

Appendix B Response to individual submissions

The following responses to submissions are attached to this report:

- Response to Office of Environment & Heritage submission
- Response to NSW Environment Protection Authority submission
- Response to NSW Roads and Maritime Services submission
- Response to Transport for New South Wales submission
- Response to Parramatta Council Traffic & Transport submission
- Response to Public submission

Response to Individual Submissions Table

SUBMISSIONS	ISSUES RAISED	APPLICANT'S RESPONSE
NSW Office of Environment & Heritage (OEH)	Statement of Heritage Impact The Heritage Division notes the Project Area is located within three Archaeological Management Units (AMUs) identified in the Parramatta Historical Archaeological Landscape Management System (PHALMS), 2000. These AMUs include 2890, 2891 and 2893. EOH suggests that there are likely to be minor impacts to the archaeological resources present within each AMU with some areas subject to more major disturbance. Furthermore, the EOH considers that the SOHI which supports the EIS does not adequately address the SEARs, as the archaeological assessment was not prepared in accordance with the guidelines of the NSW Heritage Manual. <u>Recommendation:</u> The OEH recommends the following conditions of approval: – A detailed historical archaeological assessment prepared by a suitably qualified archaeologist, detailing archaeological potential and consideration of land disturbance. Appropriate mitigation measures should be identified and be referred to OEH for review and approval prior to works commencing. – An Excavation Methodology and Research Design to be prepared by a suitably qualified archaeologist if the above archaeological assessment identifies the need for archaeological excavation as a mitigation measure.	A response statement has been prepared by RPS Group, dated 21 December 2015. Refer to Appendix I. RPS Group notes that due to the extensive disturbances throughout the AMUs, the resulting archaeological significance is low, sinking to nil in areas beneath the main hospital buildings. As detailed in the 2015 SoHI and other reports (EIS Appendix E Geotechnical, and Appendix M Contamination studies), there is little potential for archaeological material to be present due to extensive land use and multiple episodes of asbestos and medical waste disposal in the past. Furthermore, it was assessed that any type of archaeological evidence that could be expected from the AMUs, particularly evidence of the Government Domain (Westmead Boys Home) would be limited to the types of crops grown and the original vegetation. RPS Group concludes, “as noted in the reports, cutting and filling as a result of the Westmead Showground, waste disposal and construction of the car park would have removed any such evidence and an extensive archaeological investigation would again be superfluous in the circumstances.

NSW Environment Protection Authority (EPA)

Construction phase

The EPA anticipates site preparation, bulk earthworks, construction and construction related demolition activities will be undertaken in an environmentally responsible manner.

Refer below.

Site investigation and remediation

In response to identified asbestos contamination, the EPA recommends that the applicant engage a site auditor accredited under the Contaminated Land Management Act 1997 to produce a Section A site audit statement for the whole development site prior to construction.

A response statement has been prepared by JBS&G Australia Pty Ltd, dated 20 January 2016. Refer to **Appendix M**.

Health Infrastructure (HI) has engaged Melissa Porter of Ramboll Environ Australia (Ramboll), EPA Accredited Site Auditor 0803, as the Site Auditor for the MSCP works. The Site Auditor has been engaged to:

- Prepare an Interim Advice Letter (IAL); and
- Prepare a Site Audit Report & Section A Site Audit Statement

Note the Interim Advice Letter has been prepared and is attached at **Appendix P**.

It is noted that the Site Auditor has also been engaged as Site Auditor for the Stage 1 Early Works (currently underway).

Asbestos

The EPA is unclear whether the asbestos impacted fill materials from Lot 4 DP 1077852 are proposed to be imported onto Lot 100 DP 1119583, or vice versa. Accordingly, the EPA is unable to determine at this time whether waste regulatory requirements may be triggered by the proposed remedial action.

The EPA recommends that the applicant be required to address the uncertainty (above), satisfy the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 (Part 7) and consult SafeWork NSW.

A response statement has been prepared by JBS&G, dated 20 January 2016. Refer to **Appendix M**.

In response to the EPA's uncertainty regarding the movement of fill material, JBS&G outlines at the current stage of planning it is not proposed to move material from Lot 4 to Lot 100 or vice versa. Further, all works will be undertaken in accordance with the POEO Act and POEO (Waste) Regulations 2014.

JBS&G notes that asbestos impacted materials are widespread across the majority of Lot 100 (i.e., Westmead Hospital Lot), however, only the south-eastern corner of Lot 4 has been observed to contain asbestos impacted materials. This corner of Lot 4 does not fall within the MSCP site, and is being remediated as part of the Stage 1 Early Works project.

In response to the EPA's recommendation that the applicant satisfy the requirements of the Protection of the Environment Operations (Waste) Regulations 2014, JBS&G outlined that:

- The requirement is referenced in Sections 10.12 and 12.3 of the Remedial Action Plan (RAP); and
- The recently released 'Notice of Exemption from Clause 79: Reporting on transportation of asbestos waste solely within New South Wales' is acknowledged and will be monitored by JBS&G with regards to the expiration date of the exemption.

In response to EPA's recommendation that the applicant be required to consult with Safework NSW, JBS&G outlines that consultation with Safework NSW has been undertaken by JBS&G, HI, Western Sydney Local Health District (WSLHD). JBS&G notes that Health Infrastructure (HI) and the Western Sydney Local Health District (WSLHD) presented to the Head of Asbestos Coordination Authorities (HACA) in August 2015, and that ongoing consultation with Safework NSW and HACA will be undertaken throughout the duration of the project.

Waste control & management

The applicant should manage waste in accordance with the waste management hierarchy; Avoidance, Resource Recovery & Disposal (Waste Avoidance and Resource Recovery Act 2001).

Furthermore the EPA recommends the applicant commit to assessing and managing all waste generated during the project in accordance with the, "Waste Classification Guidelines Part 1: Classifying Waste" (EPA 2014), ensure all vehicles or trailers used to transport waste are covered before leaving site, and any material likely to fall from or be cast of the wheels of a vehicle or trailer be removed before leaving the premises.

