

1 Fitzroy Street, St Kilda
Electronic Major Promotion Sign
Road Safety Review

16/03/2023

Ref: 300304505

PREPARED FOR:

JCDecaux Australia Trading Pty Ltd

PREPARED BY:

Stantec

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	09/03/23	Final	David Graham	-	David Graham	DG
B	16/03/23	Minor Updates	David Graham	-	David Graham	<i>DG</i>

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1. Introduction

1.1 Background

An existing electronic major promotion sign is located on the roof of the building at 1 Fitzroy Street, St Kilda. The sign is permitted by Port Phillip Planning Permit 678/2000/A, which was granted by the Victorian Civil and Administrative Tribunal (VCAT). Condition 18 of this permit limits the period of operation of the permit as follows:

“18. The permit expires 10 years from the 1 November 2013, at which time the sign and all supporting structures must be removed and the site made good to the satisfaction of the Responsible Authority.”

Application is now being made by JCDecaux to VCAT under s87A of the Planning and Environment Act to amend Condition 18 of the permit to extend the permitted period of operation of the sign by 15 years.

Stantec has been engaged by JCDecaux to undertake a Road Safety Review of the sign, to consider whether it is appropriate to allow its continued operation. It is understood that this review will be filed with VCAT as part of the submission for an amended permit.

1.2 Purpose & Structure of this Report

This report sets out an assessment of the implications of the sign on road safety, including consideration of:

- existing traffic conditions surrounding the site
- existing safety record of the roads in the vicinity of the site
- motorist viewing angles and sight lines to the sign
- the sign's duration of visibility
- the continued suitability of the sign against:
 - Clause 52.05-8 of the Port Phillip Planning Scheme
 - Austroads Research Report on the impact of roadside advertising on road safety.

1.3 References

In preparing this report, reference has been made to the following:

- Port Phillip Planning Scheme
- Austroads Research Report 'AP-R420-13 Impact on Roadside Advertising on Road Safety', dated January 2013
- DoT CrashStats Database
- an inspection of the site and its surrounds
- various technical data as references in this report
- other documents as nominated.



2. Existing Conditions

2.1 Subject Site

The sign is situated on the roof of the building at 1 Fitzroy Street, St Kilda, just west of Acland Street. It faces northwest and is visible to motorists travelling south on Beaconsfield Parade. The location of the site and the surrounding environs is shown in Figure 2.1 and Figure 2.2.

