be offensive to the senses of human beings”. Currently there are no concentration-based aesthetic criteria for soil. While aesthetic observations are subjective, it is considered that if there is discolouration, noticeable odour from the soil on the site or if there are obvious components of waste, such as rubble, slag, bagged waste or similar, then there is a potential aesthetic concern.



## 7 Soil Investigation

A detailed soil investigation was undertaken to assess potential for contamination associated with past site activities. Sampling methodology involved broad scale sampling and targeted locations in areas that would represent potential contamination concerns (refer Section 4.1).

The site layout is provided in Figure 2 within Appendix A.

### 7.1 Soil profile

The geological logs in Appendix I show the varying soils encountered, any observations of potential contamination, together with the depth of samples recovered at the sampling locations. No aesthetic issues were observed during sampling work, with the exception of minor brick fragments in BH06 and odorous soils adjacent the UST.

Top soils consisting of brown sandy clay were encountered at all the locations from the surface to depths between 0.4 m bgl and 0.6 m bgl. This layer overlies soils of brown to light brown to grey layer of clay. Refusal was encountered at depth varying between 0.4 and 1.3 m bgl at borehole locations BH01-BH03 and BH05, suggesting the presence of shallow weathered basaltic flows. Basaltic rock was encountered below the top soil layer extending up to termination depths (20.5 and 30 m bgl) at the two groundwater well locations.

Fill or re-worked site soils were encountered within the warehouse (BH06 and BH07) and around the remnant UST infrastructure in the northeast portion of the property (BH08 and BH09). The fill within the warehouse was described as a sandy gravelly clay identified from surface or immediately below the concrete surfacing to depths of approximately 0.5 m bgl. The fill encountered at the borehole locations around the remnant UST was mostly described as a brown clay, which extended to termination depth (4.5 m bgl).

Geological logs are supplied in Appendix I.

### 7.2 Analytical results

Analytical results identify elevated concentrations of cobalt, benzo(a)pyrene (BaP) and Total Petroleum Hydrocarbons (TPH). The specific screening levels exceeded by these analytes highlighted in Table 7.1 are indicated below.

Tabulated analytical results are provided in Appendix C of this report and NATA Certified Laboratory reports are provided in Appendix D.

Table 7.1: Exceeded Soil Screening Level (SL) Summary

Elevated Analyte	SL (mg/kg)			Samples Exceeding SL	Concentration (mg/kg)
	Ecological	Human Health	Management Limits		
Metals					
Cobalt	NA	100	NA	BH09-3.0	110
Polycyclic aromatic hydrocarbons (PAH)					
Benzo(a)pyrene	0.7	NA	NA	BH01-0.1	9.9
BaP TEQ	NA-	3	NA	BH01-0.1	15
TPH					
C10-C16	NA	NA	1000	BH06-0.5	1600

Elevated Analyte	SL (mg/kg)			Samples Exceeding SL	Concentration (mg/kg)
	Ecological	Human Health	Management Limits		
				BH08-3.0	1100
C16-C34	1300		3500	BH06-0.5	1700
C10-C16 less Naphthalene	120	280	NA	BH06-0.5	1600
				BH08-3.0	100
				BH09-3.0	780

### 7.3 Discussion of soil results

The majority of the soils sampled reported results below the adopted criteria for those analytes tested. Of those samples reporting above the criteria, these were limited to moderately elevated concentrations of cobalt and TPH. An elevated BaP concentration was reported in one surface sample from the rear of the site (borehole location BH01). The toxic equivalency quotient (TEQ) for the culmination of potentially harmful PAH constituents (relative to BaP) also reported a concentration (15 mg/kg) above the adopted human health criteria (3 mg/kg).

All the other samples exceeding the criteria were located within fill material, within the warehouse building (BH06) and around the UST (BH08 and BH09). The elevated TPH concentrations reported at borehole location BH06 were above the human and ecological screening levels, along with the management limits for residential sites. Samples taken from the fill at 3 m bgl at borehole locations BH08 and BH09 reported TPH concentrations above the ecological screening level and management limits for residential sites. Sample BH09-3.0 also reported elevated cobalt, above the human health screening level for Health Investigation Level (HIL) A, but below the screening level for HIL B.

## 8 Groundwater Investigation

A physical investigation of groundwater was not undertaken at the site due to the absence of groundwater in the wells installed. With groundwater depth at the site greater than 30 m bgl, there is unlikely to be any significant risk from potential vapours emanating from contaminated groundwater. The depth to groundwater also makes it unlikely that any potential site derived contamination would have reached groundwater underlying the site, unless significant evidence of contamination in soils was identified.



## 9 Beneficial Uses

### 9.1 Beneficial uses of land

In order to confirm whether or not beneficial uses of land at the Site are precluded, we have discussed each beneficial use with respect to the land setting, and proposed/potential use of the site. T+T has assessed beneficial uses based on current site status, with comment also on likely future condition of the site.

#### 9.1.1 Maintenance of modified and highly modified ecosystems

In general, site soils have not exhibited contaminant concentrations above the beneficial uses criteria. One exceedance was reported for BaP, with all but one other result reported as 'non-detect'. Exceedances for were reported TRH at three locations, in fill soils within the factory and adjacent the UST.

It is noted that the ecological screening level of 0.7 mg/kg as provided in the NEPM was based on direct adoption of the Canadian Soil Quality Guideline (SQG). However, since the review of the NEPM, the Canadian values have been revised up (the latest CCME environmental SQG from 2010 is 20 mg/kg for residential/parkland for BaP). It is expected that actual risk from BaP to ecological communities at the site is limited, given significant past modification and no remnant natural vegetation and this beneficial use is not likely to be compromised in a high density residential setting.

The hydrocarbon impacts are considered to present a risk to ecological receptors. The impacts at the UST locations are likely to be relatively localised, and should be removed. The impacts at the location within the factory (BH06) will require delineation, with the impacted soils removed to preserve this beneficial use.

#### 9.1.2 Human health

Based on the proposed redevelopment of the Site, this beneficial use is considered relevant.

None of the results reported concentrations above the adopted human health criteria, with the exception of the result for cobalt from location BH09; BaP TEQ in sample BH01-0.1 and TPH in BH06.

Cobalt was reported at a depth of 3 m bgl, and it is unlikely that human receptors would come in contact with these soils. The result is below the HIL for high density residential use and would not constrain the use of the site for that purpose.

The BaP TEQ is above the low and high density residential criterion and will need to be removed from site.

The sample from borehole BH06 within the fill soils exceeded the adopted criteria for vapour intrusion, in clay soils at depths of less than 1 m (280 mg/kg). As stated above, the TRH impacts at this location will require delineation, and removal to meet the ecological criteria, which will also be required to remove any potential vapour intrusion impacts.

Following the removal of the impacted soils, this beneficial use is considered to be protected.

#### 9.1.3 Buildings and structures

Based on the proposed redevelopment of the Site, this beneficial use is considered relevant.

The laboratory results were evaluated against the values provided in AS2159. Adopting the soil conditions 'B' from Table 6.4, the pH results reported indicate an exposure classification to be 'Non-

aggressive'. The presence of structures on the site and the surrounding land further indicates soil conditions are not likely to present a risk to this beneficial use.

The TPH concentrations from locations BH06 and BH08 (1,600 and 1,100 mg/kg respectively) were above the management limit for the C10-C16 fraction (1,000 mg/kg). While in exceedance of the management limit, the reported concentrations are unlikely to present a risk to typical building materials. Furthermore, the soils from these locations will require removal from site to restore the ecological and human health beneficial uses.

Following removal of these impacts this beneficial use is considered to be protected at the site.

#### 9.1.4 Aesthetics

Based on the proposed redevelopment of the Site, this beneficial use is considered relevant.

In order to assess the site in terms of the beneficial use aesthetics, field observations relating to odours, staining and the presence of wastes were recorded.

##### Odours

A hydrocarbon odour was reported during the drilling of boreholes BH08 and BH09. This is likely associated with contamination from the UST at this location and is unlikely to be laterally extensive.

##### Staining

No staining likely to impact upon this beneficial use was identified at site during the investigation.

##### Wastes

Some minor quantities of solid inert waste (i.e. fragments of brick and tile) were identified within fill soils location BH02. However, the quantity and size of the fragments are not likely to present an aesthetic impact in the context of the intended site use, therefore this beneficial use is considered to be protected.

#### 9.1.5 Summary

Following excavation and removal of the UST any associated infrastructure, and demolition of the factory building, removal of the hydrocarbon impacted soils at locations BH06, BH08 and BH09 is recommended to preserve the ecological and human health beneficial uses.

Removal of any soils exhibiting hydrocarbon odours in the vicinity of the UST will be required to restore the beneficial use of aesthetics.

All other beneficial uses are considered to be currently protected.

## 10 Quality Assurance and Quality Control

### 10.1 Quality Control procedures

A quality assurance/quality control (QA/QC) program based on relevant Australian Standards was implemented as part of field procedures for this ESA.

The QA/QC program undertaken as part of the assessment by T+T included the following:

- Use of appropriately trained field staff throughout the assessment;
- Implementation of T+T procedures for all aspects of field works including sample handling, container labelling, equipment decontamination and sample preservation;
- Transportation of samples with accompanying COC documentation;
- Collection of blind and split duplicate samples and calculation and review of relative percent difference (RPDs);
- Compliance with recommended sample holding times; and
- Use of NATA accredited laboratories for the analysis undertaken (analysis for which NATA accreditation is available).

### 10.2 Decontamination procedures

Non-dedicated sampling equipment was disassembled (if possible), scrubbed and washed using Decon 90 solution and rinsed with de-ionised water. Disposable equipment did not require decontamination as it was not re-used (i.e. nitrile gloves, tubing, and disposable bailers).

### 10.3 Field QC sampling program

The QC sampling program conducted as part of this investigation involved collection of replicate samples for data reliability purposes, assessing possible errors due to potential sources of cross contamination, inconsistencies in sampling, and analytical techniques etc.

A quantitative measure of the accuracy of the results obtained was undertaken by calculating the relative percent difference (RPD) values for each duplicate pair. The RPD values were calculated using the following equation:

$$\text{Relative Percent Difference} = \frac{\text{Result 1} - \text{Result 2}}{\text{Mean Result}} \times 100$$

Where Result 1 = concentration obtained from the original sample

Result 2 = concentration obtained from the split or duplicate sample

The RPD was used to normalise each pair of results, allowing data interpretation of reliability. For RPD values that exceed a generally accepted 30 to 50% limit (AS 4482.1 – 2005), correlation of data between the sample pair is considered poor.

QC samples collected included intra-laboratory and inter-laboratory replicate samples.

Table 10.1 provides the QC samples pairs collected during the soil assessment works.



Table 10.1: QC sampling program

Sample Type	Date Sampled	Replicate ID	Primary ID	Replicated Analysis
Interlab duplicates	24/10/2017	QC01	BH05-0.1	Metals, TRH, BTEXN, PAH/Phenols
	12/12/2017	QC02	BH07-0.5	
Intralab duplicates	24/10/2017	QC01A	BH05-0.1	
	12/12/2017	QC02A	BH07-0.5	

In accordance with AS4482.1 (2005) the soil quality control samples should be collected for every 20 primary samples. For this investigation 12 primary samples were collected along with 2 blind replicates and 2 split replicates and therefore the 1 in 20 ratio has been met.

An RPD was calculated for each replicate analyte pair and these are provided in Tables contained in Appendix C. In some cases RPDs were reported above the typical range of 30-50% provided in AS4482.1 (2005). Each elevated RPD is provided in Table 10.2 and discussed in the sections below.

Table 10.2: Summary of soil assessment elevated RPDs

Primary Sample	Replicate Sample	Analyte	RPD (%)
Intra-laboratory Replicates			
BH05-0.1	QC01	Manganese	61
		Nickel	51
Inter-laboratory Replicates			
BH07-0.5	QC02A	Arsenic	100
		Cobalt	130
		Nickel	98

The replicate pairs showed some variance but were below the screening levels, with the exception of the HIL adopted for cobalt for low density residential scenario. However, the result was below the high density residential HIL, and as such the variance is not considered to have affected the interpretation of the results in relation to impacts on beneficial uses in a high density residential scenario.

The RPD assessment has been included as Appendix G.

### 10.3.1 Compliance with recommended holding-times

Recommended holding times were complied with for all batches of samples submitted to the primary and secondary laboratories.

### 10.3.2 Laboratory internal Quality Control

In all cases the analytical results met the laboratories' own quality control regime. NATA accredited laboratories were used and the results of the analysis are therefore considered reliable.

### 10.3.3 Conclusions of QA/QC program

Based on the results of the QA/QC program as detailed above, the following is concluded:

- The field sampling procedure was carried out in general accordance with recommendations from relevant guidelines and standards.

- Some variance was reported between replicated samples which exceeded the typical RPD range of 30-50% from AS4482.1 (2005). Overall, the variance is not considered likely to impact upon the interpretation of results.
- Laboratories used were NATA accredited for the analyses performed (where available) and the data met each laboratories' own quality requirements.
- Samples were analysed within the applicable holding times.
- It is concluded that the sampling and analytical programs were acceptable and the results obtained are of reliable quality to reach the conclusions made in this report regarding the contamination status of soils and groundwater at the Site.

## 11 Summary and Conclusions

T+T was commissioned to conduct an Environmental Site Assessment for the site at 53 Wattle Road and 34 George Street, Maidstone.

The site is proposed to be developed for high density residential use.

The site has been used historically for activities such as a bus depot (with fuel storage), and more recently as a commercial factory.

While several potential disused fuel storage tanks were observed in aerial photographs on the surface in the southern portion of the site, there was no evidence of the USTs having been buried at the site (i.e. no pits/pipes/deep fill/uneven ground where tanks may have been etc.), other than the remaining UST present in the northeast corner. On this basis, the investigation focussed on impacts from the insitu UST, and the activities associated with the building and general assessment of diffuse source impacts in the southern half of the site.

### 11.1 Soil assessment

A total of 7 grid based and 2 target locations were advanced as part of the soil investigation.

Soils analysis identified an elevated concentration of cobalt from soils at depth (3 m) exceeding the low density residential, human health (HIL A) criterion, but below the screening level for high density residential (HIL B). Results for TRH exceeding the ecological criteria were reported at several locations (BH06, BH08 and BH09). Results from boreholes BH06 and BH08 were above the adopted management limit for TRH C10-C16, and above the vapour intrusion criterion at BH06. The reported TRH impacts appear to be localised to location BH06 and the UST in the north east of the site. Hydrocarbon odours were noted at locations adjacent to the UST

BaP was reported above the ecological criteria at one location (BH01). However, the BaP criterion provided in the NEPM is conservatively low, and actual risk to ecological communities on site (given the highly modified nature of the site currently (or for future high density use) is considered to be acceptable. The result also exceeded the HIL for BaP TEQ.

pH varied across the site ranging between 8.3 and 11 pH units. However, this is considered likely a natural feature of the local soils.

Fragments of solid inert waste were also observed in the shallow fill soils at location BH02. However, the quantity and size of these fragments are not considered to present a significant aesthetic impact in the context of the proposed site use.

For the site to be considered suitable for high density residential use, removal is required of the UST and the impacted soils exceeding the adopted ecological and human health criteria at locations BH1, BH06, BH08 and BH09 by removed from site, under supervision of a qualified environmental scientist. Any use would need to be considerate of the soils around BH01 which do not appear to be suitable for garden beds due to elevated BaP.

While the original desktop assessment identified a medium to high potential for contamination based on historical uses, the results of the testing have generally not indicated significant contamination of the site, other than at targeted areas as noted above. Given the impacts identified and that established remedial and management options are readily available for the types of impacts observed, these issues could potentially be addressed through the redevelopment and construction phase and a validation report provided as a condition of the planning approval, rather than requirement for an Environmental Audit.

However, should any material be identified during the excavation works, that is not consistent with the representative samples (i.e. a change in soil types, presence of unknown fill or odorous or stained soils), or evidence of other pits or structures underlying the building that have not been previously observed, a review of that material and site suitability should be conducted to confirm whether the results reported above are still applicable.

## 11.2 Groundwater assessment

A physical groundwater assessment was not able to be undertaken at the site due to depth to groundwater being greater than 30 m bgl.

A total of two monitoring wells were installed on the site to depths of 20.5 m bgl and 30 m bgl. Gauging undertaken a week following well installation reported both wells as dry, indicating groundwater is greater than 30 m bgl at the site. Information from previous investigations on sites in the area indicated groundwater in the region is likely to be impacted from dispersed point sources. However, the depth to groundwater is considered unlikely to present a significant risk in the context of the proposed high density residential use.



## 12 Applicability

This report has been prepared for the exclusive use of our client Latin America Pty Ltd, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

Recommendations and opinions in this report are based on data from discrete sampling locations. The nature and continuity of subsoil away from the sampling locations are inferred but it must be appreciated that actual conditions could vary from the assumed model.

Tonkin & Taylor Pty Ltd

Report prepared by:

Authorised for Tonkin & Taylor Pty Ltd by:



Tom Madill

Senior Environmental Scientist



Tim Vass

Project Director

mmbp

t:\south melbourne\projects\1003973\workingmaterial\1003973\_20171215\_r01\_rko\_comments.docx

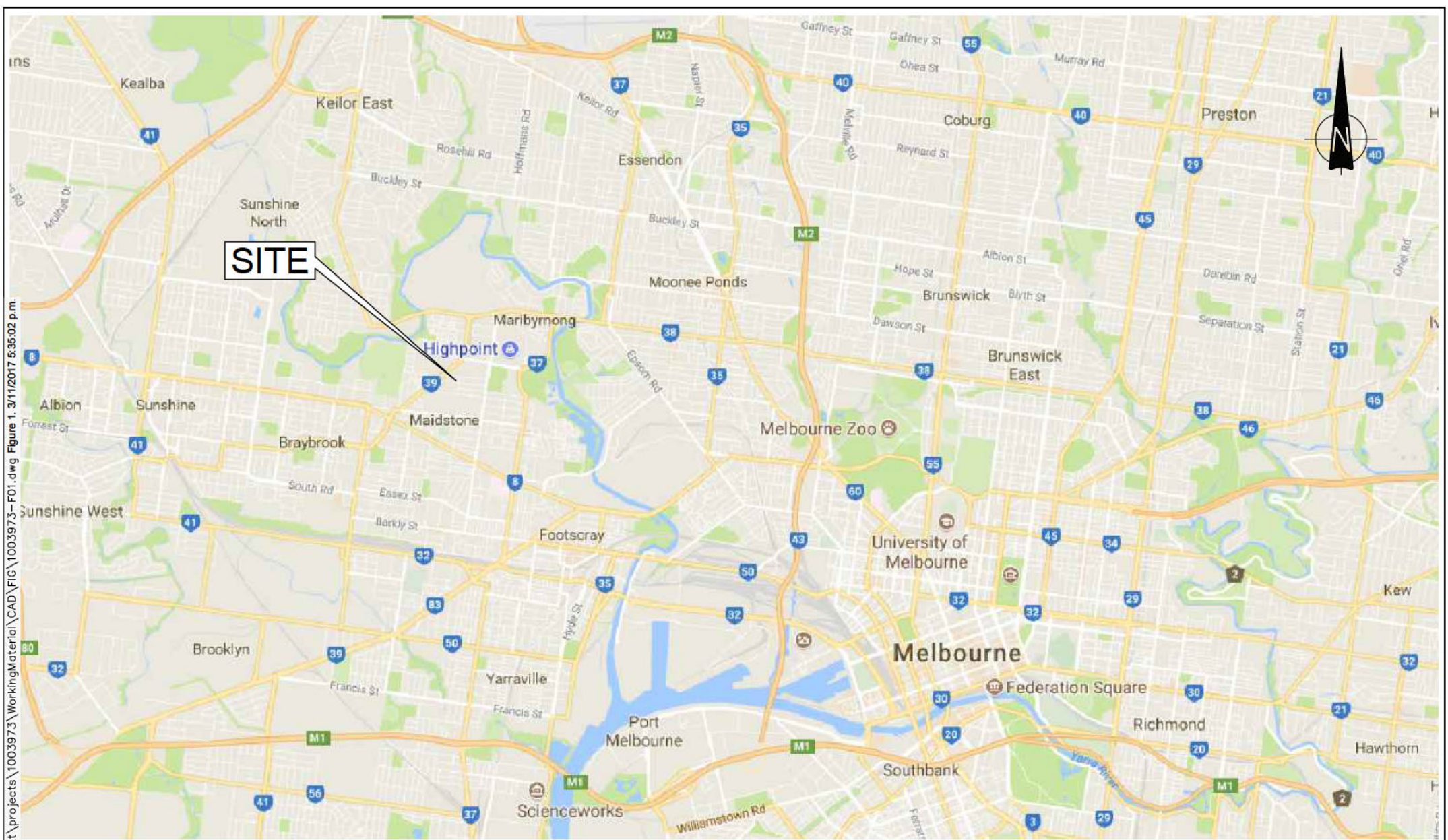


## Appendix A: Figures

---







Street map sourced from Google Maps (Copyright 2017).

A3 SCALE 1: 1000  
0 5 10 15 20 30 40 50 (m)

ORIGINAL IN COLOUR



**Tonkin+Taylor**

Tonkin & Taylor Pty Ltd  
Kings Technology Park, Ground Floor 95 Coventry St  
Southbank, Victoria, 3006  
Ph: (03) 9863 8686  
www.tonkintaylor.com.au

DRAWN	KAH	Nov.17
DRAFTING CHECKED		
APPROVED		
CADFILE :	1003973-F01.dwg	
SCALES (AT A4 SIZE)	NTS	
PROJECT No.	1003973	

**LATIN AMERICA PTY LTD**  
ENVIRONMENTAL SITE ASSESSMENT  
53 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC  
Regional Site Location Plan

FIG. No. **Figure 1.** REV. **0**



\\\\mcl\\data\\rep\\live\\tt\\projects\\1003973\\WorkingMaterial\\CAD\\FIG\\1003973-F02.dwg Figure 1. 3/11/2017 5:37:34 p.m.




#### LEGEND

 Site Boundry

Aerial photo sourced from NearMap (copyright 2017). Date flown: 10/10/2017.

A3 SCALE 1: 1000  
0 5 10 15 20 30 40 50 (m)

  
ORIGINAL IN COLOUR



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Kings Technology Park, Ground Floor 95 Coventry St  
Southbank, Victoria, 3006  
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DRAWN	KAH	Nov.17
DRAFTING CHECKED		
APPROVED		
CADFILE : \\1003973-F02.dwg		
SCALES (AT A4 SIZE) 1:1000		
PROJECT No.	1003973	

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ENVIRONMENTAL SITE ASSESSMENT  
53 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC  
Site Plan

FIG. No. Figure 2

REV. 0



T:\South Melbourne Projects\1003973\WorkingMaterial\CAD\FIG\1003973-F03.dwg, Figure 3, 5/02/2018 9:47:42 AM  
T:\South Melbourne Projects\1003973\WorkingMaterial\CAD\FIG\1003973-F03.dwg, Figure 3, 5/02/2018 9:47:42 AM



#### LEGEND

- Site Boundary
- ⊕ BH02 Borehole
- MW02 Monitoring Well

Aerial photo sourced from NearMap (copyright 2017). Date flown: 10/10/2017.

A3 SCALE 1: 1000  
0 5 10 15 20 30 40 50 (m)

ORIGINAL IN COLOUR



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Southbank, Victoria, 3006  
Ph: (03) 9863 8686  
www.tonkintaylor.com.au

DRAWN	KAH	Feb.18
DRAFTING CHECKED		
APPROVED		
CADFILE : \\1003973-F03.dwg		
SCALES (AT A4 SIZE) 1:1000		
PROJECT No.	1003973	

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ENVIRONMENTAL SITE ASSESSMENT  
53 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC  
Sample Location Plan

FIG. No. Figure 3

REV. 0





## Appendix B: Planning Property Report

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# Planning Property Report

from [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 10 October 2017 04:46 PM

**Address:** 34 GEORGE STREET MAIDSTONE 3012

**Lot and Plan Number:** Lot 205 LP1504

**Local Government (Council):** MARIBYRNONG **Council Property Number:** 104985

**Directory Reference:** Melway 27 J10

This property has a total of 3 parcels.

For full parcel details get the free Basic Property report at [Property Reports](#)

See next page for planning information

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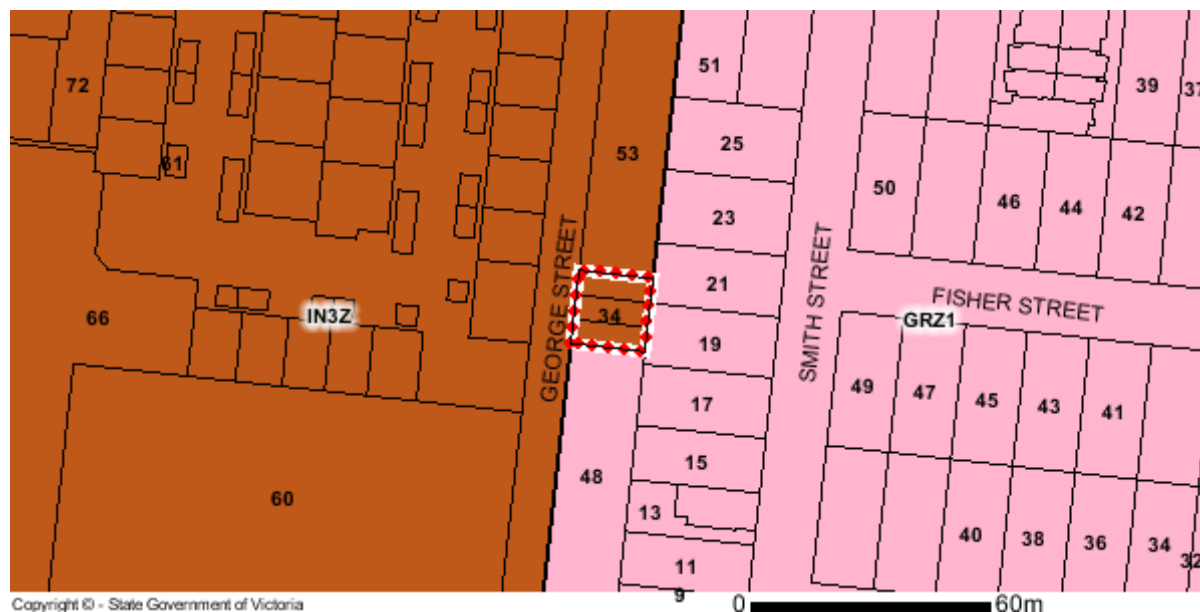
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## Planning Zone

### INDUSTRIAL 3 ZONE (IN3Z)

#### SCHEDULE TO THE INDUSTRIAL 3 ZONE (IN3Z)



Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

### Zones Legend

ACZ - Activity Centre	IN1Z - Industrial 1	R1Z - General Residential
B1Z - Commercial 1	IN2Z - Industrial 2	R2Z - General Residential
B2Z - Commercial 1	IN3Z - Industrial 3	R3Z - General Residential
B3Z - Commercial 2	LDRZ - Low Density Residential	RAZ - Rural Activity
B4Z - Commercial 2	MUZ - Mixed Use	RCZ - Rural Conservation
B5Z - Commercial 1	NRZ - Neighbourhood Residential	RDZ1 - Road - Category 1
C1Z - Commercial 1	PCRZ - Public Conservation & Resource	RDZ2 - Road - Category 2
C2Z - Commercial 2	PDZ - Priority Development	RGZ - Residential Growth
CA - Commonwealth Land	PPRZ - Public Park & Recreation	RLZ - Rural Living
CCZ - Capital City	PUZ1 - Public Use - Service & Utility	RUZ - Rural
CDZ - Comprehensive Development	PUZ2 - Public Use - Education	SUZ - Special Use
DZ - Dockland	PUZ3 - Public Use - Health Community	TZ - Township
ERZ - Environmental Rural	PUZ4 - Public Use - Transport	UFZ - Urban Floodway
FZ - Farming	PUZ5 - Public Use - Cemetery/Crematorium	UGZ - Urban Growth
GRZ - General Residential	PUZ6 - Public Use - Local Government	
GWAZ - Green Wedge A	PUZ7 - Public Use - Other Public Use	
GWZ - Green Wedge	PZ - Port	

- - - - - Urban Growth Boundary

++++++ Railway    +---+---+---+ Tram    ——— River, stream    Lake, waterbody

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## Planning Overlay

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY (DCPO)

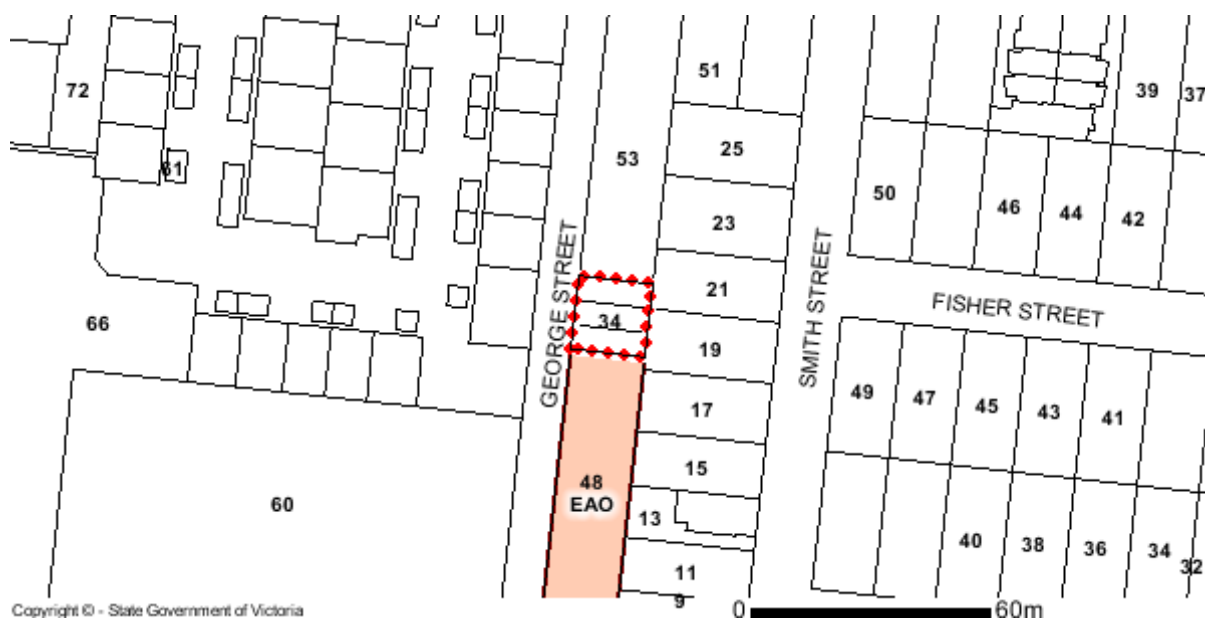
DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 2 (DCPO2)



### OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

ENVIRONMENTAL AUDIT OVERLAY (EAO)



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## Planning Overlays Legend

### Overlays Legend

 AEO - Airport Environs	 IPO - Incorporated Plan
 BMO - Bushfire Management	 LSIO - Land Subject to Inundation
 CLPO - City Link Project	 MAEO1 - Melbourne Airport Environs 1
 DCPO - Development Contributions Plan	 MAEO2 - Melbourne Airport Environs 2
 DDO - Design & Development	 NCO - Neighbourhood Character
 DDOPT - Design & Development Part	 PO - Parking
 DPO - Development Plan	 PAO - Public Acquisition
 EAO - Environmental Audit	 RO - Restructure
 EMO - Erosion Management	 RCO - Road Closure
 ESO - Environmental Significance	 SBO - Special Building
 FO - Floodway	 SLO - Significant Landscape
 HO - Heritage	 SMO - Salinity Management
 ICPO - Infrastructure Contributions Plan	 SRO - State Resource
	 VPD - Vegetation Protection
 Railway	 Tram
 River, stream	 Lake, waterbody

Note: due to overlaps some colours on the maps may not match those in the legend.

## Further Planning Information

Planning scheme data last updated on 3 October 2017.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

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# Planning Property Report

from [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 20 July 2017 03:01 PM

**Address:** 53 WATTLE ROAD MAIDSTONE 3012

**Lot and Plan Number:** Plan CP150094

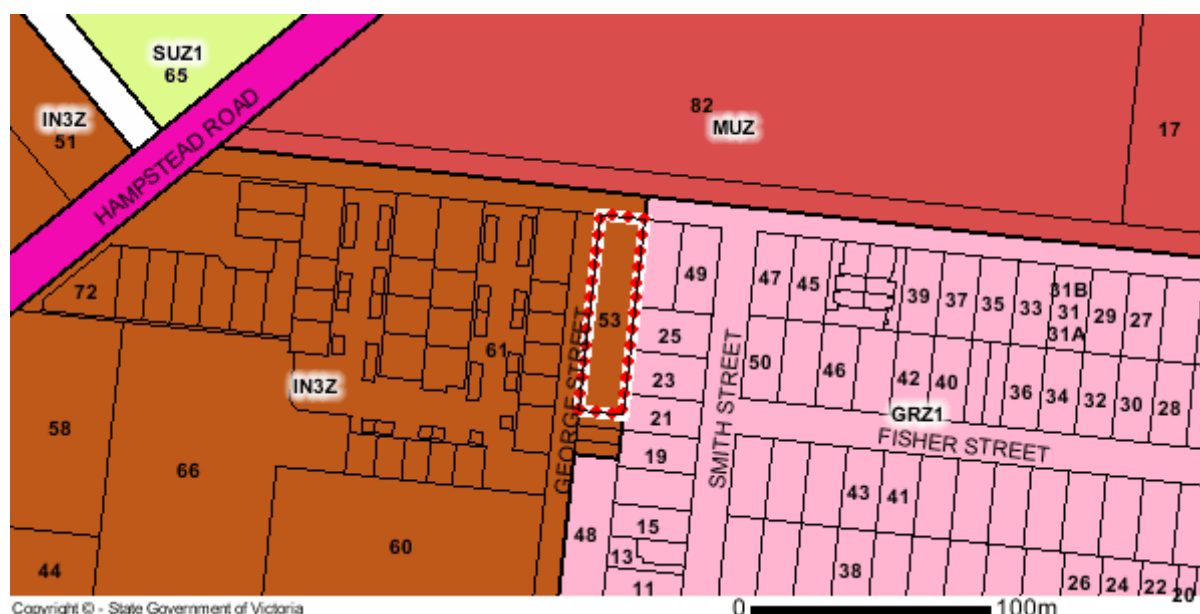
**Local Government (Council):** MARIBYRNONG **Council Property Number:** 107138

**Directory Reference:** Melway 27 J10

## Planning Zone

INDUSTRIAL 3 ZONE (IN3Z)

SCHEDULE TO THE INDUSTRIAL 3 ZONE



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C2Z - Commercial 2	PDZ - Priority Development	RGZ - Residential Growth
CA - Commonwealth Land	PPRZ - Public Park & Recreation	RLZ - Rural Living
CCZ - Capital City	PUZ1 - Public Use - Service & Utility	RUZ - Rural
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DZ - Dockland	PUZ3 - Public Use - Health Community	TZ - Township
ERZ - Environmental Rural	PUZ4 - Public Use - Transport	UFZ - Urban Floodway
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+++++ Railway    +---+---+ Tram    --- River, stream    Lake, waterbody

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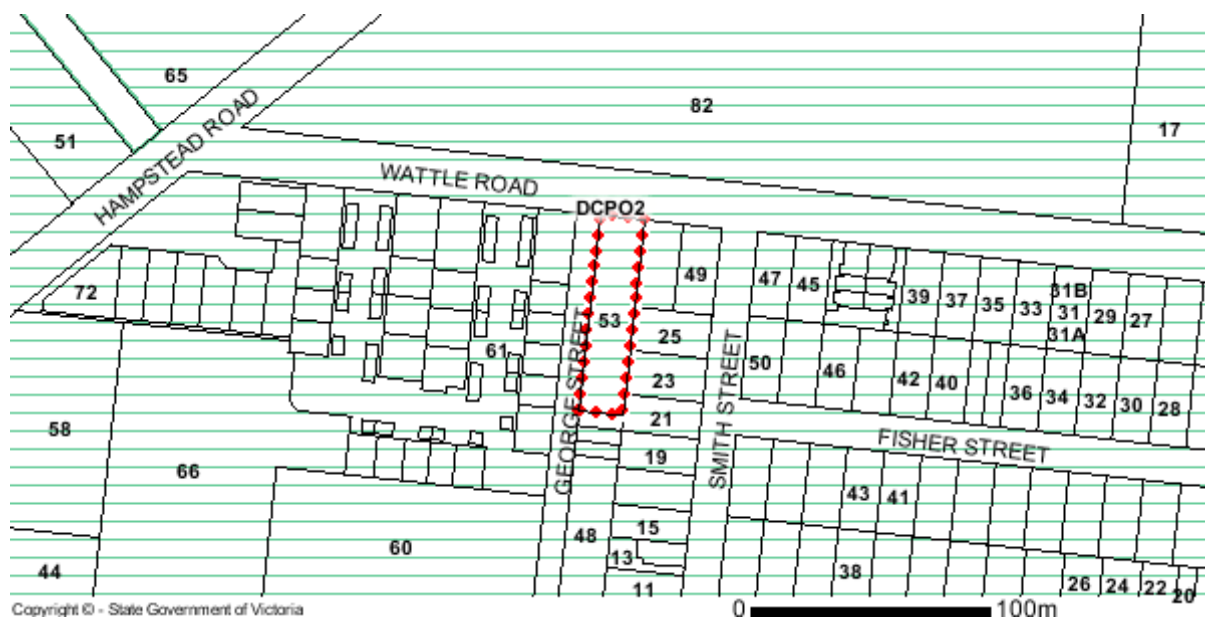


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## Planning Overlay

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY (DCPO)

DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 2 (DCPO2)



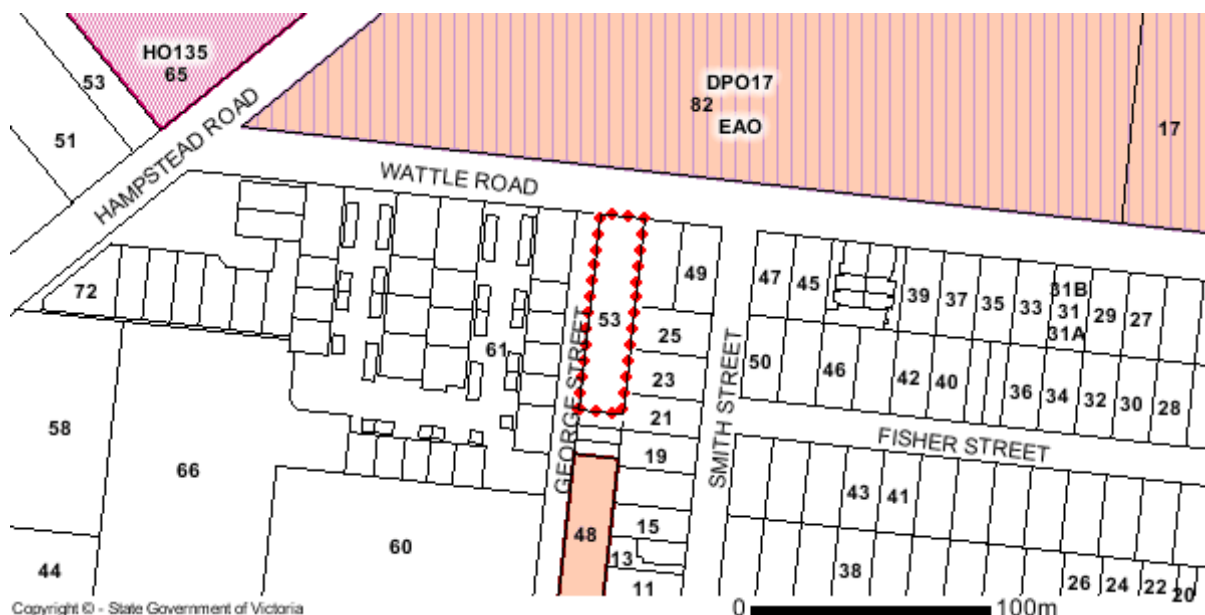
### OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

DEVELOPMENT PLAN OVERLAY (DPO)

ENVIRONMENTAL AUDIT OVERLAY (EAO)

HERITAGE OVERLAY (HO)



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## Planning Overlays Legend

### Overlays Legend

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 DDOPT - Design & Development Part	 PAO - Public Acquisition
 DPO - Development Plan	 RO - Restructure
 EAO - Environmental Audit	 RCO - Road Closure
 EMO - Erosion Management	 SBO - Special Building
 ESO - Environmental Significance	 SLO - Significant Landscape
 FO - Floodway	 SMO - Salinity Management
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## Appendix C: Tabulated Analytical Results

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Table 1: Laboratory Analytical Results

				Moisture Content		BTEX								Halogenated Phenols						Herbicides	Inorganics		Lead	Metals														PAH					
						Benzene	Ethylbenzene	Toluene	Total BTEX	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C10 less BTEX (F1)	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols	Dinoseb	Moisture Content (dried @ 103°C)	pH (aqueous extract)	Lead	Arsenic	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Cobalt	Copper	Manganese	Mercury	Nickel	Selenium	Zinc	Benzo[b+]]fluoranthene	Benzo[a]pyrene TEQ (lower bound) *	Benzo[a]pyrene TEQ (medium bound) *	Benzo[a]pyrene TEQ (upper bound) *	2,4-dimethylphenol	2,4-dinitrophenol	
%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg				
EQL		0.1	0.1	0.1		0.2	0.1	0.3	10	0.5	0.5	0.5	0.5	0.5	1	1	20	1	0.1	5	2	1	10	0.4	0.5	2	5	5	0.1	2	2	5	0.5	0.5	0.5	0.5	0.5	5					
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																																											
0-1m		0.7	NL	480				110	50																																		
1-2m		1	NL	NL				310	90																																		
2-4m		2	NL	NL				NL	150																																		
NEPM 2013 Table 1A(1) HILs Res A Soil															100					300	100	60	4500	20	100	100	6000	3800	40	400	200	7400											
NEPM 2013 Table 1A(1) HILs Res B Soil															130					1200	500	90	40000	150	500	600	30000	14000	120	1200	1400	60000											
EILs																				1100	100				410		220			280			1100										
NEPM 2013 Table 1B(6) ESLs for Urban Res		65	125	105		45			180																																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																																											

LocCode	Field ID	Sampled Date-Time	Lab Report Number																																						
BH01	BH01-0.1	23/10/2017	570085	-	-	-	-	-	-	-	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	30	8.3	79	13	<2	<10	<0.4	<1	20	41	560	0.1	73	<2	160	6.5	15	15	15	<0.5	<5	
BH02	BH02-0.1	23/10/2017	570085	-	-	-	-	-	-	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	27	8.5	69	15	<2	17	<0.4	<1	12	52	210	<0.1	30	<2	220	<0.5	<0.5	0.6	1.2	<0.5	<5		
BH03	BH03-0.1	23/10/2017	570085	-	-	-	-	-	-	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	15	8.5	88	21	2.4	10	<0.4	<1	27	52	480	0.1	77	<2	180	0.6	0.7	1	1.3	<0.5	<5		
BH04	BH04-0.1	24/10/2017	570085	-	-	-	-	-	-	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	24	9.1	18	8.6	<2	20	<0.4	<1	12	14	190	<0.1	23	<2	30	<0.5	<0.5	0.6	1.2	<0.5	<5		
BH05	BH05-0.1	24/10/2017	570085	-	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.3	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	17	-	<5	16	2.1	<10	<0.4	<1	28	49	620	<0.1	150	<2	69	<0.5	<0.5	0.6	1.2	<0.5	<5
BH06	BH06-0.5	12/12/2017	577186	-	-	-	-	-	-	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	10	11	7.6	<2	<2	<10	<0.4	<1	26	31	620	<0.1	110	<2	73	<0.5	<0.5	0.6	1.2	<0.5	<5		
BH07	BH07-0.5	12/12/2017	577186	-	-	-	-	-	-	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	17	9.5	8	<2	<2	13	<0.4	<1	12	7.8	92	<0.1	14	<2	21	<0.5	<0.5	0.6	1.2	<0.5	<5		
BH08	BH08-3.0	12/12/2017	577186	-	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.3	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	23	-	13	2	<2	23	<0.4	<1	31	7.7	170	<0.1	21	<2	18	<0.5	<0.5	0.6	1.2	<0.5	<5
BH09	BH09-3.0	12/12/2017	577186	-	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.3	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<20	25	-	17	4	<2	23	<0.4	<1	110	12	400	<0.1	39	<2	24	<0.5	<0.5	0.6	1.2	<0.5	<5






Table 1: Laboratory Analytical Results

					PAH/Phenols																				Phenolics			TPH																
					2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Pyrene	4,6-Dinitro-o-cyclohexyl phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	C10-C16	C16-C34	C34-C40	F2-NAPHTHALENE	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	C6-C10			
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
EQL					0.2	0.5	0.4	5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	20	1	20	50	100	100	50	10	20	50	50	50			10		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																																												
0-1m																							5																					
1-2m																							NL																					
2-4m																							NL																					
NEPM 2013 Table 1A(1) HILs Res A Soil																								300		3000																		
NEPM 2013 Table 1A(1) HILs Res B Soil																								400		45000																		
EILs																							170																					
NEPM 2013 Table 1B(6) ESLs for Urban Res														0.7																														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																																	1000	3500	5600	120							800	
LocCode	Field ID	Sampled Date-Time		Lab Report Number		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<1	<20	<50	540	<100	<50	<20	<20	370	250	620	-	<20			
BH01	BH01-0.1	23/10/2017		570085		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20 <td>&lt;1</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;100</td> <td>&lt;100</td> <td>&lt;50</td> <td>&lt;20</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;50</td> <td>&lt;50</td> <td>-</td> <td>&lt;20</td>	<1	<20	<50	<100	<100	<50	<20	<20	<50	<50	<50	-	<20			
BH02	BH02-0.1	23/10/2017		570085		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20 <td>&lt;1</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;100</td> <td>&lt;100</td> <td>&lt;50</td> <td>&lt;20</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;50</td> <td>&lt;50</td> <td>-</td> <td>&lt;20</td>	<1	<20	<50	<100	<100	<50	<20	<20	<50	<50	<50	-	<20			
BH03	BH03-0.1	23/10/2017		570085		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.5	0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<20 <td>&lt;1</td> <td>&lt;20</td> <td>&lt;50</td> <td>140</td> <td>&lt;100</td> <td>&lt;50</td> <td>&lt;20</td> <td>&lt;20</td> <td>&lt;50</td> <td>95</td> <td>95</td> <td>-</td> <td>&lt;20</td>	<1	<20	<50	140	<100	<50	<20	<20	<50	95	95	-	<20			
BH04	BH04-0.1	24/10/2017		570085		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20 <td>&lt;1</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;100</td> <td>&lt;100</td> <td>&lt;50</td> <td>&lt;20</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;50</td> <td>&lt;50</td> <td>-</td> <td>&lt;20</td>	<1	<20	<50	<100	<100	<50	<20	<20	<50	<50	<50	-	<20			
BH05	BH05-0.1	24/10/2017		570085		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20 <td>&lt;1</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;100</td> <td>&lt;100</td> <td>&lt;50</td> <td>&lt;20</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;50</td> <td>&lt;50</td> <td>-</td> <td>&lt;20</td>	<1	<20	<50	<100	<100	<50	<20	<20	<50	<50	<50	-	<20			
BH06	BH06-0.5	12/12/2017		577186		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	2	<0.5	<0.5	3.3	0.6	<0.5	<0.5	<20	<1	<20	1600	1700	440	1600	<20	990	2300	680	3970	-	<20
BH07	BH07-0.5	12/12/2017		577186		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20 <td>&lt;1</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;100</td> <td>&lt;100</td> <td>&lt;50</td> <td>&lt;20</td> <td>&lt;20</td> <td>&lt;50</td> <td>&lt;50</td> <td>&lt;50</td> <td>-</td> <td>&lt;20</td>	<1	<20	<50	<100	<100	<50	<20	<20	<50	<50	<50	-	<20			
BH08	BH08-3.0	12/12/2017		577186		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	1.7	<0.5	<0.5	<20	<1	<20	1100	830	<100	1100	<20	650	1700	<50	2350	-	<20	
BH09	BH09-3.0	12/12/2017		577186		<0.2	<1	<0.4	<5	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20 <td>&lt;1</td> <td>&lt;20</td> <td>780</td> <td>560</td> <td>&lt;100</td> <td>780</td> <td>&lt;20</td> <td>400</td> <td>1200</td> <td>&lt;50</td> <td>1600</td> <td>-</td> <td>&lt;20</td>	<1	<20	780	560	<100	780	<20	400	1200	<50	1600	-	<20			

## Appendix D: Laboratory Report

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# Chain of Custody (COC)

Laboratory: <b>MGT EUROFINs</b>			Address: <b>OAKLEIGH</b>		Analysis Required:												
Project Name: <b>MADSTONE</b>			Project Manager: <b>TOM MADILL</b>														
Samplers Name: <b>PD BARAT</b>			Job Number: <b>1003973</b>														
Comment/Instructions:																	
Container Type & Preservation Codes: I-Ice, P-Plastic, G-Glass, V-Vial, N-Nitric Acid Preserved, C-Hydrochloric Acid Preserved, S-Sulphuric Acid Preserved																	
Sample ID	Sample Date	Time	Sample Matrix (e.g soil, water etc)	Container/Preservative Type (e.g. glass, vial etc)	CHILLED, TICK IF YES	M13	TRA, B3, B4	BTEX	R20	R21	TRH	PH	HOLD	Notes			
BH01-0-1	23/10/17		SOIL	IG		✓	✓					✓					
- 0.5													✓				
- 1.0													✓				
BH02-0-1						✓	✓					✓					
- 0.5													✓				
- 1.0													✓				
BH03-0-1						✓	✓					✓					
BH04-0-1	24/10/17					✓	✓					✓					
- 0.5													✓				
- 1.0													✓				
BH05-0-1						✓	✓	✓					✓				
- 0.5																	
SC01						✓	✓	✓									
SC01A						✓	✓	✓									
Results Requested Within: 24hrs 48hrs <u>5days</u>					Total:												
Relinquished By: <b>PD BARAT</b>			Received By: 			Relinquished By:			Received By:			Date:		Date:			
Signature: 			Signature: 			Signature:			Signature:			Date:		Date:			
Company: <b>TAT</b>			Company: <b>TT</b>			Company:			Company:			Time:		Time:			



**Company Name:** Tonkin & Taylor P/L  
**Address:** Ground Floor, 95 Coventry St  
Southbank  
VIC 3006  
  
**Project Name:** MAIDSTONE  
**Project ID:** 1003973

**Order No.:**  
**Report #:** 570085  
**Phone:** 03 9863 8686  
**Fax:** 03 9863 8685

**Received:** Oct 30, 2017 1:20 PM  
**Due:** Nov 6, 2017  
**Priority:** 5 Day  
**Contact Name:** Thomas Madill

**Eurofins | mgt Analytical Services Manager : Mary Makarios**

Sample Detail						HOLD	pH (1:5 Aqueous extract)	Eurofins   mgt Suite B3	NEPM 2013 Metals : Metals M13	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID							
1	BH01-0.1	Oct 23, 2017		Soil	M17-Oc33846		X	X	X		X	X
2	BH02-0.1	Oct 23, 2017		Soil	M17-Oc33847		X	X	X		X	X
3	BH03-0.1	Oct 23, 2017		Soil	M17-Oc33848		X	X	X		X	X
4	BH04-0.1	Oct 24, 2017		Soil	M17-Oc33849		X	X	X		X	X
5	BH05-0.1	Oct 24, 2017		Soil	M17-Oc33850			X	X	X	X	X
6	QC01	Oct 24, 2017		Soil	M17-Oc33851			X	X	X	X	X
7	QC01A	Oct 24, 2017		Soil	M17-Oc33852			X	X	X	X	X
8	BH01-0.5	Oct 23, 2017		Soil	M17-Oc33853	X						
9	BH01-1.0	Oct 23, 2017		Soil	M17-Oc33854	X						

**Company Name:** Tonkin & Taylor P/L  
**Address:** Ground Floor, 95 Coventry St  
Southbank  
VIC 3006  
  
**Project Name:** MAIDSTONE  
**Project ID:** 1003973

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**Eurofins | mgt Analytical Services Manager : Mary Makarios**

Sample Detail						HOLD	pH (1:5 Aqueous extract)	Eurofins   mgt Suite B3	NEPM 2013 Metals : Metals M13	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	BH02-0.5	Oct 23, 2017		Soil	M17-Oc33855	X						
11	BH02-1.0	Oct 23, 2017		Soil	M17-Oc33856	X						
12	BH04-0.5	Oct 24, 2017		Soil	M17-Oc33857	X						
13	BH04-1.0	Oct 24, 2017		Soil	M17-Oc33858	X						
14	BH05-0.5	Oct 24, 2017		Soil	M17-Oc33859	X						
Test Counts						7	4	7	7	3	7	7

# Certificate of Analysis

Tonkin & Taylor P/L  
Ground Floor, 95 Coventry St  
Southbank  
VIC 3006



NATA Accredited  
Accreditation Number 1261  
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing  
The results of the tests, calibrations and/or  
measurements included in this document are traceable  
to Australian/national standards.

Attention: Thomas Madill

Report 570085-S  
Project name MAIDSTONE  
Project ID 1003973  
Received Date Oct 30, 2017

Client Sample ID			BH01-0.1	BH02-0.1	BH03-0.1	BH04-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			M17-Oc33846	M17-Oc33847	M17-Oc33848	M17-Oc33849
Date Sampled			Oct 23, 2017	Oct 23, 2017	Oct 23, 2017	Oct 24, 2017
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	370	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	250	< 50	95	< 50
TRH C10-36 (Total)	50	mg/kg	620	< 50	95	< 50
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	540	< 100	140	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	15	< 0.5	0.7	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	15	0.6	1.0	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	15	1.2	1.3	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	2.2	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	8.1	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	9.9	< 0.5	0.6	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	6.5	< 0.5	0.6	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	7.1	< 0.5	0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	5.0	< 0.5	0.5	< 0.5
Chrysene	0.5	mg/kg	6.8	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	2.1	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	13	< 0.5	0.7	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	5.4	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	7.0	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	13	< 0.5	0.7	< 0.5
Total PAH*	0.5	mg/kg	86.1	< 0.5	3.6	< 0.5
2-Fluorobiphenyl (surr.)	1	%	90	80	97	88
p-Terphenyl-d14 (surr.)	1	%	85	94	97	106

Client Sample ID			BH01-0.1	BH02-0.1	BH03-0.1	BH04-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			M17-Oc33846	M17-Oc33847	M17-Oc33848	M17-Oc33849
Date Sampled			Oct 23, 2017	Oct 23, 2017	Oct 23, 2017	Oct 24, 2017
Test/Reference	LOR	Unit				
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	1.0	mg/kg	< 1	< 1	< 1	< 1
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	98	79	111	75
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
pH (1:5 Aqueous extract)	0.1	pH Units	8.3	8.5	8.5	9.1
% Moisture	1	%	30	27	15	24
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	13	15	21	8.6
Beryllium	2	mg/kg	< 2	< 2	2.4	< 2
Boron	10	mg/kg	< 10	17	10	20
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Cobalt	5	mg/kg	20	12	27	12
Copper	5	mg/kg	41	52	52	14
Lead	5	mg/kg	79	69	88	18
Manganese	5	mg/kg	560	210	480	190
Mercury	0.1	mg/kg	0.1	< 0.1	0.1	< 0.1
Nickel	5	mg/kg	73	30	77	23
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Zinc	5	mg/kg	160	220	180	30



<b>Client Sample ID</b>			<b>BH05-0.1</b>	<b>QC01</b>	<b>QC01A</b>
<b>Sample Matrix</b>			<b>Soil</b>	<b>Soil</b>	<b>Soil</b>
<b>Eurofins   mgt Sample No.</b>			<b>M17-Oc33850</b>	<b>M17-Oc33851</b>	<b>M17-Oc33852</b>
<b>Date Sampled</b>			<b>Oct 24, 2017</b>	<b>Oct 24, 2017</b>	<b>Oct 24, 2017</b>
Test/Reference	LOR	Unit			
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50
<b>BTEX</b>					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	94	108	118
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>					
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
<b>Polycyclic Aromatic Hydrocarbons</b>					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	95	82	95
p-Terphenyl-d14 (surr.)	1	%	129	106	129
<b>Phenols (Halogenated)</b>					
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1
2,4,6-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1

Client Sample ID			BH05-0.1	QC01	QC01A
Sample Matrix			Soil	Soil	Soil
Eurofins   mgt Sample No.			M17-Oc33850	M17-Oc33851	M17-Oc33852
Date Sampled			Oct 24, 2017	Oct 24, 2017	Oct 24, 2017
Test/Reference	LOR	Unit			
<b>Phenols (Halogenated)</b>					
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1	< 1
Pentachlorophenol	1.0	mg/kg	< 1	< 1	< 1
Tetrachlorophenols - Total	1.0	mg/kg	< 1	< 1	< 1
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1
<b>Phenols (non-Halogenated)</b>					
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	78	74	74
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1
% Moisture	1	%	17	15	32
<b>Heavy Metals</b>					
Arsenic	2	mg/kg	16	9.9	16
Beryllium	2	mg/kg	2.1	< 2	2.3
Boron	10	mg/kg	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Cobalt	5	mg/kg	28	24	28
Copper	5	mg/kg	49	35	41
Lead	5	mg/kg	< 5	8.4	7.8
Manganese	5	mg/kg	620	330	600
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	150	89	110
Selenium	2	mg/kg	< 2	< 2	< 2
Zinc	5	mg/kg	69	55	64

## Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.  
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C36	Melbourne	Nov 01, 2017	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Nov 01, 2017	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Nov 01, 2017	14 Day
BTEX and Naphthalene			
BTEX - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Nov 01, 2017	14 Day
Eurofins   mgt Suite B3			
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soils by GCMS	Melbourne	Nov 01, 2017	14 Day
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soils by GCMS	Melbourne	Nov 01, 2017	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soils by GCMS	Melbourne	Nov 01, 2017	14 Day
Chromium (hexavalent) - Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)	Melbourne	Nov 01, 2017	28 Day
Heavy Metals - Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)	Melbourne	Nov 01, 2017	180 Day
pH (1:5 Aqueous extract) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Nov 01, 2017	7 Day
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Oct 31, 2017	14 Day

# Certificate of Analysis

Tonkin & Taylor P/L  
Ground Floor, 95 Coventry St  
Southbank  
VIC 3006



NATA Accredited  
Accreditation Number 1261  
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing  
The results of the tests, calibrations and/or  
measurements included in this document are traceable  
to Australian/national standards.

