Appendix B – Detailed Response to Submissions and Request for Information

Department of Planning, Industry and Environment (DPIE)

Reference No.	Extract	Response
DPIE 1	Provide a comprehensive response to the concerns raised by Council and Transport for NSW (TfNSW). In particular, the Department requests you provide: a) further consideration of vehicular access, including the feasibility of limiting public access to the site to Windsor Road, noting TfNSW concerns about the proximity of the Showground Road entrance to the traffic signals at Windsor Road and merging lanes. b) options to provide additional informal parking in accordance with the existing conditions of development consent D/1674/2007/HA on the adjoining TAFE site.	This Response to Submissions (RtS) report provides a comprehensive response to the concerns raised by TfNSW and the Council. More specifically, the following information is provided: a) The access point on Showground Road already exists and it is required to maintain a suitable level of operations for the broader MDC site. This existing driveway is over 135m away from the traffic lights at Windsor Road and operates well without impacting the road network. In addition to the distance between the driveway and traffic lights, this is a legal manoeuvre. It is currently permitted for vehicles accessing the MDC site and will continue into the future. Restricting access for vehicles accessing MDC for Building J only is not feasible. As documented in the Transport Impact Assessment (TIA), the development of Building J would generate a minor number of additional vehicles to the site. This is estimated to be 15 vehicles during the morning peak hour (when vehicles may be making this move). When taking into consideration that these trips will be spread across the site access points on Showground Road and Windsor Road, the development would result in less than 10 additional vehicles accessing the site via this existing driveway. This level of additional traffic generation is less than one vehicle every six minutes and would not impact the operation of the road network.

		A review of crash data from the five year period between 2015 to 2019 demonstrates that only one incident was recorded on Showground Road (eastbound) between Windsor Road and Green Road. This incident involved one vehicle 'rear ending' another and did not result in any injuries. Importantly no crashes over this five year period were recorded as a result of vehicles weaving across traffic lanes on Showground Road which is of concern to TfNSW. b) An option for informal parking to replace parking required under development consent D/1674/2007/HA is included at Appendix M (Informal Parking Plan prepared by Lahznimmo Architects). This is considered the only reasonable option without the need to remove extensive numbers of trees. As the existing informal parking has never been utilised, it is considered unnecessary to provide options that would create additional impacts that are unlikely to be warranted in the future.
DPIE2	Clarify the relationship between the TAFE and MDC site including vehicle and pedestrian connections, public access arrangements, any agreements for vehicular access and use of any parking on the TAFE site by the MDC and integration with the existing TAFE operations.	As neighbouring institutions with a shared purpose in education, TAFE and MDC enjoy a close working relationship, with regular communication and planning ensuring the successful operation of both sites without negative impacts to either party. Whilst this relationship exists, there is no current integration of operations between TAFE and MDC. Access between the TAFE and MDC sites is managed by prior arrangement between the parties. MDC is surrounded by locked fencing with access control managed by the Powerhouse Museum for both vehicles and pedestrians. All public access to MDC is via the gates on Windsor Road or Showground Road for pedestrians. Public and pedestrian access between the expanded MDC and TAFE will be prevented through the use of the controlled access gates, fences and façade of Building J (i.e. the building will form the access restriction between the two sites). Whilst entry and exits between Building J and the TAFE site exist, these

		will only be accessible for MDC staff and will only be utilised in emergency situations. TAFE and MDC have a longstanding arrangement whereby vehicles can access MDC via the TAFE entry on Green Road. This arrangement has operated effectively since at least 2008, and allows vehicles arriving from Showground Rd to enter the MDC site conveniently via a right turn onto Green Rd, as there is no right turn into the MDC Showground Rd gate. Access to the MDC site from TAFE is via a secure gate with intercom. All vehicle parking for MDC visitors, including both business-as- usual operations and special events such as Open Days, is accommodated entirely on the MDC site. There is no requirement to use any parking on the TAFE site. The existing access arrangement between TAFE and MDC (see DPIE2) will continue after the completion of the MDC Expansion Project, with the only change being the partial realignment of the TAFE internal roadway around the new MDC building, and the relocation of the existing secure gate between sites to the north of the new MDC building. Only MDC will benefit from the proposed right of way. There is no benefit to TAFE in accessing TAFE from the MDC, as the Green Road entry is the best vehicle access to the TAFE site. Access to TAFE through MDC would be facilitated on request if required (e.g. in case of future works on the TAFE site temporarily blocking the Green Road entry.
DPIE3	Provide further information on the existing vehicular access arrangement over the TAFE site and the proposed right of way, in particular whether TAFE will benefit from access via the MDC site.	The existing access arrangement between TAFE and MDC (see DPIE2) will continue after the completion of the MDC Expansion Project, with the only change being the partial realignment of the TAFE internal roadway around the new MDC building, and the relocation of the

		existing secure gate between sites to the north of the new MDC building. Only MDC will benefit from the proposed right of way. There is no benefit to TAFE in accessing TAFE from the MDC, as the Green Road entry is the best vehicle access to the TAFE site. Access to TAFE through MDC would be facilitated on request if required (e.g. in case of future works on the TAFE site temporarily blocking the Green Road entry.
DPIE4	Provide further information on the proposed operation of the loading dock including: a) justification for the proposed 24 hours operation, and whether the proposed operation can be feasibly reduced to minimise potential impacts to neighbouring residential properties in the evening and night-time period b) should loading operations be required during the evening and night-time period, an updated Acoustic Assessment should be provided, including additional mitigation and management measures to further reduce impacts to neighbouring residential properties.	a) The existing MDC site does not have any restrictions on access movements for vehicles in terms of number of movements or hours of movements. The loading dock for Building J will be utilised for the transport of objects to both Powerhouse Parramatta and Powerhouse Ultimo for exhibitions. These exhibitions are installed and deinstalled these properties on a 24-hour basis, which necessitates the movement of objects during the evening and night time period. Movement of objects within the evening and night time periods is particularly important for Very Large Objects which benefit from less traffic on the road network due to size. The ability to load and unload in the evening and night time periods allows access for larger vehicles within the MDC site to not conflict with any public or pedestrian movements within the MDC site. This is particularly relevant in relation to parking to the east of existing stores G and I. Manoeuvring a truck in this area will be easier out of hours when these parking spots are unlikely to be occupied. Whilst approval is sought for use of the loading dock within the evening and night time periods, this use will not be significant in terms of vehicle movement or duration. At most it is anticipated that up to 2 medium or heavy vehicles would access the loading dock per evening/night (noting

