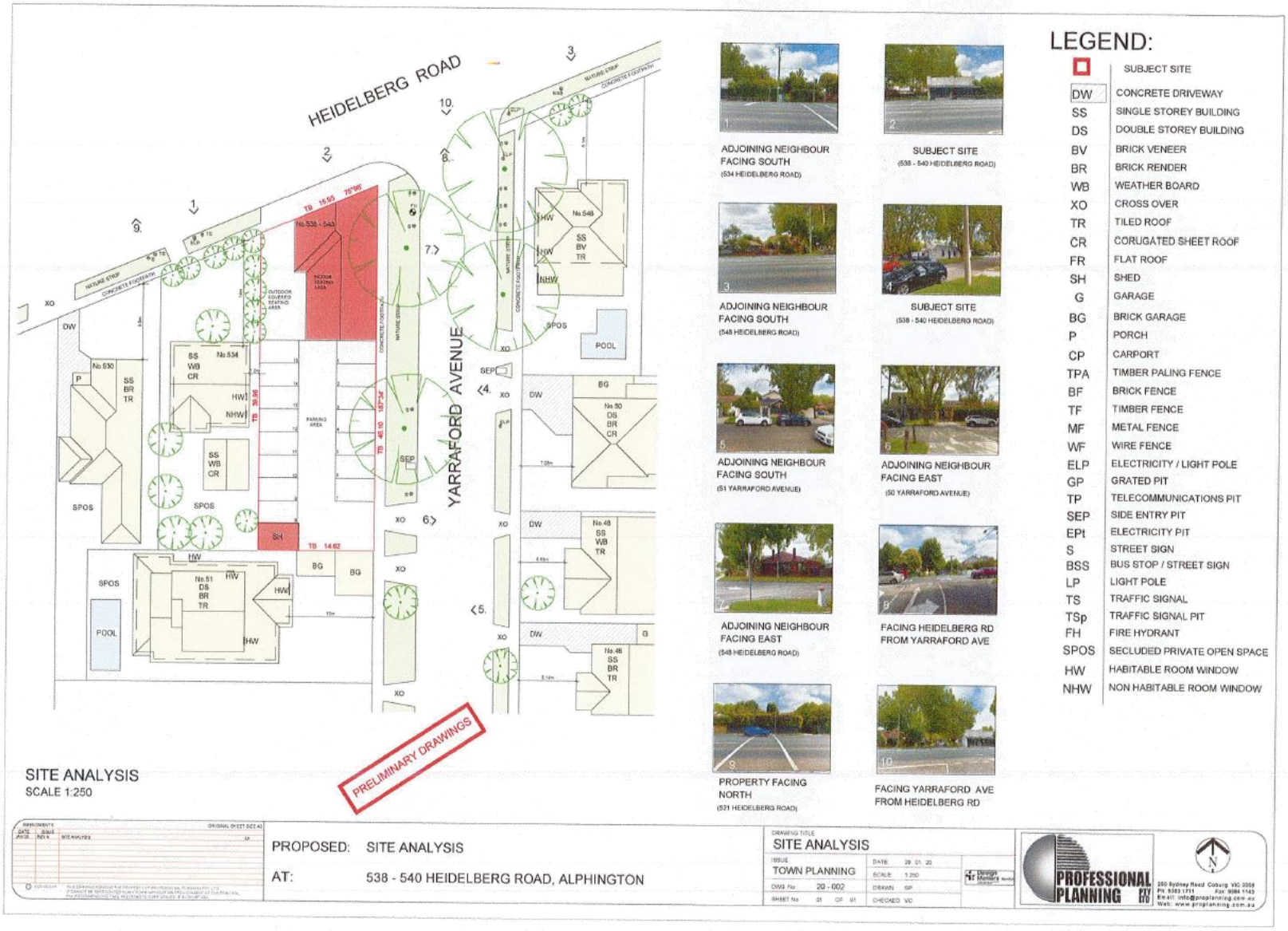
Attachment 1 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Subject Land

SUBJECT LAND: 538-540 Heidelberg Road, Alphington

⇧ **North**

★ **Subject Site**

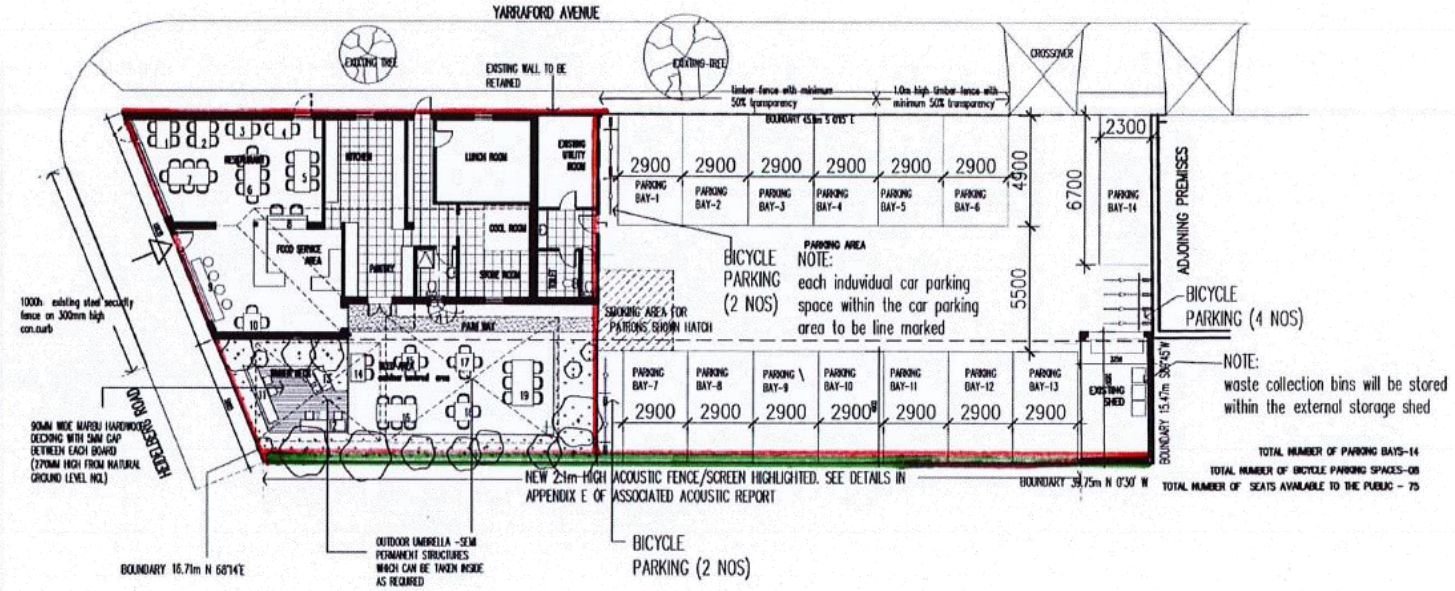
Attachment 2 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Decision (Advertised) Plans



Attachment 2 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Decision (Advertised) Plans

TOWN PLANNING ISSUE

SCHEDULE (TOTAL SEAT)	
TABLE NO	SEATS
1	4
2	4
3	2
4	2
5	6
6	8
7	8
8	2
9	4
10	3
11	2
12	2
13	2
14	2
15	4
16	6
17	4
18	4
19	6
TOTAL	75



BUILDING AREAS				PARKING AREA
RESTAURANT AREA	OUT DOOR RESTAURANT AREA	SHED	TOTAL	361.4m
175.3m^2	48.4m^2	19.0m^2	242.7m^2	

01 SITE PLAN
SCALE 1:200

RECEIVED
27 FEB 2020

NOTE:
Architectural drawings are to be read in conjunction with structural drawings.
Contractor is to check all dimensions and levels on site prior to commencing any work or stage thereof and report any discrepancies or omission to the Designer. figured dimensions given are to be taken in preference to scaled dimensions.

Project: KISSATEN ALPHINGTON
538 – 540 HEIDELBERG ROAD
ALPHINGTON
VIC.3078

Client

Drawing Title
PROPOSED SITE PLAN / LICENSED AREA
PROPOSED NEW ACOUSTIC FENCE

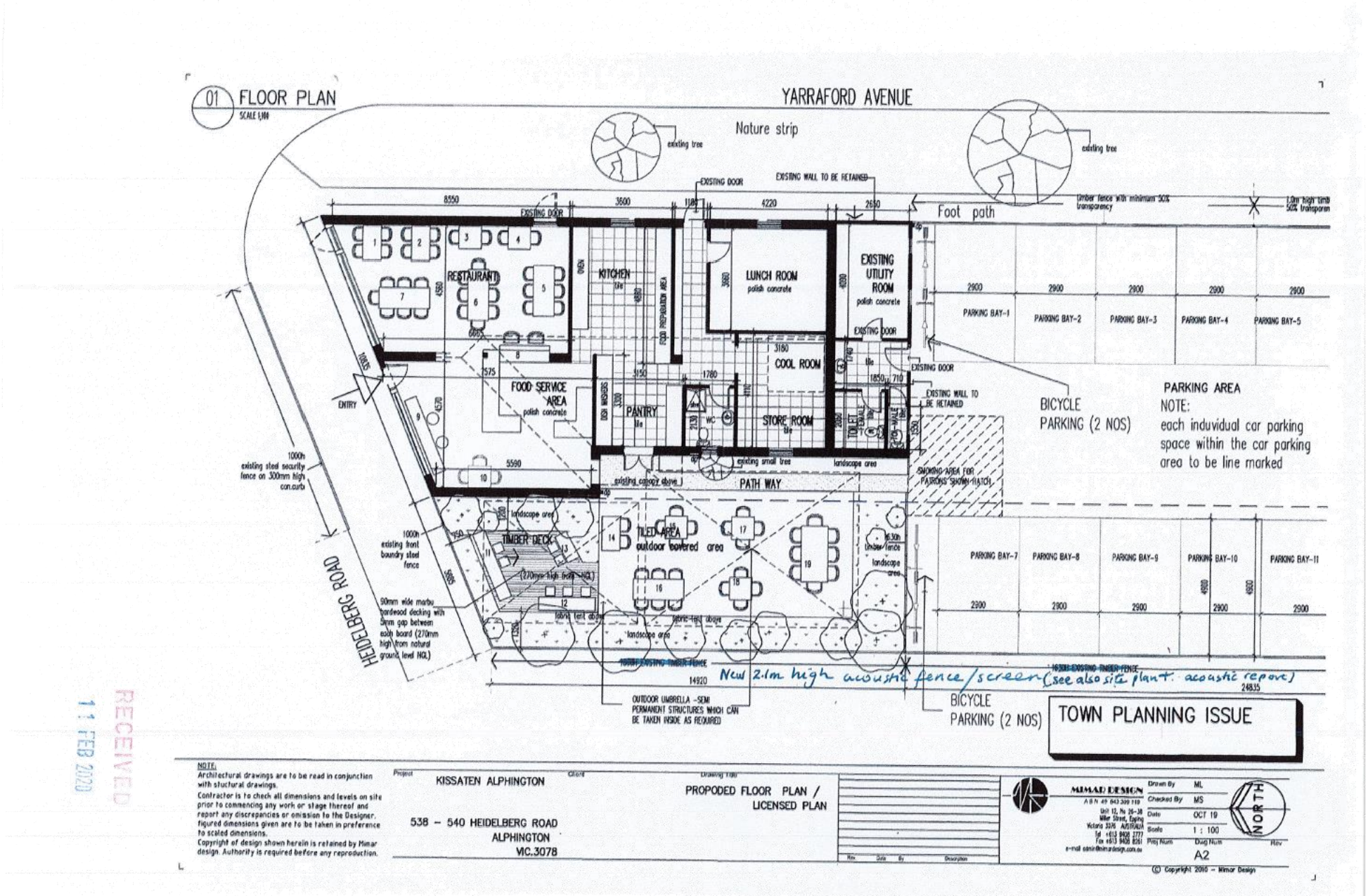
TP SUBMISSION
Rev. Date By Description

MIMAR DESIGN
A.B.N 49 643 309 119
Unit 12, No 26-38 Miller Street, Epping Victoria 3076 AUSTRALIA
Tel +613 9408 3777
Fax +613 9408 8261
e-mail admin@mimardesign.com.au

Drawn By ML
Checked By MS
Date OCT 19
Scale 1 : 200
Proj Num 100330 A1
Dwg Num
Rev A

NORTH

Attachment 2 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Decision (Advertised) Plans



Attachment 2 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Decision (Advertised) Plans

TOWN PLANNING ISSUE

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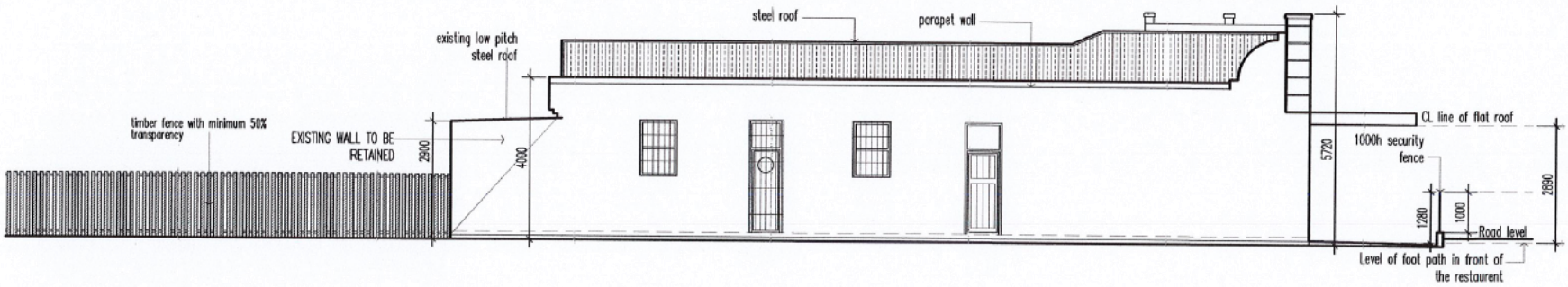
29 NOV 2019



EAST ELEVATION
SCALE 1:100

NOTE:
Architectural drawings are to be read in conjunction with stuctural drawings.
Contractor is to check all dimensions and levels on site prior to commencing any work or stage thereof and report any discrepancies or omission to the Designer. figured dimensions given are to be taken in preference to scaled dimensions.

Project: KISSATEN ALPHINGTON
Client:
Drawing Title: ELEVATIONS

538 – 540 HEIDELBERG ROAD
ALPHINGTON
VIC.3078

Rev. Date By Description

MIMAR DESIGN
A B N 49 643 300 119
Unit 12, No 26-38
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Tel +613 9408 3777
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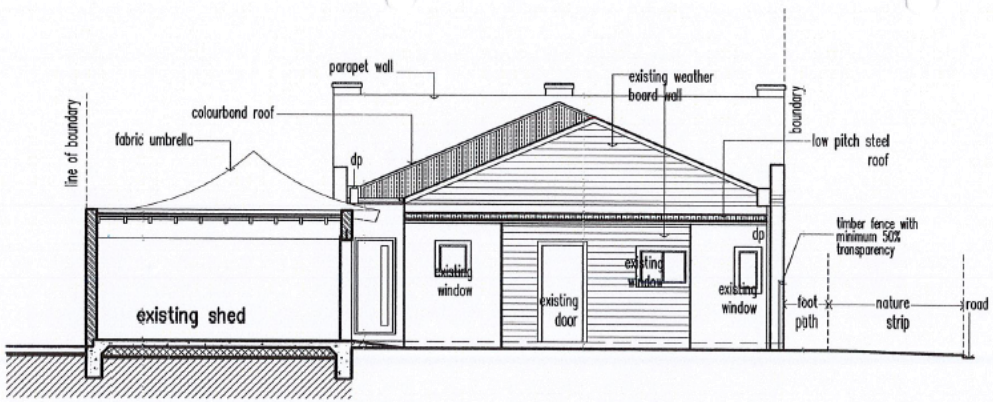
Drawn By MH
Checked By MS
Date OCT 19
Scale 1 : 100
Proj Num
Dwg Num A3
Rev

Attachment 2 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Decision (Advertised) Plans



SOUTH SECTIONAL ELEVATION
SCALE 1:100

TOWN PLANNING ISSUE

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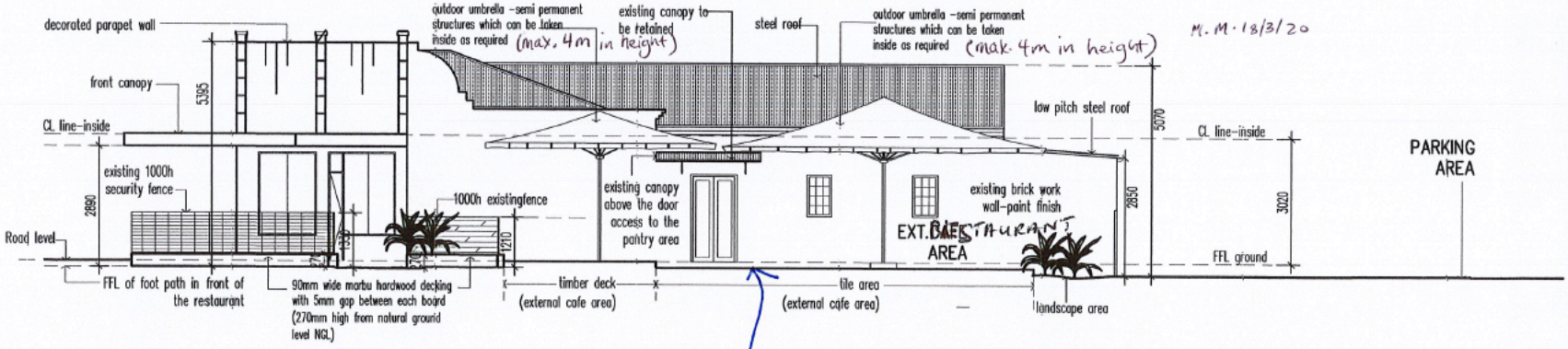

WEST ELEVATION
SCALE 1:100

New 2.1m high acoustic fence/screen proposed along west boundary - see details in Appendix E of associated acoustic report.

M.M. 18/3/20

NOTE:
Architectural drawings are to be read in conjunction with structural drawings.
Contractor is to check all dimensions and levels on site prior to commencing any work or stage thereof and report any discrepancies or omission to the Designer. figured dimensions given are to be taken in preference to scaled dimensions.
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Project: KISSATEN ALPHINGTON
538 – 540 HEIDELBERG ROAD
ALPHINGTON
VIC.3078

Client:

Drawing Title: ELEVATIONS

Rev. Date By Description

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Drawn By MH
Checked By MS
Date OCT 19
Scale 1 : 100
Proj Num
Dwg Num
Rev
A4

Attachment 2 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Decision (Advertised) Plans

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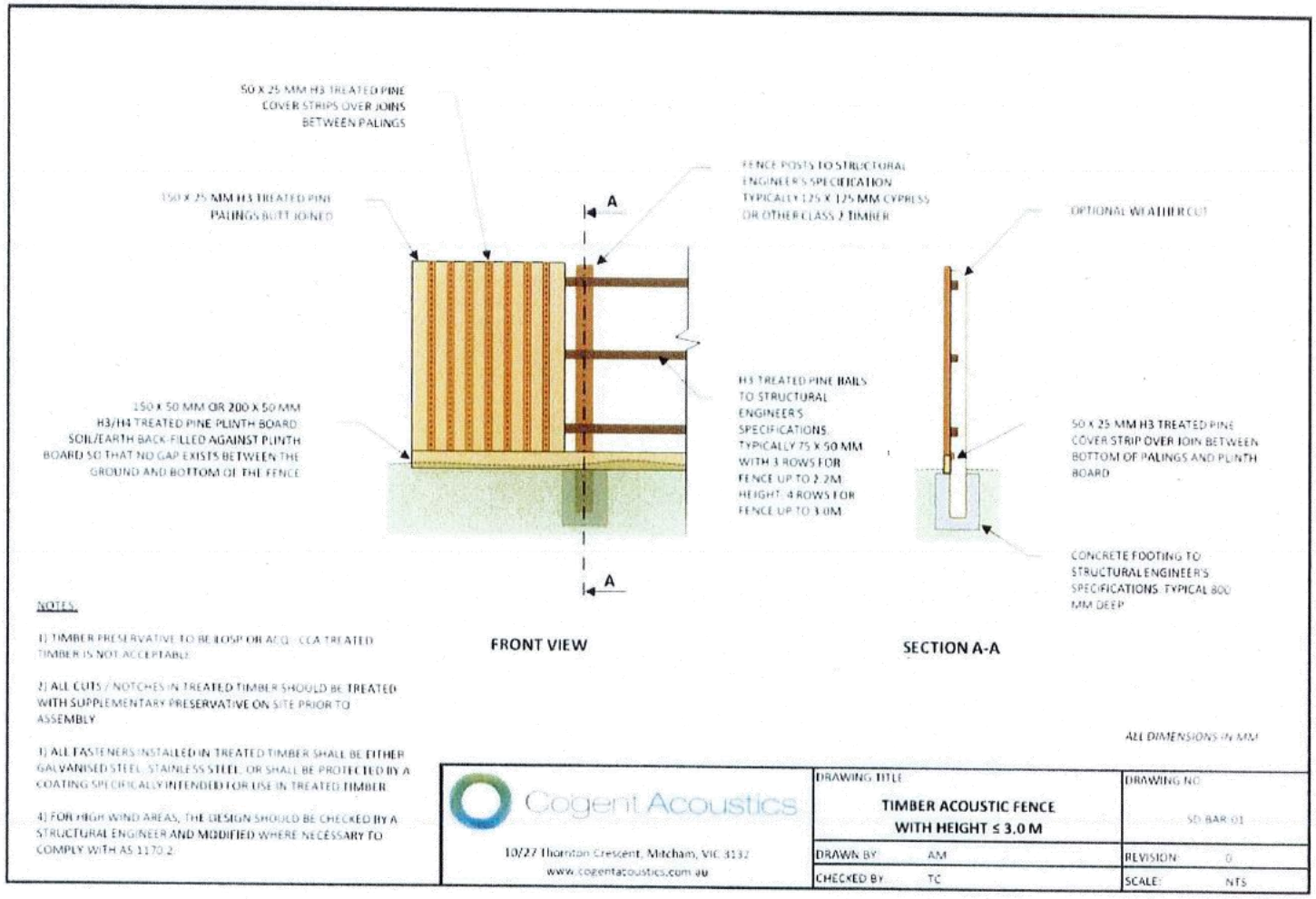
42

Appendix E Timber Paling Acoustic Fence

Cogent Acoustics



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29 NOV 2019

Attachment 3 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Traffic Report

A1915683V Car Parking Assessment 1.2

15th November 2019

Yarra City Council
PO Box 168
Richmond VIC 3121

Dear Sir / Madam

Car Parking Waiver Assessment – Proposed Change of Use from Food and Drinks Premises to a Restaurant, and Extension of Trading Hours at 538 Heidelberg Road, Alphington

1. Overview

We have been commissioned by Kissaten Alphington to undertake a Clause 52.06-7 car parking impact assessment for a proposed change of use from café (food and drinks premises) to a restaurant, and an extension of trading hours at 538 Heidelberg Road, Alphington. The site is not located within a Principal Public Transport Network (PPTN) zone.

The existing restaurant trades between 7am and 4pm 7 days a week. Lunch (12pm to 2pm) is the busiest trading period – as per our observations. The business has a permit for a café (food and drinks premises) that operates on 175.3m^2 of leasable area. There are 14 on-site parking spaces. The on-site parking area is accessible from Yarraford Avenue.

Current seating arrangement comprises 34 seats internally, 32 seats within the rear al-fresco area and 9 seats within the footpath. The proposal is to change the use from food and drinks premises to a restaurant with a capacity of 75 seats, and to extend the opening times to 8pm 7 days a week.

2. Car Parking Demand Analyses

Given the site's location outside of a PPTN zone, parking rates as per Column A of Table 1: Car Parking Requirement within Clause 52.06-5. The proposed restaurant requires 0.4 space per patron, as per Table 1: Car Parking Requirement, Clause 52.0-6-5. A 75-seat capacity restaurant requires 30 parking spaces. With 14 spaces provided on-site, a dispensation of 16 spaces applies.

The existing café (food and drinks premises), on 175.3m^2 of leasable area, requires 7 parking spaces. With 14 on-site parking spaces, all parking is accommodated on-site.

Suite 5.04 Level 5, 365 Little Collins Street, Melbourne VIC 3000

Telephone: 0413 295 325 *traffic@mltraffic.com.au*
Facsimile: 1300 739 523 *www.mltraffic.com.au*

ML Traffic Engineers Pty Ltd
ABN 69 148 048 257

Attachment 3 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Traffic Report

As part of the permit granted for the subject restaurant, two on-site kerbside parking spaces on the east side of Yarraford Avenue (along the side frontage of No.548 Heidelberg Road) are subject to a permit zone restriction.

I undertook inspections of on-street parking occupancies between 4pm and 8pm, over a number of days along Yarraford Avenue, between Heidelberg Road and No.33 Yarraford Avenue. The survey catchment covers a distance of 200m from the subject site. In addition, I have also driven through several streets in the immediate area within the current 7am to 4pm trading period, and parked outside the subject restaurant to observe where people park, if they had not parked on-site. I note the following:

- No staff or customer parks along Heidelberg Road, despite being able to do so legally. Sections to the west of the pedestrian crossing and to the west of the subject site allow parking outside of clearway hours. It is my view that nobody parks due to constant exposure to traffic during daytime hours. However, during dinner hours, parking on Heidelberg Road could occur as traffic volume is considerably lower by then.
- On most occasions, no staff or customer parks along Hanslope Avenue, located to the north of the subject side, and accessible via the signalized pedestrian crossing on Heidelberg Road.
- No staff or customer parks along Alphington Street, located to the west of the subject side, and accessible by walking 100m along Heidelberg Road.
- No staff or customer parks along Perry Street, located to the west of the subject side, and accessible by walking 70m along Heidelberg Road.

Parking surveys show there is ample off-site capacity to accommodate the 16-space shortfall between 4pm and 8pm – see Table 1, and between 7am and 4pm – see Table 2.

