Summary of Mitigation Measures

Aspect	Mitigation measure	Timing
Soils and Geology	• Implement the recommendations contained in the Geotechnical Assessment prepared by Alliance, dated 5 August 2022; • Erosion and sediment controls would be implemented in accordance with the Landcom/ Department of Housing Managing Urban Stormwater, Soils and Construction Guidelines (the Blue Book) and ensure any water diversion or control outlets associated with the site compound/ stockpile do not result in scouring; • The Stormwater Management Plan, including sediment and erosion notes and conditions would be implemented in accordance with The Civil Engineering Design Report by Meinhardt Bonacci, dated July 2022; • Works would only commence once all erosion and sediment controls have been established. The controls would be maintained in place until the works are complete, and all exposed erodible materials are stable; • Erosion and sedimentation controls would be checked and maintained (including clearing of sediment from behind barriers) on a regular basis (including after any precipitation events) and records kept and provided on request; • All sediment control measures would be checked and repaired or re-installed (if required) if heavy rainfall was forecast; • Imported materials would be sourced as clean fill from an approved site; and • Disturbance of natural sediments and vegetation would be minimised.	Prior to Commencement of Works / During Construction
Hazardous Materials and Contamination	• The following recommendations from the Detailed (Stage 2) Site Investigation (DSI) dated 5 August 2022 are to be implemented as part of the Activity: (a) Further assessment of soils classified as PASS should be undertaken to: - Assess the nature and extent of natural soil layers that have a pH of 5.5 or more, and that would meet the definition of virgin excavated natural material (VENM) even though they contain sulfidic ores. This assessment could facilitate offsite disposal of those soils (if excavated) below the permanent water table without treatment, at a suitably licensed facility. - Assist with delineation of relevant PASS layers that cannot be disposed of below the permanent water table without treatment, to better inform relevant liming rates for acid sulfate soil treatment of those soils, prior to waste classification and offsite disposal. (b) An acid sulfate soils management plan should be prepared to address identified acid sulfate soils; and (c) Further assessment and management plan works should be undertaken by a suitably experienced environmental consultant.	Prior to Commencement of Works / During Construction/ Undertaking of Work

Aspect	Mitigation measure	Timing
	• Storage and handling of material shall be in accordance with AS1940 The Storage and Handling of Flammable and Combustible Liquids, SafeWork NSW Code of Practice - Managing Risks of Hazardous Chemicals at Workplaces, Protection of the Environment Operations Act 1997 and Work Health and Safety Act and Regulations 2011. • A spill containment kit would be available at all times. All personnel would be made aware of the location of the kit and trained in its effective deployment. • Any hazardous materials would be handled, managed, transported, and disposed of according to applicable regulations, including WH&S and EPA waste protocols. • In the event that any unexpected conditions are encountered during earthworks (e.g. underground storage tanks, stained or odorous soils, fibre cement fragments, etc), all work should cease in that section of the site and an environmental consultant should be engaged to inspect the site and address the issue. • Any hazardous materials would be handled, managed, transported, and disposed of according to applicable regulations, including WH&S and EPA waste protocols.	
Hydrology, Flooding and Water Quality	• Stormwater Management controls including onsite detention would be implemented in accordance with The Civil Engineering Design Report by Meinhardt Bonacci dated July 2022. • The erosion and sediment control measures for the site will be implemented during construction. The design of these measures is to be in accordance with the Landcom “Blue Book”. These will include: - A sediment fence. - Temporary access to site with shaker pad. - An indicative stockpile area with sediment fence around it during construction. - Geotextile inlet pit filters or sandbags to be placed around existing stormwater pits. • Prior to occupation of the site a Business Continuity Plan would be prepared outlining how the ambulance station would be managed during an extreme flood event. The Plan is to consider and address the following matters: i) During a flood, it would be safe to shelter-in-place in the building at the site (provided that the floor level is constructed above the PMF as intended). ii) The duration of inundation across the catchment may range from as little as 30 minutes through to several hours depending on the location and the nature of the storm event. The site itself may experience inundation of 1 to 4 hours duration in events of a 2% AEP magnitude or larger. iii) Do not attempt to drive through floodwater. Driving through floodwater is the major cause of death during floods. Floodwater may be deeper or faster flowing than it appears and can contain hidden snags or debris, or the road	Prior to Commencement of Works

