NSW Department of Education

Appendix 1: Mitigation Measures for Review of Environmental Factors

New High School for Googong

February 2025

NSW GOVERNMENT

Document Control

Version History

Version	Date	Description	Prepared by	Approved by
1	29/01/2025	Rev 1 Mitigations	Alistair Smith	
2	16/02/2025	Rev 2 Mitigations	Alistair Smith	
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Purpose of Document

The purpose of this document is to outline the mitigation measures addressed in the Review of Environmental Factors (REF) for the New High School for Googong that will be incorporated into the detailed design phase of the proposal and during construction and operation of the proposal should it proceed. These safeguards and management measures will minimise any potential adverse impacts arising from the proposed work on the surrounding environment.

Department of Education will also impose other standard mitigation measures that apply to all DoE activities.

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ID	Mitigation Measure	Timing
Traffic, Access and Parking		
T1	A detailed CTMP, which will include a Construction Traffic Management Plan, will be prepared in accordance with Transport's *Traffic Control at Work Sites Manual* (Transport, 2022). The CTMP will include: • vehicle estimates (including hourly movements). • confirmation of haulage routes • measures to maintain access to local roads and properties • site-specific traffic control measures (including signage) to manage and regulate traffic movement • measures to maintain pedestrian and cyclist access • requirements and methods to consult and inform the local community of impacts on the local road network • access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads. • a response plan for any construction traffic incident • consideration of other developments that may be under construction to minimise traffic conflict and congestion that may occur due to the cumulative increase in construction vehicle traffic monitoring, review and amendment mechanisms.	Pre-Construction
T2	Training is provided to all workers, to ensure familiarity with traffic management strategies and controls. Accredited traffic controllers will be required to ensure the function of all pedestrian and construction interfaces. Hoarding, fences, boom gates and appropriate signage to be employed.	Pre-Construction
T3	Prior to the commencement of any construction work within the road reserve, approval under Section 138 of the Roads Act 1993 is to be obtained from the relevant road authority. Any work in the road reserve, including a road opening permit for temporary construction access, requires Section 138 approval.	Pre-Construction
T4	Widened footpath Glenrock Drive and Observer Street to accommodate students walking to/from, the school entrances. The footpath on Glenrock Drive will be widened to 4.8m at the Kiss and Drop area and 3.9m at the bus zone. Threshold treatments (continuous footpath) to be considered where feasible with regard to constructability and levels. These would be provided across staff car park driveway and delivery driveway on Observer Street.	During Construction
T5	Safe pedestrian access in and around the site shall remain unimpeded at all times. Required informative signage and directional information must be provided in appropriate locations ensuring pedestrian safety. Where necessary, traffic control measures will be implemented.	During Construction
T6	Five raised crossings proposed on Wellsvale Drive (x2), Observer Street, Glenrock Drive and Harvest Street connecting to the school block. Kerb blisters proposed on Observer Street and Glenrock Drive Wombat crossings. All wombat crossings	During Construction

