



Project Environmental Management Plan

[N206]

Hornsby Ku-Ring-Gai Hospital Stage 2 and
Medical Imaging Building

November 2019

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Revision History

Issue	Date	Revision Description	Authorised by
1	March 2018	Contract Issue	Tim Williams (Construction Manager)
2	25 June 2018	SSD	Nick Limbrey (Project Manager)
3	November 2018	General review / update, incorporating recommendations from Independent Audit (Aquas) 26/9/19 and report 17/10/18	Nick Limbrey (Project Manager)
4	January 2019	General review and update, incorporating recommendations from Audit (Morasey) 12/12/18 and review of objectives & targets	Nick Limbrey (Project Manager)
5	July 2019	General update in accordance with requirements of REF 004/2018	Nick Limbrey (Project Manager)
6	December 2019	General Review and Update, including change to template to reflect new branding and new Appendix 1	Nick Limbrey (Project Manager)

Abbreviations

Abbreviation	Meaning
AASS	Actual Acid Sulfate Soil
ARMP	Approved Risk Management Plan
ASS	Acid Sulfate Soil
CAR	Corrective Action Request
CEMP	Construction Environmental Management Plan
CMS	Construction Management System
DAF	Department of Agriculture and Fisheries
DEHP	Department of Environment and Heritage Protection
ECC	Environmental Clearance Certificate
EMP	Environmental Management Plan
EMS	Environmental Management System
EPA	Environmental Protection Act
EPBC	Environmental Protection Biodiversity Conservation Act
ESC	Erosion and Sediment Control
ESCP	Erosion and Sediment Control Plan
ESD	Ecologically Sustainable Development
HMP	Heritage Management Plan
HOTO	Handover Takeover
HSEQ	Health, Safety, Environment and Quality
IECA	International Erosion Control Association
KPI	Key Performance Indicator
MSDS	Material Safety Data Sheet
NCR	Non-conformance Report
NEPM	National Environmental Protection Measure
NGER	National Greenhouse and Energy Reporting
NPI	National Pollutant Inventory
NSMS	National Safety Management System
PASS	Potential Acid Sulfate Soil
PEMP	Project Environmental Management Plan
PERP	Project Emergency Response Plan
PFC	Perfluorinated Compound
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane Sulfonate
PMCA	Project Manager / Contract Administrator
PPE	Personal Protective Equipment
QMS	Quality Management System
RDO	Rostered Day Off
REO	Regional Environmental Officer
RI	Restricted Items
RIFA	Red Imported Fire Ant
SDS	Safety Data Sheet
UXO	Unexploded Ordnance
WOL	Whole Of Life

1. System Application and Authorisation

1.1. Planning Environmental Management

Watpac is committed to safely construct the project, on time and on budget, without harm to the environment.

In particular Watpac will:

- Comply with the ESD and environmental requirements of the Contract and Contract Specifications
- Comply with relevant regulatory and legislative requirements governing the protection of the environment
- Identify environmental issues, opportunities and potential adverse impacts arising from the project and identify appropriate prevention and or mitigation measures that will be applied to minimise any adverse effects
- Ensure all personnel who work on the project receive a site specific induction, which will include relevant environmental aspects / items.

Watpac also commits to managing the construction of the project in conformance with the Company's broader environmental vision, goals and objectives as documented in the Watpac Environmental Policy.

Specific project performance targets have been documented for each of the key environmental aspects in Section 5 of this Project Environmental Management Plan (PEMP).

1.2. Principal Requirements

The Principal requirements of environmental management for the construction phase of this project are as set out in the Contract documents, various development consents and specifications.

The Principal's Environmental objectives expressed in the Conditions of Contract have been addressed within this PEMP.

The Principal's requirements regarding notification of disruptive works have also been addressed; the notification procedure and templates for the Disruptive Works Notice (DWN) and Watpac's register of DWNs are provided in Appendix 6.7.

1.3. Watpac HSEQ Policy

The Watpac HSEQ Policy is:

Watpac considers excellence in health, safety and environmental performance, our quality of service and client satisfaction, essential components to the long term sustainability of its business.

Our goal is to achieve a high level of HSEQ performance for the benefit of all stakeholders, including employees, subcontractors, suppliers, clients, shareholders and the local communities in which we work.

Our Values

Watpac promotes an organisational culture in which the principles of HSEQ are highly valued and upheld through the Watpac core values:

- COMMITMENT: Delivering on promises, safely
- ONE TEAM: Collaborating to accomplish a shared purpose
- INSPIRATION: Leading by example in everything we do
- INNOVATION: Achieving solutions that make a difference
- CANDOUR: Acting with authenticity, integrity and respect

Our Commitments

Watpac is committed to:

- providing a high standard of service.
- conducting our activities in a safe and sustainable manner which includes protection of the environment.
- mitigating foreseeable hazards through proactive risk management practices.
- continual improvement of our health, safety, environmental and quality management systems.
- consistently meeting stakeholder expectations.
- compliance to applicable legal and other requirements and voluntary commitments.
- providing effective HSEQ information, instruction and training to our employees and sub-contractors.

Our Actions

Watpac will achieve this by:

- providing visible support and leadership, with clear accountabilities and expectations that encourages employee, subcontractor and supplier participation in achieving our HSEQ goal.
- establishing and maintaining documented and communicated HSEQ management systems certified to AS/NZS 4801, ISO 14001 and ISO 9001.
- providing and maintaining a proactive HSEQ risk management framework across all aspects of our business.
- ensuring effective consultation and communication strategies and processes are in place which allows all stakeholders to have input and provide feedback on HSEQ matters.
- setting clear, achievable and measurable objectives and targets that promote continual improvement of our HSEQ management systems and performance.

Watpac empowers, promotes and supports all personnel in making the necessary decisions to ensure the intent of this policy is upheld.

1.4. Application

This Project Environmental Management Plan has been prepared by the Watpac Project Team, in consultation with the Watpac Quality and Environment Manager, to document the company's environmental commitments, objectives and procedures for the project. The PEMP is the key environmental management document that the Project Manager and Site Manager relies on to ensure appropriate environmental management practices are followed during construction.

The PEMP has been developed to conform with and satisfy the requirements of:

- AS/NZS ISO 14001: 2015 - Environmental Management Systems
- The environmental performance requirements of the Principal as set out in the Contract and Contract specifications
- The Watpac Environment Management System
- NSW Government Environmental Management System Guidelines (2013), Part 3
- Applicable legal and other requirements
- The broader community's general expectations of an environmentally responsible organisation.
- The Review of Environmental Factors 037/2017 (dated 11 December 2017) prepared by APP for the Medical Imaging Building
- The Review of Environmental Factors 004/2018 (dated 3 April 2018) prepared by APP for the Early Works 1 & 2 (Sewer and Stormwater Infrastructure Works)
- The State Significant Development (SSD) Consent for the Stage 2 Redevelopment (main works) SSD 8647 (dated 30th May 2018).

The PEMP is intended for use on the project and is based on the management systems and procedures currently in place at Watpac.

This PEMP applies to all Watpac Construction personnel, visitors, subcontractors, consultants, Principal Representatives, authority representatives and suppliers involved in the project.

