

26 August 2021

John Hunter Health and Innovation Precinct SSD – 9351535

Response to Public and Agency Submissions

Comment	Response
Agency Submissions	
Department of Planning, Industry and Environment	
Proposed Northern Road 1. The Environmental Impact Statement (EIS) indicates the eastern portion of the proposed Northern Road will provide a connection to the wider hospital precinct as part of a future stage of the development (Phase 2). Confirm the target time for completion of the eastern portion of the Northern Road, identify who has responsibility for its delivery and what commitments have been made to its delivery.	It is Health Infrastructures intent to deliver the future stages of the road network in accordance with the staging and target timeframes outlined at Section 3.19 of the EIS (i.e 2025).
2. The Biodiversity Development Assessment Report indicates the proposed Northern Road will result in the loss of native vegetation and fauna habitats requiring biodiversity offsets to compensate for the loss of ecological values on the site. The EIS also indicates that a temporary construction access road to the Acute Service Building will utilise an existing fire trail via Jacaranda Drive to assist in reducing environmental impacts. Consideration should be given to the use of the temporary construction access road location as an alternative future connection to the wider hospital precinct to avoid and minimise the biodiversity impacts and offset requirements associated with the future construction of the eastern portion of the Northern Road. Details of those considerations should be provided.	Northrop Engineering has provided a response at Section 3 of Appendix H . In summary, whilst it is acknowledged the desire to reduce clearing, the project team do not believe utilising the construction access for a future road will achieve this outcome as upgrading to meet design standards would subsequently increase the associated clearing, rendering the provision ineffective at reducing biodiversity impacts. Further: <ul style="list-style-type: none"> • It is not practical to have the final road network and construction access along the same alignment as it would cause significant delays to the delivery of the ASB as construction vehicles would not be able to access the building zone whilst roadworks are being completed. Postponing access to the ASB until the completion of North Road Construction in order to avoid installing the construction access will result in significant time delays to the ASB delivery which cannot be accommodated. • The alignment contains tight bends which do not afford adequate sight distances for a primary road network in accordance with Australian standards. • The proposed construction access is generally placed over the existing fire trail and only requires minor additional clearing to facilitate construction access. Upgrading this track to provide compliant road widths would greatly increase the extent of battering and clearing required, likely requiring a similar extent of clearing as the proposed northern road.
Car Parking 3. The EIS refers to a Parking Demand Study that was prepared to understand the current and projected parking requirements of the hospital precinct and identified an additional 754	See Section 3.2 of the RTS Report.

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parking spaces would be required on the site to satisfy demand to 2031/32. Provide a copy of the study and a summary explanation of how the total parking demand was determined.	
Additional Information 4. Provide the following additional information: - a plan of the proposed new road network in a wider context including the Newcastle Inner City Bypass and interchange and Lookout Road.	Additional details provided at Appendix C - Refer to 1.0 Environmental Analysis & Site Layout.
- a land use zoning plan with an overlay showing the development footprint and associated roadworks.	Additional details provided at Appendix C - Refer to 1.0 Environmental Analysis & Site Layout.
- a plan showing the existing cycling and bushwalking tracks in the vicinity of the site.	Additional details provided at Appendix C - Refer to 1.0 Environmental Analysis & Site Layout.
5. Update the architectural plans to include: - existing loading docks/logistics area to be retained.	Additional details provided at Appendix B - Refer drawings AR_C0-A22 NL-XO & AR_C0-A22 NL-X1
- dimensions on the elevations/sections for the new hospital building and any new structures/link bridge/canopy.	Additional details provided at Appendix B - Refer drawings AR_C0-C10 XX-X0, AR_C0-C10 XX-X1, AR_C0-C10 XX-X2, AR_C0-D10 XX-X0, AR_C0-D10 XX-X1
The City of Newcastle Council	
1. Aboriginal Cultural heritage A search of the Aboriginal Heritage Information Management System found four known Aboriginal sites within a 200m radius. In addition, much of the proposed works are located within undisturbed areas. An Aboriginal Cultural Heritage Assessment Report (ACHAR) was undertaken and assessed the site as having low archaeological potential. The ACHAR provided includes a number of management recommendations which are recommended for inclusion as conditions of consent, should the development be approved.	Noted. The ACHAR recommendations have been adopted for inclusion in the consent, by the project.
2. Flood Management It is noted that there are natural water courses along the northern part of the site which contributes towards the stormwater that flows through the site to the lower lying catchment areas. The site generally sits at the top of the catchment area and therefore contributes to the lower catchment flooding, including Jesmond Town Centre and Wallsend Town Centre. The downstream catchment area is generally very sensitive in nature and therefore upstream contributions are required to be considered. Concern is raised that the proposal has not considered the potential flood impact to the lower catchment areas from the overall development planning. It is recommended that a site-specific flood impact analysis and any required flood modelling be undertaken for the site to analyse the potential flood impacts from the overall site and current proposed development. Flood mitigation measures are to be considered as part of the proposal to mitigate the downstream flood impacts.	See response by Northrop Engineers at Appendix H – Section 4.
3. Stormwater Management The submitted concept stormwater plans, MUSIC Modelling and cut and fill plans have been reviewed. The plans and the MUSIC modelling are generally in accordance with the guidelines of the Newcastle Development Control Plan (NDCP) 2012, except for the assessment and design against hydrological targets within the NDCP as discussed below.	See response by Northrop Engineers at Appendix H – Section 4.

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<p>As noted in the flood management comments above, the proposal is to consider the potential impacts from flooding and mitigating measures to manage the run-off on this upper catchment area to ensure that the lower catchment areas are not impacted. The proposal will be discharging through natural creek areas and will need to demonstrate elements relating to the management of stormwater discharge control for more frequent stormwater events. The concurrence of WaterNSW may also be required.</p> <p>To be consistent with the NSW Government's 'Risk-based Framework for Considering Waterway Health Outcomes', hydrological targets need to be met by this proposal for frequent, stream forming flows. An example is the Stream Erosion Index for 2yr ARI events, set within CN DCP.</p> <p>The State's risk-based framework for waterway health prompts consideration of the following context for the protection of downstream natural creek lines in natural bushland reserves.</p> <ul style="list-style-type: none"> • The current zoning of the riparian corridors downstream reflects their local ecological significance and rarity within the Local Government Area. • The extent and location of these downstream riparian bushland reserves constitutes a key corridor within the cities' local green and blue grid, consistent with the NSW Government's Greater Metropolitan Plan. • The potential impacts and likely trajectory of these downstream natural creek lines. Changes to the flow and duration of frequent flows (in the vicinity of 2yr ARI events) cause downstream natural creek lines to deepen. This destabilises both channel beds and banks. This can result in risks to infrastructure and private land. It increases the sediment released from the whole length of the creek line. This can reduce downstream channel, pipe, and drain capacity. • The impacts of the proposed cut and fill batters and culverts to install new internal road networks. These disconnect upper bushland headwater catchments from downstream streams. • The community's environmental values and uses of the waterway, as a local bushland reserve. Confirmed through local Community Strategic Plans. <p>To mitigate this risk, it is recommended hydrologic objectives are achieved for the hospital development so that the Stream Erosion Index (SEI) is to be no greater than 2, where the SEI is expressed as the ratio of 'post development flow exceeding the stream forming flow' to 'pre-development flow exceeding the stream forming flow'. The drainage calculation method for checking and achieving this SEI objective are outlined in the Stormwater and Water Efficiency Technical Manual – Section 4.15 of the NLEP 2012. This target is derived from best practice hydrology – the CRC for Catchment and Creek Hydrology. It may be achieved through careful detailed design of inlets and outlets of proposed biobasins. It is further recommended that the designs are amended to ensure culverts and pipes which discharge into downstream bushland include rock stabilised energy dissipator outlets, which apply natural channel design principles. The site specific, expert design and construction of these will protect upstream infrastructure from bed erosion risks. Unchecked, bed erosion can migrate upstream. Given the downstream contours (C100-DA-5) CN suggests rockwork is needed for respectively 20 and 40/50 metres to locations where the receiving waterway's longitudinal grade reduces.</p>	

