

20 December 2021

TfNSW Reference: SYD21/00188/03

DPIE Reference: SSD-14378717

Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Attention: Andy Yung

EXHIBITION OF EIS FOR TELOPEA CONCEPT PLAN AND STAGE 1A RESIDENTIAL, RETAIL, CHILD CARE AND AGED CARE - ADDERTON ROAD, TELOPEA

Dear Sir/Madam,

Reference is made to your correspondence dated 8 October 2021, regarding the abovementioned application which was referred to Transport for NSW (TfNSW) for approval of new traffic control signals under Section 87 of the *Roads Act, 1993* and for comment under *State Environmental Planning Policy (Infrastructure) 2007*.

TfNSW has reviewed the submitted application and is unable to provide approval for new traffic signals under Section 87 of the *Roads Act, 1993*. The following comments are provided for the applicant to address:

1. It is noted that this SSD only seeks consent for the signalised intersection of Adderton Road/New Link Road but Section 6.8 of the submitted traffic report *states "The road upgrades detailed in Section 6.2 above would be completed prior to the anticipated completion of Stage 1A in 2026/2027, as will the other key road network upgrades as detailed in Table 17 and of course the Parramatta Light Rail will have commenced services."* Accordingly, SIDRA modelling and Warrants Assessments must be submitted for TfNSW review as part of this SSD.
2. A warrants assessment for Adderton Road/New Link Road, Adderton Road/Mason Street, Mason Street/Sturt Street and Shortland Street/Evans Road should be submitted to TfNSW for review. A warrant assessment will need to be undertaken as per the 'Traffic Signal Design Manual, Section 2 Warrants' and the applicant needs to confirm at which stage of the development proposal the warrants for signal will be met at each proposed location.

It should be noted that the Road Network Upgrade Schedule in Section 5.12.2 of the submitted Traffic and Accessibility Impact Assessment (TAIA) report proposes most road upgrades to be completed by 2023. Warrants assessments should be carried out on the volume of traffic in the year that the signals are proposed to be operation, or signals should be installed if and when warrants are met.

3. Revised Residential Trip Generation rates presented in Table 14 of the submitted TAIA indicate that traffic generation for residential uses represent a reduction from the trips assigned in the Precinct TTA Addendum by 35% due to close proximity to Telopea Station. Traffic generation rates for social housing have been similarly discounted from TTA Addendum rates. TfNSW is seeking further explanation to justify how these traffic generation rates were determined and what benchmarking was used. It is assumed that car parking will still be provided for the proposed social housing.
4. Submitted SIDRA modelling showing the intersection performance of surrounding signalised intersections does not consider cumulative traffic impacts in Telopea to represent a cumulative impact assessment. It is noted in the submitted TAIA that *"It is assumed all trips entering and exiting the New Link Road are associated with development trips as per the Precinct TTA Addendum's analysis. As such, these modelled New Link Road trips have been used as the basis of the trip distribution for the revised Telopea CPA Stage 1 traffic generation."* New Link Road will provide a significant road connection between Adderton Road and the Telopea Town Centre and traffic modelling should consider background traffic growth in addition to development traffic to represent actual trip distributions.
5. The proposed location of the new signals on Adderton Road/New Link Road is within substandard proximity (minimum of 130m) to the existing signalised mid-block pedestrian crossing on Adderton Road, north of Roberts Street. TfNSW is concerned the proposed location can result in the see-through effect and create a safety hazard. The combined operation of the existing mid-block signalised crossing and the proposed New Link Road/Adderton Road intersection should be considered in amended SIDRA modelling. It is also noted that the length of the southbound left turn bay on Adderton Road is proposed to be 100m long and will extend into the existing mid-block crossing.
6. SIDRA modelling for all proposed signalised intersections has not been submitted for review. Modelling should assess forecast impacts on road safety and capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or a similar traffic model as prescribed by TfNSW. The traffic modelling should consider the scenarios of baseline year, year 2026, 2031, 2036 and the year until the facility cease operation. Any intersection upgrade works assumed to be undertaken by TfNSW by a certain date on the classified road that are unfunded will need to be removed from the traffic modelling. This is to ensure that an accurate assessment is undertaken of the cumulative impact of this development on the existing classified road network.
7. It is noted that Section 2.3.1 of the TAIA states the following relating to Existing Road Network Performance – Traffic Surveys:

"At the above 5 mid-block locations, the following data were collected for 7 days, between 16 June to 23 June 2021"

Transport for NSW notes that the traffic survey undertaken by the proponent was during the COVID-19 pandemic. Traffic volumes across the Sydney road network throughout the year 2020, including when the survey was undertaken, were abnormally low due to

the impacts of COVID-19. The use of a singular point of data collection may not be a true representation of the existing parking and traffic demand generated by the site as stated in Section 2.3.1.

