DOC22/850208

Michael Cassel
Planning Secretary
Department of Planning and Environment
Locked Bag 5022
Parramatta NSW 2124

Attn: Shiraz Ahmed / Rob Sherry

28 September 2022

Dear Mr Cassel

Upgrades to Glenwood High School (SSD-23512960): Submission of Construction Environmental Management Plan (CEMP) in accordance with Conditions B15-B24

I refer to SSD Application SSD-23512960, upgrades to Glenwood High School, approved on the 25 August 2022.

In accordance with conditions B15-B24 of the Development Consent, the Applicant has prepared a Construction Environmental Management Plan (CEMP).

The CEMP has been reviewed by the Project Team and the Statutory Planning Team at School Infrastructure NSW.

The Department of Education hereby submits a copy of the CEMP to the Planning Secretary for information.

Yours sincerely

Jeremy Stott
Project Director
Schools Infrastructure NSW

NSW Department of Education
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www.schoolinfrastructure.nsw.gov.au

GLENWOOD HIGH SCHOOL
1278

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

16 September 2022

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CONTENTS

GLOSSARY

Term	Definition
Approved disturbance area	The area identified as such on the development layout
CEMP	Construction Environmental Management Plan
Conditions of consent	SSDA
Department	NSW Department of Planning, Industry and Environment.
EIA	Environmental impact assessment. This includes the approved documents prepared to support an application for consent or approval of a project, and any subsequent modifications to the application or proposed project, including (as relevant) further environmental impact assessments and responses to submissions.
EIS	Environmental impact statement prepared by the proponent for a state significant project application.
Environmental aspect	As defined by AS/NZS ISO 14001:2015 as an element of an organisation's activities, products or services that can interact with the environment. They can be direct or indirect.
Environmental control map or plan	A plan or map that identifies the location of physical protection measures, work method controls and monitoring requirements to minimise the impact of project activities on the environment and community in and adjoining a specific work area.
Incident	An occurrence or set of circumstances that causes, or threatens to cause, material harm and which may or may not be or cause a non-compliance.
Material harm	Harm that: • involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial • Results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).
Minister	NSW Minister for Planning and Public Spaces (or delegate or nominee, including the Secretary of the Department of Planning, Industry and Environment)
Mitigation	Actions or measures to reduce the impacts of a project.
Non-conformance	Failure to comply with an environmental requirement, standard, or procedure.
Non-compliance	An occurrence and/or set of circumstances that breach the conditions of consent and/or any other legal requirement.
Phase	A distinct period in the project (for example construction, operation, decommissioning).
Project (or 'The Project)	The construction process required to complete the works described in 2.1 Project Overview
Proponent	The person or entity that is referred to as the proponent in an approval or the applicant in a consent or any other person carrying out any part of the development to which the approval or consent applies.
Planning Secretary	Planning Secretary under the Environmental Planning and Assessment Act 1979, or nominee. (Note references to the Planning Secretary in legislation now refer to the 'Secretary of the Department of Planning, Industry and Environment)
PMP	Project Management Plan – RCC internal project management document
RCC	Richard Crookes Constructions Pty Ltd

Stage	A discrete sequence of activities undertaken to complete one or many activities within the project scope. A project can have several stages which can extend throughout multiple phases.
SSD	State Significant Development

REVISION REGISTER

REVISION DATE	REVISION DESCRIPTION	PREPARED BY	APPROVED BY
18/07/2022	Revision 1	Joshua Stubbs (Project Engineer)	Joel Coubrough (Senior Project Engineer)
06/07/2022	Revision 2 – PCA Review & Planning Secretary Submission	Joshua Stubbs (Project Engineer)	Joel Coubrough (Senior Project Engineer)

Project Stage – This CEMP relates specifically to the Construction of Glenwood High School and the approval conditions within SSD-233330227.

CEMP CONDITION COMPLIANCE TABLE

Each Sub-Plan has an included Condition Compliance Table, with specific section and page number references. The below table is high level and directs to each appendix/sub-plan.

SSDA Conditions shown below:

Condition	Condition Requirements	Document/Sub-Plan Reference
B16	Prior to the commencement of construction, the Applicant must submit a Construction Environmental Management Plan (CEMP) to the Certifier and provide a copy to the Planning Secretary for information. The CEMP must include, but not be limited to, the following: (a) Details of:	
	(i) Hours of work	Appendix 6.1
	(ii) 24-hour contact details of site manager	M: 0410 521 986 E: riellyL@richardcrookes.com.au
	(iii) Management of dust and odour to protect the amenity of the neighbourhood	Appendix 6.2
	(iv) External lighting in compliance with AS 4282-2019 Control of obtrusive effects of outdoor lighting	Appendix 6.2
	(v) Community consultation and complaints handling as set out in the Community Communication Strategy required by condition B11	SINSW Comms Team
	(b) An unexpected finds protocol for contamination and associated communications procedure to ensure that potentially contaminated material is appropriately managed;	Appendix 6.4
	(c) An unexpected finds protocol for Aboriginal and non-Aboriginal heritage and associated communications procedure;	Appendix 6.4
	(d) Construction Traffic and Pedestrian Management Sub-Plan (see condition B17)	Appendix 6.5

	(e) Construction Noise and Vibration Management Sub-Plan (see condition B18)	Appendix 6.6
	(f) Construction Waste Management Sub-Plan (see condition B19)	Appendix 6.7
	(g) Construction Soil and Water Management Sub-Plan (see condition B20)	Appendix 6.8
	(h) Biodiversity Management Sub-Plan (see condition B21); and	Appendix 6.9
	(i) Flood Emergency Response (see condition B22).	Appendix 6.11

1 INTRODUCTION

1.1 PURPOSE AND SCOPE

This Construction Environmental Management Plan (CEMP) has been prepared by Richard Crookes Constructions Pty Ltd for the Glenwood High School (GHS) development.

This CEMP and its sub-plans have been developed in accordance with the SSDA Conditions of Consent, Richard Crookes Constructions' environmental management systems, the relevant project approval documentation and the Environmental Management Plan Guidelines.

The purpose of this Construction Environmental Management Plan is to:

- Identify the environmental issues (aspects and impacts) for this project;
- Maintain Compliance with the SSDA;
- Establish, communicate & implement environmental operational controls to reduce any adverse impacts on the environment from RCC's activities, products and services.
- Implement and Monitor compliance by RCC and its suppliers & subcontractors with the requirements of all relevant environmental legislation, conditions of any applicable licence, approval and permit, regulatory requirements and this EMP.
- Action any outcomes from incidents or accidents, project audits or other identified non-conformances to continually improve the RCC environmental management system.

1.2 OBJECTIVES

The principal objectives of the CEMP are:

- Ensure that the construction works are carried out in accordance with the appropriate environmental statutory requirements
- Ensure that the works are carried out in such a way as to minimise potential environmental degradation by the implementation of environmental best practice
- Ensure that personnel engaged in the work comply with the CEMP
- Respond to changes in environmental conditions during the proposed works through review, monitoring and control programs
- Ensure corrective actions are implemented in a timely manner

This CEMP is the overarching document for environmental management of the Project, with a number of supporting management documents. It is applicable to all personnel associated with the completion of the Project works, including Project Managers, Contractors and Sub-Contractors.

1.3 ENVIRONMENTAL POLICY

Richard Crookes Constructions Pty Ltd implements an Environmental Management System that is certified by Global mark as meeting the requirements of AS/NSW ISO 14001:2016 Environmental Management Systems. RCC's Environmental Policy can be found in Appendix 6.4 of this CEMP. It is provided as an Appendix so that it may be updated in isolation as required.

This CEMP is not staged, as it applies to the entire construction phase of the Project.

2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The development is for upgrading works comprising alterations and additions to Glenwood High School at 85 Forman Avenue, Glenwood. The site is roughly rectangular in shape, with a total area of 60,790m2 and street frontages to Forman Avenue to the south and Glenwood Drive to the east. Glenwood Reserve adjoins the northern and western boundaries of the school.

The key driver for intervention at GHS is to replace the demountables with fit for purpose permanent facilities and provide the required core facilities for the increased student population. The proposed upgrade will need to achieve all the necessary educational outcomes, realising the NSW Department of Education's reform agenda. The works comprise the following key activities

- Site preparation and excavation
- Construction of new buildings including:
    - Construction of a new three-storey building at the north-eastern portion of the site facing Glenwood Park Drive which will accommodate new learning spaces
    - Construction of a one story performance pavilion
- ▪ Refurbishment of existing Building Block A (ground floor only) to provide one new support unit within the space of an existing general learning space
- ▪ Refurbishment of Building Block E to re-purpose it on the ground floor for computer learning spaces, staff and administration spaces as well as upgrades to the library on the first floor
- ▪ Refurbishment of Building Block J to re-purpose it from visual arts and performing arts to learning spaces and workshops for food tech and woods/metal unit
- ▪ Demolition of existing botany room and construction of a new single storey pavilion comprising of interview rooms and end-of trip facilities; and
- ▪ The proposed development will also involve ancillary works at the site associated with the proposed upgrades.

Development Consent:

- Principal will provide State Significant Development approval (SSD-23330227)

2.2 SITE LOCATION PLAN

2.3 SITE LOCATION PLAN

1 SITE PLAN - RL 69.875
1 : 600

2.4 SCOPE OF WORKS

Scope of Works

This CEMP will apply to all construction activities relating to the works approved under the SSDA for Glenwood High School

indicative plant and equipment

- *Excavators*
- *Rollers*
- *Mobile Cranes*
- *Piling machines*
- *Trucks (deliveries, haulage etc.)*
- *Concrete trucks*
- *Concrete pumps*
- *Generators*

The above list is indicative only. All plant and equipment required to complete the Project works will be used.

2.5 TIMING OF ACTIVITIES

Hours of Work

Construction activities will be carried out between:

(a) Monday to Friday: 7:00am to 6:00pm

(b) Saturdays: 8:00am to 4:00pm

(c) Sundays and Public Holidays: No work permitted

24 Hour Contact Details

Name	Title	Phone Number
Lucas Rielly	Site Manager	0410 521 986

3 COMMUNITY AND STAKEHOLDER ENGAGEMENT

A Community Communication Strategy has been prepared by SINSW as required by, and in accordance with the relevant conditions

This will be submitted to the Planning Secretary and will be made available on the School Infrastructure NSW website as required.

All information pertaining to community and stakeholder engagement for the SSDA can be found within this strategy. Refer to Appendix 6.9 – Community Consultation Strategy.

4 ENVIRONMENTAL MANAGEMENT FRAMEWORK

4.1 RELATIONSHIP TO AN EXISTING ENVIRONMENTAL MANAGEMENT SYSTEM

This CEMP is a supplementary document to RCC's Environmental Management System that is certified by Global mark as meeting the requirements of AS/NSW ISO 14001:2016 Environmental Management Systems.

RCC's Environmental Management Plan itself is included within RCC's Project Management Plan (PMP).

Some information has been copied into this CEMP for clarity, any reference in this CEMP to the PMP, QAP's or various forms is a reference to RCC's internal management system.

4.2 ENVIRONMENTAL MANAGEMENT STRUCTURE AND RESPONSIBILITIES

Project Tasks and Duties *(Insert • In box for nominee, delete or add rows as required for tasks required / not required)*	Project Manager	Site Manager	Engineer	ContractManager/Administrator	Design Manager	Cadet	Foreman	QA Officer /Finishes Foreman	WHS & Env Coordinator	Leading Hand	Construction worker		Subcontractors	Construction Director//Manager	Business Systems QA.ENV Manager	Human Resources Manager	WHS Manager	Rehabilitation Coordinator	Commercial Manager	External Auditors	
ENVIRONMENTAL MANAGEMENT																					
Identification of project environmental risks (aspects & impacts) and development of the EMP to document controls		•							•												
Planning & conducting training incl. inductions															•	•	•				
Inspections, monitoring & testing		•							•						•		•				
Compliance with the EMP, corrective & preventative action		•							•						•					•	
Verification of compliance (audits) and review of system effectiveness (ie. is it working as planned?)	•	•							•						•					•	
Incident management & emergency response		•							•						•		•				
Environmental Policy, objectives & targets		•							•					•	•						
Allocation of resources for Environmental management		•							•					•							
Compliance with legal & other requirements		•							•					•	•						
Keeping abreast of changes in legal & other requirements	•	•							•						•						
Acquire & disseminate environmental management information		•							•						•						
Develop & implement procedures		•							•						•						
Assessing suppliers/subcontractors abilities to comply with the EMS		•							•						•						
Ensuring compliance with RCC procedures and site rules		•							•				•		•						
Monitoring or technological changes & management practices		•							•					•	•						
Liaise with regulatory authorities (Local Council, Heritage Office, EPA,DPiE etc)	•	•							•						•						
Management of community complaints	•	•							•					•							
						••															

4.3 LEGAL AND COMPLIANCE REQUIREMENTS

Legislation	Objectives & Application	Relevance
Federal		
Environment Protection and Biodiversity Conservation Act 1999	The Environment Protection and Biodiversity Conservation Act (EPBC) 1999 aims to: • Provide for the protection of the environment, especially matters of national environmental significance • Conserve Australia's biodiversity • Protect biodiversity internationally by controlling the international movement of wildlife • Provide a streamlined environmental assessment and approvals process where matters of national environmental significance are involved • Protect our world and national heritage • Promote ecologically sustainable development.	This Act is applicable to the Project in the event of an Unexpected Find of an Aboriginal object or Heritage item.
Aboriginal and Torres Strait Islander Heritage Protection Act 1984	The purposes of this Act are the preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters, being areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition.	This Act is applicable to the Project in the event of an Unexpected Find of an Aboriginal object.
National Environmental Protection Council Act 1994	The object of this Act is to ensure that, by means of the establishment and operation of the National Environment Protection Council: • People enjoy the benefit of equivalent protection from air, water, or soil pollution and from noise, wherever they live in Australia; and • Decisions of the business community are not distorted, and markets are not fragmented, by variations between participating jurisdictions in relation to the adoption or implementation of major environment protection measures.	The Council may make national environment protection measures that will influence the completion of the Project. See Act for further detail.

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Legislation	Objectives & Application	Relevance
Federal		
National environmental Protection measures (Implementation) Act 1998	The objects of this Act are: • to make provision for the implementation of national environment protection measures in respect of certain activities carried on by or on behalf of the Commonwealth and Commonwealth authorities; and • to protect, restore and enhance the quality of the environment in Australia, having regard to the need to maintain ecologically sustainable development; and • to ensure that the community has access to relevant and meaningful information about pollution.	Under this Act, the Environment Minister may (subject to considerations of national interest or administrative efficiency): • Apply State laws to the activities of the Commonwealth or Commonwealth authorities in Commonwealth places • Apply State or Territory laws to the activities of the Commonwealth or Commonwealth authorities in other places.
NTC Brochure: Load Restraint Guide 2004	The Load Restraint Guide 2018 provides truck drivers, operators, and everyone in the transport chain of responsibility with basic safety principles for the safe carriage of loads.	All drivers (where relevant) must follow this guide when transporting goods to and from the Project.
Legislation	**Objectives & Application**	**Relevance**
State		

Legislation	Objectives & Application	Relevance
Federal		
Waste Avoidance and Resource Recovery Act 2001	The objects of this Act are as follows: • To encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of • ecologically sustainable development, • To ensure that resource management options are considered against a hierarchy of the following order: (i) Avoidance of unnecessary resource consumption, (ii) Resource recovery (including reuse, reprocessing, recycling and energy recovery), (iii) Disposal, • To provide for the continual reduction in waste generation, • To minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste, • To ensure that industry shares with the community the responsibility for reducing and dealing with waste, • To ensure the efficient funding of waste and resource management planning, programs and service delivery, • To achieve integrated waste and resource management planning, programs and service delivery on a State-wide basis, • To assist in the achievement of the objectives of the Protection of the Environment Operations Act 1997.	Waste Avoidance and Resource Recovery Act 2001 Establishes the waste hierarchy. Promotes waste avoidance and resource recovery by developing waste avoidance and resource recovery strategies. Provides requirements for waste avoidance and resource recovery

Legislation	Objectives & Application	Relevance
Federal		
State Environmental Planning Policy No 55 - Remediation of Land	The object of this Policy is; • To provide for a State-wide planning approach to the remediation of contaminated land. In particular, this Policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment: • By specifying when consent is required, and when it is not required, for a remediation work, and • By specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for consent to carry out a remediation work in particular, and • By requiring that a remediation work meet certain standards and notification requirements.	The site is to be remediated in accordance with State Environmental Planning Policy 55 – Remediation of Land (SEPP 55).

Legislation	Objectives & Application	Relevance
Federal		
Protection of the Environmental Operations Act 1997	An Act to protect, restore and enhance the environment in NSW and to promote public access to information and involvement in environment protection. The Act: - Designates the EPA (Environment Protection Authority) as the regulatory authority. See epa.nsw.gov.au for further information. Objectives of the Act are: • To protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development, • To provide increased opportunities for public involvement and participation in environment protection, • To ensure that the community has access to relevant and meaningful information about pollution, • To reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote the following: • Pollution prevention and cleaner production, • The reduction to harmless levels of the discharge of substances likely to cause harm to the environment, • The elimination of harmful wastes, • The reduction in the use of materials and the re-use, recovery or recycling of materials, • The making of progressive environmental improvements, including the reduction of pollution at source, • The monitoring and reporting of environmental quality on a regular basis, • To rationalise, simplify and strengthen the regulatory framework for environment protection, • To improve the efficiency of administration of the environment protection legislation, • To assist in the achievement of the objectives of the Waste Avoidance and Resource Recovery Act 2001.	There is a duty to report pollution incidents under section 148 of the Protection of the Environment Operations Act 1997 (POEO Act). Schedule 1 of the POEO defines activities that require an Environmental Protection Licence. The POEO Act Classifies Environmental Offences and Penalties.

Legislation	Objectives & Application	Relevance
Federal		
Protection of the Environment Operations (Noise Control) Regulation 2017	The object of this Regulation is to repeal and remake, with minor amendments, the provisions of the Protection of the Environment Operations (Noise Control) Regulation 2000. This Regulation creates offences (maximum penalty $11,000 for corporations and $5,500 for individuals) for selling or driving a vehicle with a temporary noise reduction device or with temporary noise reduction packing or for modifying or repairing a vehicle so as to include any such device or packing. A person is not guilty of any such offence if the conduct alleged to give rise to the offence occurs within 6 months after the commencement of this Regulation. This Regulation also makes provision with respect to the following: a) the selling or using of certain classes of motor vehicles and motor vehicle accessories that are capable of emitting noise levels above a prescribed level, b) the use of motor vehicle horns and motor vehicle intruder alarms, c) the times during which it is not permissible to use certain motor vehicles if they emit noise that can be heard in other residential premises, d) the sounding of sirens and similar devices and the use of sound systems on vessels, e) the emission of noise from the engines or exhausts of motor vehicles and vessels, f) the maintenance of noise control equipment on motor vehicles and vessels, g) the issue of defective vehicle notices and defective vessel notices, h) the prohibition on selling certain articles that are capable of emitting noise levels above a prescribed level, i) the obligation to label certain articles, j) the times during which it is not permissible to use certain articles (including musical instruments) if they emit noise that can be heard in any residential premises, k) the inspection and testing procedures for the purpose of determining noise emission levels of certain motor vehicles, motor vehicle accessories, vessels, articles or equipment. See epa.nsw.gov.au for further information.	Equipment used during the Project construction works must be in compliance with this regulation.

Legislation	Objectives & Application	Relevance
Federal		
Protection of the Environment Operations (Waste) Regulation 2014	The Waste Regulation improves the EPA's ability to protect human health and the environment and paves the way for a modern and fair waste industry in NSW. See epa.nsw.gov.au for further information.	Construction waste must be managed in accordance with this regulation.
Protection of the Environment Operations (Clean air) Regulations 2010	This Regulation: • Provides for the certification of domestic solid fuel heaters; • Controls burning generally by imposing an obligation to prevent or minimise emissions, by prohibiting the burning of certain articles and requiring approval for certain fires/incinerators; • Requires the fitting of anti-pollution devices to certain motor vehicles and prescribes an offence of emitting excessive air impurities; • Imposes certain requirements and standards on the supply of petrol; • Prescribes standards for certain groups of plant and premises to regulate industry's air impurity emissions; and • Imposes requirements on the control, storage and transport of volatile organic liquids. See epa.nsw.gov.au for further information.	The construction works associated with the project must be conducted in such a way that does not contravene this regulation. Regulates atmospheric pollutants including dust and odour onsite

Legislation	Objectives & Application	Relevance
Federal		
Crown Lands Act 2016	For the purposes of this Act, the principles of Crown land management are— (a) that environmental protection principles be observed in relation to the management and administration of Crown land; (b) that the natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible; (c) that public use and enjoyment of appropriate Crown land be encouraged; (d) that, where appropriate, multiple use of Crown land be encouraged; (e) that, where appropriate, Crown land should be used and managed in such a way that both the land and its resources are sustained in perpetuity; and (f) that Crown land be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles.	The Project site is Crown Land, which influences the management of works, certification, and applicability of legislation.
Fire Brigades Act 1989	This Act applies to; • Land-based hazardous material incidents (and to any fires that may result from them) that occur anywhere in the State except on State waters, as defined in the Marine Pollution Act 2012. • A hazardous material incident that occurs in or on a building, bridge or other structure or on any body of water (not being part of State waters) is taken to be land-based.	Applies to emergency incidents and accidents involving hazardous materials
Local Government Act 1993	The purposes of this Act are as follows: • To provide the legal framework for an effective, efficient, environmentally responsible and open system of local government in New South Wales, • To regulate the relationships between the people and bodies comprising the system of local government in New South Wales, • To encourage and assist the effective participation of local communities in the affairs of local government,	Referenced and assessed during Approval Process

Legislation	Objectives & Application	Relevance
Federal		
Contaminated Land Management Act 1997	Objects of this Act: • The general object of this Act is to establish a process for investigating and (where appropriate) remediating land that the EPA considers to be contaminated significantly enough to require regulation under Division 2 of Part 3. • Particular objects of this Act are: • To set out accountabilities for managing contamination if the EPA considers the contamination is significant enough to require regulation under Division 2 of Part 3, and • To set out the role of the EPA in the assessment of contamination and the supervision of the investigation and management of contaminated sites, and • To provide for the accreditation of site auditors of contaminated land to ensure appropriate standards of auditing in the management of contaminated land, and • To ensure that contaminated land is managed with regard to the principles of ecologically sustainable development	Contamination on site must be assessed and managed in accordance with this act

Legislation	Objectives & Application	Relevance
Federal		
Environmental Planning and Assessment Act 1979	The objectives of this Act are to encourage: • The proper management, development, and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment, • The promotion and co-ordination of the orderly and economic use and development of land, • The protection, provision and co-ordination of communication and utility services, • The provision of land for public purposes, • The provision and co-ordination of community services and facilities, and • The protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and • Ecologically sustainable development, and • The provision and maintenance of affordable housing, and to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and • To provide increased opportunity for public involvement and participation in environmental planning and assessment.	Planning approval for the project is regulated by the DPE under the Environmental Planning and Assessment Act 1979.

4.4 TRAINING AND AWARENESS

Project specific environmental training and awareness will be conducted/enforced throughout the duration of construction. The key avenues for the implementation of this training and awareness are **Site Inductions**, **Toolbox Talks**, **Pre-Start Meetings** and **General Awareness** measures.

Additional training may be conducted on an as-required basis as the works progress.

Site Inductions

All workers will complete a Project specific induction prior to accessing site/commencing works. In addition to the compulsory WHS information, this induction will provide all construction personnel with site specific environmental training. The training will include environmental concerns, management measures and other protocols in place to satisfy the Conditions of Consent and other environmental obligations.

Toolbox Talks

Tool box talks will be conducted regularly by RCC and sub-contractors, to address specific WHS and environmental concerns. These toolbox talks will address specific activities, the hazards associated with them, and the management measures required to be put in place to maintain compliance and minimise/eliminate environmental harm.

Examples of specific environmental issues that will be addressed in tool box talks include:

- Erosion and sediment control
- Hours of work
- Emergency and spill response
- Noise
- Housekeeping and waste
- Dust control
- Construction traffic management

Toolbox talk attendance is mandatory and all those in attendance will be required to sign in to the discussion and outcomes on an attendance form. RCC will maintain records of all Toolbox talks.

Pre-Start Meetings

Pre-start meetings are a daily training and awareness protocol that will be implemented to inform the daily activities of the construction workforce.

The upcoming construction activities will be reviewed daily, and prior to the day commencing, the pre-start meeting will review and inform the required WHS practices, environmental management measures, work area hazards and other task specific concerns.

The pre-start meeting will be conducted by an RCC representative responsible for the work area that is being discussed. Sub-contractors will be encouraged to share and discuss WHS and environmental concerns in relation tot heir specific works for that day.

Attendance is mandatory and all in attendance will be required to sign in to the discussion and outcomes on an attendance form. RCC will maintain records of all pre-start topics, dates and attendees.

General Awareness Training

General awareness of environmental obligations, risks and management measures will be enforced through site notice boards, posters, environmental bulletins and sub-contractor engagement (i.e. contractual) information packages.

4.5 ENVIRONMENTAL RISK MATRIX/ASSESSMENT

A copy of the Environmental Risk Matrix/Assessment has been included as an appendix to this CEMP. This is a live document that will be continuously revised as the Project progresses.

It will be supplementary to a monthly High Risk Project Assessment, that will be completed and provided to all construction workers.

4.6 HOLD POINTS

Other than the specific requirements of the SSDA Conditions of Consent, there are no additional hold points applicable to the construction works of the Project.

The key hold points from the consent are:

- Unexpected Finds Procedure for contamination.
- Unexpected Finds procedure for Aboriginal Heritage.
- Unexpected Finds procedure for Non-Aboriginal Heritage.

Specific unexpected finds protocols for these hold points have been completed and are supplied with this CEMP as required by the Conditions of Consent.

4.7 ENVIRONMENTAL MANAGEMENT MEASURES, INSPECTIONS AND MONITORING

The following table outlines the environmental management measures, inspection and monitoring process that will be followed as part of RCC's existing Environmental Management System.

This is a live document that will be continuously updated as required throughout the duration of construction works.

Refer to appendix 6.4

4.8 ENVIRONMENTAL CONTROL MAPS OR PLANS

The environmental control maps and/or plans that are relevant to the Project construction works are:

- Site context plans provided within this CEMP.
- Tree protection zones, shown within the arborist report for both sites.
- Sensitive receivers relating to the noise and vibration impacts of the construction works, presented in the Construction Noise & Vibration Management Sub-Plan.
- Erosion and sediment control measures, shown on the erosion and sediment control plans within the Construction Soil & Water Management Sub-Plan.

4.9 ENVIRONMENTAL MANAGEMENT DOCUMENTS

The environmental management documents that will be implemented as part of the environmental management system include:

- Environmental Site Inspection Checklist
- Complaints Register
- Hazardous substances register
- Waste register
- High Risk Works Project Assessment
- Asbestos (Hazmat) Register
- Imported/Exported Materials Register
- Sub-Contractor high risk safe work method statement (where environmental risks are present)

4.10 COMPLIANCE MONITORING AND REPORTING

As this EMP is a CEMP, and only applicable to the construction phase of the development, the post approval compliance monitoring and reporting requirements (which apply to operation/occupation) do not apply.

An operational management plan will be prepared by the Applicant, which will address the post approval compliance monitoring and reporting requirements of the project.

4.11 ENVIRONMENTAL AUDITING

This development will be audited in accordance with the Department's Independent Audit Post Approval Requirements.

4.12 ENVIRONMENTAL INCIDENT AND EMERGENCY PLANNING, PREPAREDNESS AND RESPONSE

Project Personnel Responsible for Managing Environmental Incidents and Emergencies

- Project Manager
- Site Manager
- WHS&E Manager
- Business Systems & Environmental Manager

Contact Details for Emergency Services (ambulance, fire brigade, police, spill clean-up services and others if relevant)

ORGANISATION	NAME	PHONE (W)	PHONE (M)
WorkCover	-	Hotline for incident reporting 13 10 50	
Fire Brigade/HAZMAT	Emergency	000	
Police	Emergency	000	
Environment Protection Authority (EPA)	-	02 9211 4723 Head Office 02 9995 5000 Parramatta	After Hours Pollution line 131 555
SSD – Dept of Planning Compliance contact	-		

Location of On-Site information on hazardous materials, including safety data sheets and spill containment materials

Information on hazardous materials, including safety data sheets and spill containment materials will be located in or adjacent to the project first aid shed. This will be located in the location deemed most suitable for the progress/status of works at any time.

4.13 CORRECTIVE AND PREVENTATIVE ACTIONS

Incident management and reporting

Incident reporting and Investigation refer to internal management system.

Definitions:

Class 1: Dangerous occurrence, or actual harm to an ecosystem, property loss or clean up exceeds $10,000 (as prescribed in 2.1.) Class 1 incidents and some cases Class 2 (as determined by senior management) will be investigated, as directed by BS Environmental Manager, WHS Head of Safety and/or where required initiate the RCC Business Continuity Plan

Form 03 0 Investigation Report will be completed by the BS Environmental Manager or Senior Safety Advisors and the original forwarded to the Project Manager and reviewed by the BS Environmental Manager WHS Head of Safety and reported to Senior management and Executives/Board.