Figure 2.1: Location of Subject Site and its Surrounds - Map

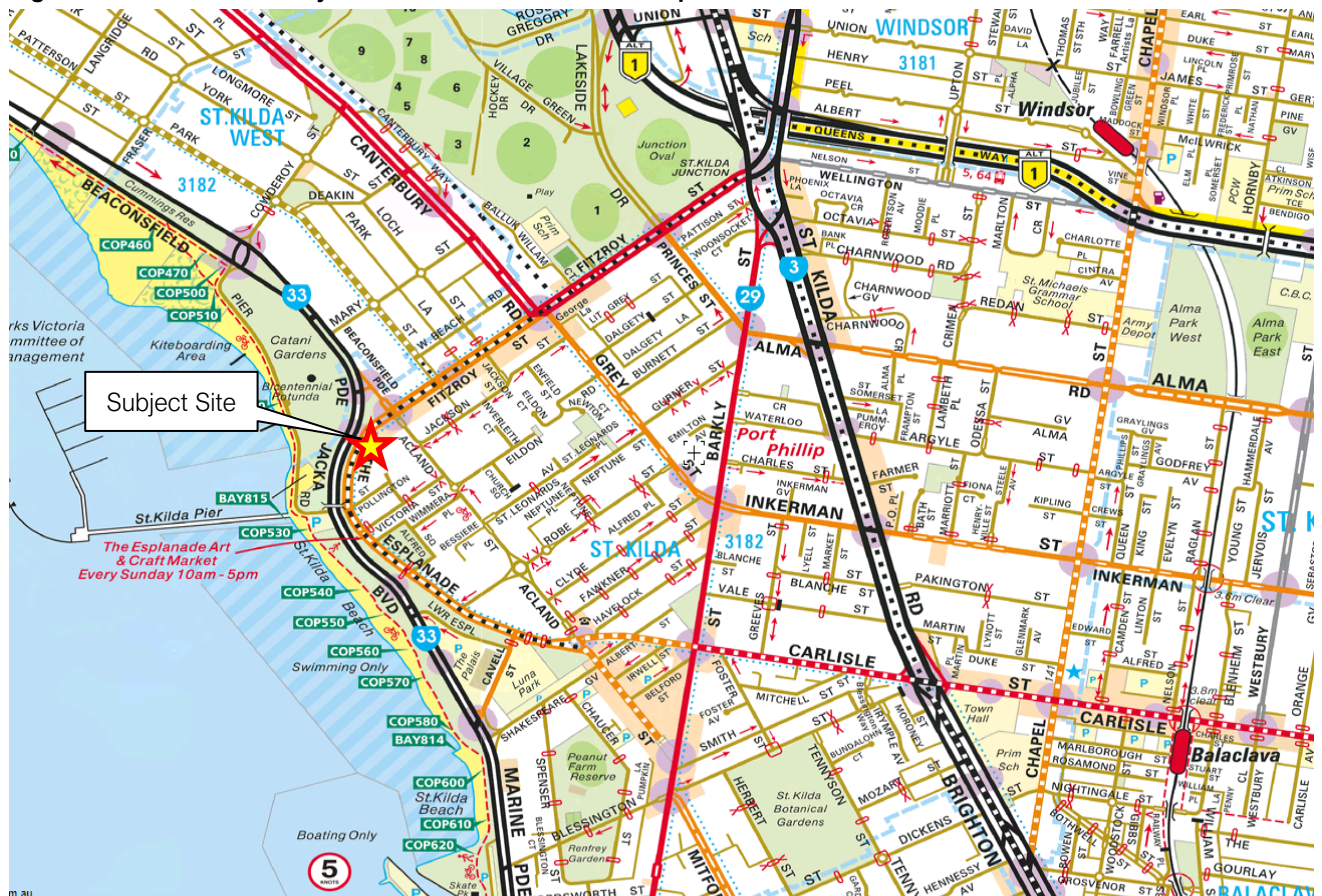


Figure 2.2: Location of Subject Site and its Surrounds – Aerial Photo



2.2 Road Network

2.2.1 Beaconsfield Parade / Jacka Boulevard

Beaconsfield Parade / Jacka Boulevard is a primary arterial road under the management of the Department of Transport (DoT) and is located within a Transport Zone 2. It is a two-way road approximately aligned in a north-south direction. It has a divided carriageway with two through lanes, a bicycle lane and auxiliary turn lanes. There are also kerbside parking lanes along sections of Beaconsfield Parade. Beaconsfield Parade / Jacka Boulevard has a 60km/h speed limit in the vicinity of the sign.



