



# **Agenda**

## **Planning Review Meeting**

Wednesday 11 December 2013 at 7:00pm

Queenscliff Town Hall  
50 Learmonth Street, Queenscliff

### **Distribution**

#### **Councillors**

Cr. Helene Cameron (Mayor)  
Cr. Susan Salter (Deputy Mayor)  
Cr. Bob Merriman  
Cr. Graham J Christie, JP  
Cr. Sue Wasterval

#### **Officers**

Lenny Jenner, Chief Executive Officer  
Phil Josipovic, General Manager Planning & Infrastructure  
Leah Protyniak, Senior Planner

In accordance with the Borough of Queenscliffe Local Law No 1, 2010, the information contained within this Agenda is for the confidential and privileged use of Councillors until at least 48 hours prior to this meeting

**THIS MATERIAL DOES NOT NECESSARILY REFLECT THE VIEWS OF COUNCIL**



## Planning Review Meeting

### A guide to understanding meeting protocol

There is a need to cover some simple protocols as each meeting will often involve people attending for the first time.

1. Planning Review meetings are held to provide additional information to Councillors in preparation for the following formal council meeting. The meetings are informal and proponents and submitters to any planning matter are encouraged to address council.
  2. This is not a debating forum – we are trying to obtain the best possible understanding of the matter.
  3. We ask that parties addressing Council speak to the chair and not involve the gallery.
  4. Submitters are asked to elaborate on their written submissions – not just read out their letter – all councillors have a copy of written material.
  5. The meeting process will typically adopt the following sequence:
    - Introduction and welcome by the Chairperson.
    - Overview presentation by Council's Planning Officer.
    - The Applicant is given 5-10 minutes to outline their proposal – longer time may be given at the discretion of the chair depending on the complexity of the matter.
    - We ask submitters to limit their comments to 5 minutes bearing in mind we are seeking elaboration on the comments already received in their submission.
    - Following the last submitter the Applicant will be given an opportunity to clarify any matter of fact – but not to comment on matters of opinion.
    - Throughout this process Councillors will be able to ask questions of the Applicant, submitters or a Council Officer.
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**1. OPENING OF MEETING**

**2. APOLOGIES**

**3. PECUNIARY INTEREST & CONFLICT OF INTEREST DISCLOSURES**

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#### 4. PLANNING & DEVELOPMENT

##### 4.1 1 KIRK ROAD, POINT LONSDALE

Planning Permit Application: 2013/066

#### SUMMARY

<b>Proposal</b>	Buildings and works associated with the construction of a three storey building (retail premises and dwelling), use of the land for a dwelling and removal of native vegetation  Application and plans: <i>Refer Appendix 1</i>
<b>Zone/Overlays</b>	Commercial 1 Zone Design and Development Overlay – Schedule 2 Vegetation Protection Overlay – Schedule 1
<b>Permit Triggers</b>	Clauses 34.01 & 43.02 – Buildings and works
<b>Public Notification</b>	Advertised by registered post to adjoining property owners and occupiers, two signs on the site, a notice in The Echo newspaper and notice in the municipal offices for 14 days.
<b>Submissions</b>	Twenty-one (21) submissions received. Copies of submissions provided to Councillors: <i>Refer Confidential Appendix 2</i>
<b>Key issues raised by submitters (summarised)</b>	Overdevelopment, neighbourhood character, parking, vegetation, liquor licence, use of site, waste, deliveries, residential impact, discrepancies on plans, amenity impacts, site coverage, hours of operation, setbacks, vehicle and pedestrian safety, noise.



**4.1.1. Applicant to present to Council**

**4.1.2. Submitters to present to Council**

**4.1.3. Applicant to readdress Council**

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## 5. APPENDIX 1 – APPLICATION DOCUMENTS



Planning Enquiries  
Phone:  
Web: <http://www.queenscliffe.vic.gov.au>

### Office Use Only

Application No.: 2013/066

Date Lodged:

## Application for Planning Permit

If you need help to complete this form, read [How to complete the Application for Planning Permit 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 concerns, please contact Council's planning department.

Questions marked with an asterisk (\*) are mandatory and must be completed.

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

Clear Form

### The Land 1

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

#### Street Address \*

Unit No.:	St. No.: 1	St. Name: Kirk Road
Suburb/Locality: Point Lonsdale		Postcode: 3225

#### Formal Land Description \*

Complete either A or B.

This information can be found on the certificate of title.

A	Lot No.: 1	<input type="radio"/> Lodged Plan	<input checked="" type="radio"/> Title Plan	<input type="radio"/> Plan of Subdivision	No.: 619877Q
OR					
B	Crown Allotment No.:		Section No.:		
Parish/Township Name:					

#### Street Address \*

Unit No.:	St. No.: 1	St. Name: Kirk Road
Suburb/Locality: Point Lonsdale		Postcode: 3225

#### Formal Land Description \*

Complete either A or B.

This information can be found on the certificate of title.

A	Lot No.: 2	<input type="radio"/> Lodged Plan	<input checked="" type="radio"/> Title Plan	<input type="radio"/> Plan of Subdivision	No.: 619877Q
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.

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

If you need help about the proposal, read:  
[How to Complete the Application for Planning Permit Form](#)

Use and development of the land for a licensed retail premises (cellar door) and dwelling and reduction in associated car parking.

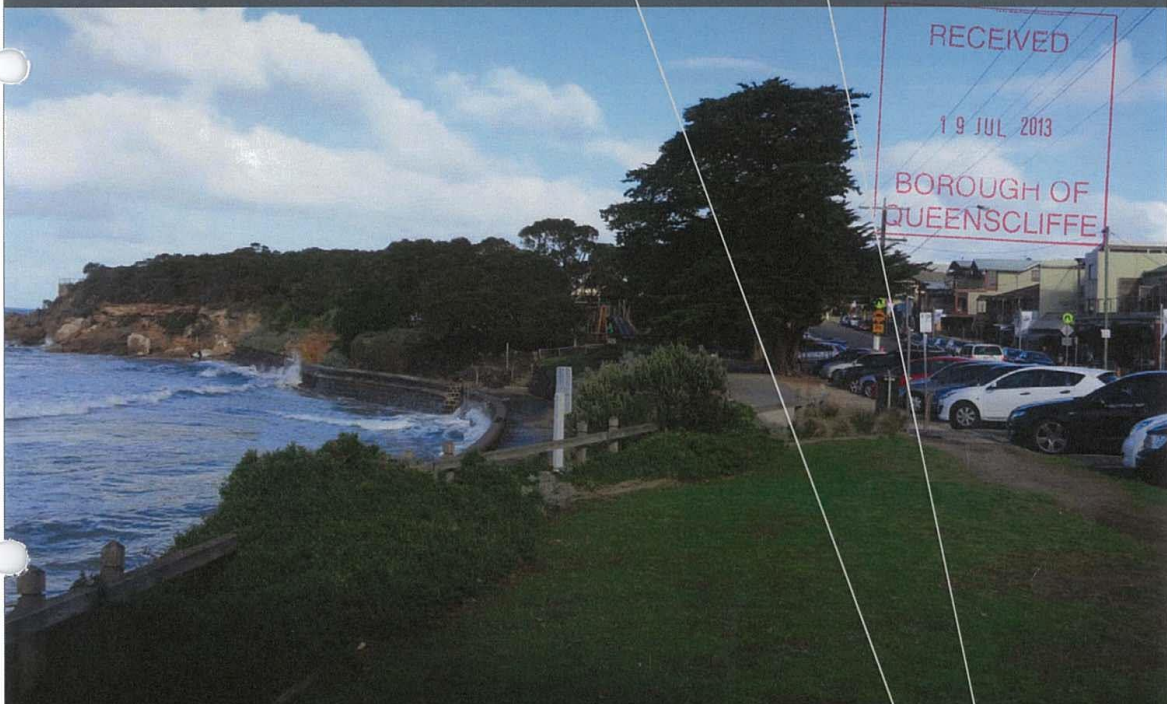
Provide additional information on the proposal, including: plans and elevations; any information required by the planning scheme, requested by Council or outlined in a Council planning permit checklist; and if required, a description of the likely effect of the proposal.



## 1 kirk road, point lonsdale

planning permit application for the use  
and development of land for a licenced  
retail premises (cellar door) and dwelling  
and reduction in associated car parking

prepared by **hansen partnership pty ltd**  
july 2013



urban planning | urban design | landscape architecture





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## 1 introduction

Hansen Partnership Pty Ltd has been engaged by PJG Nominees Pty Ltd to prepare a planning permit application for the use and development of land at 1 Kirk Road, Point Lonsdale.

Approval is sought to construct a three (3) storey mixed use development on the subject site, incorporating a licensed retail premises (shop) at ground level, and a dwelling on the first and second levels. The proposed development will offer a unique opportunity within Point Lonsdale for both retail and residential development, which complements the existing character of the Point Lonsdale Retail Village.

This planning report provides details of the subject site, relevant planning controls and policies and a discussion of relevant planning considerations.

In addition, reference is given to the Aboricultural Construction Impact Assessment prepared by Greenwood Consulting, and the Traffic Impact Report by Ratio Consultants.

To summarise, the proposed development is considered appropriate for the following reasons:

- The proposal is an appropriate response to the overarching objectives of State Planning Policy particularly in relation to economic development, settlement and housing diversity.
- The proposal is supported by Local Planning Policy including the objectives for settlement, living, economic development and environment.
- The proposal is consistent with the neighbourhood character of the area considering the sites' location within the Point Lonsdale Shopping Village.
- The proposal is an appropriate response to the relevant zones and overlays affecting the site, providing a commercial and residential opportunity that is responsive to the built form and environmental context of the area.

This report provides justification for why this development should be approved in relation to relevant planning matters.

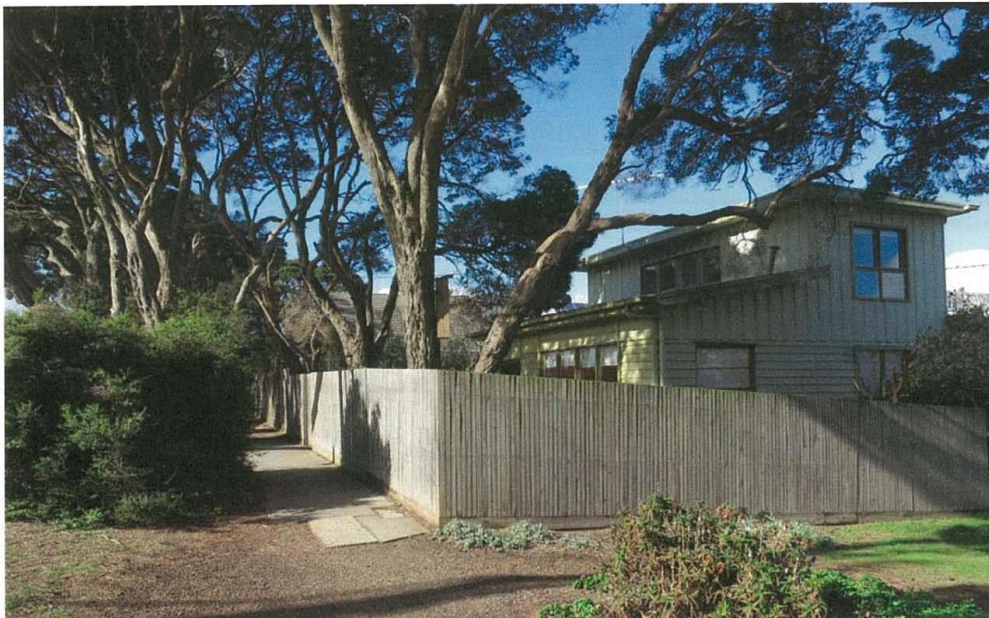


Figure 1: the subject site, viewed from the corner of kirk road and simpson street



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## 2 subject site and environs

### 2.1 subject site

The subject site is located on the corner of Kirk Road, between Point Lonsdale Road to the west and Glaneuse Road to the east. The land is identified as two parcels, formally known as Lot 1 TP619877 and Lot 2 TP619877.

The site is rectangular in shape with a 12.19 metre wide frontage along Kirk Road and a 19.69 metre frontage along Simpson Street, forming an area of approximately 240m<sup>2</sup>. There is approximately a 1 metre slope north to south across the site.

The site is currently occupied by a 2 storey dwelling of timber weatherboard construction. It has a flat corrugated iron roof and a timber paling fence. Vehicle access is provided from Simpson Street along the western boundary.

There are several canopy trees on the site, mostly located at the front of the property. As stated in the recommendations section of the arborist report, two of the three trees at the frontage of the site have low retention value.

There are no covenants on the property that would affect the proposal. Maps and photos of the site follow this section.

### 2.2 environs

The subject site is located in the beachside locale of Point Lonsdale. The area bounded by Point Lonsdale Road, Kirk Road, Simpson Street and Adman Street is the retail centre of the township, comprising a range of retail uses, some with

dwellings above. The built form is mixed, with traditional and contemporary styles ranging from 1 to 3 storeys. Infill development of up to 3 storeys is evident within the retail centre. Allotments in this area are generous in size and are generally orientated east west with pedestrian access often from Simpson Street and Point Lonsdale Road.

The area west of Simpson Street is primarily residential and comprises detached and some attached dwellings 1 to 2 stories in scale. Allotments are generally large, evidenced by some dwellings having private tennis courts in addition to private open space. This area comprises of traditional holiday homes and larger contemporary dwellings.

In relation to the nature of adjoining properties, we note the following:

- **No. 109 Lonsdale Road** abuts the eastern boundary of the review site and contains a 2 storey detached dwelling of timber weatherboard construction. It has a pitched tiled roof and timber panel fencing. Private open space is located at the rear of the property.
- **No. 1 Simpson Street** abuts the southern boundary of the review site and contains a single storey dwelling of timber weatherboard construction. It has a pitched corrugated iron roof and no front fencing. Vehicle access is from Simpson Street. Habitable room windows are located on the north side of the dwelling.

Photos of the adjoining sites follow.



Figure 2: location of the subject site and surrounding area (source: nearmap)



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figure 3: subject site showing development in the point lonsdale shopping area to the south



figure 4: street view of point lonsdale road, looking south



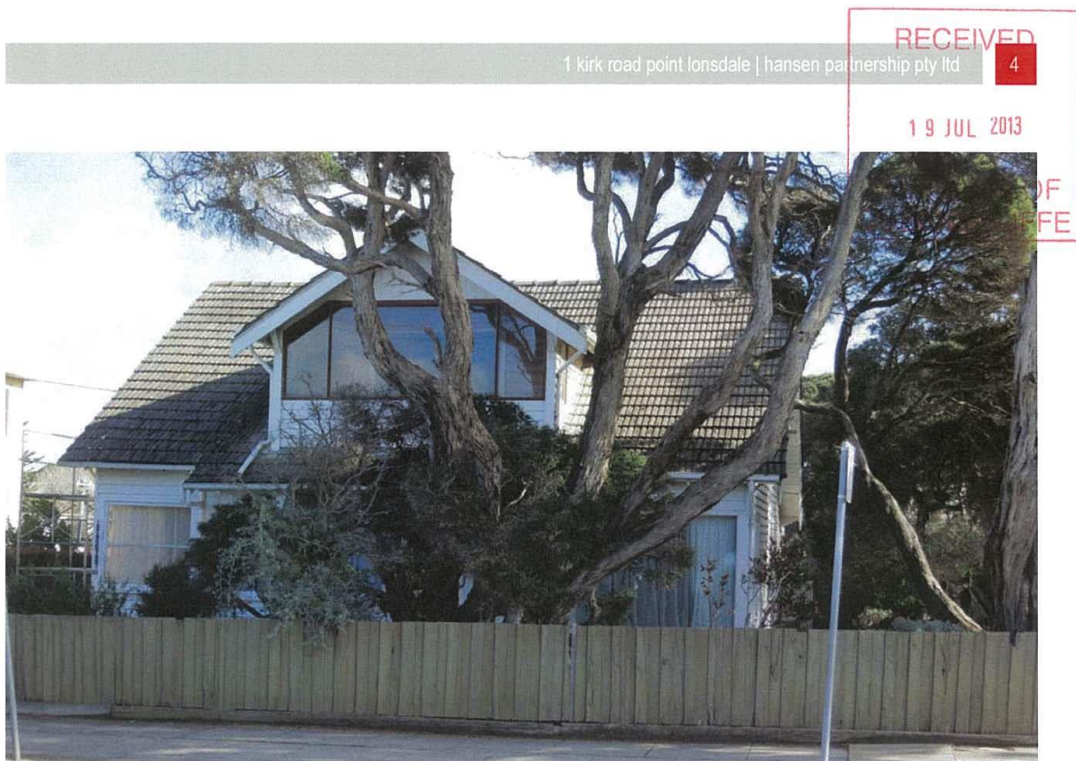


figure 5: frontage of 109 point lonsdale road, immediately east of the subject site



figure 6: rear of 109 point lonsdale road, viewed from the east side of the subject site

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figure 7: 1 simpson street, immediately south of the subject site



figure 8: north side of 1 simpson road, viewed from the rear of the subject site



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figure 9: properties to the north of the subject site on kirk road



figure 10: properties to the west of the subject site along simpson street

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figure 11: properties to the south of the subject site along simpson street



figure 12: walkway to the subject site from point lonsdale road looking east, showing vegetation in the roadside reserve





### 3 the proposal

It is proposed to demolish the existing dwelling on the site to develop a three (3) storey mixed use development, incorporating a licensed retail premises (shop) at ground level, and a dwelling on the first and second levels, as illustrated in the plans prepared by e+ architecture (Context Plan 3).

The proposed building is contemporary in nature. A range of materials, including light coloured render and natural timber cladding, will enhance the appearance of the building and soften its impact in the streetscape.

Specifically, the development includes the following features:

#### Ground floor

- Licensed retail premises (shop), for the purpose of wine sales and tasting and accompanying food, being approximately 130m<sup>2</sup>.
- The proposed hours of operation for the retail tenancy are:
  - Wednesday and Thursday – 11:00am to 6:00pm; and
  - Friday to Sunday – 11:00am to 8:00pm.
- 2 car parking spaces, accessed from Simpson Street.
- Disabled toilet for retail tenancy.
- Private secure storage area.
- Lift and stairwell to upper levels.

#### First floor

- Two (2) bedrooms, each with an en suite.
- Laundry.
- Private balcony areas accessed from the first bedroom, with an area of approximately 18.5 m<sup>2</sup>.
- Lift and stairwell to upper and lower levels.

#### Second floor

- Lounge room, kitchen, dining and powder room.
- Secluded private open space, in the form of a balcony, accessed from the lounge room, with a total area of 15 m<sup>2</sup>.
- Lift and stairwell to lower levels.

#### General

- Site coverage of 230 m<sup>2</sup> (95 per cent).
- Maximum building height of 9.5 metres from natural ground level.

#### Setbacks

The building is set back as follows:

Floor	Kirk Rd (north)	Simpson St (west)	Side (east)	Rear (south)
Ground	0 - 0.45m	0 - 1.2m	0 m	0 m
First	3 m	2 m	2 m	2 m
Second	3 m	2.5 m	2 m	2 m

The proposed development necessitates the removal of all vegetation within the site boundary.

An assessment against Clause 54 outlining particulars on the building height, setbacks from boundaries, provision of private open space etc. is given under planning considerations, later in this report.

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## 4 the planning context

Clause 65 identifies the relevant decision guidelines that a Responsible Authority must consider in assessing a planning permit application. The following are relevant to the proposed development:

- The matters set out in Section 60 of the Act.
- The State Planning Policy Framework and the Local Planning Policy Framework including the Municipal Strategic Statement and the local planning policies.
- The purpose of the zone, overlay and other provisions.
- Any matter required to be considered in the zone, overlay or other provision.
- The orderly planning of the area.
- The effect on the amenity of the area.

These matters form the framework of the following sections of this submission.

### 4.1 state planning policy framework

The following provisions of the State Planning Policy Framework (SPPF) are relevant to this application:

- **Clause 12.01: Biodiversity** seeks to protect and conserve native vegetation and habitats for native plants and animals;
- **Clause 12.02-2: Appropriate Development of Coastal Areas** seeks to ensure that development conserves, protects and enhances coastal biodiversity and ecological values;
- **Clause 15.01-1: Urban Design** seeks to create urban environments that are safe, functional and provide a sense of place and community identity;
- **Clause 16: Housing** seeks to encourage housing diversity and to promote a housing market that meets the needs of the community; and
- **Clause 17: Economic Development** seeks to provide for a strong and innovative economy by encouraging development which meets the community's needs for retail and entertainment services that provide a net community benefit.

The overarching intent of these policies are to promote well-designed development, which provide a range of economic opportunities and diverse housing types, whilst protecting native vegetation and being responsive to the neighbourhood character of the area. The main elements of these policies as they relate to the proposal are discussed within the planning considerations section of this report.

### 4.2 local planning policy framework

The following provisions of the Local Planning Policy Framework (LPPF) are relevant to this application:

- **Clause 21.04: Vision – Strategic Framework** seeks to maintain the Borough's unique natural environment, and built and natural environment through careful land use planning and development. The Point Lonsdale Structure Plan map locates the review site within a Neighbourhood Activity Centre.
- **Clause 22.04-3: Foreshore Areas.** Urban Character Policy Map 3, locates the subject site in Future Character Management Area 3, Point Lonsdale Road. This policy identifies objectives and built form guidelines for all new development, including site layout; building design; building height and setbacks; and fencing, driveways and landscaping.

### 4.3 land use zoning

The site is within the **Business 1 Zone (B1Z)**, which has the following purpose:

*To encourage the intensive development of business centres for retailing and other complementary commercial, entertainment and community uses.*

Pursuant to Clause 34.01-1, a permit is required for a dwelling, as the frontage at ground level exceeds 2 metres. Pursuant to Clause 34.01-4, a permit is also required to construct a building or construct or carry out works. A relevant decision guideline for the grant of a permit is compliance with Clause 54 (Rescode).



figure 13 - zoning map showing subject site in business 1 zone (B1Z)



#### 4.4 land use overlays

The site is covered by a **Design and Development Overlay – Schedule 2** (Point Lonsdale Shopping Village), which seeks to ensure new development is sympathetic to the distinguishing urban character elements of the area. It also encourages urban design improvements; appropriate building heights; bulk and setbacks that are respectful of adjoining sites; and consolidation of commercial functions that are distinguished from adjacent residential land. These matters are addressed within the planning considerations section of this report.

Pursuant to Clause 43.02-2 and Section 2.0 of Schedule 2 a permit is required to construct a building or construct or carry out works.

Notably, pursuant to Section 2.0 of Schedule 2, no new building can exceed three storeys or 9.5 metres above natural ground level.

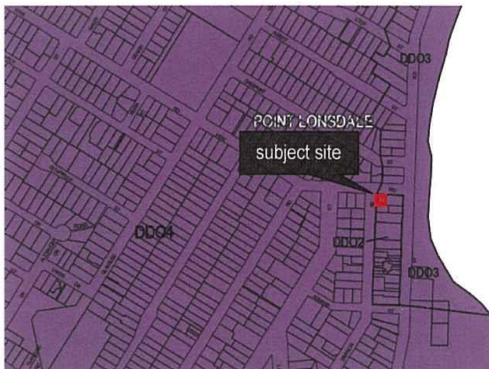


figure 14: the subject site within design and development overlay – schedule 2

The site is also covered by **Vegetation Protection Overlay – Schedule 1** (Remnant and Vegetation Protection Area), which seeks to preserve and enhance vegetation by ensuring that new development has regard to established landscapes, streetscapes and development patterns, and that it does not adversely impact remnant vegetation.

Pursuant to Clause 42.02-2 a permit is required to remove, destroy or lop native vegetation specified in the schedule to the overlay. Pursuant to Schedule 2, a permit is required to remove or lop all native vegetation including Moonah, Tea Tree and Coastal Heath.

It is noted that a permit is not required to destroy or lop native vegetation within 3 metres of an existing dwelling, except within the frontage of the site.



figure 15: the subject site within vegetation protection overlay – schedule 1

#### 4.5 particular provisions

The following particular provisions are relevant to this application:

- **Clause 52.06 Car Parking** requires the provision of parking under Clause 52.06-5 to be provided. A permit may be granted (including to zero) to reduce the requirement to provide parking in accordance with the Planning Scheme rate.
- **Clause 52.27 Licensed Premises** aims to ensure that licensed premises are situated in appropriate locations and that the impact on the amenity of the surrounding area is considered.
- **Clause 54 One Dwelling on a Lot** seeks to encourage development that respects the existing neighbourhood character, provides reasonable standards of amenity for current and future residents and is responsive to the site and surrounds.

It is noted that Clause 54 does not apply to land within the Business 1 Zone. However it is a decision guideline that the Council can consider when assessing an application. In this commercial context, variations to ResCode standards are acceptable given that the area is not subject to the same scrutiny as areas zoned for residential purposes (i.e. the residentially zoned area west and north of Kirk Road). An assessment of the proposal against the Standards and Objectives of Clause 54 is provided within the planning considerations section of this report.



## 5 the planning considerations

Based on the provisions of the Queenscliffe Planning Scheme and the decision guidelines of Clause 65, the following are considered to be the planning issues relevant to the proposed development of the subject site.

- Is there support for the proposal in state and local planning policy?
- Does the proposal respond appropriately to neighbourhood character?
- Does the proposal meet the requirements of the zone and overlays?
- Will the licensed premises have amenity impacts?
- Is a Cultural Heritage Management Plan required?
- Does the proposal achieve compliance with the relevant provisions of ResCode?
- Has adequate parking been provided on site?

### 5.1 response to planning policy

Having regard to relevant state and local policy, there are a number of themes that arise in relation to the proposal, which will be addressed as follows:

- Settlement;
- Economic development;
- Housing; and
- Environment.

#### settlement

The subject site sits behind the retail core within the designated retail precinct of Point Lonsdale. While there is not strong evidence of retail at the back of this precinct fronting Simpson Street, the zoning of the site suggests consistency with a preferred future vision for this area.

