



Integrated Management System

Planning Approval Consistency Assessment Form

SM ES-FT-414

Sydney Metro Integrated Management System (IMS)

Assessment Name:	Radio masts along the Sydenham to Bankstown corridor
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Prepared for:	Sydney Metro
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The Planning Approval Consistency Assessment Form should be completed in accordance with the Sydney Metro Planning Approval Consistency Assessment Procedure (SM ES-PW-314) and Sydney Metro Environmental Planning and Approval Manual (SM ES-ST-216)

1.0 Existing Approved Project

Planning approval reference details (Application/Document No. (including modifications)):

SSI_8256 Sydney Metro City & Southwest – Sydenham to Bankstown

SSI_8256 Sydney Metro City & Southwest – Sydenham to Bankstown Bankstown Station Modification 1 – October 2020

Date of determination: 12/12/2018

Type of planning approval: Critical State Significant Infrastructure

Description of existing Approved Project you are assessing for consistency:

Construction and operation of a metro rail line, approximately 13km long, between Marrickville and Bankstown, including ten metro stations and associated ancillary infrastructure. The works include station works, track and rail system facility works and other works to support metro operations. The project would include communications equipment and equipment for radio communications, housed in services areas at each station. Telecommunication masts will be positioned along the rail corridor between 180 and 250 metre intervals. The height of mast assessed within the EIS varied between three and six metres high and consist of concrete or steel poles.

Relevant background information (including EA, REF, Submissions Report, Director General’s Report, MCoA):

Sydenham to Bankstown Environmental Impact Statement (EIS) – September 2017

Sydenham to Bankstown Submissions and Preferred Infrastructure Report (SPIR) – June 2018

Sydenham to Bankstown Submissions Report (SR) – September 2018

Sydenham to Bankstown Modified Conditions of Approval – October 2020

All proposed works identified in the assessment would be undertaken in accordance with the mitigation measures identified in the EIS, SPIR and SR and the conditions of approval.

2.0 Description of proposed development/activity/works

This Consistency Assessment relates to the installation of the following eight radio masts along the rail corridor to support the communication system for the metro rail line:

- Marrickville: 25m mast near the Marrickville services building
- Dulwich Hill: 25m mast south of the Dulwich Hill station platform adjacent to the commuter car park
- Canterbury: 25m mast near the Canterbury traction substation
- Campsie: 20m mast near the Campsie services building
- Belmore: 20m mast south of the Belmore Senior Citizens Centre
- Lakemba: 20m mast near the Lakemba services building

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- Punchbowl: 25m mast near the Punchbowl services building
- Bankstown: 25m mast west of the Stacey Street road overbridge

The proposed locations of the above radio masts are shown in Appendix A, noting that the exact location (within a few metres) will be confirmed on site to ensure that site constraints such as overhead wiring and other services are not affected as a result of the works.

The proposed work would involve the following works:

- Installation of new radio mast poles and associated panel antennas
- Installation of aboveground cabinets, installed on concrete slabs (around 2-3m by 3m) in close proximity to the proposed masts
- Installation of feeder cables for both power and fibre
- Other associated and necessary activities to ensure the proper functioning of the radio masts including earthing, safe access, signage, bollards for vehicle protection etc.

Construction works would comprise:

- Site establishments
- Excavation of foundations for the proposed masts and delivery and pouring of concrete
- Installation of concrete slabs for proposed cabinets
- Excavation of trenches for feeder cables, installation of conduit and cables and backfilling of trenches
- Transport, installation and assembly of proposed radio mast including antennas
- Connection of cables and installation and commissioning of radio and other communication equipment.

The proposed radio masts would be installed on the ground with a low height Franna crane to assemble the components and hinge lift the mast into place using a hydraulic ram.

The work would be completed using the same materials, equipment, hours of work and workforce as identified in the planning approval documents.

3.0 Timeframe

Construction of the bases to support the proposed radio mast would commence from early 2021, with installation of the masts to follow.

4.0 Site description

The proposed radio masts would be located within the rail corridor between Marrickville and Bankstown, which is within the footprint of the Sydenham to Bankstown project. An example of a typical radio mast is shown in the figure below. The proposed location of each mast is shown in Appendix A.



Figure 1: Indicative example of radio mast

5.0 Site Environmental Characteristics

Describe the environment (i.e., vegetation, nearby waterways, land use, surrounding land use), identify likely presence of protected flora/fauna and sensitive area.

The proposed radio masts would be located within the rail corridor and footprint of the Sydenham to Bankstown project – refer to the Environmental Impact Statement for a description of the existing environment.

6.0 Justification for the proposed works

The proposed radio masts are required as part of the communications system for the City & Southwest metro line. The increase in height of the radio masts over those identified in the Environmental Impact Statement is due to the low radio frequency strength along sections of the rail corridor – higher masts are required to allow for optimised frequencies. Detailed design and radio frequency modelling has shown that without the increased heights in radio masts, there would be low levels of in-train radio coverage due to the alignment of the corridor, topology, as well as encroachment of some buildings adjacent to the rail corridor. Not providing additional higher radio masts could result in the in-train communications systems being non-compliant or compromised in areas of concern.

7.0 Environmental Benefit

Identify whether there are environmental benefits associated with the proposed works. N/A

8.0 Control Measures

Will a project and site specific EMP be prepared? Are appropriate control measures already identified in an existing EMP?

Construction and installation of the proposed radio masts would be undertaken in accordance with an approved CEMP prepared by the contractor.

9.0 Climate Change Impacts

Is the site likely to be adversely affected by the impacts of climate change? N/A

10.0 Impact Assessment – Construction

Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Flora and fauna	<p>All radio masts are within the project area. All vegetation within the rail corridor was mapped and impacts assessed as part of the EIS.</p> <p>The radio masts are located in areas of either exotic grassland, exotic shrub or forest or planted native vegetation. The radio mast locations are not within or adjacent to any threatened ecological communities (TECs).</p> <p>The radio masts at Campsie and Belmore are located in close proximity to planted native vegetation which may need to be removed. As the EIS assessed the removal of this type of vegetation (while avoiding impacts to TECs), no additional impacts to flora and fauna are anticipated relative to the Approved Project.</p>	No additional measures required.	Y	Y	
Water	No change from Approved Project.	No additional measures required.	Y	Y	
Air quality	The proposed works would require some excavation and therefore a potential for localised air quality (dust) impacts in these locations however this is considered to be negligible relative to the Approved Project.	No additional measures required.	Y	Y	
Noise and vibration	The construction methodology for the radio masts would remain similar to the Approved Project. As such any additional noise and vibration impacts during construction as a result of the proposed works would be negligible relative to the Approved Project.	No additional measures required.	Y	Y	
Aboriginal heritage	<p>No previously recorded Aboriginal heritage items or places were identified within the area immediately surrounding the proposed work.</p> <p>The archaeological potential of the majority of the project area is considered to be low to nil. This is due to the significant disturbance and landform modifications which would have removed any archaeological deposits.</p> <p>As such, there would be no additional impacts relative to the Approved Project.</p>	No additional measures required.	Y	Y	

(Uncontrolled when printed)

Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Non-Aboriginal heritage	<p>Heritage items</p> <p>Some radio masts are proposed within or directly adjacent to State, Section 170 Heritage and Conservation Register or local heritage items as assessed in the EIS, including:</p> <ul style="list-style-type: none"> • Marrickville radio mast- within Marrickville Station Group –State Heritage Register (01186) and s170 Register item curtilage • Dulwich Hill radio mast- within Dulwich Station Group- s170 Register item curtilage • Canterbury radio mast - adjacent to (within 10 metres of) the Old Sugarmill- Canterbury LEP 2012 curtilage (item I82) and about 20 metres from the Old Sugarmill State Heritage Register curtilage (item 00290). • Campsie radio mast- within Campsie Station Group- s170 Register item and Canterbury LEP 2012 (I40) curtilage • Belmore radio mast- within the Canterbury LEP 2012 (I11) heritage curtilage and directly adjacent (within five metres) to Belmore Station Group- State heritage item curtilage (01081) and s170 Register item. • Lakemba radio mast- directly adjacent (within 10 metres) to Lakemba Railway Station Group – s170 Register item curtilage and Canterbury LEP 2012 (I143). <p>The proposed works would be undertaken in accordance with the relevant mitigation measures outlined within the EIS. No additional direct impacts are anticipated on any elements of heritage significance within the curtilages as a result of the proposed construction works relative to the Approved Project.</p> <p>Archaeological potential</p> <p>The Approved Project would have required excavation for the foundations for the radio masts and trenching for telecommunication cabling. The construction methodology for the proposed radio masts would be similar in nature to the telecommunication masts assessed for the Approved Project.</p>	No additional measures required.	Y	Y	

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Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
	<p>The EIS archaeological assessment concluded that overall the study area has low to nil potential to contain significant archaeological remains. However, the assessment found that there are four locations (Marrickville Station Catchment, Canterbury Station Catchment and work site, the Lakemba Station Catchment and Belmore Station Catchment) with the potential to contain significant archaeological remains.</p> <p>Excavation works for the foundations for the proposed masts the base may be within:</p> <ul style="list-style-type: none"> - Marrickville Station Catchment area a due to the proximity of the radio mast in relation to the eastern end of the Marrickville Station platform. The EIS assessed works within this area as <i>likely to impact to potentially significant archaeology.</i> - Canterbury Station catchment and construction site as the radio mast is located east of Canterbury station and adjacent to the Old Sugarmill. The EIS assessed works within this area as follows '<i>Although the location of the Old Sugarmill and former associated structures is to the east of the station, there is a moderate – high potential that remains associated with this period of occupation may also extend into the station catchment and construction site to the south of the rail line, adjacent to the Old Sugarmill SHR item. These remains would have local or State significance depending on their nature and intactness. The former Canterbury Township is located to the east of Canterbury Station. Any subsurface works within the rail corridor and construction site have a moderate – high potential to impact any associated intact archaeological remains. These remains would have local significance.</i>' - Lakemba Station Catchment as the radio mast location is in close proximity to Lakemba Railway Station. The EIS assessed works within this area as the follows '<i>There is a low potential for locally significant archaeology associated with the early settlement of Lakemba including structures associated with the Taylor House (Lakemba) such as outbuildings and stables and archaeological features associated with farming activities, domestic and agricultural structures, refuse pits and drains or culverts. Works within the station catchment have the potential to impact any associated intact archaeological remains.</i>' 				

Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
	<p>- Belmore Station Catchment as the radio mast location is within this area. The EIS assessed that <i>'there is a low-moderate potential for locally significant archaeological remains associated with the railway station goods shed and goods platform to be impacted by the proposed works.'</i></p> <p>The proposed works are within the Approved Project area and would be undertaken in accordance with relevant mitigation measures and Conditions of Approval including the Archaeological Research Design prepared to manage and mitigate impacts to the potential archaeological resource. As such, there would be no additional archaeological impacts relative the Approved Project.</p>				
Community and stakeholder	<p>The construction of the proposed works would be similar in nature to the telecommunication masts proposed within the Approved Project.</p> <p>The proposed works would be undertaken in accordance with the relevant mitigation measures outlined within the EIS. As such, community and stakeholder impacts are anticipated to be negligible as a result of the proposed works relative to the Approved Project.</p>	No additional measures required.	Y	Y	
Traffic	<p>Due to the size of the radio mast structures, the delivery to site may be required out of standard hours as required by the relevant road authorities and in accordance with the project condition of approvals.</p> <p>This impact is considered negligible relative to the Approved Project.</p>	No additional measures required.	Y	Y	
Waste	No change from Approved Project.	No additional measures required.	Y	Y	
Social	No change from Approved Project.	No additional measures required.	Y	Y	
Economic	No change from Approved Project.	No additional measures required.	Y	Y	

(Uncontrolled when printed)

Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Visual	<p>All radio mast locations are within the existing rail corridor. The level of detail within the EIS and SPIR did not identify specific locations of radio masts along the existing rail corridor.</p> <p>The construction works would hydraulically hinge lift the mast into place which would not require high or obtrusive visual elements during construction.</p> <p>Visual impacts as a result of the construction of the proposed works are anticipated to be consistent with the construction landscape and visual impacts which range between moderate and minor adverse impact.</p>	No additional measures required.	Y	Y	
Urban design	No change from Approved Project.	No additional measures required.	Y	Y	
Geotechnical	No change from Approved Project.	No additional measures required.	Y	Y	
Land use	No change from Approved Project.	No additional measures required.	Y	Y	
Climate Change	No change from Approved Project.	No additional measures required.	Y	Y	
Risk- Obstacle limitation surface (OLS)	<p>As the mast would be hydraulically hinge lifted into place, the construction would not require a large crane triggering an approval from the Civil Aviation Safety Authority (CASA) to complete the installation of the radio mast. As such, an additional control measure has been included.</p> <p>No additional risks have been identified relative to the Approved Project.</p>	<p>1. If required, an additional CASA application for approval would be sought for any temporary structures or equipment (e.g. a large crane) greater than 15.24 metres above existing ground height.</p>	Y	Y	
Other	No change from Approved Project.	No additional measures required.	Y	Y	

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Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Management and mitigation measures	The relevant project-specific mitigation measures identified in the approval documentation would continue to apply to the Proposed activity. These mitigation measures would adequately address the construction impacts.	One additional mitigation measure has been identified as outlined above.	Y	Y	

11.0 Impact Assessment – Operation

Attach supporting evidence in the Appendix if required. Make reference to the relevant Appendix if used.

Aspect	Nature and extent of impacts (negative and positive) during operation (if control measures implemented) of the proposed activity/works, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Flora and fauna	No change from Approved Project.	No additional measures required.	Y	Y	
Water	No change from Approved Project.	No additional measures required.	Y	Y	
Air quality	No change from Approved Project.	No additional measures required.	Y	Y	
Noise vibration	No change from Approved Project.	No additional measures required.	Y	Y	
Aboriginal heritage	No change from Approved Project.	No additional measures required.	Y	Y	

Aspect	Nature and extent of impacts (negative and positive) during operation (if control measures implemented) of the proposed activity/works, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Non-Aboriginal heritage	<p>Some radio masts are proposed within or directly adjacent to State, Section 170 Heritage and Conservation Register or local heritage items as assessed in the EIS, including:</p> <ul style="list-style-type: none"> Marrickville radio mast- within Marrickville Station Group –State Heritage Register (01186) and s170 Register item curtilage Dulwich Hill radio mast- within Dulwich Station Group- s170 Register item curtilage Canterbury radio mast - adjacent to (within 10 metres of) the Old Sugarmill- Canterbury LEP 2012 curtilage (item I82) and about 20 metres from the Old Sugarmill State Heritage Register (item 00290). Campsie radio mast- within Campsie Station Group- s170 Register item and Canterbury LEP 2012 (I40) curtilage Belmore radio mast- within the Canterbury LEP 2012 (I11) heritage curtilage and directly adjacent (within five metres) to Belmore Station Group- State heritage item curtilage (01081) and s170 Register item. Lakemba radio mast- directly adjacent (within 10 metres) to Lakemba Railway Station Group – s170 Register item curtilage and Canterbury LEP 2012 (I143). <p>Due to the nature of the Approved Project, the increase in height of the radio masts is anticipated to have a negligible visual impact to these heritage items relative to the Approved Project (refer to Appendix B).</p> <p>The proposed works would be undertaken in accordance with the relevant mitigation measures outlined within the EIS.</p>	No additional measures required.	Y	Y	
Community and stakeholder	<p>There would be a minor increase in community and stakeholder impacts as a result of the visual impacts as outlined in Appendix B.</p> <p>The proposed works would be undertaken in accordance with the relevant mitigation measures outlined within the EIS. As such, community and stakeholder impacts are anticipated to be minor a result of the proposed works and consistent with the impacts relative to the Approved Project.</p>	No additional measures required.	Y	Y	