		that small vehicles do not exceed the noise criteria). Further, such access would occur at most 4 times per year (i.e., 4 evening/ night periods with a maximum of 2 vehicles). As such, owing to the short duration of the exposure as well as the maximum of 8 times per year where this would occur, the exceedance and associated noise impacts are considered reasonable. b) Clarification is provided as to the impact of the loading dock operations during the evening and night time period within the amended Acoustic Report dated 20 January 2021 prepared by Northrop at Appendix H. In accordance with the NSW EPA Noise Policy for Industry, 2017 the limited use of the loading dock together with the limited duration in the evening and night periods is considered acceptable. Further mitigation measures are proposed within section 7.4.2 of the amended report.
DPIE5	Provide an updated BDAR in response to the concerns raised by Council in relation to options considered to avoid impacts to Cumberland Plain Woodland.	The Council's comments have been reviewed by WSP, the author of the BDAR. WSP advises that Council Officers may have incorrectly interpreted that all trees to be removed could be classified as Cumberland Plan Woodland (refer BDAR Addendum prepared by WSP at Appendix L). It is clarified that the BDAR submitted with the EIS identifies that, due the presence of some native species, the vegetation is conservatively allocated to Plant Community Type 849. However, the majority of the trees to be removed are not native to NSW or Cumberland Plain Woodland. Indeed, the site value score is assessed as 1.9 out of 100 and it is unlikely to make any meaningful contribution to the overall recovery and persistence of the Cumberland Plain Woodland. The BDAR has been developed in accordance with the Biodiversity Assessment Method (BAM). Should Option B of the BDAR submitted with EIS have been chosen, relocation of a significant portion of the existing TAFE car parking would need to be undertaken. This could only

		be undertaken by construction of a multi-story car park on the TAFE site (with associated significant cost and amenity impacts), or through removal of further vegetation elsewhere on the TAFE site to reconstruct this car parking. It is considered that given the low value score, potential ecological and cost impacts of Option B and the Applicant's commitment to tree replacement that the BDAR is valid and in accordance with the BAM.
DPIE6	Provide an updated Tree Replacement Strategy refining suitable off-site planting locations, in consultation with Council. In addition, further consideration should be given to the proposed planting density, pot sizes and the maintenance period, noting the concerns raised by Council.	In response, an Addendum to the Tree Replacement Strategy has been prepared by the applicant and it is provided at Appendix J. The Addendum analysis, dated 25 January 2021, demonstrates that, within the nominated sites approximately 2,071 trees could be accommodated which confirms that the applicant's commitment to a 2:1 replanting ratio can easily be achieved. Continued consultation will occur with the Council as outlined in the addendum statement to finalise the replanting prior to occupation of Building J.
DPIE7	Clarify the approval requirements for off-site planting and consultation required to provide certainty that the off-site planting can be achieved to offset the loss of vegetation on the site.	Development Consent is not required to carry out tree planting at the nominated sites. More specifically, each reserve is located within the RE1 Zone (Public Recreation) and, pursuant to The Hills Local Environmental Plan 2019 (The Hills LEP), environmental protection works are permitted without consent. The Hills LEP defines "environmental protection works" as, 'works associated with the rehabilitation of land towards its natural state or any work to protect land from environmental degradation, and includes bush regeneration works, wetland protection works, erosion protection works, dune restoration works and the like, but does not include coastal protection works.' This includes tree planting.

		The Tree Replacement Strategy Addendum at Appendix J of the Response to Submissions Report outlines the consultation and land owners consent processes that will be undertaken prior to planting of replacement trees.
DPIE8	Provide an updated Aboricultural Impact Statement including: a. a breakdown of the trees being removed for Building J and for the proposed car park b. any encroachment into tree protection zones of trees outside of the proposed building footprint c. clarify inconsistencies with the architectural plans.	a) The Arboricultural Impact Statement is consistent with the Tree Removal Plan provided within the landscape plans at Appendix G of the EIS. For clarity the Tree Removal Plan has been updated to include tree and tree stand numbers in accordance with the Arboricultural Impact Statement. This updated plan is included at Drawing No. LA.1101 of the Landscape Plan package provided at Appendix C. b) The tree protection zones of trees to be retained and protected are shown at Drawing No. LA_1104 of the updated package of landscape plans (refer Appendix C). c) For the avoidance of doubt, tree removal notations have been removed from the Architectural drawings and the matter is addressed in the updated package of Landscape Plans prepared by Aspect Studios (refer Appendix C). It is noted that these plans are consistent with the Arboricultural Impact Statement submitted with the EIS.
DPIE9	Amended plans showing the location, setback requirements and landscaping/screening of the proposed substation within the Showground Road setback, in accordance with Endeavour Energy requirements.	Drawing No. LA_1101 of the updated package of Landscape Plans includes a notation that the area denoted for the substation is inclusive of the setback required by Endeavour Energy and that appropriate screening planting will be undertaken beyond this setback. The amended plan is included at Appendix C.
DPIE10	A comprehensive response to the flooding, drainage and stormwater concerns raised by Council.	An updated Stormwater Management Report and associated updated civil engineering drawings prepared by Northrop is included at Appendix K. The report and plans address all issues raised by the Council.