Attachment 3 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Traffic Report

Figure 1: Parking Survey Map (Area of Interest in Blue)

Attachment 3 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Traffic Report

Location		Restriction	Supply 6.30am to 9.30am Mon to Fri	Supply 4pm to 6.30pm Mon to Fri	Supply Other Times	Parking Occupancy 18-Jul-19 Thu 4.30pm	18-Jul-19 Thu 6.45pm	19-Jul-19 Fri 5.30pm	19-Jul-19 Fri 6.45pm	19-Jul-19 Fri 7.45pm	20-Jul-19 Sat 6pm	20-Jul-19 Sat 7.30pm
Yarraford Avenue (In front of the Subject Site, and No.50 Yarraford Avenue)	West Side	Unrestricted	2	2	2	1	0	0	0	0	1	1
	East Side	Unrestricted	1	1	1	1	1	1	1	1	1	1
Yarraford Avenue (Between the Subject Site and No.45 and No.42 Yarraford Avenue)	West Side	Unrestricted	7	7	7	5	4	5	4	4	4	5
	East Side	Unrestricted	8	8	8	4	1	4	2	1	1	1
Yarraford Avenue (Between No.45 and No.42 Yarraford Avenue, and No.33 and No.28 Yarraford Avenue)	West Side	Unrestricted	9	9	9	2	3	2	3	3	2	2
	East Side	Unrestricted	10	10	10	1	3	3	2	1	4	4
Hanslope Avenue (Between Heidelberg Road and No.7 Hanslope Avenue)	West Side	Unrestricted	5	5	5	1	1	1	1	1	3	4
	East Side	Unrestricted	4	4	4	0	0	1	1	1	3	3
Heidelberg Road (Between Alphington Road - Broomfield Avenue and the Signalised Pedestrian Crossing	North Side	Clearway 4pm to 6.30pm	2		2	0	0	0	0	0	0	0
	South Side	Clearway 6.30am to 9.30am		6	6	0	0	0	0	0	0	0
Number of Parked Cars			48	52	54	15	13	17	14	12	19	21
Number of Vacant Spaces						39	41	37	40	42	35	33

Table 1: Parking Supply and Occupancies – Between 4pm and 8pm

Location		Restriction	Supply 6.30am to 9.30am Mon to Fri	Supply 4pm to 6.30pm Mon to Fri	Supply Other Times	Parking Occupancy 17-Jul-19 Wed 8.15am	17-Jul-19 Wed 11.45am	17-Jul-19 Wed 1pm	17-Jul-19 Wed 2pm	17-Jul-19 Wed 2.45pm
Yarraford Avenue (In front of the Subject Site, and No.50 Yarraford Avenue)	West Side	Unrestricted	2	2	2	1	1	2	2	1
	East Side	Unrestricted	1	1	1	1	1	1	1	1
Yarraford Avenue (Between the Subject Site and No.45 and No.42 Yarraford Avenue)	West Side	Unrestricted	7	7	7	3	4	3	4	4
	East Side	Unrestricted	8	8	8	1	4	6	4	6
Yarraford Avenue (Between No.45 and No.42 Yarraford Avenue, and No.33 and No.28 Yarraford Avenue)	West Side	Unrestricted	9	9	9	2	2	2	2	2
	East Side	Unrestricted	10	10	10	2	1	1	1	1
Hanslope Avenue (Between Heidelberg Road and No.7 Hanslope Avenue)	West Side	Unrestricted	5	5	5	1	1	2	2	1
	East Side	Unrestricted	4	4	4	0	0	0	0	0
Heidelberg Road (Between Alphington Road - Broomfield Avenue and the Signalised Pedestrian Crossing	North Side	Clearway 4pm to 6.30pm	2		2	0	0	0	0	0
	South Side	Clearway 6.30am to 9.30am		6	6	0	0	0	0	0
Number of Parked Cars in the Surrounding Streets			48	52	54	11	14	17	16	16
Number of Vacant Spaces in the Surrounding Streets						43	40	37	38	38
Number of Parked Cars On-Site			14	14	14	2	4	10	9	2

Table 2: Parking Supply and Occupancies – Between 7am and 4pm

Attachment 3 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Traffic Report

Given that the applicant is seeking to reduce the car parking requirement, a set of responses against criteria contained in Clause 52.06-7 has been undertaken.

a	The likelihood of multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.	There is limited degree of multi-purpose trips, given the site's location.
b	The variation of car parking demand likely to be generated by the proposed use over time.	Demand will vary according to occupancy – which is higher during lunch and dinner periods, and quieter at other times (including breakfast).
c	The short-stay and long-stay car parking demand likely to be generated by the proposed use.	Customer parking demand is short-stay. Staff parking demand is long stay.
d	The availability of public transport in the locality of the land.	The site has excellent access to 2 bus routes that operate along Heidelberg Road – Route 546 and Route 609. It has poor access to rail, with Fairfield Station located 900m away.
e	The convenience of pedestrian and cyclist access to the land.	Being in a built up area, access for pedestrians and cyclists are excellent.
f	The provision of bicycle parking and end of trip facilities for cyclists in the locality of the land.	Not a relevant consideration.
g	The anticipated car ownership rates of likely or proposed visitors to or occupants (residents or employees) of the land.	Not a relevant consideration.
h	Any empirical assessment or case study.	An empirical assessment has not been carried out, as Clause 52.06's parking rate is considered to be appropriate without the need for further consideration.

Table 3: Response to Clause 52.06-7

Attachment 3 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Traffic Report

ML
Traffic Engineers

3. Conclusion

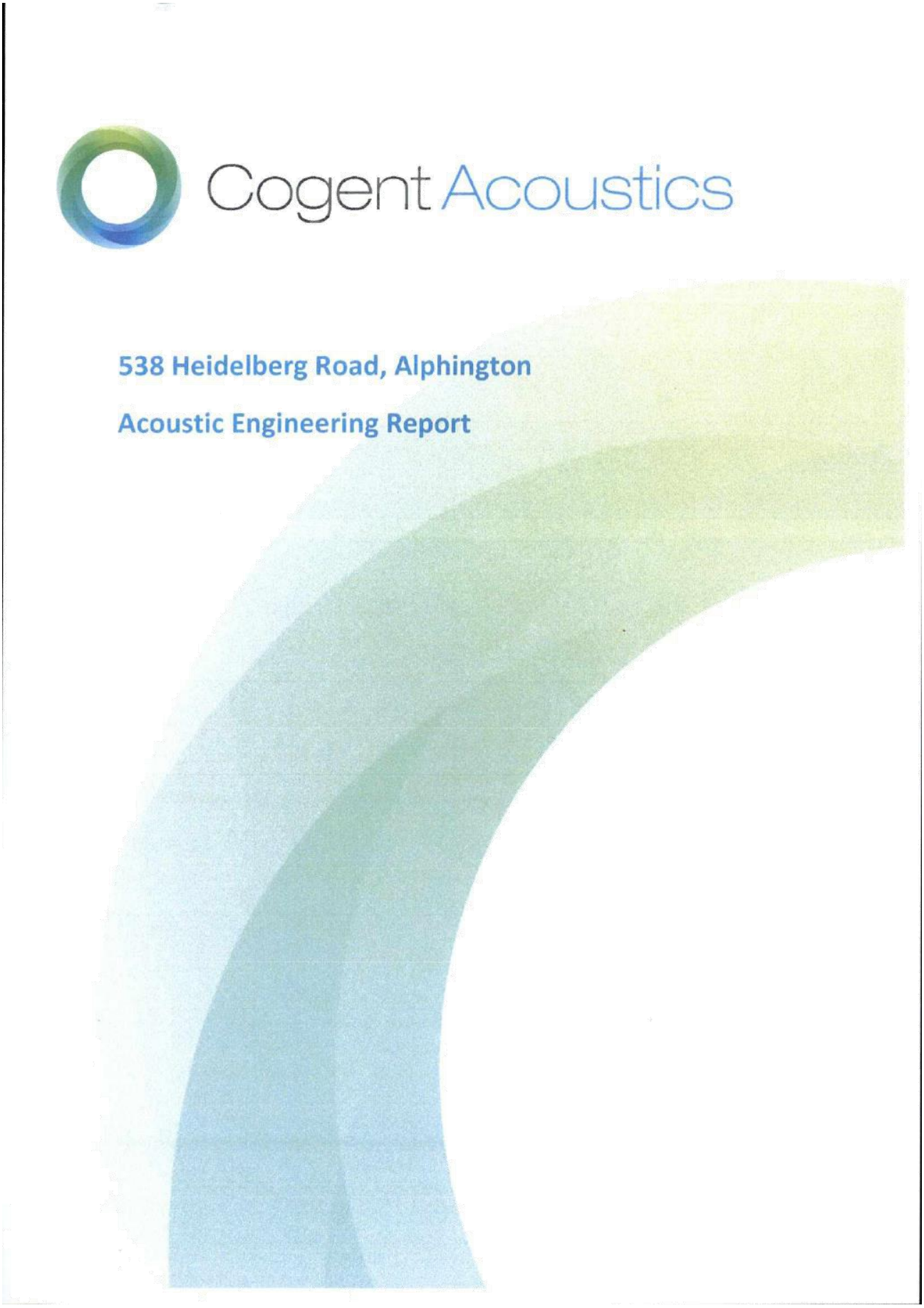
There is ample off-site parking spaces to accommodate a 16-space parking shortfall at all times – daytime (7am to 4pm) and evening (4pm to 8pm).

If you have any questions regarding the contents of this report, please do not hesitate to ring me on 0413 295 325, or email me at mlee@mltraffic.com.au.

Yours sincerely

Michael Lee, BEng (Monash, 1989)
Principal

Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report



Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

Cogent Acoustics

538 Heidelberg Road, Alphington

Acoustic Engineering Report

Prepared for:

Kissaten
538 Heidelberg Road
Alphington VIC 3078

Prepared by:

Cogent Acoustics Pty Ltd
ABN: 13 610 344 986
11/27 Thornton Crescent,
Mitcham VIC 3132
03 8814 3250

Project Number: 19246

Prepared by **Te-liang Chong**
Bachelor of Mechanical Engineering
te@cogentacoustics.com.au

Signature

Reviewed by **Andrew Mitchell**
BE(Hons) Mech, ME
MAAS
RBP (Vic) EM-45042
andrew@cogentacoustics.com.au

Signature

Revision History

Rev.	Date	Purpose	Prepared by:	Reviewed by:
0	07/10/2019	Draft for comment	Te-liang Chong	Andrew Mitchell
1	09/10/2019	For Issue	Te-liang Chong	Andrew Mitchell
2	28/11/2019	Revised based on Council feedback and revised operational hours	Te-liang Chong	Andrew Mitchell

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Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

Cogent Acoustics

Executive Summary

Kissaten has appointed Cogent Acoustics Pty Ltd to provide acoustic engineering consulting services associated with their premises at 538 Heidelberg Road, Alphington.

Advice in relation to the following acoustic engineering elements has been requested, and is presented in this report:

Table 1 Acoustic Engineering Elements and Reference Criteria

Acoustic Engineering Element	Reference Criteria
Environmental noise emissions due to mechanical plant.	SEPP N-1
Music noise emissions.	SEPP N-2
Patron noise emissions.	SEPP N-1 (As guideline only); WHO Guideline for sleep disturbance
Environmental noise emissions due to on-site vehicle movements and other car park activity.	SEPP N-1 (As guideline only); WHO Guideline for sleep disturbance
Environmental noise emissions due to waste collections and deliveries.	EPA Noise Control Guidelines

Assessment of the existing and proposed operations at the premises has been undertaken with respect to the above elements. It is considered that the existing and proposed operations at the premises will satisfy the reference criteria for the proposed extended operating hours until 8 pm every night, provided that a 2.1 m high acoustic screen is installed along the western boundary of the site to control patron and car park noise.

In addition, patrons at the rear courtyard should be limited to no more than 32 patrons at any time.

Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

Cogent Acoustics

Contents

Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

Cogent Acoustics

Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

Cogent Acoustics

1 Introduction

1.1 Purpose

Kissaten has appointed Cogent Acoustics Pty Ltd to undertake an assessment of environmental noise emissions from their premises at 538 Heidelberg Road, Alphington, for the purpose of informing a Planning Permit Application to Council.

The scope of the assessment includes:

- Assessment of noise due to mechanical plant in relation to the requirements of State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-1 (SEPP N-1) (State of Victoria, 2001).
- Assessment of music noise emissions from the site in relation to the requirements of State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2 (SEPP N-2) (State of Victoria, 1999).
- Prediction and assessment of potential patron noise emissions from the site.
- Assessment of potential noise emissions due to on-site vehicle movements and other car park activity.
- Assessment of potential noise due to other activities associated with the proposed use, such as private waste collections and deliveries.

This report documents the investigations and advice provided in relation to the above services.

A glossary of the acoustic nomenclature used in this report is presented in Appendix A.

1.2 Reference Documentation

This report is based on information contained in the following documents and drawings:

Table 2 Reference Documentation

Document	Prepared by	Issue
Email To: Benjamin Mathieson CC: Te-liang Chong; Adam Wright Subject: Re: Acoustic Fee Proposal - 19246 538 Heidelberg Road, Alphington	Kissaten Alphington	Wed 2/10/2019 10:59 AM
Council Request For Information; Amendment application No. PL05/1061.04	City of Yarra	30/10/2019

Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

Cogent Acoustics

1.3 Report Limitations

The following limitations are applicable with respect to the acoustic advice presented in this report:

- Cogent Acoustics has prepared this document for the sole use of the Client and for the specific purpose expressly stated in the document. No other party should rely on this document without the prior written consent of Cogent Acoustics. Cogent Acoustics undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.
- The information contained in this document provides advice in relation to acoustics and vibration only. No claims are made and no liability is accepted in respect of design and construction issues falling outside of the specialist field of acoustics and vibration engineering including and not limited to structural integrity, fire rating, architectural buildability and fitness-for-purpose, waterproofing and the like. Supplementary professional advice should be sought in respect of these issues.
- Reports marked 'Not for Construction' or 'Draft' may be subject to change and are not released as final reports. Cogent Acoustics accepts no liability pending release of the final version of the report.
- In preparing this document Cogent Acoustics may have relied upon information provided by the client and other third parties, some of which may not have been verified. Cogent Acoustics accepts no responsibility or liability for any errors or omissions which may be incorporated into this document as a result.
- The recommendations, data and methodology documented in this assessment are based on the listed reference documentation. The recommendations apply specifically to the project under consideration, and must not be utilised for any other purpose. Any modifications or changes to the project from that described in the listed reference documentation may invalidate the advice provided in this document, necessitating a revision.
- Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

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Cogent Acoustics

2 Project Characteristics

2.1 Site Location

The project site is located at 538 Heidelberg Road, Alphington, as shown in Figure 1. The topography in the area of the site is near flat.

Figure 1 Aerial Image of Site (Image Source: Google Maps)

2.2 Existing Situation

The existing site comprises a restaurant, kitchen, rear courtyard, and car park with the following operating hours:

- 7 am to 4 pm Monday to Friday;
- 8 am to 4 pm Saturday and Sunday.

The premises has capacity for up to 75 patrons, with 32 seats provided at the rear courtyard. No live music is played at the restaurant. There is a loudspeaker system installed inside the restaurant that plays background music. There are no loudspeakers installed in the rear courtyard.

Figure 2 presents an image of the rear courtyard.

Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

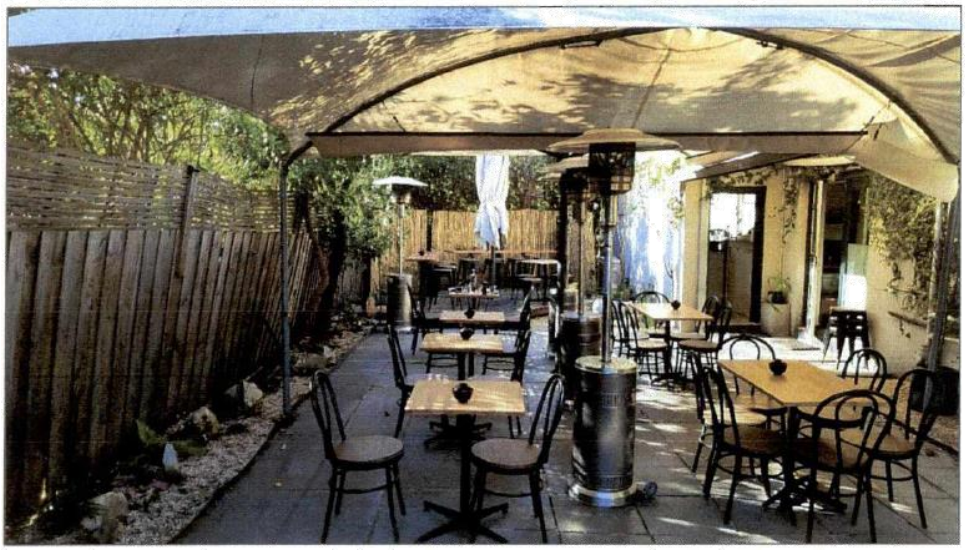

Figure 2 Photograph of Rear Courtyard – Photo Facing North

2.3 Proposed Changes

We understand the project to comprise a Planning Application to obtain a liquor licence for the existing restaurant as well as to extend the operating hours until 8 pm each night.

No changes to patron capacity, mechanical equipment, or car parking are being proposed as part of the application.

As part of the changes, installation of loudspeakers within the rear courtyard to play background music is being considered.

Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

3 Legislation and Guidelines

3.1 Summary of Relevant Documents

Table 3 presents a summary of the relevant legislation and guidelines applicable to the proposed development. The information contained in these documents forms the basis of the design criteria and advice presented in this report.

Table 3 Summary of Relevant Statutory Requirements and Guidelines

Document	Status	Relevance to this Project
State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-1 (SEPP N-1) (State of Victoria, 2001)	Legislation	Prescribes the methods for determining the statutory environmental noise limits that apply to noise emissions from industrial, commercial, and trade premises within metropolitan Melbourne, and the methods to be used for assessment. Mechanical plant noise emissions from the premises will be subject to the requirements of SEPP N-1.
State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2 (SEPP N-2) (State of Victoria, 1999)	Legislation	Prescribes the procedures used to determine limits for, and assess, music noise emissions from public premises. Compliance with SEPP N-2 is a statutory requirement in Victoria.
Guidelines for Community Noise (World Health Organization, 1999)	Guideline	Provides guidance on acceptable levels of community noise. The guidance provided is relevant to the premises in respect of maximum noise levels in relation to sleep disturbance.
EPA Victoria, Noise Control Guidelines, Publication 1254 (EPA Victoria, 2008)	Guideline	Provides guidance in relation to appropriate delivery and waste collection times to control noise impacts to residential premises.

Attachment 4 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Advertised Acoustic Report

Cogent Acoustics

4 Noise Sensitive Areas

Table 4 and Figure 3 identify the nearest and potentially most-affected Noise Sensitive Areas (NSA) in the vicinity of the project site, as defined by the relevant environmental noise legislation.

Assessment of environmental noise emissions due to the project will be undertaken at these locations. It is expected that compliance with the environmental noise criteria at these locations will also result in compliance at all other nearby NSAs.

Table 4 Details of Potentially Most-Affected Noise Sensitive Areas (NSA)

NSA Ref.	Address	No. Storeys	NSA Type
1	534 Heidelberg Road, Alphington	1	Single Dwelling
2	548 Heidelberg Road, Alphington	1	Single Dwelling
3	51 Yarraford Avenue, Alphington	2	Single Dwelling
4	50 Yarraford Avenue, Alphington	2	Single Dwelling

Figure 3 Locations of Potentially Most-Affected Noise Sensitive Areas (NSA)
(Image Source: Google Maps)

Cogent Acoustics

5 Existing Acoustic Environment

5.1 Soundscape

The existing soundscape in the vicinity of the site and potentially most-affected noise sensitive areas is dominated by road traffic noise from Heidelberg Road north of the site.

5.2 Background Noise Levels

Environmental noise logging was performed at the site to establish the background noise levels. The measurements were performed along the southern boundary of the site between 19 and 25 September 2019. Details of the measurement location and measurement methodology are presented in Appendix B.

As the microphone position was located within 2 m in front of an acoustically reflecting surface, an adjustment of -2 dB has been made to the measured background noise levels.

Table 5 and Table 6 present summaries of the measured background noise levels, as determined in accordance with the procedures given by SEPP N-1 and SEPP N-2 respectively. Graphs showing the variation of background noise level over the full measurement period are presented in Appendix C.

Table 5 Background Noise Levels – SEPP N-1

Period	Applicable Times during Proposed Operating Hours	L_{A90} Background Noise Level, dB(A)
Day	▪ 7 am to 6 pm Monday to Friday ▪ 7 am to 1 pm Saturday	50
Evening	▪ 6 pm to 8 pm Monday to Friday ▪ 1 pm to 8 pm Saturdays ▪ 7 am to 8 pm Sundays and Public Holidays	47
Night	▪ N/A	-

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Table 6 Background Noise Levels – SEPP N-2

Period	Applicable Times during Proposed Operating Hours	L_{OCT90} Background Noise Level, dB							L_{A90} Background Noise Level, dB(A)
		63	125	250	500	1k	2k	4k	
Day / Evening	▪ 9 am to 8 pm Monday to Friday and Public Holidays ▪ 10 am to 8 pm Saturdays ▪ 12 pm to 8 pm Sundays	-	-	-	-	-	-	-	44
Night	▪ 7 am to 9 am Monday to Friday and Public Holidays ▪ 8 am to 10 am Saturdays ▪ 8 am to 12 pm Sundays	49	47	39	37	41	35	25	-

5.3 Existing Operational Noise Measurements

Noise associated with the existing operation of the restaurant was measured on 25 September 2019 between 3:15 pm and 3:25 pm. The measured noise levels are detailed in the following sections.

5.3.1 Mechanical Plant Noise

The key noise-generating mechanical plant items at the premises are the kitchen exhaust fan and outdoor air-conditioning condenser unit at the eastern side of the building roof, as shown in Figure 4 and Figure 5 respectively.

At the time of our visit, both the kitchen exhaust fan and AC condenser unit were operating. Noise from these mechanical plant items was not audible on the footpath east of the building over traffic noise from Heidelberg Road. Measurements were therefore conducted on the roof of the building within 1 m of each of the identified noise-generating mechanical plant items.

Table 7 presents a summary of the measured mechanical plant noise levels. Note that the presented sound pressure levels are the L_{A90} background levels. Due to traffic noise dominating the acoustic environment at the time of measurements, and the measured mechanical plant equipment operating constantly during the measurement period, the background levels (levels with the lowest contribution from traffic noise) have been adopted as the mechanical plant noise levels.

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Table 7 Measured Mechanical Plant Noise

Measurement Location	Measurement Description	L_{A90} Sound Pressure Level, dB(A)
On rooftop 1 m horizontally from kitchen exhaust fan	Exhaust fan noise and traffic noise.	68
On rooftop 1 m horizontally from AC condenser unit	AC condenser unit noise and traffic noise.	66

Figure 4 Key Noise-Generating Mechanical Plant Items – Kitchen Exhaust Fan

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Figure 5 Key Noise-Generating Mechanical Plant Items – AC Condenser Unit

5.3.2 Music Noise

Music is only played inside the restaurant. At the time of our visit, the front door (facing Heidelberg Road) was closed and the rear door (leading into the rear courtyard) was kept open. Music was being played at a background level that would typically be expected of a restaurant (i.e. loud enough to be heard over ambient noise within the restaurant but not so loud as to prevent conversation).

Music played within the restaurant was inaudible at the rear courtyard.

Table 8 presents a summary of the measured music noise level within the restaurant.

Table 8 Measured Music Noise Within Restaurant

Measurement Location	Measurement Description	L_{OCT10} Sound Pressure Level, dB							L_{Aeq} Sound Pressure Level, dB(A)
		63	125	250	500	1k	2k	4k	
Inside restaurant (near front counter)	Music noise and restaurant / kitchen activity noise	68	72	62	66	59	58	53	63

5.3.3 Patron Noise

At the time of the site visit the rear courtyard was unoccupied. Patron noise from the rear courtyard will be assessed through acoustic modelling.

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5.3.4 Car Park Noise

On-site vehicle movements were rare during the time of the site visit. As such, car park noise measurements were not conducted. On-site car park noise will be assessed through acoustic modelling.

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6 Mechanical Plant Noise Assessment

6.1 Assessment Criteria

The noise limits presented in Table 9 have been determined to apply at the potentially most affected noise sensitive areas in accordance with SEPP N-1. Details of the SEPP N-1 Zoning Level and noise limit calculations are presented in Appendix D.

Table 9 SEPP N-1 Noise Limits

Period	Applicable Times during Proposed Operating Hours	Noise Limit, L_{eff}, dB(A)
Day	▪ 7 am to 6 pm Monday to Friday ▪ 7 am to 1 pm Saturday	56
Evening	▪ 6 pm to 8 pm Monday to Friday ▪ 1 pm to 8 pm Saturdays ▪ 7 am to 8 pm Sundays and Public Holidays	50
Night	▪ N/A	-

6.2 Assessment

The sound pressure levels measured on the restaurant rooftop at approximately 1 m from the kitchen exhaust fan and air-conditioning condenser unit were found to be 68 dB(A) L_{A90} and 66 dB(A) L_{A90} respectively.

The distances from the kitchen exhaust fan and air-conditioning condenser unit to the nearest NSA (NSA 2: 548 Heidelberg Road) are approximately 20 m and 19 m respectively. Based on the measured noise levels, the combined noise level at NSA 2 due to the fan and AC condenser unit is calculated to be approximately 40 dB(A). No tonality adjustment or other SEPP N-1 character adjustment is considered to be applicable.

Given that no change to the existing noise-generating mechanical plant equipment is proposed, the distance between the kitchen exhaust fan and air-conditioning condenser unit and NSAs, and the conservative sound pressure levels measurements used in this assessment, it is considered that the combined noise level due to the kitchen exhaust fan and air-conditioning condenser unit will comply with the applicable SEPP N-1 noise limits for all periods.

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7 Music Noise Assessment

7.1 Assessment Criteria

Music noise emissions from the premises must comply with the requirements of State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2 (SEPP N-2) (State of Victoria, 1999).

Table 10 presents the SEPP N-2 music noise limits that have been determined to apply at the potentially most-affected NSAs based on the measured background noise levels.