Attention: Thomas Madill

Report 577186-S  
Project name MAIDSTONE  
Project ID 1003973  
Received Date Dec 13, 2017

Client Sample ID			BH06-0.5 Soil M17-De17103 Dec 12, 2017	BH07-0.5 Soil M17-De17106 Dec 12, 2017	BH08-3.0 Soil M17-De17112 Dec 12, 2017	BH09-3.0 Soil M17-De17132 Dec 12, 2017
Sample Matrix						
Eurofins   mgt Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	990	< 20	650	400
TRH C15-C28	50	mg/kg	2300	< 50	1700	1200
TRH C29-C36	50	mg/kg	680	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	3970	< 50	2350	1600
<b>BTEX</b>						
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	93	93
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	1600	< 50	1100	780
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	1600	< 50	1100	780
TRH >C16-C34	100	mg/kg	1700	< 100	830	560
TRH >C34-C40	100	mg/kg	440	< 100	< 100	< 100
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5



Client Sample ID			BH06-0.5 Soil M17-De17103 Dec 12, 2017	BH07-0.5 Soil M17-De17106 Dec 12, 2017	BH08-3.0 Soil M17-De17112 Dec 12, 2017	BH09-3.0 Soil M17-De17132 Dec 12, 2017
Sample Matrix						
Eurofins   mgt Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
Fluoranthene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	2.0	< 0.5	1.7	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	3.3	< 0.5	1.7	< 0.5
2-Fluorobiphenyl (surr.)	1	%	67	86	91	92
p-Terphenyl-d14 (surr.)	1	%	91	98	122	109
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	1.0	mg/kg	< 1	< 1	< 1	< 1
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	73	76	98	84
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
pH (1:5 Aqueous extract)	0.1	pH Units	11	9.5	-	-
% Moisture	1	%	10	17	23	25
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	< 2	< 2	2.0	4.0
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	13	23	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Cobalt	5	mg/kg	26	12	31	110
Copper	5	mg/kg	31	7.8	7.7	12
Lead	5	mg/kg	7.6	8.0	13	17
Manganese	5	mg/kg	620	92	170	400
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	110	14	21	39
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Zinc	5	mg/kg	73	21	18	24

<b>Client Sample ID</b>			<b>QC01</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>Eurofins   mgt Sample No.</b>			<b>M17-De17134</b>
<b>Date Sampled</b>			<b>Dec 12, 2017</b>
Test/Reference	LOR	Unit	
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-36 (Total)	50	mg/kg	< 50
<b>BTEX</b>			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	86
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>			
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
<b>Polycyclic Aromatic Hydrocarbons</b>			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	83
p-Terphenyl-d14 (surr.)	1	%	101
<b>Phenols (Halogenated)</b>			
2-Chlorophenol	0.5	mg/kg	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5
2,4,5-Trichlorophenol	1.0	mg/kg	< 1
2,4,6-Trichlorophenol	1.0	mg/kg	< 1

<b>Client Sample ID</b>			<b>QC01</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>Eurofins   mgt Sample No.</b>			<b>M17-De17134</b>
<b>Date Sampled</b>			<b>Dec 12, 2017</b>
Test/Reference	LOR	Unit	
<b>Phenols (Halogenated)</b>			
2,6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1
Pentachlorophenol	1.0	mg/kg	< 1
Tetrachlorophenols - Total	1.0	mg/kg	< 1
Total Halogenated Phenol*	1	mg/kg	< 1
<b>Phenols (non-Halogenated)</b>			
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
2-Nitrophenol	1.0	mg/kg	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20
Phenol-d6 (surr.)	1	%	83
Chromium (hexavalent)	1	mg/kg	< 1
% Moisture	1	%	19
<b>Heavy Metals</b>			
Arsenic	2	mg/kg	< 2
Beryllium	2	mg/kg	< 2
Boron	10	mg/kg	19
Cadmium	0.4	mg/kg	< 0.4
Cobalt	5	mg/kg	8.1
Copper	5	mg/kg	8.3
Lead	5	mg/kg	11
Manganese	5	mg/kg	150
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	17
Selenium	2	mg/kg	< 2
Zinc	5	mg/kg	18

## Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.  
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C36	Melbourne	Dec 15, 2017	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Dec 15, 2017	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Dec 15, 2017	14 Day
BTEX and Naphthalene			
BTEX - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Dec 15, 2017	14 Day
Eurofins   mgt Suite B3			
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soils by GCMS	Melbourne	Dec 15, 2017	14 Day
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soils by GCMS	Melbourne	Dec 15, 2017	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soils by GCMS	Melbourne	Dec 15, 2017	14 Day
Chromium (hexavalent) - Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)	Melbourne	Dec 19, 2017	28 Day
Heavy Metals - Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)	Melbourne	Dec 15, 2017	180 Day
pH (1:5 Aqueous extract) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Dec 16, 2017	7 Day
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Dec 13, 2017	14 Day



**Company Name:** Tonkin & Taylor P/L  
**Address:** Ground Floor, 95 Coventry St  
Southbank  
VIC 3006  
  
**Project Name:** MAIDSTONE  
**Project ID:** 1003973

**Order No.:**  
**Report #:** 577186  
**Phone:** 03 9863 8686  
**Fax:** 03 9863 8685

**Received:** Dec 13, 2017 1:32 PM  
**Due:** Dec 19, 2017  
**Priority:** 5 Day  
**Contact Name:** Thomas Madill

**Eurofins | mgt Analytical Services Manager : Mary Makarios**

Sample Detail						HOLD	pH (1:5 Aqueous extract)	Eurofins   mgt Suite B3	NEPM 2013 Metals : Metals M13	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID							
1	BH06-0.5	Dec 12, 2017		Soil	M17-De17103		X	X	X		X	X
2	BH06-1.0	Dec 12, 2017		Soil	M17-De17104	X						
3	BH06-2.0	Dec 12, 2017		Soil	M17-De17105	X						
4	BH07-0.5	Dec 12, 2017		Soil	M17-De17106		X	X	X		X	X
5	BH07-1.0	Dec 12, 2017		Soil	M17-De17107	X						
6	BH07-2.0	Dec 12, 2017		Soil	M17-De17108	X						
7	BH08-0.3	Dec 12, 2017		Soil	M17-De17109	X						
8	BH08-1.0	Dec 12, 2017		Soil	M17-De17110	X						
9	BH08-2.0	Dec 12, 2017		Soil	M17-De17111	X						

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Sample Detail						HOLD	pH (1:5 Aqueous extract)	Eurofins   mgt Suite B3	NEPM 2013 Metals : Metals M13	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	BH08-3.0	Dec 12, 2017		Soil	M17-De17112			X	X	X	X	X
11	BH06-3.0	Dec 12, 2017		Soil	M17-De17113	X						
12	BH07-3.0	Dec 12, 2017		Soil	M17-De17114	X						
13	BH08-4.0	Dec 12, 2017		Soil	M17-De17128	X						
14	BH09-0.3	Dec 12, 2017		Soil	M17-De17129	X						
15	BH09-1.0	Dec 12, 2017		Soil	M17-De17130	X						
16	BH09-2.0	Dec 12, 2017		Soil	M17-De17131	X						
17	BH09-3.0	Dec 12, 2017		Soil	M17-De17132			X	X	X	X	X
18	BH09-4.0	Dec 12, 2017		Soil	M17-De17133	X						
19	QC01	Dec 12, 2017		Soil	M17-De17134			X	X	X	X	X
20	QC02	Dec 12, 2017		Soil	M17-De17135	X						
Test Counts						15	2	5	5	3	5	5

## Internal Quality Control Review and Glossary

### General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

### Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

**\*\*NOTE** pH duplicates are reported as a range NOT as RPD

### Units

<b>mg/kg</b> milligrams per kilogram	<b>mg/L</b> milligrams per litre
<b>ug/L</b> micrograms per litre	<b>ppm</b> Parts per million
<b>ppb</b> Parts per billion	<b>%</b> Percentage
<b>org/100mL</b> Organisms per 100 millilitres	<b>NTU</b> Nephelometric Turbidity Units
<b>MPN/100mL</b> Most Probable Number of organisms per 100 millilitres	

### Terms

<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>LOR</b>	Limit of Reporting.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>CRM</b>	Certified Reference Material - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>USEPA</b>	United States Environmental Protection Agency
<b>APHA</b>	American Public Health Association
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>COC</b>	Chain of Custody
<b>SRA</b>	Sample Receipt Advice
<b>QSM</b>	Quality Systems Manual ver 5.1 US Department of Defense
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>TEQ</b>	Toxic Equivalency Quotient

### QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

### QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

## Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
<b>Method Blank</b>							
<b>BTEX</b>							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
<b>Method Blank</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1.0	Pass	
Pentachlorophenol	mg/kg	< 1			1.0	Pass	
Tetrachlorophenols - Total	mg/kg	< 1			1.0	Pass	
<b>Method Blank</b>							
<b>Phenols (non-Halogenated)</b>							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20			20	Pass	



Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
<b>Method Blank</b>							
<b>Heavy Metals</b>							
Arsenic	mg/kg	< 2			2	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Zinc	mg/kg	< 5			5	Pass	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	95			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>BTEX</b>							
Benzene	%	87			70-130	Pass	
Toluene	%	94			70-130	Pass	
Ethylbenzene	%	101			70-130	Pass	
m&p-Xylenes	%	101			70-130	Pass	
Xylenes - Total	%	101			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>							
Naphthalene	%	98			70-130	Pass	
TRH C6-C10	%	86			70-130	Pass	
TRH >C10-C16	%	81			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	92			70-130	Pass	
Acenaphthylene	%	88			70-130	Pass	
Anthracene	%	85			70-130	Pass	
Benz(a)anthracene	%	92			70-130	Pass	
Benzo(a)pyrene	%	93			70-130	Pass	
Benzo(b&j)fluoranthene	%	70			70-130	Pass	
Benzo(g,h,i)perylene	%	83			70-130	Pass	
Benzo(k)fluoranthene	%	103			70-130	Pass	
Chrysene	%	101			70-130	Pass	
Dibenz(a,h)anthracene	%	85			70-130	Pass	
Fluoranthene	%	103			70-130	Pass	

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluorene				%	93			70-130	Pass	
Indeno(1.2.3-cd)pyrene				%	85			70-130	Pass	
Naphthalene				%	86			70-130	Pass	
Phenanthrene				%	92			70-130	Pass	
Pyrene				%	101			70-130	Pass	
LCS - % Recovery										
Phenols (Halogenated)										
2-Chlorophenol				%	98			30-130	Pass	
2.4-Dichlorophenol				%	82			30-130	Pass	
2.4.5-Trichlorophenol				%	91			30-130	Pass	
2.4.6-Trichlorophenol				%	74			30-130	Pass	
2.6-Dichlorophenol				%	95			30-130	Pass	
4-Chloro-3-methylphenol				%	99			30-130	Pass	
Pentachlorophenol				%	64			30-130	Pass	
Tetrachlorophenols - Total				%	73			30-130	Pass	
LCS - % Recovery										
Phenols (non-Halogenated)										
2-Cyclohexyl-4.6-dinitrophenol				%	39			30-130	Pass	
2-Methyl-4.6-dinitrophenol				%	45			30-130	Pass	
2-Methylphenol (o-Cresol)				%	102			30-130	Pass	
2-Nitrophenol				%	95			30-130	Pass	
2.4-Dimethylphenol				%	100			30-130	Pass	
2.4-Dinitrophenol				%	45			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)				%	94			30-130	Pass	
4-Nitrophenol				%	70			30-130	Pass	
Dinoseb				%	51			30-130	Pass	
Phenol				%	103			30-130	Pass	
LCS - % Recovery										
Chromium (hexavalent)				%	100			70-130	Pass	
LCS - % Recovery										
Heavy Metals										
Arsenic				%	97			80-120	Pass	
Beryllium				%	99			80-120	Pass	
Boron				%	102			80-120	Pass	
Cadmium				%	95			80-120	Pass	
Cobalt				%	93			80-120	Pass	
Copper				%	86			80-120	Pass	
Lead				%	96			80-120	Pass	
Manganese				%	100			80-120	Pass	
Mercury				%	95			75-125	Pass	
Nickel				%	91			80-120	Pass	
Selenium				%	95			80-120	Pass	
Zinc				%	94			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Spike - % Recovery										
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					Result 1					
TRH C6-C9	M17-De16733	NCP	%	83			70-130	Pass		
TRH C10-C14	M17-De16941	NCP	%	106			70-130	Pass		
Spike - % Recovery										
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					Result 1					
Naphthalene	M17-De16733	NCP	%	112			70-130	Pass		
TRH C6-C10	M17-De16733	NCP	%	88			70-130	Pass		
TRH >C10-C16	M17-De16941	NCP	%	87			70-130	Pass		
Spike - % Recovery										

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1					
Acenaphthene	M17-De17146	NCP	%	100			70-130	Pass	
Acenaphthylene	M17-De17146	NCP	%	102			70-130	Pass	
Anthracene	M17-De17146	NCP	%	97			70-130	Pass	
Benz(a)anthracene	M17-De17146	NCP	%	103			70-130	Pass	
Benzo(a)pyrene	M17-De17146	NCP	%	96			70-130	Pass	
Benzo(b&j)fluoranthene	M17-De17146	NCP	%	76			70-130	Pass	
Benzo(g,h,i)perylene	M17-De17146	NCP	%	93			70-130	Pass	
Benzo(k)fluoranthene	M17-De17146	NCP	%	78			70-130	Pass	
Chrysene	M17-De17146	NCP	%	98			70-130	Pass	
Dibenz(a,h)anthracene	M17-De17146	NCP	%	103			70-130	Pass	
Fluoranthene	M17-De17146	NCP	%	95			70-130	Pass	
Fluorene	M17-De17146	NCP	%	102			70-130	Pass	
Indeno(1,2,3-cd)pyrene	M17-De17146	NCP	%	98			70-130	Pass	
Naphthalene	M17-De17146	NCP	%	98			70-130	Pass	
Phenanthrene	M17-De17146	NCP	%	111			70-130	Pass	
Pyrene	M17-De17146	NCP	%	95			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Phenols (Halogenated)</b>				Result 1					
2-Chlorophenol	M17-De17146	NCP	%	106			30-130	Pass	
2,4-Dichlorophenol	M17-De17146	NCP	%	81			30-130	Pass	
2,4,5-Trichlorophenol	M17-De17146	NCP	%	87			30-130	Pass	
2,4,6-Trichlorophenol	M17-De17146	NCP	%	82			30-130	Pass	
2,6-Dichlorophenol	M17-De17146	NCP	%	92			30-130	Pass	
4-Chloro-3-methylphenol	M17-De17146	NCP	%	101			30-130	Pass	
Pentachlorophenol	M17-De17146	NCP	%	78			30-130	Pass	
Tetrachlorophenols - Total	M17-De17146	NCP	%	79			30-130	Pass	
<b>Spike - % Recovery</b>									
<b>Phenols (non-Halogenated)</b>				Result 1					
2-Cyclohexyl-4,6-dinitrophenol	M17-De17146	NCP	%	67			30-130	Pass	
2-Methyl-4,6-dinitrophenol	M17-De17146	NCP	%	63			30-130	Pass	
2-Methylphenol (o-Cresol)	M17-De17146	NCP	%	103			30-130	Pass	
2-Nitrophenol	M17-De17146	NCP	%	100			30-130	Pass	
2,4-Dimethylphenol	M17-De17146	NCP	%	96			30-130	Pass	
2,4-Dinitrophenol	M17-De17146	NCP	%	89			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M17-De17146	NCP	%	99			30-130	Pass	
4-Nitrophenol	M17-De17146	NCP	%	85			30-130	Pass	
Dinoseb	M17-De17146	NCP	%	70			30-130	Pass	
Phenol	M17-De17146	NCP	%	99			30-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
Chromium (hexavalent)	M17-De17103	CP	%	106			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Heavy Metals</b>				Result 1					
Arsenic	M17-De17476	NCP	%	75			75-125	Pass	
Beryllium	M17-De17476	NCP	%	90			75-125	Pass	
Boron	M17-De17476	NCP	%	89			75-125	Pass	
Cadmium	M17-De17476	NCP	%	90			75-125	Pass	
Cobalt	M17-De17476	NCP	%	80			75-125	Pass	
Copper	M17-De17476	NCP	%	84			75-125	Pass	
Lead	M17-De17476	NCP	%	88			75-125	Pass	
Manganese	M17-De18408	NCP	%	76			75-125	Pass	
Mercury	M17-De17476	NCP	%	93			70-130	Pass	
Nickel	M17-De17476	NCP	%	79			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Selenium	M17-De17476	NCP	%	73			75-125	Fail	Q08
Zinc	M17-De17476	NCP	%	82			75-125	Pass	
<b>Spike - % Recovery</b>									
<b>BTEX</b>				Result 1					
Benzene	M17-De16733	NCP	%	92			70-130	Pass	
Toluene	M17-De16733	NCP	%	97			70-130	Pass	
Ethylbenzene	M17-De16733	NCP	%	96			70-130	Pass	
m&p-Xylenes	M17-De16733	NCP	%	95			70-130	Pass	
o-Xylene	M17-De16733	NCP	%	94			70-130	Pass	
Xylenes - Total	M17-De16733	NCP	%	95			70-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
Chromium (hexavalent)	M17-De17112	CP	%	95			70-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
Chromium (hexavalent)	M17-De17132	CP	%	102			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				Result 1	Result 2	RPD			
TRH C6-C9	M17-De17174	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M17-De16940	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M17-De16940	NCP	mg/kg	390	340	14	30%	Pass	
TRH C29-C36	M17-De16940	NCP	mg/kg	740	740	<1	30%	Pass	
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD			
Naphthalene	M17-De17174	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M17-De17174	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M17-De16940	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M17-De16940	NCP	mg/kg	860	820	5.0	30%	Pass	
TRH >C34-C40	M17-De16940	NCP	mg/kg	630	690	9.0	30%	Pass	
<b>Duplicate</b>									
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1	Result 2	RPD			
Acenaphthene	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M17-De17145	NCP	mg/kg	< 0.5	0.9	76	30%	Fail	Q15
Benzo(a)pyrene	M17-De17145	NCP	mg/kg	< 0.5	1.3	91	30%	Fail	Q15
Benzo(b&j)fluoranthene	M17-De17145	NCP	mg/kg	< 0.5	0.8	62	30%	Fail	Q15
Benzo(g,h,i)perylene	M17-De17145	NCP	mg/kg	< 0.5	1.0	84	30%	Fail	Q15
Benzo(k)fluoranthene	M17-De17145	NCP	mg/kg	< 0.5	0.7	75	30%	Fail	Q15
Chrysene	M17-De17145	NCP	mg/kg	< 0.5	1.2	90	30%	Fail	Q15
Dibenz(a,h)anthracene	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M17-De17145	NCP	mg/kg	0.8	1.8	77	30%	Fail	Q15
Fluorene	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M17-De17145	NCP	mg/kg	< 0.5	0.8	74	30%	Fail	Q15
Naphthalene	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M17-De17145	NCP	mg/kg	0.8	2.0	90	30%	Fail	Q15
<b>Duplicate</b>									
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD			
2-Chlorophenol	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dichlorophenol	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4,5-Trichlorophenol	M17-De17145	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2,4,6-Trichlorophenol	M17-De17145	NCP	mg/kg	< 1	< 1	<1	30%	Pass	



Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2,6-Dichlorophenol	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M17-De17145	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M17-De17145	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M17-De17145	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M17-De17145	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M17-De17145	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M17-De17145	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
2-Nitrophenol	M17-De17145	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M17-De17145	NCP	mg/kg	< 5	< 5	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M17-De17145	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M17-De17145	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M17-De17145	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M17-De17145	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	B17-De16546	NCP	mg/kg	< 1	< 1	<1	30%	Pass
pH (1:5 Aqueous extract)	M17-De20620	NCP	pH Units	8.2	8.0	pass	30%	Pass
% Moisture	M17-De17067	NCP	%	6.1	7.1	16	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M17-De17476	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Beryllium	M17-De17476	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M17-De17476	NCP	mg/kg	11	13	13	30%	Pass
Cadmium	M17-De17476	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Cobalt	M17-De17476	NCP	mg/kg	24	25	3.0	30%	Pass
Copper	M17-De17476	NCP	mg/kg	24	24	1.0	30%	Pass
Lead	M17-De17476	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Manganese	M17-De17498	NCP	mg/kg	300	330	7.0	30%	Pass
Mercury	M17-De17476	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	M17-De17476	NCP	mg/kg	95	97	2.0	30%	Pass
Selenium	M17-De17476	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Zinc	M17-De17476	NCP	mg/kg	45	46	2.0	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	M17-De17174	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	M17-De17174	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	M17-De17174	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	M17-De17174	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	M17-De17174	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	M17-De17174	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass

## Comments

### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

## Comments

### Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference
Q15	The RPD reported passes Eurofins   mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

## Authorised By

Mary Makarios	Analytical Services Manager
Alex Petridis	Senior Analyst-Metal (VIC)
Alex Petridis	Senior Analyst-Organic (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



**Glenn Jackson**

**National Operations Manager**

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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# Chain of Custody Form

#577186  
PMATINE  
12/12  
1700

Laboratory Contact Person: MGT EUROFINIS			Deliver to:		
Date: 12/12/17			DARLEIGH		
Our Purchase Order No.:		Our Job No.: 1003973		Refer all results to:	
(please quote this number in all your correspondence and invoicing)		MAIDSTONE		T. MADILL	
				Turn Around Time:	
				24Hr / 48Hr / <u>Standard</u>	
Sample ID:	Sample Matrix (soil, sludge, groundwater etc)	Sampling Date and Time	Testing / Analysis Required:	Composite	Additional Analysis on individual Composite Sample
BH06-05	SOIL	12/12/17	M13, TRH, B3, PH		De17103
1-0			HOLD		
2-0			HOLD		
BH07-05			M13, TRH, B3, PH		06
1-0			HOLD		
2-0			HOLD		
BH08-03			HOLD		
1-0			HOLD		
2-0			HOLD		
3-0			M13, TRH, B3, BTEXN		12
BH06-30			HOLD		
BH07-30			HOLD		
Sampler Name Relinquished By: D. ZAPAT			Relinquished By:..... Date and Time:.....		
Signature: [Signature] Date and Time: 12/12/17			Signature:.....		
Relinquished By:..... Date and Time:.....			Relinquished By:..... Date and Time:.....		
Signature:.....			Signature:.....		

### Chain of Custody Form

Laboratory Contact Person: <b>MGT EUROFINES.</b>			Deliver to: <b>OAKLEIGH</b>		
Date: <b>12/12/17</b>		Our Purchase Order No.:		Our Job No.: <b>1003973</b>	
(please quote this number in all your correspondence and invoicing)				Refer all results to: <b>MARDSTONE TMADILL</b>	
Sample ID:	Sample Matrix (soil, sludge, groundwater etc)	Sampling Date and Time	Testing / Analysis Required:	Turn Around Time: 24Hr / 48Hr / <u>Standard</u>	Composite / Additional Analysis on individual Composite Sample
BH08-4.0	SOIL	12/12/17	HOLD		
BH09-03			HOLD		
-1.0			HOLD		
-2.0			HOLD		
-3.0					
-4.0			M13, TRH, B3, BTEXN	32	
			HOLD		
SC01			M13, TRH, B3, BTEXN	34	
SC02			——— " ———		
SC01A			——— " ———		
SC02A	——— " ———			} FORWARD TO ALS.	
Sampler Name / Relinquished By: <b>JSB</b>			Relinquished By: _____ Date and Time: _____		
Signature: _____ Date and Time: _____			Signature: _____ Date and Time: _____		
Relinquished By: _____ Date and Time: _____			Relinquished By: _____ Date and Time: _____		
Signature: _____			Signature: _____		



## QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM1717143	Page	: 1 of 4
Client	: TONKIN AND TAYLOR PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: TOM MADILL	Telephone	: +61-3-8549 9636
Project	: 1003973	Date Samples Received	: 13-Dec-2017
Site	: MAIDSTONE	Issue Date	: 18-Dec-2017
Sampler	: ----	No. of samples received	: 2
Order number	: ----	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

### Summary of Outliers

#### Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, **NO** surrogate recovery outliers occur.

#### Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

#### Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



## Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055) QC01A,	QC02A	12-Dec-2017	----	----	----	13-Dec-2017	26-Dec-2017	✓
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) QC01A,	QC02A	12-Dec-2017	14-Dec-2017	10-Jun-2018	✓	14-Dec-2017	10-Jun-2018	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) QC01A,	QC02A	12-Dec-2017	14-Dec-2017	09-Jan-2018	✓	15-Dec-2017	09-Jan-2018	✓
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048G) QC01A,	QC02A	12-Dec-2017	14-Dec-2017	09-Jan-2018	✓	14-Dec-2017	21-Dec-2017	✓
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM)) QC01A,	QC02A	12-Dec-2017	14-Dec-2017	26-Dec-2017	✓	14-Dec-2017	23-Jan-2018	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM)) QC01A,	QC02A	12-Dec-2017	14-Dec-2017	26-Dec-2017	✓	14-Dec-2017	23-Jan-2018	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080) QC01A,	QC02A	12-Dec-2017	13-Dec-2017	26-Dec-2017	✓	15-Dec-2017	26-Dec-2017	✓
Soil Glass Jar - Unpreserved (EP071) QC01A,	QC02A	12-Dec-2017	14-Dec-2017	26-Dec-2017	✓	14-Dec-2017	23-Jan-2018	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080) QC01A,	QC02A	12-Dec-2017	13-Dec-2017	26-Dec-2017	✓	15-Dec-2017	26-Dec-2017	✓
Soil Glass Jar - Unpreserved (EP071) QC01A,	QC02A	12-Dec-2017	14-Dec-2017	26-Dec-2017	✓	14-Dec-2017	23-Jan-2018	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080) QC01A,	QC02A	12-Dec-2017	13-Dec-2017	26-Dec-2017	✓	15-Dec-2017	26-Dec-2017	✓



## Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification	
Analytical Methods	Method	QC	Regular	Actual	Expected		Evaluation
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard



## Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl <sub>2</sub> ) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl <sub>2</sub> which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	In house: Referenced to USEPA SW846, Method 3060A. Hexavalent chromium is extracted by a kaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against a kane standards over the range C10 - C40. Compliant with NEPM amended 2013.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.
Preparation Methods	Method	Matrix	Method Descriptions
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	In house: Referenced to USEPA SW846, Method 3060A.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na <sub>2</sub> SO <sub>4</sub> and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.



Chain of Custody Form

Laboratory Contact Person: <b>MGT EUROFINES.</b>			Deliver to: <b>OAKLEIGH</b>		
Date: <b>12/12/17</b>					
Our Purchase Order No.: <i>(please quote this number in all your correspondence and invoicing)</i>		Our Job No.: <b>1003973</b>		Refer all results to: <b>MARDSTONE TIMADILL</b>	
				Turn Around Time: 24Hr / 48Hr / <b>Standard</b>	
Sample ID:	Sample Matrix (soil, sludge, groundwater etc)	Sampling Date and Time	Testing / Analysis Required:	Composite	Additional Analysis on individual Composite Sample
BH08-4-0	SOIL	12/12/17			
BH09-03					
-10					
-20					
-30					
-40					
SC01					
ALS: SC02					
1- SC01A					
2- SC02A					
Sampler Name / Relinquished By: <b>ASB</b>			Relinquished By:..... Date and Time:.....		
Signature: ..... Date and Time:.....			Signature:.....		
Relinquished By:..... Date and Time:.....			Relinquished By:..... Date and Time:.....		
Signature:.....			Signature:.....		

Environmental Division  
Melbourne

Work Order Reference  
**EM1717143**



Telephone: + 61-3-6549 9600

FORWARD TO  
ALS.

LAWSON (AM) 13/12 12.35



# Chain of Custody Form

#527186  
 RMAINE  
 12/12  
 1700

Laboratory Contact Person: <b>MGT EUROFINIS</b>			Deliver to:		
Date: <b>12/12/17</b>			<b>OAKLEIGH</b>		
Our Purchase Order No.:		Our Job No.: <b>1003973</b>	Refer all results to:		Turn Around Time:
(please quote this number in all your correspondence and invoicing)		<b>MAIDSTONE</b>	<b>T. MADILL</b>		24Hr / 48Hr / <b>Standard</b>
Sample ID:	Sample Matrix (soil, sludge, groundwater etc)	Sampling Date and Time	Testing / Analysis Required:	Composite	Additional Analysis on individual Composite Sample
<b>BH06-0.5</b>	<b>SOIL</b>	<b>12/12/17</b>	<b>M13, TRH, B3, PH</b>		
<b>1.0</b>			<b>HOLD</b>		
<b>2.0</b>			<b>HOLD</b>		
<b>BH07-0.5</b>			<b>M13, TRH, B3, PH</b>		
<b>-1.0</b>			<b>HOLD</b>		
<b>-2.0</b>			<b>HOLD</b>		
<b>BH08-0.3</b>			<b>HOLD</b>		
<b>-1.0</b>			<b>HOLD</b>		
<b>-2.0</b>			<b>HOLD</b>		
<b>-3.0</b>			<b>M13, TRH, B3, BTEXN</b>		
<b>BH06-3.0</b>			<b>HOLD</b>		
<b>BH07-3.0</b>			<b>HOLD</b>		
Sampler Name: <b>Relinquished By: D. BACAR</b>			Relinquished By:..... Date and Time:.....		
Signature: <b>[Signature]</b> Date and Time: <b>12/12/17</b>			Signature:.....		
Relinquished By:..... Date and Time:.....			Relinquished By:..... Date and Time:.....		
Signature:.....			Signature:.....		

### Chain of Custody Form

Laboratory Contact Person: <b>MGT EUROFINIS.</b>			Deliver to: <b>OAKLEIGH</b>		
Date: <b>12/12/17</b>			Our Purchase Order No.: <b>1003973</b>		
(please quote this number in all your correspondence and invoicing)			Our Job No.: <b>1003973</b>		
			Refer all results to: <b>MARDSTONE TMADILL</b>		Turn Around Time: <b>24Hr / 48Hr / <u>Standard</u></b>
Sample ID:	Sample Matrix (soil, sludge, groundwater etc)	Sampling Date and Time	Testing / Analysis Required:	Composite	Additional Analysis on individual Composite Sample
BH08-4-0	SOIL ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	12/12/17	HOLD		
BH09-03			HOLD		
-10			HOLD		
-20			HOLD		
-30			HOLD		
-40			M13, TRH, B3, BTEXN		
			HOLD		
SC01			M13, TRH, B3, BTEXN		
SC02			_____		
SC01A			_____		
SC02A		_____			
					} FORWARD TO ALS

Sampler Name / Relinquished By: <u>JSB</u>		Relinquished By: _____ Date and Time: _____	
Signature: _____ Date and Time: _____		Signature: _____	
Relinquished By: _____ Date and Time: _____		Relinquished By: _____ Date and Time: _____	
Signature: _____		Signature: _____	

## CERTIFICATE OF ANALYSIS

**Work Order** : **EM1717143**  
**Client** : **TONKIN AND TAYLOR PTY LTD**  
**Contact** : TOM MADILL  
**Address** : GROUND FLOOR 95 COVENTRY STREET  
                   SOUTHBANK VIC 3006  
**Telephone** : +61 03 9863 8686  
**Project** : 1003973  
**Order number** : ----  
**C-O-C number** : ----  
**Sampler** : ----  
**Site** : MAIDSTONE  
**Quote number** : EN/222/17  
**No. of samples received** : 2  
**No. of samples analysed** : 2

**Page** : 1 of 6  
**Laboratory** : Environmental Division Melbourne  
**Contact** : Bronwyn Sheen  
**Address** : 4 Westall Rd Springvale VIC Australia 3171  
**Telephone** : +61-3-8549 9636  
**Date Samples Received** : 13-Dec-2017 12:35  
**Date Analysis Commenced** : 13-Dec-2017  
**Issue Date** : 18-Dec-2017 10:31



Accreditation No. 825  
 Accredited for compliance with  
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Nancy Wang	2IC Organic Chemist	Me bourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Me bourne Inorganics, Springvale, VIC





## General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

Ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenzo(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR.  
Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC01A	QC02A	----	----	----
Client sampling date / time					12-Dec-2017 00:00	12-Dec-2017 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EM1717143-001	EM1717143-002	-----	-----	-----
					Result	Result	----	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%		22.7	23.6	----	----	----
<b>EG005T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		6	<5	----	----	----
Beryllium	7440-41-7	1	mg/kg		1	1	----	----	----
Boron	7440-42-8	50	mg/kg		<50	<50	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	----	----	----
Cobalt	7440-48-4	2	mg/kg		57	21	----	----	----
Copper	7440-50-8	5	mg/kg		10	8	----	----	----
Lead	7439-92-1	5	mg/kg		11	10	----	----	----
Manganese	7439-96-5	5	mg/kg		120	148	----	----	----
Nickel	7440-02-0	2	mg/kg		41	16	----	----	----
Selenium	7782-49-2	5	mg/kg		<5	<5	----	----	----
Zinc	7440-66-6	5	mg/kg		16	15	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>									
Hexavalent Chromium	18540-29-9	0.5	mg/kg		<0.5	<0.5	----	----	----
<b>EP075(SIM)A: Phenolic Compounds</b>									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	----	----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC01A	QC02A	----	----	----
Client sampling date / time					12-Dec-2017 00:00	12-Dec-2017 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EM1717143-001	EM1717143-002	-----	-----	-----
					Result	Result	----	----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		<b>0.6</b>	<b>0.6</b>	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		<b>1.2</b>	<b>1.2</b>	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<b>110</b>	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<b>360</b>	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<b>470</b>	----	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<b>230</b>	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<b>230</b>	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<b>460</b>	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<b>230</b>	----	----	----
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC01A	QC02A	----	----	----
Client sampling date / time					12-Dec-2017 00:00	12-Dec-2017 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EM1717143-001	EM1717143-002	-----	-----	-----
					Result	Result	----	----	----
EP080: BTEXN - Continued									
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		80.5	76.5	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		75.8	73.4	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		76.0	75.0	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		93.8	89.9	----	----	----
Anthracene-d10	1719-06-8	0.5	%		103	102	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		113	112	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		87.2	90.0	----	----	----
Toluene-D8	2037-26-5	0.2	%		72.5	70.8	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		86.6	83.7	----	----	----





## Surrogate Control Limits

Sub-Matrix: **SOIL**

		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2,4,6-Tribromophenol	118-79-6	34	122
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124

## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: EM1717143</b>	<b>Page</b>	<b>: 1 of 9</b>
<b>Client</b>	<b>: TONKIN AND TAYLOR PTY LTD</b>	<b>Laboratory</b>	<b>: Environmental Division Melbourne</b>
<b>Contact</b>	<b>: TOM MADILL</b>	<b>Contact</b>	<b>: Bronwyn Sheen</b>
<b>Address</b>	<b>: GROUND FLOOR 95 COVENTRY STREET SOUTHBANK VIC 3006</b>	<b>Address</b>	<b>: 4 Westall Rd Springvale VIC Australia 3171</b>
<b>Telephone</b>	<b>: +61 03 9863 8686</b>	<b>Telephone</b>	<b>: +61-3-8549 9636</b>
<b>Project</b>	<b>: 1003973</b>	<b>Date Samples Received</b>	<b>: 13-Dec-2017</b>
<b>Order number</b>	<b>: ----</b>	<b>Date Analysis Commenced</b>	<b>: 13-Dec-2017</b>
<b>C-O-C number</b>	<b>: ----</b>	<b>Issue Date</b>	<b>: 18-Dec-2017</b>
<b>Sampler</b>	<b>: ----</b>		
<b>Site</b>	<b>: MAIDSTONE</b>		
<b>Quote number</b>	<b>: EN/222/17</b>		
<b>No. of samples received</b>	<b>: 2</b>		
<b>No. of samples analysed</b>	<b>: 2</b>		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC



## General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high

Key :  
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot  
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
 LOR = Limit of reporting  
 RPD = Relative Percentage Difference  
 # = Indicates failed QC

## Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 1313930)</b>									
EM1717132-003	Anonymous	EA055: Moisture Content	----	1	%	25.0	23.0	8.00	0% - 20%
EM1717132-011	Anonymous	EA055: Moisture Content	----	1	%	25.0	25.2	0.564	0% - 20%
<b>EG005T: Total Metals by ICP-AES (QC Lot: 1315075)</b>									
EM1717132-008	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	1	1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	30	27	9.67	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	38	37	2.89	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	14	17	18.4	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	15	27.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	635	700	9.81	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	32	34	7.50	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1315074)</b>									
EM1717132-008	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 1315444)</b>									
EM1717017-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM1717132-008	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
<b>EP075(SIM)A: Phenolic Compounds (QC Lot: 1314972)</b>									
EM1717160-007	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)A: Phenolic Compounds (QC Lot: 1314972) - continued									
EM1717160-007	Anonymous	EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EM1717136-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1314972)									
EM1717160-007	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	4.2	0.5	156	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	1.7	0.8	69.4	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	0.8	<0.5	44.6	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	2.5	0.9	93.6	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	15.3	12.6	19.0	0% - 20%
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	3.7	3.2	13.7	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	19.1	16.3	16.1	0% - 20%
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	19.8	16.8	16.3	0% - 20%
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	9.2	6.2	39.1	0% - 50%
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	9.7	6.1	46.3	0% - 50%
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	9.7	9.0	7.36	0% - 50%
			205-82-3						
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	3.9	3.0	23.4	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	9.0	6.6	31.0	0% - 50%
		EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	4.6	3.2	35.4	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	1.1	0.9	27.7	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	5.7	3.7	43.0	0% - 50%
		EM1717136-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5
EP075(SIM): Acenaphthylene	208-96-8			0.5	mg/kg	<0.5	<0.5	0.00	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1314972) - continued									
EM1717136-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1313895)									
EM1717136-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EM1717174-006	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1314971)									
EM1717136-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	200	160	24.3	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	260	210	20.1	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	460	370	21.7	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1313895)									
EM1717136-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EM1717174-006	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1314971)									
EM1717136-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	400	320	22.3	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	160	140	16.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	560	460	19.6	0% - 50%
EP080: BTEXN (QC Lot: 1313895)									
EM1717136-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit



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 Work Order : EM1717143  
 Client : TONKIN AND TAYLOR PTY LTD  
 Project : 1003973



Sub-Matrix: <b>SOIL</b>				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
<b>EP080: BTEXN (QC Lot: 1313895) - continued</b>									
EM1717174-006	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit



## Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG005T: Total Metals by ICP-AES (QCLot: 1315075)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	95.8	79	113
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	104	85	120
EG005T: Boron	7440-42-8	50	mg/kg	<50	33.2 mg/kg	105	82	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	105	85	109
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16 mg/kg	93.9	78	112
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	94.0	78	108
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	92.8	78	106
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	96.6	82	107
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	93.1	82	111
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	101	93	109
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	96.8	82	111
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1315074)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	85.7	77	104
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 1315444)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	40 mg/kg	85.8	80	120
EP075(SIM)A: Phenolic Compounds (QCLot: 1314972)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	3 mg/kg	92.0	70	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	3 mg/kg	96.7	74	128
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	3 mg/kg	92.1	76	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	6 mg/kg	96.8	70	128
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	3 mg/kg	99.4	56	114
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	3 mg/kg	81.9	70	122
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	3 mg/kg	95.2	70	121
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	3 mg/kg	96.1	70	126
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	3 mg/kg	80.6	67	120
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	3 mg/kg	90.5	63	121
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	3 mg/kg	85.8	71	133
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	6 mg/kg	48.8	20	110
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1314972)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	93.2	75	131
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	79.8	70	132
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	93.0	80	128
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	104	70	128
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	95.8	80	128



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1314972) - continued								
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	1.5 mg/kg	97.7	72	126
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	100.0	70	128
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	104	80	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	81.6	70	130
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	93.8	80	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	3 mg/kg	80.8	71	124
	205-82-3							
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	94.8	75	125
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	86.4	70	125
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	83.0	71	128
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	88.0	72	126
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	84.5	68	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1313895)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	81.6	70	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1314971)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	806 mg/kg	82.8	80	120
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	3006 mg/kg	93.5	84	115
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1584 mg/kg	95.8	80	112
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1313895)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	82.3	68	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1314971)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1160 mg/kg	89.9	83	117
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	3978 mg/kg	95.1	82	114
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	313 mg/kg	82.6	73	115
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN (QCLot: 1313895)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	87.4	74	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	92.3	77	125
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	84.0	73	125
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4 mg/kg	90.3	77	128
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	99.2	81	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	103	66	130

**Matrix Spike (MS) Report**



The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 1315075)							
EM1717132-009	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	78.6	78	124
		EG005T: Beryllium	7440-41-7	50 mg/kg	100	85	125
		EG005T: Cadmium	7440-43-9	50 mg/kg	84 0	84	116
		EG005T: Copper	7440-50-8	50 mg/kg	93 3	82	124
		EG005T: Lead	7439-92-1	50 mg/kg	91.4	76	124
		EG005T: Manganese	7439-96-5	50 mg/kg	83.1	68	136
		EG005T: Nickel	7440-02-0	50 mg/kg	89 2	78	120
		EG005T: Selenium	7782-49-2	50 mg/kg	79.1	71	125
		EG005T: Zinc	7440-66-6	50 mg/kg	86.1	74	128
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1315074)							
EM1717132-009	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	88 2	76	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 1315444)							
EM1717017-011	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	40 mg/kg	85 3	58	114
EP075(SIM)A: Phenolic Compounds (QCLot: 1314972)							
EM1717140-002	Anonymous	EP075(SIM): Phenol	108-95-2	3 mg/kg	88.6	63	117
		EP075(SIM): 2-Chlorophenol	95-57-8	3 mg/kg	82 2	65	123
		EP075(SIM): 2-Nitrophenol	88-75-5	3 mg/kg	64 2	40	134
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	81 0	56	122
		EP075(SIM): Pentachlorophenol	87-86-5	3 mg/kg	41.4	15	139
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1314972)							
EM1717140-002	Anonymous	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	92 9	67	117
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	110	52	148
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1313895)							
EM1717140-002	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	103	42	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1314971)							
EM1717081-001	Anonymous	EP071: C10 - C14 Fraction	----	806 mg/kg	79.4	53	123
		EP071: C15 - C28 Fraction	----	3006 mg/kg	88 9	70	124
		EP071: C29 - C36 Fraction	----	1584 mg/kg	91 0	64	118
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1313895)							
EM1717140-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	101	39	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1314971)							
EM1717081-001	Anonymous	EP071: >C10 - C16 Fraction	----	1160 mg/kg	85 9	65	123
		EP071: >C16 - C34 Fraction	----	3978 mg/kg	90 3	67	121
		EP071: >C34 - C40 Fraction	----	313 mg/kg	80 3	44	126



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 1313895)							
EM1717140-002	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	104	50	136
		EP080: Toluene	108-88-3	2 mg/kg	104	56	139



## Appendix E: Certificates of Titles

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## **HISTORICAL SEARCH STATEMENT**

## **Land Victoria**

Page 1 of 7

Produced 17/10/2017 10:52 AM

Volume 01357 Folio 236  
Folio Creation: Details Unknown

STATEMENT END

### **VOTS Snapshot**

NIL

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### **Paper Title Images**

1357/236 - Version 0, Date 21/04/2000



**CANCELLED** Entered in the Register Book,

*Entered in the Register Book,*

Vol. ~~45~~ 57 Folio



**P**etria

Assistant Registrar of Titles.

by the Grace of God of the United Kingdom of Great Britain and Ireland QUEEN DEFENDER of the Faith to all to whom these presents shall come GREETING

that whereas in conformity with the laws relating to the sale and occupation of Crown Lands in our Colony of Victoria the person hereinafter named has in consideration of the sum of Thirty three pounds which sum has been duly paid to us

getherras in conformity with the laws relating to the sale and occupation of Crown Lands in our Colony of Victoria the person hereinafter named has in consideration of the sum of Twenty three pounds which sum has been duly paid to us

George Sulton of North Tisbury

heirs and assigns <sup>tho</sup> THAT PIECE OF LAND in the said Colony containing four acres and twenty perches more or less being Allocation forty four of Section twenty in the Parish of Cutshaw par County of Bourke

delineated with the measurements and abutments thereof in the map drawn in the margin of these presents and therein colored yellow To hold unto the said George Sullivan

heirs and assigns for ever.

the boundaries of the said land AND ALSO reserving to us our heirs and successors free liberty and authority for us our heirs and successors and our and their agents and servants at any time or times hereafter to enter upon the said land and to search and mine therein for gold and to extract and remove therefrom any gold and any auriferous earth or stone and for the purposes aforesaid to sink shafts erect machinery carry on any works and do any other things which may be necessary or usual in mining PROVIDED ALWAYS that it shall be lawful for us our heirs and successors at any time on paying full compensation to the said George Bullon

h) lets executors administrators or assigns for the full value other than auriferous of the said piece of land or so much thereof as may be resumed as hereinafter mentioned and of the improvements upon the said piece of land or the part so resumed such value in case of disagreement to be ascertained by arbitration to resume the said piece of land or any part thereof for mining purposes

AND THAT the terms conditions and events upon which such land may be resumed and the manner in which such arbitration may be conducted may be determined by regulations in such manner as the Governor in Council may from time to time direct or if at any time no such regulations shall be in force then by the regulations concerning the resumption of land for mining purposes in force at the date of this Grant unless Parliament shall otherwise determine

An testimony wherof we have caused this our Grant to be sealed with the Seal of the said Colony Witness our trusty and well-beloved the Most Honorable George Augustus Constantine Marquis of Normanby Earl of Mulgrave Viscount Normanby and Baron Mulgrave all in the County of York in the Peerage of the United Kingdom and Baron Mulgrave of New Ross in the County of Wexford in the Peerage of Ireland a Member of Her Majesty's Most Honorable Privy Council Knight Grand Cross of our Most Distinguished Order of Saint Michael and Saint George Governor and Commander-in-Chief of the said Colony of Victoria and its Dependencies and Vice-Admiral of the same at Melbourne this third day of March in the forty fifth year of our Reign and in the year of our Lord One thousand eight hundred and eighty nine

NOTE.—The bearings and measurements are approximately given in this plan.

NOTE.—The bearings and measurements are approximately given in this plan.  
The measurements are in links.

T01357-236-1-0

P.D.—170.



# MEMORIALS OF INSTRUMENTS.

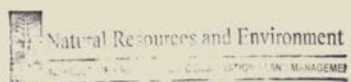
Nature of Instrument.	Time of its Production for Registration.	Names of the Parties to it.	Number or Symbol thereon.
<i>Caveat</i> No 13524 lodged	29 <sup>th</sup> April 1887 at 3 pm	<i>W. A. McFarland</i>	
<i>Caveat</i> lodged	15 <sup>th</sup> June 1888 at 10.15 am	<i>W. A. McFarland</i>	
Transfer as to part and Creation of Easement	The 31 <sup>st</sup> May 1887 at 12.5 pm	George Sutton to Leah Jacobs. <i>W. A. McFarland</i> Asst Regr of Titles	190185
CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 1918 FOL 383495			
Creation of Easement	The 13 <sup>th</sup> May 1887 at 2.25 pm.	George Sutton to Herbert Charles Powell <i>W. A. McFarland</i> Asst Regr of Titles	18919
Vol. 1920 Fol 383853			
Transfer as to part and Creation of Easement	The 31 <sup>st</sup> August 1887 at 11.4 A.M.	George Sutton To James Joseph Hunter <i>W. A. McFarland</i> Asst Regr of Titles	19575
CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 1943 FOL 388423			
Transfer as to part and Creation of Easement	The 1 <sup>st</sup> September 1887 at 10.42 A.M.	George Sutton To Anthony Kennedy <i>W. A. McFarland</i> Asst Regr of Titles	195833
CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 1943 FOL 388424			
Transfer as to part and Creation of Easement	The 14 <sup>th</sup> October 1887 at 11.35 A.M.	George Sutton to Patrick McCarthy <i>W. A. McFarland</i> Asst Regr of Titles	199093
Vol. 1955 Fol 390962			
Creation of Easement	The 21 <sup>st</sup> November 1887 at 11.40 A.M.	George Sutton to John Harvey <i>W. A. McFarland</i> Asst Regr of Titles	201276
Vol. 1967 Fol 393314			

For continuation of Endorsements see the annexed paper marked A

Asst. Regr of Titles







**INTENTIONALLY  
BLANK**



Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
<p>Transfer as to part and Creation of Easement</p> <p><b>CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2011 FOL 402132</b></p> <p><i>McArthur</i> Assistant Registrar of Titles.</p>	<p>The 24<sup>th</sup> April 1888 at 1-22 pm</p>	<p>George Sutton to Grace Sturrock</p> <p><i>McArthur</i> Assistant Registrar of Titles.</p>	<p>214357</p>
<p>Creation of Easement</p> <p><i>McArthur</i> Vol 2015 Fol 402873</p>	<p>The 1<sup>st</sup> May 1888 at 10-12 AM</p>	<p>George Sutton to Henry Horace White</p> <p><i>McArthur</i> Assistant Registrar of Titles.</p>	<p>215007</p>
<p>Creation of Easement</p>	<p>The 12<sup>th</sup> June 1888 at 12-54 pm</p>	<p>George Sutton to Phoebe McMay McWilliam</p> <p><i>McArthur</i> Vol 2028 Fol 405598 Assistant Registrar of Titles.</p>	<p>219497</p>
<p><u>Transfer as to balance</u></p>	<p>The 15<sup>th</sup> June 1888 at 10-15 am</p>	<p>George Sutton to Patrick Callaghan the young</p> <p><i>McArthur</i> Vol 2037 Fol 407389 Assistant Registrar of Titles.</p>	<p>219868</p>
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	



T01357-236-3-6

Assistant Registrar of Titles.



This is the Sheet marked *A* referred to in the Certificate of Title entered in the Register Book Vol. *1337* Fol. *271236*

Assistant Registrar of Titles.

Nature of Instrument.	Day and Hour of its Production	Names of the Parties to it.	Number or Symbol thereon.
<i>Transfer as to part and Creation of Easement</i> REGISTERED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 1995 FOL. 398998	<i>The 5<sup>th</sup> March 1888 at 1.35 pm</i>	<i>George Sutton to Sarah Wagner</i>	<i>209778</i>
<i>Transfer as to Part and Creation of Easement.</i> REGISTERED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 1999 FOL. 399756	<i>The 14th day of March, 1888, at 2.15 o'clock in the afternoon.</i>	<i>George Sutton to Charlotte Henrietta Stopp.</i>	<i>210712.</i>
<i>Creation of Easement.</i>	<i>The 14th day of March, 1888, at 2.15 o'clock in the afternoon.</i>	<i>George Sutton to Thomas Turner.</i>	<i>210713.</i>
<i>Creation of Easement.</i>	<i>The 14th day of March, 1888, at 2.15 o'clock in the afternoon.</i>	<i>George Sutton to George Lane</i>	<i>210714.</i>
<i>Creation of Easement</i>	<i>The 27<sup>th</sup> March 1888 at 10.15 am</i>	<i>George Sutton to John Thomas Bull</i>	<i>211903</i>
<i>Creation of Easement</i>	<i>The 27<sup>th</sup> March 1888 at 10.15 am.</i>	<i>George Sutton to John Robert McAlpine</i>	<i>211904</i>

## HISTORICAL SEARCH STATEMENT

## Land Use Victoria

Page 1 of 5

Produced 02/02/2018 03:42 PM

Volume 08349 Folio 417

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 01943 Folio 424

THE IMAGE OF THE FOLIO CEASED TO BE THE DIAGRAM LOCATION ON 25/03/2006 08:47 AM

### RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
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### RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
---------------------------------	------------------------------	---------	--------

30/09/2002	30/09/2002	AB592663M	Y
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DISCHARGE OF MORTGAGE  
MORTGAGE(S) REMOVED  
X039567G

30/09/2002	30/09/2002	AB592665H	Y
------------	------------	-----------	---

TRANSFER OF LAND BY ENDORSEMENT  
FROM:  
PHILIP GEORGE COBBY  
TO:  
STEPHANIE OLVER

RESULTING PROPRIETORSHIP:  
Estate Fee Simple  
Sole Proprietor  
STEPHANIE OLVER of 16 CAVENDISH STREET PORTLAND VIC 3305  
AB592665H 30/09/2002

30/09/2002	30/09/2002	AB592666F	Y
------------	------------	-----------	---

MORTGAGE OF LAND  
MORTGAGE AB592666F 30/09/2002  
RAMS MORTGAGE CORPORATION LTD

05/02/2004	05/02/2004	AC647983G	Y
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DISCHARGE OF MORTGAGE  
MORTGAGE(S) REMOVED  
AB592666F

05/02/2004	05/02/2004	AC647984E	Y
------------	------------	-----------	---

TRANSFER OF LAND BY ENDORSEMENT  
FROM:  
STEPHANIE OLVER  
TO:  
HANH THI THU NGUYEN

RESULTING PROPRIETORSHIP:  
Estate Fee Simple



## HISTORICAL SEARCH STATEMENT

## Land Use Victoria

Page 2 of 5

### Sole Proprietor

HANH THI THU NGUYEN of 74 DRISCOLLS ROAD KEALBA VIC 3021  
AC647984E 05/02/2004

13/11/2007	13/11/2007	AF466223N	Y
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### MORTGAGE OF LAND

MORTGAGE AF466223N 13/11/2007  
NATIONAL AUSTRALIA BANK LTD

31/01/2012	31/01/2012	AJ457431W (O)	Y
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### DISCHARGE OF MORTGAGE

AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)  
MORTGAGE AF466223N

31/01/2012	31/01/2012	AJ457432U (O)	Y
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### MORTGAGE OF LAND

MORTGAGE AJ457432U 31/01/2012  
AUSTRALIA AND NEW ZEALAND BANKING GROUP LTD

09/05/2014	09/05/2014	AL071481N	Y
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### DISCHARGE OF MORTGAGE

AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)  
MORTGAGE AJ457432U

09/05/2014	09/05/2014	AL071482L	Y
------------	------------	-----------	---

### TRANSFER OF LAND BY ENDORSEMENT

FROM:  
HANH THI THU NGUYEN  
TO:  
LJILJANA GAJIC  
BOSKO GAJIC

### RESULTING PROPRIETORSHIP:

Estate Fee Simple  
TENANTS IN COMMON  
As to 9 of a total of 10 equal undivided shares  
Sole Proprietor  
LJILJANA GAJIC of 13 WINJEEL COURT BRAYBROOK VIC 3019  
As to 1 of a total of 10 equal undivided shares  
Sole Proprietor  
BOSKO GAJIC of 13 WINJEEL COURT BRAYBROOK VIC 3019  
AL071482L 09/05/2014

20/02/2017	20/02/2017	AN575917Y	Y
------------	------------	-----------	---

### TRANSFER OF LAND BY ENDORSEMENT

FROM:  
LJILJANA GAJIC  
BOSKO GAJIC  
TO:  
BOSKO GAJIC  
MILEVA GAJIC

### RESULTING PROPRIETORSHIP:

Estate Fee Simple  
Joint Proprietors  
BOSKO GAJIC  
MILEVA GAJIC both of 13 WINJEEL COURT BRAYBROOK VIC 3019  
AN575917Y 20/02/2017

## **HISTORICAL SEARCH STATEMENT**

## **Land Use Victoria**

Page 3 of 5

STATEMENT END

### **VOTS Snapshot**

Volume 08349 Folio 417  
124003266663H  
Produced 30/09/2002 11:43 am

### **LAND DESCRIPTION**

Lots 205 and 206 on Plan of Subdivision 001504.  
PARENT TITLE Volume 01943 Folio 424  
Created by instrument B300203 18/10/1961

### **REGISTERED PROPRIETOR**

Estate Fee Simple  
Sole Proprietor  
PHILIP GEORGE COBBY of 1 WALDEN ST WEST FOOTSCRAY  
R571197C 01/10/1991

### **ENCUMBRANCES, CAVEATS AND NOTICES**

MORTGAGE X039567G 14/09/2000  
COMMONWEALTH BANK OF AUSTRALIA

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 8349 FOLIO 417 FOR FURTHER DETAILS AND BOUNDARIES

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### **Paper Title Images**

8349/417 - Version 1, Date 04/10/2000

**ORIGINAL**

**NOT TO BE TAKEN FROM THE OFFICE  
OF TITLES**



VICTORIA

REGISTER BOOK

VOL. 8349 FOL. 417

# Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

VOL. 8349 FOL. 417

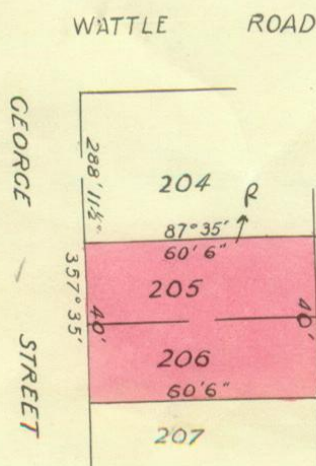
JOHN WILLIAM ALLISON of 19 Talbot Avenue Bentleigh Gentleman is now the proprietor of an estate in fee simple subject to the encumbrances notified - hereunder in ALL THAT piece of land delineated and coloured red on the map - in the margin being Lots 205 and 206 on Plan of Subdivision No.1504 Parish- of Cut Paw Paw -Together with a right of carriageway over George Street - -- shown on the said Plan of Subdivision - - - - -

DATED the 18th day of October 1961.



*R. Hall*

Assistant Registrar of Titles  
ENCUMBRANCES REFERRED TO.



MEASUREMENTS ARE IN FEET & INCHES

Derived from Vol.1943 Fol.424  
B300203

VOL.

FOL.

INSTRUMENT

APPLICATION

SALVATORE CAMARDA Labourer and GIOVANNI  
ROSSO Labourer both of 61 Wattle Road  
Maidstone are now JOINT PROPRIETORS  
Registered 14th February 1974  
No.F199874

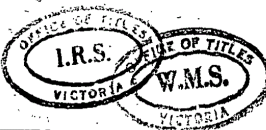


**MORTGAGE** to THE COMMERCIAL BANKING  
COMPANY OF SYDNEY LIMITED  
Registered 14th February 1974  
No.F199875



**CAVEAT No. F793235 LODGED 30 JUL 1975**

**CAVEAT WITHDRAWN 30/5/77**



JOHN RAYMOND COBBY Crane Driver and  
NORA FELICITY COBBY Married Woman  
both of 19 Smith Street Maidstone  
are now JOINT PROPRIETORS  
Registered 30th May 1977  
No.G645647



PROPRIETOR

JOHN RAYMOND COBBY OF 19 SMITH ST. MAIDSTONE  
REGISTERED 23/2/87



M712948X

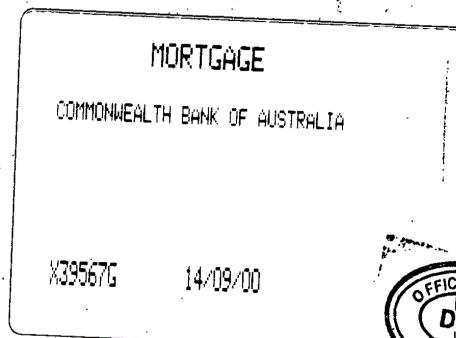
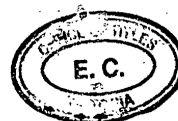
**SO** JOHN RAYMOND COBBY DIED ON 24/1/91 LETTERS  
OF ADMINISTRATION OF HIS ESTATE HAVE BEEN  
GRANTED TO JOHN DENNIS COBBY  
REGISTERED 1/10/91  
R571196F



PROPRIETOR

PHILIP GEORGE COBBY OF 1 WALDEN ST.  
WEST FOOTSCRAY

REGISTERED 1/10/91  
R571197C



T08349-417-1-1

V.8349 F.417



## HISTORICAL SEARCH STATEMENT

## Land Victoria

Page 1 of 3

Produced 17/10/2017 10:10 AM

Volume 10707 Folio 718  
Folio Creation: Created as a computer folio  
Parent title Volume 09759 Folio 371

### RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
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### RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
02/06/2003	02/06/2003	AC106036A	Y

#### TRANSFER OF LAND BY ENDORSEMENT

FROM:

DESMOND THOMAS KELLY

TO:

STEPHANIE OLVER

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

STEPHANIE OLVER of 16 CAVENDISH STREET PORTLAND VIC 3305  
AC106036A 02/06/2003

05/02/2004	05/02/2004	AC647975F	Y
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#### TRANSFER OF LAND BY ENDORSEMENT

FROM:

STEPHANIE OLVER

TO:

HANH THI THU NGUYEN

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

HANH THI THU NGUYEN of 74 DRISCOLLS ROAD KEALBA VIC 3021  
AC647975F 05/02/2004

13/11/2007	13/11/2007	AF466223N	Y
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#### MORTGAGE OF LAND

MORTGAGE AF466223N 13/11/2007

NATIONAL AUSTRALIA BANK LTD

31/01/2012	31/01/2012	AJ457431W (O)	Y
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#### DISCHARGE OF MORTGAGE

AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)

MORTGAGE AF466223N

31/01/2012	31/01/2012	AJ457432U (O)	Y
------------	------------	---------------	---

#### MORTGAGE OF LAND



## HISTORICAL SEARCH STATEMENT

## Land Victoria

Page 2 of 3

MORTGAGE AJ457432U 31/01/2012  
AUSTRALIA AND NEW ZEALAND BANKING GROUP LTD

09/05/2014 09/05/2014 AL071481N Y

DISCHARGE OF MORTGAGE  
AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)  
MORTGAGE AJ457432U

09/05/2014 09/05/2014 AL071482L Y

### TRANSFER OF LAND BY ENDORSEMENT

FROM:  
HANH THI THU NGUYEN  
TO:  
LJILJANA GAJIC  
BOSKO GAJIC

RESULTING PROPRIETORSHIP:  
Estate Fee Simple  
TENANTS IN COMMON  
As to 9 of a total of 10 equal undivided shares  
Sole Proprietor  
LJILJANA GAJIC of 13 WINJEEL COURT BRAYBROOK VIC 3019  
As to 1 of a total of 10 equal undivided shares  
Sole Proprietor  
BOSKO GAJIC of 13 WINJEEL COURT BRAYBROOK VIC 3019  
AL071482L 09/05/2014

20/02/2017 20/02/2017 AN575917Y Y

### TRANSFER OF LAND BY ENDORSEMENT

FROM:  
LJILJANA GAJIC  
BOSKO GAJIC  
TO:  
BOSKO GAJIC  
MILEVA GAJIC

RESULTING PROPRIETORSHIP:  
Estate Fee Simple  
Joint Proprietors  
BOSKO GAJIC  
MILEVA GAJIC both of 13 WINJEEL COURT BRAYBROOK VIC 3019  
AN575917Y 20/02/2017

STATEMENT END

## VOTS Snapshot

Volume 10707 Folio 718  
124004902367T  
Produced 21/02/2003 02:24 pm

## LAND DESCRIPTION

Lot 1 on Title Plan 137517J (formerly known as Lot 204 on Plan of Subdivision 001504).  
PARENT TITLE Volume 09759 Folio 371

## **HISTORICAL SEARCH STATEMENT**

## **Land Victoria**

Page 3 of 3

Created by instrument AB888718P 19/02/2003

### **REGISTERED PROPRIETOR**

Estate Fee Simple

Sole Proprietor

DESMOND THOMAS KELLY of 13 WEEROONA AVENUE HAMLYN HEIGHTS VIC 3215 Legal  
Personal Representative(s) of BRYAN JOSEPH KELLY who died on 10/06/1999  
AB888717R 19/02/2003

### **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 TP137517J FOR FURTHER DETAILS AND BOUNDARIES

## HISTORICAL SEARCH STATEMENT

## Land Victoria

Page 1 of 4

Produced 17/10/2017 10:19 AM

Volume 09759 Folio 371

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 01943 Folio 424

THE IMAGE OF THE FOLIO CEASED TO BE THE DIAGRAM LOCATION ON 31/08/2002 05:01 AM

### RECORD OF HISTORICAL DEALINGS

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

### RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
19/02/2003	21/02/2003	AB888717R	Y

#### TRANSMISSION APPLICATION

FROM:

BRYAN JOSEPH KELLY

TO:

DESMOND THOMAS KELLY

#### RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

DESMOND THOMAS KELLY of 13 WEEROONA AVENUE HAMLYN HEIGHTS VIC  
3215 Legal Personal Representative(s) of BRYAN JOSEPH KELLY who  
died on 10/06/1999  
AB888717R 19/02/2003

19/02/2003	21/02/2003	AB888718P	Y
------------	------------	-----------	---

Cancelled by AB888718P

STATEMENT END

### VOTS Snapshot

Volume 09759 Folio 371

124004902324Q

Produced 21/02/2003 02:22 pm

### LAND DESCRIPTION

Lot 1 on Title Plan 137517J (formerly known as Lot 204 on Plan of Subdivision 001504).

PARENT TITLE Volume 01943 Folio 424

Created by instrument M854124L 22/05/1987

## **HISTORICAL SEARCH STATEMENT**

## **Land Victoria**

Page 2 of 4

### **REGISTERED PROPRIETOR**

Estate Fee Simple

Sole Proprietor

BRYAN JOSEPH KELLY of 9 WILLIAM STREET FOOTSCRAY  
M854124L 22/05/1987

### **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 TP137517J FOR FURTHER DETAILS AND BOUNDARIES

---

### **Paper Title Images**

9759/371 - Version 0, Date 31/03/1999

**ORIGINAL**

**NOT TO BE TAKEN FROM THE OFFICE  
OF TITLES**



VICTORIA

REGISTER BOOK

VOL. 9759 FOL. 371

# Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

FOL.

BRYAN JOSEPH KELLY of 9 William Street Footscray is the proprietor of an estate in fee simple subject to the encumbrances notified hereunder in all that piece of land in the Parish of Cut-paw-paw being Lot 204 on Plan of Subdivision No.1504 which land is shown enclosed by continuous lines on the map hereon TOGETHER WITH a right of carriage way over George Street shown on the said Plan of Subdivision- - - - -

VOL.

DATE: 22/5/87  
DERIVED FROM VOL.1943 FOL.424 M854124L



T09759-371-1-0

## ENCUMBRANCES

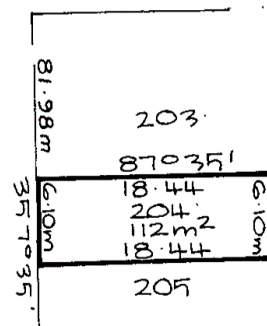


*A. J. J. J. J.*

Assistant Registrar of Titles

WATTLE ROAD

GEORGE STREET



*R.*

MEASUREMENTS ARE IN METRES

*AS*



VOL. 9759 FOL. 371



## **HISTORICAL SEARCH STATEMENT**

## **Land Victoria**

Page 1 of 3

Produced 17/10/2017 10:41 AM

Volume 01943 Folio 424

Folio Creation: Details Unknown

Parent titles :

Volume 01357 Folio 235 to Volume 01357 Folio 236

STATEMENT END

### **VOTS Snapshot**

NIL

---

### **Paper Title Images**

1943/424 - Version 0, Date 16/03/2001

Entered in the Register Book

Vol. 1943 Vol. 388424



VICTORIA.

**CANCELLED** *dm*

# Certificate of Title,

UNDER THE "TRANSFER OF LAND STATUTE."

*Anthony Kennedy of Number 23 Leicester Street Carlton Victoria is now the proprietor of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All that piece of Land, delineated and colored red on the Map in the margin, being lots two hundred and four, two hundred and five and two hundred and six on the plan of subdivision Number 1504 lodged in the Office of Titles and being part of Crown allotment forty four section twenty Parish of Cut Saw Saw County of Bourke together with a right of carriage way over George Street shown on the said plan of subdivision.*

Dated the first                      day of September                       
eight hundred and eighty-seven

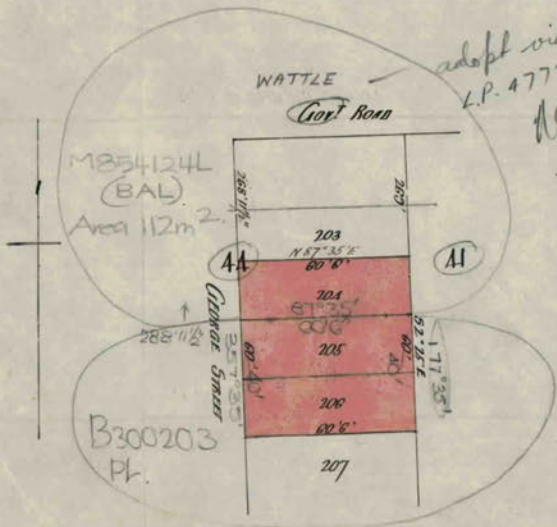
                    

One thousand

*[Signature]*



Assistant Registrar of Titles.  
ENCUMBRANCES REFERRED TO.



T01943-424-1-9

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

*[Signature]*  
The Measurements are in feet and inches



Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
<p>CANCELLED AS TO PART</p> <p>UNDER ACT No. 6299</p> <p>CANCELLED AS TO PART</p> <p>Entered on Duplicate to Section 376</p>	<p>No. 8300203</p> <p>registered 18 October 1961</p> <p>See Vol 8349 Fol. 417</p> <p>OFFICE OF TITLES L.D. VICTORIA</p>	<p>Assistant Registrar of Titles.</p>	
<p>TRANSFER AS TO BALANCE No. 178541241</p> <p>PURSUANT TO SECTION 376 ACT 6299</p> <p>registered 22 MAY 1987</p> <p>CANCELLED See Vol. 9759</p> <p>Not entered on Duplicate pursuant to Section 376 Act 6299</p>	<p>FOL. 371</p> <p>OFFICE OF TITLES L.A.A. VICTORIA</p>	<p>Assistant Registrar of Titles.</p>	
<p><b>CANCELLED</b></p>		<p>Assistant Registrar of Titles.</p>	
		<p>Assistant Registrar of Titles.</p>	
		<p>Assistant Registrar of Titles.</p>	
		<p>Assistant Registrar of Titles.</p>	



## **HISTORICAL SEARCH STATEMENT**

## **Land Victoria**

Page 1 of 7

Produced 17/10/2017 10:48 AM

Volume 01357 Folio 235  
Folio Creation: Details Unknown

STATEMENT END

### **VOTS Snapshot**

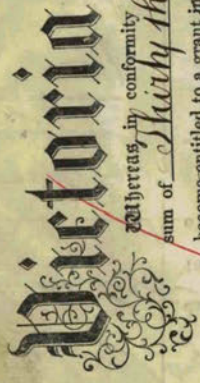
NIL

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### **Paper Title Images**

1357/235 - Version 0, Date 15/06/2000





**CANCELLED**  
Entered in the Register Book,  
Vol. 1357, Folio 27/235.  
*George Sulton*  
Assistant Registrar of Titles.

**Victoria**  
by the Grace of God of the United Kingdom of Great Britain and Ireland QUEEN DEFENDER of the Faith to all to whom these presents shall come GREETING  
Whereas in conformity with the laws relating to the sale and occupation of Crown Lands in our Colony of Victoria the person hereinafter named has in consideration of the  
sum of Thirty three pounds  
become entitled to a grant in fee-simple of the land hereinafter described Now know ye that in consideration of the sum so paid and in pursuance of *The Land Act 1869* WE DO HEREBY GRANT UNTO

George Sulton of North Fitzroy  
heirs and assigns ALL THAT PIECE OF LAND in the said Colony containing four acres and twenty perches more or less being  
Allocation forty three of section twenty in the Parish of Cuthawhaw County of Bourke

delimited with the measurements and abutments thereof in the map drawn in the margin of these presents and therein colored yellow To hold unto the said George Sulton

his heirs and assigns for ever

AND ALSO reserving to us our heirs and successors free liberty and authority for us our heirs and successors and our agents and servants at any time or times hereafter to enter upon the said land and to search and mine therein for gold and to extract and remove therefrom any gold and any auriferous earth or stone and for the purposes aforesaid to sink shafts erect machinery carry on any works and do any other things which may be necessary or usual in mining PROVIDED ALWAYS that it shall be lawful for us our heirs and successors at any time on paying full compensation to the said George Sulton

his heirs executors administrators or assigns for the full value other than auriferous of the said piece of land or so much thereof as may be resumed as hereinafter mentioned and of the improvements upon the said piece of land or the part so resumed such value in case of disagreement to be ascertained by arbitration to resume the said piece of land or any part thereof for mining purposes

AND THAT the terms conditions and events upon which such land may be resumed and the manner in which such arbitration may be conducted may be determined by regulations in such manner as the Governor in Council may from time to time direct or if at any time no such regulations shall be in force then by the regulations concerning the resumption of land for mining purposes in force at the date of this Grant unless Parliament shall otherwise determine

In testimony whereof we have caused this our Grant to be sealed with the Seal of the said Colony ~~Witness~~ our trusty and well-beloved the Most Honorable George Augustus Constantine Marquis of Normanby Earl of Mulgrave Viscount Normanby and Baron Mulgrave of Mulgrave all in the County of York in the Peerage of the United Kingdom and Baron Mulgrave of New Ross in the County of Wexford in the Peerage of Ireland a Member of Her Majesty's Most Honorable Privy Council Knight Grand Cross of our Most Distinguished Order of Saint Michael and Saint George Governor and Commander-in-Chief of the said Colony of Victoria and its Dependencies and Vice-Admiral of the same at Melbourne this third  
day of March in the fourth year of our Reign and in the year of our Lord One thousand eight hundred and eighty two



**CANCELLED**

*George Sulton*



T01357-235-1-3

NOTE: - The bearings and measurements are approximately given in this plan.  
The measurements are in links.

3690

D.-170.