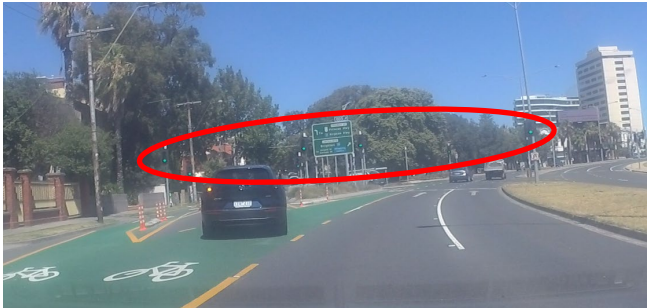

2.2.2 Fitzroy Street / The Esplanade

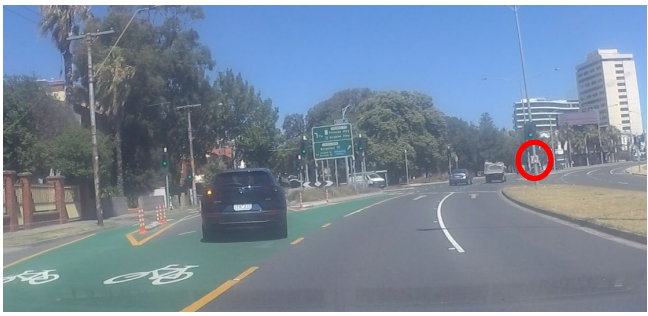
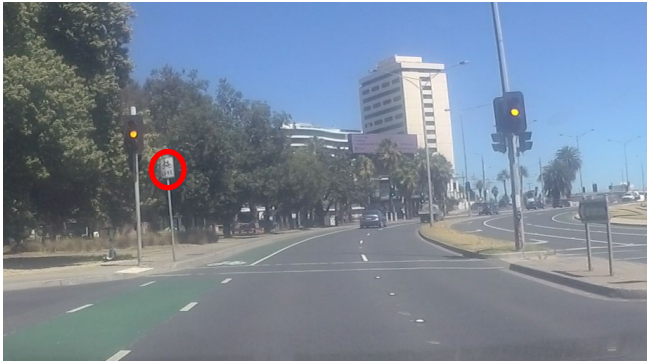

Fitzroy Street / The Esplanade is a Council arterial road under the management of Port Phillip City Council. It is a two-way road approximately aligned in a northeast-southwest direction. It generally has one through traffic lane and a bicycle lane in each direction, with median tram lanes and kerbside parking in selected locations. Fitzroy Street / The Esplanade mostly has a 40km/h speed limit. However, there is a section of road immediately to the east of the sign which has a 10km/h speed limit.

2.3 Existing Signage & Traffic Control Devices

For southbound motorists on Beaconsfield Parade, there are some existing signs and traffic control devices that are visible concurrently with the sign. The existing signs and traffic control devices are listed in Table 2.1.

Table 2.1: Existing Signage on Approach to Proposed Sign

Location	Sign Type	Travel Distance to Sign	Image
Both sides of the southbound carriageway of Beaconsfield Parade, just north of Mary Street	Speed limit signs	340m	
East side of the southbound carriageway of Beaconsfield Parade, just north of Mary Street	'No Trucks' sign and baseplates	310m	
Intersection of Beaconsfield Parade & Acland Street	Traffic signals	160m	
North side of intersection of Beaconsfield Parade & Acland Street	Directional sign	160m	

Location	Sign Type	Travel Distance to Sign	Image
Median of Beaconsfield Parade at Acland Street intersection	'No U-Turn' sign	160m	
East side of Beaconsfield Parade on south side of Acland Street intersection	'Bicycle Lane' sign	120m	
On bend in Beaconsfield Parade adjacent to Fitzroy Street	Pedestrian signals	50m	

2.4 Crash Statistics

When assessing the relative safety of a location, reference is typically made to the reported crash history in the vicinity of the subject site using data sourced from DoT's 'CrashStats' crash database. This data is usually sourced for the most recently available five-year period for crashes which result in injury or death involving road users for whom the sign may have been visible.

Within the past five years for which data is available (July 2015 – June 2020) there were six reported crashes which occurred at a location where the sign is potentially visible to a motorist. A summary of the crashes that have occurred within the vicinity of the sign is shown in Table 2.2.

Table 2.2: Crash History within the Vicinity of the Sign (July 2015 – June 2020)

Date	Time	Severity	Description
03/11/16	10:15am	Serious	Southbound vehicle on Beaconsfield Parade hit bicycle while veering left into Acland Street



Date	Time	Severity	Description
02/04/17	2:00pm	Serious	Vehicle turning left from Beaconsfield Parade into Mary Street side-swiped southbound motorcycle on Beaconsfield Parade
17/06/17	5:00pm	Other	Vehicle turning left from Beaconsfield Parade into Mary Street side-swiped southbound bicycle on Beaconsfield Parade
12/09/17	2:00pm	Serious	Vehicle exiting property on east side of Beaconsfield Parade at intersection with Acland Street hit bicycle
18/09/18	5:16pm	Other	Rear-end crash involving 5 southbound vehicles on Beaconsfield Parade at Mary Street
22/05/20	4:30am	Other	Southbound vehicle on Beaconsfield Parade lost control in the wet whilst travelling around the bend south of Acland Street and hit parked cars

With regard to these crashes, the following should be noted:

- Three of the crashes occurred at the intersection of Beaconsfield Parade and Mary Street, from where the sign is barely visible and is partly obscured by trees.
- One crash involved a vehicle exiting a driveway, from which the sign would not be within the normal field of vision of a motorist.