TfNSW recommends the proponent revises the TAIA to use traffic data from a wider sample of dates during a period pre-Covid or post-Covid. If the proponent is unable to source this data, the provided should be adjusted to account for reduced traffic volumes due to COVID-19.

8. There is little information about the expected flows of different populations in and out of the precinct, where their key destinations or origins would be, and how this aligns with different transport options including the Parramatta Light Rail (PLR). Such information affects viability of different transport options and their ability to accommodate the trip demand of the Telopea Concept Plan, in particular PLR, which has not been considered in the TAIA.

The TAIA should be amended to undertake the following:

- Detail key destinations/origins that would involve travel to or from the precinct and determine potential to use different modes of transport for these trips (including cost and time associated with the trips).
 - Model the transport options and potential trips generated based on mode share targets and desirability of modes for different destinations to determine how the full number of trips during the AM and PM peak periods of the Telopea Concept Plan will affect the passenger capacity of PLR and nearby bus services and active transport infrastructure, including identifying the ability of PLR/bus services ability to accommodate increased passenger volumes from the development.
9. Submitted traffic signal design does not indicate the signalised pedestrian crossing over the PLR line.
 10. The cross section of Adderton Road including the PLR line should be submitted for review to confirm adequate storage space in the road reserve for pedestrians is provided.
 11. The stop line on the intersection layouts for Adderton Road/New Road should be located as close to the intersection as possible to minimise inter-green time and improve sight distances.
 12. The TAIA does not state that the proposed New Link Road across the PLR and proposed New Link Road/Adderton Rd/light rail intersection have been considered in the design and operation of PLR (including acceptance from the PLR SOM contractor) and therefore it is not clear if any potential impacts to light rail have been considered.

The TAIA should confirm if the proposed New Link Road across the PLR and proposed New Link Road/Adderton Rd/light rail intersection have been considered in the design and operation of the PLR (including acceptance from the PLR SOM contractor) and

identify their potential impacts to light rail and subsequent mitigation measures.

13. TfNSW has previously advised that the proposed New Link Road/Adderton Rd/light rail intersection requires two exit lanes from the New Link Road to optimise the signal operation. Left Lane = left turn : Right Lane = right turn. This has not been shown in the intersection design in the TAIA.

If an alternative options to at-grade crossings through the Parramatta Light Rail corridor is not possible, the proposed New Link Road/Adderton Rd/light rail intersection should be amended in the TAIA to two exit lanes from the New Link Road in the configuration of Left Lane = left turn : Right Lane = right turn

14. TfNSW has previously advised that the proposed New Link Road/Adderton Rd/light rail intersection requires two exit lanes from the New Link Road to optimise the signal operation. Left Lane = left turn : Right Lane = right turn. This has not been shown in the intersection design in the TAIA.

TfNSW has also previously provided a copy of the signal phasing for the signals at Sunnyholt Road/ James Cook Drive (attached) which is a similar intersection layout to the proposed New Link Road/Adderton Rd/light rail intersection, instead involving a bus T-Way rather than a light rail.

It is advised that the phasing is a result of the many delays we had following the initial phasing at the intersection. This should be provided to the proponent to support the aforementioned required intersection design change.

15. It is noted that the proposed development is located immediately adjacent to the Parramatta Light Rail (PLR) corridor. It is advised that:
 - The introduction of additional at-grade signalised crossings across the Parramatta Light Rail corridor has the potential to impact service reliability and travel times.
 - Detailed intersection design in Figure 19 is unclear due to the images low resolution and unable to be adequately examined at this time. However, it appears that the only one 3m wide lane in each direction is proposed across the PLR corridor.