Class 2: Major Leak, spill or escape off site of liquids, near miss/dangerous occurrence i.e. plant/equip damage, disruption to services. Note: Some Class 2 will be investigated at the discretion of the BSM/WHS Head of Safety

Class 3: Minor Leak, spill or escape off site of liquids all less than >10lts, Dust, Vibration

The Site Manager/Supervisor will ensure that all Class 2 and Class 3 incidents in or around the site, involving RCC personnel, subcontractors, visitors or passers-by, external authorities, Unions etc. are reported regardless of how minor they appear at the time of the occurrence.

Duty to Notify Environment Protection Authority (EPA) of Pollution Incident – notifiable incident

Pollution Incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed on the premises, but it does not include an incident or set of circumstances involving only the emission of noise.

Incidents that require a (Duty to Notify) to the regulatory authorities EPA Pollution line (phone 131 555) under section 148 of the Protection of the Environmental Operations Act 1997 (POEO Act) are:

- If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial,
- If actual or potential loss or property damage (including clean-up costs) associated with a pollution incident may exceed $10,000

For all Notifiable Incidents, the following activities should be undertaken:

- The incident site must not be disturbed until an inspector arrives at the scene or directs otherwise, this may include plant, substance, structure or thing associated with the incident. The person with management or control of the workplace is responsible for preserving the incident site, so far as reasonably practicable
- The incident site will be preserved unless it prevents any action needed to:
  - minimise the risk of further notifiable incident
  - facilitate a EPA investigation

For Regulator "reportable incidents", the Supervisor will notify the Project Manager, Business Systems Environmental Manager and or WHS Head of Safety to seek advice, then immediately prepare the submission of Notification to the regulator.

Business Systems Environmental Manager and or WHS Head of Safety will confirm and organise legal representation to assist in the preparation of the reports and initiate the RCC Business Continuity Plan

In some contracts it is a requirement to notify the Client's Representative immediately e.g. GC21 Contracts and relevant DPIE SSD reportable incidents

Incident debrief/closure

Where an investigation is undertaken and it is determined that an "incident debrief" is to be carried out using Form 04.10, the Incident debrief will be distributed to all relevant stakeholders and Senior/Executive Management.

Outcomes of Investigations/findings may initiate an internal Alert for distribution.

Non-Conformance

In the event of breach in the requirements of the CEMP, such as:

- Non-compliance with the RCC/ subcontractors SWMS or other environmental procedures;
- Noncomplying activities noted during site inspections (high risk or potential for legal breach);
- Following concerns regarding potential breaches in environmental legislation raised by RCC, the client or other stakeholders such as local council or the EPA;
- Changes to the RCC system or subcontractors' procedures, as a result of corrective or preventative action following and environmental incident, inspection or external audit.

Form 31.1 – Non-Conformance Report or via Aconex will be completed and issued to the offending party.

Non-Conformances will be registered in Form 31.2 Non-Conformance Report Register or on soft copy.

A copy of the Non-Conformance Notice will be forwarded to the Project Manager and the subcontractor, who will implement appropriate corrective action.

Additionally, Contractors Notices or Main Contractor Notices may be issued in certain circumstances, as described in Section 2 of the PMP.

5 CEMP REVIEW AND REVISION PROCESS

To ensure this CEMP remains current and relevant to the project, it will be reviewed in accordance with the relevant conditions

A30	Within three months of: (a) the submission of a compliance report under condition A33;
	(b) the submission of an incident report under condition A26;
	(c) the submission of an Independent Audit under condition C35 or C36;
	(d) the approval of any modification of the conditions of this consent; or
	(e) the issue of a direction of the Planning Secretary under condition A2 which requires a review, the strategies, plans and programs required under this consent must be reviewed, and the Planning Secretary and the Certifier must be notified in writing that a review is being carried out.
A31	If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans, programs or drawings required under this consent must be revised, to the satisfaction of the Planning Secretary or Certifier (where previously approved by the Certifier). Where revisions are required, the revised document must be submitted to the Planning Secretary and/or Certifier for approval and/or information (where relevant) within six weeks of the review. Note: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development. Compliance Reporting

Where a review is required, the **CEMP Review Checklist (provided overleaf)** will be used. This will determine why a review is required, who needs to be involved in the review, if revision is required as a result of the review, and what the revision is, if required.

If this CEMP is revised, it will be submitted to the Department (and/or other party as required by the conditions of consent) for assessment and approval in accordance with the requirements of the relevant conditions of consent and the review process that was documented and approved in the earlier version/s.

The revised version of the revised EMP will be provided to the Department, and accompanied by information that identifies:

- what has changed and why it has been changed
- the proposed timeframe to implement the change.

A brief summary of the changes made and the circumstance/s that triggered the review and revision will also be included in the version control information.

Complete this checklist if a review of this CEMP or its sub-plans is triggered (see section 5 for applicable triggers).

CEMP Review Checklist		
	Person Completing Checklist:	**Date:**
1	Why is a review required? *Outline what has triggered the review. Use the triggers from Condition A34 & A35 of the SSD Consent.*	
2	What sections of the CEMP and/or Sub-Plans require a review? *List all that apply.*	
3	Notify the Planning Secretary that a review is being carried out, with a description of the extent of the review. *Provide evidence of notification.*	
4	Who is required to be involved in the review? *Identify the relevant consultants, project staff and/or authorities who may need to be involved in the review.*	
5	Conduct review. Do the CEMP sections and/or Sub-Plans being reviewed still address the specific requirements of the development? **If Yes**, no revision is required. State why no revision is required and file a completed copy of this checklist for reference. No further action is required. **If no**, revision is required. Go to step 6. *Note – if a review has been triggered, the specific trigger will generally highlight what information in the CEMP or it's Sub-Plans is not adequately addressing the specific requirements of the development.*	
6	Revise CEMP and/or relevant Sub-Plans. Engage with relevant stakeholders where required. Consult with relevant parties about revision where required.	

CEMP Review Checklist		
7	Issue updated CEMP and/or Sub-Plans to the Planning Secretary (and/or other party as required by the conditions of consent) for assessment and approval (if approval is required).	
8	Provide a summary that identifies: - What has changed and why it has been changed - The proposed timeframe to implement the change	
9	Ensure revision information and the circumstances that triggered the review is included in the version control information of the revised document.	

6 APPENDICES

6.1 SITE RULES

Refer to following page for Richard Crooke Constructions Site Rule for the GHS Project

Site Rules for Glenwood High School

RICHARD CROOKES CONSTRUCTIONS

It is a condition of entry to this site that the following Quality, Environmental & Safety requirements are complied with, in addition to the RCC standard DVD induction.
The site rules form part of the contract agreement.

1. RESPONSIBILITIES UNDER THE WHS ACT

Duties of employers:
"An employer (PCBU) must ensure the health, safety and welfare at work of all the employees of the employer."

Others at workplace:
"An employer (PCBU) must ensure that people (other than the employees of the employer) are not exposed to risks to their health or safety arising from the conduct of the employer's undertaking while they are at the employer's place of work".

Duties of self-employed persons:
"A self-employed person (PCBU) must ensure that people (other than the employees of the person) are not exposed to risks to their health or safety arising from the conduct of the person's undertaking while they are at the person's place of work."

Duties of employees:
"An employee must, while at work, take reasonable care for the health and safety of people who are at the employee's place of work and who may be affected by the employee's acts or omissions at work."

2. ENTRY TO THE CONSTRUCTION SITE

All visitors to site must:

- report to the site office for induction by RCC Staff. Unless site inducted, they are to be accompanied at all times by a person inducted to the site. The inducted person is responsible for the visitor.
- sign the daily site VISITOR attendance register.

All persons first attending site to commence work must"

- Report to the site office for site induction by RCC staff, at the agreed times.
- Have completed, and display evidence of completing, Industry WHS Induction
- Have completed, and display evidence of completing work activity training.
- Provide evidence of being trained in their applicable Safe Work Method Statement(s).

All persons working on site must:

- Complete the daily site attendance register.
- Wear a safety helmet, *Note: No other form of hat is permitted under the hard hat.*
- Wear safety glasses at all times when out on site (Tinted – Outdoors and Clear – Indoors).
- Wear high visibility clothing in the form of a Shirt or vest.
- Short sleeve shirts to be worn at a minimum, singlets / vests only, in place of shirts are not permitted.
- Wear safety footwear complying with AS 2210.
- Comply at all times with your company's Safe Work Method Statement (SWMS).
- Be sun smart, wear sun screen. Re-apply and re-hydrate regularly.

It is the responsibility of the subcontractor employer to supply PPE and provide training to their workers in the correct use, care and storage.

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3. OPERATING HOURS

Site Hours are **7:00 am to 6:00 pm** Monday to Friday and **8:00 am to 1:00 pm** Saturdays, no work Sundays or Public Holidays.
Note: provided noise levels do not exceed the existing background noise level plus 5dB, works may also be undertaken during the following hours: **6:00pm and 7:00pm**, Mondays to Fridays inclusive; and between **1:00pm and 4:00pm,** Saturdays.

4. SECURITY AND ACCESS

Security measures, including perimeter fencing, will be used to prevent unauthorised access to the building(s) and construction areas, and to ensure safe access and passage for all those on and adjacent to the work site.

When walking on site, (where applicable), use the walkways provided in the work areas and when walking to and from the work area- ***DON'T TAKE SHORT CUTS.*** Never move across in front of oncoming vehicles.

Beware of reversing vehicles, as the driver may not know you are behind the vehicle.

Pedestrian and vehicular gates to be kept in the closed position when not in use.

5. VEHICLE ACCESS

Where applicable, vehicles may only be driven on site with the approval of Richard Crookes Constructions. The only vehicles allowed on site are those that are used specifically for delivering materials. These materials must be off-loaded immediately and the vehicle moved from the site once the delivery has been made.

In such instances employees, subcontractors and visitors must obey the site speed limits.

Parking on site is not permitted without the approval of RCC site management.

Vehicles shall not park on public footpaths; nature strips or in any way that restricts pedestrian accesses.

6. WORK OUTSIDE SITE

No work is to be undertaken outside the site unless approved by RCC Management. Approval will be in the form of a written authorisation and will only be issued following a formal submission from the subcontractor a minimum 7 days prior to the work being undertaken.

7. EMERGENCY PLAN

The site emergency/evacuation plan is displayed in various locations around the site (e.g. lunchrooms, toilets, etc.).

When an emergency is notified by the siren/hooter and evacuation is required, all personnel are required to evacuate in accordance with that plan to the dedicated muster area(s),and await instruction from RCC

8. SAFE WORK METHOD STATEMENT'S (SWMS)

Subcontractors will be required to provide a SWMS statement in accordance with the requirements of the WHS Act. The SWMS must be submitted prior to commencing work on this project. Guidelines for the production of SWMS are available upon request.

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The SWMS must be relevant to the task being undertaken on this site. Persons working under the SWMS must be instructed in its contents before commencing the task by their nominated supervisor. Records of the instruction and attendees are to be forwarded to the Site Foreman prior to commencing work.

9. HAZARD REPORTING & NEAR MISSES

Any hazards reported by site personnel will be reported to the Foreman who will record the hazard on the Project Risk Assessment or Site Inspection Form. A detailed assessment of risks associated with the hazard will be undertaken by nominated RCC personnel.

10. FIRST AID

All injuries, no matter how slight are to be reported to the site Foreman or supervisor. Persons requiring first aid treatment shall immediately contact the first aid officer who shall administer any first aid treatment. Details of all accidents and first aid treatment will be recorded.

Refer to the site notice board for identification of the First Aid officer(s) and the location of the first aid facilities.

Note: Identify what system will be used in the form of a nurse call system, and identify locations of call points & how to operate. Post on notice board and adjacent to Nurse Call stations.

11. ACCIDENTS AND DANGEROUS OCCURRENCES

Accidents, dangerous occurrences or any other safety issues are to be reported immediately to Richard Crookes Constructions site Foreman or other representative, and to the Subcontractor's site representative in charge.

The Site Supervisor will ensure that all near misses, accidents, incidents and property damage occurring in or around the site, involving RCC personnel, subcontractors, visitors or passers-by, are investigated and reported regardless of how minor they appear at the time of the occurrence.

12. HAZARDOUS SUBSTANCES

Subcontractors shall provide **safety data sheets (SDS)** to Richard Crookes Constructions site management employees before bringing any hazardous substance onto the site.

Chemicals and other hazardous substances must be used and stored in compliance with the MSDS and details must be recorded on the Register of Hazardous Substances.

A Safe Work Method Statement shall be prepared for the use of each Hazardous Substance. The SWMS shall cover safe handling, PPE and what to do in an emergency. This SWMS shall be used to instruct personnel in the safe use of the substance.

RCC Note: MSDS needs to be attached to the contractor's task specific SWMS with copies located in the site, MSDS folder and listed in the register.

Note: For refurbish /alteration projects – insert the following paragraph. Edit as required.
Please refer to the site plan that indicates the areas of hazardous substances that are part of the structure and surrounding environment. See site notice board.

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13. TEMPORARY ELECTRICAL

The nominated electrician will provide temporary power boards; subcontractors shall supply individual task lighting for use on site.

Subcontractors shall comply with the WorkCover "Code of Practice for Electrical Practices for Construction Work" and the AS3000 Wiring Rules.

14. LEADS AND POWER TOOLS

The inspection and tagging of all electrical leads, electrical tools and equipment prior to working on this project, and during construction, ***is the responsibility of the individual subcontractor***.

Copies of all electrical registers and details of their inspection must be forward to the RCC site management team. Details on the tags and in the log book must include the licence number of the electrician, date of the inspection and the owner's plant number. Testing intervals for portable electrical plant is not to exceed 1 month.

When using extension leads, the lead is to be supported at a height of no less than 2 metres off the ground to within 4 metres of the work area. Ensure clear access is maintained around / above any work area or passageway. The joining of extension leads is prohibited. The length of any one lead shall not exceed (25) twenty five metres. Do not extend 240-volt flexible extension cords of the maximum length by more than 5 metres by the attachment of electrical equipment.

Confine flexible extension cords used in multi-storey construction to the same floor as the power source. Obtain power for use in stairwells from the floor above or the floor below the work area. This clause need not apply to:

(i) falsework; (ii) lift or service shafts

Do not locate flexible extension cords with plug socket connections in wet places or places where they are subject to damage by liquids.

Subcontractors shall supply Insulated lead stands. All power is to be taken from a source that is protected by earth leakage or similar device.

Support of leads is to be by the use of insulated / non conductive hooks. Do not support directly off metal structures.

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15. PLANT AND EQUIPMENT

All plant and equipment used on this project is to be properly maintained. Damaged or modified tools and equipment are not permitted on site.

Plant and machine guarding must not be removed or modified.

Subcontractors shall keep a register for the proper and safe maintenance of their plant and equipment. A copy is to be supplied to the site office each month.

Every operator of plant must ensure that, where required, the item of plant is registered with WorkCover and copies of certificates and evidence of regular maintenance completed are given to RCC site management prior to operating.

In addition to these requirements, operators must also be able to demonstrate that training by a competent person has been completed.

As required, mobile plant must be fitted with working hazard lights / reversing lights and beepers.

16. HOISTING/CRANAGE

Vertical movement of materials is to be undertaken by the hoist or crane located on site. The following rules are to be strictly observed:

- No overloading
- Position load so it is safe. Secure load if necessary.
- A ticketed operator shall operate the hoist and crane at all times.
- Observe signage near and around the hoist and crane.

17. EXCAVATION / TRENCHES / HOLES

All excavation work shall be carried out in accordance with the Code of Practice, Excavation. Prior to excavation, **all existing underground services shall be located, identified, and marked. All due care must be taken** to prevent damage to those services.

Subcontractors shall make safe any trenches or holes they create. Penetrations in slabs are to be made safe by fixing structural grade plywood or plate steel across them as necessary to support anticipated loads.

Adequate handrails and barricading is to be installed around all open trenches and excavations, the sides of which must be free from spoil, materials, plant and equipment.

18. CERTIFICATES OF COMPETENCY

Scheduled work as defined under the Occupational Health & Safety Regulation which includes scaffolding, dogging, rigging, operation of crane, hoist, concrete placing boom, load shifting machines, explosive powered tools and formwork, shall only be performed by persons who hold the required certificates of competency or meet the requirements of the Regulation.

Prior to performing work on site, certificates of competency are to be submitted to Richard Crookes Constructions for inspection, copies will be made and attached to RCC induction records.

Material are not to be thrown from elevated levels including slabs, roofs or scaffolds.

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19. HOT WORK/FIRE PREVENTION

Subcontractors shall provide an appropriate fire extinguisher for each welding set and oxy-acetylene set brought on site.

All combustible, flammable and explosive materials shall be removed from the work area or covered with fire proof material.

Welding or spark arrester screens shall be positioned around the work area to protect others working nearby or passing by. As determined by RCC site management via risk assessment, the issuing of a 'Hot Work permit' may be required prior to starting.

Particular care is to be taken on days of Total Fire Ban especially working in grassed areas.

20. SITE SAFETY COMMITTEE or OTHER AGREED ARRANGEMENTS

If a site safety committee is established, the minutes of meetings will be displayed on the site notice board together with the names and positions of elected members of the committee.

Where site numbers are not enough to allow for the formation of an affective safety committee
Other Agreed Arrangements will be established in accordance with the WHS Regulations 2011, Chapter 2.

21. TOOLBOX TALKS

There will be regular tool box discussions conducted at minimum intervals of 1 week, between and in consultation with those working on the site relating to health, safety and environmental matters associated with day to day activities.

22. CODE COMPLIANCE STATE AND FEDERAL

As RCC is a Code Compliant Contractor and has tendered work with relevant agency funding, The NSW implementation guidelines for procurement and the Building Code 2016 and Guidelines apply to our projects. This relates to Workplace Relations issues on our projects.

Your responsibilities as a subcontractor working for RCC include:

- Advising RCC Supervisor of union visits (Right of Entry).
- Advising RCC Supervisor of CCU (NSW Industrial relations) or the ABCC inspectors.
- Not holding stopwork meetings.
- Not coercing or collusion with someone to hire or not hire, join a particular superannuation fund, that your workmates/employees are covered by a particular industrial instrument, pressuring your workmates/employees to join/not to join/cease being a member of a union or industrial association. (Freedom of Association)
- Reporting any non compliant actions or behaviours to the RCC Foreman or Project Manager as listed above.
- Become familiar with the ABCC/CCU awareness poster.

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23. SITE COORDINATION MEETINGS

These meetings will be held at pre-determined intervals as nominated by RCC site management. A representative from each subcontractor on site shall attend the meeting.

At the meeting the coordination of site safety will be discussed as the first item of the agenda.

Persons responsible and completion times will also be determined at this point. The progress of these items will be reviewed prior to the end of the day by the site foreman or his representative.

24. WORKING AT HEIGHT

Working at heights above 2m must be in accordance with WorkCover requirements, including WHS Regulation 2011 Part 4.

25. LADDERS

Subcontractors shall inspect all ladders for damage prior to use on site. Only "commercial" or "industrial" ladders to be used on site with the max load rating displayed.

3 & 4 Foot ladders are NOT permitted on site. All "A" frame ladders to have working a platform where access is restricted. "Other" ladders may be used after a risk assessment has been approved by RCC. Extension ladders are to extend a minimum of 1m above the highest working platform they serve and set at a safe angle of about 75 degrees to the horizontal (4 to 1). Do not stand above the third rung from the top of the ladder.

3 points of contact must be maintained at all times whilst working from ladders, if not possible to maintain seek alternate means of access.

Extension ladders are to be secured top & bottom from slipping back or sideways. Where they are used in a public or other trafficable area additional measures such as barricading is to be provided to prevent accidental collision.

26. SCAFFOLDING

Scaffolding is to comply with the appropriate Australian Standards.

Scaffolding shall only be moved or altered by a scaffolder who holds the appropriate certificate of competency.

When using scaffolding do not place excessive loads on it or leave material such as bolts or debris on it once the work has finished.

Scaffold is to be accessed by means of a temporary staircase.

Mobile scaffolds are to be set up on level stable ground with wheels locked when in use.

Adequate handrails and means of access is to be maintained whilst the scaffold is in use. Climbing the side is not permitted.

Mobile scaffolds are to be fitted with stabilisers where their height exceeds 3x the narrowest width.

Scaffolds marked with an 'incomplete' sign are not to be used.

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27. GRAVITATIONAL HAZARDS

Special care is required when working at heights, and to protect others from working at heights risks in areas below. Check that adequate handrails and kick boards are in place before entering or working in any area where there is a risk anything falling.

Hand tools are to be fitted with approved lanyards if people are working below. Areas below are to be sectioned off and defined as 'Works Zone'.

Safety harnesses are to be used in accordance with the Code of Practice for Working on Roofs and the Code of Practice Safety Line Systems, and must be worn in accordance with relevant method statements or as directed by the site Foreman.

All fall arrest devices must be inspected and tested by a competent person periodically as required by **AS/NZS 1891.4 Industrial fall-arrest systems and devices - Selection, use and maintenance.**

28. MANUAL HANDLING

Manual handling is to be carried out in accordance with the regulatory requirements.

Manual handling requirements are to be documented within the contractor's SWMS.

Generally material and equipment of excessive weight is to be lifted by mechanical means or with the assistance of other workers**.**

29. NOISE CONTROL

Noise levels generated on site by plant and equipment is not to exceed the limits specified by statutory authorities and noise management is to be in accordance with the provisions of the Occupational Health & Safety Regulation.

Note that if you need to raise your voice to be heard, then you should be wearing hearing protection.

As required, designated noise areas need to be established around work zones.

30. UV PROTECTION

All persons on site must take adequate precautions against ultraviolet radiation. As a minimum, all persons working in direct sunlight shall wear high protection sunscreen (30+ or greater) on exposed skin.

It is RCC's preference that shirts with collars are worn at all times. The wearing of singlets and / or vests in place of a short sleeve shirt is not permitted.

31. CONFINED SPACES

Controls for persons working in confined spaces are to be in accordance with the Code of practice – Confined Space and AS 2865 Confined Spaces. All work carried out within a confined space shall be completed by persons who have received the appropriate training and operating under the conditions of an entry permit.

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32. ENVIRONMENTAL MANAGEMENT

Protection of the Environment Operations Act 1997 (POEO Act), Protection of the Environment Amendment Act

This legislations means a person or company can be prosecuted for "potential" or "actual" environmental pollution. "No knowledge" is not a defence in court.

Examples include dust emission, washing concrete or paint into drains, working outside the site operating hours (noise) etc.

Site personnel shall observe all environmental safeguards and protection measures in place around the site and to conduct their day to day activities in a manner which minimises the potential to adversely affect the environment. In particular:

- Keep out of fenced areas (tree protection, heritage, fauna reserves etc).
- Not disturb or remove any of the bunding, silt fencing, hay bales and the like designed to prevent sediment leaving the site or making its way into waterways.
- Keep dust to a minimum, notify the RCC foreman if dust suppression is required, use equipment fitted with vacuum/dust collection systems.
- Be aware of how noise from your work may disturb the neighbours and follow the site hours of operation in relation to start, finish and delivery times and respect the local community when driving along local roads.
- Vibration from impulsive equipment (rock hammers, jack hammers etc) can damage to structures and property. Follow any site specific hours for impulsive work.
- It is illegal to discharge dirty water or water that may contain sediment, chemicals, paints, pigments, oils etc into the stormwater system or creeks. Get advice when dewatering excavations.
- Chemicals to be stored in accordance with their MSDS and in bunds to prevent spills.
- No storage of bulk fuels onsite, rather use mini tankers for fuelling up plant and equipment.
- Place all waste materials (i.e. glass, metal, masonry etc) in the correct designated bin or temporary holding area.
- Washing out of concrete trucks is be carried out at the batch plant (as the first option). If onsite, wash out within a contained area identified by the RCC foreman.
- Use wash up areas for painting equipment.
- If you encounter any suspicious materials whist excavating (contamination, asbestos, munitions, clinic wastes, and acid sulphate soils) STOP work immediately and contact the RCC Foreman.
- Do not destroy any heritage artefacts or building without permits. In encountered STOP work and notify the RCC foreman.
- Clean up after yourself and put all rubbish in bins. Where identified, recycle steel, gyprock, pallets etc.

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33. CONTROL OF NON-CONFORMANCES

A Quality, Environmental or Safety Breach will attract a Non Conformance Report (NCR).

Examples of items that may attract a Non Conformance are:

- Failure to wear a hard hat / wear hard hat correctly.
- Failure to wear safety glasses (Clear or smoke).
- Failure to have leads supported off the floor.
- Failure to have current tags on electrical equipment.
- Having persons on site who haven't had a site induction or been instructed in the SWMS for this job.
- Not performing works in accordance with their company's SWMS.
- Not carrying out items assigned at the daily coordination meeting within the agreed time frame.
- Failure to attend the coordination meeting.
- Failure to maintain environmental controls.
- Failure to keep work areas clean (House keeping).
- Failure to promptly clean up & notify of chemical spills.
- Failure to carry out the work in accordance with drawings and specification.
- Damage to other subcontractors work.

34. MANAGEMENT SAFETY AUDIT

Subcontractors are advised that they may be audited randomly during this project to ascertain if they are adhering to the site safety plan, their Safe Work Method Statement and relevant statutory requirements.

35. WORK AREAS - HOUSEKEEPING

Work areas must be kept clean and tidy, with rubbish and other safety hazards cleaned up promptly.

All protruding nails are to be removed from timber.

Materials are to be stored and used in a manner as to maintain safe access and egress to work areas at all times. In particular walkways, passages, stairs and exits must be kept clear to provide unimpeded access or egress at all times.

Spillage of oil or other similar liquids are to be cleared up immediately.

36. GLASS CONTAINERS

Glass containers are not allowed on the site other than in the lunch room.

Richard Crookes Constructions Pty Ltd
Level 3, 4 Broadcast Way
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PO Box 1024, Crows Nest NSW 1585

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www.richardcrookes.com.au

37. ALCOHOL & ILLEGAL DRUGS

Under no circumstances will any Employee, Subcontractor, Supplier or associated stakeholder affected by alcohol and/or by any other illegal drug be permitted to work and/or operate any plant or equipment on RCC projects. RCC reserve the right to conduct drug and alcohol testing on a random or with cause basis. Advise RCC if you are currently stood down or on medication.

Refer to RCC Drug and Alcohol Policy

38. VIOLENCE AND HARASSMENT ON SITE

Violence, harassment or bullying of any kind will not be tolerated. Refer to WorkCover NSW Guide, "Violence in the Workplace" and RCC Guidelines for Dealing with Workplace Violence.

Refer to - RCC Harassment and Discrimination Policy.

- Dispute Resolution Procedure.

Approach the RCC Site Manager if you need assistance.

RCC reserve the right to remove workers from this site, existing and future RCC Projects where workers have conducted blatant unsafe acts, do not respond the requests, show blatant disregard to their fellow worker and the surrounding environment.

39. YOUNG & INEXPERIENCED WORKERS

All workers must be protected from risk of injury or illness arising from workplace hazards. Employers must give young / inexperienced workers the information, training and supervision needed to perform their task safely.

Employers must pay particular attention to young / inexperienced workers as they lack the experience needed and may be unfamiliar with the task.

For further information refer WorkCover NSW web site; Young workers.

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40. PROTECTION OF CHILDREN AND OTHER VULNERABLE PEOPLE

Code of behaviour

The Subcontractor must ensure that all persons working on the Site, including but not limited to the Subcontractor's employees and managers, Consultants, Subcontractors and Suppliers (Subcontractor Employees) understand and comply with the requirements shown below:

- All Subcontractor Employees must gain permission to enter a school or facility before commencing work and may only enter approved areas. The Subcontractor's representative or where a subcontractor is working without the supervision of the Contractor, the subcontractor's representative must report their presence to the person in charge of the school or facility on arrival each day and record, in a "Site Visit Log", the details of all Contractor's or subcontractor's employees working at that site that day.
- Contractor Employees should avoid talking with, touching or interacting with any children or residents or other users of the school or facility except where the work requires it or in an emergency or safety situation.
- Subcontractor Employees must only use approved toilets and other facilities, unless the person in charge of the school or facility gives written authority to use alternative facilities.
- The work area must not be able to be used or accessed by children, or residents or other users of the school or facility while work is in progress.
- Clear signs and barricades (where appropriate) must be used to prevent any inadvertent or unauthorised access.
- Appropriate privacy must be maintained when working on toilets and similar facilities. Subcontractor Employees must ensure that toilets and similar facilities are not occupied or in use by children, residents or other users before entering to perform work, and that work does not continue when use of the facilities is required. Where practicable male employees should perform work on male facilities and female employees on female facilities.
- Subcontractor Employees must wear clothing that is tidy and in good condition, including a shirt and shorts, trousers or a skirt at all times.
- Subcontractor Employees should report any concerns about children's behaviour or child abuse to the person in charge of the school or facility.
- Subcontractor Employees must wear or carry an identity card at all times when on the Site.
- If requested, the Subcontractor must ensure that all persons working on the Site complete a written declaration that they have not been convicted and are not awaiting trial for a Disqualifying Offence as defined in Schedule 2 of the Child Protection (Working with Children) Act 2012 (NSW). The Contractor must keep copies of the declarations with site induction records.