Therefore, only two of the crashes involved motorists for whom the sign would have been clearly visible. This suggests that the existing sign is not generating significant safety issues.



3. Proposal

3.1 Overview

The existing sign is installed on the roof of the building at 1 Fitzroy Street, St Kilda, on the south-eastern side of Fitzroy Street, and faces northwest. The sign face is 17m wide x 4m high and is mounted on a steel-framed structural support. The sign is electronic and displays static images only. The images on the sign are displayed for no less than 30 seconds, before changing instantaneously. The sign does not display moving or flashing images or video content.

Application is being made by JCDecaux to extend the permitted period of operation of the sign. It is not proposed to modify the existing sign, which is shown in Figure 3.1.

Figure 3.1: Image of the Sign



3.2 Visibility

The sign is visible to southbound motorists on Beaconsfield Parade only. It is visible from just north of Mary Street, which is a driving distance of approximately 320m from the sign, but is partly obscured by trees on the east side of Beaconsfield Parade at that distance. The sign becomes clearly visible to the south of Mary Street, a distance of approximately 250m from the sign and then begins to be obscured by trees gain from just south of the intersection with Acland Street at a distance of approximately 100m from the sign.

The sign is not visible to motorists travelling southwest on Fitzroy Street. It is also not visible to motorists travelling south on Acland Street south of the traffic signals at the intersection with Beaconsfield Parade.



4. Statutory Requirements

Statutory requirements for signage are set out in Clause 52.05 of the Port Phillip Planning Scheme. The requirement to consider the impact of signage on road safety is included in Clause 52.05-8. Specifically, Clause 52.05-8 includes ten points which relate to road safety which a Responsible Authority must consider when determining whether a sign is appropriate.

Table 4.1 provides an assessment of the sign against each of these considerations.

Table 4.1: Assessment against Clause 52.05-8 of the Port Phillip Planning Scheme

No.	Issue	Comment
1	Obstructs a driver's line of sight at an intersection, curve or point of egress from an adjacent property.	No. The sign is on the roof of a building, above the road level, and does not obstruct line of sight for motorists.
2	Obstructs a driver's view of a traffic control device, or is likely to create a confusing or dominating background that may reduce the clarity or effectiveness of a traffic control device	As the sign is well set back from the road, and elevated, it does not block views of traffic, signs or signals. For some southbound motorists on Beaconsfield Parade, the sign briefly appears behind some traffic signal lanterns at the intersection of Beaconsfield Parade and Acland Street, when motorists are approximately 200m from the sign. The sign also briefly appears behind some traffic signal lanterns for some southbound motorists on Beaconsfield Parade at the signalised pedestrian crossing just north of the sign. However, the sign is partly obscured by trees this location.
3	Could dazzle or distract drivers due to its size, design or colouring, or it being illuminated, reflective, animated or flashing	While the sign is illuminated, Conditions 4, 5, 6, 7, 8 & 16 of the existing planning permit, which relate to illumination levels, ensure that the sign does not dazzle or distract. The sign is not animated or flashing. This is prohibited by Condition 14(d) of the existing planning permit.
4	Is at a location where particular concentration is required, such as a high pedestrian volume intersection	No. Motorists driving along Beaconsfield Parade in the vicinity of the sign do not have to give way to pedestrians other than at the signalised crossings. There are no lane merges and no kerbside parking within 200m of the sign. Therefore, the sign is not at a location where particular concentration is required above the typical level of concentration required by motorists when driving on the road network.
5	Is likely to be mistaken for a traffic control device, because it contains red, green or yellow lighting, or has red circles, octagons, crosses, triangles or arrows	No. This content is prohibited by Condition 14(b) of the existing planning permit.
6	Requires close study from a moving or stationary vehicle in a location where the vehicle would be unprotected from passing traffic	No. The sign does not require close study as it is relatively large and Condition 14(c) of the existing planning permit prohibits images being displayed which could be mistaken as an instruction to a road user. The sign is only visible by



No.	Issue	Comment
		southbound motorists on Beaconsfield Parade, and when motorists are close to the sign it is obscured by trees. Therefore, they do not slow down or stop to read the sign.
7	Invites drivers to turn where there is fast moving traffic or the sign is so close to the turning point that there is no time to signal and turn safely	No. This content is prohibited by Condition 14(c) of the existing planning permit.
8	Is within 100m of rural railway crossing	No
9	Has insufficient clearance from vehicles on the carriageway	No. The sign is on the roof of a building well above and offset from the carriageway.
10	Could mislead drivers or be mistaken as an instruction to drivers	No. This content is prohibited by Condition 14(c) of the existing planning permit.