1.5. Scope of Works

The Stage 2 Redevelopment project will deliver the following:

- A new 5-storey building, including:
 - Combined Intensive Care and High Dependency Unit
 - Combined Coronary Care and Cardiac Investigations Unit
 - Cardiorespiratory Inpatient Unit
 - Medical Inpatient Unit (including Dementia / Delirium and Stroke Beds)
 - Rehabilitation Inpatient Units (cold shell). Fit out of each IPU (option).
 - Ambulatory Care Centre providing a centralised location for all Ambulatory Care services
 - Combined Education space with the University of Sydney
 - Main Entry with Retail and Front of House (FoH) area located adjacent to the high-traffic Ambulatory Care Centre and the main Hospital Street.
- A refurbished and expanded Emergency Department within the HOPE Building
- PECC Refurbishment to be tendered as an option.
- Demolition of PECC as a tendered option which may be exercised.
- Fit-out of the co-located Paediatrics Inpatient Unit and Paediatric Allied Health clinics on the second floor of the new Medical Imaging building
- Associated civil and landscaping works throughout the campus
- Sewer main upgrade and Stormwater Infrastructure along Derby Road, this is in order to support the Hospital Building Works.

The Hornsby Ku-ring-gai Hospital is located about 25 kilometres north-west of the Sydney CBD. The hospital is within the local government area of Hornsby Shire and is bounded by Palmerston Road to the west, Burdett Street to the south, Derby Road to the east and Lowe Road to the north.

The hospital campus comprises of Lot 2 in DP14774, Lot 3 in DP14774, Lot B in DP363790, Lot 23 in DP814181, Lot 1 in DP232290 and Lot 189 in DP752053.

Refer to the overarching Project Management Plan for more information.

1.6. Site Contact

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Email	cscott@watpac.com.au

1.7. Environmental Risk Assessment Process

Watpac implements the following systems on all projects:

- Watpac Quality Management System (QMS)
- Watpac National Safety Management System (NSMS)
- Watpac Environmental Management System (EMS)

This PEMP is consistent with and where applicable directly references Watpac Quality, Environmental and OH&S Procedures.

As documented in its Environment Management System, Watpac adopts a systematic approach to environmental management that is designed to ensure potential environmental risks through all phases of project delivery are:

- Identified
- Evaluated and ranked
- Mitigated and controlled
- Subject to ongoing review and assessment.

Following award of the Contract, Watpac has conducted a comprehensive review of Contractual Conditions; Permit conditions; recommendations documented in environmental specialist reports, applicable environmental laws and regulations; Contract Specifications; and site conditions.

Our project team has conducted a number of pre-start meetings addressing environmental issues and have undertaken a detailed environmental risk assessment for the project. The Risk and Opportunity Assessment process incorporates the development of risk profiles, Risk and Opportunity Assessment, mitigation strategies, the identification of opportunities and the development of project specific procedures.

The Watpac Management Plans are dynamic documents that will be reviewed and revised as warranted to ensure they remain current throughout all phases of the project.

Environmental elements have been integrated where applicable into project documents including:

- Site specific inductions
- Safety Plan
- Quality Plan
- Emergency Plan

Our comprehensive and systematic approach will ensure the Principal and community that Watpac will:

- Employ best environmental practice
- Harmonise safety and environment in planning work
- Exceed required quality and performance criteria without compromising the environment
- Satisfy ESD and environmental objectives

1.8. Watpac EMS

Watpac's Environmental Management System (EMS) has maintained third party Certification status for over 20 years, embracing the current Environment Management Standard AS/NZS ISO 14001:2004 without exception. The system has successfully been applied across a variety of projects with no limit as to the value and variability of the project. Our Environmental Management System has delivered high quality projects across diverse ranges of work including multi-residential, commercial, industrial, infrastructural, medical, Defence, and refurbishment projects.

The key EMS aspects that will be applied on this project include:

- Scheduled inspections, monitoring and maintenance
- Auditing
- Education, training and awareness
- Feedback loop of environmental legislation and continual improvement
- Community Consultation
- Environmental Risk Assessments (C-FRM-018)
- Environmental Legal and Statutory Requirements Register (C-REG-007)

Watpac's core business is separated into modules into which each relevant procedure or form is grouped:

Module	Description
Pre-Contracts	Principal relations, tender opportunities, scoping and pricing tenders
Project Start-Up	Effective planning and coordination
Procurement	Subcontractor assessment for effective safety and quality capabilities
Administration	Financial administration of the project, EOT's, RFI's
Control	Control of the project encompassing quality, environment requirements
Project Completion	Defect management, commissioning, certification and handover
Quality	QMS procedures including document control, record management, audit
Environment	EMS procedures including Aspects, Risk Assessment, Compliance

All elements of AS/NZS ISO 14001 will be required, without exception, in the delivery of our projects and services. Our system is managed into tiers, which inform our integrated approach:

Tier	Type	Description
01	Environmental Policy	Watpac's policy on Environmental Management informs our approach when documenting procedures.
02	Environmental Management System Manual	Outlines Watpac's structure and general principles of the Environmental Management System.
03	Environmental Procedures	These procedures describe how activities within the company are performed. Each Environmental Procedure includes what, how, and when steps are performed; what materials, equipment and documentation are used and, where applicable, how processes are controlled.
04	Environmental Documentation and Records (forms, registers)	These documents prompt the detailed information, work, inspection and review processes. Changes are accommodated with reference to the correct Control of Documents and Data procedures. They will also act as records to document that all due diligence was performed.

1.9. Confidentiality

This PEMP and any attachments shall not be copied or reproduced without the express written permission of the Watpac's Quality and Environment Manager.

1.10. PEMP Authorisation

The issue and use of this PEMP is approved in accordance with the revision history table at the front of this document.

Commitment to implement Watpac's EMS as per this PEMP and internal procedures is made by the **Project Manager**.

Approved by



Date 26 July 2019

1.11. Precedence

Where an ambiguity is detected between the PEMP and the procedures in the Watpac Environmental Management System Manual, the procedures in the Project Environmental Plan shall take precedence.

1.12. Specific Exclusions

Any specific exclusions relative to the requirements of ISO 14001 will be noted in the relevant sections of this PEMP. The works covered by this PEMP are limited to the scope of work as defined by the Contract, drawings, and specification.

1.13. Validity

The currency of this PEMP remains valid from the date of issue until Practical Completion or approved revision and amendment. Construction work cannot commence until this PEMP has been authorised by the HSE Manager. This plan is subject to regular review, generally at minimum 6-monthly increments.

2. Project Environmental Objectives

2.1. Watpac Environment Objectives

Watpac's main environmental objective is to conduct project activities in full consideration of the environmental conditions and requirements of Client Contracts, and environmental legal and other requirements as an environmentally responsible organisation of the broader community.

Watpac will comply with its EMS to control and minimise environmental impacts and preserve the environment through the following: -

- The control and minimisation of contaminate discharges or disturbances to air, land and water
- The control and minimisation of waste
- To review and re-source component materials, as opportunity presents
- Undertake regular review of the EMS against performance targets with the view toward continual improvement and the prevention of pollution.