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6.2 ENVIRONMENTAL ACTIONS AND MONITORING TABLE

Refer to the following page for Richard Crooke Constructions Pty Ltd Environmental Controls Table, which outlines the control measures for air quality, odour and dust management. The allows for the management of site generated odours and prevents any impacts to hospitals.

Appendix 6.2 – Environmental Actions and Monitoring Table

RICHARD CROOKES CONSTRUCTIONS

Environmental Aspect (to be read in conjunction with, Environmental Risk Matrix)		Environmental Actions, Controls and Criteria	Operational Controls				Effectiveness of Controls			Checking, Corrective & Preventative Action		Resp
			Induction &/or toolbox	RCC	Subcont. SWMS & contracts	Consult reports	Visual	**Form 18.3** Environmental Inspection Checklist	**Form 40.2** SWMS Compliance	**Form 31.1** NCR/Site Notice Refer PMP Section 4	Check records during audit	
1	Dust Generation Particulate Emissions (General)	• Install shade cloth on perimeter fencing as required and appropriate to the hoarding type. • Vehicle corridors will be clearly identified and restricted to control vehicle access onsite. • Follow all posted speed limit signs on-site, with vehicle speed onsite not to exceed 20km/h • Fixed and mobile (water tanker) water sprays as required by the parameters of the site • Reduce and/or stop work activities during moderate to high wind velocity periods. • Maintain equipment. Smokey plant to be stopped until repair works completed. • Turn off vehicle engines whilst not in use (no long periods of idling) • This document is to be read in conjunction with the Construction Soil and Water Management Sub-Plan (CSWMSP) for the John Palmer Public School Project. Where ambiguity and/or conflict occurs, the most onerous control/action is to be enforced.	✓	✓	✓		Daily	Weekly		As required		SS
1	Dust Generation (Demolition)	• Breakers and crushing equipment to be fitted with dust filtration equipment or water sprays to control dust emissions. • This document is to be read in conjunction with the Construction Soil and Water Management Sub-Plan (CSWMSP) for the John Palmer Public School Project. Where ambiguity and/or conflict occurs, the most onerous control/action is to be enforced.			✓		Daily	Weekly during works	✓	As required		SS

1	Dust Generation (Construction)	• Minimise areas of site disturbed and stage works where possible. • Dust suppression strategies to be used, i.e. water sprays, soil binders, hydromulching, controlled speed onsite, roadbase + shaker grids. • Stockpiled topsoils and rubble will be restricted to 4m high. Stabilise if insitu for >4-6months. • On site drilling or coring operations will be undertaken by equipment fitted with air filtration equipment. • This document is to be read in conjunction with the Construction Soil and Water Management Sub-Plan (CSWMSP) for the John Palmer Public School Project. Where ambiguity and/or conflict occurs, the most onerous control/action is to be enforced.	✓	✓			Daily	Weekly		As required		SS
2	Odour	• If odorous materials uncovered, recover immediately. • Seek advice from consultant regarding soil/materials management.		✓		✓	Daily	Weekly		As required		SS
3	Greenhouse	• Ensure purchased electrical products/whitegoods products comply with specification for CFCS & energy ratings • Low solvent paints to be used as a priority • Building to conform to AGBR or GreenStar performance criteria • Deliveries/transport from site effectively planned to limit inefficient transport, assist back loading etc		✓						As required	✓	CA SS

4	Stormwater (Discharge from sedimentation basins, flooding)	• Water quality to meet ANZECC Water Quality Guidelines. → Conduct water quality test (external test company) NTU and TSS to determine the best treatment and acceptable levels – (Generally) PH 6.5- 8.5, Turbidity <50NTU, No visible oil & grease • Obtain advice for use of flocculants to settle sediment from water. • Sedimentation pond to be maintained at low levels to ensure capacity during rainfall event. • DO NOT DISCHARGE IF CONTAMINANTS SUSPECTED. Obtain advice. • This document is to be read in conjunction with the Construction Soil and Water Management Sub-Plan (CSWMSP) for the John Palmer Public School Project. Where ambiguity and/or conflict occurs, the most onerous control/action is to be enforced.	✓	EP-001		✓	Daily during discharge	Weekly		As required	✓	SS
5	Adjoining waterways (dewatering, soil erosion & runoff)	• Temporary drainage systems will be established to divert clean waters around the land development areas as appropriate. • Erect silt fences, bunds and construct swale drains. • Concrete Bunded washouts plastic lined • Inspect atleast weekly & after rainfall.		EP-001		✓	Daily during discharge	Weekly		As required	✓	SS
5	Adjoining waterways (dewatering, soil erosion & runoff)	• Maintain and/or replace as required. • Refer NSW Department of Housing's Managing Urban Stormwater (2004). • Street sweepers will be employed on regular basis. • This document is to be read in conjunction with the Construction Soil and Water Management Sub-Plan (CSWMSP) for the John Palmer Public School Project. Where ambiguity and/or conflict occurs, the most onerous control/action is to be enforced.										

6	Sewer (Trade waste)	• No paints or other chemical to be poured down drains. • If required, obtain trade waste licence for discharge or local council approval.		EP-001		✓				As required	✓	SS
7	Land (contaminated soils, imported fill)	• Stop work if unexpected potentially contaminated soils are encountered. • Obtain waste classification from consultant in accordance with EPA guidelines Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-Liquid Wastes (June 2004) www.environment.nsw.gov.au/waste/envguidlns/index.htm.	✓		✓	✓	Daily	Weekly	✓	As required	✓	SS
7	Land (contaminated soils, imported fill)	• Where required a Remediation Action Plan will be developed and implemented. • Sign off by Site Auditor may be required to validate cleanup. • Any groundwater or ponded rainwater will be tested and classified by consultants prior to disposal. • Check geotech requirements. Ensure soil classification suitable for land use ie. Schools, residential, commercial etc.	✓	EP-002	✓	✓	Daily	Weekly	✓	As required	✓	SS
7	Land	• If odorous soils (rotten egg gas) or grey/yellowed mottled soils encountered, stop work. • The requirements to import fill will be minimised by utilising on site cut material wherever possible. • All analysis certificates shall be handed over as part of the completion documents to the client. • Record all imported fill on Form 25.08 - Product Identification & Traceability. • Mark up locations where fill compacted in site plan. Survey if required.										

8	Resources - water, materials, energy	• For design and construct jobs, refer to the design specification for ESD requirements and product choices. • Buy local wherever possible to reduce impacts of transport on environment.		✓		✓					✓	PM
9	Noise	• Refer to DA/SSD for noise restrictions and working hours. • Use hoarding or acoustic mats as required. • Situate generators and plant away from sensitive receivers. • Turn off machinery. Maintain equipment and stop noisy plant until repaired. • No early deliveries.	✓		✓	✓	Daily	Weekly	✓	As required	✓	SS
10	Vibration	• Conduct dilapidation report prior to work starting, as required in consultation with the applicable Consultant Reports/Sub-Plans. • Limit the use of vibratory rollers, rock breakers, impact piling etc adjacent to buildings (>7m). • Regenerated noise may also transfer through bedrock and building structures. • Obtain advice as required.	✓		✓	✓	Daily	Weekly	✓	As required	✓	SS
11	Community Concerns	• Refer community approaches to SINSW Comms (issue handout card) • Provide contact name for inquires. • Advice locals of “noisy” work. • If required in noise sensitive areas and/or in response to complaints, engage consultants to undertake monitoring at nominated receivers. • Vehicles will not be permitted to queue outside the site or in residential areas unless a defined area is established which does not adversely impact on neighbours.	✓				Daily	Weekly		As required		PM SS

12	Flora	• Review planning documentation to determine the presence of any protected, threatened or significant flora. Obtain approvals as required. • Engage aborist to develop tree management plan or refer DA and aborist reports. • Education and training at site toolbox meetings and induction. • Report all sightings to the site manager. • Fence or barricade protected flora at the drip zone. Erect Keep Out signage. • Do not stack materials under/against trees. • The potential for reuse of vegetative wastes by mulching, chipping or on-site placement of trunks or limbs shall be reviewed for each project.	✓	✓		✓	Daily	Weekly		As required	✓	SS
13	Fauna	• All native animals protected. • Review planning documentation to determine the presence of any protected, threatened or significant fauna. Obtain approvals as required. • Site rules/induction to include information regarding of the • For injured animals, to relocate call WIRES	✓	✓		✓	Daily	Weekly	✓	As required	✓	SS

14 **15**	Waste Litter	• Hazardous materials surveys to be completed. • Materials to be removed prior to demolition • Registers and waste disposal requirements as per WorkCover and EPA requirements for removal, storage, transport and disposal. • General site wastes –use one bin system and sort in contractors yard to produce quantities of material for recycling, reuse, disposal etc. • Empty drums are to be taken off-site for disposal. • Empty drums shall be crushed prior to recycling/disposal. • Do not overfill skip bins. Provide plenty for use. Cover where potential for windblown litter.	✓	EP-002	✓	✓	Daily	Weekly	✓	As required	✓	SS
16	Landfilling	• Reduce, reuse and then dispose • Landfill space scare leading to increased tipping costs • Dispose of hard construction wastes for recycled gravels and sands • Do not send soil to landfill until alternatives for beneficial reuse have been explored as per consultants advice. • Consideration should be given to chipping of the vegetation and reuse • Reuse packaging to protect works		EP-002			Daily	Weekly		As required	✓	SS

17	Chemicals	• Chemicals to be stored in bunded areas (impervious + 110% of largest container) away from stormwater drains & pits. • Refer Workcover Code of Practice for Storage & Handling of Dangerous Goods, EPA Guidelines for Bunding & Spill Management. Appropriate chemicals storage is in conformance with: → AS 1940 The Storage and Handling of Flammable and Combustible Liquids → Storage and Handling of Dangerous Goods WorkCover Code of Practice 2005– refer p. 86 • EPA requirements http://www.environment.nsw.gov.au/mao/bundingspill.htm • Ponded water within bunds will not be discharged to stormwater. • Fuel and hydraulic leaks to be cleaned up immediately. • Drilling muds to be contained within bunds and reused. • Liquid paints NOT to be poured down drains. Spread on waste cardboard or similar and leave to dry. Paint brushes to be rinsed and paint solids allowed to settle. Container of paint solids to be disposed to liquid waste facility. • Construct concrete washout pit for washout, away from stormwater drains. Send back to batch plant where possible.	✓	EP-002, EP-005, EP-006	✓		Daily	Weekly	✓	As required		SS

	Chemicals	• Concrete cuttings to be contained and wetvac to prevent runoff into stormwater drains. • Storage of bulk fuels (>200L) on site is prohibited. All refuelling shall be undertaken by a mobile facility with appropriate spill control and containment control equipment. • MSDS's must be provided to the Site supervisor prior to a chemical being received on site and by subcontractors using chemicals/products.	✓	EP-002, EP-005, EP-006	✓		Daily	Weekly	✓	As required		SS
18	Traffic	• Develop and implement traffic management plans. Submit to local council as required. • Signage and notices regarding disruptions. • Use crushed concrete, mulches etc along site access roads. • Install shakers and wheel wash as required. • Organise regular street sweeping. • Haulage routes and rules will be provided to subcontractors prior to commencing on site. • All loads of soil, demolition wastes, general wastes etc are to be tarped.	✓	TMPs		✓	Daily	Weekly		As required		SS

19	European heritage	• Education and training at site toolbox meetings and induction. • It is illegal to destroy heritage items. • Review local or regional environmental plans, or on the State Heritage Register is to be consulted prior to work starting onsite. • Obtain excavation permit issued by the Heritage Council of NSW if required. • Any heritage relics or sites discovered during construction shall be reported to the NSW Heritage Office. • Work in the subject area to cease until specialist advice is obtained. • The area will be fenced and signs erected to restrict access. • Heritage consultants may be required to provide advice on demolition/construction processes and finishes.	✓	✓		✓	Daily	Weekly		As required	✓	SS
20	Aboriginal heritage	• Education and training at site toolbox meetings and induction. • It is illegal to destroy heritage items. • Check the Aboriginal Heritage Information Management System (AHIMS). • Also check the register of the National Estate. • Obtain approval from NPWS (Section 90 consent).	✓	✓		✓	Daily	Weekly		As required	✓	SS
21	Aboriginal heritage	• Any evidence of Aboriginal relics discovered during construction shall be reported to the National Parks and Wildlife Service. • Local land Land Council representatives may be required to monitor stripping/excavation. • Work in the subject area to cease until specialist advice is obtained. • The area will be fenced and signs erected to restrict access.	✓	✓		✓	Daily	Weekly		As required	✓	SS

20	Emergency Preparedness	• Spill kit onsite. • Refer to the MSDS for advice and procedures. • All spills must be reported to the FM & cleaned up. Complete RCC Accident /Incident report. • Sed pond pumped out regularly to maintain capacity in case of emergency • Ensure you know where stormwater drains are and have materials to block them in case of a fire.	✓	✓			Daily	Weekly		As required		SS
21	External lighting	• External lighting in compliance with AS 4282-2019 Control of obtrusive effects of outdoor lighting o All site compound access and operation lighting is limited to use during the approved constriction hours. o There are no external lighting elements utlised outside of construction hours. • Lighting associated with the development/project are designed & installed in accordance with the relevant and applicable Standards, Requirements and Guidelines approprioate to the Project/Development		✓			Daily	As required		As required		SS & Subcontractor

6.3 ENVIRONMENTAL POLICY

Refer to the following page for Richard Crookes Constructions Pty Ltd Environmental Policy. The policy is not embedded in this document, it is provided as an attached appendix so that it can be displayed/updated/revised in isolation if required.

ENVIRONMENTAL
POLICY

Richard Crookes Constructions Pty Limited promotes and encourages a sustainable environment throughout our business activities and sources our supplies and services in ways that prevent pollution and promote compliance with legal and other requirements.

The company implements Environmental Management System to aid us in meeting our corporate responsibilities. The System is certified as meeting the requirements of AS/NZS ISO 14001:2016 Environmental Management Systems.

These form part of the company's Project Management Plans and are supported by company procedures and guidelines.

Management intends that all employees of our company, relevant subcontractors and suppliers, are made aware of their environmental responsibilities and the environmental impacts associated with their activities, products and services.

Our company objectives for continual improvement in environmental management include:

- Reducing the number of environmental notices issued on the projects by implementing a program of inductions, training and monitoring.
- Minimising the impacts to the community through the development of project specific Environmental, Traffic management plans, stakeholder consultation plans and by timely and appropriate response to complaints.
- Minimising impacts on the environment using dust, soil and water, waste and chemical management practices that are regularly inspected and maintained.
- Achieve a waste minimisation figure of 85% through monthly reporting

The Continual improvement of the project environmental management plans and progress with achieving the company's objectives will be reviewed during management meetings, project reviews and following the results of internal and external audits.

The Policy will be made available to the public and interested parties on request. This Policy will be reviewed every two years.

Jamie Crookes
Managing Director
26th February 2022

6.4 UNEXPECTED FINDS PROTOCOL – ASBESTOS, HISTORIC HERITAGE AND ABORIGINAL HERITAGE

Refer to the following page for Richard Crookes Constructions Pty Ltd Unexpected Finds Protocol. The protocol is not embedded in this document, it is provided as an attached appendix so that it can be displayed/updated/revised in isolation if required.

RICHARD CROOKES
CONSTRUCTIONS

GLENWOOD HIGH SCHOOL
1278

UNEXPECTED FINDS PROTOCOL

ASBESTOS

21 July 2022

This plan has been approved for use by the following:

Approved by/Date	
	Project Manager
Approved by/Date	
	Craig Richmond, Business Systems , QA/Env Manager
Approved by/Date	
	Simon Dayball Group WHS Manager
Approved by/Date	
	Ian West, General Manager – Commercial & Risk

AUTHORITY POSITION	COMPANY NAME	NO. OF COPIES
Peter Morrison (SPM)	Jacobs	Electronic
Simon Karkkainen (PD)	Richard Crookes Constructions	1 copy
Lucas Rielly (SM)	Richard Crookes Constructions	1 copy

REVISION REGISTER

REVISION DATE	REVISION DESCRIPTION	PMS INITIALS (ACCEPTANCE OF CHANGES)
20.06.22	Original issue	SK

CONTENTS

UNEXPECTED FINDS PROTOCOL TRAINING REGISTER

Name	Project Position	Signature	Trained By	Tool box date

1 INTRODUCTION

1.1 PURPOSE

The management of asbestos containing materials is important to ensure the Asbestos Containing Material (ACM) are not damaged nor deteriorate to such an extent that site workers, public, external contractors or visitors are unnecessarily exposed to airborne asbestos fibres.

The requirements of the contractor site induction and permit to work system will aid in the management of ACM's throughout the site. Any other unexpected finds that are or could be potentially hazardous will follow the same protocol as ACM.

1.2 GENERAL PRINCIPLES

The RCC's principles of asbestos management have been adapted from general principles published in the Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)]. These principles are summarised below:

- Consideration should be given to the removal of ACM during any renovations, refurbishments or maintenance work in preference to other control measures such as encapsulation, enclosure and sealing.
- The WHS Regulation requires all ACM within the construction area to be labelled. (Refer 6.3 Labelling)
- Where ACM is identified or presumed, the locations and type of ACM are to be recorded in the ACM Register located within the Asbestos management plan folder.
- A risk assessment must be performed on all identified or presumed ACM.
- Control measures must be established to prevent exposure to airborne asbestos fibres and should take into account the results of risk assessments conducted for the identified or presumed ACM.
- All workers and contractors on site etc. must be advised of the ACM Register at time of induction, and as requested, permitted access to the register for their review
- Only competent persons should undertake the identification of ACM.
- All workers and contractors on site where ACM are present or presumed to be present, and all other persons who may be exposed to ACM as a result of being on the premises, must be provided with full information on the occupational health and safety consequences of exposure to asbestos and appropriate control measures. The provision of this information should be recorded.
- Reasonable steps must be taken to identify all possible locations of ACM within the site.
- Once a risk assessment has been completed and controls established, a SWMS is to be developed and submitted to RCC'S site management team for approval

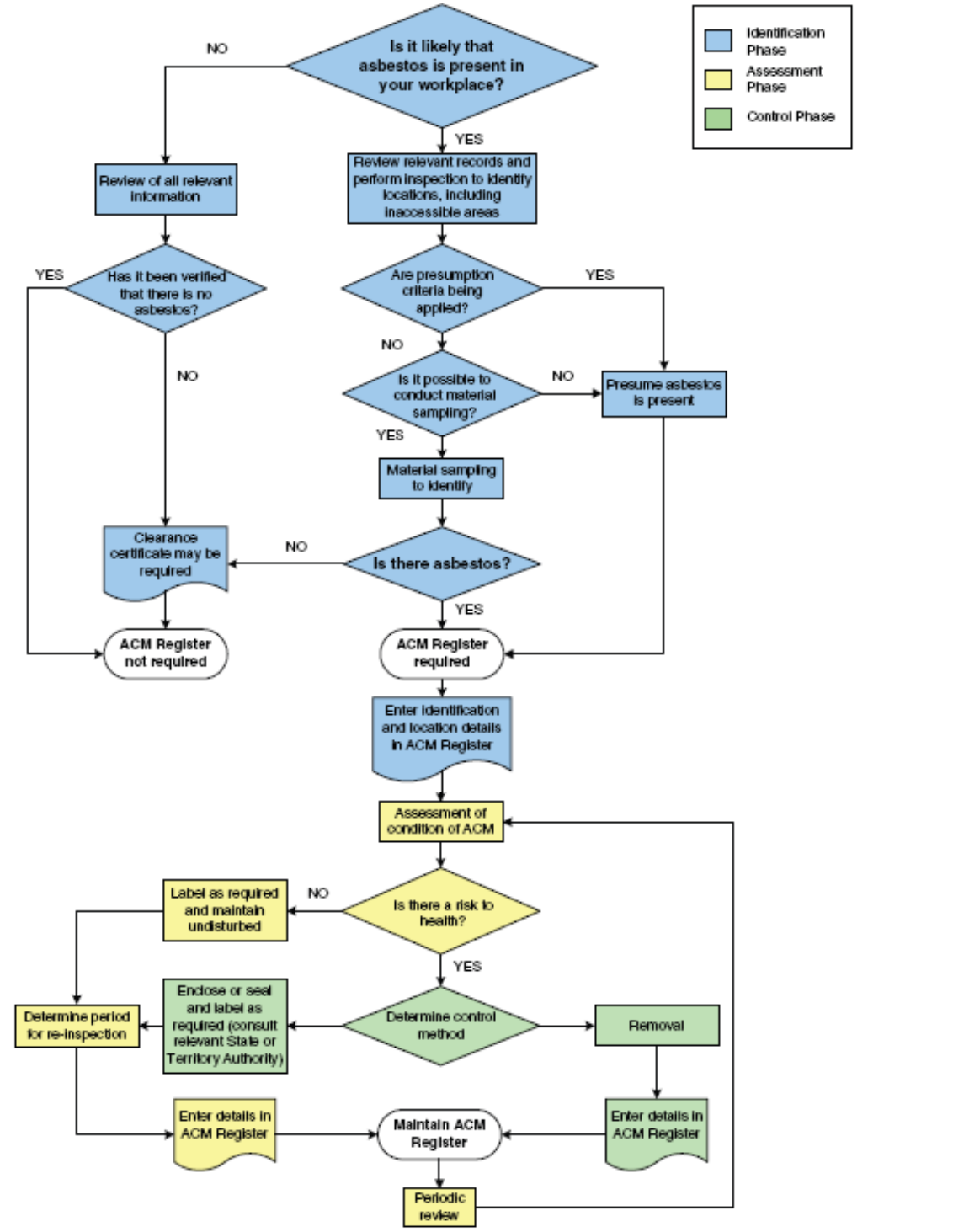


Figure 1: General principles of an asbestos management plan

Source: Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)]

2 OBJECTIVES

- Remove all high-risk asbestos items where possible.
- Deliver effective asbestos management work programs.
- Ensure that no one is exposed to airborne asbestos fibres.
- Ensure compliance with this Asbestos Management Plan.
- Ensure the asbestos database and register is accurate.
- Comply with State and Commonwealth legislation.
- Remove asbestos containing items when and where possible

3 REGULATORY REQUIREMENTS

This asbestos management plan is consistent with removal, encapsulation, transport, and disposal or otherwise potential disturbance of asbestos containing materials. All these activities shall be performed in accordance with relevant Commonwealth and State Acts, Regulations, Codes of Practice, Advisory Standards and Industry Standards.

3.1 STATE LEGISLATIVE REQUIREMENTS – NEW SOUTH WALES, ACT & QUEENSLAND

Relevant State legislation includes:

- Work Health and Safety Act 2011
- Work Health and Safety Regulation 2017

3.2 CODE OF PRACTICE/GUIDES

Key Codes of Practice and Guidance Notes include:

- Code of Practice for the Management and Control of Asbestos in the Workplaces [NOHSC: 2018 (2005)].
- COP- How to Manage and Control Asbestos in the workplace - Oct 2018
- COP- How to safely remove asbestos - Oct 2018

3.3 RCC REQUIREMENTS

- Project Managers (PM) /Site Managers (SM) must be notified before asbestos removal work commences.
- Any new asbestos identified must be explicitly notified to the PM/SM.
- All Staff and Contractors must comply with this Plan.
- Tenants and other interested parties must be notified of the asbestos removal work in advance and asbestos awareness training shall be made available to those persons affected by the asbestos work.

4 ORGANISATIONAL RESPONSIBILITIES

Person/Party	Responsibility
Construction Manager (CM), Project Manager (PM)	▪ Ensure all staff and contractors are aware of and comply with the plan. ▪ Project management ▪ Identification and bringing to the attention of appropriate staff, any suspect material ▪ Ensure all contractors working on asbestos are aware of and meet the requirement of the plan. ▪ Notify Adjacent neighbours, property owners work type and time frame
Site Manager (SM) Health Safety and Environmental Coordinator (HSE)	▪ Obtain from Subcontractor, copy of Safework Notification (Requirement of RCC Asbestos removal permit) ▪ Ensure project personnel (including contractors) are inducted ▪ Surveying, identification and arranging for sampling of suspected asbestos containing materials by competent persons. ▪ Training and awareness RCC relevant staff ▪ Manage the asbestos works program and removal program ▪ Respond to incidents ▪ Document preparation, recording and filing ▪ Manage asbestos inspection contractor
Contractors (C) and Trades Staff (TS)	▪ Not to impact on an ACM without complying with the plan ▪ To bring to the attention of the SM/HSE any suspect material ▪ Refer to the plan for guidance to identify, manage, and remove asbestos ▪ Apply for Asbestos Permit to Work when performing asbestos removal work that requires notification. ▪ Undergo RCC Contractor Induction ▪ Develop a site specific asbestos removal control plan, SWMS and Risk Assessment prior to performing the asbestos removal work

5 CONTROL OF ASBESTOS HAZARDS

As part of the asbestos survey or subsequent resurvey, a 'Competent Person' is required to assess the risk posed by the ACM by completing a Risk Assessment; this will determine what, if any, control measures may be required. Generally, there are four control options available to select:

- Leave in-situ and manage
- Seal/encapsulate
- Enclose/isolate
- Remove

The controls are to be appropriate to the risk of the ACM in question. The following information should be used as a guideline when determining the correct control measure for management of the ACM risks.

If the ACM is friable, and there is a risk to health from exposure, it should be removed.

If the ACM is bonded and in a stable condition, encapsulation may be appropriate if the ACM is unsealed. Encapsulation is not necessarily required if the ACM is unsealed but it does provide another "barrier" to the potential release of asbestos fibre as well as prolonging the lifespan of the material by providing protection against UV and environmental elements etc.

ACM that are bonded, stable and sealed, which are unlikely to be disturbed during normal activities, can be left in-situ and managed, but need to be recorded in the ACM Register.

ACM within the works zone must be removed prior to the commencement of demolition, partial demolition, renovation or refurbishment if they are likely to be disturbed by those works. This is in accordance with the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC: October 2018]

5.1 REMOVAL OF ACM

5.1.1 LICENSED CONTRACTORS

ACM falls into two broad categories (bonded and friable) and the category the ACM falls under will determine how the ACM is removed. If the ACM is classified as friable (e.g. sprayed limpet, pipe lagging, millboard insulation, vinyl sheet floor coverings with asbestos backing material, etc.) it is necessary to engage a contractor who holds a current AS-A class license for friable asbestos removal. The holder of an AS-A licence is also permitted to removed Bonded ACM

If the ACM is classified as bonded ACM (e.g. asbestos cement wall linings, Super Six roof sheeting, vinyl floor tiles, Zelemite electrical boards, etc.) the ACM may be removed by the contractor who holds a current AS-B licence for bonded asbestos removal. The holder of an AS-B licence is not permitted to remove friable ACM.

5.1.2 SAFEWORK – NOTIFICATION

For Bonded ACM, in quantities greater than 10m^2, requiring a licensed contractor (AS-B) to complete the removal works, a Safework (Regulator) Notification is required to be lodged by the Licensed Contractor.

The Notification is required to be lodged a minimum of seven (7) working days prior to starting the removal works. Safework (Regulator) will review the application and return the first two pages, stamped with an official Safework (Regulator) approval. No works are to proceed prior to the receipt of the Notification.

RCC will require a copy of the Safework (Regulator) stamped 'Notification' prior to issuing an RCC Asbestos removal permit.

5.1.3 SAFEWORK – PERMIT

For all Friable removal works, regardless of quantity, a suitably licensed contractor (AS-A) must apply to Safework (Regulator) for a Permit prior to removal works progressing.

The Permit application is required to be lodged a minimum of seven (7) working days prior to starting the removal works. Safework (Regulator) will review the application and return the first two pages stamped with an official Safework (Regulator) approval and, issue a separate numbered Permit. No works are to proceed prior to the receipt of the permit.

RCC will require a copy of the Safework (Regulator) 'Permit' and the application form prior to issuing an RCC Asbestos removal permit.

5.1.4 AIRBORNE FIBRE MONITORING

Airborne fibre monitoring must be conducted during and after the removal of all friable ACM by an independent competent person. For Bonded ACM, air monitoring is conducted as part of the clearance certificate (where required) or as requested by RCC, client or Hygienist. Air monitoring is conducted during the removal works to check the effectiveness of control measures implemented by the contractor (e.g. isolating the removal work area with a sealed, airtight enclosure fitted with negative air generating units, etc.).

Air monitoring is also conducted after the ACM has been completely removed and the work area has passed a satisfactory visual inspection to determine whether the area is safe to reoccupy by unprotected persons.

5.1.5 CLEARANCE CERTIFICATES

For all Friable ACM removal works or, as requested by the client or RCC for Bonded works, before an area can be re-occupied post asbestos removal, a clearance inspection must be carried out. The clearance inspection must be undertaken by an independent competent person only and a clearance certificate must be obtained from that competent person. Clearance monitoring is a mandatory requirement for all friable asbestos removal works and is recommended for bonded ACM removal works particularly when the bonded ACM is located internally or near sensitive receptors.