From Table 4.1 the following should be noted:

- Items 5, 6, 7 and 10 refer to potential content on the sign, which is prohibited by Condition 14 of the existing planning permit.
- The location of the sign does not obstruct lines of sight or present a physical hazard.
- Concerns with the illumination of the sign are already addressed through Conditions 4-9 & 16 of the existing planning permit.
- The sign is not at a location where particular concentration is required above the typical level of concentration required by motorists when driving on the road network.
- The sign briefly appears behind some traffic signal lanterns for some motorists. However, this is either at a significant distance from the sign or at a location where the sign is mostly obscured by vegetation.

Therefore, the sign has appropriate regard for the requirements of Clause 52.05-8 of the Port Phillip Planning Scheme with regard to road safety.



5. Advertising Signs – Road Safety Research

5.1 Introduction

There have been a number of studies undertaken both in Australia and internationally over the last few decades regarding the impact of advertising signs, including both static and electronic signs, on road safety. The most relevant study in an Australian context is the Austroads Research Report 'AP-R420-13 Impact on Roadside Advertising on Road Safety', dated January 2013 ('Austroads report').

This report provides a summary of previous research undertaken regarding the safety impact of roadside advertising, reviews the current guidelines regarding roadside advertising within various jurisdictions throughout Australasia, and seeks to establish best practice principles regarding the minimising the impact of roadside advertising on road safety. Each of these is discussed below.

5.2 Review of Research

With regard to the safety impact of roadside advertising, Section 5.3 of the Austroads report notes that, whilst distraction is a contributor to crashes, *“studies providing direct evidence that roadside advertising plays a significant role in these distraction-based crashes are currently not available.”* It also indicates that, while looking at an external object increases crash risk, *“it is reasonable to conclude that far less than 1% of all crashes and near crashes involved distraction from roadside advertising.”* This compares with studies which show that in-car distractions are a contributing factor in up to 21% of crashes¹.

5.3 Best Practice Principles and Guidelines

With regard to whether roadside advertising should be permitted, Section 6 of the Austroads report notes the following:

“However, as noted earlier, the human factors issues are not straightforward when attempting to be definitive about what is and is not desirable from a distraction perspective. Firstly, in some environments, some level of appropriate roadside ‘distraction’ may be desirable. Secondly, it seems very likely that if drivers are not completely engaged by the driving environment they will spontaneously engage in other ‘distracting’ activities. Finally, it appears that in many cases drivers regulate their engagement with potentially distracting stimuli so that its distraction potential is controlled to some extent. This does not mean that roadside advertising is of no concern, but it does mean that there are situations where it is unlikely to compromise the integrity of the Safe System. The key is to specify the principles that are important in determining those situations.”

Section 6 of the Austroads report then goes on to state some recommended principles which should be thought through, when approval for a roadside advertising sign is being considered. Section 7 of the Austroads report reviews the current guidelines regarding roadside advertising within various jurisdictions throughout Australasia. This leads to Section 9 of the Austroads report, which contains guidance recommendations on advertising signs. Many of these recommendations are similar to the principles outlined in Section 6 of the Austroads report.

Table 5.1 provides an assessment of the sign against each of the relevant principles in Section 6 of the Austroads report and guidelines in Section 9 of the Austroads report.