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<p>4. Traffic management</p> <p>A new road link is proposed into the site via the proposed Newcastle Inner City Bypass and new Eastern and Western Road links within the site. The proposed new Services Building Carpark will be linked via a new driveway to the Eastern Link.</p> <p>Overall, the submitted traffic report has indicated that the future proposed links to the site via the Inner By-pass will enhance traffic movement to and from the site, while also reducing the traffic impacts on the existing Lookout Road network.</p> <p>The proposed development is dependent on the proposed Bypass to be constructed to manage the internal access roads network. The data presented in the traffic report seems to indicate that some of the existing intersections are at near capacity and service levels are below expectation. In this regard, the following concerns are raised:</p>	<p>Noted.</p>
<ul style="list-style-type: none"> • Consideration should be given to upgrading the existing and proposed traffic intersections to ensure that the internal road network can achieve a satisfactory level of service with or without the Bypass access. This will ensure that the internal access management can be sustained in case the Bypass is not constructed prior to the building or even during maintenance of the road network. 	<p>In the event that the NICB project is not completed before the JHHIP occupation, Health Infrastructure has proposed a condition to manage site capacity and therefore traffic loads, as follows:</p> <p><i>Should the Newcastle Inner City Bypass Rankin Park to Jesmond road works approved as part of State significant Infrastructure approval SSI 6888 not be completed by the commencement of operations of the Acute Services Building, the proponent shall identify appropriate management measures (such as ensuring there is no uplift in clinical activity, staggered staff start and finish times, modified visiting hours) to minimise traffic growth on the John Hunter Hospital Campus during peak periods to the satisfaction of the Secretary. These measures shall be implemented until the completion of the Newcastle Inner City Bypass Rankin Park to Jesmond road works.</i></p>
<ul style="list-style-type: none"> • Safety and compliance with Australian Standards to the internal road network intersections. 	<p>The requirements are noted and Northrop confirms that the detailed design will be completed in accordance with Austroads Guidelines, AS2890.1 and AS2890.2 as appropriate for the road network, driveway and carparking facilities nominated across the site.</p>
<p>Furthermore, the vehicle Swept path plan prepared by GTA indicates that the northern section of Kookaburra Circuit between the proposed building and Jacaranda Drive allows for trucks to pass through the existing building underpass, thus appears to propose a two-way travel where it is currently one-way. This will likely result in additional works required within the road and the existing building, which has not been identified on plans. Height clearance at the underpass location would need to be confirmed.</p>	<p>As outlined in 5.7 of the TIA submitted with the EIS, Kookaburra Circuit currently operates as a one-way loop (traveling clockwise) from the Car Park 2 exit through to Jacaranda Drive. It is proposed to convert Kookaburra Circuit to two-way for its entire length by removing the existing on-street parking.</p> <p>Swept path assessments have been prepared to determine the impact of large vehicles using Kookaburra Circuit. It is understood that the largest vehicle would be a 19m semi-trailer, however, this is expected to be an infrequent occurrence associated with accessing the sub-station in the event of unplanned maintenance. The current width of Kookaburra Circuit does not allow for a 19m truck and an ambulance to pass, however, a more common occurrence is likely to be a 12.5m rigid truck. Swept path assessments (provided in Appendix C of the TIA submitted with the original EIS) a 12.5m truck passing an ambulance identifies that this can be accommodated.</p> <p>An operational policy will be prepared to manage vehicle movements, in the event that a 19m semi-trailer is required to use Kookaburra Circuit. This will include the requirement to complete movements at designated times and in consultation with the Hospital Engineering Department to ensure no impact to ambulances. This will also consider the management of approach routes to</p>

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	ensure ambulances have right of way, with ambulances arriving from the west and semi-trailers arriving from the east.
5. Parking management The submitted traffic report and survey seems to indicate the provision of additional parking spaces for the proposed development and for staff, however clear numbers for staff parking have not been indicated in the report. Concern is raised that the proposed modification of the existing staff car parking and not allocating additional parking for staff for the overall development and hospital precinct has not been demonstrated.	Section 4.1 of the TIA submitted with the EIS outlines the proposed parking requirement and provision. The parking demand study identified that the proposed JHHIP should provide for an additional 754 parking spaces on site by 2031/32, comprising 517 staff spaces, 9 VMO spaces, 25 fleet spaces and 203 public spaces. Table 4.1 also provides a parking reconciliation across the campus of where spaces will be removed as part of the redevelopment and the additional spaces to be provided within the new Aute Services Building. As outlined as a minimum an additional 517 staff parking spaces will be provided on the campus. Regarding Construction parking, Health Infrastructure will work with the contractor to implement initiatives such as park and ride shuttle bus services and encourage car-pooling.
Furthermore, the impact of parking during construction stage and management has also not been addressed.	Construction Parking is addressed at Section 5.5.15 of the EIS and within the TIA submitted with the EIS including considering car parking impacts during construction. Further, car parking loss will be mitigated with the staging of the project tasks to maintain net supply across the campus.
6. Alternative transport Although the submitted Green Travel Plan will promote 'the use of transport, other than the private car, for choice of travel to and from the JHHIP site, which is more sustainable and environmentally friendly', only 24 secured staff bike storage spaces are provided with minimum end user facilities proposed. It is noted that there will be additional cycle network created through the Bypass proposal and the development. CN is concerned that a lack of end user facilities and secured bike storage will discourage use of bicycle usage and encourage greater car travel, thus further burden on off-street and on-street car parking demand.	The Newcastle DCP requires one bicycle parking space is provided for every 10 staff or visitors that are associated with the ASB. It is anticipated that an additional 240 staff and 240 visitors are expected to visit the site on average, and therefore, 24 staff and 24 visitor bicycle parking spaces are proposed. The following end of trip facilities are proposed in the ASB basement: <ul style="list-style-type: none"> • 24 secure bicycle spaces. • Six showers. • 24 lockers. In addition to this, 24 bicycle spaces in the form of bicycle racks will be available adjacent to the pick-up and drop-off area of the main southern entrance.
7. Local Bushland Impacts It is recommended habitat tree protection measures are included in the design and construction controls applied to the site, particularly given the vulnerability of the local squirrel glider population in this area.	Tree protection and management recommendations are provided in this Arborist Report, including recommendations relating to: <ul style="list-style-type: none"> • General tree protection measures and tree protection fencing. • Bushfire APZ planning. • Service trench alignment and trenching works. • Tree pruning and vegetation management. These recommendations form mitigation measures that are included at Section 7.0 of the EIS
It is recommended high density native vegetation beds are planted on disturbed surfaces to reduce the risk for future weed impacts.	See response provided by Urbis at Appendix F .
8. Section 7.12 Local Infrastructure Contribution CN's Section 7.12 Local Infrastructure Contribution Plan 2019 (Update Dec2020) applies to the subject land. However, as stated in the EIS the plan provides that s7.12 levy is not imposed on an Infrastructure Infacility as defined under the State Environmental Planning	Noted.