The complete removal of all ACM must be verified with a written clearance certificate which must include details of a satisfactory clearance inspection conducted by the independent competent person. If clearance air monitoring has been conducted, the results of the clearance monitoring must be included as part of the clearance certificate as well.

5.1.6 WASTE

All asbestos waste shall be disposed of at an approved landfill disposal site by licensed contractors, and in accordance with the requirements of The Legislation. Transport and disposal of asbestos waste shall be carried out only in a manner that will prevent the liberation of asbestos fibres into the atmosphere.

To achieve "final completion" of an asbestos removal activity, RCC require verification that the asbestos waste has been transported and disposed of in accordance with State/Territory legislative requirements. A copy of the EPA Waste Tracking document is the required documentation for disposal, and a copy of the necessary License for carrying out this removal and disposal is the required documentation for transportation.

5.2 RECORD KEEPING

RCC shall maintain detailed records of all activities relating to asbestos works which have been undertaken on site. The records kept should include:

- Copies of all asbestos survey/audit reports, including updates and amendments. (RCC ACM Registers)
- Copies of all Safework (Regulator) notifications and permits
- Risk Assessments and SWMS documents.
- RCC Asbestos removal permits
- RCC Air Monitoring and Clearance certificate records
- Records pertaining to the informing of employees/contractors about the presence of asbestos on site, and those employees have been appropriately trained in safe work procedures and practices.
- Clearance certificates indicating areas are safe to reoccupy after asbestos abatement works; and
- Airborne fibre monitoring results
- Previous versions of the asbestos register

All documentation is to be retained in the one file structure under the heading of Asbestos Management. All asbestos related records and documents are to be retained for a period of 30 years.

5.3 LABELLING

Current State and Territory legislation specify the requirements for some form of labelling in buildings. [NOHSC: 2018 (2005)] states all in-situ ACM's should be labelled where practicable. The words 'should' and 'practicable' in the Code of Practice allow some flexibility in the approach to labelling. Similar flexibility is allowed under State and Territory workplace health and safety legislation.

RCC has advised that individual labelling of ACM is to be determined by a Competent Person usually nominated by the client however may not be necessary in every instance.

All friable and high risk asbestos situations, as well as any location containing ACM's where regular maintenance or repair work is likely to be carried must be labelled.

In locations where ACM has been identified within close proximity to the work area, but not required to be removed or disturbed, should be labelled or sign posted warning of 'Asbestos containing material, do not disturb' or in wording similar.

Ref: WHS Regulation, Chapter 8, Asbestos- Clause 469

An asbestos removalist must ensure that:

a) Signs alerting persons to the presence of asbestos are placed to indicate where the asbestos removal work is being carried out, and

b) Barricades are erected to delineate the asbestos removal area.

5.4 WARNING SIGNS

All site areas which are known or suspected to contain ACM's shall have a warning sign at every main entry and around the perimeter of the isolated ACM area. An asbestos register exists for the site and a point of contact must be contacted before undertaking any works.

The warning sign must be clearly visible from all directions leading onto the area.

5.5 SAFE WORK PRACTICES

Prior to commencing any works on RCC sites, such as demolition, refurbishment, maintenance or installation of new equipment, the asbestos register must be consulted to determine if any ACM are present which may be disturbed. This ACM must be removed before commencement of the work. If unknown materials, or undocumented materials suspected of containing asbestos are encountered during building works, stop work and follow the Incident response procedures shown in figure 7.0.

If a project is likely to impinge upon ACM, the principal contractor (RCC) must assess the requirement for a licensed asbestos removalist to perform the asbestos removal work. A Safework permit/Notification may be required as part of an RCC, Asbestos Permit to work, prior to the asbestos removal work commencing.

5.5.1 MAINTENANCE PROCEDURES

Maintenance tasks that may impact on ACM are to be performed under controlled conditions to prevent the distribution of airborne asbestos fibres. [NOHSC: 2018 (2005)] has procedures for certain maintenance tasks and these must be followed. These maintenance tasks include:

- The drilling of asbestos containing materials
- Sealing, painting, coating of asbestos cement products
- Cleaning leaf litter from the gutters of asbestos cement roofs
- Replacing cabling in asbestos cement conduits or boxes
- Working on electrical mounting boards (switchboards) containing asbestos

5.5.2 TOOLS AND EQUIPMENT

Tools and equipment to be used for asbestos removal jobs are required to minimise the generation of airborne asbestos fibres. High-speed abrasive power or pneumatic tools such as angle grinders, sander, saws and high speed drills must never be used. Hand tools are preferred over power tools.

At the end of the removal work, all tools should be:

Decontaminated (i.e. fully dismantled and cleaned under controlled conditions as described in the Code, or

Disposed of in sealed containers similar to that for disposal of the ACM waste product.

Vacuum cleaners used for asbestos cleaning must comply with:

- AS 3544-1988 (Industrial Vacuum Cleaners for Particulates Hazardous to Health) and
- AS4260-1997 High Efficiency Particulate Air Filters (HEPA) - Classification, construction and performance.

5.5.3 RCC ASBESTOS REMOVAL PERMIT

An RCC Asbestos Removal Permit form must be completed for any work on ACM.

Before being issued with an Asbestos Removal Permit, individuals will be required to peruse the RCC Asbestos Management Plan and the Asbestos Register. Where practicable, contractors should be made aware of the requirements of the plan prior to tendering to ensure they allow for such requirements when quoting.

The Asbestos Removal Permit is designed to ensure appropriate work practices are employed when working with ACM. The Asbestos Removal Permit will document what ACM's are to be removed, encapsulated or otherwise protected, prior to the contracted works proceeding. The Asbestos Removal Permit will also check other requirements such as the need for barricading and airborne fibre monitoring.

The Demolisher or asbestos removal contractor will be responsible to ensure that their workers are aware of their responsibilities and abide by the requirements of the permit.

RCC's Site Manager or HSE Coordinator shall be advised immediately of any incidents of non-compliance with the RCC Asbestos Management plan or the Code.

6 HISTORIC & ABORIGINAL HERITAGE UNEXPECTED FINDS PROTOCOL

In the event that either an unexpected archaeological relic is uncovered or Aboriginal object the below protocol is to be followed:

6.1.1 OBJECT/RELIC IS DISCOVERED

Subcontractor or personnel is to advise Richard Crookes Constructions, in the event they believe they may have located a relic.

6.1.2 STOP WORKS AND ISOLTATE

Richard Crookes Constructions will immediately stop works to this area and isolate this zone.

6.1.3 NOTIFY ENGAGED CONSULTANT - TOCOMWALL

Richard Crookes Constructions are to make contact with the engaged Consultant Tocomwall – Scott Franks – CEO 0404 171 544. Who will attend site and review the findings to confirm if it is either an Aboriginal or Heritage relic.

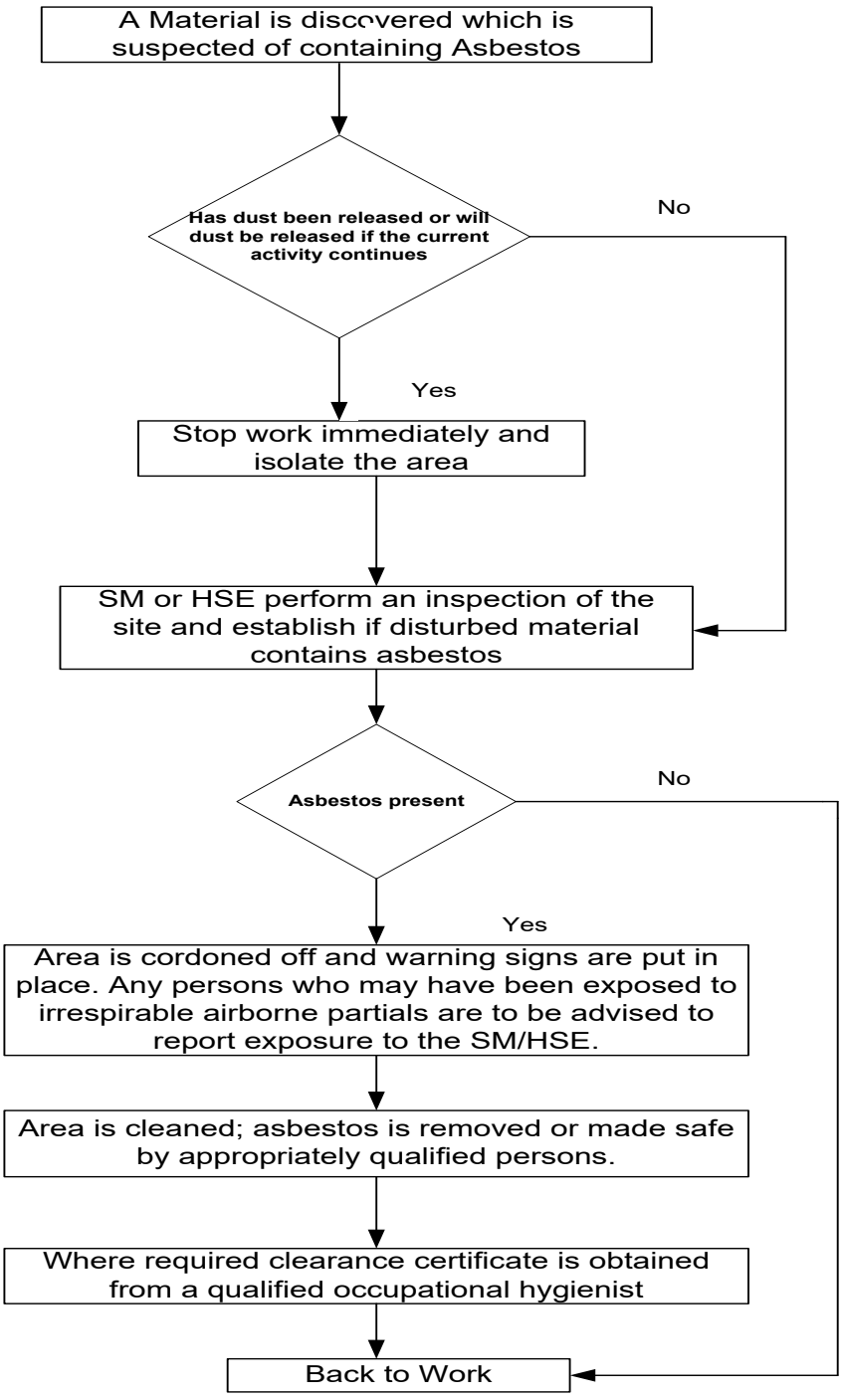
6.1.4 CONSULTANT MANAGEMENT – HERITAGE NSW OR REGISTERED ABORIGINAL REP

If the finding is confirmed to be a relic, Tocomwall will make contact with either a registered Aboriginal representative and or Heritage NSW depending on the assessment of the finding. Tocomwall will manage the remainder of the protocol from here on with either Heritage NSW and or the Aboriginal representative. Any assessments and or strategies that are requested by either Heritage NSW and or the Aboriginal representative can be developed by Tocomwall.

6.1.5 RECOMMENCE WORKS

Richard Crookes Constructions are only to recommence works when written approval is received from Heritage NSW

7 INCIDENT RESPONSE FLOW CHART



8 DOCUMENTATION REQUIREMENTS

8.1 ASBESTOS CONTAINING MATERIAL (ACM) REGISTER FORM 21.1A

The RCC ACM register will be generated where no report has been received from the client or when additional ACM items have been identified but not listed in previous reports.

The RCC ACM register and the clients ACM report will be monitored and signed off where required, when ACM works are completed.

Supporting information that should be included in the register is:

- Register of ACM items
- Register of items which were samples but found to contain no asbestos
- Certificates of analysis
- Photos
- Floor plans with asbestos containing items marked up

8.2 ASBESTOS REMOVAL PERMIT FORM 21.1B

The RCC Asbestos removal permit is required to be completed prior to any ACM removal/remedial works.

The requirements for supporting documentation are listed within the permit.

8.3 ASBESTOS CONTAINING MATERIAL (ACM) AIR MONITORING & CLEARANCE CERTIFICATE RECORD FORM 21.1C (NOTE: 1 FORM PER ACTIVITY/ITEM)

Asbestos Containing Material (ACM) Air Monitoring & Clearance Certificate Record is used to collate all associated documentation involved in the identification, removal, remediation, transport and disposal of logged ACM.

9 TRAINING

9.1 ASBESTOS AWARENESS TRAINING

Asbestos awareness training provides participants with a general overview of asbestos including history and background; asbestos types and properties; common asbestos situations; health effects; risk in perspective and management of asbestos. Conducted by RCC person,or RTO . ACT region training conducted by MBA or other ATO accredited company mandatory for Act Workers.

9.2 ASBESTOS REMOVAL TRAINING

This course is typically provided by an external registered training organisation (RTO) to personnel who intend to remove bonded ACM, pre-requisite for obtaining a Safework recognised licence

APPENDIX 1 – 21.11 ASBESTOS CONTAINING MATERIAL (ACM) REGISTER

Project Name:	Glenwood High School	Report date:	
Project Number:			

Item No.	Date Entered	Entered by	Location of ACM	Sample Tested Y/N	Asbestos Bonded/Friable/NA	Description of ACM type & condition, remedial works planned (Scattered pieces, sheeting, pipe lagging etc.)	Date work completed

APPENDIX 2 – 21.11A ASBESTOS REMOVAL PERMIT

Project Name:		Company Performing Work:	
Contractors Contact:		Position:	
Location of works:			
Description of Work:			
RCC Asbestos Register – Item Identification number:			

Asbestos Type

Bonded Less than 10m² ☐	No License or Permit / Application required	
Bonded Greater than 10m² ☐ AS-B Lic. No:_____	Copy of WorkCover Stamped, Notification to be obtained from contractor prior to start.	
Friable ☐ AS-A Lic. No: _____	Copy of WorkCover stamped, Permit application to be obtained from contractor prior to start.	WorkCover Permit No: _____

Permit begins	Permit expires
Date: / / Time: am/pm	Date: / / Time: am/pm
Date: / / Time: am/pm	Date: / / Time: am/pm
Date: / / Time: am/pm	Date: / / Time: am/pm
Date: / / Time: am/pm	Date: / / Time: am/pm

RCC Emergency Contact information

Name of RCC Contact:		Tel:	( )

Authorisation by company representative

The above work is authorised to proceed subject to the following action being taken prior to work starting and procedures being maintained for the duration of the work.

RCC Representative Name:	Position:	Signature:

	Yes	N/A		Yes	N/A
Work area has been inspected prior to works proceeding			Contractor has read the requirements of the RCC, ACM Management plan		
Risk Assessment completed			Disposal method established		
Will the area be occupied during the works			Air conditioning / Mechanical ventilation isolated:		
Is it necessary to vacate the building during the works			Electrical isolated (Written confirmation from Electrician required)		
SWMS reviewed by RCC			Signage / Barricades in place		
Air monitoring required			Clearance certificate required		

Weekly Review of Permit

	Week 1	Week 2	Week 3	Week 4
Signature and position of person issuing the permit:				
Signature of the person conducting the Work:				

APPENDIX 3 – 21.11B ASBESTOS CONTAINING MATERIAL (ACM) AIR MONITORING AND CLEARANCE CERTIFICATE RECORD

In all Friable removal works and in other cases where requested by RCC or the client, a clearance certificate may be required post completion of ACM removal works. Clearance certificates may require air monitoring to be conducted during the removal process. All monitoring records are to be maintained and kept for a period of 30 years post completion. Separate form required for each location.

Project Name:	Glenwood High School	Project Number :	1278

Clearance Certificate location/item details

RCC ACM Register No: (Refer to ACM register)	Item description, type & Location (Wall sheeting, Bonded)	Removed		Date removed
		Yes	No	

Air Monitoring Results

Monitoring Unit ID;	Sample location	Start time (24hour)	Finish time (24 Hour)	Average flow rate (mL)	Fibres/Fields	Result Fibres/mL

Completion sign off by competent person

Copy of final clearance certificate attached ☐				Copy of waste transport receipt attached ☐			
Copy of waste disposal dockets attached ☐				Copy of ACM work permit attached ☐			
Name:		Position:		Signature:		Date:	

APPENDIX 4 – 40.3 SAFE WORK METHOD STATEMENT: REMOVAL OF BONDED ASBESTOS SCATTERED AT RANDOM

[PCBU Contractor Name, contact details]		**Principal Contractor (PC)** **[Name, contact details]**	
Works Manager: Contact Phone:		**Date SWMS provided to PC:**	**Revision No:**
Work activity/trade:		**Project Name::**	
HIGH RISK CONSTRUCTION WORK: HRCW	Risk of a person falling more than 2 metres (*Note*: in some jurisdictions this is 3 metres)	Work on a telecommunication tower	Demolition of load-bearing structure
	Likely to involve disturbing asbestos	Temporary load-bearing support for structural alterations or repairs	Work in or near a confined space
	Work in or near a shaft or trench deeper than 1.5 m or a tunnel	Use of explosives	Work on or near pressurised gas mains or piping
	☐ Work on or near chemical, fuel or refrigerant lines	Work on or near energised electrical installations or services	☐ Work in an area that may have a contaminated or flammable atmosphere
	☐ Tilt-up or precast concrete elements	☐ Work on, in or adjacent to a road, railway, shipping lane or other traffic corridor in use by traffic other than	☐ Work in an area with movement of powered mobile plant
	☐ Work in areas with artificial extremes of temperature	☐ Work in or near water or other liquid that involves a risk of drowning	☐ Diving work
Person responsible for ensuring compliance with SWMS:		**Date SWMS received:**	
What measures are in place to ensure compliance with the SWMS?			
Person responsible for reviewing SWMS control measures:		**Date SWMS received by reviewer:**	
How will the SWMS control measures be reviewed?			
Review date:		**Reviewer's signature:**	

Procedure (in steps):	Possible Hazards	Control Measures
Break the job down into steps. Each of the steps should accomplish some major tasks and be logical	Situation with potential to harm – injury, illness, damage, environmental impact Eg.loss of control of plant	What actions are necessary to eliminate or minimise the hazards – elimination, substitution, isolation, engineers solutions and lastly PPE
Isolation/protection of Asbestos containing material (ACM)	Disturbance of ACM Incorrect removal	Isolate identified material by removing workers form the area and barricading off minimum radius of 5 metres – Danger tape. Warning signage to be placed at the barrier to area warning of ACM Restrict access to one entry point ONLY Asbestos register to be updated in accordance with ACM Register. Initiate RCC ACM works permit process
Establish works area/removal area	Unauthorised entry to areas	Identify the boundary for the works area i.e the location where ACM is to be removed from and identify with danger tape and signage advising ACM removal in progress. Identify area for removal site i.e. the isolated region around the works,identify with danger tape & signage warning of restricted access ACM removal works in progress.
Protection of surrounding areas/adjoining structures	Adjoining areas contaminated by removal process	Prior to any removal: Protection in the form of 200 micron plastic to be secured to protect adjoining finishes (Floors/walls) Isolation/lock out of mechanical ventilation required prior to starting
Sealing of ACM prior to removal	Disturbance of ACM Water run off Electrical outlets i.e. switches, lights, outlets, alarms etc.	Ensure all electrical items are isolated from supply. Ensure all Any drains within the area to be protected. PPE as identified above. Low pressure coarse spray to be applied to all faces/edges. A mixture of water & PVA solution or detergent or paint can be used as a wetting agent. Ensure surface is saturated but minimise run off Ensure ACM is saturated through it's full depth prior to removal/disturbing. Spray all accessible voids where dust may exist
Removal process	Damage to sheets General disturbance Manual handling	Determine methodology for removal Remove any loose sections prior to removing fixed sheets. Ensure all disturbed areas remain saturated, re-apply dampening method as required. Avoid breaking sheets where possible. Should sheets continually break, reassess method of removal. Support sheets prior to removing fixings

Procedure (in steps):	Possible Hazards	Control Measures
		Where possible, remove nails/fixings or punch nail heads through sheeting. 2 person lifts for heavy or awkward materials. PPE as specified above.
Packaging waste	Packages become loose and tear Materials spill onto ground Manual handling	**For small pieces**, ACM to be packaged into man-handleable packages, enclosed in heavy duty 200 micron plastic. (Bag or wrap) Where possibility of tearing is identified 2 layers may be required. Bags to be labelled with appropriate warnings similar to ' Caution Asbestos' or Asbestos within, do not open bag. Where bags are used, opening to be twisted and folded over and fixed with tape or other means. **For larger sections**, skips may be used but must be in good condition. Skip is to be lined in 2 layers of 200 micron plastic. ACM must be kept wet. Once skip is full, it's contents must be sealed with the plastic sheeting.
Clean up	Adjoining areas contaminated by removal process Manual handling	Ensure all disturbed areas remain saturated, re-apply dampening method as required. Start from the top and work down cleaning ledges, sills & high flat areas that ACM can settle. Remove any loose items. Start cleaning and removing plastic from furthest workpoint from exit working towards the exit point. The use of an Asbestos vacuum is permitted for dry decontamination cleaning. All waste to be disposed of in Same way to ACM. (Lined bin, plastic bag 200 micron) All PPE to remain on till area is decontaminated. Scrape/clean off excess materials from boots, tools etc with damp rag, into Asbestos waste bag. All disposable PPE to be placed in Asbestos waste bag and not re-used.
Disposal of waste	Incorrect disposal of waste	Materials to be disposed of at registered waste management fascility, capable of receiving Hazardous waste. Receipts of waste disposal to be collected and recorded in Asbestos register.
Other items as identified		

Project Company

I/We the undersigned, employees of _____, declare that I/we have attended "Work Activity Training" in the tasks to be performed on this project and have had an opportunity to participate in the development / review of the SWMS. We acknowledge that all work will be performed in the manner described within the Safe Work Method Statement.

Date	Employee Name (print)	Certificate/Licence No.:	Signature	SWMS Trainer Name

Project: (List Project Name)	**Signed by Senior Management Company Rep.**
Contractor: Richard Crookes Constructions. 214 Willoughby Rd, Crows Nest 2065	**Signature: (Who has reviewed the SWMS)**
Description of Work: SWMS - Removal of BONDED Asbestos containing material ONLY (ACM) quantity less than 10 square metres (Non licensed - Minor works) **Revision date: .....**	**Title: (Your title)**
	Date: (Date reviewed prior to release)

Potential Environmental Impacts:			
Air (odour, dust, fumes)	☑	Spills to ground	☑
Noise	☐	Soil Erosion	☐
Vibration	☐	Contamination/Haz materials	☑
Spills to drains/waterways	☑	Traffic / community	☐
Flora	☐	Fauna	☐
Waste:	☑	Other:	

Safety Equipment	
Fire extinguishers	☐
Barricades	☑
Ventilation	☐
Lighting	☐
Ladders/mobile scaffold	☐
Traffic control	☐
Welding screens	☐
Dust extraction	☐
Emergency response	☐

Permits	
Hot Work	☐
Excavation	☐
Confined Space	☐
Tag out / Lock out	☐
Formwork stripping	☐
Fall Arrest Systems	☐
Scaffold	☐
Other: RCC Asbestos Permit to Work	

Personal Protective Equipment (PPE)	
Hard Hat	☑
High Vis. Clothing	☐
Steep capped boots	☑
Face Shield/Welding Shield	☐
Safety Glasses	☑
Gloves	☑
Hearing Protection	☐
Fall Protection/Harness	☐
Other Task Specific: Face mask - Type 2 Cartridge, Disposable over-alls (Non - Velcro type).	

Procedure (in steps):	Possible Hazards	Risks	Inherant Risk Score (risk with no controls)	Control Measures	Residual Risk Score (risk after controls in place)	Resp. Person
Break the job down into steps. Each of the steps should accomplish some major tasks and be logical	Situation with potential to harm – injury, illness, damage, environmental impact Eg.loss of control of plant	List Eg. Damage to plant, buildings etc,injury or death, spills	Refer to RCC Risk Assessment Calculator F 21.5 Score 1, 2, 3	What actions are necessary to eliminate or minimise the hazards – elimination, substitution, isolation, engineers solutions and lastly PPE	Refer to RCC Risk Assessment Calculator F 21.5 Score 1, 2, 3	
Isolation / protection of Asbestos	Disturbance of ACM	Dust inhalation	1	Isolate identified material by removing	3	HSE

Risk Scores: 1= Immediately Stop work until controls in place, 2 =High priority controls in place as soon as practicable, 3= Low risk, planned re assessment of risk

Procedure (in steps):	Possible Hazards	Risks	Inherant Risk Score (risk with no controls)	Control Measures	Residual Risk Score (risk after controls in place)	Resp. Person
containing material (ACM)	Incorrect removal	Long term heath effects Cross contamination Whole of site closure		workers form the area and barricading off minimum radius of 5 metres – Danger tape. Warning signage to be placed at the barrier to area warning of ACM Restrict access to one entry point ONLY Asbestos register to be updated in accordance with ACM Register. Initiate RCC ACM works permit process		SM
Establish works area / removal area	Unauthorised entry to areas	Workers exposed to ACM	2	Identify the boundary for the works area i.e the location where ACM is to be removed from and identify with danger tape and signage advising ACM removal in progress. Identify area for removal site i.e. the isolated region around the works, identify with danger tape & signage warning of restricted access ACM removal works in progress.	3	SM, HSE Competent Person
Protection of surrounding areas / adjoining structures	Adjoining areas contaminated by removal process	Workers exposed to ACM	1	Prior to any removal: Protection in the form of 200 micron plastic to be secured to protect adjoining finishes (Floors / walls) Isolation / lock out of mechanical ventilation required prior to starting	3	Competent Person
Sealing of ACM prior to removal	Disturbance of ACM	Cross contamination	2	Ensure all electrical items are isolated	3	Competent

Risk Scores: 1= Immediately Stop work until controls in place, 2 =High priority controls in place as soon as practicable, 3= Low risk, planned re assessment of risk

Procedure (in steps):	Possible Hazards	Risks	Inherant Risk Score (risk with no controls)	Control Measures	Residual Risk Score (risk after controls in place)	Resp. Person
	Water run off Electrical outlets i.e. switches, lights, outlets, alarms etc.	to other areas Electrocution Explosion Slips / falls		from supply. Ensure any drains within the area are protected. PPE as identified above. Low pressure coarse spray to be applied to all faces / edges. A mixture of water & PVA solution or detergent or paint can be used as a wetting agent. Ensure all exposed surfaces (where exposed) are saturated but minimise run off, prior to removal / disturbing. Ensure ACM is saturated (where exposed), prior to removal / disturbing. Spray all accessible voids where dust may exist		Person
Removal process	Damage to sheets General disturbance Manual handling	Workers exposed to ACM Dust generation Cross contamination to other areas Strains / cuts	1	Determine methodology for removal Remove any loose sections prior to removing fixed sheets. Ensure all disturbed areas remain saturated, re-apply dampening method as required. Avoid breaking sheets where possible. Should sheets continually break, reassess method of removal. Support sheets prior to removing fixings Where possible, remove nails / fixings or punch nail heads through sheeting. 2 person lifts for heavy or awkward	3	Competent Person

Risk Scores: 1= Immediately Stop work until controls in place, 2 =High priority controls in place as soon as practicable, 3= Low risk, planned re assessment of risk

Procedure (in steps):	Possible Hazards	Risks	Inherant Risk Score (risk with no controls)	Control Measures	Residual Risk Score (risk after controls in place)	Resp. Person
				materials. PPE as specified above.		
Packaging waste	Packages become loose and tear Materials spill onto ground Manual handling	Workers exposed to ACM Dust generation Whole of site closure Environmental damage Strains / cuts	1	**For small pieces**, ACM to be packaged into man handle-able packages, enclosed in heavy duty 200 micron plastic. All asbestos waste must be double bagged or wrapped in 2 layers of 0.2mm plastic Bags to be labelled with appropriate warnings similar to 'Caution Asbestos' or Asbestos within, do not open bag. Where bags are used, opening to be twisted and folded over and fixed with tape or other means.	3	Competent Person
Clean up	Adjoining areas contaminated by removal process Manual handling	Workers exposed to ACM Dust generation Environmental damage Strains	1	Ensure all disturbed areas remain saturated, re-apply dampening method as required. Start from the top and work down cleaning ledges, sills & high flat areas that ACM can settle. Remove any loose items. Start cleaning and removing plastic from furthest work point from exit working towards the exit point. The use of an Asbestos vacuum is permitted for dry decontamination cleaning. All waste to be disposed of in Same	3	SM HSE Competant Person

Risk Scores: 1= Immediately Stop work until controls in place, 2 =High priority controls in place as soon as practicable, 3= Low risk, planned re assessment of risk

Procedure (in steps):	Possible Hazards	Risks	Inherant Risk Score (risk with no controls)	Control Measures	Residual Risk Score (risk after controls in place)	Resp. Person
				way to ACM. (Lined bin, plastic bag 200 micron) All PPE to remain on till area is decontaminated. Scrape / clean off excess materials from boots, tools etc with damp rag, into Asbestos waste bag. All disposable PPE to be placed in Asbestos waste bag and not re-used.		
Disposal of waste	Incorrect disposal of waste	Environmental contamination Environmental fines imposed People exposed Commercial disgrace	1	Materials to be disposed of at registered waste management facility, capable of receiving Hazardous waste. Receipts of waste disposal to be collected and recorded in Asbestos register.	3	SM
Other items as identified						

Details of Site Supervisory staff		
Name:	Qualification:	Certificates of Competence/Safework Approvals required:

Training Required to Complete Work
General WHS Induction Training
Work activity training – (Asbestos awareness training)
SWMS Training
Manual Handling training
Personal protective equipment
Other: RCC Asbestos Management Plan

Plant & Equipment: (Log books to be supplied)	

Codes of Practice, Legislation, etc. applicable :
Act: Work Health & Safety Act 2011 Protection of the Environment Operations Act 1997
Regulation: Work Health & Safety Regulation 2017
Codes of Practice: COP For the safe removal of Asbestos [NOHSC:2018 (2005)] COP- How do manage and control asbestos in the workplace-Oct 2018 COP- How to safely remove asbestos- Oct 2018
Hygienists report, if submitted.