A response statement has been prepared by JBS&G, dated 20 January 2016. Refer to **Appendix M**.

JBS&G outlines that waste is to be assessed, classified and managed in accordance with EPA 2014 as noted in Section 12.4 of the RAP.

Further, the Construction Environmental Management Plan (CEMP) to be prepared by the Principal Contractor will address specific requirements regarding decontamination or cleaning of plant moving within and leaving the site. The CEMP will be reviewed and ultimately endorsed by client and relevant consultants.

All vehicles used to transport waste or excavation spoil from the premises will be covered in accordance with requirements of the POEO (Waste) Regulations.

	The waste hierarchy is detailed and discussed within the Waste Management Strategy. Refer to Appendix W, Part 1, EIS .
Dust control & management EPA recommends that the applicant take all such feasible and reasonable measures to minimise dust emissions on site; and prevent dust emissions from the site.	A response statement has been prepared by JBS&G, dated 20 January 2016. Refer to Appendix M. JBS&G notes that dust control measures are discussed within Section 10 and 11 of the RAP. The Principal Contractor is required to detail dust control measures in the CEMP. Airborne asbestos fibre air monitoring and real time dust tracking monitoring requirements are detailed in Section 10.9.1 of the RAP.
Erosion & sediment control Due to the proximity of the site to Toongabbie Creek, the EPA recommends that appropriate erosion and sediment controls are in place before commencing earthmoving or vegetation removal, and that daily inspection of erosion and sediment controls is conducted.	A response statement has been prepared by ARUP, dated 14 January 2016. Refer to Appendix E. After reviewing the EPA submission, ARUP advises that the information requested in the EPA review of the EIS is addressed in detail in Appendix J – Part 1 the Arup Darcy Road Multi Storey Car Park SSD – Civil Report, Rev B, dated 29 October 2015, and Appendix J – Part 2 the associated Arup drawings of the EIS and is sufficient for the tender references design which was prepared.
Noise & vibration The EPA notes the location of residences in Mons Road, Westmead private hospital and schools including Catherine McAuley Westmead, and the likely change in nature and intensity of noise impacts on these surrounding noise sensitive receivers.	In response to the EPA submission, Acoustic Logic updated their Noise Impact Assessment and provided a specific response statement to the EPA submission. Refer to Appendix K and Appendix L.
Construction hours The EPA recommends that the applicant be required to: • Comply with the standard construction hours as recommended in Table 1 Chapter 2 of the Interim Construction Noise Guideline, July 2009. • In consultation with residents and management of other noise sensitive receivers, schedule intra-day ‘respite	Construction noise impacts on the residents along Mons Road are likely to exceed the “noise affected” criteria of the Interim Construction Noise Guideline, but are predicted to remain compliant with the “highly noise affected” criteria. Construction noise impacts on the internal areas of Westmead Private Hospital will comply with construction noise emission criteria.

periods' for construction activities identified in Interim Construction Noise Guideline.	Recommended construction hours have been based on the standard construction hours outlined in the NSW EPA Interim Construction Noise Guideline, presented in Section 6.2.1.3 of the report. Refer to Appendix L. It is noted by Acoustic Logic that respite period for noise intrusive construction activities (e.g. hydraulic hammering, grinding etc.) has been recommended (Section 6.2.1.3 (Appendix L)). It is recommended that noise intrusive activities be limited to 9am to 12pm Monday to Saturday and 2pm to 5pm Monday to Friday to provide respite to receivers.
Reversing and movement alarms The adoption of a 'quacker' type movement/reversing alarm instead of traditional beepers on all plant vehicles.	It is noted by Acoustic Logic that the EPA recommends a safety risk assessment of construction activities be conducted to determine whether it will be feasible to use less annoying/noise intrusive movement/reversing alarms for vehicles in order to reduce noise impacts on nearby receivers.
Operational Phase The EPA notes that the EIS does not appear to provide an assessment of the predicted operational noise impacts on the nearby residences in Mons Road or on Westmead Private Hospital. As such the EPA recommends the applicant produce a detailed noise impact assessment; detailing potential sleep disturbance impacts on these 'sensitive receivers', the need to apply 'modifying factors', 'noise shielding', and the need to adopt management measure to minimise noise impacts. In addition, the EPA notes that the applicant should be required to commit to adverting unacceptable noise impacts on sensitive receivers by undertaking a noise monitoring program, following the operation of the parking structure.	Acoustic Logic provide in response that noise and vibration impacts of the operation of the proposed car park have been assessed and the results indicate that noise impacts on the residents and Westmead Hospital (including sleep disturbance) will be fully compliant with noise emission goals. There are no modifying factors from chapter 4 of the Industrial Noise Policy that apply to the proposed car park. Potential tonal noise factors from car tyres squealing will be mitigated provided that the floor surface has a broom finish as recommended in Section 6.1.4 of the report. Refer to Appendix L. Noise impacts from the operation of the car park on all nearby receivers will be minimal. As such, there is no requirement for additional screens or barriers for the proposed car park as discussed in Section 6.1.3 of the report (Appendix L). Signage reminding users to keep noise to a minimum within the car park, contained within Section 6.1.4 of the report (Appendix L). Furthermore, it is recommended by Acoustic Logic that noise

measurements be conducted of the operation of the completed car park at the nearest receivers to ensure compliance with the relevant noise emission criteria.

Water Quality (Toongabbie Creek), Water Conservation & Energy Efficiency

The EPA recommends that the applicant be required to identify, evaluate and implement additional practical measures for the management (water sensitive urban design), collection, treatment and re-use of stormwater.

A response statement has been prepared by civil engineers, ARUP, dated 14 January 2016. Refer to **Appendix E**.

After reviewing the EPA submission, ARUP advises that the information requested in the EPA review of the EIS is addressed in in **Appendix J** – Part 1 the Arup Darcy Road Multi Storey Car Park SSD – Civil Report, Rev B, dated 29 October 2015, and **Appendix J** – Part 2 the associated Arup drawings of the EIS that was part of the lodged development application, and is sufficient for the updated drawings prepared for tender.

