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consulting pty ltd

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Statement of Environmental Effects

Digital Advertising Signage
Princes Highway, Bombo

Prepared for JCDecaux on behalf of Sydney Trains
Submitted to the Department of Planning and Environment

March 2022

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Cover image: Photomontage of the proposed sign (Source: JCDecaux)

Revision	Prepared by	Reviewed by	Date	Revision Type
1	CT	PS/MW	23/03/2022	Draft
2	CT	PS/MW	25/03/2022	Final

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Project Summary

Project Element	Summary of the project
Proposal	• digital conversion of an existing static freestanding advertising sign with a north and south facing panel • display of illuminated advertisements 24 hours a day, 7 days a week
Advertising Display Area	• existing: 24.09m^2 (per side, includes advertising & logo panels) • proposed: 20.75m^2 (per side)
Visual Screen Size	• existing: 18m^2 (6.0m x 3.0m) • proposed: 16.25m^2 (7.936m x 2.048m)
Site Description	• Lot 27 DP1188375

Visual Impacts	• a detailed Visual Impact Assessment (VIA) has been undertaken by Keylan Consulting (Appendix 6)
	• the VIA confirms the proposal will result in an overall positive visual impact as:
	  • the proposed sign has a 10% smaller visual screen size than the existing sign
	  • the proposal is accompanied by upgrades which will improve the appearance of the advertising structure

Lighting Impacts	• a Lighting Impact Assessment (LIA) has been undertaken by Electrolight (Appendix 4)
	• the LIA confirms the proposal:
	  • complies with the relevant illumination criteria under the Signage Guidelines and AS 4282-2019
	  • will not result in unacceptable glare
	  • will not unreasonably impact on the visual amenity of nearby residences of accommodation

Road Safety Impacts	• a Digital Sign Safety Assessment (SSA) has been prepared by the Transport Planning Partnership (Appendix 3)
	• the SSA confirms the proposed sign:
	  • will be visible and readable from a maximum distance of 285m and 110m respectively from northbound lanes
	  • will be visible and readable from a maximum distance of 210m and 100m respectively from southbound lanes
	  • will be located within the stopping sight distance of a deceleration lane, however, this is not anticipated to cause any safety issues
	  • requires a minimum dwell time of 25 seconds
	  • complies with the relevant road safety criteria
	  • would not compromise safety for road users

Public Benefit	• a Public Benefit Statement has been prepared by Sydney Trains (Appendix 5) • the statement confirms the revenue will support essential Sydney Trains services, the proposed sign will be available for emergency messaging and messaging from Sydney Trains and TfNSW for 5 minutes per hour
Hours of Operation	• 24 hours a day, 7 days a week
Cost of Works	• $492,250 (including GST)

Table 1: Project Summary

1 Introduction

This Statement of Environmental Effects (SEE) has been prepared by *Keylan Consulting Pty Ltd* (Keylan) for JCDecaux on behalf of *Sydney Trains* (the Applicant) to accompany a Development Application (DA) for the digital conversion of an existing static advertising sign at Bombo within the Kiama Local Government Area (LGA).

The Minister for Planning and Public Spaces (the Minister) is the consent authority for the application, as prescribed under section 3.10(c) of *State Environmental Planning Policy (Industry and Employment) 2021* (Industry and Employment SEPP). Accordingly, this SEE has been prepared and is submitted to the Department of Planning and Environment (DPE) pursuant to the provisions of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

As the Applicant is a public authority, the subject application is a Crown Development Application pursuant to Part 4 Division 4.6 of the EP&A Act.

This SEE includes a detailed assessment of the operation of the proposed digital advertising signage against the requirements outlined in the *Transport Corridor Outdoor Advertising and Signage Guidelines, Assessing Development Applications under SEPP 64* (DP&E, 2017) (Signage Guidelines).

The proposed development comprises the removal of an existing double-sided static advertising sign at the site adjacent to the Princes Highway and its replacement with a digital advertising sign. The new digital advertising sign provides:

- two new digital advertising panels
- an advertising display area of 20.75m^2 and a visual screen size of 16.25m^2 (per side)
- the display of illuminated advertisements
- a minimum dwell time of 25 seconds for message changes
- a maximum luminance of 250 cd/m^2 during the night time period
- webcam mounted on a safety arm to monitor visual content

The proposed digital advertising panels have a 10% smaller visual screen size than the existing 18m^2 panels and will improve the overall quality and visual appearance of the display.

The application seeks consent to operate the sign for a period of 15 years. The estimated cost of works of the development is $492,250 (including GST).

This SEE should be read in conjunction with the following supporting documents:

Supporting documentation	Appendices
Industry and Employment SEPP & Signage Guidelines Assessment	Appendix 1
Architectural Plans	Appendix 2
Signage Safety Assessment	Appendix 3
Lighting Impact Assessment	Appendix 4
Public Benefit Statement	Appendix 5
Visual Impact Assessment	Appendix 6
Site Survey	Appendix 7

Table 2: List of Appendices

1.1 Pre-lodgement meeting

Department of Planning and Environment

On 7 March 2022, a DA pre-lodgement meeting was convened with DPE to discuss key issues associated with the development application.

The meeting provided an opportunity for JCDecaux to introduce the site and the proposal and to facilitate discussion on key issues that are considered as part of this DA. The application has been prepared in accordance with the advice given at the pre-lodgement meeting with DPE.

Key issues discussed include:

- **Road Safety** – Concurrence from Transport for NSW (TfNSW) is critical to approval. In-Principle approval should be gained from TfNSW for proposal prior to DA lodgement.
- **Amenity** – The proposal should include mitigation measures to avoid residential impacts where proposals are in close proximity to such uses. This may include reducing LUX levels and curfews.
- **Conversions** – Where signs are being upgraded from static to digital, opportunities to reduce the proposed size of the asset and display area should be investigated. Seek to improve design and visual impact.
- **Visual Impact** – Avoid blocking other signs, such as businesses identification signs. Proposals should provide evidence of reducing clutter and visual impact should be assessed carefully.
- **Heritage/National Parks** – Respect architecture of bridge and sensitive areas such as natural settings (e.g. National Parks).
- **Public Benefit** – Show how proposal is specifically providing public benefit under the Industry and Employment SEPP. Consultation and engagement with the relevant Council is recommended, whether this is pre or post-lodgement.

This application has been prepared with consideration of the issues raised by DPE during the pre-lodgement meeting. These issues are addressed at Section 5.

Transport for NSW

A meeting was convened with TfNSW to discuss traffic and road safety issues associated with the development application. During this meeting no significant issues were raised with the proposal from a traffic safety perspective. Road safety is addressed at Section 5.1.

2 The site and locality

2.1 Site Description

The subject site is in the Kiama LGA approximately 26km south of Wollongong and 1km north of Kiama town centre. The site is located between the Princes Highway and the railway in a fenced off area that is not accessible to public vehicles or pedestrians (Figure 1).

The Princes Highway is a Classified Road (Highway 1) and is frequented by drivers travelling north and south along the NSW coast. The site is also located opposite the Kiama Cemetery approximately 100m south of Bombo Train Station.

The existing freestanding static sign has dimensions of 6.00m x 3.00m and has north and south facing panels that are not illuminated. There is no other advertising signage in the immediate vicinity other than road safety signage to the north and south. An 85km/h turning speed sign is located 20m south of the site and a sign for the Gipps Street highway exit is located 80m south of the site.

The subject site in its broader context is shown in Figure 2 and the site's local context is shown in Figure 3.

Figure 1: The site (Source: Google Maps)

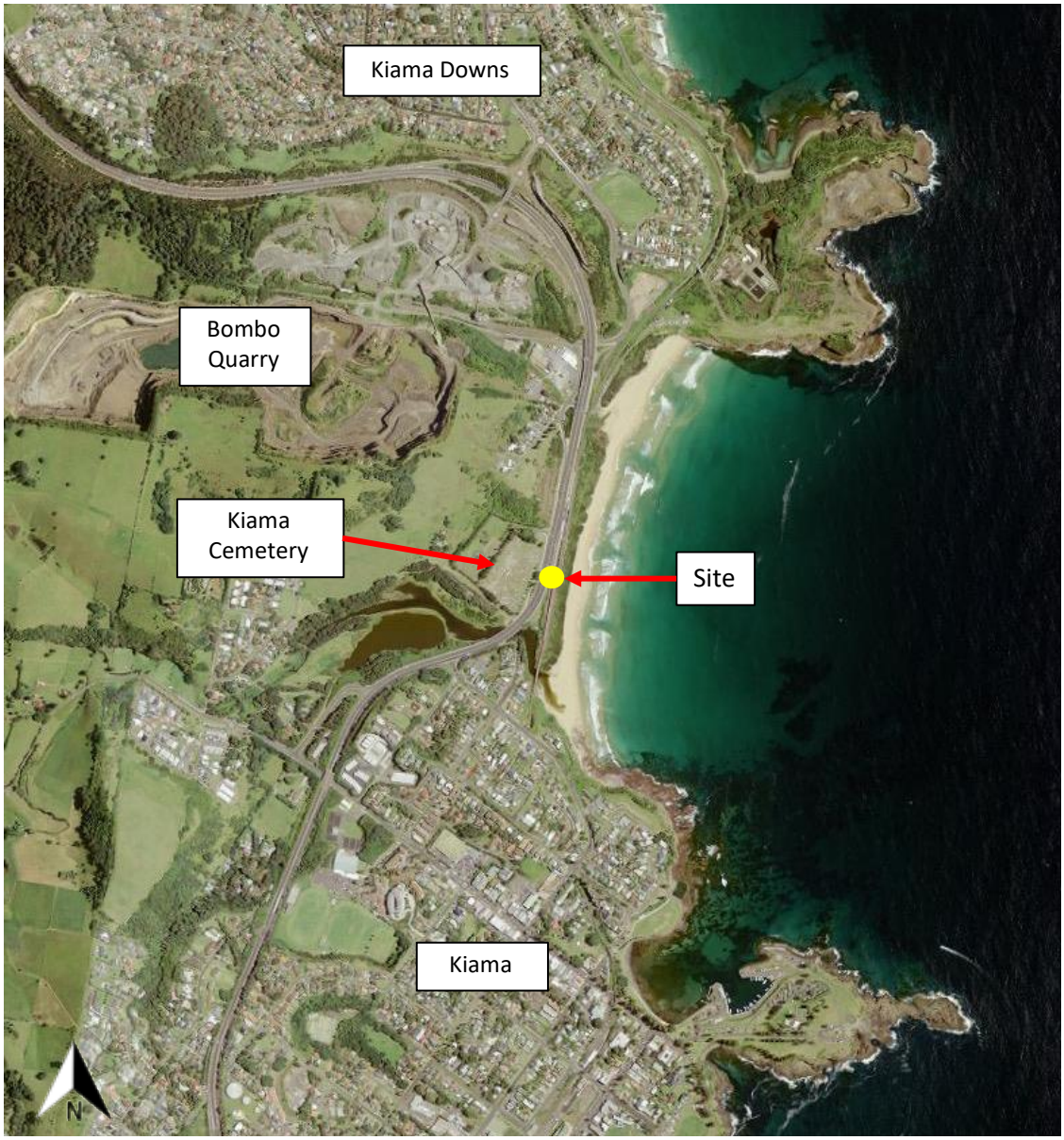

Figure 2: Site context (Base source: SixMaps)

Figure 3: Local context (Base source: SixMaps)

2.2 Existing Road Environment

The Princes Highway is an established road corridor, comprising six lanes with three lanes travelling in each direction. This section of the road corridor is flat and follows the alignment of Bombo Beach.

There is a commuter car park and drop off area associated with Bombo Station north of the site which is entered from the Princes Highway (southbound) 100m north of the site and rejoins the highway 25m north of the site.

The site is approximately 400m north of the nearest southbound entry and exit and 100m south of the nearest northbound entry and exit at Kiama Cemetery. The sign will be visible to north and southbound traffic travelling along the Pacific Highway as well as trains travelling north and south along the railway.

On approach to the site in both directions a speed limit of 100km/h applies. There are also pedestrian footpaths on both sides of the Princes Highway.

2.3 Surrounding Locality

The sign's surrounding locality is characterised by the Princes Highway road corridor, the Sydney Trains railway corridor and the coastal environment.

