Appendix D

Mitigation measures

Appendix D – Mitigation measures

A full list of measures required to mitigate the potential impacts associated with the Concept SSDA are detailed below.

Table 1 – Mitigation measures

Proposed OSD-specific Measure	
Urban Design	The detailed design of the OSD is to be undertaken in accordance with the Design Quality Guidelines at Appendix M including to demonstrate that the design is architecturally and structurally integrated. The future detailed SSD Application(s) must address the manner in which the design/proposal has responded to the detail within this concept SSD Application and the Design Quality Guidelines. The future detailed SSD Application must implement the process outlined in the Design Excellence Strategy provided at Appendix L.
Reflectivity	The following mitigative strategies would be further explored during preparation of subsequent Detailed SSDA(s): • Using a less reflective glazing – reduces the amount of light that is reflected from the façade • Different material – using a non-reflective material or materials with increased roughness, will help to control the impact of reflections • Shielding the façade – introducing a non-reflective structure, design, or landscaping that shields the glazed façade will help to control the impact of reflections • Built form – incorporating different built forms can help disperse light reflections. Note that concave-built forms should be avoided as these will instead concentrate sunlight, exacerbating the glare risk.
Overshadowing	The future development is to demonstrate consistency with the proposed maximum building envelope for each site (as detailed in Appendix G) so as to ensure that the overshadowing impacts are minimised. Opportunities to articulate the built form to minimise overshadowing impacts, including to neighbouring residential premises, should be investigated. Details are to be demonstrated in the detailed SSD Application(s)
Solar Access	The future detailed SSD Application(s) is to demonstrate consistency with the proposed maximum building envelope for each site (as detailed in Appendix G) and should seek to optimise solar access to the development and neighbouring residential premises. The future detailed SSD Application(s) for Building B is to be accompanied by a detailed solar access analysis and demonstrate compliance with SEPP 65 and the ADG.

Proposed OSD-specific Measure	
Visual and view Impacts	The future detailed SSDA(s) is to demonstrate consistency with the proposed maximum building envelope for each site (as detailed in Appendix G) to ensure that the visual and view impacts are consistent with the assessment provided in this concept SSD Application. Any future Detailed SSDA(s) should also consider: • Undertaking of a design excellence process, which should: – Require competitors to address the relevant zone objectives and additional local provisions of the PLEP 2011 that relate to view corridors and visual impacts, as outlined by this VIA. – Encourage competitors to demonstrate consistency with the intended effect of view impact and view corridor provisions provided by the Parramatta City Centre Development Control Plan. • Careful attention to form, line, materiality and colour as part of any subsequent approval process for proposal, including as part of design development or as a condition of development consent.
Wind	Future Detailed SSDA(s) for Buildings A, B or D should consider the following potential mitigation strategies for the east-west through site link or the retail tenancies facing east from Buildings A and D: • Fixed or retractable canopies or awnings to protect patrons • Architectural screening in critical positions, such as podium balustrading or landscape screening • Roughing elements (e.g., banners, etc.) as a means of diffusing the energy contained in the wind
Public space	General recommendations for future Detailed SSDA(s) to consider that will further decrease the risk of crime: • The design of ground floor areas, and immediate floors above, should maximise surveillance opportunities • An effective lighting strategy will contribute to public perception by reducing fear, increasing community activity and increasing the chance that offenders will be detected and apprehended • Signage and wayfinding should be developed through the proposed development and broader precinct design process, as effective wayfinding systems contribute to a sense of well-being, safety, and security. • Considerations for ongoing site maintenance • Ensure the proposed building design limits spaces or dark areas where loitering and vagrancy can take place • Considerations for the CPTED functions for designation, definition and design.

