

Chapter 8

Response to community submissions



8. Response to community submissions

8.1 Overview

This chapter provides a summary of issues raised by:

- members of the public (individuals)
- submitters registered as organisations whose submissions are not addressed in Chapter 7 (Response to key organisations) of this report.

Responses to issues raised are provided. The approach to reviewing and responding to submissions is described in section 3.2 of this report. As described in section 3.2.3 of this report, each issue identified in this section is presented as a summary of the issues raised by individual submissions, grouped into key issue categories. This means that, while the exact wording of a particular submission may not be present in the summary of the issue, the intent of issues raised has been captured. A response has been provided to each grouped issue summary, which may be relevant across a number of submissions.

The submissions register (see Appendix A of this report) includes a table identifying submissions using the submission identification numbers provided to submitters by the Department of Planning and Environment. The table presents, for each submission, a cross reference to where the issues raised in the community submissions have been addressed in the report.

Further detail on issues raised in each submission, including background, contextual information and full submissions, is provided in the detailed submissions available via the Department of Planning and Environment's Major Projects website ([Parramatta Light Rail Stage 2](#)).

The responses to issues raised include a number of references to the mitigation measures that would be implemented to avoid or minimise the potential impacts of the project. Further information about the mitigation measures (as updated) is provided in Chapter 9 (Conclusion and next steps) and Appendix B (Updated mitigation measures) of this report.

8.2 The project – design features and operation

8.2.1 Track form and alignment

Requests and support for green/permeable track

Issue description

Submitters requested that green track be provided in Wentworth Point. Comments made included:

- Wentworth Point is full of buildings and very little green space. Green track will be highly appreciated to keep our suburb as green as possible.
- Green track in this section will help reduce noise and flooding.
- Due to the extensive green space areas within Wentworth Point, and directly alongside the proposed route, the project should utilise the permeable green track option as detailed in the EIS.
- The track is planned to be constructed alongside extensive open green space/parklands and would be the ideal location to utilise the green track option.

Other submitters noted that they are in favour of as many green tracks as possible across the project, and that permeable/green track should be considered wherever possible in future light rail projects. Comments made included:

- Green track sections should be included along key sections that resonate with the adjacent natural environment, such as Ken Newman Park, Archer Park, Hill Road and the Sydney Olympic Park precinct.
- Track through Ken Newman Park and along Boronia Road Street (between the River Road and Melrose Park stops) should be a wire-free green track to fit in with the surrounding area.
- Extending green tracks should be investigated, particularly in Sydney Olympic Park (including Australia Avenue), and wherever possible along the route.
- The investigation of green tracks is encouraged in Ken Newman Park to enhance the natural outcome for the light rail tracks that will be constructed through the middle of the park.
- Ballasted sleeper track, which can be turfed or sown in with robust plants, should be considered.

Submission numbers

SE-51719707, SE-51854962, SE-51996710, SE-52091708, SE-52091732, SE-52110225, SE-52170500, SE-52213976, SE-52275991, SE-52496457, SE-52462492, SE-52670974, SE-52716711, SE-52718459, SE-52724457, SE-52724719

Response

The project would incorporate sections of permeable track, where the tracks are laid in a permeable concrete slab or on concrete sleepers incorporating space for materials that allow water to infiltrate. Types of permeable track that may be used include green track, incorporating areas between and beside the tracks planted with grasses or groundcover and crushed stone. Section 6.2.1 of the EIS provides examples of where these different track forms would be used. These include:

- within or adjacent to areas of open space
- adjacent to vegetated or environmentally sensitive areas
- where it would contribute to the amenity of the public domain, based on existing and future land uses.

Permeable tracks use less concrete and reduce glare. Permeable tracks have the potential to reduce airborne noise from light rail vehicle movements compared to embedded tracks encased in concrete, as some of the noise would be absorbed by the permeable surface. The use of permeable tracks may also reduce stormwater runoff; however, any reduction would be minor in the context of the overall catchment, and unlikely to reduce peak flood levels and velocities.

As described in section 6.2.1 of the EIS, green track would be provided in the vicinity of the Atkins Road stop, and Transport would investigate the opportunity to provide other areas of permeable and green track during design development. The design development of track forms such as permeable and green track are informed by technical assessments, some of which require the design to be further developed before they can progress.

The use of permeable and green track would be investigated in consultation with key stakeholders, including City of Parramatta Council and Sydney Olympic Park Authority. Relevant considerations include:

- existing conditions and usage patterns
- community and stakeholder preferences and interests
- the functionality of the proposed spaces/precincts
- maintenance access requirements
- safety aspects relating to the differentiation of track and park areas

- the impacts of permeable and green tracks on adjacent environmentally sensitive areas, e.g., the need for irrigation, fertiliser and the management of weeds.

An initial concept plan for improvements at Ken Newman Park was provided in Figure 6.20 of the EIS. The use of permeable and green track in Ken Newman Park would be considered during design development for improvements at this open space, taking into account the considerations listed above.

In relation to Wentworth Point, the final track form, and potential for using permeable and green track, would also consider:

- Sydney Olympic Park Authority's management strategy for the Millennium Parklands, including the impacts of green track adjacent to environmentally sensitive areas (such as wetlands)
- opportunities for any future shared use of parts of the project corridor by buses.

With regards to the request to use ballasted sleeper track sown with plants, it is noted that ballast is not suitable for use in most urban environments. The alignment would be located within existing road corridors for most of its route. Given this, tracks embedded in concrete would need to be used for most of the alignment as they would need to be trafficable by both rail and road vehicles as well as pedestrians and cyclists.

Investigations into the use of permeable and green track would occur as part of the development of the project's urban design requirements, which would be prepared in accordance with mitigation measures LV1 and LV2.

Alignment along Hill Road (Wentworth Point / Sydney Olympic Park)

Issue description

Submitters requested that the alignment be relocated in the vicinity of Hill Road. Comments made included:

- The alignment along Hill Road should be placed further back from the road (into the parkland) to maintain the tree canopy that is currently in place. This will reduce noise and visual impacts, and pedestrians using the pedestrian paths along that side of the road would not need to cross the tracks to reach the path.
- The alignment should be located on the southern side of Hill Road in the car park opposite Narawang.

Submission numbers

SE-51058708, SE-52005707

Response

The alignment is constrained along Hill Road by various features including:

- The area west of Hill Road includes the Millennium Parklands, Narawang Wetland and Newington Nature Reserve. Environmental values in this area include endangered ecological communities, and Green and Golden Bell Frog habitat.
- The URBNSURF development is currently being constructed near the corner of Hill Road and Holker Busway. This area is no longer a car park.

Further information about the biodiversity values of, and habitat in, this area is provided in section 16.2 of the EIS.

The process of developing the preferred light rail alignment is described in Chapter 5 (Design development, alternatives and options) of the EIS. The alignment has been designed to traverse the western edge of Hill Road and the eastern edge of Millennium Parklands, adjacent to the existing road transport corridor. This takes advantage of the existing transport corridor in this location and avoids a number of constraints and/or environmental impacts associated with locations further to the west.

Potential issues and constraints associated with locations further to the west include:

- removal/reduction in existing open space and recreation areas
- fragmentation of the parklands and areas of vegetation, with the potential creation of a narrow strip of land between a light rail corridor and the existing road corridor
- increased fragmentation of ecological habitats
- introduction of new noise and light sources into sensitive ecological areas
- potential impacts on existing landfill management infrastructure and interaction with contaminated lands and groundwater
- potential impacts on existing pedestrian walkways.

It is noted that the project would provide for crossings of the light rail tracks via the addition of signals to four intersections along Hill Road, which would provide for improved pedestrian safety.

The noise and vibration impacts of constructing and operating the project were described in Technical Paper 3 (Noise and Vibration) and summarised in Chapter 10 (Noise and vibration) of the EIS. As described in section 4.2.1 of this report, an Updated Noise and Vibration Report has been prepared to assess the potential impacts of the proposed amendments to the project. In the vicinity of Hill Road, the results of the noise assessment indicate that during construction:

- Noise management levels would be exceeded during site establishment works at compound sites, during construction of light rail infrastructure, stops and bridge works, and during road works.
- Receivers at this location would be highly noise affected during construction of light rail infrastructure and road works.

During operation receivers along Hill Road would not experience exceedances of the relevant trigger levels for groundborne or airborne noise during operation, except for three buildings still to be constructed in Sanctuary Wentworth Point (receiver numbers L012, L014 and L015).

These impacts are due to the proximity of the proposed works to the sensitive receivers along Hill Road. A range of mitigation measures (NV4 to NV15) are proposed to minimise noise and vibration impacts during construction. Further information about how noise impacts would be mitigated is provided in the response in section 8.7.4 of this report. It is also noted that vegetation alone would not provide an effective form of mitigation for transport noise sources.

Track design at active transport link crossings

Issue description

A submitter requested that track inserts be used in locations where paths cross light rail tracks at acute angles.

Submission number

SE-52726459

Response

Transport is committed to providing safe cycling and walking connections as part of the project. As described in section 6.4 of the EIS, the proposed active transport links would be designed in accordance with the principles outlined in Technical Paper 1 (Design, Place and Movement), the urban design requirements, relevant guidelines and standards (including *Guide to Road Design Part 6A: Paths for Walking and Cycling* (Austroads, 2017) and Australian Standard AS 1428.1-2009 *Design for access and mobility*), and crime prevention through environmental design principles.

All active transport link connections for the project would cross the light rail tracks at about 90 degrees. Potential innovative technologies, including those that address the specific risk of the bicycle-rail interface, would continue to be investigated as the design progresses.

Alignment grade

Issue description

A submitter requested clarification of the alignment grade and noted that there is no cut and fill diagrams to indicate the treatment of variations to achieve a reasonable steady grade, and that information on the final grade in Ken Newman Park is not provided.

Submission number

SE-52009207

Response

The alignment has been designed with passenger comfort in mind and to maintain acceptable grades for the light rail vehicles to traverse. While changes of grade are needed to accommodate the topography along the alignment, the design restricts the amount of undulation to be within acceptable limits to maintain passenger comfort.

Removal of ramps and reliance on tactile ground surface indicators

Issue description

Submitters expressed concern that removing kerb ramps and relying on warning tactile ground surface indicators at an at-grade / flush finish crossing would not be an effective or safe means to prevent people who are blind or vision impaired from walking straight out into an intersection or into the path of a light rail vehicle. Issues raised included:

- Safety concerns associated with flush finishes are compounded by the greater uptake of electric and hybrid vehicles and personal mobility devices, which run silently.
- People who are blind or vision impaired must be able to distinguish when the safety of the footpath ends and the danger zone of road and light rail commences, which is generally best via a compliant kerb ramp.
- New infrastructure should be built to ensure inclusion and independence.
- For a Guide Dog handler, the kerb ramp allows the handler to reinforce the positive behaviour of the Guide Dog who has taken them to the ramp and stopped prior to the road. A Guide Dog cannot reliably stop at warning tactile ground surface indicators at an at-grade / flush finish crossing.
- The opportunity to work with Transport for NSW and Parramatta Light Rail would be welcomed, to improve the design to ensure that people who are blind or have low vision can access their communities and public transport with safety, confidence and independence.

Submission numbers

SE-52714718, SE-52779232

Response

Transport acknowledges this feedback and appreciates the issue being raised. Transport understands that flush-finished crossing treatments, while compliant with Australian Standards, may cause practicality and safety issues for vision-impaired people.

The preliminary urban design concepts outlined in the EIS (see Technical Paper 1 (Design, Place and Movement)) were prepared based on current best practice and adherence to relevant legislation, guidelines and standards, including the Disability Standards for Accessible Public Transport and the *Disability Discrimination Act 1992* (Cth).

Transport would consult with Blind Citizens Australia and Guide Dogs NSW/ACT during further design development to understand the issue further and consider how the project treatments can best respond to the issues raised, while also maintaining compliance with relevant legislation and design standards.

8.2.2 Light rail stops

Location and need for stops

Issue description

Submitters raised concerns and/or had queries about the proposed design and location of various stops. Concerns, queries and requests raised included:

Sandown Boulevard stop

- The Sandown Boulevard stop should be moved west, just past the junction, to facilitate cross-platform transfer between Parramatta Light Rail Stages 1 and 2 and avoid the need to leave one stop and cross streets to walk to another stop.
- The exact location of the Sandown Boulevard stop should be confirmed to allow future planning of surrounding sites. The indicative width of the stop appears larger than the majority of the project area along the Sandown Line. Confirmation is sought that Billbergia's land will not be required as part of the construction or operation of this stop.

Stops near Rosehill Gardens Racecourse / in Camellia

- A stop is needed in Rosehill or Camellia, including to service functions at Rosehill Gardens Racecourse.
- The Camellia East stop should be considered as part of the project to ensure the Camellia town centre and broader peninsula can be planned appropriately. This additional stop will allow the town centre to be serviced by more than one public transport service. It is noted the next stop will not be until John Street which is about 2.5 kilometres away.
- As detailed in the Draft Camellia-Rosehill Place Strategy, there are multiple sites east of the Camellia town centre that will be developed in the future and would utilise the Camellia East stop. Further, the heavy industrial areas on the eastern side of the peninsula are important employment lands that the additional stop would service.

Stops in Ermington

- Consideration should be given to relocating the stops in Ermington to provide a stop near Silverwater Road, which is one of only a few crossings of the Parramatta River and is an important transport corridor. This could become an important part of the bus network.

Waratah Street stop

- Consideration should be given to removing the Waratah Street stop to avoid the boat ramp and surrounding streets from becoming a car park.

- The location of a stop at Waratah Street will be of great benefit to the southern and eastern sections of Melrose Park, as well as facilitating interchange with other transport modes.

Holker Busway stop

- The stop on Holker Street is not near the large resident base at Newington.
- The Holker Busway stop is not located near the existing bus stop, active transport link, and ticketing and amenities blocks. Is the stop just proposed to service URBNSURF?

Stops in Sydney Olympic Park / future stop at Grand Parade

- The future stops at Australia Avenue and Grand Parade should be included in the initial proposed stops to provide an alternative egress option for patrons attending events and make it more possible for operations to continue down Dawn Fraser Avenue during major events.
- The tentative location shown for a possible future stop at Grand Parade should be re-considered. The stop should be moved closer to the entrance gate on Sydney Showground's Grand Parade for pedestrian convenience and simplified wayfinding.
- The Olympic Park stop is at the opposite end of the heavy rail station, which is another mode change.
- How is having two stops within 400 metres inside Sydney Olympic Park justified?

Submission numbers

SE-50536707, SE-50862710, SE-51938967, SE-51996749, SE-52009207, SE-52025476, SE-52486209, SE-52604711, SE-52661960, SE-52670974, SE-52718459, SE-52769958

Response

An extensive options consideration process to identify the preferred route alignment, including stop locations, was undertaken as part of the project's economic appraisal and business case processes in 2018 and 2019/2021 respectively. Stop locations were considered based on a range of inputs, including demand, urban design, access and project operability considerations. Further information on how the proposed stop locations were determined as part of the overall design process is provided in section 4.2 of Technical Paper 1 (Design, Place and Movement).

Responses to issues raised about individual stop locations are provided below.

Sandown Boulevard stop

Figure 6.1 of the EIS (and Figure 1.1 in the updated project description provided in Appendix A of the Amendment Report) shows the approximate size and location of the proposed Sandown Boulevard stop. The stop is proposed to be located wholly within the existing Sandown Line corridor in this section of the alignment. The stop has been located to integrate with the future Camellia town centre in accordance with the *Camellia-Rosehill Place Strategy* (DPE, 2022b).

Providing an interchange stop further to the west as suggested in the submission is not technically feasible. Stops need to be installed on level ground to ensure adequate safety and accessibility. The grade from the Bidgee Bidgee Bridge constructed over James Ruse Drive as part of Parramatta Light Rail Stage 1 means that appropriate level areas are not available at this location.

There are a number of interchanges that could be used to transfer between Parramatta Light Rail Stage 1 and Stage 2 services, including at the Parramatta Light Rail Stage 1 Tramway Avenue stop to the west. A description of other interchange locations is provided in the response in section 8.2.8 of this report (under the heading 'Interchange with Parramatta Light Rail Stage 1 and Sydney Metro West').

The project site shown in the EIS varies in width at different locations along the alignment to facilitate differing project requirements (e.g., construction compounds) and the work scopes for different project activities and facilities (e.g., utility works, pavement, active transport links).

As listed in Appendix E (Preliminary land requirements) of the EIS and Appendix D (Updated preliminary land requirements) of the Amendment Report, land located at 1, 1C and 3 to 9 Grand Avenue is not located within the project site and is not proposed to be used to construct or operate the project.

Stops near Rosehill Gardens Racecourse / in Camellia

Two Parramatta Light Rail stops would be located close to the Rosehill Gardens Racecourse entrance. These are the Rosehill Gardens stop (constructed as part of Parramatta Light Rail Stage 1) and the stop at Sandown Boulevard (proposed as part of the project). These stops are within 300 metres and 200 metres respectively of the Might and Power Entrance to the racecourse.

Section 2.2 of the Supplementary Design, Place and Movement Report describes stop locations and spacing. There is about 1.9 kilometres between the Sandown Boulevard and John Street stops. Minimal demand for a stop between these two stops is currently anticipated due to the low density industrial land use in the eastern portion of Camellia.

As described in section 6.3.1 of the EIS, the project has futureproofed space for a possible future stop at Camellia East, which may be constructed after the project commences operation based on demand and surrounding development. No stop infrastructure is currently proposed to be constructed at this location. The proposed location for the possible stop was identified taking into account the *Camellia-Rosehill Place Strategy* (DPE, 2022b).

Stops in Ermington

There are a number of technical, operational and economic considerations in relation to the location of light rail stops. At Silverwater Road, the alignment would cross the road via a bridge structure. To achieve suitable clearance over Silverwater Road, the bridge needs to start its incline some distance back from Silverwater Road, which restricts potential stop locations.

Stops are also located to maximise patronage, typically within a 400 metre radius of the stop. A stop on the bridge structure would affect the location of Nowill Street and River Road stops. The River Road stop is located about 200 metres west of Silverwater Road and the bus stops to the south of the proposed light rail bridge.

Waratah Street stop

The Waratah Street stop would service the southern Melrose Park precinct and areas to the east. The location of the stop adjacent the Parramatta Valley Cycleway would also provide opportunities for pedestrians and cyclists using this shared path to access light rail services. Significant development is proposed immediately north of the Waratah Street stop, which would provide a large passenger demand for trips using the project and for interchanges with other transport modes.

Transport would work with Council to maintain the car park at Ermington Boat Ramp for boat ramp users.

Holker Busway stop

Providing regular stops improves public transport access and enables passengers to walk and ride to stops. The proposed Holker Street stop would create a place of arrival for several of the recreation facilities located in the northern portion of the Sydney Olympic Park precinct. These include the proposed URBNSURF facility, the southern section of Millennium Parklands, Wentworth Common, and the Brickpit Ring Walk. The Holker Street stop would be located about 500 metres (about a seven minute walk) from the Newington residential area via Holker Street and the Louise Sauvage Pathway. It would also connect with bus routes, including the 526 route from Newington.

The location of stops in Wentworth Point attempt to balance coverage of the high density residential areas with large areas of parklands and open spaces and other design considerations, including the locations of new crossings on Hill Road. Most of the existing and future residential population in the area would be

within 400 metres of a light rail stop, although it is acknowledged that walking distances of up to 800 metres would be experienced in some locations.

Stops in Sydney Olympic Park / future stop at Grand Parade

Two stops are proposed in Sydney Olympic Park about 400 metres apart. This compares to the average distance between stops along the rest of the alignment, which is about 780 metres. The Jacaranda Square stop would provide access to the northern portion of the developing Sydney Olympic Park Central precinct and the Parkview precinct north of Australia Avenue, in addition to Millennium Parklands and recreational areas. The Olympic Boulevard stop would provide access to the stadiums and the southern portion of the Central precinct, and enable interchange with the Sydney Trains Olympic Park Station and Sydney Metro West station.

As described in section 6.3.1 of the EIS, the project has futureproofed space for a possible future stop at Grand Parade, which may be constructed after the project commences operation based on demand and surrounding development. There would be an opportunity to refine the location of the stop in consultation with Sydney Olympic Park Authority and Royal Agricultural Society.

Seating at stops

Issue description

A submitter suggested that better provision of seating as part of stop designs is important in making transport more friendly to people with restricted mobility. Seating should be designed consistent with social distancing.

Submission number

SE-52724719

Response

Seats would be provided at all stops. The integration of urban furniture and fixtures, including seating, would improve the experience of the public domain, be a catalyst for positive social interaction, and deliver an enduring and sustainable outcome for the project. The furniture and fixtures associated with the project would be placed with consideration of other elements within the public domain to maximise use and efficiency, and minimise clutter.

The design of stops would ensure that there is provision for customers to walk around seating and for users, including those with wheelchairs and prams, to manoeuvre on the platforms. Stop seats would be designed to comply with relevant legislation and guidelines including the Disability Standards for Accessible Public Transport and the *Disability Discrimination Act 1992*. Priority seating would be located under the stop canopy, with adjacent wheelchair waiting spaces. Due to the limited space at stops and the need to provide clear paths of travel and meet accessibility requirements, there are limitations on the space that can be provided between seats.

Parking at stops

Issue description

A submitter expressed concern about the lack of parking at stops, and access to stops for people with limited mobility who would need parking close to stops to access light rail services. The submitter noted that disregarding those who are not as mobile will cause more social isolation as our community ages, and queried why parking is not provided at major stops, particularly for night travel. The submitter noted that light rail would be preferable to buses for older people if parking is available.

Another submitter requested that multi-storey car parks be considered to take cars off the road and encourage people to use the stops.

Submission numbers

SE-50862710, SE-51789975

Response

Transport acknowledges the importance of access to light rail services for people with limited mobility and that universal access is a fundamental component of a safe, equitable and comfortable transport network. The project would provide accessible and convenient paths of travel to stop platforms, and through stop environments and public domain areas. The project's public domain would be designed in accordance with relevant Australian Standards, including *AS 1428.1-2009 Design for access and mobility*, the Disability Standards for Accessible Public Transport, and Transport standards. Ramps and stairs would be designed in accordance with these requirements to provide comfortable access to stop platforms along the alignment.

Due to constraints on space, additional nearby parking would not be available at all stops. However, accessible parking would be available at some stops, including the John Street and Waratah Street stops. Further consideration of accessible parking would be undertaken during design development as part of the parking management strategy prepared in accordance with mitigation measure TT7.

Light rail is designed to serve a predominantly walk-in catchment connecting communities and places around the stops. It is noted that for some people, including those with mobility issues, kiss-and-ride and accessible parking may be particularly important to facilitate access to the project. This would be considered in the parking management strategy.

The project does not propose multi-storey car parking, which would be incompatible with surrounding land uses, increase the project's land requirements, and have the potential for other impacts, including traffic, noise and visual impacts. The *Road User Space Allocation Policy* (Transport for NSW, 2021a) requires that users are considered in the following order ahead of general traffic and on-street parking for private motorised vehicles:

1. walking (including equitable access for people of all abilities)
2. cycling (including mobility devices)
3. public transport
4. freight and deliveries
5. point-to-point transport.

While car parking has a role within the transport system, the overarching focus of the project is to optimise the use of available road space for access to adjacent land uses and efficient use of the road space along the light rail alignment and the surrounding network. To achieve this, on-street parking would need to be removed in a number of instances.

It is recognised that some parking types play an important role in servicing businesses and meeting the accessibility needs of the community. Where impacted, these spaces would need to be replaced in surrounding local roads. The accessible parking spaces, loading zones and taxi ranks that would be affected by the project are recognised as higher priority parking. Transport has committed to replacing these spaces as close as possible to existing locations in accordance with the parking management strategy, prepared in accordance with mitigation measure TT7.

Transport would continue to work with key stakeholders involved in the management of the road network and/or kerbside activity to develop and implement appropriate measures to manage the temporary or permanent displacement of car parking as described in section 9.4.5 of the EIS. The purpose of further consultation and design would be to ensure that appropriate and satisfactory measures are implemented

to promote better utilisation and efficiency of use for kerbside space, while considering the access requirements of local residents, businesses, and other land uses along and in the vicinity of the alignment.

Wayfinding

Issue description

A submitter queried whether wayfinding would be provided between the Carter Street stop and the Lidcombe train station.

Submission number

SE-50667210

Response

Section 6.3.2 of the EIS describes the approach to wayfinding signage. Signage would be provided that meets the standards for light rail operations and applies consistent branding in accordance with Transport's specifications and the urban design requirements for the project.

It is noted that the Sydney Trains Olympic Park Station is closer to the proposed Carter Street stop (about one kilometre away) than Lidcombe Station (about two kilometres away). Convenient interchange with train stations and the future Sydney Metro would be available at Sydney Olympic Park, Parramatta and Westmead, enabling connection to a range of destinations, including Lidcombe Station.

Nearest light rail stop

Issue description

A submitter queried where the nearest stop to Bicentennial Park is proposed.

Submission number

SE-51789975

Response

The nearest stop to Bicentennial Park would be Jacaranda Square, which would be located close to the intersection of Dawn Fraser Avenue and Australia Avenue.

Naming of stops

Issue description

A submitter raised issues associated with the naming of the Footbridge Boulevard and Sandown Boulevard stops, including in relation to their location.

Submission number

SE-52486209

Response

As described in section 6.3.1 of the EIS, the names of stops provided in the EIS are indicative and would be finalised during design development. The EIS has adopted 'project names' for proposed stop locations, with general reference to a prominent landmark such as street name or destination, to help the community geographically place the proposed stop location for the purpose of the assessment and approval process.

The final stop names would be determined based on stakeholder and community feedback, and approval by the Geographical Names Board of NSW.

8.2.3 Bridge between Melrose Park and Wentworth Point

Preferred bridge location

Issue description

Submitters expressed concerns about the proposed location of the bridge and a preference for it to be located further to the west. Concerns raised and comments made included:

- Residents would be greatly impacted by the bridge in its current location, particularly as a result of the need to acquire six properties.
- The proposed route would have a significant impact on residents of Melrose Park, particularly those living in Wharf Road and Lancaster Avenue.
- The existing downward incline on Waratah Street (towards Wharf Road) would need to be built up to allow traffic under the bridge to access Ermington Boat Ramp, which would contribute to visual impacts.
- The proposed route would impact property values and cause impacts such as the amplification of noise, vibration and light on waterfront properties located in the vicinity of the light rail bridge.
- The alternative route is a much better planning outcome, more environmentally sensitive, and less disruptive to existing public infrastructure (the boat ramp facilities and the Parramatta River pedestrian/cycleway) and existing residential development in the area.
- There appears to be alternatives to enable the bridge approaches to be located further to the west. Our strong preference is for the bridge to be located further to the west of both the locations shown in the EIS (including in Figure 5.6).
- The impacts of the bridge crossing could be partly minimised by having the bridge crossing further west of Ermington Boat Ramp. A route similar to that proposed by the Melrose Park Residents Action Group is supported (attached to the submission). This route is also supported by a number of other boating, fishing and community groups.

Submitters noted that relocating the bridge to a location west of the boat ramp and the current public amenities block would:

- improve the visual amenity of the bridge for nearby property owners and residents
- reduce noise, vibrations and light coming from the bridge and amplified across the river
- eliminate the need for compulsory acquisition of any private properties in Wharf Road
- eliminate the need for the removal of the 12 significant and mature trees in Waratah Street
- utilise vacant public land over private land
- be acceptable to more community organisations and members.

Submission numbers

SE-50557218, SE-51789992, SE-51794726, SE-51996749, SE-52089757, SE-52212470, SE-52467457, SE-52622707, SE-52646956, SE-52661960, SE-52665709, SE-52681720, SE-52682209

Response

Transport acknowledges the concerns raised by a number of stakeholders and community members in relation to the proposed location of the bridge between Melrose Park and Wentworth Point as described in the EIS, and the associated property, amenity and environmental impacts identified.

Options for the bridge between Melrose Park and Wentworth Point are substantially constrained by the location of the Parramatta River, residential properties, existing and planned infrastructure (including high voltage electricity lines and developments), Ermington Boat Ramp, and areas of biodiversity (including Newington Nature Reserve and areas of mangrove vegetation). Transport has undertaken a further review of alignment and bridge options between Melrose Park and Wentworth Point to minimise the potential for direct property impacts. The review included considering alternate bridge alignment options, including one about 50 metres west (as shown in Figure 5.25 of the EIS) and one further west of Ermington Boat Ramp (suggested by some submitters).

As described in section 4.1 of this report, Transport is proposing to amend the alignment and locate the bridge further to the west (about 50 metres further west than that described in the EIS) to avoid direct impacts on six residential properties that would no longer need to be acquired. More information on why a bridge alignment option further west of the Ermington Boat Ramp was not considered viable is provided in section 4.2.2. of the Amendment Report.

The review also considered relocation options for the transmission tower and wires, in consultation with Ausgrid, including the potential to incorporate electricity wiring into, or as part of the new bridge. An option to relocate the existing transmission tower and replace it with three poles was confirmed. This option would allow for the alternate bridge alignment about 50 metres west to be progressed.

Further information about the proposed new location for the bridge and the potential impacts are provided in section 4.2 and Chapter 6 (Additional environmental assessment) of the Amendment Report. The assessments identified there would be the potential for amenity impacts for properties to be retained. For some receivers in Melrose Park construction noise levels would be lower as a result of the alignment moving further west. The amendment would also result in less impacts on street tree and mangrove vegetation.

To accommodate the amended alignment, the existing transmission tower in Archer Park would be replaced with three poles. The amended design has also sought to minimise impacts on open space in Archer Park and Ermington Boat Ramp. However, a temporary closure of Ermington Boat Ramp would still be required and there would be some reconfiguration of the car park and access changes, along with relocation of the existing amenities block. Further information about the potential impacts is provided in Chapter 6 (Additional environmental assessment) of the Amendment Report.

A response to issues raised about impacts on Ermington Boat Ramp is provided in section 4.3.4 of this report.

Transport and vehicles able to use the bridge

Issue description

Submitters raised concerns and/or had queries about the vehicles that would be able to use the bridge. Concerns and queries included:

- Concerns about making the bridge open to private transportation or public cars (e.g., taxis or ride share). Legislation is requested to prevent future NSW Governments from doing so. This is of concern as there is no funding committed to the project.
- The bridge should include all vehicles. Local traffic issues, including those at Wentworth Point, should be considered, and vehicles should be allowed on the bridge.
- Can it be confirmed if the bridge will only be used by light rail or can buses use it?
- Will the general public vehicles be able to use the bridge?

Submission numbers

SE-50557218, SE-51360970, SE-51789992, SE-52681720

Response

As described in section 6.5 of the EIS the bridge between Melrose Park and Wentworth Point would be designed to provide public and active transport access to and from proposed redevelopment areas in Melrose Park, and the developing suburb of Wentworth Point across the Parramatta River. The bridge would accommodate light rail services and an active transport link, which would provide pedestrian and cycle access between Melrose Park and Wentworth Point. Emergency vehicles can use the bridge.

The bridge would also be designed to convey bus services between Melrose Park and Wentworth Point in the future; however, the provision of bus services across the bridge is not currently part of the project for which approval is being sought.

There is no proposal for the bridge to be used by private vehicles. Any change in use to that assessed by the EIS would require assessment and approval in accordance with the requirements of the EP&A Act.

Bridge design – high voltage electricity transmission lines

Issue description

Submitters requested that the existing high voltage electricity transmission lines (and associated towers) be removed and incorporated into the bridge. Issues raised include:

- The bridge should incorporate appropriate infrastructure to facilitate the future undergrounding of the existing overhead high voltage electricity wires in the immediate area.
- Temporarily relocating the towers (stanchions) while the bridge is being built is an unnecessary cost and inconvenience.
- Removal of the tower and relocation of the power lines to below ground would improve views in the area, particularly for the Holdmark development.
- The opportunity exists to remove the three towers (stanchions) on the southern side of the river and the six on the northern side of the river up to Victoria Road.
- Incorporating high voltage lines into the bridge is supported, and developers are encouraged to move underground the remaining high voltage wires up to Victoria Road.

Submission numbers

SE-50557218, SE-51789992, SE-52009207, SE-52112232, SE-52622707, SE-52681720

Response

The high voltage electricity transmission tower located near Ermington Boat Ramp is proposed to be removed as part of the project to provide space for the amended bridge location between Melrose Park and Wentworth Point. As described in section 4.2 of the Amendment Report, the tower would be permanently replaced with three new poles.

Removing other high voltage towers on either side of the Parramatta River and undergrounding the transmission lines would not be necessary to deliver the project and is therefore not part of the project for which approval is sought. Design development for the project as proposed in the EIS, and as amended as outlined in section 4.1 of this report, has aimed to minimise the footprint of the project to reduce impacts on sensitive foreshore ecosystems and community facilities. To achieve the same level of reliability as overhead options, the cables that would be required for undergrounding would need to be oversized, and up to 10 separate underbores would need to be completed underneath the river. The size of each bore would be many times larger than the current conductors.

There would also be a need to establish bore entry and exit pits and construct transition structures on either side of the river to transfer the cables from below the ground into the air. This would result in a much greater area of disturbance within the vicinity of Archer Park and Newington Nature Reserve as well as the

river foreshores (and associated disturbance of mangroves and river sediments), resulting in a substantially greater area of impact beyond that necessary to deliver the project.

