Mitigation Measures Table

10, 14 and 14A Stanhope Road, Killara V2 updates in red

Table 1 Mitigation Measures

SEARS Item	Mitigation Measure
1 Statutory Context	No mitigation measures required.
2 Estimated Development Cost and Employment	No mitigation measures required.
3 Contributions and Public Benefit	No mitigation measures required.
4 Engagement	No mitigation measures required.
5 Design Quality	No mitigation measures required.
6 Built Form and Urban Design	No mitigation measures required.
7 Environmental Amenity	No mitigation measures required.
8 Visual Impact	No mitigation measures required.
9 Transport	The following mitigation measures are recommended, however, they are at the responsibility of the highway authority. • A “No Right Turn – between 6AM – 10AM & 4PM – 7PM” signage for vehicles turning out of Stanhope Road. • Pedestrian facilities to be implemented at the signalised intersection of Werona Avenue / Stanhope Road on the northern an eastern legs to support crossing movements
10 Noise and Vibration	• Construction and Operational activities must be undertaken in accordance with the Noise Impact Assessment
11 Water Management	• Stormwater drainage system designed in accordance with the requirements outlined in AS3500.3 and of Ku-ring-gai Council’s Development Control Plan Part 24. • The stormwater management strategy including on-site stormwater detention, stormwater quality and stormwater drainage are designed in accordance with the relevant requirements of Ku-ring-gai Council Development Control Plan Part 24 and AS 3500.3.
12 Ground and Groundwater Conditions	• All excavated material transported off site should be classified in accordance with NSW EPA 2014 - Waste Classification Guideline Part 1; Classifying Waste. • A suitably qualified geotechnical engineer is to assess the condition of exposed material at foundation or subgrade level to assess the ability of the prepared surface to act as a foundation or as a subgrade. • Observation of the material within pile excavations should be undertaken at the start of piling works to confirm that material across the site is in accordance with the geotechnical model presented in this report.

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	• Regular inspections of battered and unsupported excavations, where proposed, to confirm geotechnical conditions and to assess the suitability of design assumptions and to provide further advice with regards to excavation retention/ support and proposed construction methodologies, if required. • Where groundwater ingress is encountered during pile excavation, concrete is to be placed as soon as possible upon completion of pile excavation. Pile excavations should be pumped dry of water prior to pouring concrete, or alternatively a tremmie system could be used.
13 Contamination and Remediation	Prepare an unexpected finds protocol.
14 Trees and Landscaping	• Retain trees T1, T2, T3, T4, T5, T6, T7, T8, T10, T11, T13, T14, T15, T16, T17, T18, T19, T27, T28, T29, T30, T31, T32, T33, T34, T35, T36, T37, T38, T39, T40, T41, T54, T55. • Any construction or demolition works must be undertaken in accordance with the Arboricultural Method Statement set out in Appendix 5 of the Arboricultural Impact Appraisal
15 Ecologically Sustainable Development	The following should be implemented during the Construction Certificate design phase. • Where practical, consider the use of Solar PV with Battery Energy Storage System (BESS). • Review material datasheets for in-service temperature range and allow for a nominal tolerance on peak temperatures based on today's values. Select materials which have a higher temperature tolerance if required. • Develop a Drought Management Plan. Water restrictions would likely be signposted well in advance. Consider alternative water supply. • Check the design includes overflow outlets in parapet. Add to design if required. • Check whether capacity of overflow slots and drainage system is sufficient to allow for increased rainfall intensity. Increase either/both if required. • Ensure secondary overflow system provided and check if systems can manage increased flows. Implement further measures if required. • Primary storm water drainage system to be designed to cater for a minimum of a 100- year storm. System to also have full backup of either piped overflow or overland flow designed to a higher storm intensity. Consider other feasible mitigation measures as required. • Consider options for protecting the mechanical plant in design. Implement if required. • Screen outlets with hail guards. • Check wind load thresholds in engineering for façade and glazing. Adopt heat treated glazing for greater impact strength if required. • Consider in design and highlight risk for building managers. Include wet weather management plan in facilities management contract. • Evacuation plan to be developed by FM company, including use of link to nearby hospitals for particularly vulnerable occupants. Consider use of non-latching outside air smoke detectors to shut down outside air systems in the event of a bushfire situation.
16 Biodiversity	**Impact to resident fauna species in the development footprint** • Clearing to be conducted under ecological supervision.