Project Company

I/We the undersigned, employees of _____, declare that I/we have attended "Work Activity Training" in the tasks to be performed on this project and have had an opportunity to participate in the development / review of the SWMS. We acknowledge that all work will be performed in the manner described within the Safe Work Method Statement.

Date	Employee Name (print)	Certificate/Licence No.:	Signature	SWMS Trainer Name

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CONSTRUCTIONS

GLENWOOD HIGH SCHOOL
1278

UNEXPECTED FINDS PROTOCOL

CONTAMINATION
HISTORIC HERITAGE
ABORIGINAL HERITAGE

4 July 2022

This plan has been approved for use by the following:

Approved by / Date	
	Project Manager
Approved by / Date	
	Craig Richmond, Business Systems , QA/Env Manager
Approved by / Date	
	Simon Dayball Group WHS Manager
Approved by / Date	
	Ian West, General Manager – Commercial & Risk

AUTHORITY POSITION	COMPANY NAME	NO. OF COPIES
Peter Morrison (SPM)	Jacobs	Electronic
Simon Karkkainen (PD)	Richard Crookes Constructions	1 copy
Wes Ward (SM)	Richard Crookes Constructions	1 copy

REVISION REGISTER

REVISION DATE	REVISION DESCRIPTION	PMS INITIALS (ACCEPTANCE OF CHANGES)
20.06.22	Original issue	SK

CONTENTS

UNEXPECTED FINDS PROTOCOL TRAINING REGISTER

Name	Project Position	Signature	Trained By	Tool box date

1 INTRODUCTION

1.1 PURPOSE

The objectives for the project include to provide control measures for the protection and management of known and unknown/unexpected contamination, heritage, archaeological items and features including but not limited to; soil profiles, trees, buildings, structures, artefacts, relics, human remains and places.

Richard Crookes Constructions are to:

- Ensure all risks associated with excavation and exposure of workers or the public to contamination are eliminated where possible.
- Follow the protocols and communication procedures outlined below for unexpected finds related to contamination, archaeological heritage and aboriginal heritage.
- To protect or conserve (where possible) known Indigenous and Non-indigenous heritage and archaeological items and features on and adjacent to the site.
- To protect and conserve (where possible) previously undiscovered heritage and archaeological items and features on or adjacent to the site.
- To manage heritage and archaeological items and features impacted by construction in accordance with regulatory requirements.

2 UNEXPECTED FINDS PROTOCOL

2.1 OVERVIEW

The objectives for the project include to provide control measures for the protection and management of known and unknown/unexpected contamination, heritage, archaeological items and features including but not limited to; soil profiles, trees, buildings, structures, artefacts, relics, human remains and places.
Richard Crookes Constructions are to:

- Ensure all risks associated with excavation and exposure of workers or the public to contamination are eliminated where possible.
- Follow the protocols and communication procedures outlined below for unexpected finds related to contamination, archaeological heritage and aboriginal heritage.
- To protect or conserve (where possible) known Indigenous and Non-indigenous heritage and archaeological items and features on and adjacent to the site.
- To protect and conserve (where possible) previously undiscovered heritage and archaeological items and features on or adjacent to the site.
- To manage heritage and archaeological items and features impacted by construction in accordance with regulatory requirements.

2.2 CONTAMINATION

2.2.1 PROTOCOL AND COMMUNICATION PROCEDURE

The possibility exists for hazards that have not been identified to date to be present within fill materials or underlying existing pavements/building on the site. These hazards may present no vel conditions which require to be addressed to ensure that the continuation of site works is co mpleted in a manner which achieves the project objectives.

An example of such a condition would be the identification of previously unknown contaminant s within site soils and/or excavation dewater.

The procedure has been abstracted for the RAP, as relevant to potential soil and water manage ment at the site. The nature of hazards which may be present and which may be discovered at the site are generally detectable through visual or olfactory means, for example:

- Hydrocarbon impacted materials (visible/odorous); and/or
- Drums, waste pits, former pipework or USTs (visible); and/or
- Oily Ash and/or oily slag contaminated soils/fill materials (visible/odorous); and/or
- Tarry like impacted soil/fill material (visible/odorous); and/or
- Potential chlorinated hydrocarbon impact (sweet odour soils).

2.3 ARCHEALOGICAL HERITAGE

2.3.1 PROTOCOL AND COMMUNICATION PROCEDURE

There is potential that unexpected physical evidence associated with the phases of occupation at the site may be present in all areas of the site. Such unexpected remains may include, but not be limited to:

- Deep cut wells, reservoirs and pits associated with occupation at the site;
- Structural remains and artefacts;
- Rubbish pits containing waste and discarded artefacts disposed of away from housing
- Other unexpected, buried remains.

Unexpected finds do not include isolated artefacts and building remains that may form part of fill deposits. If unexpected finds are exposed or disturbed work should cease in that area and a Curio archaeologist notified of the find as soon as practicable. Do not move the item or attempt to further disturb it. Take a photo and forward to the archaeologist and they will discuss and advise the next step which may include, but not be limited to:

- A site visit by the archaeologist;
- An instruction to move the item;
- No further action required. The Excavation Director will assess the archaeological research significance of all Unexpected Finds and this assessment will determine the action to be followed. These may include:
- No further action (i.e. the find is not significant);
- Retention of isolated artefacts, that otherwise are assessed as of low archaeological research potential, as items for possible use in interpreting the site, display, etc;
- Recording of the location of the find and
- Retaining artefact(s) of research potential for the archaeological collection and further analysis;
- further recording and excavation to expose a larger feature or structural remains;
- Notification of the find(s) to Heritage NSW and further liaison with them;
- Additional research to identify larger features if not previously identified in the historical record;
- Reassessment of the significance of the unexpected find in light of this research.

Some of the attributes of any unexpected finds that may determine if further advice is sought from Heritage NSW regarding the find are:

- Larger previously unrecorded features especially structural remains;
- Suspected human remains;
- Evidence for earlier occupation of the site (i.e. pre 1815);
- Rare or unusual find.

If State or locally significant relics are found during works, the Heritage Council of NSW is to be notified in accordance with s.146 of the Heritage Act 1977. This notification takes place in the form of an email to the relevant archaeologist at Heritage NSW. It is noted that Section 4.41 of the Environmental Planning and Assessment Act 1979 does not exempt notification of the discovery of relics under s146, of the Heritage Act 1977, nor the notification of the discovery of Aboriginal objects under s89 of the NPW Act for State Significant Development or State Significant Infrastructure.

Depending on the assessed significance of the find it may be necessary to undertaken additional assessment and management recommendations related to the new information. Work may only recommence with the written approval of Heritage NSW.

2.4 ABORIGINAL HERITAGE

2.4.1 PROTOCOL AND COMMUNICATION PROCEDURE

Upon discovery of an archaeological feature that is suspected to be an Aboriginal Unexpected Find (excluding human remains- see Section 6.4.2 below), the following procedure should be followed:

1. Cease works in the immediate vicinity of the find.
2. Contact the project archaeologist to verify the nature of the find.
3. If Unexpected Find is confirmed as Aboriginal archaeology, project archaeologist will notify project Register Aboriginal Parties (RAPs) and Biodiversity & Conservation Division (BCD) of the find. (If Unexpected Find is confirmed as not Aboriginal in origin, project archaeologist will provide advice for works to recommence).
4. Project Archaeologist/Project RAPs will undertake a preliminary assessment and recording of the find.
5. Formulate archaeological or heritage management plan- specific to nature of the find.
6. Implement archaeological/heritage management plan.
7. Works may commence once archaeological/heritage management plan has been successfully implemented and project archaeologist provides sign off to contractor for works to resume in vicinity of find.

2.5 UNEXPECTED SKELETAL REMAINS

While not anticipated to be encountered within the GHS study area, the unexpected discovery of any potential skeletal remains during development works would be managed in accordance with the approved Office of Environment and Heritage (OEH) protocol for the discovery of human remains which is stated as:

If any suspected human remains are discovered and/or harmed the proponent must:

a) Not further harm these remains;

b) Immediately cease all work at the location;

c) Secure the area to avoid further harm to the remains;

d) Notify the local police and OEH's (now BCD of DPIE) Environment Line on 131 555 as soon as practicable and provide any available details of the remains and their location; and

e) Not recommence any work at the location unless authorised in writing by OEH (now BCD of DPIE).

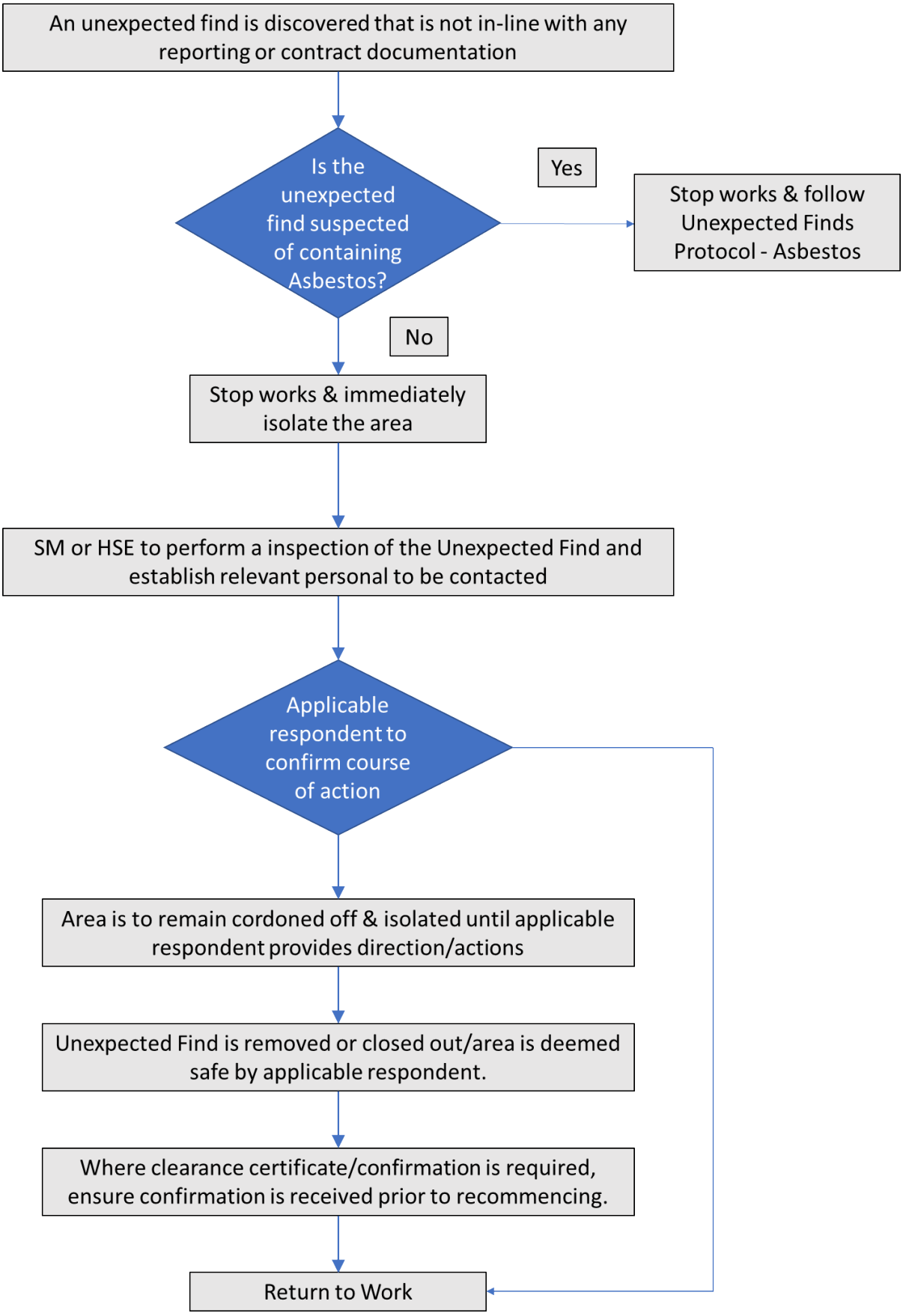
3 OBJECTIVES

- Remove all high-risk asbestos items where possible.
- Deliver effective asbestos management work programs.
- Ensure that no one is exposed to airborne asbestos fibres.
- Ensure compliance with this Asbestos Management Plan.
- Ensure the asbestos database and register is accurate.
- Comply with State and Commonwealth legislation.
- Remove asbestos containing items when and where possible

4 ORGANISATIONAL RESPONSIBILITIES

Person / Party	Responsibility
Construction Manager (CM), Project Manager (PM)	▪ Ensure all staff and contractors are aware of and comply with the plan. ▪ Project management ▪ Identification and bringing to the attention of appropriate staff, any suspect material ▪ Ensure all contractors working on asbestos are aware of and meet the requirement of the plan. ▪ Notify Adjacent neighbours, property owners work type and time frame
Site Manager (SM) Health Safety and Environmental Coordinator (HSE)	▪ Obtain from Subcontractor, copy of Safework Notification (Requirement of RCC Asbestos removal permit) ▪ Ensure project personnel (including contractors) are inducted ▪ Surveying, identification and arranging for sampling of suspected asbestos containing materials by competent persons. ▪ Training and awareness RCC relevant staff ▪ Manage the asbestos works program and removal program ▪ Respond to incidents ▪ Document preparation, recording and filing ▪ Manage asbestos inspection contractor
Contractors (C) and Trades Staff (TS)	▪ Not to impact on an ACM without complying with the plan ▪ To bring to the attention of the SM/HSE any suspect material ▪ Refer to the plan for guidance to identify, manage, and remove asbestos ▪ Apply for Asbestos Permit to Work when performing asbestos removal work that requires notification. ▪ Undergo RCC Contractor Induction ▪ Develop a site specific asbestos removal control plan, SWMS and Risk Assessment prior to performing the asbestos removal work

5 INCIDENT RESPONSE FLOW CHART



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Delivering Certainty

6.5 CONSTRUCTION TRAFFIC AND PEDESTRIAN MANAGEMENT SUB-PLAN

The Construction Traffic & Pedestrian Management Sub-Plan has been prepared by TTW.

Refer to the following page.

Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP)

Glenwood High School

SSD-23512960

Prepared for School Infrastructure NSW

21 September 2022

Revision 4

211530

TTW (NSW) PTY LTD (ACN 649 974 112)
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Contents

Revision Register

Rev	Date	Prepared by	Reviewed by	Approved by	Remarks
0	10/05/2022	NB	PY	-	Draft for comment
1	18/05/2022	NB	AL	PY	For issue
2	27/05/2022	NB	AL	PY	For issue
3	31/05/2022	NB	AL	PY	For issue
4	21/09/2022	AL	MB	PY	Add Driver Code of Conduct Add Worker Transport Strategy

Document Control

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Prepared by	Review by	Authorised by
		
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Traffic Engineer PWZTMP Card No. TCT1007469	Associate (Traffic)	Technical Director

AMIR LAHOUTI

Traffic Engineer

1.0 Preliminary Information

Taylor Thomson Whitting (TTW) has been engaged by Richard Crookes Construction (RCC) to prepare a Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) for the proposed construction of upgrading Glenwood High School at 85 Forman Avenue, Glenwood. The site is legally described as Lot 5227 DP 868693. The document aims to assess the impacts of the construction works on the surrounding roads and develop traffic management measures during construction.

The document satisfies the duties applied by Chapter 3 of the Work Health and Safety Act 2011, regarding managing and eliminating risks to the health and safety of workers and other persons near a construction site.

Part 6.1 (Clause 291) of the Work Health and Safety Regulation 2011 defines high risk construction work as (amongst other definitions) work, which is carried out on, in or adjacent to a road, railway, shipping lane, or other traffic corridors that is in use by traffic other than pedestrians. Part 6.4 (Clause 315) of the Regulation also requires that the principal contractor for a construction project must manage risks to health and safety associated with traffic near the workplace that may be affected by construction work carried out relating to the construction project. This document satisfies this requirement.

Under the SafeWork NSW Construction work code of practice, a traffic management plan is considered an administrative control measure to minimise risk. As per the hierarchy of control measures, the preferred control is to eliminate risk (e.g., by using traffic lights instead of a traffic controller to control traffic at road works, to eliminate potential harm to the worker). This document aims to provide control measures which eliminate the risk where possible. As outlined in this code of practice, workplace specific induction should cover this document.

AS1742.3 requires a procedure to be followed whereby all essential traffic management matters are considered in an ordered way. Traffic demand, routing, control, and other road users and special vehicles are to be considered in turn and incorporated into a traffic management plan where relevant. This document satisfies this procedure and addresses the relevant matters.

Consideration has been given in the development of this document to the Roads Act 1993 (NSW) and other applicable and relevant legislation.

Richard Crookes Construction is responsible for acquiring and shall acquire the necessary certificates, licences, consents, permits, and approvals relevant to the construction on this site.

This report has been prepared by an engineer who holds the Transport for NSW Prepare a Work Zone Traffic Management Plan accreditation as below:

- Nathaniel Borja – Card No. TCT1007469

2.0 Introduction

2.1 Project Information

The project is to provide upgrades to Glenwood High School. The upgrades consists of the following alterations and additions:

- Construction of a new three-storey building at the north-eastern portion of the site facing Glenwood Park Drive which will accommodate new learning spaces;
- Construction of one storey performance pavilion;
- Refurbishment of existing Building Block A (ground floor only) to provide one new support unit within the space of an existing general learning space;
- Refurbishment of Building Block D (ground floor only) to provide an additional office space and storeroom;
- Refurbishment of Building Block E to re-purpose it on the ground floor for computer learning spaces, staff and administration spaces as well as upgrades to the library on the first floor;
- Refurbishment of Building Block J to re-purpose it from visual arts and performing arts to learning spaces and workshops for food tech and woods/metal unit;
- Demolition of existing botany room and construction of a new single storey pavilion comprising interview rooms and end-of trip facilities; and
- The proposed development will also involve ancillary works at the site associated with the proposed The proposed site plan is shown in Figure 2.1, with the new buildings located to the north-east of the site.

Figure 2.1: Proposed site plan
Source: PTW Architects

2.2 Response to State Significant Development Application Consent

We have been provided with consent conditions for the Glenwood High School Upgrade (SSD-23512960). The key issues relevant to construction traffic include those shown in Table 2.1 and have been addressed in various sections of this report as referenced.

Table 2.1: Response to SSDA Consent

	Key items	**Comments and references**
B16	The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following:	
a	Be prepared by a suitably qualified and experienced person(s);	*This CTPMSP has been prepared by Nathaniel Borja who holds Prepare Work Zone Traffic Management Plan accreditation no. TCT1007469.* *Relevant CVs are attached at Appendix D.*
b	Be prepared in consultation with Council and TfNSW	*Refer to Section 2.3 and Appendix E*
c	Detail:	
c.(i)	Measures to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclist and pedestrians and bus services;	*Refer to Section 6.0* Project Impact
c.(ii)	Measures to ensure the safety of vehicles and pedestrians accessing adjoining properties where shared vehicle and pedestrian access occurs;	*Refer to Section 5.0* Construction Traffic Management
c.(iii)	Heavy vehicle routes, access and parking arrangements;	*Refer to Section 5.0* Construction Traffic Management
c.(iv)	The swept path of the longest construction vehicle entering and exiting the site in association with the new work, as well as manoeuvrability through the site, in accordance with the latest versions of AS2890.2; and	*Refer to Appendix C*
c.(v)	arrangements to ensure that construction vehicles enter and leave the site in a forward direction unless in specific exceptional circumstances under the supervision of accredited traffic controller(s)	*Refer to Appendix B and C*
B22	A Driver Code of Conduct must be prepared and communicated by the Applicant to heavy vehicle drivers and must address the following:	*Refer to Section 5.5* Driver Conduct and Construction Worker Transport

	Key items	Comments and references
a	Minimise the impacts of earthworks and construction on the local and regional road network;	*Refer to Section 5.5* Driver Conduct and Construction Worker Transport
b	Minimise conflicts with other road users;	*Refer to Section 5.5* Driver Conduct and Construction Worker Transport
c	Minimise road traffic noise; and	*Refer to Section 5.5* Driver Conduct and Construction Worker Transport
d	Ensure truck drivers use specified routes.	*Refer to Section 5.5* Driver Conduct and Construction Worker Transport
	Construction Parking	
B23	Prior to the commencement of construction, the applicant must provide sufficient parking facilities on-site, including for heavy vehicles, to ensure that construction traffic associated with the development does not utilise public and residential streets or public parking facilities.	*Refer to Section 5.6* Construction Workers Parking
B24	Prior to the commencement of construction, the applicant must submit a Construction Worker Transportation Strategy to the Certifier. The Strategy must detail the provision of sufficient parking facilities and/or other travel arrangements for construction workers in order to minimise demand for parking in nearby public and residential streets or public parking facilities. A copy of the strategy must be provided to the Planning Secretary for information.	*Refer to Section 5.5* Driver Conduct and Construction Worker Transport

2.3 Response to Development Application Consent

We have been provided with consent conditions for the Glenwood High School bulk earthworks and associated development under DA-21-02007. The key issues relevant to construction traffic include those shown in Table 2.2 and have been addressed in this report as referenced.

Table 2.2: Response to DA Consent

	Key items	Comments and references
2.2.1	The recommendations in the Traffic Impact Statement 211530 TAAA dated 1 October 2021 and prepared by TTW are to be implemented.	*The Traffic Impact Statement notes that a Construction Traffic Management Plan will need to be provided, to detail worker numbers, site access arrangements, and construction vehicle volumes. All elements outlined in the Traffic Impact Statement have been addressed in this CTPMSP.*

2.4 Response to Review of Environmental Factors

We have been provided with conditions of approval for the Glenwood High School upgrades associated with the Review of Environmental Factors dated 8 October 2021. The key issues relevant to construction traffic include those shown in Table 2.3 and have been addressed in this report as referenced.

Table 2.3: Response to REF Consent

	Key items	Comments and references
11.1	A Construction Traffic and Pedestrian Management Plan is to be prepared by an appropriately qualified engineer prior to the commencement of works and implemented during the undertaking of works. The Construction Traffic and Pedestrian Management Plan is to, but not be limited to:	*This CTPMSP has been prepared by Nathaniel Borja who holds Prepare Work Zone Traffic Management Plan accreditation no. TCT1007469.* *Relevant CVs are attached at Appendix D.*
a	Determine the relevant construction traffic flows and assess the predicted road traffic noise levels in accordance with the criteria.	*Refer to Section 5.0 Construction Traffic Management and* *Construction Noise and Vibration Management Sub Plan (Report number 220239-GHS-CNVMSP-220513-R0, 13 May 2022)*
b	Consider construction traffic management measures to mitigate construction traffic impacts to surrounding local streets.	*Refer to Section 5.0 Construction Traffic Management*
c	Consider and outline measures to manage any cumulative traffic impacts due to other related development proposed or underway on the site, including development progressed under other assessment pathways.	*Refer to Section 5.0 Construction Traffic Management*

2.5 Authority Consultation

As identified in SSDA Condition B16(b), this CTPMSP is to be prepared in consultation with Council and TfNSW.

A work-in-progress copy of Revision 4 of this CTPMSP (dated 20 July 2022) was provided by email to Council (to Nadeem Shaikh, Coordinator Traffic Management and Andy Karklins, Traffic Management Officer) and TfNSW (to a centralised CTMP inbox as advised by TfNSW during the SSDA). At the time of writing, no response has yet been received from Council or TfNSW, but any comment would be addressed in future revisions of this CTPMSP.

A copy of relevant consultation records is attached at Appendix E.

3.0 Traffic Environment

3.1 Site Location

Glenwood High School (GHS) is on a 6.08 Ha site, located in the suburb of Glenwood in north Western Sydney and falls within Blacktown local government area, between Bella Vista and Stanhope Gardens. The property is legally identified as Lot 5227, DP 868693. Figure 3.1 shows the site location.

GHS is surrounded by Glenwood Reserve and recreational fields to the west, Glenwood Park Drive to the east, Forman Avenue to the south and Glenwood Reserve to the north. There are also low-density residential areas on south and east side of the school.

The school operation hours start at 8:40am and finish at 2:10pm on Mondays, 3:00pm on Tuesdays, Thursdays and Fridays, and 2:50pm on Wednesdays. On the other hand, there will be Out of School Hour Care (OOSHC) activities operating out of school bell time; therefore, it has no conflict with school traffic flow circulation related to pick-up/drop-off or staff car parking entrance/exit. It needs to be noted that the maximum number of 104 students using this service, which might be active after the COVID restrictions.

Figure 3.1: Site extents
Source: SIX Maps

3.2 Road Network

3.2.1 State Roads

The state and regional roads in the vicinity of the site can be seen in Figure 3.2.

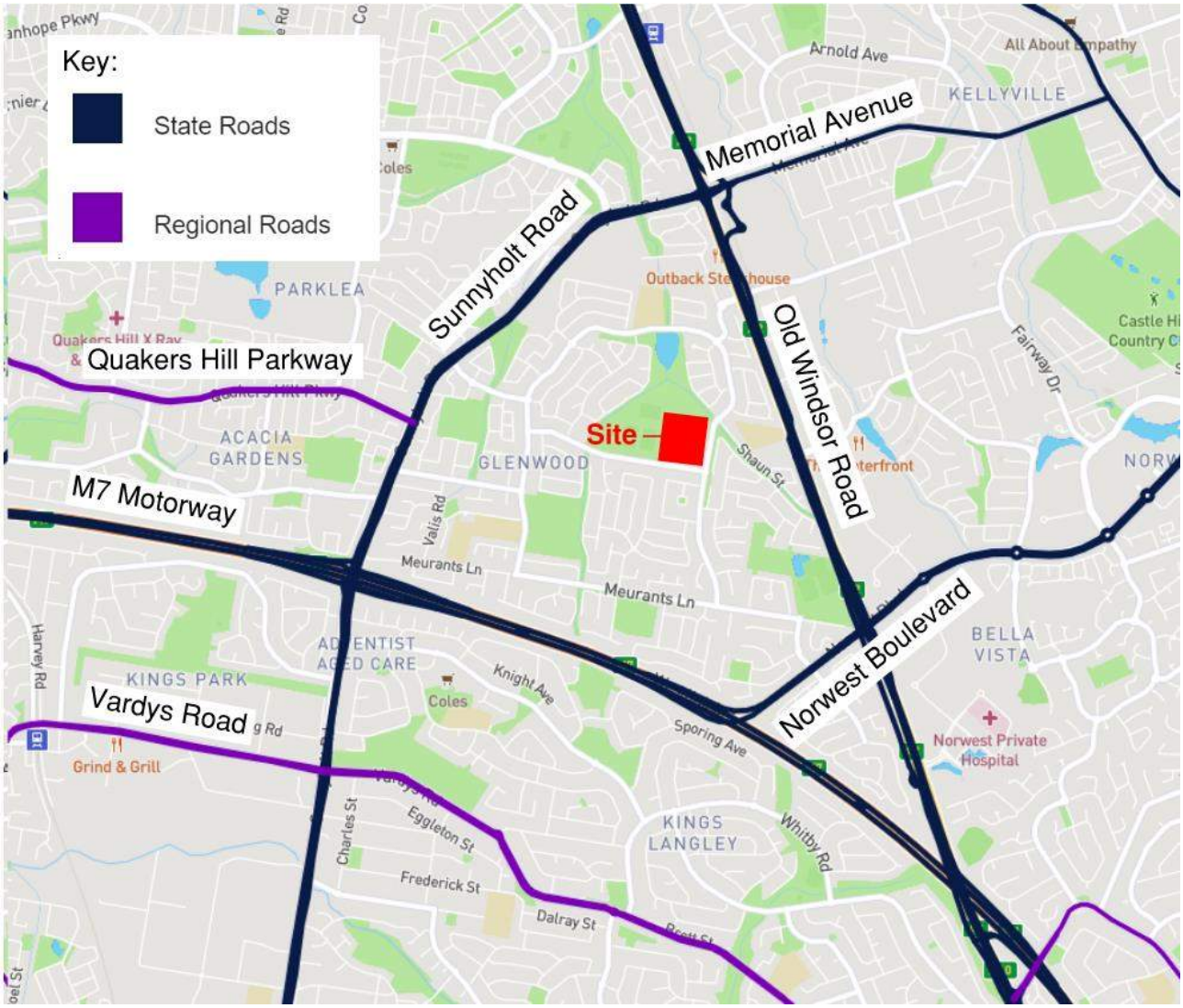


Figure 3.2: Classified Road Network
Source: NSW Road Network Classifications map, Transport for NSW 2021

Sunnyholt Road is a major arterial road at the north and west GHS that links the suburb of Stanhope Gardens in the north, to Blacktown Train Station. Parking is not allowed along Sunnyholt Road in both directions. There are typically two travel lanes in each direction, with a maximum speed limit of 70 km/hr with a bus lane at each direction near intersections.