Development and land uses surrounding the site include:

- the railway line, Bombo Beach and the Pacific Ocean to the east
- Bombo Train Station and commuter carpark to the north
- Kiama Cemetery and the Princes Highway to the west
- Spring Creek 170m to the south

There is limited residential development within the immediate vicinity of the site. The closest residential receivers are located 320m northwest, 320m west and 240m south. The visual catchment of the sign is limited to the Princes Highway and railway corridor and also includes some residential properties located approximately 400m south of the site.

Visual impacts to sensitive receivers are discussed further at Section 5.2.

Figure 4: Area surrounding the site to the south (Source: Keylan)

Figure 5: The site and the surrounding area as seen from approximately 130m south of the site (Source: Keylan)

Figure 6: Surrounding coastal environment and view towards the site from Bombo Headland (Source: Keylan)

3 The Proposal

The proposal involves the digital conversion of an existing freestanding static advertising sign located between the Princes Highway and the railway corridor at Bombo.

The development is summarised in the table below.

Development Aspect	Description
Development summary	• digital conversion of existing static advertising signage
Associated works	• the existing advertising panels, cladding, support columns and footings are to be removed • the proposal includes a new advertising sign, steel column, footings and a ladder and internal walkway between the panels for maintenance access • supporting structures are to be painted black and monument to improve the visual appearance of the advertising structure
Sign location	• the site is located between the Princes Highway and the railway corridor (visible to north and southbound traffic along the Princes Highway)
Advertising display area	• 20.75m^2 (per side)
Visual screen size	• existing: 18m^2 (6.0m x 3.0m) • proposed: 16.25m^2 (7.936m x 2.048m)
Dwell time	• minimum dwell time of 25 seconds in accordance with the Signage Guidelines
Sign exposure	• visible and readable from a maximum distance of 285m and 110m respectively from northbound lanes • visible and readable from a maximum distance of 210m and 100m respectively from southbound lanes
Illumination	• the digital signage is to be illuminated using LEDs installed within the front face 24 hours a day, 7 days a week
Consent time period	• 15 years

Existing signage	• existing static advertising sign to be removed
	  • the existing static advertising panels (6.0mm x 3.0m, 18m^2) is larger than the proposed sign
	  • the new sign will be 10% smaller than the existing sign
	  • the existing static advertising sign is not illuminated

Table 3: Development summary

The proposed signage will be available for display of emergency messaging by Sydney Trains and other NSW Government agencies such as NSW Police, NSW Health and Transport for NSW.

Architectural drawings for the sign are shown in Figure 7 to Figure 10 and provided within the Architectural package at Appendix 2.

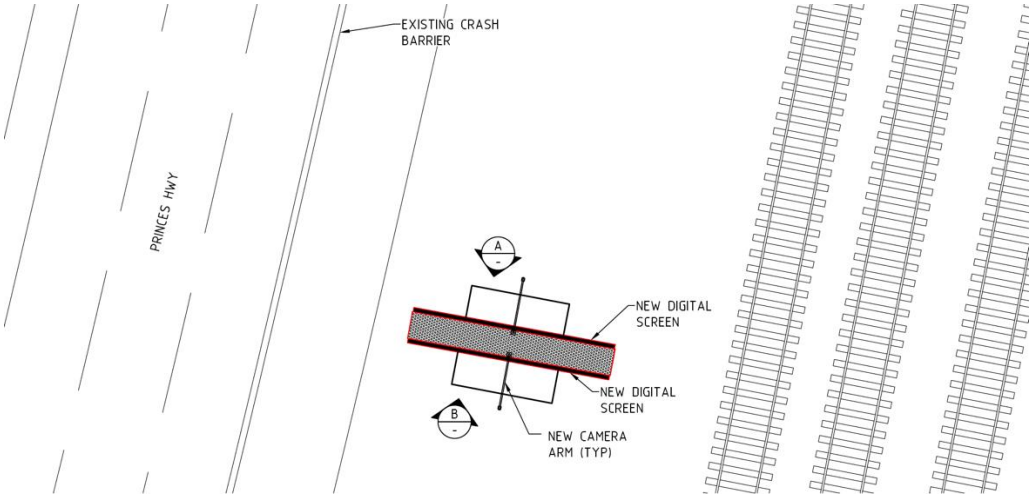

Figure 7: Digital signage plan (Source: DBCE)

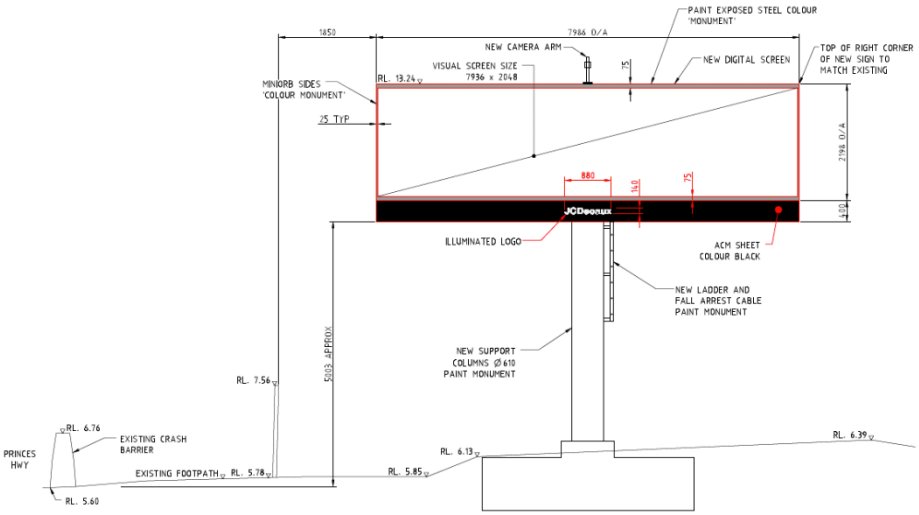

Figure 8: Southern elevation of proposed sign (Source: DBCE)

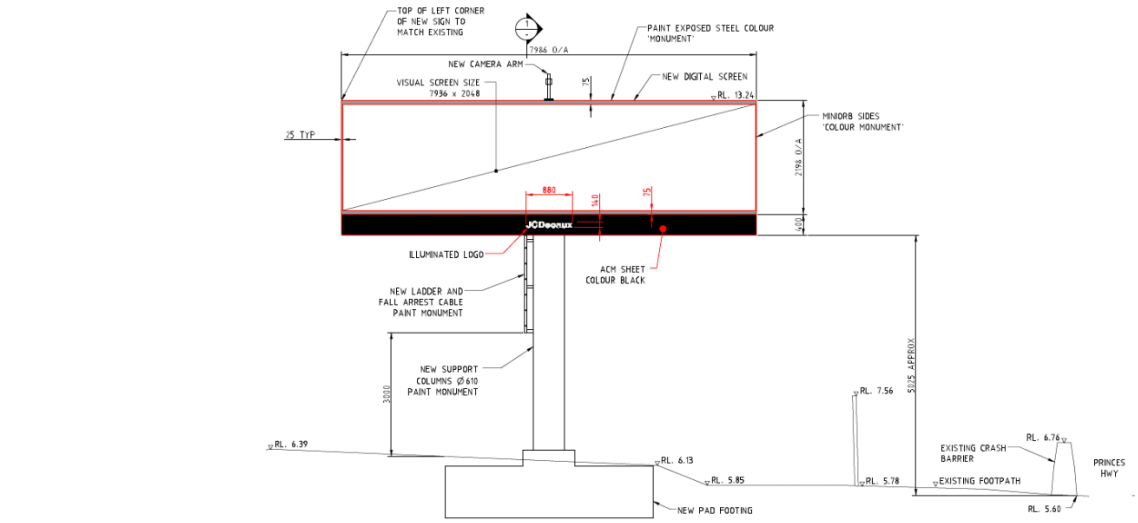

Figure 9: Northern elevation of the proposed sign

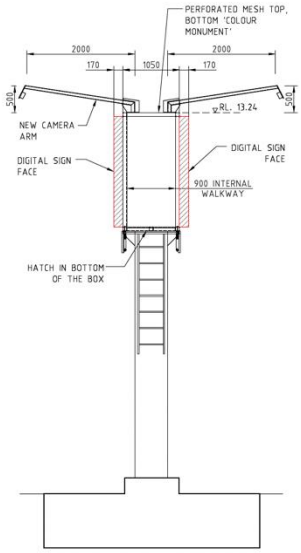

Figure 10: Section of proposed sign (Source: DBCE)

Figure 11: Indicative view from Princes Highway northbound (Source: JCDecaux)

Figure 12: Indicative view from Princes Highway southbound (Source: JCDecaux)

3.1 Digital LED Technology for Outdoor Advertising

Outdoor advertising requires changeable signs or images. Traditional outdoor advertising billboards require manual change of materials (paint, paper and vinyl) either pasted onto billboards or tensioned across support frames. The introduction of digital technology has enabled new methods to change signage without regular manual change to the advertising signage.

A LED or digital screen will present a very high quality image by adopting a pixel pitch of 10mm in accordance with industry standards. A digital screen is comprised of a cluster of red, green, blue and amber diodes driven together to form a full colour pixel usually square in shape. These pixels are spaced evenly apart and are measured from centre to centre for absolute pixel resolution.

The proposed digital advertising sign will only display static content. The LED display will not scroll, flash or feature motion pictures or emit intermittent light. The advertising signage includes an operation management system to ensure that only static images are displayed.

3.2 Digital LED Screen Operation and Management

JCDecaux will operate the content management system for the advertising signage. This management system ensures that unapproved content is not downloaded either by mistake or without appropriate authorisation.

A webcam will monitor operation of the sign 24 hours a day. A motion threat response is built into the display, which will make the screen incapable of displaying movement or live video feed. In the event that unapproved content is displayed the signage will, by default, revert to a black screen format immediately.

The LED screen will display content in feed cycles that are sequentially rotated on a loop cycle. Static digital advertisements will appear on the screen for a 25 second dwell time before changing to a new static digital image. There will be a 0.1 second transition time between images, which appears instantaneous.

The proposed dwell time is consistent with the global and national operation of LED screens, variable messaging and scrolling technology as demonstrated below:

- the dwell time for electronic signage in the United States is typically 8 seconds
- scrolling technology is typically 7 to 8 seconds
- NSW TfNSW variable messaging signage works on a 3 second transition time for both information and emergency displays
- the 25 second dwell time specified for this 100km/hr speed zone is consistent with the Signage Guidelines

JCDecaux will implement content controls for the proposed signage, including:

- no tobacco products
- no overtly religious advertising
- no advertising that contains overt and sexually graphic images
- no pornography and illegal drugs

Further, all advertising copy material will comply with the following:

- Australian Advertising Industry Code of Conduct
- The Outdoor Media Association (OMA) Code of Conduct

Car Park Sensor

The proposal will include a sensor which detects when vehicles are leaving the Bombo Station commuter car park. If the sensor detects a car is exiting the car park, the north-facing panel will not change advertisements. This is proposed to ensure drivers re-joining the Princes Highway are not distracted by advertisement changes on the display.

The performance of the sensor will be reviewed as part of the road safety audit that will be conducted post the 12-18 month operational period and will be removed subject to the findings of the road safety audit.

Sign Access and Maintenance

The sign will be accessed from the internal walkway which is proposed to be constructed in between the two display panels and accessed by ladder. JCDecaux will be responsible for maintenance of the signage structure. Maintenance will be undertaken by employees/ representatives of JCDecaux.

Hours of Operation

The proposed signage is for 24-hour operation, 7 days a week.

4 Statutory Planning Framework

4.1 Environmental Planning and Assessment Act 1979

As the Applicant is a public authority, the subject application is a Crown Development Application pursuant to Part 4 Division 4.6 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The subject application is not Integrated Development under section 4.46 of the EP&A Act.

The proposal is consistent with the objects of the EP&A Act as it is considered to promote the orderly and economic use and development of land without resulting in an adverse impact on the environment. Detailed assessment against the objects of the EP&A act is provided below.