DPIE11	Updated Architectural Plans including: a) annotations of the front setback from the future road widening reservation, rear and existing and proposed boundaries b) gross floor area plans c) details of the proposed fencing and retaining wall d) details of all the proposed materials and finishes including the proposed glazing and fencing e) indicative location of lighting f) the location of the proposed signage zones.	An updated architectural drawing package has been prepared by Lahznimmo Architects (refer Appendices E and F) with additional details as required. More specifically: a) Annotations of setbacks, future road widening and clarifications of site boundaries are provided at Drawing No. A-DA-1101. b) Gross floor area plans are provided at Drawing No. A-DA- 1103. c) The updated Landscape Plans prepared by Aspect Studios provide details of the proposed fencing and retaining walls. Refer Drawing LA-1101 at Appendix C. The material palette is also updated within the accompanying Landscape Report at Appendix D. d) The proposed materials for the balustrade, fencing and the retaining wall are included in the updated Landscape Report at Appendix D. The use of glazing within the architectural components has been included in the updated material palette prepared by Lahznimmo Architects at Appendix N. e) Indicative lighting locations are included within Drawing No. LA-1101 of the Updated Landscape Plan package at Appendix C. f) Proposed signage zones are provided at Drawing Nos A- DA-2000 and A-DA2001 of the updated architectural drawing package (refer Appendices C and D).
DPIE12	For SIA purposes, the study should focus on people most directly affected by the project, regardless of statistical boundaries. Who exactly will be most affected by the project (positively and negatively)?	In response, an updated Social Impact Assessment has been prepared by Ethos Urban (refer Appendix I) which includes specific reference to a more localised area of social influence in addition to the LGA. It is also clarified that: The original SIA focused on communities most affected by the project, once operational. The Hills Shire LGA was selected as the Primary Study Area (PSA) – i.e., the most important and appropriate 'area of social

		influence' for the assessment of impacts as an approximation of local communities who will benefit across all demographic groups. Broad-based local communities, across all demographic groups and characteristics, will be impacted by the project. Therefore, it is appropriate to analyse impacts with regard to statistical boundaries that best approximate these communities. The PSA (i.e. Hills Shire LGA) resident profile provided in the report remains relevant: this community is among the key beneficiaries of the proposed project, which will appeal to a local audience. It is noted that the residents and businesses in the neighbourhood were contacted as part of the consultation undertaken to inform the project and the SIA. A summary of the consultation outcomes is available in the SIA report section 7.0; this was considered when preparing the assessment. Further detail on the community engagement activities and outcomes is available in the EIS Appendix W – Consultation Outcomes Report. It is acknowledged that during construction phases, a more localised community will be most impacted. Also, during operational phases, this highly localised community (within 400m) may experience particular direct impacts that the broader local community may not experience. The report has therefore been amended to also specify the community considered most directly affected in these ways. Within the baseline social analysis (Section 6.0 of the updated SIA report), a socio-demographic profile of the resident community in immediate proximity to the site (approximately 400-metre radius) has been added. This community is acknowledged to most likely to experience the construction phase impacts and may disproportionately experience some of the operational impacts of the project. This community has also

		been more explicitly addressed through the impact assessment (Refer Section 8).
DPIE13	Please revise prediction of impacts using a more appropriate area of social influence.	It is acknowledged that during construction phases and with regard to some operational impacts, a more localised community will be most impacted. The assessment in Section 8 in the SIA report has therefore been revised to include more explicit reference to this more localised area of social influence, as additional to the LGA- based area of social influence (which remains appropriate with regard to most operational impacts). This addition has resulted in minimal changes to the overall analysis and conclusions, since this more localised community had indeed been considered in the analysis (including through taking account of consultation feedback arising from a mailbox drop of this 400m area of social influence), albeit not as explicitly referenced.
DPIE14	The study should describe what value the 337 trees may have (if any) for the local community, in order to inform the social impact of their proposed removal and the appropriateness of proposed response measures. Please consider for example: potential loss of aesthetic qualities and amenity of people's surroundings change in people's sense of place in the locality potential loss of ecosystem services (e.g. shade, cooling, flood mitigation) to people the degree to which people might experience the proposed mitigation (i.e. planting two trees for each tree lost, but perhaps elsewhere) as commensurate with the impact. Noting that the existing trees are not locally endemic and that the replacements could be, please specify how the replacement plan might be able to enhance the overall experience of people's surroundings Aboriginal cultural connection to the site.	Removal of the trees has been discussed in Sections 8.2.1, 8.2.3 and 8.2.4 of the SIA report, and included as one of the projects key challenges in the SIA summary. The removal of the trees was not raised as a priority during the consultation period for this SSDA (August to September 2020). As per the community webinar minutes, the removal of trees from the site was raised as a concern by one participant during a community information webinar. The project team responded that the replacement trees would be planted elsewhere within the LGA, and this was deemed a satisfactory response. This may indicate that there is limited community attachment to the trees at this location, potentially because the trees are not publicly accessible, and have little ecosystem value. To ensure that the community consultation was representative of a broad range of views, a variety of communications were used to