(Uncontrolled when printed)

Aspect	Nature and extent of impacts (negative and positive) during operation (if control measures implemented) of the proposed activity/works, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Traffic	No change from Approved Project.	No additional measures required.	Y	Y	
Waste	No change from Approved Project.	No additional measures required.	Y	Y	
Social	No change from Approved Project.	No additional measures required.	Y	Y	
Economic	No change from Approved Project.	No additional measures required.	Y	Y	
Visual	Refer to Appendix B for a revised operational visual impact assessment.	No additional measures required.	Y	Y	
Urban design	No change from Approved Project.	No additional measures required.	Y	Y	
Geotechnical	No change from Approved Project.	No additional measures required.	Y	Y	
Land use	No change from Approved Project.	No additional measures required.	Y	Y	
Climate Change	No change from Approved Project.	No additional measures required.	Y	Y	
Risks- Electromagnetic Energy	No change from Approved Project.	No additional measures required.	Y	Y	
Risk- Obstacle limitation surface (OLS)	An approval from the Civil Aviation Safety Authority (CASA) to complete the installation of the radio masts has been sought. No additional risks have been identified relative to the Approved Project.	No additional measures required.	Y	Y	
Other	No other impacts are anticipated as a result of the proposed works.	No additional measures required.	Y	Y	

(Uncontrolled when printed)

Aspect	Nature and extent of impacts (negative and positive) during operation (if control measures implemented) of the proposed activity/works, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Management and mitigation measures	The relevant project-specific mitigation measures identified in the approval documentation would continue to apply to Proposed activity. These mitigation measures would adequately address all operation impacts.	No additional measures required.	Y	Y	

12.0 Consistency with the Approved Project

<p>Based on a review and understanding of the existing Approved Project and the proposed modifications, is there a transformation of the Project?</p>	<p>No. The proposed works would not transform the project. The project would continue to provide a metro rail line between Sydenham and Bankstown.</p>
<p>Is the project as modified consistent with the objectives and functions of the Approved Project as a whole?</p>	<p>Yes. The proposed works would be consistent with the objectives and functions of the Approved Project.</p>
<p>Is the project as modified consistent with the objectives and functions of elements of the Approved Project?</p>	<p>Yes. The changes identified in this assessment are consistent with the objectives and functions of the Approved Project.</p>
<p>Are there any new environmental impacts as a result of the proposed works/modifications?</p>	<p>No new environmental impacts have been identified, the anticipated visual impacts as a result of the communications system are consistent with the visual impacts of the Approved Project.</p>
<p>Is the project as modified consistent with the conditions of approval?</p>	<p>Yes. The proposed works would be consistent with the conditions of approval.</p>
<p>Are the impacts of the proposed activity/works known and understood?</p>	<p>Yes. The impacts of the proposed works are understood.</p>
<p>Are the impacts of the proposed activity/works able to be managed so as not to have an adverse impact?</p>	<p>Yes. The impacts of the proposed works can be managed so as to avoid an adverse impact.</p>


13.0 Other Environmental Approvals

Identify all other approvals required for the project:


An approval from the Civil Aviation Safety Authority (CASA) to complete the installation of the radio masts has been sought and approved. There are no conditions identified as a result of this approval. If required, an additional CASA application for approval would be sought for any temporary structures or equipment (e.g. a large crane) greater than 15.24 metres above existing ground height.

Author certification

To be completed by person preparing checklist.

I certify that to the best of my knowledge this Consistency Checklist:			
<ul style="list-style-type: none"> Examines and takes into account the fullest extent possible all matters affecting or likely to affect the environment as a result of activities associated with the Proposed Revision; and Examines the consistency of the Proposed Revision with the Approved Project; is accurate in all material respects and does not omit any material information. 			
Name:	Katie Mackenzie	Signature:	
Title:	Manager Planning Approvals		
Company:	Sydney Metro	Date:	14/01/2021


This section is for Sydney Metro only.

Application supported and submitted by			
Name:	Yvette Buchli	Date:	19/01/2021
Title:	Associate Director Planning Approvals	Comments:	
Signature:			

Based on the above assessment, are the impacts and scope of the proposed activity/modification consistent with the existing Approved Project?

Yes The proposed activity/works are consistent and no further assessment is required.

No The proposed works/activity is not consistent with the Approved Project. A modification or a new activity approval/ consent is required. Advise Project Manager of appropriate alternative planning approvals pathway to be undertaken.

Endorsed by			
Name:	Fil Cerone	Date:	25 January 2021
Title:	Director, City & Southwest, Environment, Sustainability & Planning	Comments:	
Signature:			

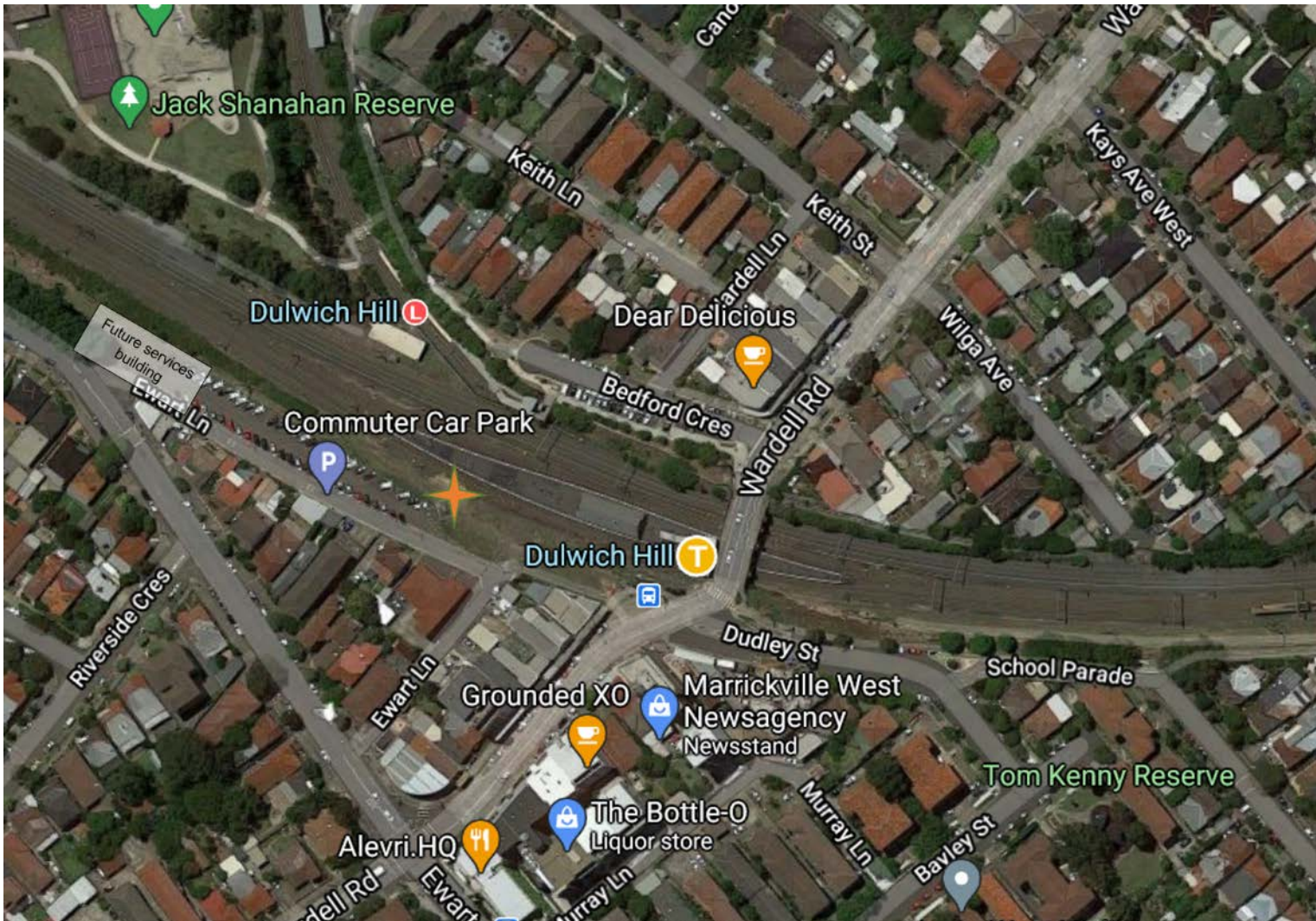
Appendix A Location of proposed radio masts

Mast locations shown by orange star.