Objective	Comment
(a) To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,	The development promotes the social and economic welfare of the community by generating revenue to improve and maintain the Sydney Trains network and provide messages to the community during key periods on behalf of the NSW Government.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	This SEE provides information on the relevant economic, environmental and social impacts of the proposed development to enable the consent authority to undertake a thorough environmental assessment and assist in its decision-making on the application.
(c) to promote the orderly and economic use and development of land,	The development promotes the orderly and economic use of the land by providing a new digital advertising sign within an established transport corridor that will provide public benefits including the generation of revenue to contribute to improving and maintaining the Sydney Trains network
(d) to promote the delivery and maintenance of affordable housing,	Affordable housing does not form part of this application.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,	The development will not impact on any threatened species or other species of native animals and plants, ecological communities and their habitats
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	There are no significant historical or Aboriginal cultural heritage features at the site that will be significantly impacted by the development. Impacts on nearby heritage items are addressed at Section 5.4.
(g) to promote good design and amenity of the built environment,	The development will be located within an established transport corridor. The design of the sign is considered to promote good design and will not have an adverse impact on the amenity of the surrounding location.
(h) to promote the proper construction and maintenance of buildings, including the	The development will be constructed and maintained in accordance with any conditions

Objective	Comment
protection of the health and safety of their occupants,	of approval issued by the consent authority and the relevant requirements that relate to health and safety, construction and maintenance.
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	This SEE is submitted to DPE to enable an environmental assessment of the application. It is expected that the SEE will be referred by DPE to other State agencies and Council for further assessment and comment.
(j) to provide increased opportunity for community participation in environmental planning and assessment.	As part of DPE's assessment of the application, the SEE will be made publicly available and the community, Council and State agencies will be invited to provide comment via a submission on the proposal. Any submissions received will be addressed as part of a Response to Submissions Report.

Table 4: Assessment against Objectives of the EP&A Act

This section of the report provides the planning assessment against the key statutory environmental planning instruments and Development Control Plans relevant to the development. The following detailed assessment of the proposal is provided and which is based on the heads of consideration contained in section 4.15 of the EP&A Act.

Relevant Provision	Comment
(a) the provisions of:	
(i) any environmental planning instrument, and	The relevant environmental planning instruments are addressed at Section 4.
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	The relevant proposed environmental planning instruments are addressed at Section 4
(iii) any development control plan, and	The *Kiama Development Control Plan 2020* is addressed at Section 4.4.3.
(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and	No planning agreement or draft planning agreement has been entered into as part of this application.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),	The application is consistent with the relevant matters of the EP&A Regulations.
(v) (Repealed)	N/A
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments,	The impacts of the proposal are addressed in Section 5.

Relevant Provision		Comment
	and social and economic impacts in the locality,	
(c)	*the suitability of the site for the development,*	Site suitability is addressed at Section 5.5.
(d)	*any submissions made in accordance with this Act or the regulations,*	Any submissions made on this subject development application will be duly considered and addressed by Keylan.
(e)	*the public interest.*	Public interest is addressed at Section 5.6.

Table 5: Section 4.15(1) assessment

4.2 Heritage Act 1977

The *Heritage Act 1977* (Heritage Act) makes provisions to conserve the State's environmental heritage. It provides for the identification, registration and protection of items of State heritage significance and constitutes the Heritage Council of New South Wales.

The Bombo Railway Station Group (SHR ID 01092) (Figure 13) is located 100m north of the site and was gazetted onto the State Heritage Register under the Heritage Act on 2 April 1999. The item is also listed under section 170 of the Heritage Act on the NSW State agency heritage register. The site is not located within the curtilage of the item and is not considered integrated development pursuant to the provisions of section 4.45 of the EP&A Act.

The statement of significance notes that Bombo Railway Station is of State historical significance as it retains its 1887 weatherboard platform building, out-of-room, remnant early platform foundations and brick paved platform surface, and 1925 signal box with original signal levers. The statement of significance also recognises its State aesthetic significance for its landscape setting and also its rarity.

There is no Conservation Management Plan (CMP) for the Bombo Railway Station Group on the Heritage Management System.

The proposal is also not anticipated to cause any impacts affecting the heritage significance of the station, given it is the conversion of an existing sign and is of a sufficient distance that it does not alter people's experience of the item. Additionally, the historical significance associated with the original station buildings and the aesthetic significance associated with the broader coastal environment are not altered or significantly altered by this proposal.

Heritage impacts are considered further at Section 5.2.

Figure 13: Bombo Railway Station Group State heritage register curtilage (Source: Heritage NSW)

4.3 State Environmental Planning Policies

The proposal has been designed with regard to the objectives and standards of the relevant planning instruments and policies that apply to the site. Under the provisions of the EP&A Act, the key applicable state environmental planning policies are:

- *State Environmental Planning Policy (Industry and Employment) 2021*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- *State Environmental Planning Policy (Resilience and Hazards) 2021*

The application of the above plans and policies is discussed in detail in the following sections of this SEE.

4.3.1 State Environmental Planning Policy (Industry and Employment) 2021

Chapter 3 – Advertising and Signage

Chapter 3 of the Industry and Employment SEPP aims to ensure that advertising and signage is well located, compatible with the desired amenity of an area and of high quality. Chapter 3 applies to all signage, advertisements that advertise or promote any goods, services or events and any structure that is used for the display of signage.

Regardless of permissibility under the KLEP 2011, the proposed sign is permissible with consent under clause 3.14 of the Industry and Employment SEPP as it is on behalf of Sydney Trains and is within a railway corridor. Further, under section 3.10(c) of the Industry and Employment SEPP, the Minister is the consent authority for the application as it is for an advertisement displayed on behalf of Sydney Trains in a rail corridor.

A comprehensive assessment against the provisions of Chapter 3 of the Industry and Employment SEPP that apply to the development is provided at Appendix 1.

Schedule 5 Assessment

Section 3.6 of the Industry and Employment SEPP requires the consent authority to assess the proposal against the criteria within Schedule 5 prior to granting consent to carrying out of any development on that land. An assessment of these matters is provided in the Table below:

Schedule 5	Comment	Compliance
1. Character of the Area		
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	• the proposal is compatible with the existing and desired future character of the area as it reduces the advertising area of an existing sign and improves the quality of the advertising structure • the proposal is consistent with outdoor advertising in the area being within a transport corridor located between the Princes Highway and the railway line	Yes
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?		Yes
2. Special Areas		
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	• the proposal does not detract from the amenity of visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas • the proposal is visible from 3 heritage items and residential areas from a significant distance • the visual impacts to these areas are considered minimal given the sign is 10% smaller than the	Yes

Schedule 5	Comment	Compliance
	existing sign and are further considered in the Visual Impact Assessment (Appendix 6)	
3. Views and vistas		
Does the proposal obscure or compromise important views?	• the proposal is visible from Bombo Headland and residential areas in Kiama, however, this is at a sufficient distance that the advertising structure will be barely perceptible • the height of the proposal is consistent with street lighting and infrastructure along the railway corridor to ensure the proposal is within the skyline and does not obscure or dominate vistas • the proposal does not conflict with the viewing rights of other advertisers as it is a conversion of an existing advertising sign	Yes
Does the proposal dominate the skyline and reduce the quality of vistas?		Yes
Does the proposal respect the viewing rights of other advertisers?		Yes
4. Streetscape, Setting or Landscape		
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	• as identified above, the proposal is appropriate for the streetscape as it reduces the advertising area of an existing sign and sits within the skyline • the proposal contributes to the visual interest along the Princes Highway through the display of high-quality advertisements • the proposal rationalises the existing advertising by reducing the display area • the proposal does not require ongoing vegetation management	Yes
Does the proposal contribute to the visual interest of the streetscape, setting or landscape?		Yes
Does the proposal reduce clutter by rationalising and simplifying existing advertising?		Yes
Does the proposal screen unsightliness?		Yes
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?		Yes
Does the proposal require ongoing vegetation management?		Yes
5. Site and Building		
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?	• the proposal is compatible with the scale, proportion and characteristics of the site as it reduces the area of existing signage • the proposal respects and improves the features of the site	Yes
Does the proposal respect important features of the site or building, or both?	• the proposal shows innovation by upgrading the existing display to	Yes

Schedule 5	Comment	Compliance
	provide high quality advertisements and community messaging	
Does the proposal show innovation and imagination in its relationship to the site or building, or both?		Yes
6. Associated Devices and Logos with Advertisements and Advertising structures		
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	• a security camera / web camera is proposed to ensure the display of the LED screen is working properly • a compliant operator logo will also be located at the bottom of the screen within the advertising structure	Yes
7. Illumination		
Would illumination result in unacceptable glare?	• a Lighting Impact Assessment (LIA) prepared by Electrolight is included at Appendix 4 • the LIA confirms that the proposed digital conversion would not result in unacceptable glare or have any detrimental impacts to safety • the proposed signage incorporates baffles which reduce any upward light spill • additionally, the sign complies with all relevant criteria for luminance of digital advertisements and should not cause any reduction in visual amenity to nearby residences • the brightness of the LEDs will be controlled to provide upper and lower thresholds as required as well as automatically via a local light sensor to adjust to ambient lighting conditions • the proposal is consistent with the applicable 'post curfew' illuminance limits established under AS 4282-2019	Yes
Would illumination affect safety for pedestrians, vehicles or aircraft?		Yes
Would illumination detract from the amenity of any residence or other form of accommodation?		Yes
Can the intensity of the illumination be adjusted, if necessary?		Yes
Is the illumination subject to a curfew?		Yes
8. Safety		
Would the proposal reduce the safety for any public road? *Would the proposal reduce the safety for pedestrians or bicyclists?* *Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?*	• the Signage Safety Assessment prepared by TTPP confirms the proposal will not reduce the safety of any public road or reduce the safety of pedestrians or bicyclists. • the proposal does not obscure sightlines from public areas	Yes

Table 6: Schedule 5, Industry and Employment SEPP Consideration

4.3.2 Transport Corridor Advertising and Signage Guidelines 2017

The *Transport Corridor Outdoor Advertising and Signage Guidelines* (Signage Guidelines) sets out a best practice approach for the planning and design of outdoor advertisements in transport corridors in NSW.

The Signage Guidelines have been established to compliment the provisions of the Industry and Employment SEPP under the EP&A Act. The DA for any advertising sign that is located in, or adjacent to, a transport corridor to demonstrate how the proposal addresses the Signage Guidelines. An assessment against the criteria within Signage Guidelines is provided at Appendix 1 and Section 5.

The assessment provided at Appendix 1 demonstrates the proposal is consistent with:

- the Land Use Compatibility Criteria for Transport Corridor Advertising
- the Digital Sign Criteria
- the Freestanding Signage Criteria
- Road Safety (refer Section 5.1)
- Luminance Levels for Digital Advertisements (refer Section 5.2)
- the Public Benefit Test (refer Section 5.6)

4.3.3 State Environmental Planning Policy (Transport and Infrastructure) 2021

Chapter 2 – Infrastructure

Chapter 2 of *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Transport and Infrastructure SEPP) identifies the environmental assessment category into which different types of infrastructure and services development fall. In addition, the Transport and Infrastructure SEPP identifies those matters that are to be considered in the assessment of development that is adjacent to particular types of infrastructure, including development in and adjacent to road corridors.

Clause 2.118 of the Transport and Infrastructure SEPP requires the consent authority to be satisfied that any new development with a frontage to a classified road would not compromise the operation and function of the road. The proposal comprises development with frontage to a classified road (Princes Highway – Highway 1).

A Signage Safety Assessment (SSA) has been prepared as part of the application and is included at Appendix 3. The SSA considers the ongoing operation and function of the Princes Highway in context to the development and concludes the proposal is acceptable from a road safety perspective. Road safety is further discussed at Section 5.1.

4.3.4 State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 2 – Coastal Management

Chapter 2 of *State Environmental Planning Policy (Resilience and Hazards) 2021* (Resilience and Hazards SEPP) aims to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objects of the *Coastal Management Act 2016*.

Chapter 2 of the Resilience and Hazards SEPP applies to land within the coastal zone which is comprised of the following areas identified by the Chapter 2 maps.

- the coastal wetlands and littoral rainforests area
- the coastal vulnerability area
- the coastal environment area
- the coastal use area

The site is identified in the coastal environment area and coastal use area and as a result development consent must not be granted unless the consent authority has addressed a series of considerations including Aboriginal and built environment heritage, visual amenity of the coast, biodiversity impacts, water quality impacts and public access to the coast.