The ability to incorporate the transmission lines into, or as part of, the proposed new bridge has been investigated and is not preferred at this stage due to:

- safety clearances from other structures which must be maintained to ensure reliability and safety
- interference with and impacts on sensitive light rail operations and communications systems
- the need to maintain maintenance access to the transmission lines, which may require temporary interruptions to light rail services and/or active transport links
- whole-of-life issues, including:
 - durability concerns – stray electrical currents can impact the durability of the bridge
 - ownership/easements – any critical bridge maintenance would require consent from the asset owner, including stringent safety controls to ensure the safety of bridge maintenance staff not normally trained in high voltage safety aspects.

Bridge active transport location and access

Issue description

Submitters requested that the ramp after the bridge in Wentworth Point be connected to the footpath, as the current design is going to the park (next to new buildings at Sanctuary Wentworth Point) and is not user-friendly. An elevator should be provided for disabled access.

Submission numbers

SE-52091708, SE-52091732, SE-52110225

Response

Figure 6.4 in the EIS and Figure 1.4 in the updated project description in Appendix A of the Amendment Report shows that the bridge would have an active transport link on either side, which would connect to the Parramatta Valley Cycleway, the River Walk and Louise Sauvage Pathway. As described in the EIS, active transport links would be designed in accordance with the principles outlined in Technical Paper 1 (Design, Place and Movement), the urban design requirements, relevant guidelines and standards (including *Guide to Road Design Part 6A: Paths for Walking and Cycling* (Austroads, 2017) and *AS 1428.1-2009 Design for access and mobility*) and crime prevention through environmental design principles. The ramps at the ends of the bridge would comply with relevant disability access standards, meaning that ramp gradients would not exceed a ratio of 1:14 and would have a flat landing every nine metres.

Coordination with the developers of Sanctuary Wentworth Point is ongoing and would continue throughout further design development. The new active transport link across the bridge would connect to the River Walk and to Foreshore Boulevard within Sanctuary Wentworth Point, once construction of that development is complete.

An elevator is not currently proposed to be delivered as part of the project. The design would not preclude future installation of an elevator if identified as needed based on modelling or operational use reviews.

As part of the proposed amendment to the bridge location, the active transport link would be consolidated on the bridge's south-eastern end. Further details are provided in the Amendment Report.

8.2.4 Active transport links

Width of active transport links

Issue description

Submitters expressed concerns about the proposed width of active transport links. Issues raised included:

- The proposed width of the active transport link is insufficient and less than the standard of 3.6 metres.
- The link will be a 2.5 metre shared path in places along South Street (Rydalmere), Boronia Street (Ermington) and Waratah Street (Melrose Park), which does not meet Transport's guidelines in the Cycleway Design Toolbox and will cause conflict between people walking and cycling.
- Shared paths should be futureproofed by allowing for increased demand at the outset. Paths should be wide enough to be inclusive, allow for overtaking, and accommodate a range of mobility options, such as cargo bikes and disability scooters. A minimum width of three metres should be achieved with extra width considered where volumes of people walking and cycling may be high.
- Bicycle NSW recommends referring to the new Cycleway Design Toolbox and the 2017 Austroads Cycling Aspects of Austroads Guides (AP-G88-17) to ensure that the paths are constructed to current best practice.

Submission numbers

SE-51719707, SE-51854962, SE-52110225, SE-52114207, SE-52726459

Response

As described in section 6.4 of the EIS, the active transport links would be designed in accordance with the principles outlined in Technical Paper 1 (Design, Place and Movement), the urban design requirements, relevant guidelines and standards (including the *Guide to Road Design Part 6A: Paths for Walking and Cycling* (Austroads, 2017) and *AS 1428.1-2009 Design for access and mobility*), and crime prevention through environmental design principles.

The EIS shows that the active transport links would need to be about 2.5 metres wide at some locations along the alignment, including at South Street (Rydalmere), Boronia Street (Ermington) and Waratah Street (Melrose Park). This is a result of the need to accommodate various constraints, including:

- existing setback of buildings
- design issues such as existing grades
- presence of utilities
- potential for environmental and community impacts.

Transport acknowledges the active transport link widths noted in the Cycleway Design Toolbox. However, in constrained sections of the alignment, a narrower active transport link is required to minimise the project's land requirements and associated impacts. In higher demand areas, and where space allows, wider active transport links are proposed, including six metre wide active transport links across the two proposed bridges over the Parramatta River.

The proposed active transport links have been developed in consultation with relevant stakeholders to ensure they integrate with the existing and future surroundings and active transport infrastructure. The design does not preclude the links being widened in some areas identified for future development where there is the opportunity to do so. The final design (including width) of the active transport links would be confirmed during design development in consultation with relevant stakeholders and in accordance with the project's urban design requirements.

Further information on walking and cycling in streets and within open spaces is provided in section 4.10.3 of Technical Paper 1 (Design, Place and Movement).

Form of active transport links on bridges / shared paths

Issue description

A submitter noted that no-one knows how popular the new river crossings might become. The submitter requested that both bridges be designed to carry pedestrians and cyclists, preferably separating pedestrians from bicycles and skateboards etc.

Submission number

SE-52724719

Response

Transport undertook modelling of peak pedestrian and cyclist activity, including consideration of existing activity, population growth and land use changes, to inform priority locations/connections and the capacity needed for the proposed active transport links. The active transport link on each of the proposed bridges would be a single-sided six metre wide shared path.

Adopting a shared path on bridges provides some advantages over separated paths as described in the response in section 6.3.3 of this report (under the heading 'Cycleways'). The shared path design allows for separation in the future if this determined to be required based on future usage and feedback about user experience once it is open to the public.

The design of both bridges, including the active transport links, has been amended as outlined in section 4.1 of this report. The revised design, including details of the proposed active transport links, is described in the Amendment Report.

Design of bridge over Silverwater Road

Issue description

A submitter requested that the final design of the active transport link associated with the bridge over Silverwater Road be arranged in a way that minimises unnecessary backtracking for users.

Submission number

SE-52769958

Response

As described in section 6.5.2 of the EIS, a new integrated light rail and active transport bridge would provide a connection over Silverwater Road between South Street, Rydalmere to the west and South Street, Ermington to the east.

The new bridge and associated active transport connections need to be designed in accordance with relevant accessibility legislation, standards and guidelines (as described above under the heading 'Width of active transport links'). Due to the level differences between the proposed bridge and the existing ground surface, the ramps need to be a minimum length to meet accessibility requirements, which requires some direction changes. Elevators would also be provided on the southern side of the bridge.

Location/expansion of active transport links

Issue description

Submitters raised concerns and made suggestions about active transport link locations and opportunities for expansion, including:

- A pedestrian route with a wide footpath to act as a boulevard could be constructed to give spectators better and safer access to the new 'Cricket NSW Central' headquarters venue near the River Road stop, which could be used as the main public transport stop to service the facility.
- The exact location of the active transport link along Sandown Boulevard is not indicated.
- The project should not exclude bicycles, including from the Parramatta CBD.
- Elements of the Hill Road cross section are not in the spirit of the rest of the project. This includes placing bike riders in the 'door zone' of parked vehicles.
- There are many possibilities for expansion of active transport in the area, which could use part of the light rail corridor(s).

Submission numbers

SE-52009207, SE-52496457, SE-52724719, SE-52726459

Response

Pedestrian route from the River Road stop

Cricket NSW Central is located at 161 Silverwater Road, which is more than one kilometre from the River Road stop. As shown in Figure 6.1 to Figure 6.6 of the EIS (and Figure 1.1 to Figure 1.6 of the updated project description in Appendix A of the Amendment Report), new active transport links would be located parallel to the light rail tracks along most of the alignment, with connections provided to existing active transport infrastructure. The project does not preclude other active transport links and connections being proposed and delivered in the future by others.

Location of active transport link along Sandown Boulevard

Figure 6.1 of the EIS (and Figure 1.1 of the updated project description in Appendix A of the Amendment Report) shows the indicative location of the active transport link along this section of the alignment, including at Camellia and at the interface between Parramatta Light Rail Stage 1 and the project adjacent to Rosehill Gardens Racecourse.

At this location, the active transport link would extend along the southern side of the light rail alignment before turning north and linking with the Parramatta Light Rail Stage 1 active transport link in the vicinity of the Rosehill Gardens stop. Final details of the active transport link would be provided following further design development.

Excluding bicycles from the Parramatta CBD

The project includes constructing a turnback facility in the Parramatta CBD, with the turnback proposed to be located (as described in the EIS) on a section of Macquarie Street, between Marsden and Church streets. There is no existing cycleway in that section of roadway that is proposed to be removed.

While the project is not proposing new active transport links in the Parramatta CBD, active transport links are currently being delivered by the City of Parramatta Council, and as part of other Transport projects, including Parramatta Light Rail Stage 1 and Sydney Metro West.

The active transport links proposed as part of the project would connect to the Parramatta Valley Cycleway, which provides a cycle route into Parramatta CBD from the east.

Cycle lane on Hill Road

There is an existing on-road cycleway on Hill Road southbound between Footbridge Boulevard and Stromboli Strait where the cycle lane is next to parked cars (on the eastern side of the roadway). Cycle lanes impacted during construction would be reinstated.

Only a short section of an on-road active transport link (northbound between Bennelong Parkway and Stromboli Strait) is proposed. Providing a short section of an on-road link in this location would be consistent with the remainder of Hill Road. There are also alternate routes that cyclists can use, such as the parkland paths on the western side of Hill Road.

The remainder of the active transport link proposed adjacent to Hill Road would comprise a new shared path on the western side of Hill Road connecting to the Louise Sauvage pathway.

Existing active transport paths in Millennium Parklands and Sydney Olympic Park would be reinstated where they are impacted by the project. New signalised crossings along paths within Millennium Parklands would also be delivered.

Expansion of active transport links

If approved, the project (as amended) would deliver about 9.5 kilometres of active transport links and paths as described in the EIS and Amendment Report. The delivery of active transport links as part of the project does not preclude additional links and connections being delivered in the future by others. Further information about the active transport links being delivered by the project and connections to other links is provided in the other responses in this section.

Connection with other active transport links

Issue description

A submitter noted that the active transport path was one of the biggest benefits to come out of Parramatta Light Rail Stage 1, and with Sydney Olympic Park having some of the best cycling tracks in Sydney, it is hoped that the project will connect with and expand the active transport network.

Submission number

SE-50960709

Response

The project (as amended) includes about 9.5 kilometres of new active transport links along most of the alignment, including connections to existing links such as the River Walk and those delivered as part of Parramatta Light Rail Stage 1. The proposed active transport links would connect to the existing and proposed active transport network in the City of Parramatta and City of Ryde local government areas, filling gaps in the existing networks and providing enhanced opportunities for increased movement and activity, particularly across the Parramatta River.

The project (including the two bridges over the Parramatta River) would create three walking and cycling 'loops' centred around the river in Camellia, Rydalmere, Ermington, Melrose Park and Wentworth Point, which would encourage movement and active lifestyles, and potentially draw in visitors from outside these areas.

Further information on the proposed active transport links is provided in section 1.4 of the updated project description in Appendix A of the Amendment Report.

8.2.5 Road network changes

Traffic controls and intersections

Issue description

Submitters requested clarification as to:

- The method of traffic control at Spurway Street.
- Whether the streets of Church Street, Bachell Avenue, Birnie Avenue, and Carter Street and their intersections would be made accessible, walkable and beautified regardless of whether the light rail route is extended to Lidcombe station.

Submission numbers

SE-50667210, SE-52009207

Response

Table 4.5 of Technical Paper 2 (Transport and Traffic) indicates the proposed methods of control at intersections along the alignment, including existing and proposed future controls. The existing intersection of Spurway, Boronia and Broadoaks streets is controlled by a roundabout. Signal controls are proposed at this intersection as part of the project.

The intersections of Church Street, Bachell Avenue, Birnie Avenue and Carter Street in Lidcombe are beyond the scope of the project. No work is proposed in these streets, with the exception of Carter Street at its intersection with Uhrig Road, where some resurfacing/pavement works may be needed.

Road and traffic changes in Wentworth Point / Sydney Olympic Park

Issue description

Submitters requested clarification about how local traffic issues would be managed with the introduction of the project, including:

- There is no information about how the intersection between Footbridge Boulevard, Hill Road and the future rail bridge / bus crossing will connect. The intersection is busy as it is today, with significant development still to occur. How will that intersection cope with buses coming across from Melrose Park continuing up to Rhodes Station across Bennelong Bridge?
- How will traffic in/out of Wattlebird Road work?
- How will Hill Road cater for safe pedestrian movement across to the light rail station given the risk to bus movement along Wentworth Point when trying to turn out onto Hill Road?
- Hill Road also needs to be widened. The submitter noted that it only has one lane in and out, which is insufficient for the rapid growth of population in the area. If Hill Road is not widened before the project is built, it will not be possible to make future changes.

Submission numbers

SE-51058960, SE-51796974

Response

Intersection between Footbridge Boulevard, Hill Road and the future rail bridge / bus crossing

A signalised intersection is proposed at Footbridge Boulevard / Hill Road. The light rail alignment would be separated from the intersection and located in an off-road corridor along the western side of Hill Road and the southern side of the bus-only lane.

Section 6.2.6.1 of Technical Paper 2 (Transport and Traffic) identifies substantial improvement in intersection performance is predicted for the project compared to the 'without project' scenario. The intersection is forecast to operate at level of service E in the AM peak and at level of service B in the PM peak with the changes proposed as part of the project. Further information is provided in section 9.4.1 of the EIS.

Traffic at Wattlebird Road

No changes to the intersection of Wattlebird and Hill roads are proposed as part of the project. However, operational network performance reviews would be undertaken (in accordance with mitigation measure TT20) to identify any issues that may arise with the operation of the surrounding road network. In accordance with mitigation measure TT20, if any impacts are identified, appropriate changes that balance the performance outcomes for the project and general traffic will be considered. Mitigation measure TT20 also provides that feasible and reasonable mitigation measures required to manage identified traffic performance impacts for surrounding arterial roads will be identified in consultation with key stakeholders.

Works at Hill Road

The proposed signalised intersections at Footbridge Boulevard, Verona Drive, Stromboli Strait and Bennelong Parkway would provide safe pedestrian and cyclist access to light rail stops located on the western side of Hill Road. Active transport links leading to the stops, and the stops themselves, would be designed in accordance with relevant accessibility and safety standards and guidelines.

The project does not include widening of Hill Road, with the exception of localised changes at key intersections as described in the EIS. The project would encourage modal shift from cars to public transport, walking and cycling, which would assist in managing traffic demand along Hill Road. Traffic modelling undertaken for the project and documented in section 6.2.6.1 of Technical Paper 2 indicates satisfactory traffic performance at all key intersections along Hill Road within Wentworth Point.

Separate to the project, Transport is continuing planning of proposed upgrades to Hill Road. Further information is available at [Hill Road Upgrade project](#).

Right turn into and out of Sydney Showground to and from Australia Avenue

Issue description

A submitter requested that freight access to Sydney Showground be fully maintained from both directions along Australia Avenue. The submitter noted that Sydney Showground Gate 13 is the loading dock access for all Sydney Showground events and exhibitions and often requires multiple stacking of articulated heavy vehicles along the eastern side of Australia Avenue in readiness to turn right into the loading dock.

Submission number

SE-52670974

Response

Section 6.2.7.4 of Technical Paper 2 (Transport and Traffic) states that all property accesses would be maintained along Australia Avenue. Additionally, mitigation measure TT2 commits to seek input from relevant stakeholders prior to finalising the design of those aspects of the project that affect the operation of road and other transport infrastructure under the management of these stakeholders. This includes confirming ongoing operation and maintenance arrangements, such as vehicular access requirements. Where changes as a result of the project permanently affect access to and from a public road, mitigation measure TT3 provides that inputs would be sought from property owners and occupants regarding alternative arrangements prior to finalising the design.

Transport confirms that the project would not change the entry arrangements into and out of Sydney Showground Gates 10, 11 and 13, including right turns. In times of significant vehicle movements, local controls may be required to ensure safe access to and from Gate 13. Such controls would be developed in accordance with mitigation measures TT1 and TT2, and in consultation with key stakeholders, including Royal Agricultural Society.

Further information about how access would be managed during construction is provided in the responses in section 8.6.4 of this report.

Removing on-street parking

Issue description

A submitter requested that Transport be strong when faced with resident opposition to removing on-street parking, which is the storage of private property in the public domain, makes driving easier, and generates car trips. The submitter noted that when on-street parking is prioritised over safe cycling, sustainable transport for the whole community suffers, and that a parking survey can be useful to determine precise usage patterns for on-street parking.

Submission number

SE-52726459

Response

Operational impacts on parking are described in section 6.1.3 of Technical Paper 2 (Transport and Traffic) and are summarised in section 9.4.5 of the EIS. Constructing the project along roadways in sections of the alignment would require the reallocation of existing roadway space for light rail infrastructure. This would result in the permanent removal of on-street car parking from a number of roads along the alignment.

The *Road User Space Allocation Policy* (Transport for NSW, 2021a) requires that users are considered in the following order ahead of general traffic and on-street parking for private motorised vehicles:

1. walking (including equitable access for people of all abilities)
2. cycling (including mobility devices)
3. public transport
4. freight and deliveries
5. point to point transport.

In accordance with mitigation measure TT7, the approach to managing impacts on on-street parking will be defined by the parking management strategy, which will be developed and implemented in consultation with key stakeholders, the community and relevant property owners/occupants.

The parking management strategy will be informed by further detailed surveys of parking availability and usage. It will detail the provision of alternative parking arrangements for high priority parking needs (such as accessible car parking, loading zones, bus zones and taxi parking) as close as possible to their existing locations.

Other local road changes needed

Issue description

A submitter expressed concern that South Street in Rydalmere has become increasingly busy and that there is also a need to consider improving access from South Street via Clyde Street to Victoria Road.

Submission number

SE-50982031

Response

The project would deliver public and active transport links that would provide an alternative to private vehicle use. The light rail would be integrated with future development and provide interchanges with other existing transport modes at a number of locations to maximise travel options for passengers.

The intersection of South Street, Clyde Street and Victoria Road is more than 800 metres from the project site. Changes to this intersection are not part of the project scope. However, as described in section 9.1.1 of the EIS, traffic network modelling for the project incorporated forecast land use, road network and population changes to predict potential impacts following implementation of the project. The outcomes of modelling for intersections adjacent to the project alignment, including at Victoria Road, indicates that a number of intersections along Victoria Road, including to the east of John Street, operate at a good level of service and with spare capacity (see Figure 9.8 of the EIS).

Reduce speed limits to 30 kilometres per hour

Issue description

A submitter requested that speed limits be reduced to 30 km/h on local streets, which reduces the need for separate bicycle infrastructure on residential roads and town centres. 30 km/h has been shown as an optimal speed limit to allow people driving and cycling to share the road safely and is becoming a standard speed limit in many parts of the world.

Submission number

SE-52726459

Response

Changes to the speed limits on local streets are not part of the project for which approval is being sought. The relevant road authority is responsible for setting or amending speed limits.

Traffic light phasing

Issue description

A submitter requested that traffic light phasing and sensors favour active modes to encourage more people to walk and cycle. In line with the *Road User Space Allocation Policy* and other State and Council strategies, small delays to vehicle traffic should not prevent delivery of safer, more efficient and more attractive active transport infrastructure. A number of features to optimise pedestrian and bicycle level of service are suggested.

Submission number

SE-52726459

Response

The phasing arrangements to be adopted at each signalised intersection would account for all road users, their needs and public benefits. Phasing arrangements that balance pedestrians, cyclists, public transport and traffic outcomes would be adopted.

8.2.6 Public domain and open spaces

Ken Newman Park

Issue description

A submitter noted that the track through Ken Newman Park would also need a large amount of trees and shrubs planted to act as a privacy screening for the residents backing onto the park.

Submission number

SE-52496457

Response

Visual impacts have been assessed by the Landscape and Visual Impact Assessment (Appendix A of Technical Paper 1 (Design, Place and Movement)) and are summarised in Chapter 15 (Landscape and visual impacts) of the EIS. In response to the potential visual impacts (including privacy), section 8.3.3 of the Landscape and Visual Impact Assessment provides a number of design recommendations for Ken Newman Park, including considering additional vegetation screening on Tristram Street and Heysen Avenue to screen views from habitable rooms. Transport would consult with affected residents during the design development and construction to ensure that the proposed planting is suitable to address privacy concerns.

Figure 6.20 of the EIS provided a concept plan for the proposed improvements to Ken Newman Park. This indicates that new trees and landscaping would be planted in the park, including along the alignment where residences are located close by. This would provide amenity as well as privacy screening.

As described in section 6.8.3 of the EIS, the provision of landscaping would be a key element in achieving the placemaking and tree canopy objectives of the project. Landscaping would be defined by the urban design requirements, which would be developed and implemented in accordance with mitigation measures LV1 and LV2. In accordance with mitigation measure LV14, early planting and revegetation works will be undertaken where practicable to provide a screening buffer that has time to mature before the project is operational.

8.2.7 Power supply to light rail vehicles

Requests for wire-free power supply

Issue description

Submitters requested that the project include wire-free power in Wentworth Point. Issues raised included:

- Wire-free rail technology needs to be used consistent with Wentworth Point being a wire-free suburb to this point.
- The project should use underground power (similar to the proposed for the Dawn Fraser Avenue section), to ensure it is in keeping with the existing appearance and aesthetic of the precinct as a whole.

Submitters also requested that wire-free sections be provided in Sydney Olympic Park, including along Australia Avenue and Dawn Fraser Avenue, to support stronger placemaking outcomes through the Sydney Olympic Park town centre and ensure that potential obstacles for access to the Sydney Showground site for freight vehicles are avoided.

A submitter requested that the track through Ken Newman Park and along Boronia Street (between the River Road and Melrose Park stops) be a wire-free green track to fit in with the surrounding area.

Submission numbers

SE-51719707, SE-51996710, SE-52001214, SE-52110225, SE-52170500, SE-52213976, SE-52275991, SE-52496457, SE-52670974, SE-52716711, SE-52718459, SE-52724457

Response

The project would incorporate sections of wire-free power supply. The EIS confirms a commitment to provide wire-free power supply along Dawn Fraser Avenue in Sydney Olympic Park (between the Jacaranda Square and Carter Street stops) and to investigate the feasibility of wire-free across other sections of the alignment.

The clarification in section 4.3.2 of this report provides further information about the options to power light rail vehicles (including wire-free power), constraints that influence the extent of wire-free sections that can be provided, and how the location of wire-free sections of the alignment would be confirmed during design development. Key stakeholders (including Council and Sydney Olympic Park Authority) have been consulted regarding the prioritisation of additional wire-free sections.

Opportunities to provide additional wire-free sections will be actively pursued through design development and following contractor engagement, in accordance with new mitigation measure LV3. This would include balancing the potential for visual, biodiversity and operational impacts and requirements, guided by the project's urban design requirements.

The height of power infrastructure (including poles and wires) for those sections of the alignment powered using overhead wiring would be sufficient to ensure that access by freight vehicles is not impacted.

Further information is provided in section 4.3.2 of this report.

Need for wire-free power supply

Issue description

Submitters stated that wire-free power supply should not be used. Issues raised include:

- There is no need to waste money on 'wire-free' sections.
- The project should fully operate with overhead wiring to reduce costs, reduce incidents and safety issues, and improve efficiency and reliability for the overall network.

Submission numbers

SE-51938967, SE-52462492

Response

Transport acknowledges the range of interests and views on how light rail vehicles should be powered.

Transport has committed to delivering some sections of wire-free power, based on required investigations and in consultation with relevant stakeholders as described in section 4.3.2 of this report. The potential to provide additional wire-free sections would be investigated during design development. Service efficiency and reliability is an important consideration in this process. As noted above, this would include balancing the potential for visual, biodiversity and operational impacts and requirements, guided by the project's urban design requirements.

8.2.8 Operation of the project

Start date

Issue description

A submitter requested that the start date of operations be clarified and more clearly stated in project materials to allow people to fairly consider the project, its impacts and its benefits.

Submission number

SE-50704216

Response

As described in sections 1.2.3 and 7.1.2 of the EIS, and in section 2.1.3 of the updated project description in Appendix A of the Amendment Report, the first passenger services are proposed to start from 2030/2031.

This start date has been informed by the indicative construction program. The indicative construction program, which has been updated to consider construction of the amended project (see section 2.1.3 of Appendix A of the Amendment Report), has been developed based on Transport's experience constructing major infrastructure projects.

During design development and construction planning the construction program and associated start date of operations would continue to be refined.

Light rail vehicle capacity

Issue description

A submitter queried the number of passengers that could be carried by the light rail vehicles. The submitter noted that there appears to be a discrepancy between the number of passengers carried by Gold Coast Light Rail and Parramatta Light Rail Stage 1, and that the EIS does not mention the number of passengers that would be seated.

The submitter also stated that sharing tracks with Parramatta Light Rail Stage 1 west of Camellia would limit service frequency, which could become important as patronage grows.

Submission number

SE-52724719

Response

Section 6.10.4 of the EIS provides an outline of the proposed light rail vehicles, which would be similar to those for Parramatta Light Rail Stage 1. Each vehicle would be about 45 metres long and have capacity for 76 seated passengers. Depending on the density of standing passengers, the total capacity of each vehicle could vary from about 300 to 400 passengers.

Service planning for both Parramatta Light Rail Stage 1 and Stage 2 has assumed shared tracks west of Camellia and service frequency, including increased frequency for special events, can be accommodated.

Running frequency and delays

Issue description

Submitters provided comments in relation to the need to optimise running frequency and avoid delays, including:

- A true turn-up-and-go service should be delivered from the beginning by striving to provide a 7.5 minute frequency all day, every day. This will be integral to the system's success and will stimulate greater demand. Running a poor 15 minute frequency late at night means longer waits at dark platforms, which will discourage people from relying on the network.
- Submitters requested that the highest level of traffic signal priority be installed at all at-grade intersections to minimise running time, requesting that the light phases be planned to ensure this is the case.
- Design and vehicle options to avoid delays at stops for charging should be considered. Vehicle designs with sufficient battery capacity should be used so that charging at stops will not be required.

Submission numbers

SE-51938967, SE-52769958

Response

Service frequency

As described in section 6.10.1 of the EIS, the project would operate as a turn-up-and-go light rail service from 5am to 1am, seven days a week, similar to the operation of Parramatta Light Rail Stage 1. Different service schedules for weekdays, weekends and public holidays are proposed to meet passenger demand. Table 6.5 of the EIS shows that:

- On weekdays services would operate:
 - about every 7.5 minutes between 7am and 7pm
 - at 10 minute intervals between 5am and 7am and between 7pm and 11pm
 - at 15 minutes intervals between 11pm and 1am.
- On weekends, services would operate at:
 - 10 minute intervals between 7am and 11pm
 - 15 minute intervals between 5am to 7am and between 11pm and 1am.

The operator may adapt the services in response to demand and usage changes and for special events.

In accordance with mitigation measure TT20, a review of operational network performance will be carried out 12 months and three years from the opening of the project to confirm the operational impacts of the project. Services may be adapted as needed to balance the performance outcomes for the project and general traffic, and in response to demand, special events and identified impacts.

In relation to safety risks and stop design, Transport is committed to customer safety and will implement and maintain a customer safety plan to manage identified safety risks. The proposed stop infrastructure, including platforms, furniture, facilities and stop access arrangements, would be designed in accordance with the urban design requirements. The design would include consideration of, and provision for, appropriate safety and security features. As described in section 6.3.2 of the EIS, stops would be designed according to crime prevention through environmental design principles and would include the following security features:

- unimpeded sight lines from adjacent land uses to improve passive surveillance as far as possible
- closed circuit television (CCTV) cameras linked to the operations control centre for passenger security and to deter anti-social behaviour and vandalism
- lighting to maximise passenger safety at stops, along access paths and the active transport link, and to enable CCTV operation
- an emergency help point.

Lighting would be designed, mounted, screened and directed in accordance with relevant standards (including *AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting*) to minimise nuisance to surrounding residents.

Light rail priority at intersections

Operational efficiency, including avoiding extended delays at stops, is one of the factors that would be considered during design development when confirming the specific arrangement of power supply along the alignment. However, the phasing arrangements to be adopted at each intersection would account for all road users, their needs and public benefits, and phasing arrangements that balance pedestrians, cyclists, public transport and traffic outcomes would be adopted.

Light rail vehicle charging

There is no proposal for light rail vehicle charging stations as part of wire-free sections. A mixture of in-ground and wired charging for light rail vehicles is likely to be used to ensure sufficient battery capacity for operation along wire-free sections. The specific arrangements would be determined during design development.

Further information about the options to supply power to light rail vehicles and what is proposed as part of the project is provided in the clarification in section 4.3.2 of this report.

Interchange with Parramatta Light Rail Stage 1 and Sydney Metro West

Issue description

Submitters raised issues about interchanging between light rail services for Parramatta Light Rail Stage 1 and the project, and interchange between the project and Sydney Metro West. Issues raised included:

- Transfers between Parramatta Light Rail Stage 1 and the project may take considerably longer than the one minute shown in project information. A much safer and convenient solution for transferring passengers would be the provision of an island platform immediately west of the track (branch) junction. Use of the alternative transfer stop, Tramway Avenue, adds undesirable travel time for interchanging passengers, in both directions.
- A fully integrated interchange should be delivered at Camellia or Yallamundi to enable efficient connections between Parramatta Light Rail Stage 1 and the project. With high patronage expected at Yallamundi, significant redevelopment in Dundas, Telopea, and Carlingford, and existing active transport links including the Parramatta Valley Cycleway, Yallamundi and/or Rosehill Gardens present a superior option for service of the wider GPOP.
- Another site with walkability issues is the Camellia junction with the Carlingford leg, being built as Parramatta Light Rail Stage 1. Interchange between the Carlingford and Olympic Park branches will involve some walking and crossing tracks.
- If services are run at a 15 minute frequency at night, consideration should be given to extending services through to Westmead or providing timed interchanges at Parramatta. This will mean that hospital shift workers do not need to endure lengthy interchanges to reach Stage 2 destinations.
- The Sydney Metro West station at Olympic Park will be about 250 metres south of the proposed light rail stop. The connection between the Metro station and light rail stop should be highly legible with a well-marked and well-lit covered direct footpath. There should be on-line indicators at the light rail stop showing the next few Metro and train services. Passengers should not have to walk unnecessarily.

Submission numbers

SE-51938967, SE-51971510, SE-52486209, SE-52724719

Response

Interchanges between Parramatta Light Rail Stages 1 and 2

Interchanges between Parramatta Light Rail Stages 1 and 2 have been designed to occur in Camellia at the Sandown Boulevard, Rosehill Gardens and Tramway Avenue stops. These stops have been located to integrate with the future Camellia town centre and proposed development in accordance with the *Camellia-Rosehill Place Strategy* (DPE, 2022b), and to respond to other land use and operational considerations governing stop locations (see responses in section 8.2.2 of this report).

Passengers would be able to interchange between Parramatta Light Rail Stages 1 and 2 in Camellia as follows:

- Walk between the Parramatta Light Rail Stage 1 Rosehill Gardens stop to the proposed Parramatta Light Rail Stage 2 Sandown Boulevard stop (a distance of about 110 metres). Pedestrian access between these two stops would be facilitated via a pedestrian path.
- Cross between platforms at the Parramatta Light Rail Stage 1 Tramway Avenue stop.

Passengers would also be able to interchange between Stage 1 and Stage 2 services via other stops along the shared section of alignment between Camellia and the Parramatta CBD.

Additional interchange locations

Providing an interchange stop further to the west in Camellia is not technically feasible. Stops need to be installed on level ground to ensure adequate safety and accessibility. The grade from the Bidgee Bidgee Bridge constructed over James Ruse Drive as part of Parramatta Light Rail Stage 1 means that appropriate level areas are not available at this location.

Providing an additional interchange stop at Yallamundi is not required as the interchange movements have been designed to occur at the above stops in Camellia. Passengers wishing to travel to Western Sydney University from stops east of Sandown Boulevard, in addition to the above interchange options, may also use the active transport link (a distance of about 1.2 kilometres from the Sandown Boulevard stop). The project would substantially improve public transport connections to/from Western Sydney University from the eastern portion of the GOP area without the need for an additional interchange at Yallamundi.

Interchange with Parramatta Light Rail Stage 1 at night

As shown in Table 6.5 of the EIS, services would operate at 10 minute intervals between 7pm and 11pm and at 15 minute intervals between 11pm and 1am. As a guide, under an optimal operating scenario, Parramatta Light Rail Stage 1 and Stage 2 services would be coordinated. For example, between 11pm and 1am when services are operating at 15 minute intervals, the Parramatta Light Rail Stage 1 service would arrive about 7.5 minutes after the Parramatta Light Rail Stage 2 service.

As described in section 6.3.2 of the EIS, stops would be designed according to crime prevention through environmental design principles and would include the security features described in the above response (under the heading 'service frequency').

Legibility of the connection with Sydney Metro West

Sections 6.7.3 and 6.10.5 of the EIS describe the key interchange locations between the project and other forms of public transport, and the works proposed at these locations to facilitate convenient and seamless connections. This would include providing wayfinding signage, direct pathways and line of sight to other public transport services, and passenger information displays, including at the interchange with Sydney Metro West. The project team is working with the Sydney Metro West team and Sydney Olympic Park Authority to harmonise designs, material finishes and signage between the different transport modes to provide consistency and legibility.