Old Windsor Road is a north-south state road at the east GHS that connects the suburb of Mulgrave to the Westmead Hospital. The road has two lanes in each direction at GHS nearby, with an 80 km/hr general speed limit.

M7 Motorway is a 40-kilometre state road located at the south GHS that connects the suburb of Prestons in the south-west to the suburb of Bella Vista with a general speed limit of 100 km/hr.

Norwest Boulevard is located in the south GHS that links three other state roads, including M7 Motorway, Old Windsor Road and Windsor Road. Norwest Boulevard has two lanes per direction, and roundabout sat its level crossings with other roads. It is equipped with traffic signals at its intersection with Old Windsor Road and Windsor Road, and the speed limit is mostly 70 km/hr along the boulevard.

3.2.2 Local Roads

The local roads surrounding the school site and the type of intersection control (if any) can be seen in Figure 3.3.

Figure 3.3: Intersection controls in the local road network
Background image source: Nearmap

Forman Avenue is a local street running south of the school, which provides access to pedestrians, staff vehicles and service vehicles into GHS. There is a single travel lane in each direction with various parking restrictions in the westbound direction. The general speed limit along Forman Avenue is 50 km/hr; however, it is also subject to a 40 km/hr School Zone at the relevant times (8:00 – 9:30 am, 2:30 – 4:00 pm).

Glenwood Park Drive is also a local street located east of the campus that provides both vehicles' accessway and access for pedestrians into GHS. There is a single travel lane in each direction with some parking spaces in the kerbside lanes, a general speed limit of 50 km/hr, and the signage for 40 km/hr School Zone at the relevant times (8:00 – 9:30 am, 2:30 – 4:00 pm).

Figure 3.4 indicates the locations of the surrounding school zones. The school zones associated with Glenwood High School cover the length of the site along Forman Avenue and Glenwood Park Drive. A smaller school zone is located north of Glenwood Park Drive, adjacent to Parklea Public School.

Figure 3.4: School Zone extents
Background image source: Nearmap

3.3 Car Parking

3.3.1 Off-Street Parking

The school has two designated staff car parks, one in the south-east corner of the site and one along the western side of the site. These are both accessible via Forman Avenue, as shown in Figure 3.5. They are both controlled by a two-way gated driveway, approximately 7 metres in width, allowing vehicles to enter and exit. The existing on-site car parking capacity provides 93 parking spaces, including one accessible parking space. 30 of these spaces are available in the south-eastern car park and the remaining 63 on the western side of the site.

Figure 3.5: Off-Street Parking Provisions

Car parking associated with the Goodstart Early Learning centre is within the legal property boundary of the site.

3.3.2 On-Street Parking

On-street parking in the vicinity of the site is generally unrestricted. Similar to the off-street parking, on-street parking in the vicinity of the site has been reviewed to assess long-term usage trends.

The extent and description of on-street zones used for the detailed analysis are shown below in Figure 3.6. All on-street parking spaces in the vicinity are unmarked.

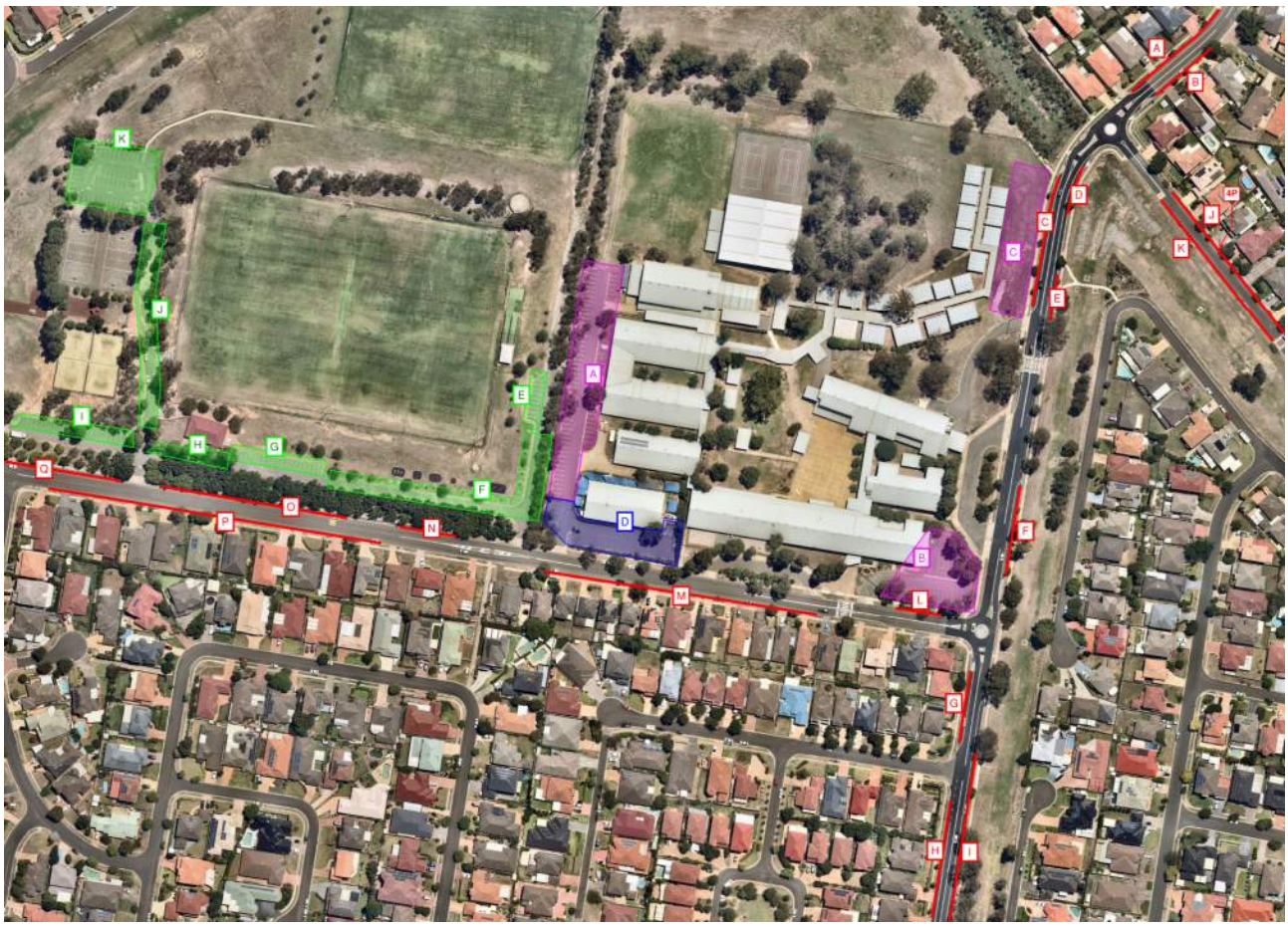


Figure 3.6: On-street and off-street parking areas for analysis

3.4 Site Access

There are six existing access gates into Glenwood High School catering for pedestrians, vehicles, and service vehicles; two gates are at Glenwood Park Dive and three gates are at Forman Avenue, as shown in Figure 3.7.

Figure 3.7: Access gateways into Glenwood High School

3.4.1 Pedestrian Access

There is pedestrian access on the eastern side of the site, adjacent to the off-street bus bay on Glenwood Park Drive. The main school buildings can be accessed from this point via stairs. Figure 3.8 shows this accessway.

Figure 3.8: Glenwood Park Drive Pedestrian Access

There is a pedestrian access point at the southern side of the site on Forman Avenue, shown in Figure 3.9. This gate provides access to the main school buildings via stairs and an accessible ramp.

Figure 3.9: Forman Avenue Eastern Pedestrian Access

A smaller pedestrian gate shown in Figure 3.10 is located on Forman Avenue in the south-west corner of the site, providing access to the back of the main school buildings. Stairs are provided at this point.

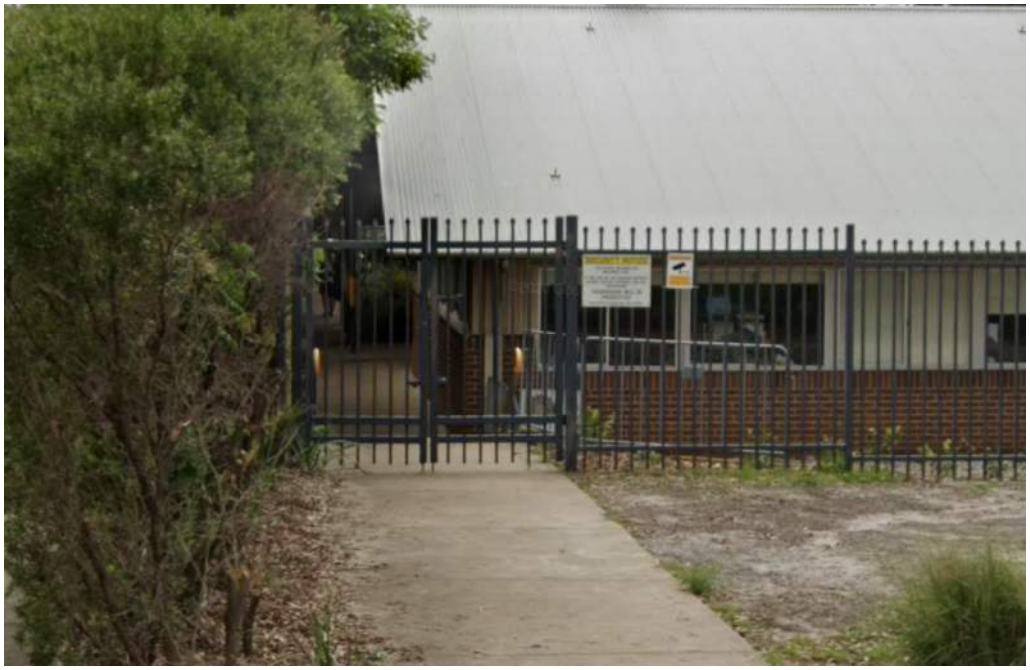


Figure 3.10: Forman Avenue Western Pedestrian Access

3.4.2 Vehicle Access

There is a vehicle access gateway at the eastern side of the site on Glenwood Park Drive, labelled Gate F. This gated driveway joins an internal road leading to the main school buildings. As shown in Figure 3.11, this access point is also connected to an unpaved road, which staff drive along to park informally on the grass.

Figure 3.11: Glenwood Park Drive Vehicle Access

Figure 3.12 contains the vehicle access point on Forman Avenue at the southern side of the site, labelled Gate D. This point leads to the staff car park and access is restricted to permitted staff and service vehicles. The driveway provides a two-way entry and exit, with a width of approximately 7 metres. The gate can be closed to restrict access.

Figure 3.12: Forman Avenue Eastern Vehicle Access

There is a vehicle access driveway in the south-west corner of the campus on Forman Avenue, providing the secondary staff car parking access. This driveway is approximately 7 metres in width, providing two-way vehicle access. The driveway is shared with Goodstart Early Learning Child Care. To access the Glenwood High School staff car park, vehicles are required to enter through the gates indicated in Figure 3.13. This gate is controlled by a ticketed system only to allow staff and service vehicles to enter.

Figure 3.13: Forman Avenue Western Vehicle Access

3.5 Public Transport

3.5.1 Public Buses

The nearest bus stops to Glenwood High School serviced by the 730 and 745 lines are located at Forman Avenue and Glenwood Park Drive.

The relevant services and destinations in the vicinity of the site are listed in Table 3.1, with all local routes shown in Figure 3.14 in the school context and the existing catchment boundary.

Table 3.1: Bus routes surrounding the school

Bus Number	Bus Route	Morning Times	Afternoon Times
730	Castle Hill to Blacktown via Norwest & Glenwood	7:39am 8:01am 8:26am	3:16pm
730	Blacktown to Castle Hill via Norwest & Glenwood	7:52am 8:17am 8:41am	3:15pm 3:44pm
745	St Marys to Norwest Hospital via Stanhope Gardens	8:15am	2:50pm 3:51pm
745	Norwest Hospital to St Marys via Stanhope Gardens	7:53am 8:20am	3:36pm
616X	Kellyville Ridge to City QVB	Every 1 – 5 mins from 7:14am to 8:19am 8:26am 8:29am 8:36am	Does not run
616X	City QVB to Kellyville Ridge	Does not run	4:01pm
663	Rouse Hill Station to Parramatta via Kellyville Ridge	7:50am 8:00am 8:10am 8:19am 8:29am	3:26pm 3:36pm 3:51pm
663	Parramatta to Rouse Hill Station via Kellyville Ridge	7:53am 8:16am 8:36am	3:07pm 3:27pm 3:40pm 3:50pm

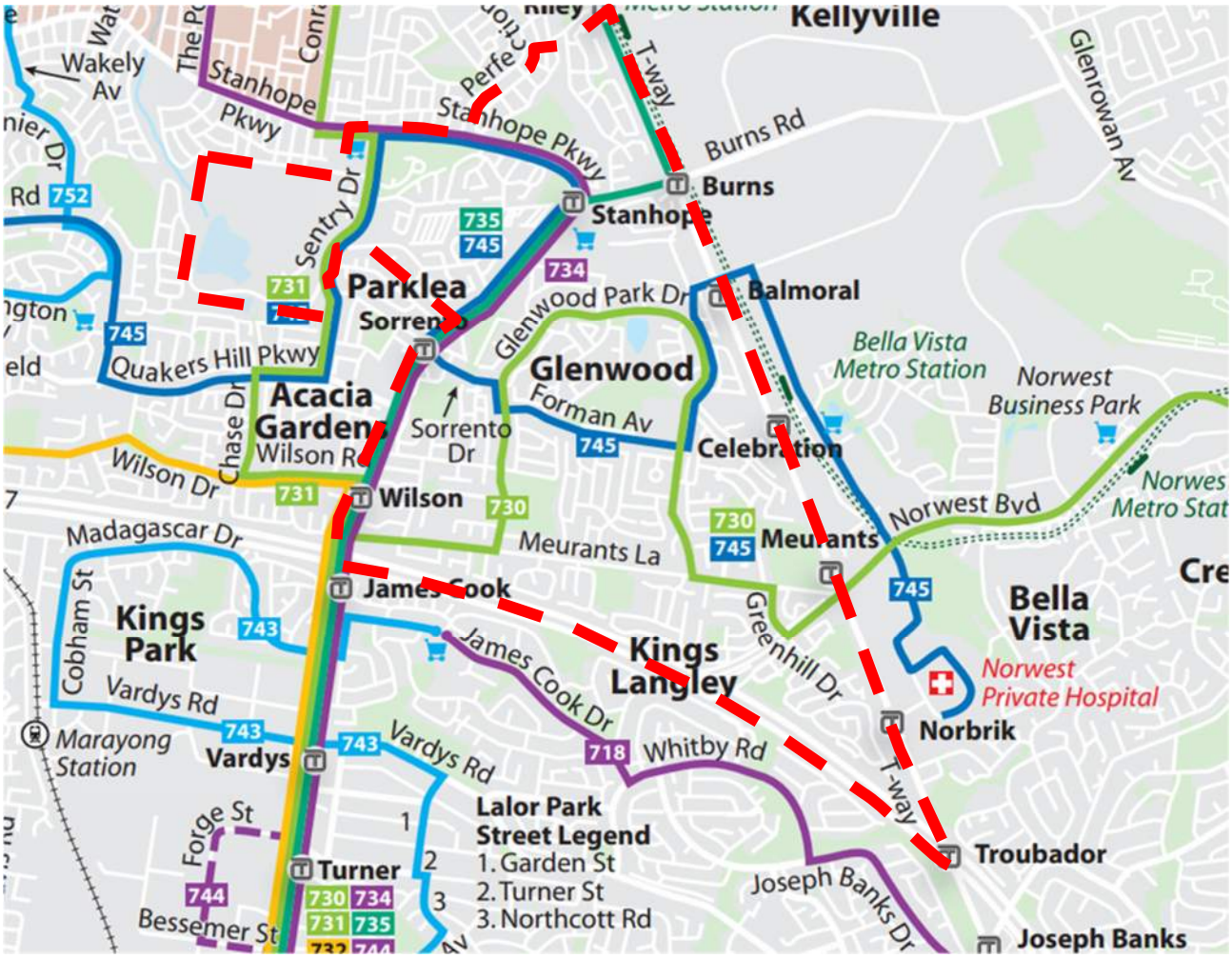


Figure 3.14: Local bus routes

Source: Greater Western Sydney Bus Network Map (Transport for NSW), Effective April 2021

3.5.2 Train and Metro

Glenwood High School is a 25-minute walk from Bella Vista metro station, which is a walking distance of 2 kilometres. The station can also be reached via bus route 663, 730 and 745, with travel times between 5 – 20 minutes. Bella Vista metro station connects into the Metro North West Line, connecting Tallawong and Chatswood, providing connections to the T9 Northern, T9 Gordon, and T1 North Shore and Western lines.

The closest train station to the school is Blacktown train station, accessible via a bus ride of upwards of 25 minutes. Blacktown train station provides access to the T5 Richmond and T1 Western lines, with these services providing connections across Sydney. These train and metro services can be seen in Figure 3.15.

Figure 3.15: Sydney Trains and Metro Network

3.6 Active Transport

3.6.1 Pedestrian Facilities

Figure 3.16 shows the pedestrian facilities available within a walking distance radius of approximately 800 to 1200 metres from the school site. There are existing footpaths on both sides of Forman Avenue and Glenwood Park Drive. Both pedestrian site access points have a raised pedestrian crossing servicing each access. Other raised and non-raised pedestrian crossings and pedestrian refuges are available at intervals along Glenwood Park Drive and Forman Avenue. The majority of the minor roads within the residential areas have a footpath on at least one side of the road, but some are missing footpaths on both sides.

Figure 3.16: Pedestrian facilities in the local road network
Background image source: Nearmap

3.6.2 Cycling Facilities

There are currently no bicycle paths connecting directly to the site, as indicated in Figure 3.17. There is a nearby cycleway on Moulmein Terrace, consisting of both on-road and off-road bike paths. This route has a proposed off-road cycleway connecting into the existing cycleway adjacent to the M7 motorway. Another cycleway close to the school site exists along Teawa Crescent, connecting into Glenwood Park Drive and leading to Windsor Road. There is a proposed on-road cycleway connecting these two existing cycleways together via Honnyeater Terrace.

Additionally, there are existing cycleways along the major roads in this area, including the M7 motorway, Sunnyholt Road and Windsor Road. Considering the existing and proposed cycleways within the larger

network, routes to Blacktown train station, Seven Hills train station and Quakers Hill train station will eventually be available.

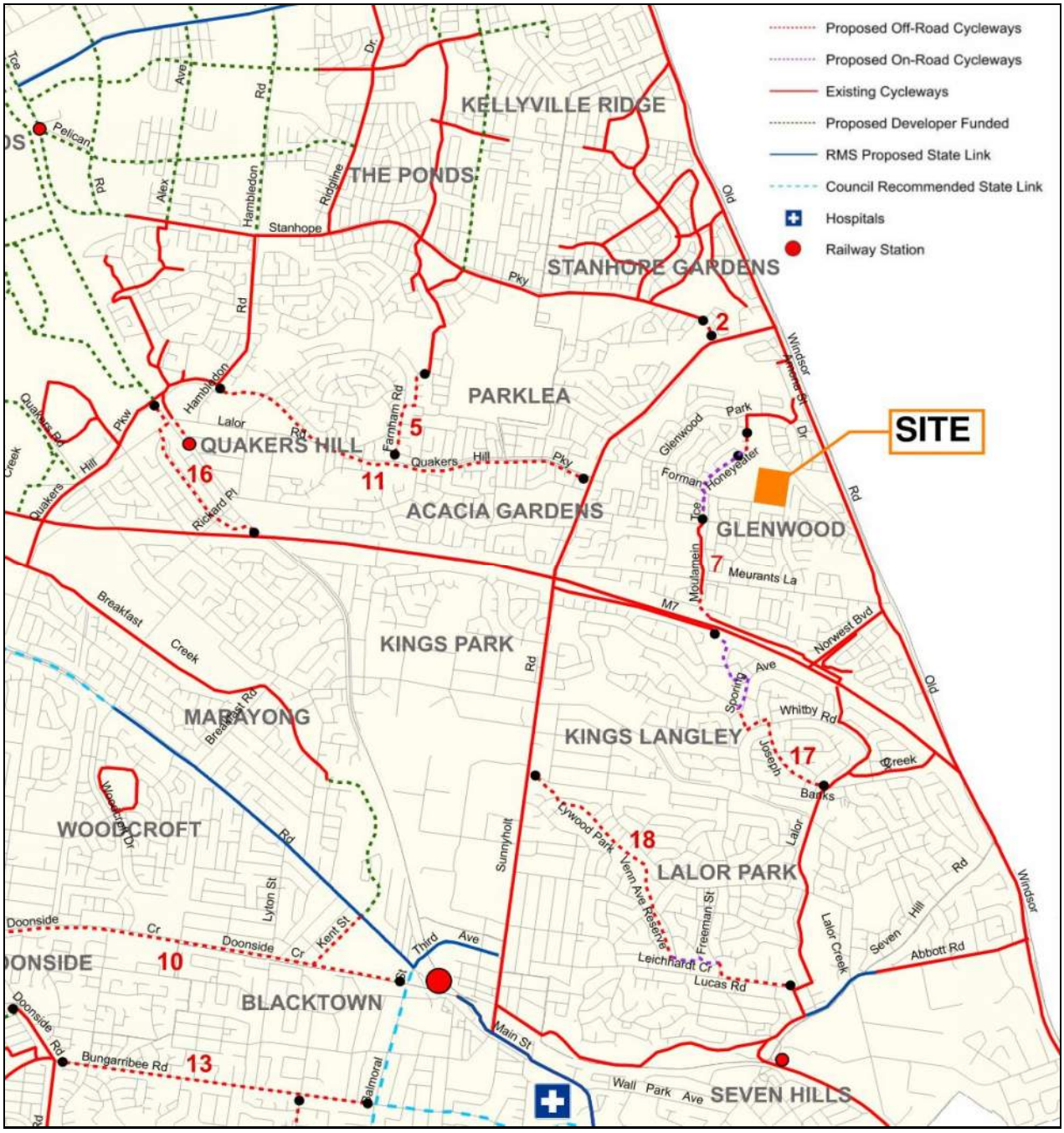


Figure 3.17: Existing and Future proposed cycling network
Source: Blacktown City Council, 2016 Bike Plan

The school site currently contains 56 bicycle parking spaces, located near the south-east car park.

The existing staff facilities have limited provision of end-of-trip facilities. 1 shower is available, and some unassigned lockers are located in the staffroom.

3.7 Drop-off and Pick-up (Kiss & Ride)

The school currently operates with one indented kiss & ride zone along Forman Avenue, allowing parents to pick up and drop off their children in front of the school. The overall length of this zone is around 60 metres. This kiss & ride zone on Forman Avenue is shown in Figure 3.18. This zone is signposted 'No Parking' zone between 8:00-9:30 am and 2:30-4:00 pm.

Figure 3.18: Forman Avenue kiss & ride bay

Additionally, there are further on-street kiss & ride (No Parking) zones along Forman Avenue, both east and west of the indented bay, shown in Figure 3.19.

Figure 3.19: Forman Avenue kiss & ride zones

4.0 Overview of Construction Activities

4.1 Scope of Works

The Glenwood High School scope of works has 2 stages that includes, but is not limited to, the following:

Early Works: REF - Phase B

- Install temporary site fencing, access arrangements and site establishment.
- Establishment of new sewer trench as per the drawings
- Install new sewer connections
- Transition sewer flows to new infrastructure
- Removal of old sewer infrastructure and make good of the area in question

Main Works: Stage 1 and 2 (DA & SSDA)

- The Project consists of the design and construction of:
- New 3 storey building
- New single storey
- Alterations to existing buildings
- Public domain works and landscaping.

The purpose of the Works is to provide new teaching and ancillary facilities for the education of public school students, with minimal disturbance to ongoing School operations. The Works includes decanting between existing buildings on site and into the new buildings.

4.2 Site Layout and Access

The construction vehicles would access the site via Glenwood Park Drive and Forman Avenue. RCC has proposed to provide a circulation area for construction trucks, within the site zone located to the north and west of the site. Figure 4.1 shows an overview of the proposed site layout plan. Based on the site layout shown below, the construction vehicles will enter and exit the site from/to east access at Glenwood Park Drive during Stage 1 and at south access at Forman Avenue. A detailed site layout plan is available in Appendix A of this report.

Figure 4.1: Site layout - Stage 1

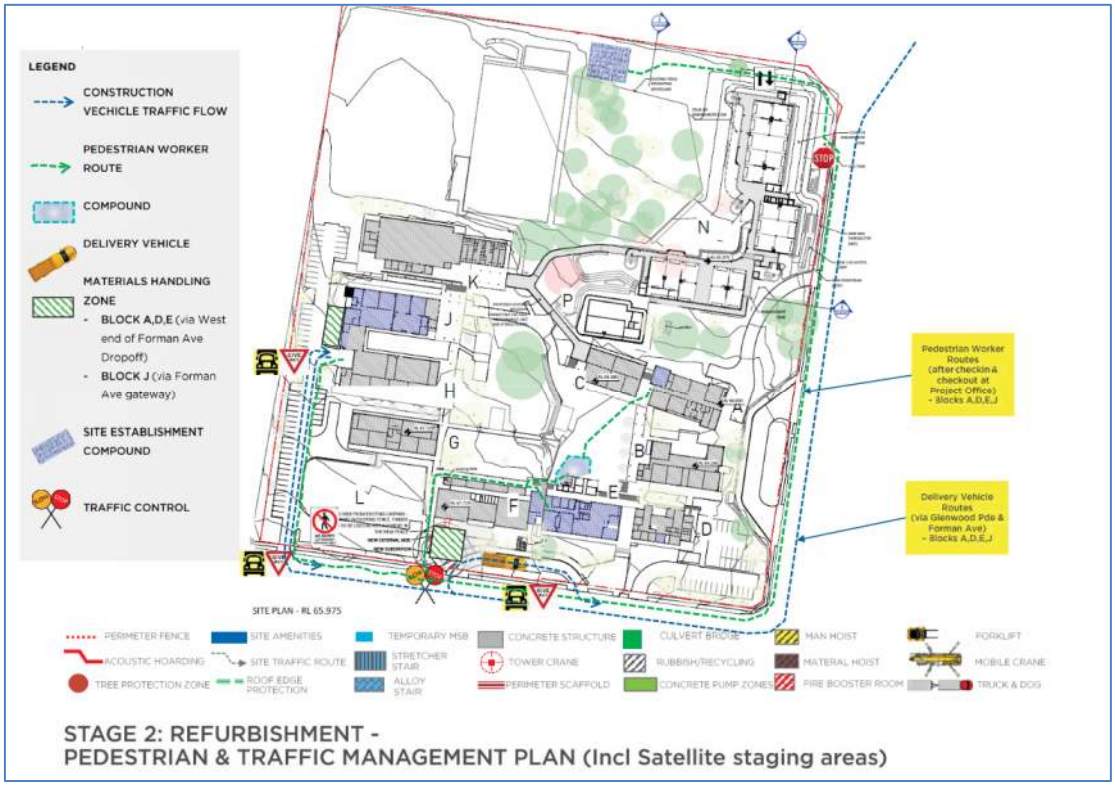


Figure 4.2: Site layout - Stage 2

Swept path analysis for movements to the site are provided at Appendix C.

4.3 Construction Stages

The proposed construction works would be completed in approximately 18 months' time, with an anticipated start in May 2022 and completion by August 2023. It is anticipated that the project will be divided into stages, the anticipated duration of each stage is provided in Table 4.1. The below outlined construction stages may overlap each other during the course of construction.