At a State level, Clause 11 states:

*Planning is to facilitate sustainable development that takes full advantage of existing settlement patterns, and investment in transport and communication, water and sewerage and social facilities.*

In addition, local policy at Clause 21.05-1 encourages growth in appropriate locations, whilst retaining a compact urban form that is part of the coastal village character of Point Lonsdale. This Clause also states that household sizes in the Borough are

declining, therefore requiring a greater number and diversity of dwellings in order to maintain the present population.

It is considered that the proposal provides increased opportunities for amenity and liveability in Point Lonsdale through provision of a retail premises, while also contributing to housing diversity through shop-top housing within the area. The proposal is an appropriate use of the land contributing to both residential and commercial development.

#### economic development

As the subject site is located in a Business 1 Zone and the core retail area of Point Lonsdale, the provision of a retail premises (shop) is an appropriate response to this site, and is supported in both state and local policy.

Clause 17.01-1 of State policy has the following objective:

*To encourage development which meets the communities' needs for retail, entertainment, office and other commercial services and provides net community benefit in relation to accessibility, efficient infrastructure use and the aggregation and sustainability of commercial facilities.*

In addition, local policy at Clause 21.05-4, has the following relevant objectives:

- *Provide a range of retail and commercial uses servicing the needs of the local community, temporary population and tourists.*
- *Encourage new commercial and retail developments that respond to the opportunities presented by the tourist industry.*
- *Preserve and enhance the character of retail and commercial centres, consistent with their urban character and or heritage values.*
- *Improve amenity levels for shoppers and businesses.*
- *Encourage retail and commercial employment.*

As such, it is considered that the development of a retail space is a welcome addition to the township, improving economic viability and amenity for both residents and visitors.

#### housing

Shop-top housing exists within the Point Lonsdale Shopping Village, and provides an opportunity for more dense and diverse housing types than the surrounding residential areas.

Housing is a relevant consideration in State policy with Clause 16.01-4 having the following objective:





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*To provide for a range of housing types to meet increasingly diverse needs.*

In addition, local policy at **Clause 21.05-3** has the following objectives:

- *Improve the range of housing options that meet the needs of residents, the temporary population and tourists.*
- *Encourage increased housing diversity and appropriate density to complement the existing built form and character.*
- *Ensure that new residential development retains significant vegetation.*
- *Ensure that new residential development and redevelopment of existing dwellings achieve high quality design standards.*

The proposed development is considered an appropriate response for this area, providing both a ground floor shop and a diverse dwelling type, contributing to residential amenity in the area.

#### environment

Environment is a key consideration for Point Lonsdale, considering its valued coastal location, and this is outlined in both state and local policies.

At State level, **Clause 12.02-2** aims:

*To ensure development conserves, protects and seeks to enhance coastal biodiversity and ecological values.*

Additionally, local policy at **Clause 21.05-2** concerns the natural environment and aims to preserve the biodiversity of flora and fauna, as well as protecting the environment from inappropriate use and development. This is to be achieved through protecting and retaining native vegetation.

Following recommendations in the arborists report, previously mentioned, it is submitted that the proposal has responded appropriately to the vegetation on the site and in the road reserve to provide a commercial and residential development responsive to the environmental features of the area.

## 5.2 response to neighbourhood character

In addition to state and local policies mentioned above, both ResCode and Council's planning policies reinforce the importance of neighbourhood character as a means of assessing appropriate development.

**Clause 21.05-1** of the MSS identifies the importance of urban character and the need to identify the distinctive qualities of Point Lonsdale to ensure that new development maintains,

enhances and harmonises with the prevailing character of the area.

The **Urban Character Study** is a policy document in the Borough of Queenscliffe Planning Scheme and is a relevant consideration for this application. The Urban Character Study provides guidelines for consideration in the assessment of a proposed development in order to achieve high quality design which reflects the unique qualities of the township.

It is noted that the guidelines in the document have essentially been prepared for residential development on conventional lots and that only relevant objectives in relation to non-residential development need to be addressed. These guidelines are outlined in **Clause 22.04** and therefore an assessment will be given against this Clause below.

**Clause 22.04 - Urban Character Policy** is the primary policy relating to neighbourhood character in the Queenscliffe Planning Scheme. This Clause outlines objectives and policies relating to specific areas in the municipality.

As identified in Urban Character Policy Map 3 (Foreshore Areas) the subject site is located in Future Character Management Area 3 – Point Lonsdale Road. **Clause 22.04-3** outlines objectives and policy for Foreshore Areas, in relation to site layout, building design, building height and setbacks, and fencing, driveways and landscaping.

The proposed development responds positively to the neighbourhood character sought by this Policy, by providing an appropriate response, considering it is located within the commercial area of the Point Lonsdale Shopping Village.

With respect to the recommendations for **Site Layout** under this policy, the proposed development responds as follows:

- The layout of the proposed development has regard to the site's physical, historic and environmental features considering the commercial context of the site's location, the retention of street trees in the road reserve and the absence of heritage buildings within the surrounding streetscape.
- The layout of new development provides a high quality of living for occupants, with provision of high on-site amenity in relation to private open space, daylight and solar access. While there are some amenity impacts for occupants of adjacent dwellings, it is considered the site layout is appropriate for a commercial context on a small lot.
- The layout of the proposed development removes native vegetation on site however retains the native vegetation in the adjacent road reserve.

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In addition, the proposed development meets the following design standards:

- North facing indoor and outdoor living areas are provided, maximising solar access.
- The frontage to the street of the proposed development provides a sense of address.
- The retention of native vegetation in the road reserve minimises views to the building from the street.
- The need for earthworks is limited to less than 1 metre.

With respect to **Building Design Policy** it is considered:

- The design of the proposed development does not impede any views to or from the foreshore area.
- The proposed development fits with the character of the commercial area in a coastal township, which has a diversity of architectural styles, materials and finishes. Consistent with buildings along Point Lonsdale Road within the B1Z, the proposed development is built to the boundary and is considered appropriate scale, massing and proportion for this commercial environment.

In regards to the design standards:

- While a varied roof form is suggested, this would significantly reduce the internal amenity of the proposed development considering the small size of the lot for both retail and residential development.
- The use of a combination of light coloured render and natural timber cladding suits the coastal landscape and softens the impact of the development on the streetscape.

With respect to **Building Height and Setbacks Policy** it is considered:

- The proposed three storey building built to the boundaries, is characteristic of a commercial development, and fits with other similar developments within the Point Lonsdale Shopping Village which are three storey and built to the boundary.
- As the site is located on a corner and is the only site fronting Kirk Road within the Point Lonsdale Shopping Village, the setbacks cannot match the adjoining buildings and are considered appropriate for this context.

With respect to Fencing, Driveways and Landscaping:

- No fencing is provided, suiting a commercial context and the transparent character of the coastal setting.
- Driveways and parking are provided to the side of the site and are not visually dominant in the streetscape.

- While existing native vegetation will be removed, the retention of prominent vegetation in the road reserve will minimise the visual impact of the building.

In addition to this policy on Urban Character, **Clause 54.02** aims to ensure that the proposed design respects the existing neighbourhood character or contributes to a preferred neighbourhood character and that the design responds to the features of the site and the surrounding area. Standard A1 lists neighbourhood character objectives, policies or statements as relevant decision guidelines. Consideration of neighbourhood character is a decision guideline for several provisions of ResCode. An assessment against Clause 54 is given further in this report.

### 5.3 zone and overlay requirements

#### business 1 zone

The site is within the **Business 1 Zone (B1Z)**, which has the following purpose:

*To encourage the intensive development of business centres for retailing and other complementary commercial, entertainment and community uses.*

Pursuant to Clause 34.01-1, a permit is required for a dwelling, as the frontage at ground level exceeds 2 metres. Pursuant to Clause 34.01-4, a permit is also required to construct a building or construct or carry out works.

Clause 34.01-2 relates to the proposed use and whether it will detrimentally affect the amenity of the neighbourhood through transport of materials, building appearance or emissions.

Clause 34.01-4 outlines decision guidelines in relation to buildings and works. It is considered that the proposed development has consideration for the interface with adjoining zones, both across Kirk Road and Simpson Street, considering it incorporates both retail and residential uses. The nature of the retail premises and the hours of operation are not likely to cause detrimental impacts to adjoining residences.

The design of the development provides a positive addition to the streetscape through contemporary architecture and responsive design elements and an active frontage to the pedestrian thoroughfare of Kirk Road.

Although not a requirement for development in a Business 1 Zone, an assessment against Clause 54 is given later in this report, showing the development provides a positive contribution for both future residents and the surrounding area.

#### design and development overlay

The site is covered by a **Design and Development Overlay – Schedule 2** (Point Lonsdale Shopping Village), which seeks to





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ensure new development is sympathetic to the distinguishing urban character elements of the area. It also encourages urban design improvements; appropriate building heights; bulk and setbacks that are respectful of adjoining sites; and consolidation of commercial functions that are distinguished from adjacent residential land.

Pursuant to Clause 43.02-2 and Section 2.0 of Schedule 2 a permit is required to construct a building or construct or carry out works. Notably, pursuant to Section 2.0 of Schedule 2, no new building can exceed three storeys or 9.5 metres above natural ground level.

It is noted that the proposed development has a maximum overall height of 9.5 metres, as shown in Plan 10 (West Elevation – Simpson Street) by e+ architecture, therefore meeting the height requirement.

In addition, the car parking has been provided towards the rear of the property and the building design is considered to be consistent with the diverse forms within the commercial area.

#### vegetation protection overlay

The site is also covered by **Vegetation Protection Overlay – Schedule 1** (Remnant and Vegetation Protection Area), which seeks to preserve and enhance vegetation by ensuring that new development has regard to established landscapes, streetscapes and development patterns, and that it does not adversely impact remnant vegetation.

Pursuant to Clause 42.02-2 a permit is required to remove, destroy or lop native vegetation specified in the schedule to the overlay. Pursuant to Schedule 2, a permit is required to remove or lop all native vegetation including Moonah, Tea Tree and Coastal Heath.

In relation to the decision guidelines of this Clause, the removal of vegetation is appropriate for the following reasons:

- The VPO1 applies to a large area of Point Lonsdale and it is considered an anomaly that the B1Z is included, considering the commercial nature of this area;
- The value of the vegetation is not significant, considering two of the three trees to be removed have low retention value, as outlined in the arborists report;
- It would be unreasonable to retain the vegetation on site, considering the small size of the lot for the proposed uses of retail tenancy (shop) and dwelling; and
- The retention of native vegetation in the roadside reserve, which contributes to the preservation of biodiversity and landscape values.

#### 5.4 licenced premises

**Clause 52.27 Licensed Premises** aims to ensure that licensed premises are situated in appropriate locations and that the impact on the amenity of the surrounding area is considered. As the proposed use is small in scale, being a cellar door sale of licenced premises, contained within reasonable hours, it is not considered that it will impact on the amenity of the neighbourhood.

#### 5.5 aboriginal cultural heritage

The site is identified as being in an area of Aboriginal Cultural Heritage Sensitivity as described in the *Aboriginal Heritage Regulations 2007*. The proposed development does not require the preparation of a Cultural Heritage Management Plan.

#### 5.6 compliance with ResCode provisions

An assessment under Clause 54 – One dwelling on a lot, is not required for land within the Business 1 Zone. However, it is a decision guideline that the Council can consider when assessing an application under Clause 31.01-4. In this commercial context, variations to ResCode standards are acceptable given that the area is not subject to the same scrutiny as areas zoned for residential purposes, such as the residentially zoned area west and north of Kirk Road. As such, this assessment will give justification to areas of non-compliance with Standards under Clause 54, through addressing the objectives and relevant decision guidelines.

In broad terms, the provisions of ResCode can be broken up into five sub-categories dealing with:

- Neighbourhood character (Standards A1 – A2);
- Site layout and building massing (Standard A3 – A8);
- Amenity impacts (Standard A10 – A15);
- On-site amenity and facilities (Standards A16 – A18); and
- Design detail (Standard A19 – A20).

Neighbourhood character considerations have been previously addressed with the proposal deemed to be acceptable to the urban character of Point Lonsdale, given the commercial context.

The following section provides an outline of the remaining sub-categories, focussing in particular on those aspects of the development where a variation to the standard is sought.



#### site layout and massing

ResCode includes a number of Standards that help inform an appropriate building envelope. These include:

- Street Setback – Standard A3;
- Building Height – Standard A4;
- Site Coverage – Standard A5;
- Permeability Coverage – Standard A6;
- Energy Efficiency – Standard A7; and
- Significant Trees – Standard A8.

**Standard A3** seeks to ensure that the setbacks of buildings from a street respect the existing or preferred neighbourhood character and make efficient use of the site.

The subject site is located on a corner with a frontage to Kirk Road. The residential building to the east faces Point Lonsdale Road and the rear of the property adjoins the subject site. To the south, the rear of the subject site adjoins a property facing Simpson Street. As such, the development should be set back 4 metres from Kirk Road, and 2 metres from Simpson Street in accordance with this Standard.

The proposed development is built to the property boundaries on all sides, with no setbacks at ground level.

The objective of this Clause is that the setbacks from a street will respect the existing or preferred neighbourhood character and make efficient use of the site.

In addressing the decision guidelines, it is considered that the proposed set backs are suitable to a commercial context, making efficient use of the site and are consistent with similar development within the Point Lonsdale Shopping Village, which is built to the boundary.

**Standard A4** requires the maximum building height to not exceed the maximum height specified in the zone, schedule to the zone or an overlay that applies to the land. Schedule 2 to the Design and Development Overlay which applies to the site, states a maximum height of 3 storeys and 9.5 metres above natural ground level. The maximum overall building height is 9.5 metres, which meets the requirements stated in DDO2 and the requirements of this standard.

The overall site coverage of 95% exceeds the 60% referred to under **Standard A5**. The extent of site coverage is generally consistent with the character of commercial areas, and consistent with other development within the Business 1 Zone.

In terms of permeability, the proposal provides for 5% of the total site area, therefore not meeting the requirement of 20% under **Standard A6**. The objective of this standard is to reduce the impact of increased stormwater run-off on the drainage system

by facilitating on-site stormwater infiltration. Based on the decision guidelines it is considered impractical to achieve 20% pervious surfaces on this site, considering the lot is less than 300 square metres. In addition, a reduced percentage of permeability is consistent with the commercial zoning of this land.

Energy efficiency is achieved primarily by the orientation and design of the building which seeks to maximise sunlight to north facing windows, private open space and living areas. Large windows are provided for both the retail space and the dwelling on the north side of the development. Living areas and private open space are located on the north side of the dwelling on the first and second levels. In addition, the shadow diagrams show minimal impact on sunlight to neighbouring properties therefore it is not expected that the development will adversely affect the energy efficiency of existing dwellings. The proposed development therefore meets the objective of **Standard A7** which aims to achieve energy efficient dwellings and to ensure the orientation and layout of development makes appropriate use of daylight and solar energy.

**Standard A8** requires the retention, planting or replacement of trees, where these are part of the neighbourhood character. The proposed development removes the existing trees within the site, mainly located along the frontage and includes additional landscaping along the north and west boundaries as part of the proposal. The objective of this standard is to encourage development that respects the landscape character of the neighbourhood and to encourage the retention of significant trees on the site. As noted from the arborists report, the value of the vegetation on the site is not significant, considering two of the three trees to be removed have low retention value. Additionally, the retention of trees within the road reserve provides a level of vegetation and screening of the development from the streetscape.

#### amenity impacts

Amenity impacts largely focus on preserving the existing amenity standards of neighbouring properties and the surrounding neighbourhood. The following are standards for consideration:

- Side and rear setbacks – Standard A10
- Walls on boundaries – Standard A11;
- Daylight to existing windows – Standard A12;
- North facing windows – Standard A13;
- Overshadowing open space – Standard A14; and
- Overlooking – Standard A15.

With respect to the side and rear setbacks, both the east and south walls are built on the boundary and therefore are not required to be set back. The west wall is more than 150mm from the boundary and therefore is required to be set back 4.59





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metres from the side boundary. The proposed development is set back 2 metres from the side boundary on the east side and therefore does not comply with the requirement of **Standard A10**.

Based on the decision guidelines, it is considered the proposed set backs are consistent with neighbourhood character, considering the commercial nature of the area. The proposed set back is not likely to impact the amenity of neighbouring properties considering the west elevation faces a side street. Additionally, increasing the setback would significantly impact the design and internal amenity of the dwelling.

**Standard A11** outlines requirements for walls on boundaries and ensures a new wall constructed on or within 150mm of a side or rear boundary of a lot does not abut the boundary for a length of more than 10 metres plus 25 per cent of the remaining length of the boundary of an adjoining lot. In relation to the proposed development:

- The boundary wall on the east abuts the boundary for the length of the lot, 19.66 metres.
- The boundary wall at the rear abuts the boundary for the width of the lot, 12.19 metres.
- The boundary wall on the west abuts the boundary for a total of 2.5 metres.
- The boundary wall at the front of the property abuts the boundary for a total of 1 metre.

While the east and rear walls do not comply with this standard, it is considered this design is appropriate considering the commercial context of the development.

The Standard also requires that the height of a new wall constructed on the boundary should not exceed an average of 3 metres with no part higher than 3.6 metres unless abutting a higher existing or simultaneously constructed wall. The height of the walls on boundaries comply with this aspect of the standard.

**Standard A12** aims to allow adequate daylight into existing habitable room windows. The shadow diagrams submitted with the application show no impact on habitable room windows to the property to the east, however overshadowing occurs to the habitable room windows of the adjacent dwelling to the south from 9am. The proposed development does not provide a light court or setback from the existing window in accordance with this standard. In relation to the decision guidelines, it is considered that the design response for the proposed development is acceptable, considering the commercial context.

**Standard A13** aims to allow adequate solar access to existing north-facing habitable room windows. The north facing habitable room windows of the property to the south are within 3 metres of the boundary therefore requiring the development to be set back accordingly. The proposed development does not meet the requirements of this standard. It is however noted, that two of

the habitable room windows have alternate existing light access from windows to the west, therefore reducing the impact on amenity from the proposed development.

**Standard A14** aims to ensure buildings do not unreasonably overshadow existing secluded private open space. The proposed development complies with this Standard.

**Standard A15** aims to limit views into existing secluded private open space and habitable room windows. There is potential for overlooking from the balcony on the second level into the private open space of the adjacent property to the east. While screening to 1.7 metres high could be provided for this balcony, this would alter the design response and impact the amenity of this space for residents.

#### on-site amenity

The following are standards for on-site amenity:

- Daylight to new windows – Standard A16;
- Private open space – Standard A17; and
- Solar access to private open space – Standard A18.

**Standard A16** seeks to allow adequate daylight to new habitable room windows. The habitable room windows of the proposed development are located to face an outdoor space clear to the sky, a light court or a veranda in accordance with this Standard.

**Standard A17** requires adequate private open space provision for the needs of residents at 20 per cent of the site area being a total of 48 square metres for this site. This should include secluded private open space, with a minimum area of 25 square metres and a minimum dimension of 3 metres, at the side or rear of the dwelling and accessed from a living room.

The dwelling is provided with two areas of private open space: a balcony on the first floor, with an area of 11.5 m<sup>2</sup>, accessed from bedroom one; and a balcony on the second floor, with a minimum area of 15 m<sup>2</sup>, accessed from the living room.

The proposed development has a total area of secluded private open space of approximately 15m<sup>2</sup> which is accessed off a living room and located at the side of the property, with a minimum dimension of 3m. The set back of the second level gives more privacy to this space. Additional private open space is located off bedroom 1, with an area of 11.5 m<sup>2</sup>.

It is submitted that the level of private open space provided is sufficient, taking into account the nature of this development with commercial use at the ground level limiting the available area for private space, and the abundance of public open space opportunities in the surrounding area, being a coastal township. It is therefore considered that the objective of provision of

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adequate private open space for the reasonable recreation and service needs of residents, has been met.

Both areas of private open space are located on the north side of the dwelling therefore meeting the requirements of **Standard A18** to allow solar access into the secluded private open space of a new dwelling.

#### detailed design

The following standards apply:

- Design detail – Standard A19; and
- Front fences – Standard A20.

The proposed development achieves a level of design detail that respects the preferred neighbourhood character, as sought by **Standard A19**, considering the area has a diversity of built form, including contemporary style buildings, particularly within the surrounding Business 1 Zone of the Point Lonsdale Shopping Village.

**Standard A20** aims to encourage front fences to complement the design of the dwelling and front fences on adjoining properties. As there is no front fence proposed to this development, due to the retail space on the ground level, this Standard is not applicable.

### 5.7 parking and traffic impact

**Clause 52.06** outlines objectives and requirements in relation to car parking for new development. According to **Clause 52.06-5**, one car parking space is required for the two bedroom dwelling and five spaces for the retail premises (shop), being a total of six required spaces. The proposed development provides 2 car spaces, therefore a permit is required to reduce the number of car spaces under **Clause 52.06-3**.

It is proposed that the two spaces provided will accommodate for the dwelling and a staff member for the retail premises, with customer parking demands to be accommodated within suitable on-street public parking in close proximity to the site. The Traffic Impact Assessment Report by Ratio Consultants concludes that the parking provision on the site is acceptable for the following reasons:

- The actual parking demand generated by the retail activity is likely to be less than required by the planning scheme, as the proposed patrons of the retail premises are likely to be tourists or visitors to the precinct, with a high proportion of multi-purpose trips.
- The parking occupancy surveys confirm that a minimum of 134 spaces were available within convenient proximity to the site to accommodate any customer/visitor parking demand outside peak seasonal periods without adversely affecting the availability of parking in the vicinity of the site.

- In addition, it is considered that even during the peak summer period, when significantly higher on-street parking demands are experienced, there is still spare car parking available in convenient proximity to the site.

In addition, it is estimated that the development will generate in the order of 11 vehicle trips during peak hours and will be dispersed onto Simpson Street, Kirk Road, Point Lonsdale Road and the surrounding road network. The road network has the ability to accommodate the expected traffic volumes associated with the proposed development and will not create adverse traffic safety or operational concerns.

**Clause 52.06-8** outlines design standards for car parking. As stated in the Traffic Impact Assessment Report by Ratio Consultants, the garages provided on site comply with the design standards of the Queenscliffe Planning Scheme, for the following reasons:

- The accessway provides an adequate width of 3.4 metres.
- Each car parking space has an internal width of 3.4 metres, a depth of 6.3 metres, with garage doors 3 metres wide. While the requirement for car park width is 3.5 metres wide, the width meets the requirements of Australian Standard AS2890.1-2004.
- Each space can be accessed (egress and ingress) in a satisfactory manner.
- The proposed garage car parking spaces will gain access to/from Simpson Street via an informal vehicle crossover. The existing site, and other surrounding dwellings, currently gain access in a similar manner and as such, it is considered that the access provisions are appropriate and will continue to occur safely and efficiently.
- Car parking is accessed from the western side of the site and is not visually dominant in the streetscape.
- Vehicles will be required to reverse directly onto Simpson Street, which due to the scale of the development and the road classification of Simpson Street is a safe and adequate response.

**Clause 52.34** outlines objectives and requirements for bicycle facilities. Under **Clause 52.34-3**, a retail premises requires 1 space to each 500 square metres of leasable floor area for employees and 1 to each 500 square metres of leasable floor area for shoppers. The proposed development therefore does not require any bicycle spaces as the leasable floor area is too small.

Therefore based on this assessment against relevant Standards, the conclusions of the Traffic Impact Assessment Report and the decision guidelines of **Clause 52.06-9**, it is considered the provision and design of parking spaces for the proposed development is adequate.



## 6 conclusion

It is submitted that the proposal is consistent with the matters set out in Clause 65 of the Queenscliffe Planning Scheme as detailed throughout this report, including the relevant policies and provisions of the SPPF and the LPPF and Clause 54 for the following reasons:

- The proposal is an appropriate response to the overarching objectives of State Planning Policy particularly in relation to economic development, settlement and housing diversity.
- The proposal is supported by Local Planning Policy including the objectives for settlement, living and economic development, and environment, as outlined in Clause 21.05.
- The proposal is consistent with the neighbourhood character of the area and the provisions of Clause 22.04 – Urban Character Policy, considering the sites location within the Point Lonsdale Shopping Village.

- The proposal is consistent with the objectives of the Business 1 Zone, and most requirements of the DDO2 and VPO1.
- An assessment against Clause 54 shows compliance with most of the objectives of the standards, with justification given considering the commercial context of the development.
- The requirements for parking and traffic have been met when assessed against the relevant decision guidelines.

Following this assessment, it is considered the proposal is a positive contribution to the residential and commercial development of Point Lonsdale.

It is therefore respectfully requested that Council support the application through the issue of a planning permit.