Aspect	Mitigation measure	Timing
	beneath may be damaged. Ambulance drivers who may be required to drive through floodwaters should be provided with specialist training. iv) If evacuation of the site is being considered during a storm or flood event, water levels at the Cabbage Tree Creek gauge should be monitored (https://mhl.nsw.gov.au/Station-214405) and consideration given to the following: - A level of 5.3 mAHD is used by the SES as a response trigger level, indicating that some roads are likely to begin experiencing inundation soon thereafter. At a level of 5.5 mAHD the Princes Highway at Hungry Jacks is likely to be inundated, as is Montague Street. These levels could be considered as a threshold for determining whether it is appropriate to complete an early evacuation. - If floodwaters have begun to spill across the site from the south-west, it is expected that hazardous road conditions would be encountered during evacuation and it would be preferable to remain at the site until conditions abate. - The safest route out of the local floodplain is to the north along Carters Lane via Storey Street and Holder Street. If significant inundation is encountered on local roads (e.g., Elliots Road, Carters Lane or Squires Way) when leaving the site, it is likely that hazardous road conditions would be encountered elsewhere during the journey. Accordingly, it would be preferable to return to the site and shelter-in-place until conditions abate. (v) On receipt of a Bureau of Meteorology (BoM) Preliminary Flood Warning, Flood Warning, Flood Watch, Severe Thunderstorm Warning or a Severe Weather Warning for Flash Flooding consider whether it is appropriate to complete an early evacuation of the site prior to flooding by: - Monitoring the BoM website (http://www.bom.gov.au/nsw/warnings/index.shtml) and local radio stations for updates; and, - Checking water levels at the Cabbage Tree Creek gauge (https://mhl.nsw.gov.au/Station 214405). (vi) The SES may advise the community to evacuate. The SES will issue an 'Evacuation Warning' when the intent is to warn the community of the need to prepare for a possible evacuation. The SES will issue an 'Evacuation	

Aspect	Mitigation measure	Timing
	Order' when the intent is to instruct the community to immediately evacuate in response to an imminent threat. In such case, follow the instructions issued by the SES. The SES will issue an "All clear" notification when return to evacuated areas is safe after floodwaters have receded and reliable access is available.	
Ecology	• Landscaping of the site will be carried out in accordance with the plans and specifications prepared by Site Image Landscape Architects dated 5 August 2022. • Trees identified for retention will be protected during construction in accordance with the Landscape Specification prepared by Site Image Landscape Architects dated 5 August 2022. • Trees identified for retention will be protected during construction in accordance with the Landscape Specification prepared by Site Image Landscape Architects dated 5 August 2022 and in accordance with the recommendations contained with the Arboricultural Impact Assessment Report prepared by Civica and dated 26 October 2022.	During Construction / Prior to Commencement of Operation
Traffic, Access and Parking	• A Traffic Control Plan (TCP) shall be prepared by a suitably qualified person and implemented for the works in accordance with the requirements of the Traffic Control at Worksites Manual (RTA 2010 V4) and AS1742.3. Licensed traffic controllers will assist with traffic control during the project. • The Traffic Control Plan is to address the provision and maintaining of safe pedestrian movements around the project site during construction works. • Any affected Council or University infrastructure associated with pedestrian facilities or road related infrastructure would be reinstated consistent with its prior condition. • Where possible, current traffic movements will be maintained during the works. • Regard to public safety will be maintained at all times. • Appropriate signage will be erected, and details will be confirmed by appropriate Project personnel responsible for site safety during the development. • Traffic delay notifications will be issued to Council at least two weeks prior to commencement of works requiring full or partial road closure. An Access Management Plan shall be prepared to manage internal site traffic and pedestrian movements to ensure the safety of workers and public within the site. • Neighbouring residents and property owners are to be informed in writing at least two weeks prior with respect to any changes to pedestrian movements and parking restrictions associated with the development. • Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.	Prior to Commencement of Works / During Construction / Undertaking of Work

Aspect	Mitigation measure	Timing
Noise and Vibration	• The following construction hours are proposed: - Monday to Friday: 7 am to 6 pm. - Saturday: 8 am to 1 pm. Sundays and Public Holidays: No excavation or construction works. Noise control measures are to be implemented during these hours in accordance with the approved Construction Noise and Vibration Management Plan. High noise level works – i.e. piling, excavation, etc – shall be scheduled to not occur during shoulder periods of the recommended standard hours – i.e. 7am to 8am and 5pm to 6pm. • A detailed Construction Noise and Vibration Management Plan (CNVMP) is to be prepared to further assess the noise impact of construction works, include a protocol to minimise any potential noise impacts to identified sensitive receivers, and to ensure that appropriate noise control measures are defined and implemented to comply with all relevant noise guidelines. In order to meet the noise and vibration requirements for the site the Contractor will be required to engage a qualified acoustic consultant to assist in the compilation of a Construction Noise and Vibration Management Plan (CNVMP) and undertake noise and vibration monitoring for the duration of the project, if required by the CNVMP and / or Conditions of Consent. • Plant and equipment: - Employing quieter techniques for all high noise activities such as rock breaking, concrete sawing, and using power and pneumatic tools. - Use quieter plant and equipment based on the optimal power and size to most efficiently perform the required tasks. - Selecting plant and equipment with low vibration generation characteristics. - Operate plant in a quietest and most effective manner. - Where appropriate, limit the operating noise of equipment. - Regularly inspecting and maintain plant and equipment to minimise noise and vibration level increases, to ensure that all noise and vibration reduction devices are operating effectively. • On site noise management: - Maximising the distance between noise activities and noise sensitive receivers. Strategically locate equipment and plant. - Undertaking noisy fabrication work off-site where possible. - Avoid the use of reversing beeping alarms or provide for alternative systems, such as broadband reversing alarms. - Maintaining any pre-existing barriers or walls on a demolition or excavation site as long as possible to provide optimum sound propagation control. - Constructing barriers that are part of the project design early in the project to afford mitigation against site noise.	Prior to Commencement of Works / During Construction/ Undertaking of Work / During operation