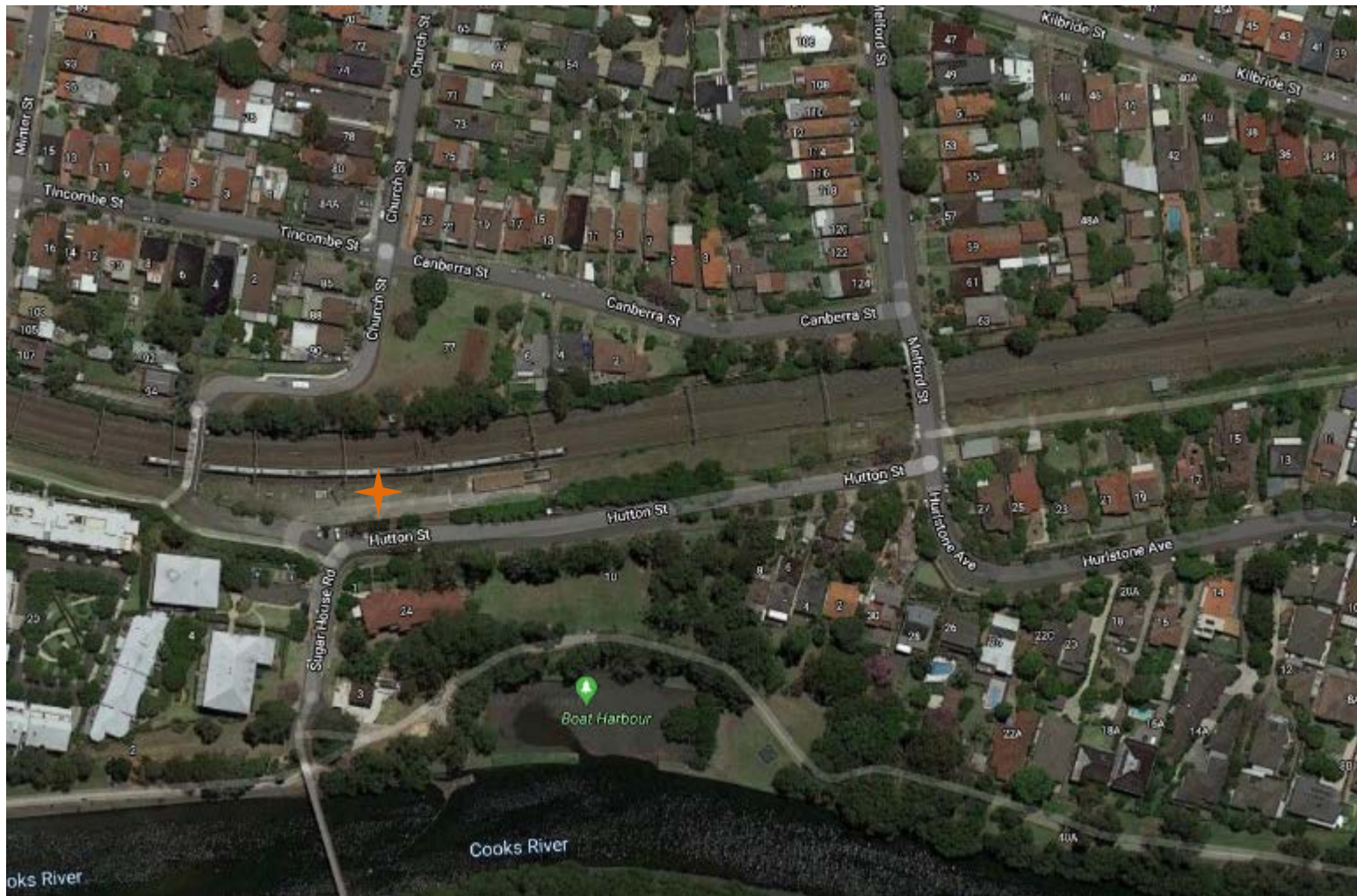
Marrickville: near the Marrickville services building



Dulwich Hill: near the Dulwich Hill commuter car park & adjacent to end of station platform



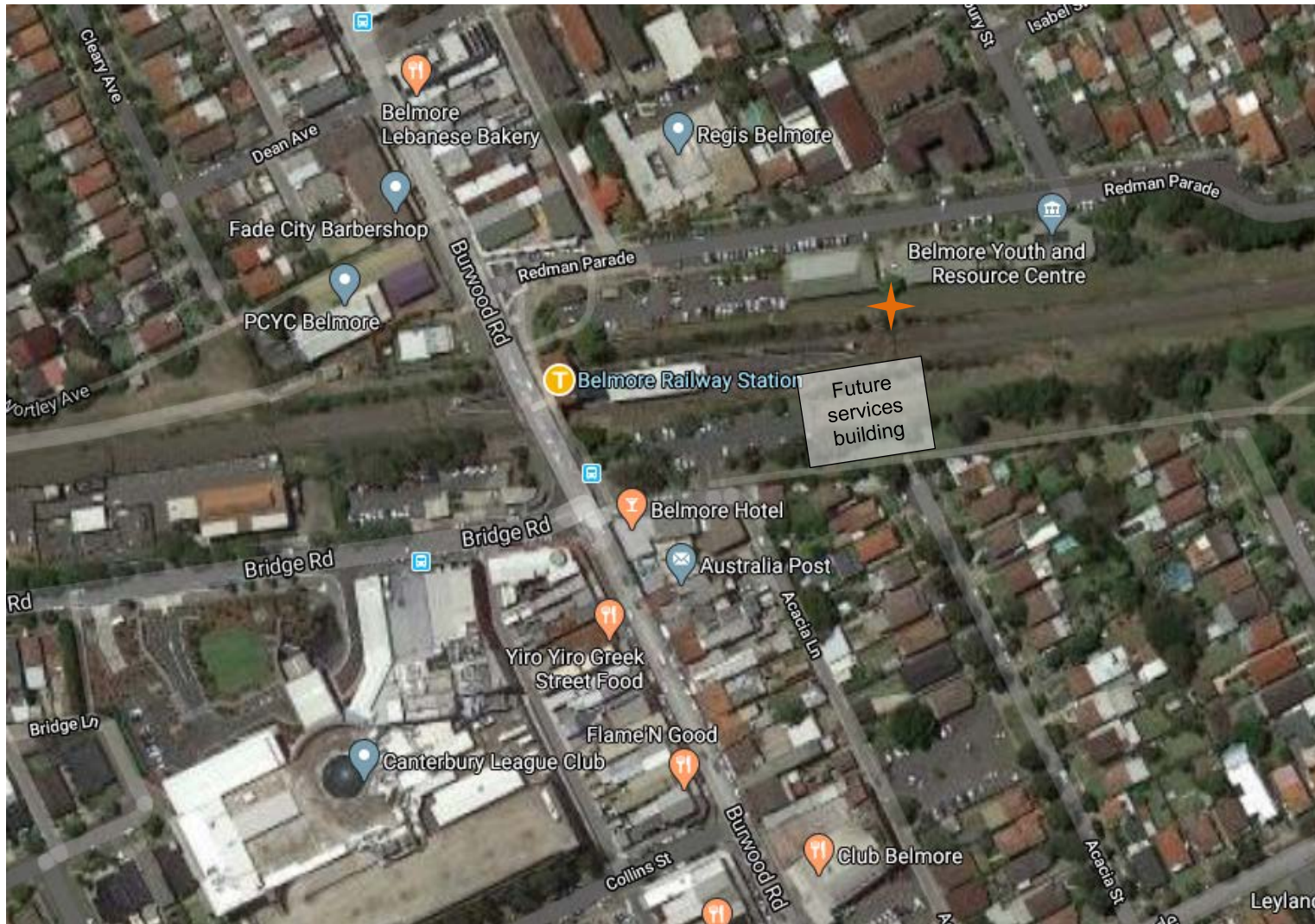
Canterbury: near the Canterbury traction substation



