

Ms Megan Fu  
Principal Planner  
Social and Infrastructure Assessment  
Department of Planning, Industry and Environment  
GPO Box 39  
Sydney NSW 2001

Dear Ms Fu

**Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre  
(SSD-10831778)**

Thank you for your correspondence via the Major Projects Portal on 17 May 2021, requesting Transport for NSW (TfNSW) to review and comment on the above.

**Protection of TfNSW Infrastructure and Sydney Light Rail Operation**

Comment

The development includes a proposal for the excavation, construction, and operation of a health facility that is near to the Sydney Light Rail corridor.

There are concerns about the potential effect on the structural integrity and safe operation of the light rail during construction and operation phases of the development. The proposed development is located within 25m of the light rail corridor and includes relatively deep excavation. Clause 86 of the State Environmental Planning Policy (Infrastructure) ISEPP outlines that in this circumstance development would require concurrence from TfNSW.

As the proposal is being assessed as State Significant Development, formal concurrence from TfNSW does not apply. Nevertheless, the development has been assessed and appropriate mitigation measures should be adopted to minimise these effects.

The light rail infrastructure must be protected and any disruptions to its operation are to be minimised during the construction and operation of the subject development.

It is advised that the applicant needs to assess the impacts of the operation of the Sydney Light Rail on the future locations of sensitive equipment (if any) within the subject site, particularly in regards to Electromagnetic Interference and Vibration and design the development to mitigate potential impacts of the Sydney Light Rail.

Recommendation

It is advised that the applicant must provide detailed engineering drawings, which illustrate the delineation of the light rail tracks (and relative dimensions to the excavation area) as part of the response to submissions.

The applicant must be conditioned to:

- Provide all relevant documentation as requested by TfNSW for review and endorsement prior to issuing the relevant Construction Certificate; and

- Protect TfNSW infrastructure and to minimise disruption to the light rail operation during the construction and operation of the subject development.

A draft set of conditions relating to the above is contained in **TAB A**.

## **Parking Demand and Management**

### Comment

Section 5.2 of the Traffic and Transport Assessment prepared to support the development application states the following:

*“Currently parking behaviours indicate that the average occupancy of the car park during the peak period is 91% on a weekday. A review of literature indicates that a dynamic wayfinding system has the potential to increase operational capacity of a multi-storey car park to the vicinity of 95%.”*

*“For the Project, this means an additional 95 parking bays will be required in the main car park to offset staff parking demand and to account for additional visitor/outpatient parking demand.”*

### Recommendation

It is requested that the applicant provides the following as part of the applicant’s Response to Submissions:

- Details on the measures including associated technologies (implementation of dynamic wayfinding systems and car stackers) that would be used to demonstrate the suggested utilisation can be achieved; and
- Evidence such as calculations or examples of car parks, with a similar turnover rate to the existing hospital car park, can or do operate effectively at 95% utilisation.

## **Travel Demand Management**

### Comment

It is noted that a Green Travel Plan (GTP) has been prepared as part of the Traffic and Transport Assessment. It is advised that

- The applicant updates and expands the existing GTP developed for the Randwick Hospitals Campus (SSD-10339-Mod-1), to provide for sustainable travel solutions for travel demand generated by the development;
- The GTP needs to be developed in collaboration with the UNSW Health Translations Hub development (SSD-10822510) due to their cumulative impact, and to ensure consistency across the project sites and to identify potential synergies;
- The applicant needs to identify how ongoing activities and/or those that are not completed by the Health Infrastructure prior to occupancy will be transferred to and/or delivered by Sydney Children Hospital, including provision of funding and resourcing for those activities, for a period of at least 5 years post-occupancy; and
- TfNSW would welcome further discussions with the proponent regarding these matters to ensure their delivery.

### Recommendation

It is requested that the applicant be conditioned to update the Green Travel Plan in consultation with TfNSW and submit a copy of the final plan for TfNSW endorsement, prior to the issue of the Occupation Certificate.

## **Safety Assessment of the Proposed Development**

### Comment

The proposed access arrangement allows light and heavy vehicle movements via Botany Street with multiple conflicts at the access to the loading dock to the Health Translation Hub, the loop road and the car park access for the subject site. The following conflicts in vehicle / pedestrian movements would have the potential to cause safety issues:

- Vehicles accessing the loading dock for the Health Translation Hub (HTH) and the car park for the subject development;
- Vehicles accessing the loading dock for the HTH and the proposed loop road; and
- Vehicles accessing the subject site as well as other properties adjacent to the site and pedestrian accessing these sites.

