

16 December 2013

Ms Diane Sarkies
A/Manager, Rail Infrastructure Projects
NSW Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2000

Dear Ms Sarkies,

**Re: CBD and South East Light Rail Project (CSELR)
Submission on Environmental Impact Statement**

Health Infrastructure (HI) on behalf of NSW Health, including the Ministry of Health, the South Eastern Sydney Local Health District and the Sydney Children's Hospitals Network, has reviewed the documentation provided by the Department of Planning and Infrastructure (DP&I) in respect to the above project. HI appreciates the opportunity to provide comment on this important project and commends the Government's initiative in developing a light rail service to serve the City and South Eastern suburbs.

As you know NSW Health is a significant stakeholder along the proposed route of the light rail project and the impacts of the proposal will directly affect two (2) NSW Health properties. The most significant impacts will be to the Randwick Health Precinct but the impacts on the Langton Centre in Surry Hills are also considerable. Our specific concerns with the project (as exhibited) have been collaboratively workshopped with the project team and are outlined below for completeness.

1. Randwick Health Precinct

HI has met with Transport for NSW (TfNSW) and its consultants to provide input to the design process particularly regarding the Randwick Health Precinct and the criticality of High Street for health service provision.

a. Future Growth

HI has provided detailed information to TfNSW on the planned growth of the Randwick Health Precinct, and further reference should be made by the project to the forecast expansion of the health precinct and the likely impacts this would have on demand for travel in this area.

The Randwick Health Precinct is a major trip generator and destination. Over 11,000 people work on the campus with approximately 3,600 trips accessing the site via the High Street entrances each day. In the next 10 years this number is predicted to double to an estimated 7,000 trips per day. Growth of the health precinct must be accounted for in patronage forecasting. Access for disabled, the elderly and children is a high priority consideration.

Figure 9.8 of the Environmental Impact Statement (EIS) shows that CSELR is forecast to operate close to capacity in 2021 in the morning peak. HI are concerned that the CSELR has a limited ability to serve future travel demand, particularly when considering growth associated with the health precinct.

b. Stop Location

One of HI's most critical concerns with the proposal is the design configuration and lack of a stop or terminus in High Street. Locating the stop in High Cross Park has meant that project benefits associated with improved connectivity between transport and major travel generators (Randwick town centre and health precinct) have not been adequately addressed. In addition, critical construction and operational issues affecting the hospital have not been sufficiently addressed.

HI does not support the terminus location in High Cross Park or the absence of a light rail stop on High Street. Three design options discussed in the EIS were considered for the Randwick terminus, including two options in High Street. These were both discounted based on sub-optimal performance of interchange functions from buses and accessibility impacts due to full or partial closure of High Street. HI is strongly supportive of Option 3 described on page 4-24 of the EIS which includes a stop in High Street and a single traffic lane being retained.

HI is working with TfNSW on further development of this option and alternatives; however there is no resolution of this issue at this stage

c. Operation of High Street

High Street is currently the Randwick Health Precinct's "front door". It operates 24 hours a day and directly serves patients, staff, visitors and students of three tertiary NSW hospitals including the Prince of Wales Hospital, Royal Hospital for Women and Sydney Children's Hospital. A large number of trips are currently made by public transport - buses and taxis - to a location immediately adjacent the main hospital entrance. The current proposal would require these groups to negotiate Avoca and Belmore Roads to access the hospitals. Relocation of the taxi rank away from the hospital frontage creates significant accessibility issues for some user groups.

Several critical hospital functions are served by the Precinct's frontage with High Street. These include access to the Sydney Children's Hospital Emergency Department and pick up/drop off area, Prince of Wales Hospital pick up/drop off, ambulance parking and critical deliveries via Hospital Drive. The current CSELR proposal identifies various changes to the operation of High Street which do not adequately deal with the hospital's requirements.

Proposals to modify intersections and access at the following locations along High Street are not supported by HI. Specifically,

- The signalisation of High Street and Clara Street The proposed design for the pick up/drop off facility does not meet operational requirements for the Prince of Wales Hospital. Impacts of the proposed design include internal queuing and insufficient parking.
- Signalisation of High Street and Hospital Drive This will force vehicles to access Sydney Children's Hospital via signals and does not allow for pick up/drop off on the kerbside entrance to hospital. This is critical to operation of this facility – particularly if all parking along High Street is removed.

- The consolidation of the entrances to Prince of Wales Hospital to a single four way signalised access with Clara Street will create significant impacts on the operation of the pickup/drop off facility.

d. Traffic management and access.

HI does not support one of the traffic management principles stated in the EIS, “consolidation of right turn movements across the alignment with these only permitted at signalised intersections”.

HI requests alternative options be developed to address the operational impact caused by the CSELR along High Street on Prince of Wales pick up/drop off, Sydney Children’s Hospital emergency pick up/drop off and ambulance access and parking bays as described above.

e. Noise and vibration

The potential impact of vibration from construction work and operational light rail vehicles on hospital operations and buildings has not been adequately assessed. No allowance for the future operations of the approved Prince of Wales Nelune Comprehensive Cancer and Advanced Treatment Centre (NCCATC) has been included, despite its approval in July 2012. Linear accelerators located in underground bunkers (corner of High Street/Avoca Street) are highly sensitive to vibration and need detailed consideration and formulation of mitigation measures.