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	• Adaptive management strategies to be employed such as pre-clearing surveys, relocation of individuals, care for injured wildlife, and euthanasia of feral species in accordance with appropriate licences and approvals. **Potential impact to fauna species potentially occupying tree hollows or other habitat** • Clearing to be conducted under ecological supervision and using a professional bee rescue service in accordance with appropriate licences and approvals. **Potential impacts on native wildlife from humans and companion animals** • Educational material is to be provided to all residents regarding the potential impacts to biodiversity of uncontrolled pets and human activity. • Residents to be encouraged to keep Cats indoors or within an enclosure at all times and not allowed to roam. **Landscaping species becoming a nuisance in nearby bushland** • The Landscape Plan to rely on planting species consistent with those that occur naturally in BGHF or those that are not known to have weed potential. • Regular sweeps for weeds and low impact controls to be implemented per the Landscape Plan and scheduled maintenance. **Landscaped areas induce disruptions to foraging of birds** • The Landscape Plan not to rely heavily on species (e.g. Grevilleas) known to favour Noisy Miners. **Increased spill over noise, activity, scent and light into nearby bushland** • Install external lighting only where necessary for safety. • Prohibit external uplights, lights directed into the retained trees, or any bright lighting that spills into nearby bushland. **Introduction of soil borne pathogens** • Standard hygiene controls are to be observed as part of the civil management works plan. • All plant material to be introduced to the site must be certified as disease-free. **Increased soil nutrients from runoff** • Weeds arising from this potential impact to be controlled by actions detailed in the Landscape Plan and as part of ongoing maintenance. **Impacts on water quality in remaining native habitats** • A carefully chosen planting palette using native species will require fewer chemical inputs. Therefore, it is important that the planting list in the Landscape Plan is appropriate to serve to mitigate this potential impact at its source.
17 Waste Management	• Construction and Operational Waste Management should be undertaken in accordance with the Waste Management Plan.
18 Social Impact	• As per the Traffic Impact Assessment, recommended to include “No Right Turn – between 6AM – 10AM & 4PM – 7PM” signage for vehicles turning out of Stanhope Road. • Prepare a Green Travel Plan for the site prior to Construction Certificate. • Continue to provide information to the community throughout the construction stage.

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	• Comply with the recommendations and mitigation measures identified in the Noise Impact Assessment. In addition to these measures, the contractor shall: • Prepare a management procedure to deal with noise and vibration complaints. • Make allowance for notification by letterbox drop for all occupied buildings within 50m of the construction site. Notification should provide detailed estimated duration of demolition, excavation and construction. • A Construction Traffic Management Plan (CTMP) shall be prepared prior to Construction Certificate. The purpose of the CTMP shall be to detail the construction vehicle routes, access and parking arrangements, coordination with other construction occurring in the area, and how impacts on existing traffic, pedestrian and bicycle networks would be managed and mitigated. At a minimum, the Plan shall consider: o Construction vehicle related movements and times o Impacts of construction vehicles on On-street parking o Impacts on neighbouring properties o Impacts on pedestrians o Cumulative construction traffic impact. • Prepare a Tree Protection Plan (TPP) in accordance with the Australian Standards prior to Construction Certificate. The TPP shall include an updated health and condition report on all trees to be retained.
19 Flood Risk	The site is flood free during all flood events, no mitigation measures required.
20 Bushfire Risk	The site is not bushfire prone, no mitigation measures required.
21 Aboriginal Cultural Heritage	Should any unexpected Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the Heritage NSW and Aboriginal stakeholders.
22 Environmental Heritage	No Mitigation Measures required.
23 Public Space	No Mitigation Measures required.
24 Hazards and Risks	The site is within a highly urbanised area, surrounding by residential development. No hazardous or dangerous goods are in the surrounding area and therefore, no mitigation measures required.
Other	BCA and Access • All works are to be in accordance with the relevant Australian Standards and requirements, in particular, those specified within the BCA Assessment prepared by Certatude.