Table 4.1: Construction staging

Work Stages	Description of Works	Duration (no. of days)	Start	Finish
Ealy Works		48	03/05/2022	07/07/2022
Main Works				
1	Stage 1			
	Performing Arts	105	06/07/2022	29/11/2022
	New Building	204	30/06/2022	02/05/2023
2	Stage 2			
	Building J	53	02/05/23	17/07/2023
	Building A	17	10/05/2023	02/06/2023
	Buidling D	26	10/05/2023	16/06/2023
	Building E	60	10/05/2023	02/08/2023

Table 4.2: Construction staging details

Work Stages	Description of Works	Start	Finish
Ealy Works			
1	Site Establishment	23/05/2022	02/06/2022
2	In-ground Services	07/06/2022	12/07/2022
Main Works			
Stage 1 (New Building & Performing Arts)			
1	Bulk Earthworks & Piling	29/09/2022	14/10/2022
2	Sub-structure	15/10/2022	15/11/2022
3	Structure	01/11/2022	29/01/2023
4	Envelope	25/10/2022	11/02/2022
5	Internal Finishes & Services	01/11/2022	02/05/2023
6	External Works /Landscape	13/02/2023	30/03/2023

Stage 2 (Buildings J, A, D & E)			
1	Site Establishment	11/05/2022	31/05/2020
2	Fitout Works	19/5/2022	09/08/2022
3	Services	19/05/2022	28/07/2022
4	Structure	26/05/2022	14/06/2022
5	Envelope	15/06/2022	05/07/2022

4.4 Hours of Operation

Construction activities are only to be carried out during the following approved hours of work:

- Monday to Friday 07:00 AM to 06:00 PM
- Saturday 08:00 AM to 01:00 PM
- Sundays and Public Holidays No work permitted

RCC will be responsible for instructing and controlling all sub-contractors regarding the hours of work. Any works outside the proposed construction hours will be subject to specific prior approval from the appropriate authorities. Such work may include delivery of cranes, oversized equipment required to the site.

4.5 Construction Workforce

The construction workforce would vary based on work schedule requirements. The anticipated workforce would range between 80 to 120 workers, with the peak anticipated workforce during Main Works DA & SSDA.

5.0 Construction Traffic Management

5.1 Construction Traffic Volumes

Construction traffic will primarily include trucks up to 20 metres long semi-trailer trucks for excavation, for the delivery of large size construction material and civil works, with occasional use of 50T mobile crane up to 12.5m for lifting works. Based on the extent of the project and proposed construction stages, Table 5.1 outlines the anticipated number of constructions trucks for each stage of the project.

Table 5.1: Construction traffic volumes

Work Stages	Description of Works	Average Movements (one-way) Per Day	Vehicles per hour[1] (maximum)
Ealy Works			
1	Site Establishment	2	1
2	In-ground Services	2	1
Main Works			
Stage 1 (New Building & Performing Arts)			
1	Bulk Earthworks & Piling	6	1
2	Sub-structure	40	5
3	Structure	40	5
4	Envelope	6	1
5	Internal Finishes & Services	6	1
6	External Works /Landscape	6	1
Stage 2 (Buildings J, A, D & E)			
1	Site Establishment	6	1
2	Fitout Works	6	1
3	Services	6	1
4	Structure	40	5
5	Envelope	6	1

Vehicle volumes for a development of this scale are likely to be on the order of no more than 6 vehicles per day (equivalent to 1-2 vehicles per hour) excluding during concrete pouring works. At these volumes, the local road network could easily accommodate the proposed standard construction vehicle movements subject to appropriate management.

[1] Assuming trucks will arrive and depart between eight hours of total daily operation.

Construction vehicle management will be subject to local traffic control by qualified traffic controllers

All the concrete pours and deliveries will occur outside of the road network and during school peak periods to minimise traffic impact and associated road network.

Any oversize vehicle needs to approach the site via surrounding roads, which would require Council's approval. RCC would be responsible for submitting an application for an Over Size Vehicle Access Permit and obtaining approval prior to such traffic movement.

The assessment of predicted road traffic noise levels are detailed in Construction Noise and Vibration Management Sub Plan (Report number 220239-GHS-CNVMSP-220513-R0, 13 May 2022).

5.2 Construction Vehicle Routes

Generally, construction vehicles will approach the site from a wide range of locations throughout the greater Sydney area. However, all construction vehicles will use the State, and Regional road network, as well as the TfNSW approved heavy vehicle route network where practicable. The recommended construction vehicle routes are detailed below and shown in Figure 5.1.

Truck drivers will be advised of the designated truck routes to and from the site, as shown in Figure 5.1. No queuing of construction vehicles will be permitted on the surrounding road network, with call-up procedures to be put in place to manage arrivals.

The main construction access point is anticipated to be located at the northern end on Glenwood Park Drive of the site during Stage 1 and at the west mid of the site from Forman Avenue during Stage 2. Figure 5.1 outlines the recommended haulage routes for this potential construction access point. The recommended routes involve both left and right in and out movements at the construction access point.

Figure 5.1 shows the recommended haulage routes for arrival from north and departure to south of the site. Construction vehicles are expected to utilise Old Windsor Road for haulage in the north and south directions. Inbound and outbound vehicles from the east can travel via the M2 Motorway, which has connections to NorthConnex. Similarly, vehicles arriving and departing from the west can use the M7 Motorway, which connects to further regions via the M4 and M5 Motorways.

During Main Works Stage 1, construction vehicles arriving from and leaving toward the north are likely to access the site via the following route:

Old Windsor Road > Miami Street > Tarwin Avenue > Glenwood Park Drive > Tarwin Avenue > Miami Street > Old Windsor Road

For Main Works Stage 2, construction vehicles from north and leaving toward the south are likely to access the site via the following route:

Old Windsor Road > Miami Street > Tarwin Avenue > Glenwood Park Drive > Forman Street >

Glenwood Park Drive > Norwest Boulevard > Greenhill Drive > Meurants Lane > Glenwood Park Drive

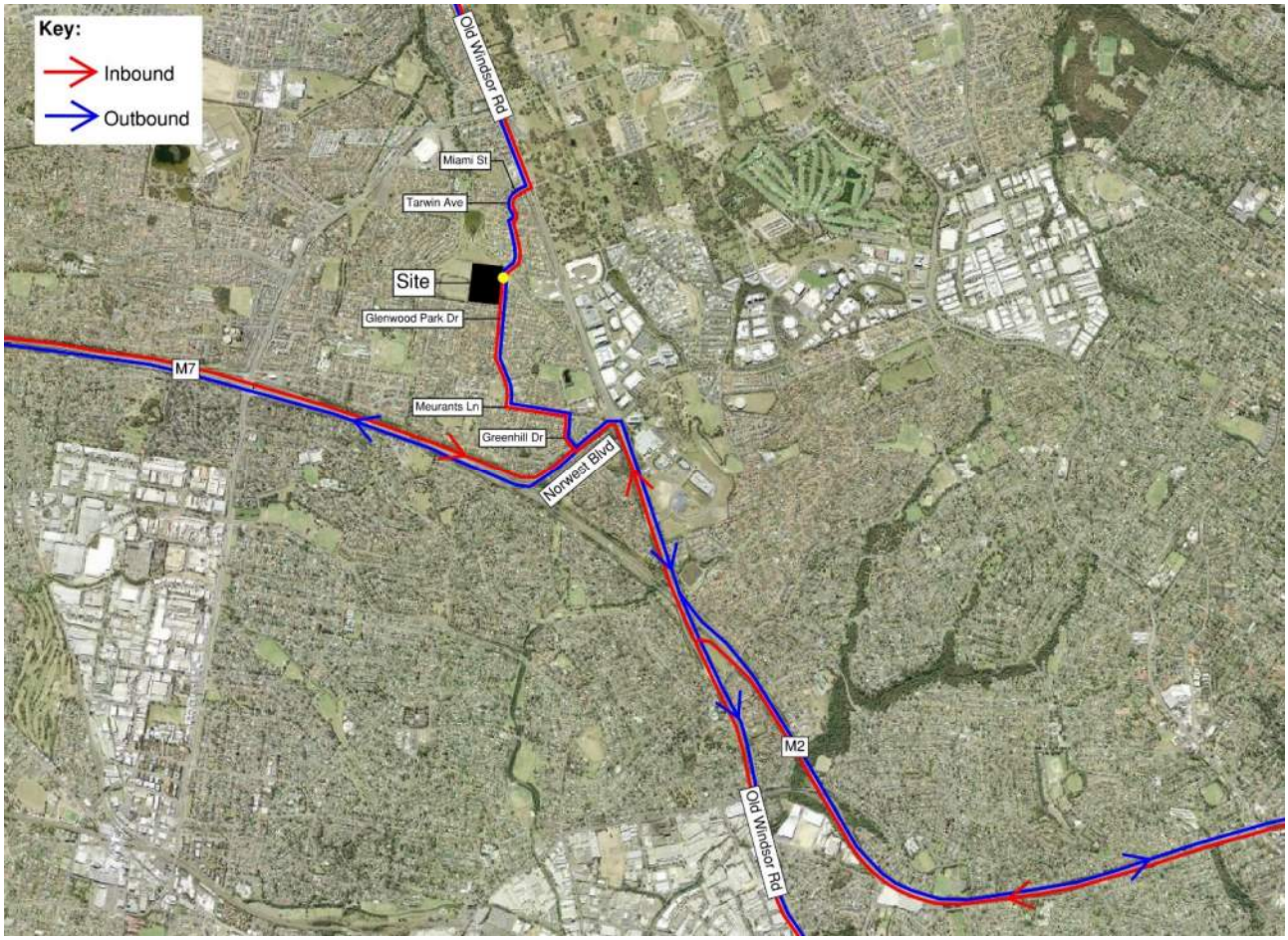


Figure 5.1: Truck Haulage Routes

It is noted that some local roads will be included in the construction haulage routes. The local road network includes several roundabouts, some with narrow pedestrian medians. If required, there is an opportunity for heavy vehicles to mount most of these roundabouts. It is not recommended for construction vehicles to use these roundabouts to make U-turns, particularly large rigid vehicles or semi-trailers.

This CTPMP has undertaken swept path analysis of the construction vehicle haulage routes, including swept path analysis of tight turning movements. Detailed measures would be refined in consultation with Council prior to any implementation. Swept path analysis for movements to the site are provided in Appendix C.

5.3 Construction Traffic Management

Truck loading and unloading will occur wholly within the site compound.

Traffic controllers will be implemented at the site entries as required to ensure safe and efficient movement of vehicles, pedestrians and the safety of workers within site.

All deliveries are to be made within the approved work hours. Truck movements to and from the site will be scheduled outside of network peak hours to reduce impacts to the local road network, which includes busy town-centre areas and high pedestrian volumes.

All construction vehicles enter and leave the site in a forward direction unless in specific exceptional circumstances under the supervision of accredited traffic controller/s.

During days of high estimated vehicle movements, communication between the site, vehicles will be maintained to stagger the arrival of vehicles, for them to be accommodated within the worksite and to minimise traffic disruptions. This will not impact the surrounding roads as activities will be managed within the site boundary with trucks entering and exiting in forward direction.

During school peak hours, significant pedestrian activity is expected as students and staff arrive and depart from the site. There are several management measures that may be implemented to ensure the safety of these active transport users including:

- Scheduling construction vehicle movements outside of school peak hours where possible to ensure pedestrian and cyclist safety.
- Prohibit pedestrians from entering or passing through specific areas of the site during construction, enforced by fencing around the perimeter.
- Signage should be fitted to communicate to students and staff any detours or prohibited areas within the site. Any changes to external pedestrian or cyclist routes should also be communicated with signage and have detours clearly marked.

It is recommended that construction vehicle access points to the site are secured by manned traffic control to ensure no unauthorised or unsafe access is permitted for vehicles or pedestrians. Traffic control will also enable safe pedestrian movements across the construction access driveway, particularly students walking to and from school.

A Traffic Control Plan showing appropriate warning signage addressing all the construction stages are provided in **Appendix B**.

5.4 Work Zones

As discussed above, all the loading/unloading activities will occur within the site. Therefore, the proposed construction works do not require an on-street works zone for such activities.

5.5 Driver Conduct and Construction Worker Transport

The following Driver Code of Conduct and Construction Worker Transportation Strategy have been prepared to address SSDA Conditions B22 and B24 respectively. These shall be distributed to site workers and drivers as required.

The objectives of the Driver Code of Conduct are to minimise the impacts on the road network, to minimise conflicts with other road users, to minimise road traffic noise; and ensure drivers use the specified routes for approaching and exiting the site.

The objective of the Construction Worker Transport Strategy is to minimise demand for parking in nearby public and residential streets or public parking facilities. Temporary on-site parking may be available within the construction site, however this will be subject to construction phasing and site compound arrangements, and workers are therefore advised to find alternative means of transport.

It is recommended to develop a program or a checklist to ensure truck drivers are adhering with driver code of conduct.

Driver Code of Conduct

Minimise Impacts to Road Network

To minimise the impacts of earthworks and construction on the local and regional road network:

- Always obey all applicable road rules and laws
- Drivers to obey road speed limit and reduce the speed while approaching nearby intersections. Heavy braking can damage the roads.
- Drivers should avoid local, narrow roadways where possible
- Drivers should follow specified truck routes (see Figure 5.1 and enquire if unsure)

Minimise Conflicts with other Road Users

To minimise conflicts with other road users including pedestrians, cyclists or private vehicle drivers:

- Drivers should be mindful of pedestrians and cyclists along all haulage routes
- Drivers should not obstruct access to any public roads, residential driveways, or pedestrian footpaths
- All loading and unloading will occur wholly within the site
- Drivers should exit the site in a forward motion and check their left and right twice while exiting to ensure the safety of pedestrians, cyclists and other vehicles is maintained
- Upon exiting, drivers must wait for a suitable gap in traffic. The Roads Act does not give any special treatment to trucks exiting a construction site, but the vehicles on the road have the right-of-way
- Drivers should obey the traffic controllers while entering and exiting the site
- Drivers should be aware of site's surrounding conditions including speed limits, other traffic controls and pedestrian routes. This information can be presented to drivers during site inductions
- Drivers should be aware that construction vehicle movements are to be scheduled outside of peak traffic periods where possible.

Minimise Road Traffic Noise

To minimise the noise impacts on the community resulting from driving heavy vehicles:

- Drivers should reduce speed to reduce instances and severity of compression braking, including when approaching speed humps or raised zebra crossings
- Limit any excessive or unnecessary use of horns, in particular outside of working hours

Environmental Control

For safe environmental management:

- Construction vehicle wheels shall be cleaned prior to leaving the site to prevent transport of dust, dirt, or gravel from the worksite onto the road network or pedestrian footpaths.
- All loads are to be sealed or covered when entering or leaving the site. Loading of disposable material into vehicles leaving the site is to occur only within site.

Construction Worker Transportation Strategy

Preferred Travel Modes

All workers should be aware that car parking may not be available on the construction site and should consider alternative means of transport to/from the site. Where possible based on your personal situation, the following travel modes are recommended in order of priority:

- Walking
- Cycling
- Public transport
- Carpooling (including rideshare)
- Driving

Bus Options

Glenwood High School is 2 kilometres away (25 minute-walking) from Bella Vista Metro Station. If you can make your way to Bella Vista metro stations, bus routes 730 and 745 will connect you to the site in just 15 minutes approximately.

The closest train station to the site is Blacktown Station which is accessed via the 730 bus route with an upward of 15 minutes bus ride. Blacktown train station provides access to the T5 Richmond and T1 Western lines which these services provide connections across Sydney.

The following is a brief summary of some departure and arrival times for current bus services, and you can find more at https://transportnsw.info/. Please note that all bus times listed below may be subject to change, and you should check the latest data.

Bus Number	Bus Route	Morning Departure Times	Morning Arrival Time
730	Blacktown Station to Glenwood High School	5:25am-5:55am-6:10am-6:30am-6:50am-7:00am-7:10am-7:16am-7:35am-7:39am-8:00am	5:41am-6:11am-6:26am-6:46am-7:06am-7:18am-7:30am-7:36am-7:55am-7:59am-8:20am
		Afternoon Departure Times	**Afternoon Arrival Time**
		4:05pm-4:25pm-4:45pm-5:05pm-5:25pm-5:45pm-6:05pm	4:24pm-4:45pm-5:05pm-5:25pm-5:45pm-6:05pm-6:23pm

On-Street Car Parking

If you do choose to drive to site, please be aware of the following:

- Remember to investigate carpooling options that may be available with other workers
- Where possible, try to park in locations that are not along residential frontages, such as outside Glenwood Reserve to the west of the site or Kidman Street to the east of the site.
- Please do not park within 100 metres of the school boundary, to ensure parking availability and reduce traffic congestion during drop-off and pick-up periods.
- Remember that street parking locations around the site may be time-limited, and you may not be able to park all day in vacant zones.
- You are responsible for following all regulatory signage and parking restrictions around the site.

5.6 Construction Workers Parking

The proposed site layout has no off-street parking area for the construction workers. There is prevalent unrestricted parking along Glenwood Park Drive, Forman Avenue and Shaun Street, with vacant spaces readily available.

The builder will encourage all the workers to use public transport and carpool.

Due to the spatial constraints within the site, it is expected that some on-site parking may be available for construction workers however this may not accommodate individual spaces for all workers. The following mitigation measures are recommended to ensure impacts to local residential streets are limited:

- Workers to be provided with information on available public transport options and transport planning
- Workers recommended and reminded to carpool where possible
- No workers to park within 100 metres of the School boundary (to ensure parking availability and to reduce impact on drop-off and pick-up periods)
- Advice on workers about preferred on-street parking locations which would not occupy residential frontages (such as the southbound side of Glenwood Park Drive and the north-westbound side of Shaun Street). This is to reduce the impacts on residents for those workers who do choose to drive
- Workers recommended to park away from the Forman Avenue kiss & ride area, to avoid additional congestion

Workers must follow all on-street regulatory signage including drop-off and pick-up zones around the schools.

6.0 Project Impact

6.1 Local Traffic

Local traffic patterns during construction are expected to remain consistent with the existing conditions. All public roads will remain in operation at full capacity. Traffic impacts from the construction works are expected to be limited to the volume of construction vehicles only, with minimal contractor traffic during peak hours only.

The number of daily vehicles is expected to be minimal in comparison to the total volumes of traffic on local roads. Truck movements to and from the site will be scheduled outside the network peak hours where possible to reduce impacts to the area.

All deliveries and construction works are to take place within site with no impacts to passing traffic. Existing travel lanes along all local roads will remain in operation at full capacity.

Merging of construction trucks at Glenwood Park Drive and Forman Avenue are to be managed carefully by on-site traffic controllers, such that traffic flow is maintained. For small deliveries, traffic is not to be held up in advance to allow vehicles to exit the site, and vehicles are to use suitable gaps in traffic (as per the normal right-of-way scenario).

If the relevant loading area is found to be full at the time of vehicle arrival, vehicles are not to queue on the roadway. In this instance, vehicles shall store appropriately within other areas of the site (and shall not reverse out of the site) or be turned away and rescheduled if necessary. If recirculating to the site, vehicles shall only park legally in designated parking zones and in accordance with any relevant road rules, and only for as long as necessary.

6.2 Parking

As discussed in section 0, the builder will encourage all the workers to use public transport and carpool. Section 5.6 is to be adhered to with regards to on-street parking adjacent to the site and any additional parking requirements. Construction workers would be encouraged to use public transport or shuttle service provided by the builder.

Based on the above, the proposed works would not generate any significant impact on the surrounding streets.

6.3 Public Transport

It is anticipated that there will be no changes to the current public transport services (including the bus zone on Glenwood Park Drive). The potential construction access driveway is to the north of the bus bay and is not expected to interfere with the existing bus routes in any way.

6.4 Pedestrians

The footpath to the site remains operational and construction traffic movements are unlikely to interrupt any pedestrian facility in the vicinity of the site. Pedestrian access along the existing trail along the eastern boundary of the site would be maintained throughout all phases of the project. Therefore, the proposed construction works would not impact any pedestrian activity in the surrounding.

The safe movement of pedestrians around the site, particularly during drop-off and pick-up periods, would be accommodated by the proposed construction methodology.

6.5 Cyclists

There are no changes to dedicated cycleways in the area. Cyclists on public roads will be required to follow direction from traffic controllers as per standard vehicles. The cycle access along the existing trail along the eastern boundary of the site would be maintained throughout all phases of the project.

6.6 Communication of Works

Prior to any site works taking place, notification of commencement of the works shall be distributed to the neighbourhood. Notification is to include information or comment. Community notifications will be undertaken as per the Construction Management Plan prepared by the Contractor.

6.7 Public Infrastructure

On infrequent occasions when particularly large vehicles are required to access the site, some mounting or crossing of public kerbs and medians may be necessary. The builder shall repair any damage to this infrastructure if large vehicles are required to mount the devices. Any other road markings damaged as a result of vehicles associated with the construction shall be repaired as a responsibility of the builder.

6.8 Emergency Services

The contractor will assure that access to all emergency services should be maintained to and site surrounds.

6.9 Site Safety

All construction work and operations are to be contained within site. Hoarding Class A is to be implemented on site, this will ensure that existing footpath will be separated from the site. Safety for passing traffic including pedestrians shall be maintained at all times.

6.10 Neighbouring Properties

Construction truck access to the site shall be predominantly via the Glenwood Park Drive and Forman Avenue that provides access to the Glenwood High School site, with construction activities contained within the site. Glenwood Park Drive and Forman Avenue will generally be accessible at all times during construction. Properties adjacent to the construction zone perimeter will not be impacted by the works.

Minimal construction traffic access will be imposed through the Glenwood Park Drive and Forman Avenue where users will be made aware of construction traffic movement via warning signages as outlined in the relevant TCP.

Based on the above, all the surrounding properties will remain accessible throughout the construction period as per existing conditions.

7.0 Further Information

7.1 Certificate and Approvals

Approval may need to be obtained from Transport for NSW, Blacktown City Council and other relevant authorities. Approval may be required for items including but not limited to:

- Road occupancy approvals
- Hoarding/fencing approvals
- Oversize vehicle usage on local roads.

Responsibility for acquiring the necessary certificates, permits, and/or approvals rests with the builder (through managed subcontractors where relevant), and must be completed prior to commencement of the associated works.

Only certified personnel will be used on site to implement, monitor, and carry out the Traffic Control Plans.

7.2 Other Responsibilities

Richard Crookes Construction personnel are responsible for, but not limited to:

- Implementing the Construction Traffic Management Plan and associated TCP
- Informing sub-contractors of the requirements of the Construction Traffic Management Plan
- Undertaking site inspections to ensure all signage is clearly visible and not damaged
- Monitoring the implementation of the Construction Traffic Management Plan
- Reporting on incidents
- Obtaining permits.

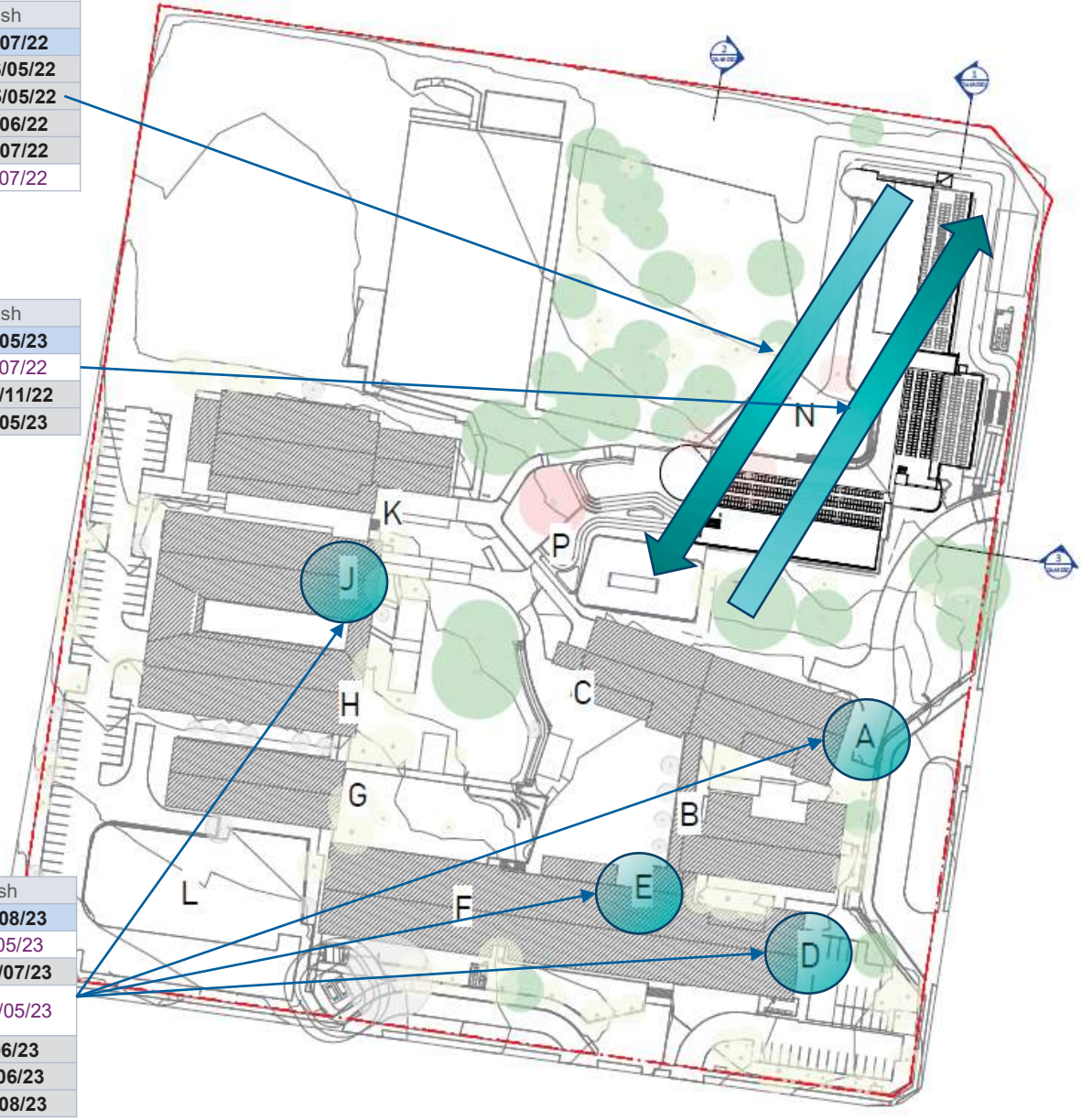
As part of the site induction procedures, all site workers and sub-contractors will be made aware of this Construction Traffic Management Plan, the relevant Traffic Control Plan, and their responsibility to adhere to these plans.