Visual impacts on the coastal environment and surrounding heritage items are addressed further at Section 5 and within the Visual Impact Assessment at Appendix 6.

Additionally, physical works on site are limited to the installation of a new advertising structure which is unlikely to result in any adverse biodiversity and water quality impacts due to the minor scale of works.

Further, the site is located within a railway corridor which is not able to be accessed by the public and therefore the proposal will not further restrict public access to the coast.

4.4 Kiama Local Environmental Plan 2011

The *Kiama Local Environmental Plan 2011* (KLEP 2011) is the principal Environmental Planning Instrument applicable to the land.

4.4.1 Zoning

The site is located on land zoned SP2 Infrastructure – Classified Road under the *Kiama Local Environmental Plan 2011* (KLEP 2011). Signage is prohibited in the SP2 zone under the KLEP 2011.

Notwithstanding, clause 3.14 of the Industry and Employment SEPP overrides the provisions of any other environmental planning instrument including the provisions under the KLEP 2011. Consequently, under clause 3.14(a) of the Industry and Employment SEPP, the display of an advertisement by or on behalf of Sydney Trains on a railway corridor is permissible with development consent.

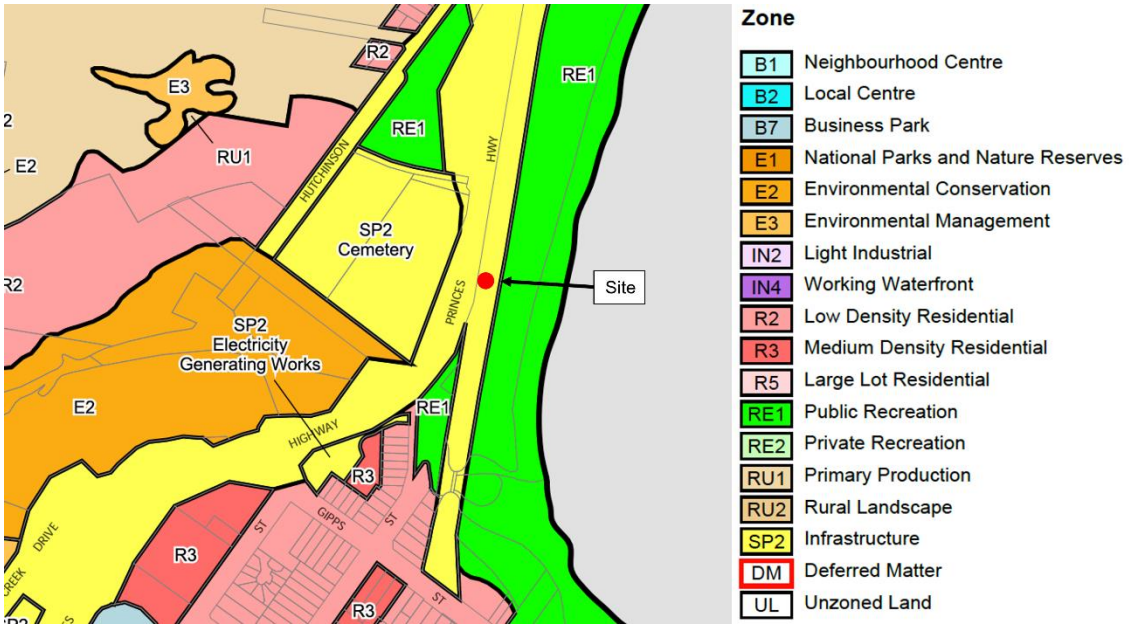

Figure 14: Land use zoning map (Source: KLEP 2011)

4.4.2 Heritage

There are two heritage items in the surrounding locality as illustrated by Figure 9. The site is located opposite the Kiama Cemetery local heritage item (Item I111) and 100m south of Bombo Railway Station Group state and local heritage item (Item I2).

Despite this, the site's visibility from both heritage items is limited due to its distance from the Bombo Railway Station and its orientation towards northbound and southbound traffic along the Princes Highway which limits views from Kiama Cemetery. Trees within Kiama Cemetery and along the Princes Highway further obstruct views towards the site.

Additional detail on the Bombo Railway Station Group is included at Section 4.2 and heritage impacts are further discussed at Section 5.2.

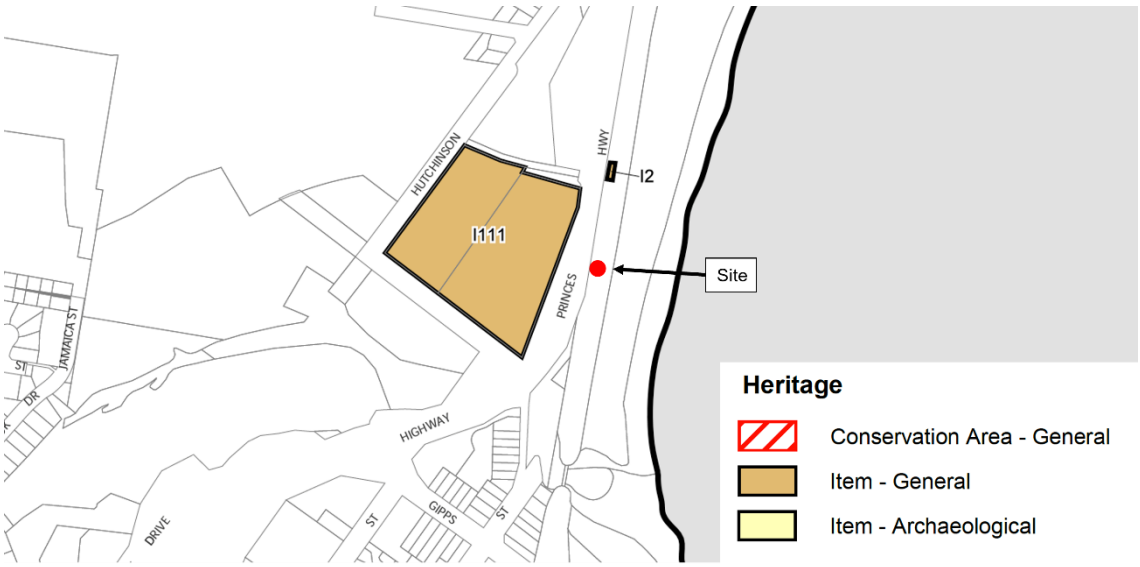

Figure 15: Heritage map (Source: KLEP 2011)

4.4.3 Acid Sulfate Soils

The site is identified as containing Class 5 acid sulfate soils on the Acid Sulfate Soils Map (Figure 11). The objective of Clause 6.1 is to ensure that development does not disturb, expose or drain acid sulfate soils and cause environmental damage.

Earthworks proposed as part of this application are limited to a new pad footing to support the advertising structure.

The new pad footing will involve minor earthworks approximately 1m below the natural ground level and will not lower the watertable below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.

Accordingly, the provisions of Clause 6.1 do not apply to the proposal.

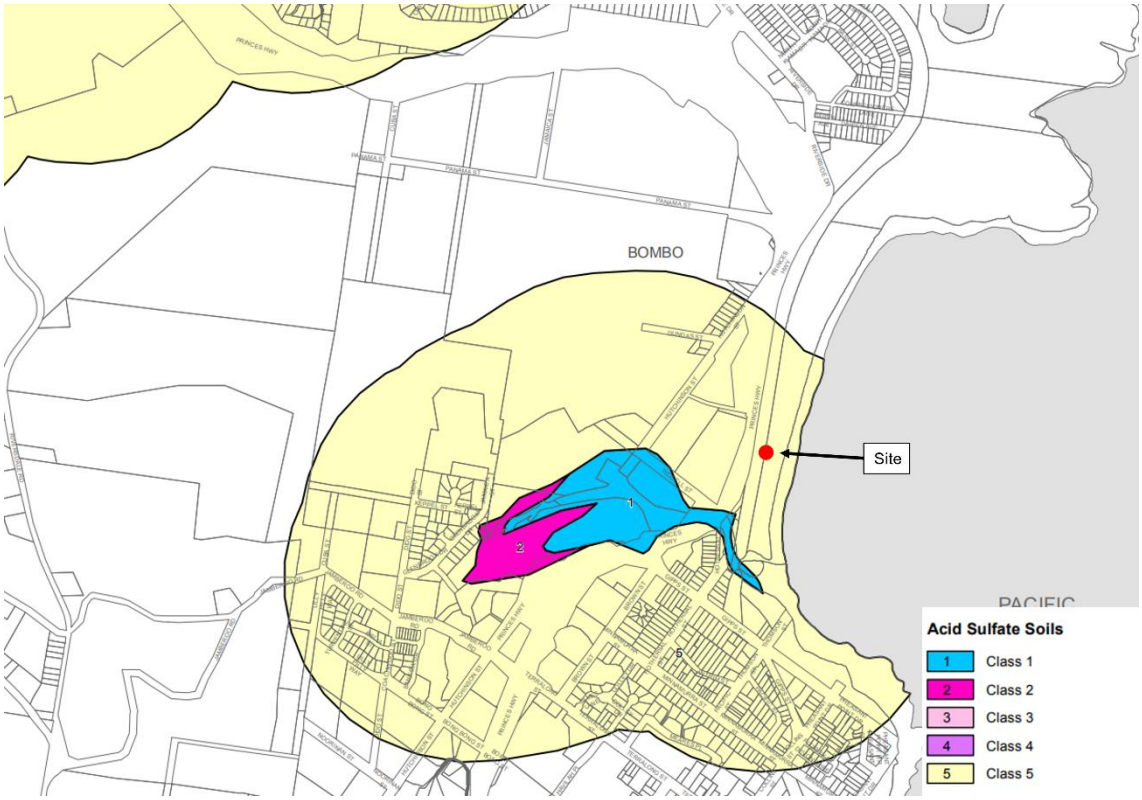

Figure 16 Acid Sulfate Soils Map (Source: KLEP 2011)

4.5 Kiama Development Control Plan 2020

The *Kiama Development Control Plan 2020* (KDCP 2020) does not prescribe any specific controls applicable to signage or advertising.

Chapter 4 of the KDCP 2020 relates to heritage and cultural conservation and requires consideration of the following design criteria for new development in the vicinity of a heritage item.

Design Criteria	Comment
a) Character - The character of the built environment is shaped by many contributing factors including: the natural landform; landscape elements; date and style of buildings; scale and form of buildings; street and subdivision patterns; building setbacks; materials and details; and views, vistas and skylines.	The proposal is consistent with the character of the area being located between a major road corridor and railway corridor which also separates the site from heritage items. Further, the proposal involves the digital conversion of an existing advertising structure and will therefore not substantially alter the character of the area. Given the locality is dominated by transport corridors there is no prevalent building style, materials or subdivision patterns.
b) Scale - Scale encompasses proportion, height and bulk, and relates to the size of buildings relative to surrounding buildings.	The proposed sign has a 10% smaller visual screen size than the existing advertising sign. The scale is also consistent with the scale of surrounding structures and vegetation. The scale of the proposed sign is not considered to impact upon the values of nearby heritage items.
c) Form - Form relates to the overall shape and volume of a building, and the arrangement of its parts including the roof and façade.	The form of the advertising structure is consistent with the character of the road corridor and is not considered likely to impact upon surrounding heritage items.
d) Siting - Siting relates to the positioning of buildings on allotments, which includes houses, garages and carports.	The siting of the proposed sign ensures limited impact on surrounding items as it is a sufficient distance from the Bombo Railway Station Group and is oriented to ensure visibility is limited from Kiama Cemetery.
e) Materials and Detailing - Proposed alterations and additions to heritage items and new development in the vicinity of a heritage item or within the site of a heritage item should recognise and respond to the predominant materials, textures, and details which contribute to the character of a locality.	The proposal seeks to upgrade an existing advertising structure including new support structures which will be painted monument to ensure a high quality and uncluttered appearance. The proposed materials will not detract from the surrounding heritage items and will improve the visual of appearance of the existing sign.

Table 7: Assessment against the design criteria for new development in the vicinity of a heritage item

5 Environmental Planning Assessment

5.1 Road safety

A Signage Safety Assessment (SSA) has been prepared by the Transport Planning Partnerships (TTPP) (Appendix 3). The SSA considers the signage exposure and road accident history and has been prepared having considered the requirements for road safety set out in the Signage Guidelines.