Swept paths analysis has not been undertaken for the maximum size of the vehicle accessing the loop road (Ambulances) via Botany Street in the Traffic and Transport Assessment.

### Recommendation

It is requested that the applicant undertakes the following as part of the Response to Submissions:

- Consider providing a consolidated loading dock for the subject site as well as the Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre with access via Hospital Road. This is to remove the heavy vehicle access via Botany Street;
- A Stage 2 (Concept Plan) Road Safety Audit for the proposed vehicle and pedestrian access arrangement to the subject site in accordance with *Austroads Guide to Road Safety Part 6: Managing Road Safety Audits* and *Austroads Guide to Road Safety Part 6A: Implementing Road Safety Audits* by an independent TfNSW accredited road safety auditor; and
- A swept path analysis for the maximum size of the vehicle (Ambulances) entering and leaving the loop road to / from Botany Street.

Based on the results of the road safety audit and the swept path analysis, the design drawings need to be reviewed to identify safety measures that may need to be implemented.

## **Operational Traffic Management**

### Comment

It is noted that a number of different users from multiple sites will be accessing the proposed entry route/ drop off area/ loop road. It is not clear how this area will be managed such that queuing back onto Botany Road will not occur.

### Recommendation

It is requested that the applicant provides the details on the estimated number of vehicles using the proposed entry route/ drop off area/ loop road and undertakes a queuing analysis to confirm that the proposed access and internal circulation arrangements would not cause queuing on Botany Street as part of the applicant's Response to Submissions.

### **Construction Pedestrian and Traffic Management**

#### Comment

Several construction projects are likely to occur within the Randwick Precinct at the same time as this development. The cumulative increase in construction vehicle movements from these projects could have the potential to impact on general traffic and public transport operations within the Randwick Precinct, as well as the safety of pedestrians and cyclists particularly during commuter peak periods.

It is noted that a Preliminary Construction Pedestrian and Traffic Management Plan (CPTMP) has been prepared as part of the Traffic and Transport Assessment. It is advised that the applicant updates and expands this Plan in consultation with TfNSW to prepare a CPTMP.

#### Recommendation

It is requested that the applicant be conditioned to prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with TfNSW and the Sydney Light Rail Operator and submit a copy of the final CPTMP for TfNSW endorsement, prior to the issue of any construction certificate or any preparatory, demolition or excavation works, whichever is the earlier.

### **Draft Conditions of Consent**

Draft Conditions of Consent are included in **TAB A** (for ISEPP Clause 86 Concurrence matters) and **TAB B** (for all other matters). It is advised that the final suggested Conditions of Consent be provided as part of the comments on the applicant's response to submissions.

TfNSW would be pleased to consider any further material forwarded from the applicant.

Thank you again for the opportunity of providing advice for the above development application. If you require clarification on the above, please don't hesitate to contact Para Sangar, Senior Transport Planner, Land Use Planning and Development on 0466 024 892.

Yours sincerely



15/6/2021

**Mark Ozinga**

Senior Manager, Land Use Planning and Development  
Customer Strategy and Technology

Objective Reference- CD21/03609

## **TAB A – Draft Suggested Conditions Relating to ISEPP Clause 86 Concurrence Requirements**

### **General**

- The applicant must comply with all Altrac Light Rail Partnership (Altrac) or any subsequent operator of Sydney Light Rail (Sydney Light Rail Operator) policies, rules and procedures when working in and about the Sydney Light Rail corridor;
- The applicant must comply with the requirements of T HR CI 12080 ST External Developments version 1.0 and Development Near Rail Corridors and Busy Roads- Interim Guidelines;
- Activities of the applicant must not affect and/or restrict Sydney Light Rail operations without prior written agreement between the applicant, Transport for NSW (TfNSW), Altrac, and the Sydney Light Rail Operator, and it is a condition precedent that such written agreement must be obtained no later than two (2) months prior to the activity. Any requests for agreement are to include as a minimum the proposed duration, location, scope of works, and other information as required by the Sydney Light Rail Operator;
- The applicant must apply to Altrac and the Sydney Light Rail Operator for any required network shutdowns four (4) months prior to each individual required network shutdown event. Each request for network shutdown must include as a minimum the proposed shutdown dates, duration, location, scope of works, and other information as required by the Sydney Light Rail Operator. It is likely in the first two (2) years there will not be a light rail shutdown for maintenance purposes. The Sydney Light Rail Operator may grant or refuse a request for network shutdown at its discretion;
- The applicant shall provide safe and unimpeded access for Sydney Light Rail patrons traversing to and from the Sydney Light Rail stops at all times;
- TfNSW, and persons authorised by it for this purpose, are entitled to inspect the site of the approved development and all structures to enable it to consider whether those structures on that site have been or are being constructed and maintained in accordance with these conditions of consent, on giving reasonable notice to the principal contractor for the approved development or the owner or occupier of the part of the site to which access is sought; and
- All TfNSW, Altrac and Sydney Light Rail Operator's costs associated with review of plans, designs and legal must be borne by the applicant.