The objectives of this PEMP are as follows:

- To ensure compliance with environmental legislative requirements
- To ensure the Project Team (including subcontractors) are aware of their environmental responsibilities and are proactive in their approach to environmental management
- To ensure environmental commitments are implemented
- To prevent environmental incidents through the establishment and maintenance of environmental control measures, work practices and the supervision of construction activities
- To minimise environmental, community and system impacts

Proper adherence to the EMS objectives and awareness of environmental issues pertinent to Watpac's activities is a requirement of all Watpac personnel and those entities engaged by Watpac in the delivery of projects.

2.2. Project Environment Commitment

The Watpac Project Team is committed to the implementation of a comprehensive and effective EMS for the design and construction of this project.

Our Project Environmental Management Plan will comply with all elements of the Watpac Environmental System, certified to ISO 14001. The PEMP addresses all environmental elements of managing the design and construction of the Project to ensure full compliance with the requirements of the current legislation and expectations of the Principal and neighbouring community.

The Project Environmental Management Plan and its application will be continuously assessed and improved through processes of review and audit.

All participants in the project are responsible for implementing the PEMP and contributing to its improvement to ensure we meet our objective of providing a project which meets agreed requirements in terms of its construction and operational performance.

2.3. Key Performance Indicators

The environmental performance of the Watpac Project Team is assessed by two Key Performance Indicators (KPIs):

Policy	Objective	Measurement Basis	Target	Responsibility	Compliance Review (WTP)*		
					Dec 2018	Jul 2019	Dec 2019
Minimise Impacts	Minimise the impact of the site works to the receiving environment	Internal audits conducted by Management	No more than 5 environmental Corrective Action items issued to a single project from an internal audit.	Project Manager	✓	✓	✓
			Zero Non-Conformances issued to a single project from an internal audit.	Project Manager	✓	✓	✓
			Project is audited within 6 months of being established on site.	Project Manager	✓	✓	✓
			Receipt of written positive feedback from local stakeholders etc. regarding environmental performance or positive experience.	Project Manager	✓	✓	✓
			No major negative formal complaints received pertaining to poor environmental management or performance.	Project Manager	✓	✓	✓
Compliance	Comply with all Statutory Requirements	Commonwealth, State and Local Council regulation	Zero Penalty Infringement Notices issued by Local Council or State EPA	Project Manager	✓	✓	✓
			Zero Prosecutions issued by Local Council or State EPA	Project Manager	✓	✓	✓

Note *: evidentiary documentation to substantiate review rating available in the project environmental records.

Compliance with KPI's, objectives and targets should be reviewed and self-assessed by the project team at 6-monthly intervals (aligning with PEMP reviews). Any corrections or adjustments to the indicators, objectives or targets shall be incorporated into subsequent revisions.

3. Project Organisation

3.1. Project Organisation Chart

Refer to Appendix B of the overarching *Project Management Plan*.

3.2. Roles and Responsibilities

3.2.1. Construction/Operations Manager

The Construction/Operations Manager has responsibility to:

- Ensure construction activities are undertaken in accordance with Watpac's HSEQ Policy and the objectives and provisions of the PEMP
- Ensure all personnel carrying out activities which may have a significant impact on the environment are appropriately trained to a level commensurate with their role and responsibilities in the project.

3.2.2. Quality and Environment Manager

The Quality and Environment Manager is responsible for establishing and maintaining the Company's Environment Management System and represents Watpac on all environmental matters pertinent to the EMS.

The Quality and Environment Manager is responsible for:

- Ensuring that approval conditions and environmental specialist recommendations made during the design phase are incorporated into the PEMP
- Assisting the Project Manager with the implementation of the PEMP
- Providing support and technical assistance to the Project Environmental Coordinator
- Manage the implementation of the EMS during the project
- Monitoring the effectiveness of the EMS
- Coordinating environmental audits during the project in accordance with KPIs
- Ensuring record keeping is undertaken as required to demonstrate compliance with the EMS, PEMP, and legal requirements
- Ensuring the Project Team (including subcontractors) receive the appropriate environmental induction (including site-specific environmental requirements)
- Coordinating environmental accident/incident investigations
- Issuing external authority notification regarding environmental incidents (following confirmation with the Client)
- Assessing the environmental capabilities of subcontractors during procurement and review/approve their environmental management documentation (if not working under the Watpac PEMP)

The Quality and Environment Manager is authorised to require all employees to comply with the provisions of the documented Environmental Management System and may issue directions to that effect. The Quality and Environment Manager has the authority to stop work in the event of potential or actual environmental damage.

3.2.3. Project Manager

The Project Manager is responsible to the State Manager through the Construction Manager to ensure effective environmental controls are implemented for the duration of the project.

Specifically, the Project Manager shall be responsible for:

- Implementing and maintaining the PEMP
- Ensuring all works comply with environmental legislative requirements and conditions of any statutory approvals
- Reviewing the environmental aspects at project start-up and ensuring the PEMP addresses all requirements
- Providing guidance, motivation and resources to achieve the provisions of the PEMP

- Ensuring that subcontractors and suppliers are aware of Watpac's environmental policy and objectives, through conditions of contract, tender interviews, scopes of work and site environmental inductions as applicable
- Establishing monitoring records and ensuring the scope and frequency of monitoring activities satisfies the requirements of the PEMP. Ensure that site environmental management information (e.g. records, reports, checklists etc) is maintained and accessible.
- Provide adequate equipment, facilities and training (if required) to the Site Manager
- Plan construction activities to minimise environmental impact and to comply with site environmental management requirements
- Assist the Environment Manager with the investigation of environmental incidents
- Assist the Environment Manager with the close out of "non-conformances" and "action requests" arising from audits, site inspections and incident investigations
- Report all environmental incidents to the Environment Manager

The Project Manager shall have sufficient authority and independence to:

- Identify and record any environmental problems
- Initiate solutions to the environmental problem
- Stop the works, if such a decision becomes necessary, in order to prevent or mitigate adverse environmental conditions, or if corrective measures recommended are not being carried out. The Project Manager must notify the Environment Manager as soon as possible regarding any stop work orders relating to environmental management.
- Provide recommendations for EMS and operational improvements to the Quality and Environment Manager

3.2.4. Project Environmental Coordinator

The Project Environmental Coordinator is responsible to the Project Manager for the maintenance of the Project Environmental Management system.

The Project Environmental Coordinator is the document controller for the PEMP and shall prepare/compile registers, records, plans and forms necessary for the implementation of environmental controls. The Project Environmental Coordinator shall review these as necessary and ensure timely distribution to all relevant parties in the Project.

Responsibilities of the Project Environmental Coordinator shall include:

- Monitor the construction processes to ensure that appropriate environmental protection/procedures are in place. Apply EMS procedures as applicable during the project.
- Identify and record any environmental issues
- Recommend and initiate solutions to environmental problems and verify the implementation of solutions
- Investigate all environmental complaints (which shall be recorded on the project records)
- Control and maintain project environmental records, including indexing records, prior to archiving
- Implement any environmental checklists, field records and procedures as applicable to the works
- Maintenance the PEMP and control of distribution
- Conduct site inspections and audits as required
- Provide recommendations to the Quality and Environment Manager for EMS and operational improvements.