8.2.9 Other design and operation issues

Stabling and maintenance facility – car park

Issue description

A submitter suggested that as Parramatta Light Rail stabling and maintenance facility staff will be able to travel to the facility via light rail, there is no need to increase the size of the car park.

Submission number

SE-52769958

Response

An additional 13 light rail vehicles would need to be stabled and/or serviced at the facility to operate the project. As a result, the number of workers at the facility would need to increase.

Parramatta Light Rail as a whole supports multi-modal public transport connectivity, and the stabling facility operator would promote the use of public transport to travel to the facility. However, it is not realistic to expect that all staff and visitors would travel to the facility via public transport.

Stabling and maintenance facility staff would also be required to carry and deliver materials and equipment for their work, and/or to attend other sites. Some staff need to arrive or leave outside of the hours that light rail services run, and so cannot use light rail services to attend the facility. As a result, there is a need for the facility to provide sufficient vehicle parking.

Land requirements – residual land

Issue description

A submitter requested that residual land should be retained as public open space as much as possible.

Submission number

SE-52769958

Response

The project would provide new and improved open spaces and recreation facilities and repurpose some residual land to increase open space. This would offset the areas of open space directly impacted by the project (see section 1.9.1 of the updated project description in Appendix A of the Amendment Report, Chapter 13 (Land use and property) of the EIS, and section 6.6 of the Amendment Report). In accordance with amended mitigation measure SE7 Transport will continue to consult with relevant councils and Sydney Olympic Park Authority to offset the direct impacts of the project's land requirements on open space (parks and reserves) through the provision of a net increase in open space, including active transport infrastructure and improved open spaces and recreation facilities.

As described in section 1.9.2 of the updated project description, which updates the information originally provided in section 6.9.2 of the EIS, about 4,000 square metres of the land acquired by Transport to construct the project would be available for other uses following construction. This land is surplus to the operational requirements of the project, including the improved open spaces committed to by mitigation measure SE7.

The final area of residual land would be subject to ongoing design development. This would include consideration of opportunities to consolidate lots where practicable to maximise the land available for potential future uses. Potential future uses of residual land would be determined by Transport with consideration of:

- surrounding land uses and existing zonings
- local and regional strategic planning, including master planning for identified urban renewal areas
- consultation with key stakeholders
- the requirements (including any remediation of contaminated land) to make the land suitable for potential future uses.

As described in sections 6.9.2 and 13.7 of the EIS, and in accordance with mitigation measure LP4, a residual land management plan will be prepared in consultation with key stakeholders to define the approach to managing residual land, including the future use of the land. The plan will include identification of, and consultation with, key internal and external stakeholders, including local councils and relevant government agencies as appropriate.

Additional turnback facilities

Issue description

Issues raised by submitters included:

- There is a need for a turnback track at the Atkins Road stop for shuttle and event services to Sydney Olympic Park.
- Only two intermediate turnback/crossover locations are proposed. For a line of this length, this may be inadequate to ensure the flexibility needed for special events or cope with accidents and disruptions.

Submission numbers

SE-51996749, SE-52724719

Response

The project has identified two locations for intermediate turnbacks and crossovers in addition to those at each end of the alignment. This includes a turnback track at the Atkins Road stop.

The need for any additional turnbacks and crossovers would be considered during further design development in accordance with the approach to design refinements described in section 4.3.6 of this report and section 23.3 of the EIS.

Redirection of buses

Issue description

A submitter noted that there is some information about the redirection of buses but no detail.

Submission numbers

SE-51789975

Response

The potential impacts of constructing and operating the project on public transport (including buses) has been assessed by the traffic and transport assessment, and the results are described in Technical Paper 2 (Traffic and Transport) and summarised in sections 9.3.3 and 9.4.2 of the EIS.

A summary of the bus routes with the potential to be affected during construction is provided in section 9.3.3 of the EIS. As described in section 9.4.2 of the EIS, the project would result in permanent changes to some bus routes, including the potential relocation of some bus stops and modification of some routes to ensure complementary bus services are provided for light rail customers. As described in section 9.4.2 of the EIS, further development of future bus routes and services would be carried out by Transport to ensure effective integration with the project and the wider public transport network. Changes to the bus network are outside the scope of the project and would be assessed and delivered separately by Transport.

Changes to bus routes and stops during construction and operation would be confirmed during construction planning and design development. Information about these changes and alternative routes and stops would be communicated to affected customers and the community.

Materials used

Issue description

A submitter asked how much recycled and reused material will be used in the project.

Another submitter requested that the track be designed to minimise the impact on the environment, including increased CO₂ arising from excessive concrete.

Submission numbers

SE-50667210, SE-52462492

Response

Design development undertaken to date has included careful consideration of the construction methodology and selection of materials and resources to ensure they are fit for purpose and to minimise resource consumption.

Estimates of the resources that are predicted to be used during construction of the project are provided in section 22.2.4 of the EIS. Exact amounts of construction materials, including the proportion that would be recycled and reused materials, would be determined by professional estimators during design development and construction planning.

Consistent with the resource management hierarchy described in section 22.1 of the EIS, resource consumption would be further minimised during construction through material reuse, where practicable. In addition, consistent with the principles of the circular economy, opportunities to use recycled and sustainable materials would be identified. This could include, for example, supplementary cementitious material content in concrete, recycled aggregate products, and recycled steel.

Transport commits to ensuring that sustainable procurement and waste management practices are adopted during construction and operation. This commitment is confirmed by the waste management and resource use mitigation measures, including:

- Mitigation measure WR1 provides that measures to minimise spoil generation will be confirmed during design development. This will include a focus on optimising the design to minimise spoil volumes, and the reuse of material on site.
- Mitigation measure WR2 provides that material procurement and resource planning will be undertaken in accordance with the *Sustainable Design Guidelines* (Transport for NSW, 2020).
- Mitigation measure WR3 provides that a waste and resource management plan will be prepared as part of the CEMP and implemented during construction. The plan will adopt the circular economy principles and the waste hierarchy contained in the *Waste Avoidance and Resource Recovery Act 2001* and the *Infrastructure Sustainability Rating Scheme Technical Manual* (Infrastructure Sustainability Council, 2021). It will detail processes, responsibilities and measures to manage waste and resource use, and minimise the potential for impacts during construction. The plan will include strategies to manage spoil, including preferred reuse options.

In addition, mitigation measure GHG2 provides that opportunities to reduce construction and operational greenhouse gas emissions will be investigated during design development, including the use of low embodied energy and recycled materials. Preferred measures will be defined in the energy and greenhouse gas strategy (mitigation measure GHG1).

Stormwater

Issue description

A submitter requested that care be exercised during design and construction to ensure that rainwater ponding is avoided, particularly where pedestrian traffic is likely to occur. Current stormwater drainage design guidelines may not allow for more severe storm events, which are anticipated with climate change.

Submission number

SE-52486209

Response

The flooding impacts of constructing and operating the project are described in Technical Paper 10 (Hydrology, Flooding and Water Quality) and summarised in Chapter 17 (Water) of the EIS. The modelling undertaken as part of the flooding assessment considered the capacity of existing stormwater drainage infrastructure and the potential for climate change affects. This modelling informed the potential for changes to overland flow patterns and increased flooding, which are described in sections 17.3.3 and 17.4.3 of the EIS, respectively.

While the findings of the initial assessment provide an indication of the potential impacts of construction activities on flood behaviour and localised ponding, further assessment would be carried out during design development and construction planning as layouts and construction staging strategies are developed. The location and layout of construction work sites and compounds would be prepared with consideration of overland flow paths, avoiding flood liable land, and minimising changes to flow paths where practicable. This commitment is confirmed by mitigation measure W6, the implementation of which would minimise the potential for ponding during construction.

Mitigation measure W1 provides that a flood management strategy will be prepared, building on the results of the assessment presented in Technical Paper 10 (Hydrology, Flooding and Water Quality) to inform further design development and demonstrate how:

- the project will achieve the flood management objectives and flood immunity standards
- the risk of flooding to the project will be minimised
- the potential impacts of the project on flood behaviour (under pre-project conditions) will be determined in accordance with the *Floodplain Development Manual* (DIPNR, 2005) and managed such that flooding characteristics will not be adversely impacted.

Mitigation measure W1 has been amended to confirm that the flood management strategy will be based on revised flood modelling, taking into account further design development and construction planning.

Additional flood modelling would also inform the design responses to minimise localised flooding impacts, including localised ponding on pedestrian paths and areas surrounding stops, as relevant. Design responses would include designing bridges to minimise flow disruption, and considering the capacity of existing and proposed stormwater drainage systems.

Mitigation measure W2 provides that drainage and flood management infrastructure will be designed with regard to relevant drainage design requirements and guidelines, including the *Development Engineering Design Guidelines* (City of Parramatta Council, 2018) and *Sydney Olympic Park Authority Policy – Stormwater Management and Water Sensitive Urban Design* (SOPA, 2016).

It is recognised that the potential for large storm events to occur is increasing with climate change and that this could affect stormwater infrastructure. The climate change risk assessment summarised in section 21.3 and included in Appendix I (Climate change assessment – additional information) of the EIS noted that high intensity rainfall creating floods or surface flows of water that exceed the capacity of drainage and stormwater infrastructure was a high risk for the project. As such, the development or adoption of appropriate design standards for drainage infrastructure that consider climate change was identified as a potential adaptation measure.

Mitigation measure CC1 provides that the climate change risk assessment will continue to be refined in accordance with Australian Standard AS 5334-2013 *Climate change adaptation for settlements and infrastructure – A risk based approach* and the *Transport for NSW Climate Risk Assessment Guidelines* (Transport for NSW, 2021b).

Adaptation measures will be confirmed, and actions implemented, to address very high, high and medium risks where reasonable and feasible, such as that identified for drainage infrastructure.

8.3 The project – construction

8.3.1 Delivery program

Requests to expedite the delivery program

Issue description

Submitters expressed concerns about how long it would take to construct the project and requested that the project be delivered as soon as possible, as additional public transport infrastructure is urgently needed. Issues raised included:

- The project needs to commence immediately not just the bridge from Melrose Park to Wentworth Point. The work on other sections should be completed simultaneously so the full project can be completed as soon as possible. The proposed 2031 completion deadline is unacceptable and would leave the (anticipated 25,000 plus) residents of Wentworth Point in gridlock.
- It is hoped that the timelines are brought forward and the project is completed as soon as possible.
- Due to the urgency with which this transport infrastructure is required, it is desirable that the project be expedited so that construction commences prior to 2025.
- Transport for NSW and the NSW Government are encouraged to investigate all opportunities to commence construction of the project as soon as possible and examine how it can be sequenced to reduce the overall construction period.
- It is disappointing that the timeline for construction to commence is now some 10 years since the initial light rail project from Parramatta to Sydney Olympic Park was first announced.
- It is unclear why the construction phase will take five to six years given that this will be the total length of time for Parramatta Light Rail Stage 1 to be completed. The time frame seems excessive given the complexity of construction within the Parramatta CBD, and the experience gained.
- Will delivery of the project be delayed well into 2026 given that Parramatta Light Rail Stage 1 was delayed into 2024?
- Concerns that the provision of adequate active transport links will be delayed until the project commences operation are running.

Submission numbers

SE-50625960, SE-50704216, SE-51258983, SE-51589207, SE-51719707, SE-51749707, SE-51996749, SE-52009207, SE-52112232, SE-52213976, SE-52438212, SE-52496457, SE-52670974, SE-52716711, SE-52718459, SE-52724457

Response

Transport is committed to delivering the project as soon as reasonably possible. Procurement processes have begun with leading organisations invited to participate in an Expressions of Interest process for the bridge between Melrose Park and Wentworth Point. Simultaneously, project planning work is continuing, including utilities and geotechnical investigations to inform future stages of design development.

The indicative construction program provided in section 7.1.2 of the EIS indicated a total construction period of around five to six years until the commencement of operations. This is similar to Parramatta Light Rail Stage 1, which will commence operations in 2024. An updated indicative construction program is provided in section 2.1.3 of the updated project description in Appendix A of the Amendment Report, which also includes the early commencement of the bridge between Melrose Park and Wentworth Point, and an indicative timeline for the remainder of the project. Light rail services are anticipated to commence from 2030/2031.

The indicative construction program has been developed based on Transport's experience constructing major infrastructure projects and aligns with market capacity. It has considered the complexity of the project, that it would be constructed along or adjacent to road corridors for most of its length with a significant number of interfaces with surrounding land uses, utilities and landholders. The project also involves constructing two bridges over Parramatta River, which are expected to take about 30 to 36 months to construct.

As a result, the estimated construction program is considered reasonable and provides flexibility to schedule works, taking into account existing and future constraints and needs, including planning works around events in Sydney Olympic Park and Sydney Showground.

The construction program would continue to be refined during design development and construction planning. The refinements would consider additional construction staging to further minimise disruptions, and the potential to further accelerate work.

One opportunity Transport is proposing is the primary project working hours (described in section 7.5 of the EIS), which would support delivery of the project program and potentially shorten the duration of construction (and associated impacts) in any location. Further clarification regarding the proposed primary project working hours is provided in section 4.3.1 of this report.

Prioritise works in Sydney Olympic Park and undertake outside special events

Issue description

A submitter encouraged Transport to prioritise construction works in Sydney Olympic Park and to program these works to take place outside of key major event schedules to minimise economic disruption to business and inconvenience for major event attendees.

Submission number

SE-52718459

Response

The project would be designed, constructed and operated to facilitate access and minimise inconvenience for patrons and businesses during special events at Sydney Olympic Park and Sydney Showground. Transport would work collaboratively with relevant key stakeholders, including Sydney Olympic Park Authority and Royal Agricultural Society, to identify major events and their requirements, which would inform construction planning and programming of works during these periods.

Section 7.7.6 of the EIS acknowledges that the construction contractor(s) would be responsible for considering special events in the construction program and making appropriate arrangements to manage the impacts of construction (including traffic management and contingency arrangements) during these events. Transport understands that during special events periods, detours and adjustments to road and footpath capacity and construction worksites may be required to facilitate safe and efficient access for vehicles and pedestrians. This commitment is confirmed by mitigation measure TT17, which is focussed on managing impacts during special events, including at Sydney Olympic Park. In accordance with this measure, where special events require traffic and pedestrian management, measures will be developed and implemented in consultation with relevant stakeholders.

During detailed construction planning the construction contractor(s) will prepare a traffic and access management plan in accordance with mitigation measure TT8 to detail the processes and responsibilities to minimise traffic and access delays and disruptions, and identify and respond to changes to road access and on-street parking arrangements. In accordance with mitigation measure TT9, the plan will include measures to manage staging of construction works to ensure that satisfactory capacity and minimum levels of service are maintained for all users.

Further information about the approaches to managing construction during special events in Sydney Olympic Park and Sydney Showground is provided in the responses in sections 7.3.1, 7.3.2 and 7.3.11 of this report.

8.3.2 Working hours

Preferred working hours – Sunday and public holidays

Issue description

Submitters provided comment on the primary project working hours described in the EIS. Some submitters requested that there be no work on Sundays and public holidays. Others stated that work should be undertaken seven days a week from 7am to 7pm to finish the project as soon as possible.

Submission numbers

SE-51719707, SE-51854962, SE-52001214, SE-52091708, SE-52110225, SE-52213976

Response

Balancing the potential impacts of construction with the delivery of projects that will ultimately benefit the community is complex. While amenity impacts are an unavoidable part of major projects such as Parramatta Light Rail, Transport works hard to minimise impacts on the community, while also ensuring the works are undertaken as safely and efficiently as possible.

Transport has proposed working hours for the project that would extend the recommended standard hours defined in the *Interim Construction Noise Guideline* (DECC, 2009). The clarification provided in section 4.3.1 of this report provides information about the proposed primary project working hours, including why they have been proposed and how construction during these hours would be managed. In summary, the proposed primary project working hours would:

- reduce the duration of construction in any one location and associated amenity (including noise, access, etc) impacts
- permit works within the road corridor at times when traffic volumes are lower, reducing the potential for disruption to the general public and providing safety benefits for workers
- minimise potential disruptions to critical utilities during times of greatest needs
- enable works within or with the potential to affect locations such as the Parramatta CBD, Sydney Olympic Park (including Sydney Showground) and Rosehill Gardens Racecourse to be planned around special events.

Transport is committed to avoiding or minimising amenity impacts from all construction projects under its control, including Parramatta Light Rail Stage 2. As described in section 4.3.1 of this report, a number of mitigation measures have been provided to minimise the potential for amenity impacts during the primary project working hours. In addition, specific works would be prioritised where possible to minimise the duration of construction, and community feedback would be taken into account when designing the construction program.

8.3.3 Proposed closure of Ermington Boat Ramp

Concern regarding the closure and duration

Issue description

Submitters conveyed objections and expressed concerns about the proposed closure of Ermington Boat Ramp associated with construction of the bridge between Melrose Park and Wentworth Point, including the perception that closure is proposed to provide the construction contractor with land for construction facilities and car parking. Comments included:

- As one of the 100s of people who use the Wharf Road boat ramp facilities every weekend, the closure of this facility for any period of time is strongly opposed. The alternative ramps within this waterway are already overcrowded most weekends and lack sufficient parking. There is plenty of alternative sites that can be used for this project with minimal disruption to the community.
- It is requested that Ermington Boat Ramp not be closed for the duration of the construction period, which could be approximately three years. Closing the ramp would prevent people from accessing the Parramatta River and Sydney Harbour at a safe, convenient and accessible location designed and built for that purpose.
- Closing the ramp means that the project is contrary to the directions of Transport's Future Transport Strategy, which includes a commitment to create safer waterway access and infrastructure, improve access for boaters on the State's waterways, and ensure people have safe and responsible access to the water.
- The ramp is being closed for three long years so that a construction company can have accommodation and car parking on public lands, which would permanently reduce the available access and parking at the ramp post construction for an 'operational building' in a valuable waterfront location.
- Closing the ramp is not fair for the local people. The proposal to remove Ermington Boat Ramp for a period of three years is not in the public interest and must not be allowed to proceed without proper consideration of alternative access arrangements for the construction of the bridge structure.
- It is unacceptable to close the boat ramp or deny access to any users of the waterways. Boat owners pay licence fees that fund these boat ramps and they are not to be used as staging depots to build projects unless suitable and equal facilities are provided in the immediate area.
- Boaters from western Sydney and the local area who use the ramp will be forced to keep their families at home because of a distinct lack of facilities and major overcrowding in the area.
- There is sufficient capacity in nearby underutilised industrial areas for site offices, car parking and lay down areas. The project team should explore these alternatives to construct the bridge rather than taking the boat ramp out of service for three years.
- The NSW Government has not yet provided appropriate solutions or alternatives for people in Western Sydney and surrounding areas for having their access to Sydney Harbour cut off for three years.
- The current strategy is to wait for the boating public to give up thereby negating the level of concern for the NSW Government.
- Closing Ermington Boat Ramp will:
 - prevent people from accessing the Parramatta River and Sydney Harbour at a safe, convenient and accessible location designed and built for that purpose for approximately three years
 - force people to use Rhodes or Kissing Point, which have insufficient trailer parking to accommodate the additional usage from Ermington

- force people to tow further afield adding to congestion, stress, access and parking issues elsewhere.

Submission numbers

SE-51794726, SE-51890766, SE-52014207, SE-52020217, SE-52022962, SE-52024970, SE-52131532, SE-52467457, SE-52503972, SE-52661960, SE-52665709, SE-52681720, SE-52703707, SE-52713972, SE-52720957, SE-52723458, SE-52770208, SE-52779248, SE-52861959, SE-52863719

Response

Transport acknowledges the impact of the proposed closure of Ermington Boat Ramp for up to three years. As a result of surveys of boat ramp usage between 2019 and 2020, along with the feedback received from stakeholders and community, Transport understands that Ermington Boat Ramp is a highly sought after river access point, particularly for Western Sydney residents.

Archer Park, the southern section of Wharf Road, and the Ermington Boat Ramp car park at Melrose Park, would be the site of a proposed construction compound (referred to as construction compound 7 in the updated project description (Appendix A of the Amendment Report)). The space needed for the construction compound and to accommodate frequent movement of construction vehicles, heavy machinery, deliveries and bridge components to and from the temporary working platforms would require ongoing use of the boat ramp car park and southern section of Wharf Road. Additionally, construction associated with the northern section of the bridge would block part of Wharf Road. As a result, public access via the land to the boat ramp and car park cannot be maintained.

Transport investigated a number of alternative locations for construction compound 7. Transport concluded that there are no areas of similarly sized, relatively flat land within one kilometre of the proposed bridge site that are unconstrained by existing or proposed future development and available for lease over the construction period.

The closure of Ermington Boat Ramp for up to three years is a reasonable worst-case assumption used in the EIS for assessment purposes.

As part of the procurement process for construction of the bridge, Transport would require tenderers to innovate their design and construction processes to minimise the duration of bridge construction and any impacts on the boat ramp and navigational channel closures, particularly during the peak boating season.

The clarification in section 4.3.4 of this report provides further information on why Ermington Boat Ramp would need to close during construction, how this would be managed, and the arrangements that would be made to continue to provide access to the Parramatta River for the community.

Responses to issues raised about the traffic, transport and social impacts of closing the boat ramp are provided in section 8.6.1 and 8.10.1 of this report.

8.3.4 Transport and access

Parking for construction workers

Issue description

Submitters requested clarification and expressed concern about the provision of parking for construction workers. Comments made included:

- There is no mention of arrangements for construction worker transportation. Residents cannot be expected to deal with the repercussions of the removal of street parking spots in a suburb where this is already extremely scarce.
- When construction commences there will be a problem with car parking for the workers, given the limited car parking now at Wentworth Point.

- There is plenty of parking suitable for workers in Olympic Park, why is it not possible for workers to park there and arrange for a shuttle bus to take them to the two Hill Road construction compounds?

Submission numbers

SE-51719707, SE-52213976, SE-52275991

Response

As described in section 7.7 of the EIS, some parking for the construction workforce would be provided at construction compounds. It is estimated that up to about 340 additional parking spaces would be required across the project site to service the parking demand from construction workers. To meet some of this demand, the project would provide about:

- 200 off-street spaces at the Sydney Olympic Park P5 car park (in compound 12 (Holker Busway) (now referred to as compound 11 in the updated project description provided in Appendix A of the Amendment Report))
- 50 off-street spaces at Edwin Flack Avenue (in compound 15 (Dawn Fraser Avenue) (now referred to as compound 14 in the updated project description in Appendix A of the Amendment Report)).

Opportunities for additional construction workforce parking would be investigated during construction planning, particularly for larger work areas.

Measures to manage construction worker parking to minimise impacts on parking in public streets, such as provision of designated parking areas within the project site, encouraging use of public transport, and shuttle bus arrangements, will be defined by the parking management strategy prepared in accordance with mitigation measure TT7. Further information about managing impacts on parking during construction is provided in the responses in section 8.6.4 of this report.

8.3.5 Construction management

Construction nuisance

Issue description

A submitter requested that care should be taken to minimise nuisance during construction. The submitter noted that too many recent projects have barricaded large areas for months with no construction progress.

Submission number

SE-52724719

Response

It is the responsibility of the appointed contractor(s) to plan and implement the works to maintain public safety during construction. Typically, this is achieved by excluding access to construction areas for members of the public by using barricades or other means. Because of this responsibility, there is a reticence to remove the barricades prior to completion of all construction activities. Also, some construction activities (such as laying track) may be staged over a certain length of alignment. Barricades may not be removed from recently concreted areas if there are subsequent activities such as installation of traffic signals, signage and line marking still to be undertaken even though other activities have already been completed.

Transport is aware of the inconvenience caused by barricading off large sections of the corridor. Transport would work with the construction contractor(s) to manage the staged closure/re-opening of sections of the corridor following the completion of works to limit these impacts.

8.4 Alternatives and options

8.4.1 Strategic and corridor alternatives

Alternative light rail networks

Issue description

A submitter suggested that providing light rail on Victoria Road would be an important strategic project that would replace car traffic and is also the appropriate route to connect Rydalmere.

Submission number

SE-52715218

Response

The preferred light rail alignment was selected to serve and connect communities living north and south of the Parramatta River in the GPOP area, and to connect to existing and new public transport modes and interchanges, responding to the forecast high demand for journeys and reducing congestion on existing networks.

As described in section 5.3.1 of the EIS, seven corridor options between Camellia and Sydney Olympic Park were considered during the phase 1 corridor assessment. This included a corridor option that followed Victoria Road to West Ryde. This option was not preferred primarily due to unacceptable construction and traffic management challenges on Victoria Road, and because it provided limited opportunity to service growth or new residential development catchments. In addition, there are numerous bus routes that already service Victoria Road. Further information on the development of the preferred network for Parramatta Light Rail is provided in *Parramatta Light Rail - How the preferred network was determined* (Transport for NSW, 2016) (available at: [Parramatta Light Rail Options Report](#)) and Chapter 5 (Design development, alternatives and options) of the EIS.

Future extensions may be considered in line with NSW Government integrated transport and land use planning.

Corridor consistency with original announcement

Issue description

A submitter noted that the project described in the EIS is inconsistent with the announcement by the then Premier on 8 December 2015. The original announcement stated that the Western Sydney light rail network would connect the Parramatta CBD to the key hubs of Sydney Olympic Park, Westmead Hospital, Western Sydney University, and Strathfield. That announcement also referred to a branch line to Carlingford to replace the existing heavy rail line.

Submission number

SE-51795216

Response

As described in section 5.2.2 of the EIS, the network for Parramatta Light Rail announced by the NSW Government in December 2015 included:

- Westmead to Carlingford via Parramatta, reusing the Sydney Trains T6 Carlingford Line
- Parramatta to Strathfield via Sydney Olympic Park.

In February 2017, the NSW Government announced that Parramatta Light Rail would be delivered in stages, with Stage 1 connecting Westmead to Carlingford via Parramatta, and Stage 2 connecting the Parramatta CBD to Strathfield via Sydney Olympic Park. Subsequent to this announcement, further analysis identified some challenges with the network for Parramatta Light Rail Stage 2, including:

- limited urban renewal opportunities between Camellia and Sydney Olympic Park along the network
- significant engineering challenges, including space restrictions, steep grades, property and utility impacts, and complex structures, particularly around Strathfield
- future integration with Sydney Metro West, the route for which would largely duplicate the original network.

Given these challenges a two-phase assessment of other corridor options was undertaken, with options scrutinised in greater detail as they advanced through each phase.

As described in section 5.3.1 of the EIS, 12 potential corridor options were identified to cater for forecast demand beyond Sydney Olympic Park and connections to Strathfield. This included two corridor options to Lidcombe. Only one of these options progressed to the next stage of optioneering (identified as Corridor 5 in section 5.3.1 of the EIS). It was noted that this option would potentially attract the highest demand overall, but it would require significant property acquisition south of the M4 Western Motorway. Therefore, a shortened Lidcombe corridor was identified as the preferred corridor option to maximise the benefits of the project by connecting to Sydney Olympic Park and the Carter Street precinct. This corridor also had relatively low costs, enhanced the catchment of the proposed Sydney Metro West station at Sydney Olympic Park, and had community support, as described in the *Carter Street Precinct Development Framework* (DPIE, 2020a).

Further information about the route selection process is provided in sections 5.3 and 5.4 of the EIS.

The Parramatta Light Rail network, consisting of Parramatta Light Rail Stage 1 and the project, would connect the Parramatta CBD to the key hubs of Sydney Olympic Park, Westmead Hospital and the three Western Sydney University campuses. Parramatta Light Rail Stage 1 includes a connection to Carlingford located along the Carlingford rail line.

Sydney Metro West will connect Westmead, Parramatta, Sydney Olympic Park, Burwood North, Five Dock, The Bays and Pyrmont, and the Sydney CBD. Train services connect Westmead, Parramatta and Sydney Olympic Park with Strathfield. Interchange between trains, Sydney Metro West and the Parramatta Light Rail network would be available at Westmead, Parramatta and Sydney Olympic Park.

Corridors beyond Carter Street (Lidcombe) and Sydney Olympic Park

Issue description

Submitters requested that the preferred route should extend beyond Sydney Olympic Park and Carter Street, and connect to Lidcombe Station and/or Homebush / Strathfield Station. Comments made included:

- An extension to Lidcombe should be considered as part of the project. Extending the line past Carter Street will make Parramatta Road accessible to people and tie together these geographically close, but quite isolated, parts of central Sydney. It will also benefit disadvantaged communities.
- Connecting to Strathfield would enable direct interchange with most Sydney Trains express services and NSW Trains intercity lines, reducing travel times and allowing Wentworth Park and other connected suburbs to have better connectivity to the Sydney Trains network without adding a second transfer (since Sydney Olympic Park services are shuttles to Lidcombe most of the time).
- The project should connect with heavy rail at both ends. The eastern terminus at Carter Street does not connect with any other public transport.

- Please continue the stage two track to loop back to Parramatta after Carter Street.
- The truncation of Parramatta Light Rail to Carter Street, which is short of the original proposal for the line terminating at Strathfield, is not supported.
- The project should not merely be constructed to increase property values of the Carter Street precinct and as last-mile transit to provide connecting patronage for Sydney Metro West at Olympic Park Station.
- Carter Street and the surrounding precinct should be designed to enable a future extension of light rail services.
- Transport should plan for the termination at Carter Street in Lidcombe to allow for the route to extend further in due course.
- If the Cumberland Council proposal for light rail from Carter Street to Lidcombe were to be adopted, the preferred alignment is via Hill Road, Parramatta Road and John Street.
- The priority for improving transit between Olympic Park and Lidcombe is the establishment of Pippita CityExpress (using the Sydney Trains T7 Olympic Park line) and Pippita Rail Trail (Active Transport parallel to the T7 Olympic Park line on the former Abattoir Line).

Submission numbers

SE-50667210, SE-50927468, SE-51814457, SE-51938967, SE-52044211, SE-52462492, SE-52670974, SE-52716711, SE-52718459, SE-52724457, SE-52769958

Response

As described in section 5.3.2 of the EIS, four potential corridors beyond Sydney Olympic Park were considered, which would have extended the line to Homebush (Corridor 4), Lidcombe (Corridor 5), North Strathfield (Corridor 6) or Concord West (Corridor 7) (see Figure 5.5 in the EIS).

A key development during the corridor assessment process was confirmation by the NSW Government of the preferred route for Sydney Metro West, which will connect Greater Parramatta and the Sydney CBD.

Corridors 4, 5, 6, and 7 all showed some benefits but also presented substantial technical and property acquisition challenges. Analysis showed that the introduction of Sydney Metro West would result in substantial changes to travel behaviour and movement patterns in these areas, with travel demand for the Concord West and North Strathfield options reduced by potentially up to 50 per cent.

The Lidcombe corridor would potentially attract the highest demand overall but required significant property acquisition south of the M4 Western Motorway. Therefore, a shortened Lidcombe corridor (Corridor 5) was identified as the preferred corridor option to maximise the benefits of the project by connecting Sydney Olympic Park and the Carter Street precinct, and providing a transport connection to this growing residential population. This corridor also had relatively low costs, enhanced the catchment of the proposed Sydney Metro West station at Sydney Olympic Park, and had community support, as described in the *Carter Street Precinct Development Framework* (DPIE, 2020a).

The preferred light rail alignment was selected to serve and connect communities living north and south of the Parramatta River in the GPOP.

The preferred alignment allows connections with existing public transport services at and near its western and eastern ends at Parramatta and Sydney Olympic Park. The stop at Olympic Boulevard would also be located close to the proposed new Sydney Metro West station at Olympic Park.

A return loop to Parramatta is not required as light rail vehicles would make the return trip along the same alignment. The provision of additional alignments to form a loop back to Parramatta is beyond the scope of this project.

The design of light rail, including the Carter Street terminus, enables future extensions of light rail services. Future extensions may be considered in line with NSW Government integrated transport and land use planning.

The Carter Street terminus and proposed public domain improvements do not preclude Cumberland Council or other parties from providing future active transport connections in this precinct.

It is noted that City of Parramatta Council is finalising designs for improvements to active transport along Carter Street, and that Cumberland City Council has received funding from the NSW Government to progress the planning and design of the Pippita Rail Trail. The delivery of these projects will assist in supporting improved walking and cycling links to the project.

Extension to Strathfield and Sydney CBD

Issue description

A submitter noted that significant opportunity exists for Parramatta Light Rail Stage 2 to improve connectivity between the Greater Parramatta and the Olympic Peninsula and the Inner West. Sydney Metro West and Parramatta Light Rail both should have a place in the corridor between Olympic Park and Strathfield as each serve as a response to different forms of commuter needs.

The submitter requested that the project should not preclude a future connection and establishment of Parramatta Road Light Rail (to connect with Sydney CBD Light Rail at Central) as the fulfilment of the WestConnex project's planning conditions for two lanes of public transport along Parramatta Road

Submission number

SE-52462492

Response

The reasons why the project terminates at Carter Street and opportunity for future extensions is described in the response above.

Analysis showed that the introduction of Sydney Metro West would result in substantial changes to travel behaviour and movement patterns. Sydney Metro West will deliver stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street in the Sydney CBD. Parramatta Light Rail will interchange with Sydney Metro West at Westmead, Parramatta and Sydney Olympic Park, providing quick access to North Strathfield and Burwood North.

Future extensions may be considered in line with NSW Government integrated transport and land use planning.