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Policy (Infrastructure) 2007. The proposed development constitutes an infrastructure facility and therefore no levy is applicable.	
Biodiversity & Conservation Division (BCD)	
<p>Biodiversity</p> <p>1. Further consideration of potential impacts to threatened microbats is required. The assessment of potential impacts to threatened microbats by the John Hunter Hospital Health and Innovation Precinct project does not appear to have considered local, manufactured structures (such as buildings, culverts etc...) as possible roosting sites. Figure 4.2 'Ecosystem credit Species Records' in the BDAR shows local records of the Little Bent-winged Bat and Large Bent-winged Bat. The assessment of likely impacts on the Large-eared Pied Bat, Little Bent-winged Bat, Large Bent-winged Bat and the Eastern Cave Bat, presented in Table 6.2 'Likelihood of impacts to SAI entities' of the Biodiversity Development Assessment Report (BDAR) discounted any impacts to those species because of the absence of caves or tunnels in the project area. However, as described in BCD's Threatened Biodiversity data Collection (TBDC) these microbats can also roost in culverts and old buildings. This is highlighted by the recent discovery of a roost site of Little Bent-winged Bat and Large Bent-winged Bat in a culvert of Dark Creek at Jesmond; about 1.7 kilometres north of the proposed Acute Services Building of this project. The "Species Credit" threatened bats and their habitats: NSW survey guide for the Biodiversity Assessment Method' (OEH, 2018) requires all potential habitat, including culverts and old buildings, to be identified on the subject land. Any potential habitat identified then requires survey as per BCD's threatened bat survey guidelines. If breeding habitat is identified then this will generate a species polygon in the Biodiversity Assessment Method 2017 (BAM) assessment, which may then generate species credits to be offset by the project.</p> <p>Recommendation 1</p> <p>BCD recommends that the proponent demonstrates how potential roosting sites for the Large-eared Pied Bat, Little Bent-winged Bat, Large Bent-winged Bat, and Eastern Cave Bat have been considered and for any identified that they have been adequately surveyed. If surveys have not met BCD survey guidelines then BCD recommends additional surveys are conducted.</p>	<p>Section 6.4 and Appendix E of the revised BDAR has been updated to provide additional information for the BCD. See Appendix J.</p> <p>Umwelt advice confirms that no field surveys are required. BCD have grouped species with different credit assessment requirement together. Large-eared Pied Bat and Eastern Cave Bat are full species credit whereas Little Bent-winged and Large Bent-winged bats are only credit species for breeding habitat. As such, the approach to survey and assessment are different. All four species require caves, cliffs tunnels, culverts or appropriate structures for there to be potential habitat.</p> <p>There are no cliffs, caves, tunnels within the development footprint and no suitable culverts or old buildings within the development footprint. The development footprint has been surveyed extensively by foot during searches of threatened flora species and such features haven't been identified. This approach is consistent with section 2.5 of the survey guidelines - Identify areas of potential habitat on the subject site.</p> <p>API and review of adjoining development assessments have been used for areas proximate to the Development footprint and potential habitat (as defined by the guidelines) has not been identified using this approach. This approach is consistent with the guidelines for identifying potential habitat for the Large-eared Pied Bat and the Eastern Cave bat where features within 2km of the Development footprint need to be considered.</p>
<p>2. Matching on-ground vegetation to Plant Community Types requires more explanation. Section 3.2.1 'Plant Community Types and Vegetation Zones' describes features of three native woody vegetation communities on the project area and gives the Plant Community Type (PCT) that they have been matched to. The discussion does not include which PCTs were considered before a final match was made, nor the degree of confidence of the match.</p> <p>Recommendation 2</p> <p>BCD recommends that the proponent provides details of the Plant Community Types considered to match each of the on-ground vegetation communities and provides the degree of confidence in each match.</p>	<p>Section 3.2.1 of revised BDAR has been updated with additional PCTs considered in the assessment as requested by BCD. See Appendix J.</p>

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<p>3. A table of the measures to avoid and minimise impacts is required Table 26 of the BAM requires that a table of the measures to be implemented before, during and after construction to avoid and minimise the impacts of the project is required to be included in the BDAR. This must include details of the proposed action, timing and responsibility of these measures. Such a table does not appear to be presented in the BDAR.</p> <p>Recommendation 3 BCD recommends that in the 'Avoid and Minimise' section of the BDAR a table of the measures to be implemented before, during and after construction to avoid and minimise the impacts of the project is provided.</p>	<p>Section 5.2.7 has been added to the revised BDAR containing the table of mitigation measures and responsibilities. See Appendix J.</p>
<p>4. More information is required on survey effort for Large Forest Owls and the Eastern Osprey Appendix E 'Species-credit Species Survey Methods' of the BDAR describes the survey effort for the Barking Owl, Powerful Owl and the Eastern Osprey. Sixteen stag watching survey and targeted owl call playback sites in the study area are shown in Figure 4.1 'Species-credit Species Survey Locations'. However, sampling details with respect to suitable hollow-bearing trees for large forest owls, are unclear; and targeted searches for roost / nest sites for the Eastern Osprey are not shown. In comparison, Figure 4-1a 'Fauna habitat sheet 1 of 2' in the 'Technical Paper 1 – Biodiversity Assessment Report: Newcastle Inner City Bypass: Rankin Park to Jesmond (Dated June 2018) by GHD (2018) shows at least 60 hollow-bearing trees in the western part of the project area where two targeted owl surveys were conducted. Although, the diameter and height above ground of the hollows in those trees is not provided, it is likely that some of these hollows may offer suitable habitat to the forest owls or represent large roost trees for raptors. It is unclear in the BDAR were these areas of potential habitat considered in the impact assessment on these species. BCD's survey requirements for large forest owls and other tree-hollow dependent birds are provided in Section 5.3 of the 'Threatened Biodiversity Survey and Assessment: guidelines for Developments and Activities: Working Draft' (Dated November 2004) (DEC, 2004). BCD's requirements of sampling strategy are described in Section 5.1 of the same guideline. Species-specific survey requirements may also be provided in the TBDC. BCD, therefore, recommends that further information is provided on the determination of the sampling design, survey limitations, habitat assessment, sampling methods and effort, for forest owls and the Eastern Osprey (including the location of the Eastern Osprey searches to be shown on a map).</p> <p>Recommendation 4 BCD recommends that further details are provided on targeted searches of for large forest owls and the Eastern Osprey, and how they meet BCD survey requirements.</p>	<p>Appendix E of the revised BDAR has been updated with additional information as requested by the BCD. See Appendix J.</p>
<p>5. Any nest boxes on trees to be cleared must be replaced The BDAR does not discuss the fate of nest boxes in trees that would be cleared if the project is approved. Figure 4-1a 'Fauna habitat sheet 1 of 2' in the 'Technical Paper 1 –</p>	<p>Removal and relocation of nest boxes has been included in Section 5.2.1 - in the pre-clearance mitigation measures as requested by BCD. See Appendix J.</p>

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<p>Biodiversity Assessment Report: Newcastle Inner City Bypass: Rankin Park to Jesmond (Dated June 2018) by GHD (2018) shows at least 30 nest boxes that occurs in the western and central part of the project area.</p> <p>BCD recommends that any nest box on a tree to be removed for this project is:</p> <ol style="list-style-type: none"> 1. Subjected to a pre-clearing survey, conducted by an appropriately qualified and experienced ecologist, in which all signs of use and current occupancy are recorded; 2. Moved and secured to a tree within the adjacent forest that is outside of any development footprint (or if the nest box is unable to be moved that a new nest box that targets the same guild of animals is established in its place); 3. Removed under the supervision of appropriately qualified ecologist and that any native fauna occupants are assessed and either given to wildlife carers or relocated in a way that gives them the best chance of survival with the next box in a new location; and 4. That the movement of the next boxes is done in a way that meets the consent conditions for which they were established. <p>Recommendation 5</p> <p>BCD recommends that all nest boxes in trees that may be cleared for this project are moved to trees in the adjacent forest that are outside of any development footprint.</p>	
<p>6. Changes to some maps are required</p> <p>Some maps in the BDAR do not fully meet BAM requirements. New maps are required to show the following features:</p> <ul style="list-style-type: none"> • Cadastre • Strahler Stream Order (streams are shown on all nine Figures in the BDAR, but stream order is not shown) • Native vegetation extent presented at no more than 1: 10,000 scale (Figure 2.1 'Site Map' is presented at 1:24,000 scale) <p>Recommendation 6</p> <p>BCD recommends that maps are prepared that present the additional information required in by the BAM.</p>	<p>All figure in the revised BDAR have been revised to address BCD comments. See Appendix J.</p>
<p>Flooding and flood risk</p> <p>7. The waterways capacity to accommodate increases in flows has not been assessed The proponent has not assessed the impacts on the bed and bank stability of watercourses adjacent to the project site.</p> <p>Many of the watercourses within the vicinity of the project are currently undergoing active erosion and scouring, by way of active head cuts (refer to Water Quality and Watercourse Assessment, Newcastle Inner City Bypass Environmental Impact Assessment, RMS, 2016).</p> <p>The proposed detention basins have the potential to adversely affect stream erosion by altering the downstream hydrology. The basins are likely to increase the duration of peak flow rates and the volume of discharge. The need for additional stabilisation measures at the detention basin outlets should be investigated further in detailed design.</p> <p>City of Newcastle's Development Control Plan (DCP) 2012 requires an erosion assessment for first order streams. The assessment is required to demonstrate that the Stream Erosion</p>	<p>See response by Northrop Engineers at Appendix H – Section 1.</p>