The Project Environmental Coordinator has the authority to stop work in the event of pollution or actual environmental damage. The Project Environmental Coordinator must notify the Site Manager and Project Manager as soon as possible regarding any stop work orders relating to environmental management.

3.2.5. Independent Verification Staff

Individual employees or consultants may be appointed to assist the Project Manager to carry out audits, environmental testing and inspection duties. This testing and inspection may be in addition to and separate from any testing and inspection required for Environmental Management purposes.

Independent Verification staff will not be drawn from personnel who are performing or directly supervising the activities being inspected.

3.2.6. Site Manager

The Site Manager is responsible to the Project Manager to:

- Ensure all work under the Site Manager's control is undertaken in accordance with statutory environmental requirements and the PEMP.
- Identify, recommend and initiate solutions to any project environmental issues
- Ensure that site environmental management information (e.g. records, reports, checklists etc) are maintained and accessible
- Seek advice regarding environmental management issues (if in doubt) from the following: Project Manager, HSE Manager, environmental specialist
- Respond to environmental incidents as per the Incident Management Plan and directions provided by Project Manager
- Report all environmental incidents to the Project Manager
- Ensure all workers and subcontractors under the Site Manager's control are properly inducted in the requirements of the Watpac HSEQ Policy and objectives and the PEMP, and are instructed in the following:
 - The role and environmental responsibilities of the project/works for which they are engaged
 - The use and understanding of any environmental documentation for the work
 - Specific environmental procedures for the project/works.

The Site Manager has the authority to stop work in the event of pollution or actual environmental damage, or non-compliance with contractual requirements. The Site Manager must notify the Project Manager as soon as possible regarding any stop work orders relating to environmental management.

3.2.7. Foremen

The Foremen are responsible to the Site Manager to:

- Ensure all work under the Foreman's control is undertaken in accordance with statutory environmental requirements and the PEMP
- Attend environmental inductions and toolbox meetings
- Undertake remedial action as required to ensure environmental controls are maintained in good working order
- Immediately report all environmental incidents (including near misses) to the Site Manager
- Ensure plant/equipment is maintained in good working order
- Identify, recommend and initiate solutions to any project environmental problem.

3.2.8. Contract Administrator

The Contract Administrator shall be responsible to the Project Manager for:

- Ensuring proper procedures are followed for the procurement of goods and services to ensure that Watpac's HSEQ Policy and objectives and the requirements of the PEMP are achieved.

3.2.9. Direct Labour

Each tradesperson, trades assistant, operator and employee shall be responsible for carrying out their work in accordance with Watpac's stated HSEQ Policy and objectives, the PEMP and as instructed by their supervisor.

3.2.10. Subcontractors and Suppliers

Watpac will ensure all subcontractors and suppliers are responsible for conducting their activities in an environmentally sensitive manner and in compliance with the requirements of this PEMP. While it is envisaged that subcontractors will work under the requirements of this PEMP, there are potentially two situations where this may not be the case:

- Subcontractor requests to perform works under their own EMP
- Watpac requests that subcontractor perform works under their own EMP

In both situations, the approval of approach and EMP documentation is required from the Watpac Project Manager and/or HSE Manager.

Site inductions will include detailed and site specific environmental information. Activities conducted by any trade likely to have a significant impact on the environment is required to submit their own EMP, which is assessed using the Subcontractor EMP assessment checklist to ensure it is comprehensive.

All personnel shall notify the Watpac Site Manager of any activity or incident, or any deviations from work place practices and procedures set out in this PEMP.

Subcontractor audits can be conducted. The checklist C-FRM-082 Environment Audit 100 includes environmental criteria which can be adapted to the nature of the trade work. C-FRM-082 Environment Audit 100 is available on the Watpac intranet.

Contractors shall ensure their personnel working at the site:

- Have the appropriate environmental awareness training and / or qualification for the task undertaken
- Are aware of the potential environmental impacts of their activities on the site and the procedures by which such impacts are to be minimised or prevented.
- Attend environmental inductions and toolbox meetings
- Undertake remedial action as required to ensure environmental controls are maintained in good working order
- Immediately report all environmental incidents (including near misses) to the Site Manager
- Ensure plant/equipment is maintained in good working order

4. Implementation

4.1. Legal and Other Requirements

All activities associated with the Project must comply with the relevant environmental legislative requirements. The Watpac Environmental Legal and Statutory Requirements Register (C-REG-007) provides an overview of existing legislation that is related to environmental matters enacted by the Federal and NSW Governments that could be directly or indirectly related to project activities. A copy of the Watpac Environmental Legal and Statutory Requirements Register can be obtained via request from the Watpac HSE Manager.

The construction activities do not require any State Government licensing arrangements, control approvals or permits for environmental protection at this stage.

The development will be undertaken in accordance with the NCC / Building Code of Australia and relevant Australian Standards, in accordance with the various Development Consents for the project and contract plans and documentation noted therein. Pursuant to the Development Consents, the hours of work shall be:

- Monday to Friday (inclusive): 7.00am to 6.00pm;
- Saturdays: 8.00am to 1.00pm;
- Sundays and Public Holidays: No work permitted.

The Quality and Environment Manager is responsible for identifying and assessing amendments to statutory and regulatory requirements potentially applicable to the project (such as State Government licensing arrangements, control approvals or permits for environmental protection) and initiating a review of the PEMP as warranted.

4.2. Monitoring

The responsibility for general environmental monitoring rests with all personnel engaged in the project.

More specifically the Project Environmental Coordinator shall:

- Monitor each element of the construction process to ensure that appropriate environmental protection/procedures are in place
- Undertake daily monitoring of the implementation and effectiveness of environmental controls
- Conduct and record weekly site inspections of environmental controls and direct such action as may be considered necessary to protect, minimise or rectify any environmental concerns.

The Project team shall undertake random site inspections and direct such action as may be considered necessary to protect, minimise or rectify any environmental concerns.

Before the commencement of works and at the conclusion of works, dilapidation reports shall be undertaken of areas adjacent to the works that may be affected by the works. Such areas may include public roads, internal roads, the exterior of hospital buildings, and the interior of hospital buildings.

4.3. Consultation

Watpac undertakes to advise adjacent property owners/managers of the timing and duration of activities likely to give rise to environmental concerns e.g. ground works or proposed out of normal hours activities.

Where applicable a list of adjoining building managers with their business and out-of-hours contact numbers will be maintained on the project records together with notations of pertinent advices.

4.4. Environmental Complaints

The Project Manager and/or the Project Environmental Coordinator will investigate all environmental complaints. Details of complaints and the remedial action taken will be recorded in the project records.

Watpac will notify the Principal of all applicable complaints received.

Any complaints received by the Principal will be investigated and recorded by Watpac as appropriate.

4.5. Environmental Incidents

Should an environmental incident occur during the course of the works, Watpac shall take prompt action to minimise any impact and inform the Principal or the Principal's Representative accordingly in accordance with the HI Stakeholder Management Procedure. Procedures to respond to an emergency incident have been documented in the Project Emergency Plan.