Corridor options – Rydalmere Station and Dundas

Issue description

Submitters requested that that the project provide links to/from Dundas and Rydalmere. Comments made included:

- Parramatta Light Rail Stages 1 and 2 should link for people travelling from Dundas and Rydalmere to continue to Sydney Olympic Park. This would save commuters a lot of time and ease a lot of congestion at Parramatta Station.
- Stage 2 should run via Rydalmere Station enabling people living east of there to travel directly north to Carlingford and possibly at some later stage to Epping and Chatswood.

Submission numbers

SE-50982031, SE-51789975

Response

The Parramatta Light Rail network (including Stage 1 and the project) would link Carlingford, Dundas, Rydalmere (the Yallamundi stop) and Sydney Olympic Park. As described in the response in section 8.2.8 of this report (under the heading 'Interchanges between Parramatta Light Rail Stages 1 and 2 in Camellia'), there are a number of interchanges that could be used to transfer between Parramatta Light Rail Stage 1 and Stage 2 services, including at the Parramatta Light Rail Stage 1 Tramway Avenue stop and other stops along the shared section of alignment between Camellia and the Parramatta CBD.

An extension to Epping was considered during the phase 1 corridor assessment; however, it had significant challenges (see section 5.3.1 of the EIS).

Further information on the development of the preferred network for Parramatta Light Rail is provided in *Parramatta Light Rail - How the preferred network was determined* (Transport for NSW, 2016) (available at: [Parramatta Light Rail Options Report](#)).

Future extensions may be considered in line with NSW Government integrated transport and land use planning.

Corridor options – West Ryde Station

Issue description

A submitter requested that the line along Victoria Road be extended and diverted via West Ryde Station to make an interchange with the Northern Line, as Ermington residents currently have access to West Ryde shops and station.

Submission number

SE-52892210

Response

As described in section 5.3.1 of the EIS, seven corridor options between Camellia and Sydney Olympic Park were considered during the phase 1 corridor assessment. This included a corridor option that followed Victoria Road to West Ryde. This option was not selected as preferred primarily due to unacceptable construction and traffic management challenges on Victoria Road, and because it provided limited opportunity for growth or new residential development catchments.

Further information on the development of the preferred network for Parramatta Light Rail is provided in *Parramatta Light Rail – How the preferred network was determined* (Transport for NSW, 2016) (available at: [Parramatta Light Rail Options Report](#)).

Future extensions may be considered in line with NSW Government integrated transport and land use planning.

Corridor directly to Sydney Olympic Park via Silverwater

Issue description

A submitter suggested that the best route option to Sydney Olympic Park would be to cross the river from Camellia to Silverwater and then proceed along Holker Street, Holker Busway, and Australia Avenue. This route would eliminate seven stops, reducing cost and travel time. The submitter suggested that the addition of Melrose Park is only designed to help residential development there, and that the best option to link the new residents of Melrose Park to the heavy rail network is via West Ryde Station. The inclusion of Ermington and Rydalmere takes light rail through light industrial and low density residential areas that lack strategic importance.

Submission number

SE-51795216

Response

The strategic context and need for the project are described in Chapter 3 (Strategic context and need) of the EIS. In particular, the project would form part of an integrated light rail network connecting the areas served by Parramatta Light Rail Stage 1 with the growing precincts to the east of Parramatta, including Camellia, Rydalmere, Ermington, Melrose Park, Wentworth Point, Sydney Olympic Park and Carter Street. It would provide frequent and reliable services to jobs, education and services.

Light rail is designed to have regularly spaced stops within walking distance of communities and places, whereas other transport modes provide express services with fewer stops. Information on stop locations and spacing is provided in sections 4.2 and 4.4 of Technical Paper 1 (Design, Place and Movement) and sections 2.2 and 2.4 of the Supplementary Design, Place and Movement Report.

As described in the above responses and in section 5.3 of the EIS, two phases of assessment of corridor options were undertaken to refine the corridor and develop a project alignment, taking into consideration:

- current and future population growth and transport demand
- opportunities to service planned urban developments and land use change in GPOP
- existing and future traffic conditions and transport movements.

Servicing key growth areas, such as Camellia, Melrose Park and Wentworth Point, was a key consideration. Corridor options that went to Sydney Olympic Park via Silverwater were considered during both the phase 1 and phase 2 corridor assessments (see sections 5.3.1 and 5.3.2 of the EIS). During phase 2, an alignment that commenced in Camellia and remained on the southern side of the Parramatta River (Corridor 3) was considered against project-specific criteria. It was found that while shorter and more cost effective, it would likely attract the lowest customer demand as the corridor is similar to that of the planned Sydney Metro West and it would provide limited opportunity to support development due to industrial land use constraints in Silverwater.

8.4.2 Alignment options and refinements

Routes directly to Rydalmere

Issue description

Submitters expressed concerns that the preferred route has changed from the original Corridor 1 (Rydalmere option) to Corridor 2 (Camellia option) and urged Transport to switch back to this option. The benefits of this option include direct access to Western Sydney University. In the absence of reasoning which explains why Corridor 1 (which commenced in Rydalmere and continued to Ermington on the northern side of the Parramatta River) is no longer viable, Transport should not depart from this option.

Submission numbers

SE-51801207, SE-51814457, SE-51928957, SE-52715712

Response

The reasons why the Camellia option (Corridor 2) was preferred over the Rydalmere option (Corridor 1) are described in section 5.3.2 of the EIS. The analysis focused on land use outcomes, constructability, cost considerations and connectivity. The Camellia option was selected as preferred, as it would provide better placemaking and city-serving outcomes, including:

- meeting the public transport demands of the future community of the Camellia-Rosehill precinct and the development of the Camellia town centre (as proposed by the (then) *Draft Camellia Town Centre Master Plan* (DPIE, 2018))
- connecting with Parramatta Light Rail Stage 1 within Camellia.

The Rydalmere corridor did not offer the advantages of integration with areas proposed for future urban development and population growth. This option also had higher costs, potential property impacts, and construction constraints associated with narrow sections of South Street and the presence of complex utilities.

As described in section 5.4.2 of the EIS, another option (referred to as the Camellia foreshore to Rydalmere option) was considered via a screening assessment to understand the potential environmental and community risks (see Appendix D of the EIS) while Transport began a process of investigation and design development. This process considered urban design, constructability, land use and open space matters against the strategic directions of the final *Camellia–Rosehill Place Strategy* released by the Department of Planning and Environment in August 2022. This option has now been adopted as a project amendment (the Camellia foreshore to Rydalmere alignment and bridge) as described in section 4.1 of the Amendment Report.

Parramatta Light Rail Stage 1 directly connects all three Western Sydney University campuses. Passengers have a range of options to travel to the Western Sydney University Rydalmere campus from eastern sections of the project, including:

- alight at the Sandown Boulevard stop in Camellia and walk to the Parramatta Light Rail Stage 1 Rosehill Gardens stop to continue to Yallamundi stop at Western Sydney University
- alight at the Tramway Avenue stop to transfer to Parramatta Light Rail Stage 1
- alight at the Sandown Boulevard stop in Camellia and walk via the active transport link, around 750 metres to the Whitlam Library.

Alternative route option to accommodate a developer proposed Rydalmere Structure Plan

Issue description

A submitter noted that a number of landowners in Rydalmere are working together to prepare a new structure plan for the development of their sites. The submission states that as well as providing major buildings along Antoine Street where the project alignment is proposed, a key part of the plan is retaining the established trees that are near the ferry wharf, which are a key feature of the area and of the waterfront park.

The submitter requested that, to develop this area as proposed, either the alignment should continue down South Street as originally intended, which would then provide a good link to the University of Western Sydney, or be diverted to not require the removal of the large established trees and not bisect the park.

Submission number

SE-51970723

Response

Since exhibition of the EIS, an amended alignment and bridge between Camellia and Rydalmere is now proposed (see the following response). The amended alignment would allow the established trees within Eric Primrose Reserve near Rydalmere Wharf to be retained and avoids bisecting Eric Primrose Reserve.

Transport has consulted with City of Parramatta Council about the proposed Rydalmere Structure Plan being prepared by landowners. Council noted that the structure plan does not align with Council's current land use direction for the Rydalmere area. However, Council has not ruled out preparing a structure plan for Rydalmere in the future. Council suggests that any landowners wishing to discuss such a plan should contact Council as the lead agency in the development of any such plan.

Camellia to Rydalmere alignment

Issue description

Submitters provided comment on the options between Camellia and Rydalmere, including the alternative Camellia foreshore to Rydalmere option (Camellia option 3) described in section 5.4.2 and Appendix D of the EIS. Comments made included:

- Camellia option 2 or 3 is the best route with the redevelopment of Grand Avenue over the coming years.
- The crossing over Parramatta River at John Street, Rydalmere would be a good option to integrate with the Rydalmere Wharf and avoid losing any car parking capacity for the commuters using the ferry service.
- The Camellia foreshore to Rydalmere option (it is noted this is referred to as Camellia option 3 in section 5.4.2 of the EIS) is the better of the two options in balancing stakeholder needs and expectations, and the impacts on industrial land.
- The Grand Avenue alignment (referred to as Camellia option 1 in section 5.4.2 of the EIS) is preferred. The foreshore is a sensitive environment with established mangrove forests. The addition of a standalone shared path along the foreshore is supported. This would require a much narrower strip of land.
- The proposed route that utilises an extended corridor adjacent to Grand Avenue (referred to as Camellia option 1 in section 5.4.2 of the EIS) would generate a range of social and economic impacts (as detailed in the submission) for industrial tenants.
- The alternative option (referred to as Camellia option 3 in section 5.4.2 of the EIS) (as described in Appendix D of the EIS) is supported as it would minimise the issues described above and detailed in the submission, and provide a range of benefits as described in the submission.

In addition, a submitter noted that in their 2019 Planning Proposal and subsequent submissions to various policies, projects and plans, including Parramatta Light Rail Stage 1, they identified that a bridge further east connecting Thackeray Street in Camellia to Park Road in Rydalmere would be the more appropriate bridge location. A number of supporting reasons were provided in the submission.

Submission numbers

SE-51794481, SE-51801207, SE-51814457, SE-51999230, SE-52009207, SE-52496457, SE-52604711, SE-52726459

Response

As described in sections 5.4.2 and 5.6.1 of the EIS, Transport began a process of investigation and design development for an alternative alignment between Camellia and Rydalmere in parallel with the EIS. A screening assessment for the Camellia foreshore to Rydalmere alignment was prepared for the EIS to understand the potential environmental and community risks. The results of the screening assessment are provided in Appendix D (Camellia foreshore to Rydalmere option – preliminary environmental scoping) of the EIS. This process considered urban design, constructability, land use and open space matters against the strategic directions of the final Camellia–Rosehill Place Strategy released by the Department of Planning and Environment in August 2022.

Following the options assessment process, the preferred alignment for the Camellia foreshore to Rydalmere option was confirmed, as described in section 4.1.3 of the Amendment Report. Further information on the justification for this amendment, compared to the alignment described in the EIS, is provided in section 4.1.2 of the Amendment Report.

The Camellia foreshore to Rydalmere alignment was considered to have a number of advantages over the project alignment described in the EIS echoing many of the points raised in submissions, including that it would:

- avoid impacts on the Rydalmere Wharf commuter car park
- result in fewer interactions with industrial properties in Camellia
- not be located along Grand Avenue, and as such, would avoid heavy vehicle interactions, the need for new signalised intersections and the potential for property access impacts.

An assessment of the potential environment and community impacts of the amended project is provided in section 6 of the Amendment Report and supporting technical papers. With respect to mangroves, the Updated Biodiversity Development Assessment Report (see section 4.2.1 of this report) confirms that the amended project would reduce potential impacts on mangroves and riparian connectivity compared to the alignment described in the EIS as the design has made use of the natural gaps in the mangroves.

Silverwater Road bridge

Issue description

Submitters stated that they prefer option 4 for the Silverwater Road bridge. This would ensure that the project is future proofed and able to service pedestrians, cyclists and the light rail, whilst also being used to access bus services on Silverwater Road.

Submission numbers

SE-52496457, SE-52670974

Response

As described in section 5.4.3 of the EIS, four options were considered for the Silverwater Road bridge, with option 4 being preferred. This option, which forms part of the project for which approval is sought, would provide a combined light rail and five metre wide active transport link on the southern side of the bridge. It would provide new lifts, stairs and accessible ramps, and would require the existing pedestrian bridge to be removed.

Wentworth Point alignment

Issue description

Submitters expressed a preference for the route option in Wentworth Point that connected with the Olympic Park Wharf (it is noted this is referred to as option 4 in section 5.3.3 of the EIS). Comments included:

- The originally planned route in Wentworth Point (it is noted this is referred to as option 4 in section 5.3.3 of the EIS) directly connecting to the Sydney Olympic Park Wharf terminal would be the better option providing direct links to the ferry and school. The new route is a seven minute walk to the ferry and requires commuters and school children to walk across busy roads.
- For the Parramatta River crossing entering the Wentworth Point area, option 4 is preferred to integrate with the Sydney Olympic Park Wharf.
- The amended first stop in Wentworth Point further to the south will compound the current confusion for tourists and visitors and will be potentially unsafe for students of Wentworth Point Public School and the new high school who are likely to attempt to cross Hill Road to take the shortest route to school.
- The route is now going through Sydney Olympic Park parklands, which will impact on biodiversity, require cutting down a lot more trees and is closer to the protected wetlands.

- The proposed stop will discriminate against ferry passengers seeking to travel to Sydney Olympic Park with a physical disability or mobility issues.
- The rail needs to be on the Parramatta River side of Sanctuary as originally planned to ensure that a transport hub occurs at the Sydney Olympic Park Wharf.
- Strongly object to the new route (it is noted this is referred to as option 3 in section 5.3.2 of the EIS). The original plan (referred to as option 4 in section 5.3.2 of the EIS) should be implemented based upon which people had gone ahead with their purchase of property.
- If Transport redesigns the project and locates the alignment next to river, there would not be a need to buy land from the developer of Sanctuary Wentworth Point.

Submission numbers

SE-50800474, SE-51719707, SE-52001214, SE-52009207, SE-52089724, SE-52091708, SE-52091732, SE-52110225, SE-52114207, SE-52213976, SE-52275991, SE-52438212, SE-52496457, SE-52722721

Response

As described in section 5.3.3 of the EIS, two options for the alignment at Wentworth Point were considered in response to the ongoing and planned development in the area. Option 3 would extend to the west and south of the Sanctuary Wentworth Point development, while option 4 would extend east along Foreshore Boulevard and through the development (see Figure 5.8 in the EIS). Option 4 was not selected as the preferred option due to operational, design and safety issues, including.

- The steep grade from Melrose Park to Wentworth Point over the proposed bridge, followed by the tight curve onto Foreshore Boulevard, would require the installation of infrastructure such as barriers and fences in the public domain to mitigate the risk of derailment. This would create a barrier for pedestrians accessing the river foreshore and moving around the area.
- The quick deceleration from the bridge into Wentworth Point, coupled with the sharp turn into the Sanctuary Wentworth Point site, would increase risk of incidents during daily operation. This was deemed a significant operational safety risk as there would be larger pedestrian traffic volumes interfacing with the alignment.
- There would be greater amenity and access impacts on the river foreshore and River Walk due to the proximity of the alignment.
- A complex traffic system would be required for combined bus, vehicles, development access and egress, and pedestrian and light rail operations along Foreshore Boulevard and Hill Road, to provide a safe environment for all transport modes.
- The tight curve of the track turning from Foreshore Boulevard onto Hill Road would increase the potential for wheel squeal adjacent to open space and the proposed Sanctuary Wentworth Point buildings, including residences.
- The light rail track would be close to (within two metres of) proposed Sanctuary Wentworth Point buildings resulting in poorer safety and amenity outcomes.
- The alignment would require the relocation or protection of utilities on Hill Road, increasing cost and construction complexity.

Option 3, as the preferred option, would result in better public domain and amenity outcomes for the proposed Foreshore Boulevard and the existing River Walk, with the benefits as described in section 5.3.3 of the EIS. However, it would have the potential for more biodiversity impacts due to its location partially within the Millennium Parklands. These potential impacts were assessed in the EIS and mitigation measures provided including:

- Mitigation measure BD1 provides that vegetation clearing will be limited to the minimum necessary to construct the project and that the design and location of infrastructure will be further refined during each design phase to minimise or avoid impacts on native vegetation, fauna movement and habitat as far as practicable.
- Mitigation measure BD3 provides that design development in Sydney Olympic Park and the Millennium Parklands will ensure that habitat connectivity and quality for the Green and Golden Bell Frog is maintained in consultation with Sydney Olympic Park Authority and a suitably qualified and experienced ecologist.
- Mitigation measure BD11 provides that a biodiversity management plan will be prepared prior to construction and implemented as part of the CEMP. It will be developed in consultation with Sydney Olympic Park Authority (for works within Sydney Olympic Park and the Millennium Parklands). The plan will include measures to protect biodiversity and minimise the potential for impacts during construction. The plan will include but not be limited to:
 - measures to manage potential impacts on the Green and Golden Bell Frog (see new mitigation measure BD12)
 - measures to manage potential light, noise and vibration impacts on threatened and migratory fauna, such as the Green and Golden Bell Frog, within Sydney Olympic Park
 - measures to manage biosecurity risks (including pathogens and weeds) in accordance with the *Biosecurity Act 2015* (NSW)
 - locations and requirements for pre-clearing surveys, including where clearing is required within Sydney Olympic Park and areas of mangrove, saltmarsh or other riparian vegetation (see mitigation measure BD13)
 - an unexpected finds procedure
 - hygiene controls in relation to chytrid fungus, cinnamon fungus (*Phytophthora cinnamomi*) and myrtle rust (*Pucciniales fungi*)
 - locations and procedures for monitoring (see mitigation measures BD15, BD16 and BD18).

As described in section 6.3.1 of the EIS, a light rail stop is proposed at Hill Road near Footbridge Boulevard (the Footbridge Boulevard stop), which would be about 340 metres (about a four minute walk) to Sydney Olympic Park Wharf. This is about 225 metres further than an option 4 stop location within the Sanctuary Wentworth Point site on Foreshore Boulevard. In line with City of Parramatta Council's preference, Transport is investigating providing a 240 metre long light rail stub (spur) and a terminus along Hill Road on the eastern side of the development to offer light rail services closer to the wharf. Transport has engaged with Council to obtain feedback on the desired arrangements and will consult further with Council on the results of the investigation.

Technical Paper 1 (Design, Place and Movement) of the EIS describes how the project has been developed to integrate with existing and proposed development along the alignment, including at Wentworth Point. Key urban design principles that underpin the design include provision for dedicated, safe and convenient facilities that prioritise walking and cycling, including connections between different modes of transport (see sections 3.5, 4.10 and 14.2 of Technical Paper 1).

The project would provide for safe access to and around the light rail stops and alignment. All platforms would be designed to comply with the *Disability Discrimination Act 1992* and the Disability Standards for Accessible Public Transport, ensuring that less mobile members of the community have equal access to the stops and light rail vehicles. The project would provide safe signalised crossings at the intersections of Hill Road with Footbridge Boulevard and Verona Drive to provide safe access for vehicles, pedestrians and cyclists to and from local schools.

Transport has met, and would continue to meet, with the Sanctuary Wentworth Point developer in relation to how the design would continue to be refined to integrate with surrounding land uses. The Sanctuary Wentworth Point development application is also being updated to consider the project alignment.

Transport's commitment to ongoing collaboration and design refinement to ensure that the project is integrated with existing and future land uses is confirmed by mitigation measures LP1 and LP2:

- Mitigation measure LP1 provides that the design will continue to be refined to minimise land requirements and potential impacts on land uses and properties as far as reasonably practicable. Consultation with landowners/landholders will be ongoing to confirm feasible and reasonable measures to minimise impacts on their operations/properties.
- Mitigation measure LP2 (as amended) provides that consultation with key stakeholders (including relevant developers) will be ongoing to ensure that the design of the project is integrated as far as practicable with adjoining developments, proposed developments and urban renewal areas. This will include identifying measures and design responses to manage the interface between the project and adjoining land uses and properties as far as reasonably practicable.

Connection across the Parramatta River

Issue description

A submitter stated that the light rail must connect Wentworth Point via the proposed bridge across Parramatta River.

Submission number

SE-50625960

Response

The project includes a bridge over the Parramatta River between Melrose Park and Wentworth Point. As described in section 4.1 of this report, the project (as amended) includes a new alignment for the bridge between Melrose Park and Wentworth Point that is located further west to avoid direct impacts on residential properties. Further information is provided in section 4.2 of the Amendment Report.

Other route options/refinements

Issue description

Submitters (including those with properties with the potential to be affected by the project's land requirements) requested a range of refinements to the alignment as proposed. These included:

- The alignment should utilise the road reserves on South Street between John Street and Silverwater Road. In particular, making use of road reserves between John and Patricia streets and relocating the proposed light rail stop to this location.
- A minor curve should be added so that the alignment can pass between the junction where Antoine Street meets John Street in Rydalmere.
- The alignment should extend along Park Road in Rydalmere so that multiple sites along Antoine and John streets do not need to be acquired.

- The adjustments shown on figures provided with the submissions should be made to avoid acquisition of properties.
- The alignment should be amended to use the existing Sandown Line, cross Parramatta River landing in Rydalmere on Park Road and then turn right to South Street.
- Along Hope Street the alignment should remain on the southern side of the road until the future Bundil Boulevard where it should cross to the northern side of Hope Street, or remain on the southern side of the road between Atkins Road and Waratah Street.

Submission numbers

SE-51928957, SE-52715712, SE-54342957

Response

Following selection of the project corridor (as described in the responses in section 8.4.1 of this report and in further detail in sections 5.2 and 5.3 of the EIS), a process of precinct-focused refinement of the alignment was undertaken. These alignment and associated design refinements, which focused on the Parramatta CBD, Camellia, Rydalmere, Ermington and Melrose Park precincts, are described in section 5.4 of the EIS. The preferred alignment was selected to balance a range of operational, safety, design, environmental and land use considerations, including the potential for property impacts.

The project makes use of the road corridor along South Street for the relocation of road traffic lanes and new active transport links. Relocating the proposed John Street stop into South Street is not desirable as it would be further from Rydalmere Wharf, and there are space constraints at this location.

Introducing additional curves into the track alignment (as suggested) would require additional alignment changes beyond that shown in the figures provided. This is not desirable as it increases the potential for wheel squeal and additional light rail vehicle maintenance.

In early options analysis, a corridor along Park Road and South Street was considered, but was not preferred. It would result in substantial property impacts on both Park Road and South Street, as well as traffic and parking impacts. It would also have a poorer connection to Rydalmere Wharf.

As outlined in section 4.1 of this report and in the above response (under the heading ‘Camellia to Rydalmere alignment’), the project has been amended to incorporate an alternative alignment between Camellia and Rydalmere that extends along the Sandown Line corridor and avoids direct impacts on industrial properties along Grand Avenue.

The alignment along Hope Street in Melrose Park has considered future development, including planned cross-streets. The alignment and stop would be positioned to maximise integration with the proposed future town centre. An alignment on the southern side of Hope Street is not considered to integrate appropriately. Section 9.4.2 of Technical Paper 1 (Design, Place and Movement) describes the Hope Street alignment and stop.

Further information in response to issues raised about potential acquisition impacts on private properties, and the measures that would be implemented to mitigate these impacts as far as practicable, is provided in the responses in sections 8.9.1 and 8.9.2.

8.4.3 Stop options

Alternative stop locations that do not impact homes

Issue description

Submitters commented that there are alternative locations available for light rail stops that would not directly impact homes (including the requirement for property acquisition) and/or communities.

Submission numbers

SE-51760792, SE-51765489

Response

The process for locating the proposed light rail stops is described in section 4.2 of Technical Paper 1 (Design, Place and Movement). The locations of stops were selected based on a range of inputs, including:

- existing and future catchment demand
- urban design
- integration with other modes of public transport
- access to social infrastructure and other places of interest
- pedestrian and cyclist access
- operability considerations
- potential property, land use and other community and environmental impacts.

Transport has sought to minimise the land requirements of the project and direct impacts on property during the alignment options assessment process and design development. However, Transport acknowledges that some of the proposed stops and associated active transport infrastructure still have the potential to directly impact on nearby properties.

Transport commits to ongoing collaboration and design refinement in accordance with sections 5.6 and 23.3.2 of the EIS, to ensure that potential direct property impacts are minimised. In accordance with mitigation measure LP1, the design will continue to be refined to minimise land requirements and potential impacts on land uses and properties as far as reasonably practicable. Consultation with landowners/landholders will be ongoing to confirm feasible and reasonable measures to minimise impacts on their operations/properties.

Atkins Road stop options

Issue description

Submitters commented on the Atkins Road stop and integration with the heritage listed property Willowmere, and noted that option 2 (as shown in Figure 5.19) is the preferred option, particularly for those who reside in Hope Street.

Submission numbers

SE-50522481, SE-52665709

Response

As described in section 5.4.5 of the EIS, two options were considered for the alignment between Atkins Road and Hughes Avenue, in the vicinity of Hope Street and the locally-listed heritage item, Bulla Cream Dairy (Willowmere). Option 2 (shown on Figure 5.19 of the EIS) is the preferred option, and forms part of the project for which approval is sought.

8.4.4 Options for other project features

Parramatta CBD turnback

Issue description

A submitter stated that the Parramatta CBD turnback should be located in an area that works best for passengers. Light rail will be used extensively to access the CBD for events at Parramatta Stadium. As a result, option 2 or 3 would be most suitable and avoid a bottleneck at Macquarie Street with passengers alighting to change onto the other service that goes to Westmead. Anywhere north of the Lennox bridge would be a more suitable location for the turnback.

Submission number

SE-52496457

Response

As described in section 6.10.3 of the EIS, customers would be able to interchange with Parramatta Light Rail Stage 1 at four stops, including the Parramatta Square stop in the Parramatta CBD and at the Sandown Boulevard stop in Camellia, which would reduce the potential for bottlenecks in the Parramatta CBD.

With regards to the location of the turnback in the Parramatta CBD, as described in section 5.4.1 of the EIS, Macquarie Street (turnback option 1) was selected as the preferred option following detailed analysis. This would use the existing Parramatta Square stop as the terminus for vehicle operations, with a new turnback facility to the west on Macquarie Street between Church and Marsden streets. With the shortest travel time for light rail vehicles between the Parramatta CBD and Sydney Olympic Park, this option would provide the best service efficiency and would need the fewest light rail vehicles to run the service.

The identified benefits of the Macquarie Street turnback location include fewer potential impacts on the operation of Parramatta Light Rail Stage 1 compared to other options, and the amenity benefits of avoiding additional light rail movements through Eat Street, which was made a shared light rail and pedestrian zone as part of Parramatta Light Rail Stage 1. This location would also avoid additional impacts around the heritage listed Prince Alfred Square associated with some of the other turnback options described in section 5.4.1 of the EIS.

However, as described in section 6.2.2 of this report, the City of Parramatta Council would like other options for the Parramatta CBD turnback to be further considered. Further information is provided in the response to issues raised by Council in section 6.2.2. New mitigation measure LP3 provides that the location of the turnback facility in the Parramatta CBD will be further refined in consultation with City of Parramatta Council. This will include identifying measures and design responses to maximise customer experience and manage the interface between the turnback facility and adjoining land uses.

8.5 Procedural matters – assessment and approval

8.5.1 Adequacy of the EIS

The EIS is inadequate

Issue description

A submitter stated that the EIS documentation and exhibition documents, portal and virtual room do not reveal the impacts and are confusing and inconsistent. The EIS seems to be inadequate.

Submission number

SE-52009207

Response

The EIS and supporting technical papers were prepared in accordance with the requirements of the EP&A Act, the EP&A Regulation and the SEARs, as well as relevant issue-specific assessment guidelines and policies. Details of how these requirements have been met are provided in Appendix A (SEARs compliance table) of the EIS.

The EIS and technical papers were reviewed by the Department of Planning and Environment and other relevant NSW Government agencies to confirm that they adequately addressed the SEARs prior to being finalised and placed on public exhibition. NSW Government agencies were also invited to provide advice during the public exhibition period. Responses to the issues raised in this advice are provided in Chapter 5 (Response to NSW Government agency submissions and advice) of this report.

The assessment presented in the EIS (as summarised in the EIS portal and virtual room) is based on a reference design and indicative construction methodology, and is considered sufficient to assess the environmental impacts, and inform the risks and issues potentially associated with the project. The further development of measures and design responses to respond to the identified issues and risks is a matter for design development and construction planning, which would be undertaken in accordance with the updated mitigation measures (see Appendix B of this report) and the conditions of approval. This is consistent with current practice for major project assessments in NSW and elsewhere.

The main EIS report must address the SEARs, statutory requirements and relevant guidelines. In doing so, it needs to address a wide range of technical assessment requirements, while also providing information to explain a project, its potential impacts, and management of these impacts on the community and other stakeholders. To make this information accessible to the general public, chapters in the main EIS provide a summary of the main findings of the technical assessments. It is not the purpose of the main EIS chapters to fully replicate the detail provided in technical papers. The technical papers that support the EIS provide the detailed results of the assessments undertaken.

The potential environmental impacts of the project have been assessed to enable the Minister for Planning to make a determination in accordance with Division 5.2 of the EP&A Act. Transport is proposing a number of design amendments to the project to address issues raised during consultation and in submissions, and to minimise the potential impacts of the project. A summary of the proposed amendments is provided in section 4.1 of this report. Further information is provided in the Amendment Report, which is available separately.

The project would be designed, constructed and operated in accordance with the conditions of approval and all other relevant legislative requirements and approvals. The assessments undertaken to support the EIS, and the detail provided, are consistent with the requirements of the SEARs and relevant guidelines, as noted above.

Exhibition of amended EIS

Issue description

A submitter requested that given the significance of the project to the urban renewal of the Camellia Precinct, GPOP and the City of Parramatta, any amended EIS be placed on further public exhibition.

Submission number

SE-52604711

Response

There is no provision under the EP&A Act to amend and re-exhibit an EIS. This Response to Submissions and the separate Amendment Report will be made available on the Department of Planning and Environment's Major Projects website ([Parramatta Light Rail Stage 2](#)).

8.5.2 Community engagement – adequacy

Adequacy of consultation and communication about the project

Issue description

Submitters expressed concerns about the adequacy and amount of communication and consultation that was undertaken. Concerns raised included:

- There has been little to no communications about this project. Residents in South Street are not aware of the removal of street parking and the position of the stops.
- The information about the project and alternate route via Camellia available at the time of property purchase did not indicate that the submitter's property would be impacted by the route, and searches conducted at the time confirmed that there was no current proposal to acquire the property.
- There has been no consultation in relation to what appears to be recent change to the project.
- Nowhere in the project materials (other than deep in the EIS) is the length of construction period or proposed operation date provided. This is relevant information for submissions to consider as it is relevant to the length of time construction impacts will be imposed on the community and when social/environmental/commercial benefits of the project will be received.

Submission numbers

SE-50704216, SE-52647710, SE-52861959

Response

Information about Parramatta Light Rail has been available to the community since the announcement of the preferred network for Parramatta Light Rail in December 2015. Additional information was periodically released as design development and options selection progressed.

As described in Chapter 8 (Community and stakeholder engagement) of the EIS, phase 1 of community engagement activities for the project commenced in March 2018. Engagement during phase 2, particularly between June 2021 and September 2022, sought to increase project awareness, and further understand community and stakeholder issues and concerns. This included information on the Camellia and Rydalmere alignment options.

As described in section 8.2.1 of the EIS, key engagement and communication activities during phase 2 included:

- launch of a project-specific virtual engagement room in April 2022
- delivery of pop-up engagement sessions
- over 1,100 participants provided feedback on the stop locations and alignment.

Between May 2022 and July 2022 multiple opportunities for engagement and feedback were provided including:

- distribution of 29,500 notifications to residential properties along the proposed route.
- release of a virtual engagement room to access project information 24 hours a day, which had over 4,700 visits
- 17 community pop-up sessions visited by over 1,200 community members
- 'Have your say' survey with 1,194 responses to provide feedback for input into the EIS
- multiple meetings, workshops and briefings

- notifications were also posted on social media to alert community and stakeholders about the EIS engagement period.

The purpose of engagement was to raise awareness about the project, understand community and stakeholder issues, and obtain feedback to help shape the project alignment, design and environmental assessment. Further information on the engagement undertaken is provided in Chapter 8 (Community and stakeholder engagement) and Appendix F (Community and Stakeholder Engagement Report) of the EIS.

The consultation contributed to the project team's understanding of the potential impacts, and has enabled the design to respond to, and minimise, potential impacts as far as practicable. Measures to minimise and manage impacts that cannot be avoided have been developed as an outcome of the environmental assessment process, as described in the chapters in Part C of the EIS. Impacts would continue to be minimised during design development and construction planning, considering further engagement with key stakeholders and the community, and in accordance with the updated mitigation measures provided in Appendix B of this report and conditions of approval (if approved).

Transport acknowledges the need for ongoing engagement, which will be undertaken in accordance with mitigation measure SE1 and the Community Communication Strategy (provided in Appendix D of this report). Mitigation measure SE1 has been amended to confirm Transport's commitment to ongoing consultation during design development (where relevant).

Inadequate notice or consultation in relation to acquisition

Issue description

A submitter noted that they purchased their property in October 2021. At that time, there was no publicly available information in relation to the project indicating that the property was affected / of interest. Since purchase, there has been no consultation with the landowner in relation to what appears to be a recent change to acquire the property even though multiple properties owned by associated parties have been marked for compulsory acquisition for the project. In the absence of adequate notice or consultation with the landowners, the Department should not depart from its initial proposal, and Corridor 1 via Rydalmere should be adopted.