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<p>Index (SEI) is no greater than 2, where the SEI is expressed as the ratio of 'post development flow exceeding the stream forming flow' to 'pre development flow exceeding the stream forming flow'. The requirements of this assessment are provided in S7.06 of the DCP and S4.15 of the Stormwater and Water Efficiency for Development Technical Manual.</p> <p>Recommendation 7 - BCD recommend that:</p> <ol style="list-style-type: none"> 1. The proponent should assess the potential for stream bank erosion in receiving streams in accordance with the Newcastle DCP Stormwater & Water Efficiency for Development Technical Manual (City of Newcastle 2017). 2. The need for additional scour protection measures at the watercourse crossings should be assessed during detailed design. 	
<p>8. Water quality impacts have not been assessed</p> <p>The proposal has not assessed the impacts on coastal wetlands that could be affected by additional flows generated by the project.</p> <p>The project is located at the headwaters of two sub-catchments of Dark Creek, which drain to sensitive wetland environments in the Hunter River floodplain, including the SEPP 14 and Ramsar wetland.</p> <p>For catchments draining to coastal wetlands, City of Newcastle requires an assessment to consider changes to the drying and flooding hydrology of the wetland. The requirements of this assessment are provided in S7.06 of the DCP and Appendix 8 of the Stormwater and Water Efficiency for Development Technical Manual.</p> <p>Recommendation 8 - The proponent should assess the impacts of the proposal on coastal wetlands in accordance with the Newcastle DCP Stormwater & Water Efficiency for Development Technical Manual (City of Newcastle 2017).</p>	See response by Northrop Engineers at Appendix H – Section 1.
Heritage NSW - Aboriginal Cultural Heritage Regulation	
<p>Heritage NSW recommends the following in addition to the management and mitigation measures included in the ACHAR and EIS:</p> <ul style="list-style-type: none"> · Further assessment is required of forested areas within the project area that were not subject to survey. Much of the project area has been subject to disturbance owing to the hospital construction and associated infrastructure. However, there are large areas of forested areas that have not been impacted through the ongoing construction and expansion of the hospital that were not subject to archaeological survey (ACHAR Section 6). Rather, survey coverage was restricted to exposures and within proximity to drainage depressions. While these forested areas may have been subject to clearing/deforestation in the past, the areas have potential to contain intact deposit that may contain Aboriginal Objects. Heritage NSW recommends that a complete and thorough survey be conducted in those areas not yet subject to survey. Greater explication is required in the ACHAR on the potential for intact archaeological deposit to be present throughout these forested areas. 	The project area has been updated to reflect the current design and associated impact footprint. The areas assessed as requiring further survey by Heritage NSW now largely fall outside of the project area and will not be subject to disturbance through the project. Areas at the western and north-western extent of the project area have also been subject to previous archaeological investigation (including test excavations) by KNC (2018), who identified low archaeological potential. A copy of the results of the KNC (2018) survey have been included in the report (Figure 5.1). Further detailed description of the archaeological potential for each survey unit is provided in Section 6.2 , with reference to the KNC (2018) assessment where appropriate. See updated ACHAR at Appendix N .
Greater explication is required in the ACHAR on the potential for intact archaeological deposit to be present throughout these forested areas.	

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The mapping quality throughout the main text of the ACHAR require revision, as superior mapping is presented in the Draft ACHAR than finalized version. Heritage NSW recommends that all mapping and figures be updated to a higher resolution.	Updated maps have been prepared at a higher resolution to those originally provided.
There is potentially a mapping error for AHIMS site #38-4-1940, as the point overlaps with site #38-4-1932. The ACHAR must confirm that site #38-4-1940 is located outside of the project area and site cards updated if necessary.	Advice from RMS (dated 23/7/21) identified that the 38-4-1940 site is located to the west of the project footprint for the Jesmond Bypass project, and as a result will be located outside of the JHHIP project area. The site card for the site is correct, and Umwelt have advised the AHIMS registrar that the data held in the AHIMS register has been incorrectly entered.
Consultation with Registered Aboriginal Parties (RAPs) has met Heritage NSW guidelines, with no issues raised during this process. No responses were received from the RAPs regarding the Draft ACHAR and revised project boundaries	A copy of the updated draft assessment has been provided to the registered Aboriginal parties for 28-days comment. The results of this consultation will be noted in Section 3.3.2 of the ACHAR.
There are minimal management recommendations provided in Section 9 (pages 50-51) of the ACHAR and Section 5.10 of the EIS as much of the project area has been heavily disturbed with low to nil potential for archaeological material, nor does it contain any known Aboriginal Objects, PADs, or Aboriginal Places. The ACHAR (Section 9) outlines that if any Aboriginal Objects and/or human remains are identified during the project then work would cease and contact made with the relevant agencies (e.g., NSW Police and Heritage NSW). Heritage NSW agrees with the current Management Recommendation ACHAR outcomes, based on the current state of the archaeological investigation. Heritage NSW recommends that material be produced ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site and that a detailed Unexpected Finds Protocol be produced for the Project Manager.	Noted. The project includes a mitigation measure to undertake an Unexpected Finds protocol and briefing workers of heritage considerations as part of site inductions as provided at Section 7.0 of the EIS.
Subsidence Advisory	
Subsidence Advisory NSW (SA NSW) is currently consulting with NSW Health Infrastructure and their representatives regarding our requirements for addressing the subsidence risk for the project. Under the SA NSW Merit Assessment Policy, remediation by grouting of the mine voids under the site is required to address the identified mine subsidence risk. Specific feedback regarding the provided proposed grout plan was provided to consultants working on this project on the 2nd of June 2021 (see attached). SA NSW notes that the applicant is required to obtain approval for the development under section 22 of the Coal Mine Subsidence Compensation Act 2017.	The grout plan has been updated to respond to SA NSW's comments. An updated copy of the grout plan is provided together with a table responding to SA NSW comments. This has been provided to the Department under separate cover.
NSW Environment Protection Authority	
Based on the information provided, the proposal does not appear to require an environment protection licence under the Protection of the Environment Operations Act 1997. The EPA has no comments on this project and no follow-up consultation is required.	Noted
Transport for NSW	
Please be advised, to avoid duplicating TfNSW submissions, the collective TfNSW Response will be uploaded by Roads and Maritime Services Account in the Portal.	Noted

Comment	Response
<p>Completion of works - The NICB is currently scheduled to open for traffic in Q3 of 2025. It is understood that the proposed development is scheduled for completion in Q3 of 2026, which permits the connection of the NICB to the hospital.</p> <p>As recognised in the TIA, there is insufficient capacity at the existing signalised intersections along Lookout Road to accommodate the traffic generated by the hospital development. While the NICB is expected to be completed before the hospital development is completed, DPIE should ensure that a condition is formulated requiring the connection to the NICB as a priority to accommodate the additional traffic before the occupation of the site for any part of the development that generates additional traffic.</p>	<p>As TfNSW notes the NICB is anticipated to be completed prior to the completion of the ASB. The JHHIP and TfNSW RP2J Project Teams are in regular consultation in the coordination of the respective projects. These forums are being utilised to collaborate and investigate opportunities and risk mitigation strategies to minimise the impact of the ASB opening prior to the NICB.</p> <p>In the event that the NICB project is not completed before the JHHIP occupation, Health Infrastructure has proposed a condition to manage site capacity and therefore traffic loads, as follows:</p> <p><i>Should the Newcastle Inner City Bypass Rankin Park to Jesmond road works approved as part of State significant Infrastructure approval SSI 6888 not be completed by the commencement of operations of the Acute Services Building, the proponent shall identify appropriate management measures (such as ensuring there is no uplift in clinical activity, staggered staff start and finish times, modified visiting hours) to minimise traffic growth on the John Hunter Hospital Campus during peak periods to the satisfaction of the Secretary. These measures shall be implemented until the completion of the Newcastle Inner City Bypass Rankin Park to Jesmond road works.</i></p>
<p>Safety and efficiency - Using the signalised intersection of Lookout Road / Kookaburra Circuit for early works and / or construction related traffic access / egress should be avoided as the intersection is the main thoroughfare for emergency vehicles, staff, pedestrians and visitors. Other construction access options may include the intersection at Jacaranda Drive (outside of peak traffic volume periods) or the access for NICB construction activities. TfNSW would encourage coordination through the NICB / JHH steering committee for advice and direction about access.</p>	<p>The Overview Construction Traffic Management Plan (prepared by GTA Consultants dated 14/05/2021 and submitted within Appendix G of the original EIS) has been developed to ensure the safety of all workers and road users in the vicinity of the construction site. As noted within this plan the majority of construction vehicles will use the Lookout Road / Jacaranda Drive intersection as the primary route, minimising the length of time vehicles travel on the hospital road network.</p> <p>Due to the constrained nature of the site, there will at times be the requirement for construction vehicles to use the Lookout Road / Kookaburra Circuit intersection. This has been noted as 'egress by exception'.</p> <p>The JHHIP and TfNSW RP2J Project Teams are in regular consultation in the coordination of the respective projects. These forums are being utilised to collaborate and investigate opportunities and risk mitigation strategies as required.</p>
<p>Construction Traffic Management Plan - The Traffic Impact Assessment (TIA), allows for minimal parking for construction workers during the construction phase with workers encouraged to catch public transport. The low frequency of bus services in the early morning may lead to a low uptake of this option. The TIA also states that construction workers will not be allowed to park within the JHHC, associated road network or on surrounding streets". TfNSW stresses its concern of the importance of management of this process. TfNSW would encourage coordination of the Overview Construction Traffic Management Plan within the TIA through the NICB / JHH steering committee. The focus would be on the impacts of construction related trip generation and management, including the existing cross-over of shift</p>	<p>Health Infrastructure will work with the contractor to implement initiatives such as park and ride shuttle bus services and encourage car-pooling.</p> <p>The JHHIP and TfNSW RP2J Project Teams are in regular consultation in the coordination of the respective projects. These forums are being utilised to collaborate and investigate opportunities and risk mitigation strategies as required.</p>
<p>Construction Management – DPIE should ensure that appropriate traffic measures are in place during the construction phase (including Stage 1) of the project to minimise the impacts of construction vehicles on traffic efficiency, emergency vehicles and road safety within the vicinity.</p>	<p>Construction traffic will be minimised in network peak hours, with options for offsite parking for construction workers to be implemented as outlined in the EIS. Once a contractor is engaged a detailed Construction Traffic Management Plan will be prepared including further initiatives such as park and ride shuttle bus services.</p>