		promote the consultation and encourage feedback from stakeholders and the community. These included: • Letterbox drop to 3,250 local residents • 12 stakeholder letters • A project specific website • Eventbrite listing • Social Media advertisements and updates • Direct emails/EDM's to the Museums Discovery Centre and Powerhouse databases • Geotargeted advertisements in the Hills Shire Times and News Limited publications • 1800 number and email address. Participants in community webinars and stakeholder meetings were made aware of the project team's plan to plant replacement trees, and this response to the potential impact was deemed satisfactory. In response to this issue, Sections 7.1.3 and 8 of the report have been updated with additional commentary, however the key conclusions do not change. An analysis of Aboriginal and Torres Strait Islander connection to the site is subject to separate specialist assessment (refer ACHAR at Appendix J to EIS). Note that recommendations from the ACHAR report have been incorporated into the assessment in the SIA report. In addition to that, the landscaping design and future planting will be developed in collaboration with Indigenous stakeholders, in alignment with the objectives of Powerhouse Indigenous-led programming.
DPIE15	The social baseline should include research that identifies the features that people value about their locality, and that outlines current levels of community participation in cultural experiences.	Consultation outcomes specific to the project, as well as information on the values and priorities of the broader Hills Shire LGA community are provided in Section 7 of the report. This information has been drawn from a range of sources, including the Hills Shire Community Strategic Plan which is the key official source of information on these issues.

		Section 5 of the report refer to the Hills Shire and regional strategic plans that show that it is a state and local government priority to enhance the diversity of activities available in the area, including creative and cultural opportunities close to home. This aligns with the project- related engagement outcomes reported in Section 7 that highlight that local communities welcome the museum's expansion, as there is an identified lack of event spaces and venues in the area. Some further discussion of issues of cultural participation and perspectives, which provide further insights, has been added to the report in response to this feedback (Section 6.6), and this information supports the existing conclusions of the assessment.
DPIE16	The SIA should consider new opportunities to undertake participatory engagement that is specifically designed to elicit informed views about the project from all groups in the community, during both construction and operation. Particular effort should be made to engage with any marginalised groups, since they could be most affected – either negatively by construction activities, and/or positively by access to cultural opportunities.	Residents and businesses in the neighbourhood were contacted as part of the consultation undertaken to inform the project. A summary of the consultation outcomes is available in the SIA report Section 7 and was considered when preparing the assessment. Further detail on the community engagement activities and outcomes is available in EIS Appendix W - Consultation Outcomes Report. Aboriginal and Torres Strait Islander community is subject to separate engagement activities (refer ACHAR at Appendix J of EIS). Recommendations of the ACHAR report have been incorporated into our assessment. The DPIE SSDA exhibition process has provided further opportunities for the public to comment on the project. Received commentary has been addressed in our revisions to the section 7.1 of the updated SIA report. Further opportunities for engagement during construction and operation could include: o Ongoing engagement with key stakeholders, e.g. neighbouring TAFE, surrounding residents; o User experience surveys during MDC operation, and

		○ Proactive engagement to receive feedback from a broad range of groups in the community, to inform programming for the project during operation (e.g. children and young people, Aboriginal and Torres Strait Island communities, culturally and linguistically diverse communities) ○ This is a matter for the Powerhouse Museum to determine through next phases of the project.
DPIE17	The SIA should refer to previous studies that support a causal link between cultural infrastructure and social wellbeing. For example, from a brief search, the Australian Infrastructure Audit 2019 "identifies the crucial role that arts and culture play in strengthening social inclusion and identity for Australian communities, and in delivering economic empowerment, particularly for Aboriginal and Torres Strait Islander communities" (p.395). See in particular Section 6.5 of the audit. The SIA should then identify how specific design features of the proposal will align with these empirical findings, thereby maximising the likelihood of delivering the predicted benefits, and reducing uncertainties.	The connection between culture and social wellbeing has been addressed in various sections throughout the SIA (refer Section 8.2.2). The specified information has been incorporated into a new Section 5.2.1, including the recommended source.
DPIE18	Please propose mitigation and enhancement measures that are clear and accountable statements of intent, for example by replacing 'could' with 'will'.	The updated SIA report provides accountable statements of intent, where appropriate.
DPIE 19	Please include a provisional plan for monitoring and adaptively managing social impacts.	A detailed social impact management and monitoring plan can be provided post consent. A framework for a potential future plan has been included in the updated SIA report at Section 8.3.

The Hills Shire Council (HSC)

Reference No.	Extract	Response
HSC1	Concern is raised with the cumulative traffic impacts at the intersection of Green Road/Showground Road/Victoria Avenue. Confirmation from Transport for NSW regarding the status of the future road widening scheme at this intersection is requested.	As part of the preparation of the EIS and Transport Impact Assessment (TIA) consultation was undertaken with Transport for NSW. As part of this consultation no details were provided of any immediate plans to undertake road widening at the Green Road/Showground Road/Victoria Avenue intersection. Notwithstanding the above, the detailed traffic modelling undertaken as part of the TIA demonstrates the proposal has a negligible impact on the operation of the Green Road/Showground Road/Victoria Avenue intersection. The intersection is forecast to maintain a 'Level of Service E' during the morning and evening weekday peaks which is acceptable during peak hour conditions. Further, the traffic modelling indicates that average delays for vehicles at the intersection are forecast to increase by 0.1 seconds in the AM and peak hour and 0.7 seconds in the PM peak hour. In this context the proposal would not result in adverse traffic impacts through this intersection.
HSC2	The supporting Acoustic Report identifies evening and night truck noise emissions will exceed the criteria of 43dBA and 38dBA respectively when entering and exiting the northern loading dock. This may result in detrimental noise impacts to residential properties on Peppertree Place and Sunderland Avenue. It is noted that noise mitigation recommendations included in Section 7.4.2 of the Acoustic report is considered appropriate, given the small to medium size vehicles, relatively infrequent delivery times and their minimal manoeuvring and idling outside the loading dock.	Noted.