Energy Efficiency and Conservation

The EPA recommends the applicant be required to identify, evaluate and implement additional practical measures for energy efficiency and conservation, in particular, renewable energy.

The MSCP incorporates multiple energy efficiency and conservation measures.

The MSCP has been designed to use natural ventilation across all floor plates thus eliminating the need for mechanical ventilation (**Appendix B, EIS**).

Further to this, low energy lighting has been specified (**Appendix R, EIS**), in addition to a holistic approach to water usage (**Part 1, Appendix J, EIS**).

NSW Roads and Maritime Services

13th January – initial submission

12th February – further submission (verbal)

25th February – final submission

Pre- and post-development modelling

An initial response within the submission (13th January) period was received from the RMS. Two further submissions were received, a verbal submission on 12 February and a final written submission on 25 February 2016.

“Roads and Maritime has reviewed the Environmental Assessment and advises that the issues that were of concern raised for inclusion in the Director General's Requirements have generally been adequately addressed. However, Roads and Maritime requires the Raw SIDRA 6 modelling files for review. In this regard, Roads and Maritime requires pre development

Traffic consultant (GTA consulting) sent the SIDRA files to the RMS on Tuesday 19th January 2016. GTA consulting provided a response to the verbal RMS submission on 29th February 2016. An extract of this is provided below.

“GTA acknowledges that the RMS response sets out a number of detailed conditions to be met prior to issue of the Construction Certificate, Occupation/Operation, as well as several general comments. Noting that the additional commentary relates to specific analysis and treatment details that do not impact consent to the SSDA, the project team will continue to work with RMS and TfNSW to ensure that all comments can be addressed prior to the specified

modelling files and post development modelling files for assessment.”

The subsequent verbal submission by the RMS (12th February), provided the following comments on the SIDRA intersection modelling:

- fixed green time of 14 seconds to be allocated to the T-Way
- Proposed double cycling of traffic signals at the Dental Access is undesirable
- UWS intersection upgrades to be included – RMS to provide signal plans
- UWS traffic to be included
- Linked intersection modelling requested along Darcy Road.

The final written submission received 25 February, noted that RMS have no objection to the State Significant Development provided the following conditions are included in the Consent:

“Prior to the issue of a Construction Certificate:

1. Updated SIDRA Network analysis must be submitted to Roads and Maritime (along with the electronic SIDRA files) for further review and comment in conjunction with a revised Transport Impact Assessment report which identifies any potential intersection enhancements/upgrades are required to generally maintain the existing Average Delay at intersections adjacent to the site.
2. An “in-principle” agreement should be reached between TfNSW, Roads and Maritime, and the applicant on the details and scope of road/transport infrastructure requirements that would be necessary to support this development. This agreement must be provided to the Secretary.
3. The design of the car park accesses including the implementation of appropriate measures must be in place to ensure that queuing at the access points do not affect traffic and buses on the road network and the T-Way. These measures should be incorporated into a Car Park Management Plan which is agree to by

milestone.”

Note that as the development is Crown Development, construction certificates and occupation certificates do not apply.

TfNSW and Roads and Maritime.

Prior to Occupation/Operations:

4. The design of any modified traffic signals (identified within the “in-principle” agreement) shall be designed to meet RMS requirements, be in accordance with Austroads Guide to Road design in association with relevant RMS supplements. The certified copies of the signal/civil design plans shall be submitted to RMS for consideration and approval prior to the release of an occupation certificate by the Certifying Authority and provided to the Secretary for information.

The applicant may be required to enter into a Works Authorisation Deed (WAD) for the abovementioned works.

5. Any civil/ modified traffic signal works (as identified within the “in-principle” agreement) must be completed prior to the occupation/operation of the multi-storey car park.
6. The applicant shall be responsible for all public utility adjustment/relocation works, necessitated by the above work and as required by the various public utility authorities and/or their goals.

General Comments:

7. The layout of the proposed car parking areas associated with the subject development (including, driveways, grades, turn paths, sight distance requirements, aisle widths, aisle lengths, and parking bay dimensions) should be in accordance with AS 2980.01-2004 and AS2890.6-2009.
8. The proposed development will generate additional pedestrian movements in the area. Pedestrian safety is to be considered in the vicinity.
9. All vehicles are to enter and leave the site in a forward direction.
10. All works associated with the proposed development shall be at no cost to the RMS.”

Transport for NSW

A submission was received from Transport for New South Wales (TfNSW) on the 28th of January 2016.

A response statement has been prepared by traffic consultants, GTA Consultants, dated 29 February 2016. Refer to **Appendix J** and extract below.

“GTA has responded directly to the request for further Information and clarification identified by TfNSW, with consultation to form part of an ongoing collaborative approach. The responses should be considered as initial responses and at times, a trigger for broader discussion.

It is also noted that the SSDA was focused on impacts directly attributable to the Darcy Road MSCP project and does not consider the impacts of the broader Westmead Redevelopment. Impacts associated with the proposed ASB and the broader Redevelopment will be addressed as part of a future application.

It is understood that many of the comments raised by TfNSW were presented with consideration for the broader Westmead Redevelopment and not the MSCP proposal.”

Impacts on T-Way Bus Services/T-Way Modification

The proposed modification to the T-Way operation at the intersection of Darcy Road/Mons Road/Institute Road and the proposal to allow construction and staff access on to the northern end of Mons Road T-way is not supported due to the impact on the operation of existing and future bus services.

TfNSW recommends the applicant:

- Update the SIDRA traffic modelling in consultation with RMS, assessing the operation of T-Way buses separately;
- Identify appropriate measures to maintain the operation of bus services in the future scenarios; and
- Investigate alternate measures and models accordingly as the proposed removal of left turn ban for buses on Darcy Road T-Way south approach into Darcy Road west approach is not supported

Refer to the extract below from GTA consultants' response dated 29 February 2016:

"While it is acknowledged that public transport is critical to the development of the Westmead Precinct and that implementing bus priority measures can be complex, the proposed measures aim to minimise the impact on the current and future public transport infrastructure and services, noting that the current network constraints make it difficult to limit impacts without improvements.