## **Prior to the Issue of the Construction Certificate**

### **Process of Endorsement of Conditions**

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

- Consult with TfNSW, Altrac and the Sydney Light Rail Operator to ascertain requirements in relation to the protection of TfNSW's infrastructure and to confirm the timing of the each construction certificate and associated documentation and activities prior to preparation of requested documentation;
- Sign Infrastructure Assess Deed Poll, Safety Interface Agreement and Works Deed with TfNSW and/or the Sydney Light Rail Operator;
- Confirm in writing with TfNSW what each Construction Certificate stage will involve; and
- Submit all relevant documentation to TfNSW as requested by TfNSW and obtain its written endorsement for each construction stage. A summary report for each construction stage shall also be provided to TfNSW to demonstrate the following:
  - No adverse impacts to the light rail corridor and light rail operation by clearly identifying impacts and mitigation measures; and
  - Submitted documentation has satisfied the relevant conditions.

The Principal Certifying Authority (PCA) is not to issue the relevant Construction Certificate until received written confirmation from TfNSW that the relevant conditions have been complied with for each Construction Certificate.

### **Review and Endorsement of Documents**

- Prior to the issue of any construction certificate or any preparatory, demolition or excavation works, whichever is the earlier, the following documentation shall be provided for the review and endorsement of TfNSW:
  - Final geo-technical and structural report / drawings. Geotechnical reports should include any potential impact on the light rail corridor located adjacent to the subject development site, easement and substratum;
  - Final construction methodology with construction details pertaining to structural support during excavation or ground penetration;
  - Details of the vibration and movement monitoring system that will be in place before excavation commences;
  - Final cross sectional drawings showing ground surface, rail tracks, sub soil profile, proposed basement excavation and structural design of sub ground support adjacent to the Rail Corridor located adjacent to the subject development site. Cross sectional drawings should also include the accurate RL depths and horizontal distances from assets (tracks, overhead lines, structures and cables) to the nearest point of excavation or ground penetration works. All measurements are to be verified by a Registered Surveyor; and
  - Detailed survey plan with location of services.

### Pre-construction Work Dilapidation Report

A pre-construction work Dilapidation Report of the Sydney Light Rail and its assets shall be prepared by a qualified structural engineer. The dilapidation survey shall be undertaken via a joint site inspection by the representatives of the Sydney Light Rail Operator, TfNSW and the applicant. These dilapidation surveys will establish the extent of existing damage and enable any deterioration during construction to be observed.

### Acoustic Assessment

Prior to the issue of the relevant Construction Certificate, the final acoustic assessment is to be submitted to the PCA demonstrating how the proposed development will comply with the Department of Planning's document titled "Development Near Rail Corridors and Busy Roads-Interim Guidelines". All recommendations of the acoustic assessment are to be incorporated in the construction documentation.

### Electrolysis Analysis

Prior to the issue of the relevant Construction Certificate, the applicant is to engage an Electrolysis Consultant to prepare a report on the Electrolysis Risk to the development from stray currents. The applicant must incorporate in the development all the measures recommended in the report to control that risk. A copy of the report is to be provided to the PCA with the application for the relevant Construction Certificate.

### Reflectivity Report

Prior to the issue of the relevant Construction Certificate, the applicant shall design lighting, signs and surfaces with reflective materials, whether permanent or temporary, which are (or from which reflected light might be) visible from the rail corridor limiting glare and reflectivity to the satisfaction of Altrac, TfNSW and the Sydney Light Rail Operator.

### Balconies and Windows

Given the possible likelihood of objects being dropped or thrown onto the rail corridor from balconies, windows and other external features (eg roof terraces and external fire escapes) that are within 20 metres of, and face, the rail corridor, the development must have measures installed, to the satisfaction of TfNSW (eg awning windows, louvres, enclosed balconies, window restrictors etc) which prevent the throwing of objects onto the rail corridor. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from TfNSW confirming that this condition has been satisfied.