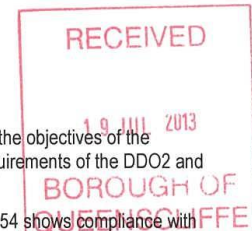
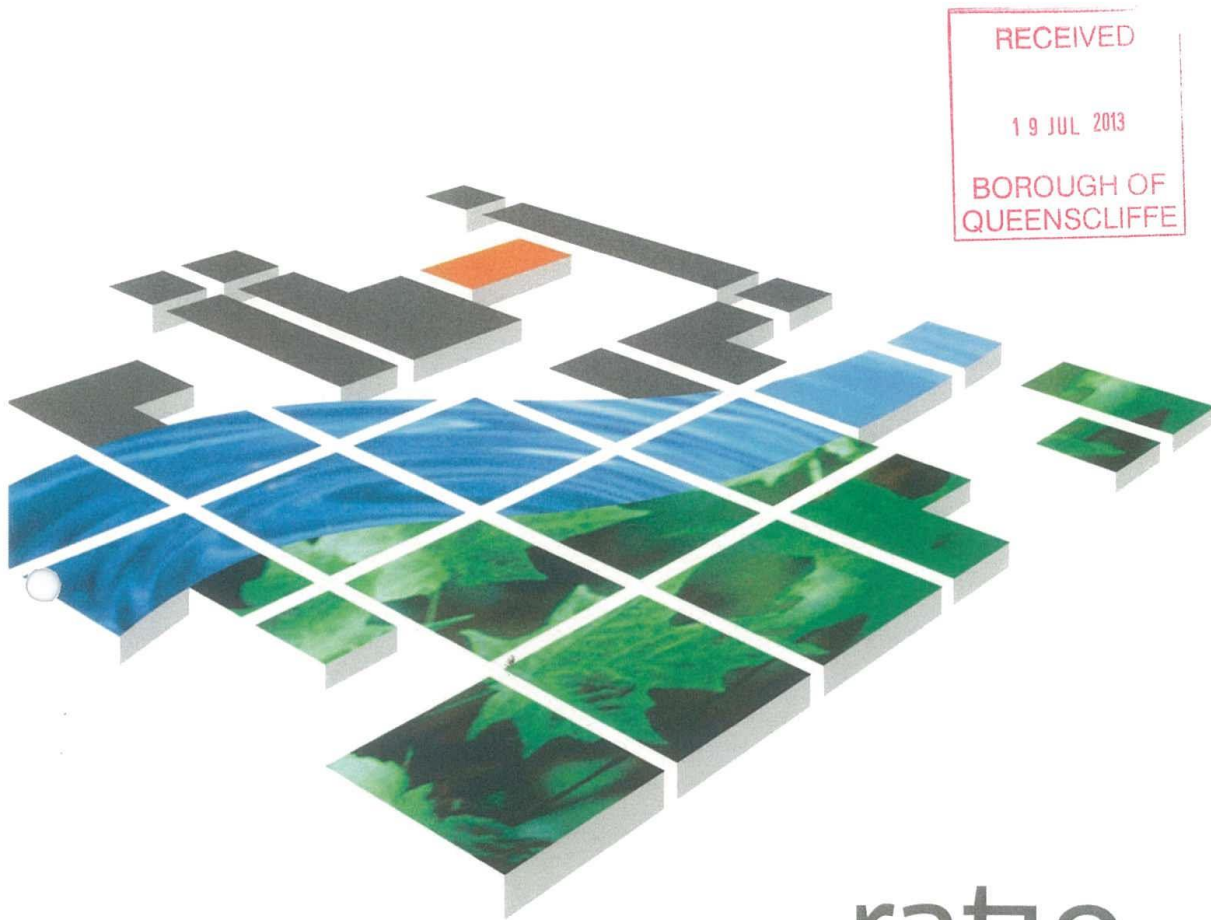


figure 16: photomontage of the subject site, as viewed from the corner of kirk road and simpson street



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**Traffic Impact Report**  
**Point Lonsdale Mixed Use Development**  
**1 Kirk Road, Point Lonsdale**

**May 2013**





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May 2013

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1 Kirk Road, Point Lonsdale - Traffic Impact Assessment Report

## 1 INTRODUCTION

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Ratio Consultants was commissioned by PJG Nominees Victoria Pty Ltd to assess the traffic and parking implications of the proposed residential and retail development at 1 Kirk Road, Point Lonsdale.

This report has been prepared to address the parking and traffic needs of the proposed development and will be submitted to the Borough of Queenscliffe for review.

The report is based on surveys and observations in the vicinity of the site, and of previous studies for similar developments elsewhere in Victoria.



## 2 EXISTING CONDITIONS

### 2.1 SUBJECT SITE AND SURROUNDS

The subject site of the proposed development is located on the south-western corner of the Kirk Road / Simpson Street intersection in Point Lonsdale. The site is rectangular in shape and has a frontage to Simpson Street of 19.69 metres, frontage to Kirk Road of 12.192 metres, for an overall site area of 240.06 square metres. The site is located in a Business 1 Zone (B1Z).

The site is currently occupied by a two storey detached residential dwelling with vehicular access available via an existing informal crossover to/from Simpson Street. The site is bordered by residential uses comprising a mix of one and two storey buildings.

Point Lonsdale Beach is located approximately 50 metres east of the site with associated car parking and a range of retail, commercial, entertainment and restaurant uses. The Point Lonsdale Bowling Club, Toc H Camp, Stoneman Reserve and the Point Lonsdale Surf Beach, are located south of the site and provide a range of active and leisure pursuits.

### 2.2 ROAD NETWORK

**Kirk Road** is a Collector Road that functions under the care and control of Council. It runs in an east-west alignment between Point Lonsdale Road in the east and Fellows Road in the west. Between Point Lonsdale Road and Simpson Street, Kirk Road has a sealed carriageway width of 9.0 metres, narrowing to 7.5 metres west of Simpson Street. A wide grassed berm is provided, and parallel parking is permitted, on both sides of the road. There are no constructed footpaths along Kirk Road, although there is a short section of concrete path on the south side of Kirk Road that connects onto an informal gravel path between Point Lonsdale Road and Simpson Street.

**Simpson Street** is a municipal road that functions as a Local Street and runs in a north-south alignment between Kirk Road and its termination south of Adams Street. Simpson Street has a relatively narrow sealed carriageway width of between 4.5 to 5.5 metres with no central line marking and no formed kerbs provided on either side of the road. A wide grassed berm is provided on either side of the road. On-street unrestricted parallel parking is permitted on both sides of the road with vehicles utilising the grassed berm. A section of 'No Stopping 7:30am to 5:30am Monday to Friday, IGA Truck Accepted' is provided along part of the east side of Simpson Street to the west of the site.

The Kirk Road / Simpson Street intersection is priority controlled with no line markings or signage provided.

All roads in the vicinity of the site, with the exception of Point Lonsdale Road, have a mandatory speed limit of 50km/hr.



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**Point Lonsdale Road** is classified as a Secondary State Arterial Road under the care and management of VicRoads, and runs in a north-south alignment from Bellarine Highway to its termination south of Ocean Road. In the vicinity of the site Point Lonsdale Road has a carriageway width of 13.6 metre catering for one lane of traffic in each direction, kerbside parallel parking on the western side of the road, and indented 60 degree angled parking along a section of the eastern side of the road in the vicinity of the site. All parking along Point Lonsdale Road south of Albert Street is time restricted ranging between '1/4P' to '2P'. South of Williams Road and through the activity centre, Point Lonsdale Road has a posted speed limit of 40km/h.

## 2.3 PARKING CONDITIONS

In order to determine the current parking conditions in the precinct, Ratio Consultants Pty Ltd conducted surveys of the parking demand in the vicinity of the subject site on Friday 10 May 2013 from 11:00am to 8:00pm and on Saturday 11 May 2013 between 11:00am and 8:00pm. The extent of the survey area and the detailed survey results are presented in Appendix A.

The surveys were conducted during relatively warm weather conditions for May, with temperatures up to 25°C on the Saturday. The survey results showed there were a maximum of 248 parking spaces available within the survey area. A summary of the survey results is provided below.

### *Friday 10 May 2013*

Overall, on-street parking demand was low to moderate, ranging from 29% (recorded between 7:00pm and 8:00pm) to 44% (recorded at 1:00pm) occupancy. On-street parking demand was moderate along Simpson Street and Kirk Road. The peak occupancy along Simpson Street was recorded at nine vehicles (out of 20 available spaces), representing 45% occupancy. The peak occupancy along Kirk Road was recorded at three vehicles (out of 21 available spaces), representing 14% occupancy. The peak occupancy along Port Lonsdale Road was 53% with a minimum of 76 available parking spaces.

### *Saturday 11 May 2013*

Overall, on-street parking demand was low to moderate, ranging from 21% (recorded at 8:00pm) to 43% (recorded at 12:00noon) occupancy. On-street parking demand was low along Simpson Street and Kirk Road. The peak occupancy along Port Lonsdale Road was 54% with a minimum of 50 available parking spaces.

These results indicate that there is a low to moderate demand for on-street parking in the vicinity of the subject site. Parking demand during both the weekday and weekend survey periods was reasonably consistent, with a moderately higher parking demand during the day. Overall, there were a minimum of 134 and 141 spaces available during the Friday and Saturday, respectively.



1 Kirk Road, Point Lonsdale - Traffic Impact Assessment Report

***General Parking Observations***

Due to the site being located in close proximity to the Point Lonsdale beachfront, it is acknowledged that the above survey data does not represent the peak parking demand which would occur during summer. Based on aerial photographs using Nearmap taken over the summer period, it is apparent that the on-street parking along Point Lonsdale Road is generally at or near capacity. However, the side streets (Kirk Road, Simpson Street, Albert Street, Chesnut Street, and Admans Street) experience more moderate on-street parking demand. Therefore, it is considered that even during the summer periods there is spare available on-street parking in the vicinity of the site.

**2.4 SUSTAINABLE TRANSPORT**

The site has reasonable access to sustainable transport facilities with the following routes operating in the vicinity of the site:

- Bus Route 76 (Geelong City to Queenscliffe via Ocean Grove) operates along Kirk Road and Point Lonsdale Road with the closest bus stop located approximately 150 metres south of the site; and
- Bus Route 75 (Geelong to Queenscliff) and Bus Route 82 (Queenscliffe to Ocean Grove) operate along Point Lonsdale Road with the closest bus stop located approximately 150 metres south of the site.

The above routes provide a combined total of 19 services per day between 5:30am and 8:40pm, Monday to Friday, reduced to 11 services per day between 7:00am and 6:30pm on Saturdays. These routes provide access to Geelong and the wider bus network.

**2.5 CRASH ANALYSIS**

A review has been conducted of VicRoads 'Crashstats' data base for the most recent five year period of available data from 1 July 2007 to 30 June 2012 for any reported casualty crashes in the vicinity of the site.

The analysis revealed no casualty crashes within the vicinity of the site along Simpson Street, Kirk Road, and Point Lonsdale Road, indicating that the surrounding road network operates in a safe manner.





1 Kirk Road, Point Lonsdale - Traffic Impact Assessment Report

### 3 THE PROPOSAL

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It is proposed to construct a three storey residential and retail development plus garage car parking on the subject site located at 1 Kirk Road, Point Lonsdale. More specifically, the development comprises:

- A single two-bedroom apartment on the top two storeys;
- A 130sqm ground floor retail use (proposed to be used primarily for wine tasting and sales); and
- Two single-garage car parking spaces.

The operating times for the retail activity will be:

- Wednesday and Thursday - 11:00am to 6:00pm; and
- Friday to Sunday - 11:00am to 8:00pm.

Primary pedestrian access to the apartment will be via Simpson Street with access for the retail use available via Kirk Road.

Vehicular access to the car parks will continue to occur informally to/from Simpson Street.



1 Kirk Road, Point Lonsdale - Traffic Impact Assessment Report

## 4 PARKING ASSESSMENT

### 4.1 PLANNING SCHEME ASSESSMENT

Parking requirements for a residential dwelling and a food and drink premises, are set out under Clause 52.06 of the Planning Scheme. It is considered that the retail activity (proposed to be used primarily for wine tasting and sales) is similar in nature to the broader term 'food and drink premises'. The use does not propose to accommodate any sit-down meals.

The number of car parking spaces required for the proposed development is listed under Table 1 of Clause 52.06-5 and are as follows:

#### Dwelling

- One resident space to each one and two bedroom dwelling; and
- One visitor space for every five dwellings for developments of five or more dwellings.

#### Food and drink premises

- Four spaces to each 100sqm of leasable floor area.

The application of the relevant rates equates to a parking requirement of six spaces, as detailed in Table 4.1.

TABLE 4.1: CLAUSE 52.06-5 - NUMBER OF PARKING SPACES REQUIRED

Land Use	Size / Number	Parking Rate	Parking Requirement (spaces)
Dwelling	1 x 2-bed dwelling	1 space per dwelling	1
	1 dwelling total	1 space per five dwellings	0
Food and drink premises	130sqm	4 spaces per 100sqm leasable floor area	5
TOTAL			6 spaces

Therefore, the proposed development generates a car parking requirement of six car parking spaces in accordance with Clause 52.06 of the Queenscliffe Planning Scheme.

### 4.2 PARKING PROVISION

It is proposed to provide a total of two on-site car parking spaces to meet the resident and staff (associated with the retail activity) parking needs with a parking shortfall of four parking spaces in terms of the Planning Scheme requirements. It is proposed that customer/visitor parking demands be accommodated within suitable on-street public parking within close proximity to the site.





1 Kirk Road, Point Lonsdale - Traffic Impact Assessment Report

It is considered that most of the patrons of the proposed retail (food and drink) activity will be generated by tourists and visitors in the precinct, with a high proportion of multi-purpose trips. Therefore, the actual parking demand generated by the retail activity will be less than required by the Planning Scheme. Notwithstanding this, the parking occupancy surveys confirm that a minimum of 134 spaces were available within convenient proximity to the site to accommodate any customer/visitor parking demand outside peak seasonal periods without adversely affecting the availability of parking in the vicinity of the site. In addition, it is considered that even during the peak summer period, when significantly higher on-street parking demands are experienced, there is still spare car parking available in convenient proximity to the site.

#### 4.3 PARKING LAYOUT AND ACCESS ARRANGEMENTS

The proposed on-site parking provision is via two car garages. Each garage has a depth of 6.3 metres, with internal widths of 3.4 metres. The garage doors are 3.0 metres wide. As such, the garages comply with the garage length and door width requirements of the Queenscliffe Planning Scheme and the internal width requirements of AS/NZS2890.1:2004.

An assessment (Refer to Appendix B) of the accessibility to and from each car space using the 'AutoTrack' software has been conducted. The B85 (85 percentile car) was used in the assessment and it was found that each space could be accessed (egress and ingress) in a satisfactory manner.

The proposed garage car parking spaces will gain accessed to/from Simpson Street via an informal vehicle crossover. The existing site, and other surrounding dwellings, currently gain access in a similar manner and as such, it is considered that the access provisions are appropriate and will continue to occur safely and efficiently. Vehicles will be required to reverse directly onto Simpson Street, which due to the scale of the development and the road classification of Simpson Street is permitted under the Planning Scheme.

#### 4.4 BICYCLE PARKING

No bicycle parking rates are specified for the retail activity. It is considered that the most similar use is a restaurant which requires, one bicycle parking space to each 100sqm of floor area available to the public (employee), plus two spaces and one space to each 200sqm of floor area available to the public if the floor area available to the public exceeds 400sqm (visitor). Therefore, one employee space and two visitor spaces are required.

No bicycle spaces are required for the residential use in terms of the Planning Scheme.

Due to the layout of the site there is limited capacity to accommodate on-site bicycle parking. In order to cater for the retail bicycle parking, it is recommended that a bicycle hoop (two bicycle spaces) be located on-street at the front of the site to the satisfaction of the responsible authority. This will provide parking for up to two customer/visitor bicycle spaces.

#### 4.5 REFUSE COLLECTION

It is proposed that the collection of refuse and recyclables be undertaken by kerbside Council collection services along Kirk Road.



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## 5 TRAFFIC ASSESSMENT

---

Based on the surveys of residential apartments conducted by Ratio Consultants Pty Ltd and others, it is estimated that the proposed residential apartment could be expected to generate about six trips per day. About ten percent of the total trips will occur in each of the morning and evening peak hours. Residential trips will be mainly departing in the morning peak (80% depart and 20% arrive) and mainly arriving in the afternoon peak (30% depart and 70% arrive).

No trip rates are available for a wine tasting retail activity. It is considered that many of the patrons of the activity will be generated by tourists and visitors to the precinct as part of a multi-purpose trip, and other local residents in the precinct. Therefore, it is conservatively estimated that the number of separate vehicle trips generated by the activity will be in the order of ten vehicle trips per hour during peak periods.

Accordingly, it is estimated that the development will generate in the order of 11 vehicle trips during peak hours.

The traffic generated by the proposed development will be dispersed onto Simpson Street, Kirk Road, Point Lonsdale Road and the surrounding road network. The road network has the ability to accommodate the expected traffic volumes associated with the proposed development and will not create adverse traffic safety or operational concerns.



1 Kirk Road, Point Lonsdale - Traffic Impact Assessment Report

## 6 CONCLUSION

---

The proposed residential and retail development at 1 Kirk Road comprises one two-bedroom dwelling and 130sqm retail activity over three levels. The proposed development also includes the provision of two on-site garage car spaces.

The proposed on-site parking provision will accommodate the expected resident and staff parking demand of the proposed development, with customer/visitor parking demands able to be accommodated in the publicly available on-street parking within the vicinity of the site.

The proposed garage car parking and informal access to Simpson Street has been suitably designed and is in accordance with the requirements of the Queenscliffe Planning Scheme and AS/NZS2890.1:2004.

It is estimated that up to about 11 specifically generated vehicular trips will occur during peak hours of the proposed development. The surrounding road network has the capacity to accommodate the additional traffic volumes generated by the proposed development.

Overall, the proposed development is not expected to create adverse traffic or parking impacts in the precinct.





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## Appendix A. Survey Results

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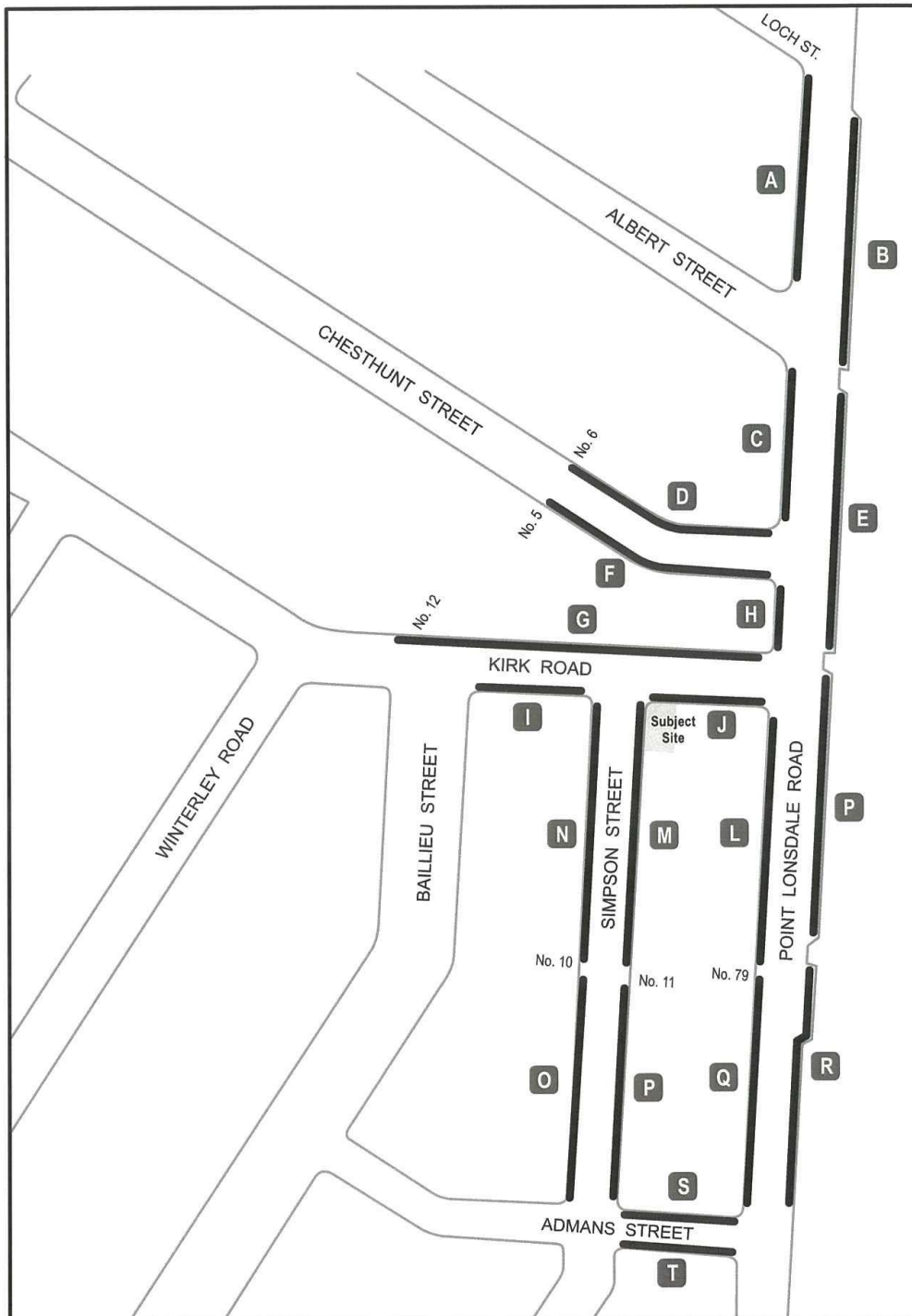


FIGURE 2.1  
PARKING SURVEY AREAS



Table 2.1

Parking Occupancy Survey

Location 1 Kirk Street, Point Lonsdale  
Date Friday, 10 May 2013  
Weather Mild And Overcast

Ratio Map Ref	Street	Section	Side	Restriction		Capacity	Parking Occupancy									
				Restriction	Secondary Restriction		11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
A	Point Lonsdale Rd	Albert to Loch	E	Unrestricted		11	0	0	0	0	0	0	0	0	0	0
B	Point Lonsdale Rd	Albert to Loch	W	P angle		32	8	8	9	5	4	4	4	4	4	4
C	Point Lonsdale Rd	Chesthunt to Albert	E	Unrestricted		4	0	0	0	0	0	0	0	0	0	0
D	Chesthunt St	No. 6 to Point Lonsdale	N	Unrestricted		9	1	1	1	0	0	0	0	0	0	0
E	Point Lonsdale Rd	Albert to Kirk	W	P angle		33	8	8	8	8	8	7	6	5	4	4
F	Chesthunt St	No. 5 to Point Lonsdale	S	Unrestricted		9	1	1	1	1	1	1	1	1	1	1
G	Kirk Rd	No. 12 to Point Lonsdale	N	Unrestricted		12	0	0	0	0	0	0	0	0	0	0
H	Point Lonsdale Rd	Kirk to Chesthunt	W	Bus zone		1	0	0	0	0	0	0	0	0	0	0
I	Kirk Rd	Baillieu to Simpson	S	Unrestricted		5	1	1	1	0	0	0	0	0	0	0
J	Kirk Rd	Simpson to Point Lonsdale	S	Unrestricted		4	2	2	2	3	3	3	3	3	3	3
L	Point Lonsdale Rd	Kirk to No. 79	W	1/2P 10a-5p		3	3	3	3	2	2	2	2	2	2	2
L				1/4P 10a-5p		2	2	2	2	2	2	2	2	2	2	2
L				LZ 8am-5pm Mon-Sat	1/2P 10am-5pm Sun	1	0	0	0	0	1	1	1	1	1	1
L				2P disabled		1	1	1	1	1	1	1	1	1	1	1
I				1/2P 10a-5p		2	2	2	2	1	1	1	1	1	1	1
M	Simpson St	Kirk to No. 10	E	Unrestricted		1	0	0	0	0	0	0	0	0	0	0
M				No Standing 7:30am-5:30pm Mon-Fri	IGA trucks excepted	7	0	0	0	0	1	1	0	0	0	2
M				Unrestricted		5	0	0	0	0	0	0	0	0	0	0
N	Simpson St	No. 10 to Admans	W	Unrestricted		12	3	3	3	3	3	3	3	3	3	3
O	Simpson St	Kirk to No. 10	W	Unrestricted		7	6	6	6	6	6	5	4	4	4	4
P	Simpson St	No. 11 to Admans	E	Unrestricted		9	5	6	6	6	6	6	5	5	5	5
P	Point Lonsdale Rd	Kirk to No. 79	E	2P 10a-5p		13	9	9	11	12	12	11	11	10	8	8
P				P angle		17	12	14	14	15	14	12	12	11	10	9
Q	Point Lonsdale Rd	No. 79 to Admans	W	2P disabled		1	0	0	0	0	0	0	0	0	0	0
Q				2P 10a-5p		15	11	11	11	13	13	13	13	11	10	10
R	Point Lonsdale Rd	No. 79 to Admans	E	2P 10a-5p		9	6	7	8	7	7	7	6	5	5	5
R				Bus zone		1	0	0	0	0	0	0	0	0	0	0
R				2P 10a-5p		15	13	15	15	10	8	7	6	6	5	5
S	Admans St	Simpson to Point Lonsdale	N	P parallel		4	1	1	1	3	3	3	3	3	3	3
T	Admans St	Simpson to Point Lonsdale	S	Unrestricted		3	0	0	0	0	0	0	0	0	0	0
PUBLIC CAPACITY							238	238	238	238	238	238	248	248	248	248
PUBLIC OCCUPANCIES							94	100	104	99	95	88	84	78	74	73
PUBLIC VACANCIES							144	138	134	139	143	150	164	170	174	175
PUBLIC % OCCUPANCIES							39%	42%	44%	42%	40%	37%	34%	31%	30%	29%

not available for public parking





Table 2.2

**Parking Occupancy Survey**

Location 1 Kirk Street, Point Lonsdale  
Date Saturday, 11 May 2013  
Weather Mild And Overcast