HI engaged Acoustic Logic to undertake a technical review of the noise and vibration information contained within the EIS. They note that sensitive equipment proposed to be within the building include four linear accelerators, a MRI, CT Scanner, and Orthovoltage Equipment and provide the following advice:

“The noise and vibration Environmental Impact Assessment prepared by SLR for the CBD and South East Light Rail currently nominates the VC-C curve as the minimum design objective for sensitive pieces of equipment within the Randwick hospital precinct. The predictions within the report additionally identify that there may be potential exceedances of this VC-C criteria (and any vibration criteria more stringent than VC-C) as a result of the operation of the South East Light Rail.

The Environmental Impact Assessment nominates resilient trackforms as a potential treatment to ameliorate vibration intrusion to the sensitive equipment. However, as noted in Table 20 [of the Noise and Vibration Impact Assessment], the predicted exceedances of the VC-C curve at the CCBDC site already include a reduction for the implementation of resilient trackforms. At this time, no manufacturer vibration data is available for the linear accelerators, however it is anticipated that the operational and damage criteria of these linear accelerators will be more stringent than the VC-C curve.”¹

Given that the EIS predicts exceedances of VC-C curve at the cancer centre (even with the implementation of resilient trackforms) and the linear accelerators are likely to have operational and damage criteria more stringent than the VC-C curve, HI require a detailed vibration emission study be undertaken with specific assessment of the NCCATC linear accelerators, MRI, CT scanner and orthovoltage equipment. HI recommends that this study is undertaken by creating a finite element model using software similar to Strand7. This model should be constructed to predict vibration from the CSELR to each piece of sensitive equipment and assess the predicted vibration level against each piece of sensitive

equipment's specific vibration criteria. Where exceedances of vibration criteria are identified, specific treatments (pneumatic isolators, isolated plinths, etc) are to be specified so that all vibration emissions from the Light Rail corridor are in compliance with NCCATC vibration criteria.

Similarly, dilapidation reports and baseline vibration surveys on and within all hospital buildings within the vicinity of the proposed light rail and particularly the Health Precinct's heritage buildings must be undertaken and monitoring implemented during construction and operation.

Further to the vibration concerns outlined above, HI is also investigating possible issues with regard to Electromagnetic Fields associated with MRI equipment and possible impacts from the CSELR. This impacts will need to be confirmed and mitigated by the CSELR in consultation with HI.

Undertakings in the EIS to stage works or do certain works on weekends or at night will not address HIs concerns nor mitigate the impacts on the hospitals campus. The health facilities on site operate 24 hours a day 7 days a week and this must be considered in mitigation measures proposed.

f. Construction impacts

HI has serious concerns with the proposed construction footprint shown in Figure 6.2f of the EIS. This figure indicates a significant encroachment on hospital land and indeed would make hospital operations during the construction period impossible. Further information must be provided on how this is proposed to be managed and HI request ongoing dialogue with TfNSW on this issue to ensure there are no unreasonable impacts on hospital operations.

The EIS also identifies High Street as a construction haulage route for work in the Randwick area. This is likely to have an impact on hospital operation and hospital construction activities over the estimated 19 month construction timetable. HI seeks reassurance from TfNSW that ongoing consultation with HI and other health stakeholders will be established prior to any construction activities commencing in this area.

HI request further consultation with both TfNSW and the preferred operator on extent, duration and severity of construction impacts on High Street as well as:

- Proposed High Street closures;
- Pedestrian and cycle access routes in the vicinity of the hospital; and
- Bus network and taxi rank changes on High St/Avoca St.

HI can also confirm that it will require construction access to the NCCATC construction site via High Street to be maintained until late 2016.

2. Langton Centre Surry Hills

The Langton Centre is an outpatient clinic of Sydney Hospital and Sydney Eye Hospital, located in South Dowling Street Surry Hills. The service aims to address the spectrum of health and social problems for people who use or are dependent upon alcohol and/or other drugs.

The current proposal for the CSELR takes a route that dissects the Langton Centre creating a separation between its clinical area and the car park. This is not supported by HI as it creates safety and access risks for patients, staff and visitors to the Centre. The EIS does not adequately address this issue and suggests that "affected Langton Centre car parking would be relocated within the general vicinity of the Langton Centre". The EIS further suggests that the location of this car parking would be resolved in consultation with the Centre and the City of Sydney Council. No consultation has been conducted and as a result there is no mitigation of this significant impact on the users of the Langton Centre.

HI requests that the TfNSW consult in more detail regarding pedestrian access, movement and safety in the vicinity of Langton Centre. It is not appropriate to leave the access issues for the Langton Centre unresolved.

3. Communication

During construction there will be significant disruption to road networks around the route of the CSELR and members of the public, and indeed ambulance and other emergency services, trying to access the relevant health services along the route will need to be aware of alternative access arrangements to both the Randwick Health Precinct and the Langton Centre. A failure to clearly communicate alternative access arrangements could result in serious impacts on health service delivery.

HI request that it is consulted on and provide input to the proposed communication strategy to ensure that significant risks to service delivery are mitigated.

HI appreciates the complexity of the CSELR project and looks forward to working with DP&I and TfNSW to ensure that the specific needs of the affected health facilities are incorporated into the detailed design process. If you have any questions in respect to the issues raised in this submission, or require further detail, please contact David Ballantyne on 9978 5447.

Yours sincerely



Sam Sangster
Chief Executive

ⁱ Acoustic Logic Letter dated 10 December 2013