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ID	Mitigation Measure	Timing
	are to be well illuminated with street lighting designed according to AS/NZS1158.4	
T7	Incorporate planting/landscaping treatments either side of marked crossing as part of the kerb build out at raised crossings. Reinforce no-stopping requirements on approach to raised crossings by incorporating low-height landscape treatments between the footpath and the carriageway. This would include: • 20m on approach to the Wellsvale Drive crossing at Heazlett Street and along the widened kerb after (adjacent to site) • 20m on approach to the Observer Street crossing at Glenrock Drive and along the corner kerb after (adjacent to site) • 20m on approach to the Wellsvale Drive crossing at Observer Street and along the corner kerb after (adjacent to site). Monitor pedestrian crossing in the first 12 months of school operations for uncontrolled / unsafe crossings.	During Construction
T8	140 bicycle spaces for students; 5 bicycle spaces for staff. 5 lockers, 4 showers provided for staff. Design of bike racks to be confirmed during design development.	Pre-Construction, During Construction
T9	Footpaths adjacent to the site frontages along Observer Street and Glenrock Drive are to be widened to accommodate students walking to/from school entrances on those frontages. Additional footpath widening on Glenrock Drive is to extend the length of the kiss-and-drop bays and the bus bay. Threshold treatments (such as continuous footpaths are to also be provided across driveway crossovers for the staff car parking driveway	Pre-Construction, During Construction
T10	17 kiss-and-drop bays are to be provided on Glenrock Drive to the south of the dedicated bus stop.	Prior to Operation
T11	55 onsite car parking spaces are to be provided for staff. Access controls at the carpark are not recommended to minimise queuing and delays for staff entering/leaving the site.	Prior to Operation
T12	A 38m long bus zone including a dedicated bus parking bay is to be provided on Glenrock Drive before (i.e. on the northern side of) the kiss-and-drop zones.	Prior to Operation
T13	A School Transport Plan (STP) must be prepared to the satisfaction of NSW Department of Education (DoE) Transport Planning team. The STP is to establish objectives and strategies to assist in the development of transport goals, policies and procedures, including the use of sustainable travel modes to reduce reliance on private vehicle transport.	Prior to Operation
Aviation		
A1	The buildings are a permanent infringement into the Obstacle Limitation Surface of Canberra Airport and require approval from the Department of Infrastructure, Transport, Regional Development and Communications (DITRDC). An application must be made via Canberra Airport with the Aviation Impact Assessment (Aviation Projects, Feb, 2025) attached as the safety case.	Pre-Construction

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ID	Mitigation Measure	Timing
A2	Consultation is to be undertaken with Airservices Australia and include the Aviation Impact Statement within the Aviation Impact Assessment (Aviation Projects, Feb, 2025) for publication in relevant aeronautical information products.	Pre-Construction
A3	Consultation is to be undertaken with the Department of Defence to confirm the extent of Defence aviation activities in the area for inclusion in the Aviation Impact Statement.	Pre-Construction
A4	Any crane used during construction must be referred to Canberra Airport for approval.	Pre-Construction
Noise and Vibration		
N1	Appropriate equipment selection and noise mitigation design to be adopted to achieve internal and external building services noise and vibration criteria in the Noise and Vibration Assessment Report (ARUP, 2025).	Pre-Construction, During Construction
N2	Acoustic louvres to be installed within Gymnasium and Covered Outdoor workshop areas where required to achieve environmental noise emission criteria in the Noise and Vibration Assessment Report (ARUP, 2025).	Pre-Construction, During Construction
N3	Restrict usage of Public Address system to daytime hours only (7am to 6pm). Use directional speakers and set volume levels to the minimum required to ensure clarity and audibility.	During Operation
N4	Where practicable, all loading dock activities, waste removal and noisy cleaning activities should take place between 7:00 AM and 10:00 PM.	During Operation
N5	Façade glazing, natural ventilation, external doors, façade wall treatments, and acoustic louvres are to be selected to mitigate noise intrusion and achieve internal noise recommendations in the Noise and Vibration Assessment Report (ARUP, 2025)	Pre-Construction, During Construction
N6	Contractor to develop a detailed construction noise and vibration management plan (CNVMP) once specific details of proposed construction activities and staging are known.	Pre-Construction
Contamination and Hazardous Materials		
C1	Prepare a Construction and Environmental Management Plan (CEMP).	Pre-Construction
C2	'Check' sampling and analysis is to be carried out for metals in any soil / bedrock that is excavated and planned to be relocated within the site.	Pre-Construction, During Construction
C3	An unexpected finds protocol be developed and implemented during future civil and construction works such that any unexpected finds of contamination (or potential contamination) is appropriately assessed and managed.	Pre-Construction, During Construction
C4	A standalone waste classification is to be required for any specific material requiring off-site disposal.	Pre-Construction, During Construction
C5	Further sampling and analysis is to be undertaken in order to provide a classification for soil or rock that is designated to be disposed off-site.	Pre-Construction, During Construction
C6	Imported Fill Material:	Pre-Construction, During Construction

