Environmental Management Plan

Wagga Wagga Hospital Redevelopment Stage 3

Project number:	N1051
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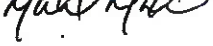
Revision:	07

Document Approval

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
01	18/01/2019	E Gardner	T Doczy	M Martin	1st submission
02	4/02/2019	E Gardner	T Doczy	M Martin	Submission to BCA Certifier
03	13/03/2019	E Gardner	T Doczy	M Martin	For Construction
04	15/04/2019	E Gardner		M Martin	For Construction
05	01/11/2019	E Gardner	K Kimber	M Martin	6 month review
06	06/02/2020	E Gardner	K Kimber	M Martin	Updates required
07	12/06/2020	E Gardner	K Kimber	M Martin	Review following audit
Signature:					

Details of Revision Amendments

Document Control

The Project Manager is responsible for ensuring that this plan is reviewed and approved. The Project Environmental Representative is responsible for updating this plan to reflect changes to environmental, legal and other requirements including the effectiveness of the control measures, every 6 months.

Amendments

Any revisions or amendments must be approved by the Project Manager and

- be submitted to the Certifying Authority within 6 weeks of the review, and
- be issued to Health Infrastructure before being distributed / implemented.

Revision Details

Revision	Details
01	First submission to HI
02	Development Consent requirements and Sub Plans added: Submission to BCA Certifier
03	BCA Certifier comments addressed – Traffic Management and Noise Sub Plans updated
04	Minor amendments for construction including Environmental Obligations Register added
05	6 month review including the following updates: s3.2.4, tables 3.4, 9.4, 9.6 and 12.4, Appendix H SEP.
06	Updates include: Part A Section 2.4, 2.5 and table 2.6 Part C Table 6.3 Appendix B - certification of CPB Appendix D - Modification 2 & 3 to SSD 9033 Development Consent. Appendix K - revised TMP
07	Updates include Part A Section 2.4 Development Consent Conditions and table 2.6 Appendix H ERSED Plan

Contents

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1. Structure of this Plan

This Environmental Management Plan (EMP) outlines how we will achieve acceptable environmental outcomes on the Wagga Wagga Hospital Redevelopment Stage 3 by the application of the CPB Contractors Environmental Management System (EMS).

In addition to the Project Management Plan, other Project Plans that interface with the Environmental Management Plan include:

- Construction Management Plan
- Engineering and Design Management Plan
- Quality Management Plan
- Safety and Health Management Plan
- Project Training Plan
- Completion Management Plan

The plan has the following structure:

Part A: Overview	This section clearly defines: ▪ Purpose and Scope of the EMP ▪ Environmental Contract Requirements ▪ Objectives and Targets ▪ Structure the Environmental Management System ▪ Summary of the Significant Environmental Hazards, specific client requirements, compliance requirements and project environmental performance targets
Part B: Implementation Plan	This section outlines in detail the key aspects for environmental management on the project including: ▪ Expectations ▪ How they will be met ▪ Responsibilities ▪ Associated deliverables
Part C: Environmental Sub-Plans	This section contains the Environmental Sub-Plans developed by the project to manage Significant Environmental Hazards and other potential major impacts upon the environment and community
Part D: Appendices	This section provides information supporting the EMP including: ▪ Environmental Policy ▪ Environmental Risk Register ▪ Environmental Roles and Responsibilities ▪ Site Environment Plan

2. Project Overview

2.1 Purpose and Scope

CPB Contractors has been contracted by Health Infrastructure to provide a new purpose built facility including subacute, ambulatory, community and primary health care services for Wagga Wagga Hospital. CPB Contractors has been appointed the Contractor to design and construct the Works in accordance with the GC21 (Edition2) Contract.

This Plan is established in accordance with 'The Way We Operate' framework and is the key document that integrates the requirements of the Environmental Impact Statement for SSD 9033 dated 28 June 2018 and the associated Development Consent Conditions and client environmental requirements during project delivery.

Implementation of the EMP will:

- Identify the environmental obligations attached to the tender / project and the hazards and risks associated with the works
- Assist in the prevention of unauthorised environmental harm
- Fulfil the Client's environmental requirements as defined in the Contract, including complying with relevant permits and approvals
- Comply with all relevant environmental legislation
- Minimise negative impacts on the community that relate to the Project's environmental impacts
- Identify and implement feasible opportunities to reduce the environmental impact of the Project that are beyond contractual and compliance requirements
- Fulfil CPB Contractors' EMS requirements enabling continued certification to ISO14001 and contribution to CPB Contractors' overall Business Plans.

The Project Manager, with advice and input from senior construction staff, is responsible for the Plan.

2.2 Environmental Contract Requirements

The following table sets out the minimum client requirements as defined in the GC21 Contract General Conditions and Special Conditions and shows where each requirement has been addressed within this Plan or the wider CPB Contractors management system.

Table A: Contract Requirements for Environmental Management

Contract Reference	Content requirements	Where addressed	Comments
General Conditions Clause 15; Contract Information Section 15D; Special Conditions Clause 6	Compliance with NSW Government Environmental Management System Guidelines		
	1. The Contractor is required to implement an accredited Environmental Management System.	EMP Part A Section 3 and Appendix B	ISO 14001:2015 accreditation to 30/11/2019.
	2. The Contractor is required to submit an Environmental Management Plan 14 days before starting work on the site.	EMP Part A Section 3.1.2	EMP provided 14 days before works commence on site.
Special Conditions Clause 16 and Preliminaries Clause 6.	**Waste Management** – the Contractor is the owner of waste absolutely and unconditionally, whether existing at the site or when generated as part of carrying out the Works, and assumes all risk and liability of any nature whatsoever in relation to such waste.	EMP Part C Waste Management Sub Plan	

Contract Reference	Content requirements	Where addressed	Comments
	Implement waste minimization and management measures. Monitor and record the volumes of waste and methods and locations of disposal.		
Preliminaries Clause 6.1	Environmental Management Monthly Report to be submitted	EMP Part B Section 12.2	
	Notification of incidents in accordance with POEO Act and immediately notify the Principal	EMP Part B Section 9.1	

2.3 Standard Operating Requirements

Hours of Work	Construction, including the delivery of materials to and from the site, may only be carried out between the following hours: a) 7am and 6pm, Mondays to Fridays inclusive; and b) 7.30am and 5pm, Saturdays. No work may be carried out on Sundays or public holidays. Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours: a) 9am and 12pm, Mondays to Saturdays inclusive; and b) 2pm to 5pm, Mondays to Fridays inclusive. Activities may be undertaken outside of these hours if required: a) by the Police or a public authority for the delivery of vehicles, plant or materials; or b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or c) where the works are inaudible at the nearest sensitive receivers; or d) where a variation is approved in advance in writing by the Planning Secretary or her nominee if appropriate justification is provided for the works. Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards.
Site Contacts	Site Manager Tim Bradley: 0420 927 216 Project Manager Michael Martin (Out of Hours): 0407 423 521

2.4 Development Consent Requirements

Development Consent Application number SSD 9033 was provided on 18 December 2018 in accordance with Section 4.38 of the Environmental Planning and Assessment Act 1979 for SSD 9033. The compliance requirements relating to the Consent are detailed in Appendix D.

Refer to the following for Development Assessment and EIS:
http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9033

Three Modifications have since been approved following commencement of the project, these include:

- Mod 1 approved 12/06/2019 – Amendment to condition B7 re. unexpected contamination procedure
- Mod 2 approved 25/08/2019 – Extension to basement carpark
- Mod 3 approved 19/12/2019 – Insertion of staging conditions

A 4th Modification is currently under review for relocation of generator.

2.5 Objectives and Targets

The Project has set the following environmental performance targets. These include current business plan environmental targets for the Business Unit and the whole of CPB Contractors:

Table B: Leading indicators

Key Performance Indicator	Target	Time Frame	Actions to be Taken	Accountability
SHEQ observations	Four observations conducted per member of leadership team per month	Each month	Four observations to be performed by each member of the leadership team per month	Project team
Completion of inspections	100 per cent of scheduled inspections of environmental controls occur	Each month	Inspections of environmental controls to be identified, scheduled and conducted	Project team

Table C: Lagging Indicators

Key Performance Indicator	Target	Time Frame	Actions to be Taken	Accountability
Level 1, 2 & HPI environmental incidents	Zero	Ongoing	Implementation of the EMP	Project Manager
Environmental Incident Frequency Rate	0.00	Ongoing	All environmental incidents reported and investigated	Project Environmental Representative
Number of actions taken by regulators and/or client	Zero	At all times	Implementation of the EMP	Project Manager
Area of land cleared or disturbed without authorisation	Zero ha	At all times	Implementation of the Fauna and Fauna Sub Plan	Site Manager
Number of unauthorised discharges	Zero	At all times	Implementation of Soil and Water Sub Plan	Site Manager

Key Performance Indicator	Target	Time Frame	Actions to be Taken	Accountability
Damage to heritage items or places without relevant approvals	Zero		Implementation of Heritage Sub Plan	Site Manager
100% of all fuel use and GHG emissions generated by the project is captured and entered into JDE (NGER reporting requirement).	All use / emissions entered into JDE System	Monthly	Implementation of Energy Sub Plan	Commercial Manager
% of waste reused or recycled	75% of waste generated [note waste types excluded from calculation must be defined]	12 months	Implementation of Waste Sub Plan	Site Manager

2.6 Key Environmental Stakeholders

Key environmental stakeholders for the Project include:

Stakeholder Name	Representative	Contact Details
Principal's Authorised Representative	Kylie Manson	kmanson@savills.com.au
Contractor's Representative CPB Contractors Pty Ltd	Anthony Armstrong	0419 236 318 Anthony.Armstrong@cpbcon.com.au
Project Manager CPB Contractors Pty Ltd	Michael Martin	0407 423 521 Michael.Martin2@cpbcon.com.au
CPB Business Unit Environmental Manager (NSW/ACT)	Tracey Doczy	0411 952 658, 02 9035 5870 Tracey.Doczy@cpbcon.com.au
CPB Project Environmental Representative	Kerry Kimber	0400 988 472 Kerry.Kimber@cpbcon.com.au
Wagga Wagga City Council	Cameron Collins Bill Harvey	1300 292 442 (02) 6926 9100 council@wagga.nsw.gov.au
Office of Environment and Heritage (EPA)	Jessica Creed Craig Bretherton	riverina.farwest@epa.nsw.gov.au Griffith EPA –02 6969 0700
Philip Chun Building Compliance	Peter Murphy	0418 898 977, 02 9412 2322 peter.murphy@philipchun.com
Independent Environmental Auditor	Erwin Budde	0414 713 242 erwin.b@nghconsulting.com.au
Riverina Water County Council		(02) 6922 0608

3. Environmental Management System

3.1 System Overview

3.1.1 Governance documentation

The Environmental Management System (EMS) is based on the requirements of the CPB Management System and has been specifically tailored to ensure compliance with Health Infrastructure additional Environmental requirements. The Project Management Plan provides more detail about 'The Way We Operate' and the process adopted to deliver against Health Infrastructure overall requirements.

The CPB Contractors management system is certified to conform to:

- AS/NZS ISO 14001:2004 Environmental management systems – Requirements with guidance for use.

Evidence of certification is included in Appendix B.

The CPB Management System has been developed and implemented to ensure a consistent approach to project delivery.
The management system comprises the following components:

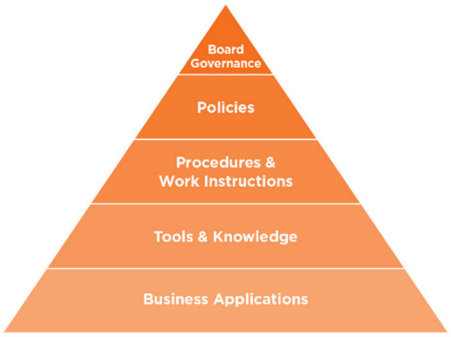


Figure 1: CPB Contractors Management System

- A Policy is a statement of strategic intent and commitment and defines the minimum mandatory requirements that CPB Contractors expects all levels of the organisation to comply with.
- The Project Management Plan outlines how the Project will be managed and it is supported by a suite of functional management plans.
- Procedures and Work Instruction specify how to undertake and control specific activities. They also list accountable roles and the tools and knowledge to be used. Where appropriate and approved by the respective Business Unit functional manager, project specific procedures may be produced to reflect specific project circumstances.
- Tools are preformatted documents such as forms and templates that are required to be completed as part of a Procedure.
- Knowledge documents are reference material to provide context, additional information or guidance to a Policy or Procedure.
- Business Applications are the software tools used to manage our business and support our operations.

3.1.2 Environmental Management Plans (EMPs)

Each project maintains an EMP (this document) that describes the actions to be taken by that project to comply with each Element and Expectation. The Project's EMP must demonstrate that:

- Contractual environmental requirements are being fulfilled
- The Project is compliant with all relevant environmental legislation
- The effect of environmental impacts on the community is minimised.

3.1.3 Procedures, Knowledge and Tools

A procedure describes the steps to be undertaken to complete an activity, the accountable roles and the tools and knowledge to be used.

Tools are preformatted documents (forms and templates) used to collect specific data or information for a particular purpose.

Knowledge documents are reference material to provide context, additional information or guidance to a Policy or Procedure.

Business Applications are the software tools used to manage and support our operations.

3.2 Improvement

In addition to specifying the day-to-day environmental management of a project, each EMP details activities to be performed to deliver continual improvement in environmental performance.

Continual improvement is achieved through constant measurement and evaluation, audit and review of the effectiveness of EMP and adjustment and improvement, project environmental outcomes, and CPB Contractors EMS.

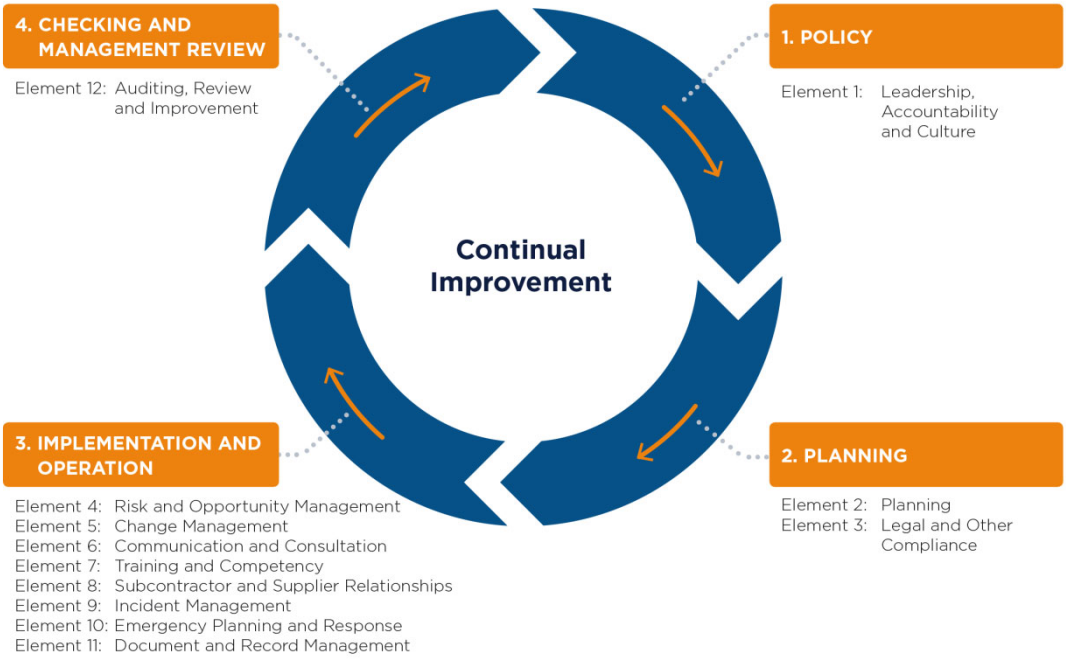


Figure 2 Continual Improvement Mechanism

3.3 Interactions with Other Management Plans

This EMP is part of an integrated set of project management plans. The table below sets out interactions of this EMP with the other management plans implemented on the Wagga Wagga Hospital Redevelopment Stage 3.

The specific linkages that exist between management plans are addressed thoroughly in Part B of this plan.

		PROJECT MANAGEMENT PLAN					
		ENVIRONMENTAL MANAGEMENT PLAN					
Element of EMP	**Design**	**Construction**	**Safety**	**Risk**	**Commercial**	**HR**	**Community & Stakeholder**
Leadership, Accountability and Culture			●			✓	
Planning			●		✓	●	
Legal and Other Compliance	✓	✓	●				●
Risk Management and Controls	✓	✓	✓	✓		●	
Change Management	●	●	●	●	●	●	●
Communication, Consultation and Participation			✓			✓	✓
Training and Competency			●			✓	
Subcontractor and Supplier Relationships	●		●	●	✓		
Incident Management			✓				●
Emergency Planning and Response			✓	●	●	●	●
Document and Records Management	●	●		●	●	●	●
Auditing, Review and Improvement			✓	●			

● Element (or subject) also addressed in other management plans

✓ Other plan directly interfaces with the Environmental Management Plan

4. Significant Environmental Hazards and Environmental Sub Plans

This EMP also includes Environmental Sub Plans for Significant Environmental Hazards (SEH), and Environmental Sub Plans for Other Environmental Hazards. As with all Environmental Hazards, SEHs have been identified through the review and analysis of environmental reports, contractual documents, community and legal compliance requirements relating to the Project and professional experience. Each of the Sub Plans listed below will be regularly reviewed during construction as the project risks are reviewed.

Environmental Hazards (Aspect)	Associated Significant Environmental Impact (Risk)	Environmental Sub Plans (Part C)
Impact to natural water courses	Contamination of soil and water including erosion and sediment control	Soil and Water Management Sub Plan
Impact to flora and/or fauna	Loss of or harm to flora or fauna and protection of exiting trees	Flora and Fauna Management Sub Plan
Environmental impact of noise	Noise affects to community and residents	Noise Sub Plan
Environmental impact of vibration	Vibration affects to community and residents	Vibration Sub Plan
Impact to Heritage	Loss or damage to Heritage items/areas	Heritage Sub Plan
Environmental impact of contaminated soil	Contaminated materials affecting soil and water	Contamination Sub Plan
NGER Reporting	Non- conformance to Government reporting requirements	Energy Sub Plan
Environmental impact of contaminated substances	Uncontrolled spills contaminating soil and water	Hazardous Substances Sub Plan
Waste management and reporting	Uncontrolled waste removal and non-conformance to waste reporting to Government	Waste Management Sub Plan
Environmental impact of air pollution	Air pollution including dust affecting people, fauna and water	Air Quality Sub Plan
Environmental impact of light	Construction light effects on hospital Users	Light Pollution Sub Plan
Environmental impact of traffic	Construction traffic effects on public traffic and pedestrians	Traffic Management Sub Plan

5. Elements and Expectations

The Environmental Management Plan is structured using a common set of Elements and Expectations:

Element	Key aspects for managing this function on the Project
Expectation	The high-level outcomes achieved as part of each Element

This two-level hierarchy provides a consistent structure that is applied across all Management Plans on the Project. Those Elements are:

- Element 1: Leadership, Accountability and Culture
- Element 2: Planning
- Element 3: Legal and Other Requirements
- Element 4: Risk and Opportunity Management
- Element 5: Change Management
- Element 6: Communication and Consultation
- Element 7: Training and Competency
- Element 8: Subcontractor Relationships
- Element 9: Incident Management
- Element 10: Emergency Planning and Response
- Element 11: Document and Record Management
- Element 12: Reporting, Auditing, Review and Improvement

Element 1: Leadership, Accountability and Culture

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
1.1 Environmental accountabilities, roles and responsibilities for managers, staff, employees and subcontractors are clearly defined, documented and communicated	**Roles and Responsibilities** Environmental responsibilities are included in all Position Descriptions. Roles that carry specific environmental accountabilities (e.g. those that supervise or manage work with specific environmental risks) will contain more detailed environmental content. The environmental responsibilities contained in Position Descriptions are communicated to each person by their immediate supervisor upon commencing in their role.	**P&C Manager** Project Environmental Representative Line managers	Position Descriptions
1.2 Environmental leadership and commitment is demonstrated through measurable participation in environmental management	**Participation and Measurement** All personnel in leadership roles on the Project participate in environmental management activities, including observations, incident reviews and HSE committee meetings. In addition, project management will: Regularly review environmental performance against Project KPIs and raise corrective actions to maintain or improve environmental performance as necessary Address pertinent environmental matters at communication forums.	**Project Manager** Line managers Functional managers Supervisory staff Project Environmental Representative	Measurement system output to include: Inspection records, Incident reviews, HSE Committee meeting attendance (minutes), delivering toolbox talks
1.3 Environmental expectations are clearly defined with appropriate reward and disciplinary processes in place.	**Environmental Policy** The CPB Contractors Environmental Policy will be communicated in project inductions and prominently displayed at the Project. **Project Environmental Rules** The Project Manager and Project Environmental Representative will assist in development of “Project Rules” during Project start-up to address key environmental matters. These rules will be documented, communicated and prominently displayed at the Project and will be reviewed at least every six months. Any person who breaches these rules will be managed in accordance with CPB Contractors requirements for counselling, discipline and, if needed, termination.	**Project Manager** All personnel	Environmental policy displayed and communicated in site inductions Project Rules KPIs defined (Part A)

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Performance Targets Environmental performance targets for the Project have been identified in Part A of this document. The associated key performance indicators (KPI) include lead and lag indicators. Measurable targets have been set for each KPI and an applicable time frame nominated. The targets are in line with CPB Contractors Corporate and Business Unit targets.	**Project Manager** Project Environmental Representative	Monthly Team Meetings
	Managing Personal Performance Environmental performance goals will be set and reviewed for individuals with environmental leadership roles (refer to Element 1.1 above) during the performance and development review process.	**Project Manager** Line Managers	Performance and development reviews

Element 2: Planning

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
2.1 Adequate resources are provided to effectively implement the EMP	**Resources** The Project budget includes sufficient allowances to implement the EMP, including people, technical environmental expertise, equipment, materials, training, plant, and infrastructure. Sufficient people are appointed to the Project to implement the EMP.	**Project Manager** Commercial Manager	Project budget Project forecasts Organisational structure Training matrix Training schedule
	Environmental Monitoring The Project Environmental Representative in consultation with the Senior Project Engineer is accountable for developing the Project Monitoring Schedule(s) prior to any works commencing on the project. All environmental monitoring on the Project is planned according to the requirements of the Environmental Sub-Plans within Part C of this Plan.	**Project Environmental Representative** Senior Project Engineer	Monitoring Schedule Environmental Sub-Plans
2.2 Business systems are defined and established	**Define and set up IT Systems** Applications required to management environment on the Project are defined and established prior to works commencing. Systems to be used include: ▪ **Synergy** - Reporting and recording all environmental incidents, audit results and corrective actions, water usage and waste data ▪ **JD Edwards** (NGER module) to capture energy use and emissions, and fuel usage ▪ **Aconex** – Records and documents management and archiving ▪ **Damstra** – Management of project inductions and record of inspections	**Project Environmental Representative**	Applicable business systems
2.3 Environmental Sub-Plans are prepared and maintained for Significant Environmental Hazards	**Identify Significant Environmental Hazards (SEH)** Significant environmental hazards relating to the projects activities have been identified through the review and analysis of environmental reports, contractual documents, and community and legal compliance requirements relating to the Project and supported by professional experience of the assessor. The project SEH list in Part A is reviewed by the Project Environmental Representative at a minimum of 6 monthly intervals. The review should be supported by the current environmental risk and opportunities identification and analysis assessment and project environmental performance.	**Project Environmental Rep**	Significant Environmental Hazards and Environmental Sub-Plans listed in Part A Sub-Plans contained in Part C Project Risk Register
	Environmental Sub-Plans Environmental Sub-Plans (Part C) are reviewed for on-going relevance and accuracy by the Project Environmental Representative. The frequency of review is triggered by	**Project Environmental Rep**	Reviews of SEH and environmental Sub-Plans

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	incident history, changes to the project, including contract variations, and management review requirements. Reviews are documented and records retained in the project document management system.		

Element 3: Legal and Other Requirements

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
3.1 Relevant legal, contractual and other requirements are identified and maintained in a legal and other obligations register	**Identifying Environmental Obligations** The Project Environmental Representative has reviewed the Contract, construction methodology and program and identified all: ▪ Contractual conditions specific to environmental management. ▪ Regulatory approvals required and associated conditions. ▪ Specific requirements of local, state and federal laws that are additional to the requirements of Project approvals using CPB Contractors' online subscription to EnviroLaw. ▪ Targets and objectives in CPB Contractors Business Unit or whole of CPB Contractors Business Plans. The sources and details of, and means of compliance with the above, are captured within the Development Consent Compliance Register (Appendix D), Legal and Other Requirements Register (Appendix F) and Environmental Obligations Register (Appendix G). Documentary evidence must be available to show that all owners of obligations have been informed of their responsibility and are in a position to deliver the obligation.	**Project Environmental Representative** Project Manager	Environmental Obligations Register Development Consent Compliance Register Legal and Other Requirements Register
3.2 All necessary environmental approvals are obtained prior to commencing relevant works and surrendered on completion	**Obtaining and Surrendering Environmental Approvals** Approvals required to deliver the project are obtained prior to the commencement of any activities relating to the scope of the approval. The timing to obtain each necessary regulatory approval is determined and included within the Project program linked to relevant activities. Details of all approvals and licenses (including applications and decision notices where appropriate) are maintained in the Project's Environmental Obligations Register. . All regulatory approvals will be surrendered according to the requirements of the approval or, where not stated, as soon as practical following the completion of the activity to which the approval relates. An Environmental Obligations Register will be updated to include conditions associated with newly received regulatory approvals.	**Project Environmental Representative** Engineers Project Manager	Environmental approval documentation Approval and licence conditions entered into Project's Environmental Obligations Register Updated Environmental Obligations Register
3.3 Work is planned and executed to ensure compliance	**Planning for Compliance** The Project Environmental Representative is consulted upon commencement of development of all Construction Area Plans (CAPs) and Work Packs, and throughout their development. All controls necessary to ensure compliance are included in the CAPs and Work Packs and in the Environmental Sub-Plans (Part C of this Plan).	**Construction Manager** Supervisors Engineers Project Environmental Representative	Reviewed WAPs and Work Packs by Project Environmental Rep Update project program

Expectations		How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
		CAP's and Work Packs should include Site Environmental Plans that clearly shows the controls to be implemented. The Project program is updated to include new approvals determined to be necessary following the review of work plans. CAPs and Work Packs are reviewed by the Project Environmental Representative prior to the commencement of works described in their scope.	Engineering Manager	
3.4	Inspections, observations and monitoring are performed to ensure compliance is maintained	**Implementing Controls** Controls required to achieve compliance, as detailed in the CAPs and Work Packs, will be implemented before relevant works commence. The Environmental Obligations Register contains an explanation, or link to an Environmental Sub-Plan containing an explanation, of how compliance with each listed requirement is to be achieved and how the project will regularly demonstrate compliance with the requirement (if relevant).	**Supervisors** Engineers Project Environmental Representative	Engineered (physical) and administrative controls (e.g. procedures, forms, training) in place
		Inspections and Observations Controls are to be inspected regularly to ensure their ongoing suitability and effectiveness. Inspections and observations are planned and conducted according to the requirements of the Conduct Task Observations and Workplace Inspections Procedures. The outcomes of inspections are captured on the inspection checklists. Corrective actions are raised, tracked and closed out in Aconex.	**Supervisors** Engineers Project Environmental Representative	Observation records Inspection schedules Inspection checklists Corrective actions in Aconex
		Environmental Monitoring Environmental monitoring is carried out to confirm compliance with the conditions of environmental approvals and laws, and to provide early indication of potential adverse impacts to the environment or community. All monitoring is planned and conducted according to the requirements of the procedure Environmental Monitoring and as detailed in the Environmental Sub-Plans (Part C of this Plan). Environmental monitoring results are interpreted to identify actual and potential non-compliances and events that may result in nuisance, environmental harm, and unacceptable loss of amenity or community complaints. Corrective actions are taken immediately or are raised and managed using Aconex	**Project Environmental Representative**	Environmental Monitoring Schedule Monitoring records Calibration records Corrective actions
3.5	All non-compliances are reported as incidents	**Reporting Non-Compliances** All non-compliances are recorded and reported as incidents in the Synergy. This includes events involving an action being taken against the project by a regulator.	**Project Environmental Representative** All personnel	Synergy Incident reports

Expectations		How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
3.6	All energy and greenhouse data are collected and entered into JDE	**Greenhouse and Energy** All subcontractor fuel use to be collated and entered into the JDE NGER Module at the site level. Projects will track subcontractor energy reporting where relevant. All relevant records relating to the reporting of NGER data will be retained with project records for seven years. Any NGER data to be reported to the Client will bereported if required in the Client Monthly Report. All energy (fuels, oils, greases, gases, electricity, solvents) purchased by CPB Contractors and processed through JDE are captured centrally at the Group level.	**Project Environmental Representative** Commercial Manager Project Manager	NGER subcontractor register NGER data checklist Completed NGER subcontractor records Monthly HSE Statistical reports
3.7	Personnel on the site have access to current versions of relevant legislation, standards and codes of practice	**Updates to Legislation, Standards and Codes of Practice** Access to all relevant legislation will be available to personnel via EnviroLaw or other online resources (e.g. state or Commonwealth government websites or www.austlii.edu.au). Updates to legislation, standards and codes of practice will be reviewed to determine relevance. Work practices, the Environmental Sub-Plans attached to this EMP, and Environmental Obligations Register will be altered where appropriate to ensure compliance and all affected personnel informed in a timely manner. Regulatory approvals will be obtained or amended as necessary, work practices altered to ensure compliance and all affected personnel informed in a timely manner.	**Business Unit Environmental Representative** Project Environmental Representative	Updates distributed

Element 4: Risk and Opportunity Management

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
4.1 Systematic processes are defined and implemented for identifying environmental risks and opportunities at all stages of the Project	**Identifying Environmental Risks and Opportunities** Environmental risks and opportunities associated with activities, products and services of the project will be identified, recorded and tracked in the Project Risk Register. The Project Risk Register is an excel Spreadsheet contained in the Project Document Management System, Aconex. Any environmental risks identified as critical will be captured and monitored via the Project Risk Register. Environmental risks and opportunities are considered during all subsequent project risk assessments as per the Project Management Plan. This includes: ▪ Safety/Environment-in-Design workshops conducted throughout the Project ▪ Construction Area Plan (CAP) risk assessments ▪ Work Pack risk assessments ▪ Project Prestart Meeting The Environment Representative is involved in the Principle Risk Assessment and Safety/Environment-in-Design workshops and has approval authorities for all other risk assessment types (except for START/Restart Cards) to ensure environmental risks and opportunities are adequately raised and addressed.	**Project Manager** Project Environmental Representative Engineering Manager Engineers Supervisors	Project Risk Register Work Area Plan risk assessments Project Prestart Meeting
4.2 Identified risks and opportunities are analysed and evaluated according to agreed criteria and recorded in a risk register	**Analysing Environmental Risks and Opportunities** Each environmental risk and opportunity will be evaluated and assigned a rating in the Work Pack Risk Register which is determined using the consequence and likelihood criteria in the Risk Management Procedure identified within the Safety & Health Plan. The influence of existing controls is considered in determining the risk rating. For each environmental risk: ▪ An owner is assigned by the Project Manager, ▪ Existing controls are recorded, including the owner of that control, and ▪ The residual risk will be evaluated. Opportunities will be assessed to determine whether or not they can be implemented on the project and be based on a cost-benefit business case for the opportunity. Advice is sought from the Project Environmental Representative as necessary by the project team to ensure CAP, Work Pack and SEP risk assessments are as informed and accurate as possible.	**Project Manager** Risk owners Project Environmental Representative Engineers	Work Pack Risk Register Project Prestart Meeting
4.3 Environmental controls appropriate to the level of risk are identified, documented and implemented	**Identifying Adequate Controls** If the risk rating returns a result of 'medium' or above, then additional controls sufficient to reduce the risk rating to 'low' or an alternative acceptable level using cost effective designs and engineering and/or administrative controls are to be utilised. Residual risks with a high or extreme risk rating will be considered 'significant' and must be controlled using appropriate systems of work, including Environmental Sub-	**Risk owners** Project Environmental Representative Project Manager Project Engineers	Controls agreed (engineered or administrative)

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Plans and project work procedure, along with available “hard controls”. Approval to proceed is required prior to commencing Accountability for the implementation of each control is assigned in the respective Sub plan and SEPs and a due date set for its implementation as appropriate. Controls are selected in consultation with the Project Environmental Representative to achieve the following, in order of preference: ▪ Eliminate the risk by not performing the relevant activity ▪ Substitute by performing the relevant activity in a way that presents a lower risk ▪ Implement physical (engineered) controls (e.g. sediment basins, check dams) ▪ Implement administrative controls (e.g. procedures, training, inspections).		
	Implementing Controls Controls are implemented by the accountable person as specified in the Sub Plan or SEP by the due date. No activity is commenced until all relevant controls are implemented.	**Risk owners**	Controls in place (engineered or administrative)
4.4 Feasible opportunities are implemented	**Implementing Opportunities** Opportunities identified and for which a business case has been developed, are submitted to the appropriate member of the project leadership team for approval. Once approved, accountability for implementation of the opportunity is assigned and the opportunity is implemented. Environmental and cost benefits are recorded and reported in monthly reporting.	**Project Manager** Opportunity Owner	Monthly reports Case studies
4.5 Identified environmental risks and controls are communicated to all relevant personnel	**Communications in line with Construction Planning** The environmental risks, controls and accountabilities identified are communicated to all relevant personnel. This is achieved through the preparation and communication of the construction methodology, CAPs, Work Packs, SEPs, the conduct of Safety/Environment-in-Design workshops.	**Project Manager** Engineers Project Environmental Representative	Toolbox talk content and attendee records Pre-start meeting content Records of communications and meetings
	HSE Communications Environmental risks, controls and accountabilities are also communicated through delivery of HSE communications, including HSE Committee meetings, toolbox talks and pre-start meetings.	**Engineers** Supervisors Project Environmental Representative Project Manager Health and Safety Manager	Site induction content Toolbox talk content and attendee records Pre-start meeting content Records of communications and meetings

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Communication through Training Nominated administrative controls, including procedures and training, will be communicated through the delivery of training in their requirements. The planning and delivery of this training is provided according to the requirements of Project Training Management Plan.	**Project Environmental Representative** P&C Manager	Training schedule Training matrix Training records
4.6 Regular inspections and monitoring are conducted to check effectiveness of controls	**Inspections, Observations and Monitoring** The processes for inspections, observations and monitoring are described in Expectation 3 of this EMP and detailed in Appendix E.	**Project Environmental Representative** Project Manager Engineers Supervisors	Observation records Inspection schedules Inspection checklists Corrective actions in Aconex
4.7 Environmental risks and controls are regularly reviewed.	**Risk Review** The relevance and adequacy of environmental risks and controls identified in this EMP, the Principal Risk Assessment, CAP and Work Pack risk assessments are reviewed and updated according to Project Management Plan.	**Project Manager** Project Environmental Representative Engineers	Project Risk Register Updated risk registers in CAPs and Work Packs

Element 5: Change Management

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
5.1 Changes to planned operations that have potential environmental consequences are identified	**Identifying Change** Personnel promptly report any 'medium' or 'major' changes that could affect the environment and/or community A 'medium' or 'major' change could result from a change to design, plant (fixed and mobile), systems, personnel and work methods such that the absence of a considered review could compromise the project's ability to comply with its obligations and/or result in an inadequate range of controls which could lead to an incident or result in community nuisance. A 'medium' change is one which includes permanent changes to Work Pack methodology or work conditions. A 'major' change is one which is site-wide or requires a revision of CAP's.	**Project Manager** Project Environmental Representative Engineering Manager Engineers Supervisors	Notification via Aconex
5.2 Risks associated with identified changes are assessed and controlled before changes are implemented	**Risks Associated with Change** All proposed changes are documented, including the assessment of risks relating to the change. Key personnel affected by the change are involved in the risk assessment.. Input from environmental personnel is sought as necessary. The approach to risk assessment and the implementation of controls will follow the requirements of Element 4 of the EMP.	**Project Manager** Change owner Supervisors Project Environmental Representative	Revised risk assessments
5.3 All changes with environmental consequences are authorised before they are implemented	**Approvals of Change** All change requests are approved by the supervisor or manager of the change owner, or as otherwise required by the project delegations, before any relevant work commences and a record is maintained. This must include any approvals associated with revised WAPs and Work Packs by the Project Environmental Representative.	**Project Manager** Construction Manager Engineering Manager Project Environmental Representative	Correspondence via Aconex
5.4 Controls associated with change are communicated to all affected personnel	**Communication of Change** Affected personnel will be consulted and understand the effects of change before the relevant works commence. This is achieved through toolbox talks, daily pre-start meeting, HSE committees or forums arranged to specifically address changes.	**Change Owner** Supervisors	Toolbox talk material Pre-start meetings Attendance records Meeting minutes