5.1.1 Road environment

The existing road environment along the Princes Highway is summarised in Table 15.

Existing Feature	Description
Road classification	• Princes Highway - Classified Road (Highway 1)
Speed limit	• Princes Highway - 100km/h
Nearby intersections and traffic control devices	• highway exit to Gipps Street located 300m south of the site • highway exit to Hutchinson Street located 270m north of the site • unsignalised intersection with Riddell Street 85m southwest of the site • unsignalised access to Kiama Cemetery 120m north of the site
Road configuration and geometry	• dual carriageway three traffic lanes in each direction • there is an additional left turn/deceleration lane along the Princes Highway for vehicles travelling northbound and seeking to access Kiama Cemetery • the Bombo Station commuter car park is located 40m north of the site and is accessed from the Princes Highway southbound
Crash data	• no crashes recorded in the last five years within 285m north or 210m south of the site (visible distance of the sign)
Pedestrian and cyclist infrastructure	• pedestrian footpaths located on both sides of the Princes Highway • no pedestrian crossing facilities in the vicinity of the site • no cyclist infrastructure along either side of the Princes Highway
Parking	• no stopping or car parking is permitted along the Princes Highway at any time • Bombo Station car park is located 100m north of the site
Stopping sight distance (SSD)	• the SSD is calculated based on a speed of 110km/h • the mimimum safe SSD distance for a speed of 110km/h is 193m

Table 15: Existing road environment (Source: TTPP Consulting)

5.1.2 Signage exposure

North approach

The SSA estimates that the proposed sign will be readable from 110m to southbound motorists in all lanes of the Princes Highway and visible from:

- 215m from Lane 1 (Figure 18)
- 240m from Lane 2 (Figure 19)
- 285m from Lane 3 (Figure 20)

In all lanes, the proposed sign would become out of driving view approximately 10m north of the proposed sign. The indicative signage exposure views are shown in the figures below.

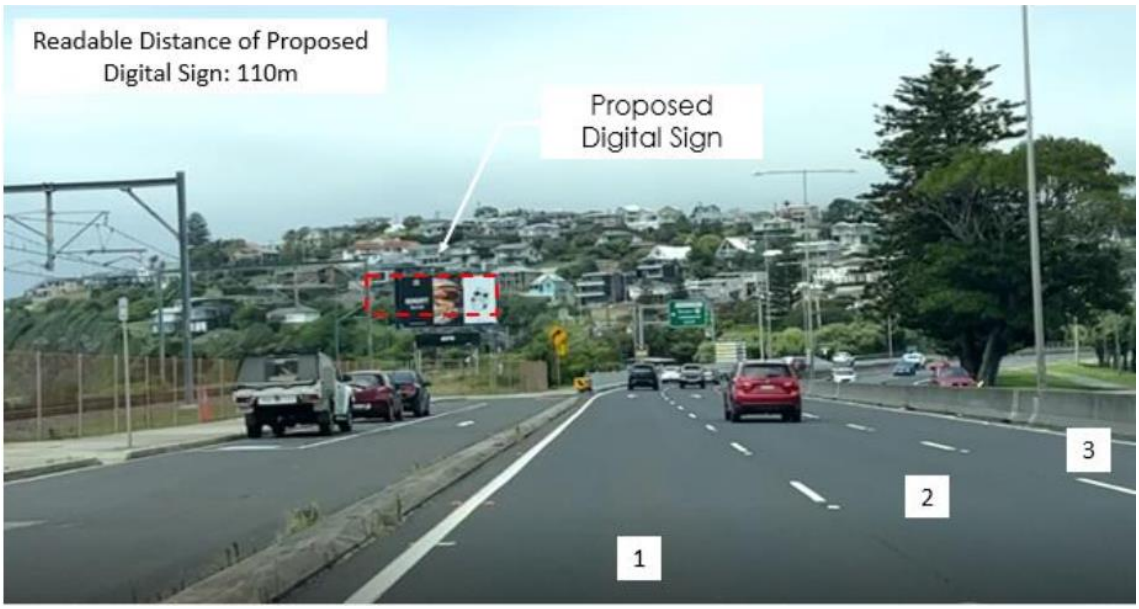

Figure 17: Indicative view Princes Highway Lane 1 (southbound) at readable distance (Source: TTPP)

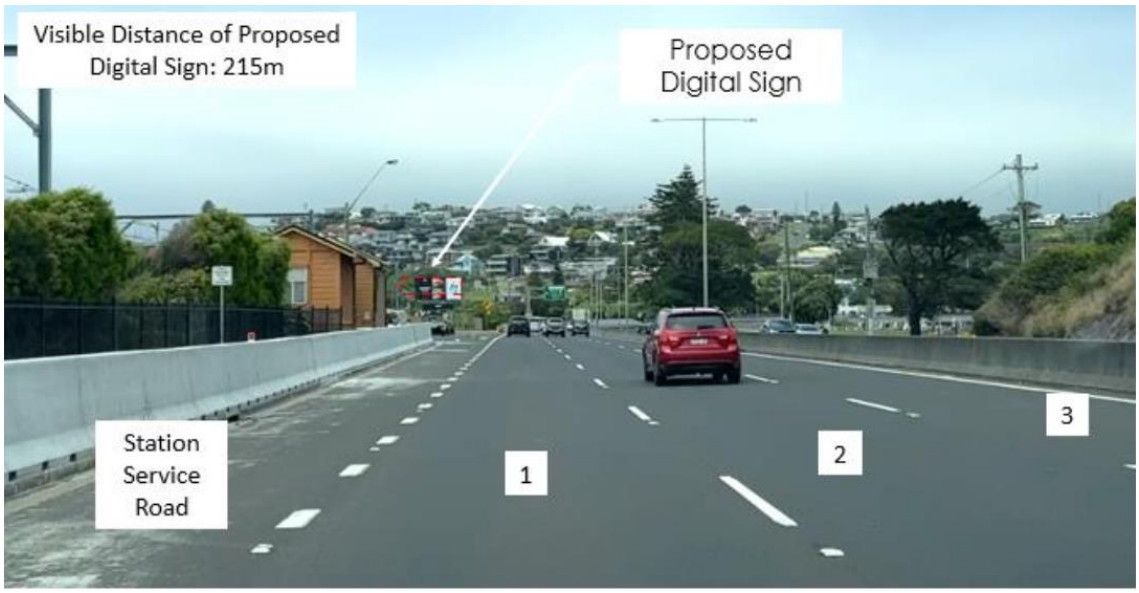

Figure 18: Indicative view Princes Highway Lane 1 (southbound) at visible distance (Source: TTPP)

Figure 19: Indicative view Princes Highway Lane 2 (southbound) at visible distance (Source: TTPP)

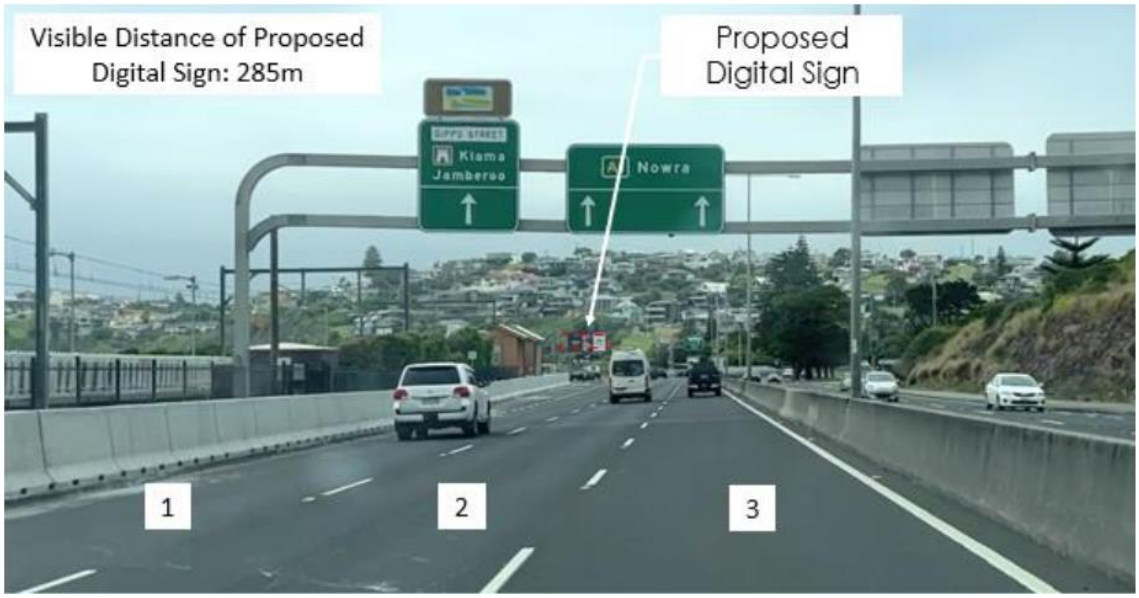

Figure 20: Indicative view Princes Highway Lane 3 (southbound) at visible distance (Source: TTPP)

South approach

The SSA estimates that the proposed sign will be readable from 100m to northbound motorists in all lanes of the Princes Highway and visible from:

- 175m from Lane 1 (Figure 22)
- 190m from Lane 2 (Figure 23)
- 210m from Lane 3 (Figure 24)

In all lanes, the proposed sign would become out of driving view approximately 35m west of the proposed sign. The indicative signage exposure views are shown in the figures below.

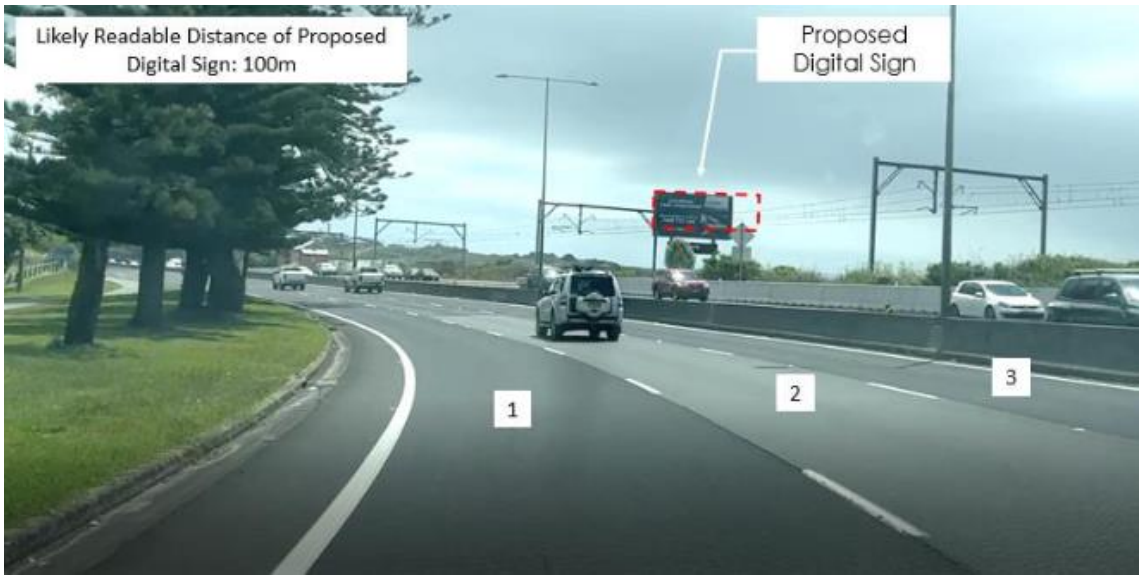

Figure 21: Indicative view Princes Highway Lane 1 (northbound) at readable distance (Source: TTPP)