Another submitter noted that, as stakeholders in Rydalmere affected by acquisition, they were not consulted and future development in Rydalmere may be neglected.

Submission numbers

SE-52715712, SE-51928957

Response

The EIS describes the estimated land use requirements based on a reference design and preliminary construction planning. All affected property owners were notified via registered post and property visits (door knocks) from 8 November 2022 at the commencement of public exhibition of the EIS.

Transport has made every effort to minimise property impacts and land acquisition. Unfortunately, with a project of this size, some impacts are inevitable. Transport commits to ongoing collaboration and design refinement to ensure that potential property impacts are minimised. In accordance with mitigation measure LP1 the design will continue to be refined to minimise land requirements and potential impacts on land uses and properties as far as reasonably practicable. Consultation with landowners/landholders will be ongoing to confirm feasible and reasonable measures to minimise impacts on their operations/properties.

In accordance with mitigation measure LP6, all property acquisitions will be undertaken in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991*, the land acquisition reforms announced by the NSW Government in 2016, and the recommendations of the Auditor General's 2021 review of Transport for NSW's acquisition practices. Transport's preference is to achieve a negotiated

agreement with the affected landowner in the first instance. However, if a negotiated agreement cannot be reached the compulsory process would then be followed.

A response to issues raised about the change in the preferred route ('Corridor 2') compared to the original announcement ('Corridor 1') is provided in section 8.4.2 of this report under the heading 'Routes directly to Rydalmere'.

The proposed amendments outlined in section 4.1 of this report would result in changes to the project's land requirements. Further information on the land requirements for the amended project is provided in section 6.6 and Appendix D (Updated preliminary land requirements) of the Amendment Report.

Further information about consultation undertaken since the EIS was exhibited, including with potentially affected landowners and landholders, is provided in Chapter 2 (Stakeholder and community engagement) of this report, and Chapter 5 (Stakeholder and community engagement) of the Amendment Report.

Insufficient information to assess property impacts

Issue description

Submitters expressed concerns that the information available during consultation was insufficient to fully assess impacts on their properties, including impacts on access and driveways. Issues raised included:

- The EIS materials and staff at the drop-in session could not provide details of what the exact impact on access to our property will be.
- We request to be consulted as soon as possible and provided with details about how the project will impact our property.
- People from Transport for NSW who came to my house provided limited information and could not answer my questions.

Submission numbers

SE-51903712, SE-52725957

Response

Transport has continued to liaise with landowners/landholders on relevant aspects of the project, including potential property impacts and measures to address these impacts.

The information and assessments presented in the EIS, and communicated in accordance with the contents of the EIS, are based on a reference design and indicative construction methodology. These are sufficient to assess the potential environmental impacts in accordance with the SEARs and relevant assessment guidelines, and inform the risks and issues potentially associated with the next stage of design development and construction planning. The further development of the design, and measures and design responses to respond to the identified issues and impacts, is a matter for detailed design and construction planning, which would be undertaken in accordance with the updated mitigation measures (see Appendix B of this report) and the conditions of approval.

Following approval of the project, the design would continue to be refined, as described in sections 5.6 and 23.3.2 of the EIS. Through this design development process, the design would be refined from the current reference design level, to be progressively becoming more detailed. The Personal Relationship Manager(s) appointed in accordance with mitigation measure LP7 will continue to work with affected landowners/landholders and provide additional information on the project, the design, property access and acquisition requirements as it is available.

Consultation in relation to closure of Ermington Boat Ramp

Issue description

Submitters raised concerns about the consultation that occurred in relation to the proposed closure of Ermington Boat Ramp. Issues raised included:

- It is unclear whether anyone using the boat ramp has been consulted/made aware of the proposal to close the ramp.
- There was one small notification which alludes to the fact the boat ramp will be closed for up to three years. The level of notice is inadequate.
- Has any discussion been made with boat owners in Western Sydney? Boat users that I have spoken to have no idea about the proposed extended closure of the ramp.
- The exhibition period should be extended over the summer months when the ramp usage is at its highest level and seek feedback from boat owners using this facility.
- The Boating Industry Association made a submission on 10 September 2021 to Thompson Clarke Shipping who were engaged by Transport for NSW to conduct a survey of vessels using Parramatta River as part of considering a bridge between Archer Point and Ermington for the Parramatta Light Rail. No formal response to concerns was received. In December 2022, Boating Industry Association raised concerns with Transport for NSW about the lack of direct engagement with key stakeholders such as the boating sector, regarding the EIS. The NSW Government has ignored concerns raised by the Boating Industry Association more than a year ago regarding significant impacts on access to the waterways and Sydney Harbour.

Submission numbers

SE-51794726, SE-52467457, SE-52661960, SE-52703707

Response

Transport has engaged, and would continue to engage, with the community and interested stakeholder groups in relation to the proposed closure of Ermington Boat Ramp and options to continue to provide access to the Parramatta River for recreational users.

Chapter 8 (Community and stakeholder engagement) of the EIS describes the engagement activities undertaken prior to exhibition of the EIS, and Chapter 2 (Stakeholder and community engagement) of this report describes engagement activities undertaken since exhibition of the EIS, including in relation to Ermington Boat Ramp. Further information about consultation undertaken in relation to Ermington Boat Ramp is provided in section 2.3.2 of this report.

The clarification in section 4.3.4 of this report provides further information about why Ermington Boat Ramp would need to close during construction, how this would be managed, and the arrangements that would be made to address the potential impacts of closing the boat ramp.

In relation to the Thompson Clarke Shipping survey, Transport acknowledges that Thompson Clarke Shipping was engaged by Transport to conduct a survey of vessels using Parramatta River. This engagement and the information obtained was for the purpose of confirming the navigational channel requirements to inform bridge designs. The use and management of potential impacts on Ermington Boat Ramp was not the focus of the survey.

8.5.3 Community engagement with specific stakeholders

Royal Agricultural Society and the Sydney Royal Easter Show

Issue description

Submitters noted that the project has the potential to affect land leased by Royal Agricultural Society and requested that Transport consult with Royal Agricultural Society in relation to the design, construction and operation of the project. Concerns were raised about the consultation undertaken to date. Issues raised include:

- Royal Agricultural Society is a major stakeholder in the Sydney Olympic Park precinct. As the custodians of one of Sydney's premier annual events (the Sydney Royal Easter Show) and the operator on the long-term lease of Sydney Showground, it is imperative to the success of the project that Royal Agricultural Society be a key partner in the delivery of the Australia Avenue corridor along the proposed route.
- More consultation is needed with Royal Agricultural Society as there is currently a lack of attention to the operational and economic impacts on this organisation.
- The concerns and issues raised by Royal Agricultural Society, including proposed solutions, have not been acknowledged or addressed in this EIS.
- This process needs to be greatly improved to genuinely reflect and address the concerns of stakeholders, to find viable, practical, and workable solutions.

Submission numbers

SE-52670974, SE-52718459

Response

Transport recognises the importance of the Sydney Olympic Park precinct (including Sydney Showground) as a significant economic contributor to Sydney and NSW and for the places, events and experiences it provides to the community, residents, visitors and tourists. Transport has continued to engage with key stakeholders in the Sydney Olympic Park precinct, including Sydney Olympic Park Authority and Royal Agricultural Society, since 2016.

Transport acknowledges that Royal Agricultural Society has a major role in the operation of Sydney Showground, which hosts a number of significant events throughout the year, including the Sydney Royal Easter Show. Transport appreciates the involvement of, and collaboration with, Sydney Olympic Park Authority and Royal Agricultural Society throughout the design development process to date and looks forward to a productive ongoing partnership to develop the project going forward.

Transport is working to confirm that the provisions and assumptions within the project design and delivery plans are current and accurate, and to ensure that key aspects of the precinct and the integrity of Royal Agricultural Society's operations are protected, including the Sydney Royal Easter Show.

While it is acknowledged that not all the assumptions and solutions discussed and agreed to date with Sydney Olympic Park Authority and Royal Agricultural Society are detailed in the EIS, they have been recorded and/or addressed in the design development to date and would be further discussed and developed through subsequent phases of the project.

Further detailed responses to issues raised by Sydney Olympic Park Authority and Royal Agricultural Society are provided in sections 5.9 and 7.3 of this report.

Request to meet with businesses

Issue description

Submitters requested that the NSW Government and/or Transport meet with them in relation to the project and the potential impacts on their land, businesses and future development. Issues raised include:

- The NSW Government is requested to meet with us in relation to our Melrose Park and Camellia sites to discuss how the business can sustainably continue to operate at both sites.
- We request the opportunity to meet with the light rail team to be able to resolve in detail the urban design and planning issues of the light rail route in this area, with the intent being to create the best overall solution for all parties and for the area.
- A meeting is requested with Transport and the Department of Planning and Environment to discuss the matters raised as a matter of urgency.
- Notification of any changes to the application that are applicable to the site and opportunity for further review and comment are requested.

Submission numbers

SE-51970723, SE-52233220, SE-5261271

Response

Transport is committed to continuing to liaise with businesses and property owners on relevant aspects of the project, including potential property impacts and measures to address these impacts. Further information is provided in Chapter 8 (Community and stakeholder engagement) of the EIS, Chapter 2 (Stakeholder and community engagement) of this report and in the Community Communication Strategy (see Appendix D of this report). Transport continues to meet with potentially affected stakeholders.

A range of mitigation measures have been developed to confirm this commitment, which has been strengthened by amendments to a number of the mitigation measures (see Appendix B (Updated mitigation measures) of this report). The approach to engaging with key stakeholders (including businesses) is defined by the Community Communication Strategy (provided in Appendix D of this report), which will be implemented in accordance with mitigation measure SE1. Mitigation measure SE1 has been amended to confirm Transport's commitment to ongoing consultation with key stakeholders during design development and construction planning.

Mitigation measure LP2 has been amended to confirm the commitment for ongoing consultation with key stakeholders to ensure that the project is integrated with adjoining developments, proposed developments and urban renewal areas. In accordance with mitigation measure LP2, this will include identifying measures and design responses to manage the interface between the project and adjoining land uses and properties as far as reasonably practicable.

Mitigation measure SE9 commits to developing and implementing a business management and activation plan for businesses with the potential to be affected by the project, including those located on roads impacted by construction. The plan will detail measures, developed in consultation with affected business owners/operators, to manage the potential impacts of the project on these businesses as far as practicable.

8.6 Transport and traffic

8.6.1 Traffic and access impacts of closing Ermington Boat Ramp during construction

Capacity of other boat ramps, loss of trailer parking during construction

Issue description

Submitters expressed concerns about the traffic, transport and access impacts of closing Ermington Boat Ramp during construction, particularly in relation to access to, and the capacity of, suggested alternative boat ramps, including Rhodes and Kissing Point. Comments made included:

- Silverwater, Rhodes and Kissing Point Park boat ramps are already overcrowded and insufficient parking capacity is available to accommodate the additional usage from Ermington.
- Increased use of other boat ramps could result in increased traffic congestion and reduced availability of parking spaces, which may inconvenience other users and decrease pedestrian safety.
- Rhodes and Kissing Point boat ramps are unsafe for large vessels.
- It is well known that at a crowded boat ramp at peak times, incidences of conflicts and arguments over parking and access can be quite high. This will cause problems at periods of high demand (such as sunny weather).
- Facilities at alternative locations for the launching of boats are of substandard quality compared to Ermington Boat Ramp. These facilities do not provide sufficient parking capacity to accommodate boat owners using them in lieu of Ermington Boat Ramp.
- If the boating public were to lose access to Ermington Boat Ramp, the other ramps upriver could not sustain the increased numbers nor have the facilities to offer. To highlight the concerns, it is not uncommon at Ermington Boat Ramp to wait up to 30 mins to launch/retrieve a boat due to its popularity.
- The statement in the EIS that Silverwater, Rhodes or Kissing Point Park boat ramps (or those further east toward Sydney Harbour) could be used is unrealistic. It shows a lack of local knowledge or is intended to mislead.
- A submitter expressed concern about the loss of trailer-boat access / parking during the long construction period.

Submission numbers

SE-51794726, SE-52661960, SE-52665709, SE-52703707, SE-52713972, SE-52720957, SE-52723458, SE-52770208, SE-52779248, SE-52861959, SE-52863719

Response

Transport acknowledges that closing Ermington Boat Ramp during construction would have the potential to increase the use of other boat ramps, including Kissing Point Park Boat Ramp on the northern side of Parramatta River in Putney, and Silverwater and Rhodes boat ramps on the southern side of the river. This has the potential to increase traffic around these ramps, and increase the demand for trailer parking, which has the potential to affect surrounding traffic and access arrangements.

Information describing the key characteristics of a number of alternate boat ramps, including the number of ramp lanes, trailer parking spaces and usage statistics, is provided in the EIS in Appendix A of Technical Paper 2 (Transport and Traffic) (see Table 2.2 and Table 6.2). Transport has carried out further investigations regarding the feasibility of providing additional capacity at the alternate boat ramps to inform mitigation measures for the closure.

These investigations identified that, while ramp improvements and offset parking could potentially be provided at these locations, the loss of open space on waterfront land would result in social and amenity impacts on the community as these locations are popular areas for recreational use. As such, the investigations concluded that the impacts associated with providing additional parking at these locations to offset the loss of parking at Ermington Boat Ramp would currently outweigh the benefits.

Where appropriate, Transport will work with key stakeholders and those local councils who manage boat ramps in the surrounding area to contribute to future funding plans aimed at providing safe and reliable access to the Parramatta River.

In addition, opportunities to mitigate the impacts on parking at Ermington Boat Ramp will be reviewed during design development. Mitigation measure TT6 has been amended to confirm this commitment.

The clarification in section 4.3.4 of this report provides information on why Ermington Boat Ramp would need to close during construction, and how Transport is working to minimise the impacts on users of Ermington Boat Ramp and other boat ramps. Further information about how these impacts, including potential traffic, transport and access impacts, would be managed is provided in the responses in section 8.6.4 of this report.

Responses to issues raised about the social impacts of closing the boat ramp are provided in section 8.10.1 of this report.

8.6.2 Other construction impacts

Impacts on parking during construction

Issue description

Submitters expressed concerns about the impact of construction on on-street parking along the alignment, and the parking spaces that would need to be removed to facilitate construction. Issues raised included:

- As residents, we cannot reasonably be expected to deal with the repercussions of removing on-street parking spots in a suburb (Wentworth Point) where this is already extremely scarce.
- Construction will go on for years and the impact on parking will be significant. This does not appear to be called out significantly in the reports and it is unclear how this will be managed.

Submission numbers

SE-51460492, SE-52001214, SE-52275991

Response

Constructing the project along roadways in sections of the alignment would require the permanent reallocation of existing roadway space for light rail infrastructure. It also means that some space within the road corridor that is currently used for on-street parking would need to be temporarily occupied to construct the project.

Potential impacts on parking during construction are considered in section 5.3 of Technical Paper 2 (Transport and Traffic) and summarised in section 9.3.6 of the EIS.

In accordance with mitigation measure TT1, the design will continue to be refined to avoid or minimise impacts on the surrounding road and transport network as far as reasonably practicable. In accordance with mitigation measure TT5, opportunities to reduce the loss of on and off-street parking will be reviewed during design development.

As described in sections 9.3.6 and 9.6.1 of the EIS, and in accordance with mitigation measure TT7, the approach to managing impacts on on-street parking will be defined by the parking management strategy. The strategy will include measures to manage the reduction in on-street parking availability, such as alternative parking arrangements for accessible and service spaces, staged removal of spaces, resident parking schemes, and managed staff parking arrangements. Mitigation measure TT7 provides that the parking management strategy will also include measures to manage construction worker parking to minimise worker parking in public streets, such as designated parking areas within the project site, encouraging use of public transport, and implementing shuttle bus arrangements.

It is recognised that some parking types play an important role in servicing businesses and meeting the accessibility needs of the community. These spaces would need to be replaced in surrounding local roads. The accessible parking spaces, loading zones and taxi ranks that would be affected by the project are recognised as higher priority parking. Transport has committed to replacing these spaces as close as possible to existing locations in accordance with the parking management strategy.

Further information on the requirements for the parking management strategy is provided in section 9.6.1 of the EIS.

Impacts on existing pedestrian and cycle routes

Issue description

Submitters expressed concerns about the impacts of construction on access to and along existing pedestrian and cycle routes. Issues raised included:

- Concern about the impacts of constructing the bridge between Melrose Park and Wentworth Point on the active transport links on both sides of the river. These provide a safe method for exercise and transit, and it would appear that they would be blocked on both sides of the river for a period of three years. Suitable off-road routes of a high standard need to be made available.
- Many users are not aware that the active transport link under the southern abutment of the proposed bridge between Melrose Park and Wentworth Point will be closed.
- Safe walking and cycling should be maintained during construction.
- Temporary detours to existing routes must be direct and convenient. Project planners should consult with Bicycle NSW and bicycle user groups about how to avoid or at least minimise detours.
- In some situations, new shared paths or separated bicycle facilities will be constructed before a detour begins. It is important that a level of safety equal to the existing facilities is provided.

Submission numbers

SE-52009207, SE-52713213, SE-52726459

Response

Changes to the road network and access restrictions around work areas would affect pedestrian footpaths and cycle facilities in some locations as described in section 7.7.4 of the EIS. Alternative access arrangements (such as detours) would be provided at the following key locations:

- Parramatta Valley Cycleway at Eric Primrose Reserve, Rydalmere and at Wharf Road, Melrose Park
- the shared use path through Koonadan Reserve
- the access path to Rydalmere Wharf.

Section 7.7.4 of the EIS confirms that all pedestrian and cycle facility adjustments would be undertaken in accordance with relevant safety and accessibility requirements and legislation, including the *Disability Discrimination Act 1992*. Section 9.3.4 of the EIS identifies potential detour routes for these locations.

In accordance with mitigation measures TT15, safe pedestrian and cyclist access will be maintained around and/or through work areas. Where disruption to access cannot be avoided, alternative routes that comply with relevant accessibility standards and guidelines will be provided, signposted and communicated. Alternative access arrangements will be established prior to implementing restrictions on existing routes.

In addition, as a result of the amended location of the bridge between Melrose Park and Wentworth Point, there would also be an effect on the Parramatta Valley Cycleway and River Walk on the northern and southern sides of the Parramatta River respectively. Details of the changes are outlined below. Further information on the potential transport and traffic impacts of the amended project is provided in section 6.2 of the Amendment Report.

On the northern side of the Parramatta River, the section of the Parramatta Valley Cycleway along Waratah Street and through Archer Park to Koonadan Reserve would need to be closed for a period of up to three years to facilitate construction of the Waratah Street stop and for bridge construction. During the closure, an alternative route for pedestrians and cyclists (about 300 metres long) would be provided via Mary Street, Wharf Road, Andrew Street and Lancaster Avenue.

On the southern side of the river, closure of a portion of the River Walk would be required during construction and operation of the temporary jetty and construction of the southern portion of the bridge. During the closure, a potential detour would be available via Hill Road and Louise Sauvage Pathway, adding about 515 metres of additional travel distance.

Mitigation measure TT15 provides that safe pedestrian and cyclist access will be maintained around and/or through work areas. Where disruption to access cannot be avoided, alternative routes that comply with relevant accessibility standards and guidelines will be provided, signposted and communicated. Alternative access arrangements will be established prior to implementing restrictions on existing routes.

Mitigation measure SE5 provides that access to community facilities and infrastructure will be maintained during construction as far as practicable. Where alternate access arrangements need to be made, including changes to access for public and active transport facilities, these will be developed in consultation with relevant stakeholders and service providers, and communicated to users in accordance with the engagement plan. Changes to access arrangements will be managed in accordance with the traffic and access management plan (mitigation measure TT8).

Mitigation measure SE6 provides that Transport will continue to consult with relevant key stakeholders (including facility managers) in relation to community infrastructure with the potential to be directly affected (by the project's land requirements) and/or indirectly affected (for example, as a result of amenity impacts or access changes).

Impacts of heavy vehicle traffic and road closures

Issue description

Submitters expressed concerns about potential access impacts due to heavy vehicle traffic and road closures. Potential concerns included:

- The enlargement of the stabling yards across the road from the Mauri site, coupled with the construction works for the tracks and the bridge crossing will result in a large increase in heavy truck movements.
- The impact of up to 122 heavy vehicle movements and 342 light vehicle movements on the operation of the Grand Avenue industrial sites is likely to be significant.
- There are likely to be road closures in Camellia during construction, which could impact access and operations.
- Road closures during construction will be a major issue for their production and distribution facility (large commercial bakery) in Melrose Park, leading to potential production impacts.

Submission numbers

SE-52233220, SE-52684958, SE-51999230

Response

Increase in heavy vehicle movements

Technical Paper 2 (Transport and Traffic) assessed the potential impacts associated with construction traffic, including heavy vehicle movements. The results, which are summarised in section 9.3 of the EIS, noted the following:

- Works at the stabling and maintenance facility are anticipated to generate about 30 to 50 heavy vehicle movements per day (two-way), including around two to four heavy vehicle movements per hour during the morning and afternoon peak periods.
- Works in Grand Avenue are anticipated to generate up to 122 heavy vehicles per day, including around eight heavy vehicle movements per hour during the morning and afternoon peak periods.

The assessment concluded that increases in daily and peak period traffic volumes as a result of construction traffic would be relatively low compared to existing traffic volumes on Grand Avenue, and that Grand Avenue has sufficient capacity to accommodate the additional vehicle movements.

As outlined in section 4.1 of this report, Transport is proposing to amend the project to include an alternative alignment between Camellia and Rydalmere to avoid direct impacts on industrial properties along Grand Avenue. The amended alignment would also avoid disruption to traffic movements on Grand Avenue associated with the proposed road widening, which is no longer required. However, Grand Avenue would still be used as a haulage route. Further information about the traffic impacts associated with the amended project is provided in section 6.2 of the Amendment Report.

Transport is committed to ensuring that the potential for impacts on traffic and access are mitigated and managed in accordance with the approach described in 9.6.1 of the EIS. Careful planning would be undertaken prior to and during construction to ensure that the capacity of, and access to, the road and transport network is maintained, and that access to and from businesses is not affected. Further information about how potential traffic and transport impacts, and impacts on businesses, would be managed during construction is provided in sections 8.6.4 and 8.10.2 of this report, respectively.

Road closure impacts

The proposed amendment to the alignment between Camellia and Rydalmere means that the road closures along Grand Avenue that were described in the EIS, including at the intersections of Durham Street and Thackeray Street, would not be required. Further information regarding the traffic impacts associated with the amended project is provided in section 6.2 of the Amendment Report.

Section 5.2.5 of Technical Paper 2 (Transport and Traffic) describes indicative road closures in Melrose Park, including the partial closures of Boronia Street, Hughes Avenue and Hope Street, and the closure of Waratah Street south of Hope Street. The need for road closures would be confirmed during detailed construction planning. It is anticipated that any road closures would be temporary and the potential impacts would be minimised through implementation of mitigation measures TT9 to TT12.

Measures to manage the potential impacts of road closures and access changes would be developed as part of the traffic and access management plan, developed in accordance with mitigation measure TT8. Where there is the potential to affect access to businesses, mitigation measure SE10 commits to developing alternative arrangements, including for pedestrian and vehicular access, in consultation with affected businesses, and implementing these measures before any changes are made to existing access.

8.6.3 Operation impacts

Impacts on on-street parking

Issue description

Submitters expressed concerns about the proposed removal of on-street parking along the alignment and the impacts this will have on the availability of parking, particularly in areas where parking is already constrained. Issues raised included:

- There is a real issue with the lack of parking for residents in Nowill Street.
- The route through Boronia Street will lessen the availability of on-street parking.
- Removing 45 parking spots is untenable in Wentworth Point. Our suburb is growing in population and will increase exponentially with the addition of new public transport. Why are parking spots being removed instead of added?
- Opportunities to reduce the impact of the project on existing car parking spaces should be explored. Alternative parking nearby should be supported if loss of spaces is unavoidable.

Submission numbers

SE-52001214, SE-52110225, SE-52275991, SE-52670974, SE-52724717, SE-52861959

Response

Operational impacts on parking are summarised in section 9.4.5 of the EIS. It is estimated that up to about 633 on-street car parking spaces would need to be removed along the alignment, which constitutes about 68 per cent (on average) of the identified parking supply along the light rail alignment. This is a result of the need to accommodate the proposed light rail infrastructure (including track, stops and active transport links) within sections of the roadway. The reallocation of road space to accommodate light rail is consistent with the *Road User Space Allocation Policy* (Transport for NSW, 2021a) (see description of the order for consideration of user needs provided in the response in section 8.2.2 under the heading 'Parking at stops').

It is acknowledged that some areas along the alignment, particularly in Wentworth Point, Sydney Olympic Park and Lidcombe, may experience increased competition for parking given that the existing parking demand already exceeds supply in these areas. However, the project would also contribute to a multi-modal transport network for the areas serviced by the project, with new active transport and public transport connections. In particular, Wentworth Point would have enhanced connectivity to areas north of the Parramatta River by transport modes other than private car and into Sydney Olympic Park for connecting services via trains and Sydney Metro West.

The proposed improvements to the active and public transport networks would reduce the need for private vehicles, particularly for residents within new developments where high quality public transport connections to multiple modes and high demand destinations would be available.

The design of the project would continue to be refined with the aim of reducing the operational traffic and transport impacts (including the impacts on on-street parking spaces). This commitment is confirmed by mitigation measures TT1, TT2, TT5 and TT7. In particular:

- Mitigation measure TT5 provides that opportunities to reduce the loss of on and off street parking will be reviewed during design development.
- Mitigation measure TT7 provides that a parking management strategy will be prepared to provide an overarching framework for parking management during operation. The strategy will include measures to manage the reduction in on-street parking availability, such as provision of alternative parking arrangements for accessible and service spaces, staged removal of spaces, resident parking schemes,

and managed staff parking arrangements. Further information about the requirements for the parking management strategy is provided in section 9.6.1 of the EIS.

Local traffic and transport impacts during operation

Issue description

Submitters expressed concerns about the impacts of the project on local roads and transport facilities during operation, including concerns about traffic, access and congestion. Issues raised included:

- Concern about impacts on active transport facilities (bikeways and walkways) along Hill Road and Parramatta River.
- The project will contribute to traffic congestion along Hill Road.
- The route along Boronia Street will contribute to worsening congestion of the local roads.
- Care should be taken to ensure that local road and parking capacity is not overwhelmed by event patrons driving to the Melrose Park stop from more distant locations to access services to Sydney Olympic Park.
- The anticipated population growth as part of development of Melrose Park will also have a negative impact on parking in local streets and the boat ramp. It is just an assumption that light rail will take cars off the roads.
- The attractiveness of Hope Street for vehicular traffic will decline due to the project, including the proposed 40 kilometres per hour speed limit and multiple signalised intersections. This traffic will seek alternative routes with potential for resultant impacts.

Submission numbers

SE-51460492, SE-51996749, SE-52661960, SE-52724717

Response

The potential traffic and transport impacts of the project during operation have been assessed by Technical Paper 2 (Transport and Traffic) and the results are summarised in section 9.4 of the EIS. Commitments to minimising the potential for local operational traffic and transport impacts are defined by the design and operational mitigation measures TT1 to TT7 and TT20. Responses to specific issues raised are provided below.

Bikeways and walkways

The project (as amended) would include about 9.5 kilometres of new active transport links for both pedestrians and cyclists constructed along or close to the light rail alignment. The proposed links would connect with and add significant additional capacity to existing active transport infrastructure, including the Parramatta Valley Cycleway and Louise Sauvage Pathway. The connections would be finalised in consultation with key stakeholders during design development.

Following completion of construction, the existing active transport links along Waratah Street and at the end of Wharf Road, Melrose Park would be reinstated in their existing location. Along Hill Road north, there would be no changes to the existing on-road cycleways or the shared path on the western side of the road, except for a local adjustment to the west of the Footbridge Boulevard stop.

Traffic congestion along Hill Road

The traffic impact assessment and modelling undertaken as part of Technical Paper 2 (see section 6.2.6.1) predicts that intersections along Hill Road would operate at a satisfactory level of service during project operations except for the intersections of Hill Road / Footbridge Boulevard and Hill Road / Baywater Drive. These intersections would operate at a level of service E in the AM peak and a level of service D in the PM peak, respectively. However, the intersection performance improves with the 'with project' scenario

compared to the 'without project' scenario. The project is considered to provide a net benefit to traffic performance at these locations. In accordance with mitigation measure TT1, the design will continue to be refined to avoid or minimise impacts on the surrounding road and transport network as far as reasonably practicable.

Route along Boronia Street and effects on congestion

The traffic impact assessment concludes that all intersections along Boronia Street would operate at a satisfactory level of service during operation of the project, with generally very low delays.

While some users may choose alternative routes, the majority of traffic redirection would be a result of the proposed left-in and left-out restrictions at property accesses and minor roads connecting to Boronia Street. The level of traffic required to circulate via the local road network due to these restrictions is considered very low and would be spread across the road network, depending on the destination of each user. The additional traffic is not expected to have a noticeable impact on other local streets. The project may also act as a deterrent to the current use of local streets in Ermington by non-local traffic during periods of higher congestion. Additionally, the project would also contribute to a multi-modal transport network for the areas serviced by the project to enhance connectivity to trains, buses, ferries and Sydney Metro West.

Parking impacts in Melrose Park

A response to issues raised about parking at stops is provided in section 8.2.2 (under the heading 'Parking at stops') of this report. The project does not include the provision of parking facilities at stops. Potential parking impacts during operation would be managed as described in the above response.

Impacts at Hope Street

Reduced vehicle speeds along Hope Street may have the effect of reducing its attractiveness for traffic. Reduced traffic volumes along Hope Street is a desired outcome for the project as it would enhance the road environment for active transport and public transport users. The alternative route for Hope Street traffic is via Victoria Road, which is the higher order road and the preferred route for through traffic. The project may also act as a deterrent to the current use of local streets in Melrose Park by non-local traffic during periods of higher congestion.

Impacts on trailer parking at Ermington Boat Ramp during operation

Issue description

Submitters expressed concern that although the car park at Ermington Boat Ramp would be reinstated following construction, the presence of the project's operational infrastructure has the potential to result in a permanent reduction of about 10 boat trailer parking spaces. This reduction in trailer parking may inconvenience users and could deter some users from participating in recreational boating and water sports at this location.

Submission numbers

SE-52770208, SE-52779248, SE-52861959, SE-52863719

Response

The potential impacts on boat trailer parking during operation are summarised in sections 9.4.5 and 9.4.8 of the EIS. As described in section 9.4.8, and as noted in the above submissions, the presence of the project's operational infrastructure adjacent to the Ermington Boat Ramp car park has the potential to reduce the number of boat trailer parking spaces. It is estimated that about 10 of the existing 52 trailer parking spaces would be affected. This would reduce the supply of boat trailer parking at the boat ramp, which (as noted in section 9.4.5 of the EIS) could increase overflow parking activity on Wharf Road and surrounding local streets.

At this stage of design development, it is predicted that the amended bridge location (outlined in section 4.1 of this report) has the potential for a similar level of impact on boat trailer parking.

Transport commits to continuing to refine the design at this location to minimise the number of trailer parking spaces lost. In accordance with mitigation measure TT6, opportunities to mitigate impacts on parking at Ermington Boat Ramp will be reviewed during design development.

8.6.4 Mitigation measures

Mitigating the impacts of closing Ermington Boat Ramp

Issue description

Submitters provided comment on the preferred approach to mitigating the impacts of construction on access to Ermington Boat Ramp, Parramatta River and Sydney Harbour, including:

- The preferred option is that access to Ermington Boat Ramp be maintained during construction of the new river crossing.
- If closure is necessary, the boat ramp should not be totally closed for the duration of the construction period, for example managed access should be provided. Measures should be established for the safe use of the boat ramp and for parking.
- Ensure alternative launching facilities are identified that can accommodate the range of vessel types, with appropriate access and parking space.
- Nearby boat ramps should be significantly upgraded with better launch ramps, supporting infrastructure and car parking to accommodate boat owners who cannot access Ermington Boat Ramp.
- Ensure there are appropriate traffic management plans in place at Ermington Boat Ramp and any alternate boat ramps, which incorporate access and parking appropriate to accommodate increased use, an education campaign to raise awareness amongst the impacted public, and an appropriate compliance approach.
- Adequate traffic management should be provided around the work site areas so as not to further disenfranchise the public wishing to utilise these facilities.
- Owners of registered boats within a 60 minute drive of Ermington Boat Ramp should be provided a discount on registration fees and tolls to access other ramps.

Submission numbers

SE-52703707, SE-52713972, SE-52770208, SE-52779248, SE-52861959, SE-52863719

Response

Transport acknowledges the concerns raised by the community in relation to the proposed closure of Ermington Boat Ramp during construction. Concerns regarding the closure, including the duration and why it needs to occur, are summarised in sections 4.3.4 and 8.3.3 of this report. Community members and organisations have also expressed concern about the transport, access and socio-economic impacts of closing the boat ramp, as summarised in sections 8.6.1 and 8.10.1 respectively.

Transport notes the options to mitigate and offset the proposed closure of the boat ramp that have been identified in submissions (as summarised above) and during consultation with the community. Further information is provided in the below in response to the issues raised, building on the results of ongoing collaboration with the community and the suggestions made.

Maintaining access to the ramp

It is not possible to keep the boat ramp open during construction of the bridge as the space needed would require ongoing use of the boat ramp car park. Even if this space was not needed, the use of heavy machinery would introduce a safety risk that would be exacerbated if access to the ramp was maintained.