Aspect	Mitigation measure	Timing
	- Using temporary site building and material stockpiles as noise barriers. These can often be created using site earthworks and may be included as a part of final landscape design. - Installing purpose-built noise barriers, acoustic sheds and enclosures. • Work scheduling: - Provide respite periods, including restricting very noisy activities to daytime, restricting the number of nights that after-hours work is conducted near residences, or by determining any specific requirements, particularly those needed for noise sensitive receivers. - Scheduling activities to minimise impacts by undertaking all possible work during hours that will least adversely affect sensitive receivers and by avoiding conflicts with other scheduled events. - Scheduling work to coincide with non-sensitive periods. - Scheduling noisy activities to coincide with high levels of neighbourhood noise so that noise from the activities is partially masked and not as intrusive. - Planning deliveries and access to the site to occur quietly and efficiently and organising parking only within designated areas located away from sensitive receivers. - Optimising the number of deliveries to the site by amalgamating loads where possible and scheduling arrivals within designated hours. - Designating, designing and maintaining access routes to the site to minimise impacts. • Consultation, notification and complaints handling: - Provide information to neighbours before and during construction. - Maintain good communication between the community and Project staff. - Have a documented complaints process and keep register of any complaints. - Give complaints a fair hearing and provide for a quick response. - Implement all feasible and reasonable measures to address the source of complaint. Implementation of all reasonable and feasible mitigation measures for all works will ensure that any adverse noise impacts to surrounding receivers are minimised when noise goals cannot be met due to safety or space constraints. • If, during construction, an item of equipment exceeds either the noise criteria at any location or the equipment noise level limits, the following noise control measures, together with construction best practices, shall be considered to minimise the noise impacts on the neighbourhood. - Schedule noisy activities to occur outside of the most sensitive times of the day for each nominated receiver. - Consider implementing equipment-specific screening or other noise control measures recommended in Appendix C of AS 2436:2010.	

Aspect	Mitigation measure	Timing
	- Limit the number of trucks on site at the commencement of site activities to the minimum required by the loading facilities on site. - When loading trucks, adopt best practice noise management strategies to avoid materials being dropped from height into dump trucks. - Avoid unnecessary idling of trucks and equipment. - Ensure that any miscellaneous equipment (extraction fans, hand tools, etc.) not specifically identified in the CNVMP incorporates silencing/shielding equipment as required to meet the noise criteria. • Whenever possible, the pressure washer and other power tools shall be operated between 7 am to 8 pm during Monday and Friday and between 8 am to 8 pm on Saturdays, Sundays, and Public Holidays. • Use of ambulance sirens within the Ambulance Station lot and surroundings should be minimised whenever possible and their operation be addressed in the Management Plan. • To minimise impact on the surrounding amenity, Waste Collection movements are recommended to occur during the day-time.	
Air Quality and Energy	• No materials will be burnt on site. • Vehicles transporting waste or other materials that may produce dust will be covered during transportation. • Vehicles, machinery and equipment will be maintained in accordance with manufacturer's specifications in order to meet the requirements of the Protection of the Environment Operations Act 1997 and associated regulations. • Vehicles and equipment will be switched off when not operating. • Debris and waste will be immediately collected into appropriate storage facilities and removed from the site as soon as practical to ensure light-weight material is not dispersed by wind gusts. • Stockpiles and exposed soils will be covered or dampened to reduce incidence of air dispersal. • Appropriate practices are to be in place to minimise dust that could be dispersed during excavation. • New fixtures and fittings would meet relevant energy efficiency standards.	During Construction / Undertaking of Work
Non-Aboriginal Heritage	• The stop work provision should be applied in line with the requirements of the NSW Heritage Act 1977 if any unexpected archaeological both historical and Aboriginal find be exposed during construction and earthworks. An appropriately qualified heritage professional and an archaeologist should be engaged to assess the finds and advise on their management.	During Construction
Aboriginal Heritage	• All personnel working on site would receive induction on their responsibilities under the NPW Act; • work in the surrounding area is to stop immediately and records are made of the finds via project reporting procedures.	Prior to Commencement of Works / During Construction