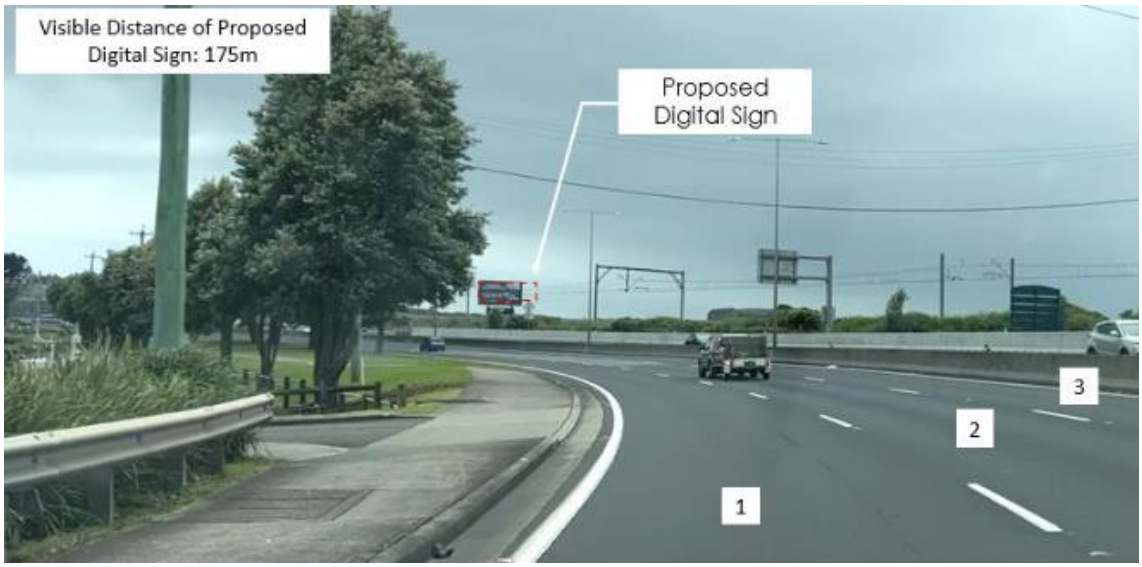

Figure 22: Indicative view Princes Highway Lane 1 (northbound) at visible distance (Source: TTPP)

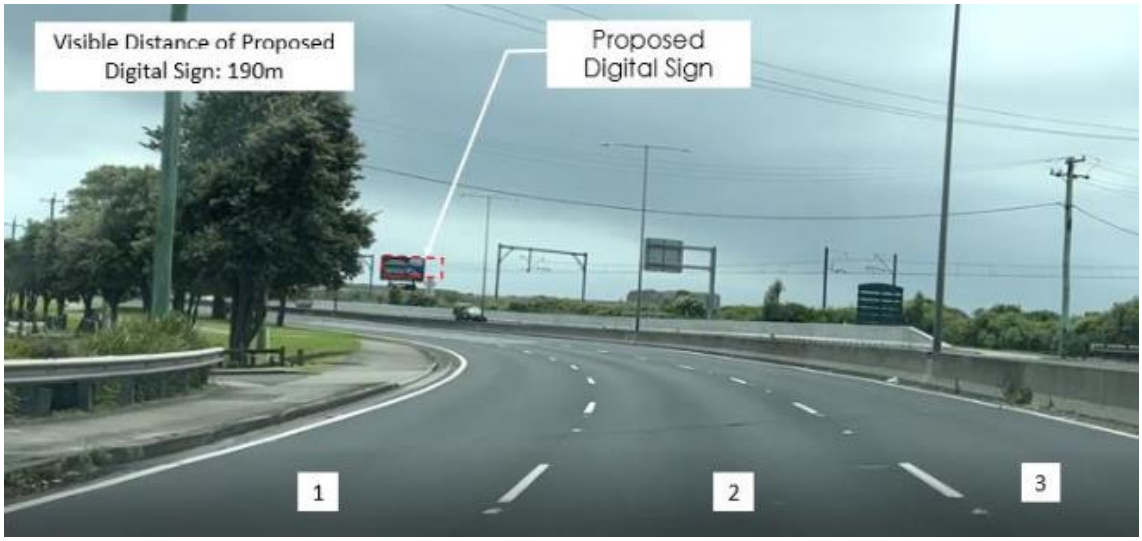

Figure 23: Indicative view Princes Highway Lane 2 (northbound) at visible distance (Source: TTPP)

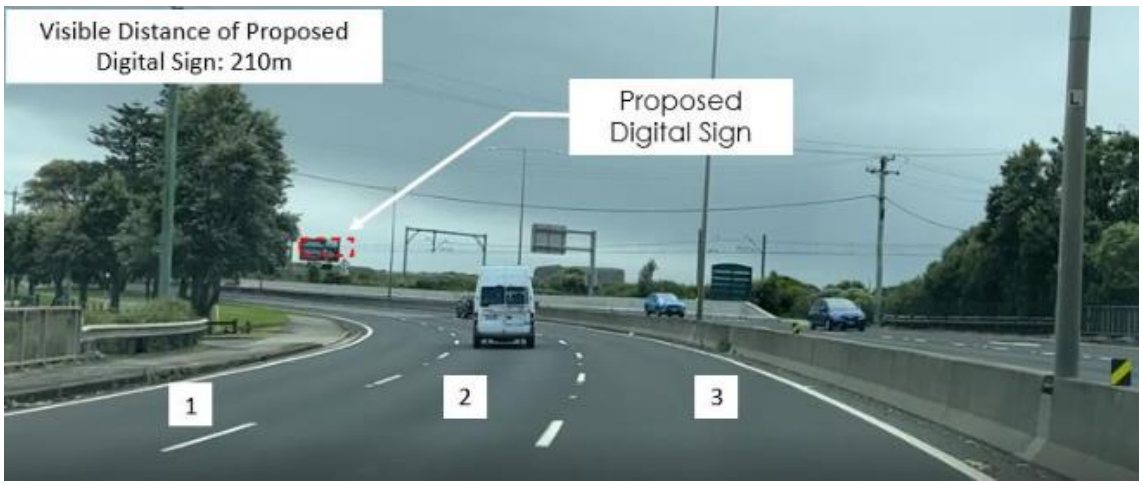

Figure 24: Indicative view Princes Highway Lane 3 (northbound) at visible distance (Source: TTPP)

5.1.3 Road accident history

Historic crash data has been reviewed by TTPP from TfNSW as part of the SSA to identify incidents which have occurred along Princes Highway within the visible distance of the proposed sign.

The SSA has found no crashes were recorded within the visible distance of the proposed signs between 1 January 2015 and 31 December 2022.

5.1.4 Stopping sight distance

Based on a speed of 110km/h TTPP calculated the stopping sight distance (SSD) at 193m for both north and southbound traffic.

The SSA found the proposed sign would not be located within the SSD of a decision making or conflict point for southbound traffic. The only nearby decision points are associated with the Bombo Station commuter car park/service road.

The station service road entry is located 220m north of the proposed sign which is beyond the SSD and the exit is located just prior to the sign. TTPP found that the sign does not pose a safety risk to the exit as the motorist would be facing north towards oncoming traffic rather than towards the sign. This limits the potential for driver distraction from the sign.

In relation to northbound traffic, the SSA found that the proposed sign will be located within the SSD of the decision-making point at the end of the deceleration lane to access Kiama Cemetery as shown in Figure 25.

The SSA notes there is currently a static advertising sign in this location and that crash data indicates this has not caused any significant crashes. Further, the SSA also states that a low volume of vehicles access the cemetery which limits the probability of a conflict between vehicles in the deceleration lane and through lanes. Accordingly, the SSA finds that the proposed sign would not be expected to cause any safety concerns for the deceleration lane.

The proposed sign is also within 125m from the T-intersection between the Princes Highway and the Kiama Cemetery Access Road. However, the SSA states that at a distance of 125m the sign would not be readable and therefore would be unlikely to distract drivers from observing oncoming traffic.

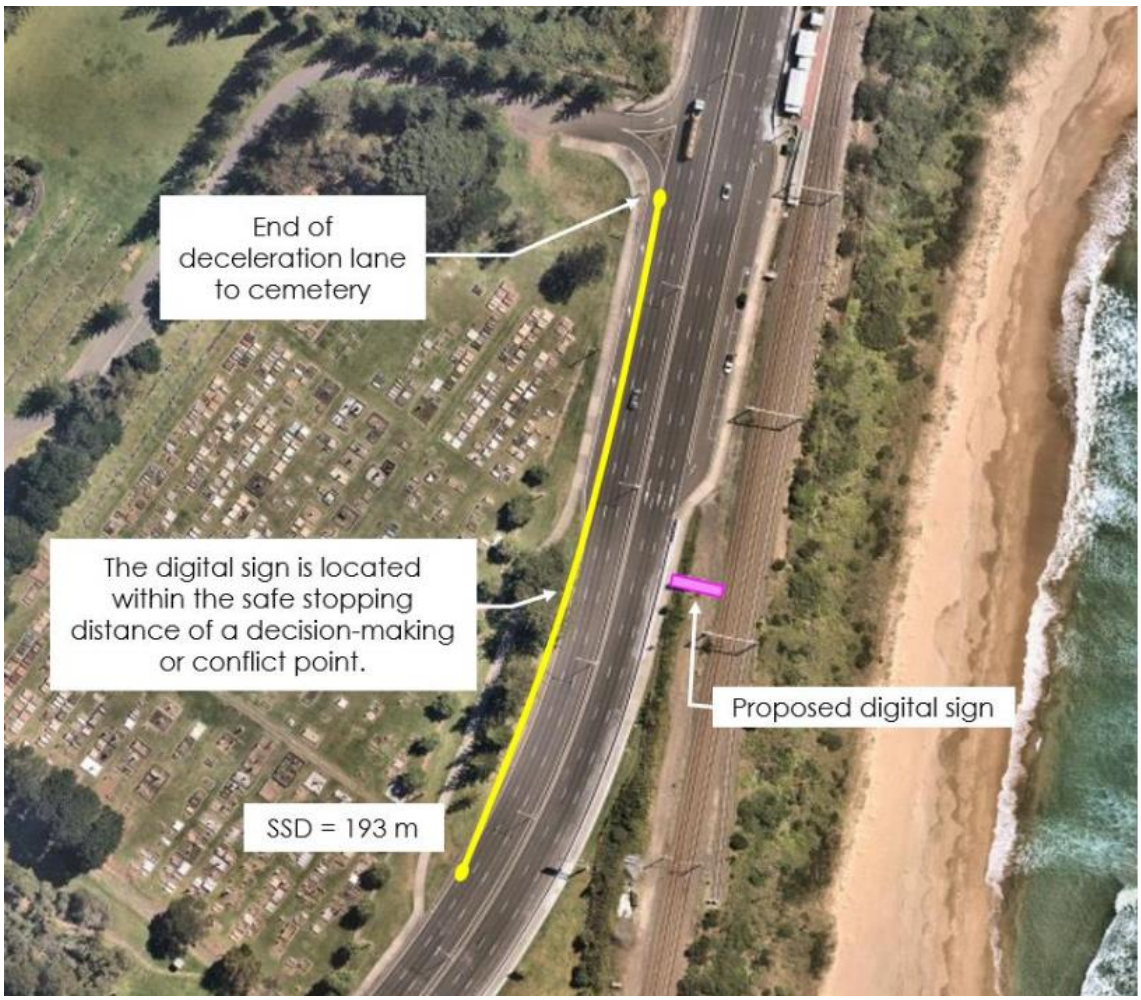

Figure 25: Stopping Sight Distance - South Approach (Source: TTPP)

5.1.5 Road safety criteria – Signage Guidelines

The SSA includes an assessment of the proposal against the criteria for road safety set out under Section 3 of the Signage Guidelines.

Responses provided in the SSA in respect to the sign location criteria (Section 3.2) and the sign design and operation criteria (Section 3.3) of the Signage Guidelines is outlined in the below tables.