# MEMORIALS OF INSTRUMENTS.

Nature of Instrument.	Time of its Production for Registration.	Names of the Parties to it.	Number or Symbol thereon.
<i>Caveat No 13524 lodged 29<sup>th</sup> April 1887 at 3<sup>40</sup> AM</i> <i>Caveat lodged 15<sup>th</sup> June 1888 at 10.45 AM</i>	The day of 18 <sup>th</sup> at o'clock in the noon.		
<i>Creation of Easement</i> <i>Tol.</i>	<i>The 31<sup>st</sup> May 1887 at 12.35 PM</i> <i>1918 Tol. 383495</i>	<i>George Sutton</i> <i>to</i> <i>Leah Jacobs</i> <i>McFarland</i> <i>Asst Regr of Titles</i>	<i>190185</i>
<i>Transfer as to part and Creation of Easement</i> <i>REGISTERED AS TO THE LAND IN CERTIFICATE</i> <i>TITLE VOL. 1920 FOL. 383853</i> <i>REGISTRAR OF TITLES.</i>	<i>The 13<sup>th</sup> May 1887 at 2.25 PM</i>	<i>George Sutton</i> <i>to</i> <i>Herbert Charles Powell</i> <i>Asst Regr of Titles</i>	<i>189198</i>
<i>Transfer as to part and Creation of Easement</i>	<i>The 31<sup>st</sup> August 1887 at 11.4 A.M.</i> <i>Tol 1943 Tol 388423</i>	<i>George Sutton</i> <i>to</i> <i>James Joseph Hunter McEann</i> <i>Asst Regr of Titles</i>	<i>19575</i>
<i>Creation of Easement</i>	<i>The 1<sup>st</sup> September 1887 at 10.42 A.M.</i> <i>Tol 1943 Tol 388424</i>	<i>George Sutton</i> <i>to</i> <i>Anthony Kennedy</i> <i>Asst Regr of Titles</i>	<i>195833</i>
<i>Transfer as to part and Creation of Easement</i> <i>REGISTERED AS TO THE LAND IN CERTIFICATE</i> <i>TITLE VOL. 1955 FOL. 390962</i> <i>W. Andrews</i> <i>ASSISTANT REGISTRAR OF TITLES.</i>	<i>The 7<sup>th</sup> October 1887 at 11.35 A.M.</i> <i>Tol</i>	<i>George Sutton</i> <i>to</i> <i>Patrick McCarthy</i> <i>W. Andrews</i> <i>Asst Regr of Titles</i>	<i>199093</i>
<i>Transfer as to part and Creation of Easement</i> <i>REGISTERED AS TO THE LAND IN CERTIFICATE</i> <i>TITLE VOL. 1967 FOL. 393314</i> <i>W. Andrews</i> <i>ASSISTANT REGISTRAR OF TITLES.</i>	<i>The 21<sup>st</sup> November 1887 at 11.40 A.M.</i>	<i>George Sutton</i> <i>to</i> <i>John Harrow</i> <i>W. Andrews</i> <i>Asst Regr of Titles</i>	<i>201276</i>

For continuation of instrument see the annexed sheet marked A

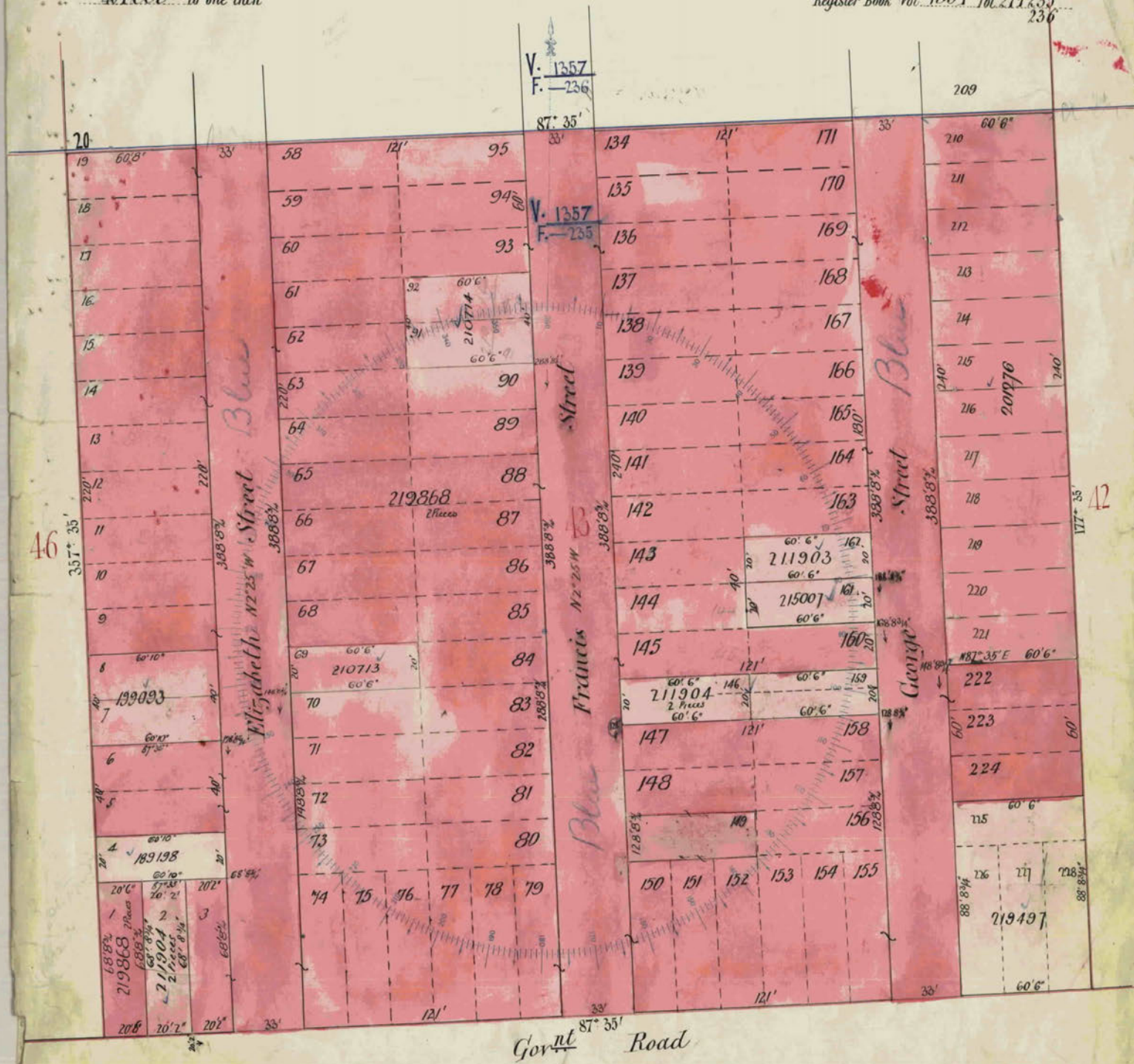


# Titles Office Record of Subdivision

SCALE

40 feet to one inch

Register Book Vol. 1357 fol. 271, 235, 236



T01357-235-2-1

L.P.  
1504



 Natural Resources and Environment  
NATURAL RESOURCES AND ENVIRONMENT  
AND MANAGEMENT

**INTENTIONALLY  
BLANK**

Nature of Instrument.	Day and Hour of its Production	Names of the Parties to It.	Number or Symbol thereon.
<p>Transfer as to part and Creation of Easement</p> <p><b>CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2015 FOL. 402873</b></p> <p><i>As Davidson</i> <small>ASSISTANT REGISTRAR OF TITLES</small></p>	<p>The 1st. May 1888 at 10.12 AM</p>	<p>George Sutton to Henry Horace White <i>As Davidson</i> <small>Assistant Registrar of Titles.</small></p>	<p>215007</p>
<p>Transfer as to part and Creation of Easement</p> <p><b>CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2028 FOL. 405598</b></p> <p><i>As Davidson</i> <small>ASSISTANT REGISTRAR OF TITLES</small></p>	<p>The 12th June 1888 at 12.54 pm</p>	<p>George Sutton to Phoebe McKay McWilliam <i>As Davidson</i> <small>Assistant Registrar of Titles.</small></p>	<p>219497</p>
<p>Transfer as to part and Creation of Easement</p> <p><b>CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2037 FOL. 407389</b></p> <p><i>As Davidson</i> <small>ASSISTANT REGISTRAR OF TITLES</small></p>	<p>The 15th June 1888 at 10.15 am</p>	<p>George Sutton to Patrick Callaghan <i>As Davidson</i> <small>Assistant Registrar of Titles.</small></p>	<p>219868</p>
		<small>Assistant Registrar of Titles.</small>	
		<small>Assistant Registrar of Titles.</small>	
		<small>Assistant Registrar of Titles.</small>	
		<small>Assistant Registrar of Titles.</small>	





This is the Sheet marked *A* referred to in the Certificate of Title entered in the Register Book Vol. 1357 Fol. 271235.

*M. W. Farland*  
Assistant Registrar of Titles.

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
Creation of Easement.	The 14th day of March, 1888, at 2.15 o'clock in the afternoon.	George Sutton to <i>Charlotte Henrietta Stopp.</i>	210712.
Transfer as to Part and Creation of Easement.	The 14th day of March, 1888, at 2.15 o'clock in the afternoon.	George Sutton to <i>Thomas Turner</i>	210713.
Transfer as to Part and Creation of Easement.	The 14th day of March, 1888, at 2.15 o'clock in the afternoon.	George Sutton to <i>George Lane.</i>	210714.
Transfer as to part and Creation of Easement.	The 27th March 1888 at 10.13 am.	George Sutton to <i>John Thomas Bull</i>	211903
Transfer as to part and Creation of Easement.	The 27th March 1888 at 10.13 am.	George Sutton to <i>John Robert McSpine</i>	211904
Creation of Easement	The 24th April 1888 at 1.28 pm	George Sutton to <i>Grace Shrock</i>	214357

CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 1999 FOL. 399757

CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 1999 FOL. 399758

CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2005 FOL. 400933

CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2005 FOL. 400934

Vol 2011 Fol 402132





## Appendix F: Dial Before You Dig

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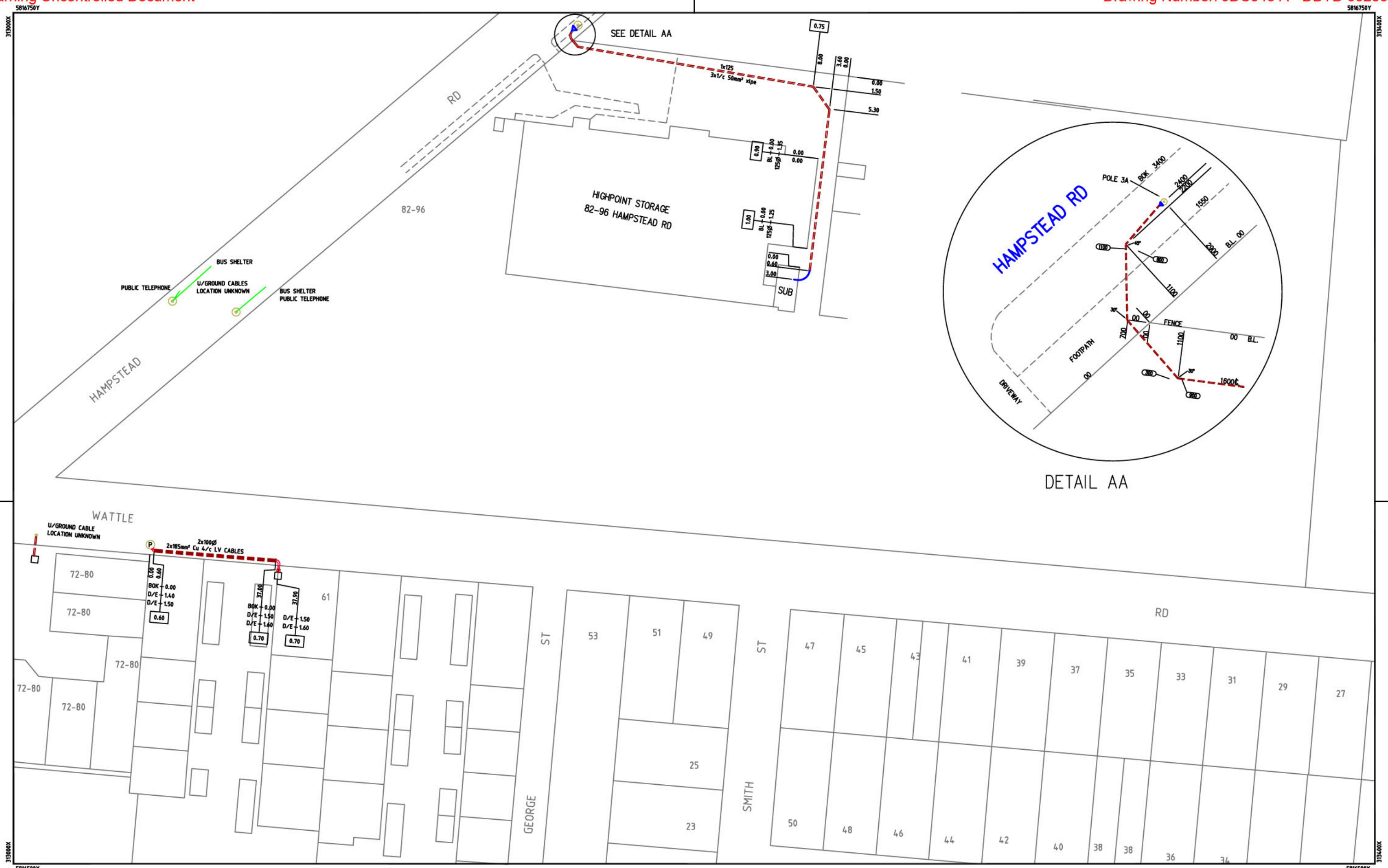


**Warning - Take Precautions if Printing this Plot in Black & White.**  
All planned mains shall be treated as live mains, as mains under pressure may be in existence.

-  Gas Transmission Pipeline  
 Gas Distribution Mains  
 Gas Distribution Mains  
 Planned Gas Assets  
 Requested Area



UNDERGROUND CABLE PLAN (A)



**LEGEND**

	110kV U/G CABLE 185/3x22.5kVCH (1.25)
	LV MAINS U/G CABLE 185/4x17.5kV (1.25)
	LV SERVICE U/G CABLE 185/4x17.5kV (1.25)
	PUBLIC LIGHTING CABLE 6x16 (1.25)
	SUPERVISORY CABLE
	HV MAINS STRAIGHT JOINT
	LV MAINS STRAIGHT JOINT
	LV SERVICE TEE JOINT
	LV MAIN TEE JOINT
	INSULATED END
	SEALED END
	U/G CABLE CUT END
	ELECTRICAL DUCT & SIZE
	BROWN OUTLETS IN U/G BOX (SHORING)
	PIPES (OTHER AUTHORITIES)
	METER BOX
	DEPTH OF EARTH COVER TO TOP OF CABLE
	DEPTH TO TOP OF OTHER SERVICES/OBSTRUCTIONS
	80W MVA MOUNTED AT 5.0m
	100W MVA MOUNTED AT 5.0m
	150W MVA MOUNTED AT 10m
	250W MVA MOUNTED AT 12.5m
	400W MVA MOUNTED AT 15m
	PUBLIC LIGHT (AS SPECIFIED)
	SERVICE PIT
	COMMUNICATIONS PIT
	VIO ROADS PIT
	BOUNDARY OR BUILDING LINE
	KERB LINE
	PARALLELISM PILLAR
	HOURLY N/A
	LEFT N/A
	CABLE HEAD POLE-HV/LV
	SUBTRANSMISSION POLE
	HV/LV POLE
	POLE POLE SUBSTATION
	HV POLE
	LV POLE
	NEW
	EXISTING
	HIGH VOLTAGE CABLE
	LOW VOLTAGE CABLE
	TITLE BOUNDARY
	BACK OF KERB
	TURNING OR TANGENT POINT
	INTERSECTION POINT
	DUCT END
	OUT OF COMMISSION
	CABLE HEAD POLE-ASBESTOS CEMENT
	CABLE HEAD POLE-EARTHWARE
	CABLE HEAD POLE-POLYVINYL CHLORIDE
	CABLE HEAD POLE-REINFORCED CONCRETE
	CABLE HEAD POLE-FIRE HYDRANT
	CABLE HEAD POLE-STORMWATER DRAIN
	CABLE HEAD POLE-INSULATION
	CABLE HEAD POLE-CONTOURLINE
	CABLE HEAD POLE-POST AND WIRE MESH FENCE
	CABLE HEAD POLE-CHAIN WIRE MESH
	CABLE HEAD POLE-STRAIGHT JOINT
	CABLE HEAD POLE-TEE JOINT
	CABLE HEAD POLE-LV
	CABLE HEAD POLE-SERVICE

**Alinta AE Limited**  
Asset Management AAE Network  
321 Ferntree Gully Road  
Mt Waverley, VIC, 3149

**IMPORTANT**  
**USERS OF THIS PLAN PLEASE NOTE**

ALL REASONABLE CARE HAS BEEN TAKEN TO ENSURE THAT THE UNDERGROUND CABLE LOCATION INFORMATION IS CORRECTLY SHOWN ON THIS PLAN.

HOWEVER, THE INFORMATION CANNOT BE GUARANTEED FOR CORRECTNESS OR COMPLETENESS.

WHERE WORK IS CLOSE PROXIMITY TO THE CABLES IS PROPOSED THE POSITION OF THE CABLES MUST FIRST BE CONFIRMED BY CAREFUL HAND EXCAVATION.

JDB044	JDC044	JDD044
JDB043	JDC043	JDD043
JDB042	JDC042	JDD042

REVISION	DATE	BY	DESCRIPTION
1	08-11-07	A	ADDED SAP600664431, FE48, XH44, YR35

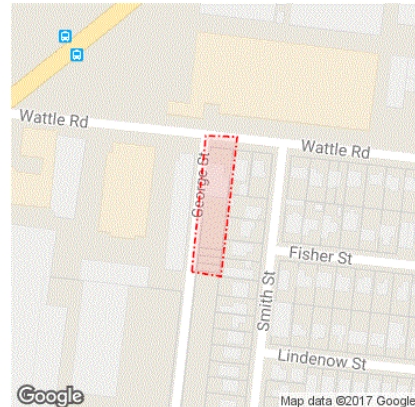
DRAWN: S. VINCI	DATE: 08-11-07	MELWAY REF: 27 J:10	DRG. No. JDC043	REV A
CHECKED:	DATE:	UNDERGROUND CABLE PLAN MAIDSTONE		
SIGNED: D. SPEARS	Asset Manager AAE Network			





## DBYD Response from AusNet Gas Services Pty Ltd.

**Job Number:** 13078275  
**Sequence Number:** 65205534  
**Enquiry Date:** 11/10/2017  
**Enquiry Location:** 53 Wattle Road Maidstone, VIC



Thank you for using the Dial Before You Dig (DBYD) service before engaging in work at the above location.

### AusNet Gas Services Pty Ltd – Gas Assets Present

Please find attached Plans and Conditions for Works near gas assets in the vicinity of your enquiry.

*\* Please note this information is only valid for 28 Days from date of issue.*

Do not rely solely on these Dial Before You Dig plans for underground asset location. The exact location of existing underground assets should be established on site prior to commencement of work. Should you wish to advise AusNet Gas Services Pty Ltd of any data discrepancy, please call 1800 088 208.

#### **For Your Safety**

In case of emergency, gas escapes, hit or damaged gas pipelines call **136707**.

Where proposed work is in close proximity to a gas pipe, the exact location of the pipe must first be determined by careful hand excavation.

#### **Gas Service Lines on Private Property**

Supplied plans do not show gas service lines on private property and do not show any gas assets of authorities other than AusNet Gas Services Pty Ltd, which may exist on site.

If you require assistance to locate gas services please contact **Downer Group** at the following locations.

Melb Metro	(03) 7379 8876	Ballarat	(03) 5342 6400	Warrnambool	(03) 5561 9614
Geelong	(03) 5223 9400	Bendigo	(03) 5442 4855		

#### **AusNet Services – DBYD Support**

Enquiries **1800 088 208**

Faults & Emergencies **136707**

[www.ausnetservices.com.au](http://www.ausnetservices.com.au)



## LEGEND – GAS ASSETS

TYPE OF PIPE		FITTINGS AND NOTATIONS			
C2	CAST IRON	90°	BEND	OR	REGULATOR KIOSK / PIT
C3	CAST IRON MECHANICAL JOINT	B.P.	BLADDER PLATE		SERVICE REGULATOR
C4	CAST IRON SOUTHERN	(C.B.)	COMBINED BEND		SYSTEM CONTROL & DATA ACQUISITION NUMBER
C5	CAST IRON A.I.S.	F. & F.	FLANGE & FAUCET PIECE		REGULATOR NUMBER
C6	CAST IRON METTERS CLOW	F. & S.	FLANGE & SPIGOT PIECE		SYPHON
C7	CAST IRON STAVELEY	LT.	LONGTHREAD		PURGE, PRESSURE POINT
C8	CAST IRON STANTON	MA	MUELLER ADAPTOR (HP)		VALVE
C9	CAST IRON STANTON-STAVELEY		OFF A WILLIAMSON TEE		VALVE INSULATED
C10	CAST IRON LEAD JOINT	D.E.	MUELLER DEAD END EXTENSION		FLANGE BLANK
D2	DUCTILE IRON-UNCOATED	L.S.	MUELLER LINE STOPPER		INSULATED FITTING
D3	DUCTILE IRON-PLASTIC COATED	T.S.	MUELLER SERVICE TEE		ANODE BED / TEST POINT
F2	FIBRO CEMENT	T.V.	MUELLER TEE VALVE		CATHODIC PROTECTION UNIT
P2	PLASTIC POLYETHYLENE (PE)	P.L.	PROPERTY LINE		ENCASING PIPE/INSERTION PIPE
P3	PLASTIC POLY VINYL CHLORIDE (PVC)	PJT	PVC TEE		CONCRETE SLABBING
P4	PLASTIC PIPE OTHER – L.P. ONLY	R.	REDUCER		CROSS
P5	PLASTIC IMPACT MODIFIED (TYPE 3)	SD.	SADDLE (C.I. MAINS ONLY)		GAS CRITICAL VALVE
P6	PLASTIC POLYETHYLENE (P.E.) CL 500 MEDIUM DENSITY (HP), (YELLOW)	ST.	STOOL (C.I. MAINS ONLY)		INSTRUMENT STATION
P7	PLASTIC POLYETHYLENE (P.E.) CL 250 MEDIUM DENSITY (LP/MP), (YELLOW)	T.	TEE		
P8	PLASTIC POLYETHYLENE (P.E.) FE808 METRIC, (BLACK WITH YELLOW STRIPES)	T.SP.	TEE SPLIT		
P9	PLASTIC POLYETHYLENE (P.E.) FE100 METRIC, (BLACK WITH ORANGE STRIPES)	TH.	THIMBLE		
P10	PLASTIC POLYETHYLENE (P.E.) FE100 METRIC, (BLACK WITH YELLOW STRIPES)	TH.R	THIMBLE REDUCER		
S2	STEEL	TH.SP.	THIMBLE SPLIT		
S3	STEEL COATED & SCREWED	TH.SP.B.	THIMBLE SPLIT BOSSED		
S4	STEEL COATED & WELDED	TH.SP.F.	THIMBLE SPLIT FLANGED		
S5	STEEL GALVANIZED	(V)	VERTICAL		
S6	STEEL COATED GIBALTY JOINT	W.S.	WILLIAMSON SHORT STOPP		
S7	STEEL PLASTIC COATED & WELDED	W.T.	WILLIAMSON TEE		
S8	STEEL PLASTIC COATED & SCREWED				
S9	STEEL INTERPON FBE COATED				
S10	STEEL NAPGARD FBE COATED				
S20	STEEL WELDED-EXTRUDED POLYETHYLENE COATED (T.P.)				
S21	STEEL WELDED-ENAMEL COATED (T.P.)				
S22	STEEL WELDED-FUSION BOND EPOXY COATED (T.P.)				
S23	STEEL WELDED-FUSION BONDED POLYETHYLENE COATED (T.P.)				
S24	STEEL WELDED-MULTI-LAYERED EXTRUDED POLYETHYLENE COATED (T.P.)				
W2	WROUGHT IRON GALVANIZED				



This Legend relates to the Plot provided in response to your DBYD request.

## Dial Before You Dig Response Cover Letter

Maribyrnong City Council  
61 Napier Street (Cnr Hyde and Napier Streets)  
Footscray  
VIC 3011



11/10/2017

To: Miss Cate Moore  
Tonkin & Taylor  
Ground Floor 95 Coventry Street  
South Melbourne VIC  
3205

Dear Miss Cate Moore

The following is our response to your Dial Before You Dig Enquiry.

### Affected Infrastructure: Drainage Assets Affected

**Sequence No:** 65205530  
**DBYD Job No:** 13078275  
**Location:** 53 Wattle Road Maidstone VIC 3012

**Commencement Date:** 11/10/2017

If you require further information please contact the Works Engineer on 03 9032 4003 or Drainage Engineer on 03 9032 4001, or [dialdb@maribyrnong.vic.gov.au](mailto:dialdb@maribyrnong.vic.gov.au).

**Important Notice:** This document contains information that is intended for use only by the addressee. If you have received this document in error, you are advised that copying, distributing, disclosing or otherwise acting in reliance on this document is expressly prohibited. If you have received this document in error, please let us know by telephone and then return it to us by post. Your reasonable costs in complying with this request will be refunded.

**DISCLAIMER:** While every care is taken by Maribyrnong City Council to ensure the accuracy of this data, Maribyrnong City Council makes no representation or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of the data being inaccurate or incomplete in any way and for any reason. **Exact positions of any assets shown on this map report should be confirmed on site.**



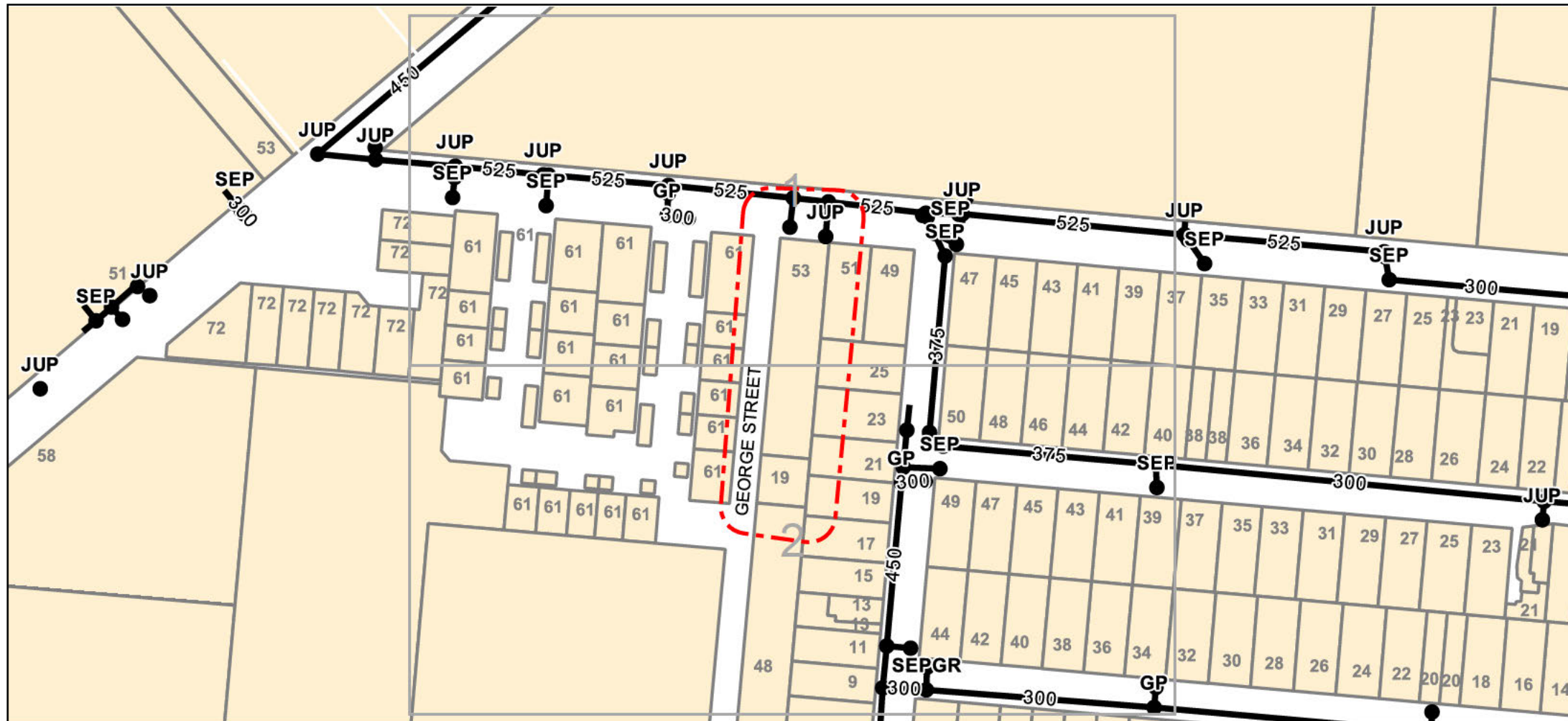
While reasonable measures has been taken to ensure the accuracy of the information contained in this plan response, neither Maribyrnong City Council or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

## Drainage

Sequence No: 65205530

DBYD Job No: 13078275

Location: 53 Wattle Road, Maidstone, VIC 3012



Create Date: 11/10/2017

Map Scale: 1:2050

**DISCLAIMER:** While every care is taken by Maribyrnong City Council to ensure the accuracy of this data, Maribyrnong City Council makes no representation or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of the data being inaccurate or incomplete in any way and for any reason. **Exact positions of any assets shown on this map report should be confirmed on site.**

Plans generated by PelicanCorp TicketDP Software [www.pelicancorp.com](http://www.pelicancorp.com)



### Asset Legend

- Drainage Pits
- Drainage Pipe



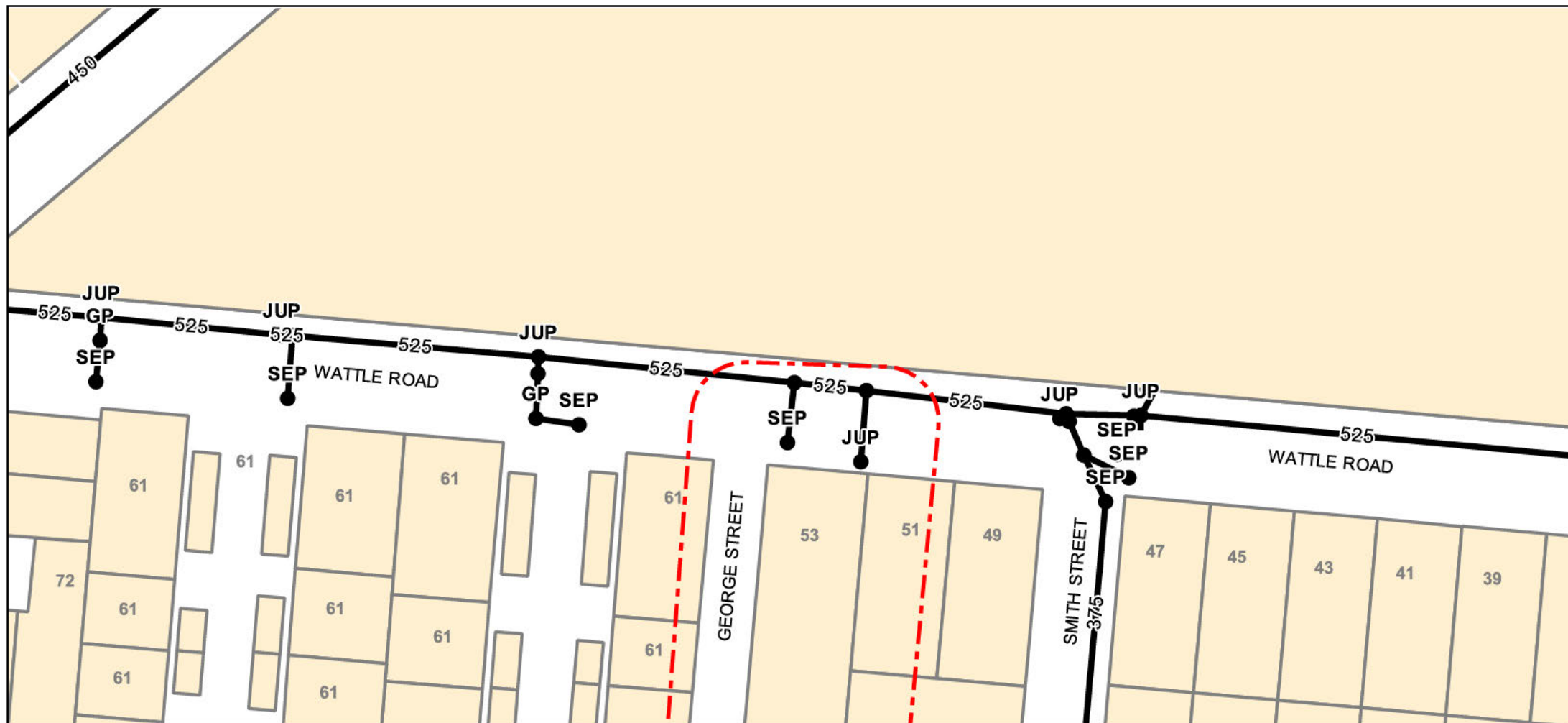


## Drainage

Sequence No: 65205530

DBYD Job No: 13078275

**Location:** 53 Wattle Road, Maidstone, VIC 3012



Create Date: 11/10/2017

**DISCLAIMER:** While every care is taken by Maribyrnong City Council to ensure the accuracy of this data, Maribyrnong City Council makes no representation or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of the data being inaccurate or incomplete in any way and for any reason. **Exact positions of any assets shown on this map report should be confirmed on site.**

Plans generated by PelicanCorp TicketDP Software [www.pelicancorp.com](http://www.pelicancorp.com)

Map Scale: 1:1000



### Asset Legend

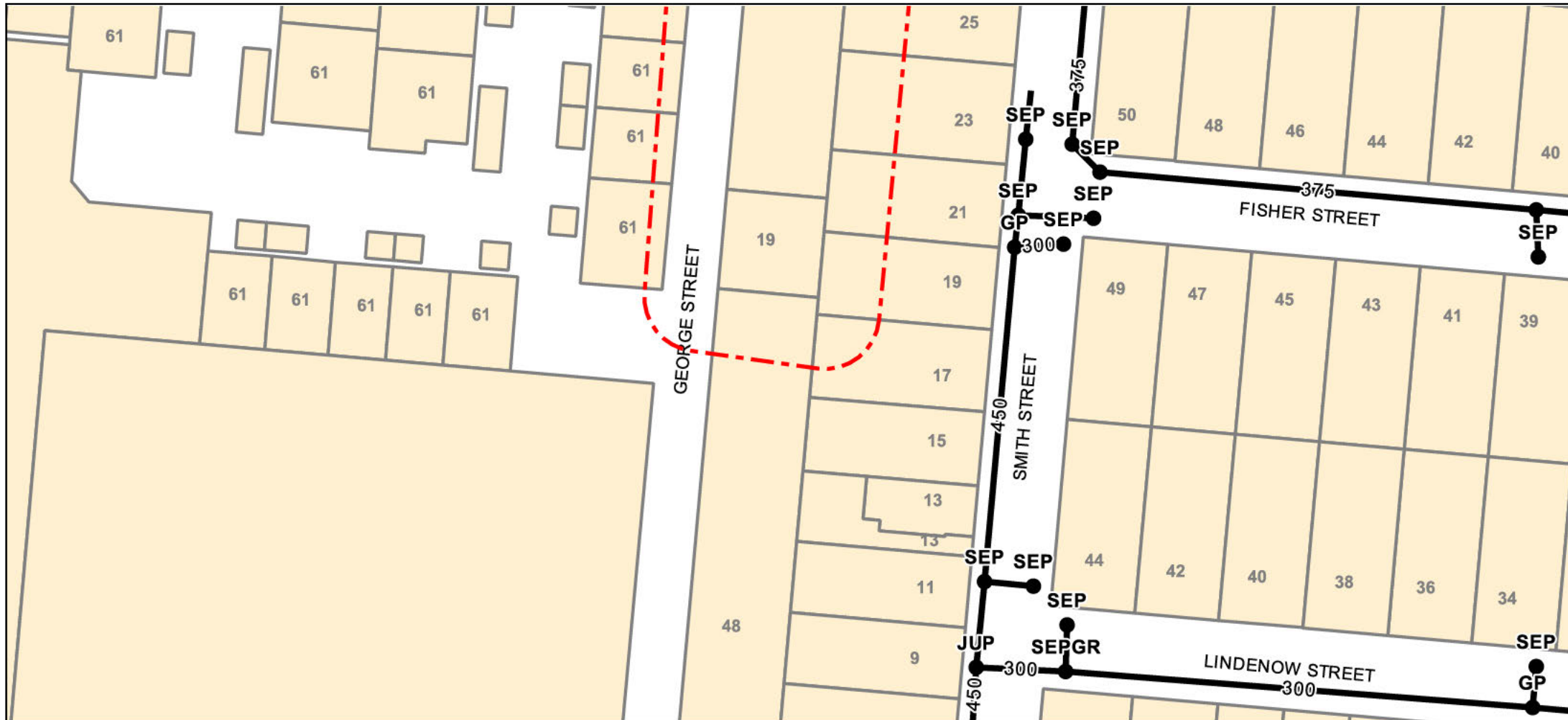
- Drainage Pits
- Drainage Pipe

## Drainage

Sequence No: 65205530

DBYD Job No: 13078275

Location: 53 Wattle Road, Maidstone, VIC 3012



Create Date: 11/10/2017

**DISCLAIMER:** While every care is taken by Maribyrnong City Council to ensure the accuracy of this data, Maribyrnong City Council makes no representation or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of the data being inaccurate or incomplete in any way and for any reason. **Exact positions of any assets shown on this map report should be confirmed on site.**

Plans generated by PelicanCorp TicketDP Software [www.pelicancorp.com](http://www.pelicancorp.com)

Map Scale: 1:1000



### Asset Legend

- Drainage Pits
- Drainage Pipe



11/10/2017

Miss Cate Moore  
Tonkin & Taylor  
Ground Floor 95 Coventry Street,  
South Melbourne, VIC 3205

Jemena Electricity Networks (Vic) Ltd  
ABN 82 064 651 083

Level 16, 567 Collins St,  
Melbourne, Vic 3000  
[www.jemena.com.au](http://www.jemena.com.au)

1300 825 469

## Dial Before You Dig Enquiry Response

Job Number: 13078275  
Sequence Number: 65205531  
Authority Name: Private  
Enquiry Date: 11/10/2017  
Enquiry Location: 53 Wattle Road  
Maidstone, VIC 3012

## Underground Electricity - Assets Affected

Please find attached plans and drawings of electricity underground assets nearest to the vicinity of your enquiry.  
This information is only valid for 28 days from the date of issue.

Attached to this response are the following documents and comments:

Jemena Assets Affected Cover Letter and Conditions  
Dig site plan(s)  
Drawings:  
JDC043\_A.pdf

### For Your Safety

If you observe obvious underground electrical cables and they appear to be additional to the information supplied, please call 1300 825 469 for further assistance.

**DO NOT PROCEED UNTIL YOU HAVE READ THIS NOTICE IN FULL**

DBYD Enquiries 1300 825 469

Faults & Emergencies 131 626

[www.jemena.com.au](http://www.jemena.com.au)





## CONDITIONS FOR WORKING IN THE VICINITY OF UNDERGROUND CABLES

SEQUENCE NUMBER : 65205531

DATE OF ISSUE : 11/10/2017

**NOTE:** Other Utilities may have electrical assets in the vicinity of your work about which we have no information. This office does not usually have plans of privately owned cables on private property. Your attention is expressly drawn to the information and disclaimers below and **'The Conditions for Working in the Vicinity of Underground Cables' attached.**

Your attention is expressly drawn to the information and disclaimers below.

1. Jemena Electricity Networks (Vic) Ltd. takes all reasonable care in providing details of its cables, however, due to the nature of underground cables and the age of some cables and records, it is impossible to conclusively ascertain the location of all cables. The accuracy and/or completeness of the information cannot be guaranteed and, accordingly, is intended to be indicative only. Information should not be solely relied upon when undertaking underground works.
2. Due to the inherent dangers associated with excavation in the vicinity of underground cables, precautions should be taken in the undertaking of any underground works, including (but not limited to) the following:
  - All excavation sites should be examined visually for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed;
  - Particular attention should be paid to areas surrounding Pole type Substations, High Voltage Switches and Kiosk Substations as there are often unrecorded earth wires buried in the vicinity;
  - If any undisclosed underground cables are located, Jemena Electricity Networks (Vic) Ltd. should be notified immediately on telephone 131 626;
  - All personnel must be properly briefed, particularly those associated with the use of earthmoving equipment, trenching, boring and pneumatic equipment;
  - All work must be undertaken in accordance with the Electricity Safety Act 1998 and the Electricity Safety Installation Regulations 2009.
3. Except to the extent that liability may not be capable of lawful exclusion, Jemena Electricity Networks (Vic) Ltd. and its servants and agents shall be under no liability whatsoever to any person for loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any Plans attached hereto. For the purposes of this condition, Jemena Electricity Networks (Vic) Ltd. has contracted on behalf of its servants and agents.
4. Except as expressly provided to the contrary in this information sheet or the attached Plans, all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.
5. Any information provided is valid only for 28 days from the date of issue.

### **NO GO ZONES**

If any **overhead** or **underground** powerlines are near your proposed work, will your equipment intrude into a NO GO Zone?

If the answer is YES, or you are NOT SURE, then please phone **131 626** for No Go Zone matters.

Further information concerning No Go Zones may be obtained from:

[www.worksafe.vic.gov.au](http://www.worksafe.vic.gov.au)

<http://www.esv.vic.gov.au>

Before work commences, you must follow the NO GO ZONE safety procedures



### **Protective Covers**

Our electrical cables usually have protective covers of;

1. Concrete or PVC cover slabs;
2. PVC, A.C. or galvanised iron pipe;
3. Concrete encased PVC pipe;
4. Thin Plastic marker tape; or
5. Wooden troughing;

Note: Some cables are known to be buried without protection.

To assist in the identification of an underground cable, some installations have marker tape installed above the cover slab or conduit protecting the cable. You must not rely on marker tape as a test for existence of underground cables.

### **Location of Cable(s)**

All reasonable care is taken to ensure that the location and level of cable(s) shown on our office drawing/s are correct at the time of installation, however, reference points may change and therefore proving of the cable(s) is essential when working in close proximity to them.

### **Excavating parallel to Cable(s)**

Generally there is no restriction to excavating parallel to our cable(s) to a depth not exceeding that of the cable. When proposed excavations are within 500mm of our cable(s), trial holes shall be hand dug at regular intervals to prove the actual locations of the cable(s).

If excavation is to exceed the depth of the cable(s) and it is likely that the protective covers or the bedding material around the cable(s) may be disturbed, or within 500mm, please phone **131 626** for No Go Zone matters

### **Excavating across Cable(s)**

It is essential that the location of cable(s) is proven by careful hand digging before using mechanical excavating machinery within 500mm of the cable(s).

A Minimum clearance of 300mm above from a cable shall be maintained.

In no case shall a cable protective cover be removed without approval.

If the width or depth of the excavation is such that the cable(s) will be exposed, our office shall be contacted to determine whether the cable(s) should be taken out of service, or whether they need to be protected or supported.

### **Heavy Machinery Operating over Cable(s)**

Where heavy "Crawler" or "Vibration" type machinery is operated over the top of cable(s), a minimum cover of 1000mm to the cable protective cover must be maintained whilst the machinery is in operation.

### **Boring**

Where it is required to bore across the line of the cable(s), the actual location of the cable(s) shall be first proven by hand digging.

A trench shall be dug one metre from the side of the cable(s) which the auger will approach, to ensure a minimum clearance of 150mm can be maintained.

### **Explosives**

The use of explosives within 3.0 metres of a cable(s) is not allowed.

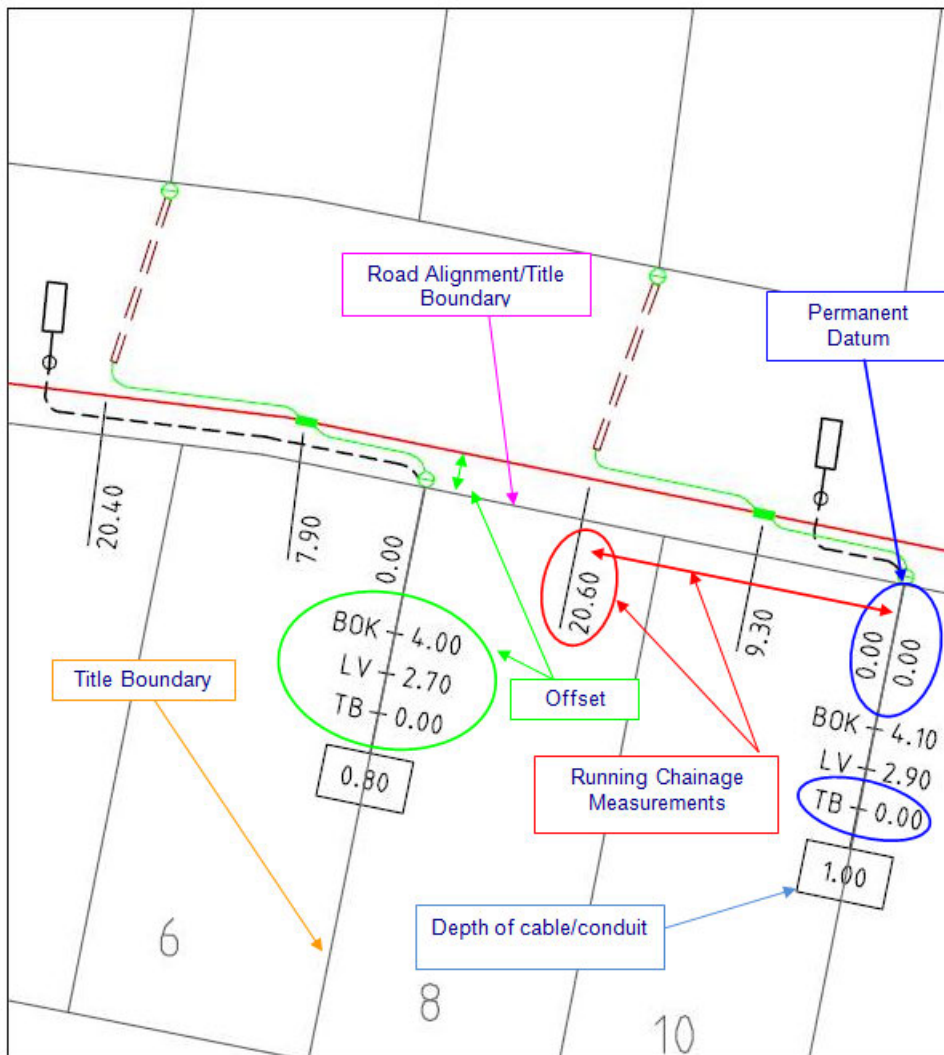
### **Regulations**

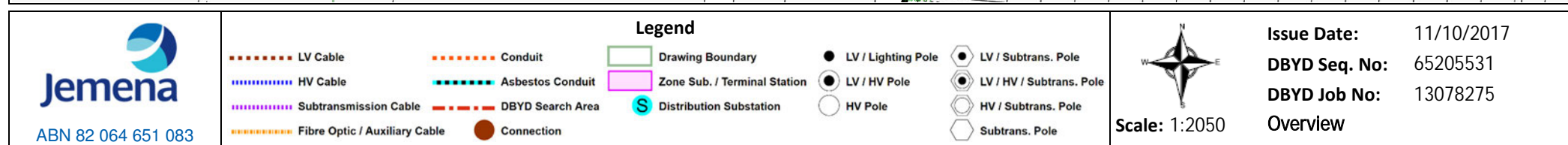
All work must be undertaken in accordance with the Electricity Safety Installation Regulations 2009.

### **Alteration of Levels**

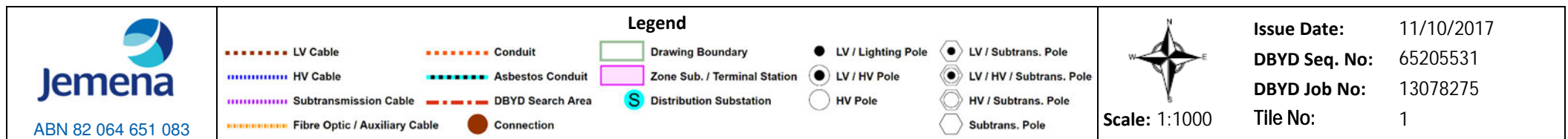
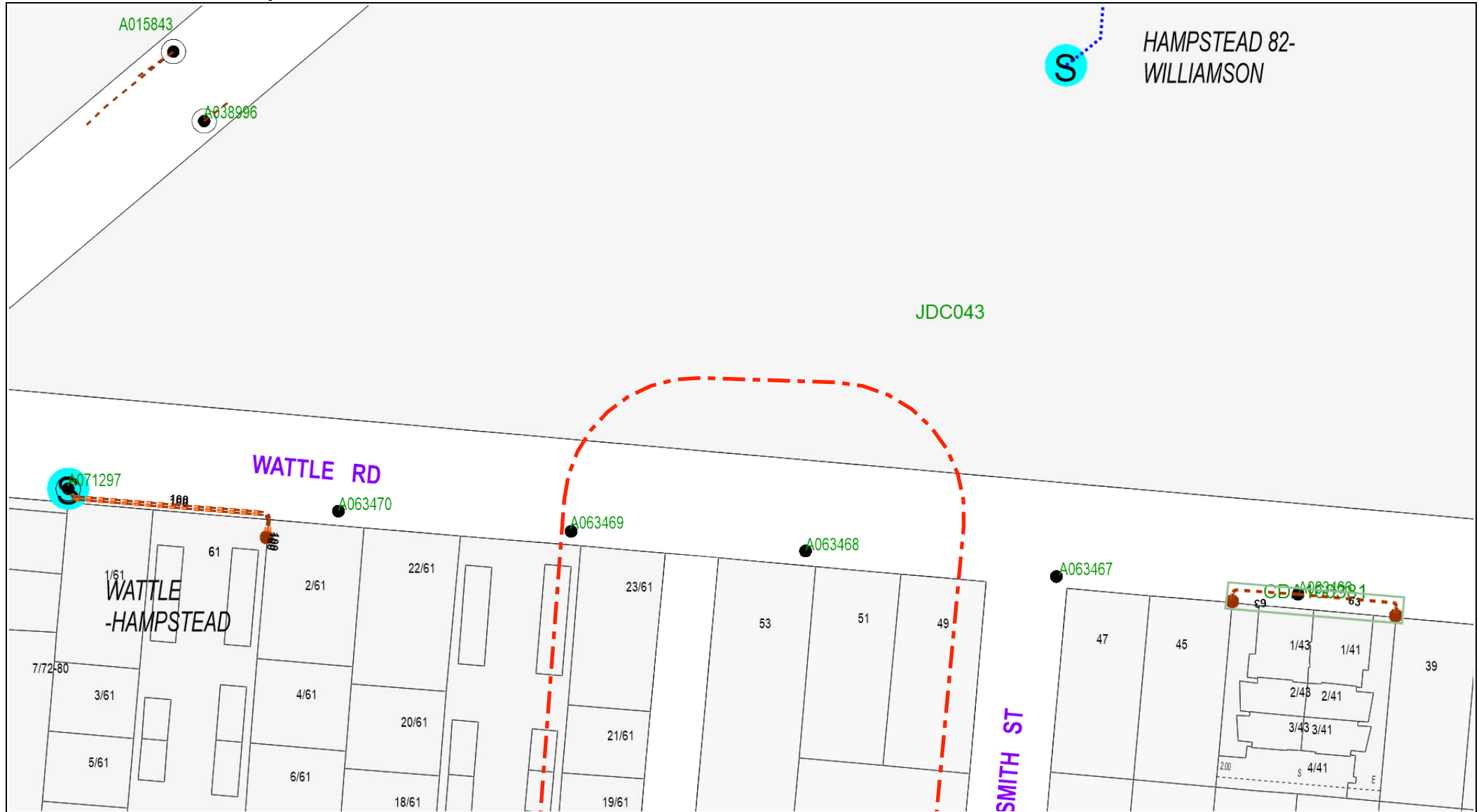
If it is desired to increase or decrease ground levels above our cables, please contact our office before the project commences to seek our approval.

### How to read Jemena Electricity plans



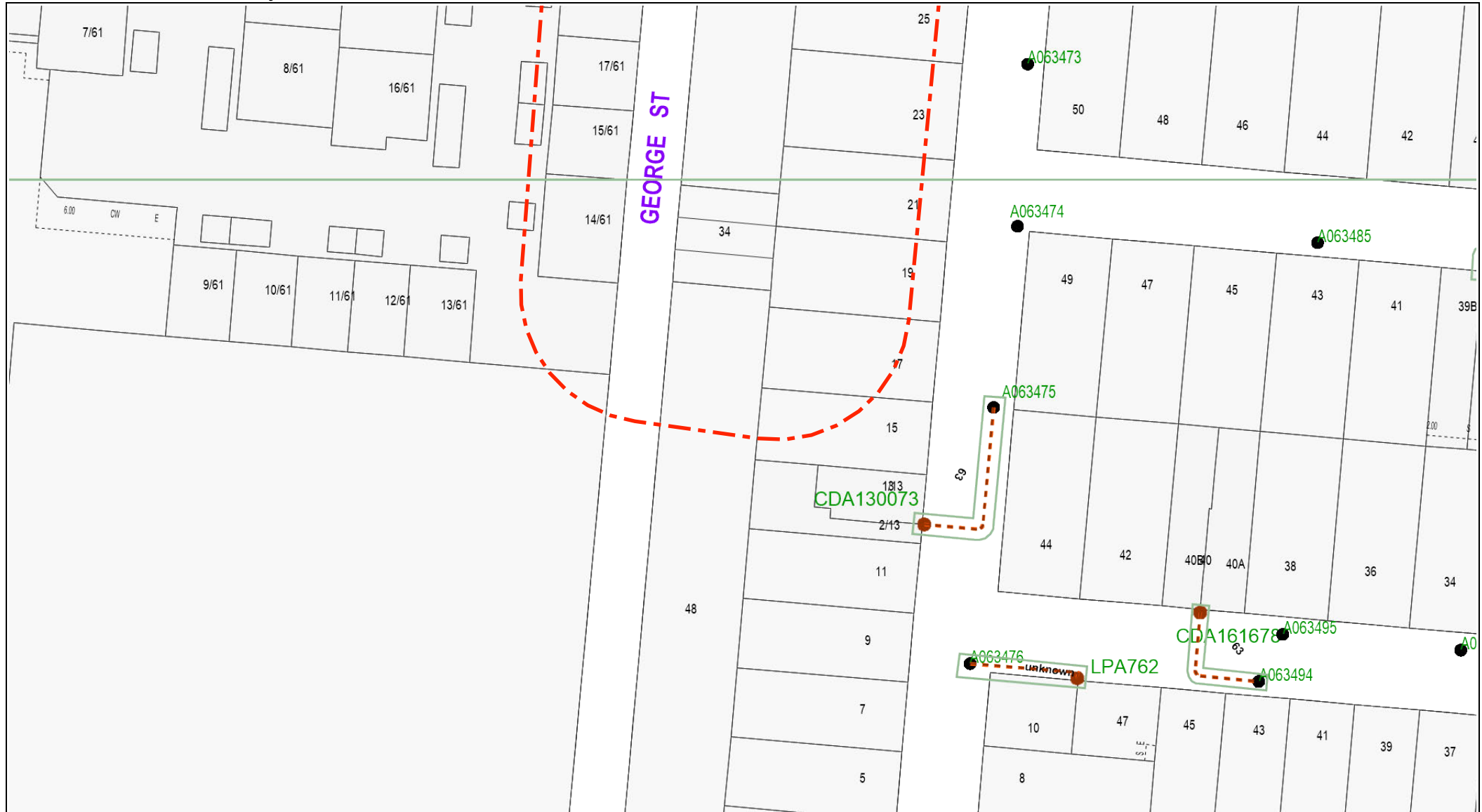


**WARNING:** This is a representation of Jemena Electricity Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the Date of Issue.



**WARNING:** This is a representation of Jemena Electricity Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the Date of Issue.





 <b>Jemena</b> ABN 82 064 651 083	<b>Legend</b>				 <b>Scale: 1:1000</b>	<b>Issue Date:</b> 11/10/2017 <b>DBYD Seq. No:</b> 65205531 <b>DBYD Job No:</b> 13078275 <b>Tile No:</b> 2
	- - - - - LV Cable - - - - - HV Cable - - - - - Subtransmission Cable - - - - - Fibre Optic / Auxiliary Cable	- - - - - Conduit - - - - - Asbestos Conduit - - - - - DBYD Search Area ● Connection	[ ] Drawing Boundary [ ] Zone Sub. / Terminal Station S Distribution Substation	● LV / Lighting Pole ● LV / HV Pole ○ HV Pole		

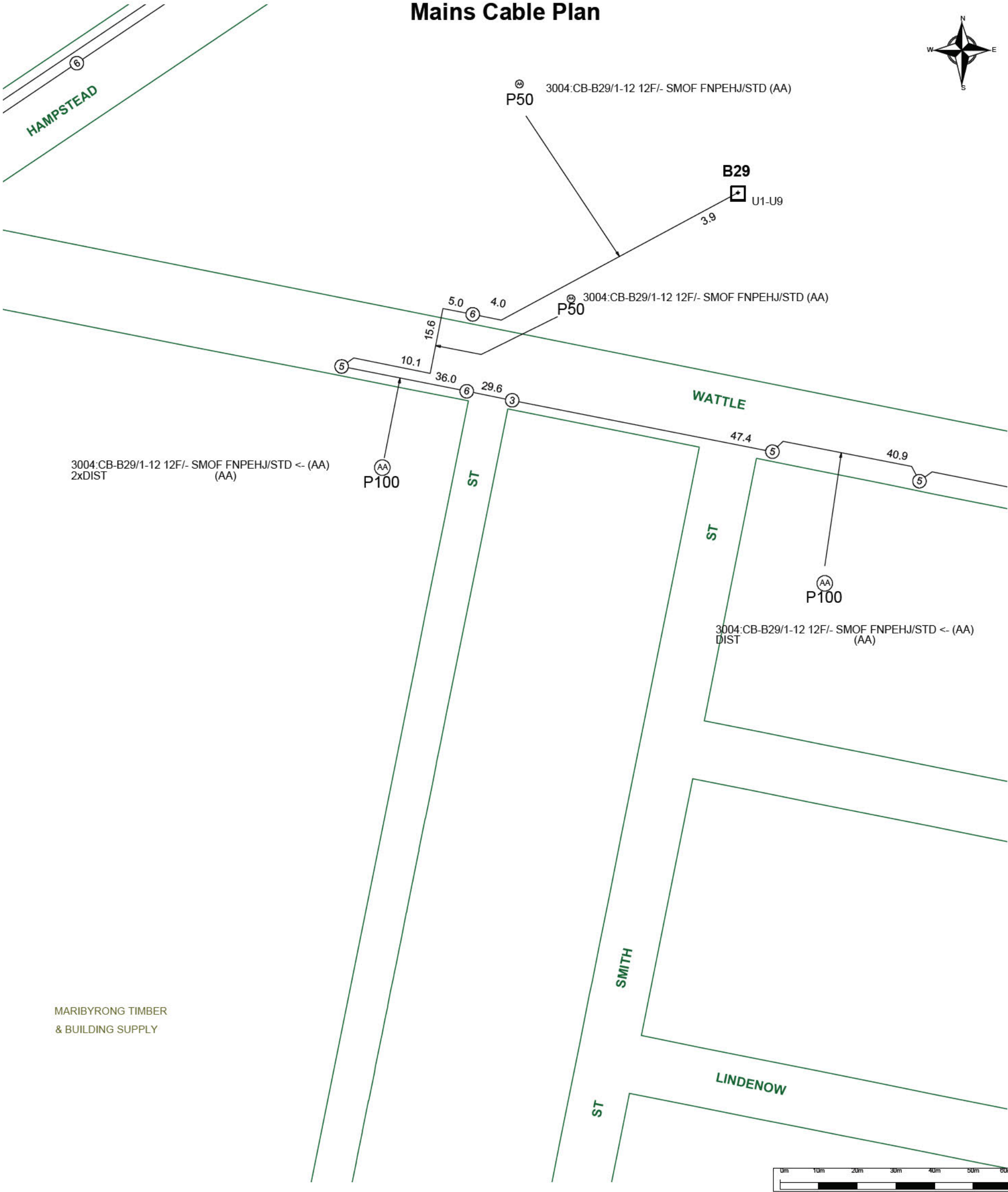
**WARNING:** This is a representation of Jemena Electricity Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the Date of Issue.







Mains Cable Plan



For all Telstra DBYD plan enquiries -  
email - Telstra.Plans@team.telstra.com  
For urgent onsite contact only - ph 1800 653 935 (bus hrs)

TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

Generated On 11/10/2017 09:40:34

Sequence Number: 65205532

**CAUTION:** Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

**WARNING** - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

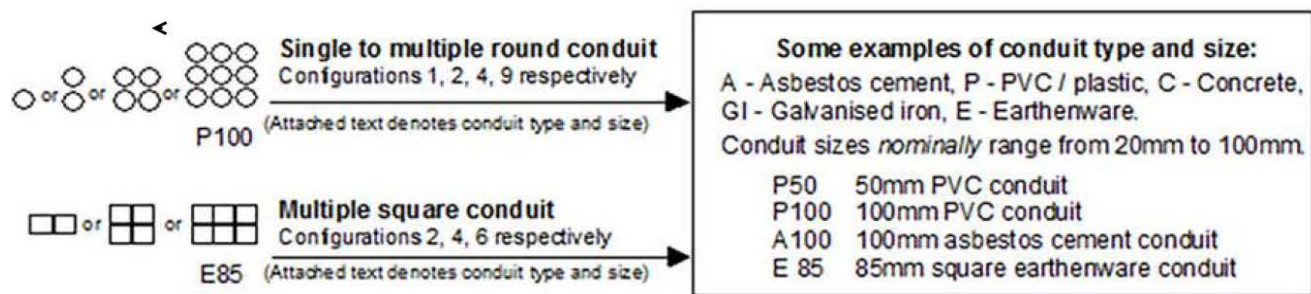
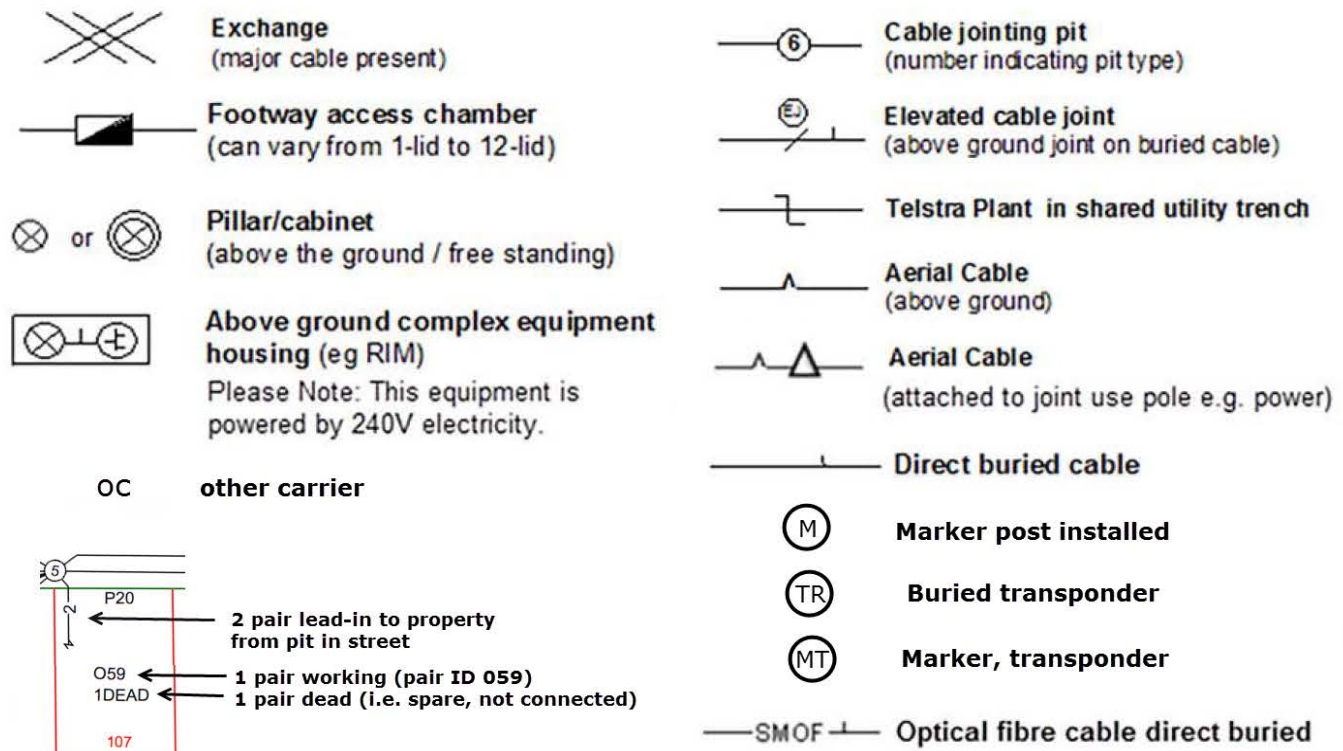
It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

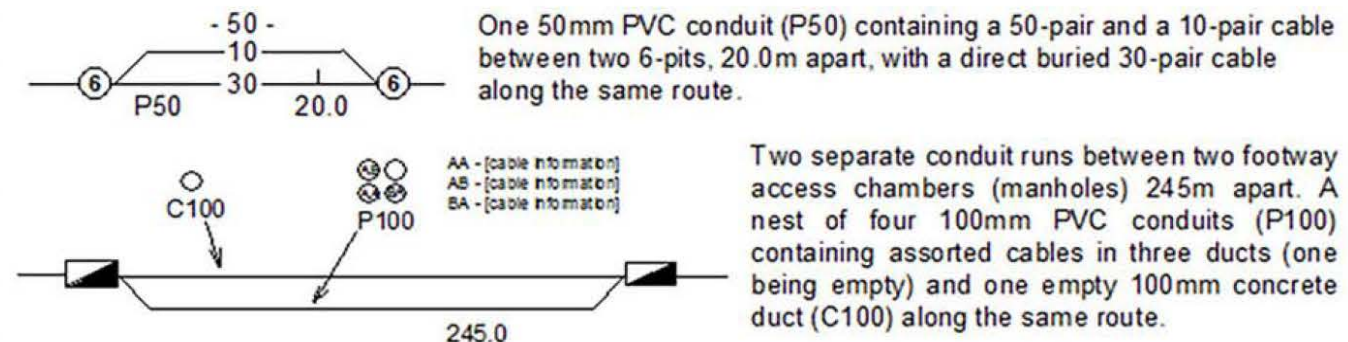
Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.