Aspect	Mitigation measure	Timing
	• a temporary fence is to be erected around the site and appropriate controls put in place to ensure that no additional ground disturbance happens in the vicinity of the find. • an appropriately qualified archaeological consultant and a representative of the Illawarra Local Aboriginal Land Council are to be engaged to identify the material and provide an initial assessment of the significance of the object and the likely nature and extent of any associated archaeological sites. • if the material is found to be of Aboriginal origin, the find must be reported on the AHIMS database. • In the event that the Aboriginal objects are considered to have been damaged or disturbed, the incident must be reported through the NSW Enviro Hotline. • works may only recommence after advice from Heritage NSW on the requirement for an AHIP or where design, engineering or construction measures are identified to mitigate further damage to the Aboriginal site (i.e. site avoidance). • As a precautionary measure, a qualified archaeologist should be employed to observe ground works below the layer of construction fill to determine if the soils have the potential to contain Aboriginal burials (i.e. dry sandy soils) or are waterlogged alluvial clays with a low potential to preserve organic material. • Heritage NSW contacted immediately.In the unlikely event that Human Remains are located at any stage during ground works within the Project Area, all works must halt in the immediate area to prevent any further impacts to the remains. The burial site should be cordoned off and the remains themselves should be left untouched. The nearest police station (Wollongong), Illawarra Local Aboriginal Land Council and Heritage NSW (Parramatta) are all to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the site for criminal activities, the Aboriginal community and the Heritage NSW should be consulted as to how the remains should be dealt with. Work may only resume after agreement is reached between all parties, provided it is in accordance with all parties' statutory obligations. -	
Visual Amenity	• The Project Manager, or appropriate person, will liaise with adjoining residents regarding the retention or possible replacement of any open fencing along the boundary with the development site. • Upon completion of construction, any works areas would be restored to an acceptable visual state. • The construction worksite would be maintained, kept free of rubbish and cleaned up at the end of each workday. • Existing solid fences along the western boundary should be maintained to minimise impacts on privacy.	During Construction/Undertaking of Work

Aspect	Mitigation measure	Timing
Land Uses and Services	• Any potential services interruptions shall be communicated to the relevant services authorities to enable flow on notifications to any affected services customers. • Any affected Council or university infrastructure would be reinstated consistent with its prior condition	During Construction/ Undertaking of Work
Waste Generation	• Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each construction day. • Waste material is not to be left on site once the works have been completed. • The working areas will accommodate separate bins and other waste storage structures to cater for waste streams required to foster waste avoidance and resource recovery. • Operation of the ambulance station will be undertaken in accordance with the NSW Health Policy Clinical and Related Waste Management for Health Services. • The contractor is required adopt an approach to reducing waste and improving recycling of waste generated through construction activities. This should result in a maximum diversion of building waste from landfill. The contractor will be required to report during construction and at completion on the volume of material that was sent to landfill. The contractor should make themselves aware of NSW Government Waste and Sustainable Materials Strategy (available at www.dpie.nsw.gov.au/our-work/environment-energy-and-science/waste-and-sustainable-materials-strategy).	During Construction/Undertaking of Work / During operation
Cumulative Impact/ Social Impact	• HI and project staff shall monitor DPIE's major projects register and Wollongong City Council's Development Application tracker for any significant developments that may occur locally and with potential to coincide with the activity construction period. • Where required project staff will undertake pre-construction review and liaison with other development sites to co-ordinate works and minimise impacts (e.g. delivery times, parking).	During Construction / Undertaking of Work
Sustainability and Climate Resilience	• Prior to the commencement of construction, unless otherwise agreed by HI's Program Manager, Sustainability, it must be demonstrated to the Crown Certifier that the that the project is able to achieve: a) compliance with Section 2.5.6 of the Health Infrastructure Engineering Services Guidelines dated 6 August 2021 (including Design Guidance Note No. 058) by attaining a minimum of 60 points in accordance with the ESD Evaluation Tool, the equivalency of a 5 Star Green Star rating under Design Guidance Note No. 058; or b) that the activity achieves the list of sustainability initiatives that align with Health Infrastructure Sustainability Commitment and Strategy, NSW	Prior to Commencement of Works.

Aspect	Mitigation measure	Timing
	Government Policy and industry good practice and approved by HI's Program Manager, Sustainability. • A list of sustainability initiatives for the project will be provided to HI Planning and Sustainability prior to the completion of the project. • Wastewater from the wash bay shall be recycled and reused on site. • A Climate risk assessment under DGN058 is to be prepared to assess projections of flooding, heat and other climate risk assessment criteria to ensure continued resilience and adaptation planning.	