HSC3	Whilst the EIS and the Construction Management Plan discuss impacts during construction and operation phases, the TAFE's potential for future expansion has not been addressed, as required by the SEARs. Further, additional staff and students may require the continual provision of the 38 informal parking spaces.	The Secretary's Environmental Assessment Requirement- 5 requested details regarding the impact of the proposal on potential future expansion of TAFE. It is noted that the TAFE campus at Green Road, Castle Hill has existed in its current footprint since 2012. Furthermore, both the TAFE and Museums Discovery Centre (MDC) have co-existed for many years. The site for the proposed expansion of MDC is currently owned by the NSW Department of Education. An agreement has been reached between the NSW Department of Education and Create Infrastructure NSW for the transfer of the 6,552sqm site to permit the expansion of the MDC. The transfer of the property will be undertaken should consent be granted to this application (SSD10472), which includes the proposal for subdivision. Any plans for expansion of TAFE operations would be subject to future planning by the NSW Department of Education. It is noted that the 6,552sqm of land that will be transferred to permit the expansion of MDC represents 17% of the overall TAFE site. It follows that any plans for future expansion of the TAFE would have been accounted for by NSW Department of Education in agreeing to the transfer of the land. In respect of informal parking, it is noted that DA 1674/2007/HA required the retention of 38 informal spaces of which 22 would be sealed upon the request of Council. Since granting of this consent, there have been no known instances where the informal parking has been utilised. Nevertheless, the Applicant has included a plan with this Response to Submissions outlining a location for these 38 spaces should they be needed in future- refer to Appendix M.
HSC4	The EIS indicates that the 38 informal car parking spaces would be relocated elsewhere throughout the TAFE site to satisfy Condition 2 of the consent for DA 1674/2007/HA. However, no plans have been submitted to identify the	A plan of informal parking spaces to replace the existing informal spaces is included at Appendix M.

	location of these parking spaces, nor has this been addressed in the supporting TIA. Clarification is sought on this discrepancy and as to whether the relocated parking will remain sealed or unsealed.	As the existing informal spaces have not been utilised since approval of DA1674/2007/HA, the proposed relocated informal spaces will be unsealed.
HSC5	Clarification on appropriate signage locations and distances between the subject site and proximity to public transport stops is required. It is recommended that this be specified in the final Architectural Design Report.	Building identification signage is included within the updated Architectural drawing package at Appendices E and F. A wayfinding and signage strategy will be developed prior to the relevant construction certificate and will provide details for: • The need for wayfinding within the site of Building J; • The content of any wayfinding signage, including access to public transport; and • The need for any revisions to wayfinding within the broader MDC site.
HSC6	A drainage system design will need to be prepared and submitted for the relocated car park.	The project civil engineer, Northrop, advises that the car park utilises the existing stormwater system. Stormwater enters the system via an existing put located at the low point of the car park in the existing kerb and gutter. An updated civil drawing identified as DA3.02 is included the updated Stormwater Report at Appendix K that provides notes to clarify this situation.
HSC7	It is noted that the Stormwater Management Report has used Version 4 of the Upper Parramatta River Catchment Trust for the on-site stormwater detention (OSD), being a dual orifice design. However, Section 2.4.1 of the report refers to site storage requirement (SSR) and permissible site discharge (PSD) from Version 3 which requires a high early discharge (HED) as opposed to dual orifice as shown on plan. Justification is required for where the additional SSR and PSD of 260m3/ha and 25L/s/Ha is derived from (as identified in the OSD calculation sheet), as no allowance for dual outlet design within the Hawkesbury Catchment is provided for within Version 4 of the Upper Parramatta River Catchment Trust	Section 2.4.1 of the updated Stormwater Management Report at Appendix K of this Response to Submissions, has been updated to comply with Version 4 of the Parramatta River Catchment Trust. Revised permissible site discharge rates and site storage requirements have been included in this section. A single outlet has been provided for the OSD tank in accordance with Council's guidelines.

	Handbook. a dual orifice design. However, Section 2.4.1 of the report refers to site storage	
HSC9	Further, consideration should be given to the following key OSD tank hydraulic design criteria in the overall design of the tank for satisfactory performance: • Downstream tail water levels against proposed tank hydraulic performance to be demonstrated during frequent and major storm events; • OSD tank volume calculation table should be presented in the OSD detail design plans; and • The proposed overland flowpath from the OSD tank ought to be identified towards downstream formal drainage system and to be clearly shown in the design plan as per Trust OSD handbook for implementation.	• Section 2.4.1 of the updated Stormwater Management Report at Appendix K includes reference to how the design was completed to include the effect of downstream tail water levels. • An updated civil drawing identified as DA4.01 is included within Appendix A of the updated Stormwater Report that contains a design summary of OSD tank volume calculations. • An updated civil drawing identified as DA3.02 is included within Appendix A of the updated Stormwater Report that clarifies the proposed overland flow route.
HSC10	Stormwater quality treatment device has been incorporated inside the basin based upon MUSIC model outcomes. It is acknowledged that the MUSIC model analysis utilises BOM Sydney Station (No 66062) rainfall record. Council recommends using Parramatta North (Mason Drive) Station (No 66124), 6 minutes rainfall with modelling period of 10 year duration, given its closer proximity to Council's boundary. This will also ensure greater consistency throughout the Shire.	The updated Stormwater Management Report utilises the recommended Parramatta North station (refer Section 2.5.3 of Appendix K).
HSC11	It is acknowledged that section 7.1.2 of the BDAR considers Option B and raises concerns for the reduction in car parking areas to justify its preference for the proposed development concept. The viability of Option B and alternative ideas of car parking locations or efficiency of the current car parking area design have not been adequately explored or justified within the BDAR. As such, it is considered that avoidance and mitigation requirements of the Biodiversity Assessment Method have not yet been met. The applicant should further investigate options for how the building design and parking	A response to this item is outlined at DPIE5 of this table.