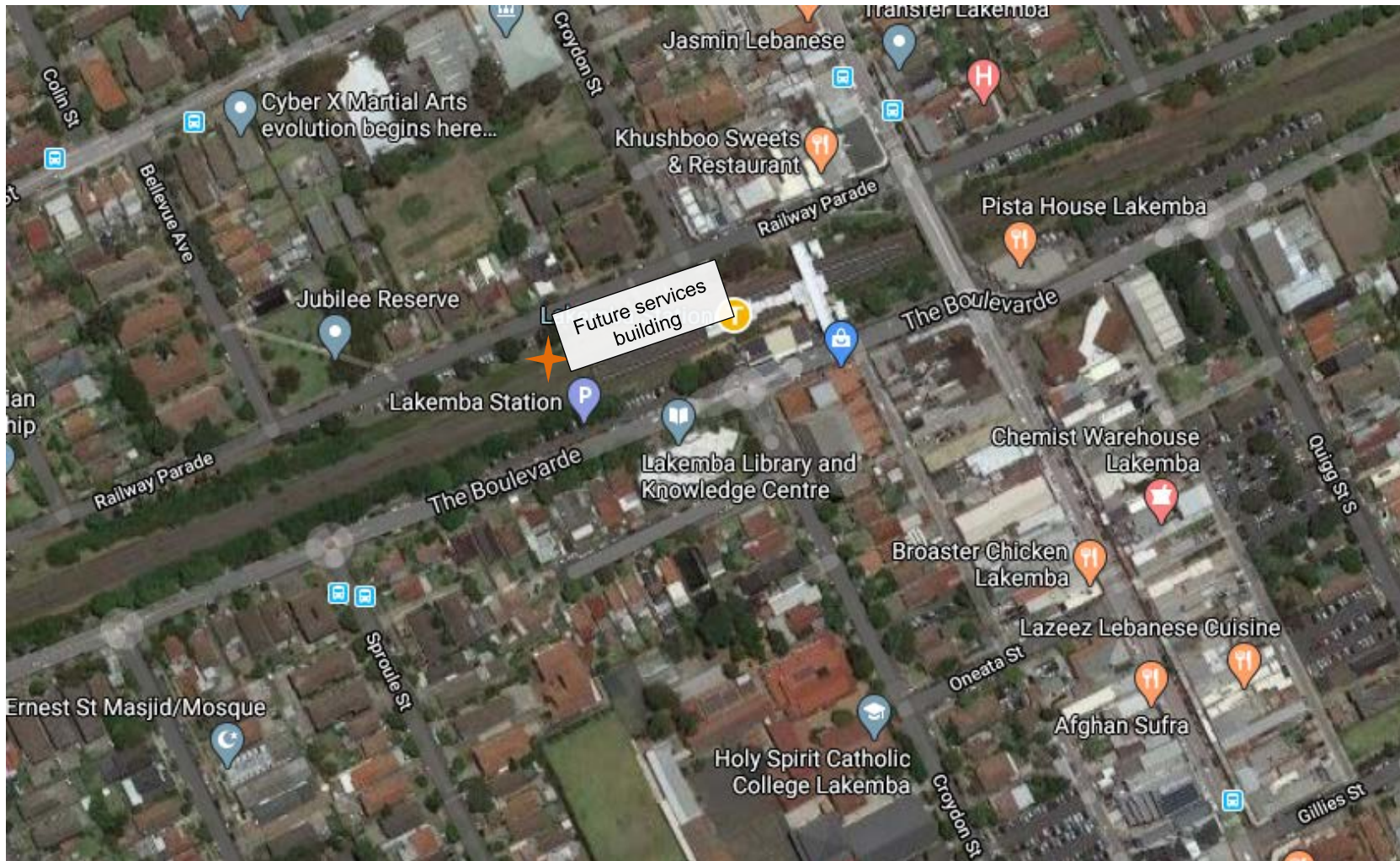
Campsie: near the Campsie services building



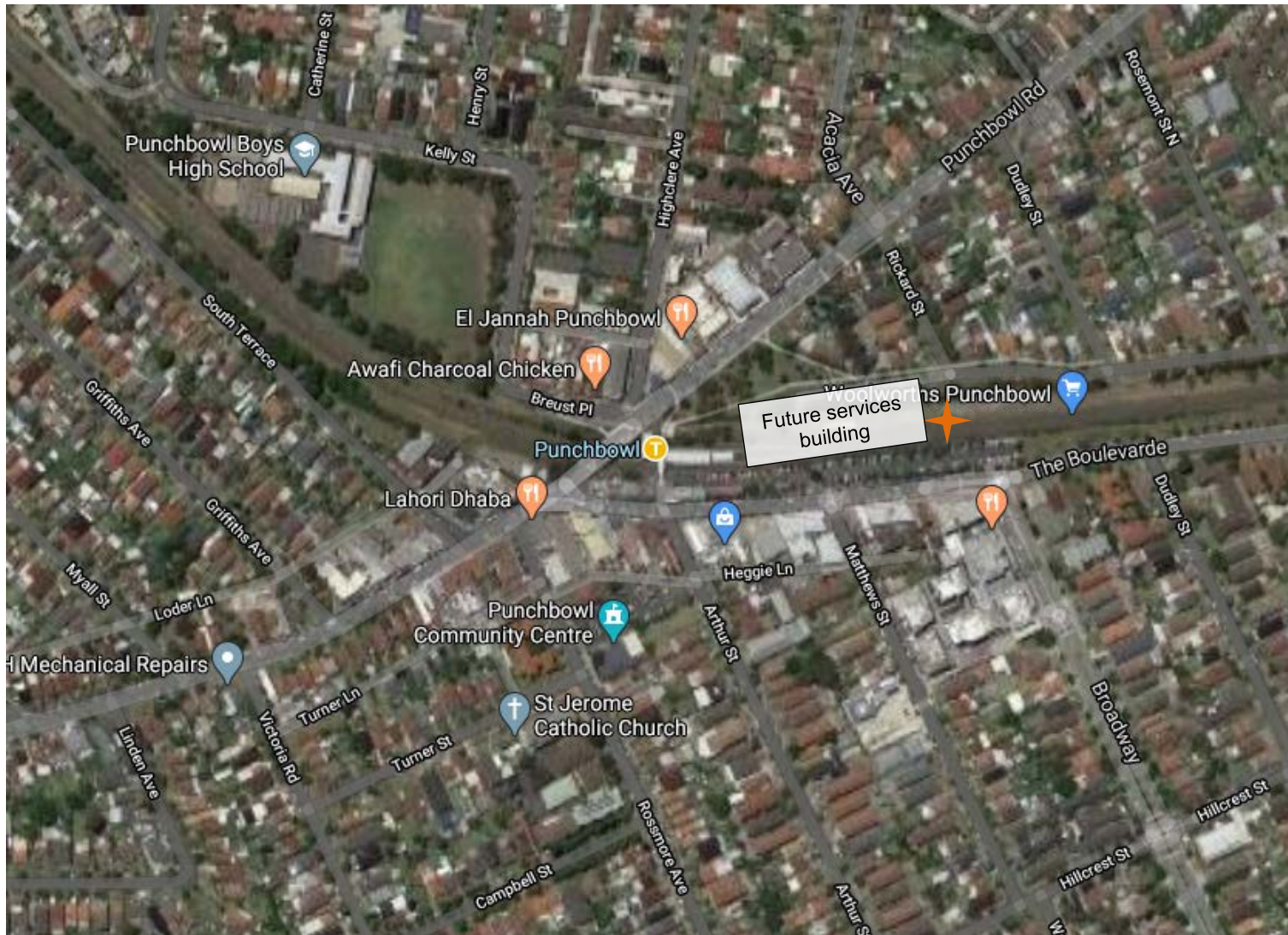
Belmore: near the Belmore services building