Element 6: Communication and Consultation

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
6.1 External environmental stakeholders are identified	**Identifying External Stakeholders** A comprehensive stakeholder analysis will be performed to identify external stakeholders and their interests in the environmental management of the Project. This will include community members and others who could be affected by the Project works, as well as government and environmental lobby groups. The Environment Representative will be involved in the analysis process.	**Community & Stakeholder Manager** Project Environmental Representative	Stakeholder register or database maintained by HI
6.2 Relationships with external stakeholders are effectively managed	**Managing Relationships** Activities performed to effectively manage relationships with external stakeholders include: ▪ Identifying environmental risks that relate to stakeholder interests by considering the impacts to stakeholders (documented in Environmental Risk Register) ▪ Determining suitable controls and activities to mitigate risks (general controls and activities documented in Environmental Risk Register, details in Environmental Sub-Plans, CAPs, and Work Packs). ▪ Performing inspections, audits, stakeholder engagement and monitoring activities to assess the effectiveness of controls Actively engaging stakeholders through open communication and involvement. Compliance with the Community Communication Strategy developed by HI is required for communication with Stakeholders and response to complaints.	**Project Environmental Representative** Community & Stakeholder Manager Project Manager	Project Risk Register Risk assessments in CAPs, Work Packs, Environmental Sub-Plans and Procedures Audit reports Monitoring results Communications material Forums and opportunities for stakeholder engagement HI Complaints Register
6.3 Internal consultative forums are established with regular meetings scheduled, conducted, documented and communicated	**Consultative Forums** A schedule of communication forums will be developed which includes: ▪ Managers' meetings that are to address environmental matters at least monthly; ▪ Environmental Toolbox Talks at least monthly; ▪ Pre-start meetings prior to commencing a shift; The Project Manager will establish appropriate environmental interfaces with the Client and regulatory bodies. Records will be kept of all HSE communication activities (e.g. attendance records). The effectiveness of the meeting outcomes will be reviewed as required.	**Project Manager** Project Environmental Representative H&S Manager	Minutes of meetings/ correspondence with Council and other Authorities Toolbox Talks Pre-Start meetings Attendance records
	Actions from Consultative Forums Actions arising from consultative forums are assigned and communicated to a responsible person and confirmed as being completed. The Project will identify, track and complete environmental related actions using Synergy – Action Plans Module.	**Community & Stakeholder Liaison** Project Environmental Representative	Synergy – Action Plans Module

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	HSE Signs and Notice Boards Dedicated HSE notice boards will be prominently located and maintained with current environmental information.	**Project Environmental Representative**	Signs and notice boards installed with current environmental content
6.4 Environmental complaints and enquiries are recorded and responded to appropriately	**Responding to Complaints and Enquiries** All environmental related complaints will be managed in accordance with the Community Communication Strategy developed by HI. In addition, complaints are treated as an incident and managed according to Element 9 of the EMP. Corrective actions are agreed and implemented, with accountabilities and time frames assigned. The complainant or enquirer is notified of the intended Project response once approved by the Project Manager by HI.	**Community & Stakeholder Manager** Project Environmental Representative Project Manager	Incident records Records of communications
	Changes to Environmental Monitoring Environmental monitoring programs will be reviewed to address matters raised through valid complaints and consultations with stakeholders. Amendments to the monitoring program will be adequate to allow early identification of conditions that are likely to result in further complaints and/or exceedances. Data will be analysed to identify actual and potential impacts to the community, and corrective actions implemented.	**Project Environmental Representative** Community & Stakeholder Manager	Monitoring schedule Monitoring records Corrective actions in Aconex
	Client and Internal Notifications The Business Unit Environment Manager and Corporate Communications Manager are notified of complaints that have or are likely to generate media interest. The Client is notified according to the conditions outlined in the Contract.	**Project Manager**	Record of communication

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
6.5 The effectiveness of internal and external stakeholder engagement is evaluated and improved.	**Evaluation of Internal and External Communications** The effectiveness of internal communication and consultation activities will be formally reviewed as required. The effectiveness of external communication and consultation activities will be formally reviewed as required. The Project Environmental Representative participates in both of these reviews, which are led by the Project Manager and include the Community and Stakeholder Manager and Health and Safety Manager. The Project Environmental Representative will also regularly attend and review the effectiveness of forums and recommend changes to the scheduling or style of forum.	**Project Manager** Community & Stakeholder Manager Project Environmental Representative H&S Manager	Meeting minutes

Element 7: Training and Competency

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
7.1 All personnel have completed an induction containing relevant environmental information before they are authorised to work on the Project	**Inductions** All personnel, subcontractors and visitors will undergo an induction before commencing work on-site. The induction addresses general and Project-specific environmental issues, including: ▪ CPB Contractors' environmental policy ▪ How the EMP will be implemented on-site ▪ High-risk environmental activities on the Project and their controls ▪ What to do in the event of an environmental incident. An assessment will be conducted upon completion of the induction. Induction materials are reviewed at least annually and amended to reflect changes to Project environmental risks, the status of community relations and the occurrence of incidents.	**Project Environmental Representative** P&C Manager Health and Safety Manager	Induction materials Training attendance records Completed induction assessments
7.2 A training plan is developed and documented	**Identifying Training Needs** Environmental training needs required to deliver this EMP are identified and documented within the Project's training matrix. In populating the training matrix, the environmental training requirements for each role are addressed, including competency, needs and capability. The Project Environmental Representative will contribute to the development of the training matrix. The performance and development management process provides an opportunity to identify and plan the delivery of training needs not provided in the training matrix, or that are necessary to aid in the development of the individual. Subcontractor training and competency responsibilities will be included in subcontractor agreements.	**Environment Representative** P&C Manager	Training matrix Performance and Development management plans Subcontractor agreements Subcontractor Start-Up Meeting minutes
	Scheduling Training Needs A project training schedule will be developed to plan the delivery of training needs identified in the training matrix. Refresher training intervals will also be stated where applicable.	**P&C Manager** Project Environmental Representative	Training matrix Training records

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
7.3 Personnel are trained and assessed according to the training plan	**Provide Training Resources** All resources to deliver the training schedule, including personnel, equipment, funding and materials, will be allowed for in the Project budget.	**Project Manager** Project Environmental Representative	Project budget
	Delivery of Training All training identified in the training matrix will be delivered according to the training schedule. Training and development needs identified through the performance and development process will be achieved as per time frames nominated in individual plans. Personnel delivering environmental training must be deemed competent by the Project Environmental Representative or Business Unit Environment Manager.	**Project Manager** P&C Manager Project Environment Representative	Training records
	Training Evaluation and Review Training assessments and evaluation forms will be used to assess the effectiveness of training. Training evaluation and feedback will be reviewed and used to improve the quality of environmental training delivered on the Project. The training matrix and schedule will be completely reviewed at least annually or prior to the commencement of major new tasks.	**P&C Manager** Project Environmental Representative	Training evaluation forms Training matrix
7.4 Training records are maintained and accessible to relevant personnel.	**Training Records** Records of all training activities, including inductions, will be maintained. Records will include the name and role of the attendee, the name of the course and, where applicable, reference to the document controlled version of the material presented, and a copy of the assessment completed.	**P&C Manager** Project Environmental Representative	Training records

Element 8: Subcontractor Relationships

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
8.1 Selection processes ensure that subcontractors meet CPB Contractors' minimum environmental requirements	**Subcontractor Selection and Engagement** Subcontractors engaged on the project are required to undergo a thorough assessment prior to selection. The Project Environmental Representative will be consulted on environmental requirements of subcontracts and the adequacy of proposed conditions. Subcontractors will be made aware of CPB Contractors' environmental requirements during the tender process and Start-Up meetings.	**Commercial Manager** Engineers Project Environmental Representative	Subcontractor Agreements
8.2 Planning requirements of all subcontractor work scopes are completed and communicated prior to commencing work	**Identify, Complete and Communicate Planning Requirements and Documentation** The scope of work to be performed by each subcontractor is reviewed to determine whether it includes works for which project planning and environmental risk assessments have been completed. If so, the subcontractor is formally informed of all relevant risks and existing project documents, systems and procedures to be followed prior to commencing works (in addition to having been informed of these during the tendering process in the Subby Pack). These may include the contents of the construction methodology, CAPs, Work Packs, SEPs, and Environmental Sub-Plans in this EMP. If the scope of works includes activities not already addressed in Project planning and risk assessment, then an appropriate risk assessment is performed and either existing documentation is revised or new documentation produced. The Project Environmental Representative should review this new documentation to ensure it meets project requirements. In either case, the subcontractor must be formally informed of all requirements prior to commencing works.	**Engineers** Project Environmental Representative Commercial Manager	Construction Area Plans (CAPs) Work Packs SEPs Records of subcontractor notification Induction
8.3 Compliance requirements for high risk environmental activities are identified and enforced	**Compliance requirements** For high risk environmental activities, the Project Environmental Representative will review the subcontractor's scope of works with the supervising Engineer and: ▪ Identify any new issues relevant to the subcontractor's scope of works; ▪ Identify any additional compliance requirement not captured; ▪ Identify necessary approvals not already in place and obtain those approvals prior to any works commencing; ▪ Update the relevant Environmental Sub-Plans, SEPs, and Environmental Obligations Register with details new approvals and their conditions. The Project Environmental Representative will review the CAP and Work Packs, for high risk environmental issues.	**Engineers** Project Environmental Representative Commercial Manager	Records of subcontractor notification Subby Pack Transmittal

Expectations		How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
		The subcontractor will be informed of all relevant environmental issues/risks and controls, procedures and documents to be followed and implemented in order to achieve compliance during the tendering process. This will be reinforced during the Start-Up meeting. The subcontractor will be informed of the requirement to provide all relevant data relating to their works as per the National Greenhouse and Energy Reporting Act 2007 (Cth).		
8.4	Subcontractor documentation is submitted and reviewed to meet Project requirements	**Documentation Preparation and Review** The subcontractor will provide CPB Contractors with all required environmental documentation prior to commencing work on the Project as described in the executed agreement, including any requirement to produce an Environmental Management Plan. Any further requirements will be agreed by the Commercial Manager and the Project Environmental Representative.	**Project Environmental Representative** Engineer Commercial Manager	Subcontractor environmental documentation
8.5	Changes to the scope of work are managed as a Project change	**Manage Changes/Variations** Changes and variations to subcontractor scopes of work will be assessed as a change according to the requirements of Element 5 of the EMP. Documentation will be amended accordingly.	**Commercial Manager** Engineers	Change Requests
8.6	Subcontractors actively participate in environmental management and training on the Project	**Subcontractor Environmental Participation** Subcontractors will participate in HSE communication forums and monitoring activities, as a minimum, including: ▪ Project induction; ▪ Scheduled HSE management meetings, toolbox talks, pre-start meetings, HSE committees (as required); ▪ HSE observations, inspections and audits; ▪ Incident investigations (as required); ▪ Development or review of safe work systems SEPs (as required).	**Commercial Manager** Project Environmental Representative Subcontractors Engineers	Attendance records Monitoring records

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Subcontractor Training Subcontractors will undergo all necessary environmental training including any required by the Project. The required training will be determined by reviewing the training matrix relative to the scope of work and roles being filled or supplied by the subcontractor. The delivery and management of training will be as per Element 7 of the EMP.	**Subcontractor** Project Environmental Representative	Subcontractor training records
8.7 Subcontractors are reviewed to assess their performance and compliance with our minimum environmental requirements.	**Subcontractor Audits and Reviews** Subcontractors will be regularly inspected and observed for environmental performance as per Element 3.4 of this EMP.	**Project Environmental Representative** Engineers Supervisors	Audit reports Inspection and monitoring records

Element 9: Incident Management

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
9.1 All incidents are followed by appropriate response and notification	**Incident Response** The immediate response to all incidents is to make the area safe and undertake measures to prevent further environmental harm. An assessment will be made in consultation with the Project Environmental Representative to ensure that responses do not result in further harm. **Initial Incident Notification** The Project Manager and Project Environmental Representative are to be notified immediately of the following incidents: All Level 1 and Level 2 environmental incidents, and PL1 and PL2. The Project Environmental Representative is also to be notified of any actual Class 3 environmental incident, procedural or legal breach. For Level 1 and Level 2 incidents and PL1 and PL2, the Project Manager will immediately notify the Business Unit General Manager and the Business Unit Environment Manager. The Project Manager will also notify the Business Unit General Manager of the need to activate the Project's Emergency Response Procedure and the Group Crisis Management Plan if necessary. The Client is notified of all environmental incidents as per the agreed contractual arrangements. Environmental incidents will be reported to regulators in accordance with POEO Act. In accordance with Development Consent SSD 9033 item C39 and associated Appendix 1 of the Consent Responsibility Matrix, the Department of Planning must be notified in writing at compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident and within 7 days. The notification must identify: the development (including the development application number and the name of the development if it has one), and set out the location and nature of the incident. Refer to Appendix I for template of written notification. Within three months of the submission of an incident report under condition C39 the strategies, plans and programs required under this consent must be reviewed, and the Department and the Certifying Authority must be notified in writing that a review is being carried out. **Preserve the Incident Scene** Scenes of environmental Level 1 and 2 incidents and PL1's are to be preserved until the incident investigation team has collected relevant data and evidence (see below).	**Project Manager** Project Environmental Representative Community & Stakeholder Manager Engineers Supervisors	Records of incident notifications
9.2 All incidents are entered and managed in Synergy	**Incident Classification and Reporting** Environmental incidents will be classified using the Incident Classification Matrix by the Project Environmental Representative in consultation with the Project Manager.	**Project Environmental Representative** Project Manager	Incident records Root cause coding

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	All environmental incidents, including community complaints, will be reported using the Synergy within three calendar days. Root causes will be identified and recorded in Synergy for all Class 1, 2 incidents and HPIs (and optionally for Class 3 incidents). All statutory notices received from regulators, including penalty notices and fines, will be entered as Environmental Legal Issue incidents upon receipt. In accordance with the Development Consent within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may berequested. The Incident Report must include: a. a summary of the incident; b. outcomes of an incident investigation, including identification of the cause of the incident; c. details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and d. details of any communication with other stakeholders regarding the incident.		
9.3 Incident investigations are conducted appropriate to the type of incident	**Project Incident Investigations** All incidents will be investigated according to company procedures. The level of investigation needed will depend on the incident classification. Corrective actions, including those required to help prevent future incident occurrences, are a key outcome of incident investigations. Incident investigation reports are to be uploaded to Synergy. **Statutory Authority Investigations** Before any staff member is questioned by officers of a statutory authority they will endeavour to consult the Project Manager to determine whether Legal Counsel is needed. Regulatory inspectors must be given appropriate assistance during their own investigations.	**Project Manager** Project Environmental Representative Supervisors Engineers	Incident investigation reports
9.4 All personnel conducting incident investigations are trained to competently perform the task	**Incident Investigation Teams Competent and Trained** The selection of the investigation team will be up to the Project Manager and will depend upon the severity of the incident, and the availability of experienced personnel. However, the investigation team does need to have a mix of both Operational and HSE Staff. The following should be considered when selecting an investigation team: ▪ Statutory requirements; ▪ CPB Contractors Corporate requirements;	**Project Manager**	

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	▪ Technical specialists with an understanding of the work process; ▪ Administrative Support; ▪ Mix of skills and experience; ▪ Potential conflict of interest for any proposed member.		
9.5 Corrective and preventive actions are taken after incidents and lessons are shared with other projects	**Corrective & Preventive Actions** Following an incident, corrective and preventive actions will be identified, assigned to the appropriate person/s and closed out according to set time frames. Time frames are set to ensure damage incurred is rectified and any chance of recurrence is eliminated as soon as practicable. Synergy will be used to assign and track corrective actions. All corrective actions will include reference to the relevant incident record for ease of tracking.	**Project Manager** Project Environmental Representative	Corrective action records on Synergy
	HSE Alerts HSE Alerts will be submitted for all Class 1 and 2 incidents and HPIs to the Project Manager and Business Unit Environment Manager for distribution outside of the project team. HSE Alerts will also be raised for all other incident types at the discretion of the Project Environmental Representative, Project Manager or Business Unit Environment Manager.	**Project Environmental Representative** Project Manager	HSE Alerts
9.6 High potential and repeat incidents are regularly reviewed by the project management team	Each month the Project Environmental Representative will, as a minimum, identify trends in incidents (as a minimum, all Class 1 and 2 incidents and HPIs) and trends in root causes to suggest the nature of preventative actions which are warranted. The Project Manager will approve actions to address incident occurrences and incident and root cause trends. Actions will be managed using the Synergy.	**Project Environmental Representative** Project Manager	Monthly project reports Corrective actions

Element 10: Emergency Planning and Response

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
10.1 Potential emergencies are identified using a formal risk assessment process	**Identifying Potential Emergencies** Risk assessments conducted in accordance with Element 4 of the EMP are used to identify potential emergencies on the Project. Activities found to have an environmental consequence of 4 or 5 as per the definitions for environmental consequence contained within the CPB Contractors Risk Management Protocol will be considered potential emergencies.	**Project Manager** Project Environmental Representative	Project Risk Register Principal Risk Assessment
10.2 Emergency response plans and procedures are developed and regularly reviewed	**Emergency Response Plan** An Emergency Response Plan that addresses all identified potential environmental emergencies with specific emergency procedures for each different potential emergency will be developed. The plan will address or include the following: ■ Nominated and trained emergency coordinator and emergency wardens ■ Explanation of communications to be performed during an emergency ■ Explanation of what a crisis is as compared to an emergency and what to do in the event of a crisis ■ The details of emergency services contacts ■ Emergency assembly locations ■ A detailed location map showing the site in relation to local public roads ■ A detailed site layout diagram ■ Information about personnel and facilities available to help emergency services ■ Specific emergency procedures for each potential emergency identified that aim to protect human health and environmental values, including assessment of resources required to respond to that emergency ■ Post-emergency actions. The Emergency Response Plan will be updated at least annually or when there are significant changes to project activities or in response to revised and new risk assessments.	**Project Manager** Project Environmental Representative H&S Manager	Emergency Response Plan and procedures
10.3 Adequate resources are provided to effectively implement emergency response plans and procedures	**Emergency Response Plans Adequately Resourced** Resources required to implement the Emergency Response Plan will be available on the Project and be maintained. Necessary resources include but are not limited to: ■ An emergency coordinator and emergency wardens; ■ Spill response kits; ■ Firefighting equipment; ■ Barricading; ■ Vehicles.	**Project Manager** Project Environmental Representative H&S Manager	Project resources for Emergency Response Plan and procedures

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
10.4 Environmental emergency response drills are conducted	**Environmental Emergency Response Drills** Environmental emergency response drills will be conducted at least every six months. The emergency scenario of the drills will be rotated to avoid repetition and be relevant to the activities occurring at the time. Records will be kept of the results for all drills. Where testing and evaluation shows a deficiency in either emergency preparations or the Emergency Response Plan, appropriate corrective and preventive actions are taken and raised and managed using Synergy.	**Project Manager** Project Environmental Representative Health and Safety Manager	Emergency response drill records Corrective action records in Synergy
10.5 Employees, contractors and visitors are given appropriate emergency response training.	**Emergency Training** Emergency coordinators and wardens are trained to implement the emergency response plans. Specific training requirements will be identified and captured within the training matrix and will be delivered according to company procedures. Visitors are informed of requirements during the visitors' induction. **General Workforce Training and Awareness** All personnel and subcontractors will receive training to inform them of their roles and responsibilities in the event of an emergency. This training and awareness will be provided during Project induction.	**P&C Manager** Project Environmental Representative Health and Safety Manager	Training matrix Training schedule Training and induction records

Element 11: Document and Record Management

Expectations	How we will meet the Expectations (minimum requirements)	Responsibilities Key Contributor	Deliverables
11.1 Current versions of all relevant documents and records are available and controlled.	The Project must ensure that all documents and records referred to and required to implement the EMP, including the plan are controlled and maintained according to CPB Contractors requirements. This includes but is not limited to all: ▪ Management plans & Procedures ▪ Knowledge and Tools ▪ Templates (e.g. audit template, training matrix) ▪ All electronic records saved in electronic databases such as Synergy, ChemAlert etc. **Document Types** The types of records to be generated on the Project that are to be stored and maintained include: ▪ Environmental monitoring results - 30 years from the date of any incident or completion of the Project, whichever is later ▪ Complaints and enquiries received - 7 years from completion of the Project ▪ Notifications received by regulators - 30 years after the completion of the project ▪ Audit reports - 7 years from completion of the Project ▪ Completed inspections and observations - 30 years from the creation of the record ▪ Waste tracking certificates - 7 years from the creation of the record ▪ Training records - 7 years from the end of the employee's employment ▪ Incident reports - 30 years from the creation of the record ▪ Calibration records for monitoring equipment ▪ Monthly reports and Meeting minutes - 7 years from completion of the Project or from the date on which work was last performed on the Project ▪ Records as required under the National Greenhouse and Energy Reporting Act 2007 - 7 years from the creation of the record ▪ HSE Alerts Any editing and access restrictions to environmental documents and records and who has authority to dispose of nominated documents and records comprise: ▪ Project Environmental Representative to authorise the disposal of any environmental documents or records.	**Project Environmental Representative** Project Manager	Controlled and maintained documents and records
11.2 Relevant documents and records will be maintained using corporate business applications and systems	Relevant environmental documents and records generated on the Project will be stored and managed using Aconex with the following exceptions: ▪ Environmental monitoring data will be managed and stored using the Project drive ▪ Whole of CPB Contractors environmental performance data will be managed and stored in Synergy and JDE, including Water, Waste and Energy and Greenhouse Gases	**Project Manager**	Controlled and maintained documents and records

Expectations	How we will meet the Expectations (minimum requirements)	Responsibilities Key Contributor	Deliverables
	▪ Incident reports and corrective actions will be stored and managed using Synergy ▪ Risk registers will be retained in excel spreadsheet in Aconex. ▪ Corrective Actions issued to Subcontractors will be managed in Aconex.		

Element 12: Reporting, Auditing, Review and Improvement

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
12.1 Environmental performance trends are identified and corrective actions are implemented as required	**Performance Trends** Environmental performance will be reviewed and reported at least monthly to identify trends. Performance will be assessed against both lead and lag measures and relative to specific targets agreed as per Expectation 1.3 of the EMP, and in the sub-plans in Part C. Corrective actions will be managed through Aconex.	**Project Manager** Project Environmental Representative	Monthly reports Team Meetings Corrective Actions in Aconex
12.2 A monthly environmental report is produced and distributed	**Monthly Reporting** A monthly environment report will be prepared for the Project Manager for inclusion in the monthly project Client report, in accordance with Clause 6.1 of the *Preliminaries*. This report will include the following: **Implementation of environmental management** - details of: • the environmental risks and opportunities, and significant environmental impacts • associated with the work; • environmental objectives, targets and measures of performance (where practical); and • management actions, including environmental controls, training, inspections and testing. **Implementation of incident management, including emergency response** - details of • all environmental incidents or emergencies, including non-compliance with • environmental procedures and near misses, implementation of incident and emergency • response management, and implementation of corrective action. **Implementation of reviews** - details of internal reviews, audits and inspections undertaken to verify that on-site environmental processes and practices conform with the Environmental Management Plan, including: • monitoring, measurement, evaluation and review of activities; • the consequences of non-conformances; • investigation, analysis, evaluation and follow-up verification; and • corrective and preventive action taken. NOTE: Environmental section of the monthly report is to be issued with Progress Claim on last business day of the month.	**Project Environmental Representative**	Monthly environment report within: • SHEQ Dashboard • Client Monthly Report
	The Monthly HSE Statistical Report in Synergy will be completed and approved by the Project Manager. This includes reporting on the currency of the EMP, compliance with the EMP and issues and initiatives arising during the period	**Project Manager**	Monthly HSE Statistical Report via SHEQ Dashboard

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
12.3 Regular management reviews are conducted to determine the continuing suitability, adequacy and effectiveness of the Environmental Management System	The Project must conduct formal management reviews to assess the adequacy of the Environmental Management System as part of its annual management system reviews. The outputs of the review will be incorporated into the EMP. That review must take into account the results of: ■ Audits undertaken; ■ Communication, participation and consultation; ■ Relevant communication including complaints from external stakeholders; ■ The perform of the Project; ■ The extent to which the objectives and targets have been met; ■ The outcomes of incident investigations and any corrective actions; ■ Changes to legislation; ■ Actions from previous management reviews and recommendations for improvement.	**Project Manager** Project Leadership Group Project Environmental Representative	Management review report Actions in Synergy
12.4 Audits are undertaken to ensure compliance with the requirements of the EMP	**Compliance with Environmental Management Plan** Regular audits and reviews will be conducted to confirm compliance with the EMP and associated Obligations. A schedule of audits and reviews will be developed and maintained, and may include: Project planning/Start Up reviews (conducted by Business Unit HSE Manager or delegate) ■ Project mobilisation audits (conducted by Business Unit HSE Manager or delegate) ■ Subcontractor audits (for subcontractors performing high risk activities) ■ High-risk activity audits ■ Environmental Management Plan audits (conducted by Business Unit Environment Manager or delegate) ■ Compliance and Legislative audits (conducted by BUEM or competent 3rd party). Action plans will be developed to improve performance as required. Necessary corrective actions will be managed using Aconex. Development Consent SSD 9033 Item A17 requires: Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, noncompliance notification, compliance reporting and independent auditing. Note: For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or particular documented evaluation of the development to provide	**Project Manager** Business Unit Environmental Management Representative Business Unit HSE Manager	Audit reports Corrective actions in Aconex

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	information on compliance with the consent or the environmental management or impact of the development.		
12.5 All audits are undertaken by suitably qualified and experienced personnel	**Auditor Competency** Persons conducting audits and reviews will be suitably experienced and qualified. There are two levels of internal auditor that can be obtained, these being Auditor and Lead Auditor. A mix of general education, specific auditor training and work experience are considered in determining the level of auditor.	**Business Unit Environmental Management Representative**	Training records
12.6 Compliance Reporting	Development Consent SSD 9033 Item B30 states: No later than two weeks before the date notified for the commencement of construction, a Compliance Monitoring and Reporting Program prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2018) must be submitted to the Department and the Certifying Authority. Compliance Reports of the project must be carried out in accordance with the Compliance Reporting Post Approval Requirements (Department 2018). The Applicant must make each Compliance Report publicly available 60 days after submitting it to the Department and notify the Department and the Certifying Authority in writing at least seven days before this is done.	**Project Manager** Environmental Manager	Compliance Monitoring and Reporting Program HI Website
12.7 Independent Environmental Audit	In accordance with Development Consent SSD 9033 Items C33 to C38: The proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the preparation of an Independent Audit Program or commencement of an Independent Audit. No later than 4 weeks after the date notified for the commencement of construction, an Independent Audit Program prepared in accordance with the Independent Audit Post Approval Requirements (Department 2018) must be submitted to the Department and the Certifying Authority. Table 1 of the Independent Audit Post Approval Requirements (Department 2018) is amended so that the frequency of audits required in the construction phase is: a) an initial construction Independent Audit must be undertaken within 8 weeks of the notified commencement date of construction; and b) a subsequent Independent Audit of construction must be undertaken no later than 26 weeks from the date of the initial construction Independent Audit. In all other respects Table 1 remains the same. The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified above, upon giving at least 4 weeks' notice to the applicant of the date upon which the audit must be commenced.	**Project Manager**	Planning Secretary Agreement (e.g. email correspondence from DP&E) Independent Audit Program and reports

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Independent Audits of the development must be carried out in accordance with: a) the Independent Audit Program submitted to the Department and the Certifying Authority under condition C34 of this consent; and b) the requirements for an Independent Audit Methodology and Independent Audit Report in the Independent Audit Post Approval Requirements (Department 2018). In accordance with the specific requirements in the Independent Audit Post Approval Requirements (Department 2018), the Applicant must: a) review and respond to each Independent Audit Report prepared under condition C36 of this consent b) submit the response to the Department and the Certifying Authority; and c) make each Independent Audit Report and response to it publicly available within 60 days after submission to the Department and notify the Department and the Certifying Authority in writing at least seven days before this is done. Notwithstanding the requirements of the Independent Audit Post Approval Requirements (Department 2018), the Planning Secretary may approve a request for ongoing annual operational audits to cease, where it has been demonstrated to the Planning Secretary's satisfaction that ongoing operational audits are no longer required. Within three months of the submission of an Independent Audit under condition C36 the strategies, plans and programs required under this consent must be reviewed, and the Department and the Certifying Authority must be notified in writing that a review is being carried out.		Review documentation
12.8 Non-compliance	All non-compliance with Development Consent requirements must be notified in writing to the Department of Planning at compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance. The Certifying Authority must also notify the Department in writing to compliance@planning.nsw.gov.au within seven days after they identify any non-compliance. The notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance. All non-compliances are to raised and actioned in Aconex.	**Project Manager**	Aconex Email correspondence to Dept Planning
12.9 Site Audit Statement and Report	In accordance with Development Consent SSD 9033 Item D19, prior to occupation of the building, the Applicant must obtain from an EPA accredited Site Auditor, a Site	**Project Manager**	Site Audit Statement and Site Audit Report

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Audit Statement and a Site Audit Report which demonstrates that the site is suitable for its intended uses(s).		

	Environmental Sub Plans
1	Soil and Water Management Sub Plan
2	Flora and Fauna Management Sub Plan
3	Noise Sub Plan
4	Vibration Sub Plan
5	Heritage Sub Plan
6	Contamination Sub Plan
7	Energy Sub Plan
8	Hazardous Substances Sub Plan
9	Waste Management Sub Plan
10	Air Quality Sub Plan
11	Light Pollution Sub Plan
12	Traffic and Pedestrian Management Sub Plan

1. Soil and Water Management Sub Plan

1.1 Scope

This Plan addresses the use of water on the project and the management of impacts to water quality and/or quantity that may be caused by Project activities and that have the potential to adversely affect water availability, the environment and/or community.

Activities conducted on the project that have the potential to impact water quality and/or quantity are provided below.

Table 1.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Detailed excavation	Damage to watercourse/waterway	Impacts to aquatic fauna and flora
Concreting	Discharge of contaminated water	Water quality negatively impacted
Storage and use of flammable and combustible liquids and solids	Spills	Water quality negatively impacted
Dust suppression	Use of water	Unnecessary load on water resources contributing to resource availability
Dewatering	Discharge of contaminated water	Water quality negatively impacted

1.2 Project Compliance Requirements

1.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern impacts to water quality on the project include:

Table 1.2: Contract Clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Special Condition 6	Environmental Protection	EMP must address erosion and sediment control
Preliminaries Clause 5.16	Progressive Cleaning & Rubbish Removal	The Contractor must at all times: 1. Keep the Site and the Works clean and tidy including all access roads; 2. Restrict mud and dust getting on and spreading onto the public roads; 3. Regularly clean public roads as required when conditions require it and/or at the request of any authority;
Preliminaries Clause 5.17	Dust, Mud, Vibration & Noise Control	The Contractor must take all reasonable precautions to avoid nuisance dust, mud. The Contractor must utilise reasonable methods of dust suppression on all compressors, jack-hammers and other machinery of whatsoever description to ensure that the dust levels emanating from the Site during the Works are minimised. The Contractor shall erect screens or take other reasonably necessary preventative measures to

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
		prevent dust and damage to surrounding or adjoining properties (public and private) and shall arrange for the programming of the Works so as to avoid or minimise any such issues occurring. If dust or mud interfere with normal hospital or health facility operations, surrounding or adjoining areas to the Site or the use of roadways, the progress of the Works (or any part thereof) will be suspended until such time as the Contractor rectifies or implements a more appropriate work method to address these issues.

1.2.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of water quality include:

Table 1.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Compliance Requirement
B17	All applicable fees and charges must be paid in full prior to RWCC commencing any on-site works or issuing a 'Certificate of Compliance for Water Supply' for the stage 3 development.	Include in construction certificate requirements submission for external works.
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include a)(iv) stormwater control and discharge (v) measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the site f) Construction Soil and Water Management Sub-Plan including Erosion and Sediment Control Plan	CEMP developed by CPB includes monitoring requirements for each impact. SEP's to include preliminary ESC (Appendix H)
B26	Prior to the commencement of the relevant work, the Applicant must design a stormwater management system for the development and submit it to the satisfaction of the Certifying Authority a) be designed by a suitably qualified and experienced person(s) b) be generally in accordance with the conceptual design in the EIS c) be in accordance with applicable Australian Standards; and d) ensure that the system capacity has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Council Handbook (EPA, 1997) guidelines.	Design review and approval work flows for design development of stormwater management documentation.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Compliance Requirement
C23	During construction, the Applicant must ensure that: a) exposed surfaces and stockpiles are suppressed by regular watering b) all trucks entering or leaving the site with loads have their loads covered c) trucks associated with the development do not track dirt onto the public road network d) public roads used by these trucks are kept clean; and e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.	Soil and Water Management Sub Plan developed by CPB Contractors includes these requirements. Rubble grid installed to main vehicle routes. Gravel access tracks installed to main vehicle routes. Wheel wash facility installed during earthworks activities. Temporary stockpiles kept suppressed with water. Longer term stockpiles to be bound with soil binder.
C24	All erosion and sediment control measures, must be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works have been stabilised and rehabilitated so that it no longer acts as a source of sediment.	ERSED controls to be inspected as part of weekly environmental inspection.
C25	Any seepage or rainwater collected on-site during construction or groundwater must not be pumped to the street stormwater system unless separate prior approval is given in writing by the EPA in accordance with the Protection of the Environment Operations Act 1997.	Soil and Water Management Sub Plan includes this requirement. CPB Permit to dewater process.
C31	The Applicant must ensure that concrete waste and rinse water are not disposed of on the site and are prevented from entering any natural of artificial watercourse.	CPB Waste Management Sub Plan developed by CPB includes this requirement. Designated concrete washout bay established on site for wash out activities.

1.3 Controls Used to Manage Water Quality

Controls that are adequate to minimise water use, to ensure compliance, and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. An Erosion and Sediment Control Plan has been prepared by TTW and is included as part of the Site Environmental plan in Appendix H. The Plan outlines the management processes to be put in place to maintain the quality of stormwater discharge during construction. Surface water management measures will be in accordance with *Landcom guidelines – Managing Urban Stormwater Runoff: Soils and Construction* ("Blue Book") and Wagga Wagga City Council Development Control Plan (DCP). Controls to be used on this project include:

Table 1.4: Water quality controls

Control	Accountability
All applicable fees and charges must be paid in full prior to RWCC commencing any on-site works or issuing a 'Certificate of Compliance for Water Supply' for the stage 3 development.	Site Manager
During construction: exposed surfaces and stockpiles shall be suppressed by regular watering trucks associated with the development shall not track dirt onto the public road network public roads used by these trucks are to be kept clean; and	Site Manager

Control	Accountability
land stabilisation works shall be carried out progressively on site to minimise exposed surfaces.	
CPB shall keep the Site and the Works clean and tidy including all access roads;	Site Manager
Erosion and sediment controls must be designed, developed and implemented in consultation with the construction team and project environmental representative	Project Environmental Representative
Clean water diversions must be installed prior to the commencement of work.	Site Manager
A wash-down area and exit pad are to be provided at the exit point from the construction site to avoid sediment being tracked off the site. All areas used by vehicles are to be adequately drained	Site Manager
Erosion and sediment controls in accordance with Appendix H must be installed prior to or immediately upon any disturbance to vegetation or soil. These controls must remain in place until revegetation, stabilisation or hard scaping has occurred. If these controls require maintenance notify your supervisor. Ensure all works within proximity to storm water drainage have adequate sediment controls that are inspected regularly.	Site Manager/ Supervisors
The body of any vehicle or trailer used to transport excavation spoil must be covered before leaving the premises to prevent any spillage or escape of any dust, waste of spoil.	Supervisors
Cleared areas must be kept to a minimum and be progressively rehabilitated/revegetated as they become available.	Site Manager
All materials must be stockpiled away from water flow paths and sediment fences installed downstream.	Site Manager
Sediment laden water (dirty water) captured onsite must be preferentially reused e.g. dust control.	Site Manager
If dewatering is required during construction, the water would be tested (and treated if necessary) prior to re-use, discharge or disposal. Water discharged from site is in strict accordance with the site's dewatering procedure. No transfer/discharge will be made without a Permit To Dewater approved by the project environmental representative. Dewatering to grassed areas is the preferred method for water discharge. No discharge permitted to storm water system..	Site Manager
An adequate number of concrete washout facilities must be maintained at all times. The washout facilities will be isolated from surface water flows using bunds to prevent contamination of clean surface waters and will be lined to prevent contamination of soil and ground water	Site Manager
All hazardous substances (liquids and solids) are stored and managed according to AS1940.	Site Manager
All refuelling points, including refuelling trucks, will carry hydrocarbon spill kits.	Site Manager
The quantity of water consumed on the project are reported monthly in Synergy	Project Environmental Representative
Opportunities to minimise the use of high quality water will be continually sought and adopted as appropriate.	Site Manager
Daily visual observations of public footpaths and roads to be undertaken for signs of soil tracked on roads. Any soil on road must be cleaned as soon as practicable.	Site Manager

1.4 Stormwater management

All stormwater from the development and during construction ultimately travels to the Docker Street stormwater system. Diversion of upslope water shall be carried out where possible. During

construction a sediment basin will be managed to hold stormwater for settlement and/ treatment as necessary prior to discharge. Note that all excavations may be used as a sediment basin. Water will be tested in accordance with the below water discharge criteria. No discharges are to occur without a signed Permit to Dewater and are to be supervised at all times. Development Consent requirement C25 requires *any seepage or rainwater collected on-site during construction or groundwater must not be pumped to the street stormwater system unless separate prior approval is given in writing by the EPA in accordance with the Protection of the Environment Operations Act 1997.* CPB have obtained advice from EPA advising they recommend reusing water where possible or if a discharge is to occur, implementing pollution control techniques such as discharging over grassed swales or vegetated areas first to reduce total suspended solids and help mitigate any flow related impacts.

Where water is pumped into a sediment basin it may require flocculation with gypsum and pH correction with lime to hasten the treatment process.

Prior to discharge the water must be sampled and tested for the requirements in Table 1.5: Waste Water discharge criteria.