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ID	Mitigation Measure	Timing
	a) Imported fill material must be compatible with the existing soil characteristics of the site and limited to the following: b) Virgin excavated natural material (VENM); and/or c) Excavated natural material (ENM) certified as such in accordance with Protection of the Environment Operations (Waste) Regulation 2014; and/or d) Material subject to a Waste Exemption under Clause 91 and Clause 92 of the Protection of the Environment Operations (Waste) Regulation 2014 and recognised by the NSW Environment Protection Authority as being "fit for purpose" with respect to the works under the REF. Certificates from a suitably qualified person/contractor proving that the imported fill material complies with these requirements must be provided to the Crown Certifier and the relevant DoE Project Director/Asset Manager prior to filling works.	
C7	Any imported mulch must comply with the Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 and the Mulch Order 2016 recognised by the NSW Environment Protection Authority as being "fit for purpose" with respect to the works under the REF. Mulch must not include physical or chemical contaminants and minimise harm to the environment through the introduction, spread or increase in any weed, disease or pest. A written statement provided by the supplier confirming compliance with the Resource Recovery Mulch Order 2016 is to be provided to the Crown Certifier and the relevant DoE Project Director/Asset Manager prior to importing the mulch.	Pre-Construction, During Construction
C8	The use and storage of hazardous materials and dangerous goods, including petroleum, distillate and other chemicals, shall be in accordance with the relevant legislation.	Construction
C9	All materials must be wholly contained within the construction site. The requirements of the Protection of the Environment Operations Act 1997 are to be complied with when placing and stockpiling construction and waste materials, when disposing of waste products and during any other works likely to pollute drains or watercourses.	Construction
C10	Building operations such as brick cutting, mixing mortar and the washing of tools, paint brushes, form-work and concrete trucks shall be undertaken in the construction site in a location so as to prevent air, land or water pollution.	Construction
C11	A spill containment kit will be available at all times. All personnel will be made aware of the location of the kit and trained in its effective deployment.	Construction
Soils and Geology		
S1	Prior to the commencement of any construction work, a Pre-Construction Dilapidation Report must be prepared by a suitably qualified expert and submitted to Council, relevant asset/service infrastructure owners, the Crown Certifier and the relevant DoE Project Director/Asset Manager. The report must provide an accurate record of the existing condition of adjoining private properties that are likely to be impacted by the works (and that have agreed to an offer for a dilapidation survey), and	Pre-Construction, During Construction

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ID	Mitigation Measure	Timing
	assets/service infrastructure that is likely to be impacted by the works	
S2	Vibration levels induced by the demolition activities must not exceed levels listed in Standard DIN 4150-3 (1999-02), Structural vibration Part 3 – Effects of vibration on structures Table 12-7. The operation of plant and equipment must not give rise to the transmission of vibration nuisance or damage to other premises. Prior to commencement a specific vibration monitor must be set up to monitor and record the vibration levels affecting surrounding buildings	Pre-Construction, During Construction
S3	Vibration monitoring to determine the level of vibrations induced by piling equipment is to be performed and if measured as being above 5 mm/sec at the boundary of the sensitive receiver, piling works should be superseded and re-evaluated.	During Construction
Hydrology, Flooding and Water Quality		
H1	Prior to the commencement of any construction work, the operational stormwater management system for the activity must be designed by a suitably qualified person and submitted to the satisfaction of the civil engineer and Crown Certifier. The system must: a) Be in accordance with the relevant plans and supporting documents; b) Ensure that the system capacity has been designed in accordance with the relevant Australian Standards; and a) Ensure that the system has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Council Handbook (EPA, 1997) Guidelines.	Pre-Construction, During Construction
H2	Should any groundwater be encountered during construction works, works are to cease immediately. Where groundwater needs to be removed, an approval will be required under the Water Management Act 2000. This will require an application for a water supply works approval to be submitted to the NSW Natural Resources Access Regulator (NRAR) for assessment and determination. Council is to be contacted to determine the appropriate measures for the management and disposal of the groundwater.	During Construction
H3	An Erosion and Sediment Control Plan must be implemented in accordance with the Landcom/Department of Housing Managing Urban Stormwater, Soils and Construction Guidelines (Blue Book) prior to work commencing. The controls must be in place, inspected and managed until the works are complete, and all exposed erodible materials are stable. Inspection records must be kept and provided on request.	Pre-Construction, During Construction
H4	Prior to the commencement of operations, a Stormwater Operation and Maintenance Plan is to be prepared and submitted to the Crown Certifier. The Stormwater Operation and Maintenance Plan shall ensure that stormwater quality measures remain effective during site operations and contain the following:	Prior to Operation