Table 10 SEPP N-2 Music Noise Limits

SEPP N-2 Period	Applicable Times during Proposed Operating Hours	SEPP N-2 Noise Limits
Day / Evening	▪ 9 am to 8 pm Monday to Friday and Public Holidays ▪ 10 am to 8 pm Saturdays ▪ 12 pm to 8 pm Sundays	49 dB(A) L_{Aeq}
Night	▪ 7 am to 9 am Monday to Friday and Public Holidays ▪ 8 am to 10 am Saturdays ▪ 8 am to 12 pm Sundays	Freq, Hz / L_{OCT10}, dB 63 / 57 125 / 55 250 / 47 500 / 45 1k / 49 2k / 43 4k / 33

7.2 Assessment Input Parameters

SoundPLAN version 7.4 environmental noise modelling software was used to model the music noise emissions from the restaurant for:

1. The existing scenario where music is only played within the internal areas of the restaurant; and
2. The potential future scenario where music is played both within the restaurant and outdoors via new loudspeakers located in the rear courtyard.

Modelling has been conducted according to the calculation methodology prescribed by ISO 9613-2 Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: General Method of Calculation (ISO, 1996).

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Music noise emissions have been based on the following parameters:

- Music sound pressure levels within the restaurant and at the rear courtyard as presented in Table 8.
- Music played at the rear courtyard via two loudspeakers installed to the external wall of the restaurant building at 2 m above ground level.
- Rear door connecting the restaurant internal space and rear courtyard kept open.
- External walls of the restaurant building consisting of 70 mm thick single brickwork, 90 mm timber studs, 10 mm thick standard plasterboard internal lining, and no insulation in the wall cavity.
- Ceiling / roof of the restaurant building consisting of 0.42 BMT profiled metal roof sheeting, timber roof framing, 10 mm thick standard plasterboard ceiling lining, and no insulation in the ceiling cavity.
- The existing timber paling fencing along western boundary of the site has been modelled as acoustically transparent, as the existing type of construction and state of repair would provide only minimal noise reduction.

7.3 Calculated Music Noise Levels

7.3.1 Music Played Within Restaurant Only

Table 11 presents the calculated sound pressure level at the nearest NSA (NSA 1: 534 Heidelberg Road) with music played only within internal areas of the restaurant.

Table 11 Calculated Music Noise Levels at NSA 1 with Music Played Within Restaurant Only

NSA Ref.	SEPP N-2 Period	Calculated Music Noise Levels and Compliance with SEPP N-2							
		Octave Band Centre Frequency, Hz							Overall, dB(A)
		63	125	250	500	1k	2k	4k	
NSA 1	Day / Evening, L_{Aeq}, dB(A)	-	-	-	-	-	-	-	35 ✓
	Night, L_{OCT10}, dB	47 ✓	47 ✓	33 ✓	37 ✓	30 ✓	29 ✓	23 ✓	38 ✓

The results of the music noise emission calculation presented in Table 11 indicate that music played inside the restaurant at the level measured during our site visit will comply with the SEPP N-2 noise limits for all periods. This agrees with observations taken during our site visit where music noise played within the restaurant was found to be inaudible in the rear courtyard, likely due to the relatively high background noise level as a result of traffic movement along Heidelberg Road.

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7.3.2 Music Played Within Restaurant and Rear Courtyard

Table 12 presents the calculated sound pressure level at the nearest NSA (NSA 1: 534 Heidelberg Road) with music played within the restaurant and the rear courtyard.

Table 12 Calculated Music Noise Levels at NSA 1 with Music Played Within Restaurant and Rear Courtyard

NSA Ref.	SEPP N-2 Period	Calculated Music Noise Levels and Compliance with SEPP N-2							
		Octave Band Centre Frequency, Hz							Overall, dB(A)
		63	125	250	500	1k	2k	4k	
NSA 1	Day / Evening, L_{Aeq}, dB(A)	-	-	-	-	-	-	-	58 ×
	Night, L_{OCT10}, dB	71 ×	75 ×	57 ×	57 ×	48 ✓	46 ×	40 ×	61 ×

The results of the music noise emission calculation presented in Table 12 indicate that music played outdoors in the rear courtyard at the level measured within the restaurant will not comply with the SEPP N-2 noise limits.

The modelling results indicate that music must not be played louder than the sound pressure levels presented in Table 13 to comply with the SEPP N-2 noise limits. The maximum allowable music noise levels are for sound pressure levels at 1 m in front of each of two loudspeakers installed to the external wall of the restaurant building at 2 m above ground level.

Table 13 Maximum Allowable Music Noise Levels at 1 m from Each Loudspeaker Installed at Rear Courtyard

Measurement Location	SEPP N-2 Period	Maximum Allowable Music Noise Levels							
		Octave Band Centre Frequency, Hz							Overall, dB(A)
		63	125	250	500	1k	2k	4k	
1 m in front of each of two loudspeakers installed at rear courtyard	Day / Evening, L_{Aeq}, dB(A)	-	-	-	-	-	-	-	58
	Night, L_{OCT10}, dB	59	61	47	54	50	45	44	54

The results presented above indicate that during the SEPP N-2 'day / evening' period, a maximum music sound pressure level of 58 dB(A) L_{Aeq} is allowed at 1 m in front of each of the two loudspeakers at the rear courtyard. This level is likely to be too low for the purpose of background music having regard to the typical the ambient traffic noise within the rear courtyard.

During the SEPP N-2 'night' period, an overall L_{A10} sound pressure level of 54 dB(A) is allowed at 1 m in front of each of the two loudspeakers at the rear courtyard. This level is also likely to be too low for the purpose of background music.

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7.4 Assessment Summary

In consideration of the above, music played at the background level measured within the restaurant will comply with the SEPP N-2 noise limits for all periods. However, music played at the rear courtyard is not recommended as, to comply with the SEPP N-2 noise limits, the maximum allowable music noise levels are likely to be too low for a desirable level of background music.

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8 Patron Noise Assessment

8.1 Assessment Criteria

8.1.1 General

There are no statutory criteria that apply to patron noise emissions from commercial premises in Victoria. In the absence of statutory noise criteria, patron noise emissions have been assessed in relation to the SEPP N-1 noise limits as specified in Table 9 of Section 6.1. For patron noise, these limits are non-mandatory and used as a guideline only.

8.1.2 Sleep Disturbance

Sleep disturbance is commonly related to short term maximum noise levels (L_{Amax}) due to individual noise events rather than overall (L_{Aeq}) noise levels as prescribed by SEPP N-1.

In consideration of the above, guidance from The World Health Organization Guidelines for Community Noise (WHO Guideline) (World Health Organization, 1999) has been used in determining appropriate indoor noise levels to avoid sleep disturbance. The guidance provided is relevant with respect to potential sleep disturbance due to patron noise during the night time.

Table 14 presents the maximum noise levels recommended in the WHO Guideline to avoid sleep disturbance.

Table 14 Sleep Disturbance Criteria

Environment	Recommended Maximum Noise Level, L_{Amax}, dB(A)
Outside Bedrooms – Night Time	≤ 60

8.2 Assessment Input Parameters

SoundPLAN version 7.4 environmental noise modelling software was used to model the patron noise emissions. Modelling has been conducted according to the calculation methodology prescribed by ISO 9613-2 Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: General Method of Calculation (ISO, 1996).

Patron noise emissions have been based on the following parameters:

- Rear courtyard layout as existing with seating capacity for up to 32 patrons.
- Remaining 43 patrons located within internal spaces only. As significant attenuation will be provided by the restaurant building, patron noise from the rear courtyard is considered to be the dominant noise source and patron noise from internal spaces has not been considered further in this assessment.

- Overall L_{Aeq} patron noise levels have been predicted based on the sound power level calculated using the formula developed by (Hayne, Taylor, Rumble, & Mee, 2011) as follows:

$$A\text{-}weighted\ Sound\ Power\ Level\ L_{WAeq} = 15logN + 64\ dB(A)$$

Where *N* is the number of patrons.

Based on the 32 patron capacity of the rear courtyard, the total overall sound power level from the rear courtyard is modelled to be 87 dB(A).

- Maximum L_{Amax} patron noise levels have been predicted based on the sound power level calculated using the formula developed by (Hayne, Taylor, Rumble, & Mee, 2011) as follows:

$$A\text{-}weighted\ Sound\ Power\ Level\ L_{WAmax} = 11logN + 81\ dB(A)$$

Where *N* is the number of patrons.

Based on the 32 patron capacity of the rear courtyard, the total maximum sound power level from the rear courtyard is modelled to be 98 dB(A).

- Modelling has been conducted based on seated patrons with head height approximately 1.2 m above ground level.
- The existing timber paling fencing along western boundary of the site has been modelled as acoustically transparent, as the existing type of construction and state of repair would provide only minimal noise reduction.

8.3 Calculated Patron Noise Levels without Noise Control Measures

Table 15 presents the calculated patron noise levels at the identified nearest and potentially most-affected NSAs based on the above input parameters.

Table 15 Calculated Patron Noise Levels at Nearest NSAs – without Noise Control Measures

NSA Ref.	Address	Calculated Effective Noise Level, L_{eff}, dB(A)	Calculated Maximum Noise Levels, L_{AFmax}, dB(A)
NSA 1	534 Heidelberg Road	56	67
NSA 2	548 Heidelberg Road	24	35
NSA 3	51 Yarraford Avenue	40	37
NSA 4	50 Yarraford Avenue	33	44

Using the SEPP N-1 noise limits as a guideline to the approximate levels of patron noise that may be acceptable, the results presented above indicate that patron noise levels from the rear courtyard are compliant with the SEPP N-1 'Day' period noise limits but exceed the SEPP N-1 'Evening' period noise limits by up to 6 dB(A).

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In addition, assessment of the maximum patron noise levels indicate that the WHO Guideline sleep disturbance criterion is exceeded at NSA 1.

Therefore, noise control measures are recommended to minimise the patron noise emissions from the rear courtyard.

8.4 Recommended Noise Control Measures

The following acoustic measures are recommended to control patron noise from the rear courtyard:

- Patrons at the rear courtyard should be limited to no more than 32 patrons at any time.
- The existing timber paling fence along the western boundary of the site should be replaced with a 2.1 m high acoustic screen, at the location shown in Figure 6.
- The fence should be constructed from minimum 25 mm thick timber palings, 1.6 mm thick steel, 9 mm thick fibre cement sheet, 8 mm thick solid Perspex or polycarbonate, or other suitable sheeting material of at least 12 kg/m^2.
- There must be no gaps between the fence panels / palings, or between bottom of the fence and the ground.
- A typical detail for an acoustic timber fence is presented in Appendix E.

Figure 6 Recommended Acoustic Fence Location (Image Source: Google Maps)

8.5 Calculated Patron Noise Levels with Noise Control Measures

Table 16 presents the calculated patron noise levels at the identified nearest and potentially most-affected NSAs with the recommended noise control measures implemented.

Table 16 Calculated Patron Noise Levels at Nearest NSAs – with Noise Control Measures

NSA Ref.	Address	Calculated Effective Noise Level, L_{eff}, dB(A)	Calculated Maximum Noise Levels, L_{AFmax}, dB(A)
NSA 1	534 Heidelberg Road	48	58
NSA 2	548 Heidelberg Road	25	36
NSA 3	51 Yarraford Avenue	36	47
NSA 4	50 Yarraford Avenue	31	42

Using the SEPP N-1 noise limits as a guideline to the approximate levels of patron noise that may be acceptable, the results above indicate that patron noise levels from the rear courtyard with the recommended noise control measures implemented are compliant with the SEPP N-1 'Day' and 'Evening' period noise limits.

It is therefore considered that patron noise will be acceptable at nearby NSAs with the recommended noise control measures implemented.

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9 Car Park Noise Assessment

9.1 Assessment Criteria

9.1.1 General

There are no statutory criteria that will apply to noise emissions from the car park. In the absence of statutory noise criteria, noise emissions from the car park have been assessed in relation to the SEPP N-1 noise limits as specified in Table 9 of Section 6.1. For car park noise, these limits are non-mandatory and used as a guideline only.

9.1.2 Sleep Disturbance

Maximum noise emissions from the car park have been assessed with regards to the WHO Guideline sleep disturbance criterion as specified in Table 14 of Section 8.1.2.

9.2 Assessment Input Parameters

The restaurant on-site car park is located at the southern part of the site. Noise due to vehicle movements within the car park has been modelled in SoundPLAN version 7.4 environmental noise modelling software using methods prescribed in Parking Area Noise (BayLfU, 2007).

For the purpose of this acoustic assessment, the following input parameters have been used:

- Car park layout as existing with 14 parking spaces.
- Noise from the car park has been modelled based on four vehicle movements per parking space per hour over the proposed operational hours during SEPP N-1 'Day' and 'Evening' periods (i.e. 28 vehicles entering and exiting the car park every hour between 7 am and 8 pm Monday to Friday and between 8 am and 8 pm Saturday and Sunday).
- The existing timber paling fencing along western boundary of the car park has been modelled as acoustically transparent.

9.3 Calculated Noise from Car Park without Noise Control Measures

Table 17 presents the calculated noise levels at the identified nearest and potentially most-affected NSAs based on the above input parameters.

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Table 17 Calculated Car Park Noise Levels at Nearest NSAs – without Noise Control Measures

NSA Ref.	Address	Calculated Effective Noise Level, L_{eff}, dB(A)	Calculated Maximum Noise Levels, L_{AFmax}, dB(A)
NSA 1	534 Heidelberg Road	61	68
NSA 2	548 Heidelberg Road	46	53
NSA 3	51 Yarraford Avenue	48	53
NSA 4	50 Yarraford Avenue	50	58

Using the SEPP N-1 noise limits as a guideline to the approximate levels of car park noise that may be acceptable, the results presented above indicate that noise from the on-site car park are not compliant with the SEPP N-1 guideline noise limits at NSA 1 for all periods. In addition, assessment of the maximum car park noise levels indicate that the WHO Guideline sleep disturbance criterion is exceeded at NSA 1.

Noise levels at the remaining identified nearest NSAs are generally compliant or marginally exceed the SEPP N-1 noise limits and WHO Guideline sleep disturbance criterion.

Based on the above, noise control measures are recommended to minimise the noise emissions from the on-site car park.

9.4 Recommended Noise Control Measures

To control noise from the on-site car park, the 2.1 m high acoustic screen along the western boundary of the site as specified in Section 8.4 is recommended.

9.5 Calculated Noise from Car Park with Noise Control Measures

Table 18 presents the calculated noise levels at the identified nearest and potentially most-affected NSAs with the recommended noise control measures implemented.

Table 18 Calculated Car Park Noise Levels at Nearest NSAs – with Noise Control Measures

NSA Ref.	Address	Calculated Effective Noise Level, L_{eff}, dB(A)	Calculated Maximum Noise Levels, L_{AFmax}, dB(A)
NSA 1	534 Heidelberg Road	53	58
NSA 2	548 Heidelberg Road	46	53
NSA 3	51 Yarraford Avenue	46	50
NSA 4	50 Yarraford Avenue	50	57

Using the SEPP N-1 noise limits as a guideline to the approximate levels of car park noise that may be acceptable, the results presented above indicate that noise from the on-site car park with the recommended noise control measures implemented are compliant with the SEPP N-1 'Day' period noise limit.

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The car park noise levels during the SEPP N-1 'Evening' period is still calculated to be 3 dB(A) higher than the applicable noise limit. However, the exceedance of the 'Evening' period noise limit is considered marginal noting that –

- A 3 dB(A) difference is typically a just-noticeable difference in practice;
- SEPP N-1 is being used as a non-mandatory guideline in this instance, and is a relatively conservative approach.

Assessment of the maximum noise levels from vehicle activity within the on-site car park with regards to the WHO Guideline sleep disturbance criterion indicates that compliance is achieved with implementation of the recommended noise control measures.

It is therefore considered that noise from the on-site car park is unlikely to result in unreasonable noise impacts to nearby NSAs with the recommended noise control measures implemented.

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10 Waste Collections and Deliveries Noise Emissions

Based on the reference documentation, existing levels of background noise, and road traffic noise at the site it is considered that the noise due to any deliveries and private waste collections associated with the premises will not adversely impact on the adjacent residences provided that such deliveries and collections are conducted between the hours presented in the table below, and in general accordance with Section 6 and 9 of the EPA Noise Control Guidelines (EPA Victoria, 2008).

Table 19 Deliveries and Waste Collection Schedules

Activity Type	Permitted Times
Waste Collections	▪ 7 am to 8 pm Monday to Saturday ▪ 9 am to 8 pm Sunday and Public Holidays
Deliveries	▪ 7 am to 10 pm Monday to Saturday ▪ 9 am to 10 pm Sundays and Public Holidays

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11 Conclusion

This report has presented an assessment of environmental noise emissions from Kissaten at 538 Heidelberg Road, Alphington.

The assessment has been undertaken with regard to the statutory criteria and guidelines prescribed by State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-1 (SEPP N-1) (State of Victoria, 2001), State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2 (SEPP N-2) (State of Victoria, 1999), Guidelines for Community Noise (World Health Organization, 1999), and the EPA Noise Control Guidelines (EPA Victoria, 2008).

Assessment of the restaurant operational noise with respect to mechanical plant noise, music noise, patron noise, car park noise, and delivery / waste collection noise has determined that an acoustic screen of 2.1 m height will be required along the western boundary of the site as per the specifications presented in Section 8.4.

Subject to the advice presented in this report, it is considered that the premises will satisfy the applicable acoustic legislation and guidelines.

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12 References

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World Health Organization. (1999, April). World Health Organization Guidelines for Community Noise. Geneva.

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Appendix A Glossary of Acoustic Terms

dB / dB(A) Decibels or 'A'-weighted Decibels, the units of Sound Pressure Level and Sound Power Level. 'A'-weighting adjusts the levels of frequencies within the sound spectrum to better reflect the sensitivity of the human ear to different frequencies at sound pressure levels typical of everyday sounds. [Unit: dB / dB(A)]

The following are examples of the decibel readings of every day sounds;

- 0 dB The faintest sound we can hear
- 30 dB A quiet library or in a quiet location in the country
- 45 dB Typical office space. Ambience in the city at night
- 60 dB The sound of a vacuum cleaner in a typical lounge room
- 70 dB The sound of a car passing on the street
- 80 dB Loud music played at home
- 90 dB The sound of a truck passing on the street
- 100 dB The sound of a rock band
- 120 dB Deafening

Effective Noise Level "Effective noise level" means the level of noise emitted from the commercial, industrial or trade premises and adjusted if appropriate for character and duration.

$L_{A90,T}$ The value of A-weighted Sound Pressure Level which is exceeded for 90 percent of the time during given measurement period T. This is commonly used to represent the background noise level. [Unit: dB / dB(A)]

$L_{Aeq,T}$ The Equivalent Continuous A-weighted Sound Pressure Level measured over the period T (also known as Time-Average Sound Pressure Level). The Equivalent Continuous A-weighted Sound Pressure Level is the constant value of A-weighted Sound Pressure Level for a given period that would be equivalent in sound energy to the time-varying A-Weighted Sound Pressure Level measured over the same period. In simple terms, this can be thought of as the average sound pressure level. [Unit: dB / dB(A)]

$L_{AFmax,T}$ The maximum value of A-weighted, F time-weighted Sound Pressure Level which occurs during a given measurement period T. [Unit: dB / dB(A)]

L_{eff} See 'Effective Noise Level'.

L_{OCT10} Means the C-weighted or Linear sound pressure level for a specified octave band that is exceeded for 10 per cent of the time interval considered. [Unit: dB]

L_{OCT90} Means the C-weighted or Linear sound pressure level for a specified octave band that is exceeded for 90 per cent of the time interval considered. [Unit: dB]

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Noise Sensitive Area	For the purposes of assessment of noise levels in relation to *State Environment Protection Policy (Control of Noise from Commerce Industry and Trade) No. N-1*, *State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2*, or the *Interim Guidelines for Control of Noise from Industry in Country Victoria*, a Noise Sensitive Area is defined as: a) That part of the land within the apparent boundaries of any piece of land which is within 10 metres outside the external walls of any of the following buildings: ▪ A dwelling (except Caretaker's House) ▪ Residential Building b) That part of the land within the apparent boundaries of any piece of land on which is situated any of the following buildings which is within a distance of 10 metres outside the external walls of any dormitory, ward or bedroom of such buildings: ▪ Caretakers house ▪ Hospital ▪ Hotel ▪ Institutional home ▪ Motel ▪ Reformative institution ▪ Tourist establishment ▪ Work release hostel
Sound Power Level	A measure of the total sound energy radiated by a source, per unit time. Mathematically, it is ten times the logarithm to the base ten of the ratio of the sound power (W) of the source to the reference sound power; where the reference sound power is $1x10^{-12}$ W. [Unit: dB]
Sound Pressure Level	A measure of the magnitude of a sound wave. Mathematically, it is twenty times the logarithm to the base ten of the ratio of the root mean square sound pressure at a point in a sound field, to the reference sound pressure; where sound pressure is defined as the alternating component of the pressure (Pa) at the point, and the reference sound pressure is $2x10^{-5}$ Pa. [Unit: dB]

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Appendix B Background Noise Measurement Methodology

Measurement Location

Table 20 presents details of the noise measurement locations. Figure 7 and Figure 8 present a map and photographs of the noise measurement locations.

Table 20 Noise Measurement Location Details

Location Reference	Measurement Description	Microphone Height Above Ground Level, m
1	Background noise logging	1.3 m

Figure 7 Noise Measurement Locations (Image Source: Google Maps)

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Figure 8 Noise Measurement Location 1 – Photo Facing South

Measurement Procedure

Unattended environmental noise logging and attended noise measurements were performed at the site to establish the environmental noise levels. Table 21 presents details of each measurement:

Table 21 Details of Measurement Period

Location Ref.	Measurement Type		Start Time	Start Date	End Time	End Date
	Attended	Unattended				
1	☐	☒	3:05 PM	Thursday 19/09/2019	3:05 PM	Wednesday 25/09/2019

The equipment was configured to provide the measurement results as a continuous series of 1 second A- and Z-weighted sound pressure levels. Metrics used for the assessment were then post-processed from this data.

A 90 mm diameter foam windscreen was installed on the microphone to minimise the effect of wind-induced pressure fluctuations on the measurements.

Instrumentation

All acoustic instrumentation used for the measurements held a current certificate of calibration from a National Association of Testing Authorities (NATA) accredited laboratory at the time of the measurements.

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A field check to confirm correct calibration of the instrumentation was performed at the beginning and end of the measurement period using a laboratory calibrated portable Sound Level Calibrator. At the time of each check the instrumentation was found to be reading correctly and the deviation between consecutive checks was found to be less than 1 dB.

Details of the acoustic instrumentation used for measurements are presented in Table 22.

Table 22 Acoustic Instrumentation Details

Location Reference	Instrument Description	Serial No.	Date of Last Laboratory Calibration*
1	Svantek 977 Class 1 Sound Level Meter	45759	13/09/2018
-	Svantek SV33 Portable Sound Level Calibrator	57427	6/05/2019

* In accordance with AS 1055.1-1997 and National Association of Testing Authorities Guidelines, Sound Level Meters and Environmental Noise Loggers are required to have comprehensive laboratory calibration checks carried out at intervals not exceeding two years. Sound Level Calibrators require calibration annually.

Meteorological Data

Weather observations during the monitoring period were taken from the Bureau of Meteorology Weather Station at Melbourne Olympic Park, approximately 6.5 km away. Appendix C shows the meteorological observations plotted against the measured L_{Aeq}, L_{A90}, L_{Amax} sound pressure levels for the duration of the measurement period.