Comment	Response
<p>It is noted that there is limited opportunity in the day for construction vehicles to access the site via the main road network (i.e. no construction traffic during peak and shift change leaves limited opportunity for a peak of 120 vehicle arrivals). The Construction Traffic Management Plan must address the scheduling of the key construction traffic generating timeframes.</p>	
<p>Active Transport Considerations - Future Transport 2056 emphasises the importance of walking and cycling for short trips and reinforces the importance of walking and cycling to increase the catchment of public transport as part of the whole customer journey.</p> <p>Building Momentum - State Infrastructure Strategy 2018-2038 includes recommendations related to walking and cycling, including integrating transport with land use; managing travel demand; unlocking capacity in existing assets; and improving population health outcomes through more active transport.</p> <p>The Traffic Impact Assessment (TIA), provides for secure bicycle spaces and end-of-trip facilities as defined in the Newcastle Development Control Plan 2012 (DCP). It should be noted: The NSW Planning Guidelines for Walking and Cycling has been superseded by Cycling Aspects of Austroads Guides, 2017..</p>	<p>Noted.</p>
<p><i>Recommendation</i></p> <p>Prior to the issue of any Construction Certificate, the provision of bicycle parking and end of trip facilities for staff and visitors in accordance with Australian Standard AS1742.9:2018 Manual of Uniform Traffic Control Devices - Bicycle Facilities, and Cycling Aspects of Austroads Guides including:</p> <ol style="list-style-type: none"> Locate bicycle parking and storage facilities in secure, convenient, accessible areas close to the main entries incorporating adequate lighting and passive surveillance and in accordance with Austroads guidelines. End of trip facilities should also include lockers, showers and safe bike storage. 	<p>See Appendix C - Refer to 1.0 Environmental Analysis & Site Layout</p> <p>See Appendix B - Refer to drawing AR_C0-B10 L2-00</p>
<p>Public Transport Considerations (bus movement) - All of the proposed roads need to be bus capable and bus swept paths are to be considered at all intersections not just the roundabouts. In order for bus services to operate safely and efficiently a minimum 3.5m standard traffic lane width is desirable. In a 50km zone (or less) a minimum traffic lane width of 3.2m is required provided there is no central median (ref: Guidelines for Public Transport Capable Infrastructure in Greenfields Sites). It is requested the applicant provide diagrams detailing road widths and swept paths for buses at all new intersections and new bus stops / layovers.</p>	<p>The road network has been designed to accommodate various bus movements.</p> <p>Lane widths have been identified at a minimum of 3.5m as per Northrop Civil design C401-SD Rev 3.</p> <p>The proposal includes 3 public bus bays and a bay for community bus and taxi parking. The bus bays have been designed in accordance with NSW State Transit Bus Infrastructure Guideline Section 3.7. Refer GTA 12/08/21 GTA-RTRFI-000023 at Bus Stop Diagram at Appendix K.</p> <p>The bus currently accesses from Lookout Road through Kookaburra Circuit and circulates to the bus stop and back out towards Lookout Road. This is proposed to continue, and design provisions have been made at the new roundabout on Kookaburra Circuit to accommodate buses turning around. There is no intention to have buses use the proposed northern road or the existing section of Kookaburra Circuit to the north of the existing hospital. Swept paths provided to confirm that existing services from Lookout Road can u-turn at the proposed roundabout to exit back towards Lookout Road. Road width and bus bay dimensions on Kookaburra Circuit also provided. Buses will use Kookaburra ct along the southern entry only</p> <p>.</p>

Comment	Response
Public Transport Considerations (bus stops) - The proposal discusses public buses and community transport sharing the bus stops for stopping and short term layover. Only public buses are permitted to stop at bus stops. TfNSW encourage arrangements for community bus should be managed separately where possible.	<p>Refer to Transport Impact Assessment (Appendix G Part 2) submitted with the original EIS and refer N169772-03-01 Sheets 1 to 4.</p> <p>See Appendix K – Bus Bay Layover and Swept Paths</p>
In addition to the above, in order for the bus stops to function effectively the following bus draw-in and draw-out lengths need to be observed (ref: Guidelines for Bus Layover Parking). Based on the supplied diagrams TfNSW is unable to determine if these have been considered. It is requested the applicant provide detailed drawings illustrating the location of proposed bus stops within the projects boundary demonstrating draw-in and draw-out lengths are met to the Customer Strategy and Technology team for further advice via email development@transport.nsw.gov.au.	<p>Given there is currently only one bus zone provided on site and the design provides the ability to accommodate up to four 12.5 metre buses, ample capacity has been provided to accommodate required pick-up and drop-off activities generated by the JHHIP by both public buses and community buses. This includes accommodating short-term layover space for any future bus routes that may terminate in the hospital. Based on the comments received from Transport for NSW that the community bus cannot share a bus zone with a public bus the design has been revised to include 1 x community bus stop (separate to public buses) at the front of the existing Southern JHH entry. This replaces a previously proposed bus bay, therefore providing provisions for 3 x space for public buses.</p> <p>See Appendix K – Bus Bay Layover and Swept Paths See Appendix B – Updated Architectural Plans</p> <p>Bus Dimension Plan provided; bus bays have been designed in accordance with the NSW State Transit Bus Infrastructure Guide. Note: The John Hunter Hospital site is not expected to be a designated bus layover site, services will be arriving and departing as per service timetables. Providing a bus layover at the main entrance to the Hospital would impact service delivery and amenity of the front area of the hospital. The proposed extended bus stop on the southern side of Kookaburra Circuit provides the required dimensions to accommodate two buses independently (nose to tail operation) in the event that a bus arrives prior to another bus departing. This is not for the purpose of a bus layover.</p> <p>See Appendix K – Bus Bay Layover and Swept Paths See Appendix B – Updated Architectural Plans</p>
Public Transport Considerations (Taxi) - The proposal assumes all point-to-point transport will be pre-booked and pick up will occur in the general pick up and drop off zones. TfNSW encourages the continued dedication of a taxi zone be provided to ensure that future demand is met.	<p>The previously proposed design provides space for 4 buses; two to the north and two to the south of the road immediately outside the front entry. The proposed solution is to reallocate the 4th bus layover space for community buses and taxi rank, with space for 1 x max 22 seater community bus, and 2 x taxis. The 2 x taxi spaces at the Southern JHH entry is in addition to the existing spaces at the RNC entry.</p> <p>See Appendix K – Bus Bay Layover and Swept Paths See Appendix B – Updated Architectural Plans</p>
Green Travel Plan - TfNSW has reviewed the overview Green Travel Plan (GTP), and has a number of recommendations to improve the GTP and the proposed initiatives to encourage sustainable transport to the site. It should be a priority for the proponent to secure funding, human resourcing and an agreed timeframe for completion of key actions identified in the GTP to support sustainable transport outcomes. TfNSW would welcome further discussions with the proponent regarding these matters to ensure their delivery.	Noted.