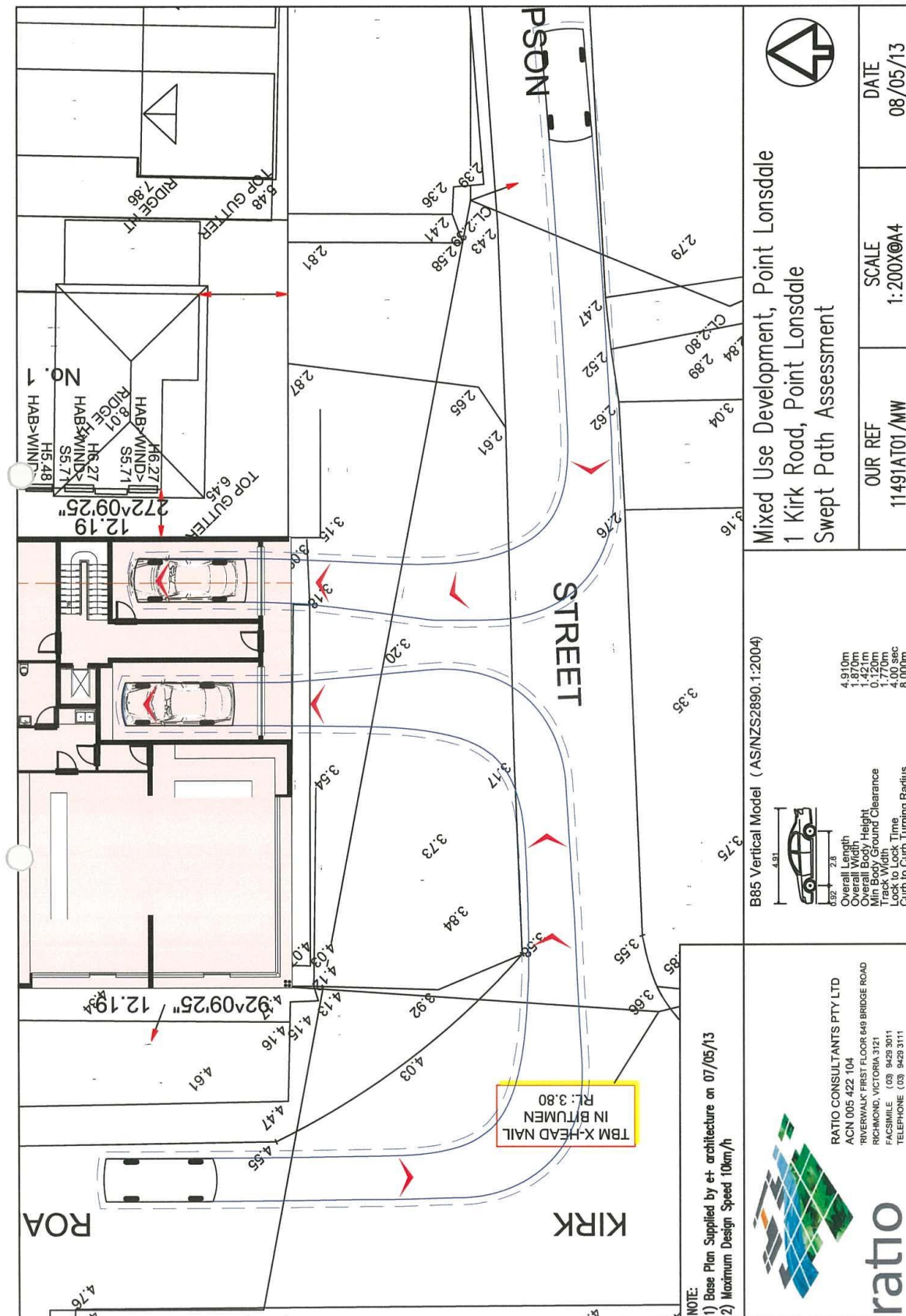
Ratio Map Ref	Street	Section	Side	Restriction		Capacity	Parking Occupancy											
				Restriction	Secondary Restriction		11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00		
A	Point Lonsdale Rd	Albert to Loch	E	Unrestricted		11	0	0	0	0	0	0	1	1	1	1		
B	Point Lonsdale Rd	Albert to Loch	W	P angle		32	4	4	6	5	8	5	3	3	3	3		
C	Point Lonsdale Rd	Chestnut to Albert	E	Unrestricted		4	0	0	0	0	0	0	0	0	0	0		
D	Chestnut St	No. 6 to Point Lonsdale	N	Unrestricted		9	0	0	0	0	1	0	0	0	0	0		
E	Point Lonsdale Rd	Albert to Kirk	W	P angle		33	12	10	11	10	8	8	4	4	4	4		
F	Chestnut St	No. 5 to Point Lonsdale	S	Unrestricted		9	1	1	1	1	1	1	0	0	0	0		
G	Kirk Rd	No. 12 to Point Lonsdale	N	Unrestricted		12	0	0	1	0	0	0	0	0	0	0		
H	Point Lonsdale Rd	Kirk to Chestnut	W	Bus zone		1	0	0	0	0	0	0	0	0	0	0		
I	Kirk Rd	Baillieu to Simpson	S	Unrestricted		5	0	0	0	0	1	0	0	0	0	0		
J	Kirk Rd	Simpson to Point Lonsdale	S	Unrestricted		4	1	2	1	2	2	3	1	1	1	1		
L	Point Lonsdale Rd	Kirk to No. 79	W	1/2P 10a-5p		3	2	2	2	2	3	2	2	2	2	2		
L				1/4P 10a-5p		2	1	1	2	1	2	2	1	1	1	1		
L				LZ 8am-5pm Mon-Sat	1/2P 10a-5p Sun	1	0	0	0	1	0	1	0	0	0	0		
L				2P disabled		1	1	1	1	0	1	1	0	0	0	0		
I				1/2P 10a-5p		2	1	2	1	2	2	1	1	1	1	1		
M	Simpson St	Kirk to No. 10	E	Unrestricted		1	0	0	0	0	0	0	0	0	0	0		
M				No Standing 7:30a-5:30p Mon-Fri	IGA trucks excepted	7	2	2	2	2	1	1	1	1	1	1		
M				Unrestricted		5	0	0	0	0	0	0	0	0	0	0		
N	Simpson St	No. 10 to Admans	W	Unrestricted		12	3	4	4	4	3	3	3	3	3	3		
O	Simpson St	Kirk to No. 10	W	Unrestricted		7	3	3	3	3	5	6	4	4	4	4		
P	Point Lonsdale Rd	Kirk to No. 79	E	2P 10a-5p		13	10	12	12	12	11	10	7	7	6	5		
P	Simpson St	No. 11 to Admans	E	Unrestricted		9	5	5	4	4	5	5	3	3	3	3		
P				P angle		17	15	17	16	15	12	15	7	7	7	7		
Q	Point Lonsdale Rd	No. 79 to Admans	W	2P disabled		1	0	0	0	0	0	0	0	0	0	0		
Q				2P 10a-5p		15	11	14	9	8	11	12	7	6	5	4		
R	Point Lonsdale Rd	No. 79 to Admans	E	2P 10a-5p		9	7	8	6	5	7	6	4	4	4	4		
R				Bus zone		1	0	0	0	0	0	0	0	0	0	0		
R				2P 10a-5p		15	12	14	10	14	14	11	7	6	6	5		
S	Admans St	Simpson to Point Lonsdale	N	P parallel		4	4	4	4	2	1	3	2	2	2	2		
T	Admans St	Simpson to Point Lonsdale	S	Unrestricted		3	0	0	0	0	0	0	0	0	0	0		
<b>PUBLIC CAPACITY</b>							247	247	247	247	247	247	248	248	248	248		
<b>PUBLIC OCCUPANCIES</b>							95	106	96	93	99	96	58	56	54	51		
<b>PUBLIC VACANCIES</b>							152	141	151	154	148	151	190	192	194	197		
<b>PUBLIC % OCCUPANCIES</b>							38%	43%	39%	38%	40%	39%	23%	23%	22%	21%		
							not available for public parking											



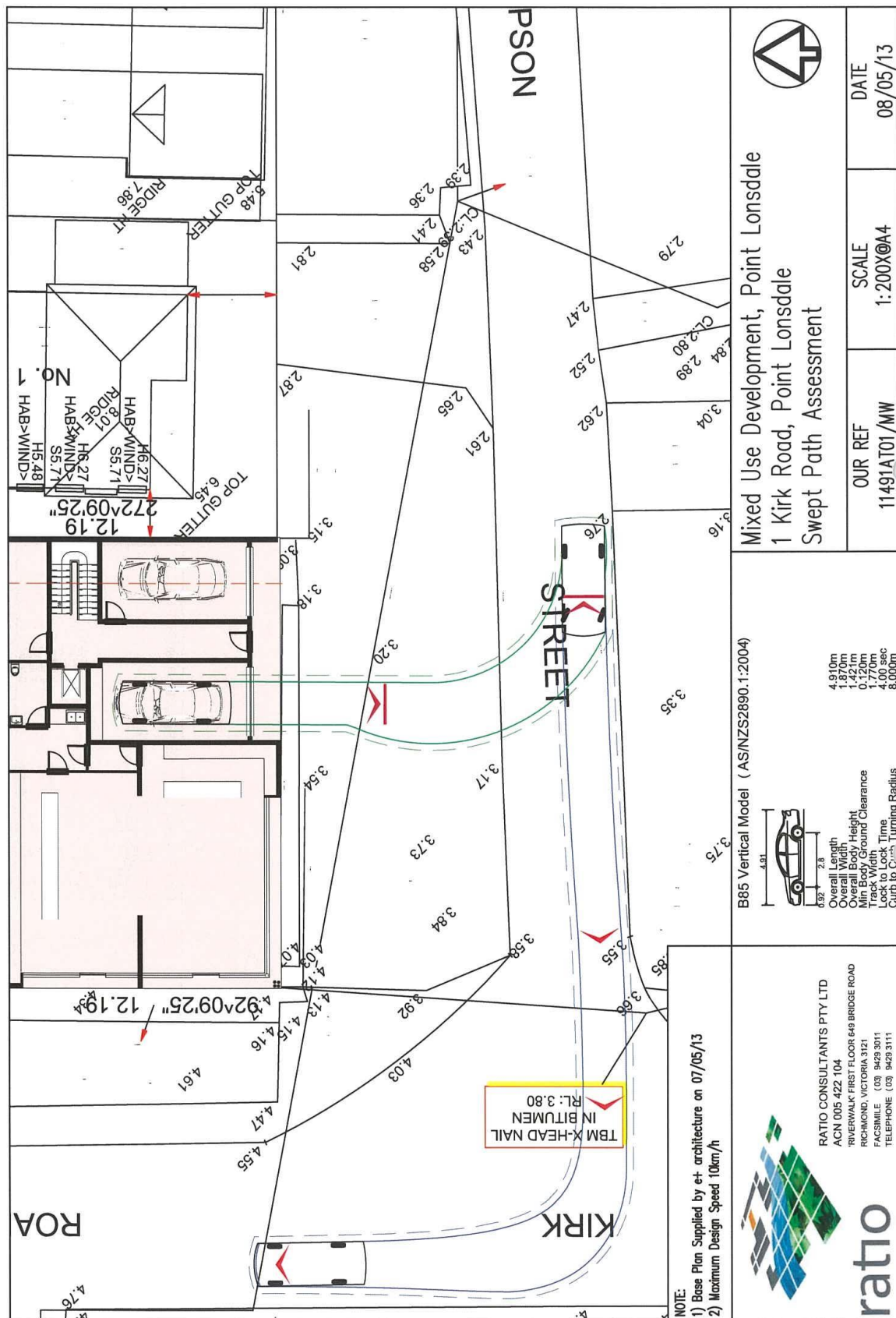
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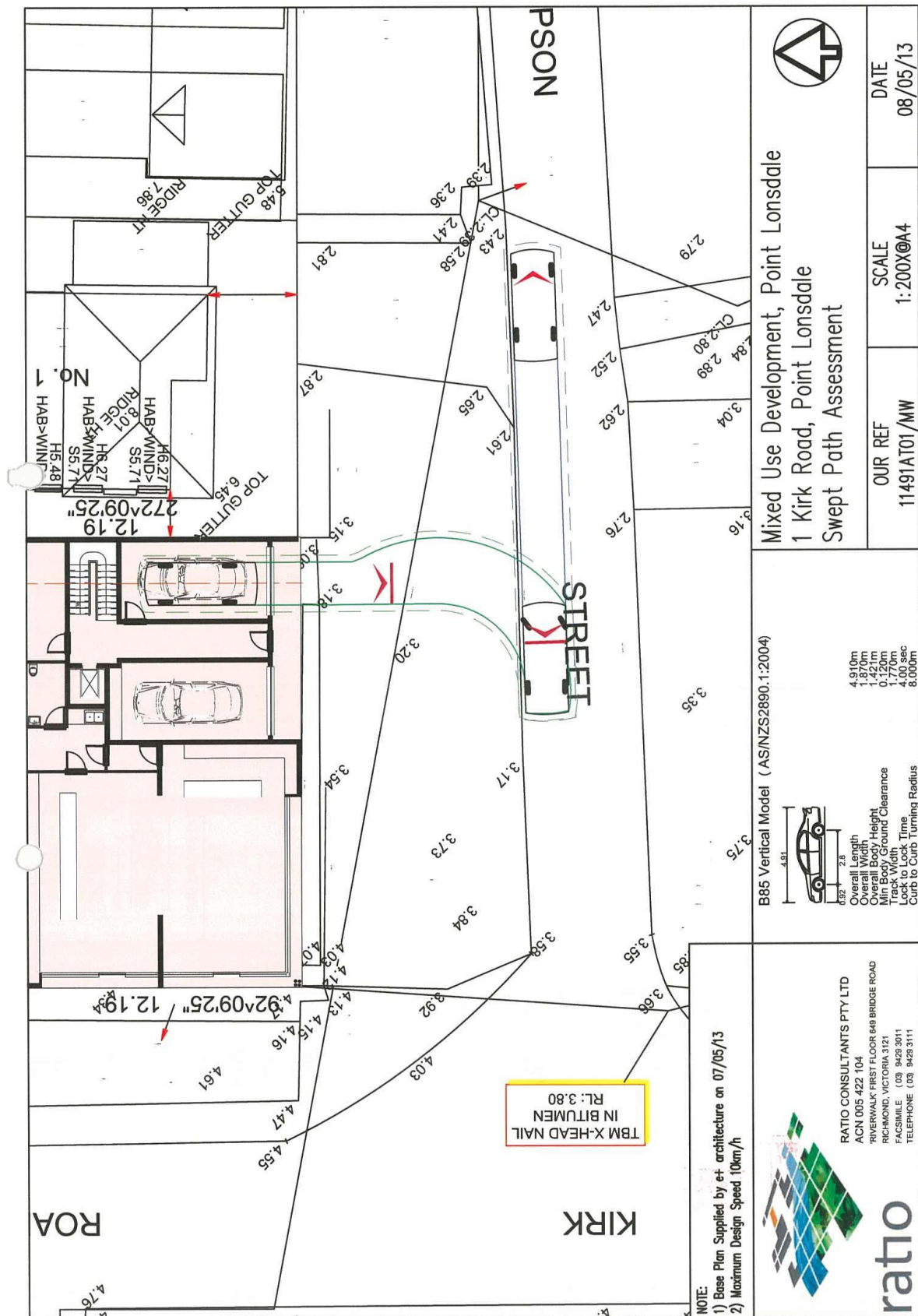
## **Appendix B. Swept Path Assessment**

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For

## Hansen Partnership

Site location

1 Kirk Road  
Point Lonsdale

Report type

## Arboricultural Construction Impact Assessment

Prepared by

**Roger Greenwood**  
B. App. Sci. (Hort)  
Dip. App. Sci. (Hort)  
Adv. Cert. Arb.

Monday, 27 May 2013

Ref: 2721 130507 CIR Hansen Kirk Point Lonsdale 1 Rd.Docx





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## 1. Summary

This report was commissioned by Mr D. Podger of Hansen Partnership to assess the condition of 19 trees on or adjacent to 1 Kirk Road, Point Lonsdale and to evaluate the impacts on these trees arising from the proposed development on this site.

Of the 19 trees assessed at this site:

1. Four trees are less than 5 metres in height and have not been fully assessed in this report.
2. One tree (Tree 9) of High retention value is located on this site.
  - a. This tree is a locally indigenous species.
  - b. This tree cannot be retained within the proposed development and is proposed to be removed.
3. Two trees (Trees 10 & 11) of Low retention value are located on the site.
  - a. These trees are a locally indigenous species.
  - b. These trees cannot be retained within the proposed development and is proposed to be removed.
4. Twelve trees are located on the road reserve to the north and west of the site and on the adjoining property to the east.
  - a. Some of these trees will be significantly affected by the proposed development and modifications to the proposed design are likely to be required to address the impact on these trees.





### 1.1. Summary data

This table contains a summary of data pertaining to all trees shown and numbered on the enclosed feature and levels survey.

Underlined and italicised species names have not been assessed. Generally these trees are <5m tall, not found or stumps. The construction impact values are blank for these records.

1. **Retention value:** The retention value of the tree to the site.
  - a. Tree number and species name are **Bold** for High and Very high values trees.
2. **Retained:** Indicates whether the tree is proposed to be retained on the site.
3. **Construction impact:** Indicates the impact of the proposed development on the tree.
  - a. **None:** Works do not intrude onto the tree's TPZ.
  - b. **Low:** Construction intrusion is less than 10% of TPZ and contiguous area exists to compensate for any loss.
  - c. **Moderate:** Construction intrusion exceeds 10% of TPZ but construction methods or other factors make tree retention possible.
  - d. **High:** Construction intrusion is excessive and tree retention is not possible within the development as currently proposed.
  - e. **Blank:** Tree has not been assessed.
4. **Location:** Whether the tree is located on the site or adjacent to the site.
  - a. **Site:** the tree is located on the site.
  - b. **Off site:** the tree is located on land adjoining the site.
    - i. Trees in this category should generally be preserved without significant impact.

ID:	Genus / Species:	Retention Value:	Retained?:	Construction Impact:	Location:
1	Melaleuca lanceolata	Very low	Retained	None	Off site
2	<b>Melaleuca lanceolata</b>	High	Retained	Low	Off site
3	<b>Melaleuca lanceolata</b>	High	Retained	Low	Off site
4	<b>Melaleuca lanceolata</b>	High	Retained	Moderate	Off site
5	Melaleuca lanceolata	Moderate	Retained	Moderate	Off site
6	Melaleuca lanceolata	Moderate	Retained	Moderate	Off site
7	<b>Melaleuca lanceolata</b>	High	Retained	Low	Off site
8	<b>Melaleuca lanceolata</b>	High	Retained	Low	Off site
9	<b>Melaleuca lanceolata</b>	High	Removed	High	Site
10	Melaleuca lanceolata	Low	Removed	High	Site
11	Melaleuca lanceolata	Low	Removed	High	Site



ID:	Genus / Species:	Retention Value:	Retained?:	Construction Impact:	Location:
12	Banksia integrifolia	Low	Retained	Moderate	Off site
13	Unknown sp.	Very low	Retained	Moderate	Off site
14	Banksia integrifolia	Very low	Retained	Moderate	Off site
15	Laurus nobilis	Low	Retained	High	Off site
16	<u>Myoporum sp.</u>	Very low	Removed	High	Site
17	<u>Unknown sp.</u>	Very low	Removed	High	Site
18	<u>Unknown sp.</u>	Very low	Removed	High	Site
19	<u>Leptospermum sp.</u>	Very low	Removed	High	Site

Total number of tree/s referred to in this report(Total): 19



## 2. Document control

File reference	File type	Modifications	Date
2721 130527	CIR	Original document. Construction Impact Assessment for 19 trees.	27/05/2013

## 3. Introduction

This report was commissioned by Mr D. Podger of Hansen Partnership to assess the condition of 19 trees on or adjacent to 1 Kirk Road, Point Lonsdale and to evaluate the impacts on these trees arising from the proposed development on this site.

Specifically the report addresses the following issues:

- The health and structural condition of the trees.
- The suitability of these trees for retention on the site in light of the proposed development.
- The impact of the development on these trees.
- Recommendations for the protection of these trees.

This report is based, in part, on the plans provided and the accuracy of these plans is assumed. Inaccuracies in the plans provided may invalidate all or parts of this report.

The location of services within the site is not known and the possible affects of these on the retained trees is not included within this report.

The site was inspected by Roger Greenwood of this office on Wednesday 22nd May 2013.

## 4. Documents referenced

Date	Title	Author	Company
28/02/2013	Feature & Level / Site Analysis Plan (Ref: 3062FL)	LJM, SGJ.	Nilsson, Noel & Holmes P/L
Not dated	Proposed Development Context Plan	Not stated	E+ Architecture

## 5. Scope

This report addresses all of those trees of significance that are located either on the site or within four metres of the boundaries of the site.

Significant trees are generally those that are greater than five metres in height and/or with a Diameter at Breast Height (DBH) of greater than 15 cm.

## 6. Site context

This site is located within a Business 1 Zone within the municipality of Queenscliffe

The following town planning overlays are applicable to this site:

1. *A vegetation Protection Overlay (VPO1) pertains to this site.*



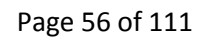


## 7. Notes

1. The column label "ID" is used in all the tables throughout this report. This refers to the tree identification number and to the tree numbering found on the "Site plan". This number is the same as the "Tree ID" found in the "Tree data" section of the report.
2. The following trees are less than 5 metres in height and are not considered significant to the site. These trees are shown on the site feature survey but have not been assessed as a part of this report.

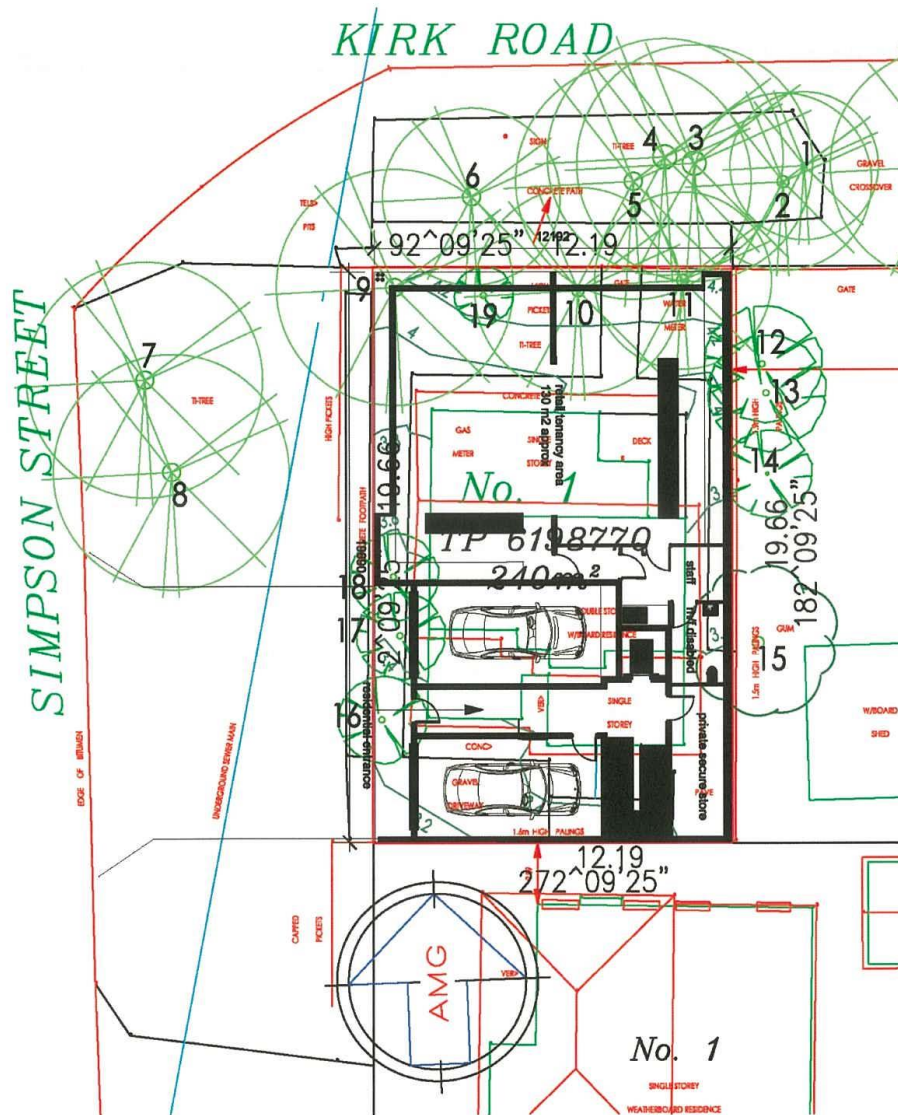
ID	Genus / Species:	Common Name:	Origin:	Weed species:
16	Myoporum sp.	Boobialla	Australian	No
17	Unknown sp.	Unknown	Unknown	No
18	Unknown sp.	Unknown	Unknown	No
19	Leptospermum sp.	Tea Tree	Australian	No

3. Trees 3 and 13 were not shown on the plans provided but were found on or adjacent to the site during the site inspection. These trees have been added to the enclosed site plan based on a visual estimation of their location.





## 9. Site plan (Proposed)







## 10. Trees recommended for retention

The following trees are located on the site and are recommended for retention on the basis of fair, or better, health and structure.

### 10.1. High or very high retention value

The following trees are assessed as having High or Very high retention value. These trees are of considerable value to the local area and should be retained if possible.

ID	Genus / species	Common name	ULE	Origin	Ret value
The following 1 tree/s are shown as Removed on the plans provided.					
9	<i>Melaleuca lanceolata</i>	Moonah	15 - 25	Australian	High
Number of tree/s in this section (Total): 1					

### 10.2. Moderate retention value

The following trees are assessed as having Moderate retention value. These trees are of value to the site and their immediate surroundings and should be preserved where they do not unduly constrain development.

*No trees of Moderate value were assessed as a part of this report.*

### 10.3. Low or very low retention value

The following trees are assessed as having low or very low retention value. While these trees are suitable for retention on the site their removal or retention will have little impact on the amenity of the area.

ID	Genus / species	Common name	ULE	Origin	Ret value
10	<i>Melaleuca lanceolata</i>	Moonah	5 - 15	Australian	Low
11	<i>Melaleuca lanceolata</i>	Moonah	5 - 15	Australian	Low
Number of tree/s in this section (Total): 2					

These two trees have significant fungal infections and exhibit signs of poor health that is likely to be related to this fungal infection.

While these trees have a relatively short useful life expectancy it is likely that they will provide useful amenity for about 10 years in their current environment.



## 11. Adjoining property

The following trees are recommended for retention because of their location on adjoining property or on the nature strip. Unless these trees constitute a significant hazard to this property they are recommended for retention irrespective of their health or structure.