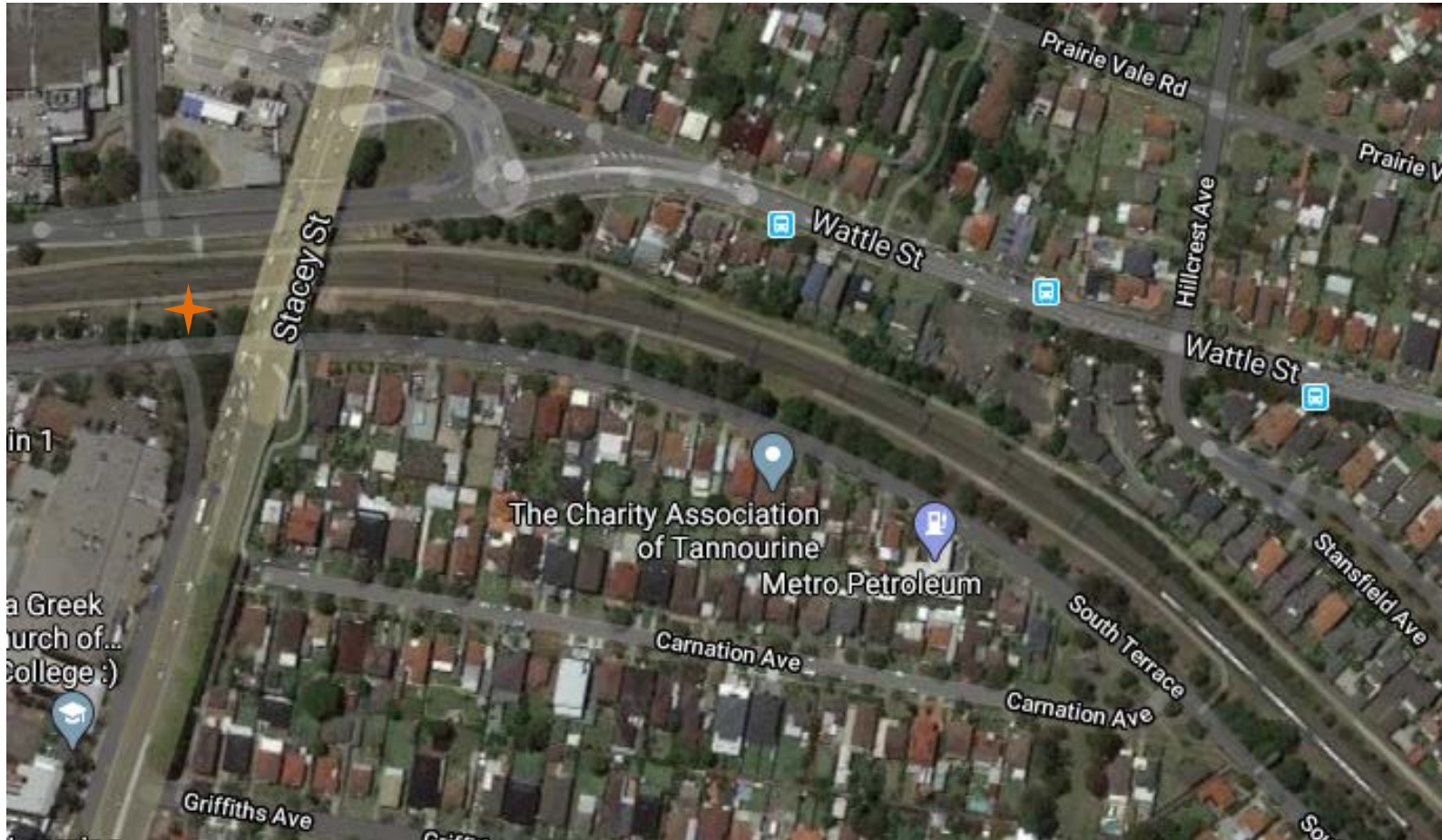
Lakemba: near the Lakemba services building



Punchbowl: near the Punchbowl services building



Bankstown: west of the Stacey Street road overbridge





Appendix B Revised operational visual impact assessment compared with Approved Project

The Landscape and Visual technical paper as exhibited with the EIS and amended within the Submissions and Preferred Infrastructure Report (SPIR) provides an assessment of landscape and visual impacts including for ancillary works along the rail corridor including telecommunications masts (radio antennae, CCTV cameras, telecommunications cabling and equipment enclosures) at approximately 250 metre intervals along the corridor, to an approximate height of three to six metres above the rail line. The eight radio masts are in addition to the telecommunication masts proposed within the EIS. All radio masts locations remain within the existing rail corridor.

The table below outlines the impacts outlined within the EIS for during operation compared with the proposed works. The revised visual assessment utilised the guidance for landscape and visual impact assessment (including sensitivity levels and modification levels) to determine a revised visual impact level as outlined in the Sydenham to Bankstown EIS Technical Paper 7- Landscape and visual impact assessment.

Radio mast location	Visual and Heritage setting	Existing operation landscape and visual impact assessed in EIS	Revised impact assessment- operation
Corridor-wide assessment			
<p>Ancillary works along the rail corridor- as assessed within the EIS and SPIR.</p> <p>The level of detail within the EIS and SPIR did not identify specific locations of the radio masts along the alignment.</p>	<p>The Approved Project assessed telecommunication masts between three and six metres high within the EIS. The Approved Project assessed the landscape and visual impact as minor adverse landscape and visual impact along all section of the rail corridor for all operational elements including the telecommunication masts.</p> <p>See below for location-specific assessments.</p>	<p>Landscape assessment</p> <p>During operation, there would be a minor adverse landscape impact experienced along all sections of the rail corridor, between Marrickville Station and Bankstown Station. This is primarily due to the proposed tree removal along the corridor together with the addition of rail corridor infrastructure, including minor modifications to existing overhead lines and support structures, telecommunication masts, and other operational infrastructure, reinforcing the corridor as a physical and visual barrier within the landscape.</p> <p>Visual impact assessment</p> <p>During operation, there would be mainly minor adverse visual impacts to views from surrounding streets and residential properties including areas of Marrickville, Dulwich Hill, Hurlstone Park, Canterbury, and Lakemba, where vegetation is not replaced and the intensification of</p>	<p>Overall assessment</p> <p>The increased height of the additional eight radio masts from approximately three to six metres to a height of between 20 and 25 metres is considered to have a minor adverse landscape and visual impact to surrounding receivers, predominately the residential receivers located along the rail corridor.</p> <p>This impact is considered consistent with the minor adverse landscape and visual impact as assessed for the Approved Project.</p> <p>Additional sensitive receivers may be visually impacted by the radio masts as a result of the increase height and therefore visual catchment. As such, the minor adverse visual impact would be experienced by additional sensitive receivers</p>