The project team are currently awaiting formal feedback from RMS regarding the SIDRA Intersection modelling. We will continue to work with RMS and TfNSW to ensure appropriate intersection arrangements can be achieved to support the MSCP.

Notwithstanding the above, the requested separated SIDRA Intersection modelling results for the T-Way for the base case and post-development scenarios presented in the GTA Transport Impact Assessment are summarised in Table 1 and Table 2 (**Appendix J**).

It is worth noting that SIDRA Intersection modelling does not accurately reflect the operation of the T-Way, noting that the traffic signals typically allocate an additional phase when necessary based on the demand of the T-Way buses (i.e. when they arrive in the traffic signal cycle)."

The modelling results indicate that increased delays and queues for the T-Way could occur at the intersections of Darcy Road/ Mons Road/ Institute Road and Darcy Road/ Hawkesbury Road as a result of the cumulative impacts of the MSCP and University of Western Sydney (now WSU). However, as discussed this does not consider the priority measures implemented at the signals. As such, any additional queuing and delays on the T-Way would be minimal.

The GTA Transport Impact Assessment proposed several improvements for the intersection of Darcy Road/ Mons Road/ Institute Road to minimise the impact on the overall intersection.

Table 3 (**Appendix J**) indicates that the intersection of Darcy Road/ Mons Road/ Institute Road would experience improved vehicle queues and average delays (typically better than the base conditions) following implementation of the proposed intersection upgrades.

As noted by TfNSW, Section 8.4 of the GTA Transport Impact Assessment identifies the potential for a left turn ban from the Darcy Road T-Way in conjunction with a right turn ban from Darcy Road into Institute Road to improve the overall operation of the Darcy Road/ Mons Road/ Institute Road intersection. Figure 1 provides additional details relating to the proposed left turn ban and clarifying that the 'unsafe merging' at the Darcy Road/ Mons Road/ Institute Road intersection identified by TfNSW would not occur under these arrangements. An indented bus stop along Darcy Road could be provided (see Figure 1) maintaining the vital patronage point. Interchanging could be accommodated via the signalised pedestrian crossing located immediately north of the proposed bus stop and the Westmead Hospital T-way stop.

A summary of the bus services which currently travel along Darcy Road is provided in Table 4 (**Appendix J**). It is noted that the proposed left turn ban would affect three of the eight existing bus services (705, 708 and 711) that use the Darcy Road corridor. It is noted that the 818 service does not currently use the T-Way, instead turning left from the Darcy Road traffic lanes, as per the proposed arrangements.

With consideration for the details provided above including the intersection modelling, it is recommended that TfNSW reconsider

the proposed measures, noting that they offer benefits for the current and future public transport network, as well as the overall intersection operation. Notwithstanding this, the project team will continue to consult with TfNSW and RMS to ensure appropriate intersection arrangements can be achieved to support the MSCP and maintain travel time reliability on the T-Way. Institute Road would carry any general through traffic in the future and has been designed as an ambulance priority route to service the Westmead Redevelopment. Any bus activity would use New Road, with access via Mons Road, which has been designed to cater for buses including indented bus stops. Based on the above, the proposed right turn ban from Darcy Road to Institute Road is considered appropriate, noting that no through access would be available via Institute Road.

General Vehicular Access onto dedicated T-Way (Mons Road Bridge)

Section 4.7 of the Preliminary Construction Management Plan (PCTMP) and separate correspondence from GTA Consultants suggested that construction vehicles be permitted on the existing dedicated T-Way (Mons Road Bridge), despite this road section forming part of a Rapid Bus Route Corridor. Due to potential impacts on the reliability of the corridor, TfNSW would like to maintain exclusive use of the T-Way for bus services.

The shared use of the existing dedicated T-Way (Mons Bridge Road), Westmead by construction vehicles or hospital staff vehicles is not supported. It is requested that;

- An alternative access arrangement for the wider Westmead Hospital precinct be investigated in a regional context; and
- An access strategy be delivered that would facilitate development growth and support the delivery of future regional transport infrastructure.

Refer to the extract below from GTA consultants' response dated 29 February 2016:

"The proposed access strategy for the broader Westmead Redevelopment will be addressed as part of the Acute Services Building (ASB) State Significant Development (SSD) application. However, Health Infrastructure and the project team are committed to consulting further with TfNSW to reach agreement on the future access strategy. It has been agreed between Health Infrastructure and TfNSW that permanent staff access to the T-Way does not form part of the MSCP SSDA.

It is also understood that Health Infrastructure and TfNSW have further discussed the potential for construction vehicles to use the T-Way, with any agreement to be reached separately to this application as part of the required consultation with TfNSW, RMS and Council during the preparation of the detailed Construction Traffic Management Plan (CTMP)."

Travel Demand

Westmead Precinct is proposed for significant development and growth, being identified as a growing specialised health and educational precinct in *A Plan for Growing Sydney*. Thus to accommodate future growth, a shift away from private vehicles to public and active transport is necessitated.

TfNSW note the importance of identifying the reasons for the high private vehicle use by staff, in order to inform effective travel planning.

It is recommended that the applicant:

- Undertake consultation with the hospital staff and visitors to obtain their views on existing and future public transport services to the hospital during the preparation of the travel plan;
- Implement the travel measures based on the outcome of the consultation to increase public transport patronage;

Refer to the extract below from GTA consultants' response dated 29 February 2016:

"Implementation of a travel plan (with appropriate monitoring strategies) would be completed as part of the broader redevelopment in consultation with TfNSW. Notwithstanding this, feedback received as part of a staff travel mode survey completed in 2014 and specifically relating to public transport utilisation is summarised in Table 5 (**Appendix J**).

Based on the staff survey results, the project team will work closely with TfNSW to improve public transport utilisation."