ID	Genus / species	Common name	ULE	Origin	Ret value
The following 12 tree/s are shown as Retained on the plans provided.					
1	<i>Melaleuca lanceolata</i>	Moonah	1 - 5	Australian	Very low
2	<i>Melaleuca lanceolata</i>	Moonah	15 - 25	Australian	High
3	<i>Melaleuca lanceolata</i>	Moonah	15 - 25	Australian	High
4	<i>Melaleuca lanceolata</i>	Moonah	15 - 25	Australian	High
5	<i>Melaleuca lanceolata</i>	Moonah	5 - 15	Australian	Moderate
6	<i>Melaleuca lanceolata</i>	Moonah	15 - 25	Australian	Moderate
7	<i>Melaleuca lanceolata</i>	Moonah	15 - 25	Australian	High
8	<i>Melaleuca lanceolata</i>	Moonah	15 - 25	Australian	High
12	<i>Banksia integrifolia</i>	Coast Banksia	> 50	Melbourne	Low
13	Unknown sp.	Unknown	15 - 25	Unknown	Very low
14	<i>Banksia integrifolia</i>	Coast Banksia	25 - 50	Melbourne	Very low
15	<i>Laurus nobilis</i>	Bay Tree	15 - 25	Exotic	Low
Number of tree/s in this section (Total): 12					

## 12. Construction impact

The following trees are regarded as being suitable for retention and are located within close proximity to elements of the proposed development. The successful retention of those trees that are proposed to be retained may require additional care and the adoption of the following recommendations.

Note: *Construction Proximity* of 0.1 indicates construction over or immediately adjacent to the tree.

ID	Genus / species	DBH	SRZ	TPZ	TPZ	ConP	Ret Value	Retained?
The following 3 tree/s are shown as Removed on the plans provided.								
9	<i>Melaleuca lanceolata</i>	57	2.7	6.8	= TPZ	0.1	High	Removed
10	<i>Melaleuca lanceolata</i>	45	2.5	5.4	= TPZ	0.1	Low	Removed
11	<i>Melaleuca lanceolata</i>	38	2.3	4.6	= TPZ	0.1	Low	Removed
The following 11 tree/s are shown as Retained on the plans provided.								
2	<i>Melaleuca lanceolata</i>	46	2.5	5.5	= TPZ	3.5	High	Retained
3	<i>Melaleuca lanceolata</i>	43	2.4	5.2	= TPZ	3.6	High	Retained
4	<i>Melaleuca lanceolata</i>	52	2.6	6.2	= TPZ	3.8	High	Retained
5	<i>Melaleuca lanceolata</i>	59	2.8	7.1	= TPZ	3	Moderate	Retained
6	<i>Melaleuca lanceolata</i>	33	2.1	4.0	= TPZ	2.5	Moderate	Retained
7	<i>Melaleuca lanceolata</i>	79	3	9.5	= TPZ	6.8	High	Retained
8	<i>Melaleuca lanceolata</i>	55	2.7	6.6	= TPZ	3.8	High	Retained
12	<i>Banksia integrifolia</i>	10	1.5	2.0	= TPZ	1	Low	Retained
13	Unknown sp.	15	1.5	2.0	= TPZ	1.1	Very low	Retained
14	<i>Banksia integrifolia</i>	15	1.5	2.0	= TPZ	1.1	Very low	Retained
15	<i>Laurus nobilis</i>	37	2.2	4.4	= TPZ	0.8	Low	Retained
SRZ: Structural Root Zone. TPZ: Tree Protection Zone. mTPZ: Tree Protection Zone.(Canopy) ConP: Construction Proximity.								
Number of trees in this section (total): 14								

### 12.1. Site and proposed development

The significant trees at this site are mostly located on the nature strip. The root systems of these trees are likely to be significantly constrained by the bitumen roads to the north and west of the site and it is therefore likely that these trees are more dependent on the soil volume of the nature strip and the site than might otherwise be the case.

The existing dwelling is set back from the front boundary by approximately 4.3 metres and these trees are likely to be exploiting the front and side setback of the property.

Accordingly activity on the site could be expected to have a disproportionate impact on these trees and the intrusions into the TPZ for these trees has a greater significance than might otherwise be the case.

The proposed development on this site occupies the entire site and is likely to require a strip footing approximately 0.7 metres in depth along most of the boundary

This footing is likely to permanently excise the underlying soil volume from the surrounding trees.

### 12.2. Tree 2

The proposed development will occupy approximately 4.5% of the TPZ surface area for this tree and this soil volume will be permanently excised from the TPZ for this tree (Figure 1).

Under AS 4970 (2009) *Protection of Trees on Development Sites* this is considered to be a minor intrusion and is not expected to significantly impact on the health or longevity of this tree.

### 12.3. Tree 3

The proposed development will occupy approximately 8.2% of the TPZ surface area for this tree and this soil volume will be permanently excised from the TPZ for this tree (Figure 2).

Under AS 4970 (2009) *Protection of Trees on Development Sites* this is considered to be a minor intrusion and is not expected to significantly impact on the health or longevity of this tree.

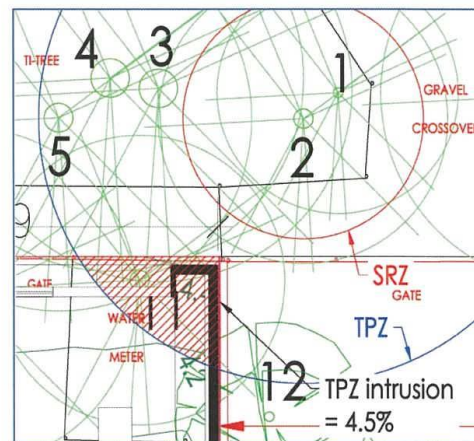


Figure 1 Tree 2 TPZ intrusions

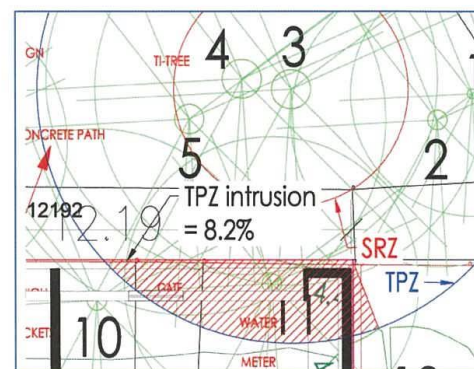


Figure 2 Tree 3 TPZ intrusions



#### 12.4. Tree 4

The proposed development will occupy approximately 12.3% of the TPZ surface area for this tree and this soil volume will be permanently excised from the TPZ for this tree.

Under AS 4970 (2009) *Protection of Trees on Development Sites* this is considered to be a major intrusion and it must be demonstrated that the tree will tolerate the proposed impact without significant reduction in its useful life expectancy.

The proposed development is likely to significantly impact on the health and longevity of this tree and under AS 4970 this impact is required to be reduced.

This could probably be achieved by moving the front footing back from the front boundary by approximately 1.5 metre and maintaining the soil volume between the new footing location and the property boundary without significant disturbance.

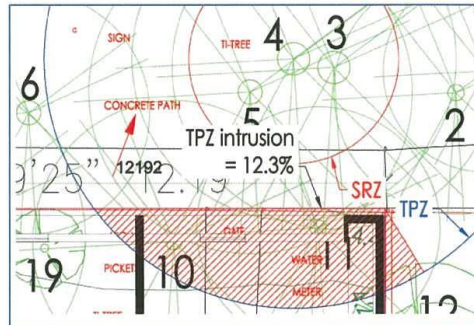


Figure 3 Tree 4 TPZ intrusion

#### 12.1. Tree 5

The proposed development will occupy approximately 23% of the TPZ surface area for this tree and this soil volume will be permanently excised from the TPZ for this tree.

Under AS 4970 (2009) *Protection of Trees on Development Sites* this is considered to be a major intrusion and it must be demonstrated that the tree will tolerate the proposed impact without significant reduction in its useful life expectancy.

The proposed development is likely to significantly impact on the health and longevity of this tree and under AS 4970 this impact is required to be reduced.

This could probably be achieved by moving the front footing back from the front boundary by approximately 1.5 metre and maintaining the soil volume between the new footing location and the property boundary without significant disturbance.

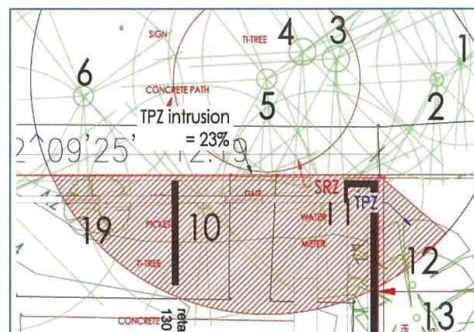


Figure 4 Tree 5 TPZ intrusions

## 12.2. Tree 6

The proposed development will occupy approximately 14.5% of the TPZ surface area for this tree and this soil volume will be permanently excised from the TPZ for this tree.

Under *AS 4970 (2009) Protection of Trees on Development Sites* this is considered to be a major intrusion and it must be demonstrated that the tree will tolerate the proposed impact without significant reduction in its useful life expectancy.

The proposed development is likely to moderately impact on the health and longevity of this tree and under *AS 4970* this impact is required to be reduced.

This could probably be achieved by moving the front footing back from the front boundary by approximately 1.5 metre and maintaining the soil volume between the new footing location and the property boundary without significant disturbance.

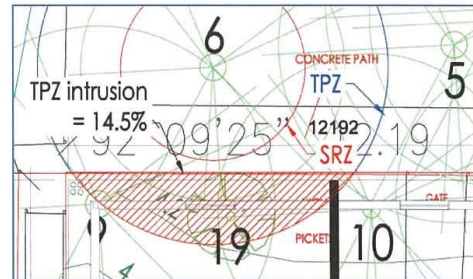


Figure 5 Tree 6 TPZ intrusions

## 12.1. Tree 7

The proposed development will occupy approximately 10.3% of the TPZ surface area for this tree. The intrusions comprise the actual built structure footing (4.4% intrusion) and the proposed driveway (5.9% intrusion). The soil volume occupied by the built structure will be permanently excised from the TPZ for this tree.

Under *AS 4970 (2009) Protection of Trees on Development Sites* this is considered to be a major intrusion and it must be demonstrated that the tree will tolerate the proposed impact without significant reduction in its useful life expectancy.

It is likely that the proposed driveway can be constructed at or above existing grade and as such it is unlikely to significantly affect the underlying soil volume or affect the health and longevity of this tree.

Accordingly it is likely that this tree will tolerate this level of intrusion without significant reduction in its health or longevity.

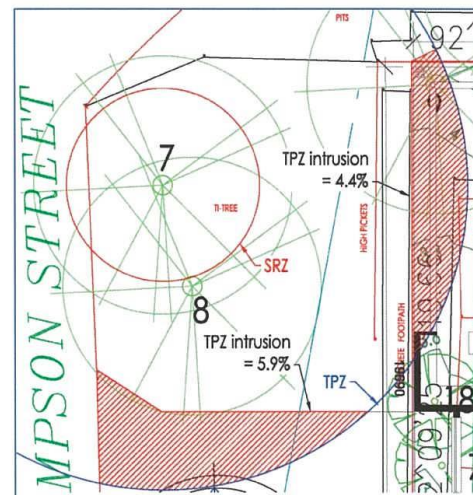


Figure 6 Tree 7 TPZ intrusions

### 12.2. Tree 8

The proposed development does not intrude into the TPZ for this tree although the proposed driveway will occupy approximately 13.5% of the TPZ for this tree.

Under *AS 4970 (2009) Protection of Trees on Development Sites* this is considered to be a major intrusion and it must be demonstrated that the tree will tolerate the proposed impact without significant reduction in its useful life expectancy.

It is likely that the proposed driveway can be constructed at or above existing grade and as such it is unlikely to significantly affect the underlying soil volume or affect the health and longevity of this tree.

Accordingly it is likely that this tree will tolerate this level of intrusion without significant reduction in its health or longevity.

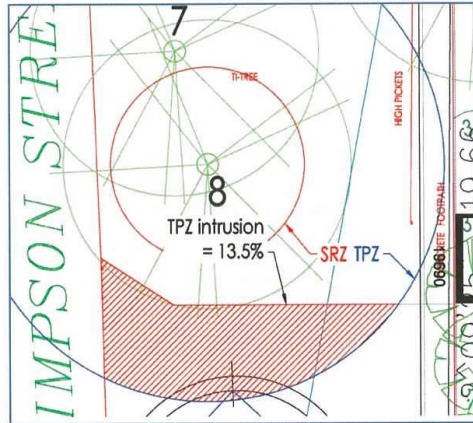


Figure 7 Tree 8 TPZ intrusions

### 12.3. Trees 12, 13 & 14

These small and immature trees are all located on the adjoining property to the east of the site and the proposed development will intrude significantly into both the TPZ and SRZ for these trees.

However because of the immaturity of these trees it is likely that they will tolerate the proposed intrusion without significant impact on their health and longevity.

All roots exposed by the footing excavation should be pruned neatly using sharp hand tools back to the edge of the excavation. If possible these trees should be mulched and irrigated for the duration of the proposed development although this is unlikely to be critical to the survival of these trees.

If these recommendations can be implemented then the successful retention of these trees is very likely.

### 12.4. Tree 15

This tree exhibits poor health, has a relatively short useful life expectancy and a low retention value. However as it is located on the adjoining property it should be preserved without significant impact to its health or longevity.

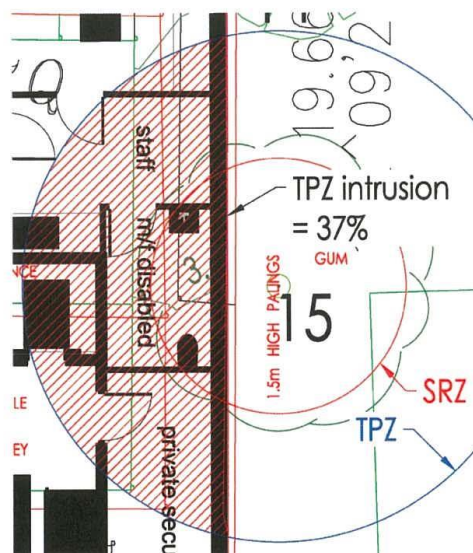


Figure 8 Tree 15 TPZ intrusion





The proposed development will occupy approximately 37% of the TPZ for this tree and will intrude significantly into the SRZ for this tree. The canopy of this tree will also need to be pruned significantly to accommodate the proposed building.

The proposed works will impact on the tree and it is likely that they will significantly reduce its useful life expectancy.

The impact on this tree could be reduced by constructing the proposed elements within the TPZ at or above grade and without strip or sheet excavation.

If this could be achieved then the proposed development could be constructed without significant impact on the structural stability, health and longevity of this tree.

### 13. Recommendations

The following recommendations should be adopted to ensure the successful retention of those trees that are proposed to be retained.

1. This construction impact report should be revised if the design of the proposed development at this site is changed in any way either resulting from the recommendations of this report or for any other reason.
2. A tree management plan should be created to ensure that the proposed works in the area the retained trees at this site are undertaken in a manner that does not significantly impact on the trees.

#### 13.1. Trees 4, 5 & 6

3. To reduce the impact of the proposed development on these trees the amount of the TPZ excised by the proposed development should be reduced.
  - a. This could possibly be achieved by locating the north boundary footing approximately 1.5 metres to the south of the north property boundary.
  - b. The floor could be cantilevered out over the resulting soil volume to the property boundary.
  - c. The soil volume between the footing and the site boundary should be maintained without disturbance.

#### 13.2. Trees 7 & 8

4. The proposed driveway should be constructed more or less at existing grade and without strip or sheet excavation greater than 0.1 metres within the TPZ for these trees.

#### 13.3. Trees 12, 13 & 14

5. Any roots exposed by the footing excavations should be pruned neatly using sharp hand tools and back to the excavation edges.





#### 13.4. Tree 15

6. The impact of the proposed development on this tree could possibly be reduced by constructing the toilets and secure store at or above graded.
  - a. The soil volume in this area would need to be maintained without significant disturbance.
  - b. Services in this area would need to be installed above grade and without strip or sheet excavation.

#### 14. Construction – no impact

The following trees are regarded as being suitable for retention and are unlikely to suffer any significant impact from the proposed development.

While significant care may be required to successfully retain these trees, no modification of the plans or special precautions are likely to be required to ensure this outcome. If these trees are to be retained then they should be protected during construction as outlined in Section 21-Tree Protection Guidelines.

ID	Genus / species	DBH	SRZ	TPZ:	mTPZ	ConP	Ret Value	Retained
<b>The following 1 tree/s are shown as Retained on the plans provided.</b>								
1	<i>Melaleuca lanceolata</i>	22	1.7	2.6	= TPZ	4.3	Very low	Retained
SRZ: Structural Root Zone. TPZ: Tree Protection Zone. mTPZ: Tree Protection Zone.(Canopy) ConP: Construction Proximity.								
Number of trees in this section Total): 1								

#### 15. Trees shown as removed

The following trees are shown as removed on the plans provided.

ID	Genus / species	Common name	ULE	Ret value
<b>The retention value for the following 1 tree/s is High</b>				
9	<i>Melaleuca lanceolata</i>	Moonah	15 - 25	High
<b>The retention value for the following 2 tree/s is Low</b>				
10	<i>Melaleuca lanceolata</i>	Moonah	5 - 15	Low
11	<i>Melaleuca lanceolata</i>	Moonah	5 - 15	Low
Number of tree/s in this section (Total): 3				

#### 16. Trees recommended for removal

The following trees are recommended for removal generally on the basis of poor, or worse, health and/or structure.

*No trees are recommended for removal on this site.*



## 17. Works required

The following section pertains to those trees that are recommended for retention (Retention recommendation).

If any of these trees are retained then the listed works should be performed as per the Priority section of the Explanation of Terms. The recommended works are of a general nature only and should be reviewed following the completion of the project.

ID	Genus / species	Works Required	Priority:
1	<i>Melaleuca lanceolata</i>	> 50mm dead wood.	Very low
3	<i>Melaleuca lanceolata</i>	> 50mm dead wood.	Very low
5	<i>Melaleuca lanceolata</i>	> 50mm dead wood.	Very low
6	<i>Melaleuca lanceolata</i>	> 50mm dead wood.	Very low
2	<i>Melaleuca lanceolata</i>	> 50mm dead wood.	Low
7	<i>Melaleuca lanceolata</i>	> 50mm dead wood.	Low
8	<i>Melaleuca lanceolata</i>	> 50mm dead wood.	Low
Number of trees in this section (Total): 7			

## 18. Weed species

The following trees are regarded by authorities as being environmental weeds (Muys, 2001) (Yarra Ranges, 2004). Consideration should be given to the removal of these trees on the basis of their potential to contribute to environmental weed problems within the local area.

Trees located on adjoining properties are not included in this list.

*No arboreal weed species were assessed on this site.*

## 19. Tree protection data

The trees in the following list are those that are recommended for retention. If these trees are to be retained the following data should be taken into account when planning and constructing structures in their vicinity.

- Where excavation, tunnelling or construction is to occur within the **Structural Root Zone** (SRZ:) (AS 4970-2009) the stability and longevity of the tree may be affected.
- Where excavation, tunnelling or construction is to occur within the **Tree Protection Zone** (TPZ:) (AS 4970-2009) the health and longevity of the tree may be affected.

ID	Genus / species	DBH	SRZ (m radius)	TPZ (m radius)
1	<i>Melaleuca lanceolata</i>	22	1.7	2.6
2	<i>Melaleuca lanceolata</i>	46	2.5	5.5
3	<i>Melaleuca lanceolata</i>	43	2.4	5.2
4	<i>Melaleuca lanceolata</i>	52	2.6	6.2
5	<i>Melaleuca lanceolata</i>	59	2.8	7.1
6	<i>Melaleuca lanceolata</i>	33	2.1	4.0
7	<i>Melaleuca lanceolata</i>	79	3	9.5
8	<i>Melaleuca lanceolata</i>	55	2.7	6.6
9	<i>Melaleuca lanceolata</i>	57	2.7	6.8
10	<i>Melaleuca lanceolata</i>	45	2.5	5.4
11	<i>Melaleuca lanceolata</i>	38	2.3	4.6
12	<i>Banksia integrifolia</i>	10	1.5	2.0
13	Unknown sp.	15	1.5	2.0
14	<i>Banksia integrifolia</i>	15	1.5	2.0
15	<i>Laurus nobilis</i>	37	2.2	4.4
SRZ = Structural Root Zone: TPZ = Tree Protection Zone:				



## 20. References

- Coder, K.D 1996, Construction Damage Assessments, University of Georgia.  
<http://www.forestry.uga.edu/warnell/service/library/for96-039a/index.html>
- Harris, R.W., Clark, J.R. & Matheny, N.P. 2004, *Arboriculture: Integrated management of landscape trees, shrubs and vines*, 4<sup>th</sup> edn., Prentice Hall, New Jersey, USA.
- Hitchmough, J. D. 1994, *Urban Landscape Management*, Inkata Press, Chatswood, NSW.
- Society for Growing Australian Plants Maroondah, 1991, *Flora of Melbourne, a guide to the indigenous plants of the greater Melbourne area*, Society for Growing Australian Plants, Maroondah.
- Mattheck, C. & Breleor, H., 1994, *The body language of trees*, The Stationery Office, London, UK.
- Standards Australia, 2009, *AS 4970 - 2009 Protection of trees on development sites*, Standards Australia, Sydney.

## 21. Appendix 1 - Tree protection guidelines

The following tree protection guidelines should be observed as appropriate. Where it is not possible to comply with these recommendations alternative arrangements should be decided with a qualified arborist.

1. A site specific Tree Protection Report should be commissioned prior to the commencement of construction to guide construction activity around any retained trees on or adjacent to the site.
2. Clearly marked as being retained on the site to avoid confusion during the tree removal phase.
3. The stumps of removed trees should be ground out rather than pulled to avoid injury to adjacent trees.
4. Construction specifications should include the plan location of those trees that are to be retained.
5. Penalties should be included in the construction specifications for damage to trees that are to be retained.
6. The trees to be retained should be enclosed with a 1.8 meter high chain link fence supported on steel posts driven 0.6 meters into the ground.
  - 6.1. Tree protection fencing should be established as shown.
    - 6.1.1. If tree protection fencing is not detailed in the report it should enclose, at a minimum, the entire **Structural Root Zone** and as much of the **Tree Protection Zone** as possible.
    - 6.2. Access should be provided by a single gate that should be kept locked at all times except when required for tree inspection or maintenance.
    - 6.3. Tree protection fencing should be installed following the removal of trees and prior to any other works being commenced.
    - 6.4. The area inside the fence should be mulched to a depth of 0.15 meters with general arboricultural wood chip mulch or similar.





7. Where construction clearance is required and areas of the Tree Protection Zone cannot be fenced the ground in these areas should be protected from compaction with Ground Protection.
  - 7.1. Ground Protection can consist of any constructed platform that prevents point loads on the soil within the Tree Protection Zone. These could include:
    - 7.1.1. Industrial pallets joined together to form a platform.
    - 7.1.2. 12 mm plywood joined together to form a platform.
    - 7.1.3. Planks of timber joined together to form a platform.
  - 7.2. Ground Protection should be constructed with sufficient strength to allow it to survive the entire construction process.
  - 7.3. Ground Protection should be installed following the removal of trees and prior to any other works being commenced.
8. Excavation within the Structural Root Zone should be avoided unless absolutely necessary.
  - 8.1. Any excavation within the Structural Root Zone should be performed by hand.
  - 8.2. Any excavation within or tunnelling under the Structural Root Zone should be supervised by a qualified arborist.
  - 8.3. Any roots encountered from the retained trees should be pruned carefully and cleanly, preferably back to a branch root.
  - 8.4. Before any roots are pruned the effect of such pruning on the health and structural stability of the tree should be evaluated by a qualified arborist.
9. Excavation within the Tree Protection Zone should be avoided where possible.
  - 9.1. Any excavation within the Tree Protection Zone should be performed carefully to minimise root injury.
  - 9.2. Any roots encountered from the retained trees should be pruned carefully and cleanly, preferably back to a branch root.
  - 9.3. Before any excavation occurs the effect of such excavation on the health and structural stability of the tree should be evaluated by a qualified arborist.
10. Concrete and other washout or waste disposal areas should be kept well away from trees to be retained.
11. Where automatic irrigation systems are installed the amount of irrigation that is applied should be checked against the requirements of the existing trees on the site.
12. Any pruning works that are required to facilitate construction should be performed by a qualified arborist.

Adapted from Harris, Clark and Matheny (1999)

## 21. Appendix 2 - Tree data

Note: Where Retention value = "Remove" only the arboricultural attributes of the tree (i.e. health, structure and ULE) are considered. Other factors that may affect the decision to retain or remove the tree are not considered.

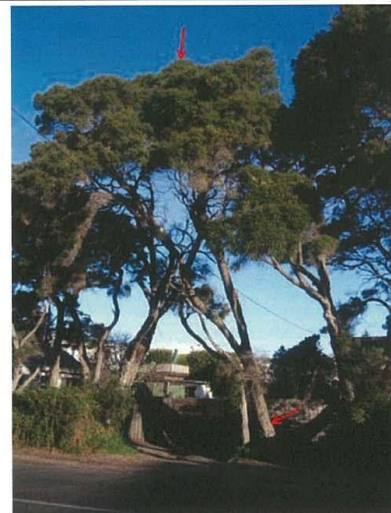
- Where the 'Construction Proximity' is larger than the 'Tree Protection Zone (TPZ)' it is probable that the development will have **no significant impact on the health and longevity** of the tree.
- Where the 'Construction Proximity' is larger than the 'Structural Root Zone (SRZ)' it is probable that the development will have **no significant impact on the stability** of the tree.
- The following information should be read in conjunction with the 'Explanation of Terms' and the 'Glossary / Notes' sections found later in this report.