Sign Location Criteria	Response provided by TTPP	Compliance
Road clearance		
a. *The advertisement must not create a physical obstruction or hazard. For example:* *i. Does the sign obstruct the movement of pedestrians or bicycle riders? (e.g. telephone kiosks and other street furniture along roads and footpath areas)?* *ii. Does the sign protrude below a bridge or other structure so it could be hit by trucks or other tall vehicles? Will the clearance between the road surface and the bottom of the sign meet appropriate road standards for that particular road?* *iii. Does the sign protrude laterally into the transport corridor so it could be hit by trucks or wide vehicles?*	*The digital signage will not physically obstruct any vehicle, pedestrian, and cyclist movements as it will be placed within the rail corridor which is outside of any pedestrian, cyclist or vehicle carriageway.* *The digital signs will not protrude into the road reserve or the footpath. The outermost edge of the signs will be approximately 6m from the edge of the carriageway, and completely within the rail corridor.*	Yes
b. *Where the sign supports are not frangible (breakable), the sign must be placed outside the clear zone in an acceptable location in accordance with Austroads Guide to Road Design (and RMS supplements) or behind an RMS approved crash barrier.*	*The digital signs will be supported by a monopole and pad footing, where the majority of the pad footing will be located below ground. A small section of the pad footpath footing will be exposed on its western side (closest to the southbound travel lanes); however, it would be located approximately 9.6 m away from the edge of the roadway. According to Austroads Guide to Road Design Part 6 (2009), the clear zone requirement at this location is 9.0 m. Therefore, the sign supports would be placed outside of the clear zone. Nevertheless, the sign supports will be located behind the existing Type-F concrete crash barrier that is located between the footpath and the southbound carriageway.*	Yes
c. *Where a sign is proposed within the clear zone but behind an existing*	*Whilst the future signage supports will be located outside of the clear zone,*	Yes

Sign Location Criteria	Response provided by TTPP	Compliance
RMS-approved crash barrier, all its structures up to 5.8m in height (relative to the road level) are to comply with any applicable lateral clearances specified by Austroads Guide to Road Design (and RMS supplements) with respect to dynamic deflection and working width.	*the signs themselves would be located within the clear zone with the base of the signs positioned 5.025 m above the road level. The distance between the edge of the signage and the existing Type-F concrete crash barrier will be approximately 5.6 m, which is a sufficient deflection and working width at this location.*	
d. *All signs that are permitted to hang over roads or footpaths should meet wind loading requirements as specified in AS 1170.1 and AS1170.2. All vertical clearances as specified above are regarded as being the height of the sign when under maximum vertical deflection.*	*It is noted that the proposed signage will not overhang roads or footpaths.* *Notwithstanding, as part of the detailed design phase, the proposed sign will be designed in accordance with Australian Standards AS1170.2 and AS1170.2 to meet the requirements for wind loading whilst having consideration for the height of the sign board when under maximum vertical deflection.*	Yes
Line of sight		
a. *An advertisement must not obstruct the driver's view of the road, particularly of other vehicles, bicycle riders or pedestrians at crossings.*	*The digital signage will be positioned at the same location of the existing signage, which is significantly offset from the carriageway and would not obstruct the drivers view of the road or pedestrians and cyclists.*	Yes
b. *An advertisement must not obstruct a pedestrian or cyclist's view of the road.*	*The proposed signage will not obstruct pedestrian and cyclist's view of Princes Highway*	Yes
c. *The advertisement should not be located in a position that has the potential to give incorrect information on the alignment of the road. In this context, the location and arrangement of signs' structures should not give visual clues to the driver suggesting that the road alignment is different to the actual alignment. An accurate photo-montage should be used to assess this issue.*	*Similar to the existing signage, the proposed signage will be offset from the carriageway in a manner that would not have the potential to give incorrect information about the road alignment.*	Yes
d. *The advertisement should not distract a driver's attention away from the road environment for an extended length of time. For example:* *i. The sign should not be located in such a way that the driver's head is required to turn away from the road and the components of the traffic*	*The proposed digital signage will be positioned within a driver's line of sight on both approaches on Princes Highway, similar to the existing static signs. For drivers travelling in the northbound direction, the sign will be located on the other side of the carriageway (east side of Princes Highway). However, with a curved road alignment on approach, the sign would*	Yes

Sign Location Criteria	Response provided by TTPP	Compliance
stream in order to view its display and/ or message. All drivers should still be able to see the road when viewing the sign, as well as the main components of the traffic stream in peripheral view. *ii. The sign should be oriented in a manner that does not create headlight reflections in the driver's line of sight. As a guideline, angling a sign five degrees away from right angles to the driver's line of sight can minimise headlight reflections. On a curved road alignment, this should be checked for the distance measured back from the sign that a car would travel in 2.5 seconds at the design speed.*	*be located in the drivers' line of sight for those travelling in the northbound direction. Hence, drivers would not be required to turn their head to view sign in either direction.* *The height and distance of the sign away from the carriageway would be unlikely to cause headlight reflection or glare.*	
Proximity to decision making points and conflict points		
a. The sign should not be located: *i. less than the safe sight distance from an intersection, merge point, exit ramp, traffic control signal or sharp curves* *ii. less than the safe stopping sight distance from a marked foot crossing, pedestrian crossing, pedestrian refuge, cycle crossing, cycleway facility or hazard within the road environment*	*According to Austroads, the minimum safe stopping sight distance* (SSD) *for a 110 km/h speed zone is 193 m.* SSD is addressed at Section 5.1.4.	Yes
iii. so that it is visible from the stem of a T-intersection.	*Motorists waiting to turn left on to Princes Highway from Kiama Cemetery Access Road would be facing in the direction of the proposed digital sign (north side of the sign). However, at a distance of 125 m, the sign would not be readable and therefore unlikely to distract the driver from observing the oncoming traffic. As mentioned previously, there is an existing advertising sign at this location, which has evidently not resulted in any distraction which has caused any crashes.*	Yes
b. The placement of a sign should not distract a driver at a critical time. In particular, signs should not obstruct a driver's view: *i. of a road hazard* *ii. to an intersection*	*A "critical time" is understood to refer to a point in time when a driver's decision is required implying that a road safety implication could occur if a driver was distracted at this time. The proposed digital sign would be*	Yes

Sign Location Criteria	Response provided by TTPP	Compliance
iii. *to a prescribed traffic control device (such as traffic signals, stop or give way signs or warning signs)* iv. *to an emergency vehicle access point or Type 2 driveways (wider than 6-9m) or higher.*	*positioned to the side of the carriageway without obstructing a driver's view of any potential hazards on the roadway.*	
Sign spacing		
a. *Sign spacing should limit drivers view to a single sign at any given time with a distance of no less than 150m between signs in any one corridor. Exemptions for low speed, high pedestrian zones or CBD zones will be assessed by RMS as part of their concurrence role.*	*There are no other advertising signs located within 150 m of the proposed digital signs.*	Yes

Table 8: Sign location criteria – Section 3.2 of the Signage Guidelines (Source: TTPP)

Sign Design and Operation Criteria	Response provided by TTPP	Compliance
Advertising signage and traffic control devices		
a. *The advertisement must not distract a driver from, obstruct or reduce the visibility and effectiveness of, directional signs, traffic signals, prescribed traffic control devices, regulatory signs or advisory signs or obscure information about the road alignment.* b. *The advertisement must not interfere with stopping sight distance for the road's design speed or the effectiveness of a prescribed traffic control device. For example:* i. *Could the advertisement be construed as giving instructions to traffic such as 'Stop', 'Halt' or 'Give Way'?* ii. *Does the advertisement imitate a prescribed traffic control device?* iii. *If the sign is in the vicinity of traffic lights, does the advertisement use red, amber or green circles, octagons, crosses or triangles or shapes or patterns that may result in the advertisement being mistaken for a traffic signal?*	*Details of the advertisement/s are not yet known since the project is still within the concept design stage. However, based on the example advertisements as depicted in the designer's impression the signage would not display colours and shapes which could be mistaken for a traffic signal.* *Notwithstanding this, it is recommended that the content of the proposed signage be reviewed against Table 5 of the NSW Guidelines to avoid any content that may be construed as imitating a traffic control device.*	Yes

Sign Design and Operation Criteria	Response provided by TTPP	Compliance
Additional criteria for digital signs and moving signs		
a. *The image must not be capable of being mistaken:* *i. for a rail or traffic sign or signal because it has, e.g. red, amber or green circles, octagons, crosses or triangles or shapes or patterns that may result in the advertisement being mistaken for a traffic signal* *ii. as text providing driving instructions to drivers.*	This criterion relates to signage content and should be considered once the signs are in operation. The criterion could be included in the consent conditions.	Yes
b. *The amount of text and information supplied on a sign should be kept to a minimum (e.g. no more than a driver can read at a short glance).*	This criterion relates to signage content and should be considered once the sign is in operation. The criterion could be included in the consent conditions.	Yes
Dwell time and transition time – criteria for digital signs		
a. *Each advertisement must be displayed in a completely static manner, without any motion, for the approved dwell time as per criterion (b) below.* b. *Dwell times for image display must not be less than:* *i. 10 seconds for areas where the speed limit is below 80km/h.* *ii. 25 seconds for areas where the speed limit is 80km/h and over* c. *Any digital sign that is within 250 metres of a classified road and is visible from a school zone must be switched to a fixed display during school zone hours.* d. *Digital signs must not contain animated or video/movie style advertising or messages including live television, satellite, Internet or similar broadcasts.* e. *The transition time between messages must be no longer than 0.1 seconds, and in the event of image failure, the default image must be a black screen.*	*Based on the NSW Guidelines, the minimum dwell time for content displayed on the digital sign would be 25 seconds. The digital sign is proposed to contain text and images, which would be in a static manner without any motion for this dwell time. The transition between content would be almost instantaneous.* *The proposed digital sign is located on a classified road but is not within a school zone.*	Yes
Interaction and Sequencing		
a. *The advertisement must not incorporate technology which interacts with in-vehicle electronic devices or mobile devices. This includes interactive technology or*	*The proposed sign would not contain interactive technology or technology that enables opt- in direction communication with motorists. The*	Yes

Sign Design and Operation Criteria	Response provided by TTPP	Compliance
technology that enables opt-in direction communication with road users. b. *Message sequencing designed to make a driver anticipated the next message is prohibited across images presented on a single sign and across a series of signs.*	*digital sign would not be designed to make motorists anticipate information.*	

Table 9: Sign design and operation criteria – Section 3.3 of the Signage Guidelines (Source: TTPP)

5.1.6 Road safety summary

Road safety impacts have been comprehensively assessed as part of the application in accordance with the requirements of the Industry and Employment SEPP and the road safety criteria set out in the Signage Guidelines.

The SSA has determined the proposed sign will be readable from approximately 110 metres when approaching the sign from the north and from approximately 100 metres when approaching the sign from the south. The sign will not obstruct and/or reduce visibility to any traffic control devices.

The SSA determined the safe stopping distance for the site is 193m for both north and southbound traffic. The SSA found the proposed sign would not be located within the SSD of a decision-making or conflict point for southbound traffic, however, it did determine the site was within the SSD of the deceleration/left turn lane into Kiama Cemetery. Despite this, TTPP determined the proposed sign would not be expected to cause any safety concerns for the deceleration lane.

Further, the proposed dwell time of 25 seconds is suitable as drivers would be viewing the sign while travelling 100km/hour or less.

In summary, based on the findings of TTPP in its SSA, the proposed sign will not compromise safety for road users in the vicinity and the proposed digital sign is therefore considered acceptable on road safety grounds.

5.2 Illumination

The proposed sign will be illuminated using LEDs installed within the front face on a 24 hour, 7 days per week basis. The brightness of the LEDs shall be controlled to provide upper and lower thresholds (as required) and will include a light sensor to automatically adjust the brightness of the display area to adjust to ambient lighting conditions.

The signage will also include baffles which mitigate upward waste light, resulting in an Upward Light Ratio of less than 50%.

A Lighting Impact Assessment (LIA) has been prepared by Electrolight (Appendix 4). The LIA has assessed the proposal against the illumination criteria under:

- Chapter 3 of the Industry and Employment SEPP
- the Signage Guidelines
- AS 4282-2019 Control of the Obtrusive Effects of Outdoor Lighting

5.2.1 Illumination criteria – Signage Guidelines

Section 3.3.3 of the Signage Guidelines sets out the illumination criteria for digital signs. The LIA assesses the north-facing panel (Face A) and south-facing panel (Face B) separately. The LIA has categorised both panels as being within Zone 3 of the Signage Guidelines, which is described as areas with generally medium off-street ambient lighting (e.g. small to medium shopping/commercial areas).

The luminance levels for digital advertisements that are within a Zone 3 environment, as outlined in the Signage Guidelines, are shown in Table 12.

Lighting Condition	Max Permissible Luminance for Zone 3 (cd/sqm)	Complies
Full sun on face of signage	No limit	Yes
Daytime luminance	6000	Yes
Morning and evening twilight and inclement weather	700	Yes
Night time	350	Yes

Table 10: Luminance levels for digital advertisements criteria – Signage Guidelines

The LIA confirms that the sign at maximum luminance, will be visually consistent with the existing ambient lighting and is therefore suitable for the local area.