- and
- Monitor the effectiveness of the travel plan measures using the appropriate reporting then identify any further improvement s

Regional Transport Impacts

TfNSW notes that the Westmead Redevelopment Project would result in an approximate increase of 40% in the number of staff and beds by the end of 2020 as follows:

- Staff – from 9,987 to 13,873
- Beds – from 743 to 1,052

It is expected that this level of growth would have a regional transport impact, requiring the preparation of a comprehensive transport assessment. TfNSW and RMS would like to work with Health Infrastructure during the investigations and associated transport modelling for the next stage of the project.

TfNSW requested that a comprehensive transport assessment be developed, in consultation with TfNSW and RMS, for the next stage of the Westmead Redevelopment project. This assessment should include the wider network, cumulative development and regional transport infrastructure to develop access and transport strategy to facilitate development growth in Westmead.

Refer to the extract below from GTA consultants' response dated 29 February 2016:

“the project team will continue to consult with TfNSW and RMS during the preparation of the ASB SSD application. A whole-of-government approach to local and regional transport infrastructure is recommended, particularly in the context of the proposed Parramatta Light Rail and associated planning studies.”

Intersection Modelling

Section 4.1 provides an assessment of the nearby intersection operations. Table 4.5 provides base case operating conditions which indicate that Darcy Road/Mons Road/Institute Road are operating well below capacity with minimal delays and queues. On site observation indicate extensive delays and queuing experienced during the AM and PM peak.

Several local intersections known to experience delays and congestion have not been modelled including Hawkesbury Road/Alexandria Avenue, Darcy Road/Briens Road, Darcy Road/Bridge Road and Alexandra Road/Bridge Road.

It is requested that the applicant:

- Verify the results of the base modelling particularly for the intersection of Darcy Road/Mons Road/Institute Road; and
- Model surrounding local intersections experiencing congestion to the satisfaction of Council and Roads and Maritime Services. As previously noted the operation of bus services on the T-Way should be assessed separately.

Refer to the extract below from GTA consultants' response dated 29 February 2016:

"Section 4.1 of the GTA Transport Impact Assessment indicates that the modelled intersections operate with an acceptable LOS during the weekday AM and PM peak hours during the base case scenario (post completion of the Stage 1 Early Works). However, queues of up to 140m were noted and are consistent with on-site observations. No statements indicating significant spare capacity are made as this would not be correct.

It is worth noting that the modelled AM peak period was 7:00am-8:00am, corresponding to the peak staff arrival, noting that the proposed car park would mostly be used by staff (80%). The PM peak hour was 4:30pm-5:30pm, which corresponds to the road network peak, as well as the overlap of staff departures and visitor arrivals/ departures.

As discussed above, the project team is currently awaiting formal feedback from RMS regarding the SIDRA Intersection modelling. We will continue to work with RMS and TfNSW to ensure appropriate intersection arrangements can be achieved to support the MSCP.

As previously discussed with PCC, TfNSW and RMS in the context of the broader Westmead Redevelopment, Parramatta Light Rail and other projects in the local area, a cumulative regional transport model needs to be completed and managed by TfNSW and/ or RMS. With consideration for this, it is understood that this regional modelling would be/ is being completed as part of the Parramatta CBD Access Strategy, as well as modelling of the Parramatta Light Rail.

It is recognised that there are significant regional transport challenges, with further traffic related impacts expected as part of the Parramatta Light Rail and key proposed developments within the local area. Many of these will need to be resolved as part of

	the Parramatta CBD Access Strategy and/ or Parramatta Light Rail. The intention of this SSD is not to address/ solve regional issues, but rather assess access to the proposed MSCP and the operation of intersections in the immediate vicinity. The project team will continue to consult with TfNSW and RMS in relation to the preparation of the ASB SSD, to ensure an agreed traffic modelling approach.”
Car Park Access It is important that the car park access is designed with entry capacity to ensure that queuing does not block through traffic on Darcy Road and Institute Road as this would have a significant impact on the operation of Darcy Road and the T-Way. The car park access proposed includes two Entry lanes from Darcy Road, one Entry lane from Institute Road and two Exit lanes onto Institute Road. The TIA indicates that the number of access points has been reduced due to the implementation of Automatic Number Plate Recognition (ANPR) system. As a result, the service rate of 550 veh/h/lane has been used for assessment, which is close to free flow (i.e 600 veh/h/lane). It is unclear how such a high service rate can be achieved considering the system seems to indicate boom gates would still be required as shown in Figures 7.5 and 7.6. It is requested that: The operation of the ANPR system be further clarified with the claimed service rate justified by empirical data; Appropriate measures be put in place aimed at ensuring queuing at the access point during peak events do not affect traffic and buses on the road network and the T-Way. The measures should be incorporated into a car park management plan.	Refer to the extract below from GTA consultants’ response dated 29 February 2016: “The queuing assessment presented in the GTA Transport Impact Assessment has been updated for the new access control, adopting a conservative service rate of 300 vehicles/ hour/ lane, noting the following typical service rates presented in AS 2890.1:2004: • 400 vehicles/ hour/ lane for typical card reader – adopted for staff • 300 vehicles/ hour/ lane for automatic ticket issue and boom gate – adopted for visitors. Please refer to Table 6 (Appendix J). Based on the above queuing assessment, the available storage is suitable to accommodate the 95th and 99th percentile queues, albeit with minor queuing back into the lower ground level of the car park during the afternoon peak. As discussed within the GTA Transport Impact Assessment, a 40m long right turn bay is also proposed for Institute Road. This ensures a maximum queuing storage area of 95m before impacting on through traffic on Institute Road. The MSCP access is designed with adequate entry capacity such that queuing would not block through traffic on Darcy Road, Institute Road and the T-Way. Appropriate line marking and intersection controls would be implemented to minimise the risk of queuing across the westbound Institute Road travel lane.

Notwithstanding the above, a Campus-wide Car Park Management Plan is currently being prepared to ensure appropriate management of all new and existing car parks including ensuring vehicle queuing does not extend on to the internal and external road network.”