SRZ (m):	AS 4970-2009 Protection of trees on development sites. (Radius)	Total Number of tree
TPZ (m):	AS 4970-2009 Protection of trees on development sites (Radius)	15
mTPZ (m):	Modification to TPZ as required to protect canopy	
Construction Proximity:	0.1 indicates construction over or immediately adjacent to the tree	

<b>Tree ID:</b>	<b>1</b>	
Genus / species:	<i>Melaleuca lanceolata</i>	
Evergreen	Moonah	
Height (m):	7	Structure: Poor
Width (m):	3	Health: Poor
DBH (cm):	22 Measured	Maturity: Imature
Origin:	Australian	ULE (years): 1 - 5
Retained?:	Retained	Form: Poor
Retention Value:	Very low	
Recommendation reason:	Road reserve.	
Amenity value:	Low	
Works Required:	> 50mm dead wood.	
SRZ (m):	1.7	Works priority: Very low
TPZ (m)	2.6	Construction Proximity: 4.3
mTPZ (m)	= TPZ	

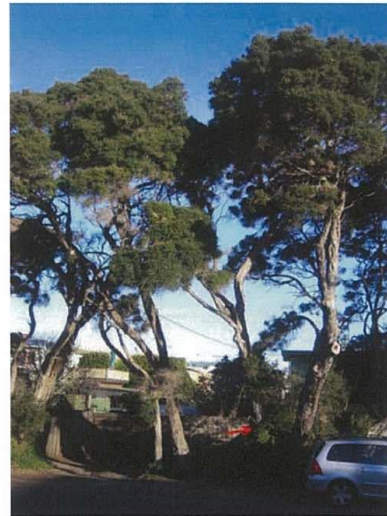


<b>Tree ID:</b>	<b>2</b>	
Genus / species:	<i>Melaleuca lanceolata</i>	
Evergreen	Moonah	
Height (m):	13	Structure: Fair
Width (m):	8	Health: Fair
DBH (cm):	46 Measured	Maturity: Mature
Origin:	Australian	ULE (years): 15 - 25
Retained?:	Retained	Form: Good
Retention Value:	High	
Recommendation reason:	Road reserve.	
Amenity value:	High	
Works Required:	> 50mm dead wood.	
SRZ (m):	2.5	Works priority: Low
TPZ (m)	5.5	Construction Proximity: 3.5
mTPZ (m)	= TPZ	



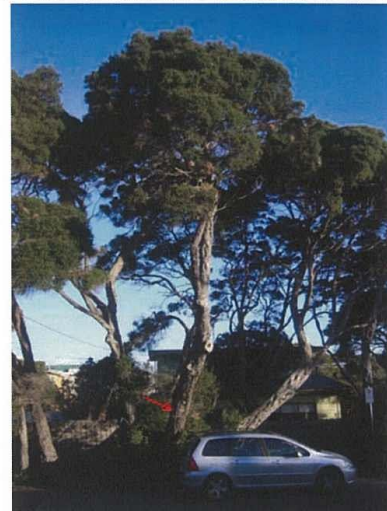
**Tree ID:** 3  
**Genus / species:** *Melaleuca lanceolata*  
**Evergreen:** Moonah  
**Height (m):** 12      **Structure:** Fair  
**Width (m):** 6      **Health:** Fair  
**DBH (cm):** 43 Measured      **Maturity:** Mature  
**Origin:** Australian      **ULE (years):** 15 - 25  
**Retained?:** Retained      **Form:** Good  
**Retention Value:** High  
**Recommendation reason:** Road reserve.  
**Amenity value:** High  
**Works Required:** > 50mm dead wood.

**SRZ (m):** 2.4      **Works priority:** Very low  
**TPZ (m)** 5.2      **Construction Proximity:** 3.6  
**mTPZ (m) = TPZ**



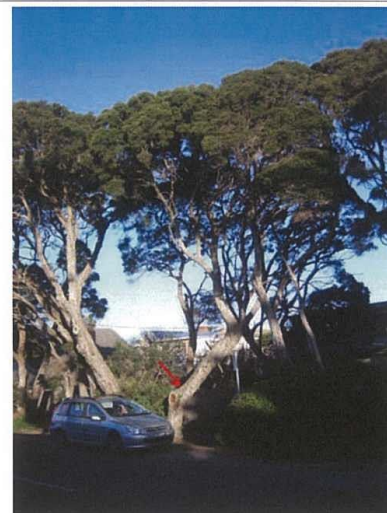
**Tree ID:** 4  
**Genus / species:** *Melaleuca lanceolata*  
**Evergreen:** Moonah  
**Height (m):** 12      **Structure:** Fair  
**Width (m):** 5      **Health:** Fair  
**DBH (cm):** 52 Measured      **Maturity:** Mature  
**Origin:** Australian      **ULE (years):** 15 - 25  
**Retained?:** Retained      **Form:** Good  
**Retention Value:** High  
**Recommendation reason:** Road reserve.  
**Amenity value:** High  
**Works Required:** N/A.

**SRZ (m):** 2.6      **Works priority:** N/A  
**TPZ (m)** 6.2      **Construction Proximity:** 3.8  
**mTPZ (m) = TPZ**



**Tree ID:** 5  
**Genus / species:** *Melaleuca lanceolata*  
**Evergreen:** Moonah  
**Height (m):** 11      **Structure:** Poor  
**Width (m):** 6      **Health:** Fair  
**DBH (cm):** 59 Measured      **Maturity:** Mature  
**Origin:** Australian      **ULE (years):** 5 - 15  
**Retained?:** Retained      **Form:** Fair  
**Retention Value:** Moderate  
**Recommendation reason:** Road reserve.  
**Amenity value:** High  
**Works Required:** > 50mm dead wood.

**SRZ (m):** 2.8      **Works priority:** Very low  
**TPZ (m)** 7.1      **Construction Proximity:** 3  
**mTPZ (m) = TPZ**



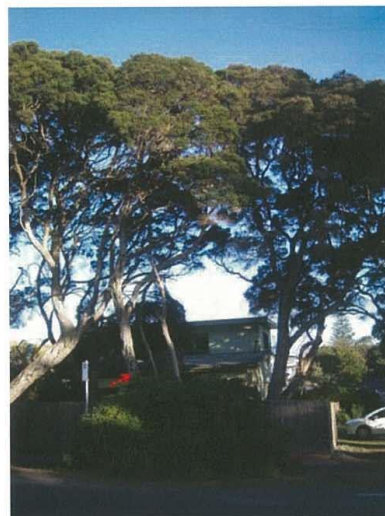




Tree ID:        6

Genus / species:    *Melaleuca lanceolata*  
Evergreen            Moonah  
Height (m):        11                      Structure:    Fair  
Width (m):         3                        Health:        Fair  
DBH (cm):         33    Measured    Maturity:    Mature  
Origin:             Australian        ULE (years): 15 - 25  
Retained?:        Retained            Form:        Fair  
Retention Value:            Moderate  
Recommendation reason: Road reserve.  
Amenity value:            Moderate  
Works Required:    > 50mm dead wood.

SRZ (m):    2.1                      Works priority:    Very low  
TPZ (m)    4.0                      Construction Proximity: 2.5  
mTPZ (m) = TPZ



Tree ID:        7

Genus / species:    *Melaleuca lanceolata*  
Evergreen            Moonah  
Height (m):        13                      Structure:    Fair  
Width (m):         10                     Health:        Good  
DBH (cm):         79    Measured    Maturity:    Mature  
Origin:             Australian        ULE (years): 15 - 25  
Retained?:        Retained            Form:        Good  
Retention Value:            High  
Recommendation reason: Road reserve.  
Amenity value:            High  
Works Required:    > 50mm dead wood.

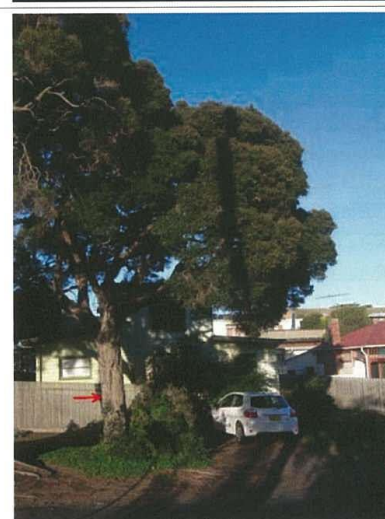
SRZ (m):    3                        Works priority:    Low  
TPZ (m)    9.5                      Construction Proximity: 6.8  
mTPZ (m) = TPZ



Tree ID:        8

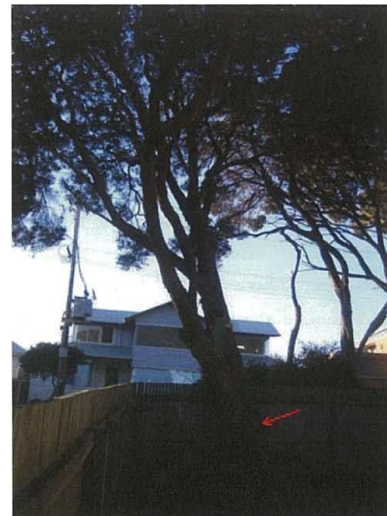
Genus / species:    *Melaleuca lanceolata*  
Evergreen            Moonah  
Height (m):        9                        Structure:    Fair  
Width (m):         7                        Health:        Fair  
DBH (cm):         55    Measured    Maturity:    Mature  
Origin:             Australian        ULE (years): 15 - 25  
Retained?:        Retained            Form:        Fair  
Retention Value:            High  
Recommendation reason: Road reserve.  
Amenity value:            High  
Works Required:    > 50mm dead wood.

SRZ (m):    2.7                      Works priority:    Low  
TPZ (m)    6.6                      Construction Proximity: 3.8  
mTPZ (m) = TPZ



**Tree ID:** 9  
**Genus / species:** *Melaleuca lanceolata*  
**Evergreen:** Moonah  
**Height (m):** 12      **Structure:** Poor  
**Width (m):** 8      **Health:** Fair  
**DBH (cm):** 57 Measured      **Maturity:** Mature  
**Origin:** Australian      **ULE (years):** 15 - 25  
**Retained?:** Removed      **Form:** Fair  
**Retention Value:** High  
**Recommendation reason:** N/A.  
**Amenity value:** High  
**Works Required:** > 50mm dead wood.

**SRZ (m):** 2.7      **Works priority:** Low  
**TPZ (m)** 6.8      **Construction Proximity:** 0.1  
**mTPZ (m) = TPZ**



**Tree ID:** 10  
**Genus / species:** *Melaleuca lanceolata*  
**Evergreen:** Moonah  
**Height (m):** 11      **Structure:** Poor  
**Width (m):** 7      **Health:** Poor  
**DBH (cm):** 45 Measured      **Maturity:** Mature  
**Origin:** Australian      **ULE (years):** 5 - 15  
**Retained?:** Removed      **Form:** Fair  
**Retention Value:** Low  
**Recommendation reason:** N/A.  
**Amenity value:** Moderate  
**Works Required:** > 50mm dead wood.

**SRZ (m):** 2.5      **Works priority:** Low  
**TPZ (m)** 5.4      **Construction Proximity:** 0.1  
**mTPZ (m) = TPZ**



**Tree ID:** 11  
**Genus / species:** *Melaleuca lanceolata*  
**Evergreen:** Moonah  
**Height (m):** 11      **Structure:** Poor  
**Width (m):** 4      **Health:** Poor  
**DBH (cm):** 38 Measured      **Maturity:** Mature  
**Origin:** Australian      **ULE (years):** 5 - 15  
**Retained?:** Removed      **Form:** Fair  
**Retention Value:** Low  
**Recommendation reason:** N/A.  
**Amenity value:** Moderate  
**Works Required:** > 50mm dead wood.

**SRZ (m):** 2.3      **Works priority:** Low  
**TPZ (m)** 4.6      **Construction Proximity:** 0.1  
**mTPZ (m) = TPZ**







Tree ID: 12

Genus / species: *Banksia integrifolia*  
Evergreen Coast Banksia  
Height (m): 3 Structure: Good  
Width (m): 2 Health: Good  
DBH (cm): 10 Estimated Maturity: Imature  
Origin: Melbourne ULE (years): > 50  
Retained?: Retained Form: Good  
Retention Value: Low  
Recommendation reason: Adjoining property.  
Amenity value: Very low  
Works Required: N/A.

SRZ (m): 1.5 Works priority: N/A  
TPZ (m) 2.0 Construction Proximity: 1  
mTPZ (m) = TPZ



Tree ID: 13

Genus / species: *Unknown sp.*  
Unknown Unknown  
Height (m): 4 Structure: Fair  
Width (m): 4 Health: Good  
DBH (cm): 15 Estimated Maturity: Imature  
Origin: Unknown ULE (years): 15 - 25  
Retained?: Retained Form: Good  
Retention Value: Very low  
Recommendation reason: Adjoining property.  
Amenity value: Very low  
Works Required: N/A.

SRZ (m): 1.5 Works priority: N/A  
TPZ (m) 2.0 Construction Proximity: 1.1  
mTPZ (m) = TPZ



Tree ID: 14

Genus / species: *Banksia integrifolia*  
Evergreen Coast Banksia  
Height (m): 4 Structure: Fair  
Width (m): 3 Health: Good  
DBH (cm): 15 Estimated Maturity: Imature  
Origin: Melbourne ULE (years): 25 - 50  
Retained?: Retained Form: Good  
Retention Value: Very low  
Recommendation reason: Adjoining property.  
Amenity value: Very low  
Works Required: N/A.

SRZ (m): 1.5 Works priority: N/A  
TPZ (m) 2.0 Construction Proximity: 1.1  
mTPZ (m) = TPZ







Tree ID: 15  
Genus / species: *Laurus nobilis*  
Evergreen Bay Tree  
Height (m): 6 Structure: Fair  
Width (m): 5 Health: Poor  
DBH (cm): 37 Estimated Maturity: Mature  
Origin: Exotic ULE (years): 5 - 15  
Retained?: Retained Form: Fair  
Retention Value: Low  
Recommendation reason: Adjoining property.  
Amenity value: Low  
Works Required: N/A.  
  
SRZ (m): 2.2 Works priority: N/A  
TPZ (m) 4.4 Construction Proximity: 0.8  
mTPZ (m) = TPZ





## 23. Appendix 3 – Arboricultural information

The following sections are presented to provide an introduction to the process of tree root system protection. A tree's root system is the critical element to be protected during the development process and if the tree's roots are adequately protected then the rest of the tree will generally survive without significant injury.

### 23.1. Root plate estimation

One of the primary purposes of this report is to estimate the impact of the development on the trees on this site. This is mainly achieved by estimating the extent of the root plate area of the trees and what proportion of this is likely to be injured or severed during the construction process.

In this report two elements of the root area are described. These are:

#### 23.1.1. Structural Root Zone

This is an estimate of the radius that is likely to encompass the major scaffold roots of the tree. These roots are critical to anchoring the tree and damage to these roots will increase the risk of entire tree failure (i.e. uprooting). This radius is based on AS 4970-2009.

#### 23.1.2. Tree Protection Zone

This is an estimate of the radius that is likely to encompass enough of the smaller absorbing roots to allow the tree to obtain sufficient nutrients and water to allow it to survive in the long term. This radius is based on AS 4970-2009 and is based on the size of the tree.

Estimation of the likely root plate radius for both methods are based on the DBH (Diameter at Breast Height) of each tree. This is usually measured but where the tree is inaccessible or has numerous trunks a visual estimation may be used. Whether the DBH is estimated or measured is noted within the "Tree Data" section of the report.

The two elements of each tree's root zone is transposed over the site survey and building footprint and the degree of root injury is calculated from this.

### 23.2. Tree rooting patterns

Contrary to common belief, trees usually have a broad flat plate of roots that may extend 1.5 – 3 times the radius of the canopy (Harris, Matheny & Clark, 1999; Coder, 1996; Hitchmough, 1994). Relatively few trees have deep roots and Harris, Matheny and Clark (2004) note that most tree roots will be found in the top 1.0 metre of the soil profile.

While the models used to approximate the size of tree root plates assume a uniformly radial root system, in highly disturbed urban soils root systems often develop in a highly asymmetric manner (Matheny & Clarke, 1998). This may require the modification of the models used where it is likely that the root system is asymmetric.



### 23.3. Construction impacts

Construction in the vicinity of trees can have several negative impacts on their health, longevity and structural stability. Harris, Matheny and Clark (2004) note that some injury is almost inevitable during the construction process and maintain that the goal of tree preservation is to reduce the impacts to a level that will enable the long term preservation of the trees.

Negative impacts can include:

- Root severance from trenching and grading activities. Damage to the transport and absorbing root system may deprive the tree of the ability to absorb nutrients and water and damage to the structural scaffold roots that support the tree may result in instability and uprooting. Depending on the percentage of the root plate affected and proximity to the tree, the affects can range from minor degradation of health through to total root plate failure (i.e. uprooting).
- Compaction and root injury. Most trees require a well aerated and friable soil to allow normal physiological processes to occur and to allow root growth. Soil compaction from pedestrian or vehicular traffic can result in direct injury to the roots, indirect injury through soil drainage changes, reduced soil aeration or decreased soil penetrability. If severe enough soil compaction can lead to a rapid decline in many tree species and may eventually result in instability and uprooting.
- Changes in drainage patterns. Changes in drainage patterns may result from hard surfacing, trenching, land shaping and other construction activities. These can result in either drought stress or waterlogging, both of which can cause a rapid decline in trees and may result in instability and uprooting.





## 24. Appendix 4 - AS 4970 -2009

This report generally conforms to *AS 4970 – 2009 Protection of Trees on Development Sites* except in the following areas.

1. AS 4970 notes that the project arborist should verify the accuracy of feature survey for the subject site.
  - a. This is generally not feasible and the feature survey is taken as being an accurate representation of the features of the site.
  - b. However if trees are found on the site that are not represented in the feature survey then these trees will be added to the report plans based on a visual estimation of their location.
    - i. Accordingly the location of these trees may not be sufficiently accurate for the purposes of the report.
    - ii. The location of these trees should be verified by a qualified surveyor where appropriate.
2. *AS 4970-2009 Protection of Trees on Development Sites* makes no differentiation between the Tree Protection Zone (TPZ) derived from the trees DBH and the modified TPZ derived from the trees canopy where it extends past the DBH derived TPZ. As the two forms of TPZ are independent a differentiation between the two forms of TPZ needs to be made. In this report:
  - a. "TPZ" refers to the DBH derived Tree Protection Zone (12 x DBH) and "mTPZ" pertains to the TPZ where it is modified to account for a canopy that extends beyond the DBH derived TPZ.
  - b. The modified Tree Protection Zone (mTPZ) for all trees is taken as being identical to the Tree Protection Zone (TPZ) except where the canopy of the tree extends beyond the TPZ. Where this is the case the TPZ is shown on the site plans and any tree canopy impacts are addressed as required within the report. Otherwise the mTPZ is recorded within this report as "= TPZ".



## 25. Appendix 5 - Explanation of terms

The assessment of Health, Structure, Condition, U.L.E. (Useful Life Expectancy), Origin, Maturity, Form and Retention value are based on the following definitions. In the case of health and structure these definitions encompass only the more common indicators for these assessments. Other indicators not included in these definitions may lead to the ascribing of a particular health or structure category.

### 25.1. Origin

The notation of "Origin" is based on the following categories.

➤ Category	Description
➤ Melbourne	Native to the greater Melbourne metropolitan area as defined by Flora of Melbourne (S. G. A. P. M., 1991).
➤ Victorian	Native to Victoria but not the greater Melbourne Metropolitan area.
➤ Australian	Native to Australia but not Victoria.
➤ Exotic	Not native to Australia.

### 25.2. Maturity

The notation of "Maturity" is based on the following categories.

➤ Category	Description
➤ Immature	Less than 20% of the life expectancy for that tree.
➤ Mature	20 – 80% of the life expectancy for that tree.
➤ Over mature	> 80% of the life expectancy for that tree.

### 25.3. Works required

The works required listed in this report are of a general nature only and should be reviewed following the completion of any works on the site.

Where a tree is recommended for removal (Recommendation) it is not listed in the Works required section of the report.



#### 25.4. Priority

The priority accorded particular works is based on a projected increased site usage following the completion of a development on the site. The priority is of a general nature only and should be reviewed following the completion of any works on the site.

“Priority” is based on the following categories.

<u>Category</u>	<u>Description</u>
➤ N/A.	Works are only required to improve tree health and could be performed at any time.
➤ Very low	Works should be performed within five years.
➤ Low	Works should be performed within three years.
➤ Moderate	Works should be performed within 18 months.
➤ High	Works should be performed within 6 months.
➤ Urgent	Works should be performed immediately.

#### 25.5. Retention value (RV)

The Retention value ascribed to each tree in this report is not definitive and should be used as a guide only. Many factors influence the comparative value of a tree and a number of these factors are outside the scope of arboricultural assessment. These factors cannot therefore be addressed in a single rating system.

Retention value is comprised of two parts. These are the Amenity Value of the tree rated as Very Low to Very high and the Useful Life Expectancy (ULE) of the tree.

The Amenity Value of the tree relates to the contribution of the tree to the aesthetic amenity of the area. The primary determinants of amenity value are tree health, size and form.

The Amenity Value is then modified by the ULE of the tree with short ULE values reducing the RV of the tree and long ULE values increasing the RV of the tree.

Trees that are listed on a register of heritage or significant trees are not accommodated within this rating system as these values are often independent from the arboricultural attributes of the tree. Heritage and significant trees may be ascribed a very low retention value despite their listing on any register. Where known, any heritage or significant register listing it will be noted in the report.

RV is assessed on each tree as a single entity. The value of a group of trees is not considered in this context and each tree within the group will be assessed as an individual.





Amenity value is based on the following categories and is ascribed an Amenity Value Value (AVV) ranging from 2 - 10.

<u>Category</u>	<u>Example</u>	<u>AVV</u>
➤ Very high	Generally a very large tree that exhibits excellent health and/or form or a tree that is listed on a heritage or significant tree register.	10
➤ High	Generally a large tree that exhibits good health and/or form.	8
➤ Medium	Generally a medium tree that exhibits good health and/or form. May be a large tree that exhibits fair health and/or form.	6
➤ Low	Generally a small tree that exhibits good health and/or form. May be a large or medium tree that exhibits fair or poor health and/or form.	4
➤ Very low	Generally a small tree that exhibits poor health and/or form. May be a large or medium tree that exhibits poor, or worse, health and/or form.	2

U.L.E. is based on the following categories each of which have a modifier (ULEM) ranging from 0 – 12.

<u>Category</u>	<u>Example</u>	<u>ULEM</u>
➤ 0	The tree is dead or almost dead or constitutes an immediate and unacceptable hazard.	0
➤ 0 – 5	The tree is unlikely to provide useful amenity for longer than 5 years. The tree is in serious decline, poses an unacceptable hazard and/or requires a level of maintenance disproportionate with its' value.	4
➤ 5 – 15	The tree is unlikely to provide useful amenity for longer than 15 years. The tree may be in serious decline, be a very short lived species, present a moderately elevated hazard and/or require high levels of maintenance.	7
➤ 15 – 25	The tree is unlikely to provide useful amenity for longer than 25 years. The tree may be in moderate decline, a short lived species, present a slightly elevated hazard and/or require moderate levels of maintenance.	10



➤ 25 – 50	The tree is likely to provide useful amenity for up to 50 years. The tree may be in fair to good condition, have a moderate life-span, present a low to moderate level of hazard and/or require moderate levels of maintenance.	11
➤ > 50	The tree is likely to provide useful amenity for greater than 50 years. The tree may be in good to excellent condition, a long lived species, present a low level of hazard and/or require low levels of maintenance.	12

RV is then derived from the multiplication of AVV by ULEM and the resulting score is categorised as Very high to Very low.

<u>Category</u>	<u>Example</u>	<u>RV value</u>
➤ Very high	Every effort should be made to preserve trees in this category	96 - 120
➤ High	These trees should be retained if at all possible	72 - 95
➤ Moderate	These trees should be retained if they do not overly constrain development on the site.	48 - 71
➤ Low	These trees should not create a material constraint on development of the site. These trees should be removed where they conflict with development of the site.	24 - 47
➤ Very low	Generally a small tree that exhibits poor health and/or form. May be a large or medium tree that exhibits poor, or worse, health and/or form. These trees should generally be removed.	1 – 23
➤ Remove	These trees are not suitable for retention within the site and are recommended to be removed.	



## 25.6. Health

Pertains to the health and growth potential of the tree.

The notation of "Health" is based on the following categories.

<u>Category</u>	<u>Example</u>
➤ Good	Crown full, with good foliage density. Foliage is entire with average colour, minimal or no pathogen damage. Above average growth indicators such as extension growth, leaf size and canopy density. Little or no canopy die-back. Generally no dead wood on the perimeter of the canopy. Good wound wood development. <b>Tree exhibits above average health and no works are required.</b>
➤ Fair	Tree may have more than 30% dead wood, or may have minor canopy dieback. Foliage density may be slightly below average for the species. Foliage colour may be slightly lower than average and some discolouration may be present. Typical growth indicators, e.g. extension growth, leaf size, canopy density for species in location. Average wound wood development. <b>The tree exhibits below average health and remedial works may be employed to improve health.</b>
➤ Poor	Tree may have more than 30% dead wood and canopy die back may be present. Leaves may be discoloured and/or distorted, often small, and excessive epicormic growth may be present. Pathogens and/or stress agents may be present that could lead, or are leading to, the decline of tree. Poor wound wood development. <b>The tree exhibits low health and remedial works or removal may be required.</b>
➤ Very poor	The tree has more than 30% dead wood. Extensive canopy die back is present. Canopy is very sparse. Pathogens and/or stress agents are present that are leading to the decline of the tree. Very poor wound wood development. <b>The tree exhibits very low health and remedial works or removal are required.</b>
➤ Dead	Tree is dead and generally should be removed.





### 25.7. Structure

Pertains to the physical structure of the tree including the main scaffold branches and roots. Structure includes those attributes that may influence the probability of major trunk, root or limb failure.

The notation of "Structure" is based on the following categories.