	requirements of the proposed development can be met onsite to avoid the need to remove 337 trees of this CEEC.	
HSC12	The report will need to be amended to clearly detail the level of encroachment into the tree protection zones of trees to be removed or retained, in accordance with the Australian Standard (AS 4970-2009). Recommendations of trees to be retained or removed are to be reconsidered on the basis of the above impact assessment.	The landscape plans prepared by Aspect Studios have been updated to include Drawing No. LA-1104 which shows the Tree Protection Zones, as required. Refer Appendix C. All retained trees will be protected in accordance with relevant Australian Standards and a condition of consent in this regard is anticipated.
HSC13	Clarification is sought for discrepancy between reports regarding tree removal, particularly where some trees are marked for removal in the Architectural Plans but have been identified to be retained and protected in the Arborist Report.	For clarity the site demolition plan within the Architectural Plans at Appendix E and F of this Response to Submissions report excludes the trees to be removed. All trees to be removed are shown within the updated Landscape Plans at Appendix C and the Arboricultural Impact Assessment that formed Appendix V to the EIS.
HSC14	The proposed density of 40 plants per hectare is considered insufficient in a landscaping setting, particularly as the site is not considered so large that firm densities cannot be provided at this time. Accordingly, planted shrubs should be roughly 1 plant per 2m2, with ground covers planted around 4 to 8 plants per 1m2. Further, planting for shrub and ground cover should be extended into areas between the existing dam and Green Road. Whilst the benefits of tube stocks are understood, larger pot sizes will ensure greater resilience in a variety of circumstances and require less maintenance.	The proponent commits to a landscape density within the site of shrub planting at 1 plant per 2 square metres and ground cover planting at 4-8 plants per square metre.
HSC15	It is considered that that trees replaced off site will require a mix of stock sizes, with 50% (at minimum) to be planted using 75L pot size. Whilst the Tree Replacement Strategy' proposed 12 month maintenance period is considered acceptable for larger pot sizes (75L), a minimum three year maintenance period is recommend for tube stocks.	The Tree Replacement Strategy Addendum at Appendix J of this Response to Submissions clarifies the proposed replacement plant sizing.
HSC16	The revised location of the new substation (from the related planning proposal) is noted and it is recommended that any	The landscaping surrounding the substation is required to conform with the requirements of Endeavour Energy. The updated package of

	visible service provision is to adequately screened and be identified and documented accordingly.	landscape plans at Appendix C provides a landscaping proposal that is consistent with Endeavour Energy requirements.
HSC17	Council officers' response to the identified site opportunities for tree replacement planting are provided in Attachment B of this letter. For all identified opportunity sites, any existing APZs will need to be maintained. It is recommended that once a site and planting location has been endorsed by Council (as subject to further discussions), community consultation be undertaken prior to any planting at all sites mentioned in Attachment B. For sites like Heritage Park and Fred Caterson Reserve, consultation with user and interest groups would also be required. The location of replanting opportunity sites should be identified on a map; and once following further discussions with Council, the quantity, species and pot sizes can be clarified. Further, approval of all relevant land owners is required prior to the submission of the strategy to the consent authority.	An Addendum Tree Replacement Strategy is included at Appendix J. The addendum demonstrates that, within the nominated sites, approximately 2,071 trees could be accommodated which confirms that the proponent's commitment to a 2:1 replanting ratio can easily be achieved. . Continued consultation will occur with Council as outlined in the addendum statement to finalise the replanting prior to occupation of Building J.

Transport for NSW (TNSW)

No.	Extract	Response
TNSW1	TfNSW requests scaled swept path analysis showing how the proposed 19m vehicles enter and exit the site from the kerb lanes on Windsor Road and Showground Road. The plans should show the dimensions of the driveways and lane arrangement on both Windsor Road and Showground Road. Please note the submitted swept path diagram does not show this information.	Scaled swept path analysis, using Nearmap aerial imagery, has been provided in **Appendix G** as part of the updated Transport Impact Assessment supporting the Response to Submissions. The swept path analysis demonstrates that 19m long vehicles can adequately enter the site from Showground Road and exit the site via Windsor Road. This reflects current operations for the MDC site. As per the Clause 28(2) of the NSW Road Rules, vehicles longer than 7.5m (and displaying a do not overtake turning vehicle sign) are permitted to make a left turn straddling an adjacent lane. There is no requirement for vehicles exiting a site to only utilise the kerbside lane. Instead, as is the case currently, heavy vehicles will exit the site via Windsor Road after waiting for an appropriate gap in the traffic before turning into the centre lane. As per TfNSW's request, the dimensions of the driveways have been indicated on the scaled swept path plans.
TNSW2	Additional swept path analysis should be provided for the longest construction vehicle accessing the site. The accesses should cater for the longest vehicle during both construction and operation of the site.	The longest vehicle anticipated to enter the site during construction and operation is a 19m long articulated vehicle. The swept path of this vehicle, entering the site via Showground Road, is provided within the updated Transport Impact Assessment.