GTA notes that through design development and in response to broader EIS submissions received, Automotive Number Plate Recognition (ANPR) will not be provided for access control of the MSCP, with traditional boom gate infrastructure and card access now included.

Further to the above change, a second boom gate has been proposed at the Institute Road access to the MSCP, resulting in a total of four entry boom gates across the two access locations. Entry queuing has been recalculated and confirmed to be acceptable.

Pedestrian and Cyclist Access

The EIS for the proposed car park includes provision for bicycle and motorcycle parking. The exact numbers are yet to be determined.

Measures to improve bicycle and pedestrian access and facilities require further assessment in the Traffic Impact Assessment.

It should be noted that the entrance to this development from Darcy Road crosses the T-Way separated cycleway. It appears that the documentation presented, does not include measures to reduce potential conflict between car park users and cyclists travelling along the cycleway.

Further, the provision of accessible car-parking spaces of 1% as outlined in Section 5.1 of the TIA is low.

It is requested that:

- Bicycle parking and end of trip facilities for pedestrian and bicycle riders be provided in accordance with relevant standards and guidelines. Details of locations and number of spaces should be shown on the plans;

Refer to the extract below from GTA consultants’ response dated 29 February 2016:

“In response to this comment, GTA notes that it is important to reiterate that the MSCP is the focus of this submission. There is no requirement for bicycle parking under any planning control or guideline for this type of facility. In addition, connections to the external pedestrian network and public transport services are not required to support the MSCP.

Although, the provision of bicycle parking, internal wayfinding, pedestrian and cyclist connections and accessible car parking spaces have been considered as part of the MSCP design, a Campus-wide approach is required when assessing the suitability of the proposed quantum.

Details of the aforementioned Campus-wide approach would be documented as part of the ASB SSD, including consideration for the following:

- appropriate levels of bicycle parking and end-of-trip

- The connectivity, safety (including security, covered lighting and walkway) and accessibility for pedestrians and bicycle riders to pedestrian and bicycle networks be provided within the hospital and public transport particularly during late night or early morning periods;
- The provision of pedestrian crossings on all legs of the intersection on Darcy Road/Mons Road/Institute Road and Darcy Road/Dental Building Access be investigated;
- Wayfinding signs be provided to increase the awareness of the walking and cycling routes;
- The potential for cars queuing to access the car park, which block the cycleway should be investigated and suitable measures implemented to appropriately manage the issue; and
- The provision of accessible car parking spaces be reviews in accordance with relevant standards and guidelines

facilities, particularly in key locations for the various users;

- pedestrian and cyclist connections between key locations across the Campus and surrounding facilities including infrastructure requirements;
- Campus-wide wayfinding strategy to direct all users, including pedestrians, cyclists and motorists, to key locations across the Campus;
- Appropriate levels of accessible parking spaces, particularly in visitor car parks and at key locations/ public access points across the Campus.

Notwithstanding the above, the project team is committed to providing bicycle parking facilities within the MSCP. The quantum and design of the bicycle parking provided would be considered further during detailed design and with broader consideration for the bicycle parking provided as part of the broader Westmead Redevelopment. As such, bicycle parking has only been indicatively shown on the plans.

The provision of a covered elevated walkway between the MSCP and the Dental Building is considered a safe and convenient internal pedestrian connection. Figure 7.8 of the GTA transport Impact Assessment shows the proposed shared path along the southern side of Institute Road, linking to the Darcy Road shared path.

The proposed MSCP does not create pedestrian demand such that investigation of additional pedestrian crossings at the intersections of Darcy Road/ Mons Road/ Institute Road and Darcy Road /Dental Building Access would be required. The potential for this would be investigated as part of the ASB SSD.

A Signage and Wayfinding Strategy for the MSCP was prepared by HDR Rice Daubney. Internal signage and wayfinding would be included to ensure users can appropriately navigate the MSCP. A Campus-wide wayfinding strategy would be considered as part of

the ASB SSD, including provision of signage intended to increase the awareness of the internal and external walking and cycling routes.

As discussed above, the proposed storage capacity at the Darcy Road access to the MSCP is in excess of the 95th and 99th percentile queues. As such, there is limited potential for queuing across the signalised pedestrian/ cyclist crossing at the intersection of Darcy Road and the Dental access. No further management measures are considered necessary.

The proposed accessible parking provision is suitable given the intended use of the MSCP noting that it would be more beneficial for accessible parking to be provided in locations closer to key facilities, including near the proposed ASB. As such, the ASB SSD will review the accessible parking requirements for the Campus and ensure these are located in suitable locations.”

Early Works Package

The TIA refers to the Early Works Package that includes additional parking, which has been approved separate to the Multi-Storey Car Park development. Section 2.4 indicates that the Early Works Package would only result minor net increase in on-site parking supply. However, Figure 2.10 indicates that it will be in the order of 2,000 additional car parking spaces.

It is requested that the number of parking spaces proposed in Early Works Package be clarified including the impact in terms of cumulative traffic and transport.

Refer to the extract below from GTA consultants’ response dated 29 February 2016:

“As discussed in the GTA Transport Impact Assessment, the broader Westmead Redevelopment is being designed, approved and constructed over multiple phases of work, with an overlap expected during most phases.

At this stage, it is expected that construction of the Stage 1 Early Works and the MSCP would overlap with enabling works for the proposed ASB; all of which include demolition of existing car parking. As such, the Stage 1 Early Works provides new and/ or reconfigured at-grade parking to replace those spaces being lost as part of the cumulative works.