For more info contact a Telstra Accredited Locator or Telstra Plan Services 1800 653 935



## Some examples of how to read Telstra plans:



**WARNING:** Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK. A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works. The exact position of Telstra assets can only be validated by physically exposing it. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.



# Dial Before You Dig

## City West Water Plan Request

Wednesday, 11 October 2017

**TO:** Miss Cate Moore  
Ground Floor 95 Coventry Street  
South Melbourne  
3205 VIC  
**EMAIL / FAX:** CMoore@tonkintaylor.com.au  
039863886

**FROM:** CWW Dial Before You Dig

**EMAIL:** connections@citywestwater.com.au

**Site Location details:**

**53 Wattle Road, Maidstone, VIC, 3012**

**SEQUENCE NUMBER**

**65205535**

**JOB NUMBER**

**13078275**

Dear Miss Cate Moore,

Thank you for your Dial Before You Dig Request. Please find attached the Water and Sewerage plans as requested.

### Important Information

- The location of assets must be proved in the field by the applicant prior to the commencement of work. These plans do not indicate private services.
- City West Water does not guarantee and makes no representation or warranty as to the accuracy or scale of these plans. This company accepts no liability for any loss, damage or injury by any person as a result of any inaccuracy in these plans.
- Assets labelled AC may contain asbestos material and therefore works on these assets must be undertaken in accordance with OHS (Asbestos) Regulations 2007.
- Metallic water mains and associated fittings may pose an electrocution hazard if electrical earth wires have been connected to the property service or water main. The contractor shall ensure that adequate electrical testing is carried out prior to working on these mains. If a positive reading is recorded the contractor shall cease all works and notify the relevant power distributor, the customer and City West Water.
- Minimum horizontal and vertical clearances ( edge to edge ) are required between your proposed works and City West Water assets. Details of these minimum clearances can be obtained from City West Water's website:  
[http://www.citywestwater.com.au/documents/Guidelines\\_for\\_proposed\\_works\\_over\\_adjacent\\_to\\_water\\_authority\\_assets\(1\).pdf](http://www.citywestwater.com.au/documents/Guidelines_for_proposed_works_over_adjacent_to_water_authority_assets(1).pdf)
- Any conflict with the minimum clearance to your proposed works should be referred to City West Water for advice.

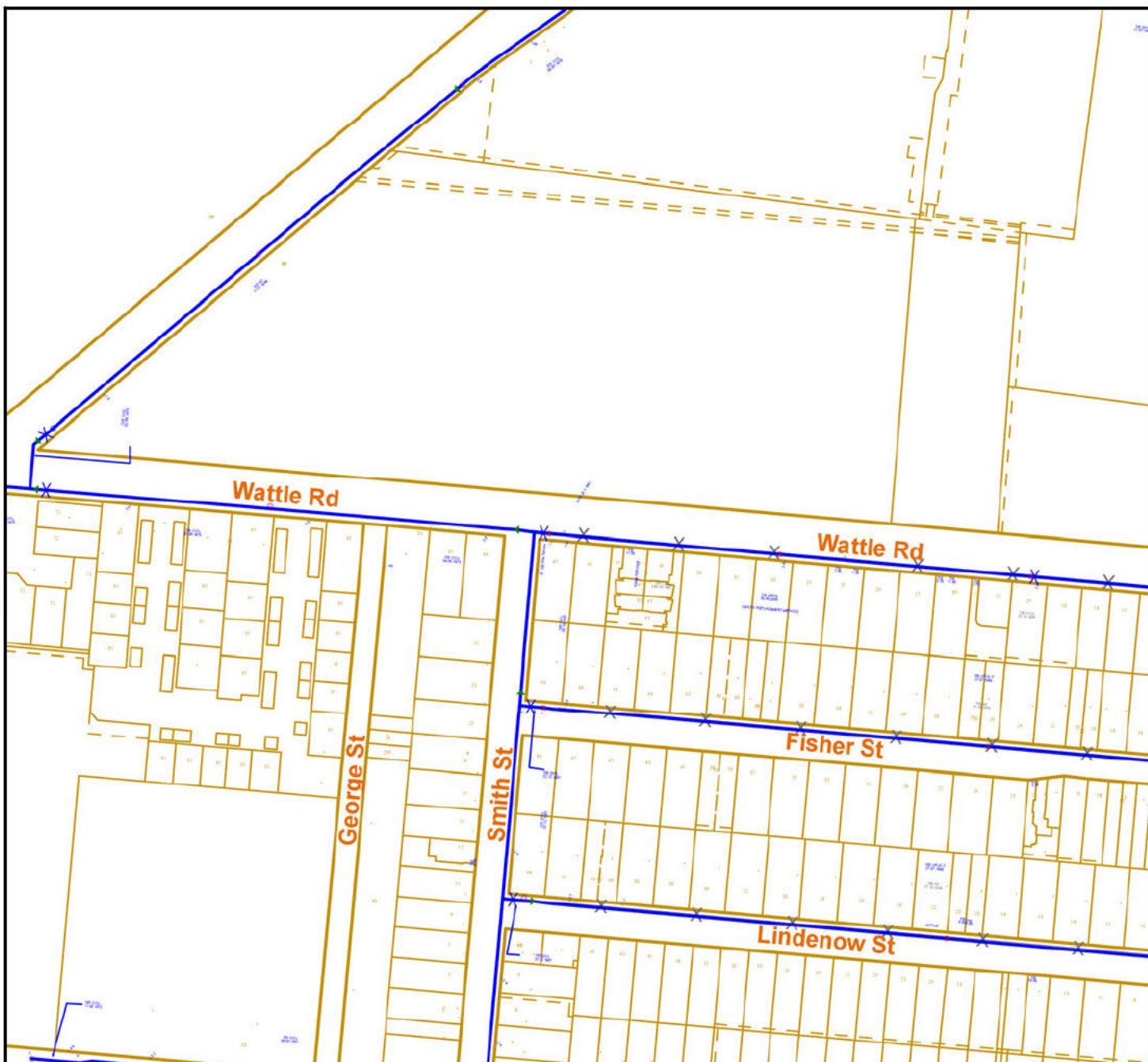
### Contact Information:

- If you require more detailed plans, please contact as follows :

( Please note, the following services will incur a processing fee )

- Sewer Detail Plan
- Asset Information Plan
- Property Service Plan ( Internal Pipes )

City West Water 13 16 91  
City West Water 13 16 91  
Casey Inspection 9835 5511



**MOCS SEQUENCE No. 13078275:65205535**

**53 Wattle Road, Maidstone VIC 3012**

**Melway Reference: 27J10**

# WATER PLAN

**Scale 1: 2577**

**Date: 11/10/2017**



City West Water



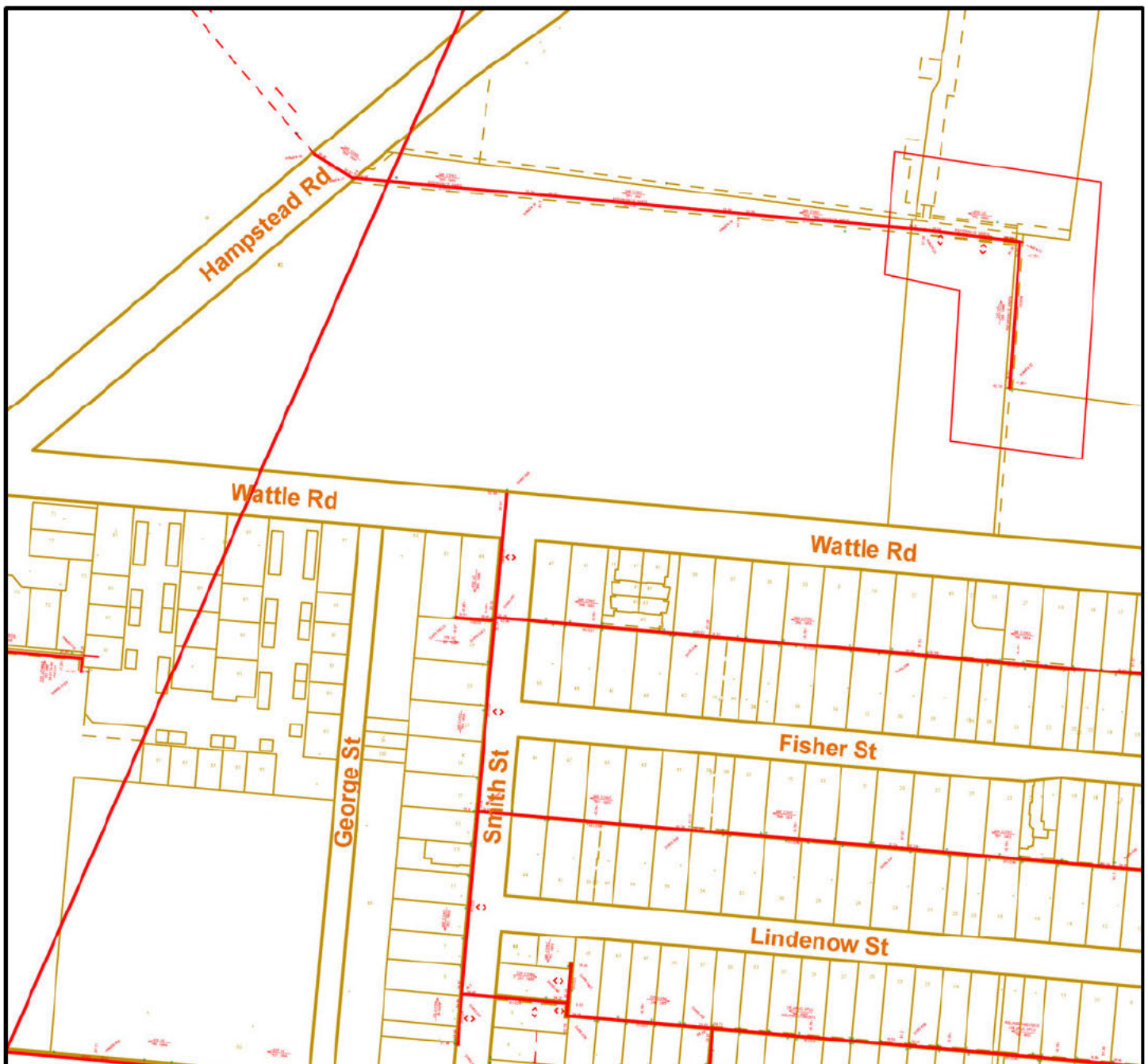
## LEGEND

Water Main		Valve ( or Stop Cock)		Hydrant – City West Water		Hydrant – Valve Controlled	
Transfer Water Main		Air Valve, Shut Valve		Hydrant – Council		Fireplug – Valve Controlled	
Recycled Water Main		Pressure Reducing Valve		Hydrant – Council/ Water Authority		Chlorination Installation	
Abandoned Water Main		Needle Valve, Air Valve		Fireplug – City West Water		Electrolysis Installation	
Offset of Water Main		Pressure Sustaining Valve		Fireplug – Council		Recorder – Depth, Pressure, Flow	
Pipe Diameter, Type	100 C.I.C.L.	Scour, Pumping Point		Fireplug – Council/ Water Authority		Dialysis	
Pipe Construction Date	01.01.1900	Manhole		Washout		Insulating Joint	
		Reducer or Taper		Washout – Valve Controlled			

Assets labelled AC may contain asbestos material and therefore works on these assets must be undertaken in accordance with OHS Regulations 2007 (Part 4.3).

Disclaimer : The location of assets must be proved in the field by the applicant prior to the commencement of work. These plans do not indicate private services. City West Water Corporation does not guarantee and makes no representation or warranty as to the accuracy or scale of this plan. This company accepts no liability for any loss, damage or injury by any person as a result of any inaccuracy in this plan.





**MOCS SEQUENCE No. 13078275:65205535**

**53 Wattle Road, Maidstone VIC 3012**

**Melway Reference: 27J10**

## SEWER PLAN

**Scale 1: 2577**

**Date: 11/10/2017**



City West Water



### LEGEND

Access Shaft		Inspection Shaft		Sewer Main	
Circular Manhole		Circular Pump Well		Abandoned Sewer Main	
Gas Check Manhole		Vent In-Ground		Direction of Flow	
Square Manhole		End of Pipe		Ventilation Structure	
Rectangular Manhole		Pipe Junction		Change of Grade	
Chambered Manhole		Long Branch Reducer			

Assets labelled AC may contain asbestos material and therefore works on these assets must be undertaken in accordance with OHS Regulations 2007 (Part 4.3 ).

Disclaimer : The location of assets must be proved in the field by the applicant prior to the commencement of work. These plans do not indicate private services. City West Water Corporation does not guarantee and makes no representation or warranty as to the accuracy or scale of this plan. This company accepts no liability for any loss, damage or injury by any person as a result of any inaccuracy in this plan.

11/10/2017

Miss Cate Moore

Tonkin & Taylor

Ground Floor 95 Coventry Street

South Melbourne, VIC 3205

Dear Miss Cate Moore,

**Re: Dial Before You Dig – Sequence No 65205536**

Location Details -

Address: 53 Wattle Road, Maidstone, VIC 3012

Map Ref: 27J10

Activity: Mechanical Excavation

Commencement Date: 13/10/2017 12:00:00 AM

Area of Interest: As per attached plan

Attached are plans showing Melbourne Water's assets in relation to the area of your enquiry. Melbourne Water's records indicate that there ARE underground assets in the vicinity of the above area of interest indicated on the plan.

**Please note, the attached plans do not constitute approval from Melbourne Water.**

For **detailed asset locations**, please email [DBYD@melbournewater.com.au](mailto:DBYD@melbournewater.com.au) allowing **at least 5 business days** for detailed plans to be provided.

If planning to undertake work over, under or near any Melbourne Water asset please contact the **Asset Services team** on **131 722** or at <http://melbournewater.com.au/constructingnearassets> **at least 14 days prior to the commencement of any work.**

Melbourne Water Corporation (MWC) shall not be responsible or otherwise liable in anyway for loss of any kind including, without limiting the generality of the foregoing damages, costs, interest, loss of profits or special loss or damage arising from any error, inaccuracy, incompleteness or other defect in this information.

By receiving and accepting this information the recipient acknowledges that Melbourne Water Corporation makes no representation as to the accuracy or completeness of this information. The exact location of Melbourne Water Corporation's assets as set out in this information should be confirmed on site by the recipient prior to the commencement of work.

**Please Note: Due to ongoing potential asset changes the attached plan/s is/are valid for 28 days from the date of issue. After that period the plan/s should not be used, rather a new plan should be obtained.**

**Warning: Assets may contain asbestos material and therefore works on these assets must be undertaken in accordance with OHS (asbestos) Regulations.**

Melbourne Water Corporation provides wholesale Water Supply and Sewerage services to City West Water, South East Water and Yarra Valley Water, who in turn provide local residents with Water Supply and Sewerage services. MWC, in conjunction with Local Government, manage Melbourne's drainage infrastructure. Local councils maintain the local drainage infrastructure, while MWC provides the major infrastructure.

The attached plans only show MWC's assets and not all Water Supply, Sewerage and Drainage pipelines.

For location of local Water Supply and Sewer pipelines please contact:

**City West Water      13 26 42**

**South East Water    13 16 42**

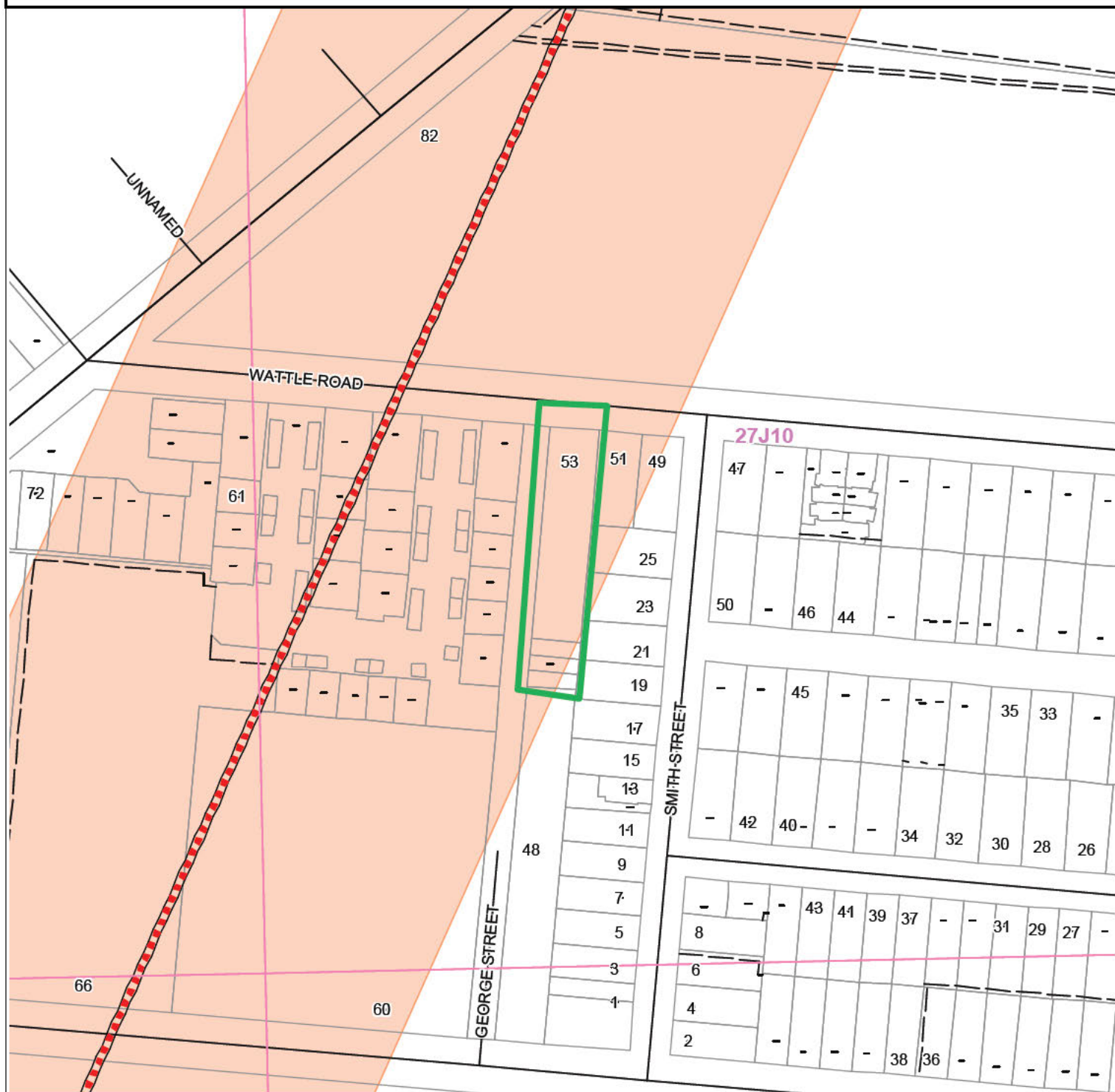
**Yarra Valley Water   1300 651 511**

For location of local Drainage pipelines please contact the relevant Council.

Melbourne Water respects the privacy of your personal information and we collect and handle it in accordance with Victoria's Privacy laws. You may access your personal information at Melbourne Water. Contact our Privacy Officer: phone 131 722, email [enquiry@melbournewater.com.au](mailto:enquiry@melbournewater.com.au).







Address: 53 Wattle Road, Maidstone, VIC, 3012

Map Ref: Melways 27J10

Date Supplied: 11/10/2017

1:2000



Sewer main

Abandoned sewer main

Sewer buffer

Please contact the Melbourne Water Asset Services team on 9679 6614 if proposed works are to be undertaken within the shaded area



Area of interest

Easement

Property boundary

House number unknown

X  
345F4  
27D4

VicRoads map reference

Melway map reference



Assets may contain asbestos material and therefore works on these assets must be undertaken in accordance with OHS (asbestos) Regulations.

**Network Operations– Asset Analysis**

Unit 9, 677 Springvale Road  
Mulgrave, Victoria, 3178

Date: 11/10/2017  
To: Miss Cate Moore  
Company:  
Address: Ground Floor 95 Coventry Street  
South Melbourne, VIC 3205

**ENQUIRY DETAILS**

Location: 53 Wattle Road, Maidstone, VIC 3012  
Sequence No.: 65205533  
DBYD Reference: 13078275

In relation to your enquiry of the above address, Optus advises as follows:

**The records of Optus disclose that there ARE underground FIBRE OPTIC TELECOMMUNICATIONS cables in the vicinity of the above enquiry as per the attached plan(s).**

**This reply is valid for a period of 30 days from the date above.**

**IMPORTANT INFORMATION**

Drawings and Plans provided by Optus are reference diagrams which were correct at the time the asset was built. Exact ground cover and alignments cannot be provided with any certainty as these may alter over time. Depths of Telecommunications plant vary considerably as do alignments. It is essential to uncover the asset and positively identify the assets exact location.

Optus plans are provided as a guide only and the completeness of the information cannot be guaranteed. Assistance can be obtained by contacting Optus Network Operations Asset Analysis on **1800 505 777**.

**All Optus assets need to be electronically located and cables physically located via pot holing, you MUST engage the services of one of the locators listed in the below table "Optus Accredited Asset Locators". All payments for these services are between the locating company and yourself.**

**"DUTY OF CARE"**

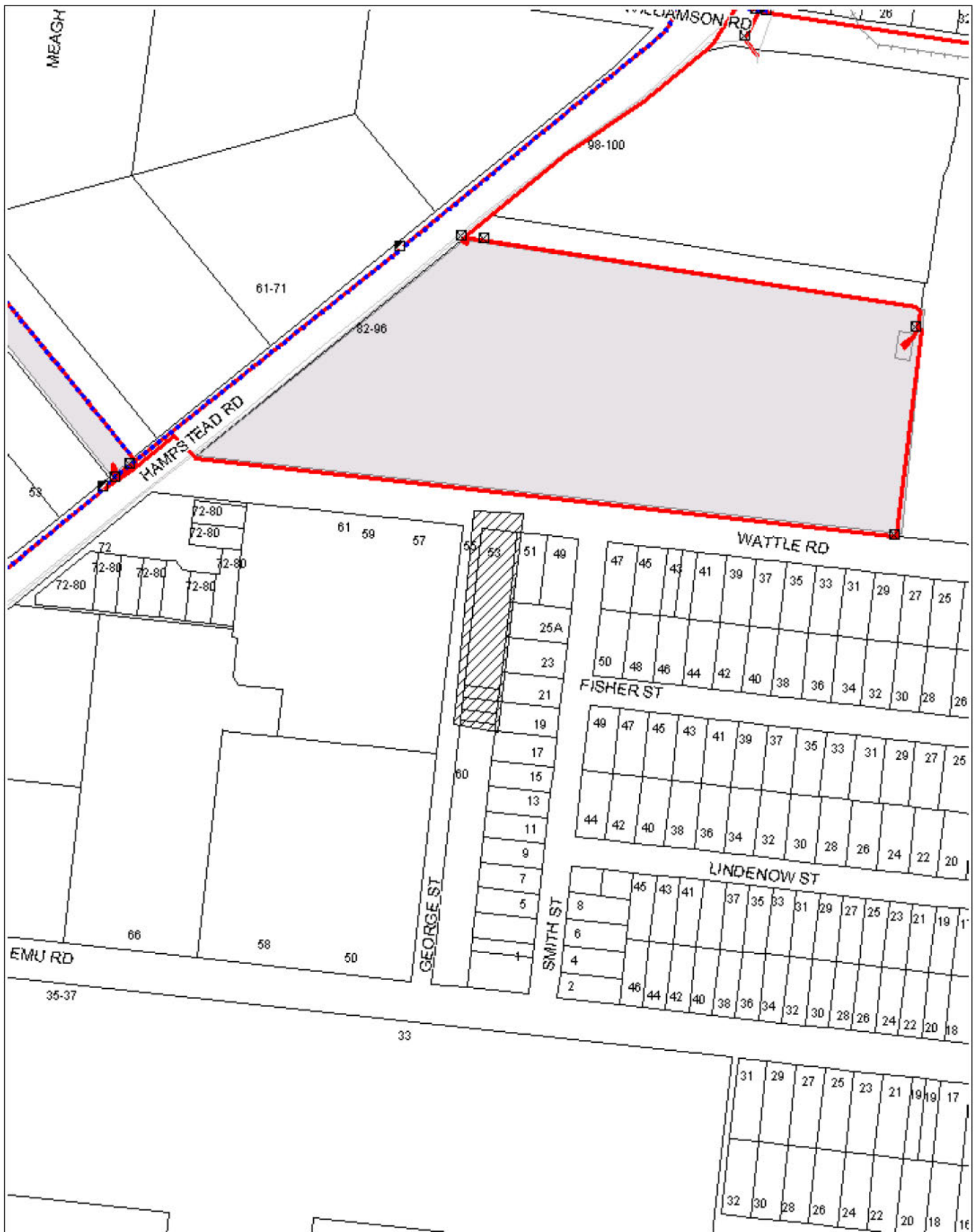
When working in the vicinity of Telecommunications plant you have a legal "Duty of Care" that must be observed.

It is the responsibility of the owner and any consultant engaged by the owner, including an architect, consulting engineer, developer and head contractor to design for minimal impact to Optus plant. Optus will provide assistance at this design stage through the provision of plans and sketches or consultation.

It is the owner's (or constructor's) responsibility to:-

- a) Request plans of Optus plant for a particular location at a reasonable time before construction begins. If you have doubts about the presence of Optus assets we strongly recommend that you engage an Optus Accredited plant locator.
- b) Visually locate Optus plant by hand digging or using non-destructive water jet method where construction activities may damage or interfere with Optus plant
- c) Contact Optus Network Operations – Asset Analyst (details below) if Optus plant is wholly or partly located near construction activities





WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

Sequence Number: 65205533

Date Generated: 11/10/2017



For all Optus DBYD plan enquiries –  
Email: [Fibre.Locations@optus.net.au](mailto:Fibre.Locations@optus.net.au)  
For urgent onsite assistance contact 1800 505 777  
Optus Limited ACN 052 833 208







## Appendix G: QAQC Program: RPD Values

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## QAQC Program: RPD Values

Latin America Pty Ltd  
1003973Field Duplicates (SOIL)  
Filter: SDG in('ALSE-Melbourne 13-Dec-1

SDG	30-Oct-17	30-Oct-17		30-Oct-17	30-Oct-17		13-Dec-17	13-Dec-17		13-Dec-17	13-Dec-17	
F eld ID	BH05-0.1	QC01	RPD	BH05-0.1	QC01A	RPD	BH07-0.5	QC02	RPD	BH07-0.5	QC02A	RPD
Sampled Date/Time	24/10/2017	24/10/2017		24/10/2017	24/10/2017		12/12/2017	12/12/2017		12/12/2017	12/12/2017	

Chem Gr	ChemName	Units	EQL									
BTEX	Benzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0			
	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0			
	Toluene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0			
	Xylene (m & p)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.2	0			
	Xylene (o)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0			
	Xylene Total	mg/kg	0.3	<0.3	<0.3	0	<0.3	<0.3	0			
	C6-C10 less BTEX (F1)	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0
Halogenat	2,4,5-trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	2,4,6-trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	2-chlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Pentachlorophenol	mg/kg	1 (Primary): 2 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	tetrachlorophenols	mg/kg	1	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
ad Phenols												
Herbicides	Dinoseb	mg/kg	20	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0
Lead	Lead	mg/kg	5	<5.0	8.4	51	<5.0	7.8	44	8.0	11.0	32
Metals	Arsenic	mg/kg	2 (Primary): 5 (Interlab)	16.0	9.9	47	16.0	16.0	0	<2.0	<2.0	0
	Beryllium	mg/kg	2 (Primary): 1 (Interlab)	2.1	<2.0	5	2.1	2.3	9	<2.0	<2.0	0
	Boron	mg/kg	10 (Primary): 50 (Interlab)	<10.0	<10.0	0	<10.0	<10.0	0	13.0	19.0	38
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0
	Chromium (hexavalent)	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	Cobalt	mg/kg	5 (Primary): 2 (Interlab)	28.0	24.0	15	28.0	28.0	0	12.0	8.1	39
	Copper	mg/kg	5	49.0	35.0	33	49.0	41.0	18	7.8	8.3	6
	Manganese	mg/kg	5	620.0	330.0	61	620.0	600.0	3	92.0	150.0	48
	Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
	Nickel	mg/kg	5 (Primary): 2 (Interlab)	150.0	89.0	51	150.0	110.0	31	14.0	17.0	19
	Selenium	mg/kg	2 (Primary): 5 (Interlab)	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0
	Zinc	mg/kg	5	69.0	55.0	23	69.0	64.0	8	21.0	18.0	15
PAH	Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)pyrene TEQ (lower bound)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)pyrene TEQ (medium bound)	mg/kg	0.5	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0
	Benzo(a)pyrene TEQ (upper bound)	mg/kg	0.5	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0
PAH/Phen	2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	2,4-dinitrophenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0
	2-methylphenol	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
	2-nitrophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	3-&4-methylphenol	mg/kg	0.4 (Primary): 1 (Interlab)	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0
	4,6-Dinitro-2-methylphenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0
	4-chloro-3-methylphenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	4-nitrophenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0
	Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a) pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Fluorene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0



# QAQC Program: RPD Values

Latin America Pty Ltd  
1003973

Field Duplicates (SOIL)  
Filter: SDG in('ALSE-Melbourne 13-Dec-1

Field Duplicates (SOIL)			SDG	30-Oct-17	30-Oct-17		30-Oct-17	30-Oct-17		13-Dec-17	13-Dec-17		13-Dec-17	13-Dec-17	
Filter: SDG in('ALSE-Melbourne 13-Dec-1			F eld ID	BH05-0.1	QC01	RPD	BH05-0.1	QC01A	RPD	BH07-0.5	QC02	RPD	BH07-0.5	QC02A	RPD
			Sampled Date/Time	24/10/2017	24/10/2017		24/10/2017	24/10/2017		12/12/2017	12/12/2017		12/12/2017	12/12/2017	
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	PAHs (Sum of total)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Phenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
ols															
Phenolics	4,6-Dinitro-o-cyclohexyl phen	mg/kg	20	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0		
	Phenols (Total Halogenated)	mg/kg	1	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0		
	Phenols (Total Non Halogenated)	mg/kg	20	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0		
TPH	C10-C16	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0
	C16-C34	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0
	C34-C40	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0
	F2-NAPHTHALENE	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0
	C6 - C9	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0
	C10 - C14	mg/kg	20 (Primary): 50 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<50.0	0
	C15 - C28	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<100.0	0
	C29-C36	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<100.0	0
	+C10 - C36 (Sum of total)	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0
	C6-C10	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0

\*RPDs have only been considered where a concentration is greater than 1 times the EQL.



## Appendix H: 53 Wattle Road PSI

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# REPORT

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Latin America Pty Ltd

Preliminary Site Investigation  
53 Wattle Road, Maidstone, VIC

Report prepared for:  
Latin America Pty Ltd

Report prepared by:  
Tonkin & Taylor Pty Ltd

Distribution:  
Latin America Pty Ltd  
Tonkin & Taylor Pty Ltd (FILE)

1 copy

1 copy

December 2014

T&T Ref: 3180.3/1



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# 1 Introduction

Tonkin & Taylor Pty Ltd (T&T) was commissioned by Latin America Pty Ltd (the 'client') to conduct a preliminary environmental site investigation (PSI) of the site located at 53 Wattle Road, Maidstone, Victoria (the 'site').

T&T understands that the client is seeking to develop the site for residential use, and requires information on potential for contamination at the site for submission to Council as part of an application for site rezoning.

This PSI was completed in accordance with our proposal dated 06 November 2014.

## 1.1 Objective

The objective of the PSI is to identify potential sources of historical contamination at the site, the types and locations of contaminants that may be present, and the constraints they may pose for future uses. Information from the investigation undertaken will be used to advise on the condition of the site and assess the need for further investigation.

## 1.2 Scope of works

T&T conducted a PSI in general accordance with relevant industry publications and standards including:

- NEPC (1999) National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013, (ASC NEPM); and
- Australian Standard AS4482.1 - 2005 Guide to the investigation and sampling of sites with potentially contaminated soil.

The scope of works undertaken comprised:

- A qualitative site history review of potential site risk (establishing previous site uses) and hydrogeological setting (for contaminant migration), incorporating historical aerial photographs, historical title information, and review of publically available information.
- Site inspection to identify potential sources of contamination.
- A site desktop review of geological and hydrogeological setting.
- Preparation of this report detailing findings of this investigation.



## 2 Site Characterisation

A site inspection and site desktop review is presented in this section.

### 2.1 Desktop site review

#### 2.1.1 Site location and description

The site is located at 53 Wattle Road, Maidstone, Vic and consists of a rectangular block facing on to Wattle Road with a disused side road (George Street) along its western boundary.

The site area is approximately 1,500 m<sup>2</sup>. Refer to Figures 1 and 2, Appendix A, for the location and layout of the site.

The site and properties to the west and north are zoned as Industrial 3 Zone (IN3Z). Land to the east and south is zoned General Residential (R1Z). A Development Plans Contribution Overlay applies to the site and surrounding area. An Environmental Audit Overlay applies to a property approximately 20 m south of the site, at 48 Emu Road.

#### 2.1.2 Nearby surface waters

The closest surface waters are the Maribyrnong River, approximately 850 m northwest, and 1,500 m east of the site.

#### 2.1.3 Geology

The Geological Survey of Victoria *Melbourne* Mapsheet (1:63,360), 1974 (Vandenburg et al, 1974) describes the local geology as Newer Volcanics comprising '*olivine basalt, olivine labradorite basalt, dark to light grey, coarsely vesicular, minor interbedded silty sand and baked soils*'.

A review of the Victorian Groundwater Beneficial Use map series<sup>1</sup> indicates that the water table is most likely present in the Quaternary aged volcanic aquifer, and yields moderate to poor quality groundwater (Segment C 3,501 – 13,000 mg/L total dissolved solids (TDS) as defined in the *State Environment Protection Policy Groundwaters of Victoria*). Groundwater is likely to be present at depths of approximately 15-25 meters below ground surface.

Local groundwater flow is expected to be in a north easterly direction, toward the Maribyrnong River.

#### 2.1.4 EPA Priority Site Register

An online search of the EPA Priority Sites Register (dated 31 October 2014) confirmed that the site is not listed as a Priority Site requiring investigation and/or remediation.

The closest Priority Site on the register is located 250 m north east of the site, and is listed as "*Former industrial site. Requires assessment and/or clean up*". A copy of the PSR is included in Appendix B. A Groundwater Quality Restricted Use Zone (GQRUZ) is declared in the region of this site, to the east, north and west, but not applying to this site. A copy of the GQRUZ map is included in Appendix C.

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<sup>1</sup> Department of Natural Resources and Environment, 1995. *Victorian Beneficial Use Map Series, South Western Victoria Aquifer Tables*.

The proximity of this site to the Priority Site and GQRUZ suggests potential impact to local groundwater, however it should be noted that the site is unlikely to be hydraulically down-gradient of the Priority Site.

#### 2.1.5 Review of nearby EPA statutory Environmental Audits

9-15 Williamson Road, Maidstone, VIC (CARMS 55545-1)

A statutory Environmental Audit was conducted by EPA Environmental Auditor Rick Graham relating to environmental works conducted at the site completed in September 2013.

A site history investigation found that the site was historically used for brass and cable manufacture, and foam making. Soil investigation found elevated concentrations of metals in the upper fill layer. Dichloromethane, TPH, PAHs, and non-halogenated solvents were found through the soil profile.

Groundwater assessment at the site included monitoring of over 100 groundwater wells, and found presence of DCE, TCE, TCFM and TPH. Five rounds of groundwater monitoring were conducted. Groundwater in the upper basalt aquifer was encountered at approximately 16 m below ground level (bgl) and groundwater flow direction was to the south east. Characterisation of the groundwater plume found onsite and offsite impacts extending to the west, northwest and south.

Following remediation, residual soil and groundwater contamination remained. Clean up to extent Practicable (CUTEP) was determined for the site, a groundwater quality restricted use zone (GQRUZ) was declared, and a Statement of Environmental Audit was issued, with a groundwater management plan. The site was determined to be suitable for non-sensitive uses.

The audit site is located approximately 200 m north east from the site. The subject site is not within the GQRUZ, however it does extend across the property to the immediate north of the site.

48 Emu Road, Maidstone, VIC (CARMS 52814-1)

A Statutory Environmental Audit was conducted by EPA Environmental Auditor Johnathon Crocket (GHD) after assessment works by Kilpatrick Associates Pty Ltd. The environmental assessment included soil investigation. Site inspection found that the site was used for storage and maintenance of earth moving machinery, with a residential property on site.

Soil investigation works identified contaminated fill from historical sites uses, including metals, sulphur and phosphorous exceeding EILs. Significant aesthetic impact was also observed with inert material throughout the fill layer. Soil investigation found that groundwater was unlikely to be polluted at the site.

A Statement of Environmental Audit was issued for the site in October 2003 subject to the removal of fill material, asbestos and capping. The site was deemed suitable for sensitive uses subject to conditions of the Statement.

The audit site is located south of the site.

31 Hampstead Road, Maidstone, VIC (CARMS 36894-1)

A Statutory Environmental Audit was conducted by EPA Environmental Auditor Wayne Drew (Egis Consulting). Assessment works were conducted by CH2M Hill between 1998 and 2002.

Site history identified a pyrotechnics facility that operated from 1958 to 2001, followed by ownership by Telstra. The soil investigation found elevated concentrations of metals exceeding EILs, but statistical analysis found that these levels were below EIL levels. Asbestos and pyrotechnical material from previous department of Defence activities were identified, removed and validated.

Groundwater assessment included installation and monitoring of five groundwater wells. Groundwater was encountered at approximately 30 m in the lower basalt aquifer, and flowed in a southerly direction, toward Port Phillip Bay. Groundwater contaminants included metals and TPH exceeding Maintenance of Ecosystems criteria. Further groundwater monitoring found an absence of TPH contamination, and metals were deemed to be indicative of background concentrations.

Remediation works at the site included removal and validation of asbestos material, and removal and disposal of unexploded ordnance material.

A Statement of Environmental Audit was issued for the site in May 2002 with an Environmental Management Plan. The audit was issued with the conditions that soils must be capped where not sealed, and that inert material, asbestos and any remnant pyrotechnic material is removed from the site.

The audit site is located approximately 200 m west from the site.

## 2.2 Site inspection

A site inspection was conducted on 12 November 2014 to identify areas of potential historical or current contamination. Information considered during the site inspection included, but was not limited to, the following:

- Site layout / structures;
- Occupancy;
- Historical infrastructure;
- Evidence of previous investigations;
- Surrounding land use;
- Surface condition / staining;
- Distinctive odours;
- Surface drainage;
- Indicators of previous tenancy; and
- Indicators of chemical storage.

Observations made during the site inspection are discussed in sections 2.2.1 to 2.2.7. Photographs taken during the site inspection are provided in Appendix D.

### 2.2.1 Site layout and structures

The site comprises a rectangular block stretching in a north-south orientation, with a brick warehouse/showroom located in the northern portion of the site. The building has a large roller door accessing the front of the building off Wattle Road. The rear of the site is vacant grassed yard and the front of the property has a small concrete car parking area.

### 2.2.2 Occupancy

The site is currently occupied by a business with a kitchen showroom and warehouse on the premises. The rear of the site is not utilised.

An online search suggests that the site was previously occupied by Firefly Coaches as a bus depot until the late 1980's and may have remained vacant for up to 20 years before it was redeveloped with its current configuration. An extract of the online Australian Transport Discussion Board ([www.busaustralia.com/forum](http://www.busaustralia.com/forum)) is included in Appendix E.

Current tenants indicated their occupancy began in January of 2014.

### 2.2.3 Infrastructure

A site walkover revealed possible remnant underground storage tank (UST) infrastructure in the north east corner of the site at the edge of site car parking. The infrastructure consisted of a vent line and large gatic cover, possible a direct or remote filling point for a UST. Further search of the site did not reveal any other remaining UST infrastructure such as bowsers, access gatic covers or Triple Interceptor Traps (TITs).

A stormwater pit was located in the front driveway in the north of the site.

Inspection of the premises revealed overhead power services.

### 2.2.4 Previous investigations

No indicators of previous intrusive soil or groundwater assessment were evident.

### 2.2.5 Surrounding land use

Surrounding land use comprised:

- North: Large education and training facility.
- East: All property to the east of the site is residential between Wattle Road and Emu Road.
- South: Land immediately south of the property was vacant. Beyond Emu Road is a large freight facility.
- West: Commercial and light industrial business.

### 2.2.6 Surface condition

No indicators of significant surface contamination were evident on the property. The sealed car park and warehouse were relatively unblemished, with the exception of minor oil spotting inside the warehouse. The unsealed rear of the property was grassed and lacked any other vegetation. Inspection of the surface soils revealed surface fill at the site. Two slightly raised areas of earth might indicate a remnant excavation.

### 2.2.7 Chemical storage

No significant chemical storage was evident inside the building. Unbunded drums were observed in the north eastern portion of the site along the eastern boundary between the warehouse and the site boundary. The contents were unknown but the drums did not appear to be in disrepair or leaking.



### 3 Site History

A review of the site history was conducted to identify potential sources of contamination both onsite and offsite. This included:

- Review of historical aerial photographs;
- Review of published historical and other mapping;
- Review of historical certificates of title; and
- A Royal Historical Society of Victoria (RHSV) review of the property.

The findings of the site history review are provided in the sections below.

#### 3.1 Historical aerial photography

Historical aerial photographs for the site and the surrounding properties were obtained from the Aerial Photography Archive (Department of Environment and Primary Industries) as part of the site history compilation. Additional photographs were available from Google Earth and online from <http://www.nearmap.com/>.

A summary of aerial photographs that were inspected is provided in Table 3.1. Aerial photographs are provided as Figure A1 to Figure A8 in Appendix F.

Table 3.1 Review of historical aerial photographs

Photograph	Observations
Melbourne and Metropolitan Area Project Date: 1945 Run/Film/Photo: 28/208/61399 Scale: 1:6000	<u>Site description</u> The site appears to be vacant paddock. Wattle road is not visible, however Emu road to the south is visible. <u>Surrounding land</u> Sparsely populated residential to the east, industrial to the west and north. Department of Defence land to the west on Hampstead Road.
Melbourne Outer Suburbs Project Date: 1956 Run/Film/Photo: 7/ 1163/ 90 Scale: 1:12000	<u>Site description</u> No change. <u>Surrounding land</u> Significant increase in residential to the east, large facility to the immediate north. Wattle Road visible.
Melbourne 1963 Project Date: 1963 Run/Film/Photo: 26/1863/200 Scale: 1:9600	<u>Site description</u> No change. <u>Surrounding land</u> Additional commercial/industrial to the south, north and northeast.

Photograph	Observations
<p>Melbourne 1974</p> <p>Date: 1975</p> <p>Run/Film/Photo: 34/2941/43</p> <p>Scale: 1:10000</p>	<p><u>Site description</u></p> <p>A structure is present on-site, set back from Wattle Road. The rear of the property appears to remain grassed. On the north-west corner of the site and on George Street are rows of what appear to be either large storage containers or buses.</p> <p><u>Surrounding land</u></p> <p>To the west is a large grassed vacant property. The narrow strip of land south of the site appears vacant and grassed. Wattle Road appears to be sealed and extends to the west linking Hampstead Road. The barracks area forming part of the Australian Department of Defence land to the north-west now appears to be a new residential development. Residential properties are prevalent to the east and south-east of the site.</p>
<p>Standard Mapsheet Photography</p> <p>Date: 1984</p> <p>Run/Film/Photo: 3/3912/132</p> <p>Scale: 1:10,000</p>	<p><u>Site description</u></p> <p>The building on-site now appears to extend closer to Wattle Road, covering most of the northern portion of the site. The rear of the property appears to remain grassed and vacant.</p> <p><u>Surrounding land</u></p> <p>A large property west of site appears vacant and grassed. A building now exists on south of the site. Further commercial/industrial development has occurred to the south and south-west roughly 100-200m from site. Residential properties are prevalent to the east and south-east of the site.</p>
<p>Google Earth Image</p> <p>March 2000</p>	<p><u>Site description</u></p> <p>A paved car parking area appears to exist at the north of the site, between the on-site building and Wattle Road. The rear of the property remains vacant and grassed except for unknown infrastructure towards the south-east corner of site.</p> <p><u>Surrounding land</u></p> <p>Further commercial/industrial development has occurred approximately 120m west/south-west of the site. This property appears to contain a large amount of scrap material present throughout the northern portion of the property. A large commercial/industrial building approximately 220m north-east of the site appears to have been demolished. Residential properties are prevalent to the east and south-east of the site</p>
<p>Nearmap image</p> <p>November 2009</p>	<p><u>Site description</u></p> <p>The site building remains unchanged. What appears to be a vegetable garden exists along the northern boundary. Towards the southern boundary of the site there are what appears to be three storage tanks.</p> <p><u>Surrounding land</u></p> <p>Fill / scrap material appears to be stockpiled at the northern and southern end of George street adjacent to the property. To the west are several large buildings under development. The narrow parcel of land to the adjacent south of the site remain vacant and grassed.</p>

Photograph	Observations
NearMap Image March 2012	<p><u>Site description</u></p> <p>There are no significant changes to the layout of the site with the exception of the three storage tanks no longer being present in the southern section of the site.</p> <p><u>Surrounding land</u></p> <p>George Street remains vacant and overgrown. The property south of the site remains vacant and grassed. Large commercial/industrial buildings have been developed to the adjacent west of the site. A new commercial/industrial building now exists approximately 220 m north-east of the site where a previous building was demolished. A scrap timber yard appears to exist approximately 30 m to the south-west of site. Residential properties are prevalent to the east and south-east of the site.</p>

A review of the historical aerial photographs indicate that the site was vacant until sometime between 1963 and 1975 when a commercial/light industrial style building was constructed on-site. The building was extended towards the north of the site sometime between 1975 and 1984 with the dimensions remaining largely unchanged to what was observed during the site inspection. In a review of the more recent satellite imagery from March 2000 until July 2010, there appear to be three storage tanks located in the southern portion of the site.

Surrounding land use over time developed consistently with what is present today. Residential developed over time to the east and south east, while commercial and industrial land use characterised the rest of the region.

### 3.2 Historical certificates of title

The parcel of land making up 53 Wattle Road, Maidstone was most recently defined on certificate of titles Vol 9392/Folio 627 which listed Latin America Pty Ltd as the current and sole proprietor.

A review of the parent titles for 53 Wattle Rd was conducted to establish historical ownership and subdivision/consolidation. A summary of the historical Certificates of Title for 53 Wattle Road, Maidstone, is provided below.

Certificates of Title confirmed that since at least 1887 the site had been split into three parts of similar size. Available records indicated previous proprietors of the site included the Deer Park Bus Proprietors - G.S. Bono & F. Bono between 1967 and 1969; after which time G. Bono of the same company operated from 1969 until 1980. The current site boundary was created in this period. Neeson's bus services were the proprietors of a portion of the site from 1974 until 1980.

Titles did not provide any additional information on potential for contaminating activities.

The land has been held by Latin America Pty Ltd since June 2012.

Aerial photographs suggest no development occurred at the site until sometime between 1963 and 1975.

Historical Certificates of Title are included in Appendix G.

### 3.3 Historical mapping

#### 3.3.1 Historical geological maps

The 1959 Melbourne 1:31,680 (1959) scale geological map and 1:63,360 (1974) was reviewed. This map provides information on historical quarrying and similar activities. No such activities were identified on the site. A number of quarries were noted east and north east of the site towards the Maribyrnong River. These were not expected to impact on the site.

#### 3.3.2 Street directories

The 1966 Melway Map was inspected. No information on the historical use of the site was found. The map identified Commonwealth of Australia Department of Defence land north and north-west of the site, consisting of an army department and ordnance factory approximately 300m northeast of site and an explosive factory approximately 930m north of site. The map also identified a government migrant hostel on the government land approximately 150m northeast of site.

### 3.4 Historical society information

A query for information on the site was requested from the Royal Historical Society of Victoria. An extract from the response is contained below.

*"This site is located near the intersection of Wattle Road (south side) and George Street (east side), Maidstone. A Google Maps search indicates that there is suburbia just to the east of this site, and the land to the west of the site is under development.*

*The Sands & McDougall Directories first list the existence of this site in 1954 as 'Wattle Avenue, Maidstone'. Prior to 1954, the directories contain reference to 'Wattle Avenue, Braybrook' (currently a neighbouring suburb). The first mention of a Wattle Avenue in Braybrook occurs in 1929, and before this the directories indicate no trace of the site. However, all references in Sands & McDougall to Wattle Avenue between 1929 and 1968 show that the area was residential. The 1969 publication of Sands & McDougall contains the first appearance of 53 Wattle Road, and the occupant listed is Sita G. & Bono F. Bus Servers, whilst surrounding areas remain residential. The Bus Servers remain at this address until the final publication of Sands & McDougall in 1974.*

*Unfortunately, RHSV does not have access to information on this site after that year. However, the 1974 Sands & McDougall also notes that a 'Raschilla tiles firing and wall' existed in close proximity to the site.*

*The 1944 Collins Street Directory confirms that this site was once 'Wattle Road, Braybrook'. While this supports the notes made in the Sands & McDougall directories, Collins does not specify whether the site and surrounding area was used for residential purposes or otherwise.*

A copy of the RHSV search is included in Appendix H.



## 4 Potential for Contamination

### 4.1 On-site

Based on a review of the site history, the site inspection and other sources of information the following conclusions were made with respect to the potential for on-site contamination.

- Petroleum related infrastructure was noted at the site during the site inspection and on satellite imagery. Three storage tanks were viewed in the rear (southern) section of the property. A review of titles also indicated that the site operated as a bus depot from between 1967 and 1980 by occupants including G.S. Bono & F. Bono and Neesons bus services. Firefly Coaches was also noted as a previously operating bus depot at the site until the late 1980's, but may have been an operating name of the formerly mentioned title holders. On-site petroleum hydrocarbon storage and handling (most likely diesel) may have therefore potentially resulted in an on-site source of contamination.
- Storage of drums and containers noted in the Google street View image dated 2009 may have potentially resulted in a source of on-site contamination.

### 4.2 Off-site

The site is located in a wider industrial setting, and there is therefore potential for regional contamination of groundwater from current and past industrial activities. The following activities in vicinity of the site were noted as potential off-site sources of contamination:

- The property located at 48 Emu Road, Maidstone, to the adjacent south of the site, which was on the list of issued Certificates and Statements of Environmental Audit, reported contamination above investigation levels within shallow soils. The report concluded that impact was limited to the fill soils at the property and no impact was identified within deeper natural silty clay soils. Groundwater was considered unlikely to be polluted given its depth and the low leachability of contaminants in the fill soils.
- A potential off-site source of groundwater impact is from the former industrial site requiring assessment and/or clean-up, located at 9-15 Williamson Road, Maidstone, approximately 250 m northeast of the site. Given this property is likely to be located down and cross-gradient of the site, groundwater impact beneath the site from this property is considered unlikely, however a GQRUZ relating to groundwater impact from this site stretches to the immediate north of the site.
- Construction material dumped at the site along George Street from the development to the adjacent west may have potentially impacted upon the site.

### 4.3 Summary

Potential sources of onsite contamination and contaminants of potential concern (COPC) identified through the site history review are summarised in Table 4.1.

**Table 4.1 Potential for contamination**

Source/Area	Media in which COPC may be present	CoPC	Receptors
<b>On-site</b>			
Petroleum hydrocarbon storage and handling, along eastern boundary. Former Underground Storage Tanks (UST's) potentially south of on-site building and an existing UST infrastructure towards the north-east corner of site.	Soil & groundwater	TPH, BTEX, PAHs, phenols, lead.	If the site is developed for residential use, with open space/garden areas, residents may be exposed to potentially contaminated soils through ingestion, inhalation of dusts or dermal contact.
Operation of a bus depot, diffuse source contamination across the site.	Soils	TPH, BTEX, PAHs, metals, solvents.	Potential for inhalation of vapours emanating from contaminated groundwater; generally considered to be a lower risk noting the expected depth to groundwater.
Unknown chemical drum storage at front of building.	Soils	Organic contaminants.	
Fill material and dumped material historically imported to site.	Soils	Solid inert waste imported to site, including potential contaminants metals and PAHs.	Environmental impacts, and restriction of other beneficial uses of groundwater.
<b>Off-site</b>			
Industrial land setting; know contamination in groundwater to the north, east and west	Groundwater	A variety of potential contaminants, notably chlorinated hydrocarbons.	GQRUZ does not cover the site, and there is a low potential for exposure to users of the site from contaminated groundwater extending from offsite.

## 5 Conclusions

T&T has completed a preliminary site investigation to advise on the potential for contamination to be present at the site and whether that would prevent development of the land for an intended residential use. T&T has identified a number of potential sources of contamination at the site:

- The storage and handling of petroleum products during operation of the site as a bus depot.
- Abandoned storage tanks viewed in historical aerials photographs at the southern portion of the property.
- Remnant UST infrastructure in the north eastern portion of the property.
- Historical chemical storage in the northern portion of the property.
- Site filling and historical inert material dumped on the adjacent George Street.

Potential offsite sources of groundwater contamination include regional groundwater conditions from regional land use as industrial, and nearby properties to the north east and south.

Based on the information gathered for this investigation, T&T concludes that the site generally has a moderate to high potential for contamination, particularly relating to impacts from storage and handling of petroleum products, which may limit development of the site for residential use. In accordance with the Department of Sustainability and Environment (DSE) General Practice Note (June 2005), sites with a high potential for contamination that are proposed for rezoning to sensitive use require an Environmental Audit.

T&T recommends that in the first instance, a detailed site investigation involving soil and groundwater sampling is conducted to determine whether contamination is present that would impact on the residential use of the site. A ground penetrating radar survey of the property is also recommended to identify remnant underground storage infrastructure.

## 6 Applicability


This report has been prepared for the benefit of Latin America Pty Ltd with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

Tonkin & Taylor Pty Ltd

Environmental and Engineering Consultants

Report prepared by:

Authorised for Tonkin & Taylor Pty Ltd by:



.....  
James Allison

Environmental Scientist

.....  
Tony Cussins

Project Director





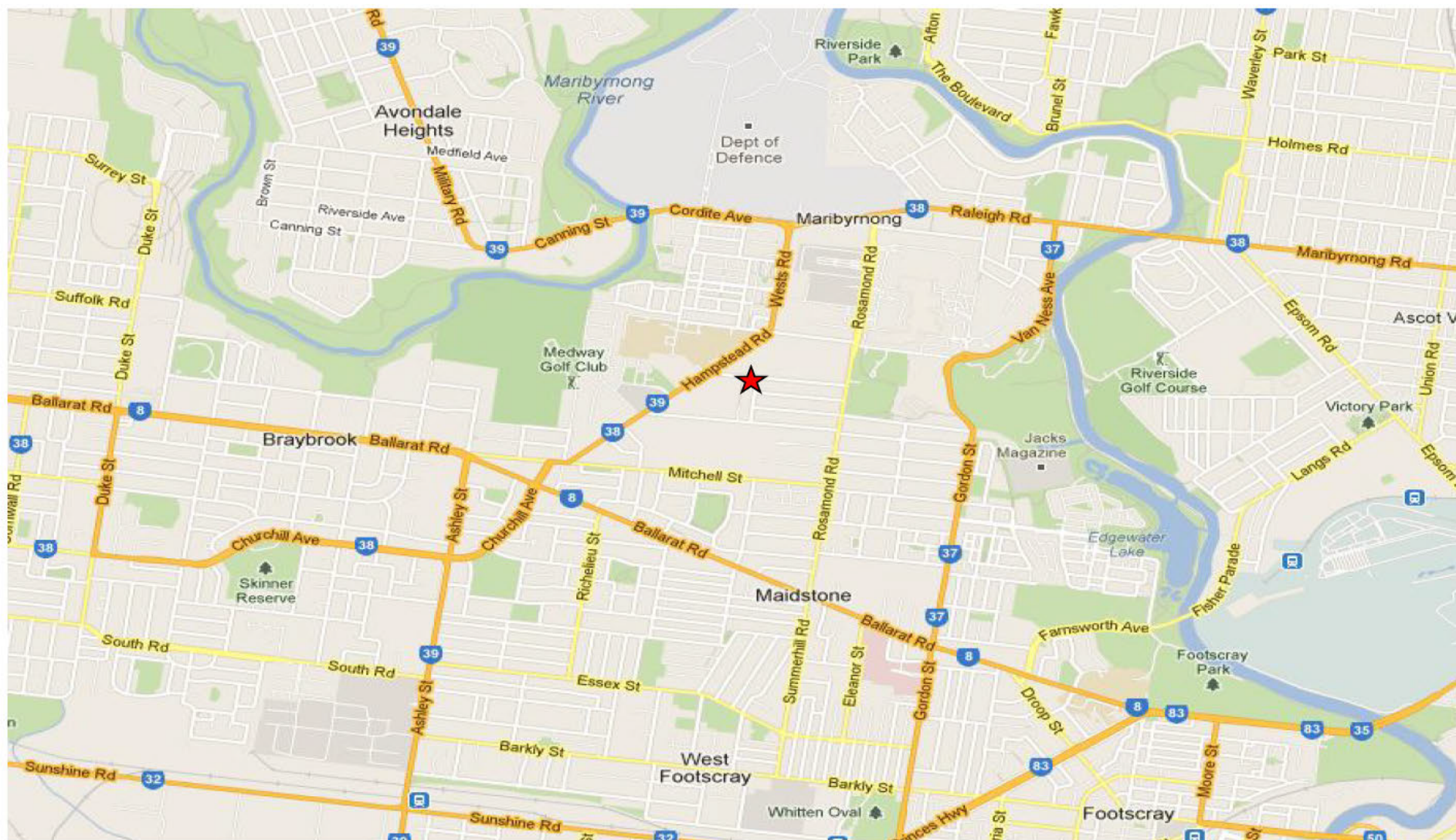
## References

- NEPC (1999), National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013 (ASC NEPM)
- Vandenberg et al (1974), Geological Survey of Victoria, Melbourne 1:63,360 Sheet SJ 55-1.
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- The Land Channel online, <http://www.land.vic.gov.au>.
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- Department of Natural Resources and Environment, 1995. *Victorian Beneficial Use Map Series, South Western Victoria Aquifer Tables*.

Appendix A

Figures

N



**Key**



Denotes approximate site location



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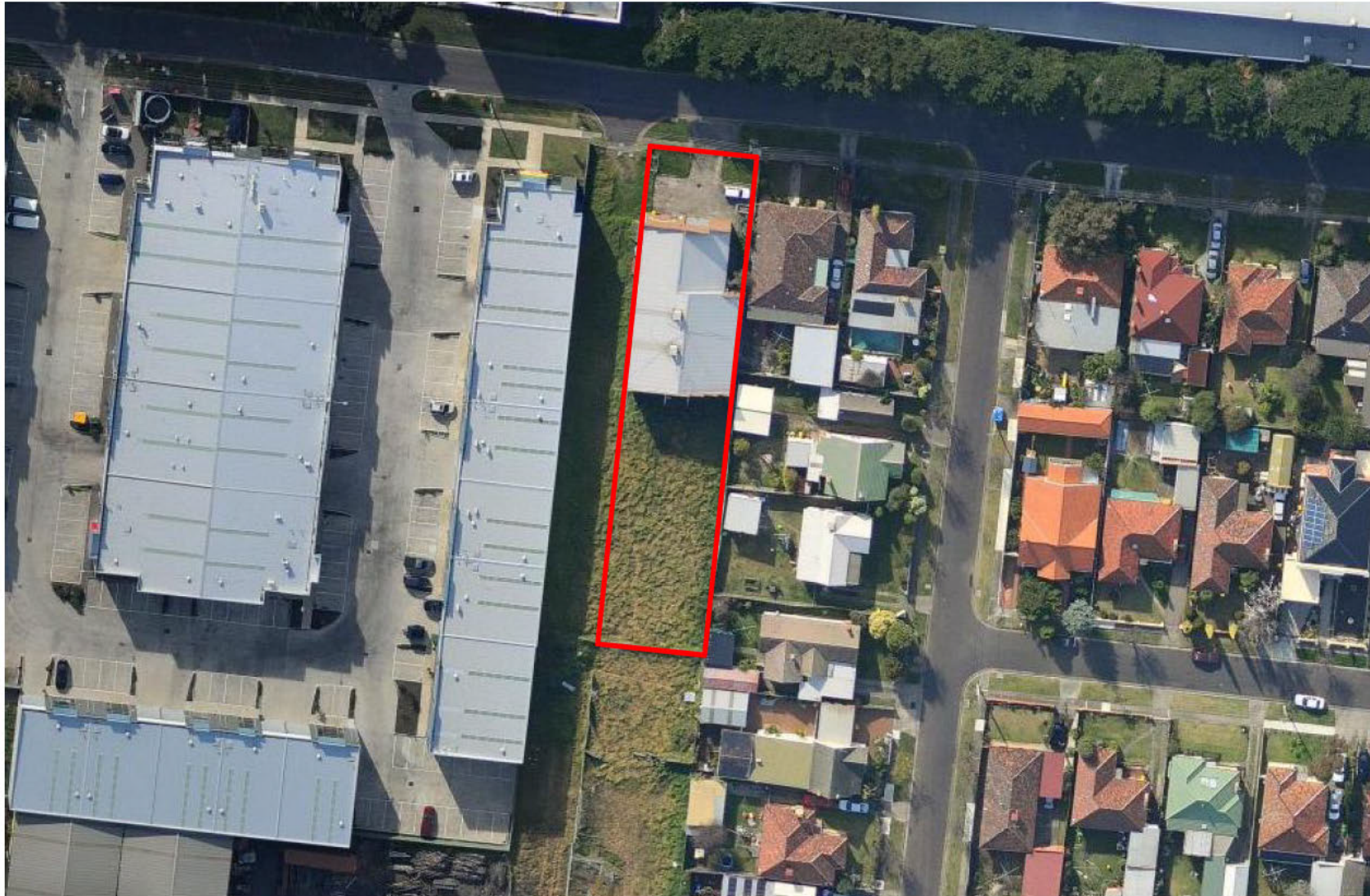
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LATIN AMERICA PTY LTD  
PRELIMINARY SITE INVESTIGATION  
53 Wattle Road, Maidstone, Victoria  
SITE LOCATION PLAN

FIG. No. **FIGURE 1**

Rev. **0**





**Key**



Denotes approximate site boundary



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PROJECT No. 3180.3		

**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
**53 Wattle Road, Maidstone, Victoria**  
**SITE LAYOUT PLAN**

FIG. No.