Subcontractors who become aware of an environmental incident shall report the matter immediately to the Site Manager.

All incidents will be:

- Addressed as expeditiously as possible to minimise the potential environmental impacts
- Investigated; where necessary Watpac will seek the advice of relevant Authorities and comply with their instructions
- Recorded on the Environmental Complaint and Incident Report Form (C-FRM-060).

If the incident has the potential to cause material environmental harm, there is a legal obligation to notify the NSW EPA. As with any environmental incident, the following process should be followed:

- Complete the Environmental Complaint and Incident Report Form (C-FRM-060).
- Send report to your State Environmental Manager.
- Environmental Manager will advise if the incident is a notifiable event, at which point the report form should be issued to the Principal with the recommendation that the incident be reported to the State Environmental Protection Agency.

4.6. Reporting

The Client will be notified of applicable environmental incidents and complaints, as soon as possible thereafter, including notification of the proposed corrective action.

Project Reports submitted to the Client will report on all applicable environmental matters including environmental incidents, non-conformances, complaints, performance and the implementation and effectiveness of the PEMP. This reporting will generally take the form of the monthly Project Control Group (PCG) report.

All communication of information concerning the project environmental performance shall be reported internally via the Monthly Project Review and Quarterly Project Review reporting templates to senior management.

The Development Consents for the project require various informative and compliance reporting to occur to Council and/or Department of Planning. This reporting shall be managed via email correspondence as articulated in the Development Consents.

4.7. Notifiable Events – Duty to Notify

The duty to notify is set out in section 148 of the Protection of the Environment Operations Act 1997 (POEO Act). Pollution incidents causing or threatening material harm to the environment must be notified. A 'pollution incident' includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur. 'Material harm to the environment' is defined in section 147. Material harm includes on-site harm, as well as harm to the environment beyond the premises where the pollution incident occurred.

The duty to report pollution incidents is a legal requirement that ensures that the appropriate regulatory authority (ARA) and other relevant persons are made aware of incidents that may have caused or threaten serious environmental harm or material environmental harm, and that appropriate action can be taken to minimise the extent of environmental harm caused.

Under the POEO Act, the following people have a duty to notify a pollution incident occurring in the course of an activity that causes or threatens material harm to the environment:

- the person carrying on the activity

- an employee or agent carrying on the activity
- an employer carrying on the activity
- the occupier of the premises where the incident occurs.

Notification must be given immediately, i.e. promptly and without delay, after the person becomes aware of the incident.

Only persons engaged in the activity resulting in the pollution incident, and occupiers of the land where the incident occurs, have a duty to report the incident.

Pollution incidents posing material harm to the environment should be notified to each 'relevant authority' as defined in section 148(8) of the POEO Act. 'Relevant authority' means:

- the appropriate regulatory authority (ARA)
- the Environment Protection Authority (EPA) if they are not the ARA
- the Ministry of Health
- SafeWork NSW (formerly WorkCover)
- the local authority, e.g. the local council, if this is not the ARA
- Fire and Rescue NSW

In general terms, sufficient detail of the incident must be reported to enable appropriate follow-up action. The information required is listed in section 150. Any required information that is not known when the incident is notified must be notified immediately once it becomes known.

If you fail to report a pollution incident posing material harm to the environment as required under Part 5.7 of the Act, you commit an offence. The maximum penalty is \$2,000,000 for corporations, or \$500,000 for individuals.

Under the Act, Watpac is classified an employee, contractor, or agent, who causes or becomes aware of a notifiable event, must notify the person who employs them or engaged them as a contractor or agent (i.e. the Principal) within 24 hours of becoming aware of the event.

The notice must contain sufficient details to provide notice of the event, its nature, and the circumstances in which it happened (for simplicity referred to as the details of the event). Watpac must always keep a record of when and to whom they gave notice of a notifiable event.

If the Principal cannot be contacted, then Watpac must give the administering authority (the State Environmental Authority) written notice with details of the event no later than 24 hours after first becoming aware of the event.

The Principal has a duty to give written notice with details of the event to the administering authority no later than 24 hours after becoming aware of the event.

As soon as possible Watpac must also either:

- Give written notice with details of the event to any combination of the occupiers or registered owners of affected land; or
- Give public notice of the details of the event.

The Environmental Complaint or Incident Report (C-FRM-060) can be used to notify the department (as administering authority) about notifiable events.

In addition to the written notice, if a person becomes aware of a notifiable event, the person should immediately call the State Environmental Protection Authority and report the matter.

Relevant legislative provisions under the POEO Act include:

- section 147: Meaning of material harm to the environment
- section 148: Pollution incidents causing or threatening material harm to the environment
- section 149: Manner and form of notification
- section 150: Relevant information to be given
- section 151: Incidents not required to be reported

- section 152: Offence for breaching duty to notify pollution incidents
- section 153: Incriminating information

4.8. Emergency Response Plan

Actions to respond to foreseeable environmental emergencies are detailed in Aspect 5.19 in Section 5.0 of this PEMP, as well as the Project Emergency Plan (separate document).

The response procedures, emergency contact numbers, responsibilities and required actions for responding to environmental emergencies have been integrated into the Project Emergency Plan.

4.9. Environmental Training & Induction

As part of their site environmental induction/training all personnel engaged in the works shall be made aware of the provisions of this Project Environmental Management Plan in order to promote a general awareness of the environment and to minimise any potential impact upon it. The following inductions are required on the Project:

- Watpac general company induction
- Site-specific induction including environmental component

Watpac General Company Induction

The Watpac general company induction provides an overview of the following items:

- Watpac HSEQ Policy
- Watpac EMS
- Watpac PEMP
- Protection of the Environment Operations Act (POEO Act) 1997
- Environmental responsibilities
- Environmental management issues (e.g. soil and water, flora and fauna, waste, fuel and chemical storage, noise and vibration, air quality and dust, traffic and property access, heritage, community and site restoration)
- Response to and reporting of environmental incidents (including pollution incidents)

This induction is compulsory for all site personnel including subcontractors involved with onsite construction works. Records of inductions are to be documented.

Site-Specific Induction

Prior to any personnel starting work at the project site, they must complete the site-specific environmental induction. This induction will be conducted by the Site Manager or Project Manager and will focus on the environmental management requirements for the project. Records of inductions are to be documented in the Induction Register.

Toolbox Talks

Toolbox talks will be held weekly at the project site. The purpose of the weekly toolbox talks is to facilitate two-way discussion of safety, community, and environment and construction matters at a site level. Details of toolbox meetings held (e.g. site, date, time, Site Manager, topics and attendance record) are to be maintained.

Environmental induction and training will be appropriately commensurate with their roles and environmental responsibilities in the project.

Evidence of environmental induction and training of personnel for this project shall be maintained on the project records.

Contractors shall be responsible for providing evidence to Watpac, as applicable, prior to commencing work that:

- Environmental training needs of their personnel working at the site have been assessed and satisfied
- Contractor personnel have received the appropriate environmental awareness training and / or qualification for the task to be undertaken.