The impacts of the Stage 1 Early Works were subject to a separate REF, which has been approved. The base case adopted as part of the GTA Transport Impact Assessment was based on the completion of the Stage 1 Early Works and the key traffic impact details were discussed in Section 4.1. As such, a

	cumulative assessment has been completed within the GTA Transport Impact Assessment. The existing and proposed parking supply (post completion of the MSCP) is shown in Table 7 (refer Appendix J). This includes any net change across the Campus as a result of the Stage 1 Early Works."
Parramatta Light Rail It is recommended that Health Infrastructure communicates with TfNSW's Parramatta Light Rail project team to ensure the impacts of the current project (and future stages) on the light rail project are appropriately considered.	Refer to the extract below from GTA consultants' response dated 29 February 2016: "The Westmead Redevelopment project team has previously attempted to consult with TfNSW's Parramatta Light Rail team, as well as other TfNSW staff to discuss the broader Westmead Redevelopment project. However, given that the preferred Parramatta Light Rail route had not been announced, there was limited available information at the time. This has presented several challenges for the MSCP project and the broader Westmead Redevelopment. Since receiving TfNSW's submission on the proposed MSCP (and concurrently with the route announcement), the project team has consulted with TfNSW's Parramatta Light Rail team, including providing a significant amount of project related information to assist in the planning of Parramatta Light Rail. The project team will continue to consult with TfNSW and the Parramatta Light Rail team in order to achieve a collaborative outcome, offering significant benefits for the local and regional community."

Construction Traffic Management Plan

The proposed development has the potential to impact on traffic and transport operation in the vicinity of the hospital including pedestrian safety within and adjacent to the hospital during construction.

TfNSW requests that prior to the commencement of any works on the site, a Construction Traffic Management Plan (CTMP) should be prepared by a suitably qualified person. It should be submitted to the Principal Certifying Authority (PCA). The Plan must be prepared in consultation with Parramatta City Council, RMS and TfNSW.

The CTMP should include the cumulative construction impacts of all the projects adjacent to the site. The applicant should submit a copy of the CTMP to Parramatta City Council, prior to the commencement of work.

Refer to the extract below from GTA consultants' response dated 29 February 2016:

"A CTMP would be prepared prior to construction of the MSCP, incorporating the above comments and in consultation with the above mentioned agencies."

Minor Issues of the Transport Impact Assessment

Further clarifications on the following minor issues relating to the Traffic Impact Assessment report:

- Section 2.3 Paragraph 4 indicates the extent of works is illustrated in Figure 2.9 which may not be correct.
- Section 7.9 states 'A footpath along the northern side of Institute Road is also included as part of the Stage 1 Early Works scope. This is not clear from the drawings provided. This footpath would be important for establishing the pedestrian connection from the northern car park (at-grade) to the proposed multi-level car park and further on to the main buildings.

TfNSW requests that the issues above are addressed and the Traffic Impact Assessment is updated accordingly.

Refer to the extract below from GTA consultants' response dated 29 February 2016:

"The reference made to Figure 2.9 as part of Section 2.3 of the GTA Transport impact Assessment is correct. The purpose of Figure 2.9 (included again in Figure 2 of this letter (**Appendix J**)) is to indicatively show the proposed location of the MSCP, the extent of works as depicted by the red line, as well as the extent of the Stage 1 Early Works (in green)."

Please refer to Figure 2 & 3 (**Appendix J**).

COUNCIL SUBMISSION	ISSUES RAISED	APPLICANT'S RESPONSE
Parramatta City Council – Traffic and Transport	Total increases in parking Council notes that the EIS does not provide overall information regarding total increases in car parking provision that is currently under construction or is planned for the near future, nor does it consider impacts to intersections not immediately adjacent to the site.	A response statement has been prepared by GTA traffic consultants, dated 29 February 2016. Refer to Appendix J. The existing and proposed parking supply (post completion of the MSCP) is shown in Table 9 Appendix J. As discussed within the GTA Transport Impact Assessment, the proposed MSCP aims to accommodate a significant proportion of forecast growth in short to medium term staff and visitor demand for parking, as well as reducing the extent of campus related parking on the surrounding road network. Parking beyond completion of the Darcy Road MSCP is still in planning and does not form part of this application; however Council will be consulted with respect to any further increases in on-site parking supply.
	Intersection upgrades The following intersections upgrades are recommended.	A response statement has been prepared by GTA traffic consultants, dated 29 February 2016. Refer to Appendix J.
	<u>Institute Road widening:</u> Council recommends that Institute Road be widened to three (3) lanes for approximately 40m on its westbound approach to Darcy Road, to satisfy the forecast increase in the afternoon peak westbound volume at this location (increase of 133 to 499 vehicles). Council notes upgrades would need to occur prior to the car park being open.	It is appreciated that the eastern leg of the Darcy Road/ Mons Road/ Institute Road intersection could be reconfigured to provide some minor additional stop line capacity with an additional left turn lane. However, an additional turn lane would result in limited benefits to vehicle delays on the eastern approach and would have a negligible impact on the overall intersection operation. The proposed intersection modifications present a balanced approach to improved pedestrian and cyclist amenity and improved traffic flow, while enabling enhanced urban design

outcomes for the adjacent green space. In particular kerb realignment presents the following benefits:

- Improved pedestrian safety as a result of the realigned pedestrian crossing in accordance with current RMS guidelines
- Improved pedestrian and cyclist amenity as a result of the slightly reduced pedestrian crossing width
- Safer intersection arrangement due to the realigned westbound traffic lanes, noting that the existing lanes direct westbound traffic south rather than west.

Furthermore, Stage 1 Early Works currently being completed by Health Infrastructure will result in the reassignment of a significant proportion of existing traffic using Institute Road, resulting in a temporary reduction in westbound traffic along Institute Road (refer Table 8, **Appendix J**). As such, the future traffic volumes are not a significant increase from existing (2015) operation.

Redbank Road & Briens Road:

Council outlines that the intersections of Redbank Road and Briens Road, and Cumberland Highway and Darcy Road are currently congested at peak times, primarily caused by the Medical precinct. Council notes that this information has been provided to Westmead Hospital and GTA, but has not been included in the consultation comments in the EIS.

The intersection of Briens Road and Redbank Road has been considered (with detailed SIDRA modelling) as part of the Stage 1 Early Works Review of Environmental Effects and will be considered further as part of future applications for the broader Redevelopment.