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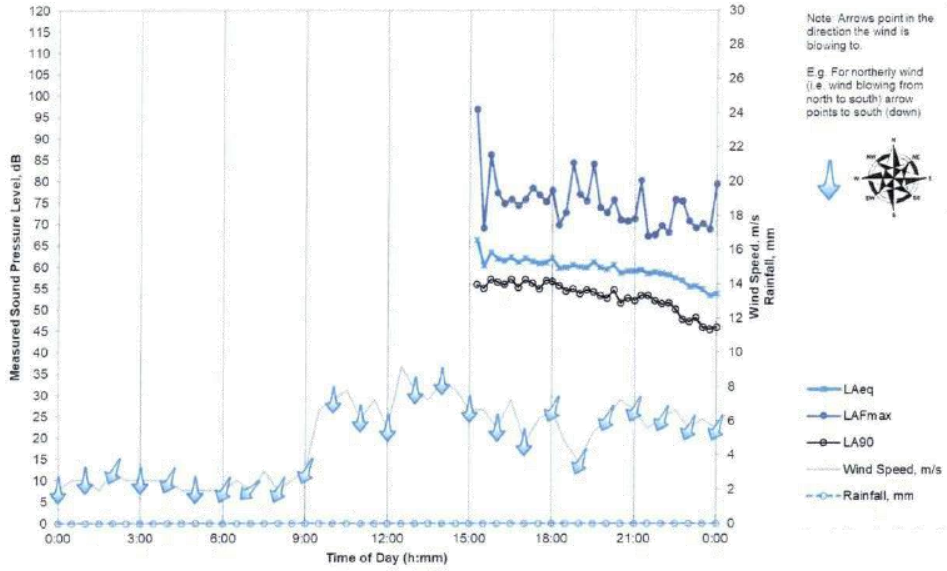
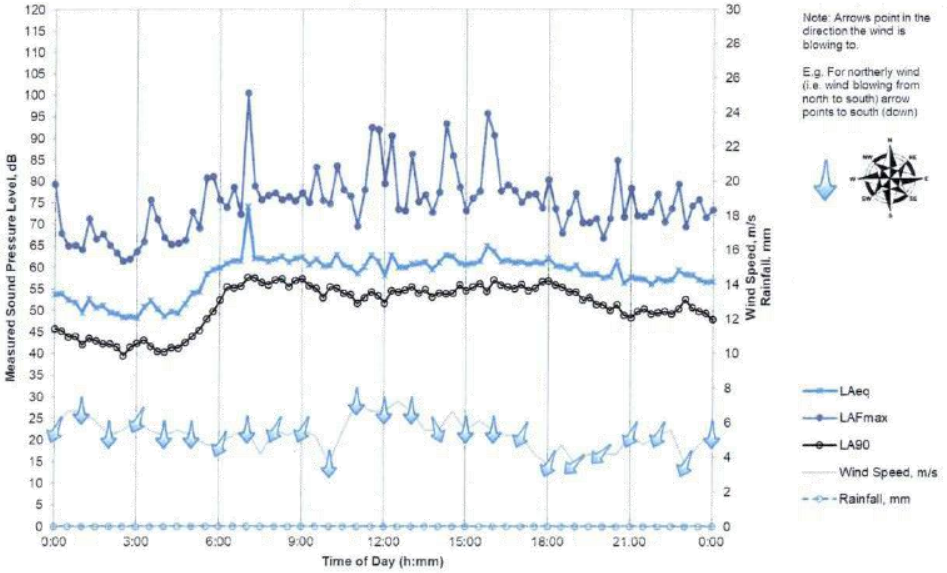
Appendix C Graphed Noise Measurement Results

Thursday, 19 September 2019



Friday, 20 September 2019



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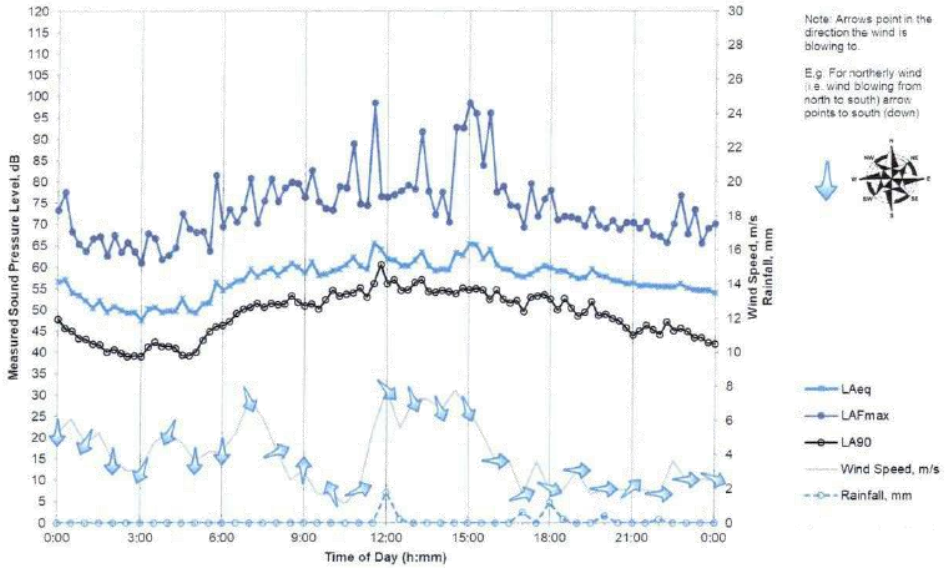
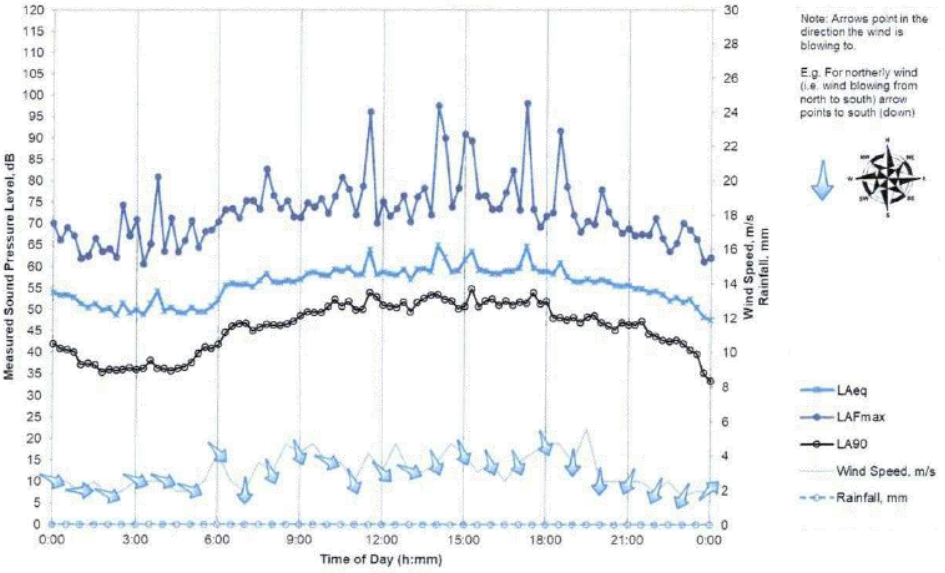
Saturday, 21 September 2019



Sunday, 22 September 2019



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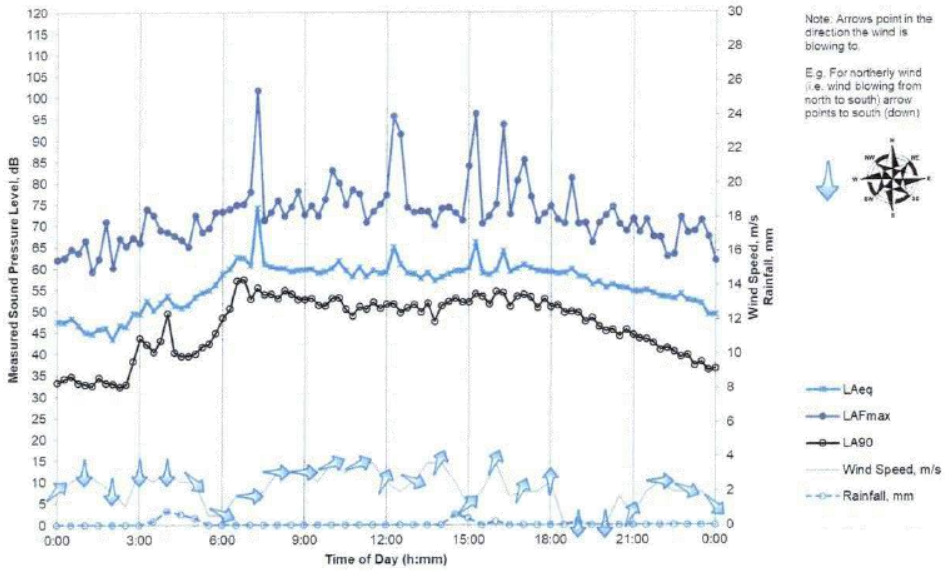
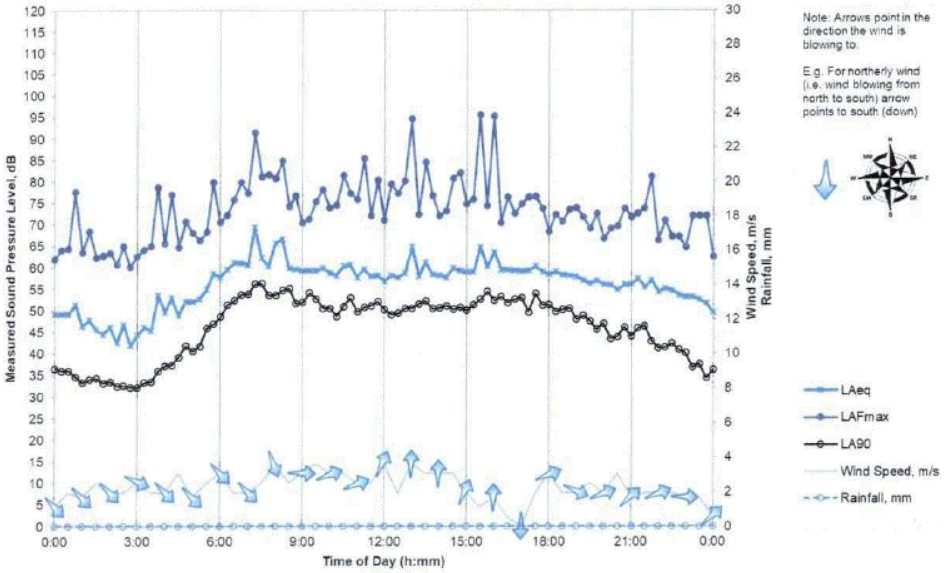
Monday, 23 September 2019



Tuesday, 24 September 2019



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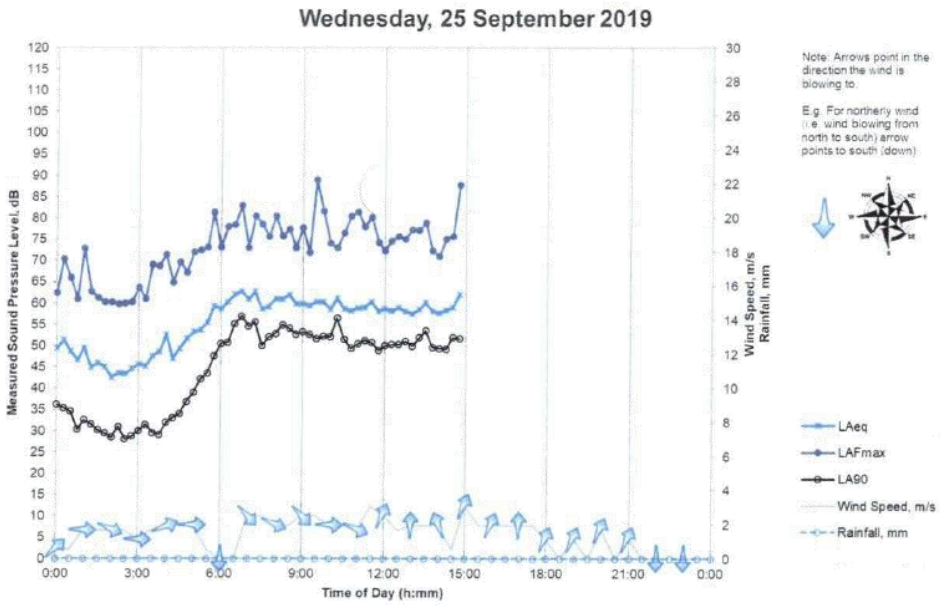

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Appendix D SEPP N-1 Zoning Level and Noise Limit Calculations

548 Heidelberg Road, Alphington

Zoning Map

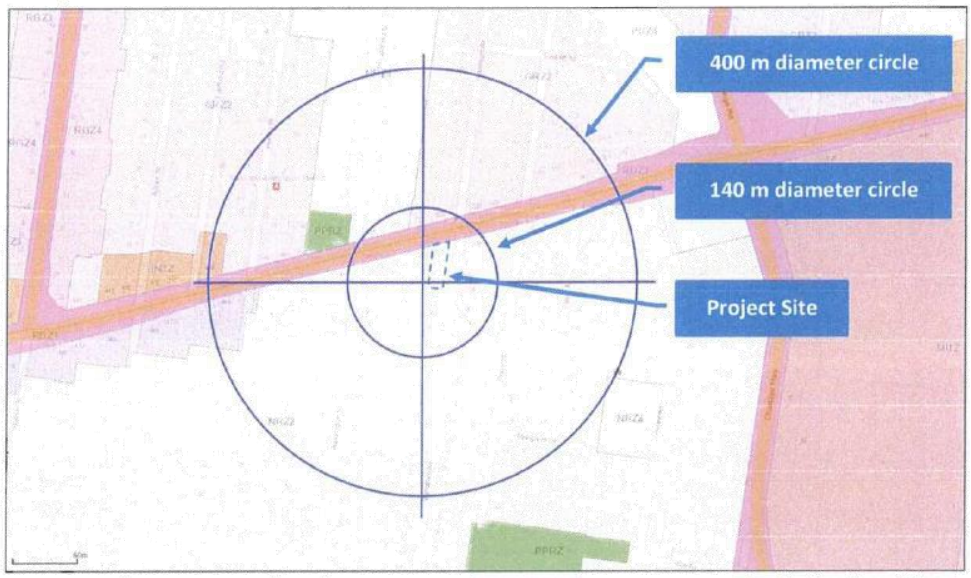

Figure 9 Zoning Circles (Image Source: VicPlan)

Zone Areas

Zone Type Designation	Applicable Zones	% Area of 140m Circle	% Area of 400m Circle
Type 1	NRZ, GRZ2, PPRZ	85%	92%
Type 2	-	0%	0%
Type 3	C2Z, RDZ1, IN3Z	15%	8%

Influencing Factor: 0.11

Zoning Levels and Noise Limits

Period	Zoning Level, dB(A)	L_{A90} Background Noise Level, dB(A)	Background Noise Classification	SEPP N-1 Noise Limits, dB(A)
Day	52	50	High	56
Evening*	46	47	High	50
Night	41	N/A	-	-

Notes:

* Evening period assessed until 8 pm only.

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Explanatory Notes to SEPP N-1 Noise Limit Derivation

In accordance with SEPP N-1 the Influencing Factor (IF) for an assessment location is calculated as follows:

$$IF = 0.25(Sum\ of\ Type\ 2\ fractions\ for\ both\ cicles) + 0.5(Sum\ of\ Type\ 3\ fractions\ for\ both\ circles)$$

The Zoning Levels are calculated according to the following equations:

$$Day\ Period\ Zoning\ Level = 18 \times IF + 50$$
$$Evening\ Period\ Zoning\ Level = 17 \times IF + 44$$
$$Night\ Period\ Zoning\ Level = 17 \times IF + 39$$

The Background Noise Levels are classified as follows:

Period	Classification Criteria	Background Noise Classification
Day	Background Noise Level > Zoning Level - 6 dB(A)	High
	Background Noise Level < Zoning Level - 12 dB(A)	Low
	Otherwise	Neutral
Evening and Night	Background Noise Level > Zoning Level - 3 dB(A)	High
	Background Noise Level < Zoning Level - 9 dB(A)	Low
	Otherwise	Neutral

The noise limits are determined based on the background noise classification, according to the following equations:

Period	Classification	Noise Limit
Day	High	Background Noise Level + 6 dB(A)
	Neutral	Zoning Level
	Low	0.5 x (Zoning Level + Background Noise Level) + 4.5 dB(A)
Evening and Night	High	Background Noise Level + 3 dB(A)
	Neutral	Zoning Level
	Low	0.5 x (Zoning Level + Background Noise Level) + 3 dB(A)

SEPP N-1 specifies that the noise limits may not be less than 45 dB(A) for the Day period, 40 dB(A) for the Evening period, and 35 dB(A) for the Night period.

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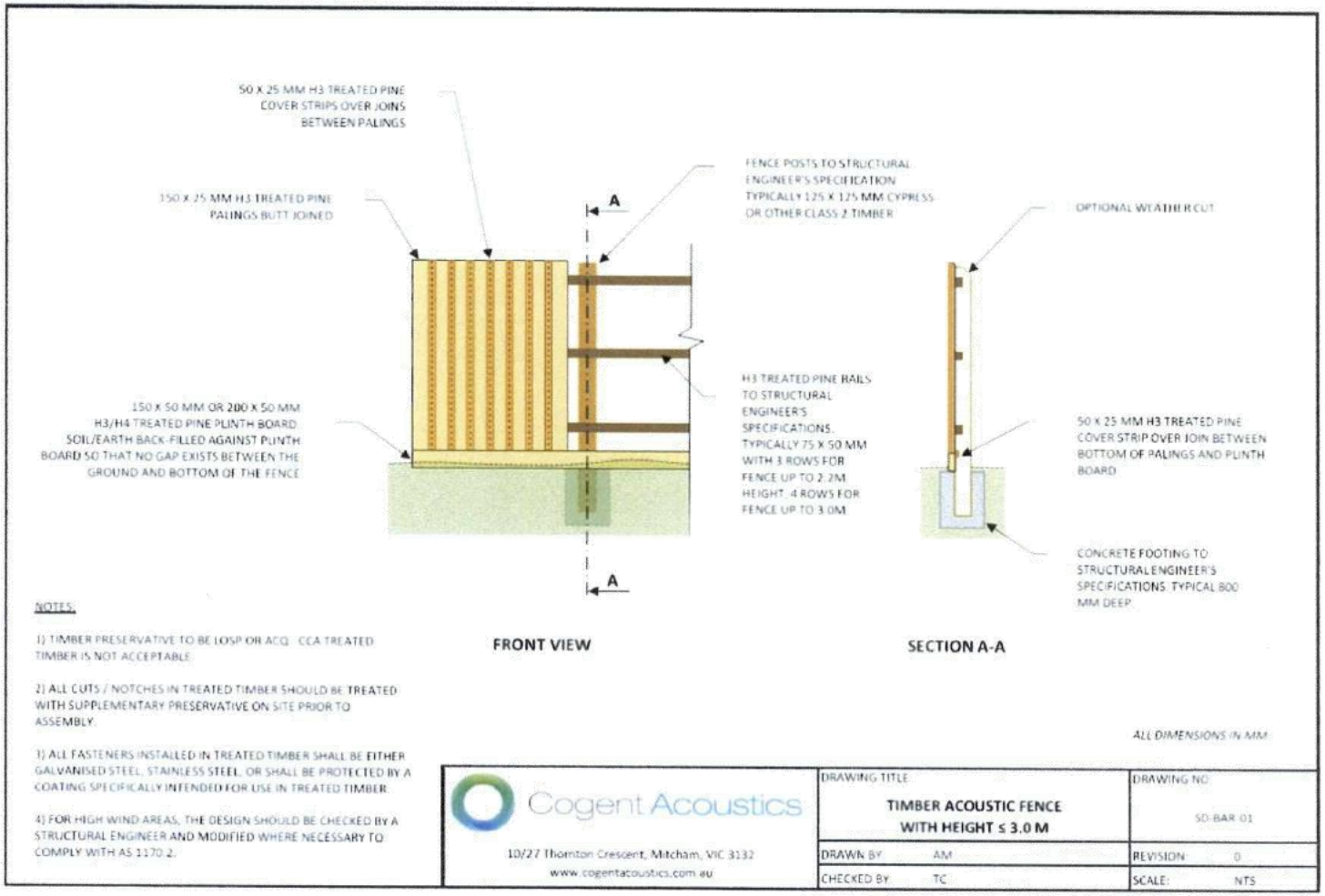

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538 Heidelberg Road, Alphington

Acoustic Engineering Report

Attachment 5 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Revised Acoustic Report

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538 Heidelberg Road, Alphington

Acoustic Engineering Report

Prepared for:

Kissaten
538 Heidelberg Road
Alphington VIC 3078

Prepared by:

Cogent Acoustics Pty Ltd
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11/27 Thornton Crescent,
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03 8814 3250

Project Number: 19246

Prepared by **Te-liang Chong**
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Signature

Revision History

Rev.	Date	Purpose	Prepared by:	Reviewed by:
0	07/10/2019	Draft for comment	Te-liang Chong	Andrew Mitchell
1	09/10/2019	For Issue	Te-liang Chong	Andrew Mitchell
2	28/11/2019	Revised based on Council feedback and revised operational hours	Te-liang Chong	Andrew Mitchell
3	1/07/2020	Updated in response to Council peer review comments	Te-liang Chong	Andrew Mitchell
4	10/08/2020	Updated based on Client comments	Te-liang Chong	Andrew Mitchell

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Executive Summary

Kissaten has appointed Cogent Acoustics Pty Ltd to provide acoustic engineering consulting services associated with their premises at 538 Heidelberg Road, Alphington.

Advice in relation to the following acoustic engineering elements has been requested, and is presented in this report:

Table 1 Acoustic Engineering Elements and Reference Criteria

Acoustic Engineering Element	Reference Criteria
Environmental noise emissions due to mechanical plant.	SEPP N-1
Music noise emissions.	SEPP N-2
Patron noise emissions.	SEPP N-1 (As guideline only); WHO Guideline for sleep disturbance
Environmental noise emissions due to on-site vehicle movements and other car park activity.	SEPP N-1 (As guideline only); WHO Guideline for sleep disturbance
Environmental noise emissions due to waste collections and deliveries.	EPA Noise Control Guidelines

A review of the above elements has been undertaken and it is considered that operational noise from the restaurant will satisfy the reference criteria with inclusion of the following acoustic engineering measures:

Table 2 Recommended Acoustic Engineering Measures

System	Acoustic Engineering Measure
Music Noise	▪ Music will be played in internal spaces within the restaurant at a background level only. ▪ No music will be played at the rear courtyard. ▪ Refer to Section 7 for further details.
Patron Noise	▪ Patrons at the rear courtyard should be limited to no more than 32 patrons at any time. ▪ The existing timber paling fence along the western boundary of the rear courtyard should be replaced with a 2.4 m high acoustic screen; and ▪ The existing timber paling fence along the western boundary of the car park should be replaced with a 2.1 m high acoustic screen. ▪ Refer to Section 8 for further details.
Car Park Noise	▪ The existing timber paling fence along the western boundary of the site should be replaced with an acoustic screen of between 2.1 and 2.4 m height (also specified to control patron noise). ▪ Refer to Section 9 for further details.

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<table>
<tr><th>System</th><th>Acoustic Engineering Measure</th></tr>
<tr><td>Waste Collections and Deliveries</td><td>
Private waste collections and deliveries should only be conducted between the hours presented in the table below, as recommended by the EPA Noise Control Guidelines.
<table>
<tr><th>Activity Type</th><th>Permitted Times</th></tr>
<tr><td>Waste Collections</td><td>▪ 7 am to 8 pm Monday to Saturday
▪ 9 am to 8 pm Sunday and Public Holidays</td></tr>
<tr><td>Deliveries</td><td>▪ 7 am to 10 pm Monday to Saturday
▪ 9 am to 10 pm Sundays and Public Holidays</td></tr>
</table>
Refer to Section 10 for further details.
</td></tr>
</table>

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Contents

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1 Introduction

1.1 Purpose

Kissaten has appointed Cogent Acoustics Pty Ltd to undertake an assessment of environmental noise emissions from their premises at 538 Heidelberg Road, Alphington, for the purpose of informing a Planning Permit Application to Council.

The scope of the assessment includes:

- Assessment of noise due to mechanical plant in relation to the requirements of State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-1 (SEPP N-1) (State of Victoria, 2001).
- Assessment of music noise emissions from the site in relation to the requirements of State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2 (SEPP N-2) (State of Victoria, 1999).
- Prediction and assessment of potential patron noise emissions from the site.
- Assessment of potential noise emissions due to on-site vehicle movements and other car park activity.
- Assessment of potential noise due to other activities associated with the proposed use, such as private waste collections and deliveries.

This report documents the investigations and advice provided in relation to the above services.

A glossary of the acoustic nomenclature used in this report is presented in Appendix A.

1.2 Reference Documentation

This report is based on information contained in the following documents and drawings:

Table 3 Reference Documentation

Document	Prepared by	Issue
Email To: Benjamin Mathieson CC: Te-liang Chong; Adam Wright Subject: Re: Acoustic Fee Proposal - 19246 538 Heidelberg Road, Alphington	Kissaten Alphington	Wed 2/10/2019 10:59 AM
Council Request For Information; Amendment application No. PL05/1061.04	City of Yarra	30/10/2019

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Document	Prepared by	Issue
538-540 Heidelberg Road, Alphington Development Application Acoustic Review PLN 05/1061; Reference ID: 640.10090.06390 538-540 Heidelberg Rd Alphington 20200429	SLR Consulting	29/04/2020

1.3 Report Limitations

The following limitations are applicable with respect to the acoustic advice presented in this report:

- Cogent Acoustics has prepared this document for the sole use of the Client and for the specific purpose expressly stated in the document. No other party should rely on this document without the prior written consent of Cogent Acoustics. Cogent Acoustics undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.
- The information contained in this document provides advice in relation to acoustics and vibration only. No claims are made and no liability is accepted in respect of design and construction issues falling outside of the specialist field of acoustics and vibration engineering including and not limited to structural integrity, fire rating, architectural buildability and fitness-for-purpose, waterproofing and the like. Supplementary professional advice should be sought in respect of these issues.
- Reports marked 'Not for Construction' or 'Draft' may be subject to change and are not released as final reports. Cogent Acoustics accepts no liability pending release of the final version of the report.
- In preparing this document Cogent Acoustics may have relied upon information provided by the client and other third parties, some of which may not have been verified. Cogent Acoustics accepts no responsibility or liability for any errors or omissions which may be incorporated into this document as a result.
- The recommendations, data and methodology documented in this assessment are based on the listed reference documentation. The recommendations apply specifically to the project under consideration, and must not be utilised for any other purpose. Any modifications or changes to the project from that described in the listed reference documentation may invalidate the advice provided in this document, necessitating a revision.
- Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

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2 Project Characteristics

2.1 Site Location

The project site is located at 538 Heidelberg Road, Alphington, as shown in Figure 1. The topography in the area of the site is near flat.

Figure 1 Aerial Image of Site (Image Source: Google Maps)

2.2 Existing Situation

The existing site comprises a restaurant, kitchen, rear courtyard, and car park with the following operating hours:

- 7 am to 4 pm Monday to Friday;
- 8 am to 4 pm Saturday and Sunday.

The premises has capacity for up to 75 patrons, with 32 seats provided at the rear courtyard. No live music is played at the restaurant. There is a loudspeaker system installed inside the restaurant that plays background music. There are no loudspeakers installed in the rear courtyard.

Figure 2 presents an image of the rear courtyard.

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Figure 2 Photograph of Rear Courtyard – Photo Facing North

2.3 Proposed Changes

We understand the project to comprise a Planning Application to obtain a liquor licence for the existing restaurant as well as to extend the operating hours until 8 pm each night.

No changes to mechanical equipment, music noise, patron capacity, or car parking are being proposed as part of the application.

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3 Legislation and Guidelines

Table 4 presents a summary of the relevant legislation and guidelines applicable to the proposed development. The information contained in these documents forms the basis of the design criteria and advice presented in this report.

Table 4 Summary of Relevant Statutory Requirements and Guidelines

Document	Status	Relevance to this Project
State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-1 (SEPP N-1) (State of Victoria, 2001)	Legislation	Prescribes the methods for determining the statutory environmental noise limits that apply to noise emissions from industrial, commercial, and trade premises within metropolitan Melbourne, and the methods to be used for assessment. Mechanical plant noise emissions from the premises will be subject to the requirements of SEPP N-1.
State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2 (SEPP N-2) (State of Victoria, 1999)	Legislation	Prescribes the procedures used to determine limits for, and assess, music noise emissions from public premises. Compliance with SEPP N-2 is a statutory requirement in Victoria.
Guidelines for Community Noise (World Health Organization, 1999)	Guideline	Provides guidance on acceptable levels of community noise. The guidance provided is relevant to the premises in respect of maximum noise levels in relation to sleep disturbance.
EPA Victoria, Noise Control Guidelines, Publication 1254 (EPA Victoria, 2008)	Guideline	Provides guidance in relation to appropriate delivery and waste collection times to control noise impacts to residential premises.

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4 Noise Sensitive Areas

Table 5 and Figure 3 identify the nearest and potentially most-affected Noise Sensitive Areas (NSA) in the vicinity of the project site, as defined by the relevant environmental noise legislation.

Assessment of environmental noise emissions due to the project will be undertaken at these locations. It is expected that compliance with the environmental noise criteria at these locations will also result in compliance at all other nearby NSAs.