Comment	Response
<p>Please contact Customer Strategy and Technology team for further advice via email development@transport.nsw.gov.au.</p> <p>Should DPIE support the proposed development it is recommended that the following condition be imposed:</p> <p>Prior to the commencement of first occupation, a Green Travel Plan (GTP) must be submitted to the satisfaction of the Certifier to promote the use of active and sustainable transport modes. The GTP must:</p> <ul style="list-style-type: none"> (a) be prepared by a suitably qualified traffic consultant (b) include objectives and modes share targets (i.e. site and land use specific, measurable and achievable and timeframes for implementation) to define the direction and purpose of the GTP; (c) include specific tools and actions to help achieve the objectives and mode share targets; (d) include measures to promote and support the implementation of the plan, including financial and human resource requirements, roles and responsibilities for relevant employees involved in the implementation of the GTP; (e) quantification and analysis of staff shift times and numbers on the Site and analysis of workforce residential post code data to properly understand public transport and car parking demand and develop effective strategies in response, as well as help to inform service planning considerations; (f) consideration of a staff travel survey and workforce data analysis to inform likely staff travel patterns and resultant travel plan strategies to / from the Site; (g) strategies for promoting higher mode share targets for alternate transport use, particularly amongst day shift and administrative staff; (h) identification of a responsible party (or Committee) for the ongoing implementation of the Travel Plan and its initiatives; (i) confirmation of extent and nature of end of trip facilities and bike parking and how they will be promoted to staff; (j) identification of a communications strategy for conveying Travel Plan information to staff, patients and visitors, including for the Travel Access Guide; (k) consideration of car parking management strategies that may be required to encourage sustainable transport use / mode share targets (such as pricing, prioritisation for those that carpool, use of wait lists, etc); (l) a detailed action plan comprising specific tasks needed to complete the proposed actions, the person/s responsible for completion of the task, completion date and anticipated costs; (m) an implementation checklist to achieve the proposed initiatives; (n) alternative actions to undertake where targets are not achieved; (o) the set-up of a steering group or committee of relevant internal and external stakeholders to inform future targets and the ongoing monitoring and revision of the GTP for five years; and (p) include details regarding the methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets of the GTP, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours of users of the development. 	

Comment	Response
There is a toolkit for hospital travel plans to help in the development of the GTP https://www.mysydney.nsw.gov.au/travelchoices/tdm	
Landscaping (tree removal) – The extent of tree removal required for the NICB is not yet confirmed and subject to changes provided it remains consistent. The proposal indicates that a portion of the clearing works will occur in a shared area and scheduled to occur first. Further details must be submitted detailing the extent of tree removal sought as part of this development and that required as part of the NICB.	It is understood that the NICB tree clearing has been approved as part of the separate SSI consent (SSI 6888). As per TfNSW's Biodiversity Assessment Report (GHD June 2018) nominated the construction footprint / clearing footprint within the included figures. The JHHIP and TfNSW RP2J Project Teams are in regular consultation in the coordination of the respective projects. These forums are being utilised to coordinate works and the timings of these works. As the JHHIP Western Road will be developed ahead of the NICB main alignment, the physical clearing of the trees will be undertaken by the JHHIP Contractor under the TfNSW approval.
Landscaping (planting) – In conjunction with the construction of the NICB, TfNSW will be providing general landscaping only to the earth batters and hospital interchange (refer concept Landscaping, Surfaces and Planting Plan by Aurecon). Where the proponent seeks to provide other forms of landscaping treatment, this will be at no cost to TfNSW.	Noted.
Stormwater Management – A combined sediment / biofiltration / detention basin - number 2 - is located immediately upstream of the NICB (located on the eastern side). Discharged stormwater from this system shall not exceed the capacity of the stormwater drainage system identified in the current design, which is for swale / catch drain and stormwater culvert system. This civil infrastructure is identified at Chainage 8630 of the concept Aurecon Design.	See response by Northrop Engineers at Appendix H – Section 5.
Noise mitigation - DPIE should ensure that the applicant is aware of the potential for road traffic noise to impact on development on the site, in particular, noise generated by the Newcastle Inner City Bypass. In this regard, the developer, not TfNSW, is responsible for providing noise attenuation measures in accordance with the NSW Road Noise Policy 2011, prepared by the department previously known as the Department of Environment, Climate Change and Water.	Noted. Operational noise from the proposed NICB has been considered in the acoustic design. The assessment of operational traffic noise from the NICB was based on noise predictions documented in the Noise and Vibration Assessment prepared for the NICB EIS/SSDA (SSI 6888).
Hunter Water	
On 10 June 2020 Hunter Water issued a Preliminary Servicing Advice letter in response to an application for the proposed John Hunter Health and Innovation Precinct development. Elements of this Preliminary Servicing Advice have been incorporated by Warren Smith Consulting Engineers into the Hydraulic and Fire Services SSDA Utility Report that forms part of the current EIS. Hunter Water's response to the EIS is consistent with this Preliminary Servicing Advice, and in particular the following advice (see letter for details)	Noted.
In respect to the Hydraulic and Fire Services SSDA Utility Report prepared by Warren Smith Consulting Engineers, Hunter Water requires that future analysis, design and documentation references relevant Hunter Water standards and guidelines rather than Sydney Water's.	It is noted there may instances where HWC do not have applicable standards. In this situation Sydney Water will be used as the most applicable guideline.
DPIE Water	
The EIS and supporting documentation does not directly consider the NSW Aquifer Interference Policy (AIP) 'minimal impact considerations'.	The project site is generally between RL 70m to RL 80m. As noted within the Geotechnical Report submitted with the EIS (Appendix X of the EIS – Document RCA ref 14399-207/1

Comment	Response
<p>It is unclear from the EIS and supporting documentation, whether the proposed activities will result in direct or indirect take of groundwater. Grouting of historical mine workings is proposed, possibly below the depth of water table, and would potentially constitute an aquifer interference activity.</p> <p>While no groundwater was intercepted during excavation of test pits that were dug to a maximum depth of 0.9 metres below ground level (mbgl), construction excavations are proposed to depths of 8-10 mbgl. The Geotechnical Assessment report indicates that two boreholes were constructed, however, no detail on water level measurements were included. Water levels of between 11.6-15.90 mbgl are mentioned in the Contamination Assessment report. The geotechnical assessment further notes that “a detailed understanding of the groundwater conditions at the site is very important” in relation to detailed design and construction, suggesting that interception of water table is possible. DPIE Water considers that the proponent has not provided sufficient information to demonstrate the likelihood of groundwater interception or take during excavation and/or operation.</p>	<p>December 2019), through subsequent mine subsidence investigations the groundwater level for this site lies at a level below RL 0m, at depths of over 70m below surface level. The Project excavations in the order of 8m to 10m below surface level are of very low likelihood to encounter groundwater during excavation or operation.</p> <p>At the time of investigations no groundwater seepage was encountered in any of the test pits, boreholes, and piezometers. The piezometers were constructed to depths of 17.55 mbgl and 8.4 mbgl respectively with further details within the Geotechnical Report (RCA ref 14399-207/1 December 2019).</p> <p>Minor perched groundwater seepage may be encountered during the basement excavation (subject to climatic conditions) and will be managed by conventional construction methodology such as provision of surface drainage, sumps and pump out as required.</p> <p>The mine workings at a depth of about 80-100m below ground level are proposed to be grouted (6000-10000m³ of grout). The mine workings are flooded and the grout will displace groundwater. The mine workings are widespread and the groundwater level is below RL 0m AHD. It is assumed that the depressed groundwater level is the result of mine level pumping somewhere in the broader region. The grouting will result in groundwater displacing laterally with an expected minor rise in the regional groundwater level.</p>
<p><i>Prior to approval</i></p> <p>- Identify if the water table will be intercepted by cut and fill activities, and if so provide information on the predicted groundwater inflow volume generated.</p>	<p>Groundwater is not expected to be intercepted through the cut/fill activities of the site, with the water table generally 70m below surface levels.</p>
<p>Report on whether the groundwater take is less than the 3ML licensing exemption offered under the Water Management (General) Regulation 2018 or a licence is required.</p>	<p>Groundwater is not expected to be intercepted through the construction activities. Therefore groundwater take licencing or exemptions are not deemed necessary.</p>
<p>Provide a statement of impact against the ‘minimal impact considerations’ as defined in the NSW Aquifer Interference Policy (2012).</p>	<p>With reference to the ‘minimal impact considerations’ as defined in the NSW Aquifer Interference Policy (2012) it is considered that the site is not a productive groundwater source and the proposed works will have minimal impact on groundwater pressure and quality.</p>
<p><i>Post approval</i></p> <p>* Provide a detailed and consolidated site water balance.</p>	<p>The responses and information provided by RCA demonstrate Groundwater is not expected to be intercepted through the construction activities. Therefore, groundwater take licencing or exemptions are not deemed necessary. Accordingly, a detailed and consolidated site water balance is not required.</p>
<p>* In the event groundwater is intercepted during construction, the proponent must ensure that any take is appropriately licenced unless eligible under an exemption.</p> <p>* All works on waterfront land as defined by the Water Management Act 2000 must be in accordance with the NRAR Guidelines for Controlled Activities on Waterfront Land. The NRAR Guidelines can be found here https://www.industry.nsw.gov.au/water/licensingtrade/approvals/controlled-activities/guide</p>	<p>These recommendations are accepted.</p>