Training requirements for Watpac personnel are identified and planned on appointment to their role, and for each project. The Project Manager will monitor the skills required by Watpac personnel and contractors to effectively implement the PEMP and its procedures on site. Any further training needs will be identified, implemented and recorded in the project records.

4.10. Audits & Site Inspections

To ensure the EMS is implemented and maintained in accordance with the principles of AS/NZ ISO 14001:2004, the Site Manager and/or the Watpac HSE Manager (or delegate) will conduct regular evaluations of the implementation and effectiveness of the PEMP via Weekly Site Inspections.

In addition to Weekly Site Inspections, the HSE Manager (or a third party) will conduct periodic environment audits including an audit of the implementation and effectiveness of this PEMP. The project KPIs include that an audit must be conducted within 6 months of project commencement.

Audits and site inspections will identify any deficiencies in the implementation and effectiveness of environmental management practices at the site. The HSE Manager will issue Non-Conformance Reports (NCRs) or Corrective Action Requests (CARs) as applicable. C-FRM-082 Environment Audit 100 will be used to conduct the site audits and C-FRM-061 Weekly Environmental Inspection will be used to conduct site inspections.

Client, Independent or regulatory audits may also be conducted from time-to-time, however these are not programmed by Watpac. Independent auditing as required by Development Consents will be arranged by the Client.

4.11. Environmental Non-Conformances, Corrective and Preventive Actions

Watpac will identify and evaluate all non-conformances with legal requirements; applicable permits; specifications and the requirements with this PEMP. Non-conformance can be identified via audits, as part of the accident/incident management process and site inspections.

Non-conformance Reports shall be raised as appropriate to clearly identify the nature of the non-conformance and document the proposed remedial action and the person responsible.

The Site Manager will verify follow-up action is implemented and effective. Reports will be filed in the project records.

Corrective and Preventive Action Requests will be raised, where appropriate, as a result of complaints, incidents, non-conformances and deficiencies identified in the implementation of environmental practices and procedures. Corrective and Preventive Action Requests shall be raised, where appropriate, to correct and/or prevent non-conformances in construction activities and in the operation of the Environmental Management System.

Actions as a result of Corrective and Preventive Action requests will be implemented, followed-up and recorded in the Project records.

4.12. Project Environmental Records

The following documents are to be retained in the project records:

- Weekly Environmental Inspection Reports (C-FRM-061)
- Environmental Incident and Complaint Reports (C-FRM-094)
- Environmental Non-Conformance Reports
- Environmental Corrective and Preventive Action Requests
- Environmental Reports (e.g. waste classification, soil/groundwater sampling, geotechnical, external audits)
- Copies of all applicable Environmental Permits

- Environmental Monitoring Records
- Environmental Induction and Training Records
- Environmental Audit Reports (C-FRM-082)
- Project Environmental Risk Assessment (C-FRM-018)
- Any correspondence regarding environmental issues relating to the site.

4.13. Issue and Control of the Project Environmental Management Plan

The Controlled copy of this PEMP is located in the project's environmental folder on the shared network drive. All hard copies of this document are uncontrolled.

The Project Manager is responsible for the issue of the PEMP. Copies of the PEMP shall be distributed electronically via Aconex. The distribution list shall be maintained within Aconex and is available from the Project Document Controller. The PEMP is to be revised with any applicable changes to the environmental requirements for this project.

4.14. Environmental Procedures

The Watpac Environmental Management System includes, but is not limited to, written procedures for controlling the following:

Internal Procedure Number	Description
C-PRO-003	Project Start-Up – Environment
C-PRO-004	Project Start-Up – Emergency Planning
C-PRO-014	Control of Non-Conformances
C-PRO-017	Environmental Control
C-PRO-021	Internal Audit
C-PRO-023	Control of Monitoring and Measuring Devices
C-PRO-028	Corrective and Preventive Action
C-PRO-030	Competence, Training and Awareness
C-PRO-031	Evaluation of Compliance
C-PRO-032	Aspects and Risk Assessment
C-PRO-033	Legal, Statutory and Other Requirements
C-PRO-034	Complaint and Incident Management
C-PRO-036	Environmental Responsibilities
C-FRM-060	Complaint and Incident Report
C-FRM-094	Project Complaint and Incident Register Template
C-PLA-014	Erosion and Sediment Control Guidelines
C-PRO-021	Internal Audit (Q&E)
C-PRO-022	External Audit (Q&E)
C-PRO-034	Complaint and Incident Management
C-REG-007	Environmental Legal and Statutory Requirements Register
C-FRM-018	Environmental Risk Assessments
C-FRM-061	Weekly Environmental Inspection
C-FRM-082	Environment Audit 100
C-PLA-004-N	Project Environmental Management Plan (NSW)

5. Aspects Management

5.1. Environmental Risk Assessment

An Environmental Risk Assessment (C-FRM-018) has been conducted for the project and is presented as Appendix 6.2 to this PEMP. The risk assessment includes issues within the following areas:

- Emissions to air
- Releases to water
- Releases to land
- Waste management, energy and resources
- Biodiversity
- Noise and vibration
- Traffic, transport and access
- Heritage
- Visual amenity
- Utilities and services
- Social and economic impacts
- Site restoration

5.2. Environmental Aspects

The Project Team in consultation with the HSE Manager have identified and addressed the environmental aspects associated with this project. They have:

- Reviewed the environmental requirements of the Contract and Contract Specifications
- Reviewed all environmental consent conditions including licence, permit and development approval consent conditions applicable to the project
- Reviewed specialist environmental reports and recommendations developed in the Project Design Phase (e.g. waste classification, soil and groundwater assessments, geotechnical, heritage, noise and vibration, community consultation, air quality etc.)
- Reviewed the site conditions and proposed construction activities
- Reviewed the Watpac Environmental Legal and Statutory Requirements Register (C-REG-007) to identify applicable legal and other statutory requirements
- Identified for each activity, the environmental aspects and associated actual and potential environmental impacts for normal and uncommon circumstances
- Assessed the inherent and residual significance of each identified environmental risk using the likelihood of occurrence of the impact and the consequence of the impact.
- Documented within this PEMP (and in the Environmental Risk Assessment (C-FRM-018)) project specific action plans and control measures to manage each identified environmental aspect and associated impact.

The environmental aspects associated with the project are documented in the Environmental Risk Assessment (C-FRM-018)

5.3. Action Plans and Control Measures for Identified Environmental Aspects

Environmental Action Plans have been developed to manage each environmental aspect pertinent to this project, as identified in the Environmental Risk Assessment (C-FRM-018)

These procedures document the Objective, Management Strategy, Control Measures, and Performance Indicators for each identified aspect. The procedure for each identified environmental aspect is documented in the sections below.

The Environmental Aspects, Actions and Control Measures included herein shall be routinely monitored, reviewed and updated. Generally this shall occur in line with the 6-monthly review of the PEMP, or any major change to the work scope.