The proponent should consider alternative options to at-grade crossings through the Parramatta Light Rail corridor in order to meet the precincts access requirements. The proponent needs to also consider a design which would enable buses to travel through the intersection to service the precinct.

16. Mode share targets could be improved, particularly for cycling and walking. There is potential to reduce the trips generated by private vehicles (particularly local trips) and therefore improve the network performance, and reduce both on-street and off-street parking requirements. The TAIA should be amended to undertake the following:
 - Increase mode share targets for active transport and decrease mode share target for cars.

- Consider how these mode share targets will change network requirements, with some contingency where needed.
- Consider reducing the parking rates with a maximum rather than a minimum rate, and introducing parking management initiatives to de-incentivise driving where possible.
- Clarify visitor bikes parking rates required and provided

17. Additional cars will impact on reliability for buses that will use Sturt Street in the future (route 545 – 8 min service during the peak). TfNSW currently receives complaints about reliability for this route. Measures to minimise impact to the reliability of route 545 should be considered in the TAIA.

18. The TAIA mentions green initiatives such as cycleways to support the development. It is advised that surrounding streets that are currently traversed by buses (Sturt/Marshal/ Evans) will not accommodate a cycleway and buses. The inability of Sturt/Marshal/ Evans streets to accommodate buses and cycleways needs to be considered in the TAIA and cycleways located on other streets instead.

19. The Stage 1A development includes 1xHRV and 1xSRV spaces to support the freight and servicing of the development. It is advised that this provision is considered inadequate to support the demand of the development and requires a third vehicle space. This could be in the form of a B99 vehicle space. The development should be amended to provide an additional freight and service vehicle space which could be in the form of a B99 vehicle space.

It is also requested that the applicant be conditioned to prepare a Loading and Servicing Management Plan for the review and endorsement of TfNSW, prior to the issue of any Occupation Certificate. The plan needs to ensure that any potential impacts to the operation of the SLR from the development's loading and servicing vehicles are mitigated.

Prior to the issue of any occupation certificate, the applicant shall prepare a detailed Loading and Servicing Management Plan in consultation with Customer Journey Planning within TfNSW. The plan shall ensure that any potential impacts to the operation of the PLR from the development's loading and servicing vehicles are mitigated. The applicant shall submit a copy of the final plan to the Executive Director Customer Journey Planning for endorsement. The Plan needs to specify, but not be limited to, the following:

- Details of the development's loading and servicing profile, including the forecast loading and servicing traffic volumes by vehicle size, frequency, time of day and duration of stay;
- Details of loading and servicing facilities that may be required either within the subject site or other sites in the immediate vicinity which adequately accommodate the forecast demand of the development so as to not rely on the kerbside restrictions to conduct the development's business; and
- Details of measures to mitigate any potential impacts to the operation of the SLR from the development's loading and servicing vehicles.

The Loading and Servicing Management Plan shall be implemented by the applicant following the issue of the Occupation Certificate.

20. Appendix B of the TAIA shows the proposed intersection upgrades to support the development. Several regular bus routes operate through these intersections along Pennant Hills Road. It is advised that the proposed upgraded intersection design of the following intersections involve the removal of bus priority infrastructure:

- Pennant Hills Road and Marsden Road
- Pennant Hills Road and Jenkins Road

It is advised that bus priority infrastructure should be retained in aforementioned intersections and the inclusion of additional bus priority infrastructure for these intersections investigated.

21. Appendix B of the TAIA shows the proposed intersection upgrades to support the development. Several regular bus routes operate through these intersections along Pennant Hills Road and could benefit from an operational perspective from the inclusion of bus priority infrastructure. These intersections include:

- Pennant Hills Road and Adderton Road
- Pennant Hills Road and Coleman Avenue
- Pennant Hills Road and Evans Road

It is advised that the inclusion of bus priority infrastructure for the aforementioned intersections should be investigated.

22. It is noted that the TAIA states *“A green travel plan for Stage 1A would be submitted to Council and DPIE for approval prior to the issue of a Construction Certificate.”* It is requested that the proponent consults with TfNSW and also requires TfNSW’s approval prior to the issue of a Construction Certificate. TfNSW will require a precinct-wide green travel plan for the Telopea Concept Plan and a site specific green travel plan for Stage 1A to be prepared and approved by TfNSW as part of its recommended conditions of consent.