TNSW3	TfNSW has concerns with regard to the location of the access on Showground Road being located close to the traffic signals at Windsor Road and the merging of traffic into different lanes approaching the Showground Road/Green Road/Victoria Road intersection. TfNSW requests that the access on Showground Road should be used for heavy vehicle movement only and the general public should solely use the access on Windsor Road. The proponent is to provide appropriate arrangements to ensure this requirement is met.	The access point on Showground Road already exists and it is required to maintain a suitable level of operations for the broader MDC site. This existing driveway is over 135m away from the traffic lights at Windsor Road and operates well without impacting the road network. In addition to the distance between the driveway and traffic lights, this is a legal manoeuvre. It is currently permitted for vehicles accessing the MDC site and will continue into the future. Restricting access for vehicles accessing MDC for Building J only is not feasible. As documented in the Transport Impact Assessment (TIA), the development of Building J would generate a minor number of additional vehicles to the site. This is estimated to be 15 vehicles during the morning peak hour (when vehicles may be making this move). When taking into consideration that these trips will be spread across the site access points on Showground Road and Windsor Road, the development would result in less than 10 additional vehicles accessing the site via this existing driveway. This level of additional traffic generation is less than one vehicle every six minutes and would not impact the operation of the road network. A review of crash data from the five year period between 2015 to 2019 demonstrates that only one incident was recorded on Showground Road (eastbound) between Windsor Road and Green Road. This incident involved one vehicle 'rear ending' another and did not result in any injuries. Importantly no crashes over this five year period were recorded as a result of vehicles weaving across traffic lanes on Showground Road which is of concern to TfNSW.

TNSW4	Justification is required for vehicle connectivity between MDC and TAFE sites. TfNSW requests access to TAFE should be provided via Green Road only.	The existing access arrangement between TAFE and MDC (see DPIE2) will continue after the completion of the MDC Expansion Project, with the only change being the partial realignment of the TAFE internal roadway around the new MDC building, and the relocation of the existing secure gate between sites to the north of the new MDC building. This arrangement allows vehicles arriving from the east on Showground Rd to enter the MDC site conveniently via a right turn onto Green Rd, as there is no right turn into the MDC Showground Rd gate. There is no benefit to TAFE in accessing TAFE from the MDC, as the Green Road entry is the best vehicle access to the TAFE site.
TNSW5	Section 2.6 – requires to provide assessment on bus services available on Windsor Road, Showground Road and Green Road. The report has only assessed bus services at Showground Metro station rather than those immediate to the site.	A list of bus services available on Windsor Road, Showground Road and Green Road is provided in Section 2.6 of the updated Transport Impact Assessment at **Appendix G.**
TNSW6	Section 5 – the report did not address public transport connection to the proposed Powerhouse Museum in Parramatta. The report needs to address the inter-museum travel with the new Powerhouse museum and how the Green Travel Plan will ensure that travel between museum sites takes advantage of public transport services.	Section 5.4.3 of the updated Transport Impact Assessment at **Appendix G** considers inter-museum travel, particularly the public transport connections available. It should be noted that travel between the Powerhouse sites is not expected to be significant, with staff to generally remain at their allocated location throughout the day rather than travelling between sites.

TNSW7	The current Green Travel Plan (GTP) needs to be updated to include more site specific details of the proposal and mechanisms to support sustainable travel. The GTP should include: • Specific mode share targets that support high mode share towards public transport, walking and cycling. Mode share should be reviewed annually. • Surveys of current and additional trips associated with the proposal and current mode share including staff and visitor mode share. Include details operational hours including peak usage including staff travel time and visitor travel times • Detail travel plans for large groups/ events and mechanisms to support sustainable travel • Details of proposed end of trip facilities including number of bike parking spaces, showers etc. • Provision of e-bike charging stations and storage lockers for staff • Details of proposed parking spaces for staff and visitors • Priority parking for car share/ carpooling and e-charging stations for private vehicles • Prepare a site specific Travel Access Guide for staff and visitors • Appointment of a Travel Plan Coordinator to oversee the implementation and review of the GTP • Specific information on behaviour change programs and how they will be implemented into the GTP • Annual review of the GTP for at least the first five years including surveys, evaluation and review. The GTP must include examples of proposed travel survey.	The Green Travel Plan has been updated to include the following information: • Objectives of the travel plan • Target mode shares • Implementation of the travel plan • Monitoring mechanisms including how the green travel plan will be reviewed once the building is operational A more detailed Green Travel Plan can be prepared prior to the occupation of Building J detailing a number of the items noted in the TfNSW response.

Environment, Energy and Science Group, Department of Planning, Industry and Environment (EES)

No.	Extract	Response
EES1	EES recommends that The Tree Replacement Strategy be finalised prior to consent being issued or alternatively before construction commences.	The Tree Replacement Strategy will be finalised in consultation with The Hills Shire Council prior to commencement of construction.
EES2	EES supports the inclusion of the listed mitigation measures in a Flora and Fauna Management Plan, as stated in Section 9 of the Biodiversity Assessment Development Report (BDAR). EES recommends that a Flora and Fauna Management Plan be included as a condition of any development consent that may be issued.	Noted. The applicant has no objection to such a condition.
EES3	Section 11 of the BDAR mentions that the credit calculator has given inconsistent credit requirement results i.e. in June 2020 the BAM-C indicated no credits were required, however, in September 2020 it indicated one credit was required for each species. EES is aware that an amendment was made to the BAM-C in September, where small credit requirements of <1 are to be rounded up to one, in accordance with section 11.2.4.5 of the BAM.	Noted.