Table 1.5: Waste Water discharge criteria

Parameter	Typical EPL Criteria	Sampling Frequency	Method
pH (units)	**6.5 – 8.5**	<1 hour Prior to discharge to stormwater	Probe
Total Suspended Solids (TSS – mg/L)	**<50**	Prior to discharge to stormwater	Lab testing to identify correlation between NTU and TSS. Testing on site to be for NTU.
Oil and Grease	**No visible oil or odour**	<1 hour Prior to discharge to receiving waterway	Visual and olfactory observation

1.5 Monitoring

The quantity of water used from potable supplies or recycled water obtained from outside the project, will be captured and reported in Synergy.

Water quality monitoring will be performed as required by the Permit To Discharge and if so requested by the Project Manager to identify potential non-compliances before they occur.

The project will use turbidity (NTU) in place of TSS to determine compliance with the Total Suspended Solids criteria. CPB will develop a statistical correlation which identifies the relationship between NTU and TSS for water quality in the sediment basins and excavations in order to determine the NTU equivalent of 50 mg/L TSS before NTU is used.

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in the HSE Reporting System.

Monitoring and analysis of data will be carried out by a competent person.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

Meteorological monitoring to allow the forecasting of rainfall will be reviewed daily at:

http://www.bom.gov.au/nsw/forecasts/waggawagga.shtml

1.6 References

Appendix H Erosion and Sediment Controls and Site Environmental Plan

Soils and Construction 4th Ed (March 2004) – Managing Urban Stormwater: https://www.environment.nsw.gov.au/resources/water/BlueBookVol1.pdf

2. Flora & Fauna Management Sub Plan

2.1 Scope

This Plan addresses the management of impacts to flora & fauna on the project. The project will not involve clearing any native vegetation or natural habitats important to native plants or animals. A Biodiversity Development Application Report as required under the *Biodiversity Conservation Act 2016,* concluded that there is not likely to be a significant impact upon listed plants, animals or communities. There is no natural vegetation however there are requirements for protection of existing street trees.

Activities conducted on the project that has the potential to impact flora and fauna is provided below.

Table 2.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Vehicle and plant movements	Impact/ interaction with existing trees around perimeter of site	Damage to trees
Earthworks and vehicle/ plant movements	Introduction of weeds	Weeds cause loss of native flora
Refuelling/ hazardous materials handling	Accidental release of contaminants to storm water	Loss of water species

2.2 Project Compliance Requirements

2.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern impacts to Flora & Fauna on the project include:

Table 2.2: Contract Clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Special Condition 6	Environmental Protection	EMP must address protection of existing trees

2.2.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of Flora & Fauna include:

Table 2.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Compliance Requirement
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include the following: h) details of tree protection areas to ensure no secondary impacts to extant trees not to be removed	CEMP developed by CPB includes monitoring requirements for each impact.
C21	For the duration of the construction works: a) street trees must not be trimmed or removed unless it forms a part of this development consent or prior written approval from Council is obtained or is required in an emergency to avoid the loss of life or damage to property	Trees to be inspected as part of weekly environmental inspection.

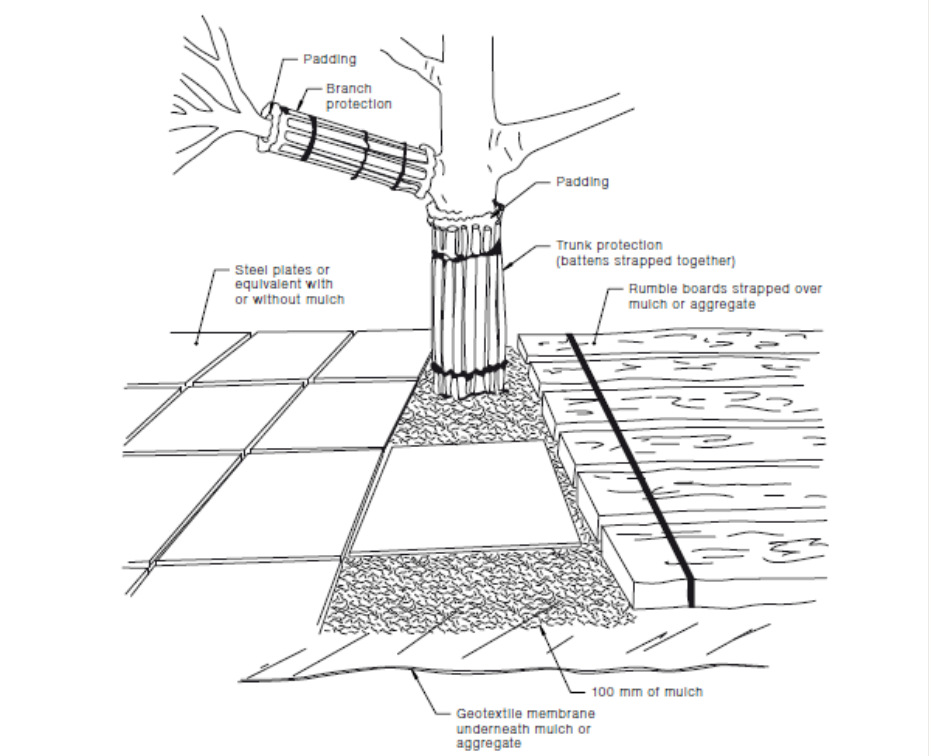
Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Compliance Requirement
	b) all street trees must be protected at all times during construction. Any tree on the footpath, which is damaged or removed during construction due to an emergency, must be replaced, to the satisfaction of Council c) all trees on the site that are not approved for removal must be suitably protected during construction as per recommendations of the Tree Assessment Report prepared for the EIS; and d) if access to the area within any protective barrier is required during the works, it must be carried out under the supervision of a qualified arborist. Alternative tree protection measures must be installed, as required. The removal of tree protection measures, following completion of the works, must be carried out under the supervision of a qualified arborist and must avoid both direct mechanical injury to the structure of the tree and soil compaction within the canopy or the limit of the former protective fencing, whichever is the greater.	

2.3 Controls Used to Manage Flora & Fauna

Controls that are adequate to manage flora & fauna risks and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 2.4: Flora & Fauna controls

Control	Accountability
Prior to any disturbance, clearing or grubbing activities in any locations the following must be in place; ▪ A Land Disturbance Permit (or equivalent) ▪ No-go Zones for significant flora and fauna must be established, fenced/flagged and sign posted prior to commencement of clearing. ▪ A wildlife catcher/spotter or the Environmental Representative needs to conduct a search for any wildlife that may need to be removed and relocated.	Site Manager
If a threat to an animal is evident onsite you must contact your supervisor and/or EMR Project Environmental Representative immediately. Works may need to cease if the animal is in danger or harmed until it has been relocated.	Site Manager
Where possible revegetation activities will preferentially use only species that are indigenous to the area	Site Manager
For the duration of the construction works: • street trees must not be trimmed or removed unless it forms a part of this development consent or prior written approval from Council is obtained or is required in an emergency to avoid the loss of life or damage to property • all street trees must be protected at all times during construction. Any tree on the footpath, which is damaged or removed during construction due to an emergency, must be replaced, to the satisfaction of Council	Site Manager/ Project Environmental Representative

Control	Accountability
• all trees on the site that are not approved for removal must be suitably protected during construction as per recommendations of the Tree Assessment Report prepared for the EIS; and • if access to the area within any protective barrier is required during the works, it must be carried out under the supervision of a qualified arborist. Alternative tree protection measures must be installed, as required. The removal of tree protection measures, following completion of the works, must be carried out under the supervision of a qualified arborist and must avoid both direct mechanical injury to the structure of the tree and soil compaction within the canopy or the limit of the former protective fencing, whichever is the greater.	
Existing Tree Management Tree protection must be installed to existing trees and roots that may be affected during construction, and maintained at all times. Examples of tree/root protection is detailed below. Daily visual inspections will be conducted to monitor protection and weekly environmental inspections will confirm adequacy. If any pruning is required for the trees a qualified arborist is to be engaged and written approval is to be received from Council prior to commencing. Any damage to existing trees must be reported to CPB Site Manager immediately.  NOTES: 1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed. 2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.	Site Manager/ Project Environmental Representative
Weed Management ▪ Vehicle and machinery wash/brush downs will be conducted before vehicles leave the proposal site to minimise the risk of spreading weed and pathogen species during construction. ▪ Priority weeds will be managed according to the requirements of the Biosecurity Act 2015. Local indigenous plant species be utilised in the landscaping wherever possible ▪ Any herbicides used for weed control will be applied to the manufacturer's specifications and as outlined in the manufacturer's Safety Data Sheet. ▪ Spraying of herbicides will not be undertaken in windy weather or within such distance of a watercourse as will permit any of the herbicide to enter the water. ▪ The exotic shrub Cotoneaster is an environmental weed and should be removed from site if encountered, and not used in landscaping.	Site Manager

Control	Accountability
	

2.4 Monitoring

Protected street trees will be monitored daily during visual inspections by the site team. Weekly recorded environmental inspections will be performed by the Project Environmental Representative or Site Manager to identify potential non-compliances before they occur.

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in Aconex.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

2.5 References

AS4970 - 2009: Protection of Trees on Construction Sites

3. Noise Sub Plan

3.1 Scope

This Plan addresses noise management on the project and the management of impacts to the environment and/or community.

Activities conducted on the project that has the potential to create noise issues are provided below.

Table 3.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Demolition	Noise from plant movements (reversing alarms), operation of excavators	Noise limits exceeded causing complaints and discomfort to local residents and hospital users
Piling works	Noise from piling operations	Noise limits exceeded causing complaints and discomfort to local residents and hospital users
Detailed excavation	Noise from plant movements (reversing alarms), operation of excavators	Noise limits exceeded causing complaints and discomfort to local residents and hospital users
Concrete works	Noise from vibrators, reversing concrete trucks	Noise limits exceeded causing complaints and discomfort to local residents and hospital users
General construction activities for building the structure	Use of hand tools (jack hammers, grinders) Additional construction traffic generating additional traffic noise Crane operations/ deliveries	Noise limits exceeded causing complaints and discomfort to local residents and hospital users
Out of hours works	Noise from plant movements (reversing alarms), air brakes, concrete works	Noise limits exceeded causing complaints and discomfort to local residents and hospital users

3.2 Project Compliance Requirements

3.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern noise on the project include:

Table 3.2: Contract Clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Contract Information Item 18	Working Hours	7am to 6pm Monday to Friday and 7.30am to 5pm Saturday inclusive or as agreed with the centre management and authorized by the Principals Authorised Person for other works and in accordance with the approved Review of Environmental Effects Document
Special Condition 6	Environmental Protection	EMP must address noise management to minimise impact to Hospital users, patients and adjoining neighbours
Preliminaries Clause 5.17	Dust, Mud, Vibration & Noise Control	The Contractor must take all reasonable precautions to avoid noise. The Contractor must utilise reasonable methods of noise suppression on all compressors, jack-hammers and other machinery of whatsoever description to ensure that the noise levels emanating from the Site during the Works are minimised. The Contractor shall erect

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
		screens or take other reasonably necessary preventative measures to prevent noise and damage to surrounding or adjoining properties (public and private) and shall arrange for the programming of the Works so as to avoid or minimise any such issues occurring. If noise interfere with normal hospital or health facility operations, surrounding or adjoining areas to the Site or the use of roadways, the progress of the Works (or any part thereof) will be suspended until such time as the Contractor rectifies or implements a more appropriate work method to address these issues.

3.2.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of noise include:

Table 3.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Compliance /Requirement
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: c) Construction Noise and Vibration Management Sub-Plan	CEMP developed by CPB includes monitoring requirements for each impact.
B23	The Construction Noise and Vibration Management Sub-Plan must address, but not be limited to, the following: a) be prepared by a suitably qualified and experienced noise expert b) describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009); c) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers d) include strategies that have been developed with the community for managing high noise generating works e) describe the community consultation undertaken to develop the strategies in condition B23(d); and f) include a complaints management system that would be implemented for the duration of the construction.	Construction Noise and Vibration Management Sub Plan developed by CPB includes monitoring requirements for each impact.
C14	The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible	Noise monitoring to be conducted regularly or during works with expected higher levels of noise.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Compliance /Requirement
	and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures identified in the approved Construction Noise and Vibration Management Plan.	
C15	The Applicant must ensure construction vehicles (including concrete agitator trucks) do not arrive at the site or surrounding residential precincts outside of the construction hours of work outlined under condition C5.	Dedicated person to manage logistics and deliveries.
C16	The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use audible movement alarms of a type that would minimise noise impacts on surrounding noise sensitive receivers.	Plant management and monitoring in accordance with CPB Noise Management Plan.
C17	Any noise generated during construction of the development must not be offensive noise within the meaning of the Protection of the Environment Operations Act 1997 or exceed approved noise limits for the site.	Construction noise management and monitoring in accordance with CPB Noise Management sub Plan.

3.2.3 Sensitive receivers

Figure 3 below identifies potential sensitive receivers adjacent to the project:

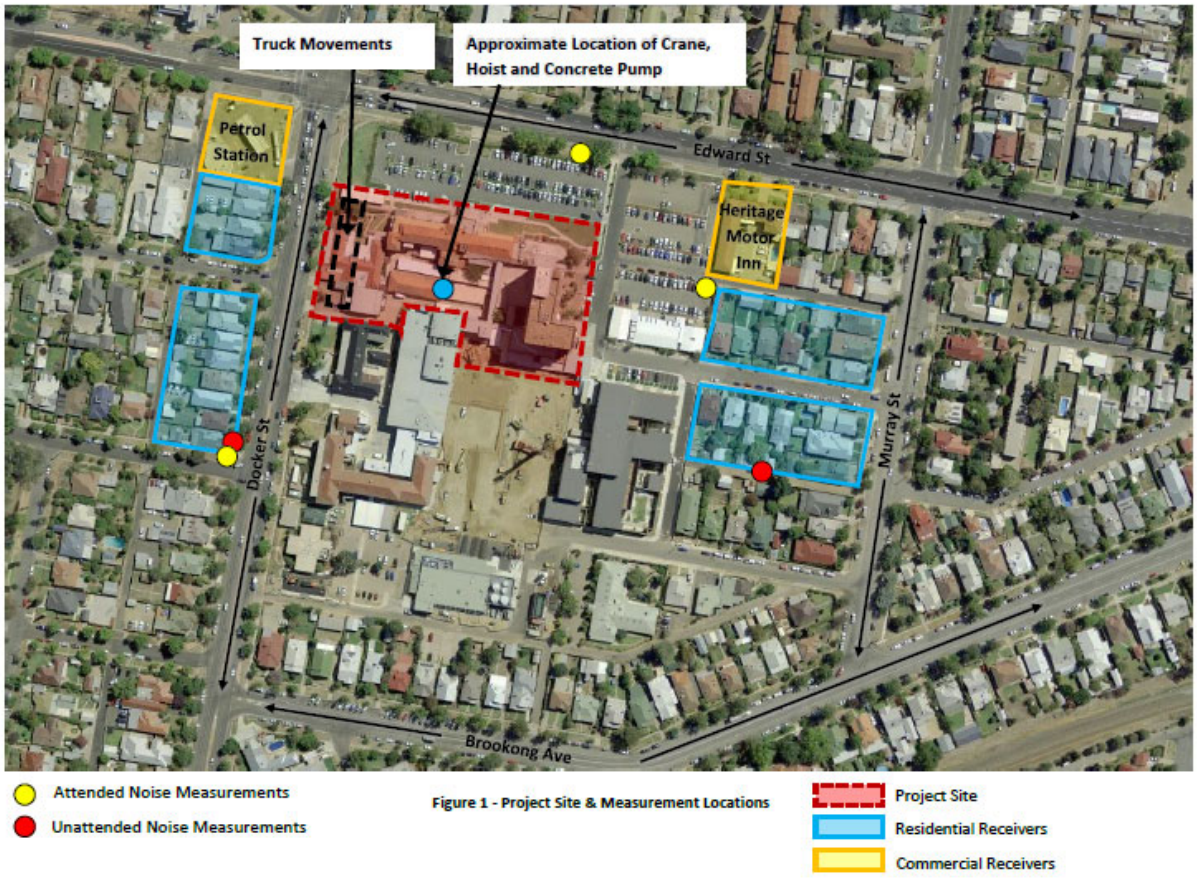


Figure 1 - Project Site & Measurement Locations

Figure 3 – Sensitive receivers

3.2.4 Working Hours

Construction, including the delivery of materials to and from the site, may only be carried out between the following hours:

a) 7am and 6pm, Mondays to Fridays inclusive; and

b) 7.30am and 5pm, Saturdays.

No work may be carried out on Sundays or public holidays.

Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours:

a) 9am and 12pm, Mondays to Saturdays; and

b) 2pm to 5pm, Mondays to Fridays inclusive.

Activities may be undertaken outside of these hours if required:

a) by the Police or a public authority for the delivery of vehicles, plant or materials; or

b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or

c) where the works are inaudible at the nearest sensitive receivers; or

d) where a variation is approved in advance in writing by the Planning Secretary or her nominee if appropriate justification is provided for the works.

Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards.

3.3 Controls Used to Manage Noise

Controls that are adequate to minimise noise and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 3.4: Noise controls

Control	Accountability
Undertake construction activities within the nominated hours of work to comply with contractual and legal requirements. For work during these nominated hours, construction noise is to be limited to 10dB(A)$L_{eq(15min)}$ above ambient levels. Any noisy works that need to occur outside the nominated hours must be approved by DPE in accordance with the Development Consent. Undertake high noise generating works in accordance with project obligations. Where noise emissions are such that nearby properties are “highly noise effected”, noise controls such as respite periods should be considered. For residential properties, the “highly noise effected” level occurs when construction noise exceeds 75dB(A)Leq(15min) at nearby residences. These levels are summarised below from the Construction Noise and Vibration Management Plan by Acoustic Logic (28/02/2019) Appendix L.:	Site Manager

<table>
<tr><th>Control</th><th>Accountability</th></tr>
<tr><td>
<table>
<tr><th>Location</th><th>Noise Management Level Trigger level - dB(A)$L_{eq(15min)}$*</th><th>"Highly Noise Affected" Trigger Level - dB(A)$L_{eq(15min)}$</th></tr>
<tr><td>Location 1
(Docker Street Residences)</td><td>55dB(A)L_{90} (Standard Construction Hours)
48dB(A)L_{90} (Saturday Afternoon)</td><td>75</td></tr>
<tr><td>Location 2
(Doris Lane/Yabtree Street Residences)</td><td>63dB(A)L_{90} (Standard Construction Hours)
53dB(A)L_{90} (Saturday Afternoon)</td><td>75</td></tr>
<tr><td>Location 3
(Edward Street Residences)</td><td>69dB(A)L_{90} (Standard Construction Hours)
59dB(A)L_{90} (Saturday Afternoon)</td><td>75</td></tr>
<tr><td>Location 4 – Existing Hospital (Acute Building/Support Services)</td><td>70 externally.
45 (internally, within wards</td><td>N/A</td></tr>
</table>
*These noise levels are determined based on the background noise levels measured at the site conducted at Project Approval Stage (table 1).
</td><td></td></tr>
<tr><td>All equipment must be serviced and maintained according to manufacturer's recommendations, or more frequently if required to minimise noise generated. Plant servicing records to be uploaded to Damstra.</td><td>Project Manager</td></tr>
<tr><td>Switch off any equipment not in use for extended periods e.g. heavy vehicles engines will be switched off whilst being unloaded. No idling of delivery trucks.</td><td>Supervisor</td></tr>
<tr><td>Where intermittent high frequency noise is a high risk, and pending safety requirements, the least noise-intrusive reversing alarms must be used.</td><td>Project Manager</td></tr>
<tr><td>In accordance with contractual requirements early consultation must be conducted with community stakeholders on the likely impacts of activities likely to cause disruption.
Learnings from community consultation in Stage 1 have been adopted for the Stage 3 works for example prohibiting rollers (due to noise and vibration impacts) and the use of a Disruption Notice process.
Consultation with MLHD continues to be managed through Savills (Project Management) using the Disruption Notice process which is minuted at the Interface Meetings.
Letter drop to affected businesses and residents has provided a communication link between the project and the community stakeholders with contact details for any strategies or community requests to be addressed.</td><td>Project Manager</td></tr>
<tr><td>Noise attenuation of fixed and mobile plant as required in order to achieve compliance is installed. Site noisy static processes and equipment where they can be shielded.</td><td>Site Manager</td></tr>
<tr><td>Use of augured rather than driven or vibratory piling to be considered</td><td>Project Manager</td></tr>
<tr><td>Construct and maintain noise barriers to shield significant noise generating activities or plant as required in order to comply</td><td>Site Manager</td></tr>
<tr><td>Adjust the Project Traffic Management Plan/Plans to minimise noise impacts as required.</td><td>Project Engineer</td></tr>
<tr><td>Noise monitoring may be conducted at the discretion of the Project Manager where methods of work or sensitive receivers require monitoring or where a non-compliance occurs. All monitoring is to be in accordance with EPA's Interim Construction Noise Guideline (DECC, 2009) and at a frequency and at locations to confirm compliance with the regulatory limits.</td><td>Project Manager</td></tr>
<tr><td>If notification is received by the Project Manager that noise interferes with normal hospital or health facility operations, surrounding or adjoining areas to the Site or the use of roadways, the noise emitting work will be suspended until such time as the issue is rectified or more appropriate work methods adopted to address the issue.</td><td>Project Manager</td></tr>
<tr><td>Perimeter of the building will be fully scaffolded with shade cloth to contain noise.</td><td>Project Engineer</td></tr>
</table>

Control	Accountability
Compliance with the Communications Strategy for notification to hospital users and residents for any activities with the potential to result in noise levels reaching the “Highly Noise Effected” noise level, and for management of noise complaints received.	All
Deliveries of heavy machinery may be required out of the proposed hours of operation to conform to the overriding requirements of Wagga Wagga City Council and the Roads & Maritime Services (RMS) such as tower crane and piling rig delivery.	Site Manager

In the event of any noise complaints additional control methods are identified in the Appendix L.

3.4 Monitoring

If required, noise monitoring is to be performed in accordance with EPA’s Interim Construction Noise Guideline (DECC, 2009).

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in Synergy.

Monitoring and analysis of data will be carried out by a competent person. Evidence of competence must be retained.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

3.5 References

EPA’s Interim Construction Noise Guideline (DECC, 2009).

Refer CPB Environmental Management Plan Appendix L – Acoustic Logic Construction Noise and Vibration Management Plan (Feb 2019)

4. Vibration Sub Plan

4.1 Scope

This Plan addresses vibration management on the project and the management of impacts to the environment and/or community. An Acoustic Assessment conducted for the EIS concluded that due to the distance between the site and the nearest residential properties, no vibration impacts are envisaged.

Activities conducted on the project that has the potential to create vibration issues are provided below.

Table 4.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Excavation	Vibration from excavation plant	Vibration limits exceeded causing complaints and discomfort to local residents and hospital users.
Piling works	Vibration from piling operations	Vibration limits exceeded causing complaints and discomfort to local residents and hospital users.

4.2 Project Compliance Requirements

4.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern impacts vibration on the project include:

Table 4.2: Contract clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Special Condition 6	Environmental Protection	EMP must address vibration management to minimise impact to Hospital users, patients and adjoining neighbours
Preliminaries Clause 5.17	Dust, Mud, Vibration & Noise Control	The Contractor must take all reasonable precautions to avoid nuisance due to vibration. The Contractor must utilise reasonable methods of vibration suppression on all compressors, jack-hammers and other machinery of whatsoever description to ensure that the noise levels emanating from the Site during the Works are minimised. The Contractor shall erect screens or take other reasonably necessary preventative measures to prevent vibration and damage to surrounding or adjoining properties (public and private) and shall arrange for the programming of the Works so as to avoid or minimise any such issues occurring. If vibration interfere with normal hospital or health facility operations, surrounding or adjoining areas to the Site or the use of roadways, the progress of the Works (or any part thereof) will be suspended until such time as the Contractor rectifies or implements a more appropriate work method to address these issues.

4.2.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of vibration include:

Table 4.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: c) Construction Noise and Vibration Management Sub-Plan	CEMP developed by CPB includes monitoring requirements for each impact.
B23	The Construction Noise and Vibration Management Sub-Plan must address, but not be limited to, the following: a) be prepared by a suitably qualified and experienced noise expert b) describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009); c) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers d) include strategies that have been developed with the community for managing high noise generating works e) describe the community consultation undertaken to develop the strategies in condition B23(d); and f) include a complaints management system that would be implemented for the duration of the construction.	Construction Noise and Vibration Management Sub Plan developed by CPB includes monitoring requirements for each impact.
C18	Vibration caused by construction at any residence or structure outside the site must be limited to: a) for structural damage, the latest version of DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures (German Institute for Standardisation, 1999); and b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: a technical guideline (DEC, 2006) (as may be updated or replaced from time to time).	Conduct vibration monitoring at regular intervals or during excessive vibration works.
C19	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition C18.	Vibration management and monitoring in accordance with CPB Vibration Management Sub Plan.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
C20	The limits in conditions C18 and C19 apply unless otherwise outlined in a Construction Noise and Vibration Management Plan, approved as part of the CEMP required by condition B23 of this consent.	Note

4.3 Controls Used to Manage Vibration

Controls that are adequate to minimise vibration and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 4.4: Vibration controls

Control	Accountability
Undertake construction activities within nominated hours of work to comply with contractual and legal requirements. Any works that need to occur outside these hours must be approved by the Project Manager or project environmental representative.	Project Manager
Work practices predicted to generate non-compliant vibration must be amended prior to commencing works to the extent required to comply with applicable limits.	Project Manager
Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition C18.	Site Manager
In accordance with contractual requirements early consultation must be conducted with community stakeholders on the likely impacts of vibration in particular any high risk activities likely to cause disruption.	Project Manager
Dilapidation surveys will be completed for properties located adjacent to construction activities	Project Engineer
If activities are predicted to result in vibration impacts vibration monitoring will be conducted at a frequency and at locations to confirm compliance with the following regulatory limits: • *DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures* (German Institute for Standardisation, 1999); and • for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: a technical guideline* (DEC, 2006)	Project Manager

4.4 Monitoring

Vibration monitoring if performed will comply with legal and contract requirements and which is sufficient to identify potential non-compliances before they occur.

During any rock excavation, vibratory compaction or in the event that any slab demolition is required as part of constructing connections to the Acute/Support Services Buildings, unattended vibration monitoring may be required at the following locations:

- North façade of Support Services Building.
- A close as practicable to the slab demolition area of the Support Services Building/Acute Building if required when forming connections from Stage 3.
- The proposed vibration monitoring equipment is a TEXCEL type monitor with externally mounted tri-axial geophone.
- The monitors are proposed to be fitted with GSM modems and will remotely signal up to five mobile phones indicating any exceedance of the prescribed vibration criteria.
- At least initially, SMS warning trigger to be set at 0.5mm/s for the Operating Suite/Day Surgery and 1mm/s for the Inpatient Units.

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in Synergy.

Monitoring and analysis of data will be carried out by a competent person. Evidence of competence must be retained.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements

4.5 References

DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures (German Institute for Standardisation, 1999);

Environmental Noise Management Assessing Vibration: a technical guideline (DEC, 2006).

Refer CPB Environmental Management Plan Appendix L – Acoustic Logic Construction Noise and Vibration Management Plan (Feb 2019)

5. Heritage Sub Plan

5.1 Scope

This Plan addresses Heritage management on the project and the management of impacts to the environment and/or community. A Heritage Impact Statement developed for the EIS determined that there will be no expected impact on non-Aboriginal heritage. A 2012 baseline archeological assessment found that there is low to moderate risk of disturbance to Aboriginal Cultural Heritage. There are no Aboriginal sites or places known to be present within the construction area and historical archeological resources have been previously significantly disturbed compromising the integrity and value of such resource.

Activities conducted on the project that has the potential to impact heritage values are listed below.

Table 5.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Excavation	Heritage artifacts identified	Incidents of damage to heritage items, places or values Complaints from the Regulators or traditional owners as a result of the works undertaken

5.2 Project Compliance Requirements

5.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern impacts to heritage on the project include:

Table 5.2: Contract clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
nil		

5.2.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of heritage include:

Table 5.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: g) an unexpected finds protocol for Aboriginal and non-Aboriginal heritage and associated communications procedure	CEMP developed by CPB includes monitoring requirements for each impact.
C26	In the event that surface disturbance identifies a new Aboriginal object, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and the registered Aboriginal representatives must be contacted to determine the significance of the objects. The site is to be registered in the Aboriginal	Unexpected finds procedure to be followed.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
	Heritage Information Management System (AHIMS) which is managed by OEH and the management outcome for the site included in the information provided to AHIMS. The Applicant must consult with the Aboriginal community representatives, the archaeologists and OEH to develop and implement management strategies for all objects/sites. Works shall only recommence with the written approval of OEH.	
C27	If any unexpected archaeological relics are uncovered during the work, then all works must cease immediately in that area and the OEH Heritage Division contacted. Depending on the possible significance of the relics, an archaeological assessment and management strategy may be required before further works can continue in that area. Works may only recommence with the written approval of Heritage Division of the OEH.	Unexpected finds procedure to be followed.

5.3 Controls Used to Manage Heritage

Controls that are adequate to manage Heritage and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 5.4: Heritage controls

Control	Accountability
If identified, all cultural heritage items and places to be preserved will be fenced/flagged and sign posted as No-go zones and shown on relevant site plans and communicate to relevant workforce. These No-go zones must be observed at all times until a Permit to Enter No-go Zone has been authorised.	Site Manager
Ground disturbance must not take place until a Land Disturbance Permit has been authorised.	Site Manager
If an object is discovered that may be a suspected Aboriginal/ heritage item, work must cease immediately in accordance with the Unexpected Finds Procedure and the supervisor and Project Manager notified. Notify the OEH as soon as practical, providing any details of the heritage object and it's location. No works at the particular location will be allowed to continue until authorized in writing by OEH. For Aboriginal artefacts discovered, local Aboriginal communities will be consulted on the retrieval and recording of the artefact.	Project Manager
All Personnel will undertake a Site Induction which includes Aboriginal and non-Aboriginal Heritage risks.	Project Environmental Representative
Work will cease upon the discovery of any object which may be a heritage item within the meaning of the relevant legislation, including likely human remains. No works will be allowed to continue until a permit or clearance has been received from the relevant authority. If skeletal remain are found the NSW Police and OEH must be contacted.	Project Manager

6. Contamination Sub Plan

6.1 Scope

This Plan addresses Contaminated Land management on the project and the management of impacts to the environment and/or community.

Activities conducted on the project that has the potential to create soil contamination are listed below.

Table 6.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Excavation	Exposing contaminated material	Persons exposed to contaminated material
Relocating existing stockpile	Unknown classification, possible exposure of contaminated material	Persons exposed to contaminated material
Importing material	Importing contaminated material	Persons exposed to contaminated material
Plant operations	Accidental release of contaminants to storm water	Loss of water species

6.2 Project Compliance Requirements

6.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern contamination on the project include:

Table 6.2: Contract clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Preliminaries Clause 5.6	Hazardous substances	**Importing material onto the Site** The Contractor must ensure that Material to be imported onto the Site, including fill material, is accompanied by a clearance certificate provided by the supplier. The Contractor shall undertake and provide the Principal with further testing (conducted by an independent person) when the Material arrives on Site (and before using or incorporation into the Works) to verify that it is free of contaminants.

6.2.2 Conditions of Project Environmental Approvals

Conditions of local, State and Commonwealth legislation that apply specific criteria to the management of contamination on the project include:

Table 6.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
B7	Prior to the commencement of earthworks, the Applicant must prepare an unexpected contamination procedure to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the of the CEMP in accordance with	Stop work and isolate the areas in accordance with unexpected finds procedure.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
	condition B20 and where any material identified as contaminated is to be disposed off-site, with the disposal location and results of testing submitted to the Planning Secretary, prior to its removal from the site.	
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: i) waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site	CEMP developed by CPB includes monitoring requirements for each impact.
B21	The Applicant must not commence construction of the development until the CEMP is approved by the Certifying Authority and a copy submitted to the Planning Secretary.	Include in construction certificate requirements submission for external works.
B24	The Construction Waste Management Sub-Plan (CWMSP) must address, but not be limited to, the following: b) The CWMSP must include a Hazardous Materials Management Plan and Asbestos Removal Control Plan c) removal of hazardous materials, particularly the method of containment and control of emission of fibres to the air, and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works.	CWMSP developed by CPB includes monitoring requirements for each impact.
C32	The Applicant is to consult with SafeWork NSW concerning the handling of any asbestos waste that may be encountered during construction. The requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 – 'Transportation and management of asbestos waste' must also be complied with.	CPB Hazardous Substance Management Sub Plan developed by CPB includes this requirement.

6.3 Controls Used to Manage Contamination

Controls that are adequate to manage Contamination and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 6.4: Contamination controls

Control	Accountability
Contamination Consultant and Occupational Hygienist to be engaged to assess any known or potential contamination risk and to oversee the management of the disposal.	Project Manager
A register is to be developed to record and track the management of all contaminated material. The register will identify: • The nature of the material • The precise location of the material within the collection point • All information, data and records relating to the disposal offsite of the contaminated material the subject of a Contaminated Material Notice (including testing and transport costs) • Cost, data and details of aggregated disposal costs of any Contaminated Material (including testing and transport costs).	Environmental Manager
Whenever contaminated materials are discovered or suspected, works must cease and the supervisor and Project Manager notified immediately, in accordance with the **Unexpected Finds Procedure**. Testing by a trained and competent person must be conducted and a management strategy developed. A Remedial Action Plan is to be prepared for any remediation works to be carried out in accordance with State Environmental Planning Policy No. 55 – Remediation of Land.	Project Manager Geotechnical Engineer
Asbestos Management Asbestos removal and management in NSW is regulated under the Occupational Health and Safety Act 2000 and Occupational Health and Safety Regulation 2001. The handling of asbestos and asbestos work must be carried out in accordance with the following documents published by the NOHS Commission in August 1988, as in force from time to time (clause 259): • "Guide to the Control of Asbestos Hazards in Buildings and Structures [NOHSC: 3002 (1988)]", and, • "Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002 (1988)]". Prior to the commencement of asbestos removal work at the site, the contractor is to prepare a building specific Asbestos Management Plan for the removal of the asbestos containing materials from the building in accordance with the requirements of section 3.4 of the How to Safely Remove Asbestos Code of Practice issued by Safe Work Australia. This asbestos removal control plan is to be kept on site for the duration of the asbestos removal work. The Regulation requires licensed contractors to contact SafeWork NSW of each bonded asbestos removal project of 10m2 or more. The removal of the asbestos containing construction materials from the buildings must only be carried out by contractor holding a Class A license for friable asbestos removal work or a Class B license for non-friable asbestos removal work. Airborne asbestos fibre monitoring is to be undertaken adjacent to each of the asbestos removal work areas for the duration of the asbestos removal and decontamination work. All asbestos contaminated waste from the work is to be double bagged in 0.2 mm asbestos waste bags for disposal at a landfill facility licensed by the NSW Office of Environment and Heritage (NSW OEH).	Environmental Manager
The movement of contaminated materials must be tracked via Synergy	Environmental Manager
Any existing stockpile material is to be classified in accordance with the NEPM Guidelines and any additional controls identified.	Project Engineer
Water runoff from contaminated land and stockpiles must be contained, treated or disposed to ensure there is no pollution of land or waterways.	Site Manager
All vehicles, plant and other machinery operating in contact with contaminated soil must be decontaminated prior to leaving site.	Site Manager
Soil, and soil leachate, containing contaminant concentrations below the relevant environmental investigation level will be assessed for unrestricted reuse, subject to other site restrictions and excluding any geotechnical requirements. This assessment must be undertaken by a competent person.	Geotechnical Engineer

Control	Accountability
Soil, and soil leachate, containing contaminant concentrations above the relevant environmental investigation level will be assessed for controlled reuse in non-environmental sensitive areas of the site	Project Engineer
All contaminated soils with contamination levels in excess of health investigation levels for Commercial/ Industrial Land Use criteria to be treated	Project Engineer
Where the above outcomes are not acceptable, other options such as (re)treatment, off-site disposal or a site-specific risk assessment be considered, as determined by Regulators and Competent Assessors.	Project Engineer
Importing material onto the Site The Contractor must ensure that *Material* to be imported onto the Site, including fill material, is accompanied by a clearance certificate provided by the supplier. The Contractor shall undertake and provide the Principal with further testing (conducted by an independent person) when the *Material* arrives on Site (and before using or incorporation into the Works) to verify that it is free of contaminants.	Project Engineer
All soil types to be separately stockpiled for inspection and verification of contamination	Site Manager
Ensure all spills are reported and cleaned up immediately	Site Manager

6.4 Monitoring

Contaminated Land monitoring is performed that complies with legal and contract requirements and which is sufficient to identify potential non-compliances before they occur.

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in Synergy.

Monitoring and analysis of data will be carried out by a competent person. Evidence of competence must be retained.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

6.5 References

Guide to the Control of Asbestos Hazards in Buildings and Structures [NOHSC: 3002 (1988)]

Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002 (1988)]

7. Energy Sub Plan

7.1 Scope

This Plan addresses the potential and actual use of energy sources and the emission of greenhouse gases (GHG) by Project activities. In particular, it requires:

- The identification of sources
- Measurement and reporting of use and emissions
- Identification, assessment and implementation of opportunities to improve energy efficiency and reduce GHG emissions

Activities conducted on the project that have the potential to use significant amounts of energy or emit significant quantities of GHG are:

Table 7.1: Activities, Hazards and Risks

Project Activity	Type of Fuel/Emission
Plant & equipment operations	Diesel and petrol
Construction Operations	Electricity, water
Light vehicles	Diesel and petrol

7.2 Energy Reporting

CPB Contractors requires all projects to report on energy consumption monthly, regardless of which company has operational control.