The TAIA should be amended to state the following – “A precinct-wide green travel plan for the Telopea Concept Plan and a site specific green travel plan for Stage 1A will be submitted to Council, TfNSW and DPIE for approval prior to the issue of the first Construction Certificate.”

Prior to the issue of a Construction Certificate, the applicant should prepare a comprehensive precinct wide Green Travel Plan for the Telopea Concept Plan and a site specific Green Travel Plan for Stage 1A Residential, Retail, Child Care, Aged Care in consultation with TfNSW. The plan is required to:

- Identify strategies and mode share targets that encourage sustainable transport use such as public transport, walking and cycling and reduce the proportion of single occupant car journeys to the site for staff and students;
- Include a Transport Access Guide that provides information to staff and

students about the range of travel modes access arrangements and supporting facilities that service the site; and

- Nominate the party/parties responsible for implementing the plan and its ongoing monitoring and review, including the delivery of actions and associated mode share targets.

23. A copy of the following plans and documents is requested to further support the assessment of the site and its impact on the rail corridor:

- A plan showing the offset to the Light Rail Tracks;
- A copy of the Civil Stormwater Management Report or Flooding Impact Assessment which sits behind the Civil Drawings submitted; and
- Reflectivity and lighting impact assessment to assess the impact to light rail operations.

24. The design for openings such as balconies and windows on Building E will require risk mitigation of debris being thrown onto rail infrastructure. The Applicant is requested to provide updated drawings/details for Building E, showing anti-throw mechanisms for openings etc. (windows, balconies, terraces, roof top facilities and the like) within 20m facing the rail corridor in accordance with protection of rail corridors in Asset Standards Authority (ASA) Technical Guidelines T HR CI 12090 ST and Development near Rail Corridors and Busy Roads – Interim Guideline.

25. Figures presented in Appendix Y3 - Prediction of Ground Movements Under Rail Corridor (Section 3) figures appear that the application of foundation load results in a localised impact on movement (no change in movement at tracks) however, this is not reflected in the results table.

The Applicant is requested to confirm the analysis results in Appendix Y3 - Prediction of Ground Movements Under Rail Corridor (Section 3) presented in the table to confirm they match those presented in Figures 3, 4 and 5 including if the stages reported are correct.

26. Appendix Y3 - Prediction of Ground Movements Under Rail Corridor in the Finite Element Analysis section addressing the detailed cross-section in Figure 2 will require additional information on reduced levels and maximum depth of excavation. The Applicant is requested to update the detailed cross-section in Figure 2 to provide additional information on reduced levels and maximum depth of excavation.

27. Building E is adjacent and within 25m of the rail corridor, from a geotechnical and ground movement standpoint the proposed berm geometry will need to satisfy the required design life. The Applicant is requested to update Appendix Y3 - Prediction of Ground Movements Under Rail Corridor' (Section 2.2) and Appendix Y1 - Preliminary Geotechnical assessment (page 6) to confirm the proposed berm geometry satisfies the required design life and provide a construction programme and design life for Building E berm adjacent to the rail corridor.

28. The Carlingford Rail Corridor is decommissioned and under construction for a new 750V DC light rail system with a high frequency of services and potential stray currents. Additionally, the site is in close proximity to a future traction substation, the likelihood of potential stray current is significantly greater than when the testing was undertaken in May 2021.

The Applicant is requested to update the Electrolysis Testing Document (Section 8 Recommendations) and the recommendations should include:

- Item 1 – heavy plastic membrane and high strength concrete with minimum 50mm cover should not be an either / or option and both should be specified as mandatory to mitigate future corrosion risk;
- Item 2 – Incorporate further measures for corrosion hazards to water and fire services can be eliminated by the installation of an insulating fitting, or non-metallic sections in the water and fire services at or close to the boundary of the property as detailed in the Transport for NSW document T HR EL 12002 GU “Electrolysis from Stray DC Current”, Clause 5.3: “Water and gas pipes servicing buildings on the Railway Corridor and near 1500 V track to have an isolating joint installed at the boundary”;
- Requirements for gas services needs to be specified. Gas services if it is metallic construction require fitting with a cathodic protection system incorporating an insulating joint at the meter and if the service is low pressure, can be run in non-metallic pipe;
- A new section needs to be added to include metallic reinforcement bar chairs to provide a conductive path for conduction of stray traction currents. Bar chairs should be either plastic or concrete;
- Electrical Continuity Testing needs to add a new section to address prior to pouring each concrete element, resistance testing should be measured and recorded. Resistance should be less than 2 ohms, as specified in AS2832; and
- A new section to address how permanent ground anchors will be protected and included in the Report.