<u>Category</u>	<u>Example</u>
➤ Good	The tree has a well-defined and balanced crown. Branch unions appear to be strong with no defects evident in the trunk or the branches. The tree is unlikely to suffer trunk or branch failure under normal conditions. <b>The tree is considered a good example of the species with a well-developed form.</b>
➤ Fair	The tree has some minor problems in the structure of the crown. The crown may be slightly out of balance and some branch unions may exhibit minor structural faults or have the potential to create faults. If the tree is single trunked, this may be on a slight lean or be exhibiting minor defects. <b>These defects are not likely to result in catastrophic trunk or branch failure although some branch failure may occur under normal conditions.</b>
➤ Poor	The tree has significant problems in the structure of the scaffold limbs or trunk. It may be lop-sided or have few branches on one side or have large gaps in the crown. Large branches may be rubbing or crossing over. Branch unions may be poor, and faults at the point of attachment or along the branches may be evident. The tree may have a substantial lean. The tree may have suffered significant root damage. The tree may have some degree of basal or trunk damage. <b>These defects may predispose the tree to major trunk or branch failure.</b>
➤ Very poor	The tree has some very significant problems in the structure of the crown. It may be lop-sided or have few branches on one side or have large gaps in the crown. Branches may be rubbing or crossing over and causing damage to each other. Branch unions may be poor, and faults at the point of attachment or along the branches may be evident. The tree may have a substantial lean. The tree may have suffered major root damage. The tree may have extensive basal or trunk damage. <b>These defects are likely to predispose the tree to trunk or scaffold limb failure.</b>



## 25.8. U.L.E. (Useful Life Expectancy)

U.L.E. pertains to the span of time that the tree might reasonably be expected to provide useful amenity value with an acceptable level of safety at an acceptable cost. Depending on the situation, available financial resources and other factors, two identical trees may be accorded different longevity ratings.

The notation of U.L.E. is based on the following categories.

<u>Category</u>	<u>Example</u>
➤ 0	The tree is dead or almost dead or constitutes an immediate and unacceptable hazard. <b>The tree should generally be removed unless other considerations require its' retention.</b>
➤ 0 – 5	The tree is unlikely to provide useful amenity for longer than 5 years. The tree is in serious decline, poses an unacceptable hazard and/or requires a level of maintenance disproportionate with its' value. <b>The tree should generally be removed unless other considerations require its' retention.</b>
➤ 5 – 15	The tree is unlikely to provide useful amenity for longer than 15 years. The tree may be in serious decline, be a very short lived species, present a moderately elevated hazard and/or require high levels of maintenance. <b>The tree could be retained or removed depending on the situation.</b>
➤ 15 – 25	The tree is unlikely to provide useful amenity for longer than 25 years. The tree may be in moderate decline, be a short lived species, present a slightly elevated hazard and/or require moderate levels of maintenance. <b>The tree should generally be retained unless other factors dictate its' removal.</b>
➤ 25 – 50	The tree is likely to provide useful amenity for up to 50 years. The tree may be in fair to good condition, have a moderate life-span, present a low to moderate level of hazard and/or require moderate levels of maintenance. <b>The tree should generally be retained unless other factors dictate its' removal.</b>
➤ > 50	The tree is likely to provide useful amenity for greater than 50 years. The tree may be in good to excellent condition, a long lived species, present a low level of hazard and/or require low levels of maintenance. <b>The tree should generally be retained unless other factors dictate its' removal.</b>



## 25.9. Form

The notation of "Form" pertains to the aesthetic qualities of the trees live canopy. Generally good form is indicative of a symmetrical, well-balanced canopy although this is dependent on the particular species. Some species naturally develop an asymmetric canopy and in this case a highly irregular canopy might be described as good.

The form of a tree is considered assuming that the tree stands in isolation from any surrounding trees. This may mean that a group of trees that exhibit good form as a group, may be described as having poor form as individuals.

The notation of "Form" is based on the following categories.

<u>Category</u>	<u>Example</u>
➤ <b>Very good</b>	An outstanding specimen of that species. Generally a very evenly balanced and symmetrical canopy with no deformation. If the development of that species is naturally irregular then an outstanding specimen of that species.
➤ <b>Good</b>	A good specimen of that species. Generally a well balanced and symmetrical canopy with minor deformation. If the development of that species is naturally irregular then a good specimen of that species.
➤ <b>Fair</b>	An average specimen of that species. Generally a balanced canopy with some minor to moderate asymmetry. If the development of that species is naturally irregular then an average specimen of that species.
➤ <b>Poor</b>	A below average specimen of that species. Generally a moderate to high degree of asymmetry. If the development of that species is naturally irregular then a poor specimen of that species.
➤ <b>Very poor</b>	A very poor specimen of that species. Generally a high to extreme degree of asymmetry. If the development of that species is naturally irregular then a very poor specimen of that species.



## 26. Glossary / notes

<u>Tree Protection Zone (TPZ)</u>	Is based on AS 4970-2009 <i>Protection of trees on development sites</i> and defines the soil volume that is likely to be required to encompass enough of the trees absorbing root system to ensure the long term survival of the tree. The radius specified as the TPZ is an estimate of the minimum distance from the tree that excavation or other activities that might result in root damage should occur to avoid negative impacts on the health and longevity of the tree. AS 4970 states that a 10% intrusion into the TPZ may occur without further assessment or analysis.
<u>Structural Root Zone (SRZ)</u>	<p>Is based on AS 4970-2009 (Protection of trees on development sites) and defines the likely spread of the trees scaffold root system. These roots are the primary anchoring roots for the tree and damage to these roots may render the tree liable to uprooting.</p> <p>SRZ is based on measurement of the trunk above the root flair (AS 4970) However in this report SRZ is based on the measured or estimated DBH and there should be taken as an estimate only. Additional measurement may be required if construction near the SRZ is expected to occur.</p>
<u>Modified Tree Protection Zone (mTPZ)</u>	Is based on the TPZ and includes any requirement to protect the above ground parts of the tree that project beyond the TPZ. However generally the mTPZ will be equal to the TPZ. TPZ extension beyond the TPZ to protect the tree canopy will be shown on the site plan but will not be reflected in the TPZ radius measurements quoted in this report.
<u>DBH (Diameter at Breast Height)</u>	Is the diameter of the tree at approximately 1.4 meters above ground level. Where a trunk is divided at or near 1.4 meters above ground the DBH is generally measured at the narrowest point of the trunk between ground level and 1.4 meters. Alternatively, where a higher level of accuracy is required with multi stemmed trees, DBH is derived from the combined cross sectional area of all trunks. The DBH of all accessible trees is measured unless otherwise stated in the Tree Data section of the report. The DBH of trees is measured where access can be gained to the property, otherwise it is estimated.
<u>Measured</u>	Indicates whether the DBH has been measured or estimated. DBH may be estimated for small low value multi stem trees or trees that are inaccessible.
<u>Retained?</u>	Indicates whether the tree is shown as being removed or retained on the plans provided. This is generally derived from the site plans provided but the removal or retention of trees might be communicated by other means.





<b>Recommendation reason</b>	Pertains to the reason that removal or retention or other works are recommended. Other than trees on adjoining properties or road reserves a reason for retention is usually not given. In this case N/A is used.
<b>Height &amp; width</b>	Tree height is generally measured for moderate, high and very high value trees and is measured with an Impulse Laser infrared range finder. The height of low and very low value trees is usually estimated and the width of all tree canopies is estimated unless otherwise stated.
<b>Genus / species</b>	The identification of trees is based on accessible visual characteristics and given that key identifying features are often not available the accuracy of identification is not guaranteed. Where the species of any tree is not known, <b>sp.</b> is used.



## 27. Practice Note VCAT 2 — Expert Evidence

### Name & address of consultant

Roger George Greenwood of 453 Mount Dandenong Tourist Road, Sassafras, Victoria 3787

### Qualifications & experience

Roger Greenwood has the following qualifications and experience:

- Bachelor of Applied Science (Horticulture).
- Diploma of Applied Science (Horticulture).
- Advanced Certificate of Arboriculture.
- 25 years experience in arboriculture.
  - 8 years as a partner in The Tree Works dealing with all aspects of commercial arboriculture. The Tree Works provided a range of arboricultural services to government, commercial and domestic clients.
  - 4 years as a contract climber, crew manager and consulting arborist with a range of companies while completing higher education qualifications.
  - 13 years as a consulting arborist.

### Area of expertise

Roger Greenwood provides specialist technical advice in the field of arboriculture. This includes the provision of technical expertise relating to problem diagnosis, management programs, tree appraisal and valuation and the relationship between trees and the built environment.

### Expertise to report

Roger Greenwood has, by training, education, experience and research, considerable knowledge relating to the care, maintenance and management of trees in a wide variety of contexts.

Significant areas of operation and expertise include the provision of tree and built structure conflict reports, hazard assessment, tree condition appraisal and broad scale tree inventories.

Considerable effort is expended in research to remain current with the latest advances in all areas relating to tree care.

### Declaration

"I have made all the inquiries that I believe are desirable and appropriate and that no matters of significance which I regard as relevant have to my knowledge been withheld from the Tribunal."



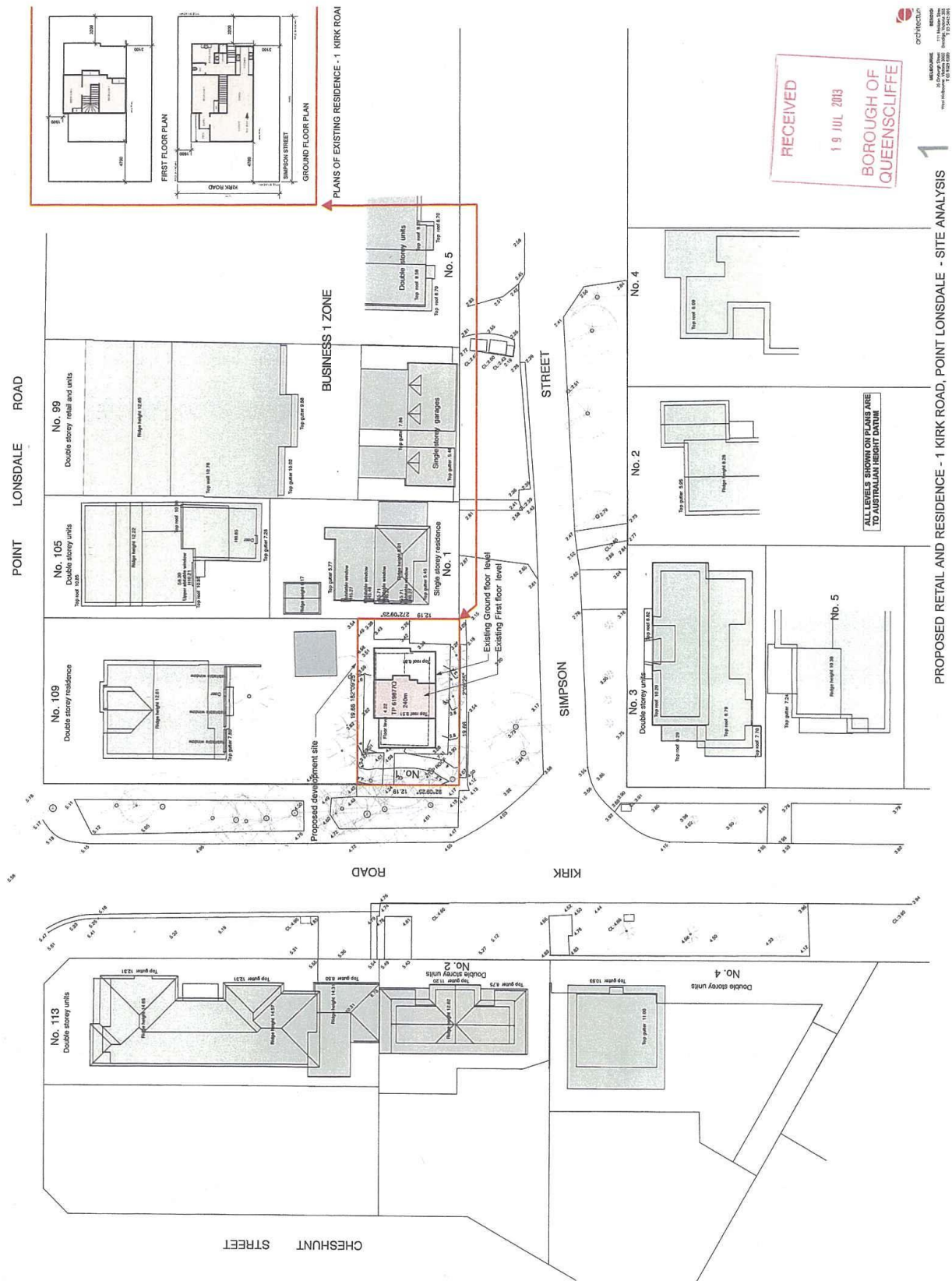
## 28. Assumptions & limiting conditions

1. R. Greenwood Consulting Pty Ltd (herein after referred to as Greenwood Consulting) contracts with you on the basis that you promise that all legal information which you provide, including land title and ownership of other property, are correct. Greenwood Consulting is not responsible for verifying or ascertaining any of these issues.
2. Greenwood Consulting contracts with you on the basis that your promise that all affected property complies with all applicable statutes and subordinate legislation.
3. Greenwood Consulting will take all reasonable care to obtain necessary information from reliable sources and to verify data. However Greenwood Consulting neither guarantees nor is responsible for the accuracy of information provided by others.
4. If, after delivery of this report, you later require a representative of Greenwood Consulting to attend court to give evidence or to assist in the preparation for a hearing because of this report, you must pay an additional hourly fee at our then current rate for expert evidence.
5. Alteration of this report invalidates the entire report.
6. Greenwood Consulting retains the copyright in this report. Possession of the original or a copy of this report does not give you or anyone else any right of reproduction, publication or use without the written permission of Greenwood Consulting.
7. The contents of this report represent the professional opinion of the consultant. Greenwood Consulting's consultancy fee for the preparation of this report is in no way contingent upon the consultant reporting a particular conclusion of fact, nor upon the occurrence of a subsequent event.
8. Sketches, diagrams, graphs and photographs in this report are intended as visual aids, are not to scale unless stated to be so, and must not be construed as engineering or architectural reports or as surveys.
9. Unless expressly stated otherwise:
  - 9.1. The information in this report covers only those items which were examined and reflects the condition of those items at the time of the inspection.
  - 9.2. Our inspection is limited to visual examination of accessible components without dissection, excavation or probing. There is no warranty or guarantee, express or implied, that even if they were not present during our inspection, problems or defects in plants or property examined may not arise in the future.
10. This agreement supersedes all prior discussions and representations between Greenwood Consulting and the client on the subject, and is the entire agreement and understanding between us.

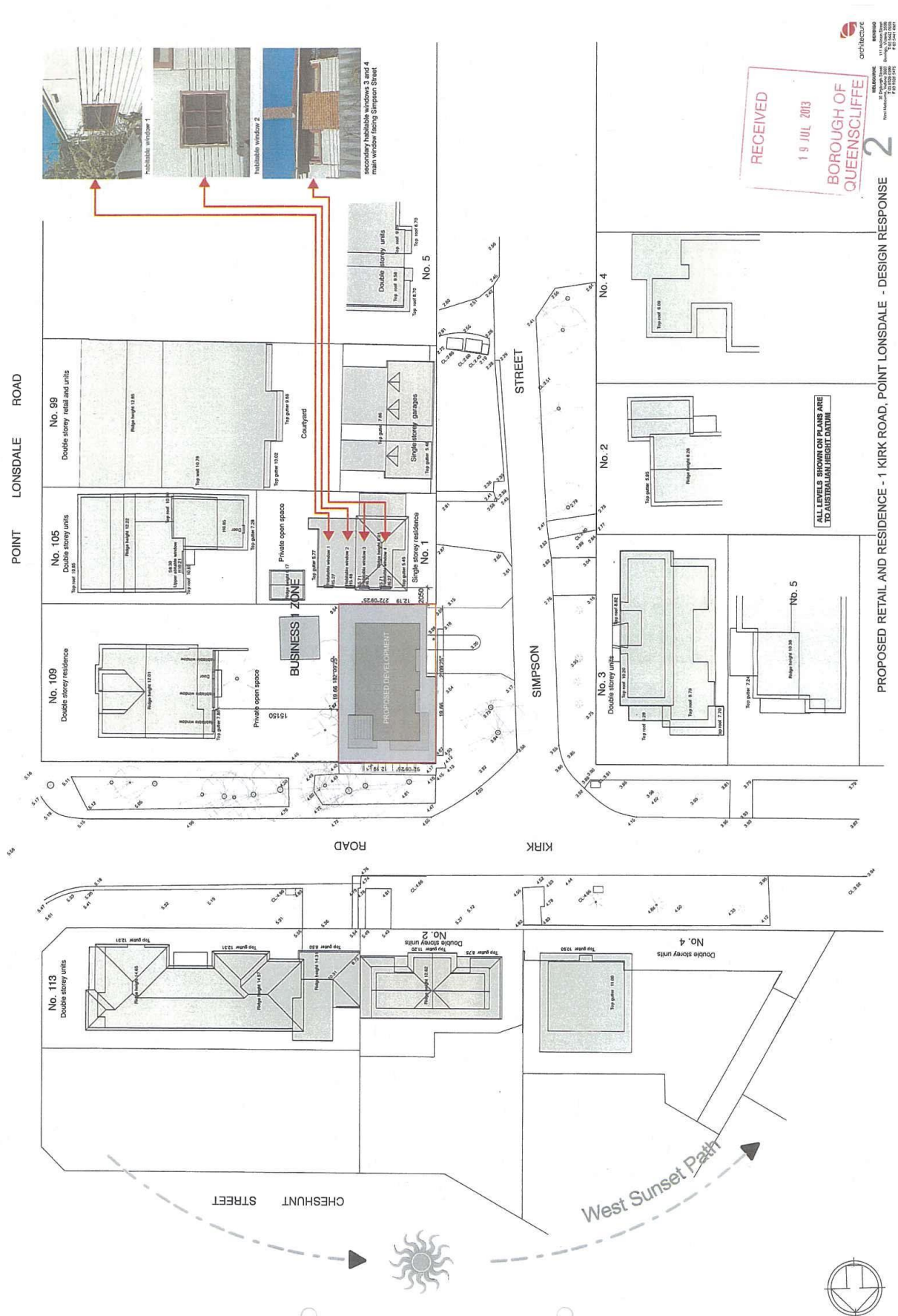
Yours sincerely,

Roger Greenwood

B. App. Sci. (Hort)  
Dip. App. Sci. (Hort)  
Adv. Cert. Arb.



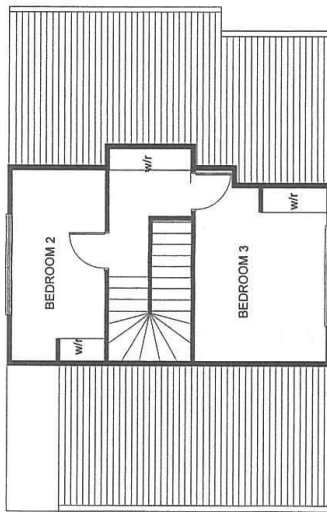




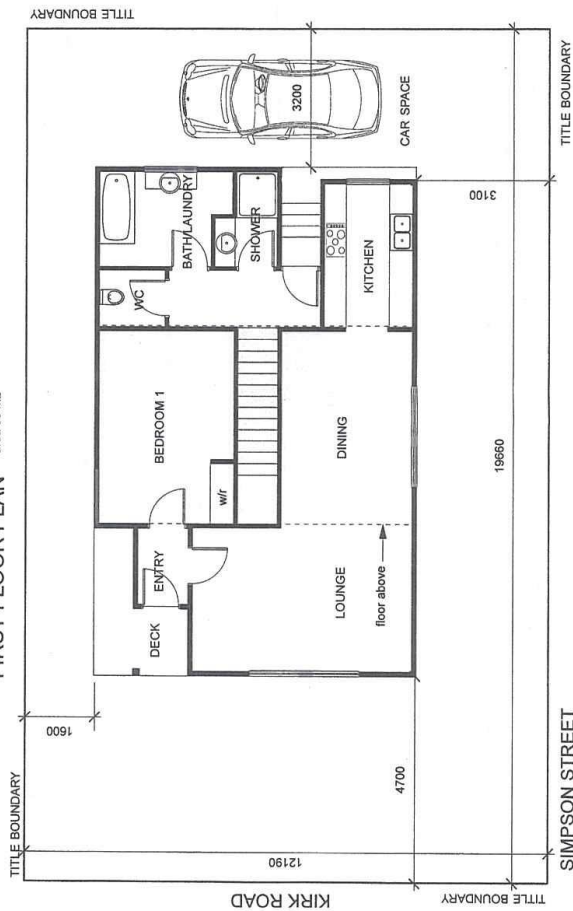




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FIRST FLOOR PLAN area 35 m<sup>2</sup>



GROUND FLOOR PLAN area 90 m<sup>2</sup>

EXISTING RESIDENCE - 1 KIRK ROAD, POINT LONSDALE







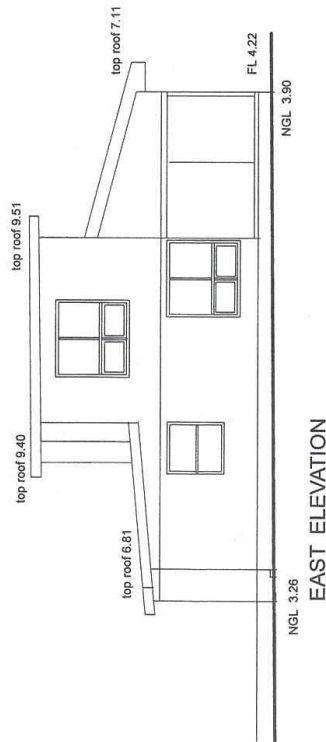
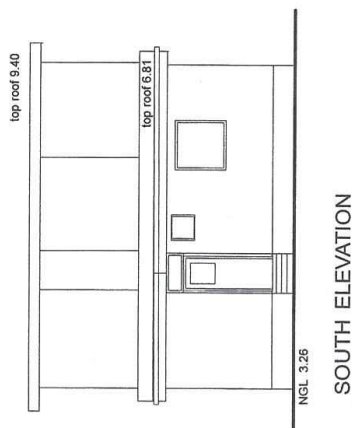
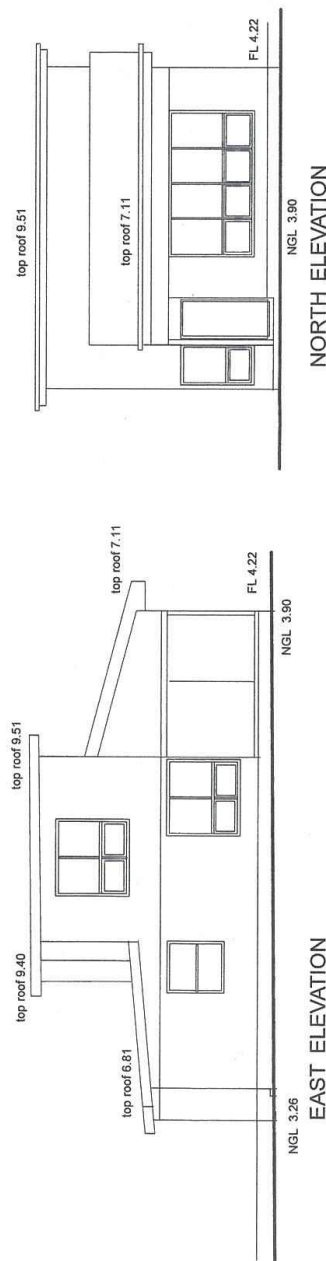
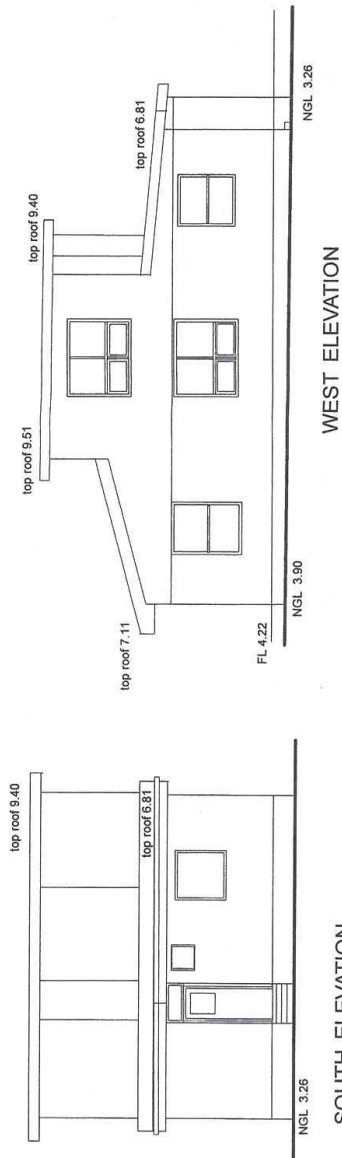
WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION

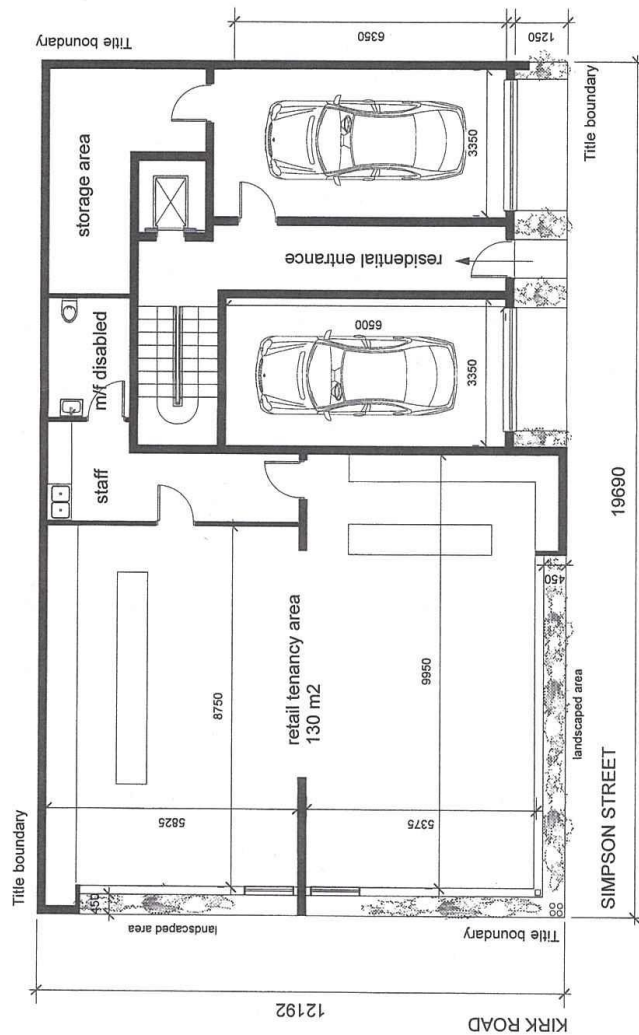


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EXISTING RESIDENCE - 1 KIRK ROAD, POINT LONSDALE





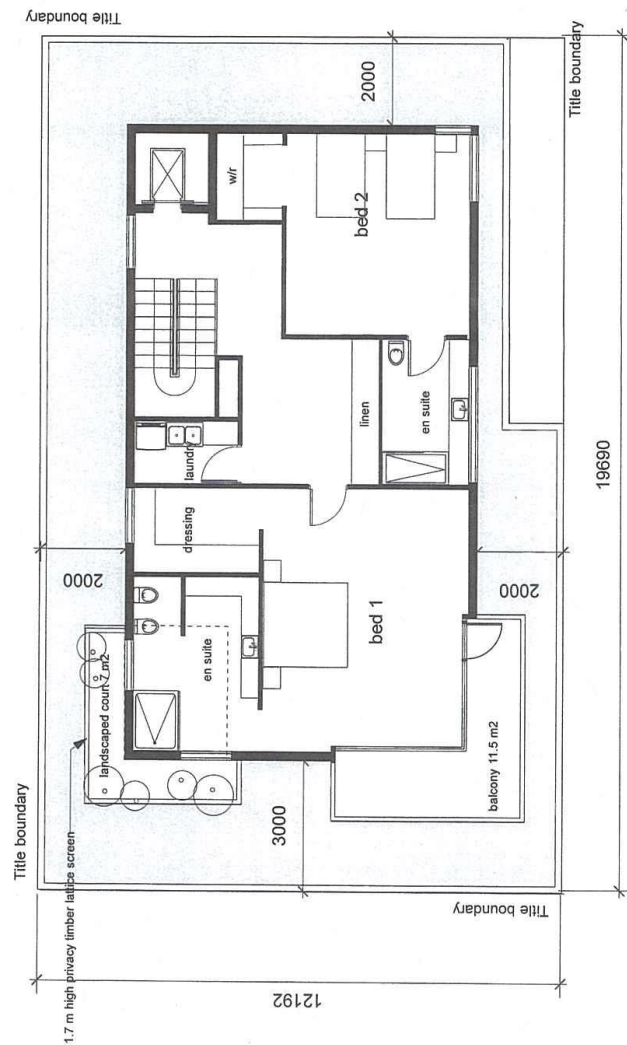
**GROUND FLOOR PLAN**  
Building Area 230 m2  
Scale 1: 100

PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE

Design Development Summary	
Site area	240 m2
<b>Ground Floor</b>	
Building area	230 m2
Retail area	130 m2
Car parking areas	50 m2
Residential entry area	40 m2
Open area	10 m2
<b>First Floor</b>	
Building Area	119 m2
Open Balcony Areas	18.5 m2
<b>Second Floor</b>	
Building Area	115m2
Open Sundeck Area	15 m2
Total Building Area	464 m2
Total Open Areas	43.5 m2
Car Spaces	2



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**FIRST FLOOR PLAN**  
Building Area 119 m<sup>2</sup>  
Scale 1: 100

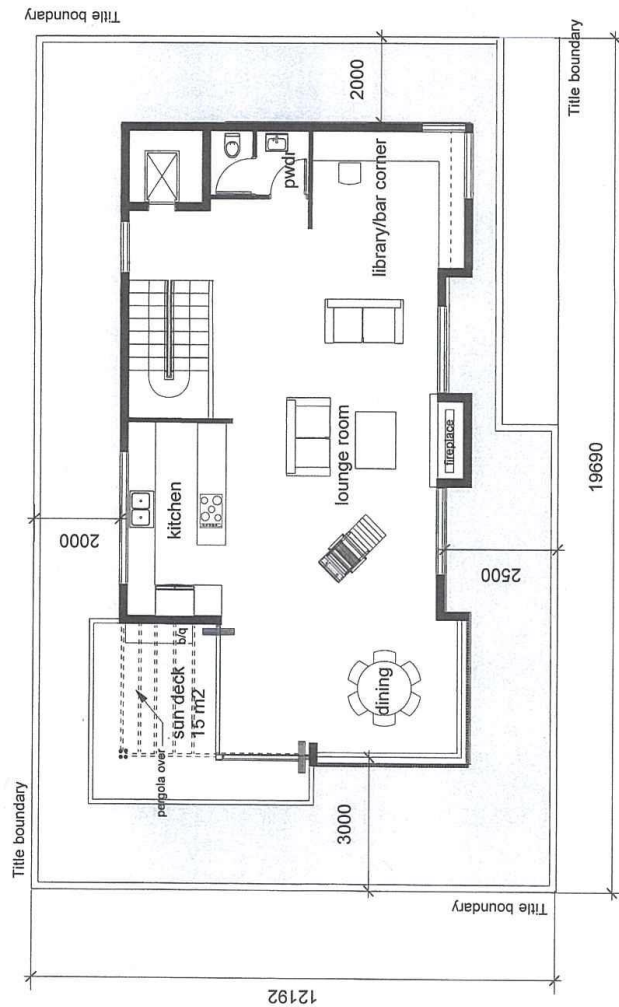


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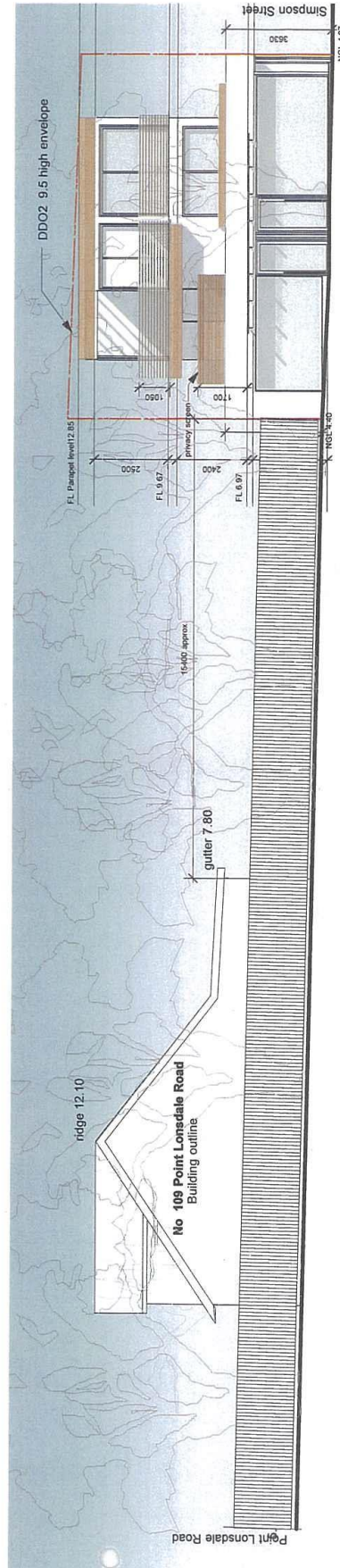
PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE



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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE



NORTH ELEVATION - KIRK ROAD STREETSCAPE

Scale 1: 130

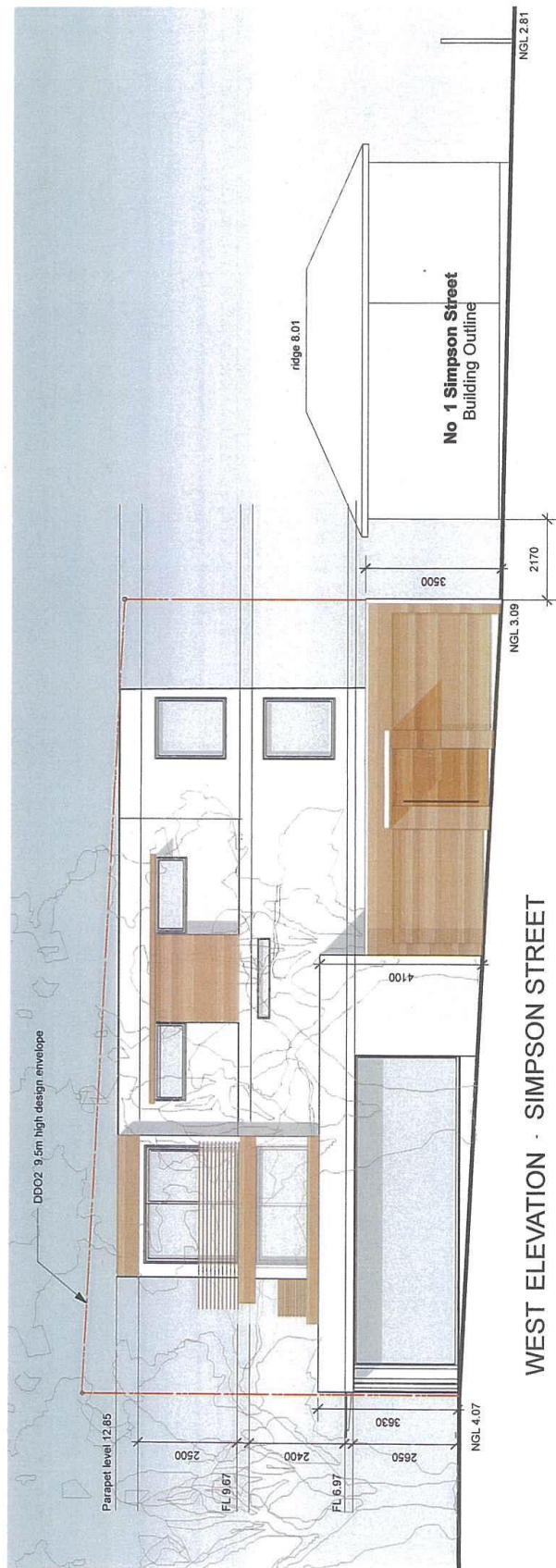
- Exterior finishes:
- Walls generally to be rendered
  - Feature elements shown coloured to be natural timber cladding



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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE





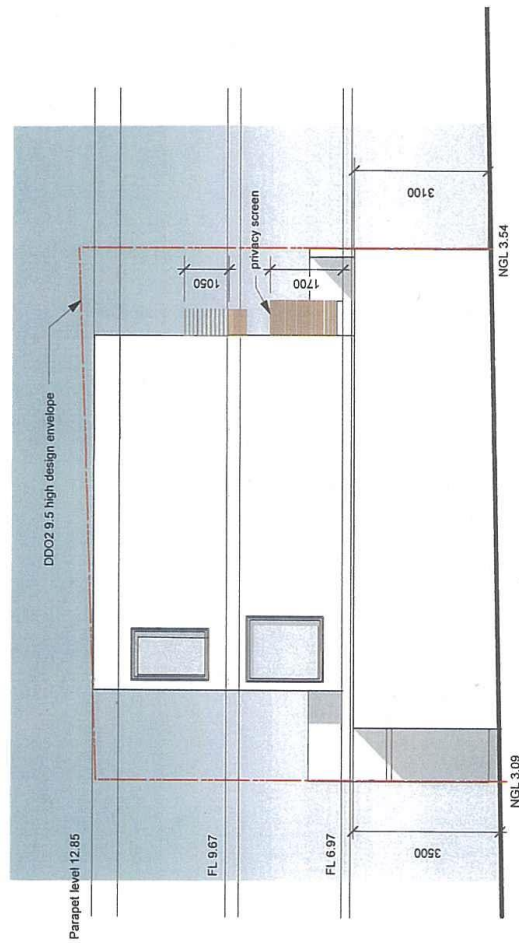
### WEST ELEVATION - SIMPSON STREET

- Exterior finishes:
- Walls generally to be rendered
  - Feature elements shown coloured to be natural timber cladding



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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE



### SOUTH ELEVATION

Scale 1: 100

Exterior finishes:

- Walls generally to be rendered
- Feature elements shown coloured to be natural timber cladding

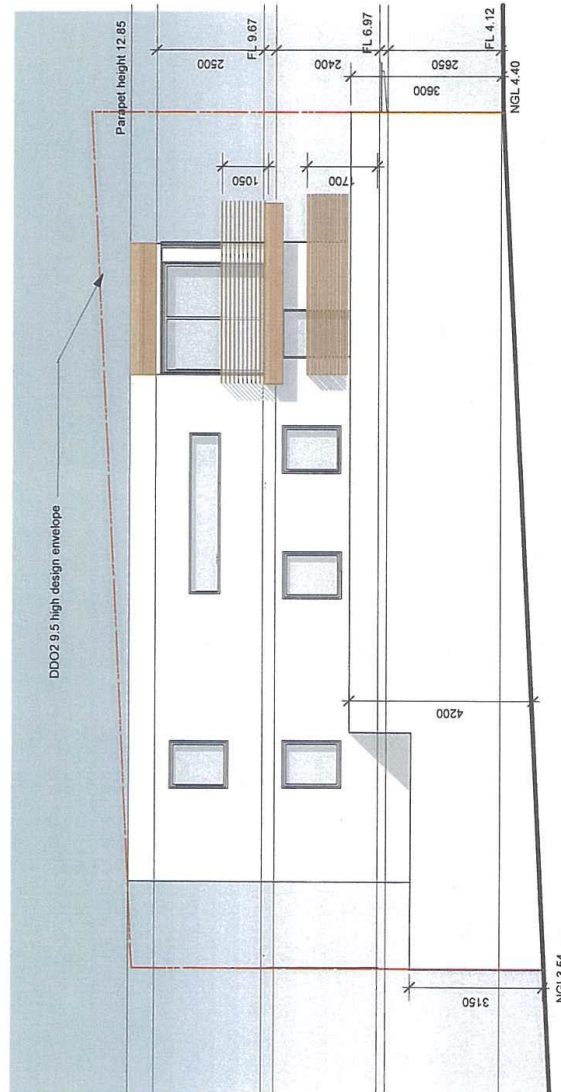


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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE



## EAST ELEVATION

- Exterior finishes:
- Walls generally to be rendered
  - Feature elements shown coloured to be natural timber cladding

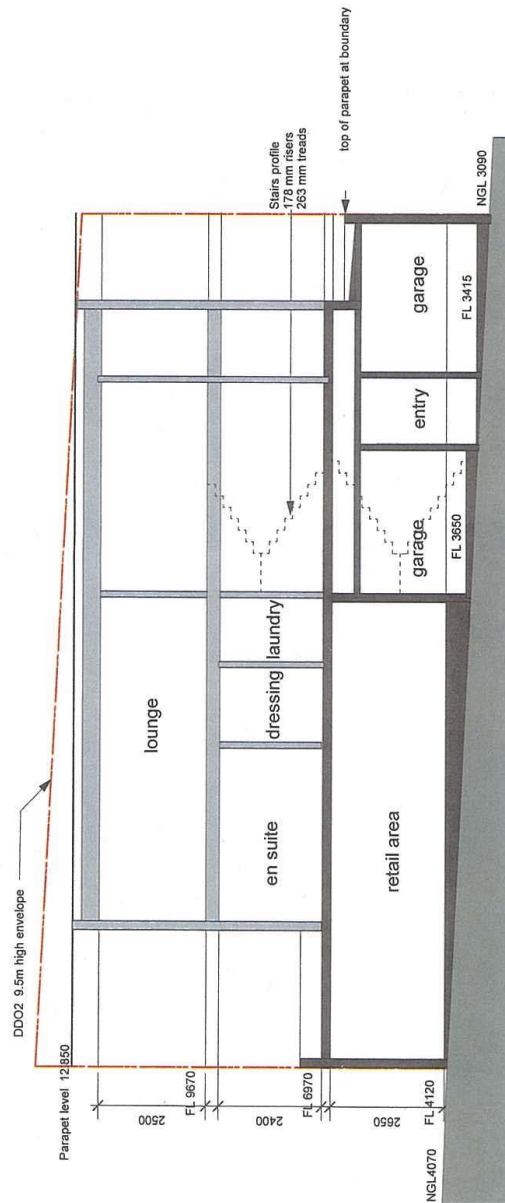


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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE



SECTION DIAGRAM AT STAIRWELL

Scale 1: 100



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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE

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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE - STREETSCAPE





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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE - COMPUTER MODELS



20 September 2013

our reference: 2013.187

Leah Protyniak  
Borough of Queenscliffe  
Statutory Planning  
PO Box 93  
Queenscliff, VIC 3225

Dear Leah Protyniak,

re: **planning application 2013/066 – response to further information**  
**1 kirk road, point lonsdale**

Reference is made to the above planning application, and your correspondence dated 6 September 2013, requesting further information (RFI) in relation to Application No. 2013/066, at 1 Kirk Road, Point Lonsdale. Please refer to *Appendix 1* for a copy of this correspondence.

Hansen Partnership Pty Ltd continues to act on behalf of PJG Nominees Pty Ltd in relation to the abovementioned planning permit application.

A response to each item of Council's request for further information is provided below:

1. *Confirmation that the site has been subject to significant land disturbance or further demonstration as to why a Cultural Heritage Management Plan is not required to be submitted.*

The subject site is identified as an Area of Cultural Heritage Sensitivity on the *Aboriginal Heritage Act 2006 Areas of Cultural Heritage Sensitivity in Victoria – Sorrento map (7821)*.

As such, a Cultural Heritage Management Plan (CHMP) may be required depending on the nature of the works proposed, and the level of ground disturbance.

Guidance on this matter is taken from the *Aboriginal Heritage Act 2006 Practice Note: Significant Ground Disturbance* which notes that:

*"A Cultural Heritage Management Plan does not need to be prepared for a high impact activity if all the area of cultural heritage sensitivity within the activity area has been subject to significant ground disturbance."*

The guidelines define significant ground disturbance as:

*"disturbance of –*

- (a) *the topsoil or surface rock layer of the ground; or*
- (b) *a waterway – by machinery in the course of grading, excavating, digging, dredging or deep ripping, but does not include ploughing other than deep ripping."*

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w www.hansen-online.com.au  
ABN 20 079 864 716 | ACN 079 864 716





The subject site currently accommodates a dwelling, with associated landscaping, which covers the majority of the site and would have previously required the significant disturbance, if not removal of the topsoil, across the site for construction purposes. Please refer to Figure 1 below for an aerial map and Figure 2 for a photo, which shows the existing house on the subject site.



Figure 1: Aerial map showing the existing dwelling at 1 Kirk Road

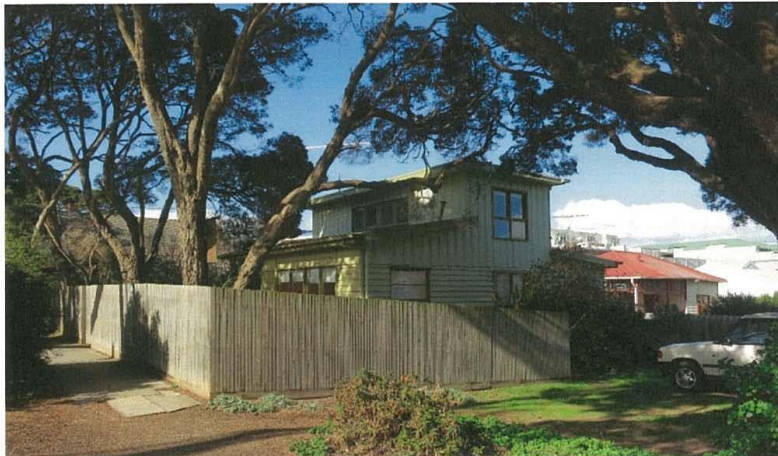


Figure 2: Photo showing the existing dwelling at 1 Kirk Road

Given the above documented evidence of significant ground disturbance, it is therefore submitted that a CHMP is not required to be undertaken for this application in this instance.





2. *Demonstration that tree numbers 4, 5 and 6 will not be impacted upon by the development (noting that the proposed building setback from the north site boundary is less than the arborist's recommendations for protection of these trees).*

The Arboricultural Construction Impact Assessment, prepared by Greenwood Consulting, suggests that the proposed development is likely to have an impact on trees 4, 5 and 6. The report makes the following recommendations for protection of these trees (p17):

*To reduce the impact of the proposed development on these trees the amount of the TPZ excised by the proposed development should be reduced.*

- a) *This could possibly be achieved by locating the north boundary footing approximately 1.5 metres to the south of the north property boundary.*
- b) *The floor could be cantilevered out over the resulting soil volume to the property boundary.*
- c) *The soil volume between the footing and the site boundary should be maintained without disturbance.*

As shown in the amended 'Ground Floor Plan', prepared by e+ architecture, and included in Appendix 2, the recommendations of the arborist have been responded to as follows:

- Relocation of the north boundary footing 1.5 metres to the south;
- The floor is to be cantilevered over the soil volume to the property boundary; and
- Soil between the footing and the site boundary is to be maintained without disturbance.

Therefore, it is submitted that the amended plans for the proposed development show an appropriate response for protection of trees 4, 5 and 6, in accordance with the arborist's recommendations.

3. *Measures to address overlooking from the east facing decks and habitable room windows of the development to the private open space of number 109-111 Point Lonsdale Road.*

As shown on the amended 'East Elevation' plan, prepared by e+ architecture, and included in Appendix 2, a 1.7 metre high timber slatted privacy screen, allowing a maximum of 25% transparency, has been provided for the eastern side of the second floor sun deck.

In addition, obscure glazing, in the form of translucent glass, has been provided for the kitchen window on the second floor. All other windows on the east elevation are not habitable room windows.

This response is in accordance with the objective and requirements of Clause 54.04-6, in regards to overlooking. It is therefore submitted that the amended plans for the proposed development show an appropriate response to limit views into the existing secluded private open space of number 109-111 Point Lonsdale Road.



*4. Details of proposed waste storage areas and potential delivery vehicle parking for the proposed retail premises.*

As shown on the amended 'Ground Floor Plan', prepared by e+ architecture, and included in *Appendix 2*, waste storage areas have been provided for the dwelling and retail premises internally on the ground floor, as follows:

- A waste storage area for the dwelling is provided in the ground floor storage area.
- A waste storage area for the retail premises is provided in the garage, for retail parking. As the garage length is 6.5 metres, exceeding the requirement of Clause 52.06-8 Design Standard 2 – Car Parking Spaces, it is submitted that this is an appropriate location for waste.

In regards to a potential delivery vehicle bay for the proposed retail premises, it is requested that an on-street loading bay be provided by Council, either on Kirk Road or Simpson Street. Considering the location of the subject site in the Business 1 Zone, the small area of the subject site, and the limited number of deliveries expected by the business, an on-street loading bay would provide an appropriate response.

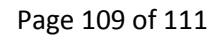
We trust that this information fully addresses all of Council's concerns, and that you are able to proceed with the assessment of this application. Should you have any queries please contact either Elissa McMillan on 9664 9826 or the undersigned on 9664 9809.

Yours faithfully,  
**hansen partnership pty ltd**

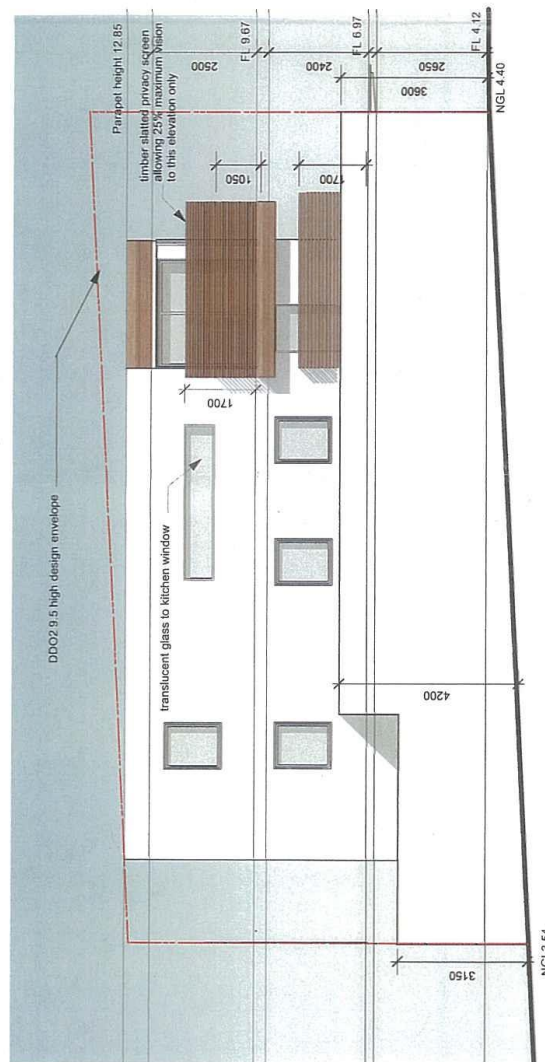
damian iles  
**director**

*Encl.*

Appendix 1: Council request for further information  
Appendix 2: Amended plans



PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE



### EAST ELEVATION

- Exterior finishes:
- Walls generally to be rendered
  - Feature elements shown coloured to be natural timber cladding



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PROPOSED RETAIL AND RESIDENCE - 1 KIRK ROAD, POINT LONSDALE





**6. APPENDIX 2 (CONFIDENTIAL) – SUBMISSIONS**

Provided to Councillors under separate cover

**7. CLOSE OF MEETING**