Aspect 5.1	
Erosion and Sediment Control (Water Quality Control)	
Objective	Maintain the health of any impacted nearby waterbodies.
Management Strategy	<p>Site environmental induction to address:</p> <ul style="list-style-type: none"> The issues concerned with the conservation of water usage in construction activities. The issue of water quality and protective measures to prevent avoidable discharge into, or contamination of, waterways or established drainage systems.
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> Any water leaving the site must be compliant with the following discharge limits: <ul style="list-style-type: none"> Less than 50mg/L Turbidity, or 50 NTU, or less than 10% of the receiving environment (to IECA guidelines). pH must be betwn 6.5 and 8.5, and Zero oils, hydrocarbons, coarse material, cement or other chemicals can be present in discharge (by visible inspection). Wet discharge must be managed. This includes designated areas for washing out of concrete trucks, concrete pumps, paint, masonry cutting, and plaster. Refer to C-PLA-014 for more information. Painter to utilise environmental washup facility Use of water for wet trades' clean-up is minimal. Paint, solvents, oils etc. are correctly stored. Stockpiles of bulk materials are located well clear of any waterway or drainage systems, protected by sediment fences, and covered by tarp, seed, mulch or chemical binder wherever possible. Inspect erosion and sediment control measures daily and after rain events. Maintain erosion and sediment controls until disturbed surfaces are restored. Limit plant/equipment movements on surfaces susceptible to erosion and unsealed areas. Suspend construction during and/or after heavy rain if erosion and sediment cannot be controlled. Minimise on-site storage time of spoil or other eroding materials in stockpiles and/or skip bins. Where available, a recycled water source will be used for dust suppression. If water discharge compliance can't be achieved, contaminated water is to be disposed to sewer under Trade Waste Agreement, or collected by a licenced contractor to licenced facility. Roadways can be swept, not washed down. Machine operated street sweepers shall be used to ensure spoil and debris does not get tracked onto Council or RMS Roads. The frequency of use shall be increased during periods of unfavourable weather Work in or around watercourses should be managed to minimise impact in accordance with Watpac plan C-PLA-014. Sediment basins: Refer to C-PLA-014 for establishing, managing and servicing sediment basins. During bulk excavation, truck shakers shall be installed at all exit points to manage spoil within the site. These shall be at least 6m in length. The bottom shall be lined with geotech fabric Provide spill kits and training to relevant workers on the use of spill kits Refer to C-PLA-014, Erosion and Sediment Control Guide, for a detailed manual on following ESC Plans and establishing on site.
Performance Indicators	<ul style="list-style-type: none"> No incidents of inadvertent waste of water. No run-off of sediment No pollution or contamination of waterways.
Reporting	<ul style="list-style-type: none"> Daily monitoring reflected in daily site diary entries when required Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form (C-FRM-061)

Applicable Permits	<ul style="list-style-type: none"> • Authority from local Council and/or NSW EPA required prior to discharge to stormwater. Written authorisation to be obtained. • Trade Waste Permit from Sydney Water required if discharge to sewer infrastructure is required.
Reference	<ul style="list-style-type: none"> • Managing Urban Stormwater: Soils and Construction. Volume 1, 4th Edition. Blue Book'. • NSW EPA Approved Methods for the Sampling and Analysis of Water Pollutants in NSW • Protection of the Environment Operations Act 1997 (NSW), Section 120 • Standard Methods for the Examination of Water and Wastewater, 20th Edition (APHA). • Water Management Act 2000 (NSW) and Amendment Act 2010 • Water Management (General) Regulation 2011 (NSW) • SSD Conditions: B11, B22, C20, C35, C36 • REF Conditions: 7, 17, 19, 21 • TTW Erosion & Sediment Control Plan (CIV-DNG-00-902)

Aspect 5.2	
Protection of Existing Trees	
Objective	Protect existing trees from damage and maintain them in their condition as found at time of contractor site possession.
Management Strategy	<ul style="list-style-type: none"> Site environmental induction to address the issue of tree protection to prevent damage caused by construction activities. Establishment of tree protection zones (in accordance with AS4970-2009) around trees identified as significant or otherwise worthy of retention in the Arboricultural Development Assessment Report (<i>Moore Trees Arborist Report, Hornsby Ku-ring-gai Hospital S2 24/10/2017</i>, Appendix K of SSD Application 17_8647)
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> Tree Protection Zones (TPZs) are established around trees identified as significant or otherwise worthy of retention in the Arboricultural Development Assessment Report, and access is restricted to TPZs by the use of protective fencing which is maintained and regularly checked. If fencing cannot be installed, or must be temporarily removed, other tree protection measures must be used such as: signage, trunk and branch protection, ground protection, root protection during works within the TPZ. <p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> Protective measures (i.e. fencing) around TPZs are not disturbed without express written permission from Watpac site management. Works including but not limited to the following are not undertaken within TPZs: machine excavation including trenching, excavation for silt fencing, removal of turf and topsoil, storage/stacking of items, preparation of chemicals (including cement products), vehicle and plant parking, refuelling, dumping of waste, washing and cleaning of equipment, placement of fill, lighting of fires, changing of soil levels, temporary or permanent installation of utilities and signs, physical damage to the tree.
Performance Indicators	<ul style="list-style-type: none"> No damage to protected trees.
Reporting	<ul style="list-style-type: none"> Daily monitoring reflected in daily site diary entries when required Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form (C-FRM-061)
Reference	<ul style="list-style-type: none"> Australian Standards 4970-2009: Protection of trees on development sites Environment Protection and Biodiversity Conservation Act 1999 Environment Protection and Biodiversity Conservation Regulations 2000 Threatened Species Conservation Act 1995 Native Vegetation Act 2003 Contract Specifications SSD Conditions: B42-45 REF Conditions: 7, 12 Arboricultural Development Assessment Report (<i>Moore Trees Arborist Report, Hornsby Ku-ring-gai Hospital S2 24/10/2017</i>, Appendix K of SSD Application 17_8647)