Appendix A – Site Establishment Plans

Name	Duration	Start	Finish
EARLY WORKS (REF)	**48 days**	**Tue 3/05/22**	**Thu 7/07/22**
SITE ESTABLISHMENT	**10 days**	**Tue 3/05/22**	**Mon 16/05/22**
DEMOLITION WORKS	**6 days**	**Tue 17/05/22**	**Wed 25/05/22**
BULK EARTHWORKS	**10 days**	**Fri 20/05/22**	**Thu 2/06/22**
INGROUND SERVICES	**25 days**	**Thu 2/06/22**	**Thu 7/07/22**
Early Works Complete	0 days	Thu 7/07/22	Thu 7/07/22

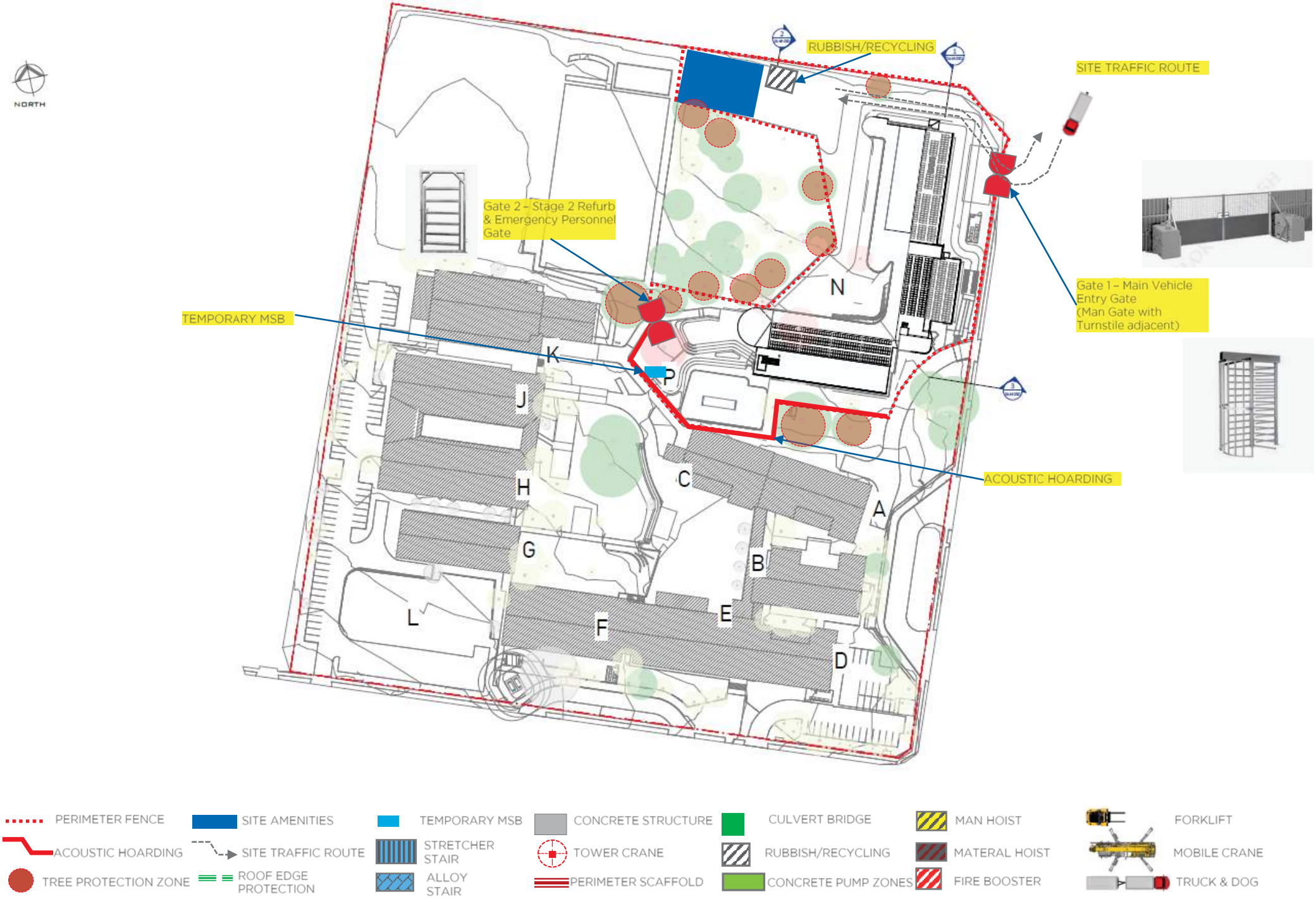
Name	Duration	Start	Finish
STAGE 1	**204 days**	**Thu 30/06/22**	**Tue 2/05/23**
Commence Stage 1 after DA Approval	0 days	Tue 5/07/22	Tue 5/07/22
PERFORMING ARTS	**105 days**	**Wed 6/07/22**	**Tue 29/11/22**
NEW BUILDING	**204 days**	**Thu 30/06/22**	**Tue 2/05/23**

Name	Duration	Start	Finish
STAGE 2	**65 days**	**Tue 2/05/23**	**Wed 2/08/23**
Commence Stage 2 after Stage 1 is Complete	0 days	Tue 2/05/23	Tue 2/05/23
BUILDING J	**53 days**	**Tue 2/05/23**	**Mon 17/07/23**
Commence Building A, D & E after Schools Decanted to the New Building	0 days	Wed 10/05/23	Wed 10/05/23
BUILDING A	**17 days**	**Wed 10/05/23**	**Fri 2/06/23**
BUILDING D	**26 days**	**Wed 10/05/23**	**Fri 16/06/23**
BUILDING E	**60 days**	**Wed 10/05/23**	**Wed 2/08/23**



PERIMETER FENCE
SITE AMENITIES
TEMPORARY MSB
CONCRETE STRUCTURE
CULVERT BRIDGE
MAN HOIST
FORKLIFT
ACOUSTIC HOARDING
SITE TRAFFIC ROUTE
STRETCHER STAIR
TOWER CRANE
RUBBISH/RECYCLING
MATERAL HOIST
MOBILE CRANE
TREE PROTECTION ZONE
ROOF EDGE PROTECTION
ALLOY STAIR
PERIMETER SCAFFOLD
CONCRETE PUMP ZONES
FIRE BOOSTER ROOM
TRUCK & DOG

STAGE 1 & 2: GENERAL STAGING & WORKFLOW

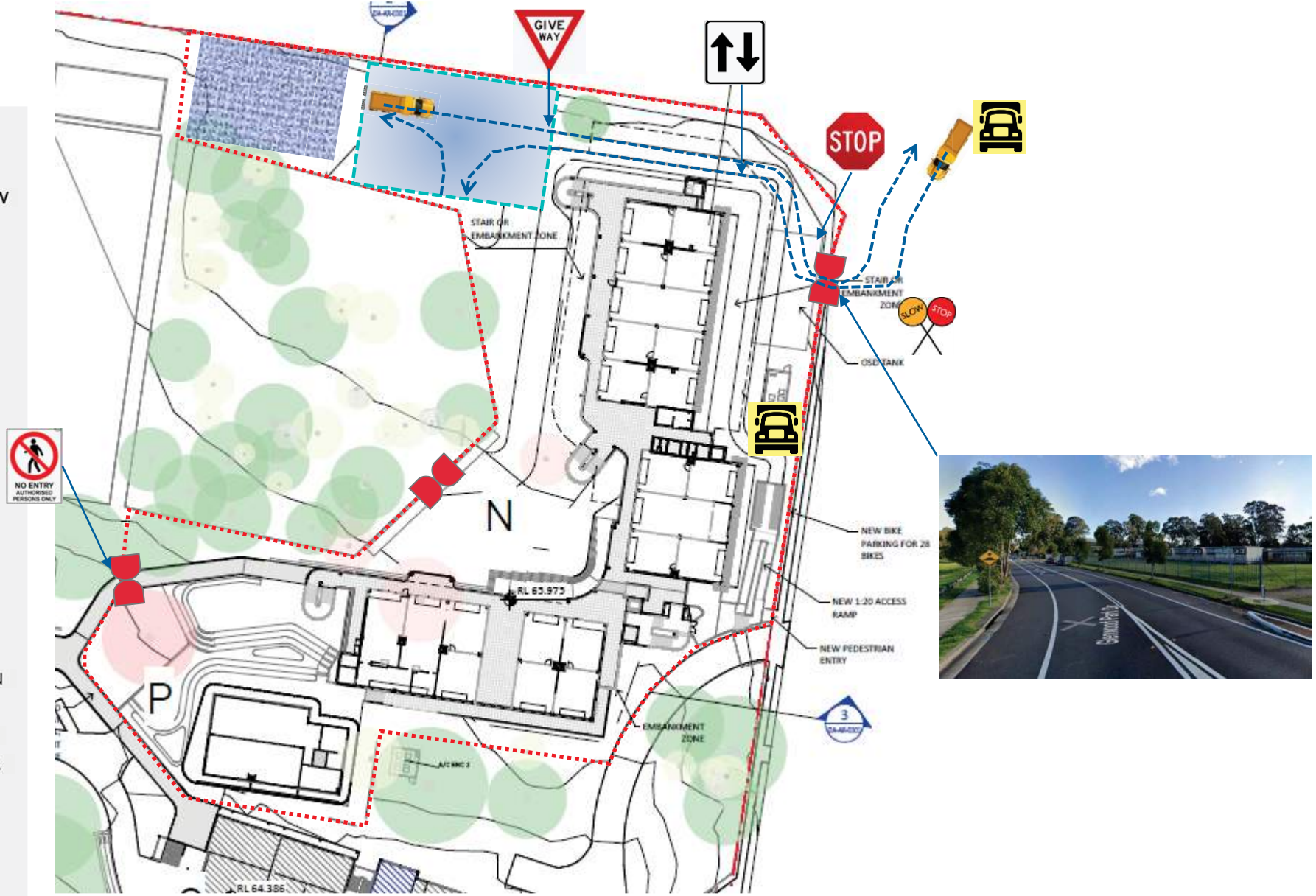


STAGE 1 - EARLY WORKS: SITE ESTABLISHMENT PLAN

NORTH

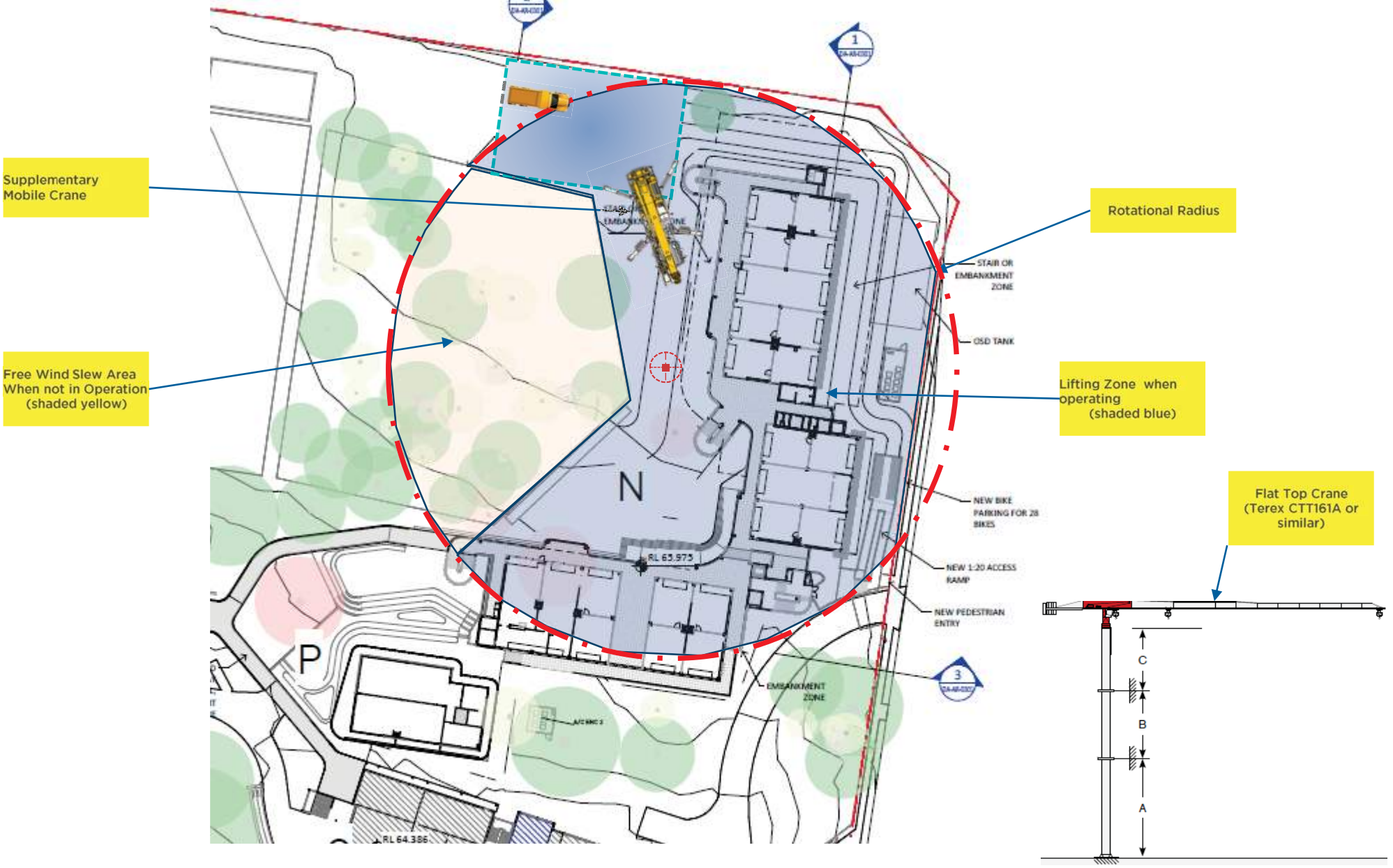
LEGEND

- CONSTRUCTION VECHICLE TRAFFIC FLOW
- COMPOUND
- DELIVERY VEHICLE
- MATERIALS HANDLING ZONE
- CRANE RADIUS
- MOBILE CRANE
- SITE ESTABLISHMENT COMPOUND
- **GATE NO. 1:** DELIVERIES
  GATE NO. 2: PEDESTRIAN ACCESS
  GATE NO. 3: ACCESS TO TREE PROTECTION AREA (Arborist Inspection)
- TRAFFIC CONTROL



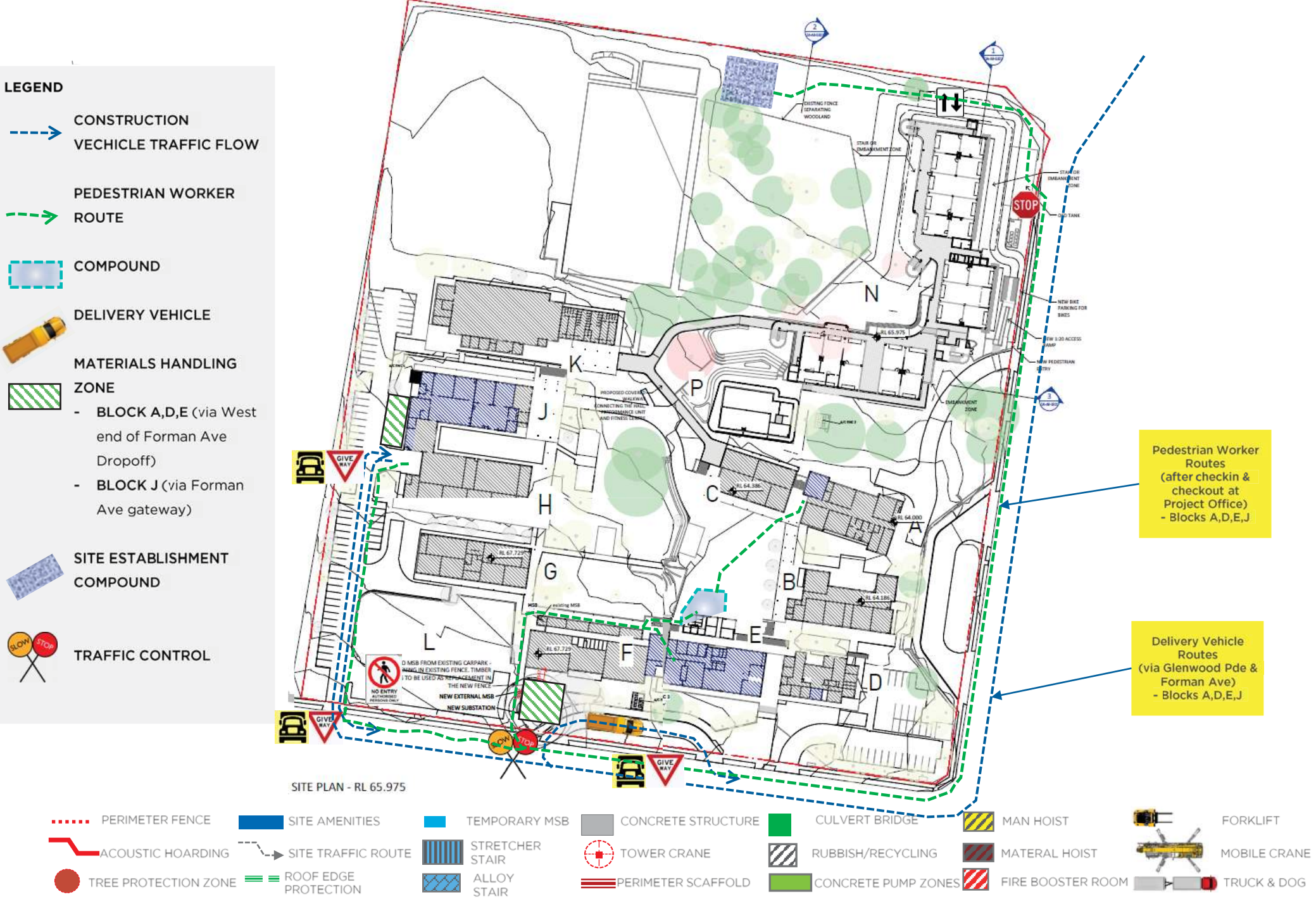
PERIMETER FENCE
ACOUSTIC HOARDING
TREE PROTECTION ZONE
SITE AMENITIES
SITE TRAFFIC ROUTE
ROOF EDGE PROTECTION
TEMPORARY MSB
STRETCHER STAIR
ALLOY STAIR
CONCRETE STRUCTURE
TOWER CRANE
PERIMETER SCAFFOLD
CULVERT BRIDGE
RUBBISH/RECYCLING
CONCRETE PUMP ZONES
MAN HOIST
MATERAL HOIST
FIRE BOOSTER ROOM
FORKLIFT
MOBILE CRANE
TRUCK & DOG

STAGE 1: PEDESTRIAN & TRAFFIC MANAGEMENT PLAN



PERIMETER FENCE
ACOUSTIC HOARDING
TREE PROTECTION ZONE
SITE AMENITIES
SITE TRAFFIC ROUTE
ROOF EDGE PROTECTION
TEMPORARY MSB
STRETCHER STAIR
ALLOY STAIR
CONCRETE STRUCTURE
TOWER CRANE
PERIMETER SCAFFOLD
CULVERT BRIDGE
RUBBISH/RECYCLING
CONCRETE PUMP ZONES
MAN HOIST
MATERAL HOIST
FIRE BOOSTER ROOM
FORKLIFT
MOBILE CRANE
TRUCK & DOG

STAGE 1: CRANEAGE, MATERIALS HANDLING (PLAN)



STAGE 2: REFURBISHMENT - PEDESTRIAN & TRAFFIC MANAGEMENT PLAN (Incl Satellite staging areas)

Appendix B – Traffic Control Plans

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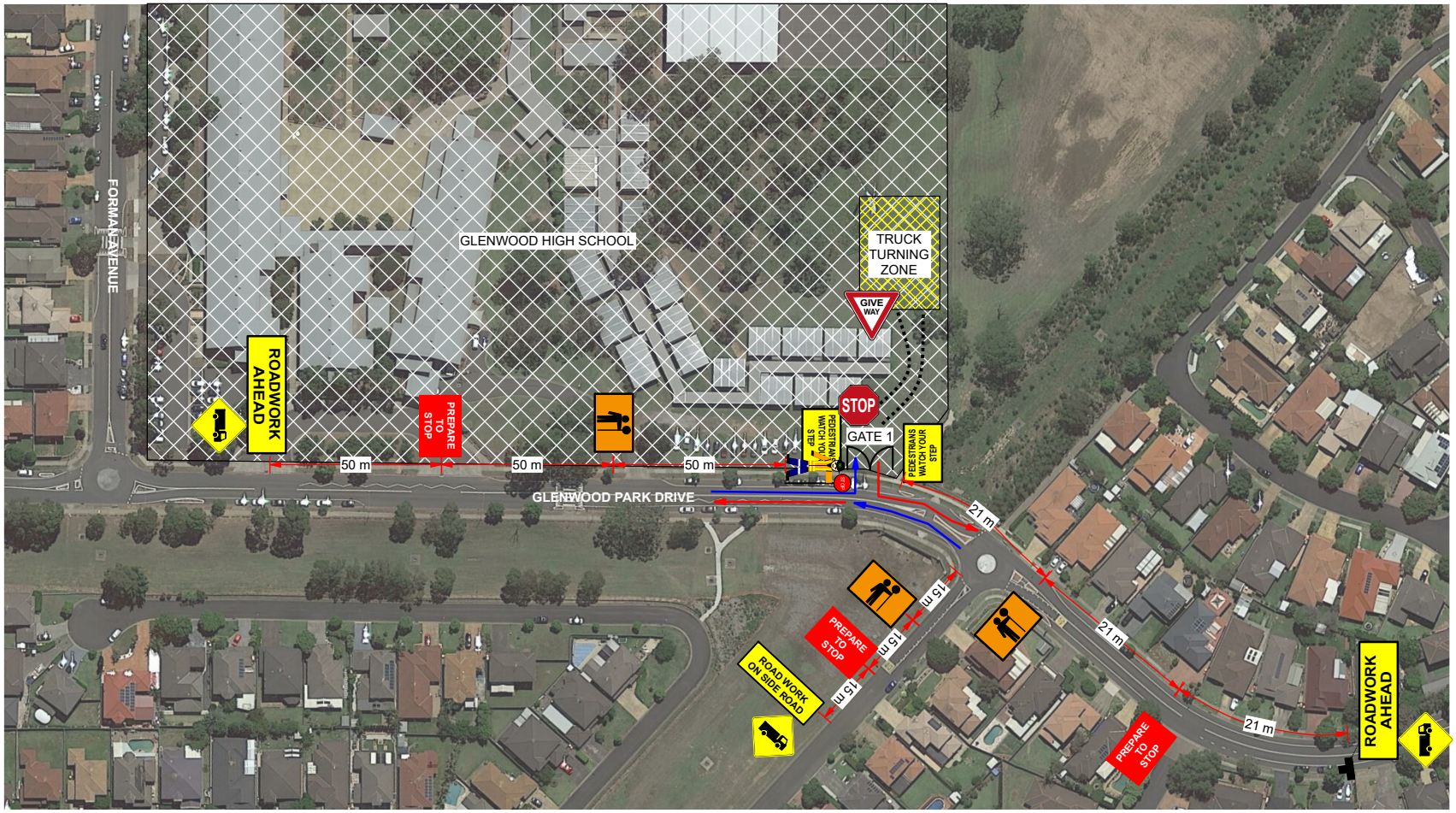
The Traffic Planner

TGS ID TC22511



CLIENT: TTW

PROJECT: Glenwood High School

LOCATION: Forman Avenue, Glenwood NSW

SCOPE OF WORKS: Work Site Access Management - Stage 1 - Eastern Access

LCA & MUNICIPALITY: Blacktown City Council

DATE: 11/5/2022 TCP EXPIRY: 11/5/2023

TMP LICENCE: TCT0041658 TYPE: PWZ

AUTHOR: Kyle Fieg SIGNATURE: K. Fieg

THIS TRAFFIC GUIDANCE SCHEME IS BASED ON THE NSW RMS TCAW MANUAL V6.0 & AS1742.3-2019

APPROVALS / PERMITS TO BE ONSITE AT ALL TIMES

Device Spacing:

Purpose and usage Recommended	Approach speed of traffic km/h	max spacing, m
All purposes	≤ 55	4
	56 to 75	12
	≥76	18
At divided road crossovers to transfer traffic to the opposing roadway	All Speeds	2
Protecting freshly painted lines	≤75	24
	≥76	60*
Temporary Signposts	≤70	24
	≥70	60

(* This spacing may need to be reduced on curves or crests,or if the row of cones is not clearly defined at night.)

Based on AS 1742.3-2009

Taper Lengths:

Existing Speed Limit	Traffic Control Taper	Lateral Shift Taper	Merge Taper
45 or less	15	15	15
46 to 55	30	15	30
56 to 65	60	30	60
66 to 75		70	115
76 to 85		80	130
86 to 95		90	145
96 to 105		100	160
Greater than 105		110	180

Distance between signs:
Single sign: 2D for speeds greater than 66 km/h and 1D for speed zones of less than 65 km

Multiple signs: 1D for all speed zones

EXISTING POSTED SPEED LIMIT: 50

PLAN SCALE: NTS

SHEET SIZE: A3

Traffic Guidance Scheme has been prepared in accordance with AS1742.3-2019 "Traffic Control Devices for Works on Roads", Road Management Act 2004, Code of Practice Traffic Management 2010 & the TfNSW Roads and Traffic Control Work Sites (TCAWS) Technical Manual V6.

All approvals/consent documents shall be on site at all times. Traffic controller to wear correctly fitted PPE (personal protective equipment) to AS/NZS 4602 as assess in the site safe work method statements (SWMS), hazard risk assessment. Location of signs shown may be varied slightly during implementation preventing a tripping hazard, improve visibility, effectiveness & not impact on pedestrian walkways (1.2m+ clearance, 1.5m+ curved footpath), cyclists, parking or deliveries unless footpath is closed. Signage is to be class 1 retroreflective signage as per AS/NZS 1742.3-2019. Note that additional traffic controllers/signage may be required.

Traffic controller instructions: all traffic management items must be in place prior to the commencement of the works. Onsite traffic management must have their TfNSW traffic controller ticket (use the stop-slow bat to control traffic), and TfNSW (implement traffic control plans) as a minimum to implement this plan. Traffic controllers will assist local buses & emergency vehicles through the worksite where required. Traffic controllers to remain onsite at all times and ensure the pedestrian and the travelling public's safety at all times. If leaving the site for any reason, they must inform the site supervisor.

Pedestrians are to be physically separated from the worksite at all times with para-webbing or similar to ensure they do not walk into the work site, with 'pedestrians watch your step' signage placed on all approaches to work site. Where pedestrians are to come on/off the kerb a non-slip surface ramp per AS1428 be provided by the client. Minimum mounting height for all short term signage should be 200mm.

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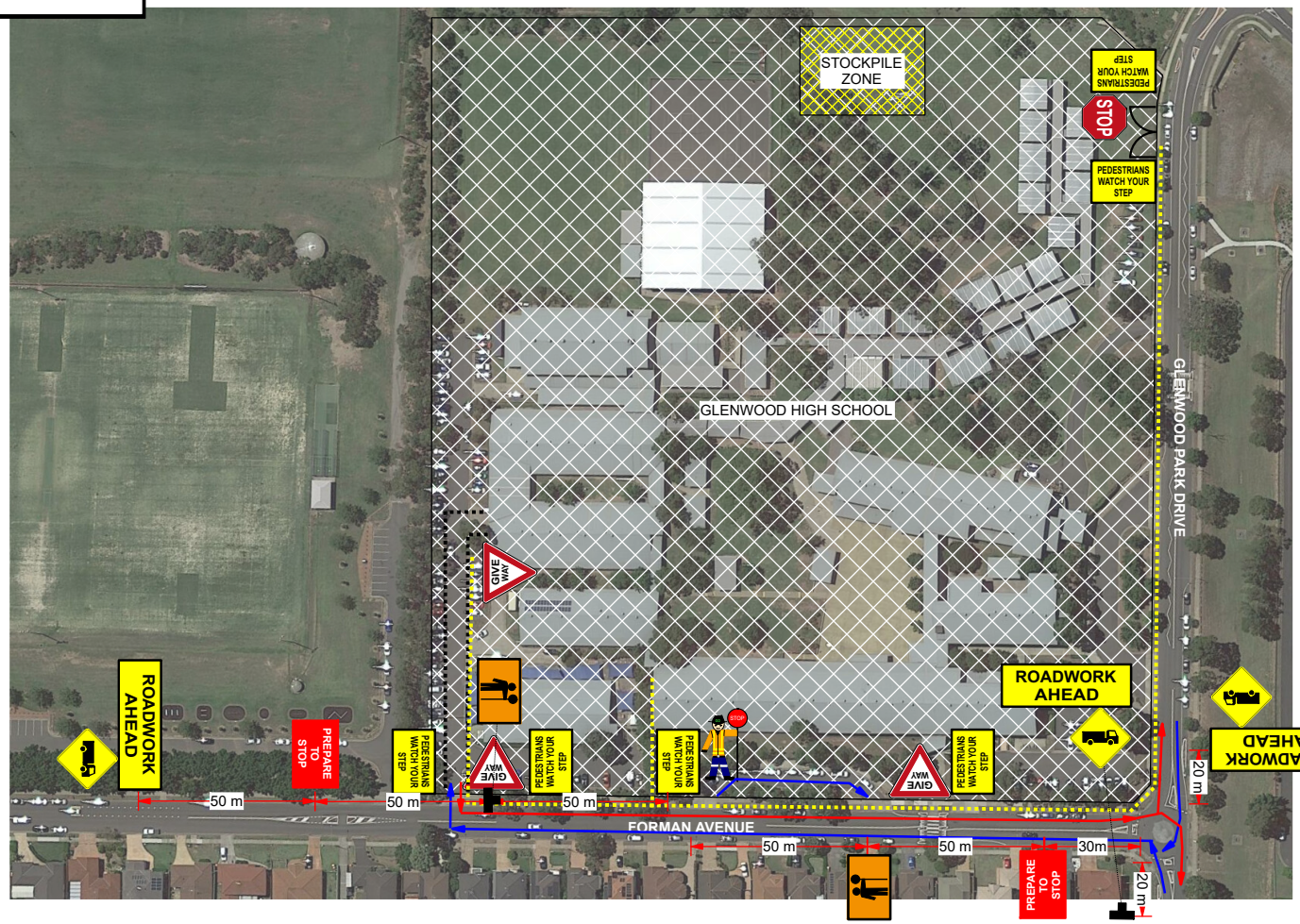
The Traffic Planner

TGS ID TC22512



Legend

- Ingress Route
- Egress Route
- Access Gate
- Workers Ped Route
- Traffic Controller

CLIENT: TTW

PROJECT: Glenwood High School

LOCATION: Forman Avenue, Glenwood NSW

SCOPE OF WORKS: Work Site Access Management - Stage 2 - Western Access

LCA & MUNICIPALITY: Blacktown City Council

DATE: 11/5/2022 TCP EXPIRY: 11/5/2023

TMP LICENCE: TCT0041658 TYPE: PWZ

AUTHOR: Kyle Fieg SIGNATURE: K. Fieg

THIS TRAFFIC GUIDANCE SCHEME IS BASED ON THE NSW RMS TCAW MANUAL V6.0 & AS1742.3-2019

APPROVALS / PERMITS TO BE ONSITE AT ALL TIMES

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Taper Lengths:

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66 to 75		70	115
76 to 85		80	130
86 to 95		90	145
96 to 105		100	160
Greater than 105		110	180

Distance between signs:
Single sign: 2D for speeds greater than 66 km/h and 1D for speed zones of less than 65 km

Multiple signs: 1D for all speed zones

EXISTING POSTED SPEED LIMIT: 50

PLAN SCALE: NTS

SHEET SIZE: A3

Traffic Guidance Scheme has been prepared in accordance with AS1742.3-2019 "Traffic Control Devices for Works on Roads", Road Management Act 2004, Code of Practice Traffic Management 2010 & the TfNSW Roads and Traffic Control Work Sites (TCAWS) Technical Manual V6.

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Pedestrians are to be physically separated from the worksite at all times with para-webbing or similar to ensure they do not walk into the work site, with 'pedestrians watch your step' signage placed on all approaches to work site. Where pedestrians are to come on/off the kerb a non-slip surface ramp per AS1428 be provided by the client. Minimum mounting height for all short term signage should be 200mm.

Appendix C – Swept Path Analysis