¹ McEvoy, S. P. (2007) Look what I can do while I'm driving: implications for road safety in Australia. *Medical Journal of Australia*, 187, 428–429



Table 5.1: Assessment Against Austroads Report Principles & Recommendations

Issue	Principle	Recommendation	Comments
Movement	Electronic billboards should not display moving or flashing images or change in a way that produces an impression of movement.	Roadside advertising devices should not contain motion, changes in luminance or any effects that create the illusion of movement.	The sign shows static images, which alter instantaneously as required by Condition 12 of the existing permit. As required by Condition 14(d) of the existing permit, it does not display moving images, or images that flash or blink.
Flashing Lights		Roadside advertising devices should not contain flashing, blinking, revolving, pulsating or intermittent lights.	
Dwell Time	The length of time for which an image is displayed should be as long as possible.	$\text{Dwell Time (s)} > \frac{\text{Visibility Distance (m)}}{0.28 \times \text{Speed Environment (km/h)}}$	Based on the formula, the dwell time should be greater than 15 seconds. This is based on a 60km/h speed limit with 250m of visibility. As required by Condition 11 of the existing permit, the images on the sign alter at no less than 30 second intervals. This interval exceeds the recommended 15 seconds.
Transition Time	Transition time between images should be instantaneous.	Message should change instantaneously. That is, no 'fade', 'zoom' or 'fly-in' effects and no blank screen between messages.	As required by Condition 12 of the existing permit, the sign has instantaneous transitions between images, which is controlled through an existing permit condition.
Luminance	Electronic signs should have luminance levels no greater than any other sign, and preferably lower than non-changeable signs.	Luminance levels should not exceed those of static signs in typical ambient light conditions.	As required by Conditions 5, 6, 7, 8 & 16 of the existing permit, the luminance levels are appropriately controlled through the existing permit conditions.
Information Content / Meaning	It is undesirable for emotional content and content that mimics traffic signs to be used in roadside advertising.	<p>Advertising devices should not imitate traffic control devices or give instructions to traffic to 'stop', 'halt' or other (e.g. give way, turn left or merge).</p> <p>Advertising devices should not contain extreme emotional material, especially content which could be threatening or anxiety provoking.</p>	The sign content is appropriately controlled through Condition 14 of the existing permit.
Colour	-	Advertising devices should not be coloured like an official traffic sign or traffic signals.	
Dimensions	-	Advertising devices should not be shaped like an official traffic control sign/device.	

Issue	Principle	Recommendation	Comments
Visual Clutter	Roadside advertising should not be placed in locations where there are already a number of existing signs and distracting material visible to a driver.	Highly cluttered road environments should be ruled out for advertising device placement.	The location of the sign is not highly cluttered. There are minimal other signs in the vicinity of the sign.
Driving Demand	Roadside advertising should not be visible from intersections, decision-making points and merge points.	Advertising devices should not be located so that they are visible at the approach to, or from, an intersection, pedestrian crossing, tram stop or in any location that is likely to be highly demanding of attention.	There are two intersections and a pedestrian crossing on the section of Beaconsfield Parade from which the sign is visible. However, there are no merge points or tram stops, and this section of road is not highly demanding of motorist attention.
Content & Quantity of Information	The informational load of the message should be minimised as much as possible. Advertising messages should not be displayed to create a meaningful sequence across transitions. It is undesirable for more than one sign to be visible at a time.	Number of words < Legibility Distance (m) ÷ {Speed Environment (km/h) x 0.28} x Comprehension Rate (sec). And: number of words < Comprehension Rate (sec) x 2	Sequencing of messages is prohibited by a condition on the existing planning permit. The sign is the only major advertising sign visible to southbound motorists on Beaconsfield Parade.
Message Sequencing		Sequencing of messages should be prohibited.	
Longitudinal Placement (1)		Only one advertising device should be visible to drivers at any time.	
Longitudinal Placement (2)	-	Advertising devices should not be located in such a way that they might interfere with the effectiveness of a traffic control device (e.g. by restricting sightlines or distracting from traffic control devices via proximity or as a background).	As the sign is well set back from the road, and elevated, it does not block views of traffic, signs or signals. For some southbound motorists on Beaconsfield Parade, the sign briefly appears behind some traffic signal lanterns at the intersection of Beaconsfield Parade and Acland Street, when motorists are approximately 200m from the sign. The sign also briefly appears behind some traffic signal lanterns for some southbound motorists on Beaconsfield Parade at the signalised pedestrian crossing just north of the