Table 5 Details of Potentially Most-Affected Noise Sensitive Areas (NSA)

NSA Ref.	Address	No. Storeys	NSA Type
1	534 Heidelberg Road, Alphington	1	Single Dwelling
2	548 Heidelberg Road, Alphington	1	Single Dwelling
3	51 Yarraford Avenue, Alphington	2	Single Dwelling
4	50 Yarraford Avenue, Alphington	2	Single Dwelling

Figure 3 Locations of Potentially Most-Affected Noise Sensitive Areas (NSA) (Image Source: Google Maps)

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5 Existing Acoustic Environment

5.1 Soundscape

The existing soundscape in the vicinity of the site and potentially most-affected noise sensitive areas is dominated by road traffic noise from Heidelberg Road north of the site.

5.2 Background Noise Levels

Environmental noise logging was performed at the site to establish the background noise levels. The measurements were performed at two locations, along the western and southern boundary of the site, between 19 and 25 September 2019. Details of the measurement locations and measurement methodology are presented in Appendix B.

As the microphones positions were located within 1 m in front of an acoustically reflecting surface, an adjustment of -6 dB has been made to the measured background noise levels.

Table 6 presents a summary of the measured adjusted background noise levels, as relevant to SEPP N-1. Only the period between 6 pm and 8 pm daily is presented this is the period most relevant to background noise. This is the period during the proposed extended operating hours that will typically have the lowest background noise levels and the measurements conducted during this period would have no contribution from existing operations at the restaurant, as the restaurant was not open during these hours during the period of the measurements.

Table 7 and Table 8 present summaries of the lowest measured adjusted background noise levels, as relevant to SEPP N-2. Note that the SEPP N-2 'Night' period L_{OCT90} background noise levels at Location 1 have been assumed to have the same spectral shape as Location 2 but adjusted based on the difference in A-weighted Sound Pressure Levels between the two locations (only overall A-weighted levels were measured at Location 2).

Graphs showing the variation of background noise level over the full measurement period are presented in Appendix C (note that these graphs present the raw measured levels without adjustment from the reflecting surface).

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Table 6 SEPP N-1 Adjusted Background Noise Levels

Date	L_{A90} Background Noise Level between 6 pm and 8 pm, dB(A)	
	At Location 1: Boundary Between Project Site and 534 Heidelberg Rd	At Location 2: Southern Boundary of Project Site
Thursday, 19 September 2019	45	49
Friday, 20 September 2019	45	48
Saturday, 21 September 2019	48	45
Sunday, 22 September 2019	44	42
Monday, 23 September 2019	45	43
Tuesday, 24 September 2019	45	43
Wednesday, 25 September 2019*	-	-

* Measurement period on Wednesday 25 September 2019 was until 3:05 pm only.

Table 7 SEPP N-2 Adjusted Background Noise Levels – At Location 1: Boundary Between Project Site and 534 Heidelberg Rd

Period	Applicable Times during Proposed Operating Hours	L_{OCT90} Background Noise Level, dB							L_{A90} Background Noise Level, dB(A)
		63	125	250	500	1k	2k	4k	
Day / Evening	▪ 9 am to 8 pm Monday to Friday and Public Holidays ▪ 10 am to 8 pm Saturdays ▪ 12 pm to 8 pm Sundays	-	-	-	-	-	-	-	42
Night	▪ 7 am to 9 am Monday to Friday and Public Holidays ▪ 8 am to 10 am Saturdays ▪ 8 am to 12 pm Sundays	47	45	37	35	39	33	23	-

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Table 8 SEPP N-2 Background Noise Levels – At Location 2: Southern Boundary of Project Site

Period	Applicable Times during Proposed Operating Hours	L_{OCT90} Background Noise Level, dB							L_{A90} Background Noise Level, dB(A)
		63	125	250	500	1k	2k	4k	
Day / Evening	▪ 9 am to 8 pm Monday to Friday and Public Holidays ▪ 10 am to 8 pm Saturdays ▪ 12 pm to 8 pm Sundays	-	-	-	-	-	-	-	40
Night	▪ 7 am to 9 am Monday to Friday and Public Holidays ▪ 8 am to 10 am Saturdays ▪ 8 am to 12 pm Sundays	45	43	35	33	37	31	21	-

5.3 Existing Operational Noise Measurements

Noise associated with the existing operation of the restaurant was measured on 25 September 2019 between 3:15 pm and 3:25 pm. The measured noise levels are detailed in the following sections.

5.3.1 Mechanical Plant Noise

The key noise-generating mechanical plant items at the premises are the kitchen exhaust fan and outdoor air-conditioning condenser unit at the eastern side of the building roof, as shown in Figure 4 and Figure 5 respectively.

At the time of our visit, both the kitchen exhaust fan and AC condenser unit were operating. Noise from these mechanical plant items was not audible on the footpath east of the building over traffic noise from Heidelberg Road. Measurements were therefore conducted on the roof of the building within 1 m of each of the identified noise-generating mechanical plant items.

Table 9 presents a summary of the measured mechanical plant noise levels. Note that the presented sound pressure levels are the L_{A90} background levels. Due to traffic noise dominating the acoustic environment at the time of measurements, and the measured mechanical plant equipment operating constantly during the measurement period, the background levels (levels with the lowest contribution from traffic noise) have been adopted as the mechanical plant noise levels.

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Table 9 Measured Mechanical Plant Noise

Measurement Location	Measurement Description	L_{A90} Sound Pressure Level, dB(A)
On rooftop 1 m horizontally from kitchen exhaust fan	Exhaust fan noise and traffic noise.	68
On rooftop 1 m horizontally from AC condenser unit	AC condenser unit noise and traffic noise.	66

Figure 4 Key Noise-Generating Mechanical Plant Items – Kitchen Exhaust Fan

Figure 5 Key Noise-Generating Mechanical Plant Items – AC Condenser Unit

5.3.2 Music Noise

Music is only played inside the restaurant. At the time of our visit, the front door (facing Heidelberg Road) was closed and the rear door (leading into the rear courtyard) was kept open. Music was being played at a background level that would typically be expected of a restaurant (i.e. loud enough to be heard over ambient noise within the restaurant but not so loud as to prevent conversation).

Music played within the restaurant was inaudible at the rear courtyard.

Table 10 presents a summary of the measured music noise level within the restaurant.

Table 10 Measured Music Noise Within Restaurant

Measurement Location	Measurement Description	L_{OCT10} Sound Pressure Level, dB							L_{Aeq} Sound Pressure Level, dB(A)
		63	125	250	500	1k	2k	4k	
Inside restaurant (near front counter)	Music noise and restaurant / kitchen activity noise	68	72	62	66	59	58	53	63

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5.3.3 Patron Noise

At the time of the site visit the rear courtyard was unoccupied. In addition, due to noise from Heidelberg Road and the lack of a solid noise barrier separating the rear courtyard from the road, measuring the existing patron noise without the acoustic environment being dominated by road traffic noise would have been difficult.

Patron noise from the rear courtyard will be assessed through acoustic modelling.

5.3.4 Car Park Noise

On-site vehicle movements were rare during the time of the site visit. As such, car park noise measurements were not conducted. On-site car park noise will be assessed through acoustic modelling.

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6 Mechanical Plant Noise Assessment

6.1 Assessment Criteria

The noise limits presented in Table 11 have been determined to apply at the potentially most affected noise sensitive areas in accordance with SEPP N-1. Details of the SEPP N-1 Zoning Level and noise limit calculations are presented in Appendix D.

Table 11 SEPP N-1 Noise Limits

Date	SEPP N-1 Noise Limits 'Evening' Period between 6 pm and 8 pm, L_{eff} dB(A)	
	NSA 1: 534 Heidelberg Rd	All Other NSAs
Thursday, 19 September 2019	48	52
Friday, 20 September 2019	48	51
Saturday, 21 September 2019	51	48
Sunday, 22 September 2019	47	46
Monday, 23 September 2019	48	46
Tuesday, 24 September 2019	48	46
Design SEPP N-1 Noise Limits	**47**	**46**

6.2 Assessment

The sound pressure levels measured on the restaurant rooftop at approximately 1 m from the kitchen exhaust fan and air-conditioning condenser unit were found to be 68 dB(A) L_{A90} and 66 dB(A) L_{A90} respectively.

The distances from the kitchen exhaust fan and air-conditioning condenser unit to the nearest NSA (NSA 2: 548 Heidelberg Road) are approximately 20 m and 19 m respectively. Based on the measured noise levels, the combined noise level at NSA 2 due to the fan and AC condenser unit is calculated to be approximately 40 dB(A). No tonality adjustment or other SEPP N-1 character adjustment is considered to be applicable.

Given that no change to the existing noise-generating mechanical plant equipment is proposed, the distance between the kitchen exhaust fan and air-conditioning condenser unit and NSAs, and the conservative sound pressure levels measurements used in this assessment, it is considered that the combined noise level due to the kitchen exhaust fan and air-conditioning condenser unit will comply with the applicable SEPP N-1 noise limits for all periods.

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7 Music Noise Assessment

7.1 Assessment Criteria

Music noise emissions from the premises must comply with the requirements of State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2 (SEPP N-2) (State of Victoria, 1999).

Table 12 presents the SEPP N-2 music noise limits that have been determined to apply at the potentially most-affected NSAs based on the measured background noise levels.

Table 12 SEPP N-2 Music Noise Limits

<table>
<tr><th rowspan="2">SEPP N-2 Period</th><th rowspan="2">Applicable Times during Proposed Operating Hours</th><th colspan="2">SEPP N-2 Noise Limits</th></tr>
<tr><th>NSA 1: 534 Heidelberg Rd</th><th>All Other NSAs</th></tr>
<tr><td>Day / Evening</td><td>▪ 9 am to 8 pm Monday to Friday and Public Holidays
▪ 10 am to 8 pm Saturdays
▪ 12 pm to 8 pm Sundays</td><td>47 dB(A) L_{Aeq}</td><td>45 dB(A) L_{Aeq}</td></tr>
<tr><td>Night</td><td>▪ 7 am to 9 am Monday to Friday and Public Holidays
▪ 8 am to 10 am Saturdays
▪ 8 am to 12 pm Sundays</td><td><table><tr><th>Freq, Hz</th><th>L_{OCT10}, dB</th></tr><tr><td>63</td><td>55</td></tr><tr><td>125</td><td>53</td></tr><tr><td>250</td><td>45</td></tr><tr><td>500</td><td>43</td></tr><tr><td>1k</td><td>47</td></tr><tr><td>2k</td><td>41</td></tr><tr><td>4k</td><td>31</td></tr></table></td><td><table><tr><th>Freq, Hz</th><th>L_{OCT10}, dB</th></tr><tr><td>63</td><td>53</td></tr><tr><td>125</td><td>51</td></tr><tr><td>250</td><td>43</td></tr><tr><td>500</td><td>41</td></tr><tr><td>1k</td><td>45</td></tr><tr><td>2k</td><td>39</td></tr><tr><td>4k</td><td>29</td></tr></table></td></tr>
</table>

7.2 Assessment Input Parameters

SoundPLAN version 7.4 environmental noise modelling software was used to model the music noise emissions from the restaurant.

Modelling has been conducted according to the calculation methodology prescribed by ISO 9613-2 Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: General Method of Calculation (ISO, 1996).

Music noise emissions have been based on the following parameters:

- Music sound pressure levels within the restaurant only as presented in Table 10.
- Rear door connecting the restaurant internal space and rear courtyard kept open.

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- External walls of the restaurant building consisting of 70 mm thick single brickwork, 90 mm timber studs, 10 mm thick standard plasterboard internal lining, and no insulation in the wall cavity.
- Ceiling / roof of the restaurant building consisting of 0.42 BMT profiled metal roof sheeting, timber roof framing, 10 mm thick standard plasterboard ceiling lining, and no insulation in the ceiling cavity.
- The existing timber paling fencing along western boundary of the site has been modelled as acoustically transparent, as the existing type of construction and state of repair would provide only minimal noise reduction.

7.3 Calculated Music Noise Levels

Table 13 presents the calculated sound pressure level at the nearest NSA (NSA 1: 534 Heidelberg Road) with music played only within internal areas of the restaurant.

Table 13 Calculated Music Noise Levels at NSA 1 with Music Played Within Restaurant Only

NSA Ref.	SEPP N-2 Period	Calculated Music Noise Levels and Compliance with SEPP N-2							
		Octave Band Centre Frequency, Hz							Overall, dB(A)
		63	125	250	500	1k	2k	4k	
NSA 1	Day / Evening, L_{Aeq}, dB(A)	-	-	-	-	-	-	-	35 ✓
	Night, L_{OCT10}, dB	47 ✓	47 ✓	33 ✓	37 ✓	30 ✓	29 ✓	23 ✓	38 ✓

The results of the music noise emission calculation presented in Table 13 indicate that music played inside the restaurant at the level measured during our site visit will comply with the SEPP N-2 noise limits for all periods. This agrees with observations taken during our site visit where music noise played within the restaurant was found to be inaudible in the rear courtyard, likely due to the relatively high background noise level as a result of traffic movement along Heidelberg Road.

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8 Patron Noise Assessment

8.1 Assessment Criteria

There are no statutory criteria that apply to patron noise emissions from commercial premises in Victoria. In the absence of statutory noise criteria, patron noise emissions have been assessed in relation to the SEPP N-1 noise limits as specified in Table 11 of Section 6.1. For patron noise, these limits are non-mandatory and used as a guideline only.

8.2 Assessment Input Parameters

SoundPLAN version 7.4 environmental noise modelling software was used to model the patron noise emissions. Modelling has been conducted according to the calculation methodology prescribed by ISO 9613-2 Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: General Method of Calculation (ISO, 1996).

Patron noise emissions have been based on the following parameters:

- Rear courtyard layout as existing with seating capacity for up to 32 patrons.
- Remaining 43 patrons located within internal spaces only. As significant attenuation will be provided by the restaurant building, patron noise from the rear courtyard is considered to be the dominant noise source and patron noise from internal spaces has not been considered further in this assessment.
- Overall L_{Aeq} patron noise levels have been predicted based on the sound power level calculated using the formula developed by (Hayne, Taylor, Rumble, & Mee, 2011) as follows:

$$A\text{–}weighted\ Sound\ Power\ Level\ L_{WAeq} = 15logN + 64\ dB(A)$$

Where *N* is the number of patrons.

Based on the 32 patron capacity of the rear courtyard, the total overall sound power level from the rear courtyard is modelled to be 87 dB(A).

- Modelling has been conducted based on seated patrons with head height approximately 1.2 m above ground level.
- The existing timber paling fencing along western boundary of the site has been modelled as acoustically transparent, as the existing type of construction and state of repair would provide only minimal noise reduction.

- At a reference location 4 m above the courtyard, the above parameters would be expected to result in patron noise level of approximately L_{Aeq} 69 dB(A). For comparison using an alternative patron noise model, this is noted to be approximately 6 dB less than the patron noise level derived by Growcott (Growcott, 2009) based on patron noise measurements conducted at an outdoor area of a 'young person's pub'. Patron noise levels would be expected to be lower in a café-restaurant scenario than for a 'stand-up' drinking situation in a pub, where patron behaviour is influenced far more significantly by alcohol. Based on comparison of the two models, it is considered that the adopted patron noise level is appropriate.

8.3 Calculated Patron Noise Levels without Noise Control Measures

Table 14 presents the calculated patron noise levels at the identified nearest and potentially most-affected NSAs based on the above input parameters.

Table 14 Calculated Patron Noise Levels at Nearest NSAs – without Noise Control Measures

NSA Ref.	Address	Calculated Effective Noise Level, L_{eff}, dB(A)	SEPP N-1 Noise Limit and Compliance (Guideline), L_{eff}, dB(A)
NSA 1	534 Heidelberg Road	56	47 ✗
NSA 2	548 Heidelberg Road	24	46 ✓
NSA 3	51 Yarraford Avenue	40	46 ✓
NSA 4	50 Yarraford Avenue	33	46 ✓

Using the SEPP N-1 noise limits as a guideline to the approximate levels of patron noise that may be acceptable, the results presented above indicate that patron noise levels from the rear courtyard are compliant with the SEPP N-1 'Day' period noise limits but exceed the SEPP N-1 'Evening' period noise limits by up to 9 dB(A).

Therefore, noise control measures are recommended to minimise the patron noise emissions from the rear courtyard.

8.4 Recommended Noise Control Measures

The following acoustic measures are recommended to control patron noise from the rear courtyard:

- Patrons at the rear courtyard should be limited to no more than 32 patrons at any time.
- The existing timber paling fence along the western boundary of the rear courtyard should be replaced with a 2.4 m high acoustic screen, at the location shown in Figure 6; and
- The existing timber paling fence along the western boundary of the car park should be replaced with a 2.1 m high acoustic screen, at the location shown in Figure 6.

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- The acoustic screen should be constructed from minimum 25 mm thick timber palings, 1.6 mm thick steel, 9 mm thick fibre cement sheet, 8 mm thick solid Perspex or polycarbonate, or other suitable sheeting material of at least 12 kg/m^2.
- There must be no gaps between the screen panels / palings, or between bottom of the screen and the ground.
- A typical detail for an acoustic timber fence is presented in Appendix E.

Figure 6 Recommended Acoustic Screen Location (Image Source: Google Maps)

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8.5 Calculated Patron Noise Levels with Noise Control Measures

Table 15 presents the calculated patron noise levels at the identified nearest and potentially most-affected NSAs with the recommended noise control measures implemented.

Table 15 Calculated Patron Noise Levels at Nearest NSAs – with Noise Control Measures

NSA Ref.	Address	Calculated Effective Noise Level, L_{eff}, dB(A)	SEPP N-1 Noise Limit and Compliance (Guideline), L_{eff}, dB(A)
NSA 1	534 Heidelberg Road	47	47 ✓
NSA 2	548 Heidelberg Road	28	46 ✓
NSA 3	51 Yarraford Avenue	39	46 ✓
NSA 4	50 Yarraford Avenue	33	46 ✓

Using the SEPP N-1 noise limits as a guideline to the approximate levels of patron noise that may be acceptable, the results above indicate that patron noise levels from the rear courtyard with the recommended noise control measures implemented are compliant with the SEPP N-1 'Day' and 'Evening' period noise limits.

It is therefore considered that patron noise will be acceptable at nearby NSAs with the recommended noise control measures implemented.

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9 Car Park Noise Assessment

9.1 Assessment Criteria

There are no statutory criteria that will apply to noise emissions from the car park. In the absence of statutory noise criteria, noise emissions from the car park have been assessed in relation to the SEPP N-1 noise limits as specified in Table 11 of Section 6.1. For car park noise, these limits are non-mandatory and used as a guideline only.

9.2 Assessment Input Parameters

The restaurant on-site car park is located at the southern part of the site. Noise due to vehicle movements within the car park has been modelled in SoundPLAN version 7.4 environmental noise modelling software using methods prescribed in Parking Area Noise (BayLfU, 2007).

For the purpose of this acoustic assessment, the following input parameters have been used:

- Car park layout as existing with 14 parking spaces.
- Noise from the car park has been modelled based on 14 vehicle movements per hour over the proposed operational hours during SEPP N-1 'Day' and 'Evening' periods. The number of vehicle movements have been based on the average rates of evening peak hour vehicle trips for a restaurant (5 trips per 100 m^2 gross floor area) surveyed by the Roads and Traffic Authority (RTA, 2002). The gross floor area of the restaurant has been assumed to be 140 m^2.
- The existing timber paling fencing along western boundary of the car park has been modelled as acoustically transparent.

9.3 Calculated Noise from Car Park without Noise Control Measures

Table 16 presents the calculated noise levels at the identified nearest and potentially most-affected NSAs based on the above input parameters.

Table 16 Calculated Car Park Noise Levels at Nearest NSAs – without Noise Control Measures

NSA Ref.	Address	Calculated Effective Noise Level, L_{eff}, dB(A)	SEPP N-1 Noise Limit and Compliance (Guideline), L_{eff}, dB(A)
NSA 1	534 Heidelberg Road	56	47 ✗
NSA 2	548 Heidelberg Road	41	46 ✓
NSA 3	51 Yarraford Avenue	43	46 ✓
NSA 4	50 Yarraford Avenue	45	46 ✓

Using the SEPP N-1 noise limits as a guideline to the approximate levels of car park noise that may be acceptable, the results presented above indicate that noise from the on-site car park are not compliant with the SEPP N-1 guideline noise limits at NSA 1.

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Noise levels at the remaining identified nearest NSAs are generally compliant with the SEPP N-1 noise limits.

Based on the above, noise control measures are recommended to minimise the noise emissions from the on-site car park.

9.4 Recommended Noise Control Measures

To control noise from the on-site car park, the existing timber paling fence along the western boundary of the site should be replaced with a 2.4 m high and 2.1 m high acoustic screen, as specified in Section 8.4.

9.5 Calculated Noise from Car Park with Noise Control Measures

Table 17 presents the calculated noise levels at the identified nearest and potentially most-affected NSAs with the recommended noise control measures implemented.

Table 17 Calculated Car Park Noise Levels at Nearest NSAs – with Noise Control Measures

NSA Ref.	Address	Calculated Effective Noise Level, L_{eff}, dB(A)	SEPP N-1 Noise Limit and Compliance (Guideline), L_{eff}, dB(A)
NSA 1	534 Heidelberg Road	47	47 ✓
NSA 2	548 Heidelberg Road	41	46 ✓
NSA 3	51 Yarraford Avenue	42	46 ✓
NSA 4	50 Yarraford Avenue	45	46 ✓

Using the SEPP N-1 noise limits as a guideline to the approximate levels of car park noise that may be acceptable, the results presented above indicate that noise from the on-site car park with the recommended noise control measures implemented will comply with the SEPP N-1 noise limits.

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10 Waste Collections and Deliveries Noise Emissions

Based on the reference documentation, existing levels of background noise, and road traffic noise at the site it is considered that the noise due to any deliveries and private waste collections associated with the premises will not adversely impact on the adjacent residences provided that such deliveries and collections are conducted between the hours presented in the table below, and in general accordance with Section 6 and 9 of the EPA Noise Control Guidelines (EPA Victoria, 2008).

Table 18 Deliveries and Waste Collection Schedules

Activity Type	Permitted Times
Waste Collections	▪ 7 am to 8 pm Monday to Saturday ▪ 9 am to 8 pm Sunday and Public Holidays
Deliveries	▪ 7 am to 10 pm Monday to Saturday ▪ 9 am to 10 pm Sundays and Public Holidays

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11 Conclusion

This report has presented an assessment of environmental noise emissions from Kissaten at 538 Heidelberg Road, Alphington.

The assessment has been undertaken with regard to the statutory criteria and guidelines prescribed by State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-1 (SEPP N-1) (State of Victoria, 2001), State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2 (SEPP N-2) (State of Victoria, 1999), Guidelines for Community Noise (World Health Organization, 1999), and the EPA Noise Control Guidelines (EPA Victoria, 2008).

Assessment of the restaurant operational noise with respect to mechanical plant noise, music noise, patron noise, car park noise, and delivery / waste collection noise has determined that an acoustic screen of between 2.1 and 2.4 m height will be required along the western boundary of the site as per the specifications presented in Section 8.4.

Subject to the advice presented in this report, it is considered that the premises will satisfy the applicable acoustic legislation and guidelines.

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12 References

BayLfU. (2007). Parking Area Noise - Recommendations for the Calculation of Sound Emissions of Parking Areas, Motorcar Centers and Bus Stations as well as Multi-Storey Car Parks and Underground Car Parks. (6. R. Edition, Ed.) Augsburg, Germany: Bayerisches Landesamt für Umwelt (Bavarian State Office for the Environment).

EPA Victoria. (2008). Noise Control Guidelines, Publication 1254. Melbourne.

Growcott, D. (2009). Consideration of Patron Noise from Entertainment Venues. *Australian Association of Acoustical Consultants Guideline*. Australia.

Hayne, M. J., Taylor, J. C., Rumble, R. H., & Mee, D. J. (2011). Prediction of Noise from Small to Medium Sized Crowds. *Proceedings of ACOUSTICS 2011*. Gold Coast, Australia: Australian Acoustical Society.

ISO. (1996). ISO 9613-2:1996 Acoustics - Attenuation of Sound During Propogation Outdoors - Part 2: General Method of Calculation. International Standards Organisation.

RTA. (2002, October). Guide to Traffic Generating Developments - Version 2.2. NSW.

State of Victoria. (1999). State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2. *No. S43, 17/7/1989, Gazette 3/8/1989, As varied 16/3/1999, No. G12, Gazette 25/3/1999*.

State of Victoria. (2001). State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-1. *No. S31, 16/5/1992, Gazette 15/6/1989, As varied 15/9/1992, No. G37, Gazette 23/9/1992, As varied 31/10/2001, No. S183, Gazette 31/10/2001*.

World Health Organization. (1999, April). World Health Organization Guidelines for Community Noise. Geneva.