Radio mast location	Visual and Heritage setting	Existing operation landscape and visual impact assessed in EIS	Revised impact assessment- operation
		<p>rail corridor infrastructure, including new retaining walls, embankments, drainage swales, noise barriers, overhead lines and support structures, signalling equipment, telecommunication masts, segregation fencing, and other operational infrastructure would be seen in close proximity.</p> <p>During operation, the rail corridor would not be lit at night, however, the headlights and internal lighting of a more frequent Metro train service, would be seen along the alignment, and the substations would require some lighting for security. This would be generally consistent with the surrounding night scene and would result in a minor adverse visual impact along the railway corridor between Marrickville Station and Punchbowl, and a negligible visual impact in Bankstown.</p> <p>Heritage visual assessment</p> <p>Visual impact would be moderate as new elements would diminish views to significant platform buildings, impact context and setting and introduce visual clutter.</p> <p>The new Metro layer which would remain distinguishable from the original elements and therefore the historic values of the station could be appreciated in the context of the evolution of the station.</p>	<p>who would not have previously been impacted by the Approved Project.</p> <p>As the proposed works would form part of the wider Approved Project, the overall landscape character and visual impact as a result of the proposed works would remain a minor adverse impact.</p>
Site-specific assessments			
<p>Marrickville: 25m mast near the Marrickville services building near to the O'Hara Street playground- a small linear park connects Cavey Street and O'Hara Street to the east of Marrickville</p>	<p>The viewpoints assessed in the EIS which would capture the proposed radio mast location include:</p> <ul style="list-style-type: none"> - Viewpoint 2- View southwest from O'Hara Street playground - Viewpoint 3- View north from Riverdale Avenue 	<p>Relevant assessment of viewpoints from the EIS are as follows:</p> <p>Viewpoint 2</p> <p>The planting and fence along the southern boundary would remain. Beyond the park, trains using the Metropolitan Goods Line would continue to be seen. Immediately south of this line, vegetation within the rail corridor would have been removed and the station services building would be visible in the centre of this view.</p>	<p>The radio mast will be located in close proximity to the upgraded station and would be wholly within the rail corridor. As the rail corridor is slightly elevated above the adjacent streetscape, the proposed radio mast would be visually prominent in this location. The services building being built as part of the Approved Project and existing vegetation would provide some screening particularly on the northern side of the rail corridor for residential receivers. There is</p>

Radio mast location	Visual and Heritage setting	Existing operation landscape and visual impact assessed in EIS	Revised impact assessment- operation
<p>Station, adjoining the northern boundary of the existing rail corridor</p>	<p>The landscape and visual values of this precinct are of neighbourhood sensitivity.</p> <p>The radio mast is located within Marrickville Station Group –State Heritage Register (01186) and s170 Register item curtilage</p>	<p>The new permanent way alignment would be generally in the same location and the extended platforms and platform canopies would be seen, extending across the view. The heritage platform buildings are unlikely to be visible, due to intervening elements, and with the platform 2 building having been relocated to the east. Vegetation to the south of the corridor would also be replaced with new trees and would be less prominent at this distance. Due to the scale, height and contrast of the proposed station services building and station, it is expected that the project would result in a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a negligible visual impact during operation.</p> <p>Viewpoint 3</p> <p>The rail corridor is the focal point of this view, elevated on an embankment of ballast, with overhead wiring and support structures, power poles and security fencing aligned along the corridor.</p> <p>The alignment of the permanent way would be generally in the same location, raised up on embankment and with perimeter security fencing. The new platforms, platform canopies and trains would be seen across the centre of this view. These elements would be elevated and rise above the adjacent residential properties on Leofrene Avenue.</p> <p>There is expected to be a noticeable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, resulting in a negligible visual impact during operation.</p>	<p>limited screening however on the southern side of the rail corridor.</p> <p>Due to the height of the radio mast at 25 metres in this location, it is expected that the proposed work would result in a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity, which would therefore remain a negligible visual impact during operation, which is consistent with the Approved Project.</p> <p>Due to the proximity from the heritage elements of Marrickville Station Group the radio mast and as a result of the elements of upgrade works to this station as a result of the Approved Project, the radio mast would have a negligible impact on the heritage setting of this item.</p>
<p>Dulwich Hill: 25m mast south of the Dulwich Hill station platform on the southern side of the</p>	<p>The viewpoints assessed in the EIS which would capture the proposed radio mast location include:</p>	<p>Relevant assessment of viewpoints from the EIS are as follows:</p> <p>Viewpoint 3</p>	<p>The radio mast would rise higher than masts previously assessed increasing from 3-6 metres to 25 metres. The radio mast would be located in close proximity to existing infrastructure. On the northern side (viewpoint 3) the radio mast would</p>



Radio mast location	Visual and Heritage setting	Existing operation landscape and visual impact assessed in EIS	Revised impact assessment- operation
<p>rail corridor between the station platform and the commuter car park (to be converted to a plaza area as part of the Approved Project).</p>	<ul style="list-style-type: none"> - Viewpoint 3- View south from Bedford Crescent to Dulwich Hill Light Rail Stop (local sensitivity) - Viewpoint 6- this view represents the outlook from residential properties on Ewart Lane and adjacent residential areas of south Dulwich Hill (neighbourhood sensitivity) <p>The radio mast is located within Dulwich Station Group- s170 Register item curtilage.</p>	<p>As there would be more station structures visible, rising above the existing built form, the project would create a noticeable reduction in the amenity of this view. This view is of local sensitivity, resulting in a minor adverse visual impact during operation.</p> <p>Viewpoint 6</p> <p>The metro platforms, canopies, and platform screens within the station, and segregation fencing along the metro track, would also be visible extending west from the new station buildings (left of view). The new station architecture would contribute to the quality of this view, as would the improvements to the public realm. The introduction of trees would filter and soften lower level views towards the station. Overall, despite the scale of the built form, this would result in a noticeable improvement in the amenity this view. This view is of neighbourhood sensitivity, resulting in a negligible visual impact during operation.</p>	<p>be visible however this would be seen as part of the overall station upgrade and would be partially screened with vegetation and the existing light rail stop and lift shaft. The increased height of the radio mast in this location would have a minor adverse visual impact on this viewpoint which is consistent with the Approved Project.</p> <p>On the southern side (viewpoint 6) the new station architecture would contribute to the quality of this view, as would the improvements to the public realm. The introduction of trees would filter and soften lower level views towards the station. The increased height of the radio mast would result in noticeable reduction, however when considered with the overall improvements in the amenity of this view with the Approved Project, and the neighbourhood sensitivity of the viewpoint, would remain a negligible visual impact during operation.</p> <p>Due to the proximity from the heritage elements of Dulwich Hill Station Group the radio mast and as a result of the elements of upgrade works to this station as a result of the Approved Project, the radio mast would have a negligible impact on the heritage setting of this item.</p>
<p>Canterbury: 25m mast near the Canterbury traction substation</p>	<p>The radio mast is located within the rail corridor adjacent to (within 10 metres of) the Old Sugarmill-Canterbury LEP 2012 curtilage (item I82) and about 20 metres from the Old Sugarmill State Heritage Register (item 00290).</p>	<p>No site specific assessment was undertaken at this location due to the distance from Canterbury Station.</p>	<p>The radio mast would be located wholly within the rail corridor. The radio mast would rise higher than masts previously assessed in this location increasing from 3-6 metres to 25 metres. The existing infrastructure within the rail corridor in the location includes 4-tired Galvanised Steel Troughing in the location of the proposed radio mast.</p>