All energy (fuels, oils, greases, gases, electricity, solvents) purchased by CPB Contractors and processed through JDE are captured centrally at the Group level.

Where subcontractors provide their own fuel for use on a project, they must provide a monthly fuel consumption report to the project commercial team along with their claim. This data is then entered into the JDE NGER Module. Subcontractor reporting must be tracked by the Commercial Team, with the Environment Manager to include the % reporting compliance in the monthly environment report via Synergy.

Operational control, which determines which company will be required to report a project under the *National Greenhouse and Energy Reporting Act 2007,* is determined as part of the project start-up process. A copy of the operational control determination can be obtained by contacting the Group Environment Team.

7.3 Processes / Controls Used to Manage Energy

Processes adequate to ensure compliance with all requirements and to ensure energy is used efficiently and GHG emissions are minimised are implemented. Processes / Controls used on this project include:

Table 7.2: Energy controls

Control	Accountability
Energy savings initiatives and outcomes must be reported to the BU Environmental Representative at least annually using the Tool 'Energy Case Study'.	Environmental Manager
Power and Subcontractor fuel reporting will be tracked by the Project commercial team in JDE. Reporting percentages of subcontractors fuel will be included in the Project Monthly Environment Report in Synergy.	Environmental Manager
Energy efficiency principles will be communicated through tool box talks and other site communication forums and tools. The workforce, including subcontractors, will be trained to minimise energy use, including switching off machines and equipment when not in use and purchasing energy efficient plant and equipment.	Site Manager
Where relevant, procurement decisions will include energy efficiency and greenhouse gas considerations of the product or service.	Project Manager / Commercial Manager

7.4 Monitoring

Monitoring of energy use complies with legal and contractual requirements and which is sufficient to identify sources of use and emissions, and opportunities for improved energy efficiency.

Energy and GHG monitoring is conducted in line with the CPB Contractors reporting approach outlined above. It is the accountability of the Project Manager to ensure all data is captured and reported according to these requirements.

Monitoring and analysis of data will be carried out by a competent person.

8. Hazardous Substances Sub Plan

8.1 Scope

This Plan addresses Hazardous substances management on the project and the management of impacts to the environment and/or community. Hazardous substances include those substances used on the project for the purpose of construction of the new works and as defined by the Global Harmonized System of classification and labelling of chemicals (GHS). Hazardous substances found during demolition works or earthworks will be managed in accordance with the Contamination Sub Plan.

Activities conducted on the project that has the potential to create risks associated with hazardous substances are provided below.

Table 8.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Refuelling of plant	Handling of diesel and petrol	Skin/ eye irritation
General construction works	Use of hazardous substances such as paints, glues, solvents, cleaning agents, water treatment chemicals, materials containing silica from work involving stone, rock, concrete, masonry	Organ toxicity, carcinogenic

8.2 Project Compliance Requirements

8.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern hazardous substances on the project include:

Table 8.2: Contract clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Preliminaries	Clause 5.6 Hazardous Substances	'Hazardous Substance' means a substance that is listed in the document entitled List of Designated Hazardous Substances published by Safe Work Australia; All hazardous substances require controlled handling including asbestos, material containing asbestos, polychlorinated biphenyl (PCB) and lead based paints, glues, solvents, cleaning agents, paints, and water treatment chemicals, materials containing silica from work involving stone, rock, concrete, masonry. **Response to Unexpected Discovery** If any hazardous substance not specified in work under the Contract is discovered on the Site the Contractor must suspend all work which may result in exposure to such hazardous substance and notify the Principal immediately of the type of substance and its location.

8.2.2

8.2.3 Conditions of Project Environmental Approvals

Conditions of local, State and Commonwealth legislation that apply specific criteria to the management hazardous substances on the project include:

Table 8.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: d) Construction Waste Management Sub-Plan i) waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site	CEMP developed by CPB includes monitoring requirements for each impact.
B24	The Construction Waste Management Sub-Plan (CWMSP) must address, but not be limited to, the following: b) The CWMSP must include a Hazardous Materials Management Plan and Asbestos Removal Control Plan	CWMSP developed by CPB includes monitoring requirements for each impact.

8.3 Controls Used to Manage Hazardous Substances

Controls that are adequate to manage Hazardous substances and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 8.4: Hazardous substances controls

Control	Accountability
Prior to bringing new chemicals to Site, the Project must be provided with the current (Safety Data Sheet) (SDS).	Project Engineer
Storage, handling and labelling of hazardous substances must be in strict accordance with the applicable Standards and SDS.	Site Manager
Hazardous substances must be stored in a bunded area with a minimum holding capacity of 110% of the largest container within the bund or 25% of the total capacity of all containers within it, whichever is the greatest.	Site Manager
Spill kits must be located adjacent to all hazardous substance storage units, in refuelling and maintenance areas and at designated locations as per the Site Environment Plan (SEP).	Site Manager
Type and size of spill kits must be selected based on the type and volume of materials stored. Aquatic spill kits shall be available at worksites in close proximity to waterways.	Site Manager
Training in the use of spill kits must be provided.	Environmental Manager
Refuelling must not occur within 30m of a waterway (without appropriate controls in place).	Site Manager
Management of hazardous materials will be covered in the site induction. Relevant workers will undergo spill response training, as well as safe handling and storage training	Environmental Manager

Control	Accountability
Containment devices, including bunds, separators and catch trays, will be used where ever there is a risk of spillage.	Site Manager
Inspections will be carried out [weekly] to assess the storage and handling of hazardous materials as a part of the HSE inspection program.	Site Manager
An Emergency Response Plan which incorporates a spill response procedure shall be maintained for the project.	Environmental Manager

8.4 Monitoring

Hazardous substances monitoring is performed that complies with legal and contract requirements and which is sufficient to identify potential non-compliances before they occur.

There are nine hazard pictograms in the GHS that represent the physical, health and environmental hazards of chemicals that should be observed when conduction monitoring for hazardous chemicals on site:

GHS01– Exploding bomb
Explosion, blast or projection hazard.

GHS02 – Flame
Flammable liquids, solids and gases; including self-heating and self-igniting substances.

GHS03– Flame over circle
Oxidising liquids, solids and gases, may cause or intensify fire.

GHS04–Gas cylinder
Gases under pressure.

GHS05– Skull and crossbones
Fatal or toxic if swallowed, inhaled or in contact with skin.

GHS06– Exclamation mark
Low level toxicity. This includes respiratory, skin, and eye irritation, skin sensitisers and chemicals harmful if swallowed, inhaled or in contact with skin.

GHS07– Corrosion
Corrosive chemicals, may cause severe skin and eye damage and may be corrosive to metals.

GHS08– Health Hazard
Chronic health hazards; this includes aspiratory and respiratory hazards, carcinogenicity, mutagenicity and reproductive toxicity.

GHS09– Environment
Hazardous to aquatic life and the environment.

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in the Synergy.

Monitoring and analysis of data will be carried out by a competent person. Evidence of competence must be retained.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

8.5 References

Hazardous Chemical Information System (HCIS) published by Safe Work Australia

9. Waste Management Sub Plan

9.1 Scope

The NSW Government's Waste Reduction and Purchasing Policy aims to minimise waste. This Plan addresses the management and reporting of waste streams generated on the project.

Under the NSW Protection of the Environment Operations Act, 1997 (POEO Act), waste is defined as:

- any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment;
- any discarded, rejected, unwanted, surplus or abandoned substance;
- any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance;
- any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations;
- any substance prescribed by the regulations to be waste;
- a substance is not precluded from being waste merely because it is or may be processed, recycled, re-used or recovered.

Activities conducted on the project that have the potential to generate waste are provided below:

Table 9.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Construction and operational processes	Generation of waste product	Soil and water contamination
Plant maintenance	Generation of waste oil	Soil and water contamination
Operation and maintenance of offices, crib huts and camp facilities	Generation of general wastes	Unnecessary load on landfill availability

9.2 Project Compliance Requirements

9.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern the management of waste on the project include:

Table 9.2: Contract clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Special Condition Clause 16	Environmental waste	The Contractor is (or is deemed to be) the owner of Waste absolutely and unconditionally, whether existing at the Site or when generated as part of carrying out the Works, and without limiting its obligations under the Contract, assumes all risk and liability of any nature whatsoever in relation to such Waste, including as the owner of that Waste.
Preliminaries Clause 6.3	Waste Management	Implement waste minimisation and management measures, including: • recycling and diverting from landfill surplus soil, rock, and other excavated or demolition materials, wherever practical; • separately collecting and streaming quantities of waste

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
		concrete, bricks, blocks, timber, metals, plasterboard, paper and packaging, glass and plastics, and offering them for recycling where practical. Ensure that no waste from the Site is conveyed to or deposited at any place that cannot lawfully be used as a waste facility for that waste. **Monitoring** Monitor and record the volumes of waste and the methods and locations of disposal. Submit a progress report every two months, and a summary report before Completion, on the implementation of waste management measures, including the total quantity of material purchased, the quantity purchased with recycled content, the total quantity of waste generated, the total quantity recycled, the total quantity disposed of and the method and location of disposal in the form of a Waste Recycling and Purchasing Report available on the ProcurePoint website. With the Waste Recycling and Purchasing Report, submit waste disposal certificates and/or company certification confirming appropriate, lawful disposal of waste.

9.2.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of waste include:

Table 9.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: d) Construction Waste Management Sub-Plan i) waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site	CEMP developed by CPB includes monitoring requirements for each impact.
B24	The Construction Waste Management Sub-Plan (CWMSP) must address, but not be limited to, the following: a) detail the quantities of each waste type generated during construction	CWMSP developed by CPB includes monitoring requirements for each impact.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
	and the proposed reuse, recycling and disposal locations b) The CWMSP must include a Hazardous Materials Management Plan and Asbestos Removal Control Plan c) removal of hazardous materials, particularly the method of containment and control of emission of fibres to the air, and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works.	CEMP Contamination Sub Plan includes for hazardous materials
C28	Waste must be secured and maintained within designated waste storage areas at all times and must not leave the site onto neighbouring public or private properties.	CPB Waste Management Sub Plan developed by CPB includes this requirement.
C29	All waste generated during construction must be assess, classified and managed in accordance with the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).	Waste receptacles to be inspected as part of weekly environmental inspection.
C30	The body of any vehicle or trailer used to transport waste or excavation spoil must be covered before leaving the premises to prevent any spillage or escape of any dust, waste of spoil. Mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site must be removed before leaving the premises.	CPB Soil and Water Management Sub Plan developed by CPB includes this requirement. Refer also to CoA C23.
C31	The Applicant must ensure that concrete waste and rinse water are not disposed of on the site and are prevented from entering any natural of artificial watercourse.	CPB Waste Management Sub Plan developed by CPB includes this requirement. Designated concrete washout bay established on site for wash out activities.

9.3 Waste Streams

The following waste streams and waste classifications have been identified on Wagga Wagga Hospital Redevelopment Stage 3.

Table 9.4: Waste streams

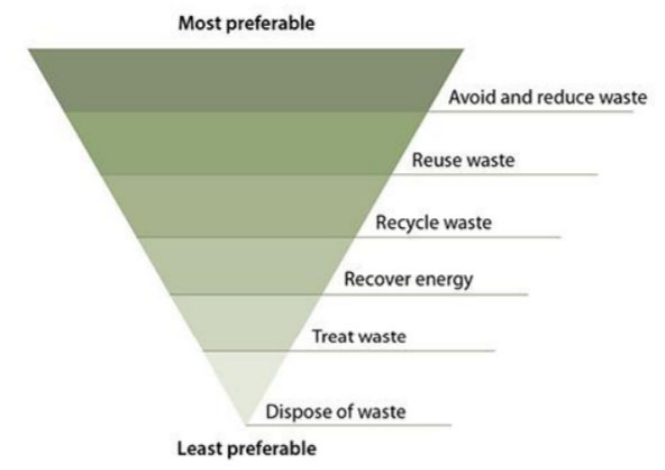
Waste Stream	Waste Classification	Expected Quantity	On-site (reuse or recycle	Destination Off-site
Excavated material	General Solid Waste (Non Putrescible)	tba	Reuse where required by civil design	Removed by earthworks contractor to licensed facility for reuse if possible
Concrete	General Solid Waste (Non Putrescible)	40m^3	No on-site reuse	Collected by waste contractor and disposed at recycling facility
Timber (formwork and construction)	General Solid Waste (Non Putrescible)	30m^3	Reuse for further formwork where possible	Unused material separated and collected by waste contractor for disposal at recycling facility
General waste	General Solid Waste (Non Putrescible)	45m^3		Collected by waste contractor and disposed at waste facility
Mixed Recyclables	General Solid Waste (Non Putrescible)	60m^3		Collected by waste contractor and disposed at recycling facility
Separated recyclables including: Drink bottles Secure Waste paper	General Solid Waste (Non Putrescible)	5m^3		Collected by specialist contractors and disposed at recycling facility
Waste metals	General Solid Waste (Non Putrescible)	7m^3		Collected by waste contractor and disposed at recycling facility
Groundwater from excavation/ potholing	Liquid Waste	200kl		Slurry removed to waste facility by pump-out truck
General office waste – paper, cardboard, used printer cartridges.	General Solid Waste (Non Putrescible)	2m^3		Waste contractor/ security waste contractor to collect and dispose at (secure) recycling facility

Waste Stream	Waste Classification	Expected Quantity	On-site (reuse or recycle	Destination Off-site
Asbestos or Asbestos Containing Material	Special Waste	tba		Licensed asbestos contractor disposal in accordance with Asbestos Control Plan
Hydrocarbons	General Solid Waste (Non Putrescible)	1m^3		Collected by waste contractor and tested prior to disposal at waste facility

9.4 Controls Used to Manage Waste

Controls that are adequate to ensure compliance and to reduce risk to the lowest acceptable rating achievable are planned before any relevant works commence. Elimination of the waste is the first preference of control, followed by reuse and recycling. Controls used on this project include:

Table 9.5 Waste controls

Control	Accountability
All wastes need to be classified, stored, tracked, transported and treated in accordance with contractual and regulatory requirements, including the use of licensed transporters and treatment facilities. A Waste Recycling and Purchasing Report is to be completed Monthly and issued to the Principal.	Environmental Manager
The waste hierarchy will be adhered to: 	Site Manager
Excavation material (removed earth), where feasible, will remain on-site for reuse.	Site Manager
All green waste material will remain on-site (shredded or composted), and be reused in landscape areas around the development if possible. If this is not possible, then CPB will transport the materials off-site for mulching or composting.	Site Manager
Bricks will be stockpiled and reused wherever possible. Surplus, unused bricks will be reused in pavement construction or for temporary access tracks etc. if possible. Unusable bricks will be collected and recycled at an appropriate brick/rubble recycling facility to be used in aggregate gravel products.	Site Manager
Recyclable timber (untreated) will be collected and recycled at appropriate timber yard. Unrecyclable (treated) timber will be disposed at landfill. Timber that is not of the standard for reuse will be transported to a site for chipping for use as garden mulch if acceptable for this process.	Site Manager
All metal materials will be reused or recycled as follows:	Site Manager

Control	Accountability
• Metal drums and packaging to be returned to the supplier • Any metal suitable for recycling will be separated and stored in a designated scrap metal bin for transport to a metal recycling facility.	
Cardboard and paper will be produced mainly from packaging materials and office paper waste. These should be disposed of into a designated recycling bin and collected regularly as required.	Site Manager
Liquid waste may be produced on-site for environmental control measures such as site and vehicle cleaning and dust control waste. The following measures will be taken to minimise the impact of liquid waste: • Ensure water is used in moderation and no taps are left continuously running • Use any grey water produced on-site for irrigation or for dust suppression; and • Only discharge clean water into storm water.	Site Manager
All actions will be undertaken to avoid pollution entering stormwater drains and for litter generation. The following will be initiated: • Prior to commencement of any works a Safe Work Method Statement will be completed and reviewed to determine potential for stormwater pollution and/or litter generation • CPB will develop a management strategy to manage the potential for these issues to be realised • Site inspections will be conducted during the working day to monitor potential for stormwater pollution generation and where identified, works will cease until appropriate controls are implemented; and • Wastewater and storm water will be managed and disposed of in accordance with Water Authority requirements.	Project Engineer
Daily site inspections will be conducted to identify litter, remedy the situation and investigate the cause so as to reduce the potential for the issue to occur in the future. Personnel will be allocated the role of litter management in that they will periodically inspect the site and surrounds for litter and if identified collect and dispose of it.	Site Manager
The relevant licences of waste facilities utilised for the disposal or handling of waste will be obtained to ensure they are legally compliant.	Environmental Manager
Storage containers (bins, skips, tanks, etc.) are provided at each work area in sufficient numbers to facilitate segregation of waste at the source of generation, where ever possible. The correct bin type must be used to avoid contamination. These bins will be appropriately signed to indicate what materials are to be deposited into them and located so as to maximise the recovery of reusable/recyclable materials.	Site Manager
All waste/recycling bins will have covers so as to ensure that wastes cannot be blown out during windy conditions. The body of any vehicle or trailer used to transport waste or must be covered before leaving the premises to prevent any spillage or escape of any waste.	Site Manager
Burial or burning of waste is not permitted.	Site Manager
There will be no treatment of wastes or recyclables on-site except for possible removal of contaminants prior to forwarding to off-site recyclers.	Site Manager
Excess concrete and concrete washout is not to be discharged to land or stormwater; a concrete washout facility must always be used. An adequate number of fully maintained concrete washout pits will be maintained on the site at all times.	Site Manager
All waste data must be collated and entered in to Synergy.	Project Environmental Representative
Concrete waste and rinse water is not to be disposed of on the site and are prevented from entering any natural of artificial watercourse.	Site Manager

Control	Accountability
For contaminated/ hazardous materials including asbestos management refer to the Contamination Sub Plan.	All

9.5 Licensed Waste Facilities

A search of the POEO Licensed facilities local to the Wagga Wagga area include:

Table 9.6: Licensed Waste Facilities

License number	Operator	Address	Fee Based Activity	License review due date
6671	Gregadoo Waste Management Centre operated by Wagga Wagga City Council	Ashfords Road Wagga Wagga 2650	General solid waste disposal by application to land	15/05/2020
12945	Cleanaway Pty Ltd	2 Saxon Street Wagga Wagga 2650	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	15/05/2020
20661	Kurrajong Recyclers	54 Chaston Street Wagga Wagga 2650	Resource Recovery - Recycling materials	31/08/2020
20369	Carbon Mate	PO Box 140 Forest Hill NSW 2651	Transport of Trackable Waste	19/11/2023
2207	Sims Metal	43 Ashford Ave, Milperra, NSW, 2214	Scrap Metal Processing	22/09/2021

9.6 Monitoring

Waste data is collected on the project to allow monthly reporting in accordance with the Waste Recycling and Purchasing Report including the following:

- The quantity of each type of waste sent to landfill
- The quantity of each type of waste recycled
- The quantity of each type of waste reused
- The quantity of each type of hazardous/regulated waste generated on the project and:
  - Its method of treatment and disposal
  - The location of treatment and disposal
  - Copies of records confirming the legal transport, treatment and disposal
- Measurement of any reduction in waste generation that has been achieved

The quantity of waste in each solid waste stream is measured by weight and liquid waste stream by volume, with records provided by the waste transport contractor.

All waste quantities are uploaded in to Synergy each month.

9.7 References

Environmental Impact Statement SSD 9033 Appendix R – Waste Management Plan

NSW EPA Waste Classification Guidelines Part 1: Classifying waste (Nov 2014)

Waste Recycling and Purchasing Report – www.procurepoint.nsw.gov.au

10. Dust and Air Quality Sub Plan

10.1 Scope

This Plan addresses air quality management on the project and the management of impacts to the environment and/or community.

Control of dust during the Delivery Phase will be especially important on the hospital site due to the presence of vulnerable people with, for example, suppressed immune systems. In addition to this Air Quality Sub Plan an Infection Control Plan has been developed which includes particular requirements for dust control when working within the Hospital.

Activities conducted on the project that have the potential to impact air quality are provided below. These have been extracted from the project work flow, including activities and materials used.

Table 10.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Earthworks, stockpiling	Dust Sediment on roads	Nuisance dust to personnel Airborne dust/ sediment affecting waterways Effects of dust on persons with suppressed immune systems
Plant and Machinery operation	Exhaust fumes	Effects on health exposed to carbon monoxide
General construction works	Wind-blown rubbish	Nuisance dust to personnel Airborne dust/ litter affecting waterways

10.2 Project Compliance Requirements

10.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern impacts to air quality on the project include:

Table 10.2: Contract clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Special Condition 6	Environmental Protection	EMP must address dust management to minimise impact to Hospital users, patients and adjoining neighbours

10.2.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of air quality include:

Table 10.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: a)(iii) management of dust and odour to protect the amenity of the neighbourhood	CEMP developed by CPB includes monitoring requirements for each impact.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
	e) Construction Dust Management Sub-Plan	
C22	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	Conduct air quality monitoring at regular intervals or if excessive dust is experienced.
C30	The body of any vehicle or trailer used to transport waste or excavation spoil must be covered before leaving the premises to prevent any spillage or escape of any dust, waste of spoil. Mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site must be removed before leaving the premises.	CPB Soil and Water Management Sub Plan developed by CPB includes this requirement. Refer also to CoA C23.

10.3 Controls Used to Manage Air Quality

Controls that are adequate to minimise air quality issues and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 10.4: Air quality controls

Control	Accountability
Areas in which vegetation will be removed or disturbed need to be minimised. Rehabilitation, seeding or grassing should occur as soon as they become available.	Site Manager
Dust generation activities including disturbed areas, spoil heaps and haul roads are to be visually monitored and where required dust control measures such as water trucks, chemical suppressants, fixed hose water spraying would be implemented, especially in high risk areas and/or on during high risk days. Materials to be stockpiled in locations to best minimize dust and with consideration of downdraft from helicopter.	Site Manager
Stabilised access with rumble grids established for the site exit to be installed to minimise mud on public roads (refer Erosion and Sediment Control Plan). Sediment would be promptly removed from roads to minimise dust generation. Sweepers may be used periodically to clean public roads where mud has been deposited.	Site Manager
Traffic speed limit(s) are determined to minimise dust generation and must be adhered to at all times.	Site Manager
The body of any vehicle or trailer used to transport waste or excavation spoil must be covered before leaving the premises to prevent any spillage or escape of any dust.	Site Manager
All construction plant and equipment must be fitted with emission control devices complying with the Australian Design Standards and maintained so they do not emit visible smoke for a period of time greater than 15 seconds. Machinery would be turned off when not in use and not left to idle for prolonged periods.	Site Manager
Burning of any materials is prohibited onsite.	Site Manager
Air quality monitoring to be conducted based on requirements of project risk assessment, and at a frequency and locations to confirm compliance with the regulatory limits will be conducted.	Project Engineer
Rubbish to be placed in waste receptacles with lids to prevent wind-blown rubbish.	Site Manager

Control	Accountability
Perimeter of the building will be fully scaffolded with shade cloth to contain dust.	Project Engineer
Monitoring of weather conditions to manage impacts of high winds in dry periods.	Site Manager
Shade cloth to be fitted to gates and fencing to minimize dust and litter leaving the site.	

10.4 Monitoring

Air quality monitoring is performed that complies with legal and contract requirements and which is sufficient to identify potential non-compliances before they occur.

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in Synergy.

Monitoring and analysis of data will be carried out by a competent person. Evidence of competence must be retained.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

10.5 References

nil

11. Light Pollution Sub Plan

11.1 Scope

This Plan addresses light pollution on the project and the management of impacts to the environment and/or community.

Activities conducted on the project that have the potential to generate light pollution are provided below.

Table 11.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
External lighting for site entrance	Light pointing down in to road users and pedestrians	Persons obstructed by light
Night works additional lighting	Light pointing in to residential properties or hospital rooms during night time	Nuisance to residents and hospital users

11.2 Project Compliance Requirements

11.2.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern impacts to air quality on the project include:

Table 11.2: Contract clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
nil		

11.2.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of air quality include:

Table 11.3: Development Consent Conditions

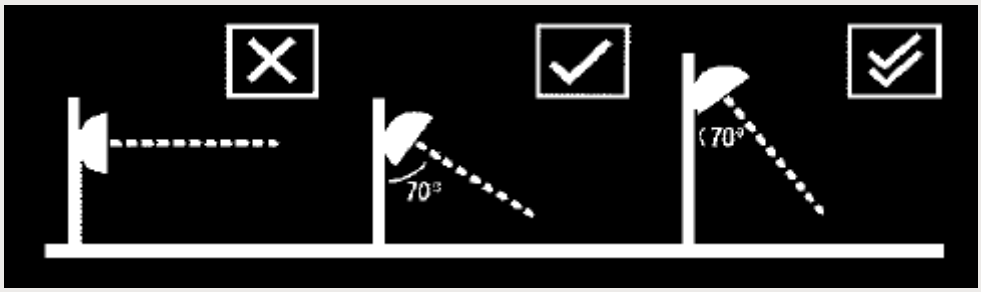
Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
B18	Prior to commencement of the relevant work, all outdoor lighting within the site must comply with AS 1158.3.1:2005 Lighting for roads and public spaces – Pedestrian area (Category P) lighting – Performance and design requirements and AS 4282-1997 Control of the obtrusive effects of outdoor lighting. Details demonstrating compliance with these requirements must be submitted to the satisfaction of the Certifying Authority.	Include in construction certificate requirements submission for external works.
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: a)(vi) external lighting in compliance with AS 4282-1997 Control of the obtrusive effects of outdoor lighting	CEMP developed by CPB includes monitoring requirements for each impact.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
E6	The Applicant must ensure the lighting associated with the development: a) complies with the latest version of AS 4282-1997 - Control of the obtrusive effects of outdoor lighting (Standards Australia, 1997); and b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	Design review and approval work flows for all electrical documentation to incorporate requirements of this condition.

11.3 Controls Used to Manage Light Pollution

Controls that are adequate to minimise light pollution issues and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 11.4: Light controls

Control	Accountability
No use of floodlighting or additional lighting beyond internal lighting and lighting required for safety and access. Ensure external lights are turned off when not in use.	Site Manager
Limit upward light and sideways spill light in to properties. Wherever possible direct light downwards. To keep glare to a minimum, ensure that the main beam angle of all lights directed towards any potential observer is kept below 70^0.  Consider shields and baffles to help reduce spill light to a minimum. Use specifically designed lighting equipment that will minimize spread of light and provide the adequate light for the situation.	Project Engineer
Ensure any external lights are mounted, screened and directed in such a manner that they do not create a nuisance to surrounding properties or the public road network.	Project Engineer

11.4 Monitoring

External lights will be monitored daily to ensure they are in full working order and not causing any impacts on pedestrians, motorists or hospital users.

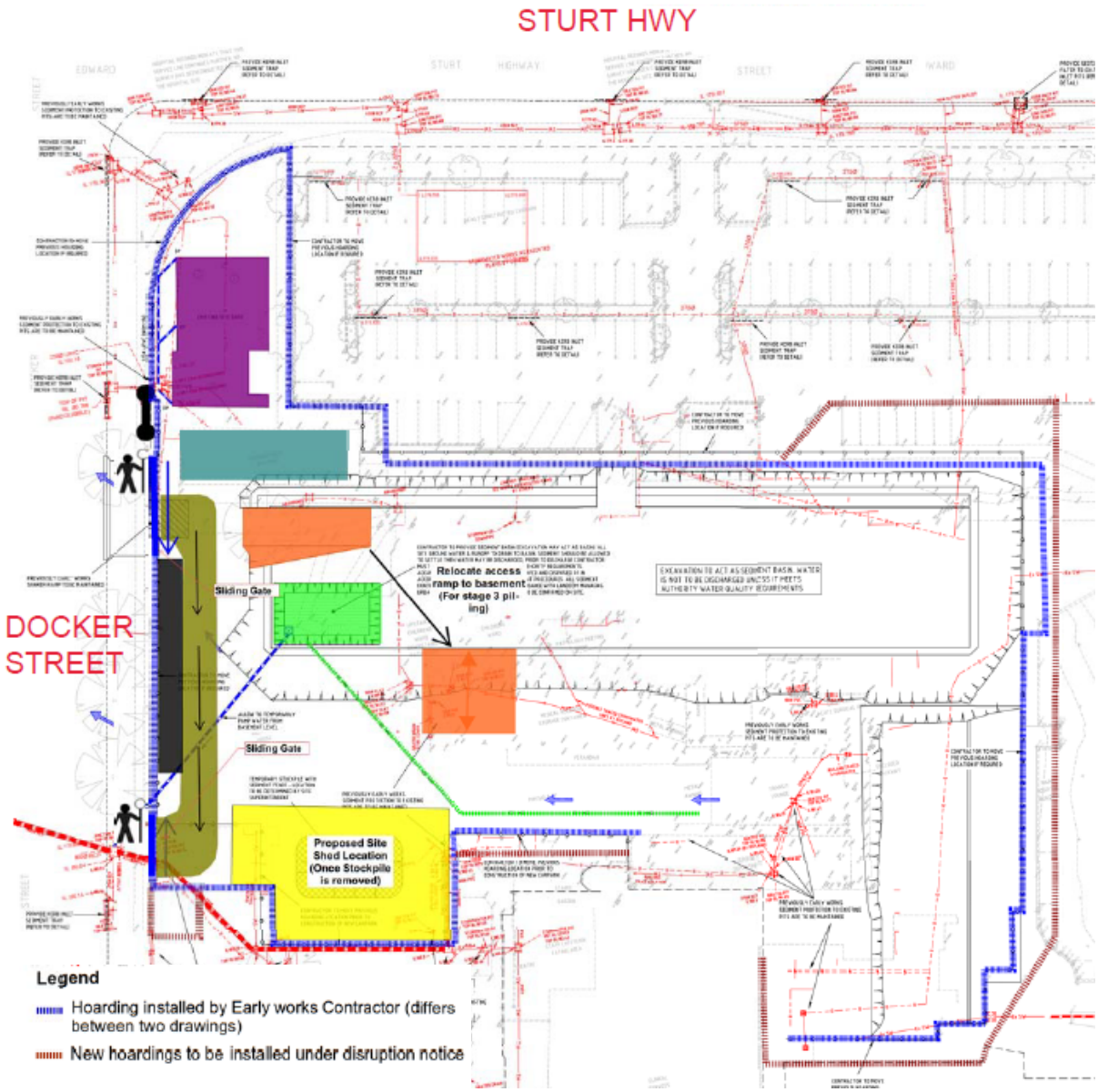
11.5 References

AS/NZS 1158.1.2:2010 Lighting for roads and public spaces
AS 4282-2019 Control of the obtrusive effects of outdoor lighting

12. Pedestrian and Traffic Management Sub Plan

12.1 Scope

This Plan addresses pedestrian and traffic management on the project. An overview of the construction site layout including construction traffic movement is detailed below:



Activities conducted on the project that have the potential to impact pedestrian and traffic are provided below.

Table 12.1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Construction worker movements to and from site	Increase traffic and pedestrians (workers and visitors to site); Reduced parking	Extended travel to work due to extra traffic from construction workers and local parking being used by construction workers therefore limiting parking for hospital users or increasing the time to walk from car to hospital
Deliveries to site	Pedestrians and cyclists cross site access points Increase delivery vehicles on Docker Street	Extended waiting times for pedestrians, cyclists and road users due to delivery Safety risks due to interaction of pedestrians, road users with heavy vehicles

12.2 Anticipated construction traffic and construction duration

Construction traffic will include construction personnel accessing the project and heavy vehicle/ trucks delivering or removing construction materials. Current anticipated heavy vehicle/ truck movements are:

- 8 trucks per day for delivery of materials (excluding concrete)
- 1 truck per day for removal of waste and recyclables
- 4 trucks per hour for delivery of concrete during concrete pours

Although the truck deliveries will be spread over the working day it is anticipated that at least 25% of deliveries would occur during the peak hour traffic.

The construction program identifies construction related traffic will start to increase from May 2019 with a peak period from May 2019 to December 2019. Milestone 1 - completion of the hospital is programmed for Q3 2020 which will see the immediate reduction of construction traffic with an anticipated completion of Milestone 2 – refurbishment by Q4 2020.

12.3 Project Compliance Requirements

12.3.1 Contract Clauses

Specific contract clauses and references which set limits and/or govern impacts to pedestrian and traffic management on the project include:

Table 12.2: Contract clauses

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
Preliminaries Clause 5.2	Site Access and limitations	The Contractor shall set up the site and arrange the works so as to mitigate any impact on the day to day operations, pedestrian and traffic flow of the Hospital. The Contract is responsible for maintaining the safe access to the Site and the safe movement of vehicles and pedestrians within and throughout the Site, without any substantial detrimental effect to the operation of the Hospital.
Preliminaries Clause 5.13	Barriers, Barricades etc	The Contractor must provide and maintain appropriate barricades, guards,

Contract Document Reference	Contract Clause/Reference	Limit/Requirement
		signs and adequate lighting at the Site (or for the purposes of the Works) for the protection of the public, residents, staff and others. The Contractor must remove these items when no longer required. Barricades and guards shall be arranged to maintain access for pedestrians as appropriate.

12.3.2 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of pedestrian and traffic include:

Table 12.3: Development Consent Conditions

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
B10	Before the commencement of construction, a Traffic and Transport Consultative Committee (TTCC) must be established for the development to develop the following upgrade works to resolve impacts on key intersections surrounding the hospital site. a) The intersection of Edward Street and Murray Street is to be upgraded to achieve a Level of Service C or better forecasting to the year 2031. The intersection treatment is to be designed and constructed in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services. b) The intersection of Murray Street and Brookong Avenue is to be upgraded for traffic calming purposes. c) Phasing and lane reconfiguration works to the Edward Street and Docker Street intersection as outlined in the Transport Impact Assessment, Issue B, dated 3 October 2018 and prepared by GTA Consultants. **Submission by HI**	TTCC established from existing WWCC and RMS meeting group. Terms of Reference written for the group Monthly meeting will be minuted.
B11	All roads and traffic facilities must be designed to meet the requirements of Council or RMS (whichever is applicable). The necessary permits and approvals from the relevant road authority must be obtained prior to the commencement of road or pavement construction works.	Design review and approval work flow for design development of documentation.
B12	For works on the State Road network the developer is required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services before finalising the design or undertaking any construction work within or connecting to the road reserve.	Note.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
	Note: The applicant is to contact the Land Use Manager for the South West Region on Ph: 02 6938 1111 for further detail.	
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: b) Construction Traffic and Pedestrian Management Sub-Plan	CEMP developed by CPB includes monitoring requirements for each impact.
B22	The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared in consultation with Council and submitted to the satisfaction of the Certifying Authority. The CPTMP must specify, but not limited to, the following: a) be prepared by a suitably qualified and experienced person(s) b) be prepared in consultation with Council, RMS and TfNSW c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services d) assess cumulative impacts associated with other construction activities (if any) e) assess the road safety at key intersections and locations subject to heavy vehicle movements and high pedestrian activity f) detail construction program, the anticipated construction duration and milestones and events during the construction process g) detail anticipated peak hour and daily truck movements to and from the site h) detail access arrangements for workers to/from the site, emergency vehicles and service vehicle movements i) detail temporary cycling and pedestrian access during construction j) detail proposed construction vehicle access arrangements at all stages k) detail heavy vehicle routes, access and parking arrangements including that required by condition B25 l) include a Driver Code of Conduct to:	CTMSP developed by CPB includes monitoring requirements for each impact. Meeting(s) with Council.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
	(i) minimise the impacts of earthworks and construction on the local and regional road network (ii) minimise conflict with other road users (iii) minimise road traffic noise; and (iv) ensure truck drivers use specified routes m) detail temporary traffic controls, including detours and signage n) include procedures for notifying the local community about project-related traffic impacts o) include procedures for managing impacts to bus stops p) include procedures for receiving and addressing complaints from the community about development-related traffic q) include measures for minimising potential for conflict with school buses, school zone operating times, emergency vehicles and other motorists as far as practicable r) include procedures for responding to any emergency repair or maintenance requirements s) include a program to monitor the effectiveness of these measures; and t) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	
B25	Prior to the commencement of construction, the Applicant must demonstrate to the satisfaction of the Certifying Authority that sufficient off-street parking has been provided, including for heavy vehicles and for site personnel, to ensure that construction traffic associated with the development reduces the utilisation of public and residential streets or public parking facilities.	Include in submission for CTPMSP.
C9	All construction vehicles (excluding worker vehicles) are to be contained wholly within the site, except if located in an approved on-street work zone, and vehicles must enter the site before stopping.	Traffic Management Sub Plan developed by CPB includes these requirements. Traffic Management Plan developed by specialist Consultant and implemented by CPB under Traffic Management Sub Plan.
C10	A Road Occupancy Licence must be obtained from the relevant road authority for any works that impact on traffic flows during construction activities and/or any works in the road reserve.	CPB to Consult with Local Council in development of CTPMSP. Application for street work zones / road occupancy licences managed by CPB through relevant authorities. Managed through CTPMSP.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
C11	To protect the safety of work personnel and the public, the work site must be adequately secured to prevent access by unauthorised personnel, and work must be conducted at all times in accordance with relevant SafeWork requirements.	Hoarding installed to entire perimeter of construction site. Perimeter locks install to all entrances. All access points kept closed except when in use. Open access points to be manned at all times. Traffic control to be used control vehicle movements into site in accordance with Traffic Management Sub Plan. Perimeter walk conducted daily by site supervisor and weekly site inspection checklist completed to check site secure.
C12	The following hoarding requirements must be complied with: a) no third-party advertising is permitted to be displayed on the subject hoarding/ fencing b) the construction site manager must be responsible for the removal of all graffiti from any construction hoardings or the like within the construction area within 48 hours of its application; and c) the Applicant must submit a hoarding application to Council for the installation of any hoardings over Council footways or road reserve.	Perimeter walk to be conducted at close of business each day. Recorded on weekly inspection checklist.
C13	The public way (outside of any approved construction works zone) must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances. Non-compliance with this requirement will result in the issue of a notice by the relevant Authority to stop all works on site.	Perimeter walk to be conducted at close of business each day.
D8	Prior to the commencement of operation, a Green Travel Plan (GTP), must be prepared and be submitted to the Secretary to promote the use of active and sustainable transport modes. The plan must: a) be prepared by a suitably qualified traffic consultant in consultation with TfNSW b) include objectives and modes share targets (i.e. Site and land use specific, measurable and achievable and timeframes for implementation) to define the direction and purpose of the GTP c) include specific tools and actions to help achieve the objectives and mode share targets d) include measures to promote and support the implementation of the plan, including financial and human	Traffic Consultant to be engaged to undertake GTP. Consultation with Council to be minuted.