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Appendix A Glossary of Acoustic Terms

dB / dB(A)	Decibels or 'A'-weighted Decibels, the units of Sound Pressure Level and Sound Power Level. 'A'-weighting adjusts the levels of frequencies within the sound spectrum to better reflect the sensitivity of the human ear to different frequencies at sound pressure levels typical of everyday sounds. [Unit: dB / dB(A)]

The following are examples of the decibel readings of every day sounds;

- 0 dB The faintest sound we can hear
- 30 dB A quiet library or in a quiet location in the country
- 45 dB Typical office space. Ambience in the city at night
- 60 dB The sound of a vacuum cleaner in a typical lounge room
- 70 dB The sound of a car passing on the street
- 80 dB Loud music played at home
- 90 dB The sound of a truck passing on the street
- 100 dB The sound of a rock band
- 120 dB Deafening

Effective Noise Level	"Effective noise level" means the level of noise emitted from the commercial, industrial or trade premises and adjusted if appropriate for character and duration.
$L_{A90,T}$	The value of A-weighted Sound Pressure Level which is exceeded for 90 percent of the time during given measurement period T. This is commonly used to represent the background noise level. [Unit: dB / dB(A)]
$L_{Aeq,T}$	The Equivalent Continuous A-weighted Sound Pressure Level measured over the period T (also known as Time-Average Sound Pressure Level). The Equivalent Continuous A-weighted Sound Pressure Level is the constant value of A-weighted Sound Pressure Level for a given period that would be equivalent in sound energy to the time-varying A-Weighted Sound Pressure Level measured over the same period. In simple terms, this can be thought of as the average sound pressure level. [Unit: dB / dB(A)]
$L_{AFmax,T}$	The maximum value of A-weighted, F time-weighted Sound Pressure Level which occurs during a given measurement period T. [Unit: dB / dB(A)]
L_{eff}	See 'Effective Noise Level'.
L_{OCT10}	Means the C-weighted or Linear sound pressure level for a specified octave band that is exceeded for 10 per cent of the time interval considered. [Unit: dB]
L_{OCT90}	Means the C-weighted or Linear sound pressure level for a specified octave band that is exceeded for 90 per cent of the time interval considered. [Unit: dB]

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Noise Sensitive Area	For the purposes of assessment of noise levels in relation to *State Environment Protection Policy (Control of Noise from Commerce Industry and Trade) No. N-1, State Environment Protection Policy (Control of Music Noise from Public Premises) No. N-2*, or the I*nterim Guidelines for Control of Noise from Industry in Country Victoria*, a Noise Sensitive Area is defined as: a) That part of the land within the apparent boundaries of any piece of land which is within 10 metres outside the external walls of any of the following buildings: ▪ A dwelling (except Caretaker's House) ▪ Residential Building b) That part of the land within the apparent boundaries of any piece of land on which is situated any of the following buildings which is within a distance of 10 metres outside the external walls of any dormitory, ward or bedroom of such buildings: ▪ Caretakers house ▪ Hospital ▪ Hotel ▪ Institutional home ▪ Motel ▪ Reformative institution ▪ Tourist establishment ▪ Work release hostel
Sound Power Level	A measure of the total sound energy radiated by a source, per unit time. Mathematically, it is ten times the logarithm to the base ten of the ratio of the sound power (W) of the source to the reference sound power; where the reference sound power is $1x10^{-12}$ W. [Unit: dB]
Sound Pressure Level	A measure of the magnitude of a sound wave. Mathematically, it is twenty times the logarithm to the base ten of the ratio of the root mean square sound pressure at a point in a sound field, to the reference sound pressure; where sound pressure is defined as the alternating component of the pressure (Pa) at the point, and the reference sound pressure is $2x10^{-5}$ Pa. [Unit: dB]

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Appendix B Background Noise Measurement Methodology

Measurement Location

Table 19 presents details of the noise measurement locations. Figure 7 and Figure 9 present a map and photographs of the noise measurement locations.

Table 19 Noise Measurement Location Details

Location Reference	Measurement Description	Microphone Height Above Ground Level, m
1	Background noise logging	1.8 m
2	Background noise logging	1.3 m

Figure 7 Noise Measurement Locations (Image Source: Google Maps)

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Figure 8 Noise Measurement Location 1 – Photo Facing North

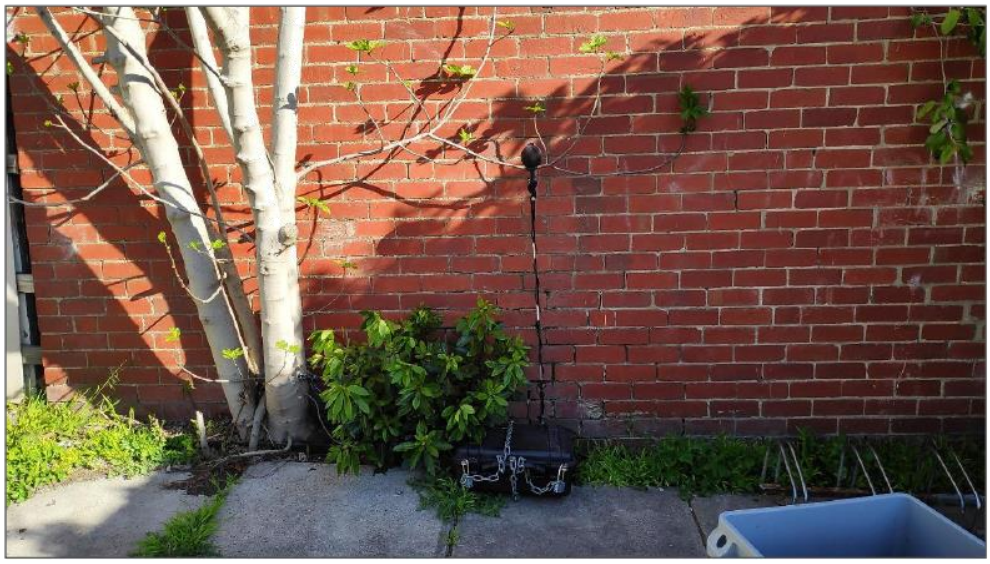

Figure 9 Noise Measurement Location 2 – Photo Facing South

Measurement Procedure

Unattended environmental noise logging and attended noise measurements were performed at the site to establish the environmental noise levels. Table 20 presents details of each measurement:

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Table 20 Details of Measurement Period

Location Ref.	Measurement Type		Start Time	Start Date	End Time	End Date
	Attended	Unattended				
1	☐	☒	3:05 PM	Thursday 19/09/2019	3:05 PM	Wednesday 25/09/2019

The equipment was configured to provide the measurement results as a continuous series of 1 second A- and Z-weighted sound pressure levels. Metrics used for the assessment were then post-processed from this data.

As the microphones positions were located within 1 m in front of an acoustically reflecting surface, an adjustment of -6 dB has been made to the measured background noise levels.

A 90 mm diameter foam windscreen was installed on the microphone to minimise the effect of wind-induced pressure fluctuations on the measurements.

Instrumentation

All acoustic instrumentation used for the measurements held a current certificate of calibration from a National Association of Testing Authorities (NATA) accredited laboratory at the time of the measurements.

A field check to confirm correct calibration of the instrumentation was performed at the beginning and end of the measurement period using a laboratory calibrated portable Sound Level Calibrator. At the time of each check the instrumentation was found to be reading correctly and the deviation between consecutive checks was found to be less than 1 dB.

Details of the acoustic instrumentation used for measurements are presented in Table 21.

Table 21 Acoustic Instrumentation Details

Location Reference	Instrument Description	Serial No.	Date of Last Laboratory Calibration*
1	Convergence Instruments NSRT_mk2 Type 1 Sound Level Meter	CFh+pP0YcdWXKjNgSyLRHD	10/10/2018
2	Svantek 977 Class 1 Sound Level Meter	45759	13/09/2018
-	Svantek SV33 Portable Sound Level Calibrator	57427	6/05/2019

* In accordance with AS 1055.1-1997 and National Association of Testing Authorities Guidelines, Sound Level Meters and Environmental Noise Loggers are required to have comprehensive laboratory calibration checks carried out at intervals not exceeding two years. Sound Level Calibrators require calibration annually.

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Meteorological Data

Weather observations during the monitoring period were taken from the Bureau of Meteorology Weather Station at Melbourne Olympic Park, approximately 6.5 km away. Appendix C shows the meteorological observations plotted against the measured L_{Aeq}, L_{A90}, L_{Amax} sound pressure levels for the duration of the measurement period.

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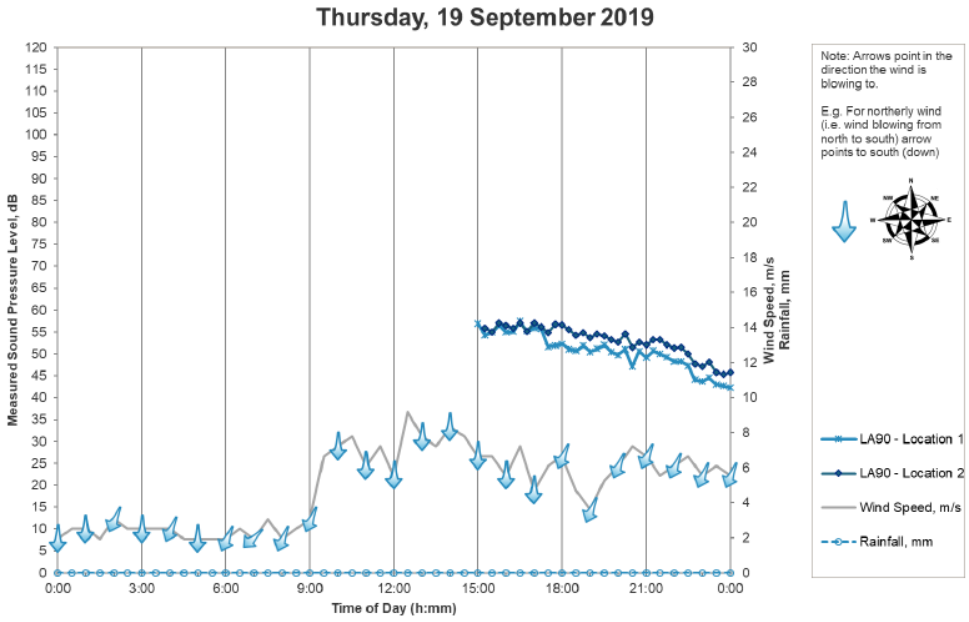
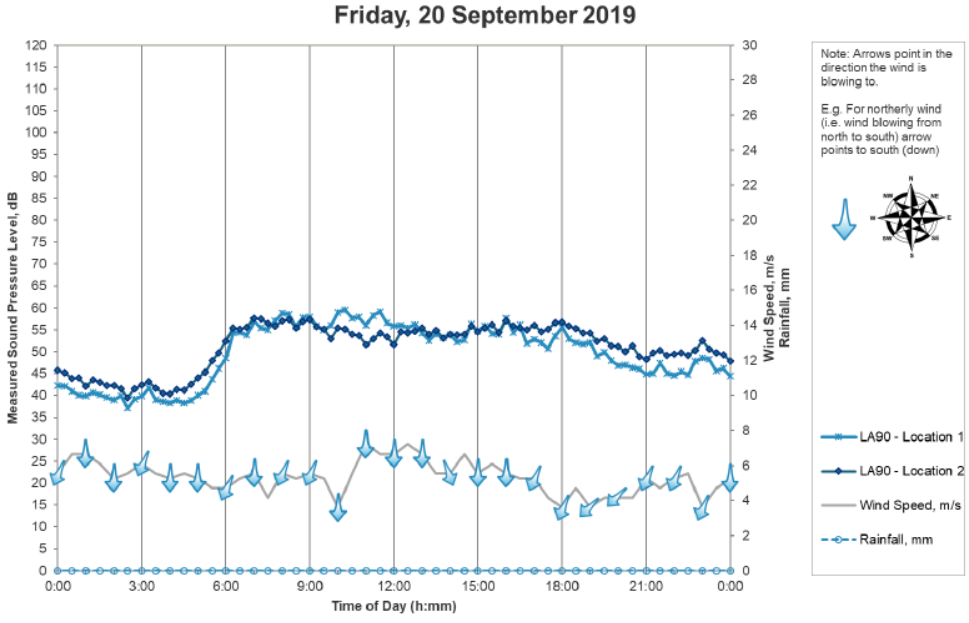
Appendix C Graphed Noise Measurement Results

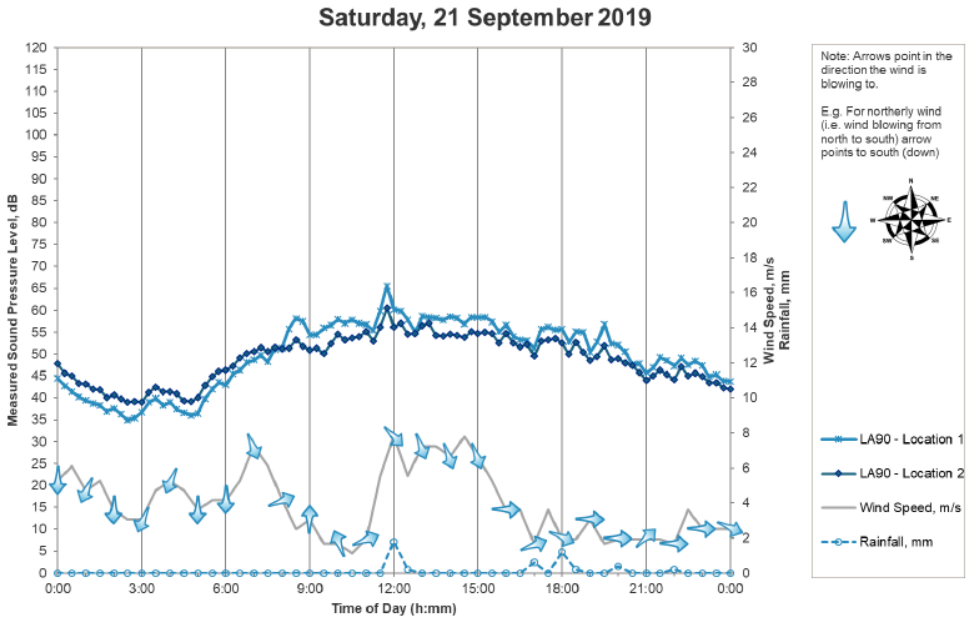
No adjustment has been applied to the Sound Pressure Levels presented in this appendix.

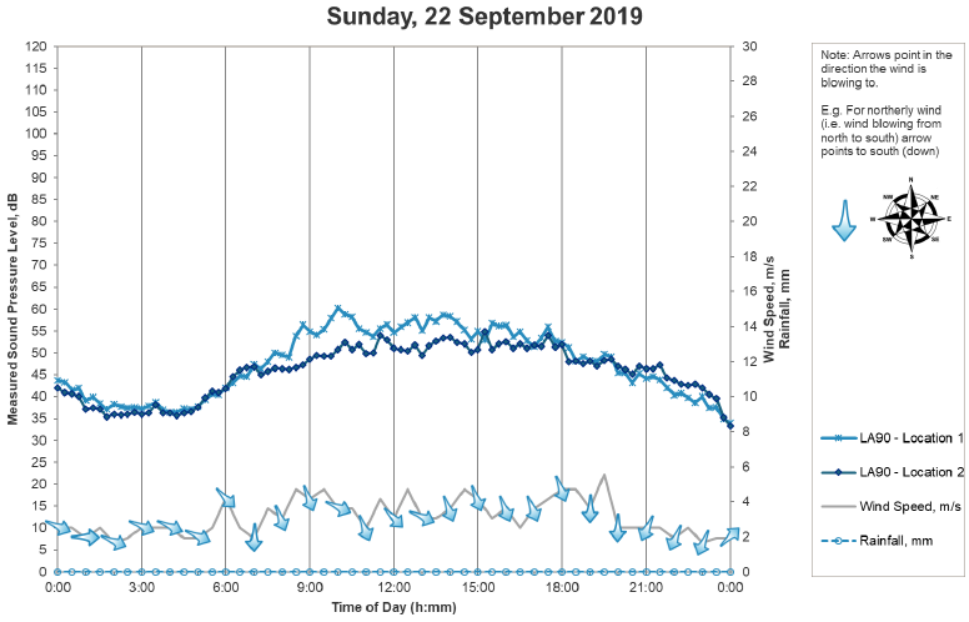




Attachment 5 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Revised Acoustic Report

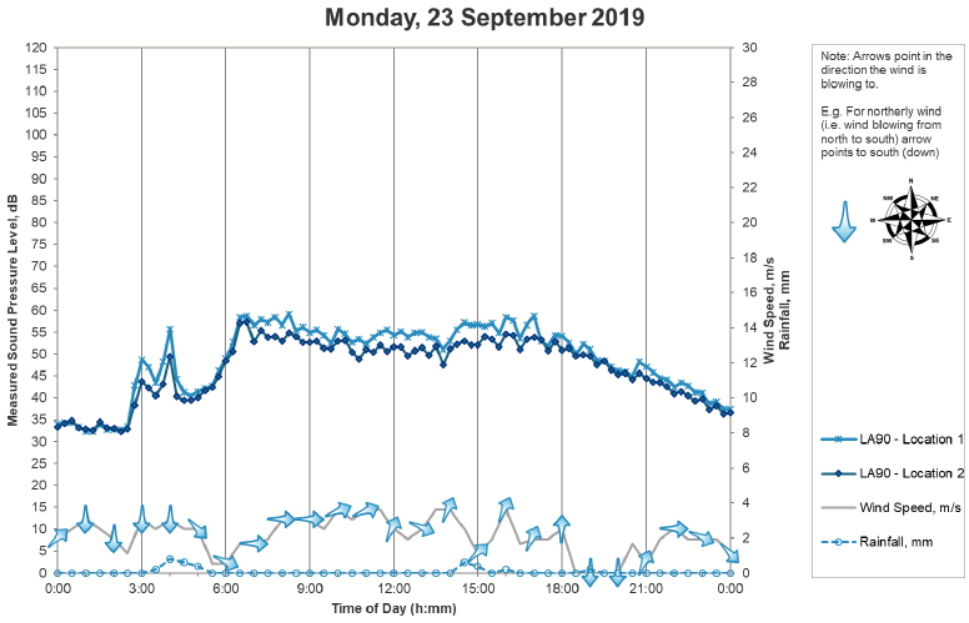
Cogent Acoustics

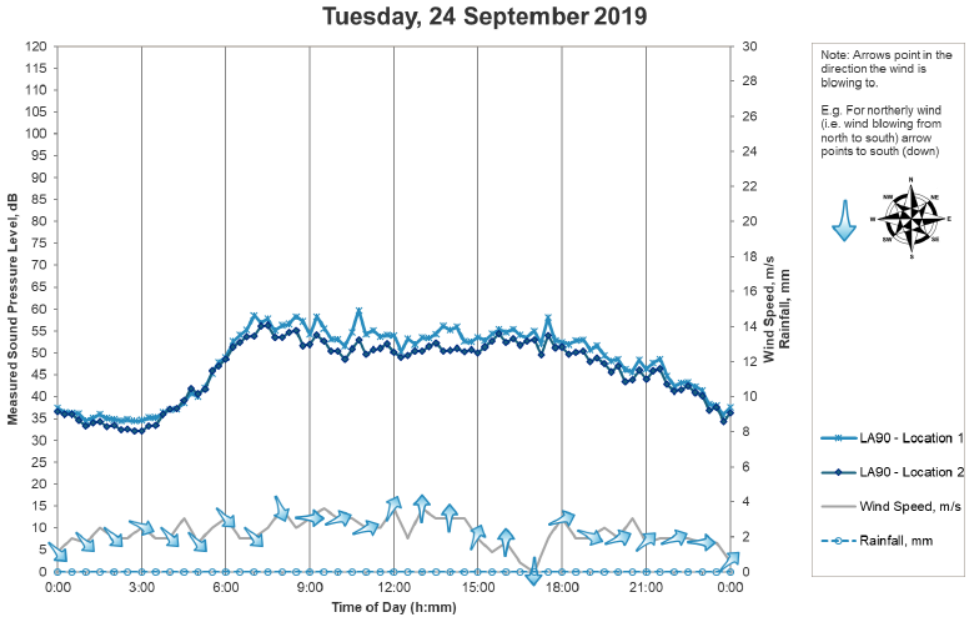




Attachment 5 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Revised Acoustic Report

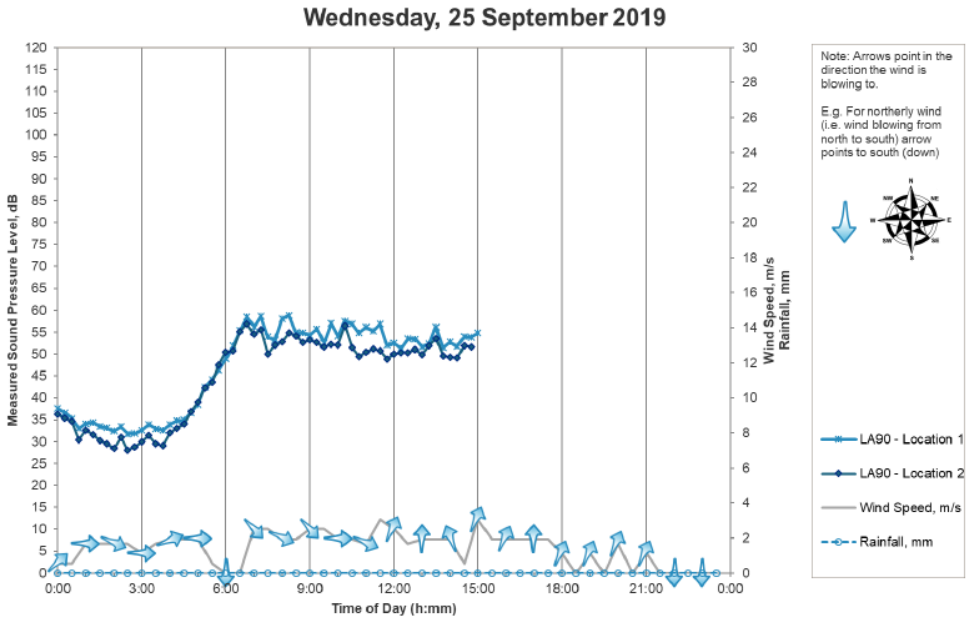
Cogent Acoustics





Attachment 5 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Revised Acoustic Report

Cogent Acoustics



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Appendix D SEPP N-1 Zoning Level and Noise Limit Calculations

534 Heidelberg Road, Alphington

Zoning Map

Figure 10 Zoning Circles (Image Source: VicPlan)

Zone Areas

Zone Type Designation	Applicable Zones	% Area of 140m Circle	% Area of 400m Circle
Type 1	NRZ, GRZ2, PPRZ	85%	92%
Type 2	-	0%	0%
Type 3	C2Z, RDZ1, IN3Z	15%	8%

Influencing Factor: 0.11

Zoning Levels and Noise Limits

Period	Zoning Level, dB(A)	L_{A90} Background Noise Level, dB(A)	Background Noise Classification	SEPP N-1 Noise Limits, dB(A)
Day	52	50	High	56
Evening*	46	47	High	50
Night	41	N/A	-	-

Notes:

* Evening period assessed until 8 pm only.

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Explanatory Notes to SEPP N-1 Noise Limit Derivation

In accordance with SEPP N-1 the Influencing Factor (IF) for an assessment location is calculated as follows:

$$IF = 0.25(Sum\ of\ Type\ 2\ fractions\ for\ both\ cicles) + 0.5(Sum\ of\ Type\ 3\ fractions\ for\ both\ circles)$$

The Zoning Levels are calculated according to the following equations:

$$Day\ Period\ Zoning\ Level = 18 \times IF + 50$$
$$Evening\ Period\ Zoning\ Level = 17 \times IF + 44$$
$$Night\ Period\ Zoning\ Level = 17 \times IF + 39$$

The Background Noise Levels are classified as follows:

Period	Classification Criteria	Background Noise Classification
Day	Background Noise Level > Zoning Level - 6 dB(A)	High
	Background Noise Level < Zoning Level - 12 dB(A)	Low
	Otherwise	Neutral
Evening and Night	Background Noise Level > Zoning Level - 3 dB(A)	High
	Background Noise Level < Zoning Level - 9 dB(A)	Low
	Otherwise	Neutral

The noise limits are determined based on the background noise classification, according to the following equations:

Period	Classification	Noise Limit
Day	High	Background Noise Level + 6 dB(A)
	Neutral	Zoning Level
	Low	0.5 x (Zoning Level + Background Noise Level) + 4.5 dB(A)
Evening and Night	High	Background Noise Level + 3 dB(A)
	Neutral	Zoning Level
	Low	0.5 x (Zoning Level + Background Noise Level) + 3 dB(A)

SEPP N-1 specifies that the noise limits may not be less than 45 dB(A) for the Day period, 40 dB(A) for the Evening period, and 35 dB(A) for the Night period.

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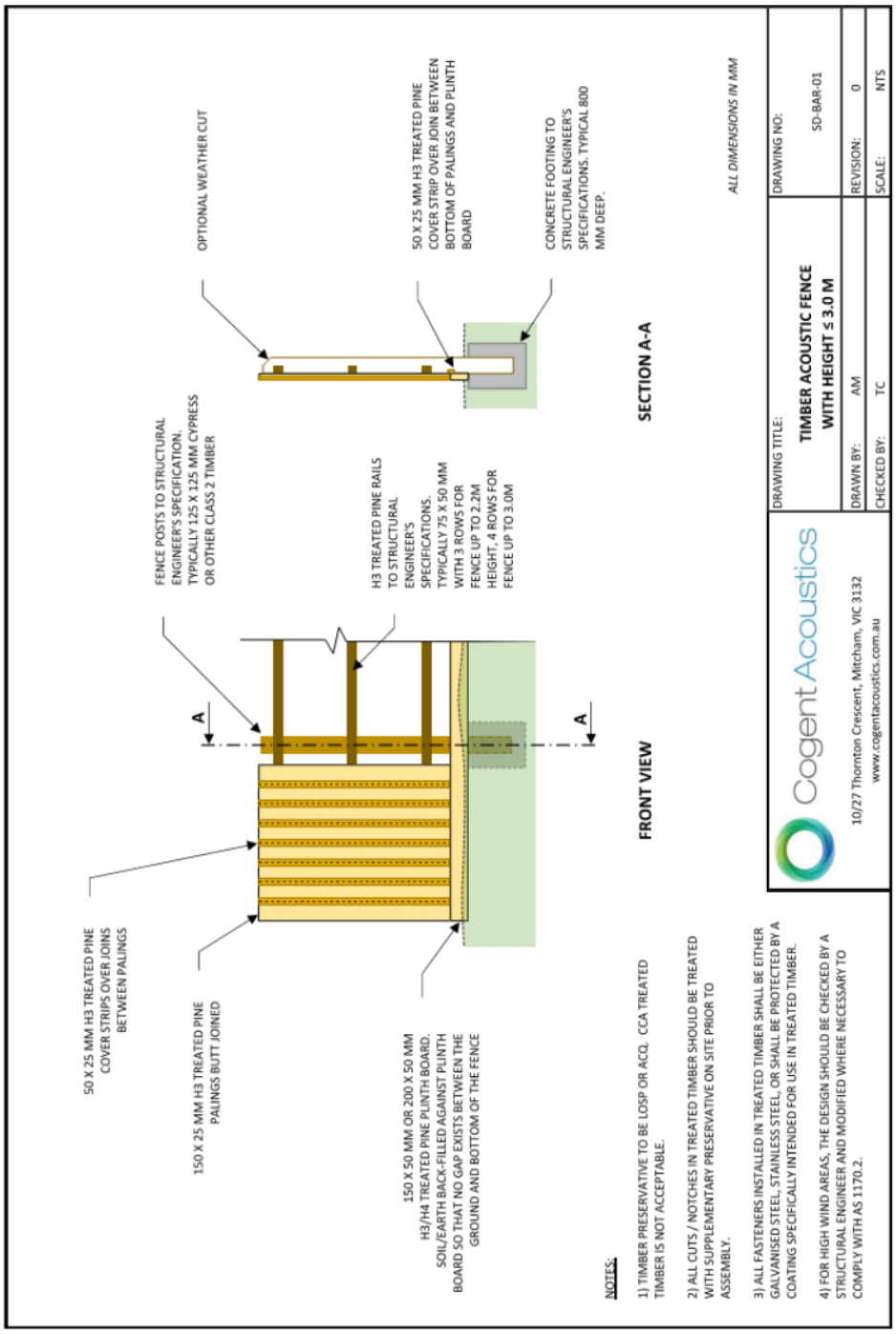
Appendix E Timber Paling Acoustic Fence



Attachment 6 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Planning Permit

Helping you understand your planning needs

PLANNING PERMIT (Amended)

Permit No: PL05/1061

Planning Scheme: Yarra

Responsible Authority: City Of Yarra

ADDRESS OF THE LAND:

538-540 Heidelberg Rd Alphington VIC 3078

THE PERMIT ALLOWS:

For the purpose of the following, in accordance with the endorsed plan(s).