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ID	Mitigation Measure	Timing
	a) Maintenance schedule of all stormwater quality treatment devices; b) Record and reporting details; and Work Health and Safety requirements.	
H5	To avoid post-occupation water pollution and adverse impacts on the quality of water in local water bodies, stormwater treatment measures like those detailed in the Civil Engineering Design Report (Enstruct, 2025) should be installed within the OSD tank as recommended.	Prior to Operation
H6	Stormwater management systems, including any water treatment systems, must be maintained and operated in a proper and efficient condition and in accordance with the Stormwater Operation and Maintenance Plan. Pollution control devices within the stormwater system are to be maintained in accordance with manufacturer specifications. Pollutant removal devices will require yearly inspection and maintenance.	During Operation
Aboriginal Heritage		
AH1	Works may proceed in accordance with AHIP No. #C0003603 (Permit ID) If human remains are found, stop work, secure the site and notify the NSW Police and Heritage NSW in accordance with the Operational Conditions and the Notification and Recording Conditions of AHIP No. #C0003603.	Construction
AH2	A copy of the PIHAIR (Lantern Heritage, 2023), and any subsequent due diligence investigations, should be kept on record, and if requested, supplied to the relevant government agency as proof of compliance with the *Due Diligence Code of Practice*.	Construction
Environmental Heritage		
EH1	All personnel working on the site must understand their responsibilities under the Heritage Act 1977. If any archaeological relic (or potential relic) of heritage significance is discovered during any construction work, all work in the vicinity must cease and the area must be appropriately protected. Materials should not be removed from the ground wherever possible. The DoE Heritage Team is to be notified and an archaeologist engaged to undertake a site inspection to ascertain whether the finds are significant relics. Construction works cannot recommence in that area until advised by the archaeologist, in consultation with the DoE Heritage Team. Should significant relics be identified, external approvals to impact the relics may be required.	Construction
Ecology – Tree Removal		
TR1	All street trees shown on the plans as being retained must be retained and protected.	Pre-Construction, Construction
TR2	An official “Project Arborist” must be commissioned to oversee the street tree removal and protection, any activity within the TPZ’s, and to complete any compliance certification	Pre-Construction, Construction
TR3	The Project Arborist is to participate in pre-clearing site walk-through to confirm the street trees to be removed and the street trees to be retained and the setup of tree protection measures.	Pre-construction

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ID	Mitigation Measure	Timing
	Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) for retained trees are to be confirmed by the arborist. Prior to commencement of construction, the arborist will inspect the setup of TPZs, ensuring they meet the requirements of AS4970(2007) Protection of Trees on Development Sites.	
TR4	The Project Arborist is to supervise any earthwork or service installation within the TPZ's of street trees to be retained.	Construction
Cumulative Impact		
CI1	Notice is to be made well in advance to relevant stakeholders (including both residents and other construction managers where possible) of roadworks, in particular those that may result in partial or full closures of surrounding roads (i.e. for works such as raised crossings and service/utility connections). In advising of such disruptions, the timing of any such part/full closures would need to be disclosed, in addition to detours or alternative routes (particularly for larger construction vehicles) if or where such closures limit the size of vehicles able to use adjacent roads while works are being undertaken.	Pre-Construction, During Construction

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