Partial closure

Transport has investigated the need for the boat ramp to be closed for the entire three years, including options to maintain partial access. As noted above, even if the boat ramp area was not needed to accommodate the construction compound, the use of heavy machinery introduces a potential safety risk. Additionally, construction associated with the northern section of the bridge would block part of Wharf Road. As a result, public access via the land to the boat ramp and car park could not be maintained without introducing the potential for unsafe interactions between large construction equipment and boat users and/or constraining the construction contractor such that the overall construction period is extended.

Alternative launching facilities and upgrades

As described in the clarification in section 4.3.4, a number of alternative launching facilities were considered. However, any improvements to launching capacity (such as extra boat ramp lanes) and ramp efficiency measures (such as boat holding structures and pontoons) would provide limited benefit unless matched with additional trailer parking capacity.

Transport investigated the potential to provide offset parking at Silverwater Boat Ramp and Kissing Point Park Boat Ramp but concluded that the impacts associated with providing additional parking at these locations to offset the loss of parking at Ermington Boat Ramp would currently outweigh the benefits.

Traffic management

As part of the procurement process to construct the bridge, Transport would require tenderers to innovate their design and construction processes to minimise the duration of bridge construction and any impacts on the boat ramp and navigational channel, particularly during the peak boating season.

Once an approach is confirmed, and in accordance with mitigation measure TT12, consultation with relevant stakeholders will be undertaken to facilitate the efficient delivery of the project and to minimise impacts on river users. Additional measures identified as an outcome of consultation will be implemented during construction, where reasonable and feasible. This will include modifying work areas, activities and construction access arrangements to address traffic flow and access issues identified by key stakeholders, where practicable.

Mitigation measure TT8 commits to preparation of a traffic and access management plan which will detail processes and responsibilities to minimise traffic and access delays and disruptions, and identify and respond to changes to road access and on-street parking arrangements. The plan will include, as appropriate, additional reasonable and feasible measures identified as an outcome of consultation.

Registration discounts

Boat users within a 60 minute drive of Ermington Boat Ramp have a range of river and harbour access points available to them that will remain open during construction. Licence fees for NSW boat users are not currently linked to accessibility options and this proposal for a new way of managing licence fees is not a viable solution to the project.

Further information about how the proposed closure of the boat ramp would be managed, and the arrangements that would be put in place to continue to provide access to the Parramatta River for the community, is provided in the clarification in section 4.3.4 of this report.

Managing other potential traffic impacts

Issue description

Submitters noted support for an overarching traffic access and management plan for the construction phase as well as ongoing traffic changes, and queried how traffic would be managed, considering the work proposed, construction hours and existing traffic.

Submission numbers

SE-51719707, SE-51996749

Response

Commitments to managing traffic and transport impacts during construction are defined by mitigation measures TT8 to TT18. In particular, in accordance with mitigation measure TT8, a traffic and access management plan would be prepared and implemented as part of the CEMP. The plan will detail processes and responsibilities to minimise traffic and access delays and disruptions, and identify and respond to changes to road access and on-street parking arrangements. The plan will include, as appropriate, additional reasonable and feasible measures identified as an outcome of consultation (in accordance with mitigation measure TT12).

Other key mitigation measures that would be implemented to manage local traffic and access impacts during construction include:

- Mitigation measure TT9 provides that the traffic and access management plan will include measures to manage staging of construction works to ensure that satisfactory capacity and minimum levels of service are maintained for all users.
- Mitigation measure TT12 provides that consultation with relevant stakeholders will be undertaken regularly to facilitate the efficient delivery of the project and to minimise impacts on road and transport infrastructure customers and users. Additional measures identified as an outcome of consultation will be implemented during construction, where reasonable and feasible. This will include modifying work areas, activities and construction access arrangements to address traffic flow and access issues identified by key stakeholders, where practicable.
- Mitigation measure TT14 provides that access to properties, including residences, businesses and community infrastructure, will be maintained. Where temporary disruption to access cannot be avoided, consultation will be undertaken with the owners, occupants and managers of affected properties and infrastructure, to confirm their access requirements and determine alternative arrangements.

8.7 Noise and vibration

8.7.1 Adequacy of the assessment

Noise study at Sanctuary Building D

Issue description

A submitter stated that the noise and vibration assessment did not consider Sanctuary Building D and noted that, due to topography, they could hear noise from four kilometres away.

Submission number

SE-51719707

Response

The noise and vibration impacts of constructing and operating the project were described in Technical Paper 3 (Noise and Vibration) and summarised in Chapter 10 (Noise and vibration) of the EIS. As described in section 4.2.1 of this report, an Updated Noise and Vibration Report has been prepared to assess the potential impacts of the proposed amendments.

The study area was divided into 20 noise catchment areas (NCAs) based on the types of sensitive receivers and ambient noise levels (see Figure 6.1 of the Amendment Report). Sanctuary Building D formed part of noise catchment area NCA-L (Wentworth Point (near ferry)) and is identified as Building ID L026 – 14-16 Hill Road, Wentworth Point in the Updated Noise and Vibration Report.

In relation to Sanctuary Building D the assessment found that, during construction:

- Noise management levels would be exceeded during construction of the light rail, light rail stops, and the bridge between Melrose Park and Wentworth Point and during road works.
- Receivers at this location would be highly noise affected during construction of the light rail and road works.
- Sanctuary Building D is inside the safe working distance for cosmetic building damage and human comfort as a result of construction vibration.

The assessment found that, during operation:

- Receivers at this location would not experience exceedances of the relevant trigger levels for groundborne or airborne noise during operation and therefore the building does not qualify for noise mitigation consideration in accordance with the Rail Infrastructure Noise Guideline (NSW EPA, 2013).
- The predicted operational vibration levels are below the relevant trigger levels and no human comfort or structural vibration impacts are anticipated.

The worst-case construction noise levels predicted at Building ID L026 are provided in Appendix F of the Updated Noise and Vibration Report.

The approach to minimising potential noise and vibration impacts during construction and operation is described in section 10.7 of the EIS and in the responses in section 8.7.4 of this report. Further information about the mitigation measures (as updated) is provided in Chapter 9 (Conclusion and next steps) and Appendix B of this report.

8.7.2 Construction impacts

Impacts at Boronia Street

Issue description

A submitter stated that the noise impacts of constructing Parramatta Light Rail Stage 1 are well documented, and expressed concern that noise during construction of the project will diminish the residents of Boronia Street way of life.

Submission number

SE-52724717

Response

The Updated Noise and Vibration Report includes an assessment of the predicted noise impacts during construction on potentially affected receivers. The results of the assessment are summarised in section 6.3 of the Amendment Report. The assessment concluded that construction has the potential to impact surrounding sensitive receivers; however, most predicted exceedances are of a low magnitude (exceedances of less than 10 dB).

The assessment found the following with regards to Boronia Street:

- Noise management levels would be exceeded during construction.
- Receivers at this location would be highly noise affected during construction of the light rail and road works.
- Receivers at this location are inside the safe working distance for cosmetic building damage and human comfort.

These impacts are due to the proximity of the proposed works to the sensitive receivers on Boronia Street.

Transport is committed to avoiding or minimising noise and vibration impacts from construction projects under its control. Mitigation measures have been developed with the aim of minimising or mitigating (as far as practicable) construction noise and vibration impacts. Further information is provided in the responses in section 8.7.4 of this report. The updated mitigation measures are provided in Appendix B of this report.

The proposed mitigation measures have been informed by consultation and feedback from the community and Transport's experience constructing Parramatta Light Rail Stage 1.

8.7.3 Operation impacts

Noise as a result of light rail operations

Issue description

Submitters expressed concerns about noise impacts during operation, including the noise generated by light rail vehicles travelling around bends. Concerns raised included:

- Noise impacts will occur as a result of trains running 5am to 1am, and every 7.5 minutes between 7am and 7pm.
- The noise level in the study area is above 70 dB during the day and about 60 dB at night. In this acoustic environment, the sound will greatly affect people.
- Notifications after 9pm will be annoying.
- Our house is directly opposite Waratah Street in Melrose Park. We will be greatly impacted by the noise the light rail vehicles make around the corner right in front of our house.
- Based on the noise generated by light rail at similar intersections around Sydney where scraping and clattering can be heard from hundreds of metres away as the light rail trains negotiate turns, residents on Wharf Road and in surrounding streets are concerned that similar levels of noise and disruption will be experienced as light rail vehicle turns at the corner of Waratah Street and Wharf Road.
- As a ground floor resident near the proposed route I am concerned about noise from the track. Particularly screeching sounds when light rail negotiates a corner near my residence.

Submission numbers

SE-51719707, SE-51996710, SE-52170500, SE-52089757, SE-52212470, SE-52681720, SE-52724717

Response

General operational noise

Transport acknowledges the potential for noise impacts during operation. The Updated Noise and Vibration Report includes an operational noise and vibration assessment, the results of which are summarised in section 6.3 of the Amendment Report. The operational noise and vibration assessment was prepared by a team of qualified and experienced noise and vibration assessment specialists in accordance with the SEARs and relevant guidelines, including the *Rail Infrastructure Noise Guideline* (NSW EPA, 2013).

The assessment found that in relation to light rail vehicle movements:

- Operation of light rail services along the section of track constructed as part of the project would not generate airborne noise levels that exceed the airborne noise trigger levels for residential receivers.
- The relevant trigger levels for groundborne noise impacts are predicted to be exceeded at about 129 residential receivers that are immediately adjacent to the alignment at Rydalmere, Ermington, Melrose Park and Wentworth Point.

Mitigation measures have been developed with the aim of minimising or mitigating (as far as practicable) the noise and vibration impacts during operation. Further information about the approach to mitigation is provided in the responses in section 8.7.4 of this report.

Light rail stop notifications

As described in section 6.10.5 of the EIS, the public address system would be used only in the event of an emergency and would be designed to minimise impacts on the amenity of the surrounding community. Regular service information would not be provided by the public address system. Only emergency announcements would be made. To minimise the potential for noise impacts, and in accordance with mitigation measure NV2, the public address system will be designed to comply with the *Noise Policy for Industry* (NSW EPA, 2017) intrusiveness and sleep disturbance noise trigger levels at all locations.

Wheel squeal

The potential for noise due to wheel squeal was considered as part of the operational noise assessment. As described in section 4.7.1.3 of the Updated Noise and Vibration Report, the effects of flanging noise or wheel squeal at tight curves were taken into account in the noise modelling. A +3 dB correction was applied for curves with a radius between 100 and 500 metres and a +8 dB correction was applied for curves with a radius of less than 100 metres. These corrections were informed by reviewing the operational noise and vibration compliance reports for the City and South East Light Rail, which was undertaken to understand the discrepancies between the modelled and measured noise levels at curves, crossovers and from light rail vehicle movements along the alignment.

To reduce the potential for wheel squeal, particularly at curves, the tracks would be constructed to include a high standard rail with increased rail hardness. Light rail vehicle wheels would be well-maintained, and tight curve sections well lubricated. The tracks would be maintained strictly in accordance with maintenance procedures to ensure noise levels are well below the trigger levels at curves.

The operational noise and vibration review undertaken in accordance with mitigation measure NV1 will include a review of compliance noise monitoring for Parramatta Light Rail Stage 1 (once it commences operation). This review will confirm the effectiveness of mitigation measures implemented for Stage 1 to inform the development of mitigation measures for the project, including those to reduce the potential for wheel squeal.

Noise over water

Issue description

Submitters noted that sound travels for longer distances across water with little attenuation and that locating the bridge at the end of Wharf Road, near residences fronting the Parramatta River on Lancaster Avenue, will expose dwellings further away from the bridge to similar levels of noise and disruption as those living directly adjacent to the proposed route on Wharf Road. It was noted that these properties are a different type of sensitive receiver to that shown as receiver K in the EIS. These properties are located directly adjacent to the river and there are no large mangrove stands present to block noise and vibration. The properties will have a direct line of sight to the bridge.

Submission numbers

SE-51789992, SE-52089757

Response

Local characteristics that may affect environmental noise levels during construction and/or operation, such as the presence of Parramatta River, were considered in the inputs and assumptions for the noise models that formed part of the noise and vibration assessment. For example, the increase in noise associated with light rail vehicles travelling over the bridge was considered in the noise model by including a +3 dB bridge noise correction. The increase in noise associated with the reflective nature of nearby waterbodies was considered by assuming the maximum ground absorption coefficient over the water surface (i.e. assuming the water is highly reflective). Acoustic shielding effects from local ground terrain and nearby building/structures were also included in the modelling. The potential for vegetation (such as trees and/or mangroves) to block noise was not considered in the noise model as vegetation generally has a negligible effect on noise levels.

Further information about the assumptions and inputs for each of the models is provided in Appendix C of the Updated Noise and Vibration Report.

In summary, the noise assessment accounts for the presence of the Parramatta River.

It is noted that water does not amplify vibration levels at adjacent receivers. As a result, the presence of Parramatta River was not considered as part of the vibration assessment.

Groundborne noise

Issue description

Submitters expressed concerns that residents of Sanctuary Wentworth Point will experience groundborne noise that will exceed the limits by 35 dB at certain hours (and above airborne noise levels) and queried how this would be mitigated.

Submission numbers

SE-51719707, SE-52001214

Response

The Updated Noise and Vibration Report concluded that none of the existing Sanctuary Wentworth Point buildings would experience noise levels in excess of the groundborne noise trigger levels. However, three approved buildings on the eastern side of Sanctuary Wentworth Point are predicted to experience exceedances of the relevant trigger levels for night-time groundborne noise.

In accordance with mitigation measure NV1, an operational noise and vibration review of the developed design will be undertaken to review the potential for operational impacts and confirm feasible and reasonable measures to be incorporated in the design. The review will include consideration of the potential for airborne and groundborne noise, based on the developed design. Feasible and reasonable mitigation measures to be incorporated in the design will be confirmed if a building within Sanctuary Wentworth Point is identified as qualifying for mitigation consideration by the operational noise and vibration review.

The operational noise and vibration review will be informed by compliance monitoring for Parramatta Light Rail Stage 1, to confirm the effectiveness of various high performance track forms that have been implemented for Stage 1.

As described in section 6.3 of the Amendment Report, no residential receivers have been identified as qualifying for consideration of mitigation as a result of airborne noise levels.

Further information on the approach to managing operational noise impacts is provided in section 10.7 of the EIS and in the responses in section 8.7.4 of this report.

8.7.4 Mitigation measures

Approach to mitigation during construction

Issue description

A submitter noted that temporary measures would be required during construction to reduce noise as many people are working from home.

Submission number

SE-51719707

Response

Transport is committed to minimising potential noise impacts during construction in accordance with the *Construction Noise and Vibration Strategy* (Transport for NSW, 2019a). The *Construction Noise and Vibration Strategy* outlines Transport's approach to mitigating and managing construction noise and vibration for infrastructure projects, including light rail works. The strategy outlines standard measures that 'shall be applied to mitigate noise and vibration impacts where reasonable and feasible'. These measures would apply to all construction works associated with the project.

A range of mitigation measures (NV4 to NV15) are proposed to minimise noise and vibration impacts during construction. In particular:

- The standard management and mitigation measures defined by the *Construction Noise and Vibration Strategy* (as noted above) would apply for all construction works with the potential to generate noise and vibration impacts, as defined by the noise and vibration management plan prepared as part of the CEMP in accordance with mitigation measure NV5.
- Location and activity-specific construction noise and vibration impact assessments will be undertaken in accordance with mitigation measure NV6. The results of the assessments will be documented in construction noise and vibration impact statements. Where potential exceedances are identified, the statements will define feasible and reasonable mitigation and management measures, developed in accordance with the *Construction Noise and Vibration Strategy* (Transport for NSW, 2019a). Potentially impacted receivers will be informed of the nature of works to be carried out, the expected noise levels and duration, and will be provided with details of the complaints management system.
- As described in section 10.4.2 of the EIS, additional mitigation would be implemented where noise levels are predicted to exceed the noise management levels.

Mitigation measure NV6 has been amended to clarify that the location and activity-specific assessments will be based on a more detailed understanding of construction methods, including the size and type of construction equipment, duration and timing, and detailed reviews of local receivers, as required.

In addition, mitigation measure NV8 provides that appropriate respite periods will be identified, in consultation with the community and in accordance with the *Construction Noise and Vibration Strategy*, for work with the potential to result in noise levels above 75 dB and/or that needs to occur outside the primary project working hours. The following will be taken into account when determining appropriate respite:

- the need to efficiently undertake construction
- the communities' preferred noise and vibration management approach
- the construction schedules of other major projects in close proximity to the project works.

Any activities that could exceed the construction noise management levels and vibration criteria would be identified and managed in accordance with the *Construction Noise and Vibration Strategy*, the noise and vibration management plan, and the activity-specific construction noise and vibration impact statements.

Further clarification regarding how construction noise would be managed during the primary project working hours is provided in section 4.3.1 of this report.

The full list of construction noise and vibration mitigation measures (NV4 to NV15) is provided in Appendix B (Updated mitigation measures) of this report.

Approach to mitigation of noise impacts due to road network changes

Submitters located on South and Boronia streets expressed concerns about how potential noise impacts from changes to the road network at these locations would be mitigated, including:

- Closer vehicle noise has the potential to interrupt sleep and contribute to adverse health effects. Measures to reduce noise to the current levels should be implemented.
- How does Transport propose to alleviate the exceedances due to road traffic noise and preserve amenity?

Submission numbers

SE-51903712, SE-52724717

Response

Section 10.5.3 of the EIS describes the potential operational noise impacts as a result of the proposed changes to the road network. The assessment found that 32 receivers are predicted to experience an increase in noise level greater than 2 dB and experience noise levels above the *NSW Road Noise Policy* (DECCW, 2011) controlling criteria for residences adjacent to collector roads. All identified receivers are located on the northern side of South and Boronia streets where the eastbound lane would move closer to the residences to allow for the centre-running light rail track.

Once the design is further developed, an operational noise and vibration review will be undertaken in accordance with mitigation measure NV1 to review the potential for operational impacts and confirm feasible and reasonable mitigation measures to be incorporated in the design to reduce these impacts. The review will include a detailed road traffic noise assessment for the proposed reconfiguration of South and Boronia streets, including:

- simultaneous noise monitoring and traffic count data for South and Boronia streets and side streets to validate the noise model in accordance with the *Road Noise Model Validation Guideline* (Transport for NSW, 2018)
- a review of the forecast traffic volumes for the year of opening and the year of opening plus 10 years
- vehicles crossing over the rail track using traffic volumes forecast for side streets
- three-dimensional road and light rail interface and local topography.

The detailed road traffic noise assessment will be undertaken in accordance with the *NSW Road Noise Policy*, the *Road Noise Criteria Guideline* (Transport for NSW, 2022c) and the *Road Noise Mitigation Guideline* (Transport for NSW, 2022d). The *Road Noise Mitigation Guideline* provides a framework for the selection of reasonable and feasible mitigation measures to be considered for qualifying receivers, including at-property treatments.

Approach to mitigation of operational impacts and use of technology

Issue description

A submitter noted that any options to reduce track noise in residential areas will be greatly appreciated.

Other submitters requested that the project include specific rail technology to limit noise and vibration. Comments and queries included:

- Can anything be done to limit noise and vibrations (i.e. best rail technologies, etc)?
- The investment needs to be made to ensure that noise and vibration is minimised by incorporating absorption track designs, such as special boots, sleeper pads under ballast mats or a floating track where possible.
- Better rail technology that limits sound and vibration needs to be implemented when the light rail route is metres away from high density residential buildings.
- Further efforts should be made to minimise any potential noise and vibration generated by the interactions between light rail vehicles and the rails. The track and rail design should be selected to minimise the noise/vibration generated.

Submission numbers

SE-51854962, SE-52091708, SE-52091732, SE-52110225, SE-52114207, SE-52170500, SE-52275991, SE-52496457, SE-52722721

Response

The primary source of airborne noise from light rail vehicles is at the wheel-rail interface, where the wheel, bogies, rail, and rail support system cause vibration and create airborne noise. The primary source of groundborne noise and vibration from light rail vehicles is also at the wheel-rail interface where the wheel-track interactions generate groundborne vibration.

Consistent with Parramatta Light Rail Stage 1, the project would use rolling stock and light rail vehicles that have been selected to reduce the potential for noise emissions. Additionally, a quantitative assessment of the predicated effectiveness of potential measures to minimise the identified operational noise and vibration impacts was undertaken as part of the noise and vibration assessment in accordance with the SEARs. The results of the assessment are described in section 4.7.1 of the Updated Noise and Vibration Report. The assessment considered the effectiveness of measures including at-property treatments, track form measures, light rail vehicle design, and maintenance measures to minimise impacts from airborne noise and groundborne noise during operation. These included:

- the need to ensure that rail surface and light rail vehicle wheel condition is maintained in accordance with relevant standards to minimise the potential for noise from wheel and rail irregularities
- using permanent track and/or on-board lubrication systems to reduce flanging noise, especially at tight curves
- incorporating absorption in the track design (including green track), where feasible
- using higher performance tracks, such as the use of embedded track encapsulated within highly resilient boots and/or floating slab track, to reduce groundborne noise and vibration levels at nearby receivers.

As described in section 10.7.1 of the EIS, the project would continue to be refined during design development to minimise the potential for operational noise and vibration impacts. The potential for groundborne noise impacts from track noise would continue to be assessed during design development. In accordance with mitigation measure NV1, an operational noise and vibration review will be undertaken to review the potential for operational impacts and confirm feasible and reasonable mitigation measures to be incorporated in the design. The review will include:

- reviewing compliance monitoring for Parramatta Light Rail Stage 1
- surveying relevant buildings to determine appropriate façade noise reduction performances

- consideration of feedback from, and preferences of, directly affected landowners/landholders.

The review will include consideration of the following:

- track design measures to reduce noise and vibration levels at the source
- use of higher performance tracks (as noted above)
- high design standards and maintenance requirements to minimise the potential for wheel squeal, especially at curves.

In accordance with mitigation measure NV1, the operational noise and vibration review will be undertaken in consultation with relevant council(s) and the NSW EPA. The review will be developed in accordance with the *Rail Infrastructure Noise Guideline* (NSW EPA, 2013), the *Noise Policy for Industry* (NSW EPA, 2017) and the *Road Noise Policy* (DECCW, 2011).

The effectiveness of operational noise mitigation would be confirmed by undertaking monitoring in accordance with mitigation measure NV16. Mitigation measure NV16 provides that monitoring of noise and vibration will be undertaken within 12 months of the commencement of operation to compare actual noise and vibration performance against that predicted by the operational noise and vibration review. Additional feasible and reasonable mitigation measures will be considered where any additional receivers are identified as qualifying for consideration of noise mitigation in accordance with the relevant guidelines.

8.8 Heritage

8.8.1 Aboriginal heritage

Seashells in vicinity of proposed bridge

Issue description

A submitter stated that a large number of seashells have been identified in the vicinity of the proposed bridge and that the Aboriginal Land Council of NSW has agreed to visit the site to confirm whether this indicates the presence of a midden.

Submission number

SE-52681720

Response

In response to the issue raised in this submission, Aboriginal cultural heritage officers from Transport and a representative of the Metropolitan Local Aboriginal Land Council attended the site in February 2023 and identified two shell middens within the mangroves at Melrose Park. These have been registered as sites on the Aboriginal Heritage Information Management System (AHIMS) (site reference numbers 45-6-4078 and 45-6-4079) and have been assessed by the Aboriginal Cultural Heritage Assessment Report (see section 4.2.1 of this report). Further investigations (archaeological testing) have been recommended and included as part of amended mitigation measure AH5 (see Appendix B (Updated mitigation measures)).

8.8.2 Non-Aboriginal heritage

Impacts on heritage listed landscaping

Issue description

A submitter stated that the project would contribute to the removal of the aesthetic green corridor along Wharf Road, which is recognised by Parramatta City Council by placing Landscaping in Wharf Road within the Local Environment Plan as a local heritage item listing (I311).

Submission number

SE-52681720

Response

Impacts on listed heritage items were assessed by Technical Paper 5 (Statement of Heritage Impact – Built Heritage). The assessments considered heritage items within a 66 metre buffer of the project site, which was the area that could be potentially impacted by vibration. Visual and cumulative heritage impacts were also assessed.

The locally-listed item Melrose Park Landscaping (including millstones at Reckitt) (Item I311) is located about 300 metres north of the project site. It was not considered by Technical Paper 5 as it would not be directly or indirectly impacted by the project.

Heritage significance of Bulla Cream Dairy (Willowmere)

Issue description

A submitter queried whether the Bulla Cream Dairy site is of heritage significance despite its listing based on information in the Melrose Park South Structure Plan. The submitter stated that a more detailed review should be undertaken to determine whether the current design, which appears to unnecessarily acquire additional land to protect this heritage item, is achieving the objective of minimising acquisition impacts.

Additional alignment options should be investigated that give less emphasis to protecting this site.

Submission number

SE-52688957

Response

As described in section 12.2.2 of the EIS, Bulla Cream Dairy (Willowmere) is listed as heritage item (item I64) on Schedule 5 (Environmental heritage) of the Parramatta Local Environmental Plan 2011.

Technical Paper 5 (Statement of Heritage Impact – Built Heritage) undertook an assessment of the potential impacts on built heritage items in accordance with the *NSW Heritage Manual Statements of Heritage Impacts* (Heritage Office and Department of Urban Affairs and Planning, 2002) and *Assessing Heritage Significance* (NSW Heritage Office, 2001). This included a review of the assessment of significance included with the listing for Bulla Cream Dairy (Willowmere), which identified that this item is of local significance. Historical research and the review of site conditions by the heritage consultants who prepared Technical Paper 5 confirmed that this was an accurate assessment of the heritage significance of this listed heritage item. Further information is provided in section 7.1.10 of Technical Paper 5.

Individual components of the heritage item were also assessed by the *Willowmere, 64 Hughes Avenue, Ermington Assessment of Cultural Significance* (LSJP, 2018) report undertaken for the Bulla Cream Dairy (Willowmere) item on behalf of City of Parramatta Council. This identified the Main House to be of high significance.

Transport is committed to minimising the potential impacts of the project on listed heritage items, sites and places. As a result, and as described in section 5.4.5 of the EIS, alternate route options were considered for the alignment between Atkins Road and Hughes Avenue, in the vicinity of Hope Street and Bulla Cream Dairy (Willowmere). The preferred option (Option 2) (see Figure 5.19 of the EIS) would:

- reduce potential impacts on properties on Hope Street
- improve the angle of the alignment in relation to cyclist travel paths
- provide an improved opportunity for open space to connect the stop to the Bulla Cream Dairy (Willowmere) building.

While Option 2 would impact on the curtilage of Bulla Cream Dairy (Willowmere), direct and indirect impacts on the main building would be minimised compared with Option 1 (although other heritage elements would still be impacted). Option 2 has been incorporated in the alignment for which approval is sought. It is noted that the land requirements are the same for both options. The project does not require any additional land as a result of reducing impacts to the Main House of the Bulla Cream Dairy (Willowmere) heritage item.

8.9 Land use and property

8.9.1 Acquisition and property impacts as a result of the project's land requirements – public submissions

Acquisition concerns and objections

Issue description

Submitters expressed concerns and raised objections to the proposed acquisition of their properties.

Issues raised included:

- We object to the acquisition of our homes for a number of reasons, including that there are viable alternative locations available for the project that will meet the land requirements while not impacting homes and communities.
- Our land will likely be one of the most impacted by the proposed light rail bridge over the Silverwater Road, which will have a large land requirement.
- It will be difficult, costly and take a long time to relocate my small business as it is extremely hard to find sites like this anymore.
- There is no genuine requirement for our properties to be acquired for this project.
- Our properties are new developments, which were designed and constructed in accordance with council requirements and existing precinct structure plans.
- The project is strongly opposed as it would mean displacement of our family. This property is our family home that was built over two years after careful consideration of our family's needs. We do not believe it would be possible to find an equivalent property close to our support system and network, school and community.
- The design is not sufficiently developed as described in the EIS to provide justification for the acquisitions proposed.

Submission numbers

SE-50522481, SE-51553711, SE-51760792, SE-51765489, SE-52170531, SE-52724717, SE-54342957

Response

Transport acknowledges that the project's land requirements (both temporary and permanent) have the potential to impact some landowners and landholders. As described in Chapter 5 (Design development, alternatives and options) of the EIS, a project corridor and alignment options assessment process was undertaken to identify the preferred alignment. Throughout this process Transport has sought to minimise the potential land requirements of the project. This has included prioritising the use of land owned by Transport and other NSW Government agencies.

The preliminary land requirements (provided in Appendix E of the EIS and updated in Appendix D of the Amendment Report) do not represent the final acquisition required for the project, as this would be confirmed following ongoing design development, in consultation with landowners.

The permanent land requirements are related to the presence of project infrastructure, including stops, tracks and substations. Land identified as permanently required is necessary to facilitate operation of the project. No land currently used for residential purposes would be required for construction only.

Transport commits to ongoing collaboration and design refinement to ensure that potential property impacts are minimised. In accordance with mitigation measure LP1 the design will continue to be refined to minimise land requirements and potential impacts on land uses and properties as far as reasonably practicable. Consultation with landowners/landholders will be ongoing to confirm feasible and reasonable measures to minimise impacts on their operations/properties.

As described in section 13.4.2 of the EIS, all property acquisitions would be undertaken by Transport in accordance with the following:

- Land Acquisition (Just Terms Compensation) Act 1991 (Just Terms Act)
- *Land Acquisition Information Guide* (Roads and Maritime Services, 2014)
- the five property acquisition standards developed by the NSW Government that focus on fairness, access to information and assistance, consistency and transparency
- the land acquisition reforms announced by the NSW Government in 2016
- recommendations of the Auditor General's 2021 review of Transport's acquisition practices.

This commitment is confirmed by mitigation measure LP6.

These requirements ensure consistent and equitable dealings with all landowners whose properties are to be acquired. Information about acquisitions under the Just Terms Act can be viewed online at: [Property acquisition in NSW](#). Information about Transport's approach to the acquisition process is provided at: [Land acquisition information guide](#).

In accordance with mitigation measure LP7, Personal Relationship Manager(s) have been assigned to assist residential landowners and tenants who may be affected by acquisition. They will continue to maintain regular contact with potentially affected residents to provide updates on the process and respond to queries. The Personal Relationship Manager(s) will work with affected residents to offer assistance and support through the process.

In addition, mitigation measure LP8 provides that Transport will seek to secure agreements with affected landowners/landholders, to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Property adjustment plans will be prepared in consultation with impacted landowners/landholders. The plans will define the works required to properties affected by acquisition and those requiring adjustments as a result of the project.

A response to issues raised about the level of information available to justify acquisition at this stage of the design and assessment process is provided in sections 8.5.1 and 8.5.2 of this report.

Request for full acquisition and relocation

Issue description

A submitter located in South Street, Rydalmere stated that the project would have significant impacts on them as a result of their circumstances, and requested that Transport consider assisting them relocate, by purchasing their property and offering compensation to relocate.

Submission number

SE-51553711

Response

The property in question was identified in Appendix E (Preliminary land requirements) of the EIS as being partially required to accommodate adjustments to the road corridor at the intersection of South Street and Fallon Street. Part of this property is still identified as required for the amended project (see Appendix D (Updated preliminary land requirements) of the Amendment Report). However, the design of the project will continue to be refined to minimise the land requirements and associated impacts on land use and properties in accordance with mitigation measure LP1.

All property acquisitions would be undertaken by Transport in accordance with the process and requirements noted in the response above. As part of the negotiation process, each property subject to acquisition would be assessed on an individual basis, as the potential impacts of the project and specific design elements localised to that property would ultimately influence the nature of acquisition and how compensation is determined.

As described in section 13.4.2 of the EIS, during the project, Transport may, at its absolute discretion, purchase residential properties that are not within the project site where landowners are able to demonstrate and meet the criteria for exceptional hardship, in accordance with the *Exceptional Hardship Land Purchase Guideline* (Roads and Maritime Services, 2016).

8.9.2 Acquisition and property impacts as a result of the project's land requirements – organisations and industrial landholdings

Relocation of the Sydney Royal Easter Show Carnival

Issue description

A submitter noted that the Sydney Royal Easter Show Carnival is a significant economic contributor to the Sydney Royal Easter Show and needs to be managed to ensure it can be successfully relocated to an alternative site to clear the route for the project. The submitter also raised issues relating to the lease agreement that Royal Agricultural Society of NSW (Royal Agricultural Society) has in relation to access to Australia Avenue and the P6a car park.

The submitter notes that the Royal Agricultural Society is a strong supporter of the project and is willing to negotiate the relocation of the Carnival in good faith. The submitter strongly encourages both parties to enter a dialogue to support a mutually beneficial outcome that supports the relocation of the Carnival and the uninterrupted operation of the project along Australia Avenue.

Submission number

SE-52670974

Response

Transport acknowledges the importance of Royal Agricultural Society as a key stakeholder of the project during design development, pre-construction activities, construction and operation. Transport is committed to collaborating with, and coordinating design development and delivery of the project in consultation with, Royal Agricultural Society and Sydney Olympic Park Authority as key stakeholders for works in Sydney Showground and Sydney Olympic Park.

Transport is aware of the lease conditions under which Royal Agricultural Society operates the annual Sydney Royal Easter Show and Carnival. This includes the areas of Australia Avenue and P5a/P5c/P6a car parks that are used for this event and are also proposed to be used during construction and operation of the project. Transport is also aware of the proposal submitted by Royal Agricultural Society to the NSW Government to relocate the Carnival from its current location.