**FIGURE 2**

Rev. **0**

## Appendix **B**

## EPA Priority Site Register Extract

# PRIORITY SITES REGISTER

Information as at 31 October 2014

## 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 Clean Up 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 clean up, 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 (e.g. 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 Clean Up Notice 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 □

1300 EPA VIC (1300 372 842) □

[www.epa.vic.gov.au](http://www.epa.vic.gov.au)

Municipality	Suburb	Address	Issue	Notice Number
Hobsons Bay City Council	ALTONA	Queen ST	Former Landfill. Requires ongoing management	0090003472
Brimbank City Council	SUNSHINE NORTH	LOTS 1 & 2 OF TP896560	Current Industrial Site. Requires assessment and/or clean up	0090005474
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	McIellan ST	Railway yard. Requires assessment and/or clean up	0090001744
Ararat Rural City Council	POMONAL	Volume 06600 Folio 807 CA 5A Sect 2 JALLUKAR TUNNEL RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090005288
Ballarat City Council	BALLARAT	1003 Humffray ST	Former Industrial Site. Requires assessment and/or clean up	0090001857
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	Volume 6747 Folio 250	Current Industrial Site. Requires assessment and/or clean up	0090001913
Ballarat City Council	MOUNT CLEAR	3 WHITEHORSE RD	Former Landfill. Requires ongoing management	0090003912
Ballarat City Council	MOUNT CLEAR	Whitehorse RD	Former Landfill. Requires assessment and/or clean up	0090004206
Ballarat City Council	MOUNT CLEAR	Whitehorse RD	Former Landfill. Requires assessment and/or clean up	0090004207
Ballarat City Council	WARRENHE P	Ballarat-Burumbeet RD	Accidental spill/leak (non-industrial site). Requires ongoing management	0090002430
Banyule City Council	GREENSBOROUGH	131 Grimshaw ST	Current Service Station. Requires assessment and/or clean up	0090002585
Bass Coast Shire Council	RHYLL	309 COWES-RHYLL RD	Former Landfill. Requires assessment and/or clean up	0090003979
Bass Coast Shire Council	RHYLL	309 COWES-RHYLL RD	Former Landfill. Requires ongoing management	0090003978
Bass Coast Shire Council	WONTHAGGI	C/a 15 Section 58 Cameron St	Former Landfill. Requires ongoing management	0090003534
Bass Coast Shire Council	WONTHAGGI	C/a 15 Section 58 Cameron St	Former Landfill. Requires ongoing management	0090003535
Bass Coast Shire Council	WONTHAGGI	C/a 15 Section 58 Cameron St	Former Landfill. Requires ongoing management	0090003536
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	0090003782
Bayside City Council	BRIGHTON	316 New ST	Former Service Station. Requires assessment and/or clean up	0090001698
Bayside City Council	CHELTENHAM	18 Hamlet ST	Current Industrial Site. Requires ongoing management	0090001671
Bayside City Council	Sandringham	Part Lot 1/TP125095-excludes Scout Hall Lot 2/LP62334	Contaminated soil is retained and managed onsite. Requires ongoing management	0090004932

Brimbank City Council	BROOKLYN	42 Market RD	Former Landfill. Requires ongoing management	0090004022
Brimbank City Council	BROOKLYN	44 Mcdonald RD	Former Landfill. Requires ongoing management	0090003591
Brimbank City Council	BROOKLYN	52 MARKET RD	Former Landfill. Requires ongoing management	0090004023
Brimbank City Council	BROOKLYN	594 Geelong RD	Former Landfill. Requires ongoing management	0090003478
Brimbank City Council	BROOKLYN	Bunting RD	Former Landfill. Requires ongoing management	0090002743
Brimbank City Council	BROOKLYN	The Western Side Of Jones RD	Former Landfill. Requires ongoing management	0090004024
Brimbank City Council	BROOKLYN	The Western Side Of Jones RD	Former Landfill. Requires ongoing management	0090004025
Brimbank City Council	DEER PARK	753 Tilburn RD	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up	0090000162
Brimbank City Council	DEER PARK	765 BALLARAT RD	Current Industrial Site. Requires assessment and/or clean up	0090001886
Brimbank City Council	KEILOR DOWNS	Green Gully RD	Former Landfill. Requires ongoing management	0090003522
Brimbank City Council	KEILOR DOWNS	Green Gully RD	Former Landfill. Requires ongoing management	0090003523
Brimbank City Council	KEILOR DOWNS	Green Gully RD	Former Landfill. Requires ongoing management	0090003524
Brimbank City Council	SUNSHINE	16 TH RD AV	Current Industrial Site. Requires assessment and/or clean up	0090003227
Brimbank City Council	SUNSHINE	6 F RST AV	Illegal dumping. Requires assessment and/or clean up	0090004622
Brimbank City Council	Sunshine North	56 Baldwin AV	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	0090004879
Brimbank City Council	SUNSHINE NORTH	152 MCINTYRE RD	Current Industrial Site. Requires assessment and/or clean up	0090005370
Brimbank City Council	SUNSHINE NORTH	47 MCINTYRE RD	Former Industrial Site. Requires ongoing management	0090001549
Brimbank City Council	SUNSHINE NORTH	62 Spalding AV	Current Industrial Site. Requires assessment and/or clean up	0090005461
Brimbank City Council	SYDENHAM	362 SYDENHAM RD	Former Landfill. Requires assessment and/or clean up	0090000921
Brimbank City Council	SYDENHAM	362 SYDENHAM RD	Former Landfill. Requires ongoing management	0090003753
Campaspe Shire Council	Bamawm Extension	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	DIGGORA	ODONNELL RD	Former Landfill. Requires ongoing management	0090003586
Campaspe Shire Council	DIGGORA	ODONNELL RD	Former Landfill. Requires ongoing management	0090003587
Campaspe Shire Council	DIGGORA	ODONNELL RD	Former Landfill. Requires ongoing management	0090003588
Campaspe Shire Council	ECHUCA	176 OGILV E AV	Current petroleum storage site. Requires assessment and/or clean up	0090004946
Campaspe Shire Council	ECHUCA	Echuca Landfill Echuca-Kyabram RD	Former Landfill. Requires ongoing management	0090003569
Campaspe Shire Council	KYABRAM	Graham RD	Former Landfill. Requires ongoing management	0090003563
Cardinia Shire Council	PAKENHAM	570 Bald Hill Road Pakenham	Former Landfill. Requires ongoing management	0090003597
Casey City Council	CRANBOURNE	Former Casey - Frankston Landfill & Former Casey Landfill	Former Landfill. Requires ongoing management	0090004108
Casey City Council	CRANBOURNE	Former Casey - Frankston Landfill & Former Casey Landfill	Former Landfill. Requires ongoing management	0090004109
Casey City Council	CRANBOURNE	Former Casey - Frankston Landfill & Former Casey Landfill	Former Landfill. Requires ongoing management	0090005266
Casey City Council	NARRE WARREN	188 QUARRY RD	Former Landfill. Requires ongoing management	0090003600
Central Goldfields Shire Council	CARISBROOK	129 W LLIAMS RD	Former Landfill. Requires ongoing management	0090003564
Central Goldfields Shire Council	CARISBROOK	129 W LLIAMS RD	Former Landfill. Requires ongoing management	0090003565
Central Goldfields Shire Council	CARISBROOK	129 W LLIAMS RD	Former Landfill. Requires ongoing management	0090003566
Central Goldfields Shire Council	MARYBOROUGH	53 HIGH ST	Current Service Station. Requires assessment and/or clean up	0090005245
Colac-Otway Shire Council	COLAC	Bruce ST	Former Landfill. Requires ongoing management	0090001464
Colac-Otway Shire Council	COLAC	Bruce ST	Former Landfill. Requires ongoing management	0090003696
Colac-Otway Shire Council	COROROKE	Factory RD	Current Industrial Site. Requires assessment and/or clean up	0090002082
Colac-Otway Shire Council	MARENGO	Roberts RD	Former Landfill. Requires ongoing management	0090003634
Corangamite Shire Council	GLENORMISTON	Terang-Mortlake RD	Former Landfill. Requires ongoing management	0090003622
Darebin City Council	NORTHCOTE	Clifton ST	Former Landfill. Requires ongoing management	0090003493
Darebin City Council	PRESTON	140 High ST	Former Industrial Site. Requires assessment and/or clean up	0090000660
Darebin City Council	PRESTON	194 Bell ST	Former Industrial Site. Requires assessment and/or clean up	0090002088
Darebin City Council	PRESTON	3 & 7 NEWMAN ST	Former Industrial Site. Requires assessment and/or clean up	0090003150
Darebin City Council	PRESTON	62 Albert ST	Current Industrial Site. Requires ongoing management	0090000535
Darebin City Council	PRESTON	67 High ST	Former Service Station. Requires assessment and/or clean up	0090001449
Darebin City Council	RESERVOIR	87 Newlands RD	Former Landfill. Requires ongoing management	0090003508
East Gippsland Shire Council	BAIRNSDALE	201 Main ST	Former Service Station. Requires assessment and/or clean up	0090005434



East Gippsland Shire Council	BAIRNSDALE	205 Main ST	Former Service Station. Requires assessment and/or clean up	0090005432
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
East Gippsland Shire Council	ORBOST	44 Salsbury ST	Former Service Station. Requires assessment and/or clean up	0090001588
Frankston City Council	Frankston	McClelland DR	Former Landfill. Requires ongoing management	0090003594
Frankston City Council	FRANKSTON	3 ROSELLA ST	Current Industrial Site. Requires assessment and/or clean up	0090005315
Frankston City Council	FRANKSTON SOUTH	4 GOLF LINKS RD	Current Service Station. Requires assessment and/or clean up	0090005375
Glen Eira City Council	CAULFIELD SOUTH	371 Hawthorn RD	Former Service Station. Requires assessment and/or clean up	0090001532
Glen Eira City Council	CAULFIELD SOUTH	818 Glen Huntly RD	Former Service Station. Requires assessment and/or clean up	0090004221
Golden Plains Shire Council	MEREDITH	119 MEREDITH-MT MERCER RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090004477
Greater Bendigo City Council	CAL FORNIA GULLY	45 Sandhurst RD	Current petroleum storage site. Requires assessment and/or clean up	0090004999
Greater Bendigo City Council	EAGLEHAWK	191 UPPER CALIFORNIA GULLY RD	Current landfill. Requires ongoing management	0090005325
Greater Bendigo City Council	HEATHCOTE	HEATHCOTE PIT - HIRDS ROAD ALLOTMENT 31B SECTION 3	Industrial waste has been dumped at the site. Requires ongoing management	0090005324
Greater Bendigo City Council	MYERS FLAT	28 W LLIAMS RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090004173
Greater Bendigo City Council	White Hills	(Crown Allotment 432E Section E)	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090004649
Greater Dandenong City Council	DANDENONG	230 Frankston-Dandenong RD	Former Service Station. Requires assessment and/or clean up	0090004119
Greater Dandenong City Council	DANDENONG SOUTH	185 Dandenong-Hastings RD	Former Landfill. Requires ongoing management	0090004214
Greater Dandenong City Council	DANDENONG SOUTH	20 Cahill ST	Former Industrial Site. Requires assessment and/or clean up	0090002115
Greater Dandenong City Council	DANDENONG SOUTH	Greens Road GREENS RD	Former Industrial Site. Requires ongoing management	0090001391
Greater Dandenong City Council	DANDENONG SOUTH	Greens Road GREENS RD	Former Industrial Site. Requires ongoing management.	0090005482
Greater Dandenong City Council	KEYSBOROUGH	151 CHAPEL RD	Land and/or groundwater impacted by intensive animal industry. Requires assessment and/or clean up	0090005305
Greater Dandenong City Council	SPRINGVALE	310 Springvale RD	Former Service Station. Requires ongoing management	0090001607
Greater Dandenong City Council	SPRINGVALE	917 Princes HWY	Former Industrial Site. Requires assessment and/or clean up	0090001557
Greater Dandenong City Council	SPRINGVALE SOUTH	Clarke RD	Former Landfill. Requires ongoing management	0090003848
Greater Dandenong City Council	SPRINGVALE SOUTH	Clarke RD	Former Landfill. Requires ongoing management	0090003849
Greater Dandenong City Council	SPRINGVALE SOUTH	Clarke RD	Former Landfill. Requires ongoing management	0090003850
Greater Dandenong City Council	SPRINGVALE SOUTH	East Side Of Clarke RD	Former Landfill. Requires ongoing management	0090000608
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 Geelong City Council	BALLAN	1 6511 Western FWY	Current Service Station. Requires ongoing management	0090004833
Greater Geelong City Council	BELMONT	180 Barwon Heads RD	Former petroleum storage site. Requires ongoing management	0090005312
Greater Geelong City Council	CORIO	1500 Biddlecombe AV	Current landfill. Requires assessment and/or clean up	0090002361
Greater Geelong City Council	CORIO	391 Princes HWY	Former petroleum storage site. Requires ongoing management	0090004837
Greater Geelong City Council	CORIO	80 REF NERY RD	Current Industrial Site. Requires assessment and/or clean up	0090004215
Greater Geelong City Council	CORIO	80 REF NERY RD	Current petroleum storage site. Requires ongoing management	0090000024
Greater Geelong City Council	CORIO	83 Purnell RD	Current Service Station. Requires ongoing management	0090002343
Greater Geelong City Council	CORIO	Off Harpur RD	Former Service Station. Requires assessment and/or clean up	0090000782
Greater Geelong City Council	DRYSDALE	97 High ST	Current Service Station. Requires ongoing management	0090001808
Greater Geelong City Council	EAST GEELONG	HEARNE PDE	Contaminated soil is retained and managed onsite. Requires ongoing management	0090004415
Greater Geelong City Council	GEELONG NORTH	1 Roseneath ST	Former chemical storage facility. Requires assessment and/or clean up	0090001664

Greater Geelong City Council	LARA	Princes HWY	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	0090001012
Greater Geelong City Council	MANIFOLD HEIGHTS	35 Shannon AV	Former Service Station. Requires assessment and/or clean up	0090004098
Greater Geelong City Council	MARSHALL	55 WOOLSCOUR LANE	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090004722
Greater Geelong City Council	MOOLAP	132 Point Henry RD	Current Industrial Site. Requires assessment and/or clean up	0090001833
Greater Geelong City Council	NORLANE	5 PR NCES HWY	Former Industrial Site. Requires assessment and/or clean up	0090004126
Greater Geelong City Council	NORLANE	60 NORTH SHORE RD	Current Industrial Site. Requires assessment and/or clean up	0090004132
Greater Geelong City Council	NORTH GEELONG	343 MELBOURNE RD	Former Industrial Site. Requires assessment and/or clean up	0090004124
Greater Geelong City Council	NORTH GEELONG	Foreshore Area At End Of Crowle ST	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090000226
Greater Shepparton City Council	COSGROVE	205 COSGROVE-LEMNOS RD	Former Landfill. Requires ongoing management	0090003551
Greater Shepparton City Council	KIALLA WEST	7358 Goulburn Valley HWY	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
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	0090003558
Hepburn Shire Council	CRESWICK	C/a 45a Parish Of Creswick County Of Talbot	Former Landfill. Requires ongoing management	0090003559
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 ongoing management	0090004373
Hobsons Bay City Council	ALTONA	351 MILLERS RD	Current Industrial Site. Requires assessment and/or clean up	0090000597
Hobsons Bay City Council	ALTONA	401 Kororoit Creek RD	Current Industrial Site. Requires assessment and/or clean up	0090000009
Hobsons Bay City Council	ALTONA	401 Kororoit Creek RD	Current Industrial Site. Requires assessment and/or clean up	0090003368
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	Elfield Meadows Estate Defined By Volume 10426	Waste Acid Sulfate Soils. Requires ongoing management	0090002765
Hobsons Bay City Council	ALTONA MEADOWS	306 Queen ST	Current Service Station. Requires assessment and/or clean up	0090002186
Hobsons Bay City Council	ALTONA NORTH	Kyle RD	Former Landfill. Requires ongoing management	0090003527
Hobsons Bay City Council	BROOKLYN	Hardie RD	Former Landfill. Requires ongoing management	0090003487
Hobsons Bay City Council	NEWPORT	411 DOUGLAS PDE	Current Industrial Site. Requires assessment and/or clean up	0090002086
Hobsons Bay City Council	NEWPORT	Burleigh ST	Current petroleum storage site. Requires assessment and/or clean up	0090001325
Hobsons Bay City Council	NEWPORT	Underground Section Of Petroleum Pipelines That Run Under Champion Rd	Current Industrial Site. Requires assessment and/or clean up	0090001459
Hobsons Bay City Council	NEWPORT	Underground Section Of Petroleum Pipelines That Run Under Champion Rd	Current Industrial Site. Requires ongoing management	0090000598
Hobsons Bay City Council	SOUTH K NGSV LLE	38 Blackshaws RD	Former Industrial Site. Requires ongoing management	0090002381
Hobsons Bay City Council	SPOTSWOOD	144 HALL ST	Current Industrial Site. Requires assessment and/or clean up	0090003301
Hobsons Bay City Council	SPOTSWOOD	18 Drake ST	Current petroleum storage site. Requires assessment and/or clean up	0090001709
Hobsons Bay City Council	SPOTSWOOD	42 Simcock AV	Former Industrial Site. Requires assessment and/or clean up	0090002179
Hobsons Bay City Council	WILLIAMSTOWN	12 Seaview PDE	Current Industrial Site. Requires ongoing management	0090002444
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	CAMPBELLF ELD	1735 Sydney RD	Current Industrial Site. Requires assessment and/or clean up	0090002373
Hume City Council	CAMPBELLF ELD	26 GLENBARRY RD	Illegal dumping. Requires assessment and/or clean up	0090003863
Hume City Council	CAMPBELLF ELD	2 8 REO CR	Former chemical storage facility. Requires assessment and/or clean up	0090004284
Hume City Council	CAMPBELLF ELD	29 HALLEY CR	Illegal dumping. Requires assessment and/or clean up	0090004877
Hume City Council	CAMPBELLF ELD	5 REO CR	Current Industrial Site. Requires assessment and/or clean up	0090003276
Hume City Council	CAMPBELLF ELD	5 REO CR	Current Industrial Site. Requires assessment and/or clean up	0090005096
Hume City Council	CAMPBELLF ELD	Bolinda RD	Former Landfill. Requires ongoing management	0090003793

Hume City Council	CAMPBELLF ELD	Bolinda RD	Former Landfill. Requires ongoing management	0090003794
Hume City Council	CAMPBELLF ELD	Mahoneys RD	Former Landfill. Requires ongoing management	0090003496
Hume City Council	CRAIGIEBURN	54 RUSHWOOD DR	Illegal Dumping. Requires assessment and/or clean up	0090005383
Hume City Council	CRAIGIEBURN	Craigieburn RD	Former Landfill. Requires ongoing management	0090003107
Hume City Council	CRAIGIEBURN	Craigieburn RD	Former Landfill. Requires ongoing management	0090003475
Hume City Council	DIGGERS REST	50 EDWARDS RD	Illegal dumping. Requires assessment and/or clean up	0090004581
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	GREENVALE	100 OAKLANDS RD	Illegal dumping. Requires ongoing management	0090001856
Hume City Council	MELBOURNE A RPORT	206 WESTERN AV	Former Landfill. Requires assessment and/or clean up	0090003661
Hume City Council	SOMERTON	Cliffords RD	Former Industrial Site. Requires assessment and/or clean up	0090002446
Hume City Council	SUNBURY	17 ACHERON CT	Illegal dumping. Requires assessment and/or clean up	0090005274
Hume City Council	Tullamarine	105 ANNANDALE RD	Illegal dumping. Requires assessment and/or clean up	0090004149
Hume City Council	TULLAMAR NE	Western AV	Former Landfill. Requires ongoing management	0090003530
Hume City Council	WILDWOOD	520 W LDWOOD RD	Illegal dumping. Requires assessment and/or clean up	0090004601
Kingston City Council	CHELSEA	476 Nepean HWY	Former Service Station. Requires assessment and/or clean up	0090001389
Kingston City Council	CHELSEA	59 MULKARRA DR	Former Landfill. Requires assessment and/or clean up	0090004862
Kingston City Council	CHELSEA	Scotch PDE	Former Landfill. Requires ongoing management	0090003613
Kingston City Council	CLAYTON SOUTH	654 Clayton RD	Current landfill. Requires assessment and/or clean up	0090004869
Kingston City Council	CLAYTON SOUTH	8 Elder ST	Former Landfill. Requires ongoing management	0090003610
Kingston City Council	CLAYTON SOUTH	Former Clayton Road Landfill Cnr. Clayton Road & Ryans Road	Former Landfill. Requires ongoing management	0090003966
Kingston City Council	CLAYTON SOUTH	Former Clayton Road Landfill Cnr. Clayton Road & Ryans Road	Former Landfill. Requires ongoing management	0090004353
Kingston City Council	CLAYTON SOUTH	Ryans RD	Former Landfill. Requires ongoing management	0090003607
Kingston City Council	CLAYTON SOUTH	RYANS RD	Former Landfill. Requires ongoing management	0090003604
Kingston City Council	D NGLEY VILLAGE	201 SPR NG RD	Former Landfill. Requires assessment and/or clean up	0090003857
Kingston City Council	D NGLEY VILLAGE	370 Old Dandenong RD	Former Landfill. Requires ongoing management	0090003831
Kingston City Council	D NGLEY VILLAGE	370 Old Dandenong RD	Former Landfill. Requires ongoing management	0090003832
Kingston City Council	MENTONE	17 BALCOMBE RD	Former Service Station. Requires assessment and/or clean up	0090004424
Kingston City Council	MOORABBIN	1 10 Ebdn ST	Former Industrial Site. Requires ongoing management	0090002273
Kingston City Council	MOORABBIN	SOUTH WEST CNR HEATHERTON SANDS & BUNNYS LANE	Former Landfill. Requires ongoing management	0090004461
Kingston City Council	MOORABBIN	SOUTH WEST CNR HEATHERTON SANDS & BUNNYS LANE	Former Landfill. Requires ongoing management	0090004462
Kingston City Council	MORDIALLOC	78 White ST	Former Industrial Site. Requires assessment and/or clean up	0090002256
Knox City Council	WANTIRNA	706 BORONIA RD	Illegal dumping. Requires assessment and/or clean up	0090000181
Knox City Council	WANTIRNA SOUTH	14 COPPELIA ST	Former Landfill. Requires ongoing management	0090003736
Knox City Council	WANTIRNA SOUTH	14 COPPELIA ST	Former Landfill. Requires ongoing management	0090003737
Knox City Council	WANTIRNA SOUTH	14 COPPELIA ST	Former Landfill. Requires ongoing management	0090005441
Knox City Council	WANTIRNA SOUTH	Cathies LANE	Former Landfill. Requires ongoing management	0090000475
Knox City Council	WANTIRNA SOUTH	Cathies LANE	Former Landfill. Requires ongoing management	0090003738
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
Latrobe City Council	TRARALGON	TRARALGON WEST RD	Former Landfill. Requires assessment and/or clean up	0090003964
Latrobe City Council	TRARALGON SOUTH	Loy Yang B3/4 Bartons Lane	Ash pond with a Groundwater Attenuation Zone. Requires ongoing management	0090002894
Macedon Ranges Shire Council	BULLENGAROOK	Hobbs RD	Former Landfill. Requires ongoing management	0090003580
Macedon Ranges Shire Council	BULLENGAROOK	Hobbs RD	Former Landfill. Requires ongoing management	0090003581
Macedon Ranges Shire Council	BULLENGAROOK	Hobbs RD	Former Landfill. Requires ongoing management	0090003582
Macedon Ranges Shire Council	KYNETON	134 HIGH ST	Former Service Station. Requires assessment and/or clean up	0090004708
Macedon Ranges Shire Council	KYNETON	Redesdale RD	Former Landfill. Requires ongoing management	0090003555
Macedon Ranges Shire Council	KYNETON	Redesdale RD	Former Landfill. Requires ongoing management	0090003556
Macedon Ranges Shire Council	KYNETON	Redesdale RD	Former Landfill. Requires ongoing management	0090003557

Macedon Ranges Shire Council	SPRINGF ELD	130 Toomeys LANE	Illegal dumping. Requires assessment and/or clean up	0090004044
Macedon Ranges Shire Council	WOODEND	130 High ST	Current Service Station. Requires assessment and/or clean up	0090004073
Macedon Ranges Shire Council	WOODEND	8 SPENCER RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090005243
Mansfield Shire Council	MANSFIELD	Monkey Gully RD	Former Landfill. Requires ongoing management	0090003844
Mansfield Shire Council	MANSFIELD	Monkey Gully RD	Former Landfill. Requires ongoing management	0090003845
Maribyrnong City Council	BRAYBROOK	30 SOUTH RD	Former Industrial Site. Requires assessment and/or clean up	0090004372
Maribyrnong City Council	BROOKLYN	550 GEELONG RD	Former Industrial Site. Requires assessment and/or clean up	0090002056
Maribyrnong City Council	BROOKLYN	550 GEELONG RD	Illegal dumping. Requires assessment and/or clean up	0090004455
Maribyrnong City Council	FOOTSCRAY	Farnsworth AV	Former Landfill. Requires ongoing management	0090003484
Maribyrnong City Council	MA DSTONE	9 W LLIAMSON RD	Former Industrial Site. Requires assessment and/or clean up	0090001771
Maribyrnong City Council	MA DSTONE	9 W LLIAMSON RD	Former Industrial Site. Requires assessment and/or clean up	0090003767
Maribyrnong City Council	MA DSTONE	9 W LLIAMSON RD	Former Industrial Site. Requires assessment and/or clean up	0090003768
Maribyrnong City Council	WEST FOOTSCRAY	Somerville RD	Former Industrial Site. Requires assessment and/or clean up	0090002163
Maribyrnong City Council	YARRAV LLE	1 High ST	Former Industrial Site. Requires ongoing management	0090000134
Maribyrnong City Council	YARRAV LLE	2A FRANCIS ST	Current Industrial Site. Requires assessment and/or clean up	0090001122
Maribyrnong City Council	YARRAV LLE	325 WHITEHALL STREET	Former Industrial Site. Requires assessment and/or clean up	0090004781
Maribyrnong City Council	YARRAV LLE	Yarraville Terminal Francis ST	Current petroleum storage site. Requires assessment and/or clean up	0090000989
Maroondah City Council	CROYDON	171 Mt Dandenong RD	Former Service Station. Requires ongoing management	0090002862
Maroondah City Council	R NGWOOD	385 Canterbury RD	Current Service Station. Requires assessment and/or clean up	0090005282
Maroondah City Council	R NGWOOD EAST	18 Mount Dandenong RD	Current Service Station. Requires assessment and/or clean up	0090001804
Melton Shire Council	MELTON	Ferris RD	Former Landfill. Requires ongoing management	0090003481
Melton Shire Council	MELTON SOUTH	2 FERRIS RD	Former Landfill. Requires ongoing management	0090003479
Melton Shire Council	MELTON SOUTH	2 FERRIS RD	Former Landfill. Requires ongoing management	0090003480
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	PLUMPTON	1 Holden RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090000159
Melton Shire Council	PLUMPTON	627 Plumpton RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090000300
Melton Shire Council	PLUMPTON	627 PLUMPTON RD	Illegal dumping. Requires assessment and/or clean up	0090004146
Melton Shire Council	PLUMPTON	627 PLUMPTON RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up	0090003893
Melton Shire Council	RAVENHALL	48A ORBIS DR	Illegal dumping. Requires assessment and/or clean up	0090003361
Mildura Rural City Council	CABARITA (Allot.110A/PP3102)	349 MCEDWARD ST	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003774
Mildura Rural City Council	KOORLONG	Twentieth ST	Former Landfill. Requires ongoing management	0090003585
Mildura Rural City Council	MILDURA	42 NINTH ST	Former petroleum storage site. Requires assessment and/or clean up	0090004105
Mildura Rural City Council	MILDURA	CA Lot 12 & 13, ETIWANDA AV	Former Landfill. Requires ongoing management	0090005268
Mildura Rural City Council	NICHOLS POINT	63 CURETON AV	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090004342
Mildura Rural City Council	OUYEN	48 FARRELL ST	Former petroleum storage site. Requires assessment and/or clean up	0090004611
Mitchell Shire Council	BROADFORD	30 MIA MIA RD	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up	0090005017
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	117 Wimble ST	Current Industrial Site. Requires assessment and/or clean up	0090001737
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
Moira Shire Council	BURRAM NE	171 THOMS RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090004594
Moira Shire Council	NUMURKAH	Parish Of Katunga C/a 14 Sect D Naring Rd	Former Landfill. Requires ongoing management	0090003545
Moira Shire Council	YARRAWONGA	81 Channel RD	Former Landfill. Requires ongoing management	0090003539
Monash City Council	CLAYTON	1555 Centre RD	Current Industrial Site. Requires ongoing management	0090004466



Monash City Council	GLEN WAVERLEY	310 SPR NGVALE 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	OAKLEIGH EAST	108 FERN TREE GULLY RD	Former Landfill. Requires ongoing management	0090004273
Moonee Valley City Council	MOONEE PONDS	783 Mt Alexander RD	Current Service Station. Requires assessment and/or clean up	0090000664
Moorabool Shire Council	BACCHUS MARSH	End of Halletts WAY	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090001880
Moorabool Shire Council	FISKVILLE	Geelong-Ballan RD	Current Industrial Site. Requires assessment and/or clean up	0090004570
Moorabool Shire Council	FISKVILLE	Geelong-Ballan RD	Current Industrial Site. Requires assessment and/or clean up	0090004571
Moorabool Shire Council	MADDINGLEY	Side Of Kerrs RD	Former Landfill. Requires ongoing management	0090003631
Moreland City Council	Brunswick	225 and 227-231 Barkly Street	Former Industrial Site. Requires ongoing management	0090004362
Moreland City Council	BRUNSWICK	225 and 227-231 Barkly Street	Former Industrial Site. Requires ongoing management	0090004520
Moreland City Council	COBURG NORTH	46 Newlands RD	Current Service Station. Requires assessment and/or clean up	0090005329
Moreland City Council	PASCOE VALE	512 PASCOE VALE RD	Current Service Station. Requires assessment and/or clean up	0090002542
Mornington Peninsula Shire Council	CR B PO NT	2 Lens ST	Former Landfill. Requires ongoing management	0090003619
Mornington Peninsula Shire Council	CR B PO NT	The Esplanade	Former Industrial Site. Requires ongoing management	0090002897
Mornington Peninsula Shire Council	MOUNT ELIZA	250 Moorooduc HWY	Former Landfill. Requires ongoing management	0090000477
Mornington Peninsula Shire Council	MOUNT ELIZA	250 Moorooduc HWY	Former Landfill. Requires ongoing management	0090003744
Mornington Peninsula Shire Council	ROSEBUD WEST	119 Truemans RD	Former Landfill. Requires ongoing management	0090003616
Mornington Peninsula Shire Council	RYE	2233 PO NT NEPEAN RD	Current Service Station. Requires ongoing management	0090000658
Mornington Peninsula Shire Council	SOMERVILLE	182 Eramosa RD	Illegal dumping. Requires assessment and/or clean up	0090000097
Mount Alexander Shire Council	Castlemaine	74 Tomkies Road Lane	Contaminated soil is retained and managed onsite. Requires ongoing management	0090004156
Moynes Shire Council	ALLANSFORD	5331 Great Ocean RD	Current Industrial Site. Requires ongoing management	0090004322
Moynes Shire Council	PORT FAIRY	Badhams LANE	Former Landfill. Requires ongoing management	0090003625
Nillumbik Shire Council	DIAMOND CREEK	50 Fraser ST	Historical deposit of mine tailings. Requires assessment and/or clean up	0090002671
Nillumbik Shire Council	ELTHAM	197 Sherbourne RD	Former petroleum storage site. Requires assessment and/or clean up	0090005162
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	105 GRAHAM RD	Former Landfill. Requires ongoing management	0090003505
Nillumbik Shire Council	PANTON HILL	165 MOTSCHALL RD	Current Industrial Site. Requires ongoing management	0090002787
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	YARRAMBAT	Yan Yean RD	Former Landfill. Requires ongoing management	0090003407
Nillumbik Shire Council	YARRAMBAT	Yan Yean RD	Former Landfill. Requires ongoing management	0090003408
Northern Grampians Shire Council	Stawell	25-39 HORSHAM ROAD CROWN ALLOTMENT 136K PARISH OF LLAWARRA	Former Industrial Site. Requires ongoing management	0090002140
Port Phillip City Council	ELWOOD	54A MAR NE PDE	Current Service Station. Requires assessment and/or clean up	0090000663
Port Phillip City Council	PORT MELBOURNE	337 W LLIAMSTOWN RD	Current Service Station. Requires assessment and/or clean up	0090004838
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	0090003745
South Gippsland Shire Council	FOSTER	4090 SOUTH GIPPSLAND HWY	Former Landfill. Requires ongoing management	0090003746
South Gippsland Shire Council	FOSTER	4090 SOUTH GIPPSLAND HWY	Former Landfill. Requires ongoing management	0090003747
South Gippsland Shire Council	LEONGATHA SOUTH	630 ROUGHHEADS 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	0090003847
Surf Coast Shire Council	WINCHELSEA	114 Trebeck CT	Illegal dumping. Requires assessment and/or clean up	0090001935
Swan Hill Rural City Council	LAKE POWELL	LOT 1 TP898018, 3 BELSAR RD	Illegal dumping. Requires assessment and/or clean up	0090004993

Swan Hill Rural City Council	LAKE POWELL	LOT 1 TP898018, 3 BELSAR RD	Illegal dumping. Requires assessment and/or clean up	0090004995
Swan Hill Rural City Council	LAKE POWELL	LOT 1 TP898018, 3 BELSAR RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090005261
Swan Hill Rural City Council	LAKE POWELL	LOT 1 TP898018, 3 BELSAR RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090005262
Swan Hill Rural City Council	PENTAL ISLAND	LOT 4\PS537291, 1411 PENTAL ISLAND ROAD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090004875
Swan Hill Rural City Council	ROB NVALE	2B\PP2269 and 2C\PP2269 HAPPY VALLEY TRACK	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up	0090005123
Swan Hill Rural City Council	ROB NVALE	BLOCK 5 116 HOCKING RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up	0090003773
Swan Hill Rural City Council	Swan Hill	3 Hastings Street	Current petroleum storage site. Requires assessment and/or clean up	0090003573
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
Towong Shire Council	BETHANGA	4 MART N ST	Former Landfill. Requires ongoing management	0090003554
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 assessment and/or clean up	0090003635
Warrnambool City Council	WARRNAMBOOL	Braithwaite ST	Former Landfill. Requires assessment and/or clean up	0090003636
Warrnambool City Council	WARRNAMBOOL	Braithwaite ST	Former Landfill. Requires ongoing management	0090003637
Wellington Shire Council	LONGFORD	746 LONGFORD-LOCH SPORT RD	Former Landfill. Requires ongoing management	0090003791
Wellington Shire Council	LONGFORD	746 LONGFORD-LOCH SPORT RD	Former Landfill. Requires ongoing management	0090003792
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	0090003055
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
Whitehorse City Council	BLACKBURN	24 Blackburn RD	Former Service Station. Requires assessment and/or clean up	0090003153
Whitehorse City Council	BLACKBURN	2 CENTRAL RD	Former Service Station. Requires assessment and/or clean up	0090004262
Whitehorse City Council	BOX HILL	14 Federation ST	Former Landfill. Requires ongoing management	0090003499
Whittlesea City Council	EPP NG	215 COOPER ST	Current landfill. Requires ongoing management	0090003348
Whittlesea City Council	EPP NG	490 COOPER ST	Former Landfill. Requires ongoing management	0090003502
Whittlesea City Council	EPP NG	500 Cooper ST	Former Landfill. Requires ongoing management	0090003490
Whittlesea City Council	THOMASTOWN	240 HIGH ST	Former Service Station. Requires assessment and/or clean up	0090004077
Whittlesea City Council	THOMASTOWN	342 Settlement RD	Former Service Station. Requires assessment and/or clean up	0090001959
Whittlesea City Council	THOMASTOWN	51 High ST	Current Industrial Site. Requires assessment and/or clean up	0090004421
Whittlesea City Council	THOMASTOWN	77 HIGH ST	Current Industrial Site. Requires assessment and/or clean up	0090005435
Wodonga Rural City Council	WODONGA	3437 Beechworth-Wodonga RD	Former Landfill. Requires ongoing management	0090003548
Wyndham City Council	Laverton North	19 Little Boundary RD	Current Industrial Site. Requires assessment and/or clean up	0090000003
Wyndham City Council	LAVERTON NORTH	142 FITZGERALD RD	Current Industrial Site. Requires assessment and/or clean up	0090004822
Wyndham City Council	LAVERTON NORTH	142 FITZGERALD RD	Current Industrial Site. Requires assessment and/or clean up	0090004823
Wyndham City Council	LAVERTON NORTH	3 PROGRESS CT	Illegal dumping. Requires assessment and/or clean up	0090004467
Wyndham City Council	LAVERTON NORTH	41 LEAKES RD	Former Industrial Site. Requires assessment and/or clean up	0090000864
Wyndham City Council	LAVERTON NORTH	41 LEAKES RD	Former Industrial Site. Requires ongoing management	0090003389
Wyndham City Council	LITTLE RIVER	490 EDGARS RD	Illegal dumping. Requires assessment and/or clean up	0090004276
Yarra City Council	FITZROY NORTH	433 SMITH ST	Former Industrial Site. Requires ongoing management	0090004363
Yarra City Council	RICHMOND	3-21a Kent St 1/4-14/4 Little Buckingham St	Former Industrial Site. Requires ongoing management	0090001920
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
Yarra Ranges Shire Council	KILSYTH	1 76 Fussell RD	Former Industrial Site. Requires assessment and/or clean up	0090000004

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	0090000005
Yarra Ranges Shire Council	KILSYTH	2 76 Fussell RD	Former Industrial Site. Requires assessment and/or clean up	0090000007

## Appendix C

## Local GQRUZ Figure



# Groundwater zone with restricted uses

## Maidstone

This zone has been cleaned up to the relevant environmental standards (section 53X environmental audit) but is still subject to restricted groundwater uses.

### Environmental audit site

9-15 Williamson Rd Maidstone






### Restrictions on use

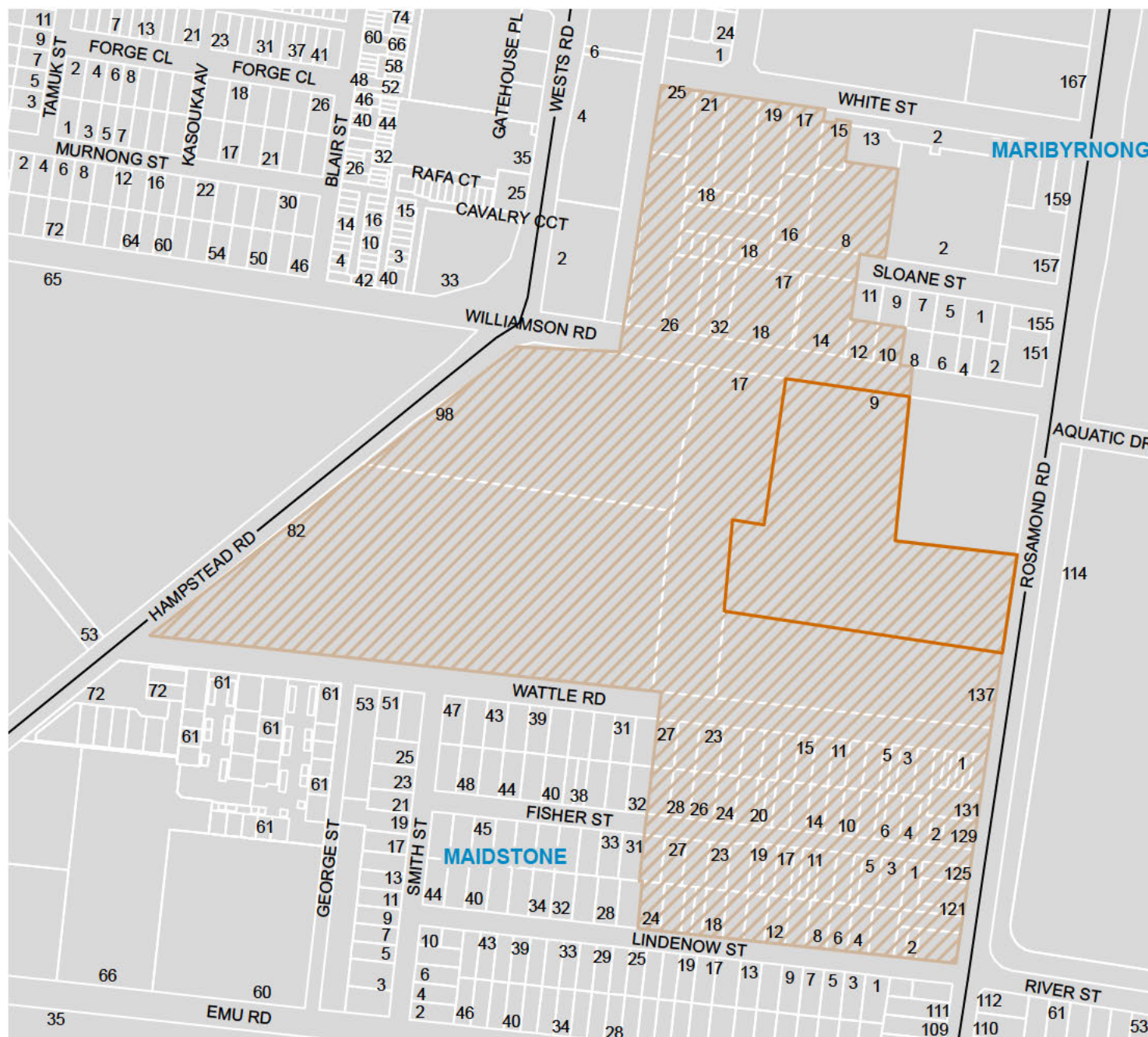
Drinking water  
Livestock water supply  
Water used for recreational purposes (e.g. swimming)

### Site history

Engineering works

### Legend

-  Environmental audit site
-  Groundwater zone with restricted uses
-  Properties
-  Unit/house/building number
-  Primary road



Disclaimer: The map represents an approximate estimation of an area where groundwater quality has been impacted by human activities. It does not provide information on the naturally occurring quality of groundwater, which can also have restrictions on its use. The environmental audit boundary and groundwater zone are based on land parcel boundaries at the time of mapping. Subsequent changes to land parcel boundaries do not change the location of the zone.



0 40 80  
Metres  
EPA ID: 55545-1  
Map generated on: 31 Oct 2013

This map may also contain data from:



For more information  
contact 1300 EPA VIC

## Appendix **D**      Site Inspection Photographs



*Photograph 1*

*Front of property,  
looking southeast*



*Photograph 2*

*Rear of property,  
looking north*



*Photograph 3*

*Interior of  
warehouse*



*Photograph 4*

*Interior of  
warehouse*



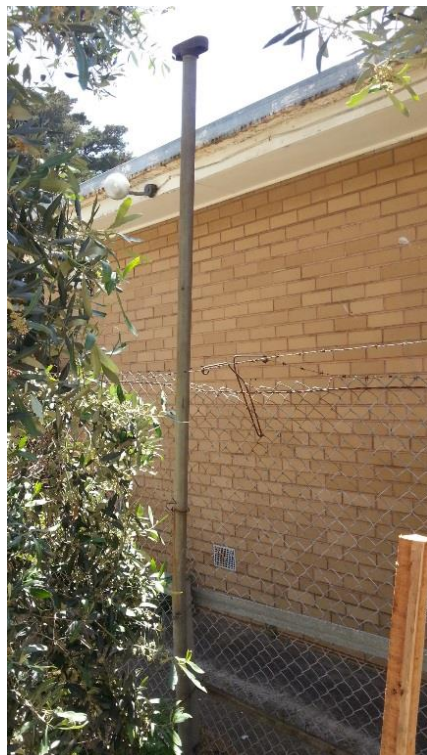
*Photograph 5*

*Potential UST  
infrastructure,  
located in the  
northeast of the  
site*



*Photograph 6*

*Potential UST  
infrastructure,  
(vent pipe)*





*Photograph 7*

*Stored drums.*



*Photograph 8*

*Disturbed ground or possible filling (centre and back right of photograph) at rear of warehouse (looking northeast). .*



*Photograph 9*

*Adjacent office/warehouse land use to the west of the site*



## Appendix E

## Online Extract Former Site Use



This year's Australian Bus Panorama Christmas Special will feature a history of ANSAIR.

### Re: Once upon a time - Country Vic in the late '70's Part 1

by [\[redacted\]](#) Mon Sep 29, 2008 11:47 pm

Thank you very much for these photos.

In a previous life I was, in fact, a Firefly employee. My duties required me to sweep out, wipe clean the seats and windows, of twelve buses and coaches per night (including the above units), six nights per week for a total weekly payment of \$ 5.00 (note the placement of the decimal point).

Being a young teenage kid extremely interested in buses, I would, of course, have done it for nothing!!

The depot in these photos actually still exists, or, at least, did so a couple of years ago. It was located at 53 Wattle Rd, [Maidstone](#), which is only one parallel street away from their current premises. It has remained largely unused for nearly 20 years since they vacated it. Their route service and buses were sold to Keffords around 86, and shortly after, their coaches, including their new purchases (ie 3-4 new Tourmasters to commence their new Sydney express service) moved to the current location in Emu Rd, [Maidstone](#).



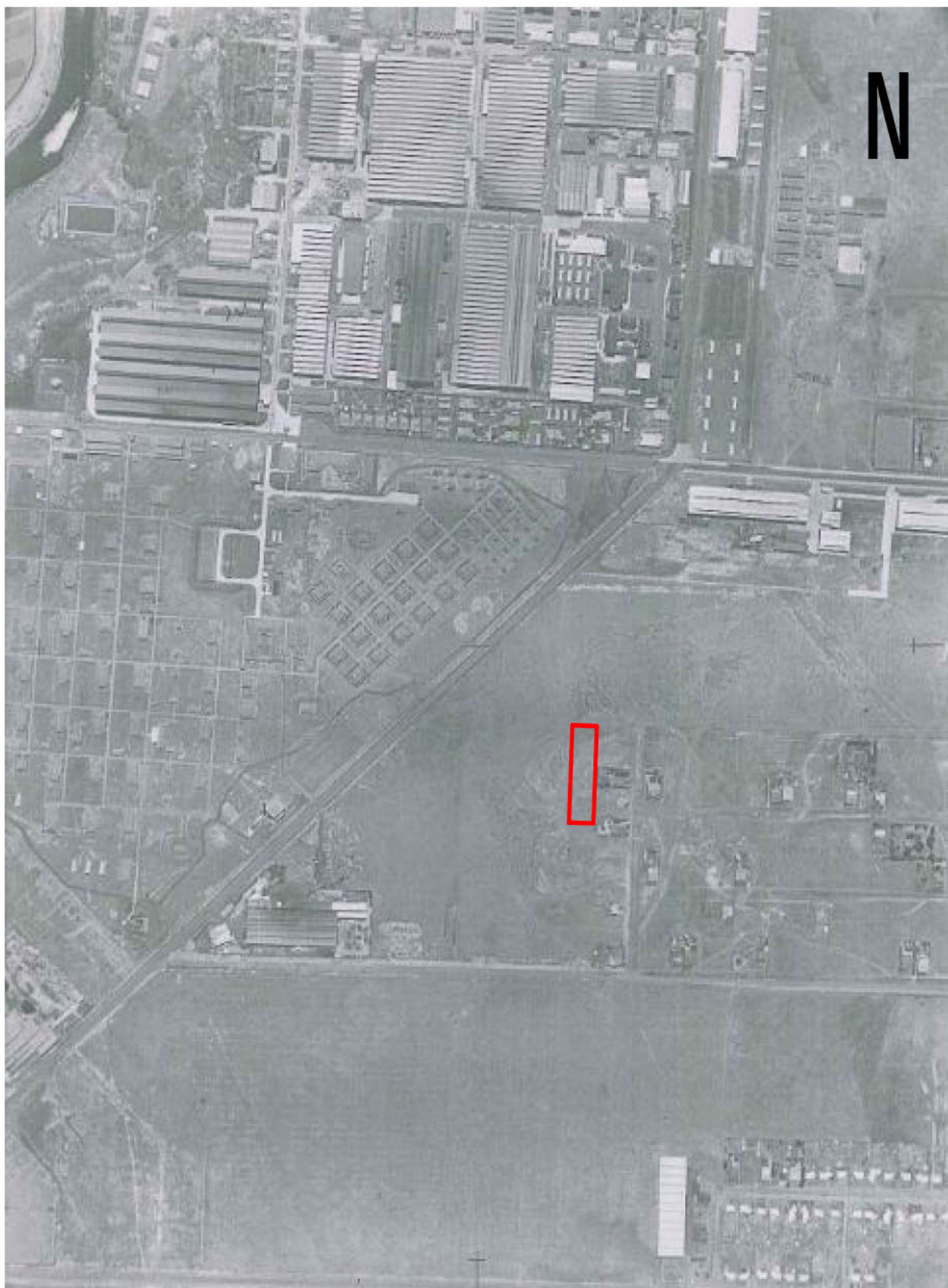


Third IMG 710, new 6/76 (~~1976~~)





## Appendix F      Historical Aerial Photographs



# Key



Denotes approximate site boundary

Approx Scale 1:7500

0 100 200 300 400 500 (m)



**Tonkin & Taylor Pty Ltd**

Environmental and Engineering Consultants  
Kings Technology Park, Ground Floor, 95 Coventry St,  
Southbank, Victoria, 3006  
Ph: (03) 9863 8686

DRAWN	jta	11/14
DRAWING CHECKED	jta	11/14
APPROVED	TV	11/14
FILE:	3180.300 Aerials	
SCALE (AT A4 SIZE)	See above	
PROJECT No.	3180.300	

**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
53 Wattle Road, Maidstone, Victoria  
1945 Aerial Photograph

FIG. No. A1

Rev 0



N



**Key**



Denotes approximate site boundary

Approx Scale 1:25,000

0 500 1000 1500 (m)



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APPROVED	TV	11/14
FILE: 3180.300 Aerials		
SCALE (AT A4 SIZE) See above		
PROJECT No. 3180.300		

**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
53 Wattle Road, Maidstone, Victoria  
1956 Aerial Photograph

FIG. No. A2

Rev 0



N



**Key**



Denotes approximate site boundary

Approx Scale 1:10,000

0 100 200 300 400 500 (m)



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FILE:	3180.300 Aerials	
SCALE (AT A4 SIZE)	See above	
PROJECT No.	3180.300	

**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
53 Wattle Road, Maidstone, Victoria  
1963 Aerial Photograph

FIG. No. A3

Rev 0



N



**Key**



Denotes approximate site boundary

Approx Scale 1:10,000

0 100 200 300 400 500 (m)



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DRAWING CHECKED	jta	11/14
APPROVED	TV	11/14
FILE:	3180.300 Aerials	
SCALE (AT A4 SIZE)	See above	
PROJECT No.	3180.300	

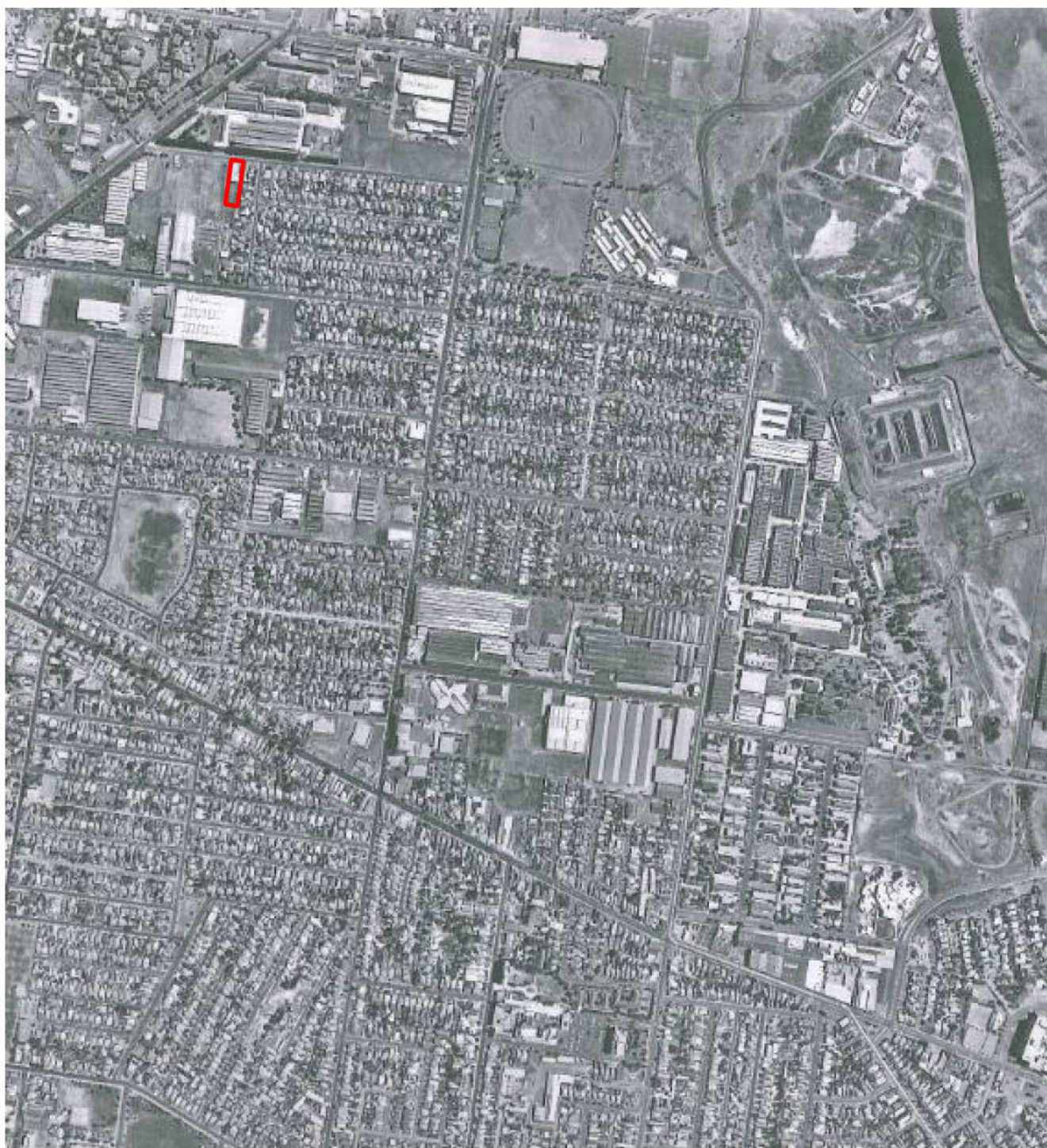
**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
53 Wattle Road, Maidstone, Victoria  
1975 Aerial Photograph

FIG. No. A4

Rev 0



N



**Key**



Denotes approximate site boundary

Approx Scale 1:10,000

0 100 200 300 400 500 (m)



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FILE:	3180.300 Aerials	
SCALE (AT A4 SIZE)	See above	
PROJECT No.	3180.300	

**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
53 Wattle Road, Maidstone, Victoria  
1984 Aerial Photograph

FIG. No. A5

Rev 0



N



**Key**



Denotes approximate site boundary

Approx Scale 1:10,000

0 100 200 300 400 500 (m)



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Southbank, Victoria, 3006  
Ph: (03) 9863 8686

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APPROVED	TV	11/14
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SCALE (AT A4 SIZE)	See above	
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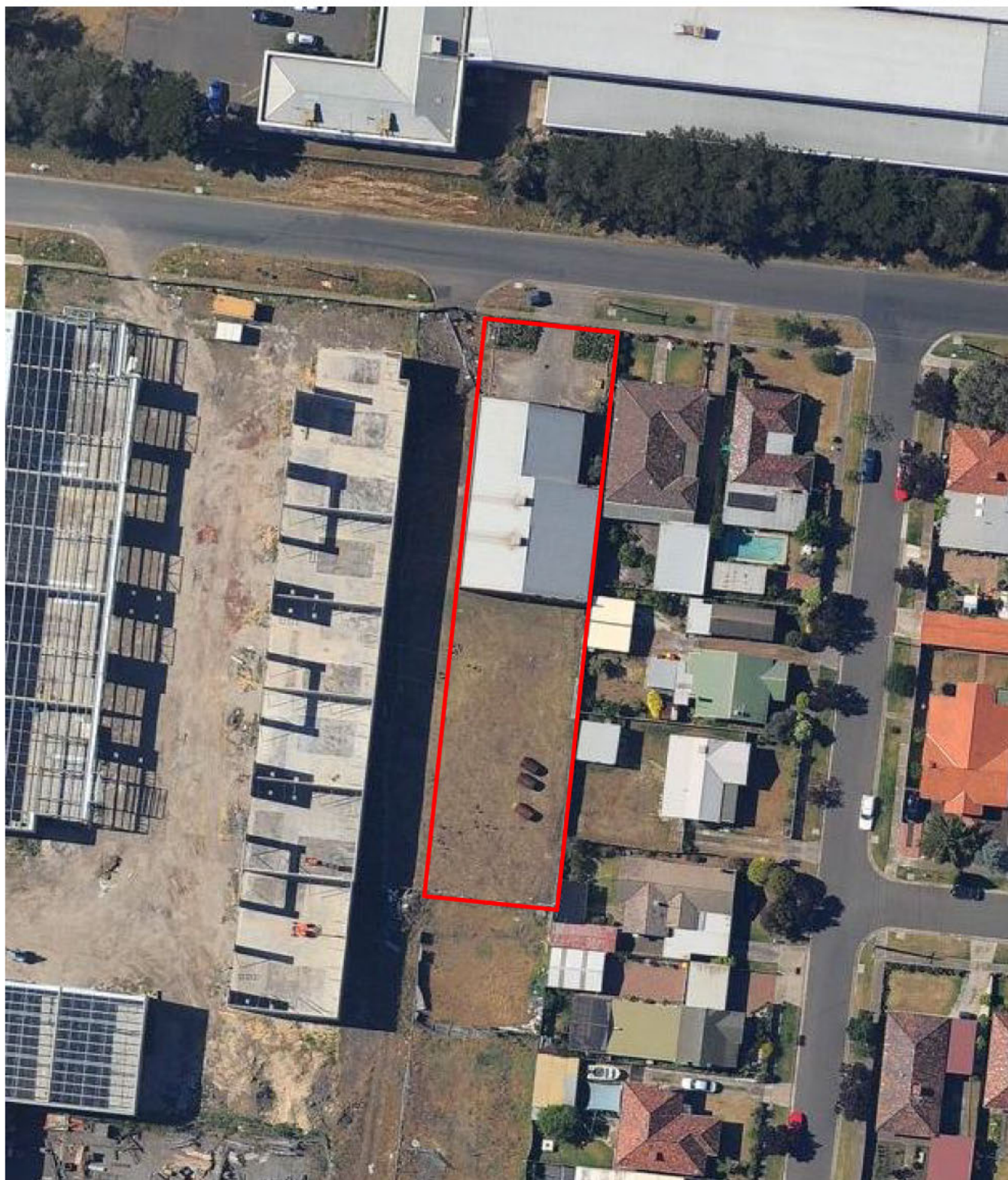
**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
53 Wattle Road, Maidstone, Victoria  
2000 Google Earth Image

FIG. No. A6

Rev 0



N



**Key**



Denotes approximate site boundary

Approx Scale 1:750

0 10 20 30 40 50 (m)



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APPROVED	TV	11/14
FILE:	3180.300 Aerials	
SCALE (AT A4 SIZE)	See above	
PROJECT No.	3180.300	

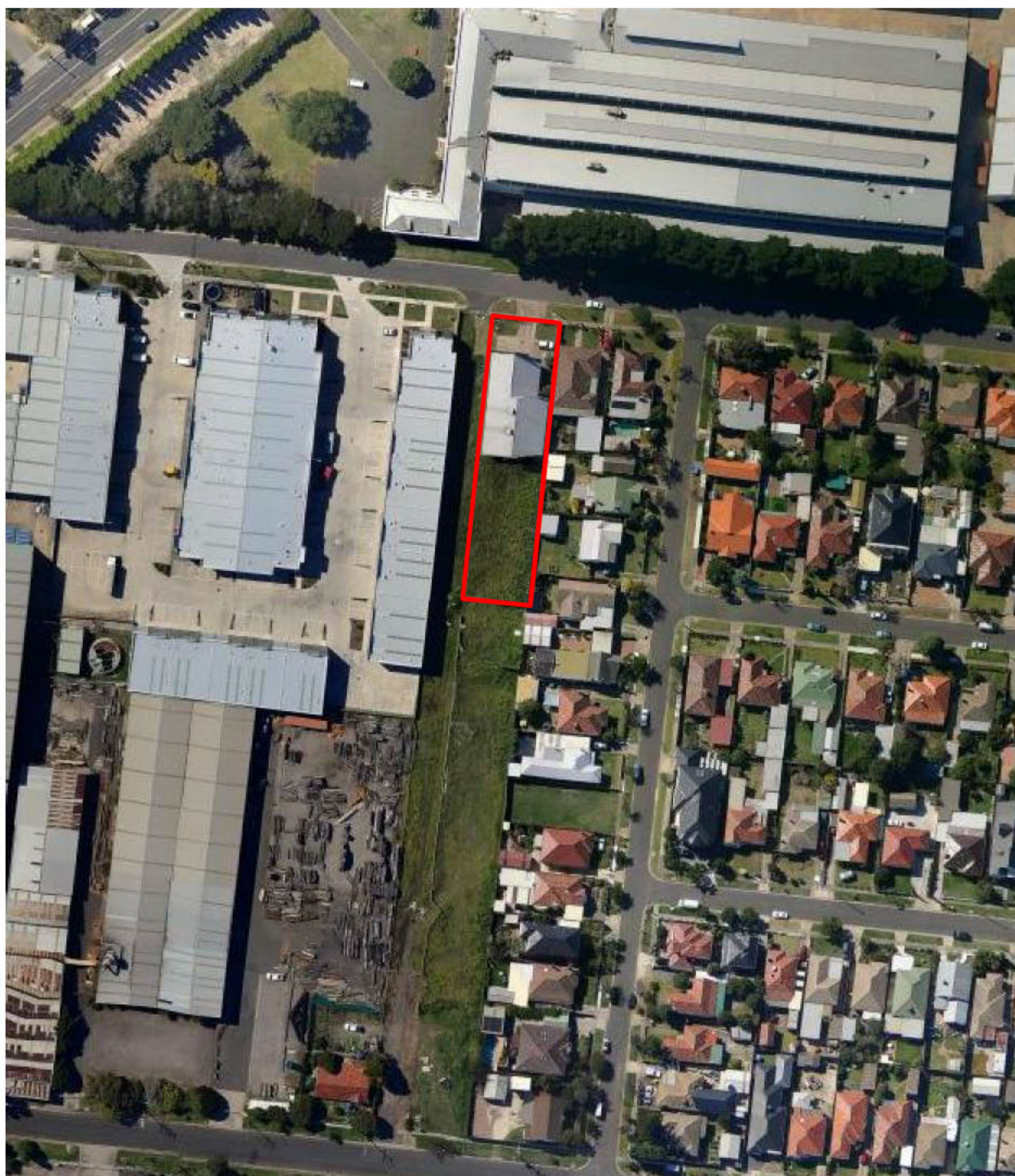
**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
53 Wattle Road, Maidstone, Victoria  
2009 NearMap Image

FIG. No. A7

Rev 0



N



**Key**



Denotes approximate site boundary

Approx Scale 1:2000



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APPROVED	TV	11/14
FILE: 3180.300 Aerials		
SCALE (AT A4 SIZE) See above		
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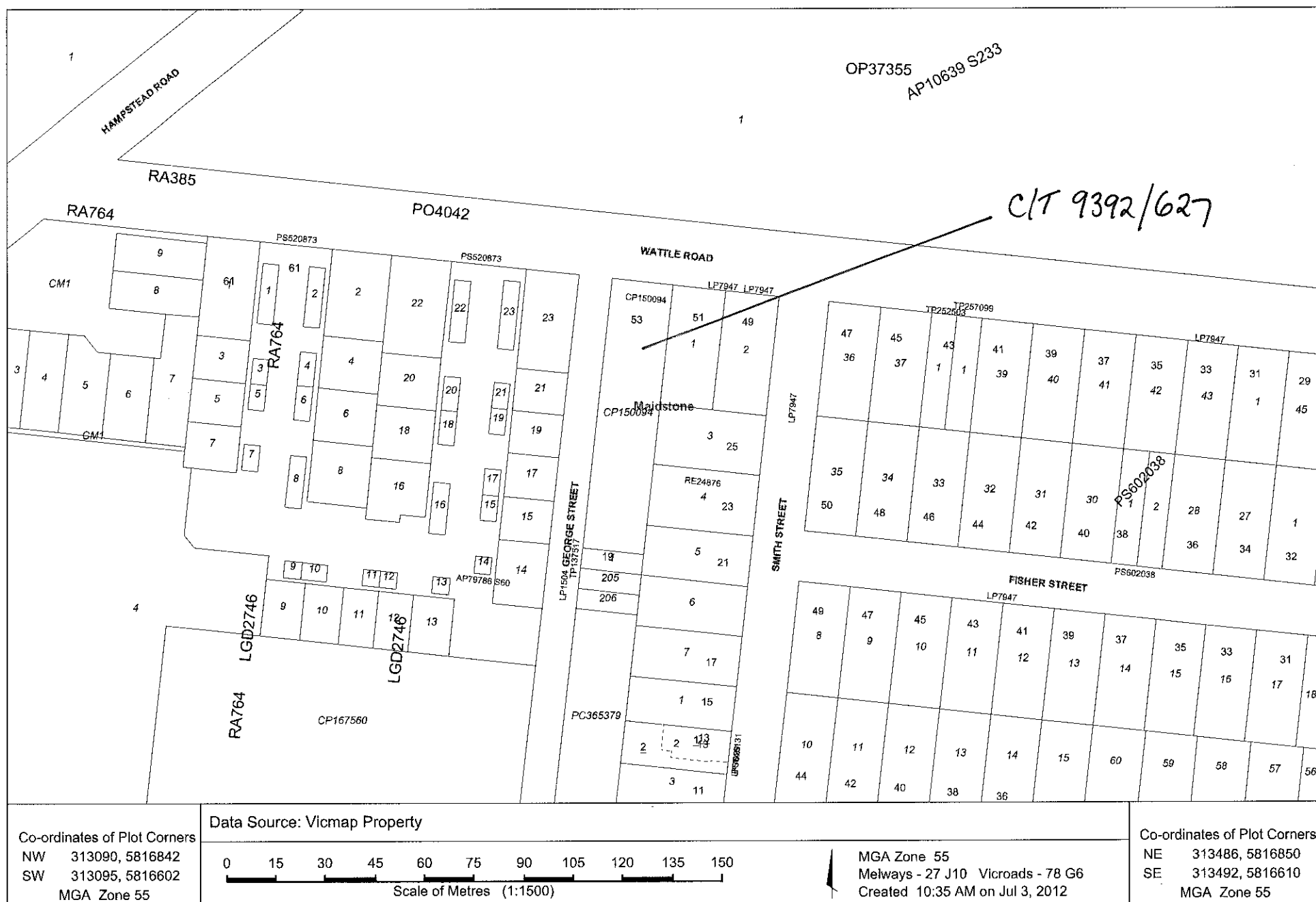
**LATIN AMERICA PTY LTD**  
**PRELIMINARY SITE INVESTIGATION**  
53 Wattle Road, Maidstone, Victoria  
2012 NearMap Image

FIG. No. A8

Rev 0

## Appendix G

## Historical Certificates of Title



WARNING: No warranty is given as to the accuracy or completeness of this map. Dimensions are approximate. For property dimensions, undertake a Title search.