### Consultation Regime

Prior to the issue of the relevant Construction Certificate, a detailed regime is to be prepared for consultation with and approval by TfNSW for the excavation of the site and the construction of the building foundations (including ground anchors) for the approved development, which may include geotechnical and structural certification in the form required by TfNSW.

## Insurance Requirements

Prior to the issue of the relevant Construction Certificate, the applicant must hold current public liability insurance cover for a sum acceptable to TfNSW. TfNSW's standard public liability insurance requirement for this type of development adjacent to a rail corridor is minimum of \$250M. This insurance shall not contain any exclusion in relation to works on or near the rail corridor, rail infrastructure. The applicant is to contact TfNSW to obtain the level of insurance required for this particular proposal. Prior to issuing the relevant Construction Certificate the PCA must witness written proof of this insurance in conjunction with TfNSW's written advice to the applicant on the level of insurance required.

## Works Deed / Agreements

Prior to the issue of any construction certificate or any preparatory, demolition or excavation works, whichever is the earlier, if required by TfNSW, Works Deed (s) between the applicant, TfNSW and/or Altrac and the Sydney Light Rail Operator must be agreed and executed by the parties. These agreements may deal with matters including, but not limited to, the following:

- Sydney Light Rail Operational requirements;
- Sydney Light Rail access requirements;
- Altrac and Sydney Light Rail Operator policies, rules and procedures compliance requirements;
- Indemnities and releases;
- Security of costs;
- Insurance requirements and conditions;
- TfNSW, Altrac and the Sydney Light Rail Operator's recovery of costs from the applicant for costs incurred by these parties in relation to the development (e.g. review of designs and reports, legal, shutdown /power outages costs including alternative transport, customer communications, loss of revenue etc) risk assessments and configuration change processes;
- Interface coordination between the Sydney Light Rail Operator and the subject development construction works, including safety interface;
  - Infrastructure Assess Deed Poll and Safety Interface Agreement between the applicant and the Sydney Light Rail Operator must be agreed and executed by the parties. This agreement may deal with matters including, but not limited to, the following:
    - Pre and post construction dilapidation reports;
    - The need for track possessions;
    - Review of the machinery to be used during excavation/ground penetration / construction works;
    - The need for track monitoring;
    - Design and installation of lights, signs and reflective material;
    - 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;



- Light Rail Operator's rules and procedures; and
- Alteration of rail assets such as the OHW along of track and associated hoarding demarcation system, if undertaken by the applicant.
- Altrac and the Sydney Light Rail Operator's reviews and impact assessment of the applicant's proposal, engineering design and construction works methodology on Sydney Light Rail Operations and assets;
- Attendance and participation in the construction works risk assessment of construction activities to be performed in, above, about, and/or below the Sydney Light Rail Corridor;
- Arrangements for shutdowns and Sydney Light Rail restricted operations related costs attributed to the applicant; and
- Sydney Light Rail site works access approval and access permit to work.

### **During Construction**

- Construction vehicles shall not be stopped or parked on High Street adjacent to the development at any time without prior approval of TfNSW;
- All piling and excavation works are to be supervised by a geotechnical engineer experienced with such excavation projects;
- No rock anchors/bolts (temporary or permanent) are to be installed into the light rail corridor without approval from TfNSW;
- No metal ladders, tapes and plant/machinery, or conductive material are to be used within 6 horizontal metres of any live electrical equipment unless a physical barrier such as a hoarding or structure provides separation;
- During all stages of the development extreme care shall be taken to prevent any form of pollution entering the light rail corridor. Any form of pollution that arises as a consequence of the development activities shall remain the full responsibility of the applicant;
- The applicant must mitigate all noise and vibration to the extent possible and provide vibration monitoring equipment and provide the results to the Sydney Light Rail Operator at intervals required by TfNSW and the Sydney Light Rail Operator, and immediately implement corrective actions in the event that the noise or vibration exceeds acceptable limits;
- Rainwater from the roof must not be projected and/or falling into the rail corridor/assets and must be piped down the face of the building which faces the rail corridor. Given the site's location next to the rail property, drainage from the development must be adequately disposed of/managed and not allowed to be discharged into the corridor unless prior approval has been obtained from TfNSW and the Sydney Light Rail Operator (or the delegated authority); and
- No scaffolding is to be used within 6 horizontal metres of the rail corridor unless prior written approval has been obtained from the Sydney Light Rail Operator and TfNSW and a physical barrier such as a hoarding or structure provides separation. To obtain approval the applicant will be required to submit details of the scaffolding, the means of erecting and securing this scaffolding, the material to be used, and the type of screening to be installed to prevent objects falling onto the rail corridor.