Transport acknowledges the importance of ongoing consultation and engagement with Royal Agricultural Society during detailed planning of the construction and operation of the project, and has proposed a range of mitigation measures (and amendments to mitigation measures) to confirm Transport's commitment to this ongoing collaboration. Further information in response to similar issues raised by Royal Agricultural Society in their submission is provided in section 7.3 of this report.

Impacts on Billbergia Group properties on Grand Avenue

Issue description

A submitter noted that a 30 metre reserve within the Sandown Line is excessive and could encroach into Billbergia's site boundaries, resulting in a loss of approximately 10 metres of land.

The submitter requested clarification of any land acquisition requirements as a result of the proposed 30 metre rail reserve.

Submission number

SE-52604711

Response

Cross sections of the Sandown Boulevard stop and Sandown Boulevard in Technical Paper 1 (Design, Place and Movement – Figure 56 and Figure 57) show a 30 metre corridor for the light rail. These figures indicatively demonstrate how the light rail and stop could be integrated with the future Camellia town centre. However, integration would be subject to design development of the project as well as further planning for the town centre by others. Of the elements shown within these figures, Transport would deliver the Sandown Boulevard stop and active transport link to the south of the track (see Figure 6.1 of the EIS) as part of the project. The light rail track and other elements would be constructed by Transport as part of Parramatta Light Rail Stage 1 and others. The Billbergia properties (1, 1C and 3 to 9 Grand Avenue, Camellia) do not currently form part of the updated preliminary land requirements listed in Appendix D of the Amendment Report. No land from these properties would be required for the project.

As the *Camellia-Rosehill Place Strategy* (DPE, 2022b) was finalised in late 2022 in parallel with the exhibition of the EIS, further consultation will be completed with the Department of Planning and Environment to ensure the project integrates seamlessly with the proposed Camellia town centre. Mitigation measure LP2 (as amended) provides that consultation with key stakeholders (including City of Parramatta Council, the Department of Planning and Environment and relevant developers) will be ongoing to ensure that the design of the project is integrated as far as practicable with adjoining developments, proposed developments and urban renewal areas (including those subject to the *Camellia-Rosehill Place Strategy*). This will include identifying measures and design responses to manage the interface between the project and adjoining land uses and properties as far as reasonably practicable.

Justification for acquisition of land in the Melrose Park North and South planning renewal areas

Issue description

Submitters expressed concerns and raised objections in relation to the proposed partial or full acquisition of their properties within the Melrose Park North and South planning renewal areas. Issues raised included:

- Hope Street in Ermington forms an integral part of the Melrose Park South planning renewal area. The project in its current form would require the acquisition of a significant parcel of land which makes up the corner of the renewal area, with little explanation or detail provided as to why all of this land is required.
- The Melrose Park North and South precincts will function better by adopting other options for the route along Hope Street.

- The combination of the lack of justification and not taking into account the rezoning process underway means that the impact on future housing supply has not been properly justified or assessed. The proponent should demonstrate and justify how the impact of the project in this regard has been minimised, and will continue to be minimised, through design refinement.

Submission numbers

SE-52688957, SE-54342957

Response

As described in section 5.3.1 of the EIS, seven corridor options between Camellia and Sydney Olympic Park were considered during the phase 1 corridor assessment. This included a corridor option that followed Victoria Road. This option was not preferred primarily due to unacceptable construction and traffic management challenges on Victoria Road, and because it provided limited opportunity for growth or new residential development catchments. Stakeholder consultation during the corridor options assessment process identified the need for improved connections to key residential growth areas in Melrose Park and Wentworth Point. This informed the selection of the preferred project corridor along Boronia Street and Hope Street.

A number of constraints are present along Boronia Street and Hope Street, including at the intersection with Atkins Road, that influenced the project alignment and land requirements in this area:

- The road reserve of Boronia Street and Hope Street is not wide enough to accommodate the light rail infrastructure.
- Sydney Water trunk mains are located along Boronia Street and Hope Street. These have specific set back requirements that need to be considered. As described in section 7.8 of the EIS, these are critical utilities that convey drinking water to Sydney's northern suburbs as part of Sydney Water's Ryde Water Delivery System. Therefore, relocation of these mains would pose risks to this critical infrastructure.
- The road geometry and topography at this location presents a number of technical challenges to light rail operation.

The alignment in this area has also been developed to minimise impacts on the heritage-listed Bulla Cream Dairy (Willowmere). As described in section 5.4.5 of the EIS, two options were considered for the alignment between Atkins Road and Hughes Avenue. The preferred option was chosen as it would:

- reduce potential impacts on properties on Hope Street
- improve the angle of the alignment, improving cyclist safety
- provide an improved opportunity for open space to connect the stop to Bulla Cream Dairy (Willowmere)
- generally retain the existing roadways.

Transport also considered locating the alignment on the southern side of Hope Street. However, this was confirmed to not be viable as there would be insufficient room for the light rail to turn down Waratah Street. The full acquisition of a number of industrial properties on the southern side of the street would also be required if this alignment was implemented.

While the alignment at this location would impact on the curtilage of Bulla Cream Dairy (Willowmere), direct and indirect impacts on the main building would be minimised compared with the other options. Further information is provided in Chapter 12 (Non-Aboriginal heritage) of the EIS. A response to issues raised about the heritage status of this item is provided in the response in section 8.8.2 of this report.

Further information about how the project was developed, including the corridor options that were considered and refined as design development progressed, is provided in Chapter 5 (Design development, alternatives and options) of the EIS and in the responses in section 8.4 of this report.

The project would provide a benefit to the Melrose Park North and South precincts and the broader area, providing improved public transport capacity (including two light rail stops) to service existing and future land uses, which would result in the opportunity for increased residential densities. For example, in response to the planning proposal for rezoning of land in Melrose Park North, the City of Parramatta Council resolved that, with delivery of a bridge to Wentworth Point, such as proposed by the project and Sydney West Metro, the development capacity of the north and south precincts could increase from 6,700 to 11,000 dwellings (City of Parramatta Council, 2019).

The design will continue to be refined to minimise land requirements and potential impacts on land uses and properties in accordance with mitigation measure LP1. In accordance with mitigation measure LP2, Transport will continue to consult with City of Parramatta Council, the Department of Planning and Environment and relevant developers regarding how the project can integrate with proposed developments and urban renewal areas (including those subject to structure planning for Melrose Park North and Melrose Park South). This will include identifying measures and design responses to manage the interface between the project and adjoining land uses and properties as far as reasonably practicable.

Property not required and acquisition not in the best interests of the project/property

Issue description

Submitters located at 40-48 Antoine Street and 50 Antoine Street noted that acquisition of their property is required. Submitters noted that with a relatively minor amendment to the project, there would be no need to acquire any parts of these properties.

Submission numbers

SE-52715712, SE-51928957

Response

As outlined in section 4.1 of this report, Transport is proposing to amend the project to include an alternative alignment between Camellia and Rydalmere. As such, the preliminary land requirements provided in Appendix E of the EIS have been updated (see Appendix D of the Amendment Report). The updated land requirements indicate that these properties would be fully required to accommodate the alignment between John Street and South Street. Further information in response to issues raised about the alignment at this location and suggested alternative options is provided in the responses in section 8.4.2 of this report, under the heading 'Other route options/refinements'.

Transport commits to ongoing collaboration and design refinement to ensure that potential property impacts are minimised. In accordance with mitigation measure LP1 the design will continue to be refined to minimise land requirements and potential impacts on land uses and properties as far as reasonably practicable. Consultation with landowners/landholders will be ongoing to confirm feasible and reasonable measures to minimise impacts on their operations/properties.

As described in section 13.4.2 of the EIS, all property acquisitions would be undertaken by Transport in accordance with the following:

- Land Acquisition (Just Terms Compensation) Act 1991 (Just Terms Act)
- *Land Acquisition Information Guide* (Roads and Maritime Services, 2014)
- the five property acquisition standards developed by the NSW Government that focus on fairness, access to information and assistance, consistency and transparency
- the land acquisition reforms announced by the NSW Government in 2016

- recommendations of the Auditor General's 2021 review of Transport's acquisition practices.

This commitment is confirmed by mitigation measure LP6.

Justification of proposed acquisition of property

Issue description

A submitter noted that the planning proposal for their site took into consideration the anticipated location of the project. As a result, the proposed built form is substantially setback 12 metres from the future light rail line, as shown in the figure provided with the submission. However, the preliminary land requirements provided in the EIS exceed this, adversely impacting upon the indicative concept design and future built form of the site.

The submitter requested that Transport clearly identify the extent of acquisition required on the site, which should be consistent with the corridor proposed for the town centre to the east of the site (i.e., 12 metre setback).

Submission number

SE-52612715

Response

Lot F DP 369480 (77 Hughes Avenue, Ermington) and Lot G DP 369480 (19 Hope Street, Melrose Park) form part of the proposed Tomola development site noted in the submission and are partly within the project site. The updated preliminary land requirements (see Appendix D of the Amendment Report) indicate that a portion of each of these lots would be required to accommodate the alignment and associated road geometry adjustments at this location. As per discussions held with developers in early 2023, the preliminary land requirements have been updated so that the portion of land required for the project would be consistent with the 12 metre setback that has been incorporated into the planning proposal.

Further details of acquisition required to confirm impacts

Issue description

A submitter noted that the landholding at 78 Hughes Avenue, Melrose Park, is an operational parking area for their Hope Street facility. Acquisition of this landholding will directly impact the operation of the property and require an alternative site for employee parking.

The submitter requested further details regarding acquisition, including timing to allow the business ample time to prepare for and manage the disruption to their operation.

Another submitter also noted that the route for the project seemed to indicate the need for the compulsory acquisition of this car park land on Hughes Street, which they also use for their operations.

Submission number

SE-52684958, SE-52233220

Response

Lot 2 DP 587022 and Lot 11 DP 3370 form part of 78 Hughes Street, Ermington. The updated preliminary land requirements provided in Appendix D of the Amendment Report shows that the project's land requirements would affect Lot 11 DP 3370. Although the whole of this lot is expected to be temporarily required to construct the project, only part of the lot would be affected by the project's permanent operational land requirements. It is noted that this part of the lot is used as an informal car park.

The formal car park referenced in the submission is located on Lot 2 DP 587022. This lot would not be affected by the project's land requirements, and no direct impacts are expected.

The measures that would be implemented to mitigate the impacts of the project's land requirements and potential impacts on businesses are described in the responses in this section (under the heading 'Property not required and acquisition not in the best interests of the project/property') and section 8.10.2 respectively.

Following approval of the project, the design would continue to be refined, in accordance with sections 5.6 and 23.3.2 of the EIS. Through this design development process and in accordance with mitigation measure LP1, the design would be refined to minimise land requirements and potential impacts on properties as far as reasonably practicable. Consultation with landowners/landholders will be ongoing to confirm feasible and reasonable measures to minimise impacts on their operations/properties.

Impacts on properties in Camellia, including impact on approved DA

Issue description

A submitter noted that they have development approval for a mobile telecommunications facility on their property in Camellia. The submitter noted that the project currently requires the majority of their property, with the light rail alignment traversing the property. The submitter requested confirmation about the project's land requirements, and whether any of their property will remain available for development in accordance with the approved DA.

Another submitter noted that the project would require a 7.4 metre corridor from their properties on the northern side of Grand Avenue. This would result in a number of impacts on their properties and tenants as detailed in the submission. The submitter stated that the Camellia foreshore to Rydalmere option presented in the EIS will require less private property acquisition, which will result in a reduced impact on the established operation of important industrial sites in the east of Camellia.

Submission numbers

SE-51999230, SE-52089457

Response

The EIS identified that land comprising Lot 4 DP 421086 (part of 29 Grand Avenue, Camellia), and part of 2-8 Thackeray Street and 35 Grand Avenue, would be affected by the project's land requirements.

However, as outlined in section 4.1 of this report, Transport is proposing to amend the project to include an alternative alignment between Camellia and Rydalmere to avoid direct impacts on industrial properties along Grand Avenue. This amendment means that the submitters' properties would now not be affected by the project's land requirements (see Appendix D of the Amendment Report).

Further information about the amended alignment and the updated land requirements is provided in the Amendment Report.

Impacts on property at 29 and 31 Hope Street

Issue description

A submitter raised a number of concerns regarding their property on Hope Street, Melrose Park including:

- The inclusion of their property in the project site is not justified. It is not clear what the land requirements are or why the requirement is different to those to the east.
- The property is identified as containing residual land suggesting that it is not required in full by Transport. Any land not required by the project should remain in the ownership of the current owner.
- The submitter is opposed to the land being included in the project site due to the impacts on the proposed R4 zoning as per a future planning proposal to seek rezoning of the land to match the zoning of adjacent properties.

Submission number

SE-54342957

Response

Justification for land requirements

Although the project site boundary shown on figures within the EIS fully incorporates land at 29 and 31 Hope Street, as noted in section 13.3.1 of the EIS not all of the land located within this boundary would be affected by the project's land requirements. As listed in Appendix E (Preliminary land requirements) to the EIS and the updated preliminary land requirements provided in Appendix D (Updated preliminary land requirements) of the Amendment Report, only part of the land located at 29 and 31 Hope Street would be required to accommodate the alignment and associated road geometry adjustments at this location.

The land required would consist of a 12 metre wide strip along the frontage to Hope Street. This is consistent with the land required from other properties on this side of Hope Street, including the adjacent site.

Following approval of the project, the design would continue to be refined, as described in sections 5.6 and 23.3.2 of the EIS. Mitigation measure LP1 provides that the design will be refined to minimise land requirements and potential impacts on properties as far as reasonably practicable. Consultation with landowners/landholders will be ongoing to confirm feasible and reasonable measures to minimise impacts on their properties.

Ownership of residual land

Although Transport only requires part of the land located at 29 and 31 Hope Street to accommodate the alignment, construction and operation of the project in the southern portion of these properties would impact the buildings and businesses within them and limit access to the northern portion of the properties from Hope Street. For this reason the whole property was included within the project site boundary and the northern portion was identified as residual land within section 6.9.2 of the EIS. However, as a result of stakeholder feedback, including submissions received and consultation undertaken with landowners and developers in this area, Transport has confirmed that alternative access would be made available via Bundil Boulevard. As a result, there would be no residual land in this location. Updated residual land information is provided in section 1.9.2 of the updated project description in Appendix A of the Amendment Report.

Impact on proposed R4 zoning

As noted above, impacts on this property would be limited to a narrow strip along the Hope Street frontage. The land requirements in this location are consistent with the land requirements for the adjacent properties, and are not expected to reduce the amount of developable land such that rezoning of the land to R4 would not be viable.

Mitigation measure LP2 provides that consultation with relevant developers will be ongoing to ensure that the design of the project is integrated as far as practicable with adjoining developments, proposed developments and urban renewal areas, including those subject to the structure planning for Melrose Park North and Melrose Park South. This will include identifying measures and design responses to manage the interface between the project and adjoining land uses and properties as far as reasonably practicable.

8.9.3 Impacts on property access during construction

Properties affected by access changes during construction

Issue description

Submitters expressed concerns regarding the potential for impacts on their property access. Concerns raised included:

- Our property will be heavily affected as the front of the house will be obstructed during construction, which means there will be no access to the driveway or garage.
- There are a number of locations along the project site where property access may be temporarily impacted by construction works.
- Construction will create challenges for industrial sites that require unobstructed vehicle access to facilitate ongoing operations.
- URBNSURF will be open to the public and would like to ensure access to their site is not obstructed during construction, including as a result of road closures and the locations of hoarding, fencing etc.

Submission numbers

SE-52725957, SE-52684958, SE-51999230

Response

Transport acknowledges that construction activities have the potential to affect access and that temporary access changes may be required for some properties. As described in section 13.4.2 of the EIS, suitable access arrangements for affected properties would be implemented, prior to the commencement of construction in the vicinity of these properties, in consultation with property owners/occupants.

In accordance with mitigation measure LP8, Transport will seek to secure agreements with affected landowners/landholders, to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Property adjustment plans will be prepared in consultation with impacted landowners/landholders. The plans will define the works required to properties affected by acquisition and those requiring adjustments as a result of the project. Works will include, but not be limited to, adjustments to driveways and access arrangements.

Further information about how access impacts would be managed during construction is provided in the responses in section 8.6.4 of this report.

8.9.4 Operation impacts – property access

Access to driveway and garage

Issue description

Submitters expressed concerns about the potential impacts of the project on access to their properties along Boronia Street and South Street. Issues raised included:

- Our property will be heavily affected by the project, with the front of the house obstructed upon completion, which means there will be no access to the driveway or garage. The lack of access to the driveway and garage for a house that has five cars will reduce the value of the house.
- The position of the Nowill Street stop will make safely accessing our driveway difficult.
- Retaining the current vehicle access off South Street is imperative for my father to be able to continue to live at the property.

Submission numbers

SE-51903712, SE-52725957, SE-52861959

Response

As described in section 6.6.3 of the EIS, access to some properties along the alignment may need to be adjusted due to the difference in grade between the property and the light rail or road alignment. This could involve changes to the location or arrangement of driveways. Potential impacts on property access during operation are assessed in Technical Paper 2 (Transport and Traffic), and the results are summarised in section 9.4.7 of the EIS. Table 9.7 of the EIS notes that adjustments to access and parking arrangements would be required at eight properties along the northern side of South Street, Rydalmere in the vicinity of the Nowill Street stop.

Transport acknowledges that these adjustments have the potential to impact how the properties are used and accessed. Design refinements that reduce the need for adjustments to property access would continue to be considered during design development. In accordance with mitigation measure TT1, the design will continue to be refined to avoid or minimise impacts on the surrounding road and transport network and property accesses as far as reasonably practicable.

Mitigation measure TT3 provides that where the project permanently affects access to and from a public road, input will be sought from relevant property owners and occupants regarding alternative access arrangements prior to finalising the design. Where any legal access to a property is permanently affected and a property has no other legal means of access, alternative access to and from a public road will be provided to an equivalent standard, where feasible and reasonable. Where an alternative access is not feasible or reasonable, and a property or part of a property is left with no access to a public road, consideration will be given to acquisition of the property or part of the property in accordance with the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991*.

Impacts on employment lands and property access at Speedibake

Issue description

A submitter noted that, when operational, the light rail will put pressure on trucks accessing their property in Melrose Park. The submitter requested that greater consideration be given to the operation of the current employment lands within the vicinity of the light rail site area, and the potential for land use conflicts that may arise through construction.

Submission number

SE-52684958

Response

Potential access impacts during operation are summarised in section 9.4.7 of the EIS and described in detail in Technical Paper 2 (Transport and Traffic).

The project would include signalling the intersection of Hughes Avenue and Hope Street. All turning movements would be maintained, including left and right turns into and out of Hughes Avenue. The alignment would extend along the northern side of Hope Street in an off-road corridor east of Hughes Avenue. As such there would not be direct impacts to properties on the southern side of Hope Street. However, it is acknowledged there may be some residual impacts due to the proposed signalisation. Additionally, there may be the need for road adjustment works, which could result in minor impacts on the driveways on the southern side of Hope Street.

The design would continue to be refined to avoid or minimise impacts on the surrounding road and transport network and property accesses as far as reasonably practicable as in accordance with mitigation measure TT1. Where the project permanently affects access to and from a public road, input will be sought from relevant property owners and occupants regarding alternative access arrangements prior to finalising the design, in accordance with mitigation measure TT3.

Access impacts for properties in Camellia

Issue description

A submitter noted that unobstructed heavy vehicle access is required to facilitate appropriate operation of their site and that operation of the project will create challenges for industrial sites that require unobstructed vehicle access to facilitate ongoing operations. The submitter requested further clarity regarding impacts on access arrangements and operational vehicle movements in Camellia.

Submission number

SE-51999230

Response

Potential access impacts during operation are summarised in section 9.4.7 of the EIS and described in detail in Technical Paper 2 (Transport and Traffic).

As outlined in section 4.1 of this report, Transport is proposing to amend the project to include an alternative alignment between Camellia and Rydalmere to avoid direct impacts on industrial properties along Grand Avenue. This change would avoid the potential for access changes and associated impacts on 14, 15, 15a, 19, 21 and 37 Grand Avenue, Camellia. Further information is provided in section 6.3 of the Amendment Report.

8.9.5 Other property impacts

Impacts on URBNSURF property and pool

Issue description

A submitter noted that their 20 million litre wave generating pool requires a significant amount of engineering. The bathymetry of the lagoon is supported by careful, considered geotechnical solutions including piling underpinning, rigid inclusions, concrete which was been carefully designed to support predictable dynamic loads from the waves and protective landscape batters.

Assurance is sought that the project will not infringe on any landscape areas within the property boundary.

Submission number

SE-52691958

Response

Transport is aware of the complex structure which URBNSURF are constructing and notes the careful interface work required to avoid impacts on the facility. Further detailed design and construction planning would be undertaken in consultation with URBNSURF to ensure the continued safe functioning of the business and its infrastructure.

8.9.6 Impacts on future development

Impacts on endorsed planning proposal

Issue description

A submitter expressed concerns about the integration of the project with the endorsed planning proposal for the site that the submitter owns in Ermington / Melrose Park, and how it would affect future development of the site. The submitter stated that the project's land requirements would affect the site and the broader Melrose Park locality's ability to achieve the projected housing target and would impede on more than 2,600 m² of public recreational space.

Submission number

SE-52612715

Response

As summarised in section 5.1.2 of the EIS and described in further detail in Technical Paper 1 (Design, Place and Movement), design development for the project has taken into consideration potential future development, including that identified in the Melrose Park North Structure Plan, of which the site forms part.

Transport is committed to collaborating and coordinating design development and delivery of the project in consultation with key stakeholders (including developers of affected properties) to ensure that potential impacts are minimised and managed in accordance with the mitigation measures. This includes a commitment to continue to liaise with landowners on relevant aspects of the project, including potential property impacts and measures to address these impacts.

In particular, mitigation measure LP2 provides that consultation with relevant developers will be ongoing to ensure that the design of the project is integrated as far as practicable with adjoining developments, proposed developments and urban renewal areas (including those subject to structure planning for Melrose Park North and Melrose Park South. This will include identifying measures and design responses to manage the interface between the project and adjoining land uses and properties as far as reasonably practicable.

The project would provide a benefit to the Melrose Park North precinct and the broader area, providing improved public transport capacity (including two light rail stops) to service existing and future land uses, which would result in the opportunity for increased residential densities. Further information is provided in the responses in section 8.9.2 of this report under the heading 'Justification for acquisition of land in the Melrose Park North and South planning renewal areas'.

In addition, as committed to by mitigation measure SE7, Transport will continue to consult with relevant councils and Sydney Olympic Park Authority to offset the direct impacts of the project's land requirements on open space (parks and reserves) through the provision of a net increase in open space, including active transport infrastructure and improved open spaces and recreation facilities.

Impact of rezoning to future operations

Issue description

A submitter noted that their site in Camellia (currently being operated by AB Mauri) is being rezoned to mixed use residential with a park and town centre next to it, and that this would impact future operation. The submitter also expressed concerns about their site at 79 Hughes Avenue, Melrose Park (run by Tip Top). Concerns raised included:

- The surrounding area is being rezoned to residential which could impact on their production facilities and impact property value of the car park land.
- The project would likely require acquisition of land on Hughes Avenue (car park land plus potentially the main factory on Hope Street) which would mean that they would need to find an alternative site.

Submission number

SE-52233220

Response

Rezoning land to deliver the land uses proposed by the *Camellia-Rosehill Place Strategy* (DPE, 2022b) and as part of structure planning for Melrose Park North and Melrose Park South does not form part of the project for which approval is sought. The timing of future rezoning processes and subsequent development will be the responsibility of relevant government agencies, including the Department of Planning and Environment and City of Parramatta Council.

The timeline provided on the Department of Planning and Environment's website for Camellia indicates that the rezoning proposal is expected to be exhibited in 2023 (see [Camellia-Rosehill precinct - \(nsw.gov.au\)](https://www.nsw.gov.au/camellia-rosehill-precinct)). With regards to Melrose Park, planning proposals were finalised for areas within the redevelopment area in mid to late 2022 and come into effect on 30 June 2023. None of these proposals directly relate to land owned by the submitter.

As described in the response to issues raised in section 8.9.2 of this report (under the heading 'Further details of acquisition required to confirm impacts') no land located at Lot 2 DP 587022 (the location of the car park referenced in this submission) or 79 Hughes Avenue (the main factory site) would be required to undertake the project.

The responses in section 8.10.2 of this report provide information about how potential impacts on businesses would be managed.

8.10 Socio-economic impacts

8.10.1 Social impacts of closing Ermington Boat Ramp

Issue description

Submitters expressed concerns about the potential social and community impacts associated with the proposed closure of Ermington Boat Ramp during construction. Issues raised included:

- The EIS describes the reduced access to the waterways as delivering social disruption, stress and damage to health and wellbeing, without providing appropriate solutions to this social (and economic) disruption.
- Existing amenity issues could be increased.
- Reduced participation in boating and recreational activities could impact quality of life and wellbeing.
- Forcing people to tow further afield will add to stress.
- Closing the boat ramp will cause many people to go to overcrowded ramps elsewhere making boating dangerous.
- The boat ramp is a way of food for our families and used by hundreds of people during the summer and weekends.
- Closing this boat ramp down will greatly impact the community and many boaters will not get to launch their boat in the water.
- Ermington Boat Ramp has high value to industry and boating public. The demographic impact of closing the ramp includes, but is not limited to, the people of Western Sydney.

Submission numbers

SE-51794726, SE-52014207, SE-52020217, SE-52022962, SE-52024970, SE-52131532, SE-52661960, SE-52665709, SE-52681720, SE-52703707, SE-52720957, SE-52770208, SE-52779248, SE-52861959, SE-52863719

Response

Technical Paper 7 (Social Impact Assessment) identified Ermington Boat Ramp as a key community infrastructure facility located within the project site with the potential to be affected during construction and operation. The results of the assessment are summarised in section 14.3.1 of the EIS, which acknowledged that:

- users of Ermington Boat Ramp would experience disrupted access during construction of the bridge over the Parramatta River

- users of the boat ramp may also be deterred from participating in recreational boating and water sports due to the inconvenience of needing to use alternative ramp facilities
- these disruptions may affect wellbeing for some.

Transport acknowledges the impact of the proposed closure of Ermington Boat Ramp for up to three years. As a result of surveys of boat ramp usage between 2019 and 2020, along with the feedback received from stakeholders and community, Transport understands that Ermington Boat Ramp is a highly sought recreational facility, particularly for Western Sydney residents. This has been confirmed by the submissions received by members of the public and organisation, and the consultation undertaken with the community, as described in section 2.3.2 of this report.

Transport has carried out further investigations regarding the feasibility of providing additional capacity at the alternate boat ramps to inform mitigation measures for the closure. These investigations concluded there while ramp improvements and offset parking could potentially be provided at these locations, the loss of open space on waterfront land would result in social and amenity impacts on the community as these locations are popular areas for recreational use. As such, the investigations concluded that the impacts associated with upgrading and providing additional parking at these locations to offset the loss of access to Ermington Boat Ramp would currently outweigh the benefits.

The clarification in section 4.3.4 of this report provides information on why Ermington Boat Ramp would need to close during construction, and how Transport is working to minimise the impacts on users of Ermington Boat Ramp and other boat ramps. Further information about how these impacts, including potential traffic, transport and access impacts, would be managed is provided in the responses in section 8.6.4 of this report. In addition to the specific measures proposed to manage the impacts of closing Ermington Boat Ramp described in section 8.6.4, Transport's commitment to minimising the impacts of the project to community infrastructure and facilities is confirmed by the following mitigation measures:

- Mitigation measure SE5 provides that access to community facilities and infrastructure will be maintained during construction as far as practicable. Where alternate access arrangements need to be made, including changes to access for public and active transport facilities, these will be developed in consultation with relevant stakeholders and service providers, and communicated to users in accordance with the engagement plan. Changes to access arrangements will be managed in accordance with the traffic and access management plan (mitigation measure TT8).
- Mitigation measure SE6 provides that Transport will continue to consult with relevant key stakeholders (including facility managers) in relation to community infrastructure with the potential to be directly and/or indirectly affected by the project. Consultation will be undertaken in accordance with the engagement plan and will assist with identifying measures to minimise the potential impacts of the project on community infrastructure as far as possible.

8.10.2 Business impacts

Interruptions to power and services potentially impacting operations

A submitter raised concerns about the potential for interruptions to power and other services to impact their businesses in Camellia and Melrose Park during construction.

Another submitter noted they need to understand if there are any works to underground services to ensure URBNSURF's systems are not affected.

Submission numbers

SE-52233220, SE-52691958

Response

Section 7.8 of the EIS (and section 2.8 of the updated project description in Appendix A of the Amendment Report) describes the critical utilities within the project site. These sections also note that other utilities infrastructure, such as drinking and recycled water supply, stormwater drainage, wastewater, electricity, gas, fuel and telecommunications, would be located within the project site and may require treatment to minimise impacts.

As outlined in section 4.1 of this report, Transport is proposing to amend the project to include a new alignment for the bridge between Camellia and Rydalmere, which now avoids several major utilities. The location of key utilities in the project site has been updated to consider the amended project and is provided in section 2.8 of Appendix A of the Amendment Report.

The potential for disruption to businesses during utility relocation/protection works was summarised in section 14.3.2 of the EIS and described in further detail in Technical Paper 8 (Business Impact Assessment). It is acknowledged that any disruption to these services, even for short periods, can inconvenience employees, interrupt business operations, and reduce revenue.

Any impacts on utilities are likely to be temporary and would be managed in consultation with the relevant utility service providers. To minimise the potential for impacts and inconvenience to businesses, interruptions to utilities would be planned and communicated in advance to affected premises.

Additionally, in accordance with mitigation measure LP9, the location of all utilities and services, and requirements for access to, diversion, protection and/or support, will be confirmed prior to construction, to minimise the potential impacts such as service disruption. This will include (as required) undertaking utilities investigations, including intrusive investigations, and consultation and agreement with service providers. Where the need for disconnection of services is identified in consultation with utility service providers this would be planned and communicated in advance to minimise the potential for impacts on businesses.

Mitigation measure LP1 provides that the design will continue to be refined to minimise potential impacts on land uses and properties as far as reasonably practicable. Consultation with landowners such as URBNSURF will be ongoing to confirm feasible and reasonable measures to minimise impacts on their operations/properties.

Impact of the project to business operations at Melrose Park

Issue description

A submitter raised a number of concerns about the project in relation to the operation of their business at Melrose Park. Concerns raised included:

- The project would reduce the available lanes on Hope Street for car and truck traffic.
- Temporary and permanent loss of on- street parking, and the need to maintain the existing car park on Hughes Avenue. Inadequate parking may render operations at the site unviable.
- Direct and indirect impacts as a result of construction on their operations, including transport related impacts (such as longer transport times), noise and other localised impacts as a result of truck movements, and land contamination issues.
- Longer term impacts that may eventuate from the project and resultant residential development – including truck movements and potential land contamination issues.

Submission number

SE-52233220

Response

Reduction in available lanes on Hope Street

The project would not involve a reduction in available lanes on Hope Street. The light rail alignment would extend along the northern side of Hope Street in an off-road corridor east of Hughes Avenue, which would minimise impact to property accesses on the south side of Hope Street.

The intersection of Hughes Avenue and Hope Street is proposed to be signalised. All turning movements, including left and right turns into and out of Hughes Avenue, would be maintained. It is acknowledged there may be some residual impacts to vehicle movements and access along Hope Street due to the proposed signalisation. As such, the design would continue to be refined to avoid or minimise impacts on the surrounding road and transport network and property accesses as far as reasonably practicable in accordance with mitigation measure TT1.

Further information about how traffic and access impacts would be managed is provided in section 8.6.4 of this report.

Temporary and permanent loss of parking

Section 6.2.5.2 of Technical Paper 2 (Transport and Traffic) confirmed that there is generally sufficient parking within Melrose Park to accommodate parking of vehicles displaced by parking spaces removed along the alignment. However, mitigation measure TT5 requires that opportunities to reduce the loss of on and off-street parking will be reviewed during design development. Additionally, a parking management strategy will be developed in accordance with mitigation measure TT7, which will document changes to parking arrangements and include measures to manage the reduction in on-street parking availability. This will include reinstating or relocating high-priority kerbside uses such as loading zones.

Further information about how parking impacts would be managed is provided in the responses in sections 8.6.2 to 8.6.4 of this report.

Impacts from construction and operation on business operations

Potential impacts on businesses during construction and operation of the project are described in Technical Paper 8 (Business Impact Assessment) and summarised in sections 14.3.2 and 14.4.2 of the EIS. The EIS assesses potential impacts on businesses, including as a result of the project's land requirements, changes to access and accessibility, amenity impacts, and economic impacts and benefits. The business impact assessment integrated findings from other technical assessments, including traffic, transport and access, noise and vibration, landscape and visual, and air quality impacts.

As described in section 14.6.1 of the EIS, implementing other relevant measures provided in Chapters 9 (Transport and traffic), 10 (Noise and vibration), 13 (Land use and property), 15 (Landscape and visual impacts) and 20 (Air quality) would minimise the potential for access and amenity impacts. These include, but are not limited to, developing and implementing a traffic and access management plan, noise and vibration management plan, air quality management plan, operational noise and vibration review and residual land management plan. Further information about how contamination, traffic and access, noise and vibration and amenity impacts would be managed is provided in the responses in sections 5.5.4, 8.6.4, 8.7.4 and 8.10.3 of this report.