Development Consent SSD 9033 (18/12/2018)	Relevant Condition	Limit/Requirement
	resource requirements, roles and responsibilities for relevant employees involved in the implementation of the GTP; and e) include details regarding the methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets of the GTP, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours of staff to and from the hospital campus.	
D13	Wayfinding signage and signage identifying the location of staff car parking must be installed prior to occupation.	Design review and approval work flows for design development of signage documentation to incorporate requirements of this condition.
D14	Bicycle wayfinding signage must be installed within the site to direct cyclists from footpaths to designated bicycle parking areas prior to occupation.	Design review and approval work flows for design development of signage documentation to incorporate requirements of this condition.
D15	Prior to the commencement of operation, the following intersection works as required by condition B10 must be completed: a) upgrade of the intersection of Edward Street and Murray Street to achieve a Level of Service C or better forecasting to the year 2031 designed and constructed in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services. [b) upgrade of the Murray Street and Brookong Avenue for traffic calming purposes to be designed and constructed in consultation Council. **To be completed by HI]** c) phasing and lane reconfiguration works to the Edward Street and Docker Street intersection to be designed and constructed in consultation with RMS.	The project Traffic Engineer will design and advise TTCC on options for intersection works. TTCC decisions will be minuted. Designs to be submitted for WWCC/RMS approval.
D17	Prior to commencement of operation, the Applicant must prepare a Car Park Management Plan (CPMP) for the hospital campus and submit it to the satisfaction of the Certifying Authority. The CPMP is to provide an overview for the efficient management of car parking across the campus, with a view to minimising the use of on-street parking by both staff and visitors to the hospital. **To be completed by HI.**	The CPMP will be prepared by the LHD based on advice received by traffic consultants for traffic management and car park demand in relation to the finished scope of the project.

12.4 Vehicle Traffic Management

Entry and Exit site entry gates located on the western boundary on Docker Street installed by the Enabling Works Contractor will be maintained for the duration of the main works. Vehicles will enter the northern gate from a south bound direction on Docker Street and exit the south gate and continue south bound on Docker Street. Due to the concrete island in the middle of Docker Street, vehicles entering site will not be permitted to enter or exit site from a north bound direction.

At all times, the gates will be manned by a certified traffic controller.

Vehicle Movement Plans have also been established by the Contractor (Appendix K) and will be briefed to supervisors in daily pre-start meetings. This plan will provide an overview of the traffic movement strategy on site each day. Specific Vehicle Movement Management plans will also be established for special traffic movements such as tower crane establishments where large floats will be delivering sections of the crane throughout the day.

See Figure 4 for construction flow coming into and out of site from Docker Street.

In the event of an emergency all emergency vehicles will be directed to the site entry on Docker Street.

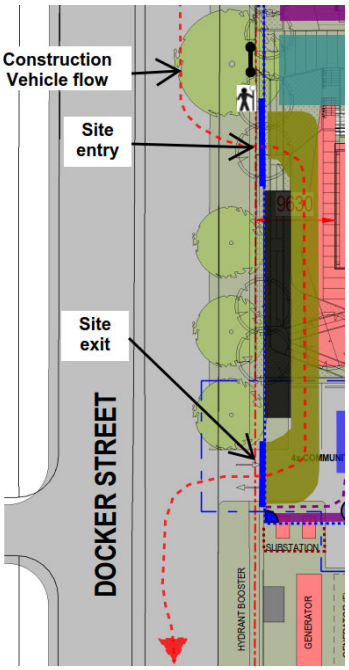
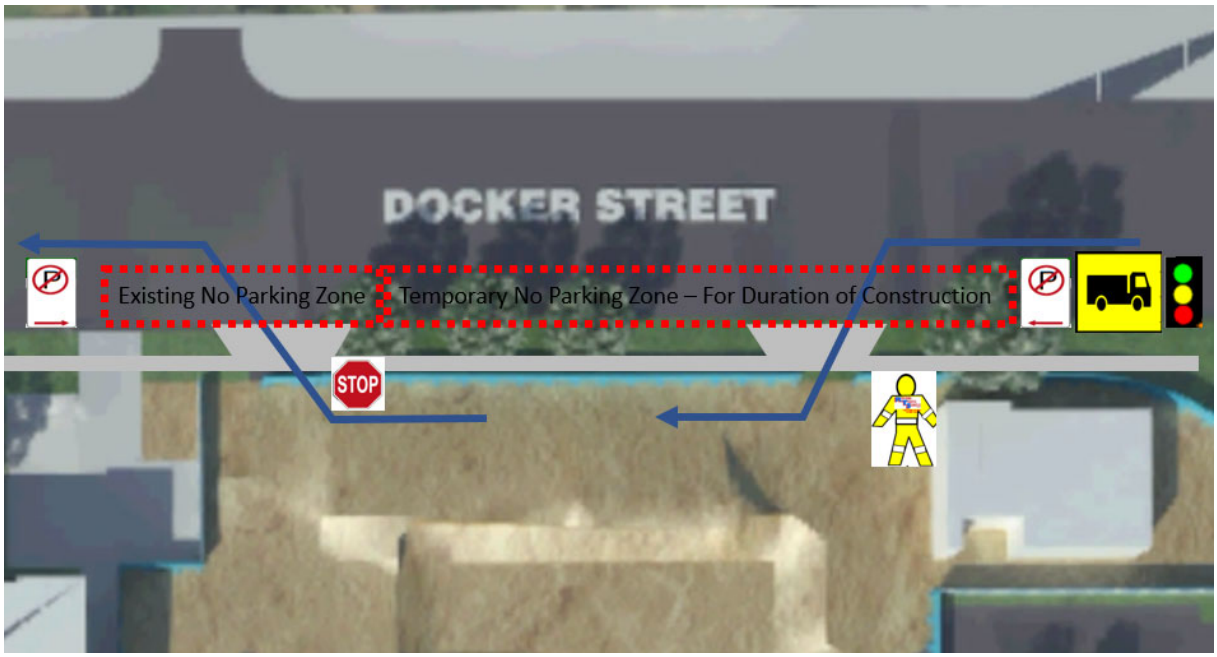


Figure 4 - Construction Vehicle Flow

To enable construction traffic to enter the site safely the existing parking spaces outside the site on Docker Street will be removed and a temporary no parking zone enforced with 'no parking' signage as per the detail below:



12.5 Construction Entry into Site

An entry to the site compound will be established on the south west of the boundary on Docker Street (see Figure 5 for reference). This ensures workers do not use hospital grounds to enter site. A turnstile will prevent unauthorised entry beyond the site compound and onto site.

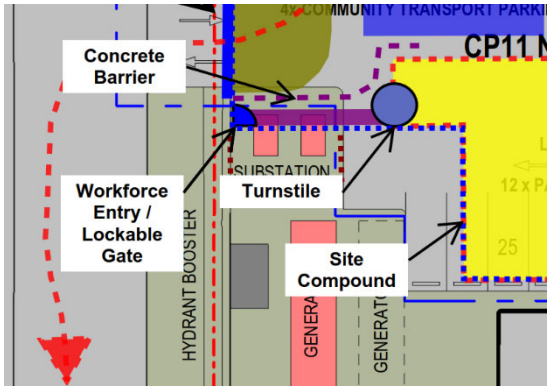


Figure 5 - Site Personnel Entry into site

12.6 Public Vehicle Traffic, Cyclists and Pedestrian Movements

Public vehicular, cyclists and pedestrian movements throughout the hospital will be maintained throughout the works. For details on the management of vehicle traffic and pedestrian movements during interface works in the hospital campus, particularly relocations of hoardings, refer to Construction Management Plan.

CPB will ensure that bus stops on Edward Street/ Sturt Highway will not be obstructed during the works.

Construction vehicles accessing site will not be permitted to block traffic routes and all waiting trucks will be held at a staging area until called to site.

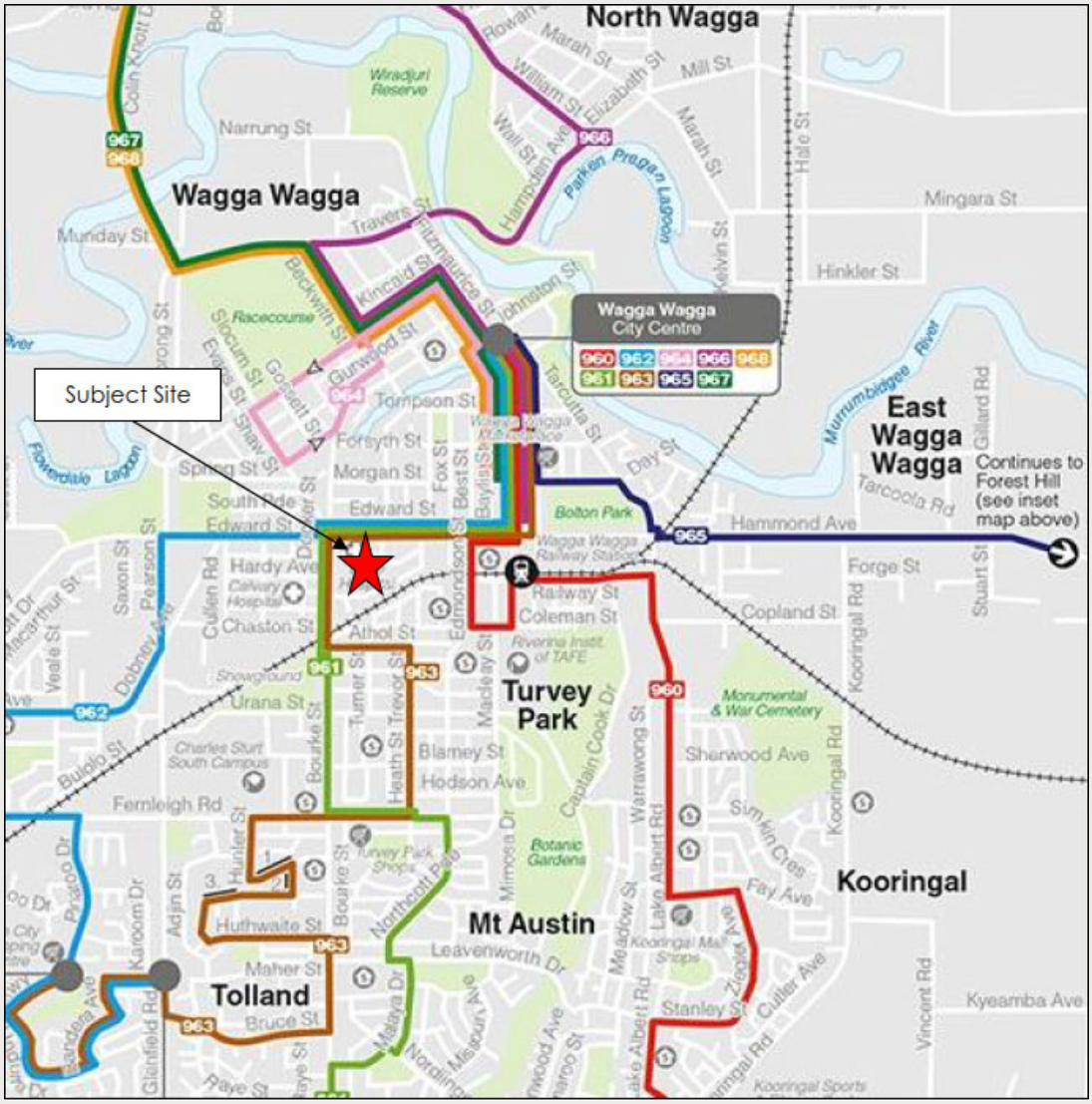
Pedestrian barriers will be used to halt pedestrians during construction vehicle movements across the footpath when entering or exiting the site. This is further detailed in the Pedestrian Movement Plan in Appendix K.

12.7 Controls Used to Manage Pedestrians and Traffic

Controls that are adequate to minimise pedestrian and traffic issues and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 12.4: Pedestrian and traffic controls

Control	Accountability
Heavy vehicles will be restricted to Sturt Highway and Olympic Highway. Construction vehicles will access the site from Docker Street via left-in left-out arrangement with loading areas proposed on the eastern side of Docker Street. A Delivery Driver Induction will be provided to all drivers prior to arrival to the site which includes a Driver Code of Conduct. This will form part of the Subby Pack included in the Subcontract Documents.	Site Manager
All deliveries to the site will be managed by a Materials Handling Coordinator who will book all deliveries 24-hours in advance. The traffic controller will control delivery access into the site by checking against the delivery schedule. Deliveries which have not been scheduled in will be directed back to their original place of departure to avoid vehicle congestion on site. In addition to booking deliveries, the Materials Handling Coordinator will also be responsible for scheduling movement equipment to allow the materials to be relocated within the site	Materials Handling Coordinator
Construction vehicle activity, including the loading/unloading of trucks and all materials handling to be provided within the construction site boundaries or within the proposed works zone at all times. Unloading IS NOT permissible from Docker Street across the footpath reserve. Accredited site personnel will be provided at each site access during vehicle access to the site to ensure pedestrian safety. Safe pedestrian access along the Docker Street footpath is to be provided at all times.	Site Manager
The necessary permits and approvals from the relevant road authority must be obtained prior to the commencement of road or pavement construction works.	Project Manager
During the induction construction workers will be instructed not to park in the vicinity of the hospital grounds up to and including Brookong/ Murray streets south of the Sturt Highway and East of Docker Street. If any worker is caught parking in hospital grounds, they will be re-inducted to site. Workers will be encouraged to car pool or use the 961, 962 and 963 bus service from Wagga Wagga City Centre limiting construction workers parking in the Hospital's surrounding streets. As part of the site-specific induction, a map of the bus service will be shown during presentations.	Project Manager

Control	Accountability
	
Emergency vehicle access will be permitted into the site through the main gate entry and the Emergency Response Team Leader will be responsible for coordinating emergency crew to the first aid shed or point of emergency. The traffic controllers will be responsible for maintaining clear access to the first aid shed for any emergency vehicle.	ERT Leader
Cumulative impacts associated with other construction activities occurring within the Docker Street/ Edward Street proximity will be assessed and if necessary managed through consultation with the Contractors Project Manager and Wagga Wagga City Council to minimise disruption to traffic and pedestrians.	Project Manager

12.8 Heavy Vehicle Routes

Following consultation between CPB and Wagga Wagga City Council, heavy vehicle routes accessing and egressing the site have been agreed as follows:

A41 OLYMPIC HIGHWAY:

Access to Construction Site

Continue South along A41 Olympic Highway to the intersection of A20 Sturt Highway

Turn Left at the Round-a-bout onto Edward Street (A20 Sturt Highway)

Continue East along Edward Street to the Signalised Intersection with Docker Street

Turn Right at the intersection onto Docker Street and travel South to the entry of the construction site.

Turn Left into Gate 1 of the Construction Site

Egress From Construction Site

Turn Left out of Site Entry from Construction site onto Docker Street

Travel South along Docker Street to the intersection with Chaston Street

Turn Right onto Chaston Street and travel West to the intersection with Dobney Avenue

Turn Left onto Dobney Avenue and travel South to the intersection with Pearson Street

Turn Right at the roundabout onto Pearson Street and North to the intersection with Edward Street.

Continue North through the roundabout and along the Olympic Highway

A20 STURT HIGHWAY – FROM SYDNEY:

Access to Construction Site

Continue West along A20 Sturt Highway to the intersection with Docker Street

Turn Left at the intersection onto Docker Street and travel South to the entry of the construction site.

Turn Left into Gate 1 of the Construction Site

Egress From Construction Site

Turn Left out of Site Entry from Construction site onto Docker Street

Travel South along Docker Street to the intersection with Chaston Street

Turn Right onto Chaston Street and travel West to the intersection with Dobney Avenue

Turn Left onto Dobney Avenue and travel South to the intersection with Pearson Street

Turn Right at the roundabout onto Pearson Street and travel North to the intersection with Edward Street.

Turn Right at the roundabout and continue East along the Sturt Highway

A20 STURT HIGHWAY – FROM ADELAIDE:

Access to Construction Site

Enter Wagga Wagga via the Sturt Highway

Continue East along Edward Street to the Signalised Intersection with Docker Street

Turn Right at the intersection onto Docker Street and travel South to the entry of the construction site.

Turn Left into Gate 1 of the Construction Site

Egress From Construction Site

Turn Left out of Site Entry from Construction site onto Docker Street

Travel South along Docker Street to the intersection with Chaston Street

Turn Right onto Chaston Street and travel West to the intersection with Dobney Avenue

Turn Left onto Dobney Avenue and travel South to the intersection with Pearson Street

Turn Right at the roundabout onto Pearson Street and travel North to the intersection with Edward Street.

Travel left at the roundabout and travel West along the Sturt Highway to Adelaide.

A20 STURT HIGHWAY – FROM MELBOURNE:

Access to Construction Site

Enter Wagga Wagga via the Olympic Highway

Turn Right at the Round-a-bout onto Edward Street (A20 Sturt Highway)

Continue East along Edward Street to the Signalised Intersection with Docker Street

Turn Right at the intersection onto Docker Street and travel South to the entry of the construction site.

Turn Left into Gate 1 of the Construction Site

Egress From Construction Site

Turn Left out of Site Entry from Construction site onto Docker Street

Travel South along Docker Street to the intersection with Chaston Street

Turn Right onto Chaston Street and travel West to the intersection with Dobney Avenue

Turn Left onto Dobney Avenue and travel South to the intersection with Pearson Street

Turn Right at the roundabout onto Pearson Street and travel North to the intersection with Edward Street.

Turn Left at the roundabout and travel north along the Sturt Highway the turn left onto Olympic Highway travelling South to Melbourne

The above routes will be included in the Subcontract Documents.

12.9 Traffic Control and Pedestrian Management Plans

A Traffic Control Plan and Pedestrian Management Plan has been generated for the project in consultation with Wagga Wagga City Council and is provided in Appendix K. This Plan includes necessary signage and parking restrictions required for the safe operation of the access and egress of construction vehicles to the site.

12.10 Maintenance of roads

Following consultation with Wagga Wagga City Council and CPB, road condition will be inspected regularly by CPB and any deterioration reported to Council who are responsible for maintenance works.

12.11 Community Consultation and Notification

Prior to Contract award the Applicant consulted with the community regarding the Project.

Following award, CPB are committed to providing the local community and immediate residents with a monthly newsletter (letter drop to premises) advising of the upcoming works and notification or any potential disruptions to traffic/ pedestrian routes. This newsletter will be coordinated with the Applicant and will include an email address for community related matters to be addressed. A recorded of all community notices will be maintained by the project.

12.12 References

Environmental Impact Statement SSD 9033 Appendix I Traffic Impact Assessment

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Appendix A: CPB Contractors Environment Policy

Environment Policy

Purpose

This Policy sets out the minimum mandatory requirements for the management of environmental risks and impacts from our construction activities.

Application

This Policy applies to all business entities controlled by the business, including alliances, joint ventures and consortia where the business exerts management control. It applies at all levels of the organisation including Corporate, Business Unit and Project.

Minimum Requirements

- Senior leaders must demonstrate a personal visible commitment to our SH&E Cultural Framework and ensure all workers understand the requirements of the Management System as it applies to the work they are undertaking, so that work is undertaken to minimise our environmental impact.
- Environment Management Plans (EMP) must be developed and implemented for each Project to outline how the project environmental risk will be managed and controlled.
- Environmental objectives, targets and key performance indicators must be established at all levels of the organisation, with performance against these monitored and analysed to provide a baseline for continual improvement.
- The Environment Procedures must be used to eliminate or minimise environmental risk from construction activities.
- Construction Area Plans and Work Packs must be developed and include an assessment of environmental risk and associated controls.
- Site Environment Plans must be developed for Work Packs where environmental risk dictates; these must be used to inform as content of Daily Pre Starts.
- As part of the risk management process, personnel and teams at the Project, Business Unit and Corporate level should seek to identify opportunities for improving efficiency in the use of natural resources, enhancing positive environmental impacts and driving innovation.
- All environmental incidents must be reported in accordance with the incident notification requirements. They must be thoroughly investigated and appropriate corrective action undertaken with the aim of preventing recurrence of the incident.
- Reporting of energy consumption, water use and waste generation, as well as reporting on initiatives and environmental achievements must be completed by projects and business units as requested.

- All levels of the organisation must be prepared to respond to an emergency and in the event of an emergency, plans and capabilities are in place to eliminate or minimise damage to the environment, preserve ongoing operations and our reputation.
- Effective communication, cooperation and consultation channels must be in place to consult with workers who may impact upon the environment.
- All project personnel responsible for environmental risk shall be appropriately trained and competent and understand their legal obligations with regard to environment management.

Appendix B: CPB Contractors Environmental Certification

Certificate AU14/4487

The management system of

CPB Contractors Pty Limited

Level 18, 177 Pacific Highway, North Sydney, NSW 2060
Australia

has been assessed and certified as meeting the requirements of

ISO 14001:2015

For the following activities

The provision of project management and related services including design, procurement, construction, traffic management at roadworks, completion, commissioning and maintenance of civil Infrastructure (including site preparation, road and bridge construction, non-building construction, plant hire and leasing), building, rail, water, utilities, tunnelling, energy, marine, mine infrastructure, structural, mechanical, piping and electrical engineering and related industries delivered under varying forms of contract including joint ventures and alliances. The scope of registration also includes the maintenance and repair of fixed and mobile plant and the manufacture of precast concrete units for major infrastructure works.

This certificate is valid from 30 November 2019 until 30 November 2022
and remains valid subject to satisfactory surveillance audits.
Certified activities performed by additional sites listed on subsequent page.
Recertification audit due a minimum of 60 days before the expiration date.
Issue 8. Certified since December 1995

Authorised by

SGS Systems & Services Certification Australia Pty Ltd
10/585 Blackburn Road, Notting Hill VIC 3168, Australia
t(61-3) 9574 3200 f (61-3) 9574 3399 www.au.sgs.com

www.jas-anz.org/register

CPB Contractors Pty Limited

ISO 14001:2015

Issue 8

Certified activities are performed by the sites on the list.
Sites:

Business Unit Operations
Level 2, 177 Pacific Highway, North Sydney, NSW 2060

Level 6, 567 Collins Street, Melbourne, VIC 3000

Level 6, HQ South Tower, 520 Wickham Street, Fortitude Valley, QLD 4006

202 Pier Street, Perth, WA 6000

14-64 Industrial Avenue, Bohle, QLD 4818

Level 2, 19 Hargreaves Street, Auckland, 1011, New Zealand

Ground Level, 62 Cavenagh Street, Darwin, NT 0800

Plan Facilities
8a Hereford Street, Berkeley Vale, NSW 2261

Lot 804 (SubLot 5) Elmsfield Road, Midvale, WA 6056

67 Bernoulli Street, Darra, QLD 4076

158 Cherry Lane, Laverton North, VIC 3026

Pre-Cast Facility
Corner Engineering & Industrial Drive, North Boambee, NSW 2450

www.jas-anz.org/register

Appendix C: Environmental Roles and Responsibilities

		Project Manager	Project Environmental Rep.	Engineering Manager	Engineers	Construction Manager	Supervisors	Line Manager	P&C Manager	Commercial Manager	Comm & S'hold Manager	H&S Manager	Other positions
Element 1:	**Leadership, Accountability and Culture**												
1.1.	Environmental accountabilities, roles and responsibilities for managers, staff, employees and subcontractors are clearly defined, documented and communicated		C					C	R				
1.2.	Environmental leadership and commitment is demonstrated through measurable participation in environmental management	R	C				C	C					
1.3.	Environmental expectations are clearly defined with appropriate reward and disciplinary processes in place.	R	C					C					
Element 2:	**Planning**												
2.1.	Adequate resources are provided to effectively implement the EMP	R	C			C			C	C			
2.2.	Business systems are defined and established		R										
2.3.	Environmental Sub-Plans are prepared and maintained for Significant Environmental Hazards		R										
Element 3:	**Legal and Other Requirements**												
3.1.	Relevant legal, contractual and other requirements are identified and maintained in a legal and other obligations register	C	R										
3.2.	All necessary environmental approvals are obtained prior to commencing relevant works and surrendered on completion	C	R		C								
3.3.	Work is planned and executed to ensure compliance		C	C	C	R	C						
3.4.	Inspections, observations and monitoring are performed to ensure compliance is maintained		C		C		R						
3.5.	All non-compliances are reported as incidents		R										
3.6.	All energy and greenhouse data are collected and entered into JDE	C	R							C			
3.7.	Personnel on the site have access to current versions of relevant legislation, standards and codes of practice		C										R
Element 4:	**Risk and Opportunity Management**												
4.1.	Systematic processes are defined and implemented for identifying environmental risks and opportunities at all stages of the Project	R	C	C	C		C						
4.2.	Identified risks and opportunities are analysed and evaluated according to agreed criteria and recorded in a risk register	R	C		C								C
4.3.	Environmental controls appropriate to the level of risk are identified, documented and implemented	C	C		C								R
4.4.	Feasible opportunities are implemented	R											C
4.5.	Identified environmental risks and controls are communicated to all relevant personnell	R	C		C		C		C			C	
4.6.	Regular inspections and monitoring are conducted to check effectiveness of controls	C	R		C		C						
4.7.	Environmental risks and controls are regularly reviewed.	R	C		C								
Element 5:	**Change Management**												
5.1.	Changes to planned operations that have potential environmental consequences are identified	R	C	C	C		C						
5.2.	Risks associated with identified changes are assessed and controlled before changes are implemented	R	C				C						C
5.3.	All changes with environmental consequences are authorised before they are implemented	R		C		C	C						
5.4.	Controls associated with change are communicated to all affected personnel						C						R
Element 6:	**Communication and Consultation**												
6.1.	External environmental stakeholders are identified		C								R		
6.2.	Relationships with external stakeholders are effectively managed		R								C		
6.3.	Internal consultative forums are established with regular meetings scheduled, conducted, documented and communicated	R	C								C	C	
6.4.	Environmental complaints and enquiries are recorded and responded to appropriately	C	C								R		
6.5.	The effectiveness of internal and external stakeholder engagement is evaluated and improved.	R	C								C	C	

	Project Manager	Project Environmental Rep.	Engineering Manager	Engineers	Construction Manager	Supervisors	Line Manager	P&C Manager	Commercial Manager	Comm & S'hold Manager	H&S Manager	Other positions
Element 7: Training and Competency												
7.1. All personnel have completed an induction containing relevant environmental information before they are authorised to work on the Project		R						C			C	
7.2. A training plan is developed and documented		R						C				
7.3. Personnel are trained and assessed according to the training plan	R	C						C				
7.4. Training records are maintained and accessible to relevant personnel.		C						R				
Element 8: Subcontractor Relationships												
8.1. Selection processes ensure that subcontractors meet CPB Contractors' minimum environmental requirements		C		C					R			
8.2. Planning requirements of all subcontractor work scopes are completed and communicated prior to commencing work		C		R					C			
8.3. Compliance requirements for high risk environmental activities are identified and enforced		C		R					C			
8.4. Subcontractor documentation is submitted and reviewed to meet Project requirements		R		C					C			
8.5. Changes to the scope of work are managed as a Project change				C					R			
8.6. Subcontractors actively participate in environmental management and training on the Project		C		C					R			C
8.7. Subcontractors are reviewed to assess their performance and compliance with our minimum environmental requirements.		R		C		C						
Element 9: Incident Management												
9.1. All incidents are followed by appropriate response and notification	R	C		C		C				C		
9.2. All incidents are entered and managed in Synergy	C	R										
9.3. Incident investigations are conducted appropriate to the type of incident	R	C		C		C						
9.4. All personnel conducting incident investigations are trained to competently perform the task	R											
9.5. Corrective and preventive actions are taken after incidents and lessons are shared with other projects	R	C										
9.6. High potential and repeat incidents are regularly reviewed by the project management team	C	R										
Element 10: Emergency Planning and Response												
10.1. Potential emergencies are identified using a formal risk assessment process	R	C										
10.2. Emergency response plans and procedures are developed and regularly reviewed	R	C									C	
10.3. Adequate resources are provided to effectively implement emergency response plans and procedures	R	C									C	
10.4. Environmental emergency response drills are conducted	R	C									C	
10.5. Employees, contractors and visitors are given appropriate emergency response training.		C						R			C	
Element 11: Document and Record Management												
11.1. Current versions of all relevant documents and records are available and controlled.	C	R										
11.2. Relevant documents and records will be maintained using corporate business applications and systems	R											
Element 12: Reporting, Auditing, Review and Improvement												
12.1. Environmental performance trends are identified and corrective actions are implemented as required	R	C										
12.2. A monthly environmental report is produced and distributed	C	R										
12.3. Regular management reviews are conducted to determine the continuing suitability, adequacy and effectiveness of the Environmental Management System	R	C										C
12.4. Audits are undertaken to ensure compliance with the requirements of the EMP	R	C										C
12.5. All audits are undertaken by suitably qualified and experienced personnel												R

R = Responsible, **C** = Key Contributor

Appendix D: Development Consent Compliance Register

Source ID	Compliance Requirement	Timing	Compliance Responsibility
PART A	**ADMINISTRATIVE CONDITIONS**		
A1	In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development.	At all times	CPB Contractors
A2	The development may only be carried out: a) in compliance with the conditions of this consent b) in accordance with all written directions of the Planning Secretary c) generally in accordance with the EIS and Response to submissions d) in accordance with the approved plans in the table below (Table A2, pg.4)	At all times	CPB Contractors
A3	Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to: a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and b)the implementation of any actions or measures contained in any such document referred to in (a) above.	At all times	CPB Contractors
A4	The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2©. In the event of an inconsistency, ambiguity or conflict between any of the documents listed in A2(c), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.	At all times	CPB Contractors
A5	This consent lapses five years after the date of consent unless the works associated with the development have physically commenced.	At all times	HI
A6	In the event of a dispute between the Applicant and a public authority, in relation to an applicable requirement in this approval or relevant matter relating to the Department, either party may refer the matter to the Planning Secretary for resolution. The Planning Secretary's resolution of the matter must be on the parties.	At all times	HI
A7	For work costing $25,000 or more, a Long Service Levy must be paid. For further information please contact the Long Service Payments Corporation Helpline on 131 441.	At all times	CPB Contractors
A8	Any advice or notice to the consent authority must be served on the Planning Secretary.	At all times	CPB Contractors
A9	Where conditions of this consent require consultation with an identified party, the Applicant must: a) consult with the relevant party prior to submitting the subject document for information or approval; and b) provide details of the consultation undertaken including: (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	At all times	CPB Contractors
A10	With the approval of the Planning Secretary, the Applicant may: a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program) b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plan or programs that are proposed to be combined) c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).	At all times	CPB Contractors
A11	If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.	At all times	CPB Contractors
A12	If approved by the Planning Secretary, updated strategies, plans or programs supersede the previous versions of them and must be implemented in accordance with the condition that requires the strategy, plan or program.	At all times	CPB Contractors
A13	Demolition work must comply with Australian Standard AS 2601-2001 The demolition of structures (Standards Australia, 2001). The work plans required by AS 2601-2001 must be accompanied by a written statement from a suitably qualified person that the proposals contained in the work plan comply with the safety requirements of the Standard. The work plans and the statement of compliance must be submitted to the Certifying Authority before the commencement of works.	Pre-construction	CPB Contractors
A14	All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the BCA.	Construction	CPB Contractors
A15	The external walls of all buildings including additions to existing buildings must comply with the relevant requirements of the BCA.	At all times	CPB Contractors
A16	References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent. However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.	At all times	CPB Contractors
A17	Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, noncompliance notification, compliance reporting and independent auditing. *Note: For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.*	At all times	CPB Contractors
	At least 48 hours before the commencement of construction until the completion of all works under this consent, or such other time as agreed by the Planning Secretary, the Applicant must: a) make the following information and documents (as they are obtained or approved) publicly available on its website:		

Source ID	Compliance Requirement	Timing	Compliance Responsibility
A18	(i) the documents referrred to in condition A2 of this consent (ii) all current statutory approvals for the development (iii) all approved strategies, plans and programs required under the conditions of this consent (iv) regular reporting on the environmental performance of the development in accordance with the reporting arrangements in any plans or programs aproved under the conditions of this consent (v) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditons of this consent, or any approved plans and programs (vi) a summary of the current stage and progress of the development (vii) contact details to enquire about the development or to make a complaint (viii) a complaints register, updated monthly (ix) audit reports prepared as part of any independent environmental audit of the development and the Applicant's response to the recommendations in any audit report (x) any other matter required by the Planning Secretary; and b) keep such information up to date, to the satisfaction of the Planning Secretary	At all times	
A19	The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.	At all times	CPB Contractors
A20	The project may be constructed and operated in stages. Where staged construction or operation is proposed (to the extent to which it relates to the requirements set out in this instrument), a Staging Report (for either or both construction and operation as the case may be) must be prepared and submitted for the approval of the Planning Secretary.	During Construction and prior to Operation	CPB Contractors
A21	A Staging Report prepared in accordance with condition A20 must: a) if staged construction is proposed, set out how the construction of the whole of the project will be staged, including details of work and other activities to be carried out in each stage and the general timing of when construction of each stage will commence and finish; b) if staged operation is proposed, set out how the operation of the whole of the project will be staged, including details of work and other activities to be carried out in each stage and the general timing of when operation or each stage will commence and finish (if relevant); c) specify how compliance with conditions will be achieved across and between each of the stages of the project; and d) set out mechanisms for managing and cumulative impacts arising from the proposed staging.	During Construction and prior to Operation	CPB Contractors
A22	Where staging is proposed, the project must be staged in accordance with the Staging Report, as approved by the Planning Secretary.	During Construction and prior to Operation	CPB Contractors
A23	Where staging is proposed, the terms of this approval that apply or are relevant to the works or activities to be carried out in a specific stage must be complied with at the relevant time for that stage.	During Construction and prior to Operation	CPB Contractors
AN1	All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents.	At all times	CPB Contractors
PART B	**PRIOR TO COMMENCEMENT OF CONSTRUCTION**		
B1	The Department must be notified in writing of the dates of commencement of physical work and operation at least 48 hours before the commencement of each stage, of the date of commencement and the development to be carried out in that stage.	Pre-construction	CPB Contractors
B2	Prior to the commencement of the relevant work, the Applicant must submit to the satisfaction of the Certifier structural drawings prepared and signed by a suitably qualified practising Structural Engineer that demonstrates compliance with: a) the relevant clauses of the BCA; and b) this development consent.	Pre-construction	CPB Contractors
B3	Prior to the commencement of the relevant works, Water Sensitive Urban Design measures are to be incorporated into the design consistent with the Australian Rainfall and Runoff, Australian Runoff Quality - a Guide to Water Sensitive Urban Design guideline.	Pre-construction	CPB Contractors
B4	Prior to the commencement of construction, the Applicant must provide the Certifying Authority with documented evidence that the products and systems proposed for use in the construction of external walls including finishes and claddings such as synthetic or aluminium composite panels comply with the requirements of the BCA. The Applicant must provide a copy of the documentation given to the Certifying Authority to the Planning Secretary within seven days after the Certifying Authority accepts it.	Pre-construction	CPB Contractors
B5	The building materials used on the facades of all buildings will be designed so as not to result in glare that causes discomfort or threatens the safety of pedestrians or drivers. A report/statement demonstrating consistency with this requirement will be submitted to the satisfaction of the Certifying Authority prior to the commencement of above ground works.	Pre-construction	CPB Contractors
B6	Before the commencement of construction, the Applicant must: a) consult with the relevant owner and provider of services that are likely to be affected by the development to make suitable arrangements for access to, diversion, protection and support of the affected infrastructure b) prepare a dilapidation report identifying the conditon of all public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and c) submit a copy of the dilapidation report to the Planning Secretary, Certifying Authority and Council.	Pre-construction	CPB Contractors