9392/627

2082/243 (1888)  
(LOTS 201, 202+203  
LP 1504)

2082/245 (1888)  
(LOTS 191 TO 196  
LP 1504)

9369/518 (1980)  
(LOTS 199+200  
LP 1504)

9369/833 (1980)  
(LOT 197 LP 1504)  
NOT SUPPLIED

9381/598 (1980)  
(LOT 198 LP 1504)  
NOT SUPPLIED

SAME PROPRIETORS  
AS 9369/518

1999/756

2071/097 (1888)

1943/423  
(1887)



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## **HISTORICAL SEARCH STATEMENT**

Produced 03/07/2012 11:03 AM

Volume 09392 Folio 627

Folio Creation: Created as paper folio continued as computer folio

Parent titles :

Volume 02082 Folio 243 to Volume 02082 Folio 245

Volume 09369 Folio 518 to Volume 09369 Folio 833

Volume 09381 Folio 598

THE IMAGE OF THE FOLIO CEASED TO BE THE DIAGRAM LOCATION ON 13/06/2002 03:30 PM

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## HISTORICAL SEARCH STATEMENT

### RECORD OF ALTS DEALINGS

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

### RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
---------------------------------	------------------------------	---------	--------

08/07/2002	08/07/2002	AB397011W	Y
------------	------------	-----------	---

### SURVIVORSHIP APPLICATION

#### FROM:

WADIH HAYKAL

NAWAL HAYKAL

#### TO:

NAWAL HAYKAL

#### RESULTING PROPRIETORSHIP:

Estate Fee Simple

TENANTS IN COMMON

As to 1 of a total of 2 equal undivided shares

Sole Proprietor

NAWAL HAYKAL of 3 HANOVER CRT AVONDALE HEIGHTS

AB397011W 08/07/2002

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

CHAYBEN MERCHED HAYKAL

WAGIHA NAHOUM HAYKAL both of 30 MONTE CARLO DR AVONDALE HEIGHTS

R212582R 12/02/1991

08/07/2002	08/07/2002	AB397012U	Y
------------	------------	-----------	---

### MORTGAGE OF LAND

MORTGAGE AB397012U 08/07/2002

COMMONWEALTH BANK OF AUSTRALIA

24/08/2010	24/08/2010	AH451169H	Y
------------	------------	-----------	---

### DISCHARGE OF MORTGAGE

AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)

MORTGAGE AB397012U

24/08/2010	24/08/2010	AH451170Y	Y
------------	------------	-----------	---

### TRANSFER OF LAND BY ENDORSEMENT

#### FROM:

CHAYBEN MERCHED HAYKAL

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## HISTORICAL SEARCH STATEMENT

WAGIHA NAHOUM HAYKAL  
NAWAL HAYKAL  
TO:  
DANIEL HENRY CUMMING

RESULTING PROPRIETORSHIP:  
Estate Fee Simple  
Sole Proprietor

DANIEL HENRY CUMMING of 27 CROWN POINT RIDGE CHIRNSIDE PARK VIC  
3116  
AH451170Y 24/08/2010

24/08/2010	24/08/2010	AH451171W	Y
------------	------------	-----------	---

### MORTGAGE OF LAND

MORTGAGE AH451171W 24/08/2010  
AUSTRALIA AND NEW ZEALAND BANKING GROUP LTD

07/01/2011	07/01/2011	AH710095U	N
------------	------------	-----------	---

### RECTIFICATION AMEND DIAGRAM

Diagram Location Snapshot: SEE CP150094 FOR FURTHER DETAILS AND BOUNDARIES

27/06/2012	27/06/2012	AJ759115Y (O)	Y
------------	------------	---------------	---

### DISCHARGE OF MORTGAGE

AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)  
MORTGAGE AH451171W

27/06/2012	27/06/2012	AJ759116W (O)	Y
------------	------------	---------------	---

### TRANSFER OF LAND BY ENDORSEMENT

FROM:  
DANIEL HENRY CUMMING  
TO:  
LATIN AMERICA PTY LTD

RESULTING PROPRIETORSHIP:  
Estate Fee Simple  
Sole Proprietor

LATIN AMERICA PTY LTD of 128 MITCHELL STREET MAIDSTONE VIC 3013  
AJ759116W 27/06/2012

27/06/2012	27/06/2012	AJ759117U (O)	Y
------------	------------	---------------	---

### MORTGAGE OF LAND

MORTGAGE AJ759117U 27/06/2012  
COMMONWEALTH BANK OF AUSTRALIA

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## **HISTORICAL SEARCH STATEMENT**

STATEMENT END



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## HISTORICAL SEARCH STATEMENT

### VOTS Snapshot

Volume 09392 Folio 627  
124002257897S  
Produced 08/07/2002 01:01 pm

### LAND DESCRIPTION

Land in Plan of Consolidation 150094.

#### PARENT TITLES :

Volume 02082 Folio 243      Volume 02082 Folio 245      Volume 09369 Folio 518  
Volume 09369 Folio 833      Volume 09381 Folio 598  
Created by instrument CP150094 16/10/1980

### REGISTERED PROPRIETOR

Estate Fee Simple

#### TENANTS IN COMMON

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

CHAYBEN MERCHED HAYKAL

WAGIHA NAHOUM HAYKAL both of 30 MONTE CARLO DR AVONDALE HEIGHTS

As to 1 of a total of 2 equal undivided shares

Joint Proprietors

WADIH HAYKAL

NAWAL HAYKAL both of 3 HANOVER CRT AVONDALE HEIGHTS

R212582R 12/02/1991

### 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 CP150094 FOR FURTHER DETAILS AND BOUNDARIES

CP150094

**ORIGINAL****NOT TO BE TAKEN FROM THE OFFICE  
OF TITLES**

VICTORIA

REGISTER BOOK

VOL. **9392** FOL. **627**

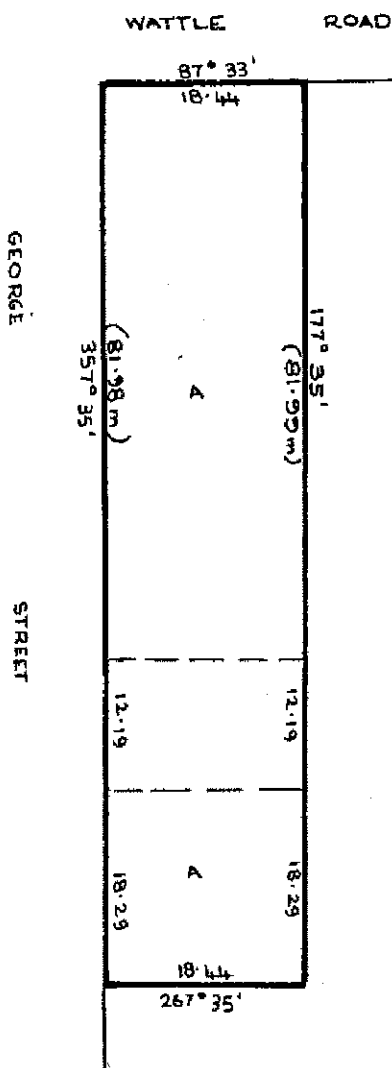
# Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

GRACE BONO of 53 Wattle Road Maidstone Bus Proprietor is the proprietor of --  
 an estate in fee simple subject to the encumbrances notified hereunder in --  
 all that piece of land in the Parish of Cut-paw-paw County of Bourke being --  
 the land in Plan of Consolidation No.150094 which land is shown enclosed by--  
 continuous lines on the map hereon As to the land shown marked A - - - - -  
 TOGETHER WITH a right of carriage way over George Street shown on - - - - -  
 Plan of Subdivision No.1504 - - - - -

Issued pursuant to Section 97A (2)  
 of the Transfer of Land Act 1958

*Edward*  
 Assistant Registrar of Titles

**ENCUMBRANCES REFERRED TO**

*BAR.*  
 MEASUREMENTS ARE IN METRES



T09392-627-1-1

Derived from Vols.2082 Fols.243

16 OCT 1980

9369

9381

245  
 518  
 833  
 598

FULLY CONVERTED TITLE  
 THIS IS A SUPERSEDED FOLIO OF THE REGISTER. Both text and diagram for this  
 Folio have been fully converted to a computer Folio.

JOINT PROPRIETORS

SUONG MAI TRAN &amp; TINH MINH VO OF FLAT

7/697 PARK ST. BRUNSWICK

REGISTERED 10/7/85

L769036J



MORTGAGE

CBFC LIMITED

REGISTERED 10/7/85

L769037F

DISCHARGED  
12 FEB 1991

MORTGAGE

CBF LEASING LIMITED

REGISTERED 24/6/87

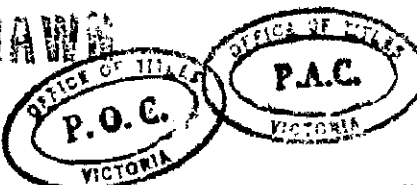
M905040T



CAVEAT No. M976337Y LODGED 6 AUG 1987

CAVEAT WITHDRAWN

12 JUL 1988



MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

Registered 13 OCT 1988

No. N765245D



CHAYBEN MERCHED HAYKAL & WAGIHA NAHOUM HAYKAL  
OF 30 MONTE CARLO DR. AVONDALE HEIGHTS AS  
JOINT PROPRIETORS AS TO ONE EQUAL UNDIVIDED

HALF PART OR SHARE & WADIH HAYKAL & NAWAL  
HAYKAL -

KAYKAL OF 3 HANOVER CRT, AVONDALE HEIGHTS

AS JOINT PROPRIETORS AS ONE EQUAL UNDIVIDED

HALF PART OR SHARE ARE NOW PROPRIETORS

AS TENANTS IN COMMON

REGISTERED 12/2/91

R212582R

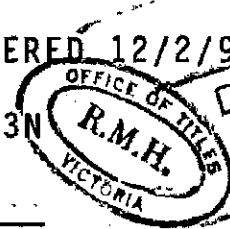


MORTGAGE

COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA

REGISTERED 12/2/91

R212583N

DISCHARGED  
23 DEC 1992

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## **HISTORICAL SEARCH STATEMENT**

Produced 03/07/2012 11:04 AM

Volume 01943 Folio 423

Folio Creation: Details Unknown

Parent titles :

Volume 01357 Folio 235 to Volume 01357 Folio 236

STATEMENT END



B. Fitzpatrick  
Assistant Registrar of Titles  
29 JUN 2000



Vol 1943  
Fol 423

# Certificate of Title,

UNDER THE "TRANSFER OF LAND STATUTE."

*Rayan  
Done  
20-9-00*

James Joseph Hunter M: Carr of Dandenong Road East Sand:  
now the proprietor of an Estate in Fee-simple, subject to the Encumbrances  
notified hereunder in All that piece of Land, delineated and  
coloured on the Map in the margin, being Lot one hundred and ninety, of  
the plan of subdivision Number 1504, lodged in the Office of Titles and  
part of Crown allotment forty four Section twenty Parish of St Albans  
County of Bourke, Together with a right of carriage way over George Street  
shown on the said plan of subdivision. —

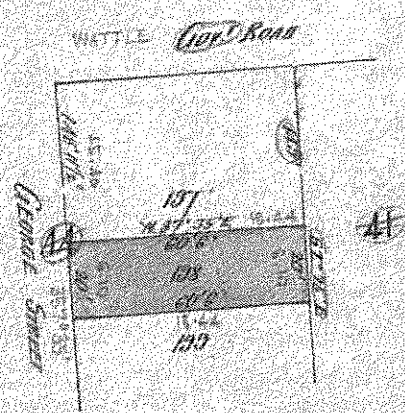
Dated the thirty first — day of August — One thousand  
eight hundred and eighty seven. —

*[Signature]*



Assistant Registrar of Titles.  
ENCUMBRANCES REFERRED TO.

OR  
Not to be



T01943-423-1-2

The Measurements are to feet and inches

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## **HISTORICAL SEARCH STATEMENT**

Produced 03/07/2012 11:04 AM

Volume 02071 Folio 097  
Folio Creation: Details Unknown  
Parent title Volume 02037 Folio 389

STATEMENT END



1357

~~1805~~  
~~1805~~

27123576

Transfer 195737

Application

Rajan  
Aur  
ART  
30/9/60**CANCELLED**

No. ument.

Day and Hour of its Production.

Assistant Registrar of Titles

Names of the Parties to it.

Number or Symbol thereon.

29 JUN 2000

James Joseph Hunter

M. Laven

To

Henry McQuarrie

Jas Davidson

Assistant Registrar of Titles.

99981

Mortgage

The 29<sup>th</sup>  
March 1889

at 12.25

p.m.

Mortgage  
99981The 24<sup>th</sup>February 1893 The Imperial Banking Company  
at 10.41 am Limited & Co. Agents

Assistant Registrar of Titles.

332708

Mortgage No. H 854791 registered 11<sup>th</sup> February 1980  
Pursuant to sec 376 Act 6299  
CANCELLED See Vol. 9381 Fol. 598Not entered on Duplicate  
pursuant to Section 376  
Act 6299

Assistant Registrar of Titles.

**CANCELLED**

Assistant Registrar of Titles.

Assistant Registrar of Titles.

Assistant Registrar of Titles.



Entered in the Register Book  
**CANCELLED**

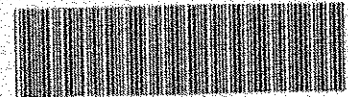


Vol. 2071 Fol. 414097

VICTORIA.

# Certificate of Title,

UNDER THE "TRANSFER OF LAND STATUTE."

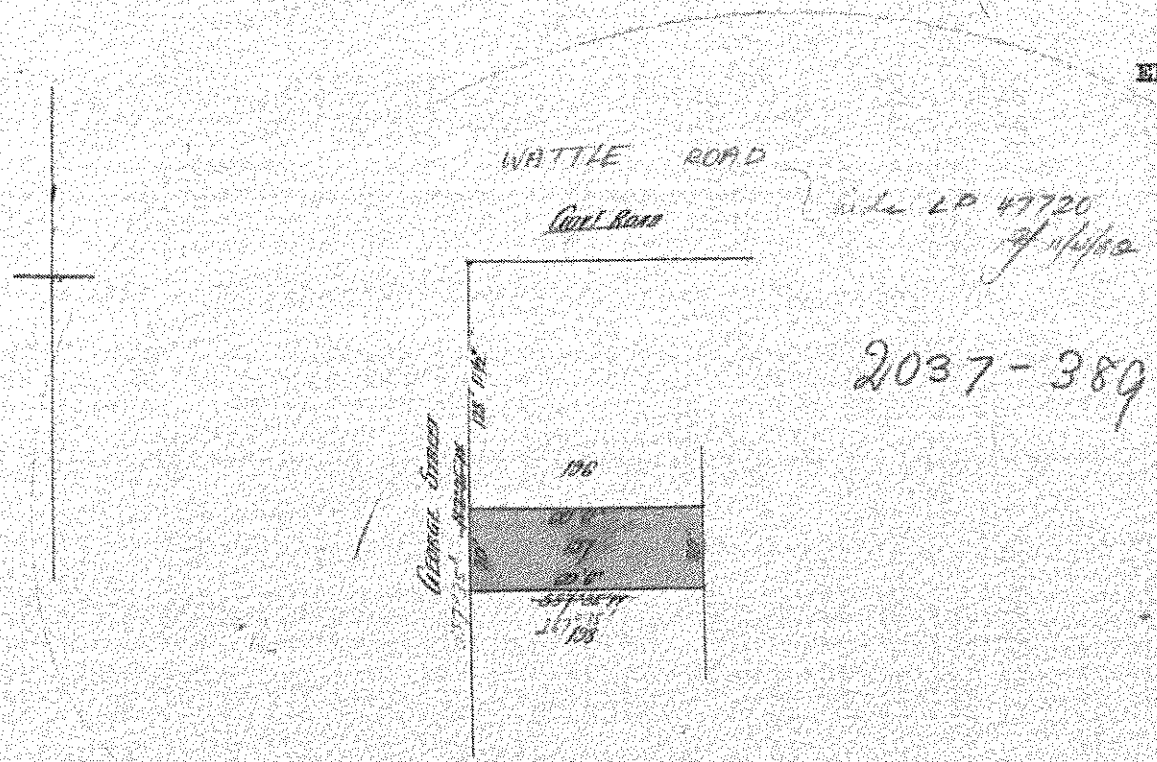


T02071-097-1-1

*Michael Harris of Echuca Platelayer is* \_\_\_\_\_  
now the proprietor of an Estate in Fee-simple, subject to the Encumbrances  
notified hereunder in **All** that piece of Land, delineated and colored  
red on the Map in the margin, being lot one hundred and ninety  
seven on plan of subdivision **Kimba 1504** lodged in the  
Office of Titles and being part of Crown allotment forty-four  
Section twenty Parish of Cat Law Saw County of Bourke  
Together with a right of carriage way over George Street  
shown on the said plan of subdivision —

Dated the twentyfifth — day of September / One thousand  
eight hundred and eighty eight.

Assistant Registrar of Titles,  
ENCUMBRANCES REFERRED TO.



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

The Measurements are in Feet and inches.



Vol. 1019 Fol. 447089

Transfer 252120

Application

Nature of Instrument.	Day and Hour of its Production	Names of the Parties to it.	Number or Symbol thereon.
TRANSFER No. H854790 Pursuant to Section 376 Act 6299 registered 4th February 1950 CANCELLED See Vol. 3369 Fol. 833			
		Assistant Registrar of Titles.	
CANCELLED			
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	

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## **HISTORICAL SEARCH STATEMENT**

Produced 03/07/2012 11:03 AM

Volume 01999 Folio 756

Folio Creation: Details Unknown

Parent titles :

Volume 01357 Folio 235 to Volume 01357 Folio 236

STATEMENT END

CANCELLED

Entered in the Register Book



VICTORIA.

Vol. 1999 Fol. 399756

# Certificate of Title,

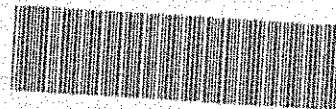
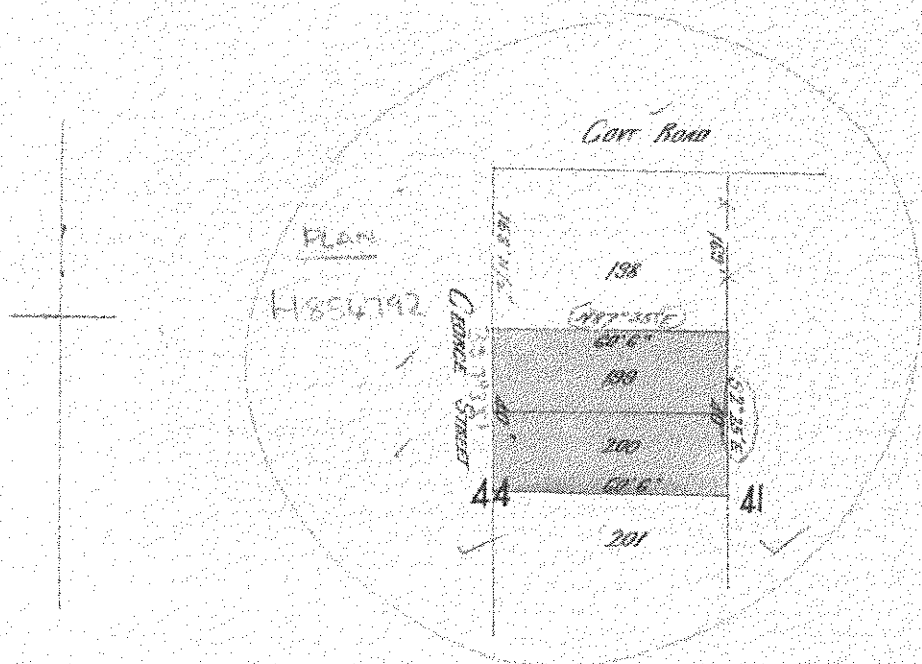
UNDER THE "TRANSFER OF LAND STATUTE."

*Charlotte Henrietta Steph* of Kensington Road South Yarra  
is  
now the proprietor of an Estate in Fee-simple, subject to the Encumbrances  
notified hereunder in All that piece of Land, delineated and colored  
red on the Map in the margin, being lots one hundred and ninety nine and  
two hundred in the plan of subdivision Number 15044 lodged in the Office of Titles  
and being part of Crown allotment forty four section twenty Parish of St Paul  
County of Bourke Together with a right of carriage way over George Street shown on  
the said plan of subdivision —

Dated the fourteenth day of March One thousand  
eight hundred and eighty-eight

*[Signature]*  
Assistant Registrar of Titles

ENCUMBRANCES REFERRED TO.



T01999-756-1-7

The Measurements are in Feet and inches.

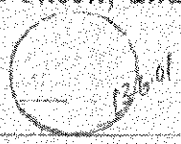


Vol. 1357 Fol. 27123546

Transfer 210712

Application

Nature of Instrument.	Day and Hour of its Production	Names of the Parties to it	Number or Symbol thereon.
<p>Ernest Hubert Gerald Math of Robinson Road Hawthorn Working Jeweller is now the proprietor of the within described Estate and Land by Transfer from the within named Charlotte Henrietta Hop registered on the 5<sup>th</sup> day of June 1901 at 12.45 o'clock in the afternoon, and Numbered 438491</p>			



*Edmund Brown*  
Assistant Registrar of Titles.

TRANSFER No. H. 854792  
registered 4th February 1950  
CANCELLED See Vol. 3369 Fol. 518

WHICH IS ISSUED PURSUANT TO  
SECTION 376 ACT 6299



Assistant Registrar of Titles.

**CANCELLED**

Assistant Registrar of Titles.

Assistant Registrar of Titles.

Assistant Registrar of Titles.

Assistant Registrar of Titles.



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## HISTORICAL SEARCH STATEMENT

Produced 03/07/2012 11:07 AM

Volume 09369 Folio 518

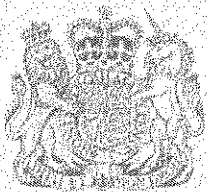
Folio Creation: Details Unknown

Parent title Volume 01999 Folio 756

STATEMENT END

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE  
OF TITLES



VICTORIA

CANCELLED REGISTER BOOK

VOL. 9369 FOL. 518

# Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

FRANK BONO and GRACE BONO both of 51 Wattle Road Maidstone Es Proprietors -  
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 Cut Paw Paw --  
County of Bourke being Lots 199 and 200 on Plan of Subdivision No.1504 and --  
being part of Crown Allotment 44 Section 20 which land is shown enclosed by--  
continuous lines on the map hereon - - - - -

DATED the 4th day of February 1980

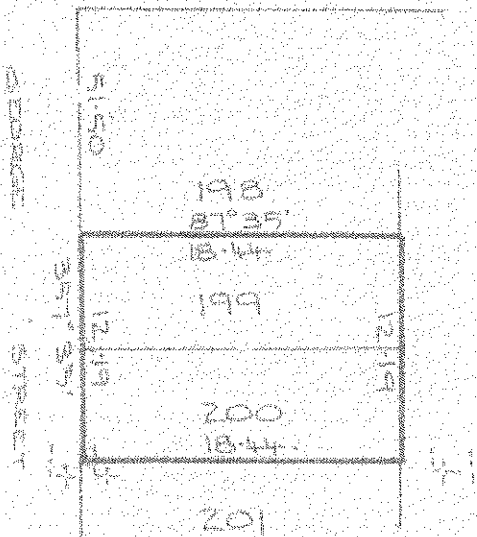
*R. M. M. M.*

Assistant Registrar of Titles



ENCUMBRANCES REFERRED TO

GOVT ROAD



MEASUREMENTS ARE IN METRES

Derived from Vol.1999 Fol.756  
H854792

GRACE BONO of 51 Wattle Road Maidstone  
Bus Proprietor is now the proprietor  
Registered 26th March 1980  
No.H921152



**CANCELLED**

PURSUANT TO PLAN OF CONSOLIDATION

No. C. P. 150094

See Vol. 9392 Fols. 627

16 OCT 1980



**CANCELLED**



T09369-518-1-2

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## **HISTORICAL SEARCH STATEMENT**

Produced 03/07/2012 11:03 AM

Volume 02082 Folio 243  
Folio Creation: Details Unknown  
Parent title Volume 02037 Folio 389

STATEMENT END



H735960

2082/243



VICTORIA.

CANCELLED

Entered in the Register Book  
Vol 2082 Fol. 410243

F243

JMS 12 12 85

# Certificate of Title,

UNDER THE "TRANSFER OF LAND STATUTE."

Vol 2082 Fol. 243  
JMS 12 12 85

*Wm J* Joseph Freemont Johnson of Moray Place South Melbourne Gentleman is now the proprietor of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All that piece of Land, delineated and colored red on the Map in the margin, being lots two hundred and one, two hundred and two and two hundred and three on the plan of Subdivision Chamber 1504 lodged in the Office of Titles and being part of Crown Allotment forty-four Section twenty Parish of Cat Law Saw County of Bourke Together with a right of carriage way over George Street Shewon said plan of Subdivision —

Dated the twenty-fourth — day of October — One thousand eight hundred and eighty-eight.

*Wm J*

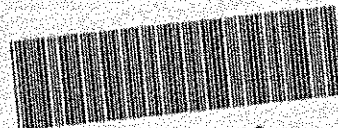
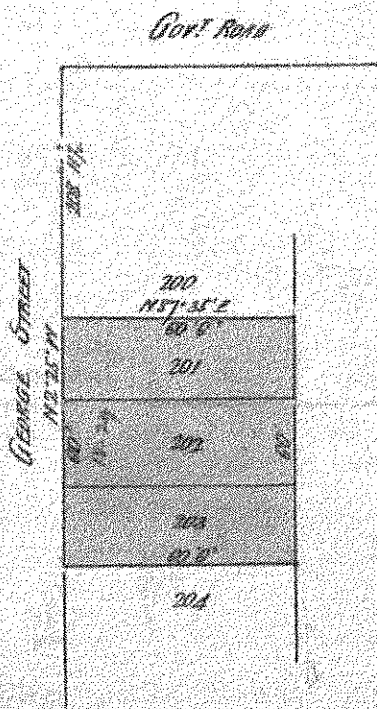


Assistant Registrar of Titles.  
ENCUMBRANCES REFERRED TO.

ORIGINAL CERTIFICATE.

Not to be dealt with outside the Titles Office.

PLAN CP150094  
AFFECTS LAND HEREIN



T02082-243-1-3

The Measurements are in Feet and Inches.



Vol. 202 / Vol. 40/389

Transfer 235282

Application

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
<p>Mr Evan Smith of 22 Summerhill Road West veray Laborer is proprietor of the within described estate</p> <p>for term Joseph Greemont</p> <p>Entered on 14th May 1929</p> <p>1104059</p> <p>Assistant Registrar of Titles.</p>		<p>GRACE BONO of 53 Wattle Road Maidstone Bus Proprietor is now the proprietor Registered 14th December 1979 No.H804197</p> <p>CANCELLED</p> <p>PURSUANT TO PLAN OF CONSOLIDATION</p> <p>No. C.E. 150094</p> <p>No. Vol. 9392 Sub. 627.</p> <p>16 OCT 1980</p> <p>CANCELLED</p> <p>Assistant Registrar of Titles.</p>	
<p>No. A812722</p> <p>JOSEPH EVAN SMITH died on 22nd June 1958 Probate of his Will has been granted to ELSIE EVELYN LAVERICK of 146 Mitchell Street Maidstone Married Woman</p> <p>DATED</p> <p>8th September 1959</p> <p>Assistant Registrar of Titles.</p>			
<p>PHILLIP JOHN RAMSAY of 358 Collins Street Melbourne Estate Agent is now the proprietor by</p> <p>Transfer A854147</p> <p>Registered 12th November 1959</p> <p>Assistant Registrar of Titles.</p>			
<p>CAVEAT No. 21079/13 LODGED 24 NOV 1960</p> <p>CAVEAT LAPSED 22 JAN 1963</p> <p>HARRY MILLS Gentleman MAURICE KEMPINSKI Grocer and BALA KEMPINSKI Married Woman all of 23 Rockingham Street Kew are now JOINT PROPRIETORS by</p> <p>Transfer B570180</p> <p>Registered 19th December 1962</p> <p>Assistant Registrar of Titles.</p>			
<p>CELESTE IANZANO of 30 Marcellin Court Deer Park Home Duties is now the proprietor</p> <p>Registered 7th December 1978</p> <p>No.H333634</p> <p>Assistant Registrar of Titles.</p>			
<p>MORTGAGE TO COMMONWEALTH TRADING BANK OF AUSTRALIA</p> <p>Registered 7th Dec 1979</p> <p>No. H735960</p> <p>CAVEAT No. H735960 LODGED 24th Oct 79</p> <p>CAVEAT WITHDRAWN 14 DEC 1979</p> <p>Assistant Registrar of Titles.</p>			

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## **HISTORICAL SEARCH STATEMENT**

Produced 03/07/2012 11:03 AM

Volume 02082 Folio 245

Folio Creation: Details Unknown

Parent title Volume 02037 Folio 389

STATEMENT END



Entered in the Register Book

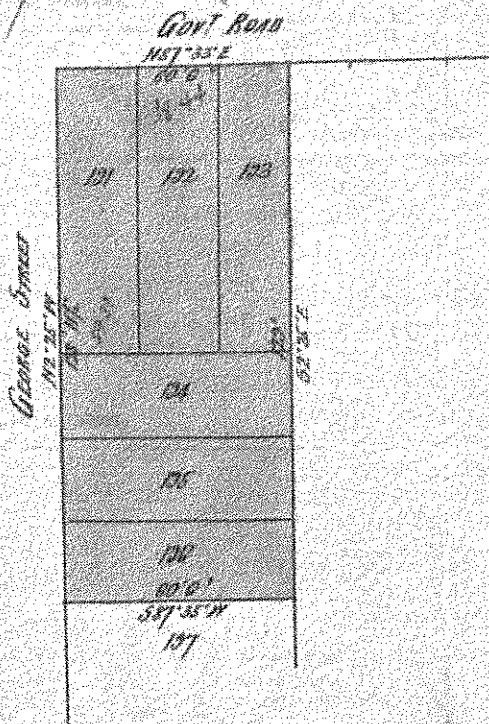
# Certificate of Title,

UNDER THE "TRANSFER OF LAND STATUTE."

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

One thousand

2037-389








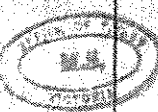






2. A. Cl 150 044

The Measurements are in ft and inches

T02082-245-1-f



Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
<p>As to the interest of ALFRED ROBERT HARRIS who died on 7th April 1916 Letters of Administration of his unadministered estate have been granted to AMELIA MARIAN SPINK of Flat 4 No. 35 Anderson Street Hawthorn Married Woman</p> <p>DATED 9th June 1967 No. C800707</p>		<p><b>MORTGAGE</b> to THE NATIONAL BANK OF AUSTRALIA LIMITED Registered 27th January 1972 No. L284200</p> <p></p> <p>Assistant Registrar of Titles.</p>	
<p>As to the interest of WILLIAM PAUL HARRIS who died on 23rd April 1935 Letters of Administration with the Will annexed of his unadministered estate have been granted to AMELIA MARIAN SPINK of Flat 4 No. 35 Anderson Street Hawthorn Married Woman</p> <p>DATED 9th June 1967 No. C800707</p>		<p><b>MORTGAGE</b> to NEESON'S BUS SERVICES PROPRIETARY LIMITED Registered 13th August 1974 No. L207422</p> <p></p> <p>Assistant Registrar of Titles.</p>	
<p>JULIE LESLIE KNEALE of 20 Alma Street West Footscray Married Woman is now the proprietor</p> <p>Registered 20th June 1967 No. C807611</p>		<p><b>CANCELLED</b> PURSUANT TO PLAN OF CONSOLIDATION No. G.E. 150094 16 OCT 1980 Vol. 9392 Fol. 627</p> <p></p> <p>Assistant Registrar of Titles.</p>	
<p>GIUSEPPE SITA and FRANK BONO both of 81 Station Road Deer Park Bus Proprietors are now proprietors as TENANTS IN COMMON IN EQUAL SHARES</p> <p>Registered 20th June 1967 No. C807612</p>		<p><b>CANCELLED</b></p> <p>Assistant Registrar of Titles.</p>	
<p><b>MORTGAGE</b> to CREDIT HOUSE (VIC.) PTY. LTD. Registered 9th August 1968 No. D104255</p> <p></p>		<p>Assistant Registrar of Titles.</p>	
<p>GRACE BONO of 81 Station Road -Married Woman- Deer Park/ is now the proprietor</p> <p>Registered 7th October 1969 No. D525591</p>		<p>Assistant Registrar of Titles.</p>	

## Appendix **H**      RHSV Property Report



## ROYAL HISTORICAL SOCIETY OF VICTORIA INC.

239 A'Beckett Street, Melbourne 3000

**Date:** 16<sup>th</sup> July 2012  
**Attention:** Kris Knight  
**Company:** Chadwick  
**From:** Gerardine Horgan, Administrative Officer

### **SITE SEARCH: 53 Wattle Road, Maidstone**

This site is located near the intersection of Wattle Road (south side) and George Street (east side), Maidstone. A Google Maps search indicates that there is suburbia just to the east of this site, and the land to the west of the site is under development.

The Sands & McDougall Directories first list the existence of this site in 1954 as 'Wattle Avenue, Maidstone'. Prior to 1954, the directories contain reference to 'Wattle Avenue, Braybrook' (currently a neighbouring suburb). The first mention of a Wattle Avenue in Braybrook occurs in 1929, and before this the directories indicate no trace of the site. However, all references in Sands & McDougall to Wattle Avenue between 1929 and 1968 show that the area was residential. The 1969 publication of Sands & McDougall contains the first appearance of 53 Wattle Road, and the occupant listed is Sita G. & Bono F. Bus Servers, whilst surrounding areas remain residential. The Bus Servers remain at this address until the final publication of Sands & McDougall in 1974.

Unfortunately, RHSV does not have access to information on this site after that year. However, the 1974 Sands & McDougall also notes that a 'Raschilla tiles firing and wall' existed in close proximity to the site.

The 1944 Collins Street Directory confirms that this site was once 'Wattle Road, Braybrook'. While this supports the notes made in the Sands & McDougall directories, Collins does not specify whether the site and surrounding area was used for residential purposes or otherwise.

*Research by Carissa Goudey*

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Appendix I

Planning Property Report

# Planning Property Report

from [www.dtpli.vic.gov.au/planning](http://www.dtpli.vic.gov.au/planning) on 07 November 2014 09:29 AM

**Address:** 53 WATTLE ROAD MAIDSTONE 3012

**Lot and Plan Number:** Plan CP150094

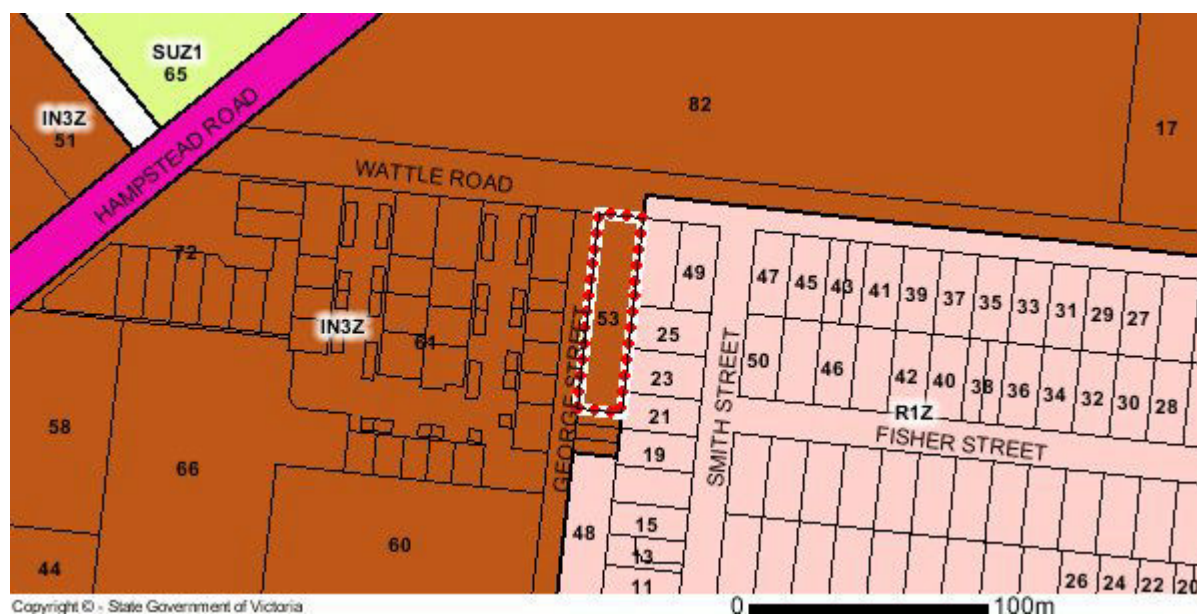
**Local Government (Council):** MARIBYRNONG **Council Property Number:** 107138

**Directory Reference:** Melway 27 J10

## Planning Zone

INDUSTRIAL 3 ZONE (IN3Z)

SCHEDULE TO THE INDUSTRIAL 3 ZONE



Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

### Zones Legend

ACZ - Activity Centre	IN1Z - Industrial 1	R1Z - General Residential
B1Z - Commercial 1	IN2Z - Industrial 2	R2Z - General Residential
B2Z - Commercial 1	IN3Z - Industrial 3	R3Z - General Residential
B3Z - Commercial 2	LDRZ - Low Density Residential	RAZ - Rural Activity
B4Z - Commercial 2	MUZ - Mixed Use	RCZ - Rural Conservation
B5Z - Commercial 1	NRZ - Neighbourhood Residential	RDZ1 - Road - Category 1
C1Z - Commercial 1	PCRZ - Public Conservation & Resource	RDZ2 - Road - Category 2
C2Z - Commercial 2	PDZ - Priority Development	RGZ - Residential Growth
CA - Commonwealth Land	PPRZ - Public Park & Recreation	RLZ - Rural Living
CCZ - Capital City	PUZ1 - Public Use - Service & Utility	RUZ - Rural
CDZ - Comprehensive Development	PUZ2 - Public Use - Education	SUZ - Special Use
DZ - Dockland	PUZ3 - Public Use - Health Community	TZ - Township
ERZ - Environmental Rural	PUZ4 - Public Use - Transport	UFZ - Urban Floodway
FZ - Farming	PUZ5 - Public Use - Cemetery/Crematorium	UGZ - Urban Growth
GRZ - General Residential	PUZ6 - Public Use - Local Government	
GWAZ - Green Wedge A	PUZ7 - Public Use - Other Public Use	
GWZ - Green Wedge	PZ - Port	

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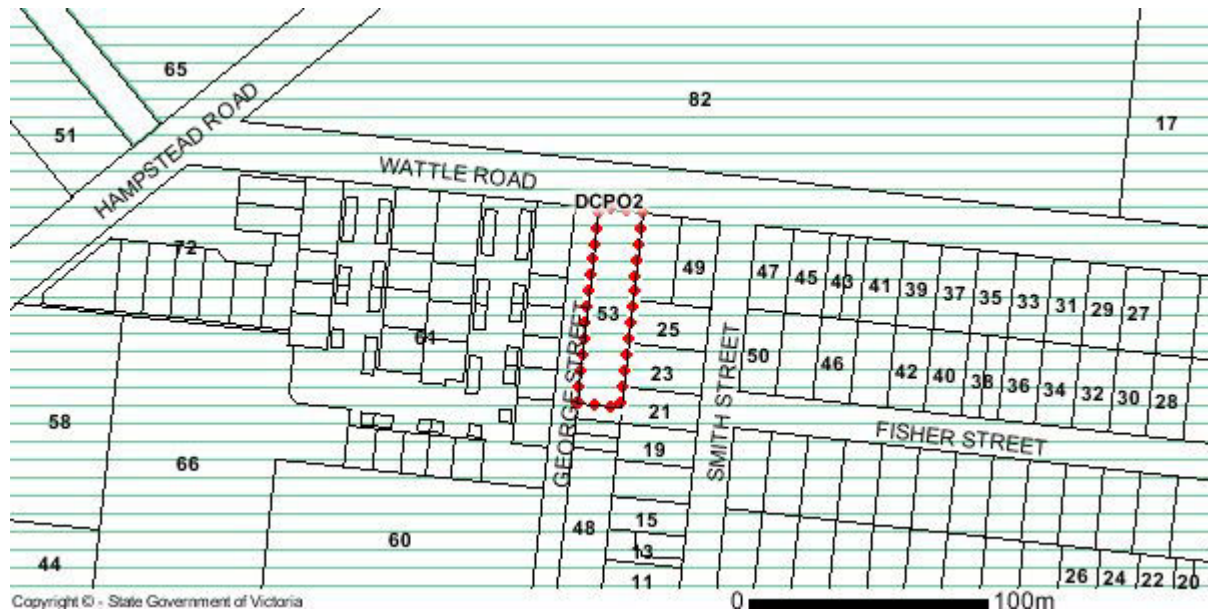
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## Planning Overlay

[DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY \(DCPO\)](#)

[DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 2 \(DCPO2\)](#)

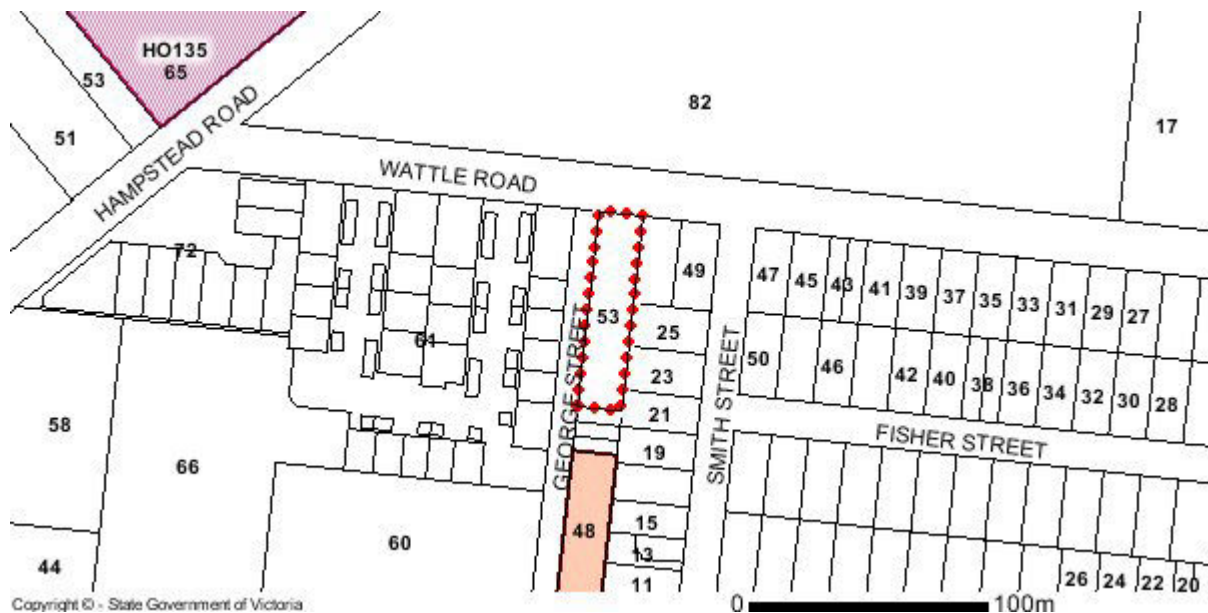


### OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

[ENVIRONMENTAL AUDIT OVERLAY \(EAO\)](#)

[HERITAGE OVERLAY \(HO\)](#)





























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## Planning Overlays Legend

### Overlays Legend

 AEO - Airport Environs	 LSIO - Land Subject to Inundation
 BMO - Bushfire Management (also WMO)	 MAEO1 - Melbourne Airport Environs 1
 CLPO - City Link Project	 MAEO2 - Melbourne Airport Environs 2
 DCPO - Development Contributions Plan	 NCO - Neighbourhood Character
 DDO - Design & Development	 PD - Parking
 DDOPT - Design & Development Part	 PAO - Public Acquisition
 DPO - Development Plan	 RO - Restructure
 EAO - Environmental Audit	 RCO - Road Closure
 EMO - Erosion Management	 SBO - Special Building
 ESO - Environmental Significance	 SLO - Significant Landscape
 FO - Floodway	 SMO - Salinity Management
 HO - Heritage	 SRD - State Resource
 IPO - Incorporated Plan	 VPD - Vegetation Protection

Note: due to overlaps some colours on the maps may not match those in the legend.

## Further Planning Information

Planning scheme data last updated on 6 November 2014.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting [Planning Schemes Online](#)

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the Planning & Environment Act 1987.

It does not include information about exhibited planning scheme amendments, or zonings that may abut the land.

To obtain a Planning Certificate go to [Titles and Property Certificates](#)

For details of surrounding properties, use this service to get the Reports for properties of interest

To view planning zones, overlay and heritage information in an interactive format visit [Planning Maps Online](#)

For other information about planning in Victoria visit [www.dpcd.vic.gov.au/planning](http://www.dpcd.vic.gov.au/planning)

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**ENVIRONMENTAL AND ENGINEERING CONSULTANTS**





## Appendix I: Logs

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




**BOREHOLE LOG**

BOREHOLE No: BH01

Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment										LOCATION: 53 Wattle Road & 19 George Street										JOB No: 1003973																			
CO-ORDINATES 5816701 313280										DRILL TYPE: AMS Drill Rig										HOLE STARTED: 23/10/17																			
R.L. m										DRILL METHOD: Push Tube										HOLE FINISHED: 23/10/17																			
DATUM										DRILL FLUID:										LOGGED BY: PDB										CHECKED: TOM									
BORING										ENGINEERING DESCRIPTION										FIELD TESTING										LABORATORY TESTS									
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)																							
						0.5			Sandy CLAY with some gravel; brown. Low plasticity. Sand: fine to medium grained, gravel: medium sized.	D	S/F			BH01-0.1																									
						0.5			Sandy GRAVEL with some sand; brown. Gravel: medium sized, sand: medium grained.	D	H			BH01-0.5																									
						1.0								BH01-1.0																									
						1.5			Refusal @ 1.3 m bgl.																														
						2.0																																	
						2.5																																	
						3.0																																	
						3.5																																	
						4.0																																	
						4.5																																	

**BOREHOLE LOG**

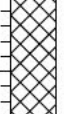
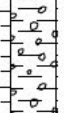
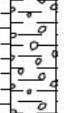

BOREHOLE No: BH02

Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment										LOCATION: 53 Wattle Road & 19 George Street										JOB No: 1003973																			
CO-ORDINATES 5816692 313274										DRILL TYPE: AMS Drill Rig										HOLE STARTED: 23/10/17																			
R.L. m										DRILL METHOD: Push Tube										HOLE FINISHED: 23/10/17																			
DATUM										DRILL FLUID:										LOGGED BY: PDB										CHECKED: TOM									

BORING						ENGINEERING DESCRIPTION				FIELD TESTING				LABORATORY TESTS			
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)	
						0.5			FILL: Sandy gravelly CLAY; brown. Low plasticity. Sand: fine to medium grained, gravel: medium sized.	D	S	With fragments of brick and tiles.		BH02-0.1			
						0.5			Gravelly CLAY with some sand; brown-grey. Moderate plasticity. Sand: fine to medium grained, gravel: medium sized.	D	F/St			BH02-0.5			
						1.0			- no gravel					BH02-1.0			
						1.5			Refusal @ 1.45 m								
						2.0											
						2.5											
						3.0											
						3.5											
						4.0											
						4.5											

**BOREHOLE LOG**

BOREHOLE No: BH03


Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment LOCATION: 53 Wattle Road & 19 George Street JOB No: 1003973

CO-ORDINATES 5816709 313274 DRILL TYPE: AMS Drill Rig HOLE STARTED: 23/10/17  
HOLE FINISHED: 23/10/17

R.L. m DRILL METHOD: Push Tube DRILLED BY: TD  
DATUM DRILL FLUID: LOGGED BY: PDB CHECKED: TOM

BORING					ENGINEERING DESCRIPTION					FIELD TESTING			LABORATORY TESTS			
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)
									Sandy CLAY; brown. Low plasticity. Sand: fine to medium grained.					BH03-0.1		
					0.5				Refusal @0.4 m bgl ==> End of BH, hammer continued for well (see MW01)							
					1.0											
					1.5											
					2.0											
					2.5											
					3.0											
					3.5											
					4.0											
					4.5											


**BOREHOLE LOG**

BOREHOLE No: BH04

Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment		LOCATION: 53 Wattle Road & 19 George Street		JOB No: 1003973	
CO-ORDINATES 5816665 313277		DRILL TYPE: AMS Drill Rig		HOLE STARTED: 24/10/17	
R.L. m		DRILL METHOD: Push Tube		HOLE FINISHED: 24/10/17	
DATUM		DRILL FLUID:		DRILLED BY: TD	
				LOGGED BY: PDB	
				CHECKED: TOM	

BORING					ENGINEERING DESCRIPTION					FIELD TESTING		LABORATORY TESTS				
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)
						0.5			CLAY with some sand; brown-grey. Moderate to high plasticity. Sand: fine to medium grained.	D	S/F			BH04-01  BH04-0.5  BH04-1.0		
					1.0			CLAY; brown-grey. Moderate to high plasticity.	D	H/VH						
					1.5		End of BH, hammer continued for well (see MW02)									
					2.0											
					2.5											
					3.0											
					3.5											
					4.0											
					4.5											







**BOREHOLE LOG**

BOREHOLE No: BH05

Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment										LOCATION: 53 Wattle Road & 19 George Street										JOB No: 1003973																			
CO-ORDINATES 5816758 313291										DRILL TYPE: AMS Drill Rig										HOLE STARTED: 23/10/17																			
R.L. m										DRILL METHOD: Push Tube										HOLE FINISHED: 23/10/17																			
DATUM										DRILL FLUID:										LOGGED BY: PDB																			
CHECKED: TOM																																							
BORING										ENGINEERING DESCRIPTION										FIELD TESTING										LABORATORY TESTS									
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)																							
						0.5			Concrete - 100 mm					BH05-01																									
									Sandy CLAY; brown. Low plasticity. Sand: fine to medium grained.	D	S/F																												
									CLAY; light grey-grey. Moderate to high plasticity.	D	F/St			BH05-0.5																									
									Refusal @ 0.9 m bgl.		St/VSt																												
						1.0																																	
						1.5																																	
						2.0																																	
						2.5																																	
						3.0																																	
						3.5																																	
						4.0																																	
						4.5																																	

**BOREHOLE LOG**



BOREHOLE No: BH06

Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment						LOCATION: 53 Wattle Road & 19 George Street				JOB No: 1003973			
CO-ORDINATES 5816727 313279						DRILL TYPE: AMS Drill Rig				HOLE STARTED: 12/12/17			
R.L. m						DRILL METHOD: Push Tube				HOLE FINISHED: 12/12/17			
DATUM						DRILL FLUID:				LOGGED BY: PDB		CHECKED: TOM	

BORING						ENGINEERING DESCRIPTION				FIELD TESTING		LABORATORY TESTS				
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)
						0.5			Concrete							
									FILL: Sandy gravelly CLAY; grey to light brown. Low plasticity. Sand: fine to medium grained, gravel: medium sized.	D	F-St					
						1.0			CLAY; grey to light grey. Moderate to high plasticity.	D	St					
						1.5			End of BH @ 1.5 m bgl	D	St					
						2.0										
						2.5										
						3.0										
						3.5										
						4.0										
						4.5										

**BOREHOLE LOG**




BOREHOLE No: BH07

Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment						LOCATION: 53 Wattle Road & 19 George Street				JOB No: 1003973			
CO-ORDINATES 5816747 313279						DRILL TYPE: AMS Drill Rig				HOLE STARTED: 12/12/17			
R.L. m						DRILL METHOD: Push Tube				HOLE FINISHED: 12/12/17			
DATUM						DRILL FLUID:				LOGGED BY: PDB		CHECKED: TOM	

BORING						ENGINEERING DESCRIPTION				FIELD TESTING		LABORATORY TESTS				
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)
						0.5			Concrete							
									FILL: Sandy gravelly CLAY; grey to light brown. Low plasticity. Sand: fine to medium grained, gravel: medium sized.	D	F-St					
						1.0			CLAY; grey to light grey. Moderate to high plasticity.	D	St					
						1.5			End of BH @ 1.5 m bgl	D	St					
						2.0										
						2.5										
						3.0										
						3.5										
						4.0										
						4.5										


**BOREHOLE LOG**

BOREHOLE No: BH08

Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment		LOCATION: 53 Wattle Road & 19 George Street		JOB No: 1003973	
CO-ORDINATES 5816758 313291		DRILL TYPE: AMS Drill Rig		HOLE STARTED: 12/12/17	
R.L. m		DRILL METHOD: Push Tube		HOLE FINISHED: 12/12/17	
DATUM		DRILL FLUID:		LOGGED BY: PDB	
				CHECKED: TOM	

BORING					ENGINEERING DESCRIPTION					FIELD TESTING		LABORATORY TESTS				
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)
									Concrete							
						0.5			Reworked natural: Sandy CLAY; light brown to brown. Low plasticity. Sand: fine to medium grained.	D	S-F			BH08-0.3		
									Reworked natural: CLAY; brown to dark brown. Moderate to high plasticity.	D	F-St		moderate hydrocarbons odour			
						1.0								BH08-1.0		
						1.5										
						2.0								BH08-2.0		
						2.5										
						3.0								BH08-3.0		
						3.5							No hydrocarbons odour.			
						4.0								BH08-4.0		
						4.5			End of BH @ 4.5m bgl							



**BOREHOLE LOG**











BOREHOLE No: BH09

Hole Location: See map

SHEET 1 OF 1

PROJECT: Environmental Site Assessment										LOCATION: 53 Wattle Road & 19 George Street										JOB No: 1003973																			
CO-ORDINATES 5816758 313291										DRILL TYPE: AMS Drill Rig										HOLE STARTED: 12/12/17																			
R.L. m										DRILL METHOD: Push Tube										HOLE FINISHED: 12/12/17																			
DATUM										DRILL FLUID:										LOGGED BY: PDB										CHECKED: TOM									

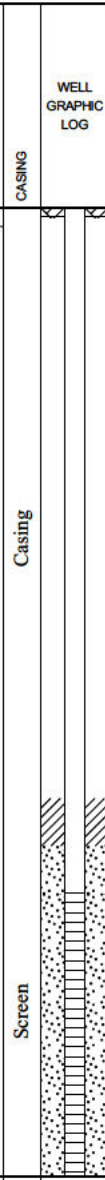
  

BORING						ENGINEERING DESCRIPTION						FIELD TESTING						LABORATORY TESTS					
FLUID LOSS	WATER	CORE RECOVERY (%)	METHOD	CASING	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITIONS / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	FIELD RECORDS/ COMMENTS	CONTAMINATION INDICATORS (ODOURS, STAINING, IMPORTED FILL, ASH, SEPARATE PHASE LIQUIDS)	SAMPLES, TESTS	MC (%)	PID (ppm)							
									Concrete														
						0.5			Reworked natural: Sandy CLAY; light brown to brown. Low plasticity. Sand: fine to medium grained.	D	S-F			BH09-0.3									
						1.0			Reworked natural: CLAY; brown to dark brown. Moderate to high plasticity.	D	F-St												
						1.5																	
						2.0																	
						2.5																	
						3.0																	
						3.5																	
						4.0																	
						4.5																	
									End of BH @ 4.5m bgl														

# TONKIN & TAYLOR PTY LTD

## WELL CONSTRUCTION LOG

BOREHOLE No: MW01  
Instrument:  
SHEET 1 OF 1

PROJECT: Environmental Site Assessment		LOCATION: 53 Wattle Road & 19 George Street		JOB No: 1003973	
CO-ORDINATES 5816709 313274		DRILL TYPE:		HOLE STARTED: 23/10/17	
R.L. m		DRILL METHOD:		HOLE FINISHED: 23/10/17	
DATUM		COLLAR RL:		DRILLED BY: Chadwick Geotechnics	
				LOGGED BY: PDB CHECKED: TOM	
INTERPRETIVE GEOLOGICAL LOG			USCS DESCRIPTION		
OBSERVATION and INTERPRETATION	CASING WELL GRAPHIC LOG	WELL CONSTRUCTION	SAMPLES	WATER LEVEL R.L. (m)	DEPTH (m) GRAPHIC LOG
<p>Push Tube</p> <p>Refusal @ 0.4 m bgl ⇒ Hammer</p>		<p>Grout</p> <p>Bentonite</p> <p>Sand</p>			<p>SOIL DESCRIPTION</p> <p>Soil type, minor components, plasticity or particle size, colour.</p> <p>ROCK DESCRIPTION</p> <p>Substance: Rock type, particle size, colour, minor components.</p> <p>Defects: Type, inclination, thickness, roughness, filling.</p> <p>Sandy CLAY; brown. Low plasticity. Sand: fine to medium grained.</p> <p>Extremely weathered rock recovered as CLAY; brown-grey. Moderate plasticity.</p> <p>Weathered Rock, grey</p> <p>- grades to red</p> <p>- Increased moisture</p> <p>End @ 20.5 m bgl</p>



# TONKIN & TAYLOR PTY LTD

## WELL CONSTRUCTION LOG

BOREHOLE No: MW02

Instrument:

SHEET 1 OF 1

PROJECT: Environmental Site Assessment				LOCATION: 53 Wattle Road & 19 George Street				JOB No: 1003973							
CO-ORDINATES 5816665 313277				DRILL TYPE:				HOLE STARTED: 24/10/17							
R.L. m				DRILL METHOD:				HOLE FINISHED: 24/10/17							
DATUM				COLLAR RL:				DRILLED BY: Chadwick Geotechnics							
								LOGGED BY: PDB							
								CHECKED: TOM							
INTERPRETIVE GEOLOGICAL LOG								USCS DESCRIPTION							
OBSERVATION and INTERPRETATION		CASING	WELL GRAPHIC LOG	WELL CONSTRUCTION		SAMPLES	WATER LEVEL	RL (m)	DEPTH (m)	GRAPHIC LOG	SOIL DESCRIPTION Soil type, minor components, plasticity or particle size, colour.				
											ROCK DESCRIPTION Substance: Rock type, particle size, colour, minor components.				
											Defects: Type, inclination, thickness, roughness, filling.				
Push Tube		Casing		Grout							CLAY with some sand; brown-grey. Moderate to high plasticity. Sand: fine to medium grained.				
Auger												CLAY; brown-grey. Moderate to high plasticity.			
Refusal @ 9.1 m bgl ==> Hammer													Extremely weathered rock recovered as CLAY; grey to light grey. Moderate plasticity.		
									5				5		
									10				10		
									15				15		
									20				20		
									25				25		
									30				30		
									32				32		
											End @ 30.0 m bgl.				



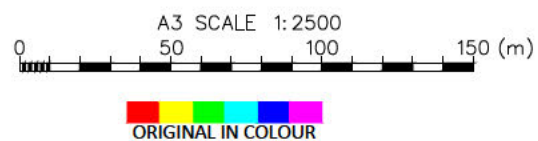


## Appendix J: Historical Aerial Photographs

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\\\\mcdcl\data\rep\live\tt\projects\1003973\WorkingMaterial\CAD\FIG\1003973-HIS-1945.dwg 1945 3/11/2017 3:37:50 p.m.



Tonkin & Taylor Pty Ltd  
Kings Technology Park, Ground Floor 95 Coventry St  
Southbank, Victoria, 3006  
Ph: (03) 9863 8686  
www.tonkintaylor.com.au

DRAWN	KAH	Nov.17
DRAFTING CHECKED		
APPROVED		
CADFILE : \\1003973-HIS-1945.dwg		
SCALES (AT A4 SIZE) 1:5000		
PROJECT No. 1003973		

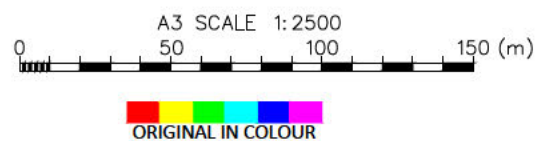
LATIN AMERICA PTY LTD  
ENVIRONMENTAL SITE ASSESSMENT  
60 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC  
Historial Aerial imagery - 1945

FIG. No. Figure - 1945

REV. 0



\\mcd\data\rep\live\tt\projects\1003973\WorkingMaterial\CAD\FIG\1003973-HIS-1956.dwg 1956 3/11/2017 4:17:31 p.m.



**Tonkin+Taylor**

Tonkin & Taylor Pty Ltd  
Kings Technology Park, Ground Floor 95 Coventry St  
Southbank, Victoria, 3006  
Ph: (03) 9863 8686  
[www.tonkintaylor.com.au](http://www.tonkintaylor.com.au)

DRAWN	KAH	Nov.17
DRAFTING CHECKED		
APPROVED		
CADFILE : \\1003973-HIS-1956.dwg		
SCALES (AT A4 SIZE) 1:2500		
PROJECT No.	1003973	

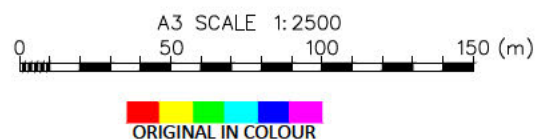
**LATIN AMERICA PTY LTD**  
**ENVIRONMENTAL SITE ASSESSMENT**  
**56 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC**  
**Historial Aerial imagery – 1956**

FIG. No. **Figure – 1956** REV. **0**





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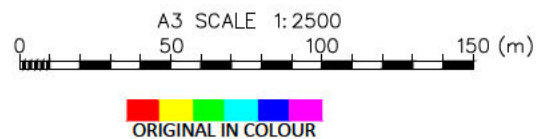
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Ph: (03) 9863 8686  
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ENVIRONMENTAL SITE ASSESSMENT		
59 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC		
Historial Aerial imagery – 1963		
FIG. No.	Figure – 1963	REV. 0



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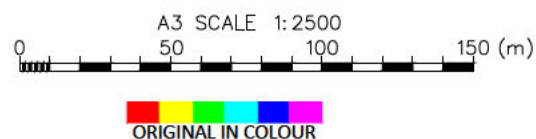
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PROJECT No. 1003973		

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54 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC  
Historial Aerial imagery – 1974 – 1975

FIG. No. Figure – 1974 – 1975	REV. 0
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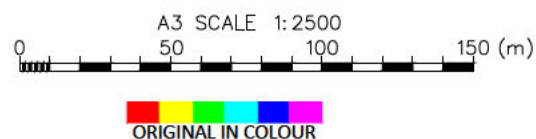
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SCALES (AT A4 SIZE) 1:2500		
PROJECT No.	1003973	

**LATIN AMERICA PTY LTD**  
ENVIRONMENTAL SITE ASSESSMENT  
55 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC  
Historial Aerial imagery - 1984

FIG. No.	Figure - 1984	REV.	0
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**LATIN AMERICA PTY LTD**  
ENVIRONMENTAL SITE ASSESSMENT  
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Historial Aerial imagery - 2000

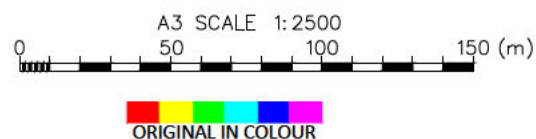
FIG. No. Figure - 2000

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PROJECT No. 1003973		

**LATIN AMERICA PTY LTD**  
ENVIRONMENTAL SITE ASSESSMENT  
53 WATTLE ROAD & 34 GEROGE STREET, MAIDSTONE VIC  
Historial Aerial imagery – 2012

FIG. No. Figure – 2012

REV. 0



## Appendix K: Bore Construction Licence

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# COPY OF RECORD IN THE VICTORIAN WATER REGISTER LICENCE TO CONSTRUCT WORKS

## *under Section 67 of the Water Act 1989*

*The information in this copy of record is as recorded at the time of printing. Current information should be obtained by a search of the register. The State of Victoria does not warrant the accuracy or completeness of this information and accepts no responsibility for any subsequent release, publication or reproduction of this information.*

*This licence does not remove the need to apply for any authorisation or permission necessary under any other Act of Parliament with respect to anything authorised by the works licence.*

*Water used under this licence is not fit for any use that may involve human consumption, directly or indirectly, without first being properly treated.*

*This licence is not to be interpreted as an endorsement of the design and/or construction of any works (including dams). The Authority does not accept any responsibility or liability for any suits or actions arising from injury, loss, damage or death to person or property which may arise from the maintenance, existence or use of the works.*

*Each person named as a licence holder is responsible for ensuring all the conditions of this licence are complied with.*

This licence authorises its holders to construct the described works, subject to the conditions.

### **Licence Holder(s)**

LATIN AMERICA PTY LTD of 53 WATTLE ROAD MAIDSTONE VIC 3012

### **Licence Contact Details**

LATIN AMERICA PTY LTD      53 WATTLE ROAD  
MAIDSTONE VIC 3012

### **Licence Details**

Expiry date	10 Oct 2018
Status	Active
Authority	Southern Rural Water
Name of waterway or aquifer	NA for construct/decommission
Water system	Unincorporated (GMU)

### **Summary of Licensed Works**

The details in this section are a summary only. They are subject to the conditions specified in this licence.

<i>Works ID</i>	<i>Works type</i>	<i>Use of water</i>
WRK102994	Bore	Observation
WRK102995	Bore	Observation
WRK102996	Bore	Observation

### **Description of Licensed Works**

---

**WORKS ID** WRK102994

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	30.000 metres

**Works location**

<i>Easting</i>	<i>Northing</i>	<i>Zone MGA</i>
313279.869	5816760.451	Zone 55

**Land description**

Volume 9392 Folio 627  
Plan CP150094

**Property address**

53 WATTLE ROAD, MAIDSTONE, VIC 3012

## Description of Licensed Works

---

**WORKS ID** WRK102995

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	30.000 metres

**Works location**

<i>Easting</i>	<i>Northing</i>	<i>Zone MGA</i>
313270.884	5816666.228	Zone 55

**Land description**

Volume 8349 Folio 417  
Lot 206 of Plan LP001504

**Property address**

34 GEORGE STREET, MAIDSTONE, VIC 3012

## Description of Licensed Works

---

**WORKS ID** WRK102996

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	30.000 metres

**Works location**

<i>Easting</i>	<i>Northing</i>	<i>Zone MGA</i>
313283.940	5816710.522	Zone 55

**Land description**

Volume 9392 Folio 627  
Plan CP150094

**Property address**

53 WATTLE ROAD, MAIDSTONE, VIC 3012

**Related Instruments**

**Related entitlements** Nil

**Related water-use entities** Nil

**Application History**

<i>Reference</i>	<i>Type</i>	<i>Status</i>	<i>Lodged date</i>	<i>Approved date</i>	<i>Recorded date</i>
WLI606634	Issue	Approved	10 Oct 2017	10 Oct 2017	

## **Conditions**

Licence WLE069283 is subject to the following conditions:

### **Siting and construction**

- 1 The bore(s) must be drilled at the location specified in the application approved by the Authority.
- 2 If after drilling the bore is considered unsatisfactory a replacement bore may be drilled on the land specified in the licence.