## **Prior to the Issue of the Occupation Certificate**

### **Post - construction Dilapidation Report**

Prior to the Issue of the Occupation Certificate, a post-construction dilapidation survey shall be undertaken via a joint inspection with representatives from TfNSW, Altrac, the Sydney Light Rail Operator and the applicant. The dilapidation survey will be undertaken on the rail infrastructure and property in the vicinity of the project. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during construction to be observed. The submission of a detailed dilapidation report to TfNSW and the Sydney Light Rail Operator will be required unless otherwise notified by TfNSW. The applicant needs to undertake rectification of any damage to the satisfaction of TfNSW and the Sydney Light Rail Operator and if applicable the local council.

### **Reflectivity Report**

Prior to the Issue of the Occupation Certificate, the applicant shall demonstrate that lights, signs and reflective materials, whether permanent or temporary, which are (or from which reflected light might be) visible from the rail corridor were installed limiting glare and reflectivity to the satisfaction of TfNSW, Altrac and the Sydney Light Rail Operator.

## **TAB B – Draft Suggested Conditions of Consent – Non - ISEPP Concurrence**

### **Travel Demand Management**

Prior to the issue of the Occupation Certificate, the applicant shall update the Green Travel Plan (GTP) in consultation TfNSW. The GTP needs to consider:

- More ambitious modal shift targets; and
- Site specific issue of travel to hospital facilities for children;

This Plan needs to include, but not limited to, the following:

- Updated bus network
- A communication strategy and a Travel Access Guide
- Funding, a delivery strategy and appropriate human resourcing for delivery of those actions for which Health Infrastructure and Sydney Children Hospital (SCH) have responsibility; and
- Details of cycling permeability and casual bike parking locations of the Randwick Hospital Campus including the new developments.

The applicant shall submit a copy of the final plan via [development.sco@transport.nsw.gov.au](mailto:development.sco@transport.nsw.gov.au) for TfNSW, prior to the issue of the occupation certificate.

The GTP must be implemented and updated annually to ensure sustainable transport outcomes and achieve the overall strategic planning objectives in the Future Transport 2056.

The plan shall be reviewed and updated annually in consultation with the aforementioned stakeholders and provide an Implementation Strategy that commits to specific management actions, including operational procedures to be implemented along with timeframes.

The plan (as reviewed and updated annually) shall be implemented by the applicant for the life of the development.

### **Construction Pedestrian and Traffic Management**

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 and the Sydney Light Rail Operator. 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);
  - Haulage routes;
  - Proposed construction hours;
  - Predicted number of construction vehicle movements and detail of vehicle types, noting that vehicle movements are to be minimised during peak periods;
  - Details of specific measures to ensure the arrival of construction vehicles to the site do not cause additional queuing on High Street or Botany Street;

- Details of the monitoring regime for maintaining the simultaneous operation of buses, light rail and construction vehicles on roads surrounding the site;
  - Pedestrian and traffic management measures;
  - Construction program and construction methodology;
  - A detailed plan of any proposed hoarding and/or scaffolding;
  - Measures to avoid construction worker vehicle movements within the Randwick Precinct;
  - Consultation strategy for liaison with surrounding stakeholders, including other developments under construction;
  - Any potential impacts to general traffic, cyclists, pedestrians and light rail and bus services within the vicinity of the site from construction vehicles during the construction of the proposed works;
  - Cumulative construction impacts of projects within the Randwick Health and UNSW precinct. Existing CPTMPs for developments within or around the development site should be referenced in the CPTMP to ensure that coordination of work activities are managed to minimise impacts on the surrounding road network; and
  - Proposed mitigation measures. Should any impacts be identified, the duration of the impacts and measures proposed to mitigate any associated general traffic, public transport, pedestrian and cyclist impacts should be clearly identified and included in the CPTMP.
- Submit a copy of the final plan to [development.sco@transport.nsw.gov.au](mailto:development.sco@transport.nsw.gov.au) for TfNSW endorsement; and
  - Provide the builder's direct contact number to small businesses adjoining or impacted by the construction work and the Transport Management Centre and Transport for NSW (via [development.sco@transport.nsw.gov.au](mailto:development.sco@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.