Source ID	Compliance Requirement	Timing	Compliance Responsibility
B7	Prior to the commencement of earthworks, the Applicant must prepare an unexpected contamination procedure to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the of the CEMP in accordance with condition B20 and where any material identified as contaminated is to be disposed off-site, with the disposal location and results of testing submitted to the Planning Secretary, prior to its removal from the site.	Pre-construction	CPB Contractors
B8	Before the construction of any utility works associated with the development, the Applicant must obtain relevant approvals from service providers.	Pre-construction	
B9	Prior to the commencement of above ground works written advice must be obtained from the electricity supply authority, an approved telecommunications carrier and an approved gas carrier (where relevant) stating that satisfactory arrangements have been made to ensure provisions of adequate sevices.	Pre-construction	CPB Contractors
B10	Before the commencement of construction, a Traffic and Transport Consultative Committee (TTCC) must be established for the development to develop the following upgrade works to resolve impacts on key intersections surrounding the hospital site. a) The intersection of Edward Street and Murray Street is to be upgraded to achieve a Level of Service C or better forecasting to the year 2031. The intersection treatment is to be designed and constructed in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services. b) The intersection of Murray Street and Brookong Avenue is to be upgraded for traffic calming purposes. c) Phasing and lane reconfiguration works to the Edward Street and Docker Street intersection as outlined in the Transport Impact Assessment, Issue B, dated 3 October 2018 and prepared by GTA Consultants.	Pre-construction	HI
B11	All roads and traffic facilities must be designed to meet the requirements of Council or RMS (whichever is applicable). The necessary permits and approvals from the relevant road authority must be obtained prior to the commencement of road or pavement construction works.	Pre-construction	
B12	For works on the State Road network the developer is required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services before finalising the design or undertaking any construction work within or connecting to the road reserve. *Note: The applicant is to contact the Land Use Manager for the South West Region on Ph: 02 6938 1111 for further detail.*	Pre-construction	
B13	A Community Communication Strategy must be prepared to provide mechanisms to facilitate communication between the Applicant, the relevant Council and the community (including adjoining affected landowners and businesses, and others directly impacted by the development), during the design and construction of the development and for a minimum of 12 months following the completion of construction. The Communication Strategy must: a) identify people to be consulted during the design and construction phases b) set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the development c) provide for the formation of community-based forums, if required, that focus on key environmental management issues for the development d) set out procedures and mechanisms: (i) through which the community can discuss or provide feedback to the Applicant (ii) through which the Applicant will respond to enquiries or feedback from the community; and (iii) to resolve any issues and mediate any disputes that may arise in relation to construction and operation of the development, including disputes regarding rectification or compensation. The Community Communication Strategy must be submitted to the Planning Secretary for approval no later than two weeks before the commencement of any work. Work for the purposes of the development must not commence until the Community Communication Strategy has been approved by the Planning Secretary, or within another timeframe agreed with the Planning Secretary.	Pre-construction	HI
B14	Prior to the commencement of the relevant work, the Applicant must submit details of all design measures to the satisfaction the Certifying Authority demonstrating the proposal incorporates ecologically sustainable development initiatives as outlined in NSW Health Infrastructure Engineering Services Guidelines and Section J of the National Construction Code 2012 to achieve the equivalent of a minimum 4 Star Green Star rating.	Pre-construction	
B15	Prior to commencement of the relevant work, the Applicant must prepare a Landscape Management Plan to manage the revegetation and lanscaping works on-site, to the satisfaction of the Certifying Authority. The plan must: a) be generally in accordance with the approved landscape plans prepared by Site Image, dated 31 August 2018 b) provide for the planting of a minimum of 68 new trees of species of at least 20 must be endemic to the area c) detail all the species to be planted on-site d) describe the monitoring and maintenance measures to manage revegetation and landscaping works; and e) be consistent with the Applicant's Management and Mitigation Measures in the EIS and RtS.	Pre-construction	CPB Contractors
B16	The Applicant must not commence the relevant work until the Landscape Management Plan is submitted to the satisfaction of the Certifying Authority.	Pre-construction	CPB Contractors
B17	All applicable fees and charges must be paid in full prior to RWCC commencing any on-site works or issuing a 'Certificate of Compliance for Water Supply' for the stage 3 development.	Pre-construction	CPB Contractors
B18	Prior to commencement of the relevant work, all outdoor lighting within the site must comply with AS 1158.3.1:2005 Lighting for roads and public spaces – Pedestrian area (Category P) lighting – Performance and design requirements and AS 4282-1997 Control of the obtrusive effects of outdoor lighting. Details demonstrating compliance with these requirements must be submitted to the satisfaction of the Certifying Authority.	Pre-construction	CPB Contractors
B19	The works that are the subject of this application must be designed and constructed to provide access and facilities for people with a disability in accordance with the BCA. Prior to the commencement of the relevant work, the Certifying Authority must ensure that evidence of compliance with this condition from an appropriately qualified person is provided and that the requirements are referenced on any certified plans.	Pre-construction	CPB Contractors
B20	Prior to commencement of construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) and it must include, but not be limited to, the following: a) Details of: (i) hours of work		CPB Contractors

Source ID	Compliance Requirement	Timing	Compliance Responsibility
	(ii) 24-hour contact details of site manager (iii) management of dust and odour to protect the amenity of the neighbourhood (iv) stormwater control and discharge (v) measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the site (vi) external lighting in compliance with AS 4282-1997 Control of the obtrusive effects of outdoor lighting (vii) community consultation and complaints handling b) Construction Traffic and Pedestrian Management Sub-Plan c) Construction Noise and Vibration Management Sub-Plan d) Construction Waste Management Sub-Plan e) Construction Dust Management Sub-Plan f) Construction Soil and Water Management Sub-Plan including Erosion and Sediment Control Plan g) an unexpected finds protocol for Aboriginal and non-Aboriginal heritage and associated communications procedure h) details of tree protection areas to ensure no secondary impacts to extant trees not to be removed i) waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site	Pre-construction	
B21	The Applicant must not commence construction of the development until the CEMP is approved by the Certifying Authority and a copy submitted to the Planning Secretary.	Pre-construction	CPB Contractors
B22	The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared in consultation with Council and submitted to the satisfaction of the Certifying Authority. The CPTMP must specify, but not limited to, the following: a) be prepared by a suitably qualified and experienced person(s) b) be prepared in consultation with Council, RMS and TfNSW c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services d) assess cumulative impacts associated with other construction activities (if any) e) assess the road safety at key intersections and locations subject to heavy vehicle movements and high pedestrian activity f) detail construction program, the anticipated construction duration and milestones and events during the construction process g) detail anticipated peak hour and daily truck movements to and from the site h) detail access arrangements for workers to/from the site, emergency vehicles and service vehicle movements i) detail temporary cycling and pedestrian access during construction j) detail proposed construction vehicle access arrangements at all stages k) detail heavy vehicle routes, access and parking arrangements including that required by condition B25 l) include a Driver Code of Conduct to: (i) minimise the impacts of earthworks and construction on the local and regional road network (ii) minimise conflict with other road users (iii) minimise road traffic noise; and (iv) ensure truck drivers use specified routes m) detail temporary traffic controls, including detours and signage n) include procedures for notifying the local community about project-related traffic impacts o) include procedures for managing impacts to bus stops p) include procedures for receiving and addressing complaints from the community about development-related traffic q) include measures for minimising potential for conflict with school buses, school zone operating times, emergency vehicles and other motorists as far as practicable r) include procedures for responding to any emergency repair or maintenance requirements s) include a program to monitor the effectiveness of these measures; and t) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	Pre-construction	CPB Contractors
B23	The Construction Noise and Vibration Management Sub-Plan must address, but not be limited to, the following: a) be prepared by a suitably qualified and experienced noise expert b) describe procedures for achieving the noise management levels in EPA's *Interim Construction Noise Guideline* (DECC, 2009); c) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers d) include strategies that have been developed with the community for managing high noise generating works e) describe the community consultation undertaken to develop the strategies in condition B23(d); and f) include a complaints management system that would be implemented for the duration of the construction.	Pre-construction	CPB Contractors
B24	The Construction Waste Management Sub-Plan (CWMSP) must address, but not be limited to, the following: a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations b) The CWMSP must include a Hazardous Materials Management Plan and Asbestos Removal Control Plan c) removal of hazardous materials, particularly the method of containment and control of emission of fibres to the air, and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works.	Pre-construction	CPB Contractors
B25	Prior to the commencement of construction, the Applicant must demonstrate to the satisfaction of the Certifying Authority that sufficient off-street parking has been provided, including for heavy vehicles and for site personnel, to ensure that construction traffic associated with the development reduces the utilisation of public and residential streets or public parking facilities.	Pre-construction	CPB Contractors
B26	Prior to the commencement of the relevant work, the Applicant must design a stormwater management system for the development and submit it to the satisfaction of the Certifying Authority. The system must: a) be designed by a suitably qualified and experienced person(s) b) be generally in accordance with the conceptual design in the EIS c) be in accordance with applicable Australian Standards; and	Pre-construction	

Source ID	Compliance Requirement	Timing	Compliance Responsibility
	d) ensure that the system capacity has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and *Managing Urban Stormwater: Council Handbook* (EPA, 1997) guidelines.		CPB Contractors
B27	Prior to commencement of the relevant work, the Applicant must incorporate the noise mitigation recommendations in the Noise Impact Assessment, into the detailed design drawings. The Certifying Authority must verify that all reasonable and feasible noise mitigation measures have been incorporated into the design to ensure the development will not exceed the recommended operational noise levels identified in the Noise Impact Assessment.	Pre-construction	CPB Contractors
B28	All mechanical ventilation systems must be designed in accordance with Part F4.5 of the BCA and must comply with the AS 1668.2-2012 The use of air-conditioning in buildings – Mechanical ventilation in buildings and AS/NZS 3666.1:2011 Air handling and water systems of buildings– Microbial control to ensure adequate levels of health and amenity to the occupants of the building and to ensure environment protection. Details must be submitted to the satisfaction of the Certifying Authority prior to the commencement of the relevant works.	Pre-construction	CPB Contractors
B29	Compliance with the following requirements for secure bicycle parking and end-of-trip facilities must be submitted to the satisfaction of the Certifying Authority prior to the commencement of construction: a) the provision of a minimum 28 bicycle parking spaces b) the layout, design and security of bicycle facilities must comply with the minimum requirements of AS 2890.3:2015 Parking facilities - Bicycle parking, and be located in easy to access, well-lit areas that incorporate passive surveillance c) the provision of end-of-trip facilities for staff in accordance with the ESD Design & As Built rating tool d) appropriate pedestrian and cyclist advisory signs are to be provided; and e) all works/regulatory signposting associated with the proposed developments shall be at no cost to the relevant roads authority.	Pre-construction	CPB Contractors
B30	No later than two weeks before the date notified for the commencement of construction, a Compliance Monitoring and Reporting Program prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2018) must be submitted to the Department and the Certifying Authority. Compliance Reports of the project must be carried out in accordance with the Compliance Reporting Post Approval Requirements (Department 2018). The Applicant must make each Compliance Report publicly available 60 days after submitting it to the Department and notify the Department and the Certifying Authority in writing at least seven days before this is done.	Pre-construction	
B31	Notwithstanding the requirements of the Compliance Reporting Post Approval Requirements (Department 2018), the Planning Secretary may approve a request for ongoing annual operational compliance reports to be ceased, where it has been demonstrated to the Planning Secretary's satisfaction that an operational compliance report has demonstrated operational compliance.	Pre-construction	
PART C	**DURING CONSTRUCTION**		
C1	A copy of the approved and certified plans, specifications and documents incorporating conditions of approval and certification must be kept on the Site at all times and must be readily available for perusal by any officer of the Department, Council or the Certifying Authority.	Construction	CPB Contractors
C2	A site notice(s): a) must be prominently displayed at the boundaries of the site for the purposes of informing he public of project details including, but not limited to the details of the Builder, Certifying Authority and Structural Engineer. b) is to satisfy all but not be limited to, the following requirements: (i) minimum dimensions of the notice must measure 841 mm x 594 mm (A1) with any text on the notice to be a minimum of 30-point type size (ii) the notice is to be durable and weatherproof and is to be displayed throughout the works period (iii) the approved hours of work, the name of the site/ project manager, the responsible managing company (if any), its address and 24-hour contact phone number for any inquiries, including construction/ noise complaint must be displayed on the site notice; and (iv) the notice(s) is to be mounted at eye level on the perimeter hoardings/fencing and is to state that unauthorised entry to the site is not permitted.	Construction	CPB Contractors
C3	All plant and equipment used on site, or to monitor the performance of the development must be: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	Construction	CPB Contractors
C4	Demolition work must comply with Australian Standard AS 2601-2001 The demolition of structures (Standards Australia, 2001). The work plans required by AS 2601-2001 must be accompanied by a written statement from a suitably qualified person that the proposals contained in the work plan comply with the safety requirements of the Standard. The work plans and the statement of compliance must be submitted to the Certifying Authority before the commencement of works.	Construction	CPB Contractors
C5	Construction, including the delivery of materials to and from the site, may only be carried out between the following hours: a) between 7am and 6pm, Mondays to Fridays inclusive; and b) between 7.30am and 5pm, Saturdays. No work may be carried out on Sundays or public holidays.	Construction	CPB Contractors
C6	Activities may be undertaken outside of the hours in condition C5 if required: a) by the Police or a public authority for the delivery of vehicles, plant or materials; or		CPB Contractors

Source ID	Compliance Requirement	Timing	Compliance Responsibility
	b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or c) where the works are inaudible at the nearest sensitive receivers; or d) where a variation is approved in advance in writing by the Planning Secretary or her nominee if appropriate justification is provided for the works. Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards.	Construction	
C7	Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours: a) 9am to 12pm, Monday to Friday b) 2pm to 5pm Monday to Friday; and c) 9am to 12pm, Saturday.	Construction	CPB Contractors
C8	The Applicant must carry out the construction of the development in accordance with the most recent version of the approved CEMP (including Sub-Plans).	Construction	CPB Contractors/ HI Planning
C9	All construction vehicles (excluding worker vehicles) are to be contained wholly within the site, except if located in an approved on-street work zone, and vehicles must enter the site before stopping.	Construction	CPB Contractors
C10	A Road Occupancy Licence must be obtained from the relevant road authority for any works that impact on traffic flows during construction activities and/or any works in the road reserve.	Construction	CPB Contractors
C11	To protect the safety of work personnel and the public, the work site must be adequately secured to prevent access by unauthorised personnel, and work must be conducted at all times in accordance with relevant SafeWork requirements.	Construction	CPB Contractors
C12	The following hoarding requirements must be complied with: a) no third-party advertising is permitted to be displayed on the subject hoarding/ fencing b) the construction site manager must be responsible for the removal of all graffiti from any construction hoardings or the like within the construction area within 48 hours of its application; and c) the Applicant must submit a hoarding application to Council for the installation of any hoardings over Council footways or road reserve.	Construction	CPB Contractors
C13	The public way (outside of any approved construction works zone) must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances. Non-compliance with this requirement will result in the issue of a notice by the relevant Authority to stop all works on site.	Construction	
C14	The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures identified in the approved Construction Noise and Vibration Management Plan.	Construction	CPB Contractors
C15	The Applicant must ensure construction vehicles (including concrete agitator trucks) do not arrive at the site or surrounding residential precincts outside of the construction hours of work outlined under condition C5.	Construction	CPB Contractors
C16	The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use audible movement alarms of a type that would minimise noise impacts on surrounding noise sensitive receivers.	Construction	CPB Contractors
C17	Any noise generated during construction of the development must not be offensive noise within the meaning of the *Protection of the Environment Operations Act 1997* or exceed approved noise limits for the site.	Construction	CPB Contractors
C18	Vibration caused by construction at any residence or structure outside the site must be limited to: a) for structural damage, the latest version of *DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures* (German Institute for Standardisation, 1999); and b) for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: a technical guideline* (DEC, 2006) (as may be updated or replaced from time to time).	Construction	CPB Contractors
C19	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition C18.	Construction	CPB Contractors
C20	The limits in conditions C18 and C19 apply unless otherwise outlined in a Construction Noise and Vibration Management Plan, approved as part of the CEMP required by condition B23 of this consent.	Construction	CPB Contractors
C21	For the duration of the construction works: a) street trees must not be trimmed or removed unless it forms a part of this development consent or prior written approval from Council is obtained or is required in an emergency to avoid the loss of life or damage to property b) all street trees must be protected at all times during construction. Any tree on the footpath, which is damaged or removed during construction due to an emergency, must be replaced, to the satisfaction of Council c) all trees on the site that are not approved for removal must be suitably protected during construction as per recommendations of the Tree Assessment Report prepared for the EIS; and d) if access to the area within any protective barrier is required during the works, it must be carried out under the supervision of a qualified arborist. Alternative tree protection measures must be installed, as required. The removal of tree protection measures, following completion of the works, must be carried out under the supervision of a qualified arborist and must avoid both direct mechanical injury to the structure of the tree and soil compaction within the canopy or the limit of the former protective fencing, whichever is the greater.	Construction	CPB Contractors
C22	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	Construction	CPB Contractors
C23	During construction, the Applicant must ensure that: a) exposed surfaces and stockpiles are suppressed by regular watering b) all trucks entering or leaving the site with loads have their loads covered c) trucks associated with the development do not track dirt onto the public road network d) public roads used by these trucks are kept clean; and e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.	Construction	
C24	All erosion and sediment control measures, must be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works have been stabilised and rehabilitated so that it no longer acts as a source of sediment.	Construction	CPB Contractors
C25	Any seepage or rainwater collected on-site during construction or groundwater must not be pumped to the street stormwater system unless separate prior approval is given in writing by the EPA in accordance with the Protection of the Environment Operations Act 1997.	Construction	CPB Contractors

Source ID	Compliance Requirement	Timing	Compliance Responsibility
C26	In the event that surface disturbance identifies a new Aboriginal object, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and the registered Aboriginal representatives must be contacted to determine the significance of the objects. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) which is managed by OEH and the management outcome for the site included in the information provided to AHIMS. The Applicant must consult with the Aboriginal community representatives, the archaeologists and OEH to develop and implement management strategies for all objects/sites. Works shall only recommence with the written approval of OEH.	Construction	CPB Contractors
C27	If any unexpected archaeological relics are uncovered during the work, then all works must cease immediately in that area and the OEH Heritage Division contacted. Depending on the possible significance of the relics, an archaeological assessment and management strategy may be required before further works can continue in that area. Works may only recommence with the written approval of Heritage Division of the OEH.	Construction	CPB Contractors
C28	Waste must be secured and maintained within designated waste storage areas at all times and must not leave the site onto neighbouring public or private properties.	Construction	CPB Contractors
C29	All waste generated during construction must be assess, classified and managed in accordance with the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).	Construction	CPB Contractors
C30	The body of any vehicle or trailer used to transport waste or excavation spoil must be covered before leaving the premises to prevent any spillage or escape of any dust, waste of spoil. Mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site must be removed before leaving the premises.	Construction	CPB Contractors
C31	The Applicant must ensure that concrete waste and rinse water are not disposed of on the site and are prevented from entering any natural of artificial watercourse.	Construction	CPB Contractors
C32	The Applicant is to consult with SafeWork NSW concerning the handling of any asbestos waste that may be encountered during construction. The requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 – 'Transportation and management of asbestos waste' must also be complied with.	Construction	CPB Contractors
C33	The proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the preparation of an Independent Audit Program or commencement of an Independent Audit.	Construction	CPB Contractors
C34	No later than 4 weeks after the date notified for the commencement of construction, an Independent Audit Program prepared in accordance with the Independent Audit Post Approval Requirements (Department 2018) must be submitted to the Department and the Certifying Authority.	Construction	CPB Contractors
C35	Table 1 of the Independent Audit Post Approval Requirements (Department 2018) is amended so that the frequency of audits required in the construction phase is: a) an initial construction Independent Audit must be undertaken within 8 weeks of the notified commencement date of construction; and b) a subsequent Independent Audit of construction must be undertaken no later than 26 weeks from the date of the initial construction Independent Audit. In all other respects Table 1 remains the same. The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified above, upon giving at least 4 weeks' notice to the applicant of the date upon which the audit must be commenced.	Construction	CPB Contractors
C36	Independent Audits of the development must be carried out in accordance with: a) the Independent Audit Program submitted to the Department and the Certifying Authority under condition C34 of this consent; and b) the requirements for an Independent Audit Methodology and Independent Audit Report in the Independent Audit Post Approval Requirements (Department 2018).	Construction	CPB Contractors
C37	In accordance with the specific requirements in the Independent Audit Post Approval Requirements (Department 2018), the Applicant must: a) review and respond to each Independent Audit Report prepared under condition C36 of this consent b) submit the response to the Department and the Certifying Authority; and c) make each Independent Audit Report and response to it publicly available within 60 days after submission to the Department and notify the Department and the Certifying Authority in writing at least seven days before this is done.	Construction	CPB Contractors
C38	Notwithstanding the requirements of the Independent Audit Post Approval Requirements (Department 2018), the Planning Secretary may approve a request for ongoing annual operational audits to cease, where it has been demonstrated to the Planning Secretary's satisfaction that ongoing operational audits are no longer required.	Construction	CPB Contractors
C39	The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one), and set out the location and nature of the incident.	Construction	CPB Contractors
C40	The Department must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance. The Certifying Authority must also notify the Department in writing to compliance@planning.nsw.gov.au within seven days after they identify any non-compliance. The notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	Construction	CPB Contractors
C41	Within three months of: a) the submission of a compliance report under condition B30 b) the submission of an incident report under condition C39 c) the submission of an Independent Audit under condition C36 d) 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 Department and the Certifying Authority must be notified in writing that a review is being carried out.	Construction	CPB Contractors
C42	If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Certifying Authority. Where revisions are required, the revised document must be submitted to the Certifying Authority for approval within six weeks of the review.	Construction	CPB Contractors
PART D	**PRIOR TO OCCUPATION OR COMMENCEMENT OF USE**		

Source ID	Compliance Requirement	Timing	Compliance Responsibility
D1	The date of commencement of the occupation of the development must be notified to the Department in writing, at least one month before occupation. If the operation of the development is to be staged, the Department must be notified in writing at least one month before the commencement of each stage, of the date of commencement and the development to be carried out in that stage.	Post construction	
D2	Prior to the occupation of the building, the Applicant must provide the Certifying Authority with documented evidence that the products and systems used in the construction of external walls including finishes and claddings such as synthetic or aluminium composite panels comply with the requirements of the BCA.	Post construction	
D3	The Applicant must provide a copy of the documentation given to the Certifying Authority to the Planning Secretary within seven days after the Certifying Authority accepts it.	Post construction	
D4	Prior to occupation of the building, the Applicant must engage a suitably qualified person to prepare a post-construction dilapidation report at the completion of construction. This report is: a) to ascertain whether the construction created any structural damage to adjoining buildings or infrastructure. b) to be submitted to the Certifying Authority. In ascertaining whether adverse structural damage has occurred to adjoining buildings or infrastructure, the Certifying Authority must: (i) compare the post-construction dilapidation report with the pre-construction dilapidation report required by these conditions; and (ii) have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads. c) to be forwarded to Council.	Post construction	
D5	Unless the Applicant and the applicable authority agree otherwise, the Applicant must: a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the development; and b) relocate, or pay the full costs associated with relocating any infrastructure that needs to be relocated as a result of the development.	Post construction	
D6	Prior to occupation of the building, the Applicant must undertake all landscape works detailed in the Landscape Management Plan required by condition B15B15 to the satisfaction of the Certifying Authority.	Post construction	
D7	Prior to occupation of the building, a compliance certificate under the section 307 of the Water Management Act 2000 must be obtained from Council and submitted to the Certifying Authority.	Post construction	
D8	Prior to the commencement of operation, a Green Travel Plan (GTP), must be prepared and be submitted to the Secretary to promote the use of active and sustainable transport modes. The plan must: a) be prepared by a suitably qualified traffic consultant in consultation with TfNSW b) include objectives and modes share targets (i.e. Site and land use specific, measurable and achievable and timeframes for implementation) to define the direction and purpose of the GTP c) include specific tools and actions to help achieve the objectives and mode share targets d) include measures to promote and support the implementation of the plan, including financial and human resource requirements, roles and responsibilities for relevant employees involved in the implementation of the GTP; and e) include details regarding the methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets of the GTP, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours of staff to and from the hospital campus.	Post construction	
D9	Following completion, installation and testing of all mechanical ventilation systems, the Applicant must provide evidence to the satisfaction of the Certifying Authority, prior to the final occupation, that the installation and performance of the mechanical systems complies with: a) the BCA b) *AS 1668.2-2012 The use of air-conditioning in buildings – Mechanical ventilation in buildings* and other relevant codes c) the development consent and any relevant modifications; and d) any dispensation granted by the NSW Fire Brigade.	Post construction	
D10	Prior to the final occupation, a Fire Safety Certificate must be obtained for all the Essential Fire or Other Safety Measures forming part of this consent. A copy of the Fire Safety Certificate must be submitted to the relevant authority and Council. The Fire Safety Certificate must be prominently displayed in the building.	Post construction	
D11	A Structural Inspection Certificate or a Compliance Certificate must be submitted to the satisfaction of the Certifying Authority prior to the occupation of the relevant parts of any new or refurbished buildings. A copy of the Certificate with an electronic set of final drawings (contact approval authority for specific electronic format) must be submitted to the approval authority and the Council after: a) the site has been periodically inspected and the Certifying Authority is satisfied that the structural works is deemed to comply with the final design drawings; and b) the drawings listed on the Inspection Certificate have been checked with those listed on the final Design Certificate/s. c) person/s authorised to, for the life of the development.	Post construction	
D12	The installation, operation and maintenance of warm water systems and water cooling systems (as defined under the Public Health Act 2010) must comply with the Public Health Act 2010, Public Health Regulation 2012 and Parts 1 and 2 (or Part 3 if a Performance-based water cooling system) of AS/NZS 3666.2:2011 Air handling and water systems of buildings – Microbial control – Operation and maintenance and the NSW Health Code of Practice for the Control of Legionnaires' Disease.	Post construction	
D13	Wayfinding signage and signage identifying the location of staff car parking must be installed prior to occupation.	Post construction	
D14	Bicycle wayfinding signage must be installed within the site to direct cyclists from footpaths to designated bicycle parking areas prior to occupation.	Post construction	
D15	Prior to the commencement of operation, the following intersection works as required by condition B10 must be completed: a) upgrade of the intersection of Edward Street and Murray Street to achieve a Level of Service C or better forecasting to the year 2031 designed and constructed in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services. b) upgrade of the Murray Street and Brookong Avenue for traffic calming purposes to be designed and constructed in consultation Council. c) phasing and lane reconfiguration works to the Edward Street and Docker Street intersection to be designed and constructed in consultation with RMS.	Post construction	
D16	Prior to the commencement of operation, the Applicant must finalise and implement the Art Strategy in consultation with local artists and the community to allow for local participation and integration.	Post construction	
D17	Prior to commencement of operation, the Applicant must prepare a Car Park Management Plan (CPMP) for the hospital campus and submit it to the satisfaction of the Certifying Authority. The CPMP is to provide an overview for the efficient management of car parking across the campus, with a view to minimising the use of on-street parking by both staff and visitors to the hospital.	Post construction	

Source ID	Compliance Requirement	Timing	Compliance Responsibility
D18	Prior to the commencement of operation, the Applicant must update the 'Wagga Wagga Hospital Waste Management Plan' to reflect the additional requirements of servicing the development. The updated plan is to be submitted to the satisfaction of the Certifying Authority. The updated plan must: a) detail the type and quantity of waste to be generated during operation of the development b) describe the handling, storage and disposal of all waste streams generated on site, consistent with the Protection of the Environment Operations Act 1997, Protection of the Environment Operations (Waste) Regulation 2014 and the Waste Classification Guideline (Department of Environment, Climate Change and Water, 2009) c) detail the materials to be reused or recycled, either on or off site; and d) include the Management and Mitigation Measures included in EIS.	Post construction	
D19	Prior to occupation of the building, the Applicant must obtain from an EPA accredited Site Auditor, a Site Audit Statement and a Site Audit Report which demonstrates that the site is suitable for its intended uses(s).	Post construction	
E1	All plant and equipment used on site, or to monitor the performance of the development must be: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	Post construction	
E2	The Community Communication Strategy, as approved by the Planning Secretary, must be implemented for a minimum of 12 months following the completion of construction.	Post construction	
E3	The Applicant must ensure that noise generated by operation of the development does not exceed the noise limits in the Noise Impact Assessment prepared as part of the EIS.	Post construction	
E4	The Applicant must undertake short term noise monitoring in accordance with the Noise Policy for Industry where valid data is collected following the commencement of use of each stage of the development. The monitoring program must be carried out by an appropriately qualified person and a monitoring report must be submitted to the Planning Secretary within two months of commencement use of each stage of the development to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant identified in the Noise Impact Assessment and dated August 2018. Should the noise monitoring program identify any exceedance of the recommended noise levels referred to above, the Applicant is required to implement appropriate noise attenuation measures so that operational noise levels do not exceed the recommended noise levels or provide attenuation measures at the affected noise sensitive receivers.	Post construction	
E5	The Work Place Travel Plan required by condition Error! Reference source not found. of this consent must be updated annually and implemented.	Post construction	
E6	The Applicant must ensure the lighting associated with the development: a) complies with the latest version of AS 4282-1997 - *Control of the obtrusive effects of outdoor lighting* (Standards Australia, 1997); and b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	Post construction	
E7	The owner must submit to Council an Annual Fire Safety Statement, each 12 months after the final Safety Certificate is issued. The certificate must be on, or to the effect of, Council's Fire Safety Statement.	Post construction	
E8	The Applicant must maintain the landscaping and vegetation on the site for the duration of occupation of the development.	Post construction	
E9	Within twelve months after the commencement of operation and every three years thereafter, or at such intervals as the Planning Secretary may agree, the Applicant must carry out a comprehensive Hazard Audit of the development. The audits must: a) be carried out at the Applicant's expense by a qualified person or team, who have been approved by the Planning Secretary and are independent of the development b) be carried out in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'*; and c) include a review of the site Safety Management System and a review of all entries made in the incident register since the previous audit.	Post construction	
E10	Within one month of completing each audit carried out in accordance with condition C36, the Applicant must submit a report to the satisfaction of the Planning Secretary for information. The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.	Post construction	
E11	The Applicant must store all chemicals, fuels and oils used on-site in accordance with: a) the requirements of all relevant Australian Standards; and b) the NSW EPA's *Storing and Handling of Liquids: Environmental Protection – Participants Manual'* if the chemicals are liquids.	Post construction	
E12	In the event of an inconsistency between the requirements of condition E11(a) and E11(b), the most stringent requirement must prevail to the extent of the inconsistency.	Post construction	
E13	The Applicant must ensure that the quantities of dangerous goods present within the development or transported to and from the development remain below the screening threshold quantities listed in Department's Hazardous and Offensive Development Guidelines Applying SEPP 33 (January 2011) at all times.	Post construction	
E14	The Applicant must store and handle all chemicals, fuels and oils in accordance with all relevant Australian Standards, including and not limited to AS 1894: The storage and handling of nonflammable cryogenic and refrigerated liquids.	Post construction	

Appendix E: MIRRA Schedule

(Monitoring, Inspections, Reporting, Review, Audit) Schedule

Name	Detail	Frequency	By Whom	Resources
MONITORING				
Water Quality	Water quality parameters including pH, NTU	Prior to discharge to stormwater	Project Environmental Representative	Environmental Monitoring form
Air Quality	As required depending on the receiver	As determined by site conditions	Project Environmental Representative	Environmental Monitoring form
Noise monitoring	As required depending on the receiver	As determined by site conditions	Project Environmental Representative	Environmental Monitoring form
INSPECTIONS				
Site Inspection	Environmental zone inspections	Weekly	Project Environmental Representative	Weekly Environmental Inspection Checklist
REPORTING				
Environmental Report	Detail on Environmental achievements, monitoring results, incidents, audit outcomes	Monthly	Project Environmental Representative	As part of Monthly Project Report
REVIEW				
EMP Review	Review of sub plans and Appendices	Bi-annual	SHEQ Manager	EMP
Risk Register Review	Review risks in relation to changes to work activity onsite	Monthly	Project Team	Project Risk Register
Site Env Plan	Review site environmental controls in relation to work activity onsite to ensure reflective of site conditions	Fortnightly	Project Environmental Representative	Project ERSED Plan
AUDIT				
CPB Contractors Internal SHEQ Audit	Review of EMP compliance to CPB Contractors EMS/ ISO14001	Bi-annual	SHEQ Team	Synergy

Appendix F: Legal and Other Requirements Register

Activity/ Aspect	Act/Regulation	Summary	Sections	Obligations	Due Diligence Strategy
	Planning / Pollution				
Administrative	Protection of the Environment Administration Act 1991	This Act establishes the EPA, the Board of the EPA (including Chairperson), two community consultation forums, and the NSW Council on Environmental Education requires the EPA to make a report on the state of the environment every three years. Objectives of the EPA are listed in section 6 of the Act. The overriding objective of the EPA is to protect, restore and enhance the quality of the environment in NSW, having regard to the need to maintain ecologically sustainable development. The EPA is a statutory body representing the Crown and is generally subject to Ministerial control, but not in relation to: the making of a report or recommendation to the Minister the release of a state of the environment report (although the Minister can require more information in the report) the making of a decision to institute criminal or related proceedings.		If the Minister gives any direction or makes any determination concerning a licensing function, a report of the direction must be tabled in Parliament.	Environmental Obligations Table / Induction Awareness Training/ Compliance Tracking
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Planning Approval	Environmental Planning and Assessment Act, 1979	The EP&A Act details the appropriate approval processes for development in NSW.	S115W	**Environmental assessment and approval of infrastructure.** Comply with the terms Minister for Planning's approval for the project. Obtain the Minister's approval for any project modifications that are not consistent with the planning approval.	Environmental Obligations Table.
Planning Approval	Environmental Planning and Assessment Act, 1979	The EP&A Act details the appropriate approval processes for development in NSW.	S115Z	Pubic consultation for the Environmental Impact Statement is required .	Requirements from the final approval included in the CEMP and other management plans as applicable.
Planning Approval	Environmental Planning and Assessment Act, 1979	The EP&A Act details the appropriate approval processes for development in NSW.	S115ZG	Approvals that do not apply to Part 5.1 projects.	Monitoring of compliance with approval conditions is outlined in Element 3 of CEMP

Planning Approval	State Environmental Planning Policy (Coastal Management) 2018	State Environmental Planning Policy (Coastal Management) 2018 Commenced 3 April 2018, repealing and replacing the State Environmental Planning Policy No 14 - Coastal Wetlands. Changes to additional obligations for coastal protection works and development in coastal zone.		State Environmental Planning Policy (Coastal Management) 2018 Commenced 3 April 2018, repealing and replacing the State Environmental Planning Policy No 14 - Coastal Wetlands. Changes to additional obligations for coastal protection works and development in coastal zone. A new framework for coastal management has been introduced, updating and consolidating existing State Environmental Planning Policies (SEPPs). The Coastal Management SEPP gives effect to the objectives of the Coastal Management Act 2016 and specifies how development proposals that fall within the coastal zone will be assessed.	
Approvals	Coastal Management Act 2016	Changes to additional obligations for coastal protection works and development in coastal zone.		Coastal Management Act 2016Commenced 3 April 2018, repealing and replacing the Coastal Protection Act 1979 and the Coastal Protection Regulation 2011. Changes to additional obligations for coastal protection works and development in coastal zone. A new framework for coastal management has been introduced that establishes statutory objectives focusing on ecologically sustainable development. The definition of coastal zone has also been updated, dividing the zone into four coastal management areas, namely the coastal wetlands and littoral rainforest area, coastal vulnerability area, coastal environment area and the coastal use area.	
Planning Approval	Environmental Planning and Assessment Act, 1979	The EP&A Act details the appropriate approval processes for development in NSW.	S115ZI	Comply with the terms Minister for Planning's approval for the project. Obtain the Minister's approval for any project modifications that are not consistent with the planning approval.	A change management process to determine if modifications are consistent with the planning approval is outlined in Element 5 of CEMP.
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Pollution	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).			Environmental Obligations Table/ Inductions/ Compliance Tracking

Environmental Protection Licences	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S47/ S48	Do not carry out or allow an activity listed in Schedule 1, or carry out work to enable such an activity (scheduled development work), unless the premises are licensed by the EPA. Note: This includes road construction: meaning the construction, widening or re-routing of roads if it results in the existence of 4 or more traffic lanes (other than bicycle lanes or lanes used for entry or exit) for 1 kilometres of their length in the metropolitan area, or 5 kilometres in length in any other area, where the road is classified, or proposed to be classified, as a freeway or tollway under the Roads Act 1993.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Pollution	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S115 S116 S117	Do not risk harming the environment by wilfully or negligently: • disposing of waste unlawfully. • causing any substance to leak, spill or otherwise escape (whether or not from a container); or • emitting an ozone depleting substance	Environmental Obligations Table/ Inductions/ Compliance Tracking
Pollution	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S148	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Pollution	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S120 S122	Do not cause water pollution (other than to a sewer), except in accordance with the conditions of any Environmental Protection Licence.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Pollution	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S124	Do not operate plant which emits air pollution caused by poor maintenance or operation.	Environmental Obligations Table/ Inductions/ Compliance Tracking

Noise	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S139	Do not operate plant if it emits noise caused by poor maintenance or operation.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Noise	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S140	Do not cause noise by failing to properly and efficiently deal with materials.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Pollution	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S142A – S142E	Do not cause or permit land pollution other than under authority of a licence or regulation. (However it is not a land pollution offence to place virgin excavated natural material (VENM) or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the Environment Protection Authority (EPA) as an unlicensed landfill and which is operated in accordance with the regulations.)	Environmental Obligations Table/ Inductions/ Compliance Tracking
Control equipment	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S167	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices).	Environmental Obligations Table/ Inductions/ Compliance Tracking
Waste	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	Part 5.6A	Do not litter in a public place or an open private place. Do not litter from a vehicle. Only deposit advertising material in receptacles provided for mail or newspapers or under the door of the premises. Do not deposit advertising material on or in vehicles.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Pollution Incident Response Management Plan	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	Part 5.7A	Requirements of a licensee to prepare, implement and test a Pollution Incident Response Management Plan (PIRMP).	Environmental Obligations Table/ Inductions/ Compliance Tracking

Waste	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	Part 3.2 Schedule 1	Do not undertake a scheduled waste activity unless in accordance with an environmental protection licence. A licence must be obtained when construction and demolition wastes are applied to land under certain circumstances. This includes the reincorporation of crushed road base material back into roads and the placing of excess fill material onto properties. A licence is not required if the material: • Is Virgin Excavated Natural Materials (VENM) • Is covered by a "resource recovery order/exemption". (Current exempted materials are Excavation Natural Materials (ENM), recycled aggregates and raw mulch. These exemptions are conditional and require some chemical testing of materials before they are placed onto land).Does not exceed 1000 tonnes or 1000 m3 on-site at any one time, processing more than 6000 tonnes a year (Regulated Area)	Environmental Obligations Table/ Inductions/ Compliance Tracking
Waste	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S143	Only transport waste to a facility that can lawfully accept the waste.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Waste	Protection of the Environment Operations Act, 1997	The POEO Act details offences and penalties for a range of environmental issues including water, noise, air and land pollution and sets out the duty to notify. The Act also details scheduled activities that require an Environment Protection Licence (EPL).	S115	Disposal of WasteDo not: dispose of waste in a manner that harms, or is likely to harm the environmentdeposit or leave on Crown land without approval any: rubbish, litter, refuse, dead animals, or other similar matterprescribed matterunless in a place or receptacle provided.	Environmental Obligations Table/ Inductions/ Compliance Tracking

Waste	Protection of the Environment Operations (Waste) Regulation 2014	Provides for the contributions to be paid by the occupiers of scheduled waste facilities for each tonne of waste received at the facility or generated in a particular area; Exempts certain occupiers or types of waste from these contributions; Allows rebates to be claimed in relation to certain types of waste; Provides for certain reporting and record-keeping requirements in relation to scheduled waste facilities and scheduled landfill sites; Exempts certain waste streams from the full waste tracking and recordkeeping requirements; Makes requirements relating to the transport of waste to interstate destinations; Makes special requirements including reporting requirements relating to asbestos waste as well as prohibiting the re-use and recycling of asbestos waste; Imposes requirements on brand owners and retailers to recover, re-use and recycle packaging; Allows the EPA to issue exemptions from certain provisions of the Act and Regulations; Allows the EPA to approve the immobilisation of contaminants in waste; and Makes it an offence to apply, or to cause or permit the application of, residue waste to land that is used for the purpose of growing vegetation, subject to any exemptions.	Regulation cl.49	Comply with general requirements for the transport of waste. For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Waste	Protection of the Environment Operations (Waste) Regulation 2014		Regulation Part 3	Comply with record keeping requirements in relation to the transport of certain types of waste.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Waste	Protection of the Environment Operations (Waste) Regulation 2014		S71	The Protection of the Environment Operations (Waste) Regulation 2014 (the Waste Regulation) makes it an offence to transport waste generated in NSW by motor vehicle for disposal more than 150 kilometres from the place of generation, unless the waste is transported to one of the two nearest lawful disposal facilities to the place of generation (even if that facility is located more than 150 kilometres from its place of generation).	Environmental Obligations Table/ Inductions/ Compliance Tracking
	Roads Act, 1993	This Act establishes procedures for closing of public roads, road works, traffic control devices etc.			
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	Rural Fires Act, 1997	The RF Act aims to provide for the prevention, mitigation and suppression of bush and other fires across the State.			
Hazards and risks	Dangerous Goods (Road and Rail Transport) Act 2008		S9	Ensure that dangerous goods are transported in a safe manner.	Environmental Obligations Table/ Inductions/ Compliance Tracking
Hazards and risks	Environmentally Hazardous Chemicals Act 1985		S28	Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.	Environmental Obligations Table. Inductions
Hazards and risks	Pesticides Act 1999	This Act controls and regulates the use of pesticides in NSW. The Act prohibits the misuse of pesticides that harms people, property, animals or plants. Under the Act the EPA can issue a person with a clean-up notice, prevention notice and compliance cost notice. The EPA may make pesticide control orders under the Act which prohibit or control the use of pesticides, or which permit the use or possession of restricted pesticides. The Act provides that certain pesticides may only be used by a person who has obtained a certificate of competence authorising such use. There are also provisions to regulate foodstuffs that contain prohibited residues of pesticides, and to prescribe methods of controlling the application of pesticides from aircraft, with the EPA being required to licence pilots and aircraft operators that conduct aerial spraying. The Act gives the Pesticides Implementation Committee a role in matters relating to the implementation of the Act, for example, for formulating regulations, pesticide control orders and pesticide codes of practice dealing with issues such as training of pesticide users and record keeping.	S12 S13 S14 S15 S17	Use pesticides in an environmentally sensitive manner. Do not use an unregistered pesticide without a permit. Read the label or permit for the pesticide. Use registered pesticides in accordance with instructions on the label. Do not use any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act. Compliance with pesticide codes of practice is required.	Environmental Obligations Table. Inductions
Administrative	Transport Administration Act 1988	Created TfNSW and defines its principal role.		Created TfNSW and defines its principal role.	