Comment	Response
NSW Rural Fire Service	
<p><i>Asset Protection Zones</i></p> <p>Intent of measures: to provide suitable building design, construction and sufficient space to ensure that radiant heat levels do not exceed critical limits for firefighters and other emergency services personnel undertaking operations, including supporting or evacuating occupants.</p> <p>1. From the start of building works, and in perpetuity to ensure ongoing protection from the impact of bush fires, asset protection zones must be provided as shown on Figure 13: Required Asset Protection Zones, dated 02 March 2021, produced within the bushfire assessment report of Bushfire Planning Australia with reference number: 1940 JHHIP. Additionally, this APZ is to be extended to include all lands to the southeast of the proposed acute services building for a distance of 60 metres. When establishing and maintaining an inner protection area (IPA) the following requirements apply in accordance with the requirements of Appendix 4 of Planning for Bush Fire Protection 2019</p>	<p>Noted. The recommended APZ increased to 60m on eastern elevation of ASB (increased from 52m) requiring an addition ~540m² to be managed as an APZ.</p> <p>An updated BDAR by Umwelt is provided at Appendix J.</p>
<p>2. The water quality and stormwater detention basins located to the north of the Acute Services Building are to be replanted using species of a type and density which are commensurate with a grassland as described in Appendix 1 of Planning for Bush Fire Protection 2019.</p>	<p>The design has been refined (See Landscape Plans at Appendix D) to include replanting as <i>grassland</i> (per PBP 2019). These will also be indicated on the Construction Certificate Landscape Plan.</p>
<p>3. A 10 metre vegetation buffer is to be established and maintained on either side of the new loop road which connects Jacaranda Drive, the acute services building, the Newcastle Inner City Bypass and the existing western end of Kookaburra Circuit. The planting in the buffer must be limited species, type and density commensurate with a grassland as described by Planning for Bush Fire Protection 2019.</p>	<p>The design has been refined (See Landscape Plans at Appendix D) to include 10m either side of road of all new roads (measured from edge of kerb) to be replanted as grassland (per PBP 2019) and will be indicated on Construction Certificate Landscape Plan. It is noted that no additional clearing is required.</p>
<p><i>Construction Standards</i></p> <p>Intent of measures: to provide suitable building design, construction and sufficient space to ensure that radiant heat levels do not exceed critical limits for firefighters and other emergency services personnel undertaking operations, including supporting or evacuating occupants.</p> <p>4. New construction must comply with Sections 3 and 5 (BAL 12.5) Australian Standard AS3959-2018 Construction of buildings in bush fire prone areas or NASH Standard (1.7.14 updated) National Standard Steel Framed Construction in Bushfire Areas – 2014 as appropriate and Section 7.5 of Planning for Bush Fire Protection 2019.</p>	<p>See BVN Response to Submissions at Appendix C - Refer 3.0 Construction Standards</p>
<p><i>Access</i></p> <p>Intent of measures: to provide safe operational access for emergency services personnel in suppressing a bush fire, while occupants are accessing or egressing an area.</p> <p>5. Public access roads must comply with general requirements of Table 6.8b of Planning for Bush Fire Protection 2019</p>	<p>Northrop and BVN plans already indicate safe operational access in accordance with PBP 2019</p>
<p>6. A 10m vegetation buffer is to be located on either side of the east-west road link. The planting in the buffer is to be limited to species type and density commensurate with a grassland, as described by Appendix 1 of Planning for Bush Fire Protection 2019.</p>	<p>The applicant accept these recommendations - can form part of a condition of consent. Replanting as <i>grassland</i> (per PBP 2019) to be indicated on Construction Certificate Landscape Plan.</p>

Comment	Response
<p><i>Utilities and Services</i></p> <p>Intent of measures: to provide adequate services of water for the protection of buildings during an after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.</p> <p>7. The provision of water, electricity and gas must comply the following in accordance with Table 6.8c of Planning for Bush Fire Protection 2019</p>	<p>Confirming compliance with requirements of Appendix 4 of Planning for Bush Fire Protection 2019, except for use of AS2419.1:2017 in lieu of AS 2419.1:2005 and ring main configuration.</p> <p><i>Detailed fire services response:</i></p> <p>Fire hydrant design is as per the following:</p> <ul style="list-style-type: none"> * Water supply is from a reticulated water main. Note, on-site fires services pumps and an on-site fire services water storage tank are also to be provided. * Fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2017 in lieu of AS 2419.1:2005 ; * Hydrants are not located within any road carriageway; * The two external double headed fire hydrants are provided between the bushfire risk and new Acute Services Building (ASB). The two external double headed fire hydrants are connected to an internal (within the new ASB) fire hydrant system ring main. * Note, hydrants located adjacent to Kookaburra Circuit, located within 4m of the undercroft opening on L00 * Fire hydrant flows and pressures comply with the relevant clauses of 2419.1:2017, which are the same as those nominated in AS 2419.1:2005 ; * All above-ground water service pipes are to be metal. <p>New fire services electrical cabling is to reticulate through the site in-ground.</p>
<p><i>Emergency Evacuation and Management</i></p> <p>Intent of measures; to provide suitable emergency and evacuation arrangements for occupants of SFPP developments.</p> <p>8. A Bush Fire Emergency Management and Evacuation Plan is prepared consistent with the:</p> <ul style="list-style-type: none"> • NSW RFS document: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan; • Australian Standard AS 3745:2010 Planning for emergencies in facilities; and, • Australian Standard AS 4083:2010 Planning for emergencies – Health care facilities. <p>The Bush Fire Emergency Management and Evacuation Plan should include planning for the early relocation of occupants. Note: A copy of the Bush Fire Emergency Management and Evacuation Plan should be provided to the Local Emergency Management Committee for its information prior to occupation of the development</p>	<p>A Bush Fire Emergency Management and Evacuation Plan will be completed prior to the issue of the occupation certificate.</p>
Comment	Response
Public Submissions	
<p><i>Parking</i> - Provision of adequate parking for staff on site, concern about spill over into surrounding suburban streets and construction parking impacts.</p>	<p>While the parking demand study identified that the proposed JHHIP should provide for an additional 754 parking spaces on site the development will provide an uplift of around 900 spaces across the site to accommodate parking demand generated by the JHHIP and to alleviate some of the existing parking shortfall. These will be provided via a combination of basement car park and at-grade spaces.</p>