29. The Noise Impact Assessment does not identify whether apartments will require alternative ventilation in accordance with “Development Near Rail Corridors and Busy Roads- Interim Guidelines” outlining criteria for when alternative ventilation is required. The Applicant is requested to update the Noise Impact Assessment (Section 6, pg. 14-16) to address alternative ventilation criteria’s in accordance with “Development Near Rail Corridors and Busy Roads- Interim Guidelines” and clearly identify which apartments require alternative ventilation and how this has been assessed.

30. The Noise Impact Assessment does not provide adequate information on the recommended treatments and how they have been established. The Applicant is requested to update the Noise Impact Assessment (Section 6.1, pg. 15) to clearly

outline the assessed external noise levels in relation to its proximity to the Parramatta Light Rail and how the recommended treatments will be established.

31. There is insufficient information on the reference noise and vibration measurements and its relationship to the site. Reference measurements has been undertaken at curved track where the light rail would likely be travelling slower than for the Parramatta Light Rail (PLR). It should be noted that reference measurements adopted were for a slab track from Sydney Light Rail (SLR) and part of PLR is ballasted track.

The Applicant is requested to update the Noise Impact Assessment (Section 5.3, pg. 11) and refer to the PLR EIS to reference the speed of reference measurements and speed for Parramatta Light Rail (PLR) including the ballasted track on PLR. Information should also include the number of light rail pass-bys measured and its relationship with PLR operations. Detailed design drawings showing where the end of the slab track and beginning of ballasted tracks can be provided by TfNSW to address this comment.

Upon receipt of the above information, TfNSW will assess the information and provide a response under the *Roads Act, 1993* accordingly.

TfNSW also provides the following comments for consideration in the determination of this application:

1. Noting the proposed works would have interface issues with the construction and/or operation of Parramatta Light Rail, the following conditions will be requested to be included in the consent should the application be approved.
 - Prior to the commencement of works on site, if required by TfNSW, an interface agreement between the Applicant, the Parramatta Light Rail Operator, (and if nominated by TfNSW any other relevant TfNSW Contractor) must be executed. The interface agreement will include, but is not limited to:
 - Pre and post construction dilapidation reports;
 - The need for track possessions;
 - Review of the machinery to be used during excavation, ground penetration and construction works;
 - The need for track monitoring;
 - Design and installation of lights, signs and reflective material;
 - Access by representatives of TfNSW, the Parramatta Light Rail Operator and any other relevant TfNSW Contractor nominated by TfNSW to the site of the approved Development and all structures on that site;
 - Endorsement of Risk Assessment/Management Plan and Safe Work Method Statements (**SWMS**);
 - Endorsement of plans regarding proposed craneage and other aerial operations;
 - Erection of scaffolding/hoarding;
 - The rules and procedures of the Parramatta Light Rail Operator and any other relevant TfNSW Contractor nominated by TfNSW;