It is noted that the maximum luminance limit during the night time period as set out in the Signage Guidelines is 350 cd/sqm for Zone 3. However, as the sign is visible from residential areas, a lower luminance of 250cd/sqm was deemed appropriate in accordance with AS 4282-2019. Both Face A and Face B will operate with a 250cd/sqm maximum luminance during the night time period.

5.2.2 AS 4282-2019 Control of the Obtrusive Effects of Outdoor Lighting

The Control of the Obtrusive Effects of Outdoor Lighting (AS 4282-2019) sets out limits for different obtrusive factors associated with the night time operation of outdoor lighting systems. The LIA has undertaken an assessment of the sign during the 'post-curfew' period (11 pm to 6 am), which is considered the most obtrusive night time period and generally when residents are trying to sleep.

The LIA has categorised the nearest residential properties as all being within Environmental Zone A3 of AS 4282-2019, which is described as having medium district brightness (e.g. suburban areas in towns and cities). Lighting impacts on the three nearest residential dwellings with potential views to Face A and the five nearest dwellings with potential views to Face B are assessed. The locations of the nearest dwellings are shown in Figure 26.

Figure 26: Location of assessed residential properties (Source: Electrolight)

The maximum lighting limits for Environmental Zone A3 during the pre-curfew and post-curfew periods, as set out in AS 4282-2019, is shown in Table 11.

Environmental Zone	Maximum vertical illuminance (lux)		Complies
	Pre-curfew	Post-curfew	
A3	10	2	Yes

Table 11: Maximum lighting limit

The LIA undertook a lighting model which found the maximum illuminance during night time operation is 0.00 lux to dwellings within zone A3 which is compliant with the limit of 2 lux outlined above. Consequently, the sign demonstrates an acceptable level of compliance with the maximum night time illumination criteria specified under AS 4282-2019.

5.2.3 Illumination summary

The LIA recommends the Applicant ensure that the average luminance difference between successive images do not exceed 30% to ensure compliance with AS 4282-2019 and for the dwell time to be at least 10 seconds or greater.

In summary, the LIA determines that the sign:

- is found to be compliant with the criteria set out in AS 4282-2019 and the Signage Guidelines
- will not result in unacceptable glare or adversely impact the safety of pedestrians, residents or vehicular traffic
- will not unreasonably impact on the visual amenity of nearby residences or accommodation.

5.3 Visual Impacts

A detailed Visual Impact Assessment (VIA) prepared by Keylan Consulting is included at Appendix 6. The VIA assesses the impact of the proposed digital conversion from a number of viewpoints and concludes that it will not have any additional visual impacts than those currently present with the existing advertising signage.

The VIA considered 11 viewpoints from a variety of locations including open space areas and heritage items. The viewpoints have also been relied upon to estimate impacts on sensitive receivers which are not publicly accessible such as residential dwellings. The 11 viewpoints are identified in Figure 27.

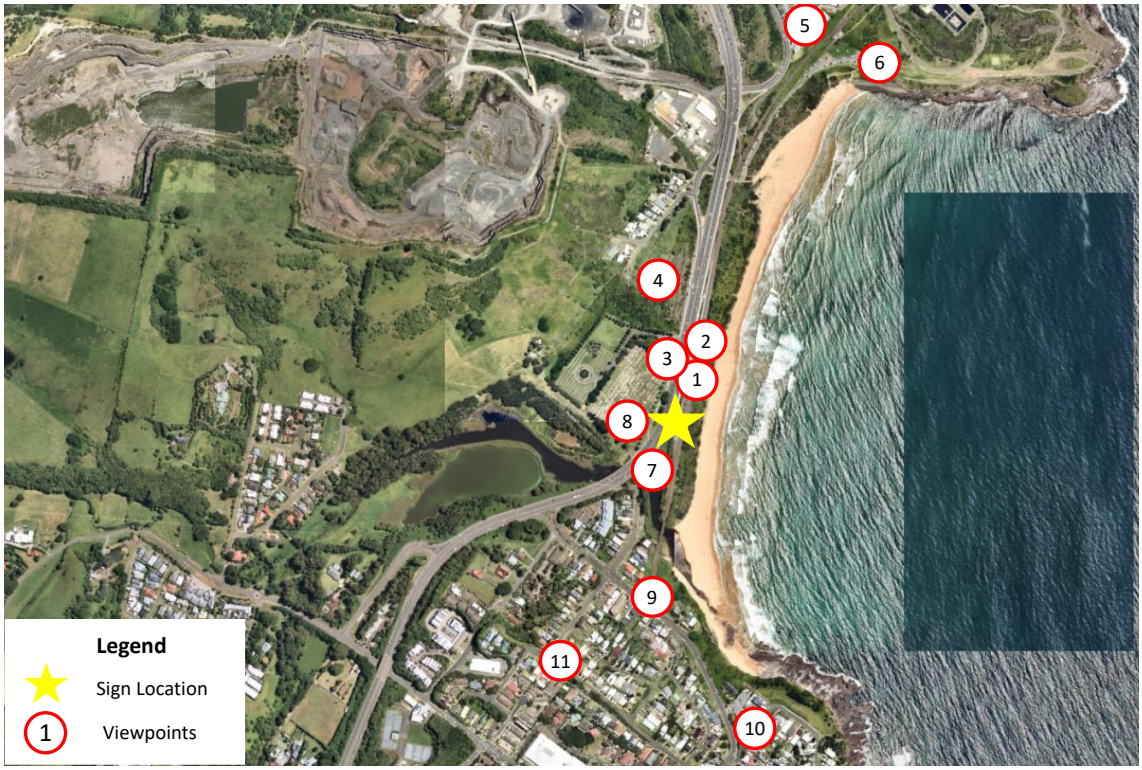

Figure 27: Viewpoints (Base source: Nearmap)

The assessment of viewpoints concludes that visual impacts from most locations within the immediate vicinity were minimal due to:

- view obstruction to the sign by street trees
- improvements upon the existing advertising structure
- consistency with the character of the area which is dominated by the Princes Highway and railway corridor

The assessment of viewpoints from the wider area including residential areas of Kiama and Bombo Headland found that visual impacts will be minimal and barely perceptible due to the distance of these receivers.

Overall, the VIA found the proposal will result in positive visual impacts as the proposed sign is 10% smaller than the existing and is accompanied by upgrades which will improve the visual appearance of the advertising structure.

5.4 Heritage

The site is in proximity to the Kiama Cemetery local heritage item listed under Schedule 5 of the KLEP 2011 and the Bombo Railway Station Group State heritage item listed under the Heritage Act. Additionally, the proposal will be visible in the distance from the Bombo Headland Quarry Geological Site which is also a State heritage item under the Heritage Act.

The Visual Impact Assessment (VIA) prepared by Keylan Consulting (Appendix 6) includes an assessment of visual impacts from each of the above heritage items including two viewpoints within Kiama Cemetery.

Views of the site from the heritage items are provided in the figures below.

Figure 28: Indicative view from the Bombo Railway Station Group (Source: JCDecaux)

Figure 29: Indicative view from the northern end of Kiama Cemetery (Source: JCDecaux)

Figure 30: View from the southern end of Kiama Cemetery (Source: Keylan)

Figure 31: View from the Bombo Headland Quarry Geological Site (Source: Keylan)

From the views provided above the following observations relating to heritage impacts are noted:

- the proposal does not significantly alter the context of the Bombo Railway Station Group and fits in with the character of the surrounding transport corridor
- there have been several upgrades at Bombo Station to modernise the station facilities which have far more significantly altered the setting of the heritage item (e.g. station infrastructure, station signage, bus shelters and telephone booths)
- impacts to Kiama Cemetery are most prominent from the northern end where there is no street tree planting and limited landscaping within the cemetery
- the proposed sign will not be visible from southern areas of Kiama Cemetery due to street tree planting
- the proposed sign will be barely perceptible from the Bombo Headland Quarry Geological Site due to distance

Ultimately, the proposal will reduce the visual screen size by 10% and improve the visual appearance of the existing advertising structure. Accordingly, the proposal is not considered to significantly alter the setting or significance of any of the heritage items.

5.5 Site suitability

The site is a suitable location for the provision of digital advertising signage on the basis that:

- the proposal is compatible with the existing and desired future character of the area, noting that the advertising sign is proposed on a rail corridor
- impacts will be minimal on heritage items
- there will be a positive visual impact on sensitive land uses as the proposed digital advertising sign is 10% smaller than the existing static sign
- detailed investigations of the road network have determined that the development will not impact on the continued and safe operation of the Princes Highway in its function as a classified road
- the illumination of the sign will not result in unacceptable glare or adversely lead to an unacceptable impact on the visual amenity of surrounding residences or heritage items
- the development fully complies with the relevant statutory and policy provisions that govern outdoor advertising signage and LED technology in NSW

Further to the above, the site is an effective location for outdoor advertising that will generate revenue to the benefit of the local community. The public benefits of the proposal are discussed in further detail at Section 5.6.

5.6 Public benefit

In accordance with the Signage Guidelines, an application for digital advertising that is proposed by Sydney Trains is to demonstrate how the local community will benefit from the proposal, such as railway station upgrades, rail crossings or amenity improvements along rail corridors including landscaping, litter removal or vandalism and graffiti management.

A Public Benefit Statement prepared by Sydney Trains is included as part of the application (Appendix 5). The statement confirms that part of the revenue generated by the proposed advertising sign will help fund essential Sydney Trains services to the benefit of the local community, including:

- improvements and maintenance programs
- ensuring the continued provision of clean, frequent, and reliable services for customers
- supporting the next generation of transport solutions online
- provision of emergency messaging and announcements to the public such as during:
  - station emergency situations
  - any major disruption which is likely to cause delays to train running times
  - Sydney Trains and TfNSW promotions and events
  - threat-to-life alerts by NSW Government Emergency and Police Agencies

The proposed new digital advertising signage will also provide public benefit through availability to be used for an emergency or community message (e.g. display of information relating to major disruption to the operation of the surrounding road network which is likely to cause delays to traffic or emergency information). The emergency messaging system will be available to Sydney Trains and other NSW Government agencies such as NSW Police, NSW Health and Transport for NSW.

Further, Sydney Trains and Transport for NSW will also be able to display messages on the digital screens for up to 5 minutes per hour for customer and event promotions at no cost.

Accordingly, the application addresses the public benefit test outlined in the Signage Guidelines through the provision of funding toward improvements to the Sydney Trains network and direct messaging to the community.

6 Conclusion

This SEE supports a DA for the digital conversion of existing static advertising sign located between the Princes Highway and the railway corridor at Bombo.

The sign is proposed to comprise an advertising display area of approximately 20.75m^2 and a visual screen size of 16.25m^2 per panel. The sign will be visible to motorists travelling north and south bound along the Princes Highway and the railway corridor.

The visual screen size of the proposed digital advertising sign will be 10% smaller than the existing 18m^2 static sign and will improve the overall visual appearance of the advertising structure.

Following a detailed consideration of the proposal in its legislative and physical context, this SEE determines that the proposal:

- meets the objectives of Chapter 3 of the Industry and Employment SEPP as it is compatible with the amenity and visual character of the surrounding area
- demonstrates compliance with the assessment criteria set in Schedule 5 of the Industry and Employment SEPP
- demonstrates compliance with the criteria set out in the Signage Guidelines in regard to land use compatibility, digital signage, road safety and illumination requirements and the public benefit test
- will not significantly impact on any items of European or Aboriginal heritage
- will be of high quality design and finish and will provide visual interest for motorists using the Princes Highway
- will be in the public interest as the revenue that is generated by the advertising signage will be used by Sydney Trains to improve the network through projects such as railway station upgrades, rail crossings or amenity improvements along rail corridors including landscaping, litter removal or vandalism and graffiti management

In consideration of the above, it is considered that the digital advertising sign will not have an adverse impact on the environment or on the safety of road users and therefore warrants approval.

Appendix 1

SEPP and Signage Guidelines Assessment

Appendix 2

Architectural Drawings

KEYLAN
consulting pty ltd

Appendix 3

Signage Safety Assessment

Appendix 4

Lighting Impact Assessment

Appendix 5

Public Benefit Statement

KEYLAN
consulting pty ltd

Appendix 6

Visual Impact Assessment

KEYLAN
consulting pty ltd

Appendix 7

Site Survey