### **Preventing pollution**

- 3 All earthworks must be carried out, and all drilling fluids and waters produced during construction and development must be disposed of, in ways that avoid contaminating native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.
- 4 Construction must stop immediately if the Authority reasonably believes that fuel, lubricant, drilling fluid, soil or water produced during construction and development is at risk of being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.
- 5 The licence holder must construct and maintain bund walls, in accordance with the timeframe, specifications, guidelines or standards prescribed by the Authority, to prevent fuel, lubricant, drilling fluid, soil or water produced during construction and development from being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

### **Construction standards**

- 6 The bore(s) must be constructed, and where relevant decommissioned, in accordance with the Minimum Construction Requirements for Water Bores in Australia, Edition 3 or its successor.

### **Drilling licence and supervision requirements**

- 7 The bore(s) must be constructed by, or under the direct supervision of, a driller licensed under the Water Act 1989 and endorsed as a Class 1, 2, or 3 driller, with appropriate endorsements.
- 8 If artesian pressure is expected or encountered, then a driller licensed under the Water Act 1989, and endorsed as a class 3 driller, must install casing in the bore(s) to a suitable depth, and in a suitable manner, to prevent its outbreak. A suitable valve must also be fitted to the bore.

### **Bore completion report**

- 9 A Bore Completion Report must be submitted to the Authority within 28 working days of the bore(s) being completed.

### **Protecting water resources**

- 10 No more than 3 bore(s) may be brought to final development under this licence.
- 11 At the completion of drilling and before the drilling rig leaves the site, all but 3 bore(s) must be decommissioned so as to eliminate physical hazards, conserve aquifer yield, prevent groundwater contamination and prevent the intermingling of desirable and undesirable waters.
- 12 The bore(s) must be located at least 30 metres from any authority's channel, reserve or easement unless authorised by the Authority.

### **Protecting water quality**

- 13 Drilling must not exceed the maximum depth.
- 14 The bore(s) must be constructed so as to prevent aquifer contamination caused by vertical flow outside the casing.
- 15 If two or more aquifers are encountered, the bore(s) must be constructed to ensure that an impervious seal is made and maintained between each aquifer to prevent aquifer connection through vertical flow outside the casing; under no circumstances are two or more aquifers to be screened within the one bore or in any other manner to allow connection between them.
- 16 Boreheads must be constructed, to ensure that no flood water, surface runoff or potential



subsurface contaminated soakage can enter the bore or bore annulus.

**Protecting other water users**

- 17 The diameter of the drill casing must not exceed 130 millimetres.
- 18 The bore(s) must be constructed so that water levels in the bore(s) can be measured by an airline, a piezometer or a method approved in writing by the Authority.

**Fees and charges**

- 19 The licence holder must, when requested by the Authority, pay all fees, costs and other charges under the Water Act 1989 in respect of this licence.

---

END OF COPY OF RECORD

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## Appendix L: EIL Calculation Spreadsheet

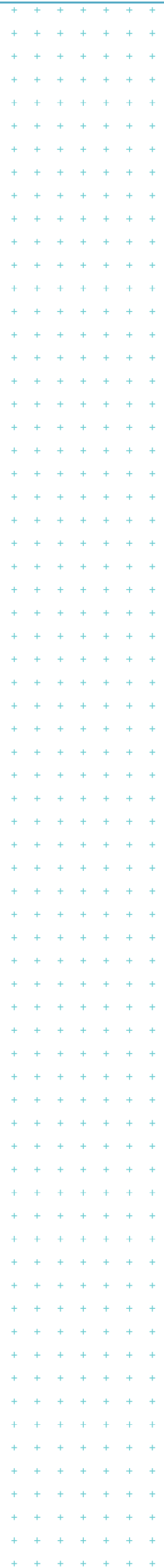
---

Inputs
Select contaminant from list below
Cu
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
20
Enter soil pH (calcium chloride method) (values from 1 to 14)
9
Enter organic carbon content (%OC) (values from 0 to 50%)
1
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
7
or for aged ABCs only
Enter State (or closest State)
VIC
Enter traffic volume (high or low)
high

Outputs		
Land use	Cu soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	75	80
Urban residential and open public spaces	130	220
Commercial and industrial	180	310









# THREE TEN EIGHT

## Car Parking Assessment

### Proposed Residential Development

Prepared For: Latin America Pty Ltd  
Site Address: 53 Wattle Road and 19 George Street  
Maidstone  
Report Date: 15 May 2019



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Director  
BEng(Hons) MTraffic

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ABN: 37 149 082 057

Our Reference: Z2825Report\_3



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## 1 INTRODUCTION

This is a Car Parking Assessment in report format for submission to the City of Maribyrnong in relation to an application by Latin America Pty Ltd. The proposal includes the demolition of an existing industry use at 53 Wattle Road and 19 George Street, Maidstone in order to construct 12 residential dwellings with associated car parking.

This report provides a parking, transport and traffic assessment of the proposed development, including:

- existing parking conditions within the vicinity of the site
- the estimated parking demand of the proposed use
- accessibility to sustainable transport
- suitability of proposed car parking layout
- suitability of refuse and loading arrangements
- suitability of bicycle arrangements
- traffic generation of the proposed use.

The report is primarily based on the Maribyrnong Planning Scheme, Australian Standards, Austroads Guide to Traffic Management as well as observations performed in the vicinity of the subject site.

## 2 EXISTING CONDITIONS

### 2.1 LOCATION AND ENVIRONMENT

The subject site is located on the southern side of Wattle Road and the eastern side of George Street in Maidstone. Vehicular access is currently provided via a double-width crossover to the Wattle Road site frontage. The subject site is currently occupied by an industry use and vacant lot.

Land uses in the immediate vicinity of the subject site are primarily residential and industrial.

The subject land is zoned as Industrial 3 Zone and does 'not' front a Road Zone. A Development Contributions Plan Overlay (DCP02) is applicable to the subject land (refer to Appendix A).

### 2.2 ROAD NETWORK

**Wattle Road** is a local street that runs east-west between Rosamond Road and Hampstead Road in Maidstone. In the direct vicinity of the subject site, Wattle Road is undivided with one traffic lane in each direction as shown in Figure 2.1.



**Figure 2.1: Wattle Road in the vicinity of the subject site**

**George Street** (when previously inspected in 2017) was an unmade local street that ran north-south between Wattle Road and Emu Road in Maidstone. In the direct vicinity of the subject site, road works were in progress (when previously inspected in 2017) associated with an approved residential development located towards the southern end of George Street as shown in Figure 2.2.



Figure 2.2: George Street in the vicinity of the subject site

## 2.3 SUSTAINABLE TRANSPORT MODES

### 2.3.1 PUBLIC TRANSPORT

The subject site is located on the Principle Public Transport Network (refer to Appendix B). The subject site has very good access to the public transport network via bus service. Bus Route 215 (Caroline Springs to Highpoint Shopping Centre), 406 (Keilor East to Footscray) and 408 (St Albans Railway Station to Highpoint Shopping Centre) operate along Hampstead Road approximately 200 metres west of the subject site. Nearby public transport services are identified in Figure 2.3.



Figure 2.3: Maribyrnong local area public transport map (source: [ptv.vic.gov.au](http://ptv.vic.gov.au))

### 2.3.2 WALKING

Walkscore is an online tool that can be used to determine a score for a site based on the number of amenities nearby. Using the online tool, the subject site scored a Walkscore of



81. The above Walkscore is deemed by the online tool to be 'Very Walkable', where most errands can be accomplished on foot.

## 2.4 AUSTRALIAN BUREAU OF STATISTICS (ABS) 2016 CENSUS DATA

Australian Bureau of Statistics (ABS) 2016 Census data (zero to three-bedroom dwellings) has been sought for entire suburb of Maidstone as set out in Table 2.1.

Table 2.1 – 2016 ABS Census Data

Number of motor vehicles per household	Number of bedrooms per household			
	0 Bedrooms (includes bedsitters)	1 Bedroom	2 Bedroom	3 Bedroom
0 Vehicles	8	80	112	95
1 Vehicle	0	98	534	526
2 Vehicles	0	13	282	552
3 Vehicles	0	3	30	138
4 vehicles	0	4	5	44
Total Households	8	198	963	1355
Mean number of vehicles per household	0	0.75	1.25	1.64

Accordingly, ABS data for the suburb of Maidstone identifies an average car parking rate of 1.64 car spaces per three-bedroom dwelling.

### **3 DEVELOPMENT PROPOSAL**

It is proposed to demolish the existing industry use at 53 Wattle Road and 19 George Street, Maidstone in order to construct 12 three-bedroom dwellings.

A total of 24 residential car parking spaces will be provided on-site at a rate of two spaces to each dwelling. Access to/from each dwelling is proposed via 12 single width crossovers (10 adjoining) to George Street. The existing redundant crossover to Wattle Road will be reinstated with kerb/channel to the satisfaction of the Responsible Authority.

All refuse collection will take place kerbside utilising the Council collection service.

## 4 PARKING ASSESSMENT

### 4.1 STATUTORY CAR PARKING REQUIREMENTS

Amendment VC148 implemented changes to the Planning Scheme to clarify, simplify and improve their structure, function and operation, and to remove unnecessary regulation.

Clause 52.06 now applies the reduced parking rates specified in Column B of Table 1 in Clause 52.06-5 to land that is (wholly or partly) within 400 metres of the Principal Public Transport Network. The land the Column B rates apply to is identified in the Principal Public Transport Network Area Maps (as incorporated into Clause 72.04).

Clause 52.06-5 of the Maribyrnong Planning Scheme specifies the number of car spaces required according to land use. Table 1, Column B to Clause 52.06-5 rates apply if any part of the land is identified within the Principle Public Transport Network Area (refer to Section 2.3). A parking rate for dwelling is specified within Table 1, Column B to Clause 52.06-5 of the Maribyrnong Planning Scheme as set out in Table 4.1:

Table 4.1 – Clause 52.06 Column B Parking Requirement

Statutory Description	Proposed Use	Size	Statutory Rate*	Parking Required
Dwelling	Dwelling	12 three-bedroom dwellings	1 car space to each one or two-bedroom dwelling	N/A
			2 car spaces to each three or more bedroom dwelling (with studies or studios that are separate rooms counted as a bedrooms)	24
			None for visitors	0
TOTAL				24

*\* Clause 52.06-5 confirms if in calculating the number of car parking spaces the result is not a whole number, the required number of car parking spaces is to be rounded down to the nearest whole number.*

Accordingly, the proposed residential development will be subject to the combined Clause 52.06 statutory parking requirement of a maximum of 24 car spaces.

An application to reduce (including reduce to zero) the number of car parking spaces required under Clause 52.06-5 or in a schedule to the Parking Overlay must be accompanied by a Car Parking Demand Assessment. Since the proposal provides car parking in direct accordance with Clause 52.06-5, there is no requirement to provide a Car Parking Demand Assessment. Notwithstanding the above, before a requirement for car spaces is reduced or waived under Clause 52.06-6 (note that no waiver is sought), a car parking demand assessment must satisfy that the reduced provision is justified and the responsible authority must consider (as appropriate):

- availability of public transport in the locality of the land
- availability of alternative car parking in the locality of the land
- any other relevant consideration.

#### 4.1.1 AVAILABILITY OF PUBLIC TRANSPORT

As discussed in Section 2.3.1 of this report, the site has very good access to the public transport system.

#### 4.1.2 AVAILABILITY OF CAR PARKING IN THE LOCALITY

The construction of George Street in the vicinity of the site frontage would introduce at least half a dozen car kerbside parking spaces.

### 4.2 BICYCLE ASSESSMENT

Clause 52.34-3 of the Maribyrnong Planning Scheme specifies the number of bicycle spaces required according to land use. A bicycle parking rate for dwelling is specified within Clause 52.34 of the Maribyrnong Planning Scheme as set out in Table 4.2

Table 4.2 – Clause 52.34 Parking Requirement

Statutory Description	Proposed Use	Unit	Statutory Rate**	Spaces Required
Dwelling	Dwelling	Less than four storeys & 12 dwellings	In developments of four or more storeys, 1 to each 5 dwellings for residents	0
			In developments of four or more storeys, 1 to each 10 dwellings for visitors	0
TOTAL				0

*\*\* Clause 52.34 confirms If in calculating the number of bicycle facilities the result is not a whole number, the required number of bicycle facilities is the nearest whole number, where If the fraction is one-half, the requirement is the next whole number.*

Accordingly, there is no statutory bicycle parking requirements for residential developments under four storeys in height.

### 4.3 ADEQUACY OF CAR PARKING SUPPLY

Resident car parking associated with the proposed residential development (refer to Section 4.1) can be accommodated on-site in accordance with Clause 52.06 of the Maribyrnong Planning Scheme. It should be highlighted that ABS data identifies a lower average car parking rate for three-bedroom dwellings for the suburb of Maidstone (refer to Section 2.4). Statutory visitor car parking demands would be accommodated kerbside to George Street once constructed (refer to Section 4.1.2).



Notwithstanding the above, the subject site is very well positioned to reduce dependence on personal motor vehicle use with nearby access to public transport and walking (refer to Section 2.3).

Accordingly, the proposal is not expected to have any adverse car parking impacts in the surrounding area.

#### **4.4 REFUSE AND LOADING**

##### **4.4.1 REFUSE**

It is proposed to utilise the Council refuse collection service, with bins collected kerbside.

##### **4.4.2 LOADING**

Clause 52.07 of the Maribyrnong Planning Scheme requires the provision of a dedicated loading bay for the manufacture, servicing, storage or sale of goods or materials. Accordingly, a residential use is exempt from any loading requirements.

#### **4.5 CAR PARKING AND ACCESS**

##### **4.5.1 SITE EGRESS**

If an accessway serves four or more car spaces or connects to a road in a Road Zone, the accessway must be designed so that vehicles can exit the site in a forward direction as per Clause 52.06-9. Since each crossover serves two car spaces (note: there are no double width crossovers; however, there are 10 adjoining single width crossovers since they allow at least 3.0 metres to each dwelling similar to most new residential subdivisions) and the site does not front a Road Zone, reverse egress is permitted.

##### **4.5.2 PASSING LANE**

Clause 52.06-9 requires the provision of a passing area at the entrance at least 6.1 metres wide and 7 metres long if the accessway serves ten or more car parking spaces and is either more than 50 metres long or connects to a road in a Road Zone. Accordingly, a passing lane is not required.

##### **4.5.3 PEDESTRIAN VISIBILITY**

Clause 52.06-9 requires a corner splay or area at least 50 per cent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage, to provide a clear view of pedestrians on the

footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height. Pedestrian corner splays are proposed on both sides of each access in general accordance with statutory requirements.

#### **4.5.4 GRADIENTS**

The following should be noted from Design Standard 3 (Gradients) to Clause 52.06-9:

- accessway grades must not be steeper than 1:10 (10 percent) within 5 metres of the frontage to ensure safety for pedestrians and vehicles
- the maximum gradients permitted within private or residential car parks are 1:4 for ramp length up to 20 metres and 1:5 for ramp lengths over 20 metres
- where the difference in grade between two sections of ramp or floor is greater than 1:8 (12.5 per cent) for a summit grade change, or greater than 1:6.7 (15 per cent) for a sag grade change, the ramp must include a transition section of at least 2 metres to prevent vehicles scraping or bottoming.

The following requirements for a parking module should be noted from Section 2.4.6.1 of AS/NZS 2890.1:2004:

- 1:20 measured parallel to the angle of parking
- 1:16 measured in any other direction.

It should be noted that AS/NZS 2890.1:2004 defines a parking module as a 'parking aisle together with a single row of parking spaces on one or both sides, but excluding any ramps or circulation roadways which take off within the module'.

The proposed internal gradients are considered in accordance with Clause 52.06-9 and AS/NZS 2890.1:2004.

#### **4.5.5 HEIGHT CLEARANCE**

Design Standard 1 to Clause 52.06-9 requires at least a 2.1 metres headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8 metres. The proposed application plans identify that the vertical clearances meet the above statutory requirement.

#### 4.5.6 CAR PARKING LAYOUT

The dimensions of the proposed on-site garages are 3.5/5.5 metres wide by 6.0 metres long in accordance with Clause 52.06 of the Maribyrnong Planning Scheme. Tandem car spaces will be provided in accordance with Diagram 1 to Clause 52.06 plus an additional 500mm to the title boundary. It should be highlighted that before deciding that a plan prepared under Clause 52.06-8 is satisfactory, the responsible authority must consider (as per Decision Guidelines of Clause 52.06-10), as appropriate:

- the type and size of vehicle likely to use the parking area
- whether the layout of car parking spaces and access lanes is consistent with the specific standards or an appropriate variation
- whether the layout of car spaces and accessways are consistent with Australian Standards AS2890.1-2004 (off-street) and AS2890.6-2009 (disabled).

Accordingly, taking into consideration the above mentioned Design Guidelines to Clause 52.06-10, the following should be highlighted from AS/NZS 2890.1:2004:

- Swept path simulation based on the B85 vehicle for parking spaces and parking aisles (Section B2.3 of AS/NZS 2890.1:2004)
- Three-point turn entry and exit into 90 degree spaces for residential, domestic and employee parking (Table 1.1 to AS/NZS 2890.1:2004)
- Forward or reverse entry for 90 degree spaces.

An Autotrack swept path analysis (refer to Appendix C) based on an AS/NZS 2890.1:2004 B85 vehicle with 300mm clearance confirms access is achievable.

## 5 TRAFFIC ASSESSMENT

Austrroads Guide to Traffic Management Part 12: Traffic Impacts of Development provides guidance on peak traffic generation activity according to land use. A residential use is specified within Table D1 to Austrroads Guide to Traffic Management Part 12 as set out in Table 5.1:

Table 5.1 – Austrroads Peak Traffic Generation

Description	Proposed Use	Size	Rate***	Daily Traffic Generation
Medium Density Residential	Residential Dwelling	N/A	5 daily (or 0.5 peak hour) vehicle trips to each dwelling	N/A
		12 three-bedroom dwellings	6.5 daily (or 0.65 peak hour) vehicle trips to each dwelling	78 (8 peak hour)
Total				78 (8 peak hour)

\*\*\* Austrroads Guide to Traffic Management Part 12 specifies 4-5 daily trips for up to two-bedroom and 5.0-6.5 daily trips for three bedrooms plus; however, for the purpose of this assessment the higher rate has been applied.

Accordingly, the proposed residential development would be expected to generate of a maximum of 78 daily vehicle trips with a maximum of eight vehicle trips during commuter peak periods (i.e. approximately one trip every seven minutes if spread out during that peak hour). The above numbers are not considered to be a significant increase to the surrounding road network. Notwithstanding the above, given the sites proximity to sustainable transport and lower average ABS resident car parking rates for the suburb of Maidstone (refer to Section 2.4), it is considered that the above traffic generation numbers could be conservative.

Overall, the proposed development is not expected to have any adverse impact on the surrounding road network.



## 6 CONCLUSION

Based on the analysis and discussions presented within this report, the following conclusions are made for the proposed residential development at 53 Wattle Road and 19 George Street, Maidstone:

- the proposed on-site vehicle spaces and associated access requirements are considered appropriate
- resident car parking demands can be accommodated on-site in accordance with statutory requirements
- there is no statutory visitor car parking requirement
- the subject site is well positioned to reduce dependence on personal motor vehicle use with nearby access to public transport
- there is no statutory bicycle parking requirement
- proposed refuse arrangements will occur kerbside utilising the Council collection service
- there is no statutory loading/unloading requirement
- additional traffic generation is not considered a significant impact to the surround road network.

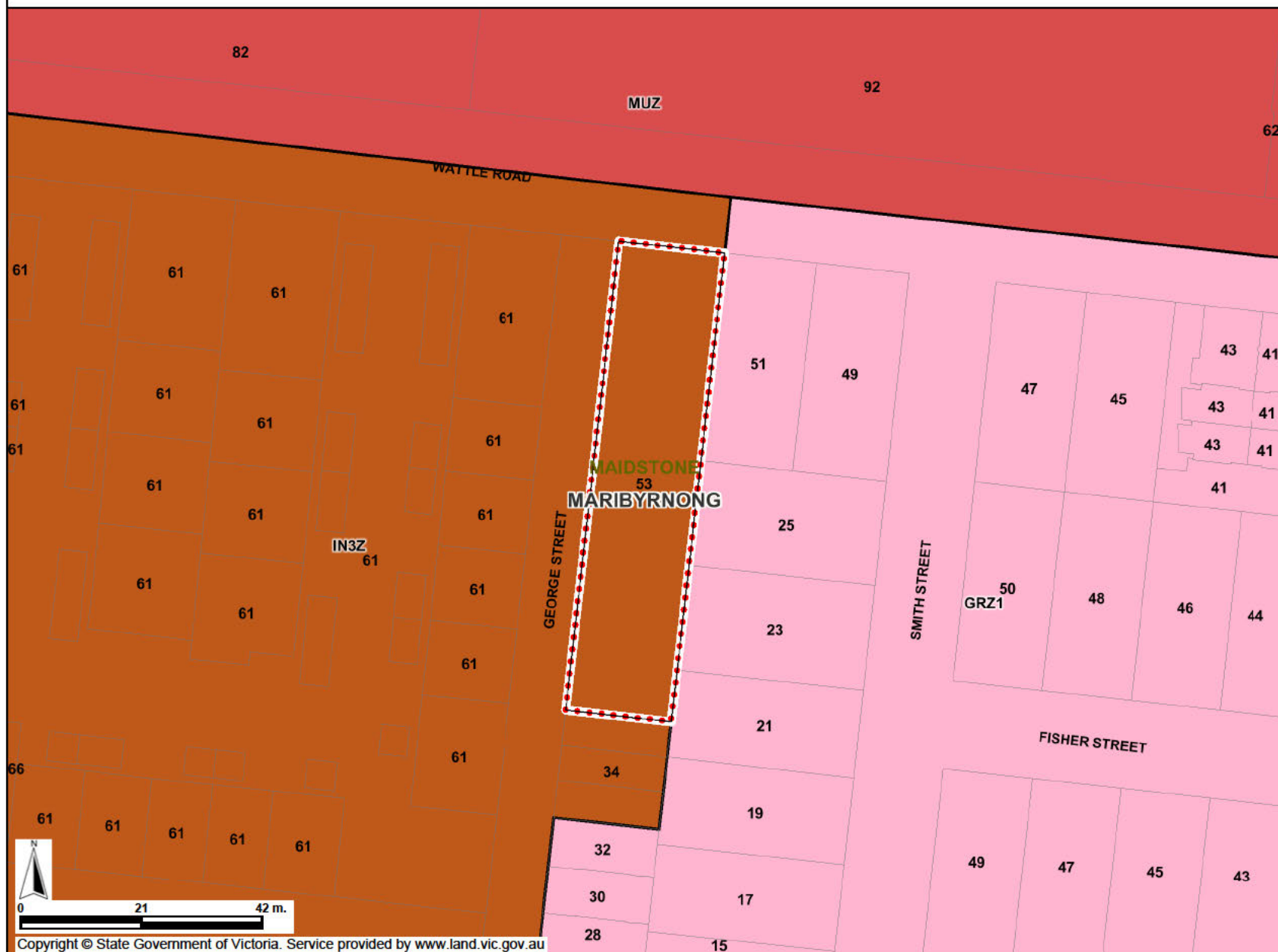
Overall the proposed residential development is not expected to have any adverse parking or traffic impacts in the area.

# APPENDIX A

# Planning Map

53 WATTLE ROAD MAIDSTONE 3012

Department of  
Environment, Land  
Water and Planning



## Legend

- WARRINAMBOOL** Major Town  
**MAIDSTONE** Major Road, Road  
**BRIMBANK** Road name  
 - - - - - Railway, Tramway  
 - - - - - Property/Parcel, Selected  
 25 2 10 Address, Lot, Crown allotment  
 River, Stream, Coastline  
 Waterbody  
 Locality  
 Locality Name  
 Local Government Area  
 Local Government Name  
 Urban Growth Boundary (UGB)  
 Area outside the UGB  
 Investigation Area  
 Land added to UGB since 2005  
 Boundary of Searched Suburb

## ZONES

- ACZ - Activity Centre
- B1Z - Commercial 1
- B2Z - Commercial 2
- B3Z - Commercial 3
- B4Z - Commercial 4
- B5Z - Commercial 5
- C1Z - Commercial 1
- C2Z - Commercial 2
- CA - Commonwealth Land
- CCZ - Capital City
- CDZ - Comprehensive Development
- DZ - Dockland
- ERZ - Environmental Rural
- FZ - Farming
- GRZ - General Residential
- GRZ1 - Green Wedge A
- GRZ2 - Green Wedge B
- GRZ3 - Green Wedge C
- GRZ4 - Green Wedge D
- GRZ5 - Green Wedge E
- GRZ6 - Green Wedge F
- GRZ7 - Green Wedge G
- GRZ8 - Green Wedge H
- GRZ9 - Green Wedge I
- GRZ10 - Green Wedge J
- GRZ11 - Green Wedge K
- GRZ12 - Green Wedge L
- GRZ13 - Green Wedge M
- GRZ14 - Green Wedge N
- GRZ15 - Green Wedge O
- GRZ16 - Green Wedge P
- GRZ17 - Green Wedge Q
- GRZ18 - Green Wedge R
- GRZ19 - Green Wedge S
- GRZ20 - Green Wedge T
- GRZ21 - Green Wedge U
- GRZ22 - Green Wedge V
- GRZ23 - Green Wedge W
- GRZ24 - Green Wedge X
- GRZ25 - Green Wedge Y
- GRZ26 - Green Wedge Z
- GRZ27 - Green Wedge AA
- GRZ28 - Green Wedge AB
- GRZ29 - Green Wedge AC
- GRZ30 - Green Wedge AD
- GRZ31 - Green Wedge AE
- GRZ32 - Green Wedge AF
- GRZ33 - Green Wedge AG
- GRZ34 - Green Wedge AH
- GRZ35 - Green Wedge AI
- GRZ36 - Green Wedge AJ
- GRZ37 - Green Wedge AK
- GRZ38 - Green Wedge AL
- GRZ39 - Green Wedge AM
- GRZ40 - Green Wedge AN
- GRZ41 - Green Wedge AO
- GRZ42 - Green Wedge AP
- GRZ43 - Green Wedge AQ
- GRZ44 - Green Wedge AR
- GRZ45 - Green Wedge AS
- GRZ46 - Green Wedge AT
- GRZ47 - Green Wedge AU
- GRZ48 - Green Wedge AV
- GRZ49 - Green Wedge AW
- GRZ50 - Green Wedge AX
- GRZ51 - Green Wedge AY
- GRZ52 - Green Wedge AZ
- GRZ53 - Green Wedge BA
- GRZ54 - Green Wedge BB
- GRZ55 - Green Wedge BC
- GRZ56 - Green Wedge BD
- GRZ57 - Green Wedge BE
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- GRZ60 - Green Wedge BH
- GRZ61 - Green Wedge BI
- GRZ62 - Green Wedge BJ
- GRZ63 - Green Wedge BK
- GRZ64 - Green Wedge BL
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- GRZ66 - Green Wedge BN
- GRZ67 - Green Wedge BO
- GRZ68 - Green Wedge BP
- GRZ69 - Green Wedge BQ
- GRZ70 - Green Wedge BR
- GRZ71 - Green Wedge BS
- GRZ72 - Green Wedge BT
- GRZ73 - Green Wedge BU
- GRZ74 - Green Wedge BV
- GRZ75 - Green Wedge BW
- GRZ76 - Green Wedge BX
- GRZ77 - Green Wedge BY
- GRZ78 - Green Wedge BZ
- GRZ79 - Green Wedge CA
- GRZ80 - Green Wedge CB
- GRZ81 - Green Wedge CC
- GRZ82 - Green Wedge CD
- GRZ83 - Green Wedge CE
- GRZ84 - Green Wedge CF
- GRZ85 - Green Wedge CG
- GRZ86 - Green Wedge CH
- GRZ87 - Green Wedge CI
- GRZ88 - Green Wedge CJ
- GRZ89 - Green Wedge CK
- GRZ90 - Green Wedge CL
- GRZ91 - Green Wedge CM
- GRZ92 - Green Wedge CN
- GRZ93 - Green Wedge CO
- GRZ94 - Green Wedge CP
- GRZ95 - Green Wedge CQ
- GRZ96 - Green Wedge CR
- GRZ97 - Green Wedge CS
- GRZ98 - Green Wedge CT
- GRZ99 - Green Wedge CU
- GRZ100 - Green Wedge CV
- GRZ101 - Green Wedge CW
- GRZ102 - Green Wedge CX
- GRZ103 - Green Wedge CY
- GRZ104 - Green Wedge CZ
- GRZ105 - Green Wedge DA
- GRZ106 - Green Wedge DB
- GRZ107 - Green Wedge DC
- GRZ108 - Green Wedge DD
- GRZ109 - Green Wedge DE
- GRZ110 - Green Wedge DF
- GRZ111 - Green Wedge DG
- GRZ112 - Green Wedge DH
- GRZ113 - Green Wedge DI
- GRZ114 - Green Wedge DJ
- GRZ115 - Green Wedge DK
- GRZ116 - Green Wedge DL
- GRZ117 - Green Wedge DM
- GRZ118 - Green Wedge DN
- GRZ119 - Green Wedge DO
- GRZ120 - Green Wedge DP
- GRZ121 - Green Wedge DQ
- GRZ122 - Green Wedge DR
- GRZ123 - Green Wedge DS
- GRZ124 - Green Wedge DT
- GRZ125 - Green Wedge DU
- GRZ126 - Green Wedge DV
- GRZ127 - Green Wedge DW
- GRZ128 - Green Wedge DX
- GRZ129 - Green Wedge DY
- GRZ130 - Green Wedge DZ
- GRZ131 - Green Wedge EA
- GRZ132 - Green Wedge EB
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- GRZ138 - Green Wedge EH
- GRZ139 - Green Wedge EI
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- GRZ144 - Green Wedge EN
- GRZ145 - Green Wedge EO
- GRZ146 - Green Wedge EP
- GRZ147 - Green Wedge EQ
- GRZ148 - Green Wedge ER
- GRZ149 - Green Wedge ES
- GRZ150 - Green Wedge ET
- GRZ151 - Green Wedge EU
- GRZ152 - Green Wedge EV
- GRZ153 - Green Wedge EW
- GRZ154 - Green Wedge EX
- GRZ155 - Green Wedge EY
- GRZ156 - Green Wedge EZ
- GRZ157 - Green Wedge FA
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- GRZ168 - Green Wedge FL
- GRZ169 - Green Wedge FM
- GRZ170 - Green Wedge FN
- GRZ171 - Green Wedge FO
- GRZ172 - Green Wedge FP
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- GRZ175 - Green Wedge FS
- GRZ176 - Green Wedge FT
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- GRZ200 - Green Wedge GR
- GRZ201 - Green Wedge GS
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- GRZ238 - Green Wedge ID
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- GRZ240 - Green Wedge IF
- GRZ241 - Green Wedge IG
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- GRZ243 - Green Wedge II
- GRZ244 - Green Wedge IJ
- GRZ245 - Green Wedge IK
- GRZ246 - Green Wedge IL
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- GRZ249 - Green Wedge IO
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- GRZ252 - Green Wedge IR
- GRZ253 - Green Wedge IS
- GRZ254 - Green Wedge IT
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- GRZ328 - Green Wedge LP
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- GRZ332 - Green Wedge LT
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- GRZ392 - Green Wedge OB
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- GRZ396 - Green Wedge OF
- GRZ397 - Green Wedge OG
- GRZ398 - Green Wedge OH
- GRZ399 - Green Wedge OI
- GRZ400 - Green Wedge OJ
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- GRZ402 - Green Wedge OL
- GRZ403 - Green Wedge OM
- GRZ404 - Green Wedge ON
- GRZ405 - Green Wedge OO
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- GRZ431 - Green Wedge PO
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- GRZ539 - Green Wedge TS
- GRZ540 - Green Wedge TT
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- GRZ542 - Green Wedge TV
- GRZ543 - Green Wedge TW
- GRZ544 - Green Wedge TX
- GRZ545 - Green Wedge TY
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- GRZ547 - Green Wedge UA
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- GRZ559 - Green Wedge UM
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- GRZ563 - Green Wedge UQ
- GRZ564 - Green Wedge UR
- GRZ565 - Green Wedge US
- GRZ566 - Green Wedge UT
- GRZ567 - Green Wedge UY
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- GRZ569 - Green Wedge VA
- GRZ570 - Green Wedge VB
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- GRZ587 - Green Wedge VS
- GRZ588 - Green Wedge VT
- GRZ589 - Green Wedge VY
- GRZ590 - Green Wedge VZ
- GRZ591 - Green Wedge WA
- GRZ592 - Green Wedge WB
- GRZ593 - Green Wedge WC
- GRZ594 - Green Wedge WD
- GRZ595 - Green Wedge WE
- GRZ596 - Green Wedge WF
- GRZ597 - Green Wedge WG
- GRZ598 - Green Wedge WH
- GRZ599 - Green Wedge WI
- GRZ600 - Green Wedge WJ
- GRZ601 - Green Wedge WK
- GRZ602 - Green Wedge WL
- GRZ603 - Green Wedge WM
- GRZ604 - Green Wedge WN
- GRZ605 - Green Wedge WO
- GRZ606 - Green Wedge WP
- GRZ607 - Green Wedge WQ
- GRZ608 - Green Wedge WR
- GRZ609 - Green Wedge WS
- GRZ610 - Green Wedge WT
- GRZ611 - Green Wedge WY
- GRZ612 - Green Wedge WZ
- GRZ613 - Green Wedge XA
- GRZ614 - Green Wedge XB
- GRZ615 - Green Wedge XC
- GRZ616 - Green Wedge XD
- GRZ617 - Green Wedge XE
- GRZ618 - Green Wedge XF
- GRZ619 - Green Wedge XG
- GRZ620 - Green Wedge XH
- GRZ621 - Green Wedge XI
- GRZ622 - Green Wedge XJ
- GRZ623 - Green Wedge XK
- GRZ624 - Green Wedge XL
- GRZ625 - Green Wedge XM
- GRZ626 - Green Wedge XN
- GRZ627 - Green Wedge XO
- GRZ628 - Green Wedge XP
- GRZ629 - Green Wedge XQ
- GRZ630 - Green Wedge XR
- GRZ631 - Green Wedge XS
- GRZ632 - Green Wedge XT
- GRZ633 - Green Wedge XY
- GRZ634 - Green Wedge XZ
- GRZ635 - Green Wedge YA
- GRZ636 - Green Wedge YB
- GRZ637 - Green Wedge YC
- GRZ638 - Green Wedge YD
- GRZ639 - Green Wedge YE
- GRZ640 - Green Wedge YF
- GRZ641 - Green Wedge YG
- GRZ642 - Green Wedge YH
- GRZ643 - Green Wedge YI
- GRZ644 - Green Wedge YJ
- GRZ645 - Green Wedge YK
- GRZ646 - Green Wedge YL
- GRZ647 - Green Wedge YM
- GRZ648 - Green Wedge YN
- GRZ649 - Green Wedge YO
- GRZ650 - Green Wedge YP
- GRZ651 - Green Wedge YQ
- GRZ652 - Green Wedge YR
- GRZ653 - Green Wedge YS
- GRZ654 - Green Wedge YT
- GRZ655 - Green Wedge YU
- GRZ656 - Green Wedge YV
- GRZ657 - Green Wedge YW
- GRZ658 - Green Wedge YX
- GRZ659 - Green Wedge YY
- GRZ660 - Green Wedge YZ
- GRZ661 - Green Wedge ZA
- GRZ662 - Green Wedge ZB
- GRZ663 - Green Wedge ZC
- GRZ664 - Green Wedge ZD
- GRZ665 - Green Wedge ZE
- GRZ666 - Green Wedge ZF
- GRZ667 - Green Wedge ZG
- GRZ668 - Green Wedge ZH
- GRZ669 - Green Wedge ZI
- GRZ670 - Green Wedge ZJ
- GRZ671 - Green Wedge ZK
- GRZ672 - Green Wedge ZL
- GRZ673 - Green Wedge ZM
- GRZ674 - Green Wedge ZN
- GRZ675 - Green Wedge ZO
- GRZ676 - Green Wedge ZP
- GRZ677 - Green Wedge ZQ
- GRZ678 - Green Wedge ZR
- GRZ679 - Green Wedge ZS
- GRZ680 - Green Wedge ZT
- GRZ681 - Green Wedge ZY
- GRZ682 - Green Wedge ZZ

## OVERLAYS

- AED - Airport Environs
- BMD - Building Management
- CLPD - City Link Project
- DCPD - Development Contributions Plan
- DDO - Design & Development
- DDO2 - Design & Development Part 2
- DPO - Development Plan
- EAD - Environmental Audit
- EMO - Erosion Management
- ESD - Environmental Significance
- FD - Floodway
- HD - Heritage
- ICPD - Infrastructure Contributions Plan
- IPD - Incorporated Plan
- LSIO - Land Subject to Inundation
- MAED1 - Melbourne Airport Environs 1
- MAED2 - Melbourne Airport Environs 2
- INCO - Neighbourhood Character
- PO - Parking
- PWD - Public Acquisition
- RD - Roadway
- RCD - Road Closure
- SBD - Special Building
- SLO - Significant Landscapes
- SMD - Salinity Management
- SRO - State Resource
- VPO - Vegetation Protection

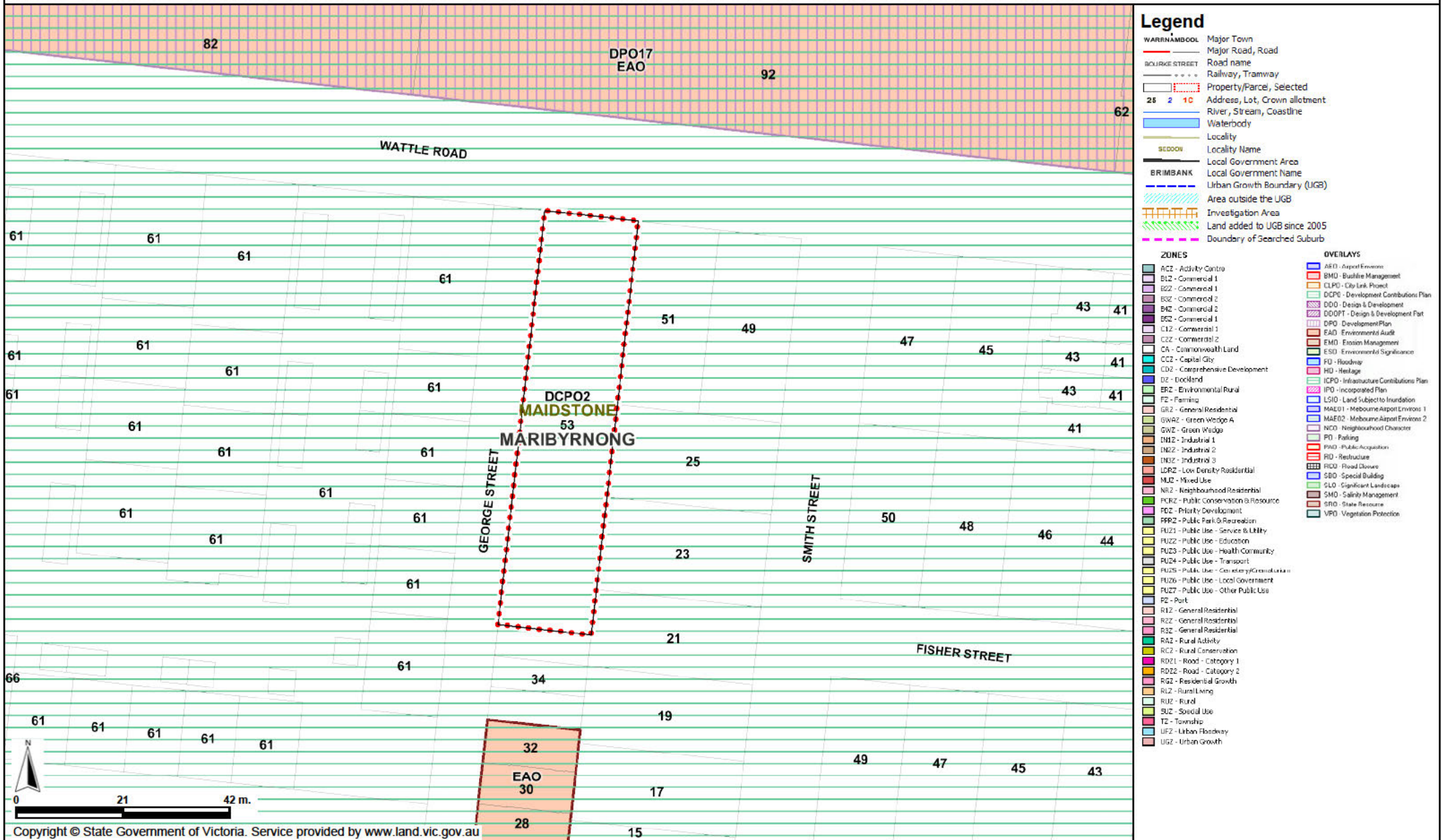


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53 WATTLE ROAD MAIDSTONE 3012

Department of  
Environment, Land  
Water and Planning



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Map Scale 1:1,000

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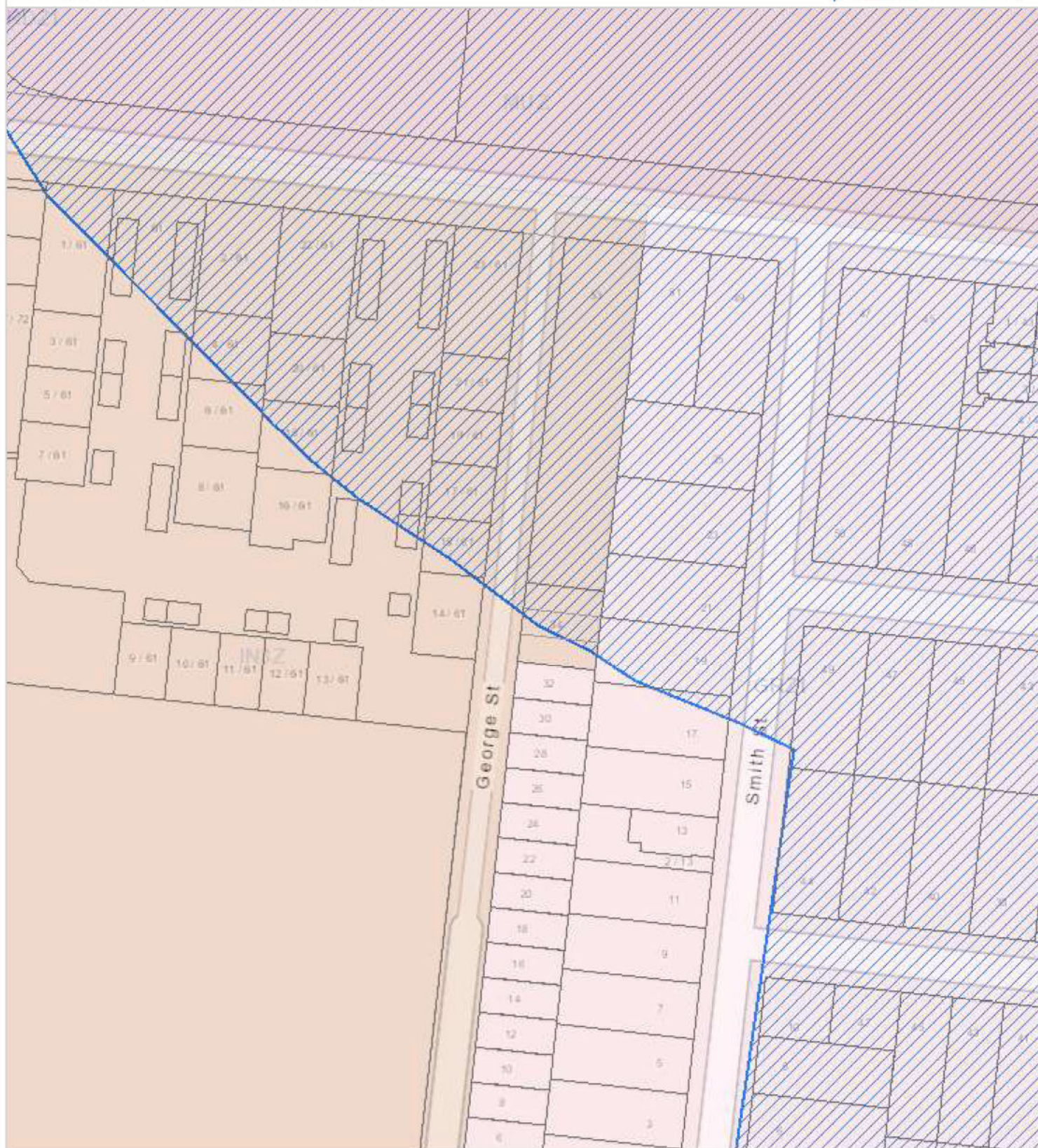




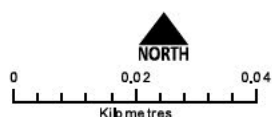
## APPENDIX B

# Planning Map

53 WATTLE ROAD MAIDSTONE 3012



<b>Property</b>	MUZ - Mixed Use Zone	RDZ1 - Road Zone-Category 1
Property	GRZ - General Residential Zone	<b>Planning Scheme</b>
Parcel	<b>Industrial Zones</b>	Other
<b>Planning Scheme Zones</b>	IN3Z - Industrial 3 Zone	Car Parking
<b>Residential Zones</b>	<b>Public Land Zones</b>	



Map Projection: GDA 1994 VICGRID94  
Print Date: 7/02/2019



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# APPENDIX C



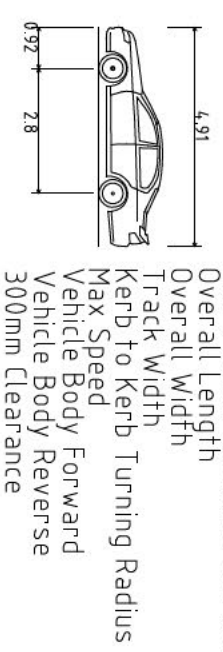


PITCHED ROOF  
GALVANISED IRON  
CONCRETE PANEL FACTORIES  
SINGLE STOREY  
No.23/61

PITCHED ROOF  
GALVANISED IRON  
CONCRETE PANEL FACTORIES  
SINGLE STOREY  
No.21/61

PITCHED ROOF  
GALVANISED IRON  
CONCRETE PANEL FACTORIES  
SINGLE STOREY  
No.19/61

NOTE:  
ROAD TO BE CONSTRUCTED TO COUNCIL'S STANDARDS AND SATISFACTION



B85 Vehicle (Realistic min radius) (2004.)  
Overall Length 4.910m  
Overall Width 1.870m  
Track Width 1.770m  
Kerb to Kerb Turning Radius 5.750m  
Max Speed 5km/h  
Vehicle Body Forward 300mm  
Vehicle Body Reverse 300mm Clearance

4.910m  
1.870m  
1.770m  
5.750m  
5km/h  
Red  
Green  
Blue

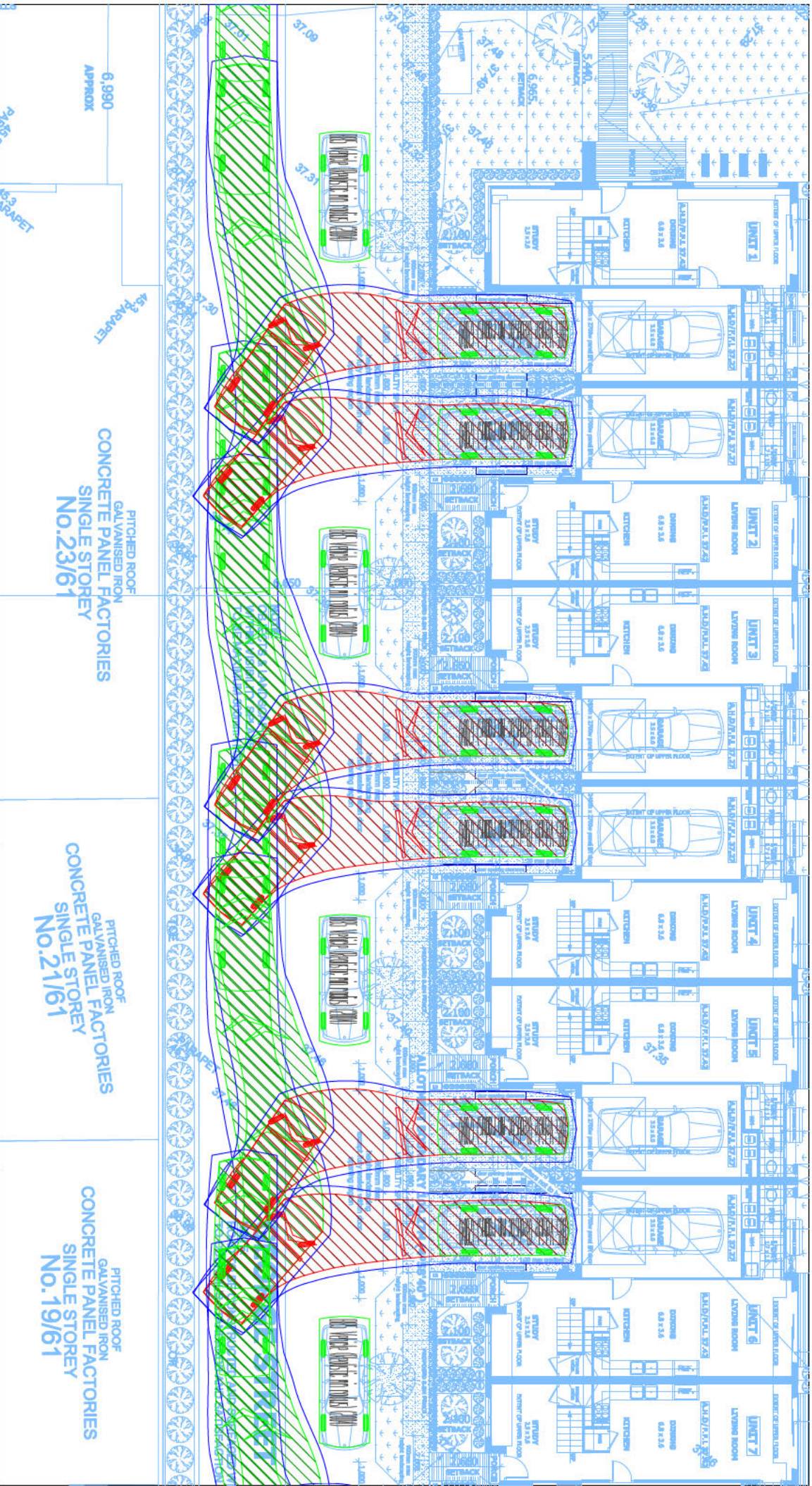
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19 George Street,  
Maidstone

Dwg No: Z2825ATR7  
Date: 09/05/19  
Prepared: AZ  
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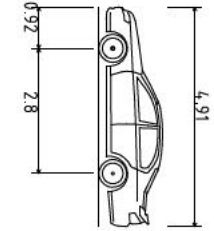
Engineered By Zav Pty Ltd  
Suite 313 / 1 Princess Street  
Kew VIC 3101  
Ph: (03) 9853 6624

318





B85 Vehicle (Realistic min radius) (2004.)



Overall Length  
Overall Width  
Track Width  
Kerb to Kerb Turning Radius  
Max Speed  
Vehicle Body Forward  
Vehicle Body Reverse  
300mm Clearance

4.910m  
1.870m  
1.770m  
5.750m  
5km/h  
Red  
Green  
Blue

Title: 53 Wattle Road &  
19 George Street,  
Maidstone

Dwg No: Z2825ATR7

Date: 09/05/19

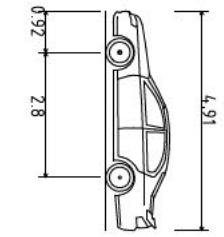
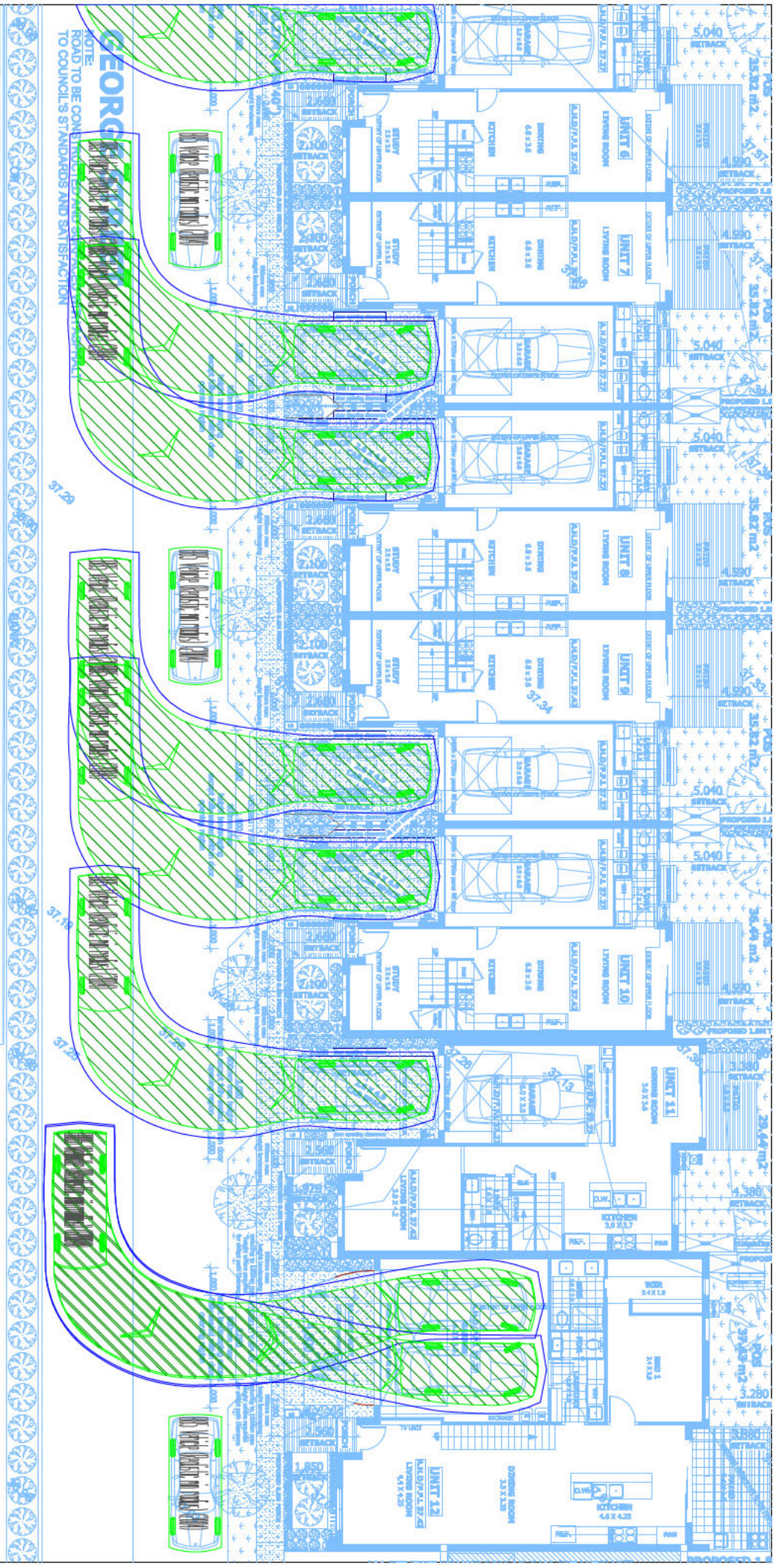
Prepared: AZ

Scale: 1:200@A4

318

Engineered By Zav Pty Ltd  
Suite 313 / 1 Princess Street  
Kew VIC 3101  
Ph: (03) 9853 6624.





B85 Vehicle (Realistic min radius) (2004.)

Overall Length 4.910m

Overall Width 1.870m

Track Width 1.770m

Kerb to Kerb Turning Radius 5.750m

Max Speed 5km/h

Vehicle Body Forward Red

Vehicle Body Reverse Blue

300mm Clearance

4.910m

1.870m

1.770m

5.750m

5km/h

Red

Green

Blue

Title: 53 Wattle Road &  
19 George Street,  
Maidstone

Dwg No: Z2825ATR7

Date: 09/05/19

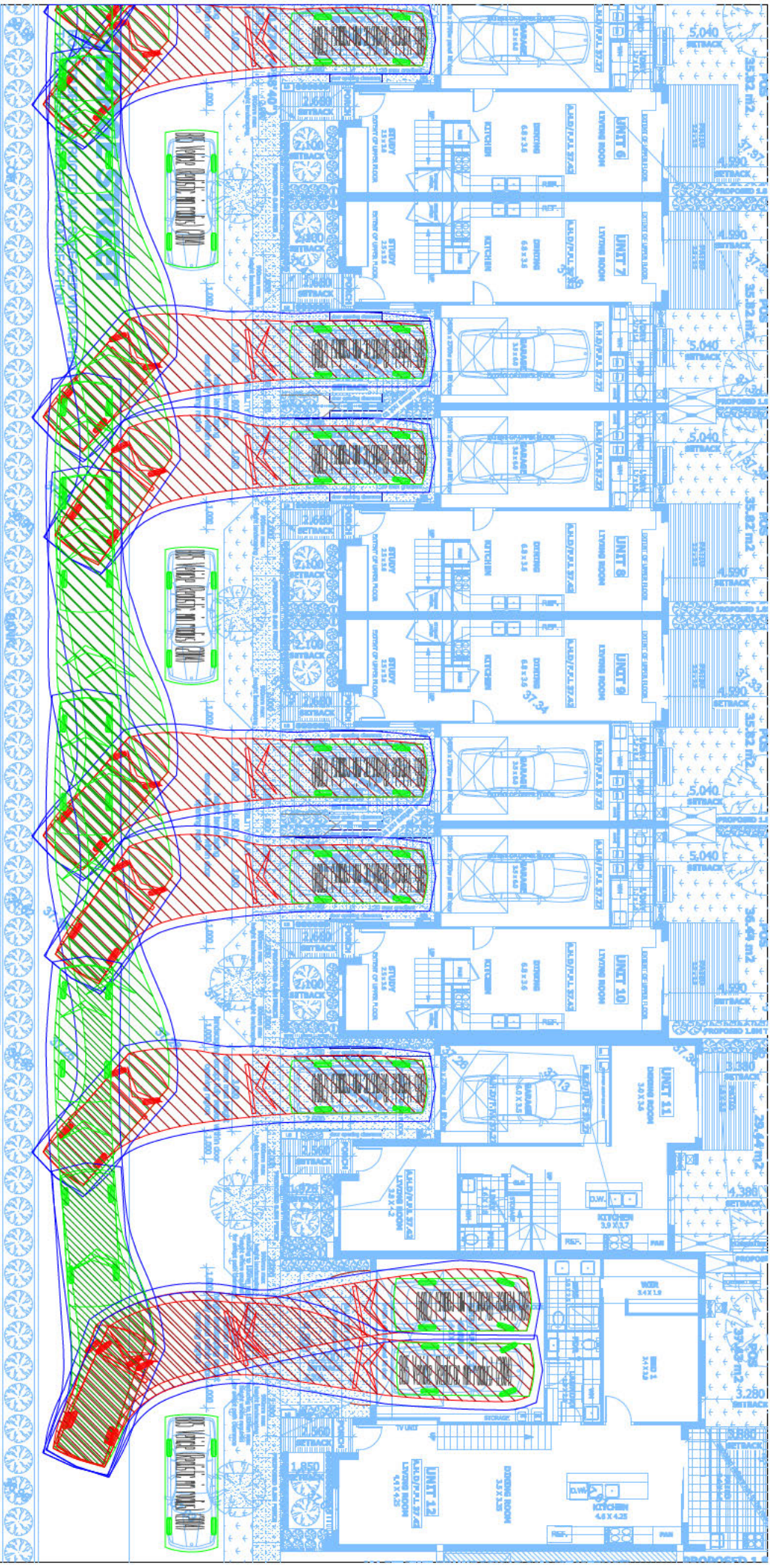
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518

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PITCHED ROOF  
GALVANISED IRON  
CONCRETE PANEL FACTORIES

PITCHED ROOF  
GALVANISED IRON  
CONCRETE PANEL FACTORIES

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CONCRETE PANEL FACTORIES

B85 Vehicle (Realistic min radius) (2004)



Title: 53 Wattle Road &  
19 George Street,  
Maidstone

Dwg No: Z2825ATR7

Date: 09/05/19

Prepared: AZ

Scale: 1:200@A4

**318**

Engineered By Zav Pty Ltd  
Suite 313 / 1 Princess Street  
Kew VIC 3101  
Ph: (03) 9853 6624.





## **WASTE MANAGEMENT PLAN**

Proposed Townhouses Development  
**53 Wattle Rd & 16 George St**  
**Maidstone**

FOR

**LATIN AMERICA PTY LTD & BOSKO GAJIC**

1 February 2018

File 147G



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Issue	Date	Prepared by	Status
A	5 December 2017	JD	Draft
A	1 February 2018	JD	Final

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# 1. Introduction

Northern Environmental Design has been engaged by Latin America Pty Ltd & Bosko Gajicto prepare a waste management plan for the proposed multi-unit development at 53 Wattle Rd & 16 George St Maidstone.

This report was based on plans provided by M7 Design Group Pty Ltd:

Drawing No.	Description	Revision	Date
1	Design response plan	-	Nov 2017
2	Ground floor plan	-	Nov 2017
3	Upper floor plan	-	Nov 2017
4	Roof plan	-	Nov 2017
5	Elevations	-	Nov 2017
6	Elevations	-	Nov 2017
7	Shadow diagrams	-	Nov 2017
8	Landscape plan	-	Nov 2017

- Discussions and correspondence with:
  - o Mr Adam Parker

# 2. Building Constituents

The proposed multi-unit development comprises the following:

Level	No of Units	No. of 1 Bed. Units	No. of 2/3 Bed. Units	No. of 4 Bed. Units
Ground level	11	-	10	1
<b>Total</b>	<b>11</b>	<b>-</b>	<b>10</b>	<b>1</b>

### 3. Waste Calculation and Waste Management System

#### 3.1. Estimated Garbage and Recycling Generation

Generation rate for this development is 120L garbage per week and 120L comingled recyclable waste per week for 3/4 bedrooms unit.

Residential Waste	No of Units	Garbage	Comingled Recycling
Residential Units	11	1.32	1.32
<b>Total (m<sup>3</sup>/wk uncompacted)</b>		<b>1.32</b>	<b>1.32</b>
<b>Total (L/wk uncompacted)</b>		<b>1320</b>	<b>1320</b>

Note: Waste generation rates are based on council's volumetric requirements.

#### 3.2. Bin Schedule and Collection Frequency

Waste Source	Waste Stream	Bin Qty	Bin Litres	Collection Frequency	Bin Area m2
<b>Whole Development</b>	<b>Garbage</b>	11	120	1/weekly	0.3
	<b>Comm. Recycling</b>	11	240	1/Fortnightly	0.5
	<b>Hard Waste</b>	-	-	As required*	-
<b>Net Bin Storage Area (excludes circulation)</b>					<b>0.8</b>

Note:

- \* = Hard rubbish disposal shall be arranged by the residents/owners corporate and Council as required via council hard waste collection system.
- Council shall provide the bins (supply cost applies)
- Subject to stakeholders' preference/capability (and as built constraints), bin sizes and quantities can be changed. Also, recyclables can be either comingled or split into bins for separate recycling streams.
- Green Waste shall be arranged by the residents/owners if required.

#### 3.3. Collection Services

Collection of waste will be undertaken by Maribyrnong City Council on George Street.



### 3.4. Location, Equipment and System Used for Managing Waste

The waste management system is summarised as follows:

- Units receptacles for garbage and recycling
- Collection bins (Kept within each unit's garage or courtyard)

The waste-streams are listed below:

**Garbage:** For collection purposes, garbage shall be stored within collection bins

**Recycling:** All recyclables shall be commingled into a single type of collection bin (for glass, steel, aluminium, paper, cardboard, PET and HDPE containers)

**Garden Waste:** All garden and organic waste is to be removed by the gardening contractors at the time of the garden maintenance as an alternative.

**Compost:** At this development, composting is considered impractical as there would be minimal onsite demand for compost.

**Other Waste Streams:** The disposal of hard/electronic/liquid waste and home detox (paint/chemicals), etc shall be organised by residents.

There are sufficient spaces within each garage or courtyard to accommodate the garbage and recycling bins specified in this report. However, should the proposed waste system fail to cope, the operator shall make the necessary operational adjustments.

#### Bin Details

Capacity (litres)	Height (mm)	Depth (mm)	Width (mm)	Empty Weight (Kg)	Average * Gross Weight(Kg)
120	1000	600	500	7	25
240	1030	800	600	13	45

Note:

- \* = Average Gross Weight is based on domestic waste studies. More weight expected for wet or compacted waste

#### Maribyrnong City Council Colour Coding

Bin	Garbage	Commingled Recycling
Lid colour	Red	Yellow
Body colour	Green	Green

## 4. Access to Waste Facilities

### Resident's Access

The starting date will be determined for both services as soon as the titles are issued, the property occupied and waste contract established.

Residents have access to all waste bins for garbage and recyclables and they shall dispose garbage and recyclables into collection bins. It will be the resident's responsibility to fill bins.