Appendix G: Environmental Obligations Register

Source Document	Obligation Extent	Authority	Impact on Project	Owner	Means of Compliance	Actions Required	Due date / Review date / Complete	Evidence Reference
Contract	EMP to be developed	DPE	To be approved prior to commencement	CPB SHEQ Manager	EMP to be issued to DPE	EMP to be developed and approved by Philip Chun	Prior to Commencement	Aconex Correspondence
	Waste Management	EPA	All waste to be monitored and reported to HI	CPB SHEQ Manager	Waste reporting every 2 months to Client	Waste tracking document and tip dockets to be maintained	Bi-monthly	Client Monthly Report Synergy
	Incident Notification	EPA	Possible stop work	CPB Project Manager	PM to notify EPA	PM to notify EPA	As required	Aconex correspondence
Development Consent	Compliance Reporting	DPE	Consent requirement	CPB SHEQ Manager BCA Certifier	Reporting to DPE	Notify DPE as per Condition requirements	As required	Aconex correspondence
	Traffic Management	Wagga Wagga City Council	Approvals for Traffic and Pedestrian Plans	CPB Project Manager	Consultation with WWCC	Traffic and Pedestrian plans to be inserted in to CEMP and issued to WWCC	Prior to commencement	Aconex correspondence
Asbestos Management Plan	Reporting of Asbestos finds	SafeWork NSW	Possible stop work	CPB Project Manager	Engage asbestos removalist	Asbestos removalist to notify SafeWork	As required	Aconex correspondence

Appendix H: Site Environment Plans

Wagga Wagga Base Hospital Stage 3 Redevelopment - Site Environmental Plan (SEP)

Project Number N1051

SEP Scope and Timeframe

This SEP covers **mandatory minimum environmental requirements** relevant to the Wagga Wagga Base Hospital Redevelopment Stage 3 Project.

Key Potential Environmental Impacts

- Noise and vibration
- Air pollution (including dust affecting people, fauna and water)
- Soil and water pollution
- Loss or damage to Heritage items/areas
- Impact to protected flora/fauna
- Incorrect waste disposal
- Spills resulting in water or soil contamination
- Erosion and sedimentation

Soil and Water

Key Management Measures	Responsible Person
Erosion and sediment controls are to be installed prior to or immediately upon any disturbance to vegetation or soil. These controls must remain in place until revegetation, stabilisation or hard scaping has occurred. If they require maintenance notify your supervisor.	Subcontractor Supervisor CPB Environmental Site Rep.
Sediment laden water (dirty water) captured onsite must be preferentially reused e.g. for dust suppression.	Subcontractor Supervisor
Stockpile materials away from water flow paths.	Subcontractor Supervisor
No dirty water is to be transferred or discharged.	All
Provide, use and maintain concrete washout facilities.	Subcontractor Supervisor

Waste

Key Management Measures	Responsible Person
All wastes shall be segregated, stored, tracked, transported and reported to CPB monthly with dockets.	Subcontractor Supervisor
All personnel are to separate waste for recycling and use facilities provided. Bins to be clearly marked.	All
Reuse removed earth where feasible.	Subcontractor Supervisor
All green waste will remain on site (shredded or composted), and be reused in landscape areas. If not possible, then CPB will transport the materials off-site.	Subcontractor Supervisor
Bricks will be stockpiled and reused wherever possible. Unusable bricks will be collected and recycled at an appropriate facility.	Subcontractor Supervisor
Recyclable timber will be collected and recycled at an appropriate timber yard. Unusable timber will be transported to a site for chipping as garden mulch.	Subcontractor Supervisor
All metal materials will be reused or recycled as follows: • Metal drums and packaging to be returned to the supplier • Any metal suitable for recycling will be separated and stored in a designated scrap metal bin for transport to a metal recycling facility.	Subcontractor Supervisor
Cardboard and paper including packaging materials and office paper are to be disposed into a designated recycling bin and collected as required.	Subcontractor Supervisor
Minimise liquid waste by: • Ensuring water is used in moderation and no taps are left continuously running • Use any grey water for irrigation and dust suppression • Only discharge clean water into stormwater.	Subcontractor Supervisor
All actions will be undertaken to avoid pollution entering stormwater drains and for litter generation.	Subcontractor Supervisor
Daily site inspections will be conducted to identify litter, remove it and find its cause to prevent it reoccurring.	Subcontractor Supervisor CPB Environmental Site Rep.
Storage containers (bins, skips, tanks etc.) are provided for waste segregation to avoid contamination. These bins must be signed and maintained and the correct waste deposited into them.	All
All waste/recycling bins must be covered to prevent wastes being blown out during windy conditions.	Subcontractor Supervisor
Burial or burning of waste is not permitted.	All
Excess concrete and concrete washout is not to be discharged to land or stormwater.	Subcontractor Supervisor

Air Quality & Dust

Key Management Measures	Responsible Person
Notify supervisor if dust/air quality issues are observed. Dust is to be managed via the use of water and stabilisation products.	All
Stabilised access including rumble grids or wash bays shall be established for the site exits to minimise mud on public roads.	Subcontractor Supervisor
Obey traffic speed limits to minimise dust generation.	All
All construction plant and equipment must be maintained so they do not emit visible smoke for any period greater than: • 15 consecutive seconds for plant not being registered for use on public roads; and • 10 consecutive seconds for plant registered for use on public roads.	Subcontractor Supervisor
Burning of any materials is prohibited on site.	All
Rubbish to be placed in waste receptacles with lids to prevent wind-blown rubbish.	All

Noise

Key Management Measures	Responsible Person
Undertake construction activities within the nominated hours of work.	All
Undertake high noise generating works in accordance with project obligations.	Subcontractor Supervisor
Where intermittent high frequency noise is a high risk, and pending safety requirements, the least noise-intrusive reversing alarms will be used.	Subcontractor Supervisor
Location of static plant (concrete pumps, cranes) as far away as practicable from the boundaries.	Subcontractor Supervisor
Any noisy works that need to occur outside the nominated hours must be approved by DPE in accordance with the Development Consent.	Project Manager

Vibration

Key Management Measures	Responsible Person
Undertake construction activities within the nominated hours of work.	All
Work practices predicted to generate non-compliant vibration must be amended prior to commencing works to the extent required to apply with applicable limits.	Subcontractor Supervisor
All equipment is to be serviced and maintained according to, as a minimum, the original equipment manufacturers recommendations, or more frequently if required to minimise noise generated.	Subcontractor Supervisor

Hours of Work

Construction Works

Approved hours of work are:

- 7am to 6pm Monday to Friday inclusive
- 7:30am to 5pm Saturdays

No work may be carried out on Sundays or public holidays.

Rock breaking and hammering, sheet piling, pile driving and similar activities

Approved hours of work are:

- 2pm to 5pm Monday to Friday inclusive
- 9am to 12pm Monday to Saturdays.

Flora, Fauna and Weeds

Key Management Measures	Responsible Person
Do not enter No-go zones.	All
Site speed limits must be obeyed at all times.	All
Vehicle and machinery wash/brush downs will be conducted before vehicles leave the site.	Subcontractor Supervisor
Notify supervisor or Environmental Representative if injured or threatened wildlife is sighted. Subcontractors are not to handle wildlife unless trained.	All
No vegetation disturbance permitted for the delivery of materials.	All
All plant is to remain on haul roads/ construction areas to minimise damage to vegetation.	All

Hazardous Substances

Key Management Measures	Responsible Person
Store and handle hazardous substances in accordance with the Safety Data Sheet (SDS).	All
Hazardous substances must be stored in a bunded area with a minimum holding capacity of 110% of the largest container within the bund or 25% of the total capacity of all containers within it, whichever is the greatest.	All
Spill kits are located adjacent to all hazardous substance storage units, in refuelling and maintenance areas and at designated locations.	Subcontractor Supervisor
Refuelling must not occur within 30m of a waterway (without appropriate controls in place).	Subcontractor Supervisor

Heritage

Key Management Measures	Responsible Person
All cultural heritage items and places to be preserved will be fenced/flagged and sign posted as No-Go Zones and shown on relevant site plans. No-Go Zones must be observed at all times unless a **Permit to Enter No Go Zone** has been authorized by Environmental Representative.	Subcontractor Supervisor All
If an object is discovered that may be a suspected heritage item, work must cease in accordance with the Unexpected Finds Protocol.	Subcontractor Supervisor

Reviewed 12/06/2020

Contaminated Land	
Key Management Measures	**Responsible Person**
Stop work if contaminated materials are discovered or suspected and notify Supervisor and environmental representative immediately.	All
Contaminated land will need to be handled, stockpiled, reused and/or disposed of as per the Contaminated Land sub-plan.	Subcontractor Environmental Rep.
The movement of materials shall be tracked via the Materials Tracking Form.	Subcontractor Supervisor/ Environmental Rep.
Water runoff from contaminated land and stockpiles must be contained, treated or disposed to ensure there is no pollution of land or waterways.	Subcontractor Supervisor
All vehicles, plant and other machinery operating in contact with contaminated soil must be decontaminated prior to leaving site.	Subcontractor Supervisor

Light Pollution	
Key Management Measures	**Responsible Person**
No use of floodlighting or additional lighting beyond internal lighting and lighting required for safety and access.	Subcontractor Supervisor

Traffic	
Key Management Measures	**Responsible Person**
Heavy vehicles restricted to Sturt Highway and Olympic highway. Construction vehicles will access the site from Docker Street via left in left out arrangement with loading areas on the eastern side of Docker Street.	Subcontractor Supervisor
Construction vehicle activity, including the loading/unloading of trucks and all materials handling to be provided within the construction site boundaries or within proposed works zones at all times.	Subcontractor Supervisor
The movement of trucks to/from the construction site would be managed and controlled by accredited site personnel with no through traffic to be affected during construction.	Subcontractor Supervisor

Energy	
Key Management Measures	**Responsible Person**
Minimise energy use: • Switch off machines and equipment when not in use • When possible, use energy efficient plant and equipment.	All

Evaluating Performance	Responsible Person
Daily: 1. Inspect erosion and sediment controls 2. Inspect dust emissions & controls 3. Inspect waste management practices including litter inspection.	Subcontractor Supervisor
Weekly: 1. Inspect erosion and sediment controls 2. Inspect dust emissions & controls 3. Inspect waste management practices 4. Inspect No Go Zones and associated protection flagging/fencing.	Subcontractor Environmental Rep. CPB Foreman/ Engineer

Emergencies and Notifications	Responsible Person
At all times notify supervisor: • Environmental incidents • Spills • Heritage or contaminated soils • Encroachment into No Go Zones • Risk or damage to native flora/fauna • Dust/air pollution • Water pollution	All

POINTS OF CONTACT		
CPB Project Manager	**Michael Martin**	**0407 423 521**
CPB Supervisor	**Tim Bradley**	**0420 927 216**
CPB Project Environmental Representative	**Kerry Kimber**	**0400 988 472**

Unexpected Finds Procedure

If the following is identified on site:

- Suspected heritage artefacts (Aboriginal or non-aboriginal)
- Human remains
- Contaminated material including asbestos
- Uncontained spill of hazardous materials
- Injured wildlife

1. STOP the works immediately
2. ADVISE the CPB Project Manager or Site Manager
   a. Type of unexpected find
   b. Location of the find
3. ISOLATE the area and CPB to erect warning signs
4. DO NOT GO BACK IN TO THE AREA UNTIL ADVISED BY CPB

CPB POINTS OF CONTACT		
CPB Project Manager	Michael Martin	0407 423 521
CPB Site Manager	Tim Bradley	0420 927 216
CPB Project Environmental Representative	Kerry Kimber	0400 988 472

FURTHER ACTIONS REQUIRED:

IF contaminated material: CPB to call EnviroScience immediately on 1300 3724 3623 for classification. All contaminated material must be disposed off-site, with the disposal location and results of testing submitted to the Planning Secretary.

IF Aboriginal object: CPB to notify archaeologist and the registered Aboriginal representatives to determine the significance of the objects. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) which is managed by OEH and the management outcome for the site included in the information provided to AHIMS. The Applicant must consult with the Aboriginal community representatives, the archaeologists and OEH to develop and implement management strategies for all objects/sites. Works shall only recommence with the written approval of OEH.

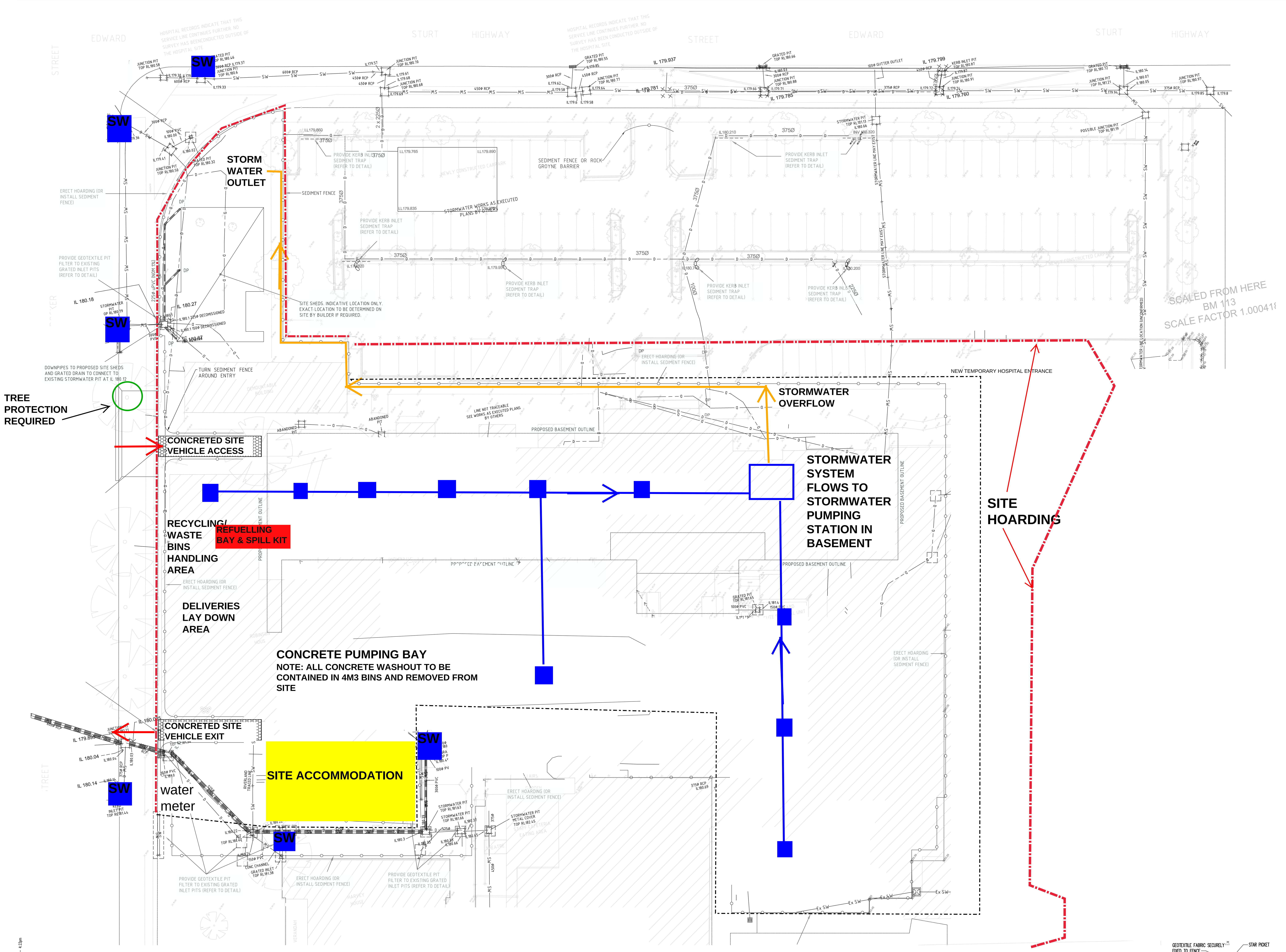
IF other archaeological relics: CPB to notify archaeologist and the OEH Heritage Division. Depending on the possible significance of the relics, an archaeological assessment and management strategy may be required before further works can continue in that area. Works may only recommence with the written approval of Heritage Division of the OEH.

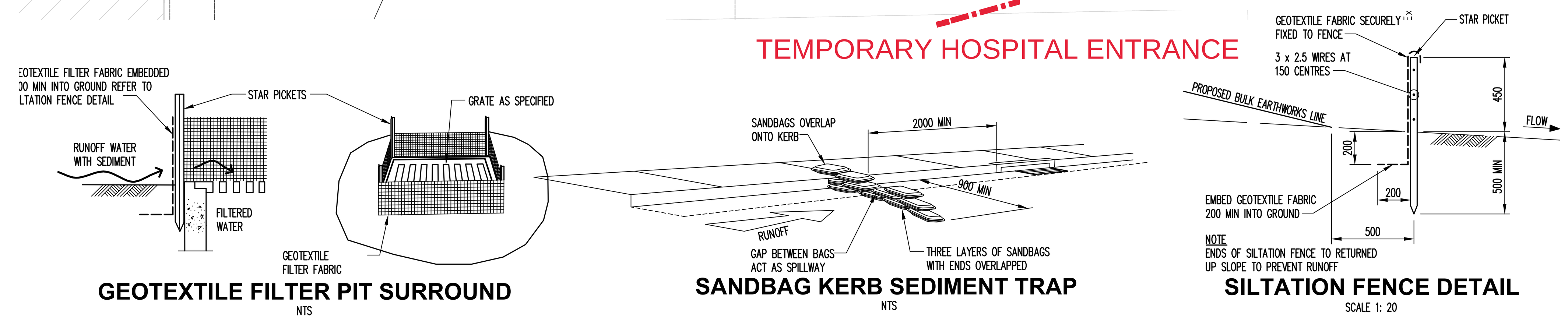
IF asbestos - CPB to call EnviroScience immediately on 1300 3724 3623 for classification and air monitoring.

IF injured wildlife - CPB to call WIRES Riverina on 1300 094 737

IF human remains - CPB to call Police 000

Reviewed 12/06/2020





THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C01

EROSION AND SEDIMENT CONTROL NOTES

1. All work shall be generally carried out in accordance with
   (A) Local authority requirements,
   (B) EPA – Pollution control manual for urban stormwater,
   (C) LANDCOM NSW – Managing Urban Stormwater: Soils and Construction ("Blue Book").
2. Erosion and sediment control drawings and notes are provided for the whole of the works. Should the Contractor stage these works then the design may be required to be modified. Variation to these details may require approval by the relevant authorities.
   The erosion and sediment control plan shall be implemented and adapted to meet the varying situations as work on site progresses.
3. Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
4. When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
5. Minimise the area of site being disturbed at any one time.
6. Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
7. All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
8. Control water from upstream of the site such that it does not enter the disturbed site.
9. All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
10. All vehicles leaving the site shall be cleaned and inspected before leaving.
11. Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
12. Clean out all erosion and sediment control devices after each storm event.

Sequence Of Works

1. Prior to commencement of excavation the following soil management devices must be installed.
1.1. Construct silt fences below the site and across all potential runoff sites.
1.2. Construct temporary construction entry/exit and divert runoff to suitable control systems.
1.3. Construct measures to divert upstream flows into existing stormwater system.
1.4. Construct sedimentation traps/basin including outlet control and overflow.
1.5. Construct turf lined swales.
1.6. Provide sandbag sediment traps upstream of existing pits.
2. Construct geotextile filter pit surround around all proposed pits as they are constructed.
3. On completion of pavement provide sand bag kerb inlet sediment traps around pits.
4. Provide and maintain a strip of turf on both sides of all roads after the construction of kerbs.

WATER QUALITY TESTING REQUIREMENTS

Prior to discharge of site stormwater, groundwater and seepage water into council's stormwater system, contractors must undertake water quality tests in conjunction with a suitably qualified environment consultant outlining the following:

- Compliance with the criteria of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
- If required subject to the environmental consultants advice, provide remedial measures to improve the quality of water that is to be discharged into Councils storm water drainage system.This should include comments from a suitably qualified environmental consultant confirming the suitability of these remedial measures to manage the water discharged from the site into Councils storm water drainage system. Outlining the proposed, ongoing monitoring, contingency plans and validation program that will be in place to continually monitor the quality of water discharged from this site. This should outline the frequency of water quality testing that will be undertaken by a suitably qualified environmental consultant.

EROSION AND SEDIMENT CONTROL LEGEND

- Batter
- Siltation fence
- Stormwater pit with Geotextile filter surround
- Sandbag sediment trap
- Catch drain
- Overland flow path

INTERNAL STORMWATER SYSTEM TO HAVE GEO FABRIC COVER

SW EXTERNAL STORMWATER SYSTEM - NO SEDIMENT CONTROLS REQUIRED

CPB Document No.
WWH-CPB-MPL-EN-GEN-0000002
Date: 05 JUNE 2020

Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	AH	AS	31.01.19

Client: NSW Government Health Infrastructure

Project: WAGGA WAGGA HOSPITAL REDEVELOPMENT STAGE 3

Sheet Subject: EROSION AND SEDIMENT CONTROL PLAN

Scale : A0	Drawn	Authorised
1:200	AS	

Job No	Drawing No	Revision
181769	SKC01	P1

Plot File Created: Jan 31, 2019 - 4:23pm

Appendix I: Environmental Incident Notification Template

A written incident notification addressing the requirements set out below must be emailed to the Department at the following address: compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under condition C39 or, having given such notification, subsequently forms the view that an incident has notoccurred.

Details required	
identify the development and application number;	**Development Consent SSD 9033** Wagga Wagga Rural Referral Hospital Corner Edward and Docker Street, Wagga Wagga
provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);	
identify how the incident was detected;	
identify when the applicant became aware of the incident;	
identify any actual or potential non-compliance with conditions of consent;	
describe what immediate steps were taken in relation to the incident;	
identify further action(s) that will be taken in relation to the incident; and	
identify a project contact for further communication regarding the incident.	Project Manager Michael Martin M: 0407 423 521 E: Michael.Martin2@cpbcon.com.au

1. Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may berequested.
2. The Incident Report must include:
   - a summary of the incident;
   - outcomes of an incident investigation, including identification of the cause of the incident;
   - details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
   - details of any communication with other stakeholders regarding the incident.

Appendix J: Unexpected Finds Procedure

If the following is identified on site:

- Suspected heritage artefacts (Aboriginal or non-aboriginal)
- Human remains
- Contaminated material including asbestos
- Uncontained spill of hazardous materials
- Injured wildlife

1. **STOP** the works immediately
2. ADVISE the CPB Project Manager or Site Manager
    a. Type of unexpected find
    b. Location of the find
3. ISOLATE the area and CPB to erect warning signs
4. DO NOT GO BACK IN TO THE AREA UNTIL ADVISED BY CPB

CPB POINTS OF CONTACT		
CPB Project Manager	Michael Martin	0407 423 521
CPB Site Manager	Tim Bradley	0420 927 216
CPB Project Environmental Representative	Kerry Kimber	0400 988 472

FURTHER ACTIONS REQUIRED:

IF contaminated material: CPB to call EnviroScience immediately on 1300 3724 3623 for classification. All contaminated material must be disposed off-site, with the disposal location and results of testing submitted to the Planning Secretary.

IF Aboriginal object: CPB to notify archaeologist and the registered Aboriginal representatives to determine the significance of the objects. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) which is managed by OEH and the management outcome for the site included in the information provided to AHIMS. The Applicant must consult with the Aboriginal community representatives, the archaeologists and OEH to develop and implement management strategies for all objects/sites. Works shall only recommence with the written approval of OEH.

IF other archaeological relics: CPB to notify archaeologist and the OEH Heritage Division. Depending on the possible significance of the relics, an archaeological assessment and management strategy may be required before further works can continue in that area. Works may only recommence with the written approval of Heritage Division of the OEH.

IF asbestos - CPB to call EnviroScience immediately on 1300 3724 3623 for classification and air monitoring.

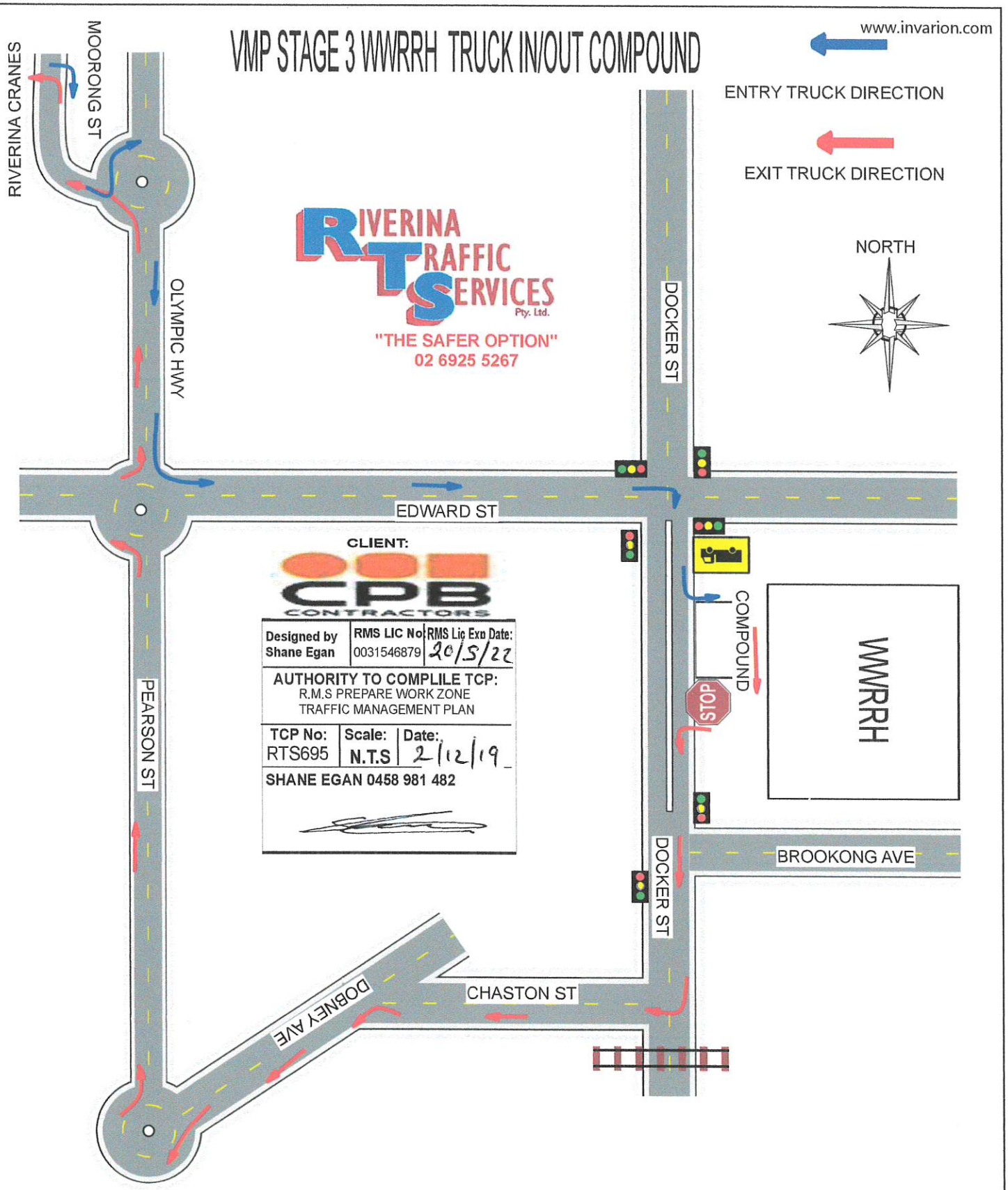
IF injured wildlife - CPB to call WIRES Riverina on 1300 094 737

IF human remains - CPB to call Police 000

Appendix K: Traffic Control and Pedestrian Management Plans

VMP STAGE 3 WWRRH TRUCK IN/OUT COMPOUND

www.invarion.com



RIVERINA TRAFFIC SERVICES Pty. Ltd.
"THE SAFER OPTION"
02 6925 5267

CLIENT: CPB CONTRACTORS

Designed by	RMS LIC No	RMS Lic Exp Date:
Shane Egan	0031546879	20/5/22

AUTHORITY TO COMPLILE TCP:
R.M.S PREPARE WORK ZONE
TRAFFIC MANAGEMENT PLAN

TCP No:	Scale:	Date:
RTS695	N.T.S	2/12/19

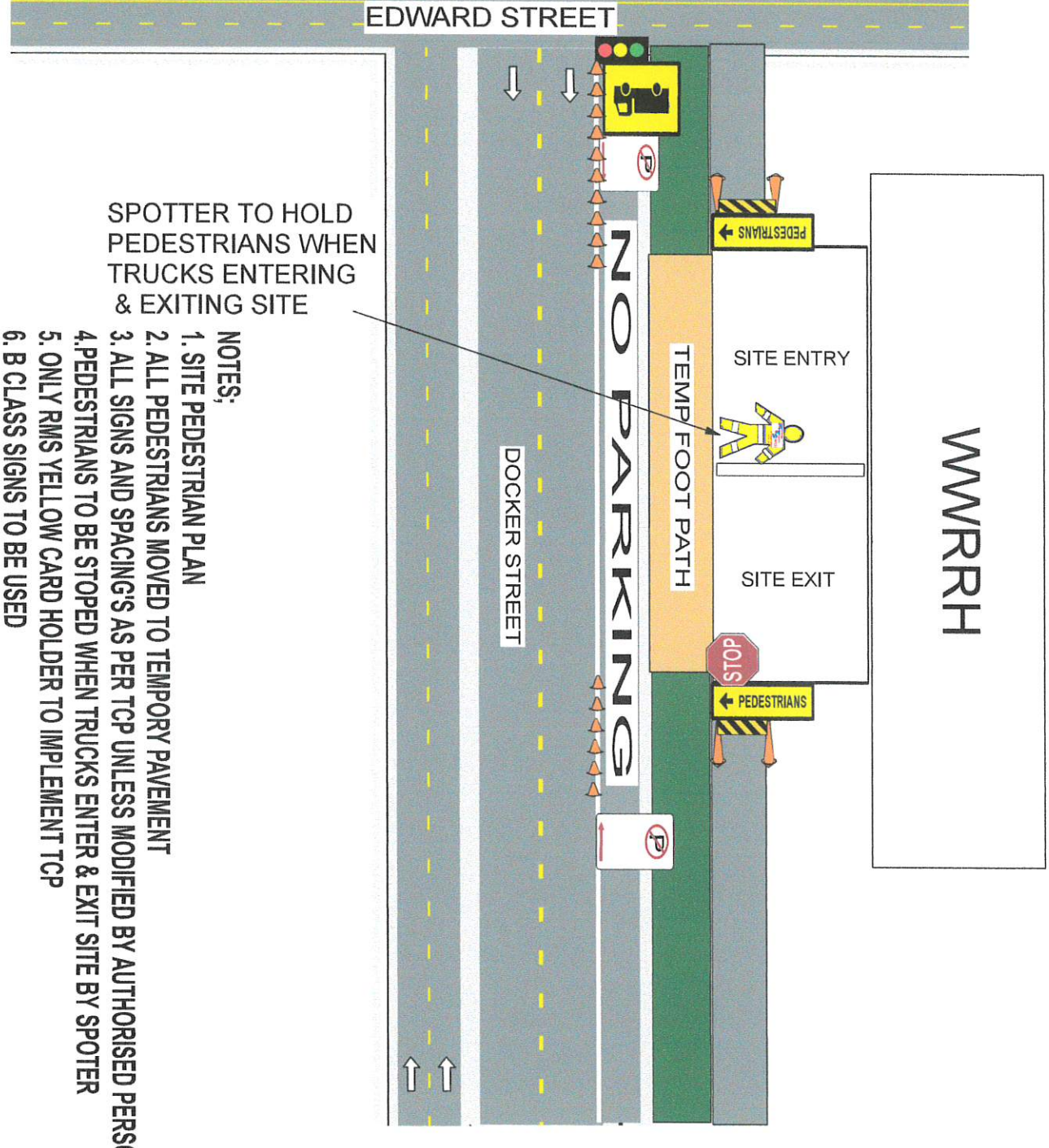
SHANE EGAN 0458 981 482

1.SITE ENTRY TRAVEL SOUTH ALONG MOORONG ST TURN RIGHT ONTO OLYMPIC HWY SOUTH TO EDWARD ST
HEAD EAST TO TRAFFIC LIGHTS TURN RIGHT ENTRY TO SITE EAST SIDE OF DOCKER ST GIVING WAY TO ALL PEDESTRIANS

2.SITE EXIT STOP AT GATE GIVE WAY TO ALL PEDESTRIANS HEAD SOUTH TO CHASTON ST
TURN RIGHT HEAD WEST TO DOBNEY AVE TURN LEFT TURN RIGHT ONTO PEARSON ST
HEAD NORTH TO EDWARD ST CONTINUE ONTO OLYMPIC HWY LEFT AT MOORONG ST
HEAD NORTH TO RIVERINA CRANES DEPOT

STAGE 3 DOCKER STREET PEDESTRIAN MANAGEMENT PLAN

www.invarion.com



NOTES;

1. SITE PEDESTRIAN PLAN
2. ALL PEDESTRIANS MOVED TO TEMPORY PAVEMENT
3. ALL SIGNS AND SPACING'S AS PER TCP UNLESS MODIFIED BY AUTHORISED PERSON
4. PEDESTRIANS TO BE STOPED WHEN TRUCKS ENTER & EXIT SITE BY SPOTER
5. ONLY RMS YELLOW CARD HOLDER TO IMPLEMENT TCP
6. B CLASS SIGNS TO BE USED
7. PARKING RESTRICTION APPLY DURRING WORK HOURS

Designed by	RMS LIC No	RMS Lic Exp Date:
Shane Egan	0031546879	20/5/22

AUTHORITY TO COMPLILE TCP:
R.M.S PREPARE WORK ZONE TRAFFIC MANAGEMENT PLAN

TCP No:	Scale:	Date:
RTS696	N.T.S	2-12-19

SHANE EGAN 0458 981 482

RIVERINA TRAFFIC SERVICES Pty. Ltd.
"THE SAFER OPTION"
02 6925 5267

CLIENT:

CPB CONTRACTORS

NOTES:

1. All signage displayed on this traffic control plan is in accordance with Australian Standard AS/NZ 1742-3 209 & RMS Traffic Control @ WS manual V5
2. All existing speed and other sgns to be covered if they conflict with TCP
3. It is the client's responsibility to have this TCP checked by a Riverina Traffic Services representive after the set up but prior to commencement of work to ensure compliance with AS/NZ 1742-3 2009 & Traffic control @ WS manual V5.