Issue	Principle	Recommendation	Comments
			sign. However, the sign is partly obscured by trees this location.
Offset	Roadside advertising should not be substantially offset from the travel lane it is desired to be viewed from.	Without conflicting with clear zone requirements (e.g. installation of post in a hazardous location), advertising devices should not be placed such that drivers must divert their gaze away from the forward roadway in order to comprehend the sign message.	The sign is to the side of the road and elevated. The location is readily visible within the driver's normal field of vision when travelling towards the sign. When a driver is close to the sign, and the sign is outside the normal field of vision, it is no longer visible due to the roadside vegetation.
Elevation	Roadside advertising should not be elevated to the extent that it draws gaze away from the forward roadway.	Advertising devices should not be placed at a height that coincides with the normal 'hazard viewing window' that drivers scan. That is, they should be elevated above the height of vehicles, pedestrians and traffic control devices, but not so high that they draw the gaze away from the forward roadway.	The sign is elevated above the ground, but still within the normal field of view so that viewing the sign does not draw the gaze unduly away from the forward roadway.
Orientation / Viewing Angle	-	Advertising devices should be oriented to facilitate legibility from the maximum legibility distance and across the full approach distance.	The sign is orientated to maximise visibility and legibility.
Sight Distance / Visibility	-	Advertising devices should be placed so that enough time is available on approach for drivers to comprehend the message. That is, the sight distance must correspond to the required legibility distance.	The sign is legible for approximately 250m. This is adequate to comprehend a simple image.
Risk Assessment & Crash Rate Assessment	Black spot locations should not be sites for roadside advertising.	<p>The speed environment on its own is likely to be less important than the overall risk profile of the road and driving demand characteristic of the road section which should be carefully reviewed.</p> <p>All installations should consider the overall risk profile of the road environment in question and the driver demand of the road section (e.g. crash history, AusRAP ratings, traffic volume, speed, complexity, clutter).</p> <p>In particular:</p> <ul style="list-style-type: none"> Black spots and road sections with less than a 3-star rating (AusRAP or equivalent) should be ruled out for advertising device placement. The installation should be reviewed at regular intervals and audited 	<p>As mentioned in Section 2.3 of this report, there have been six crashes causing injury in a location from where the sign is visible in the last five years. Therefore, there is a moderate crash history in the vicinity of the proposed sign. However, three of the crashes occurred at the intersection of Beaconsfield Parade and Mary Street, from where the sign is barely visible and is partly obscured by trees. Also, one crash involved a vehicle exiting a driveway, from which the sign would not be within the normal field of vision of a motorist</p> <p>The sign is not on the same posts as traffic control devices.</p>

Issue	Principle	Recommendation	Comments
		<p>against the guidance principles (because crash rates, traffic volume, the built environment etc. will change over time).</p> <p>Advertising signs should not be placed on the same posts as traffic control devices.</p>	

5.4 Summary

Based on the above, the sign has appropriate regard for the principles and recommendations outlined in the Austroads Research Report.



6. Summary & Conclusions

Based on the analysis and discussions presented within this report, the following conclusions are made:

- The images displayed on the sign are displayed for no less than 30 seconds before changing instantaneously and the sign does not display moving or flashing images or video content.
- Motorists driving south along Beaconsfield Parade see no more than one change of image on the sign unless they are stopped at a red traffic signal.
- The sign is elevated and set back from the road. Hence the sign is not a physical hazard.
- The sign is not at a location where particular concentration is required above the typical level of concentration required by motorists when driving on the road network.
- The crash history in the vicinity of the sign indicates that six crashes resulting in injury occurred in the last five-year period from where the sign might be visible. However, only two of the crashes involved motorists for whom the sign would have been clearly visible. This suggests that the existing sign is not generating significant safety issues.
- The sign has appropriate regard for the requirements of Clause 52.05-8 of the Port Phillip Planning Scheme for assessing whether a sign is a safety hazard and the principles and recommendations outlined in the Austroads Research Report regarding roadside advertising.
- Consequently, there is no reason from a road safety perspective why the expiry period on the existing permit should not be extended.



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Level 25
55 Collins Street
MELBOURNE VIC 3000
Tel +61 3 9851 9600



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stantec.com/australia