### Council's Access and collection arrangement

- Council shall collect waste on George.
- Each resident shall transfer their bins between their garages or courtyards and the collection point (kerbside) along George Street in coordination with truck arrival (bins shall not be left on the street longer than necessary).
- For improved safety, waste collections and bin transfer will be carried-out if possible during off-peak traffic periods

## 5. Amenity

### 5.1. Noise Minimisation

- Collection bins shall feature a plastic lid and body with rubber castors for quiet rolling during transfers.
- Local laws shall be observed for all operations in public areas and roads

### 5.2. Ventilation, vermin- prevention and washing

Waste areas will feature:

- All bins have secure fitting lids that are vermin proof
- Impervious flooring (smooth, slip-resistant and appropriately drained)
- For hygienic reasons and odour control, bins will be washed (when required) to remove waste-smear and odour. It is the resident's responsibilities to clean. Appropriate facilities will be provided to facilitate the washing and cleaning of bin

### 5.3. Design and Aesthetics of waste storage area

- The design and construction of waste facilities and equipment will conform to the Building Code of Australia, Australian Standards and Local Laws.
- Waste will be placed within the bins and stored in designated onsite areas hidden from external views.
- The facilities will be suitably illuminated.
- Waste facilities will be constructed of durable material and finishes and maintained to ensure that the aesthetic of the development are not compromised.

## 6. Management of Waste Storage Facilities

### 6.1. Arrangements for litter reduction

The operator/resident shall be responsible for:

- Preventing overfilled bins, keeping lids closed
- Promoting adequate waste disposal into the bins to avoid waste dumping

### 6.2. Protection of equipment from theft and vandalism

The operator/resident will be responsible to protect the equipment from theft and vandalism.

The following initiatives will be include:

- Label the bins according to property address
- The operator/resident will transfer bins between the bin area and the kerbside collection point in coordination with truck arrival and bins will not be left on the street longer than necessary.

### 6.3. Signage and education on use of services

All bins will be clearly marked as to their proper use.

Educational material and “house rules” will be provide to resident. These will include:

- Advise them to sort and recycle waste with care to reduce contamination of recyclables
- Inform them about waste management system and the use/location of associated equipment
- Improve facility management results

### 6.4. Supplementary information

The operator and waste collector shall observe all relevant OH&S legislation, regulations, and guidelines. The relevant entity shall define their tasks and:

- Comply with Worksafe Victoria's Occupational Health and Safety Guidelines for the Collection, Transport and Unloading of Non-hazardous Waste and Recyclable Materials (June 2003).
- Assess the Manual Handling Risk and prepare a Manual Handling Control Plan for waste and bin transfers (as per regulatory requirements and Victorian COP for Manual Handling).
- Obtain and provide to their staff/contractors equipment manuals, training, health and safety procedures, risk assessments, and adequate personal protective equipment (PPE) to control/minimise risks/hazards associated with all waste management activities.

### 6.5. Ongoing management and maintenance

It is the responsibility of the operator/residents to maintain all waste areas and components.

The operator/residents will ensure that maintenance and upgrades are carried out on the facility and components of the waste system. When required, the operator/residents will engage an appropriate contractor to conduct services, replacements or upgrades

## 7. Contact Information

The following includes a complimentary listing of collection contractors and equipment suppliers. The stakeholders will not be obligated to procure goods/services from these companies. Northern Environmental Design does not warrant or make representations for the goods/services provided by these suppliers

**City of Maribyrnong**

Corner Hyde and Napier streets. Footscray, VIC  
Ph 9688 0200

**Veolia Environmental Services**

(Private waste collector)  
Lv 1, 85 Buckhurst St, South Melbourne VIC 3205  
Ph 132 955

**JJ Richards & Sons Pty Ltd**

(Private waste collector)  
50 Elliot Road, Dandenong VIC 3175  
Ph 9794 5722

**WasteWise Environmental**

(Private waste collector)  
Ph 93591555

## 8. Limitations

This waste management plan is based on the following conditions

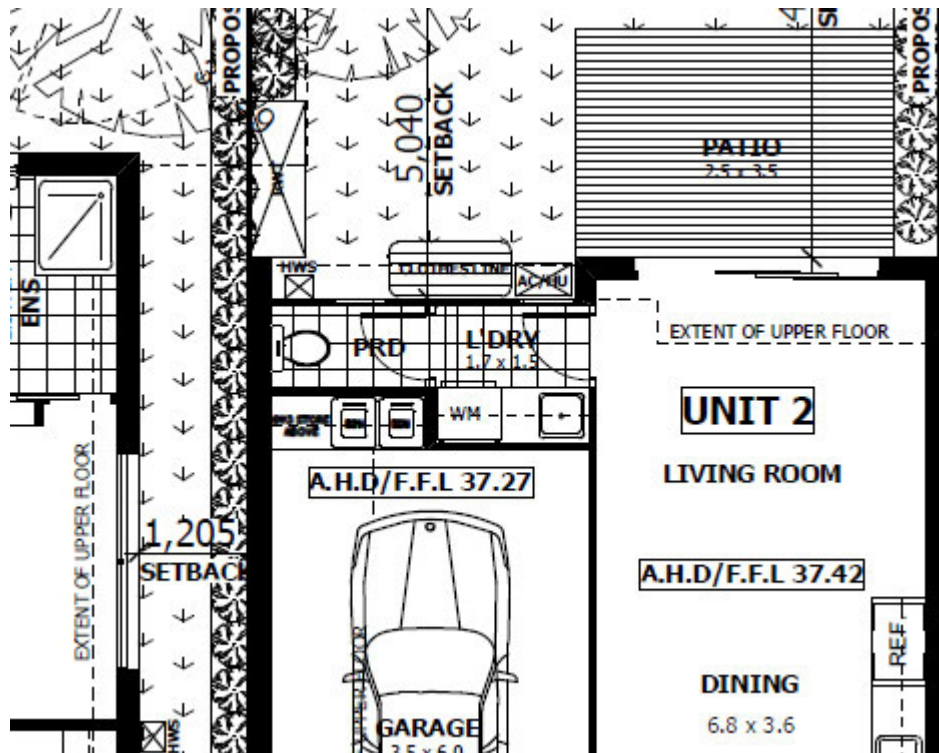
On-going use of the premises. Does not include demolition or construction stages

Figures and calculations are based on drawings and information supplied by M7 Design Group Pty Ltd.

Waste volume figures are estimates only and will be influenced by the tenant resident and operator's disposition toward waste disposal and recycling and by the development's occupancy rate. The operator/resident shall make adjustments, as required, based on actual waste volumes (if actual waste volume is greater than estimated, then the number of bins and/or the number of collections per week will be increased)



## Appendix 1 – Location of Bins





## **SUSTAINABLE MANAGEMENT PLAN**

Proposed Townhouses Development  
**53 Wattle Rd & 16 George St**  
**Maidstone**

FOR

**LATIN AMERICA PTY LTD & BOSKO GAJIC**

1 February 2018

File 147G

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W: [nedesign.net.au](http://nedesign.net.au)

E: [info@nedesign.net.au](mailto:info@nedesign.net.au)



# 1. Executive Summary

This Sustainable Management Plan (SMP) is intended to support the planning application.

A detailed sustainability review and assessment of the project has been undertaken in accordance with Maribyrnong Council Sustainable Design Assessment in the Planning Process (SDAPP).

The following Key Sustainable Building Categories have been addressed:

1. Indoor Environment Quality
2. Energy Efficiency
3. Water Efficiency
4. Stormwater Management
5. Building Materials
6. Transport
7. Waste Management
8. Urban Ecology
9. Innovation
10. Construction & Building Management

The proposed townhouses will meet the Planning Scheme requirements for the City of Maribyrnong. This will ensure an appropriate level of sustainability for the townhouses and in doing so, will help manage environmental impact, create benefits for the urban realm and provide occupants with a good level of risk reduction against rising utility costs.

The townhouses are within an area already well serviced by infrastructure (community, transport, etc.) and will also provide significant sustainability benefits such as the following:

- Solar hot water system
- Efficient lighting.
- Provisions to correctly dispose of recyclable and other waste from the site.
- Ready access to available public transport and cycling.

## 2. INTRODUCTION

Northern Environmental Design has been engaged by Latin America Pty Ltd & Bosko Gajicto identify and provide sustainability advice in relation to the proposed residential townhouses at 53 Wattle Rd & 16 George St Maidstone.

This report was based on plans provided by M7 Design Group Pty Ltd:

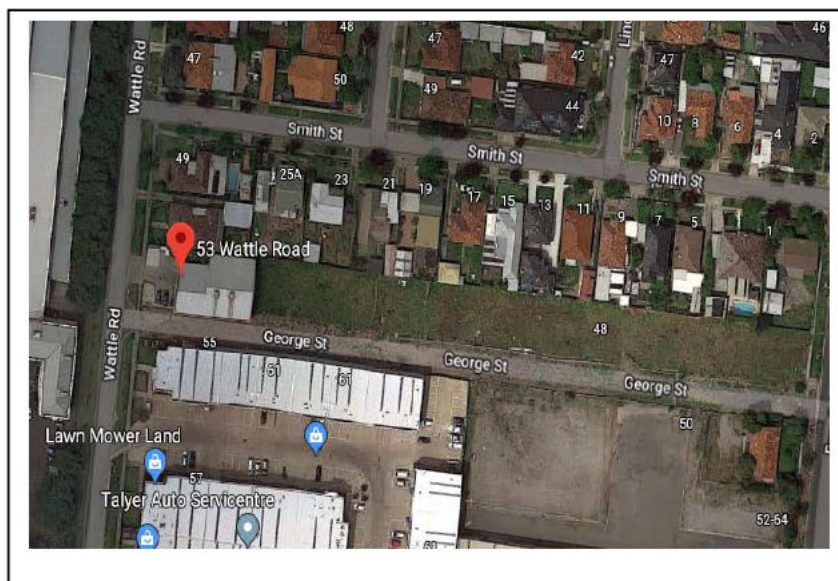
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6	Elevations	-	Nov 2017
7	Shadow diagrams	-	Nov 2017
8	Landscape plan	-	Nov 2017

- Discussions and correspondence with:
  - Mr Adam Parker,

### 2.1. Site Description

The current development site contains a building. The total site is approximately 1965 m<sup>2</sup>. The development is located within the City of Maribyrnong.

An aerial photo showing the location of the site and surrounding is presented below.



## 2.2. Building constituents

The proposed development comprises of 11 townhouses:

Level	Use
Ground floor	<ul style="list-style-type: none"> <li>Garage, Kitchen/Living, Pwd, bedrooms and entry</li> </ul>
First floor	<ul style="list-style-type: none"> <li>Bedrooms and bathrooms</li> </ul>

## 3. Key ESD Initiatives

The following key ESD initiatives have been incorporated into this project:

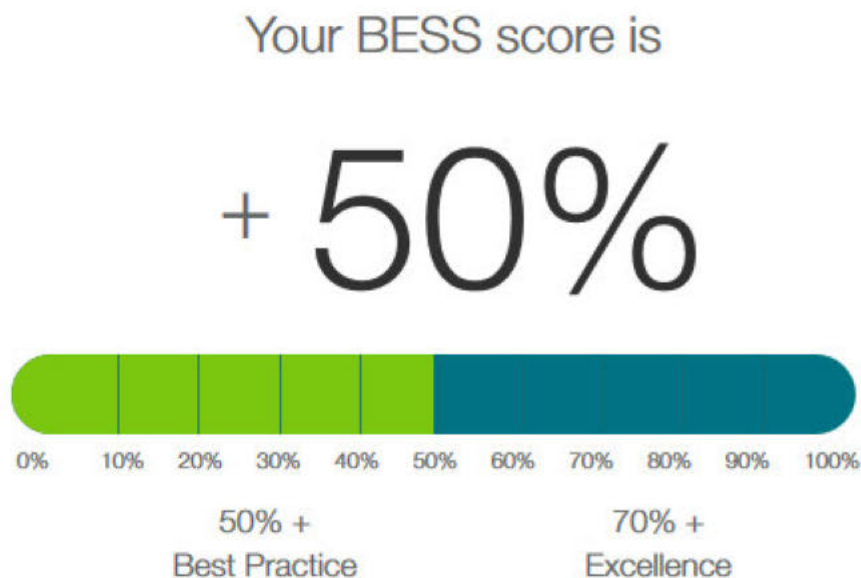
- Efficient air conditioning
- Materials selections to be in accordance with ESD principles.
- Rainwater harvesting for toilet flushing and irrigation
- Renewable energy system: solar hot water system

An assessment of sustainable design outcomes of the proposed development has been undertaken with BESS, STORM and FirstRate (Version 5) benchmarking tools.

The BESS results are summarised below:

### 3.1. BESS

BESS scores for the development are summarised in the following chart.



Please refer to Appendix 1 for details of the BESS results.



## 4. ESD Categories

Design criteria	Design response/Performance Commitments	Notes
<b>Indoor Environmental Quality</b>		
<b>Daylight / Solar exposure</b>	All habitable rooms have excellent access to natural daylight.	
<b>Thermal Comfort</b>	Thermal comfort for occupants will be enhanced by the specification of high performance glazing and adequate insulation combined with high efficiency inverter drive air-conditioning units.	
<b>Natural Ventilation</b>	All living rooms and bedrooms have access to natural ventilation. Operable windows are located in all habitable rooms and exceed BCA windows opening sizes requirement. The townhouses will have access to cross-flow ventilation. Ventilation openings are located in opposite of the townhouses with no more than 1 doorway between the ventilation openings.	
<b>Noise Attenuation</b>	The inclusion of adequate insulation to external & internal walls/floors and double-glazing windows to the dwelling will buffer excessive noise generated by traffic, neighbours and hard surfaces.	
<b>Volatile Organic Compounds</b>	All interior paints, adhesives and sealant will be Low VOC type to improve indoor environmental quality for residents.	Low VOC paints, adhesives, and sealants will be specified to meet the requirements of Credit IEQ-13.1 Indoor Pollutant of the Green Star Design & As Built Version 1.1.
<b>Energy Efficiency</b>		
<b>Building Design</b>	<p>The following sustainable design features have been integrated into the design of the development:</p> <ul style="list-style-type: none"> <li>• Specification of high performance glazing to all new windows/glazed door to reduce excessive summer heat gain and winter heat loss</li> </ul>	



<b>Energy Rating</b>	The proposed residential dwelling is expected to achieve an average energy rating of 6.3 stars.	The dwelling preliminary energy rating achieved meets the BCA 2016 energy efficiency requirements for Class 1 dwellings.  Refer to Appendix 4 for details of energy rating.
<b>Renewable Energy System</b>	The following renewable energy system will be installed to the dwelling. <ul style="list-style-type: none"> <li>A solar gas boosted hot water system to provide 30% annual average solar contribution.</li> </ul>	The proposed renewable energy system is predicted to result in equivalent avoided greenhouse emissions of approximately 0.4 tonne CO <sub>2-e</sub> each year  Refer to domestic hot water section for more information
<b>Heating &amp; Cooling</b>	Reverse cycle split systems within a star of the best available will be installed in the unit to provide heating and cooling. Non star- rated units will have performance co-efficient with similar relative efficiency within the range of products commercially available	Product listings and energy efficiency performance information is located at <a href="http://www.energyrating.gov.au">www.energyrating.gov.au</a>
<b>Domestic Hot Water</b>	Domestic hot water will be provided by <ul style="list-style-type: none"> <li>A solar gas boosted hot water system sized to provide 30% annual average solar contribution with highly insulated pipe work to minimise parasitic heat loss.</li> </ul>	The systems selected are accepted as being amongst the most greenhouse-efficient hot water systems currently available for residential development.  Please refer to Appendix 5 for details of solar panel numbers.
<b>Lighting</b>	Energy efficient lighting systems will be installed throughout including: <ul style="list-style-type: none"> <li>LED lighting (within 5W/m<sup>2</sup>)</li> <li>An energy efficient external lighting system comprising LED or compact fluorescent lighting.</li> <li>An energy efficient garage lighting system comprising LED or compact fluorescent lighting</li> </ul>	All external area lighting will be controlled through motion/daylight sensor.  Also external lighting will be designed to avoid light spill to the night sky.
<b>Clothes Line</b>	Private outdoor clothes line will be provided.	
<b>Garage Ventilation</b>	The garages will be naturally ventilated.	

## Water Management

<b>Rainwater Harvesting</b>	<p>Details about rainwater harvesting system proposed for the townhouses are listed below:</p> <ul style="list-style-type: none"> <li>• Collection area: All roof areas</li> <li>• 2,000 litres tank for each townhouse</li> <li>• Re-use of water for toilet flushing.</li> <li>• Re-use of water for irrigation.</li> </ul>	<p>Rainwater tank reliability analysis has been undertaken to estimate annual mains water savings</p> <p>Savings: 185KL</p> <p>Supply reliability for toilet flushing and irrigation: 84%</p> <p>Please refer to Appendix 3 for details of predicted harvested rainwater volumes.</p>
<b>Water Efficient Appliance</b>	<p>Water efficient appliances (where appliances are provided by the developer) will be specified within 1 WELS star of the best available at the time of specification</p>	<p>This includes dishwashers and any other appliances using water.</p>
<b>Water Efficient fittings</b>	<p>Water efficient fittings will be specified in accordance with the following minimum performance standard as rated by the Water Efficiency Labelling Scheme (WELS)</p> <ul style="list-style-type: none"> <li>• Toilets minimum 4 stars WELS rated</li> <li>• Tap minimum 5 star WELS rated</li> <li>• Showers minimum 3 star WELS rated (maximum 7.5L/min)</li> </ul>	

## Stormwater Management

<b>Stormwater Quality</b>	<p>The development achieves a STORM score of 103%.</p>	<p>The STORM score attained demonstrates that the development meets the Best Practice Standard for Urban Stormwater. Refer to Appendix 2 for the STORM report.</p>
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## Building Materials

<b>Concrete</b>	<p>Concrete used to construct the townhouses will be specified so that it has reduced the absolute quantity of Portland cement as an average across all concrete mixes, which at the same time will reduce embodied energy by substituting it with industrial waste product(s) or oversized aggregate as follows:</p> <ul style="list-style-type: none"> <li>• 30% for in situ concrete</li> <li>• 20% for precast concrete</li> <li>• 10% for stressed concrete</li> </ul> <p>Non-structural concrete will not use natural aggregate</p>	<p>Note that this is subject to meeting structural requirements and project management constraints</p>
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<b>Timber</b>	All feature timber used in the extension will be recycled or from accredited sustainably harvested plantation sources (FSC or AFS)	Note that this is subject to meeting structural requirements and project management constraints
<b>Flooring</b>	Flooring will be selected from Ecospecifier or the Moreland Greenlist or will have GECA or ISO14001 Certification	Note that this is subject to meeting structural requirements and project management constraints
<b>Paint, adhesives and sealants</b>	All interior paints, adhesives and sealant will be Low VOC type to improve indoor environmental quality for residents.	Low VOC paints, adhesives, and sealants will be specified to meet the requirements of Credit IEQ-13.1 Indoor Pollutant of the Green Star Design & As Built Version 1.1
<b>Sustainable Transport</b>		
<b>Bicycle Racks</b>	Adequate facilities to promote cycling to residents will be provided within the townhouses.  Sufficient storage area for 1 bicycles within garage.	The bike parking facilities provided meets the ratios set out in Clause 52.34 of the Maribyrnong Planning Scheme.
<b>Walk Score®</b>	This development scored 81 out of 100 which is considered to be very walkable	Walk Score® takes into account the number of facilities within close proximity and provides a numerical score of between 1 and 100, with 1 being heavily car dependant with access to community facilities that are located some distance away and 100 reflecting a location that is easily accessible to abundant facilities by foot.
<b>Trip Reduction</b>	The townhouses are positioned in an ideal location to meet the resident's daily needs. The townhouses are located within close proximity to a number of shops, shopping centres, restaurant, parks and a number of community facilities	<p><b>Restaurants:</b> Spicy Mama .3km &gt;</p> <p><b>Coffee:</b> Oh Wow Coffee .1km &gt;</p> <p><b>Bars:</b> Tram station .5km &gt;</p> <p><b>Groceries:</b> IGA X-press Maribyrnong .3km &gt;</p> <p><b>Parks:</b> Village Green .8km &gt;</p> <p><b>Schools:</b> Rose Garden Child Care .4km &gt;</p> <p><b>Shopping:</b> Millionaire Kids .2km &gt;</p> <p><b>Entertainment:</b> Hoyts Highpoint .8km &gt;</p> <p><b>Errands:</b> Highpoint Pharmacy .3km &gt;</p>

<b>Public Transport Access</b>	<p>This site is well serviced by various forms of public transport including rail. These provide access to a number of various places throughout Maribyrnong municipality as well as the CBD and outer suburbs.</p> <ul style="list-style-type: none"> <li>• Closest train station: Flemington train station which is within 3.1 Km of the development.</li> <li>• Frequent trams services along Rosamond Road</li> </ul>	
<b>Urban Ecology</b>		
<b>Landscape</b>	Landscaping has been integrated into the building design	<p>This feature will enhance the ecological value of the development.</p> <p>Drought tolerant plants will be used.</p>
<b>Waste Management</b>		
<b>Operational Waste Management</b>	<p>The following waste management facilities is provided for the townhouses:</p> <ul style="list-style-type: none"> <li>• 1 x 120 litre bin for general waste</li> <li>• 1 x 240 litre bin for recyclables</li> </ul>	Refer to WMP
<b>Construction Waste Minimisation</b>	<p>A target recycling rate of 80% of construction and demolition waste has been adopted for the construction phase of the development to minimise the volume of waste to landfill.</p> <p>This will be achieved by the development of a comprehensive waste minimisation strategy including:</p> <ul style="list-style-type: none"> <li>• Separation of all commercially viable recyclable waste streams</li> <li>• Training in waste minimisation for all site staff and contractors to form part of site induction training.</li> <li>• Record keeping of landfill waste and recyclable stream volumes to track performance against the 80% recyclable target.</li> </ul>	A dedicated recycling contractor will be engaged to facilitate separation of commercially viable recyclable waste streams in accordance with the target adopted.



**Construction & Building Management****Building Users Guide**

A Building Users Guide will be prepared and will provide details regarding the everyday operation of the building to enable building users to minimise energy and water consumption and optimise internal comfort and amenity.

The building users' guide will be prepared in accordance with the requirements of Credit Man-4.2 Building User information of the Green Star Design & As Built Version 1.1

## 5. Conclusion

This report presents the environmentally sustainable design (ESD) principles, strategies and mechanism of proposed residential townhouses at 53 Wattle Rd & 16 George St Maidstone. Integrated passive and active sustainable design will aid in the delivery of an energy efficient, water efficient and healthy building.

In terms of performance outcomes, the analysis presented in this report demonstrates that the proposed development meets the standard of residential building envelope energy efficiency required to satisfy the Building Code of Australia. Furthermore, the combination of design features and services initiatives meets all the standards of the BESS assessment.

Accordingly the sustainable design outcomes detailed in this report are considered to be consistent with current industry practice for a residential development of this scale.



**Jonathan Duverge**  
Director

## Appendix 1: BESS

53 Wattle Rd, Maidstone 3012 Maidstone

Site area: 1965 m<sup>2</sup> · Building Floor Area: 1804 m<sup>2</sup> ·

Date of Assessment: 01 Feb 2018 · Version: V3, 1.5.0-B150 ·

Applicant: info@nedesign.net.au

Project number

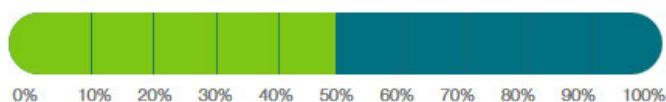
11279

Published

<http://bess.net.au/projects/11279>

Your BESS score is

+ 50%



50% +  
Best Practice

70% +  
Excellence

% of Total	Category	Score	Pass
2 %	Management	50 %	
5 %	Water	64 %	✓
14 %	Energy	52 %	✓
13 %	Stormwater	100 %	✓
8 %	IEQ	50 %	✓
2 %	Transport	33 %	
0 %	Waste	0 %	
3 %	Urban Ecology	62 %	
0 %	Innovation	0 %	

## Appendix 2: STORM Result



### STORM Rating Report

TransactionID: 548802  
 Municipality: MARIBYRNONG  
 Rainfall Station: MARIBYRNONG  
 Address: 53 Wattle Road & 19 George Street

Maidstone  
 VIC 3012

Assessor: Jonathan Duverge  
 Development Type: Residential - Multiunit  
 Allotment Site (m2): 1,965.00  
 STORM Rating %: 103

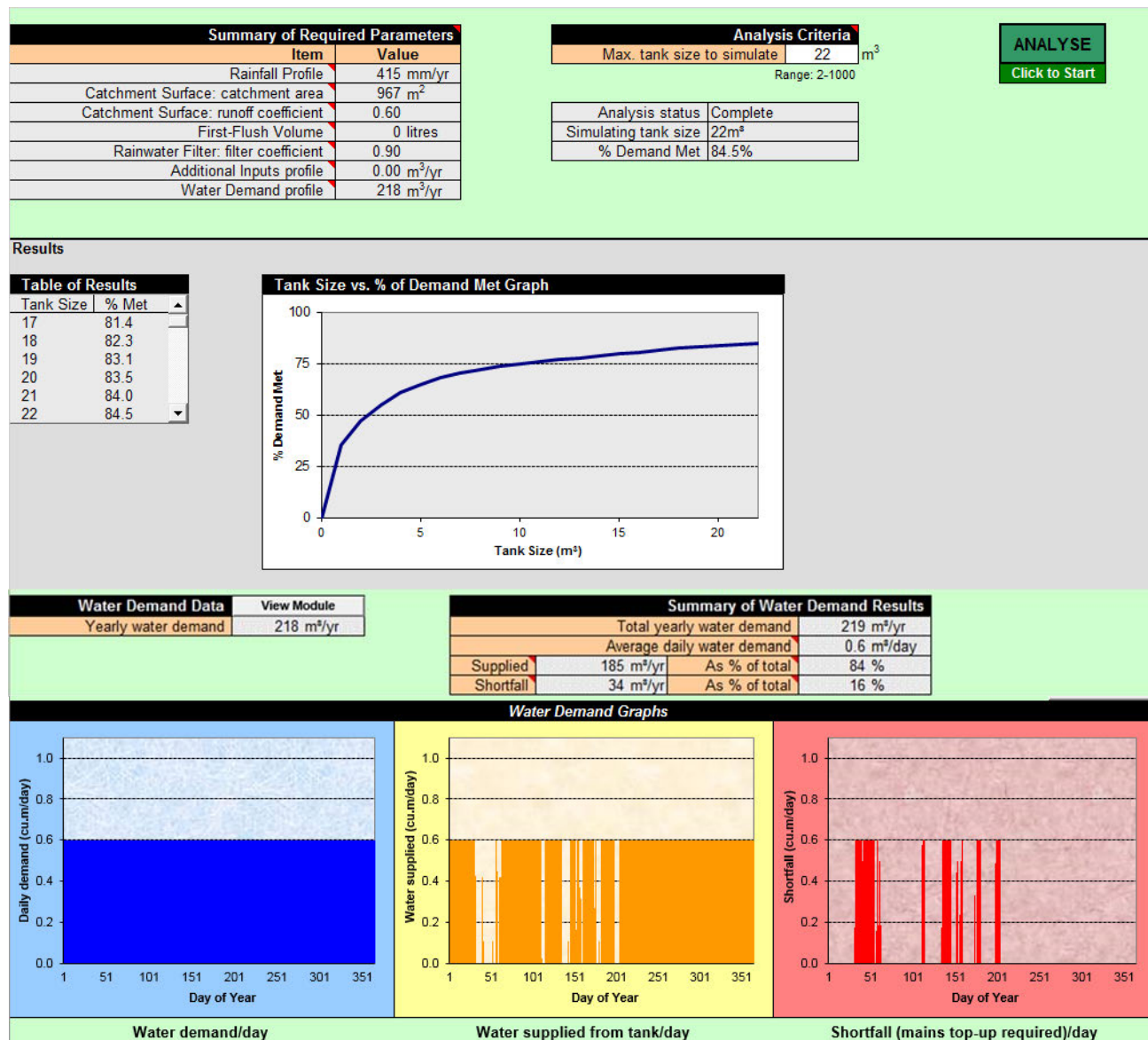
Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Unit 1 roof areas	185.00	Rainwater Tank	2,000.00	4	95.00	84.30
Unit 3 roof areas	83.00	Rainwater Tank	2,000.00	3	148.40	84.60
Unit 5 roof areas	83.00	Rainwater Tank	2,000.00	3	148.40	84.60
Unit 7 roof areas	83.00	Rainwater Tank	2,000.00	3	148.40	84.60
Unit 9 roof areas	83.00	Rainwater Tank	2,000.00	3	148.40	84.60
Unit 11 roof areas	130.00	Rainwater Tank	2,000.00	3	109.20	88.90
Unit 2 roof areas	83.00	Rainwater Tank	2,000.00	3	148.40	84.60
Unit 4 roof areas	83.00	Rainwater Tank	2,000.00	3	148.40	84.60
Unit 6 roof areas	83.00	Rainwater Tank	2,000.00	3	148.40	84.60
Unit 8 roof areas	83.00	Rainwater Tank	2,000.00	3	148.40	84.60
Unit 10 roof areas	105.00	Rainwater Tank	2,000.00	3	126.20	87.50
All remaining impermeable ares	312.00	None	0.00	0	0.00	0.00

Date Generated: 05-Dec-2017

Program Version: 1.0.0



## Appendix 3: Rainwater Tank Reliability Analysis



## Appendix 4: Energy Rating

Preliminary energy rating for a representative sample of the proposed townhouses using FirstRate (Version 5.2.7) is summarised in the table below.

Units	Star Rating	Total(MJ/m2)	Heating(MJ/m2)	Cooling(MJ/m2)
Unit 1	6.0	137.6	106.5	31.2
Unit 6	6.4	123.8	95.1	28.7
Unit 7	6.2	128.1	101.8	26.3
Unit 11	6.4	120.3	95.5	24.8
<b>Average rating</b>	<b>6.3</b>	<b>127.5</b>	<b>99.7</b>	<b>27.5</b>

Results shows that proposed dwelling exceeds the standard required by the Building Code of Australia (Victoria) 2016 in relation to residential sustainability.

### BUILDING MATERIALS

Element	Description	Added R Value
<b>Floor Type</b>	Ground floor: Concrete slab First floor: Timber floor	
<b>Floor Insulation</b>	R 2.5 insulation to upper timber floor	<b>R 2.7</b>
<b>Wall Insulation</b>	All brick veneer walls: 90mm R 2.5 insulation batts	<b>R 2.5</b>
	All external lightweight walls: 90mm R 2.5 insulation batts	<b>R 2.5</b>
	Internal walls shared with garage and surrounding wet areas 90mm R 2.5 bulk insulation	<b>R 2.5</b>
	All remaining internal walls	<b>Nil</b>
<b>Roof Insulation</b>	R 5.0 bulk insulation to ceilings of metal roof	<b>R 5.0</b>
<b>Skylights</b>	Nil	
<b>External Blinds</b>	Refer to plans	

**GLAZING**

Glazing Type	Group	Whole of Window Value		Location
<b>Default</b>		<b>U</b>	<b>SHGC</b>	
ATB-005-03 Aluminium Thermally Broken Frame Double glazed Argon fill Clear-High Solar Gain Low-E	A	2.91	0.44	<b>Unit 1 &amp; 11: Group A glazing</b>
ATB-006-03 Aluminium Thermally Broken Frame Double glazed Argon fill Clear- High Solar Gain Low-E	B	2.90	0.51	<b>Unit 1 &amp; 11: Group B glazing</b>
ALM-005-03 Aluminium Standard Frame Double glazed Argon fill Clear-High Solar Gain Low-E	A	4.10	0.47	<b>Unit 6 &amp; 7: Group A glazing</b>
ALM-006-03 Aluminium Standard Frame Double glazed Argon fill Clear- High Solar Gain Low-E	B	4.10	0.52	<b>Unit 6 &amp; 7: Group B glazing</b>

Group	Opening
<b>A</b>	<ul style="list-style-type: none"> <li>Awning, bifold, casement, tilt &amp; turn, entry door, French door, hinged door</li> </ul>
<b>B</b>	<ul style="list-style-type: none"> <li>Double hung, fixed, louvre, sliding, stacker door</li> </ul>

**GENERAL ASSUMPTIONS**

Item	Details
<b>Floor Coverings</b>	Tiles to kitchen and wet areas Carpet to remaining areas
<b>Window Coverings</b>	Holland blinds to all windows. (Regulation Mode) <sup>1</sup> Fly screens to all operable windows and sliding doors
<b>Draught Proofing</b>	Weather strips to all doors and windows. Seal all exhaust fans.
<b>Downlights</b>	Recessed down lights in ceiling space (external roof areas) to be fitted with nonvented down light covers to provide air tightness and contact with insulation
<b>General</b>	All rooms classed as conditioned except for bathrooms & ensuites with operable glazing and all-party walls are classed as neighbour walls.
<b>Shading</b>	Overshadowing from adjoining buildings/shading devices and screens have been incorporated into the energy ratings
<b>BCA requirement</b>	BCA 2016 vol.1 Part J3 and vol. 2 Part 3.12.3 requires that seals are to be provided to: <ul style="list-style-type: none"> <li>a) chimneys and flues</li> <li>b) roof lights i.e. skylights or windows installed in a roof</li> <li>c) around external doors and windows and</li> <li>d) exhaust fans</li> </ul>

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• <sup>1</sup> Holland blinds are assumed as required by BCA Practice Note 55 (Clause 5.2) Assumption for regulatory purposes only.



## Appendix 5: Solar Hot Water System

<b>Data</b>				
Specific heat of water (constant)	kJ/kg.°C	4.19		
Total number of bedrooms		3		
Average number of people per bedroom		1.1		
Total occupants		3		
<b>Summary of hot water used</b>				
Total hot water	litres / day (all occupants)	196		
Total cold water	litres / day (all occupants)	144		
Total all water	litres / day (all occupants)	340		
Total all water	litres / day / person	103		
Total hot water	litres / day / person	59		
Total cold water	litres / day / person	44		
Delivered energy total	MJ / day	37		
Reticulation & storage losses		15%		
Required energy into water	MJ / day	44		
<b>Solar Collectors &amp; Storage</b>				
Required solar contribution %		30%	▲ ▼	variable by 5% steps
To be supplied by solar water heaters	MJ / day	13		
Solar radiation, Melbourne, optimum angle	MJ / day / m <sup>2</sup> annual ave.	17.2		
		Collector Type: Flat Plate	Evac. Tube	
Solar water heater efficiency	annual average	55%		70%
Delivered energy into water	MJ / day / m <sup>2</sup> annual ave.	9		12
Solar water heater collector area required	m <sup>2</sup> aperture area	1		1
Solar water heater area / panel	m <sup>2</sup> aperture area / panel	1.86		1.67
Number of panels required	rounded up	1		1
Typical collector dimensions	width (m) x length (m) width = along header direction	1.0 x 2.0		1.1 x 2.2
Indicative water storage volume req'd	litres	70		
<b>Supplementary Heat Input to DHW</b>				
From supplementary source(s)	MJ / day	30		
Expected performance effy	annual average	75%		
Energy input to supplementary source(s)	MJ / day	41		
Annual expected solar energy contribution	GJ/y	4.8		
Natural gas use reduction from solar	GJ/y	6.4		
Greenhouse gas emissions factor, NG [1]	kg_CO <sub>2</sub> -e/GJ	55.33		
Greenhouse gas emissions reduction	tonnes_CO <sub>2</sub> -e/yr	0.35		

[1] National Greenhouse Accounts (NGA) Factors, July 2012, tables 2 and 38

[2] National Greenhouse Accounts (NGA) Factors, July 2012, table 40 "Latest", "Victoria"



HEAR DATA PTY LTD ABN 39 006 317 924 Trading as

# AUDIOMETRIC & ACOUSTIC SERVICES

Telephone: (03) 9817 5517

28 Hilda Street, Balwyn, Victoria, 3103

Facsimile: (03) 9817 5411

Email: [noiseconsult@bigpond.com](mailto:noiseconsult@bigpond.com)

**12<sup>th</sup> December 2017**

**Ref. 17116.1**

**Title:** Assess industrial noise on site and calculate attenuation ratings of building components re possible nearby industrial noise

**Brief:** Measure prevailing sound levels for site, calculate Rw ratings for the room components with respect to re possible nearby industrial noise for acoustic design of a proposed multi dwelling development at 53 Wattle Road, and 19 George Street Maidstone.

**Client:** Latin America P/L  
1 Thornhill Dr  
Kelior Downs  
VIC 3038

**Contact:** Adam Parker  
Level 24, 570 Bourke Street,  
Melbourne  
VIC 3000

## **1.0 Introduction**

Audiometric and Acoustic Services has been appointed to attend to the acoustic design of a proposed multi dwelling development at 53 Wattle Road, and 19 George Street Maidstone. We understand that as part of a request from Council, the building is to be designed to accommodate the prevailing industrial noise levels at the site to ensure adequate amenity for the residents.

## **2.0 Acoustic Specifications**

In absence of any formal legislation for residential dwellings required to be protected from industrial noise we recommend the following limits be adopted as as suitable:

- In sleeping areas with windows closed between 22:00 and 07:00hrs noise must not exceed 35dB(A) as the average of hourly  $L_{10}$  values and 50db(A) at other times as the average of hourly  $L_{10}$  values;
- In other habitable rooms with windows closed between 22:00 and 07:00hrs noise must not exceed 45dB(A) as the average of hourly  $L_{10}$  values and 60dB(A) at other times as the average of hourly  $L_{10}$  values.

The above specifications are reasonable in their basic form. They are generally in line with figures for houses and apartments near major roads from AS2107 – 2016 Acoustics - Recommended Design Sound Levels and Reverberation Times for building interiors and with AS3671 - 1989, Acoustics – Road Traffic Noise Intrusion - Building siting and construction.

Our calculations are based on a Reverberation Time of 0.5 seconds, which takes into account living rooms that are expected to be carpeted. Our approach is to undertake the assessment based on the rooms being in a liveable condition with the windows and doors closed and the air conditioners off. This approach is fully in line the relevant Australian Standards, as well as general common sense.

Primary focus will be on designing the rooms for the EPA Night Period as this is the most restrictive and will ensure compliance at other times.

Common practice from Vicroads (A Guide to Reduction of Traffic Noise 2003) applies an 18hr $L_{10}$  threshold of 63dB(A) for traffic noise. As the method of assessment will be very similar we see it as appropriate to use the same investigation threshold. That is to say, if the  $L_{10}$  measurement on site at 53 Wattle Road, and 19 George Street Maidstone for the Day and Evening Period is below 63dB(A) it is expected that there will be no further need for design or attenuation measures for the external building envelope.

## **3.0 Noise Assessment of Site**

The site is close to several sources of industrial noise to the north and west with residential dwellings flanking the east side of the site. Currently the land to the south is undeveloped.

As there are no roller doors or access to industrial buildings from George Street, the development is expected to be more affected by traffic noise than industrial noise due to the noise reduction and sheltering provided by the structure of the industrial buildings.



The site was noise logged from the morning of Friday 24<sup>th</sup> November to the morning of Friday 1<sup>st</sup> December 2017. One noise logger was fixed to the roadside fence at the current site at around 1.5m in height. A second logger was placed to the rear of the site. This allows us to grade the site accordingly.

A façade adjustment of 2dB(A) will be added to the logger results.

**Table 1 – Logger Data Street Front**

Date	Day/Evening/Night	Period hrs	L <sub>10</sub> dB(A)
Friday 24/11	Night	2200 – 0700	49
Saturday 25/11	Day/Evening	0700 – 2200	61
	Night	2200 – 0700	53
Sunday 26/11	Day/Evening	0700 – 2200	62
	Night	2200 – 0700	49
Monday 27/11	Day/Evening	0700 – 2200	69
	Night	2200 – 0700	49
Tuesday 28/11	Day/Evening	0700 – 2200	65
	Night	2200 – 0700	48
Wednesday 29/11	Day/Evening	0700 – 2200	66
	Night	2200 – 0700	47
Thursday 30/11	Day/Evening	0700 – 2200	58
	Night	2200 – 0700	49
Average	Day/Evening	0700 – 2200	64
Average	Night	2200 – 0700	49
Average + façade adj	Day/Evening	0700 – 2200	66
Average + façade adj	Night	2200 – 0700	51

**Table 2 – Logger Data Rear of Proposed Structure**

Date	Day/Evening/Night	Period hrs	L <sub>10</sub> dB(A)
Friday 24/11	Night	2200 – 0700	45
Saturday 25/11	Day/Evening	0700 – 2200	50
	Night	2200 – 0700	47
Sunday 26/11	Day/Evening	0700 – 2200	53
	Night	2200 – 0700	48
Monday 27/11	Day/Evening	0700 – 2200	63
	Night	2200 – 0700	45
Tuesday 28/11	Day/Evening	0700 – 2200	58
	Night	2200 – 0700	46
Wednesday 29/11	Day/Evening	0700 – 2200	61
	Night	2200 – 0700	
Thursday 30/11*	Day/Evening	0700 – 2200	N/A
	Night	2200 – 0700	N/A
Average	Day/Evening	0700 – 2200	57
Average	Night	2200 – 0700	46
Average + façade adj	Day/Evening	0700 – 2200	59
Average + façade adj	Night	2200 – 0700	48



\* We note that the logger did not continue to record data from Wednesday night onwards. Sufficient data from the rear of the property is available from prior periods to enable acoustic recommendations to be made.

From the data collected and onsite observations we believe that the data collected at the street front is more traffic affected than from any other source including industrial.

We have further analysed the waveform data at instances where we believe industrial noise to be apparent.



Waveforms as per Figure 1 occur periodically for half an hour to 2hrs once a day throughout the Day Period. No occurrences are noted during the Night Period.

#### 4.0 Proposed Construction Details

The drawings provided are very general in nature. We have taken the following to be applicable according to the drawings provided:

- Brickwork: Standard brick veneer with 90mm timber frame, R2.0 fibrous batts and standard 10mm plasterboard.
- Cladding: Lightweight materials in the form of 19mm timber cladding or rendered 6mm cement sheet fixed to a 90mm timber stud with R2.0 fibrous batts and standard 10mm plasterboard.
- Windows: Standard single glazing of 4mm.
- Roof: Assumed to be Colourbond or equivalent with Min. R4.0 fibrous insulation and standard 10mm plasterboard.

## **5.0 Building Material Selection**

### **5.1 Roofing**

No upgrades are needed above the standard construction specified in Section 4 of this report with regard to roof and ceiling structure.

### **5.2 Walls**

No upgrades are needed above the standard construction specified in Section 4 of this report with regard to brick veneer walls.

A considerable proportion of the walls along the west elevation are exposed to the noise from industry and are of light weight construction. We recommend using a sound reducing R2.5 fibrous insulation for all lightweight walls. This applies to all external western exposed walls to all units for all habitable rooms.

### **5.3 Glazing – Windows and Doors**

All glazing on the western façade must achieve an  $R_w=31$ .

The  $R_w$  rating for glazing is particularly dependent on frame material and quality of construction as well as effective resilient mounting of the glass. Technically an  $R_w$  rating for a glazed window or door is specific to a product which has been through a test process to obtain the  $R_w$  rating. Extrapolation of an  $R_w$  value to other products in the range is often done but is not advised, because conditions in both manufacturing and installation will vary from ideal laboratory conditions.

The main features required for good acoustic performance are an adequate glass section, a good resilient seal between glass and frame, and between fixed and openable frames. Good acoustic performance is achieved by either maximising the airgap between panes (where double glazing is used), or using panes of greater than standard thickness. To gain the benefit of the rating, care should be taken with installation. All windows must be flush fitting with the walls and any gaps filled with a suitable material, such as rubber strip or mastic. Expanding foam types of fillers are not suitable as they have little density and result in a closed cell which is not suited to acoustic absorption.

We recommend that the Client seek advice from window manufacturers on suitable windows that can achieve an  $R_w=31$ .

## **6.0 Summary**

The site is one which is not significantly affected by industrial noise. From our site visits and analysis of recorded data, we believe the neighbouring industry to be operating during normal day periods.

This firm has assessed the proposed development and has calculated the attenuation requirements to be in full accord with industry practices if built in conjunction with the data provided and test conditions referred to in the body of this report.

We repeat that care is necessary to ensure the glazing will meet the calculated values. Ultimate responsibility to ensure compliance will lie with correct installation of quality and reputable materials.

Please feel free to contact us should any additional detail be required. This applies to any third parties that have legitimate access to this report.

Respectfully,



Scott Henderson  
BEnv DipDes A.A.S

Attachments            Technical Appendix I  
                                 Technical Appendix II

Proof read by John Searle B.E (Civil) 12th December 2017

## **TECHNICAL APPENDIX I**

### Definitions of Terminology

Sound Pressure Level:

The root-mean-square values of the pressure fluctuations above and below atmospheric pressure caused by the passage of a sound wave, usually expressed in deci Bels (re 20 µ Pa)

deci Bel:

Unit usually used to define sound pressure level relative to a reference pressure.

$$dB = 20 \log_{10} \left( \frac{P}{P_{ref}} \right)$$

(A):

Reference to particular weighting network within a Sound Level Meter which modifies the linear response. 'A' weighting is designed to approximate the response of the human ear.

(C):

Reference to a weighting network within a Sound Level Meter. Modifies the Linear response only slightly on the lower frequency range.

Rw

Weighted Sound Reduction Index. A single number rating system used to define attenuation of materials. Unit is deci Bels (dB). Similar to the previous STC (Sound Transmission Class) system but with minor differences.

L<sub>10</sub>

The noise level exceeded for 10% of a measurement period. Often used as a measurement of occasional interruptive noise, such as traffic.

L<sub>90</sub>

The noise level exceeded for 90% of a measurement period. Commonly accepted as the natural Background Noise Level.

Leq:

Equivalent Continuous Sound Level. This is calculated on the basis of average of the Sound Pressure Level (acoustic energy) over a period of time and is expressed in deci Bels.

LAeq:

The 'A' weighted Equivalent Continuous Sound Level.

LAeq8hr

The equivalent of 8 hours exposure to an LAeq of 85dB. The actual exposure period may be longer or shorter than 8 hours.

Slow - S:

Dynamic characteristics of a Sound Level Meter which employs a time saving averaging constant of 1 second.

Fast - F:

Dynamic characteristic - time averaging constant is 125m sec.

Impulse - Imp:

Dynamic characteristic - time averaging constant is 33m sec.

Peak - Pk:

Dynamic characteristic - time averaging constant is 1m sec.



## **TECHNICAL APPENDIX II**

### Equipment Used

Noise Sentry Rt

Serial No. CFFWDtUYc983oJngZ0rxtD

Quest CA22

Acoustic Calibrator  
Serial No. J1060008

NATA Laboratory calibration due 13<sup>th</sup> December 2019

The noise logger and sound level analyser were calibrated before and after the measurements. No significant change was found to have occurred.

# BESS Report



This BESS report outlines the sustainable design commitments of the proposed development at 53 Wattle Rd Maidstone VIC 3012. The BESS report and accompanying documents and evidence are submitted in response to the requirement for a Sustainable Design Assessment or Sustainability Management Plan at Maribyrnong City Council.

Note that where a Sustainability Management Plan is required, the BESS report must be accompanied by a report that further demonstrates the development's potential to achieve the relevant environmental performance outcomes and documents the means by which the performance outcomes can be achieved.

## 53 Wattle Rd, Maidstone 3012 Maidstone

**Site area:** 1965 m<sup>2</sup> · **Building Floor Area:** 1804 m<sup>2</sup> ·  
**Date of Assessment:** 01 Feb 2018 · **Version:** V3, 1.5.0-B150 ·  
**Applicant:** info@nedesign.net.au

Project number

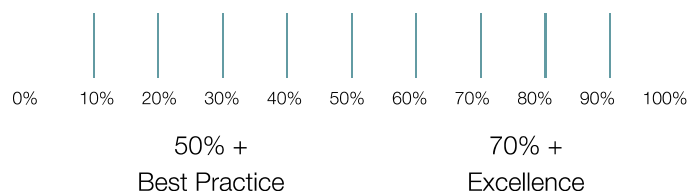
**11279**

Published

<http://bess.net.au/projects/11279>

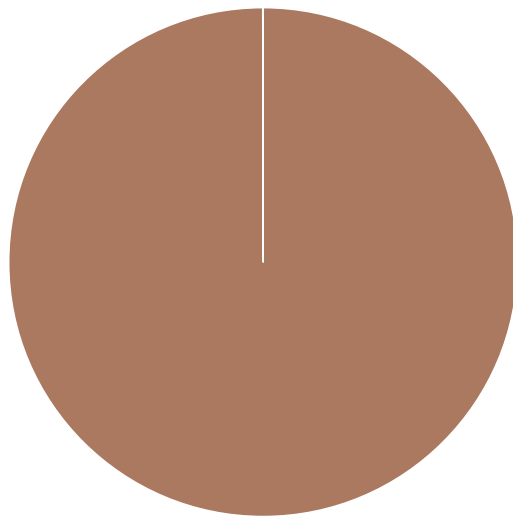
Your BESS score is

**+ 50%**



% of Total	Category	Score	Pass
2 %	Management	50 %	
5 %	Water	64 %	✓
14 %	Energy	52 %	✓
13 %	Stormwater	100 %	✓
8 %	IEQ	50 %	✓
2 %	Transport	33 %	
0 %	Waste	0 %	
3 %	Urban Ecology	62 %	
0 %	Innovation	0 %	

## Building Composition

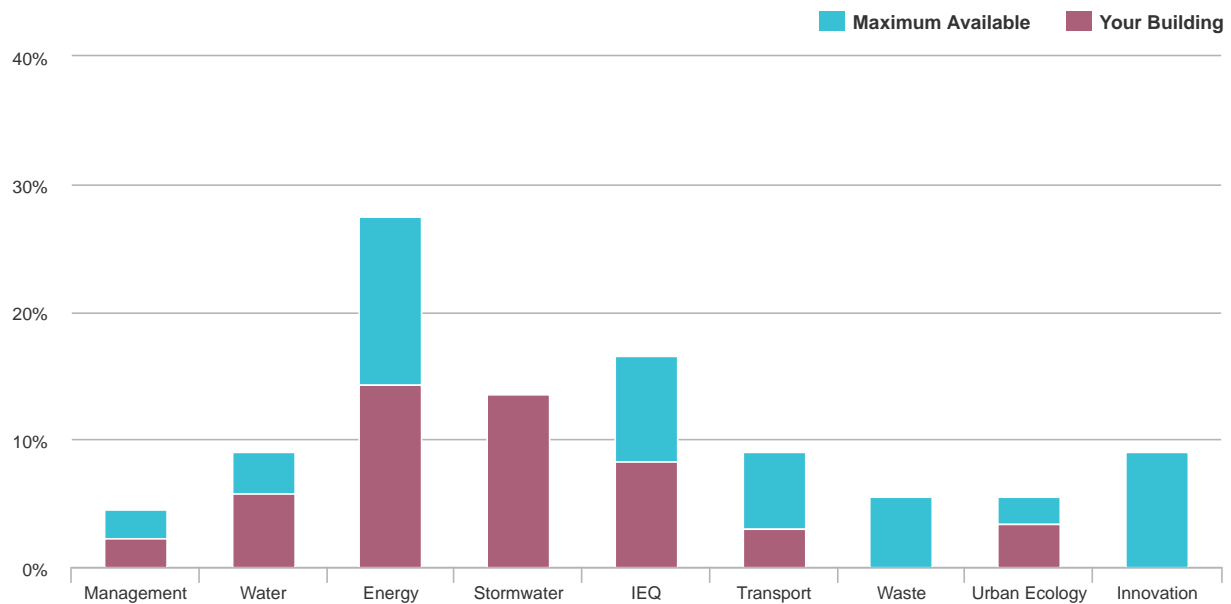


Townhouse

## Dwellings

Type	Name	Quantity	Area
Townhouse	Unit 1	1	309 m <sup>2</sup>
Townhouse	Unit 6	5	140 m <sup>2</sup>
Townhouse	Unit 7	4	140 m <sup>2</sup>
Townhouse	Unit 11	1	235 m <sup>2</sup>

## How did this Development Perform in each Environmental Category?



## Sustainable design commitments by category

The sustainable design commitments for this project are listed below. These are to be incorporated into the design documentation and subsequently implemented.

### Management

50% - contributing 2% to overall score

Credit

Disabled

Scoped out

Score

Management 2.2 Thermal Performance Modelling - Multi-Dwelling Residential	100 %
Management 4.1 Building Users Guide	100 %

## Management 2.2 Thermal Performance Modelling - Multi-Dwelling Residential 100%

Score Contribution	This credit contributes 33% towards this section's score.
Aim	To encourage and recognise developments that have used modelling to inform passive design at the early design stage
Questions	
	Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?
Yes	

## Management 4.1 Building Users Guide 100%

Score Contribution	This credit contributes 16% towards this section's score.
Aim	To encourage and recognise initiatives that will help building users to use the building efficiently
Questions	
	Will a building users guide be produced and issued to occupants?
Yes	

## Water 64% - contributing 5% to overall score

Credit	Disabled	Scoped out	Score
Water 1.1 Potable Water Use Reduction (Interior Uses)			50 %
Water 2.1 Rainwater Collection & Reuse (Additional Uses)			75 %
Water 3.1 Water Efficient Landscaping			100 %

### Water Approachs

What approach do you want to use Water? Use the built in calculation tools

### Project Water Profile Questions

Do you have a reticulated third pipe or an on-site water recycling system?	No
Are you installing a swimming pool?	No
Are you installing a rainwater tank?	Yes

### Water fixtures, fittings and connections



	Unit 1	Unit 6	Unit 7	Unit 11
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Medium Sized Contemporary Bath	Medium Sized Contemporary Bath	Medium Sized Contemporary Bath	Medium Sized Contemporary Bath
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	Scope out	Scope out	Scope out	Scope out
Washing Machine Water Efficiency	Scope out	Scope out	Scope out	Scope out
Connected to which Tank	Total tank	Total tank	Total tank	Total tank
Rainwater connected to: Toilets	Yes	Yes	Yes	Yes
Rainwater connected to: Laundry (washing machine)	No	No	No	No
Rainwater connected to: Hot Water System	No	No	No	No

Showerhead
Bath
Kitchen Taps
Bathroom Taps
Dishwashers
WC
Urinals
Washing Machine Water Efficiency
Connected to which Tank
Rainwater connected to: Toilets
Rainwater connected to: Laundry (washing machine)
Rainwater connected to: Hot Water System

### Rainwater Tanks

	Total tank
What is the total roof area connected to the rainwater tank? Square Metres	967.0
Tank Size    Litres	22000.0
Irrigation area connected to tank    Square Metres	648.0
Is connected irrigation area a water efficient garden?	Yes
Other external water demand connected to tank?    Litres/Day	0.0

### Water 1.1 Potable Water Use Reduction (Interior Uses)

Score Contribution	This credit contributes 57% towards this section's score.
Aim	Water 1.1 Potable water use reduction (interior uses) What is the reduction in total water use due to efficient fixtures, appliances, and rainwater use? To achieve points in this credit there must be >25% potable water reduction. You are using the built in calculation tools. This credit is calculated from information you have entered above.
Criteria	Percentage reduction in potable water use
Questions	
Percentage Achieved ?	Percentage %
<hr/>	
%	
<hr/>	
Calculations	
Annual Water Consumption (kL) (Reference)	
<hr/>	
1933	
<hr/>	
Annual Water Consumption (kL) (Proposed)	
<hr/>	
1353	
<hr/>	
% Reduction in Potable Water Consumption	Percentage %
<hr/>	
29 %	
<hr/>	

## Water 2.1 Rainwater Collection &amp; Reuse (Additional Uses)

75%

Score Contribution	This credit contributes 28% towards this section's score.
Aim	What is the additional reduction in potable (mains) water use due to rainwater harvesting? Additional water uses for rainwater include non-potable demands such as irrigation, pools, commercial process uses and taps for washdown. Note: tank water will only be available for additional uses if it not required for internal uses. If the property uses an alternative water source, the alternative water source is deemed to meet 90% of additional non-potable water use requirements. You are using the built in calculation tools. This credit is calculated from information you have entered above in the rainwater tanks section.
Criteria	What is the additional reduction in potable (mains) water use due to using rainwater or an alternative water source?
Questions	
Percentage Achieved ?	Percentage %
<hr/>	
%	
<hr/>	
Calculations	
Rainwater collection & reuse (additional uses)	
<hr/>	
61 %	
<hr/>	

## Water 3.1 Water Efficient Landscaping

Score Contribution	This credit contributes 14% towards this section's score.
Aim	Are water efficiency principles used for landscaped areas? This includes low water use plant selection (e.g. xeriscaping) and specifying water efficient irrigation (e.g. drip irrigation with timers and rain sensors). Note: food producing landscape areas and irrigation areas connected to rainwater or an alternative water source are excluded from this section.
Questions	
Will water efficient landscaping be installed?	
Yes	

## Energy

52% - contributing 14% to overall score

Credit	Disabled	Scoped out	Score
Energy 2.1 Greenhouse Gas Emissions			100 %
Energy 2.3 Electricity Consumption			100 %
Energy 2.4 Gas Consumption			100 %
Energy 2.5 Wood Consumption			N/A
Energy 3.2 Hot Water			100 %
Energy 3.3 External Lighting			100 %
Energy 3.4 Clothes Drying			100 %
Energy 3.5 Internal Lighting - Residential Single Dwelling			100 %

### Dwellings Energy Approachs

What approach do you want to use for Energy?	Use the built in calculation tools
----------------------------------------------	------------------------------------

### Project Energy Profile Questions

Are you installing a solar photovoltaic (PV) system?	No
Are you installing any other renewable energy system(s)?	No
Gas Supply	Natural Gas

### Dwelling Energy Profiles

	Unit 1	Unit 6	Unit 7	Unit 11
Below the floor is	Ground or Carpark	Ground or Carpark	Ground or Carpark	Ground or Carpark
Above the ceiling is	Outside	Outside	Outside	Outside
Exposed sides	4	3	3	4
NatHERS Annual Energy Loads - Heat MJ/sqm	106.5	95.1	101.8	95.5
NatHERS Annual Energy Loads - Cool MJ/sqm	31.2	28.7	26.3	24.8
NatHERS star rating	6.0	6.4	6.2	6.4

	Unit 1	Unit 6	Unit 7	Unit 11
Type of Heating System	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	5 Star	5 Star	5 Star	5 Star
Type of Cooling System	Refrigerative space	Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency	4 Stars	4 Stars	4 Stars	4 Stars
Type of Hot Water System	J Gas Instantaneous 6 star	J Gas Instantaneous 6 star	J Gas Instantaneous 6 star	J Gas Instantaneous 6 star
% Contribution from solar hot water system	30 %	30 %	30 %	30 %
Clothes Line	D Private outdoor clothesline	D Private outdoor clothesline	D Private outdoor clothesline	D Private outdoor clothesline
Clothes Dryer	A No clothes dryer	A No clothes dryer	A No clothes dryer	A No clothes dryer
Below the floor is				
Above the ceiling is				
Exposed sides				
NatHERS Annual Energy Loads - Heat MJ/sqm				
NatHERS Annual Energy Loads - Cool MJ/sqm				
NatHERS star rating				
Type of Heating System				
Heating System Efficiency				
Type of Cooling System				
Cooling System Efficiency				
Type of Hot Water System				
% Contribution from solar hot water system				
Clothes Line				
Clothes Dryer				

## Energy 2.1 Greenhouse Gas Emissions

100%

Score Contribution	This credit contributes 10% towards this section's score.
Aim	Reduce the building's greenhouse gas emissions
Criteria	Are greenhouse gas emissions >10% below the benchmark

Questions

Criteria Achieved ?

-

Calculations

Reference Building with Reference Services (BCA only) kg CO<sub>2</sub>



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110144.4

---

Proposed Building with Proposed Services (Actual Building) kg CO<sub>2</sub>

---

40109.6

---

% Reduction in GHG Emissions Percentage %

---

63 %

---

## Energy 2.3 Electricity Consumption

100%

---

Score Contribution This credit contributes 10% towards this section's score.

---

---

Aim Reduce consumption of electricity

---

---

Criteria Is the annual electricity consumption >10% below the benchmark

---

Questions

Criteria Achieved ?

---

-

---

Calculations

Reference kWh

---

84816.6

---

Proposed kWh

---

29639.1

---

Improvement Percentage %

---

65 %

---

## Energy 2.4 Gas Consumption

100%

---

Score Contribution This credit contributes 10% towards this section's score.

---

---

Aim Reduce consumption of electricity

---

---

Criteria Is the annual gas consumption >10% below the benchmark?

---

Questions

Criteria Achieved ?

---

-

---

Calculations

Reference MJ

---

179478.3

---

Proposed MJ

94273.9

Improvement Percentage %

47 %

### Energy 2.5 Wood Consumption

N/A

**This credit was scoped out:** No wood heating system present

Aim Reduce consumption of wood

Criteria Is the annual wood consumption >10% below the benchmark?

### Energy 3.2 Hot Water

100%

Score Contribution This credit contributes 5% towards this section's score.

Criteria Does the hot water system use >10% less energy (gas and electricity) than the reference case?

Questions

Criteria Achieved ?

-

Calculations

Reference MJ

49855.1

Proposed MJ

26226.7

Improvement Percentage %

47 %

### Energy 3.3 External Lighting

100%

Score Contribution This credit contributes 5% towards this section's score.

Questions

Is the external lighting controlled by a motion detector?

Yes

## Energy 3.4 Clothes Drying

100%

Score Contribution	This credit contributes 5% towards this section's score.
Criteria	Does the combination of clothes lines and efficient dryers reduce energy (gas+electricity) consumption by more than 10%?
Questions	
Criteria Achieved ?	
-	
Calculations	
Reference kWh	
7567.4	
Proposed kWh	
1513.5	
Improvement Percentage %	
80 %	

## Energy 3.5 Internal Lighting - Residential Single Dwelling

100%

Score Contribution	This credit contributes 5% towards this section's score.
Aim	Reduce energy consumption associated with internal lighting
Questions	
Does the development achieve a maximum illumination power density of 4W/sqm or less?	
Yes	

## Stormwater

100% - contributing 13% to overall score

Credit	Disabled	Scoped out	Score
Stormwater 1.1 Stormwater Treatment			100 %
Which stormwater modelling are you using?	Melbourne Water STORM tool		

## Stormwater 1.1 Stormwater Treatment

100%

Score Contribution	This credit contributes 100% towards this section's score.
Aim	To achieve best practice stormwater quality objectives through reduction of pollutant load (suspended solids, nitrogen and phosphorus)

Criteria	Has best practice stormwater management been demonstrated?
Questions	
STORM score achieved	
103	
Flow (ML/year)	% Reduction
-	
Total Suspended Solids (kg/year)	% Reduction
-	
Total Phosphorus (kg/year)	% Reduction
-	
Total Nitrogen (kg/year)	% Reduction
-	
Calculations	
Min STORM Score	
100	

## IEQ

50% - contributing 8% to overall score

Credit	Disabled	Scoped out	Score
IEQ 3.1 Thermal comfort - Double Glazing			100 %

IEQ 3.1 Thermal comfort - Double Glazing 100%

Score Contribution	This credit contributes 50% towards this section's score.
Aim	To provide comfortable indoor spaces and reduce energy needed for heating and cooling

### Questions

Is double glazing (or better) used to all living areas and bedrooms?

Yes

## Transport

33% - contributing 2% to overall score

Credit	Disabled	Scoped out	Score
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Transport 1.1 Bicycle Parking - Residential

100 %

Transport 1.1 Bicycle Parking - Residential

100%

Score Contribution	This credit contributes 33% towards this section's score.
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Aim	To encourage and recognise initiatives that facilitate cycling
-----	----------------------------------------------------------------

Criteria	Is there at least one secure bicycle space per dwelling?
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Questions

Bicycle Spaces Provided ?

22

Calculations

Min Bicycle Spaces Required

11

Waste

0% - contributing 0% to overall score

Urban Ecology

62% - contributing 3% to overall score

Credit	Disabled	Scoped out	Score
Urban Ecology 2.1 Vegetation			100 %
Urban Ecology 2.4 Private Open Space - Balcony / Courtyard Ecology			100 %

Urban Ecology 2.1 Vegetation

100%

Score Contribution	This credit contributes 50% towards this section's score.
--------------------	-----------------------------------------------------------

Aim	To encourage and recognise the use of vegetation and landscaping within and around developments
-----	-------------------------------------------------------------------------------------------------

Criteria	How much of the site is covered with vegetation, expressed as a percentage of the total site area.
----------	----------------------------------------------------------------------------------------------------

Questions

Percentage Achieved ? Percentage %

35 %

Urban Ecology 2.4 Private Open Space - Balcony / Courtyard Ecology

Score Contribution	This credit contributes 12% towards this section's score.
Aim	Encourage plants to be grown on balconies and courtyards

#### Questions

Is there a tap and floor waste on every balcony / in every courtyard?

Yes

## Innovation

0% - contributing 0% to overall score

## Items to be marked on floorplans

0 / 8 floorplans & elevation notes complete.

Energy 3.4: External lighting sensors annotated	Incomplete
Water 2.1: Location of rainwater tanks as described	Incomplete
Water 3.1: Water efficient garden annotated	Incomplete
Stormwater 1.1: Location of any stormwater management systems used in STORM or MUSIC modelling (e.g. Rainwater tanks, raingarden, buffer strips)	Incomplete
IEQ 3.1: Glazing specification to be annotated	Incomplete
Transport 1.1: All nominated residential bicycle parking spaces	Incomplete
Urban Ecology 2.1: Vegetated areas	Incomplete
Urban Ecology 2.4: Taps and floor waste on balconies / courtyards	Incomplete

## Documents and evidence

0 / 4 supporting evidence documentation complete.

Management 2.2: Preliminary NatHERS assessments	Incomplete
Energy 3.5: Provide a written description of the average lighting power density to be installed in the development and specify the lighting type(s) to be used.	Incomplete
Stormwater 1.1: STORM report or MUSIC model	Incomplete
IEQ 3.1: Reference to floor plans or energy modelling showing the glazing specification (U-value and Solar Heat Gain Coefficient, SHGC)	Incomplete

The Built Environment Sustainability Scorecard (BESS) has been provided for the purpose of information and communication. While we make every effort to ensure that material is accurate and up to date (except where denoted as 'archival'), this material

does in no way constitute the provision of professional or specific advice. You should seek appropriate, independent, professional advice before acting on any of the areas covered by BESS.

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