Notwithstanding the above, there will be no direct and convenient connection between the proposed Darcy Road MSCP and Redbank Road, as shown in Figure 4 (**Appendix J**). As such, the impact of the proposed MSCP would be limited to additional through traffic along Briens Road, which would have minimal impact on the intersection noting the significant existing traffic volumes along the Briens Road corridor during the AM and PM peak periods.

Darcy Road & Cumberland Highway:

Council has identified works that can be undertaken at these intersections, the widening of Darcy Road to the east of Cumberland Highway considered to be most beneficial. Council recommends that the design, land acquisition and construction for

The project team confirms prior receipt of the plans that outline Parramatta City Council's proposed works at the intersection of Cumberland Highway and Darcy Road. However, it was not clear that Council recommended that these works be completed as part of the Westmead Redevelopment.

this project be undertaken as part of the multistorey car park project.

With consideration for the Journey to Work data presented in the Westmead Redevelopment Multi-Storey Car Park Transport Impact Assessment, it is conservatively estimated that up to 20% of the traffic generated by the Westmead Health Precinct would use the Cumberland Highway and Darcy Road intersection during the AM and PM peak periods. Application of this to the additional traffic generated by the proposed MSCP would result in approximately 115 additional vehicles during the AM peak and 65 additional vehicles during the PM peak. That is, 1-2 additional vehicles per minute.

Council's proposed intersection improvement works include providing a right turn bay and a continuous left turn lane. This could significantly reduce capacity for the right turn movement, while improving operation for the left turn movement, and represents a significant trade-off which may not offer significant improvements for future intersection operation when longer queues form.

Given the limited additional traffic expected to use this intersection as a result of the MSCP and the significant costs associated with land acquisition for Council's proposed intersection improvements, it is not considered feasible nor suitable for these works to be funded as part of the MSCP project. The network improvement works proposed as part of the MSCP project will present a significant public benefit to a key corridor which is directly affected by the proposed MSCP, as well as the proposed Western Sydney University project and several other proposed and/ or recently completed projects.

Notwithstanding the above, the Cumberland Highway corridor as a whole currently experiences lengthy delays and congestion during peak periods, including critical intersections such as the Cumberland Highway and Windsor Road and the Cumberland Highway and Old Windsor Road intersection. A regional solution,

such as Council's proposed Western Sydney Regional Ring Road would likely be required as a long term solution to improve the traffic conditions along the corridor.

Further to this, it is understood that a Parramatta-wide traffic model is to be completed to understand the cumulative impacts of key projects, including the Westmead Redevelopment, Parramatta North Urban Transformation, Western Sydney University and Parramatta Light Rail. Such regional modelling and a whole-of-Government approach to transport infrastructure (including Light Rail) improvements is required to appropriately justify specific intersection works outside of the immediate Westmead Health Campus vicinity.

Approval

Council expresses uncertainty regarding the approval process, and state they would normally ask for design plans of proposed road works to their satisfaction before the CC is issued. Council state the intersection upgrades would need to be completed prior to the car park being open.

A response statement has been prepared by GTA consultants, dated 29 February 2016. Refer to **Appendix J**.

It is recognised that the proposed road works require approval from RMS and Parramatta City Council prior to construction. Further design progression of the road works is subject to RMS and TfNSW feedback. Subsequently, design plans would be prepared and provided to RMS and Council for approval.

Construction would be completed under a RMS Road Occupancy License (ROL) process to ensure works are completed in accordance with RMS processes and procedures.

PUBLIC SUBMISSIONS	ISSUES RAISED	APPLICANT'S RESPONSE
Patient Resident of Merrylands (name withheld)	Accessibility A submission has been made by a member of the public regarding the MSCP which raises concern about disability parking, disability access and walking distances in the hospital campus. The person making the submission advises they have a limited walking range of 100m and attends regular appointments at the University Clinics/Outpatient unit at the Hospital. The submission notes that parking close to the University Clinic (Carpark 3) is limited, and the walking distance between the proposed MSCP and University Clinic is approximately 400 metres, which is not manageable for people with restricted mobility. The submission asks whether provisions for disability access will be implemented at the MSCP.	Westmead Hospital has advised that internal transport from the car park to other areas is currently provided by Westmead Volunteers. Westmead Hospital has noted the likelihood of expanding the service (an additional buggy vehicle) to service the hospital. A response statement has been prepared by GTA consultants, dated 29 February 2016 (Appendix J) to address this submission from a traffic perspective. While the proposed MSCP would provide approximately 250 visitor spaces, these spaces would be provided for use by visitors to nearby facilities, including those located within the adjacent Dental Building. On this basis it is not expected that the MSCP would typically service existing Hospital facilities adjacent to Hawkesbury Road, given there is existing alternate visitor parking located closer to these facilities. As part of the broader Westmead Redevelopment additional visitor car parking is expected to be made available in convenient locations, with a particular focus on the Hawkesbury Road frontage. This would likely include a mixture of new spaces and/ or reallocated spaces. It is assumed that the existing outpatient and visitor buggy service would continue to transport patients and visitors across Westmead Hospital via the pedestrian corridors. Additional transport facilities are also being investigated as part of the broader Westmead Redevelopment.

Equity

The submission asks whether pensioners will have free access to the MSCP.

Western Sydney Local Health District has provided that all new Westmead campus car parks are to comply with the NSW Health Policy Directive, *Schedule 2: Guidelines for concessional fees and eligibility*.

The policy directive 10 groups/categories of Hospital Campus visitors and patients that are eligible to obtain concession rates when parking in designated gated parking areas. In relation to the public submission, holders of an RTA issued Disabled Parking Permit and/or holders of a Blue Pension Card (2/10 categories) are eligible for the below concession rates.

Refer to the Hospital car parking fee policy at **Appendix O** and the fee summary below.

Duration	Fees (incl. GST)	Notes
0–3 hours	Free	
1 exit only	\$5.00	Single visit tickets are valid for one entry and one exit only.
3–day ticket	\$10.00	Frequent use tickets allow for multiple entries and exist to the Hospital Campus and are issued in 3–day and 7–day tickets.
7–day ticket	\$20.00	