Comment	Response
	<p>Construction Parking is addressed at Section 5.5.15 of the EIS and within the TIA submitted with the EIS including considering car parking impacts during construction. Further, car parking loss will be mitigated with the staging of the project tasks to maintain net supply across the campus.</p> <p>In relation to operational parking, section 4.1 of the TIA submitted with the EIS outlines the proposed parking requirement and provision. The parking demand study identified that the proposed JHHIP should provide for an additional 754 parking spaces on site by 2031/32, comprising 517 staff spaces, 9 VMO spaces, 25 fleet spaces and 203 public spaces. Table 4.1 also provides a parking reconciliation across the campus of where spaces will be removed as part of the redevelopment and the additional spaces to be provided within the new Acute Services Building. As outlined as a minimum an additional 517 staff parking spaces will be provided on the campus.</p>
<p>Traffic report has been recommended construction workers commute with public transport where practical and to use surrounding streets to park. However, construction workers will commence shift prior to JHH morning staff and will have greater opportunity to access street parking, further reducing parking opportunities for hospital staff.</p>	<p>Workers will not be permitted to park within the Hospital campus with minor on-site worker parking allocation within the construction compound. Health Infrastructure will work with the contractor to implement initiatives such as park and ride shuttle bus services and encourage car-pooling.</p>
<p>On call operating theatre staff should have allocated car spaces (not just the doctors). As a major trauma centre we should cater for all staff who assist in the emergencies after hours.</p>	<p>Noted. This is an operational arrangement that Health Infrastructure and John Hunter Hospital can explore.</p>
<p><i>Traffic</i> Traffic is already at a standstill going to and from the JHH at certain hours, including on a busy main road. There appears to be little consideration given to the traffic impact of this expansion, and such as it may be, whether there are sufficient access points into and out of the JHH precinct.</p>	<p>The TIA provided to accompany the EIS (see Appendix G of the EIS) considered the existing traffic arrangements and operational capacity of the hospital, as well as the impact the development would have on ongoing traffic management and relevant mitigation measures. A number of upgrades to the internal road network, as well as the introduction of the NICB and relevant upgrades connecting that to the JHHIP network will assist in easing the traffic impacts.</p>
<p>Concern that times of high traffic results in ambulances not taking patients to JHH because of stand still traffic/inaccessibility.</p>	<p>Appropriate operational management plans will be implemented to ensure that ambulance access is prioritised and that no access is restricted at any times. Further, the relocation of the ambulance drop off and pick up will improve ambulance access. An operational policy will be prepared to manage vehicle movements to ensure that ambulances have right of way.</p>
<p>The JHH is the only hospital serving the inner suburbs of Newcastle. Concern that traffic will result in inaccessibility to hospital.</p>	<p>The expansion of the JHHIP is capable due to the additional traffic capacity that the Inner City Bypass will enable. As discussed above, the TIA provided to accompany the EIS (see Appendix G of the EIS) considered the existing traffic arrangements and operational capacity of the hospital, as well as the impact the development would have on ongoing traffic management and relevant mitigation measures. A number of upgrades to the internal road network, as well as the introduction of the NICB and relevant upgrades connecting that to the JHHIP network will assist in easing the traffic impacts. The study found that all intersections would operate with satisfactory levels once the NICB is operational.</p> <p>Further, the upgrades and extension improves the hospital's capacity to serve the Newcastle community, delivering greater facilities with additional capacity.</p>
<p>The traffic reporting does not take into account the various shift changes, beyond morning, afternoon and night shift overlaps, particularly due to the various departments in the hospital.</p>	<p>The TIA prepared to accompany the EIS includes surveys which considered shift changeover. Further, the focus of the TIA was to consider the peak shift changeovers, rather than all shift changeovers where traffic is less minimal.</p>

Comment	Response
<p>Concern that the North Road – East Phase section of the road network may potentially become a detour from the Newcastle Inner City Bypass to Lookout Road and onto Russell Road and vice versa.</p> <p>Opportunity to redesign the road to avoid people utilising the road as a connecting through road, whilst providing an efficient connection to hospital buildings and disturbing less bushland.</p>	<p>Detailed consideration of the northern road has been provided elsewhere in this response. The Northern Road is required to ensure that appropriate circulation for the precinct can be managed into the long term of the JHHIP.</p>
<p>Suggestion that PM Peak Hour (3:15-4:15PM) is not accurate and has been nominated to downplay the significant traffic issues experienced at the JHH campus on an almost daily basis. The major traffic peak is between 4:00 - 5:00 PM, with delays of 30 minutes to exit the campus from Car Park 4 routinely experienced, with delays of >90 minutes occurring on occasion, independent of traffic flow on Lookout Road.</p> <p>Further traffic planning should be based on the true peak between 4:00pm and 5:00pm to appropriately address the problem.</p>	<p>The TIA prepared to accompany the EIS undertook several surveys to understand when the peaks occurred across the JHHIP site. It is noted that these surveys were undertaken between 3:00-7:00pm and identified that 3:15-4:15 was the time identified as being the most accurate peak time.</p>
<p><i>Public and Active Transport</i> Request to extend the Newcastle light rail to John Hunter Hospital via Broadmeadow Stadium.</p>	<p>This is outside the scope of this application and is a matter for TfNSW.</p>
<p>Provision of better public transport to the hospital is the most effective solution to providing access for employees and visitors</p>	<p>Noted. This is outside the scope of this application. The project has increased public bus stops at JHHIP and introduces a community bus stop and taxi rank which improves the ability to increase alternative transport solutions. NSW Health will continue to work with TfNSW to improve public transport access.</p>
<p>Traffic report is reliant on current and new staff utilising public transport and/or living within proximity of accessible public transport. Not a significant amount of staff have access to appropriate public transport that provides access to JHH, let alone at the various times staff start work at the hospital.</p>	<p>The Green Travel Plan accompanying the EIS outlines the existing and future public transport links relating to the site, and outlines strategies for the hospital to implement to assist staff in utilising appropriate public transport. In addition, the TIA and Green Travel Plan both consider a large portion of staff continuing to travel to the hospital via private transportation. Additional parking and access arrangements have been proposed as a result.</p>
<p>The cycleway/walkway that enters the John Hunter Hospital (JHH) boundary on the north side will be adversely impacted by the new JHH roadworks in that area, as will the electrical easement, both of which currently provide a major access path for bushwalking and cycling in the bushland adjacent to the northern boundary of the JHH.</p> <p>What plans are in place for maintaining continued and unhindered access to these walking and cycling paths to bushland on the northern boundary of the JHH?</p>	<p>Noted. These paths will be maintained and remain accessible where possible. The existing bushwalking and cycle paths are shown at Appendix C - Refer to 1.0 Environmental Analysis & Site Layout.</p>
<p><i>Other Issues</i> Are there any plans for NSW Health to include/extend a fire trail or asset protection zone behind homes along Croudace Street? Believed to be land owned by Health NSW. There are serious concerns if there was a bush fire as there is no asset protection zone or fire trail despite many homes backing onto the bushland. There is no access from Croudace Street to that area.</p>	<p>This is noted. This is outside the scope of the JHHIP expansion, however the landowner should raise this with City of Newcastle Council who are the authority that maintain the land.</p>

Comment	Response
Long term noise and vibration monitoring on the residential side of Lookout Road should be undertaken.	Noted. Noise and vibration management and monitoring will continue throughout construction.
Need assurance from Developer and State Government any damage to our property due to Construction Vibration will be adequately compensated.	As per the Construction Noise and Vibration Impact Assessment prepared with the EIS, complaint management procedures are in place to manage any impacts from the construction works.
The built form is of significant bulk and scale.	The ASB has been designed to respond to the specific and unique requirements of a hospital building whilst also responding to the surrounding visual impact and view corridors. Overall the project is informed by the identified need for additional health services at John Hunter Health Campus and to respond to growing need for health facilities and improved models of health care to service the Hunter Region.
Construction noise and construction traffic noise to be kept to a minimum.	Construction noise and traffic will be managed in accordance with the relevant management plans which were prepared to accompany the EIS.
No wastewater or waste removal from hospital renovation and new hospital development should impact surrounding properties.	Construction management, including the removal of wastewater and waste will be carried out in accordance with the Preliminary Construction Management Plan prepared to accompany the EIS and the detailed Construction Management Plan that will be prepared by the principal contractor during the detailed design phase of the project.