Transport is committed to minimising potential impacts on businesses as a result of the project. These commitments are defined by mitigation measures SE9 to SE11. In particular, mitigation measure SE9 provides that a business management and activation plan will be prepared and implemented for businesses with the potential to be affected by the project, including those located on roads impacted by construction. The plan will detail feasible and reasonable measures, developed in consultation with affected business owners/operators to:

- minimise disruption for customers and deliveries as far as possible

- maintain vehicular and pedestrian access during business hours, including alternative arrangements for times when access cannot be maintained
- maintain visibility of the business to potential customers during construction, including alternative arrangements for times when visibility cannot be maintained
- respond to other identified impacts as far as possible, including specific measures to assist businesses with the potential to be adversely affected during construction.

Impacts on operation of URBNSURF

Issue description

The submitter notes that customer experience is paramount to their product and that they are concerned about amenity impacts. They would like to see plans to manage visual impacts and noise levels. They would also like to know what the sound levels would be at various stages of the construction timeline, and at various stages of the day.

It would be helpful to see a timeline of construction works around their site.

Submission number

SE-52691958

Response

Amenity impacts – visual

As described in section 15.3.2 of the EIS, the project would result in temporary changes to visual amenity associated with the presence of construction machinery and disturbance at work sites. Visible elements would include work areas, machinery and equipment, hoarding and fencing, soil stockpiles, waste materials and partially constructed structures. The visual changes would depend on the nature and intensity of the construction activity, and generally would be experienced from a relatively short distance.

A range of mitigation measures (LV9 to LV15) have been proposed to minimise the potential for visual impacts during construction. In particular:

- Mitigation measure LV11 provides that construction site hoarding and fencing will be designed, erected and maintained to minimise visual impacts. This will include:
 - erecting hoarding/fencing as early as possible in the site establishment phase to provide visual screening
 - using high quality materials suitable for parks and public spaces where sites are located close to sensitive receivers and public open space
 - featuring graphics, artwork or project information at appropriate locations in consultation with Transport
 - maintaining hoarding/fencing regularly, including the prompt removal of graffiti.
- Mitigation measure LV14 provides that early planting and revegetation works will be undertaken where practicable to provide a screening buffer that has time to mature before the project is operational.
- Mitigation measure LV15 provides that construction programming will provide for the progressive rehabilitation of disturbed areas as far as practicable, to minimise the duration and extent of temporary visual and landscape character impacts.

Amenity impacts – noise levels

As part of the noise and vibration assessment for the EIS, the study area was divided into 20 noise catchment areas (NCAs), based on the type of sensitive receivers and ambient noise levels. URBNSURF is located in NCA-O (Sydney Olympic Park (east of Hill Road)) and is identified as active recreation receiver (ID OA52).

As described in section 4.2.1 of this report, an Updated Noise and Vibration Report has been prepared to assess the proposed amendments to the project. The assessment found the following with regards to URBNSURF:

- Noise management levels would be exceeded during construction of the light rail track, bridge over Hill Road, and during road works.
- With regards to construction vibration, while no buildings have been constructed yet at URBNSURF, it is considered likely that any vibration levels would be below the vibration criteria for cosmetic damage for commercial buildings.
- URBNSURF would not experience exceedances of the relevant trigger levels for airborne noise during operation.

The worst-case construction noise levels predicted at receiver ID OA52 are provided in Appendix F-3 of the Updated Noise and Vibration Report.

Information about how noise and vibration would be managed during construction is provided in section 10.7 of the EIS and in the responses in section 8.7.4 of this report.

Timeline for construction works

An updated indicative construction program is provided in section 2.1.3 of the updated project description in Appendix A of the Amendment Report.

As indicated in the updated program it is anticipated that early works and site establishment for the bridge between Melrose Park and Wentworth Point would start in 2024 while construction of the rest of the project would occur between late 2025 and late 2031. The first passenger services are proposed to start from 2030/2031.

The construction program would continue to be refined during design development and construction planning in consultation with key stakeholders. This would include considering construction staging to further minimise disruptions, and the potential to further accelerate work.

8.10.3 Other operation impacts

Amenity impacts

Issue description

A submitter stated that they are concerned about the possibility of a rail line running through the residential area of Boronia Street and that their amenity, and that of their fellow residents, will be seriously affected by the project, including as a result of noise and air impacts.

Submission number

SE-52724717

Response

In accordance with the SEARs, a comprehensive range of specialist technical assessments was undertaken to consider the potential amenity impacts of the project on the community, including traffic, transport and access, noise and vibration, visual and air quality impacts. These potential impacts have been

acknowledged, integrated and assessed in Technical Paper 7 (Social Impact Assessment) and the results are summarised in Chapter 14 (Socio-economic impacts) of the EIS.

Table 14.4 of the EIS identified the potential for high negative amenity impacts for residents living close to construction activities (such as on Boronia Street) during construction. Table 14.5 identified the potential for medium negative visual, noise and traffic changes during operation.

Section 14.6 of the EIS describes the approach to managing amenity impacts on the community. The section notes that comprehensive and appropriate communication and consultation with the community and other key stakeholders plays a key role in managing the potential for impacts during construction and operation and is critical to the successful delivery of the project. The Community Communication Strategy provided in Appendix D of this report will be implemented in accordance with mitigation measure SE1 to guide the management and delivery of community and stakeholder engagement in the lead up to, and during, construction, and ensure that opportunities for input are provided and feedback from the community is encouraged.

Transport is committed to avoiding or minimising amenity impacts on residents. Appropriate management measures would be implemented during design development, construction, and operation of the project to mitigate the potential impacts on adjacent sensitive receivers in accordance with the mitigation measures (provided in Appendix B (Updated mitigation measures) of this report) and the conditions of approval. Further information about how noise and air impacts would be managed is provided in the responses in section 8.7.4 of this report and in section 20.6.1 of the EIS, respectively.

8.11 Landscape and visual

8.11.1 Construction impacts

Impacts on trees

Issue description

Submitters expressed concerns about the impacts on trees. Issues raised included:

- The removal of significant and mature trees would further sever the vital green corridor between Brush Park and Newington Nature Reserve for fauna.
- Our neighbourhood prides itself in its extensive planting of trees along Boronia Street that supports a developed habitat and a green environment.
- I object to the significant effect this light rail line will have on Newington Nature Reserve and Hill Road trees and green space.
- The project would remove or damage valuable sources of nectar and pollen for bees and other fauna that need the scarce food and habitat source. It would take at least 40 years to replace these trees; and would be potentially fatal for nearby registered apiaries and jeopardise local amateur bee keeping in the area.
- Several of the submitter's group's members have registered apiaries. Replacement of the number of significant mature trees that are proposed to be removed with new trees will not provide the necessary nectar and pollen sources currently in the immediate area.

Submission numbers

SE-51460492, SE-51789992, SE-52681720, SE-52724717

Response

The impacts of the project on trees are described in the Arboricultural Report (Appendix B to Technical Paper 1 (Design, Place and Movement)) and summarised in Chapter 15 (Landscape and visual impacts) of the EIS. The impacts on biodiversity were described in Technical Paper 9 (Biodiversity Development Assessment Report) and summarised in Chapter 16 (Biodiversity) of the EIS. As described in section 4.2.1 of this report, an Updated Biodiversity Development Assessment Report has been prepared to assess the potential impacts of the proposed amendments.

The clarification in section 4.3.3 of this report provides further information about Transport's proposed approach to managing impacts on trees, which has taken account of the issues raised in these and other submissions.

In accordance with mitigation measure LV5, the design will continue to be refined to avoid or minimise impacts on trees. Mitigation measure LV5 has been amended to confirm that any tree within the project site boundary, which will not be directly impacted by infrastructure or utility works, will be assessed for retention through careful consideration of design and construction methods.

Mitigation measure LV6 commits to developing a tree offset strategy to offset the loss of trees and achieve a net increase in tree number and canopy. LV6 has been amended to confirm that the tree offset strategy will be prepared in accordance with the *Biodiversity Policy* (Transport for NSW, 2022a) and the *Tree and hollow replacement guidelines* (Transport for NSW, 2022b). The tree offset strategy will identify the tree replacement ratios that would apply to offset the removal of trees with reference to these guidelines. The number of replacement trees depends on the tree size, but is greater than a 1:1 ratio and includes a minimum of two replacement trees for a small tree up to 16 trees for a very large tree. The strategy will also define and identify species and trees sizes to ensure a mix of species and a range of mature heights to provide visual diversity as appropriate to proposed planting locations. Mature plantings would provide a nectar source for local bees and other native fauna.

Replacement trees would comprise a mix of endemic, native and exotic trees to give appropriate streetscape, heritage and biodiversity outcomes (including in areas of environmental sensitivity). Further information on these requirements is provided in the clarification in section 4.3.3 of this report.

8.11.2 Operation impacts

24 hour lighting

Issue description

Submitters in Wentworth Point expressed concerns that the project would be lit 24 hours a day, seven days a week.

Submission numbers

SE-51719707, SE-52001214, SE-52091708, SE-52110225, SE-52114207

Response

Chapter 15 (Landscape and visual impacts) of the EIS and the Landscape and Visual Impact Assessment (Appendix A to Technical Paper 1 (Design, Place and Movement)) assessed the potential visual impacts of the project, including the effects of lighting. An assessment of 36 viewpoints along the alignment was undertaken for the daytime and night time during construction and operation. In total, six viewpoints were identified as having the potential to experience moderate or higher impacts during night time operation. None of these viewpoints are located within Wentworth Point (the closest is viewpoint 22 (Ermington Boat Ramp)).

Viewpoint 23 from Melrose Park playground, which would also be indicative of views from residences further east, was assessed as having the potential for negligible impacts during daytime and night time operation. This is because it is expected that the bridge between Melrose Park and Wentworth Point would be heavily screened by vegetation within the park, with some lighting on the bridge that may be apparent.

The visual impact assessment for the proposed amendments (see section 6.8 of the Amendment Report) assessed an additional viewpoint location at Wharf Road in Melrose Park to capture typical views of residences at this location. The assessment identified the potential for high to moderate visual impacts during construction and operation, of which lighting was noted as a contributing factor to the impact rating.

Transport commits to minimising the potential impacts of new lighting associated with the project. Mitigation measure LV7 provides that lighting will be designed and sited to minimise glare and light spill into adjoining areas in accordance with Australian/New Zealand Standard AS/NZS 4282:2019 *Control of the obtrusive effects of outdoor lighting* and relevant standards in the series AS/NZS 1158:2005 *Lighting for roads and public spaces*.

Landscape impacts

Issue description

A submitter expressed concern that the project would remove key connecting parts of some of the key attractions of this area, including the quiet secluded bike paths/walkways shaded by trees, the two alternative pathways to the river, and the adjacent wetlands and river that are part of Sydney Olympic Park.

Submission number

SE-51460492

Response

Chapter 6 (Project description – infrastructure and operation) of the EIS provided a description of the project with respect to the operational features, which has been updated to reflect the proposed amendments. Section 1.4 of the updated project description in Appendix A of the Amendment Report notes that the project would include about 9.5 kilometres of new active transport links for both pedestrians and cyclists constructed along or close to the light rail alignment, including along the Parramatta River and through Sydney Olympic Park.

In instances where the project would impact existing active transport facilities (such as bike paths/walkways), these would be reinstated and modified where necessary to integrate with the light rail corridor and proposed active transport links. Some tree removal may also be required, but replacement planting would be provided in accordance with the project's urban design requirements and the mitigation measures to provide amenity and shading.

The results of the assessment of potential impacts on existing active transport facilities (including walking and cycling paths) and community facilities were described in Chapters 9 (Transport and traffic) and 14 (Socio-economic impacts) of the EIS, respectively. Changes to impacts associated with the amended project (incorporating the amendments outlined in section 4.1 of this report), including impacts on existing active transport facilities, are described in Chapter 6 (Additional environmental assessment) of the Amendment Report.

The results of the assessment of potential landscape and biodiversity impacts are described in Chapters 15 (Landscape and visual impacts) and 16 (Biodiversity) of the EIS respectively. These included consideration of potential impacts on key features and attractions, including the Parramatta Valley Cycleway, River Walk, Millennium Parklands and the wetlands in Sydney Olympic Park. In particular, construction of the bridges over Parramatta River would result in direct and indirect biodiversity impacts on the wetlands. However, the proposed amendments would reduce the amount of clearing of mangroves and saltmarsh vegetation

and would reduce indirect impacts from shading. Further information is provided in section 6.9 of the Amendment Report.

A range of transport, socio-economic, land and visual and biodiversity mitigation measures have been developed to confirm Transport's commitments to mitigating the impacts identified. In particular:

- Mitigation measure SE6 provides that Transport will continue to consult with relevant key stakeholders (including facility managers) in relation to community infrastructure with the potential to be directly and/or indirectly affected by the project. Consultation will be undertaken in accordance with the engagement plan and will assist with identifying measures to minimise the potential impacts of the project on community infrastructure as far as possible.
- Mitigation measure BD14 commits to preparing a habitat restoration and revegetation management plan as a key part of the rehabilitation strategy (mitigation measure LP10) to include clear objectives for rehabilitation and re-establishment of native vegetation of local provenance in temporary disturbance areas.
- Mitigation measures LV6 commits to preparing and implementing a tree offset strategy that will achieve a net increase in tree number and canopy.

8.12 Biodiversity

8.12.1 Construction impacts

Terrestrial biodiversity impacts

Issue description

Submitters raised a range of concerns about the potential impacts of the project on biodiversity, including as a result of the proposed areas of clearing. Issues raised included:

- The project will require the removal of 2.5 hectares of native vegetation and could lead to the extinction due to loss of habitat of at least three animal species already listed as threatened. At a time when the mismanagement of the environment and the resulting climate change is a predominant issue amongst the community these impacts are unacceptable.
- The project will occupy the area adjacent to the Narawang Wetland and require removal of the vegetation buffer zone between Hill Road and the wetland ponds. Narawang Wetland are a vital feeding and resting area for migratory shorebirds. The project will affect buffer habitat and rob these intrepid birds of the wetland they need. Without safe places to rest and feed, they will not survive.
- The project will have a significant effect on Newington Nature Reserve and green space. There are no offsetting benefits that warrant this damage in an area that is already overdeveloped and poorly planned.
- The ecological and environment impacts on local flora and fauna will be devastating.

Submission numbers

SE-51460492, SE-52005707, SE-52681720, SE-52724717

Response

Technical Paper 9 (Biodiversity Development Assessment Report) of the EIS assessed the potential impacts on biodiversity of the project (as exhibited). The results are summarised in Chapter 16 (Biodiversity) of the EIS. The results of the assessment described in the EIS concluded that the project (as exhibited) would directly impact about 2.55 hectares of native vegetation within the project site.

As design development and construction planning progresses, Transport is committed to minimising or avoiding impacts on native vegetation (including riparian vegetation), fauna movement and habitat in accordance with mitigation measure BD1. An example of a design refinement where areas of biodiversity value have been avoided or minimised since the EIS was exhibited is the relocation of the Hill Road bridge. In response to feedback from, and consultation with, Sydney Olympic Park Authority, Transport is proposing an amendment to the proposed works at the bridge at Hill Road as outlined in section 4.1 of this report. This would involve removing the existing bridge and constructing a new bridge that would minimise direct impacts on the Narawang Wetland.

The amended alignment of the project and the bridge at Hill Road would avoid direct impacts on existing ponds that are an important habitat for the Green and Golden Bell Frog, Latham's Snipe and other local fauna. The project site boundary (i.e. the area assumed to be directly impacted) has been revised to incorporate this amendment. There would be a reduced area of impact on the western side of Hill Road (at Narawang Wetland) and a small increase on the eastern side (at Nuwi Wetland) to accommodate the new bridge arrangement. There is expected to be only limited removal of screening vegetation from Narawang Wetland, with the majority of this vegetation retained. In addition, mitigation measure BD6 also provides that landscaping will use locally indigenous species to buffer the light rail alignment adjacent to vegetated areas, including Newington Nature Reserve, and along Hill Road and the Holker Busway.

Overall, the proposed amendments and revised project site has reduced the direct impact on native vegetation to an estimated worst-case impact of about 2.43 hectares. As described in section 4.2.1 of this report, these potential impacts have been considered in the Updated Biodiversity Development Assessment Report. Further information is provided in section 6.9 of the Amendment Report.

In relation to Newington Nature Reserve, Technical Paper 9 and the Updated Biodiversity Development Assessment Report concluded that there would be no direct impact on remnant Sydney Turpentine Ironbark Forest in the Newington Nature Reserve.

Additional commitments have also been made by Transport to offset unavoidable impacts. In particular, the following will be undertaken:

- Impacts on threatened species listed by the BC Act and/or the EPBC Act will be offset as described in section 16.6.3 of the EIS. In accordance with mitigation measure BD2, biodiversity offsets will be finalised in accordance with the NSW Biodiversity Offsets Scheme and the NSW Assessment Bilateral Agreement under the EPBC Act.
- In accordance with mitigation measure BD2, offsets required under the FM Act will be finalised in consultation with DPI Fisheries.
- Mitigation measure BD14 (as amended) commits to developing and implementing a habitat restoration and revegetation plan as a key part of the project's overall rehabilitation strategy.

Further information is provided in response to issues raised about biodiversity, including impacts on Narawang Wetland, is provided in sections 5.2.4 and 5.9 of this report.

8.12.2 Operation impacts

Indirect impacts

Issue description

A submitter expressed concerns about other impacts of the project on biodiversity, including noise and lighting.

Submission number

SE-51719707

Response

The Updated Biodiversity Development Assessment Report has assessed the impacts of the project as amended. This includes updating calculations of the direct impacts on vegetation communities, and consideration of potential impacts on fauna, such as from noise, vibration, lighting and connectivity impacts. Further information is provided in section 6.9 of the Amendment Report.

Lighting along the alignment, particularly at stops, is required to ensure safe operation of the project, and safety for customers and pedestrians. The potential for noise and lighting impacts during construction and operation are considered in sections 9.4 and 9.5 of the Updated Biodiversity Development Assessment Report. This includes further discussion of the potential for noise to impact on the calling pattern of the Green and Golden Bell Frog.

Mitigation measures BD7 (as amended) and LV7 provide commitments to minimising light pollution during operation, with reference to the *National Light Pollution Guidelines for Wildlife* (DOEE, 2020). To further minimise potential noise and lighting impacts, mitigation measure BD7, which provides that opportunities to minimise light pollution to ecologically sensitive areas will be investigated and implemented, has been amended to also refer to the minimisation of noise pollution. In accordance with mitigation measure BD6, replacement planting will use locally indigenous species to buffer the light rail alignment adjacent to vegetated areas, including Newington Nature Reserve, and along Hill Road and the Holker Busway.

8.13 Water

8.13.1 Flood risks and impacts

Flood risk of preferred option

Issue description

A submitter stated that Corridor 2 should not be adopted given the exposure of the track alignment to significant flood risk. The submitter notes that the Department is aware of this risk.

Submission number

SE-52715712

Response

As described in section 5.3.2 of the EIS, three corridor options between Camellia and Sydney Olympic Park were considered in the Phase 2 options evaluation as shown in Figure 5.5 of the EIS.

Analysis of the corridors against the project-specific criteria (which included consideration of flooding) concluded that both Ermington corridors (Corridors 1 and 2) should be shortlisted for further analysis:

- Corridor 1 – commenced in Rydalmere and continued to Ermington on the northern side of the Parramatta River.
- Corridor 2 – commenced in Camellia, crossed to the northern side of the Parramatta River at Rydalmere and then to Ermington.

Following further analysis of the Camellia and Rydalmere options, the Camellia option (Option 2) (previously referred to as Corridor 2) was preferred (see section 5.3.3 and Figure 5.7 of the EIS).

The EIS included an assessment of the potential flooding risks to and as a result of the project. The assessment results are described in Technical Paper 10 (Hydrology, Flooding and Water Quality) and are summarised in Chapter 17 (Water) of the EIS.

As described in section 4.1 of this report, Transport is proposing to amend the alignment and bridge between Camellia and Rydalmere. A Supplementary Flooding Report has been prepared to assess the potential flooding impacts of this amendment. The key findings are summarised in section 6.10 of the Amendment Report. In accordance with mitigation measure W1, Transport has committed to undertaking further design refinement and modelling to achieve the flood management objectives and the flood immunity standards defined in section 5 of Technical Paper 10. Mitigation measure W1 has also been amended to confirm that the flood management strategy will be based on revised flood modelling, taking into account further design development and construction planning, and that design responses and management measures will be developed in consultation with affected landowners/landholders.

8.14 Project justification and evaluation

8.14.1 Project need

Project need in the context of local impacts and alternatives

Issue description

Submitters expressed a range of concerns about the project need and justification, including how these balance against the project's potential impacts, and whether the project is proposed to benefit developers. Issues raised included:

- Wentworth Point has a shortage of parking, traffic congestion, and a lack of parks. A project that removes parking, takes up road space, removes thousands of mature trees, and removes or impacts key connecting bikeways and walkways will not be an improvement for this area.
- The project is not needed given the services that Sydney Metro West will provide. The area is to be ruined for a rail line to connect Parramatta with Sydney Olympic Park when this will be achieved by Sydney Metro West.
- Is there not a better way to alleviate the poor transport planning in the development of Wentworth Point than to decrease the quality of life for other residents?
- It is difficult to understand why a rail service must operate in a residential street of Ermington, a suburb identified in the 2021 census with a population of only 12,856 residents.
- Existing public transport in Wentworth Point, including bus and ferry services, is sufficient.
- The project is a waste of money and resources with far higher priority investments required. It should be terminated at Ermington and funds redirected. Bike paths, trees and access to the river should be left untouched.
- The proposed direction does not make sense, as Parramatta and Sydney Olympic Park have multiple modes of public transport, whereas other areas in Sydney are poorly served.
- The project objective, hyped as a catalyst for shaping growth, is both unrealistic and inappropriate.
- We are not convinced of the benefits, value and patronage of the project as an alternative means of public transportation for residents east of the proposed Melrose Park to Wentworth Point Bridge. However, it is understood there is considerable value to the developers.
- Why utilise public and or private land in Ryde when developers and Parramatta Council gain financial benefits?

Submission numbers

SE-51319479, SE-51460492, SE-51794726, SE-51795216, SE-52661960, SE-52665709, SE-52681720, SE-52715218, SE-52715218, SE-52724717

Response

A summary of the strategic planning directions, key issues and challenges relevant to the development of, and need for, the project is provided in Chapter 3 (Strategic context and need) of the EIS.

The project, as part of Parramatta Light Rail, is needed to respond to growth in the Central River City and provide necessary public transport infrastructure to achieve the NSW Government's vision for GPOP to become the geographic and demographic centre of Greater Sydney.

The project would connect Parramatta Light Rail Stage 1 and Parramatta's CBD to Sydney Olympic Park via Camellia, Ermington, Melrose Park and Wentworth Point. It would link communities north and south of the Parramatta River to the Parramatta CBD, the Camellia town centre, and the sport, entertainment, education and employment hub at Sydney Olympic Park. The project would provide a multi-modal transport network for the areas serviced by the project to enhance connectivity to trains, buses, ferries and Sydney Metro West. The project would support the growing population in accordance with relevant plans and strategies as described in Chapter 3 (Strategic context and need) of the EIS.

The project alignment, design and construction methodology have been developed to avoid and minimise impacts on the local and regional environment, and impacts on the local community and businesses, as far as possible.

A project of this scale would inevitably have some impacts on the local environment and community, particularly during construction. This EIS has been prepared to assess the potential impacts of the project and develop measures to mitigate the impacts and enhance the benefits of the project. It addresses the key issues identified in the SEARs issued under Part 5, Division 5.2 of the EP&A Act and the relevant provisions of Part 3 of Schedule 2 of the EP&A Regulation.

Mitigation measures to minimise the identified potential impacts would be implemented through the design development and construction planning phases, taking into account the input of stakeholders and the local community.

Further information is provided in section 24.1 of the EIS, which provides the project justification in accordance with the requirements of the SEARs.

8.14.2 Costs and funding

Commitment to funding

Issue description

Submitters stated that the NSW Government should fully commit to funding the project. Other submitters requested that the project be put on hold so a review of costs, funding and value for money be undertaken.

Submission numbers

SE-51258983, SE-52213976, SE-52438212

Response

In June 2022, the NSW Government committed \$602.4 million to continue planning approval process for the project, including to build the proposed bridge across the Parramatta River between Wentworth Point and Melrose Park. The commitment and timing of funding for the remainder of the project is subject to a future NSW Government investment planning and decisions.

8.15 Support/objection

8.15.1 Support for the project

Issue description

During the submission lodgement process, where there is an opportunity to nominate support, objection or provision of comments, 30 submitters registered that they supported the project. In addition, a number of submitters also described their support for the project in their submissions, and included reasons justifying their support.

Submission numbers

SE-50499965, SE-50536224, SE-50536707, SE-50704216, SE-50960709, SE-51058708, SE-51090475, SE-51360970, SE-51364968, SE-51589207, SE-51796974, SE-51814457, SE-51938967, SE-51996749, SE-52020217, SE-52089724, SE-52091708, SE-52112232, SE-52112232, SE-52147026, SE-52165219, SE-52367229, SE-52438212, SE-52467457, SE-52486209, SE-52496457, SE-52612715, SE-52670974, SE-52691958, SE-52718459, SE-52726459

Response

Transport acknowledges the support from submitters for the project, including the provision of active transport links along the alignment.

8.15.2 Object to the project

Issue description

A total of 35 submitters registered an objection to the project as part of the submission lodgement process. In addition, some submitters also described their objection to the project in their submissions, including reasons justifying their objection.

Submission numbers

SE-50522481, SE-51794726, SE-51996977, SE-52128734, SE-52681720

Response

Transport acknowledges the objections to the project. Responses to issues raised by these submissions are provided in this chapter, as noted in Appendix A (Submissions register) of this report.

8.16 Other issues

Sustainability

Issue description

A submitter stated that the EIS mentions the Infrastructure Sustainability Council of Australia (ISCA) in the glossary, but does not include any sustainability initiatives that will give a high rating for design and as built. The EIS does not include consideration of sustainability.

Submission number

SE-51719707

Response

Transport is committed to delivering Parramatta Light Rail (including the project) in accordance with Transport's Environment and Sustainability Policy and the Parramatta Light Rail Sustainability Strategy (see [Sustainability Strategy \(nsw.gov.au\)](https://www.nsw.gov.au/sustainability)). The Parramatta Light Rail Sustainability Strategy would be updated to encompass the project. It would provide the management framework and approach for the delivery of sustainable and resilient outcomes, including the requirements to achieve a rating under the Infrastructure Sustainability Council infrastructure sustainability (IS) rating tool.

Transport has demonstrated its ongoing commitment to achieving sustainable infrastructure for Parramatta Light Rail, having been awarded the highest ever 'As-Built' rating by the Infrastructure Sustainability Council for Parramatta Light Rail Stage 1.

Disposal of contaminated soil

Issue description

A submitter requested clarification about where contaminated soil will be disposed of, and noted that there is a large amount of hazardous waste buried around Wentworth Point.

Submission number

SE-51719707

Response

Areas of contamination concern within the project site are described in section 18.2.3 of the EIS and the potential to encounter contamination during works is described in section 18.3.1. As described in section 18.3.1, works in Wentworth Point (along Hill Road) and Sydney Olympic Park would need to consider the potential to encounter soil and/or groundwater contamination and landfill gases as a result of the historical use of this area for industrial activities and landfilling.

As described in section 4.2.2 of this report, further contamination assessment has been undertaken across the project site. Preliminary results indicate that it is likely that most excess spoil would be classified as general solid waste in accordance with the NSW EPA's *Waste Classification Guidelines* (2014). However, there may be some potential to encounter materials classified as restricted solid waste (5.5 per cent of samples met this classification) or hazardous waste (less than one per cent of samples met this classification).

As described in section 22.2.3 of the EIS in-situ testing of soils would be undertaken in areas of potential contamination concern to determine the appropriate waste classification. Contaminated spoil would be sampled before being transported and disposed of at a suitably licensed off-site location. Examples of waste facilities in Sydney that could be used are provided in Table 22.5 of the EIS. The facility would be identified based on availability/capacity, the waste the facility is licensed to accept, and confirmed waste classifications. The disposal process, including the facilities used, will be documented in the waste and resource management plan prepared in accordance with mitigation measure WR3.

Removal of the Grand Avenue road over rail bridge

Issue description

A submitter noted that the Grand Avenue bridge is a known bottleneck, is not needed in its existing form to provide access over the former rail corridor, and has been made redundant by Parramatta Light Rail Stage 1. The bridge should be removed.

Submission number

SE-52009207

Response

The project does not include removing any sections of road or structures within Grand Avenue. The removal of the Grand Avenue road over rail bridge does not form part of the project for which approval is sought. As outlined in section 4.1 of this report, the project for which approval is sought incorporates an alternative alignment between Camellia and Rydalmere to avoid direct impacts on industrial properties along Grand Avenue. The alignment is now proposed to remain in the Sandown Line corridor and extend along the Parramatta River foreshore at the rear of the properties that front Grand Avenue. The alignment would not be located along or adjacent to Grand Avenue.

Use of light rail for food transport

Issue description

Submitters noted that light rail can be used for food delivery transport if designed accordingly, with food trays collected from stations. This will make the line more profitable and mean there will be less food delivery vehicles on the road.

Submission numbers

SE-52716711, SE-52724457

Response

The need for Parramatta Light Rail is described in Chapter 3 (Strategic context and need) of the EIS and is to deliver an integrated public transport service that supports the NSW Government's vision for the GPOP area, which is to become the geographic and demographic centre of Greater Sydney. The project would help meet the challenges related to connectivity and accessibility, transport choice and congestion, and urban renewal and development by providing a connected spine through GPOP enabling more connected and liveable communities.

The use of light rail services by food delivery providers is not part of the objectives of Parramatta Light Rail.

Improvements to the bus network

Issue description

A submitter urged Transport to consider and plan improvements to the bus network as part of the project rather than after the infrastructure is built. The submitter noted that the success of this project is contingent on interchanges with other transport modes, so bus interchanges should be planned in the same way that the rail and ferry interchanges will be planned.

Submission number

SE-51938967

Response

Transport is constantly reviewing bus services to ensure they maximise efficiency, ridership, are convenient, and safely transport passengers to their destinations. Improvements to bus services have been considered in parallel with design of the project as well as other major infrastructure projects such as Sydney Metro West.

As described in section 6.10.3 of the EIS, existing bus routes along roads affected by the project would be retained as far as practicable. However, an initial review has identified that some changes to the bus network may be required, including:

- introducing new routes or modifying service frequency to meet existing and future customer travel patterns
- truncating or removing some services to better integrate with the project and the broader transport network (for example reducing services that operate in a similar corridor to the project)

- changing routes to adapt to proposed changes to the road network and new development
- considering opportunities for on-demand services in the study area.

Changes to the bus network are outside the scope of the project and would be assessed and delivered separately by Transport in conjunction with bus operators.

Minor changes to some bus stop infrastructure and locations would be required. Relocated stops would be located as close as possible to the existing stop. These changes would be undertaken as part of the project.

Further information on changes to bus routes is provided in section 9.4.2 of the EIS.

Additional public transport

Issue description

Submitters noted that an additional Sydney Metro West station is supported between Olympic Park and Parramatta. Parramatta Light Rail and Sydney Metro West will not be enough to reduce car dependency in the Greater Parramatta and Olympic Peninsula, especially around Silverwater and Newington. Integrated multi-modal timetabling must be undertaken. In the interim, the 401 bus from Lidcombe Station to Carter Street should be restored to its former route servicing Olympic Park Station and Sydney Olympic Park Wharf. The Sydney Metro City & Southwest project team's proposal and planning for light rail to replace Sydney Trains on the T7 Olympic Park line and the T3 Bankstown to Lidcombe shuttle line is opposed.

Submitters also requested that a connection be made at Camellia with the Parramatta to Wynyard Metro, and that a new metro station be constructed near Camellia.

Submission numbers

SE-52462492, SE-52892210

Response

As described in section 6.7.3 of the EIS, the project would interchange with Parramatta Light Rail Stage 1, Sydney Metro West, train, ferry and bus services within/close to the project site. Cumulatively, these interchanges would encourage a modal shift away from private vehicle use to public transport. Transport understands that the timetabling of services between different transport modes is critical in providing enhanced connections and the convenience expected by the customer.

The planning of Sydney Metro West stations and routing of bus services is beyond the scope of the EIS.

Direct connections between the project and Sydney Metro West would be provided at Parramatta CBD and Sydney Olympic Park. A direct connection at Camellia and provision of a new heavy rail station as part of Sydney Metro West is beyond the scope of this project.

Other out of scope issues

Issue description

Submitters raised a range of issues that are outside the scope of the project as proposed, including:

- The noise from buses servicing Stadium Australia late in the night following major events as they brake, turn and change gear will impact residents.
- In providing an alternative to transport between Olympic Park and Lidcombe train stations, will Sydney Trains modify Olympic Park and train tracks to provide at least four platforms and tracks?
- It is assumed that Transport will take the opportunity to bury the electrical wires that currently line the new route through Wentworth Point.

Submission numbers

SE-50667210, SE-51854962, SE-52089757

Response

These issues are not within the scope of the project and it is outside the scope of this report to provide responses to these matters.