Proposed OSD-specific Measure	
Transport, traffic, parking and access	Future Detailed SSDA(s) for over station and adjacent station development at Parramatta metro station are to comply with the maximum parking rates and required number of loading and servicing bays provisioned for under the proposed concept design. The Traffic and Access Report identifies mitigation measures which would be further explored as part of future Detailed SSDA(s). These include: • A Travel Plan, as part of future Detailed SSDA(s), to reduce car trips and encourage the use of sustainable transport. • At least 1-2% parking spaces would be accessible and located to minimise walking distances, such as near lifts • Provision of loading docks adequately sized for the proposed development. • Provision of motorcycle parking, and provision of car share spaces, which are to be determined as part of future Detailed SSDA(s) and should comply with the requirements of the PDCP 2011. • A quantity of bicycle parking which conforms to the Green Star or PDCP 2011 recommendations (whichever is higher; to be confirmed as part of future Detailed SSDA(s)) should be provided. Bicycle parking in the form of Class 2 compounds (bicycle cages) or better and shower and lockers should be provided. Further analysis of traffic and parking, including detailed compliance assessment with the relevant Australian Standards, should occur as part of future Detailed SSDA(s). Future Detailed SSD applications would implement the management and mitigation measures provided within the Traffic and Access Report. As staging for the delivery of the proposed development is subject to future Detailed SSDA(s) and market trends, each future detailed design application should provide a detailed Construction Traffic and Pedestrian Management Plan (CTPMP) to ensure that traffic impacts are appropriately managed during construction, so that service levels of the surrounding road network are maintained during construction of the proposal. The CTPMP will build on the managements plan established under existing approvals on the site.
Ecological sustainable development	Future Detailed SSDA(s) should be consistent with the outcomes of the ESD Report, including implementing the targets identified in Section 3.10 of the EIS
Stormwater and wastewater	Further work is to be undertaken under future Detailed SSDA(s) once further details are known, including that of the following: • Finalise onsite detention requirements based on the finalised architectural scheme • Consultation with Council regarding the extension of pipes in the Council drainage network on George Street to facilitate drainage of Building A • Co-ordination with hydraulic engineers for design of integrated on-site detention and rainwater tanks • Further utilities and feature survey to identify invert levels and location of the existing drainage network.
Flooding	Flood barriers should be considered under future Detailed SSDA(s) to prevent floodwaters from entering the basement. Where flood barriers are proposed, they should ensure: • Flood waters would be prevented from entering the basement. • Flooding risk associated with lifts, loading dock entry and other service access arrangements are appropriately managed. • That these measures continue to be in full working order for the life of the proposed development.

Proposed OSD-specific Measure	
Waste management	For future Detailed SSDA(s), the following measures during the construction stage: • specifications relating to incorporation of used materials or materials with recycled content which contribute to landfill diversion targets set by the City of Paramatta • enabling the purchase of materials in shape / dimension and form that minimises the creation of off-cuts / waste • consideration of what will happen to the materials specified when they reach end-of-life. Where possible, elements should be designed for repair, modular repair, recycling at the end of life or safe disposal. The use of hazardous materials should be minimised. • use of prefabricated elements where possible • material reuse (such as concrete, tarmac, timber and landscaping features) • any excavated materials will be carefully stored in segregated piles for subsequent reuse on the site wherever possible. These excavated materials should be reused as deposition material for infilling or landscaping • avoiding over-purchasing and accurate delivery times, ensuring materials are ordered for delivery shortly before they are used on the proposed development would also avoid possible damage and therefore wastage • use of take back schemes, some suppliers offer a take back scheme, which should be utilised where practicable, particularly for packaging and pallets. Additionally, the following strategies are recommended for waste reduction during the operational phase: • exploring segregation of organic waste from the residual stream within commercial premises • exploring the viability of small-scale organic waste treatment. Treatment via composting has the potential to recycle the organic waste into a product which may be used within the development green areas, offset the use of imported materials and reduce emissions due to transport and disposal • introduction of paper and cardboard balers in buildings with high paper and cardboard usage • facilities management may engage with the City of Parramatta or private contractors in delivery of waste handling training to increase awareness of waste avoidance activities for both staff, residents and visitors.
Aboriginal cultural heritage	The submitted ACHAR makes the following recommendations: • further assessment of Aboriginal archaeological heritage values is not required. • following the results of the consultation process, the Connecting with Country framework should be adopted for the future design process • if changes are made to the proposal that may result in impacts to areas not assessed by this ACHAR further assessment would be required. • if Aboriginal objects, or potential objects, are uncovered during the proposed development, all work in the vicinity must cease immediately and The Sydney Metro Unexpected Heritage Finds Procedure followed. • if human remains, or suspected human remains, are found during the proposed development, all work in the vicinity should cease, the site should be secured, and the NSW Police and Heritage NSW should be notified, and The Sydney Metro Unexpected Heritage Finds Procedure and Exhumation Management Procedure should be followed.

Proposed OSD-specific Measure	
Environmental Heritage	The following mitigation measures are to guide the design of future Detailed SSDA(s): • All Buildings – Implement the advice of a suitably qualified heritage architect in the development of future building design and the adaptive reuse of the heritage structure (Building A) and Kia Ora (Building D) • Building A – Prepare a Conservation Management Plan for Shops (I703) – Provide specific guidelines for development within the building envelope and its interface with the heritage structure
Construction Management	A detailed Construction Management Plan is to be implemented as part of future Detailed SSDA(s), including ensuring good communication channels with the community and stakeholders during the construction process.
Social and economic impacts	Any future Detailed SSDA(s) should ensure good communication channels with the community and stakeholders during the construction process in line with the procedures and initiatives outlined in the SIA.