Use of the site as a food and drink premises (cafe) and construction of buildings and works including the construction of a fence and deck.

THE FOLLOWING CONDITIONS APPLY TO THIS PERMIT:

1 Within one month of the date of this amended permit, amended plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plans will be endorsed and will then form part of this permit. The plans must be drawn to scale with dimensions and three copies must be provided. The plans must be generally in accordance with the plans prepared by Mimar Design dated April 2010, drawing numbers A2 Rev B, A3 Rev B, A1 Rev B and A4 Rev B but further modified to show:

(a) Eight (8) bicycle parking spaces to be provided on site for employees and visitors, in a manner shown in the evidence statement of Ms Charmaine Dunstan of Traffix Group dated 30 June 2011
(b) Replacement of the existing fence along the eastern boundary with a fence of at least 50% transparency.
(c) Floor plans that show a total provision of 75 seats on the site.
(d) A notation stating that each individual car parking space within the car parking area will be line marked.
(e) A notation stating that waste collection bins will be stored within the external storage shed.

2. The layout of the uses and development as shown on the endorsed plans must not be altered without the further consent of the Responsible Authority.

Issued Date: **31 January 2006**
VCAT Order: **22 August 2011**

Danielle Connell
Signature for the Responsible Authority

Planning and Environment Regulations 2005 Form 4

Page 1 of 4

For more information call 9205 5555 or visit **www.yarracity.vic.gov.au**

Attachment 6 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Planning Permit

*3. The use must only operate between the following hours:

(a) 7.00am to 6.00pm Monday to Friday (except the courtyard / outdoor area that must only operate from 8.00am);
(b) 8.00am to 4.00pm Saturday; and
(c) 8.00am to 4.00pm Sunday.

4. The number of staff, proprietors, and person related to the proprietors working on the site or any other persons working on the site, whether paid or unpaid, must not exceed twelve (12) on the site at any one time.

5. No more than 75 seats may be available to the public on the site at any one time.

6. Music on the site must be limited to background music only. No live music or entertainment will be permitted.

7 No music must be played outside the premises. No speakers must be sited outside the premises.

8 The operator shall not cause or permit undue detriment to the amenity of the area to arise out of or in connection with the use of the premises to which this permit relates during or immediately after the trading hours authorised under this permit.

9. The operator shall ensure that the level of noise emitted from the premises shall not exceed the relevant State Environment Protection Policy or other relevant noise policy.

10 The use permitted must not adversely affect the amenity of the locality by the appearance of any buildings, works or materials, the transporting of goods to and from the premises, emissions from the site or in any other way.

11 Any empty bottles associated with the use must be taken in bags and no emptying of bottles into garbage bins is permitted after 9.00 pm on any night or before 7.00 am on any day.

12. No fewer than fourteen (14) car spaces must be provided on the land for the use. The car park must be clearly line-marked with 14 spaces.

13. Car parking spaces must be maintained at all times to the satisfaction of the Responsible Authority and must not be used for any other purpose, except with the written consent of the Responsible Authority.

14 There are to be no less than eight (8) bicycle spaces available on the site at all times, unless with the further written consent of the Responsible Authority.

15. Garbage collection by private contractor must be restricted between 7.00 am and 10.00 pm on any day.

16 Deliveries to the site are only permitted between 7:00am and 6:00pm on any day. All deliveries must occur on site to the satisfaction of the Responsible Authority.

Issued Date: **31 January 2006**
VCAT Order: **22 August 2011**

Danielle Connell
Signature for the Responsible Authority

Planning and Environment Regulations 2005 Form 4

Attachment 6 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Planning Permit

Melbourne Water conditions (17&20)*

17. All No polluted and / or sediment laden runoff is to be discharged directly or indirectly into Melbourne Water's drains or watercourses.

18. The carport must be constructed with finished surface levels no lower than 350mm below the applicable flood level.

19. The decking is to be constructed with unenclosed foundations to allow for the passage of overland flows.

20. Unless otherwise agreed to in writing by Melbourne Water, any proposed vehicle parking areas must have finished surface levels no lower than 350mm below the applicable flood level

21. The line marking of the car park and construction of the new fence along the eastern boundary must occur within three months of the issue of this amended permit.

22. This permit will expire if the use is not commenced within two years from the date of this permit. All development must be completed within four years from the date of this permit. The Responsible Authority may approve extensions to these time limits if requests are made within three months of expiry.

Note:
These premises are required to comply with the *Food Act* 1984. No fit-out is to commence until plans have been approved by Council's Public Health Unit. Please contact the Public Health Unit on (03) 9205 5777.

Note:
These premises will be required to comply with the *Health Act* 1958. No Fit-out is to commence until plans have been approved by Council's Public Health Unit. Please contact the Public Health Unit on (03) 9205 5777.

Note:
A building permit must be obtained before development is commenced.

Note (Melbourne Water)*:
If further information is required in relation to Melbourne Water's permit conditions shown above, please contact Melbourne Water on telephone 9235 2517, quoting Melbourne Water's reference 85967.

The applicable flood level for the property is 27.16 metres to Australian Height Datum (AHD).

THIS PERMIT WAS ISSUED AT THE DIRECTION OF VCAT AS FOLLOWS:

Date of Order	
22 August 2011	Planning Permit PL05/1061 was amended in accordance with the order of the Victorian Civil and Administrative Tribunal, reference: P503/2011.

Issued Date: **31 January 2006**
VCAT Order: **22 August 2011**

Danielle Connell
Signature for the Responsible Authority

Planning and Environment Regulations 2005 Form 4

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Attachment 6 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Planning Permit

THIS PERMIT HAS BEEN AMENDED AS FOLLOWS:

Date of amendment	Brief description of amendment
26 September 2008	Permit amended pursuant to Section 73 and 74 of The Planning and Environment Act 1987 to allow the following: • Change to the permit preamble to include the construction of a carport. • Inclusion of Melbourne Water permit conditions. • Inclusion of Melbourne Water notes.
11 December 2014	The wording and the hours of operation at Condition 3 amended.

Issued Date: **31 January 2006**
VCAT Order: **22 August 2011**

Danielle Connell
Signature for the Responsible Authority

Planning and Environment Regulations 2005 Form 4

Page 4 of 4

Attachment 6 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Planning Permit

PLANNING PERMIT

IMPORTANT INFORMATION ABOUT THIS PERMIT

WHAT HAS BEEN DECIDED?

The Responsible Authority has issued a permit.

(Note: This is not a permit granted under Division 5 or 6 of Part 4 of the **Planning and Environment Act 1987**.)

WHEN DOES A PERMIT BEGIN?

A permit operates:

* from the date specified in the permit; or

* if no date is specified, from—

(i) the date of the decision of the Victorian Civil and Administrative Tribunal, if the permit was issued at the direction of the Tribunal; or

(ii) the date on which it was issued, in any other case.

WHEN DOES A PERMIT EXPIRE?

1. A permit for the development of land expires if—

* the development or any stage of it does not start within the time specified in the permit; or

* the development requires the certification of a plan of subdivision or consolidation under the **Subdivision Act 1988** and the plan is not certified within two years of the issue of the permit, unless the permit contains a different provision; or

* the development or any stage is not completed within the time specified in the permit, or, if no time is specified, within two years after the issue of the permit or in the case of a subdivision or consolidation within 5 years of the certification of the plan of subdivision or consolidation under the **Subdivision Act 1988**.

2. A permit for the use of land expires if—

* the use does not start within the time specified in the permit, or if no time is specified, within two years after the issue of the permit; or

* the use is discontinued for a period of two years.

3. A permit for the development and use of land expires if—

* the development or any stage of it does not start within the time specified in the permit; or

* the development or any stage of it is not completed within the time specified in the permit, or, if no time is specified, within two years after the issue of the permit; or

* the use does not start within the time specified in the permit, or, if no time is specified, within two years after the completion of the development; or

* the use is discontinued for a period of two years.

4. If a permit for the use of land or the development and use of land or relating to any of the circumstances mentioned in section 6A(2) of the **Planning and Environment Act 1987**, or to any combination of use, development or any of those circumstances requires the certification of a plan under the **Subdivision Act 1988**, unless the permit contains a different provision—

* the use or development of any stage is to be taken to have started when the plan is certified; and

* the permit expires if the plan is not certified within two years of the issue of the permit.

5. The expiry of a permit does not affect the validity of anything done under that permit before the expiry.

WHAT ABOUT APPEALS?

* The person who applied for the permit may apply for a review of any condition in the permit unless it was granted at the direction of the Victorian Civil and Administrative Tribunal, in which case no right of review exists.

* An application for review must be lodged within 60 days after the permit was issued, unless a notice of decision to grant a permit has been issued previously, in which case the application for review must be lodged within 60 days after the giving of that notice.

* An application for review is lodged with the Victorian Civil and Administrative Tribunal.

* An application for review must be made on an Application for Review form which can be obtained from the Victorian Civil and Administrative Tribunal, and be accompanied by the applicable fee.

* An application for review must state the grounds upon which it is based.

* An application for review must also be served on the Responsible Authority. Details about applications for review and the fees payable can be obtained from the Victorian Civil and Administrative Tribunal.

Planning and Environment Regulations 2005 No. 33 Form 4 Sections 63 and 86

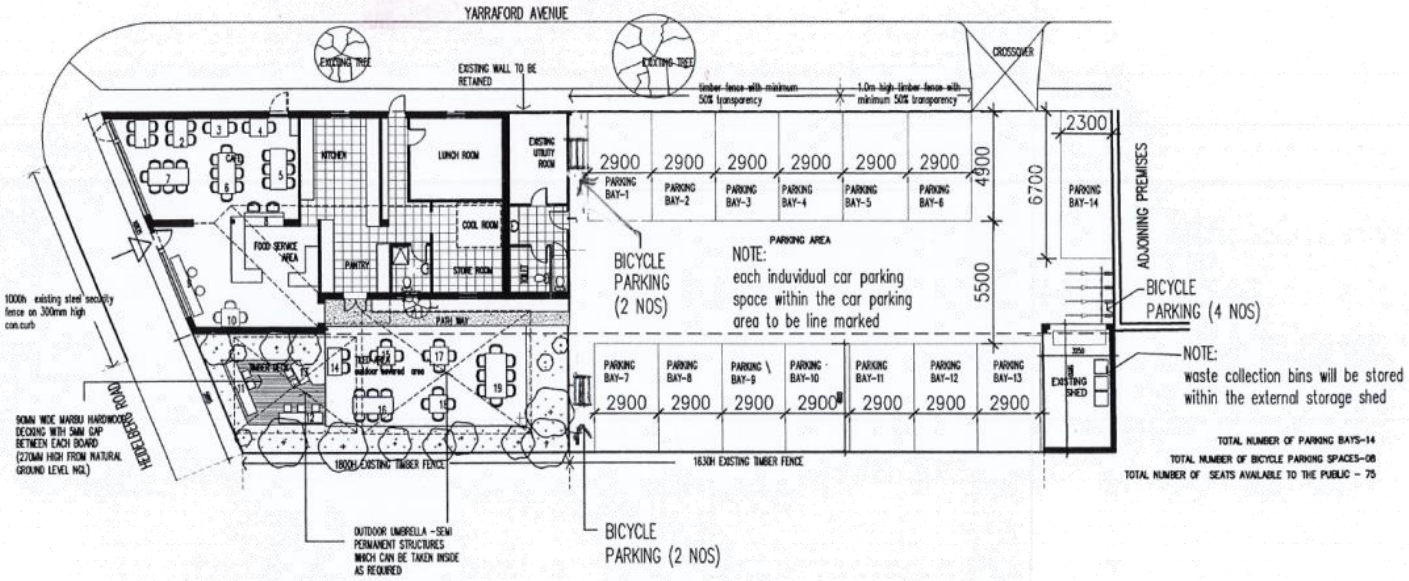
Attachment 7 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Endorsed Plans

AMENDMENT TO PLAN APPROVED
IN PERMIT No. PL05/1061
Issued 31/1/2006

PLANNING & ENVIRONMENT ACT 1987
YARRA PLANNING SCHEME
Plan referred to in Permit No: PL05/1061
relating to use/development of land.
For and on behalf of the Responsible Authority
DATE 20/12/2012 PLAN 1 of 4
This is NOT a Building Permit

TOWN PLANNING PERMIT
AMENDED AUG 2011–REV C

SCHEDULE (TOTAL SEAT)	
TABLE NO	SEATS
1	4
2	4
3	2
4	2
5	6
6	8
7	7
8	2
9	2
10	3
11	2
12	3
13	2
14	2
15	4
16	6
17	4
18	4
19	8
TOTAL	75



BUILDING AREAS				PARKING AREA
CAFE AREA	OUT DOOR CAFE AREA	SHED	TOTAL	361.4m
175.3m²	48.4m²	19.0m²	242.7m²	

01 SITE PLAN
SCALE 1:200

RECEIVED
23 JAN 2012

NOTE:
Architectural drawings are to be read in conjunction with stuctural drawings.
Contractor is to check all dimensions and levels on site prior to commencing any work or stage thereof and report any discrepancies or omission to the Designer. figured dimensions given are to be taken in preference to scaled dimensions.
Copyright of design shown herein is retained by Mimar design. Authority is required before any reproduction.

Project: "apte" CAFE
538 – 540 HEIDELBERG ROAD
ALPHINGTON
VIC.3078

Client:

Drawing Title: EXISTING CONDITION– SITE PLAN

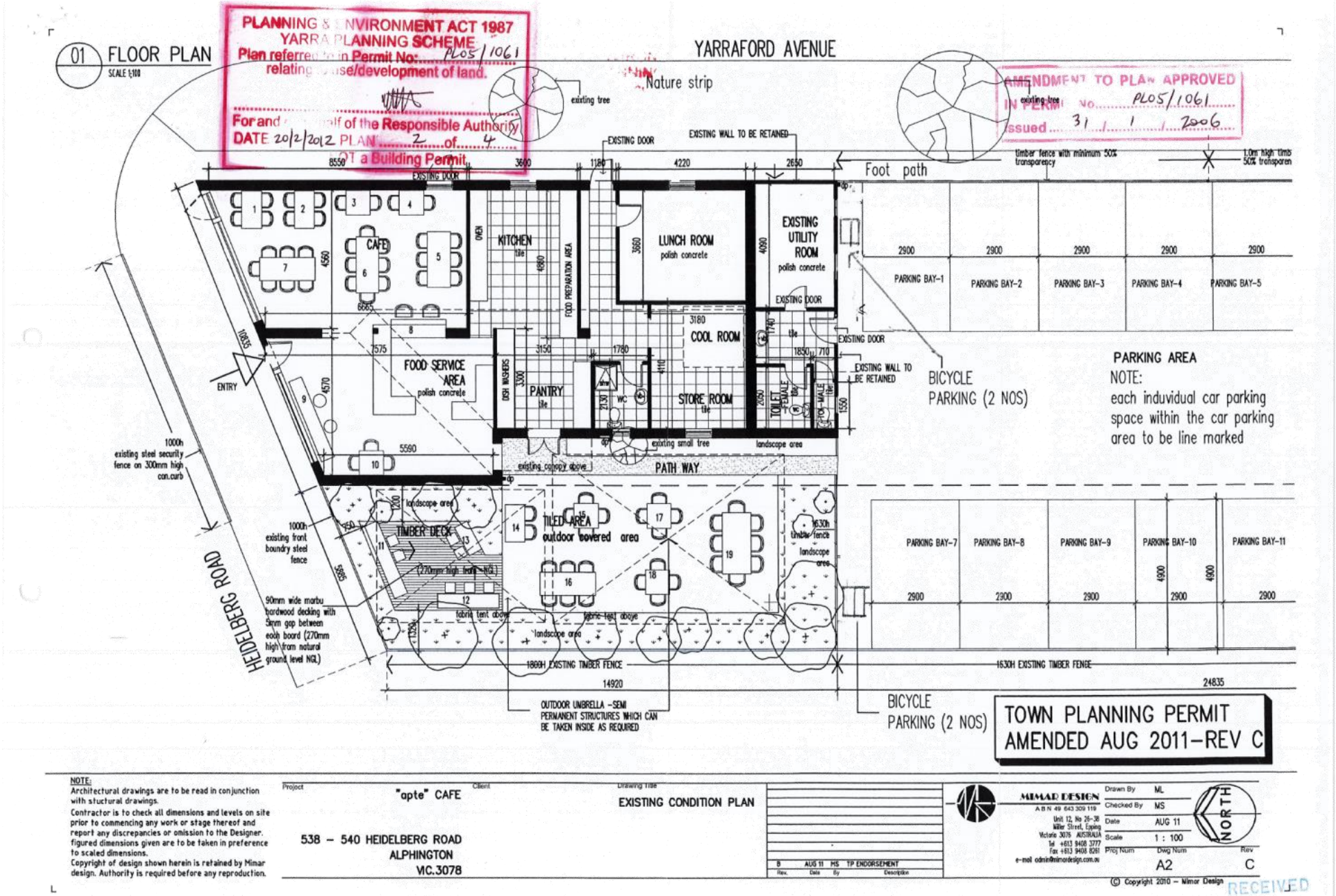
B AUG 2011 TP ENDORSEMENT
Rev. Date By Description

MIMAR DESIGN
A B N 49 643 309 119
Unit 12, No 26–38 Miller Street, Epping
Victoria 3076 AUSTRALIA
Tel +613 9408 3777
Fax +613 9408 8283
e-mail admin@mimardesign.com.au

Drawn By ML
Checked By MS
Date AUG 11
Scale 1 : 200
Proj Num 100330 A1
Dwg Num
Rev C

NORTH

Attachment 7 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Endorsed Plans

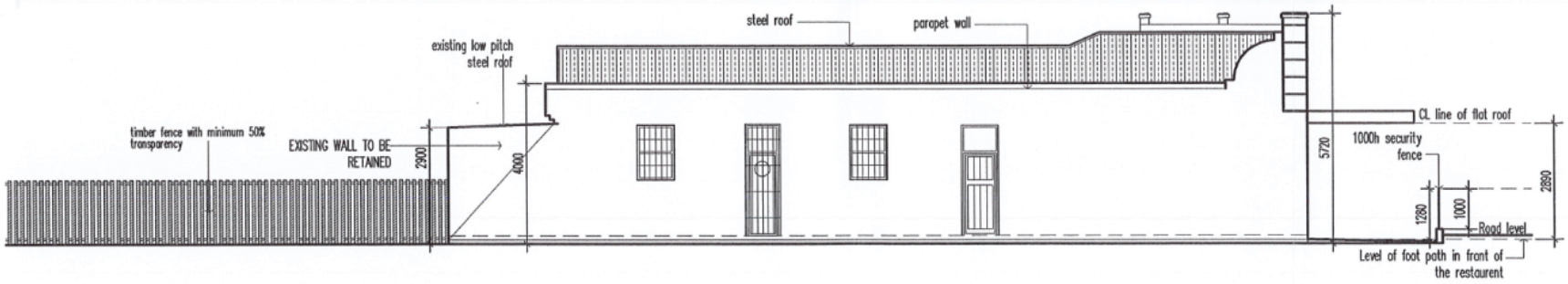


Attachment 7 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Endorsed Plans

PLANNING & ENVIRONMENT ACT 1987
YARRA PLANNING SCHEME
Plan referred to in Permit No: PL05/1061
relating to use/development of land.
For and on behalf of the Responsible Authority
DATE 20/2/2012 PLAN 3 of 4
This is NOT a Building Permit

AMENDMENT TO PLAN APPROVED
IN PERMIT No. PL05/1061
Issued 31/1/2006

TOWN PLANNING PERMIT
AMENDED AUG 2011–REV C



EAST ELEVATION
SCALE 1:100

NOTE:
Architectural drawings are to be read in conjunction with stuctural drawings.
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Copyright of design shown herein is retained by Mimar design. Authority is required before any reproduction.

Project: "apte" CAFE
538 – 540 HEIDELBERG ROAD
ALPHINGTON
VIC.3078

Client:

Drawing Title: EXISTING ELEVATIONS

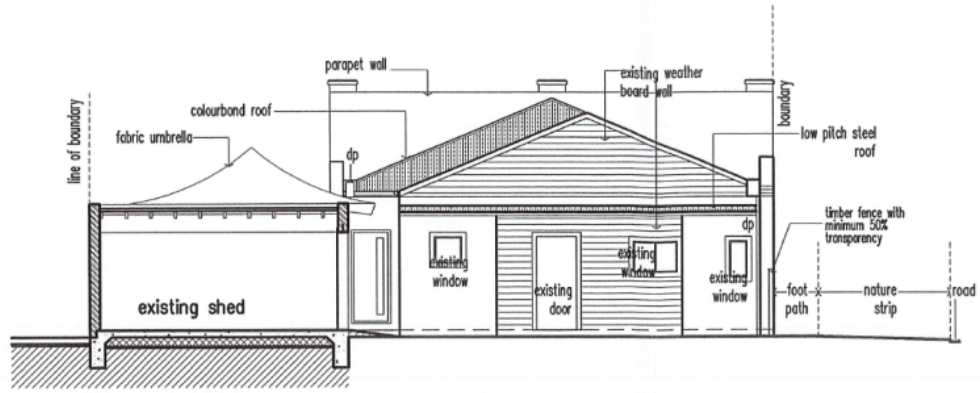
B AUG 11 MS TP ENDORSEMENT
Rev. Date By Description

MIMAR DESIGN
ABN 49 643 309 119
Unit 12, No 26-38 Miller Street, Epping Victoria 3076 AUSTRALIA
Tel +613 9408 3777
Fax +613 9408 8261
e-mail admin@mimardesign.com.au

Drawn By MH
Checked By MS
Date AUG 11
Scale 1 : 100
Proj Num
Dwg Num A3
Rev C

RECEIVED
14 SEP 2011

Attachment 7 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Current Endorsed Plans

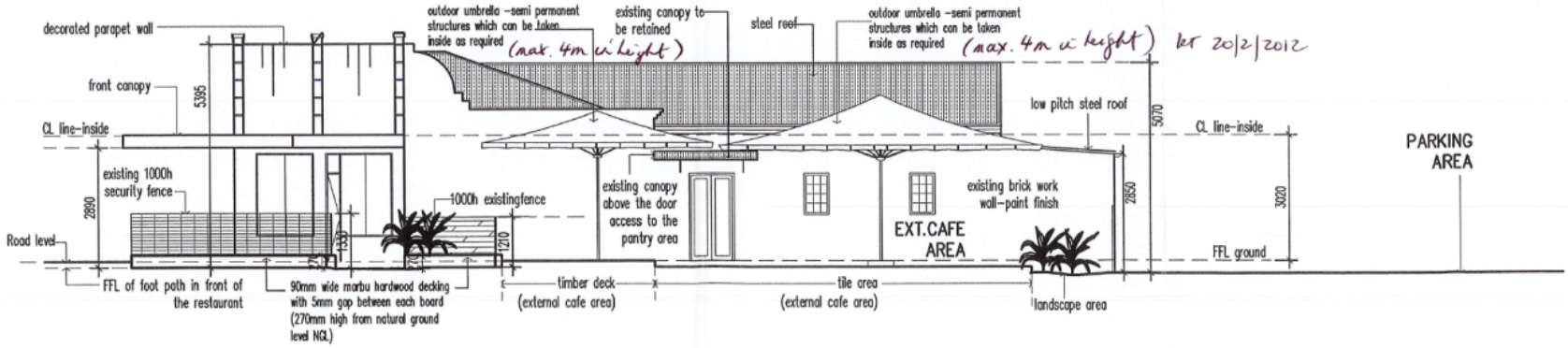


SOUTH SECTIONAL ELEVATION
SCALE 1:100

TOWN PLANNING PERMIT
AMENDED AUG 2011–REV C

AMENDMENT TO PLAN APPROVED
IN PERMIT No. PL05/1061
Issued 31/1/2006

PLANNING & ENVIRONMENT ACT 1987
YARRA PLANNING SCHEME
Plan referred to in Permit No: PL05/1061
relating to use/development of land.
For and on behalf of the Responsible Authority
DATE 30/2/2012 PLAN 4 of 4
This is NOT a Building Permit



WEST ELEVATION
SCALE 1:100

NOTE:
Architectural drawings are to be read in conjunction with stuctural drawings.
Contractor is to check all dimensions and levels on site prior to commencing any work or stage thereof and report any discrepancies or omission to the Designer. figured dimensions given are to be taken in preference to scaled dimensions.
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Project: "opte" CAFE
538 – 540 HEIDELBERG ROAD
ALPHINGTON
VIC.3078

Client:

Drawing Title: EXISTING ELEVATIONS

B AUG 11 MS TP ENDORSEMENT
Rev. Date By Description

MIMAR DESIGN
A B N 49 643 309 119
Unit 12, No 26–36 Miller Street, Epping Victoria 3076 AUSTRALIA
Tel +613 9408 3777
Fax +613 9408 8261
e-mail admin@mimardesign.com.au

Drawn By MH
Checked By MS
Date AUG 11
Scale 1 : 100
Proj Num
Dwg Num A4
Rev C

RECEIVED
14 SEP 2011

Attachment 8 - PL05/1061.01 - 538 - 540 Heidelberg Road Alphington - Council Engineering Services Referral Response

CITY OF YaRRA

MEMO

To: **Madeleine Moloney**

From: **Artemis Bacani**

Date: **27 April 2020**

Subject: **Application No:** **PL05/1061.04**
Description: **Amendment – Café to a Restaurant**
Site Address: **538-540 Heidelberg Road, Alphington**

I refer to the above Planning Application received on 27 March 2018 in relation to the proposed development at 538-540 Heidelberg Road Alphington. Council's Engineering Services unit provides the following information:

Drawings and Documents Reviewed

	Drawing No. or Document	Revision	Dated
ML Traffic Engineers	*Car Parking Waiver Assessment*		15 November 2019
Memar Design	*A2 Proposed Floor Plan*		October 2019

CAR PARKING PROVISION
Proposed Development
Under the provisions of Clause 52.06-5 of the Yarra Planning Scheme, the development's parking requirements are as follows:

Endorsed Development	Quantity/ Size	Statutory Parking Rate	No. of Spaces Required	No. of Spaces Allocated
Food and drink premises (Café)	223.7 m^2	4 spaces per 100 m^2 of leasable floor area	8	14

Proposed Development	Quantity/ Size	Statutory Parking Rate	No. of Spaces Required	No. of Spaces Allocated
Restaurant	75 Patrons	0.4 spaces per patron	30	14

* Since the site is located outside of the Principal Public Transport Network Area, the parking rates in Column A of Clause 52.06-5 now apply.