Endeavour Energy (EE)

No.	Extract	Response
EE1	To complete the application for connection of load the applicant and their ASP in due course will need to address the list of requirements included in the Supply Offer in order to comply with Endeavour Energy's standards and with the Terms and Conditions of the Model Standing Offer for a Standard Connection Service.	Noted. This application process is underway and will be completed before any new connection works are completed.
EE2	Endeavour Energy has noted the following in Appendix E 'Acoustic Report' of the EIS. Similarly consideration needs to be provided to the padmount substation required on site. The transformer in a substation may emit a hum – especially when	All noise emitting sources from the development have been assessed as part of Appendix E- Acoustic Assessment to the EIS. It is noted that the substation is located on the southern boundary of the site away from any sensitive residential or

	under heavy load say in the summer peak when use of air conditioning is at its highest. The noise is usually not perceptible enough to be regarded as disruptive and/or to the point where amelioration measures are required but should still be considered.	education receivers. As such the acoustic assessment is considered adequate in terms of assessing potential acoustic impacts to neighbouring sites and occupants.
EE3	It is not readily apparent how the proposed landscape proposals will not conflict with the existing and proposed electricity infrastructure on the site. The landscape designer will need to reconsider if the proposed plantings achieve the requirements outlined in Endeavour Energy's previous submission in regard to the proximity to the overhead power lines and underground cables. For the padmount substation, no vegetation is to be planted within the substation easement. Screening vegetation should be planted a minimum distance of 800mm plus half of the mature canopy width from the substation and have shallow / non-invasive roots. This is to avoid trees growing over the easement as falling branches may damage the cubicle and the electricity infrastructure as do tree roots. All vegetation is to be maintained in such a manner that it will allow unrestricted access by electrical workers to the substation easement all times.	The amended landscape plans at **Appendix C** show that new planting around the substation will be set back a minimum of 800mm. No trees are proposed to be planted within the easement. Access will be easily maintained to the substation from the adjacent car park.

Public Submissions

Issue	Extract	Response
Tree loss	• Trees should not be removed from site. • Reduction of trees and shade in the area leads to loss of habitat for birds and other species that occupy and share the area. • The overall reduction of trees and open areas in and around the Hills and in particular this area has been significant. • What is being planned, proposed to replace, regenerate or recreate spaces that have trees, shade and green equivalents to what is being destroyed? • Could Trees be planted on the boundary to shield our area from the sight of the new buildings? • No social, economic or cultural heritage research has been undertaken in regard to the removal of the plantation trees. • Loss of Cumberland Plain flora species.	• The trees on site do not contain a heritage listing. Furthermore, the proposed development is consistent with the objective of the SP2 Infrastructure Zone which is to provide for infrastructure and related uses. It is appropriate that the development and use of this land, which is set aside for infrastructure, undergoes transition over time in response the evolving requirements of the landowner. The expansion of the MDC will provide significant benefits to local communities and Greater Sydney and any impacts associated with removal of trees are appropriately offset by the Tree Replacement Strategy and landscape plans. • A number of options for expansion of Museums Discovery Centre were explored as outlined in section 3.4 of the EIS. It was determined that the design submitted represent the best design for expansion of the Museums Discovery Centre due to its proximity and operational integration with the existing stores and minimisation of impacts on the operation of TAFE NSW. In recognition of the impact on existing trees, the Tree Replacement Strategy at Appendix O of the EIS proposes a 2 for 1 replacement of trees removed from site, leading to an overall increase in tree canopy within the Hills LGA. • An Addendum Tree Replacement Strategy is contained at **Appendix J** to the Response to Submissions that outlines the locations and quantities of trees to be planted under the strategy.

		• The Tree Replacement Strategy for 2 trees replanted for every 1 tree removed exceeds Council requirements for replanting within the local government area. • Tree planting along boundary (which forms part of the TAFE site) is outside of the scope of this SSDA however it is noted that existing trees along the boundary are proposed to be retained and protected. • Any social impacts resulting from tree removal are explored and addressed in the accompanying SIA. • The BDAR identifies that, due the presence of some native species, the vegetation is conservatively allocated to Plant Community Type 849 however the majority of the trees to be removed are not native to NSW or Cumberland Plain Woodland.
Site selection	• Development should be located on another site that is already cleared. • The proposal is an overdevelopment of the site.	• To ensure the correct storage and care of the collection, expansion of the existing Museums Discovery Centre is required. A separated site would not allow for efficient operation of collection management and would increase the need for transportation of collection items and staff. • The proposal is consistent with the relevant environmental planning instruments applicable to the site.
Collection	• Relocation of very large objects to Castle Hill from Ultimo is unnecessary. • Risks to large objects will increase if they are transported. • Access for Very Large Objects is sub optimal.	• The Powerhouse manage the collection in accordance with relevant legislation and collection management policies. The safety and security of the collection is maintained throughout all Powerhouse operations.

		• Access throughout the site for the transportation of objects can be achieved as evidenced in Appendix I to the EIS.
Operations	• The proposal is deficient as it does not include a wood and metal workshop. • Workshops should be co-located with the collection. • There will be difficulty of access for specialist visitors and staff. • Increased cost, time and distance and handling of objects will reduce efficiency and effectiveness of MAAS operations. • There will be an increased risk to the public caused by movement of very large objects and other objects. • Impact on TAFE operations has been underestimated.	• The proposal does not replace existing operational or functional components of the Powerhouse throughout all its properties. • The Transport Impact Assessment at **Appendix G** outlines the options for accessibility between Powerhouse properties and for visitors to the site. Access via public transport, pedestrian and cycle routes and private vehicle is considered sufficient. • The Powerhouse operate all sites and undertake all operations in accordance with relevant work health safety legislation and guidelines and at all times ensure the safety of staff and visitors. • There will be no impact to the ongoing operations of TAFE as a result of the proposed development.
Sustainability	Why can't the development include solar panels on the rooftops to provide energy to the TAFE and museum which are largely used during daylight hours?	The proposed Building J includes solar panels (refer Drawing No. A-DA-1404 at **Appendix E**).
Parking	Lack of parking for new facility with most families and people with a disability will drive and require parking.	The parking within the Museums Discovery Centre has been assessed as adequate for the expected visitor profile as outlined within the Transport Impact Assessment submitted with the EIS and provided at **Appendix G**.
Business Case	Lack of Business Case analysis for the project.	The requirement for or existence of a business case is not relevant to the assessment of this SSDA.