Radio mast location	Visual and Heritage setting	Existing operation landscape and visual impact assessed in EIS	Revised impact assessment- operation
			<p>On the southern side there are some residential sensitive residential receivers in close proximity to the rail corridor, including residents within the Old Sugarmill. There is some vegetation along the rail corridor which would provide some screening of the radio mast.</p> <p>On the northern side, there are some residential receivers however given the topography which is elevated from the rail corridor, the radio mast would be partially screened by vegetation.</p> <p>There is also an existing mast within the rail corridor about 20 metres west of the proposed location of the radio mast which is similar in nature to the proposed radio mast.</p> <p>As such, there would be a no perceived change and would therefore have a negligible visual impact, which is consistent with the Approved Project.</p> <p>Three Conservation Management Plans (CMP) (1993,1995 and 2020) have been prepared for this heritage item. The 1995 CMP (Rod Howard Heritage Conservation, 1995) identifies that the views from the Sugar House to the north and northeast to the park on the adjacent side of the rail corridor should be preserved. The 2020 CMP for the Former Sugar House (Bronwyn Hanna History & Heritage, 2020) notes that ‘in 2020 the rail corridor to the north of the property is being redeveloped for conversion to a "Metro" system of public transport. All developments associated with this conversion should be designed to maintain the integrity of the property including view corridors to and from the Sugar House.’</p>



Radio mast location	Visual and Heritage setting	Existing operation landscape and visual impact assessed in EIS	Revised impact assessment- operation
			<p>As such, the radio mast is located within a visually sensitive area and within a stated view corridor to the north-east to the park from the heritage item.</p> <p>The radio mast would not be out of keeping with existing visual impacts as a result of existing tall infrastructure and other power supply infrastructure including 4-tired Galvanised Steel Troughing within the rail corridor.</p> <p>The radio mast would have a negligible impact on the heritage setting of the Old Sugarmill (SHR) and the impact is anticipated to be consistent with the impacts assessed for the Approved Project.</p>
<p>Campsie: 20m mast near the Campsie services building</p>	<p>The viewpoint assessed in the EIS which would capture the proposed radio mast location includes:</p> <ul style="list-style-type: none"> - Viewpoint 5- view west from Lilian Street – In this view the rail corridor is generally level with the road, however, it is obstructed by buildings within the rail corridor. <p>The radio mast is located within Campsie Station Group- s170 Register item and Canterbury LEP 2012 (140) curtilage</p>	<p>Viewpoint 5</p> <p>The linear car park along the rail corridor would be replaced by a services building. This building would be a prominent new structure. Beyond this building a traction substation would be visible, seen in the background. These changes would be generally consistent in character with the mix of residential and commercial development along the rail corridor. Overall, there would be a noticeable reduction in the amenity of this view, which is of neighbourhood sensitivity, resulting in a negligible visual impact during operation.</p>	<p>The radio mast would be located adjacent to the Approved new services building which would be a new visual element in this location. From the northern side of the rail corridor the radio mast would be visible from residential receivers. The increased height of the radio mast to 20 metres in this location would have a noticeable reduction in amenity, which is of neighbourhood sensitivity, as such would remain a negligible visual impact, which is consistent with the Approved Project.</p> <p>The radio mast would have a negligible impact on the heritage setting of Campsie Station Group (s170/LEP) and the impact is anticipated to be consistent with the impacts assessed for the Approved Project.</p>
<p>Belmore: 20m mast south of the Belmore Senior Citizens Centre</p>	<p>No viewpoints within the EIS would show the radio mast location.</p> <p>The radio mast would be located south of the Belmore Senior</p>	<p>Other viewpoints in this area were deemed to be of neighbourhood sensitivity and had a minor beneficial to minor adverse impact on visual amenity during operation as a result of the Approved Project.</p>	<p>The radio mast would be located adjacent to Belmore Station which is heritage listed. The radio mast would have a noticeable reduction in visual amenity in this location. The radio mast would rise higher than masts previously</p>



Radio mast location	Visual and Heritage setting	Existing operation landscape and visual impact assessed in EIS	Revised impact assessment- operation
	<p>Citizens Centre. Along the corridor to the south is residential dwellings.</p> <p>The radio mast is located within the Canterbury LEP 2012 (I11) heritage curtilage and directly adjacent (within five metres) to Belmore Station Group- State heritage item curtilage (01081) and s170 Register item.</p>		<p>assessed in this location increasing from 3-6 metres to 20 metres. The rail corridor to the north and south has some screening by trees. The Belmore Senior Citizens Centre would have a considerable reduction in visual amenity, which is of neighbourhood sensitivity, as such would remain a minor adverse visual impact, which is consistent with the Approved Project.</p> <p>The radio mast would have a negligible impact on the heritage setting of Belmore Station Group (SHR/s170/LEP) and the impact is anticipated to be consistent with the impacts assessed for the Approved Project.</p>
<p>Lakemba: 20m mast near the Lakemba services building</p>	<p>No viewpoints within the EIS would show the radio mast in this location. The closest would be viewpoint 1 (view northeast from Railway Parade), which was deemed of local sensitivity.</p> <p>The radio mast is located directly adjacent (within 10 metres) to Lakemba Railway Station Group – s170 Register item curtilage and Canterbury LEP 2012 (I143).</p>	<p>Viewpoint 1 assessed the ‘overall, it is expected that the project would result in a noticeable reduction in the amenity of this view, due to the loss of these mature trees. This view is of local visual sensitivity, resulting in minor adverse visual impact during operation.’</p>	<p>The radio mast would be located within the rail corridor at the end of the platform on the western end of Lakemba Station.</p> <p>The radio mast would be located adjacent to the future services building which will also be a new visual element in this location with limited screening from existing trees. The residential receivers directly adjacent to the commuter car park on the northern side of the rail corridor would have a noticeable reduction in their visual amenity as a result of the increased height of the radio mast in this location. To the south there would be screening for residential receivers from existing trees lining the rail corridor. The radio mast would rise higher than masts previously assessed in this location increasing from 3-6 metres to 20 metres. Given the local sensitivity of this location, the impact would remain as a minor adverse visual impact, which is consistent with the Approved Project.</p> <p>The radio mast would be located just outside the heritage curtilage however the heritage setting</p>

Radio mast location	Visual and Heritage setting	Existing operation landscape and visual impact assessed in EIS	Revised impact assessment- operation
			impact would be negligible and remain consistent with the Approved project.
Punchbowl: 25m mast near the Punchbowl services building	<p>The viewpoint assessed in the EIS which would capture the proposed radio mast location includes:</p> <ul style="list-style-type: none"> - Viewpoint 2- view east along Urunga Parade. This view includes mature trees along the rail corridor, Urunga Parade (left of view), on and off street parking and rail corridor service access gates. This mature vegetation encloses the view to the south and characterises this view. 	<p>Viewpoint 2</p> <p>The new services building and adjacent retaining wall would be seen in the foreground of this view, to the south of Urunga Parade. Overall, there would generally be a more developed, open character to this view. It is expected that the project would result in a considerable reduction in visual amenity of this view, which is of neighbourhood visual sensitivity, resulting in minor adverse visual impact during operation.</p>	<p>The radio mast would be located adjacent to the Approved services building. There would be minimal screening from vegetation for residents on the southern side of the rail corridor. The sensitive receivers on the southern side of the station would have a view directly to the radio mast with limited screening from vegetation. The radio mast would rise higher than masts previously assessed in this location increasing from 3-6 metres to 25 metres. Therefore the impact would remain a considerable reduction in visual amenity in this location resulting in a minor adverse visual impact consistent with the Approved Project.</p>
Bankstown: 25m mast west of the Stacey Street road overbridge	<p>No viewpoints within the EIS show the radio mast in this location due to the distance from Bankstown Station.</p> <p>The radio mast is located along the southern side of the rail corridor near Stacey Street road overbridge. The surrounding receivers are retail, commercial and a limited number of residential medium and low density dwellings.</p> <p>The Bankstown Station area was assessed of local sensitivity.</p>	<p>No site specific assessment was undertaken at this location due to the distance from Bankstown Station.</p>	<p>The radio mast would be located in an area of the rail corridor with limited vegetation screening. The radio mast would rise higher than masts previously assessed in this location increasing from 3-6 metres to 25 metres. Given the setting within the rail corridor adjacent to a major road overbridge, there would be no perceived change in the overall visual amenity of the area and the local sensitivity of the area (as identified in the EIS), this would result in a negligible visual impact in this location, which is consistent with the Approved Project.</p>