Revision:	MODIFIED BY:	DATE	TIME

Appendix L: Acoustic Logic Construction Noise and Vibration Management Plan – February 2019

Wagga Wagga Hospital Stage 3

Construction Noise and Vibration Management Plan

SYDNEY
A: 9 Sarah St
MASCOT 2020
T: (02) 8339 8000

SYDNEY MELBOURNE BRISBANE CANBERRA
LONDON DUBAI SINGAPORE GREECE

ABN: 11 068 954 343

DOCUMENT CONTROL REGISTER

Project Number	20190233.1
Project Name	Wagga Wagga Hospital Stage 3
Document Title	Construction Noise and Vibration Management Plan
Document Reference	20190233.1/0228/R0/TT
Issue Type	Email
Attention To	CPB

Revision	Date	Document Reference	Prepared By	Checked By	Approved By
0	28/02/2019	20190233.1/0228/R0/TT	TT		

TABLE OF CONTENTS

1 INTRODUCTION

Acoustic Logic Consultancy has been engaged to prepare a Noise and Vibration Management Plan to address noise and vibration impacts from demolition/excavation/construction associated with the Wagga Wagga Hospital Stage 3 development.

This report has been prepared in order to address condition of consent B23.

The issues which will be addressed in this report are:

- Identification of potentially impacted nearby receivers.
- Identification of the noise and vibration standards which will be applicable to this project.
- Identify likely sources of noise and vibration generation and predicted noise levels at the nearby receivers.
- Formulate strategies to mitigate noise/vibration impacts where necessary.

2 SITE DESCRIPTION AND PROPOSED WORKS

Wagga Wagga Base Hospital is located on the southern site of Edward Street/Stuart Highway, at the intersection of Edward Street and Docker Street. The hospital campus is bounded by Edward Street to the north, Docker Street to the west, Rawson Lane to the south and Murray Street to the east.

The hospital campus comprises of on-grade car parking spaces to the north and east of the site. The car park to the east is separated from the site by Lewis Drive which forms the main access to the hospital and through the site. Primary access to the site is from the north, off Edward Street and multiple access points from the east via Doris Roy Lane, Yabtree Street and Yathong Street.

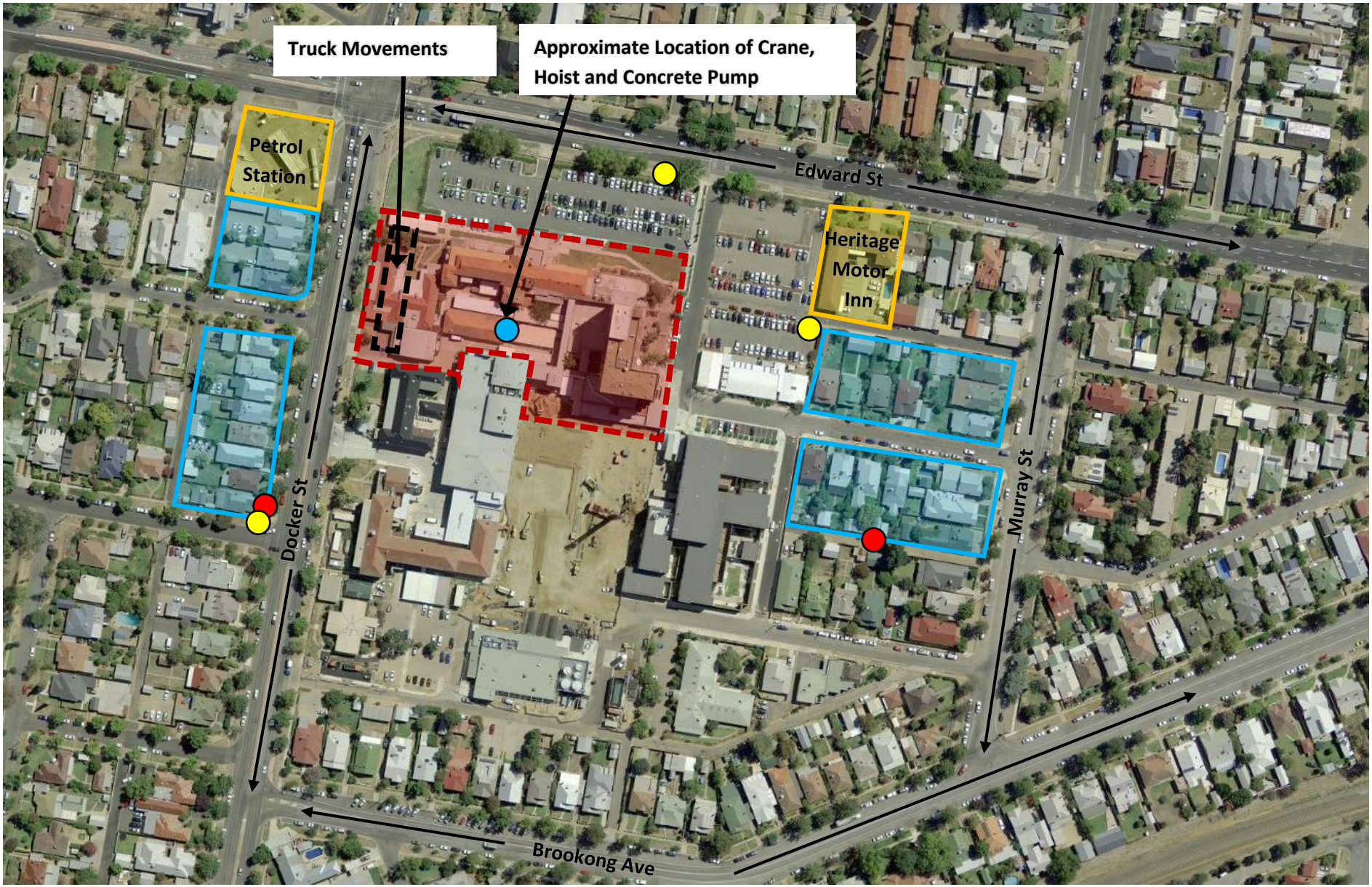
The proposed Stage 3 development consists of a six-storey Ambulatory Care Building located towards the north-western corner of the site.

We note that demolition works at the site are substantially completed and the civil works on site will primarily involve excavation in soil/fill, with minimal excavation in rock proposed.

Noise sensitive development in the vicinity of the site is as follows:

- Residential Location 1 – Docker Street residences (to the west of the site).
- Residential Location 2 – Doris Lane/Yabtree Street Residences (to the east of the site). The Heritage Motor Inn is also located to the east of the site.
- Residential Location 3 – Edward Street (to the north of the site).
- Location 4 – existing hospital buildings (Acute Building and Support Services Buildings) to the south of the site. We note that there is a combination of ward rooms and office/meeting rooms located on the northern façade of the Acute Building.

Figures 1 and 2 below illustrates the location of the site, nearby development and the locations of noise monitoring conducted at project approval stage.



Attended Noise Measurements

Unattended Noise Measurements

Figure 1 - Project Site & Measurement Locations

Project Site

Residential Receivers

Commercial Receivers

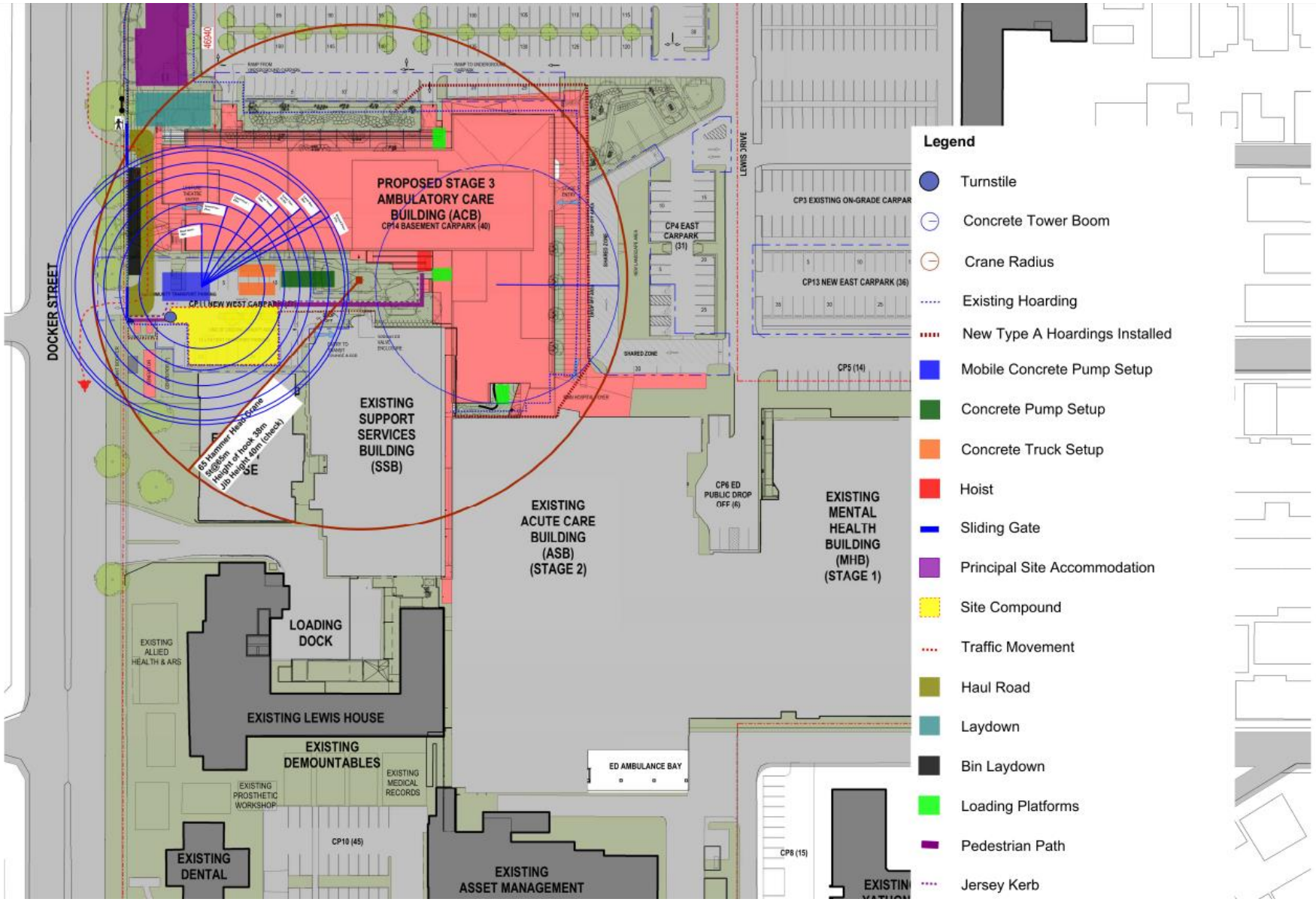


Figure 2 – Logistics Plan

3 PERMISSIBLE CONSTRUCTION HOURS

Proposed construction hours are limited by condition C5 which permits work to be conducted:

- Between 7am and 6pm on Mondays to Fridays and
- 7.30am-5pm on Saturdays.

4 EXISTING ACOUSTIC ENVIRONMENT

The existing acoustic environment was quantified using a combination of attended and long term noise logging, and was detailed in the SSD stage acoustic report (*Wagga Wagga Base Hospital – Stage 3 Redevelopment SSD Application – Acoustic Assessment* by Acoustic Logic dated 20/6/2018 Rev 3), which formed part of the SSD 9033 application.

The background noise levels at key locations around the site are extracted from that report and presented below.

We note that the periods from 1pm to 5pm on Saturdays is considered outside of typical construction hours, and therefore the background noise level at this time of day is presented separately.

Table 1 – Measured Background Noise Levels

Location	Background Noise Level
Location 1 (Docker Street Residences)	45dB(A)L_{90} (Standard Construction Hours) 43dB(A)L_{90} (Saturday Afternoon)
Location 2 (Doris Lane/Yabtree Street Residences)	53dB(A)L_{90} (Standard Construction Hours) 48dB(A)L_{90} (Saturday Afternoon)
Location 3 (Edward Street Residences)	59dB(A)L_{90} (Standard Construction Hours) 54dB(A)L_{90} (Saturday Afternoon)

5 NOISE AND VIBRATION CRITERIA

5.1 CONDITION B23

Condition of consent B23 requires the preparation of a Construction Noise and Vibration Management Sub-Plan, and states:

The **Construction Noise and Vibration Management Sub-Plan** must address, but not be limited to, the following:

(a) be prepared by a suitably qualified and experienced noise expert;

(b) describe procedures for achieving the noise management levels in EPA's *Interim Construction Noise Guideline* (DECC, 2009);

(c) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;

(d) include strategies that have been developed with the community for managing high noise generating works;

(e) describe the community consultation undertaken to develop the strategies in condition B23(d); and

(f) include a complaints management system that would be implemented for the duration of the construction.

5.2 CONSTRUCTION NOISE

5.2.1 Noise to External Areas - NSW EPA Interim Construction Noise Guideline

We note that Saturday works are proposed to be conducted between 7am and 5pm. The 7am-8am and 1pm-5pm periods are considered to be outside of typical construction hours. Noise emission goals for construction work with during typical hour construction hours, and outside of these times is provided below.

EPA guidelines adopt differing strategies for noise control depending on the predicted noise level at the nearest residences:

- *"Noise Management"* trigger level. Where construction noise is predicted to exceed the "noise effected" level at a nearby residence, the proponent should take reasonable/feasible work practices to ensure compliance with the "noise effected level". For residential properties, the "noise effected" level occurs when construction noise exceeds ambient levels by more than:
    - 10dB(A)$L_{eq(15min)}$ for work during standard construction hours (7am-6pm Monday to Friday and 8am to 1pm on Saturdays) and
    - 5dB(A)$L_{eq(15min)}$for work outside of standard construction hours (7am-8am and 1pm-5pm on Saturday).
- "*Highly noise affected"* trigger level. Where noise emissions are such that nearby properties are "highly noise affected", noise controls such as respite periods should be considered. For residential properties, the "highly noise effected" level occurs when construction noise exceeds 75dB(A)$L_{eq(15min)}$ at nearby residences.

A summary of noise emission goals for both standard hours of construction and outside of standard hours is presented below.

Table 2 – Interim Construction Noise Guideline – Noise Trigger Levels – External Areas

Location	Noise Management Level Trigger level - dB(A)$L_{eq(15min)}$*	"Highly Noise Affected" Trigger Level - dB(A)$L_{eq(15min)}$
Location 1 (Docker Street Residences)	55dB(A)L_{90} (Standard Construction Hours) 48dB(A)L_{90} (Saturday Afternoon)	75
Location 2 (Doris Lane/Yabtree Street Residences)	63dB(A)L_{90} (Standard Construction Hours) 53dB(A)L_{90} (Saturday Afternoon)	75
Location 3 (Edward Street Residences)	69dB(A)L_{90} (Standard Construction Hours) 59dB(A)L_{90} (Saturday Afternoon)	75
Location 4 – Existing Hospital (Acute Building/Support Services)	70 externally. 45 (internally, within wards	N/A

*These noise levels are determined based on the background noise levels measured at the site conducted at Project Approval Stage (table 1).

5.3 CONSTRUCTION VIBRATION

5.3.1 Amenity Criteria

Vibration goals for the amenity of nearby land users are those recommended by the EPA document *Assessing Vibration: A technical guideline.* These levels are presented below:

Table 3 – Construction Vibration Goals - Amenity

Location	Time	Peak velocity (mm/s)	
		Preferred	Maximum
Continuous Vibration			
Residences	Daytime	0.28	0.56
Hospitals – Office Areas	When in use	0.56	1.1
Hospitals – Theatres	When in use	0.14	0.28
Impulsive Vibration			
Residences	Daytime	8.6	17
Hospitals – Office Areas	When in use	18	36
Hospitals – Theatres	When in use	0.14	0.28

5.3.2 Structure Borne Vibration Damage Criteria

German Standard DIN 4150-3 (1999-02) provides vibration velocity guideline levels for use in evaluating the effects of vibration on structures. The criteria presented in DIN 4150-3 (1999-02) are presented in Table 1.

It is noted that the peak velocity is the absolute value of the maximum of any of the three orthogonal component particle velocities as measured at the foundation, and the maximum levels measured in the x- and y-horizontal directions in the plane of the floor of the uppermost storey.

Table 4 - DIN 4150-3 (1999-02) Safe Limits for Building Vibration

TYPE OF STRUCTURE		PEAK PARTICLE VELOCITY (mms^{-1})			
		At Foundation at a Frequency of			Plane of Floor of Uppermost Storey
		< 10Hz	10Hz to 50Hz	50Hz to 100Hz	All Frequencies
1	Buildings used in commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40
2	Dwellings and buildings of similar design and/or use	5	5 to 15	15 to 20	15
3	Structures that because of their particular sensitivity to vibration, do not correspond to those listed in Lines 1 or 2 and have intrinsic value (e.g. buildings that are under a preservation order)	3	3 to 8	8 to 10	8

6 ACTIVITIES TO BE CONDUCTED AND THE ASSOCIATED NOISE SOURCES

Typically, the most significant sources of noise or vibration generated during a construction project will be demolition, excavation, civil works (compaction, asphalting) and piling.

Table 5 - Sound Power Levels of the Proposed Equipment

EQUIPMENT /PROCESS	SOUND POWER LEVEL dB(A)*
Demolition and Excavation/Civil Works Phase	
Truck	105
Excavator with bucket	105
Compactor (Vibratory – installation of piling rig base)	110
Piling (screw/augured)	105
Construction Phase	
Crane (Diesel)	105
Bobcat (In Material Handling Area)	100
Concrete Works - Vibrator/Helicopter Float (Slab Finishing)	105
Concrete Pump	105
Hoist	100
Powered Hand Tools – external areas (formworking, façade etc)	95-100
Powered Hand Tools – Internal areas	95-100 (however noise emitted will be reduced as a result of building façade)

*The nominated Sound Power Levels take into account modifying factors as applicable under the NSW Noise Policy for Industry.

The noise levels presented in the above table are derived from the following sources, namely:

- Table A1 of Australian Standard 2436-2010.
- Data held by this office from other similar studies.

Noise levels take into account correction factors (for tonality, intermittency where necessary).

7 CONSTRUCTION NOISE ASSESSMENT

The predicted noise levels during demolition/construction will depend on:

- The activity undertaken.
- The distance between the work site and the receiver. For many of the work areas, the distance between the noise source and the receiver will vary depending on which end of the site the work is undertaken. For this reason, the predicted noise levels will be presented as a range.

Predicted noise levels are presented below. Predictions take into account the following:

- Noise reduction as a result of distance.
- When predicting noise impacts to internal areas of nearby development, a noise reduction o 25dB(A) through the (closed) façade of the noise impacted building is assumed (expected for 6mm glass or similar).
- Noise screening provided by the solid plywood hoarding (where detailed in section 8).

7.1 DEVELOPMENT *OUTSIDE* OF WAGGA HOSPITAL PRECINCT

Table 6 – Predicted Noise Generation – Docker Street Residences

Activity	Predicted Level – dB(A)$L_{eq(15min)}$	Noise Management Level dB(A)$L_{eq(15min)}$	Comment
Excavation/Civil Phase		**Noise Management Trigger Level** 55dB(A) – Standard Construction Hours 48dB(A) – 7.30am-8am and 1pm-5pm Saturday **Highly Noise Affected Trigger Level** 75dB(A)	
Truck	58dB(A)		Marginal exceedance of Trigger Level.
Excavator – Dozer	50-60dB(A)		Intermittent Exceedance when working on Western Boundary.
Compactor (Vibratory)	55-65dB(A)		Intermittent Exceedance when working on Western Boundary.
Piling (Augured)	50-60dB(A)		Intermittent Exceedance when working on Western Boundary..
Construction Phase			
Crane (Diesel)/Hoist	55dB(A)		Exceedance of After Hours Trigger Level.
Concrete Pump	50dB(A)		Marginal Exceedance of After Hours Trigger Level.
Concrete Vibrator/Helicopter Floats	55-60dB(A)		Intermittent Exceedance when working on Western Boundary.
Handtools (Used Externally)	45-55dB(A)		Generally Compliant with Trigger Levels. Intermittent Exceedance in after hours period if working on Western Boundary.
Handtools (Used Externally)	<40dB(A).		Compliant with Trigger Levels (standard and after hours).

*Predictions take into account recommendations detailed in section 8.

Table 7 – Predicted Noise Generation – Doris Lane/Yabtree Street Residences

Activity	Predicted Level – dB(A)$L_{eq(15min)}$	Noise Management Level dB(A)$L_{eq(15min)}$	Comment
Excavation/Civil Phase		**Noise Management Trigger Level** 63dB(A) – Standard Construction Hours 53dB(A) – 7.30am-8am and 1pm-5pm Saturday **Highly Noise Affected Trigger Level** 75dB(A)	
Truck	45dB(A)		Compliant with Trigger Levels (standard and after hours).
Excavator – Dozer	50-55dB(A)		Marginal Exceedance when working on Eastern Boundary for after hours works.
Compactor (Vibratory)	55-60dB(A)		Exceedance when working on Eastern Boundary for after hours works..
Piling (Augured)	50-55dB(A)		Marginal Exceedance when working on Eastern Boundary for after hours works.
Construction Phase			
Crane (Diesel)/Hoist	50dB(A)		Compliant with Trigger Levels (standard and after hours).
Concrete Pump	55dB(A)		Compliant with Trigger Levels (standard and after hours).
Concrete Vibrator/Helicopter Floats	45-50dB(A)		Compliant with Trigger Levels (standard and after hours).
Handtools (Used Externally)	40-45dB(A)		Compliant with Trigger Levels (standard and after hours).
Handtools (Used Externally)	<40dB(A).		Compliant with Trigger Levels (standard and after hours).

*Predictions take into account recommendations detailed in section 8.

Table 8 – Predicted Noise Generation – Edward Street Residences

Activity	Predicted Level – dB(A)$L_{eq(15min)}$	Noise Management Level dB(A)$L_{eq(15min)}$	Comment
Excavation/Civil Phase			
Truck	50dB(A)		Compliant with Trigger Levels (standard and after hours).
Excavator – Dozer	50-55dB(A)		Compliant with Trigger Levels (standard and after hours).
Compactor (Vibratory)	55-60dB(A)	**Noise Management Trigger Level** 69dB(A) – Standard Construction Hours	Marginal Exceedance when working on Northern Boundary for after hours works
Piling (Augured)	50-55dB(A)		Compliant with Trigger Levels (standard and after hours).
Construction Phase		59dB(A) – 7.30am-8am and 1pm-5pm Saturday	
Crane (Diesel)/Hoist	53dB(A)		Compliant with Trigger Levels (standard and after hours).
Concrete Pump	55dB(A)	**Highly Noise Affected Trigger Level** 75dB(A)	Compliant with Trigger Levels (standard and after hours).
Concrete Vibrator/Helicopter Floats	50-55dB(A)		Compliant with Trigger Levels (standard and after hours).
Handtools (Used Externally)	45-50dB(A)		Compliant with Trigger Levels (standard and after hours).
Handtools (Used Externally)	<40dB(A).		Compliant with Trigger Levels (standard and after hours).

*Predictions take into account recommendations detailed in section 8.

7.2 DEVELOPMENT *WITHIN* WAGGA HOSPITAL PRECINCT

Table 9 – Predicted Noise Generation – Support Services/Acute Buildings

Activity	Predicted Level – dB(A)$L_{eq(15min)}$	Noise Management Level dB(A)$L_{eq(15min)}$	Comment
Excavation/Civil Phase			
Truck	60dB(A) (Externally) <35dB(A) (Internally)		Compliant with Trigger Levels (standard and after hours).
Excavator – Dozer	60-80dB(A) (Externally) 35-55dB(A) (Internally)		Intermittent Exceedance when working on Southern Boundary.
Compactor (Vibratory)	65-85dB(A) (Externally) 40-60dB(A) (Internally)		Intermittent Exceedance when working on Southern Boundary.
Piling (Augured)	60-80dB(A) (Externally) 35-55dB(A) (Internally)	**Noise Management Trigger Level** 70dB(A) External Noise Level (at building façade) 45dB(A) in Acute Building wards (internal noise level).	Intermittent Exceedance when working on Southern Boundary.
Construction Phase			
Crane (Diesel)/Hoist	65dB(A) (Externally) 40dB(A) (Internally)		Compliant with Trigger Levels (standard and after hours).
Concrete Pump	70dB(A) (Externally) 45dB(A) (Internally)		Compliant with Trigger Levels (standard and after hours) provided pump located as per section 8.
Concrete Vibrator/Helicopter Floats	55-75dB(A) (Externally) 30-50dB(A) (Internally)		Intermittent Exceedance when working on Southern Boundary.
Handtools (Used Externally)	50-70dB(A) (Externally) 25-45dB(A) (Internally		Compliant with Trigger Levels (standard and after hours).
Handtools (Used Externally)	<40dB(A) (Externally) <30dB(A) (Internally		Compliant with Trigger Levels (standard and after hours).

*Predictions take into account recommendations detailed in section 8.

7.3 DISCUSSION

7.3.1 Noise Impacts

- Docker Street residences – intermittent exceedances of Noise Management Trigger Levels are anticipated for works conducted on the western boundary of the site (trucks and civil works). Predicted noise levels for the concrete pump in table 6 are reliant on pump location/screen as detailed in section 8.

- Doris Lane/Yabtree Street residences - Intermittent exceedances of the Saturday afternoon Noise Management Trigger Level during civil works located on the eastern boundary.

- Edward Street residences – Construction noise is expected to be generally compliant with Noise Management Trigger Levels (both Standard and After Hours).

- Hospital Buildings (Staff Support and Acute) – exceedance of Noise Management Trigger Levels are anticipated for civil works and concrete pumping conducted within approximately 15m from the building facades of these buildings.

7.3.2 Vibration Impacts

We note that primary demolition is complete, and use of hydraulic hammers and vibrated compactions/piling is not proposed other than in localised areas (piling platform construction).

See section 8 for recommendations regarding vibration monitoring.

8 RECOMMENDATIONS

8.1 NOISE IMPACTS

Given the potential impact on development outside the hospital precinct (Docker Street residences) the following is recommended:

- Civil works involving excavation, piling, compaction should not be undertaken:
  - Prior to 8am on a Saturday or
  - After 1pm on a Saturday if located within 20m of the western or southern boundaries of the site.
- A plywood hoarding (minimum 2.4m high) is recommended to the southern side of the concrete pumping station (to protect the Support Services Building).
- Major concrete pours (slabs/decks) on the western facade should not be conducted on Saturdays (before 8am or after 1pm) given the impact of the use of concrete vibrators/slab finishing equipment. Minor concrete pours on the west façade (ie core walls, columns etc) are acceptable on Saturdays. Away from the western façade, concrete pours are acceptable on Saturdays.
- Notification should be provided to residences on Dock Street of the duration of the excavation and days of major concrete pours.
- Vehicles are not to typically arrive on site prior to 7am (7.30am on Saturdays). Trucks should turn off their engines when idling. Trucks should wait on site, and not on Docker Street. In the event a special delivery/concrete truck is required to arrive on site prior to 7am (or 7.30am on a Saturday) access must be given to enable the truck to move away from Docker Street.
- Trucks and bobcats to use a non-tonal reversing beacon (subject to OH&S requirements) to minimise potential disturbance of neighbours. Avoid careless dropping of construction materials into empty trucks.
- In the event of complaint, the procedures identified in sections 9, 10 and 11 are to be followed.
- In the event that use of a rock hammer is required for isolated events (lift overrun or similar) it is recommend that this is not done before 8am or after 1pm on a Saturday.
- Respite periods – given that noise emissions are predicted to be generally compliant with EPA guidelines (and provided that the restrictions on Saturday work are observed, as detailed above), use of respite periods is not warranted.

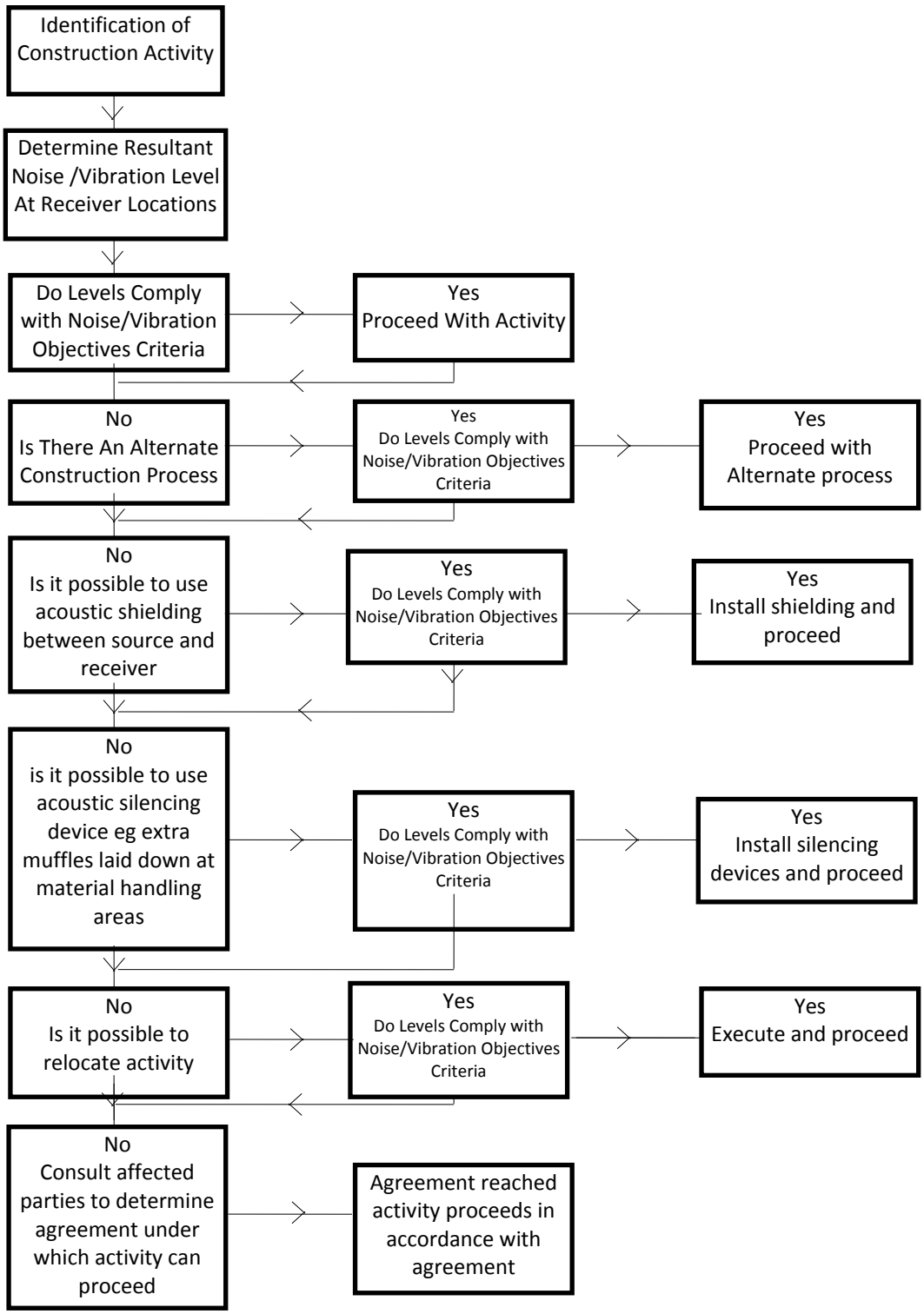
8.2 VIBRATION IMPACTS WITIN HOSPITAL PRECINCT

- Vibration Monitoring.
  - During the rock excavation, vibratory compaction or in the event that any slab demolition is required as part of constructing connections to the Acute/Support Services Buildings, unattended vibration monitoring is recommended at the following locations:
    - North façade of Support Services Building.
    - A close as practicable to the slab demolition area of the Support Services Building/Acute Building if required when forming connections from Stage 3.

- The proposed vibration monitoring equipment is a TEXCEL type monitor with externally mounted tri-axial geophone.
- The monitors are proposed to be fitted with GSM modems and will remotely signal up to five mobile phones indicating any exceedance of the prescribed vibration criteria.
- At least initially, SMS warning trigger to be set at 0.5mm/s for the Operating Suite/Day Surgery and 1mm/s for the Inpatient Units.

9 CONTROL OF CONSTRUCTION NOISE AND VIBRATION – PROCEDURAL STEPS

The flow chart presented below illustrates the process that will be followed in assessing construction activities.



10 ADDITIONAL NOISE AND VIBRATION CONTROL METHODS

In the event of complaints, there are a number of noise mitigation strategies available which can be considered.

The determination of appropriate noise control measures will be dependent on the particular activities and construction appliances. This section provides an outline of available methods.

10.1 SELECTION OF ALTERNATE APPLIANCE OR PROCESS

Where a particular activity or construction appliance is found to generate excessive noise levels, it may be possible to select an alternative approach or appliance. For example; the use of a hydraulic hammer on certain areas of the site may potentially generate high levels of noise. Undertaking this activity using bulldozers, ripping and/or milling machines will result in lower noise levels.

10.2 ACOUSTIC BARRIER

Given the position of adjacent development, it is unlikely that noise screens will provide significant acoustic benefit for commercial or residential receivers, but will provide noticeable improvement for those on ground level.

The placement of barriers at the source is generally only effective for static plant. Equipment which is on the move or working in rough or undulating terrain cannot be effectively attenuated by placing barriers at the source.

Barriers can also be placed between the source and the receiver.

The degree of noise reduction provided by barriers is dependent on the amount by which line of sight can be blocked by the barrier. If the receiver is totally shielded from the noise source reductions of up to 15dB(A) can be effected. Where only partial obstruction of line of sight occurs, noise reductions of 5 to 8dB(A) may be achieved. Where no line of sight is obstructed by the barrier, generally no noise reduction will occur.

As barriers are used to provide shielding and do not act as an enclosure, the material they are constructed from should have a noise reduction performance that is approximately 10dB(A) greater than the maximum reduction provided by the barrier. In this case the use of a material such as 10mm or 15mm thick plywood (radiata plywood) would be acceptable for the barriers.

10.3 TREATMENT OF SPECIFIC EQUIPMENT

In certain cases it may be possible to specially treat a piece of equipment to dramatically reduce the sound levels emitted.

10.4 ESTABLISHMENT OF SITE PRACTICES

This involves the formulation of work practices to reduce noise generation. A more detailed management plan will be developed for this project in accordance to the construction methodology outlining work procedures and methods for minimising noise.

10.5 COMBINATION OF METHODS

In some cases it may be necessary that two or more control measures be implemented to minimise noise.

11 DEALING WITH COMPLAINTS

Should ongoing complaints of excessive noise or vibration criteria occur immediate measures shall be undertaken to investigate the complaint, the cause of the exceedances and identify the required changes to work practices.

If a noise complaint is received the complaint should be recorded. Any complaint form should list:

- The name and address of the complainant (if provided);
- The time and date the complaint was received;
- The nature of the complaint and the time and date the noise was heard;
- The name of the employee who received the complaint;
- Actions taken to investigate the complaint, and a summary of the results of the investigation;
- Required remedial action, if required;
- Validation of the remedial action; and
- Summary of feedback to the complainant.

A permanent register of complaints should be held.

12 CONCLUSION

A noise and vibration assessment has been undertaken of the proposed construction works to be undertaken at the Wagga Wagga Hospital Stage 3 works, as required by condition of consent B23.

Potential noise and vibration impacts on nearby buildings (both inside of and outside of the hospital precinct) have been assessed.

Provided that the mitigation techniques and the vibration monitoring as recommended in sections 8 to 11 of this report are adopted, noise and vibration impacts on the adjacent buildings will be minimised.

Please contact us if you have any queries.

Yours faithfully,

Acoustic Logic Consultancy Pty Ltd
Thomas Taylor