- Parramatta Light Rail Operator's recovery of costs from the Applicant for costs incurred by these parties in relation the Development (e.g. review of designs, shutdown /power outages costs including alternative transport, customer communications, loss of revenue etc) risk assessments and configuration change processes; and
 - Alteration of rail assets such as the overhead wiring along the track and associated hoarding demarcation system, if undertaken by the Applicant.
 - Prior to the commencement of any works, if required by TfNSW, a Deed Poll will need to be accepted by Parramatta Light Rail Contractors and signed by the Applicant. The Deed Poll will include, but is not limited to:
 - Work Health and Safety provisions including the need for Safe Method Work statements;
 - Parramatta Light Rail access requirements including site works access approval and access permit to work;
 - Parramatta Light Rail Contractor compliance requirements;
 - Indemnities and releases;
 - Insurance requirements and conditions;
 - Parramatta Light Rail Contractors recovery of costs from the Applicant for costs incurred in relation to the Development (e.g. review of designs, provision of information);
 - The need to enter into an interface deed or similar with the Parramatta Light Rail Operator when the Parramatta Light Rail project is handed over to the Operator;
 - Attendance and participation in the construction works risk assessment of construction activities to be performed in, above, about, and/or below the Parramatta Light Rail Corridor.
 - Prior to commencement of works, the applicant must hold current public liability insurance cover of minimum AUD\$ 250 million, unless otherwise advised by TfNSW, for the entire period of the construction programme. This insurance shall not contain any exclusion in relation to works on or near the rail corridor, rail infrastructure. Prior to issuing the first Construction Certificate the Certifier must witness written proof of this insurance in conjunction with TfNSW's written advice to the applicant on the level of insurance required.
2. Consultation will TfNSW Light Rail and the PLR operator is to be maintained during the design phase of the New Link Road/Adderton Road signalised intersection.
 3. Prior to Construction Certificate, the Applicant is requested to provide a copy of structural drawings of proposed structures (including retention system) within 25m of the rail corridor to TfNSW.
 4. It is noted that the TAIA states *"A detailed Construction Traffic and Pedestrian Management Plan for Stage 1A would be submitted to Council and DPIE for approval prior to the issue of a Construction Certificate. A preliminary Construction Traffic and Pedestrian Management Plan for Stage 1A is detailed in Section 8"*. It is requested that

the proponent consults with TfNSW and also requires TfNSW's approval prior to the issue of a Construction Certificate.

Prior to the issue of any construction certificate or any preparatory, demolition or excavation works, whichever is the earlier, the applicant shall:

- Prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with TfNSW. The CPTMP needs to specify matters including, but not limited to, the following:
- A description of the development;
- Location of any proposed work zone(s);
- Details of crane arrangements including location of any crane(s) and crane movement plan;
- Haulage routes;
- Proposed construction hours;
- Predicted number of construction vehicle movements, detail of vehicle types and demonstrate that proposed construction vehicle movements can work within the context of road changes in the surrounding area, noting that construction vehicle movements are to be minimised during peak periods;
- Construction vehicle access arrangements;
- Construction program and construction methodology, including any construction staging;
- A detailed plan of any proposed hoarding and/or scaffolding;
- Measures to avoid construction worker vehicle movements within the Telopea Precinct;
- Consultation strategy for liaison with surrounding stakeholders, including other developments under construction and Parramatta Light Rail Builder;
- Identify any potential impacts to general traffic, cyclists, pedestrians, bus services and any light rail within the vicinity of the site from construction vehicles during the construction of the proposed works. Proposed mitigation measures should be clearly identified and included in the CPTMP; and
- Identify the cumulative construction activities of the development and other projects within or around the development site, including the Parramatta Light Rail Project and private development. Proposed measures to minimise the cumulative impacts on the surrounding road network should be clearly identified and included in the CPTMP;

Submit a copy of the final plan to TfNSW for endorsement via development.CTMP.CJP@transport.nsw.gov.au; and provide the builder's direct contact number to small businesses adjoining or impacted by the construction work and TfNSW via development.CTMP.CJP@transport.nsw.gov.au to resolve issues relating to traffic, public transport, freight, servicing and pedestrian access during construction in real time. The applicant is responsible for ensuring the builder's direct contact number is current during any stage of construction.

5. It is noted that Section 5.3.2 of the TAlA states the following relating to Active Transport:

“New pedestrian crossing facilities will be provided in Sturt Street between the internal Telopea Core green link and Telopea Station in what will be very much a shared space, while signalised pedestrian crossings will be provided with all new signalised intersections. The type of crossing facility to be provided is subject to further detailed Warrants Assessment against the TfNSW Supplement to AS1742.10, and requires the Local Traffic Committee approval.”

Pedestrian connections between the Parramatta Light Rail stop and the Telopea Precinct redevelopment should be designed in consultation with the Parramatta Light Rail project team and Operator.

If you have any further questions please direct attention to Development Assessment Officer, Ms Shoba Sivasubramaniam, on 0431446623 or email development.sydney@transport.nsw.gov.au. I hope this has been of assistance.

Yours sincerely,



Malgy Coman
Senior Land Use Planner