A reduction of 16 spaces in the car parking requirement is sought by the applicant.

Attachment 8 - PL05/1061.01 - 538 - 540 Heidelberg Road Alphington - Council Engineering Services Referral Response

Car Parking Demand Assessment
In reducing the number of parking spaces required for the proposed development, the Car Parking Demand Assessment would assess the following:

- *Parking demand for the Restaurant Use*.
  Using the statutory parking rate, the restaurant would generate a parking demand of 30 spaces. Patrons to the restaurant would be drawn from the surrounding area (residences and local businesses).

- *Availability of Public Transport in the Locality of the Land*.
  The site is within walking distance of bus services operating along Heidelberg Road and Chandler Highway. The Fairfield and Alphington railway stations are several hundred metres from the site and can be accessed by foot.

Appropriateness of Providing Fewer Spaces than the Likely Parking Demand
Clause 52.06 lists a number of considerations for deciding whether the required number of spaces should be reduced. For the subject site, the following considerations are as follows:

- *Availability of Car Parking*.
  ML Traffic Engineers had conducted on-street parking occupancy surveys of the surrounding area on Wednesday 17 July 2019 (8.15am, 11.45am, 1.00pm, 2.00pm and 2.45pm). Additional parking occupancy surveys were undertaken on Thursday 18 July 2019 (4.30pm and 6.45pm), Friday 19 July 2019 (5.30pm, 6.45pm, and 7.45pm), and Saturday 20 July 2019 (6.00pm and 7.30pm). The survey area encompassed sections of Yarraford Avenue, Hanslope Avenue and Heidelberg Road. A parking inventory ranging from 48 and 54 publicly available parking spaces was identified. The results indicate that the peak parking occupancy was observed on the Saturday at 7.30pm, with no fewer than 33 spaces vacant within the study area. The data suggests that any parking shortfall for the site can be accommodated in the surrounding streets.

- *Relevant Local Policy or Incorporated Document*.
  The proposed development is considered to be in line with the objectives contained in Council's *Strategic Transport Statement*. The site is ideally located with regard to sustainable transport alternatives and the reduced provision of on-site car parking would potentially discourage private motor vehicle ownership and use.

Adequacy of Car Parking
From a traffic engineering perspective, the proposed waiver in the car parking provision is considered appropriate in the context of the development and the surrounding area. It is expected that many of the patrons to the site would be drawn from the surrounding area. The occupation and operation of the site should not adversely impact on the existing on-street parking conditions in the area.

The Civil Engineering unit has no objection to the reduction in the car parking requirement for this site.

Attachment 8 - PL05/1061.01 - 538 - 540 Heidelberg Road Alphington - Council Engineering Services Referral Response

TRAFFIC GENERATION

The traffic generation for the site could be adopted as follows:

Existing Development	Adopted Traffic Generation Rate	Peak Hour	
		AM	PM
Commercial (Food and drink)	0.5 trips per space - AM peak hour 0.5 trips per space - PM peak hour (14 on-site spaces)	7 Trips	7 Trips
Proposed Use	**Adopted Traffic Generation Rate**	**Peak Hour**	
		AM	**PM**
Commercial (Restaurant)	0.5 trips per space - AM peak hour 0.5 trips per space - PM peak hour (14 on-site spaces)	7 Trips	7 Trips
	Change	**No change**	**No change**

The peak hour volumes generated by the site are not unduly high. The proposed restaurant would not generate any additional traffic in the surrounding road network.

Attachment 9 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Council Civic Compliance Referral Response

MeMO

TO:	**Madeleine MOLONEY**
cc:	
FROM:	**Brad Speechley**
DATE:	**2 April 2020**
APPLICATION:	**PL05/1061.04**
SUBJECT:	**Amenity Enforcement Referral**

Dear Madeleine,

Thank you for your referral dated 27 March 2020, in relation to 538-540 Heidelberg Rd ALPHINGTON.

I can advise you that Planning Enforcement has received no complaints in relation to the 'use' of the land. I have reviewed the documentation supplied for the amendment to planning permit PL05/1061 for the change of permitted use from a cafe to a restaurant and allow for the sale and consumption of liquor on site (restaurant and cafe licence), for a maximum 75 patrons, during the following hours:

- Monday to Saturday - 9am to 8pm;
- Sunday - 10am to 8pm;
- Good Friday & ANZAC Day - 12 noon to 8pm;

This proposal poses a low amenity risk. The Compliance Branch does not have any concerns with this application.

Should you wish to discuss the referral further, please feel free to contact me on 9205-5017.

Regards

Brad Speechley

Brad Speechley
Senior Team Leader Civic Compliance

Attachment 10 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Council Acoustic Consultant - Referral Response to Advertised Acoustic Report

29 April 2020

640.10090.06390 538-540 Heidelberg Rd Alphington 20200429.docx

Yarra City Council
PO Box 168
RICHMOND 3121

Attention: Madeleine Maloney

Dear Madeleine

538-540 Heidelberg Road, Alphington
Development Application Acoustic Review
PLN 05/1061

SLR Consulting Pty Ltd (SLR) has been retained by the City of Yarra to provide a review of the acoustic assessment report prepared for the café at 538-540 Heidelberg Road, Alphington.

Details of the report are as follows:

- Title: 538 Heidelberg Road, Alphington, Acoustic Engineering Report
- Reference: 19246
- Date: 28 November 2019
- Prepared for: Kissaten
- Prepared by: Cogent Acoustics (Cogent)

The report has been prepared to address proposed changes to the operating conditions.

1 Project Background

(Sections 1, 2 and 4 of the acoustic report)

The acoustically significant aspects of the application are summarised below:

- The project is an existing café with an outdoor area, located on Heidelberg Road, Alphington.
- Parking for the cafe is located at the rear (southern) end of the side.
- Potential noise impacts from the proposal are identified as music, patron and mechanical plant noise, and noise from vehicle movements.
- The nearest noise sensitive receivers are identified in Section 4 of the report and are on the western boundary of the subject site (single level dwelling at 534 Heidelberg Road), and the two storey dwelling to the rear of the subject site (51 Yarraford Street). There are also sensitive receivers to the east of the subject site.
- The existing and proposed operations are identified in Section 2 and are summarised below:

SLR Consulting Australia Pty Ltd Level 11, 176 Wellington Parade East Melbourne VIC 3002 Australia
T: +61 3 9249 9400 E: melbourne@slrconsulting.com
www.slrconsulting.com ABN 29 001 584 612

	Existing	Proposed
Liquor license	None	Proposed
Hours of operation	7 am to 4 pm Monday to Friday	7 am to 8 pm Monday to Friday
	8 am to 4 pm Saturday and Sunday	8 am to 8 pm Saturday and Sunday
Patrons		
Total	75	75
Courtyard	32 seats outside	32 seats outside
Music		
Inside	Background music	Background music
Courtyard	None	Background music proposed

SLR Comments: *The acoustically significant aspects of the proposal and the nearest noise sensitive receivers have been identified. These are: the proposed evening operating hours, the introduction of a liquor license and the introduction of background music. We note that the dwelling at 534 Heidelberg Road appears to have habitable room windows overlooking the subject site, however details of the height and location of the window relative to the proposed outdoor area are not provided in the report.*

2 Background noise monitoring for establishing noise limits

(Section 5.2 and Appendix B of the acoustic report)

Unattended noise logging was conducted in the café carpark, on the southern boundary of the subject site for the period Thursday 19 to Wednesday 25 September 2019. The logger location is shown in Figure 8 of Appendix B. Graphic results for the period, including a log of weather conditions at the time, are provided.

The background noise levels used to calculate noise limits are presented in Tables 5 (for calculating SEPP N-1 limits) and 6 (for calculating SEPP N-2 limits). The presented levels are noted to include a -2 dB adjustment because the logging was conducted within 2 m of a fence.

SLR Comments: *The measurement location is very close to a wall. SEPP N-1 advises a '-2 dB' adjustment for measurements undertaken 1 to 2 m from a solid structure, however the microphone appears to be much closer, and may potentially be within the 'pressure doubling' region. A correction of up to -6 dB can apply to measurements undertaken in conditions where pressure doubling occurs. This would result in appreciably lower background noise levels.*

Where noise logging cannot be undertaken in accordance with the guidelines provided in the SEPP (i.e. either fully free field or within 1 to 2 m from a reflective surface), we recommend that short term (e.g. 20 minute) concurrent measurements be carried out at the logging location and at a more suitable measurement location in order to identify the relevant correction factor. In this instance, a more suitable location may be a free field location closer to habitable window of 534 Heidelberg Road. If a correction factor is identified, it should be applied to all the logging data.

Attachment 10 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Council Acoustic Consultant - Referral Response to Advertised Acoustic Report

Noise logging was undertaken during operation of the café, and it is unclear whether the measurement data was affected by noise from the existing operation. The report should provide comment on this matter. We assume data collected in the evening period (when the café is not currently permitted to operate) was not affected by noise from the subject site.

The monitoring interval included some periods of high winds.

3 SEPP N-1 noise limits

(Section 6.1 and Appendix D of the acoustic report)

The background noise levels used to calculate SEPP N-1 noise limits are 50 dBA L_{90} for the day period and 47 dBA L_{90} for the evening period.

The SEPP N-1 noise limits have been calculated using the measured background levels. The limits are: 56 dBA (day) and 50 dBA (evening). A night limit is not presented because the café is not proposed to operate at night. The limits are based on background levels classified as 'high'.

SLR Comments: *The report does not provide much detail around how the single figure background noise levels have been calculated from the logging data. Our concern on this project is largely around operation of the café during the 6 pm to 8 pm period, as this is the proposed new operating period. This period does not appear to have been differentiated from Saturday afternoon and Sunday.*

While SEPP N-1 requires noise limits for Saturday afternoons and Sundays to be calculated using the same methodology as that for the SEPP N-1 defined 'evening' period, it does not suggest that the evening and weekend periods should necessarily have the same noise limit, or that the background noise data for these periods should be combined and averaged.

From our review of the logging data, lower background levels may be determined for the 6 pm to 8 pm evening period than for Saturday afternoons and Sundays.

We would also like clarification as to how the single figure levels have been derived from data collected over multiple days, and whether the lowest of the daily averages or the average of the averages have been presented. If the average is used, it should be confirmed that all days where weather conditions are not appropriate have been excluded from the analysis, and that the data is representative of the quieter periods of the week.

Our calculation of the SEPP N-1 zoning levels are consistent with Cogent's.

We note that it may be useful to determine separate evening noise limits for the northern façade of 534 Heidelberg Road, as this location is likely to be exposed to higher levels of road traffic noise than other receiver locations.

4 Mechanical Plant

(Sections 5.3.1 and 6.2 of the acoustic report)

No new mechanical plant is proposed to be installed. Cogent have identified the existing mechanical plant at the site (an AC condenser and a kitchen exhaust fan). They note that neither was audible on the footpath outside the cafe, and as such noise measurements were not made at receiver locations. Instead, measurements were conducted 1 m from each of the sources and the measured levels were used to calculate equipment noise to the nearest sensitive receiver locations. The calculated levels are approximately 40 dBA and compliant with the identified noise limits.

SLR Comments: *The provided assessment is reasonable and we agree that this issue has been addressed. The equipment will comply with SEPP N-1 even if lower SEPP N-1 limits are identified.*

5 Patron Noise

(Section 8.1 of the report)

Patron noise is proposed to be assessed to SEPP N-1.

Patron noise impacts have been modelling using a computer modelling package, with the following inputs:

- 32 patrons outdoors
- All patrons assumed to be seated (1.2 m high)
- An overall sound power level of 87 dBA
- Two scenarios are modelled:
  - No fence (existing fence is noted to be of poor quality)
  - 2.1 m high acoustic fence

The predicted noise level at the nearest sensitive receiver without any noise control is 56 dBA L_{eq}. With the proposed 2.1 m high acoustic fence along the western boundary, the predicted noise level is 48 dBA L_{eq}, and is noted to comply with the identified 50 dBA evening noise limit.

SLR Comments: *We agree that patron noise can reasonably be assessed to SEPP N-1 in order to provide an acceptable amenity outcome. In the City of Yarra assessment of patron noise to a target o 'background + 10 dB' has also been accepted for the day and evening periods. Where this approach is taken, the background noise level used to determine limits should be the lowest measured (15 min to 1 hour) level during the period that the venue is proposed to operate, consistent with the SEPP N-2 approach. This methodology may result in higher noise limits than SEPP N-1.*

The use of noise modelling in this situation is not considered to be the best practice approach. Given that the café is currently operating, it would have been preferable to measure existing noise from patrons either within the café, or at a reference location representative of the nearest noise sensitive receiver.

The patron sound power level of 87 dBA used in the noise model is on the low side, however we acknowledge that the proposal is not a tavern style facility, and that patron noise levels may be low. Nevertheless, we would have preferred to see the low assumed levels of patron noise supported by measurement data obtained from the café.

The exact location of the noise sensitive receivers considered in the assessment is not detailed. We would assume that the assessment has been conducted to both east and north facing windows of the single level dwelling at 534 Heidelberg Road, and to the north facing first floor window of 51 Yarraford Avenue. However, this should be confirmed by Cogent. The height and location of the dwelling east facing window relative to the proposed 2.1 m high acoustic fence should also be provided.

Little information about the noise model is provided in the report. The courtyard has a fabric canopy, and it is unclear how or whether this has been modelled. Similarly, we would like to confirm that acoustic reflections have been taken into account in the model, as the outdoor area appears to be a semi-reverberant environment (hard surfaces on at least two sides).

In summary, we have a number of reservations about the assessment which are of particular concern given the proximity of the nearest noise sensitive receiver to the outdoor patron area and given that the proposed operation during the evening represents a change in the area, which is not an entertainment district.

Our preference would be for measurements of the existing use to be conducted during a busy time of day to provide some assurance that the assumed low patron noise levels are reasonable. The model should ideally be calibrated to reproduce the measured level of patron noise in the outdoor area, which should be documented in the report. The exact receiver locations should be detailed to provide a higher level of transparency.

Lower noise limits, if found to apply, should also be used in the assessment.

6 Music

(Table 6, Table 10 and Section 7 of the acoustic report)

Music noise is proposed to be assessed to SEPP N-2. Noise limits have been determined for both the evening and night periods (under SEPP N-2, the 'night' period includes parts of the morning when the café operates).

Music noise in the outdoor area has been modelled to sensitive receiver locations. The modelling takes into consideration the music levels measured within the restaurant, which were noted to be 63 dBA Leq at the time of Cogent's visit to the site (approximately 3 pm on a weekday).

The results of the noise modelling suggest that music played within the restaurant only, at the current level of 63 dBA Leq, will comply with SEPP N-2. However, music played within the restaurant and in the outside court area at the current levels, is predicted to exceed both the day/evening and night noise limits. Allowable music levels for the courtyard such that compliance with SEPP N-2 will be achieved, are provided in Table 13 and are equal to 58 dBA Leq (day evening) and 54 dBA (night). The levels are to be met 1 m from each loudspeaker.

Cogent observe that the identified levels are too low to satisfy expectations, and that the better outcome would be not to have any music in the courtyard.

SLR Comments: *The noise limits look reasonable, although they should be reviewed if the background noise levels change as the result of further investigations. We agree that it may be hard to achieve compliance with SEPP N-2 with satisfactory levels of music played outdoors, particularly during the evening and night periods when the lowest limits apply.*

However we note that compliance with the relevant patron noise limits is likely to be similarly difficult to achieve. The provided patron and music noise modelling do not appear to be consistent.

7 Carpark

(Section 9 of the acoustic report)

Noise from vehicle movements in the carpark has been modelled, with the assumption of 28 vehicle movements per hour during the period that the café operates. The predicted levels of noise have been assessed to SEPP N-1 and found to exceed noise limits. A 2.1 m high acoustic fence has been proposed. With the fence in place a 3 dB exceedance of the identified SEPP N-1 limits is still predicted. Cogent argue that the exceedance should be tolerated on the grounds that it is small, and that SEPP N-1 limits do not formally apply to noise from carparks.

SLR Comments: *Noise from vehicles in the carpark is not a high risk issue on this project given that operations are not proposed for the night period. We agree that SEPPN-1 limits do not formally apply. Given the above, we are satisfied that noise from use of the carpark will be adequately addressed by the proposed 2.1 m high acoustic fence.*

8 Summary

A review of the acoustic report prepared to address the proposed extension of operating hours of the café at 538-540 Heidelberg Road, Alphington is provided above. The report adequately addresses noise from music, mechanical plant and use of the carpark. However, patron noise is the main potential noise impact from the proposed change, and is a particular risk on this project given the proximity of the nearest noise sensitive receiver, and the proposed operations in the evening period. The following is noted or requested:

- Patron noise has been assessed to SEPP N-1. While this will provide a suitable amenity outcome, we also note that patron noise is frequently assessed to a 'background + 10 dB' target for the day / evening period in the City of Yarra, with the background noise level used to determine noise limits representative of the lowest (short term) levels likely to occur during the proposed operations. Either approach would be acceptable from our perspective.
- Background noise measurements used to calculate noise limits have been determined from noise logging conducted in close proximity to a solid wall, and potentially in the 'pressure doubling' region. Larger decibel corrections may apply to the measured levels than the -2 dB used by Cogent. Options for addressing this matter in relation to determining appropriate limits for patron noise include:
  - Conducting concurrent measurements of approximately 20 minutes duration at the logging location and at a SEPP N-1 formal compliant location (either fully free field or within 1 to 2 m from a reflective surface). The difference between the measured levels should be applied as a correction factor to the noise logging data, or
  - Conduct a single attended noise measurement at a suitable location, during the last hour of the proposed operations, on a quiet night of the week (e.g. between 7:30 pm and 8 pm on a Sunday to Wednesday night). The measured level could be used to determine background based noise limits (i.e. background level + 10 dB), instead of SEPP N-1.
- The provided patron noise assessment does not make 'worst case' assumptions about noise impacts:
  - Low voice noise levels are assumed. Some further justification should be provided for this assumption, preferably in the form of measurements of the existing use undertaken during a busy operating period.
- Patron noise has been modelled however there are acoustically significant aspects of the model that are not explained in the report. We request that the following is included:
  - Clarification as to how or if the fabric cover over the outdoor patron area has been modelled.

Attachment 10 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Council Acoustic Consultant - Referral Response to Advertised Acoustic Report

- Clarification the reflections and any reverberant build up has been accounted for.
- A reference sound pressure level 1 – 2 m above patrons in the outdoor area.
- The precise location of the sensitive receiver locations considered, including height relative to both windows of habitable rooms, and relative to the proposed acoustic fence.

Regards,

Dianne Williams
Associate – Acoustics

Checked/Authorised by: JA

Attachment 11 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Council Acoustic Consultant - Referral Response to Revised Acoustic Report

14 October 2020

640.10090.06390 538-540 Heidelberg Rd Alphington 20201014.docx

Yarra City Council
PO Box 168
RICHMOND 3121

Attention: Madeleine Maloney

Dear Madeleine

538-540 Heidelberg Road, Alphington
Development Application Acoustic Review
PLN 05/1061

SLR Consulting Pty Ltd (SLR) has been retained by the City of Yarra to provide a review of the revised acoustic assessment report prepared for the café at 538-540 Heidelberg Road, Alphington.

Details of the report are as follows:

- Title: 538 Heidelberg Road, Alphington, Acoustic Engineering Report
- Reference: 19246
- Date: 10 August 2020
- Prepared for: Kissaten
- Prepared by: Cogent Acoustics (Cogent)

The report has been revised to address issues raised by SLR in our review dated 29 April 2020.

1 Review

The issues raised, as detailed in the 'Summary' section of our review, are reproduced below (in *italics*), with comment on the extent to which they have been addressed in the current report (in red).

A review of the acoustic report prepared to address the proposed extension of operating hours of the café at 538-540 Heidelberg Road, Alphington is provided above. The report adequately addresses noise from music, mechanical plant and use of the carpark. However, patron noise is the main potential noise impact from the proposed change, and is a particular risk on this project given the proximity of the nearest noise sensitive receiver, and the proposed operations in the evening period. The following is noted or requested:

- *Patron noise has been assessed to SEPP N-1. While this will provide a suitable amenity outcome, we also note that patron noise is frequently assessed to a 'background + 10 dB' target for the day / evening period in the City of Yarra, with the background noise level used to determine noise limits representative of the lowest (short term) levels likely to occur during the proposed operations. Either approach would be acceptable from our perspective.* This comment not required to be addressed.

SLR Consulting Australia Pty Ltd Level 11, 176 Wellington Parade East Melbourne VIC 3002 Australia
T: +61 3 9249 9400 E: melbourne@slrconsulting.com
www.slrconsulting.com ABN 29 001 584 612

- *Background noise measurements used to calculate noise limits have been determined from noise logging conducted in close proximity to a solid wall, and potentially in the 'pressure doubling' region. Larger decibel corrections may apply to the measured levels than the -2 dB used by Cogent. Options for addressing this matter in relation to determining appropriate limits for patron noise include:*
  - *Conducting concurrent measurements of approximately 20 minutes duration at the logging location and at a SEPP N-1 formal compliant location (either fully free field or within 1 to 2 m from a reflective surface). The difference between the measured levels should be applied as a correction factor to the noise logging data, or*
  - *Conduct a single attended noise measurement at a suitable location, during the last hour of the proposed operations, on a quiet night of the week (e.g. between 7:30 pm and 8 pm on a Sunday to Wednesday night). The measured level could be used to determine background based noise limits (i.e. background level + 10 dB), instead of SEPP N-1.*

  Sections 5.2, 6.1, 7.1 and Appendix C: The measured background noise level at the southern boundary of the subject site has been corrected by -6 dB to allow for pressure doubling. A second set of background noise data measured at the boundary between the subject site and the nearest dwelling (relabelled Location 1) has been included in the report. This data was obtained during the original assessment but not previously presented.

  The unadjusted noise logging data for both locations is provided in Appendix C. The adjusted levels are presented in Table 6.

  Patron noise has been assessed to SEPP N-1, and the calculated patron noise limits for the evening period are 47 dBA at 534 Heidelberg Road, and 46 dBA at other receiver locations. These limits are 3 to 4 dB lower than the 50 dBA limit used previously. We also note that the limits are lower than those that would be derived if a 'background + 10 dB' target was adopted, as is used on some projects in the City of Yarra.

  The calculated music noise limits are also 2 to 4 dB lower than were provided in the previous version of the report (Table 12)

  SLR Comment: The issues raised by SLR with respect to the background noise levels and noise limits have been addressed.

- *The provided patron noise assessment does not make 'worst case' assumptions about noise impacts:*
  - *Low voice noise levels are assumed. Some further justification should be provided for this assumption, preferably in the form of measurements of the existing use undertaken during a busy operating period.*

  Report Section 8.2: Cogent state that their assumed patron voice sound power level of 87 dBA equates to a noise level of approximately 69 dBA at a reference location 4 m above the patrons.

  Further discussion of the assumed patron voice noise levels has also been provided in Section 8.2, with Cogent concluding that the assumed voice levels are approximately 6 dB lower than would typically be used for a beer garden type scenario, where patrons were more crowded and standing. They consider these lower levels to be representative of a café-restaurant arrangement.

  SLR Comment: The provided justification for the patron noise levels is reasonable. It will, however, be important to ensure that the number of patrons outdoors does not exceed the assumed number of patrons in the report.

Attachment 11 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Council Acoustic Consultant - Referral Response to Revised Acoustic Report

- *Patron noise has been modelled however there are acoustically significant aspects of the model that are not explained in the report. We request that the following is included:*
  - *Clarification as to how or if the fabric cover over the outdoor patron area has been modelled. Cogent have clarified verbally to SLR that the awning was not included in the model. This issue has been addressed.*
  - *Clarification the reflections and any reverberant build up has been accounted for. Not directly provided, however the predicted level above the patron area suggests that some reflected energy has been modelled.*
  - *A reference sound pressure level 1 – 2 m above patrons in the outdoor area. Provided for 4 m (69 dBA Leq)*
  - *The precise location of the sensitive receiver locations considered, including height relative to both windows of habitable rooms, and relative to the proposed acoustic fence. Cogent have clarified verbally to SLR that the noise was modelled to receiver locations on both the north and east sides of 536 Heidelberg Road. This issue has been addressed.*

2 Other Matters

The revised report specifies a 2.4 m high barrier between the outdoor patron area and the adjacent dwelling in place of the 2.1 m barrier originally specified.

SLR Comment: *Our indicative calculations suggest that the increased height barrier will enable the noise limits to be met.*

3 Summary

A review of the revised acoustic report for the café at 534 Heidelberg Road has been conducted. The revised report addresses most of the issues raised by SLR in our original review. Some requested details of the noise model were not been provided in the revised report however these were provided to SLR over the phone and are satisfactory.

Regards,

Dianne Williams
Associate – Acoustics

Checked/Authorised by: JA

Attachment 12 - PL05/1061.04 - 538 - 540 Heidelberg Road Alphington - Melbourne Water Referral Response

14 April 2020

Madeleine Moloney
Yarra City Council
P.O.Box 168
RICHMOND VIC 3121

Dear Madeleine,

Proposal: Amendment to Planning permit - to include a new acoustic fence located along the western (side) boundary.
Site location: 540 HEIDELBERG ROAD ALPHINGTON

Melbourne Water reference: MWA-1169872
Council reference: PL05/1061-04
Date referred: 31/03/2020

Melbourne Water, pursuant to Section 56(1) of the Planning and Environment Act 1987, does not object to the amended proposal.

Advice

To access more information regarding other services or online applications that Melbourne Water offers please visit our website.

For general development enquiries contact our Customer Service Centre on 131722.

Regards,

L. Ripper

Louise Ripper
Development Planning Services

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