Aspect 5.3	
Noise and Vibration Management	
Objective	Control, minimise or avoid environmental nuisance caused by 'unreasonable' levels of noise or vibration in ground works or other structural activities.
Management Strategy	<ul style="list-style-type: none"> Engage expert consultant (Acoustic Logic) to prepare Noise and Vibration Management Plan Site environmental induction to address the issue of noise and protective measures to prevent 'unreasonable' noise caused by construction activities. Site environmental induction to address the issue of vibration and protective measures to prevent disturbance/incidents caused by vibration. Identify works likely to cause high vibration—communicate this to the Principal and to neighbours. Where possible and feasible, adjust construction methodology / techniques to implement less obtrusive noise / vibration generating construction or demolition techniques. If ongoing complaints regarding noise levels are received, review construction methods and where necessary undertake noise monitoring Abide by the approved site working hours as follows; <ul style="list-style-type: none"> SSD Approval <ul style="list-style-type: none"> M-F 7:00am - 6:00pm Sat. 8:00am - 1:00pm Sun & P. Hols. No Work REF Approval for Stormwater and Sewer works <ul style="list-style-type: none"> M-F 7:00am - 5:00pm Sat. 7:00am – 3:30pm Sun & P. Hols. No Work Noisy works to be restricted to 9:00am-12:00pm and 2:00-5:00pm M-F and 9:00am-12:00pm Saturday. Respite periods shall be provided at minimum 3 hourly increments.
Control Measures	<p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> Works are carried out in accordance with the Noise and Vibration Management Plan prepared by expert consultant Acoustic Logic Utilise fixed vibration monitoring as identified by Consultant, and routine hand-held noise monitoring. Maintain records.
Performance Indicators	<ul style="list-style-type: none"> No repeat complaints concerning noise nuisance from the project site No structural damage to existing and retained buildings caused by vibration No fines received from the regulator
Reporting	<ul style="list-style-type: none"> Daily monitoring reflected in daily site diary entries when required Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form (C-FRM-061)
Reference	<ul style="list-style-type: none"> Protection of the Environment Operations Act 1997 (NSW) Protection of the Environment Operations (Noise Control) Regulation 2008 (NSW) Contract Specifications Australian Standard 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites Protection of the Environment Operations Act 1997 (NSW) Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth), s12, 15B, 16, 18, 20, 21, 23, 24B, 24D Assessing vibration: a technical guideline 2006 AS 2670.2-1990 Evaluation of human exposure to whole-body vibration Continuous and shock-induced vibration in buildings (1 to 80 Hz) BS6472 Guide to Evaluate Exposure to Vibration in Building (1Hz to 80Hz) DIN4150 Part 3 Structural Vibration – Effects of vibration on structures Interim Construction Noise Guideline (Department of Environment and Climate Change NSW) 2009. SSD Conditions: B14, B24, C4-C10

- REF Conditions: 7, 16, 20, 22, 23

Aspect 5.4

Dust, fumes & air quality control

Objective	Avoid, control or minimise contaminant emissions to the atmosphere caused by rising dust, vehicle/plant emissions, noxious fumes/odours, or paint spraying activities.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address the issue of air quality and protective measures to prevent avoidable discharge of contaminant to the atmosphere • Implement measures for control and suppression of dust
Control Measures	<p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • Dust is minimised throughout work areas. During the demolition phase dust will be minimised by heavy duty shade cloth, water suppression and demolition strategy. • Materials deliveries such as fill, soil, sand, gravel, landscaping supplies etc, are transported to the site under covered loads. • Stockpiles are dampened down or covered as necessary. • Trucks are not overloaded and load covers are used when excavated material is transported from site. • Plant and equipment is operated and maintained in accordance with acceptable industry standards and will be turned off when not in use. • Putrescible waste is regularly removed from site. • Site conditions are regularly inspected and hand held sprinklers and/or water cart are used as required to minimise dust. • On-site speed restrictions and the need to control dust are formally discussed during site inductions. • Roads bordering the site kept free of dust and mud (regular mechanical and manual sweeping as required). • External paint spraying activities are undertaken in accordance with local authority requirements and not carried out during adverse weather conditions. • Refer Appendix 6.2 • Access roads and materials handling areas to be swept regularly.
Performance Indicators	<ul style="list-style-type: none"> • Visual observance of dusts levels; vehicle and plant emissions • No dust complaints
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Reference	<ul style="list-style-type: none"> • Protection of the Environment Operations Act 1997 (NSW) • Protection of the Environment Operations (Clean Air) Regulation 2010 (NSW) • National Greenhouse and Energy Reporting Act 2007 (NGER Act) • National Environmental Protection Measure (NEPM) for Ambient Air Quality • Contaminated Land Management Act 1997 (NSW) • SSD Conditions: B22, C15 • REF Conditions: 7, 15, 20, 21 • CG21 Preliminaries: 5.17

Aspect 5.5

Retention of the Timber of Angophora Trees for Use by the Public Artist

Objective	Avoid, control, or minimise damage to nominated Angophora trees during removal and temporary on-site storage prior to handover to artist engaged by client.
Management Strategy	<ul style="list-style-type: none"> • Trees removed by others prior to Watpac engagement. Stored off-site. • If transferred to site, timber shall be protected until used by the artist engaged by the client or another authorised client's representative.
Control Measures	Project Manager shall ensure: <ul style="list-style-type: none"> • Adequate storage is provided to reasonably protect the timber from damage by both human and natural causes.
Performance Indicators	<ul style="list-style-type: none"> • Acceptance by the artist engaged by the client or another authorised client's representative.
Reporting	<ul style="list-style-type: none"> • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form, in accordance with Aspect 5.2 above.
Reference	<ul style="list-style-type: none"> • Contract Specifications and Preliminaries

Aspect 5.6	
Vehicular and Pedestrian Traffic Management	
Objective	Avoid interference of, or obstruction to, roadways, footpaths or access points by the use of appropriate traffic control measures.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address the issues of access and delivery arrangements for materials including timing and unloading of materials. • Coordinate construction programme and delivery times to avoid hold-ups and traffic congestion. • Provide appropriate fencing/hoardings and protection for the public.
Access	<ul style="list-style-type: none"> • Access to the site will be determined to minimise impact.
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Prior to site establishment ensure a Traffic Management Plan (TMP) has been prepared and approved by appropriate authority (Council or Roads and Maritime Services (RMS)). • Controls documented in the approved Traffic Management Plan are implemented • Refer to approved TMP for specific management actions related to road closures (diversions, signage, barricading etc.). • Control of traffic on public roads to be conducted by RMS-certified Traffic Controller (as per specifications in TMP). • Ensure a Road Occupancy Licence is obtained from the RMS. Confirm times and dates approved under the Road Occupancy Licence and comply with any conditions. • Ensure a Road Opening Permit is obtained from the local Council, where required. • Vehicle entry/exits with shakedown grids will be established to remove the potential for vehicles departing the site to deposit debris on the roads. Watpac will deploy street sweepers as required. Retain records / note in site diary. • Site fencing/hoarding is properly secured and lockable; access points are clearly designated, and appropriate signage erected. • Materials set-down areas are established. • Construction program and delivery times are coordinated to avoid delays and possible traffic congestion. • Access points for each stage of construction are unobstructed to facilitate prompt service to set-down areas within the site. • Materials handling is managed to cause least disruption to traffic and local amenity. • Traffic Controllers are RMS accredited • There shall be no trucks permitted to queue on local roads. All trucks will be required to queue on state roads until they can be wholly accommodated within the site or within an approved work zone. Two-way radios and/or mobile phones shall be used to manage this condition. • Where required, all pedestrians shall be escorted across the site by RMS accredited Traffic Controllers.
Performance Indicators	<ul style="list-style-type: none"> • Reports or complaints of interruption or interference with pedestrian or vehicular traffic movement around the site.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Applicable Permits	<ul style="list-style-type: none"> • Road Occupancy Licence (RMS) • Road Opening Permit (Council) • Traffic Control Permit (Traffic Controller)
Reference	<ul style="list-style-type: none"> • Public Health Act 2010 (NSW) • Road Transport Act 2013 (NSW) • Road Transport (General) Regulation 2013 (NSW) • Roads Act 1993 (NSW)

- SSD Conditions: B21, B22, B28, C37
- REF Conditions: 7, 15, 20

Aspect 5.7

Commuting Mass Transport & Local Car Parking

Objective	Encourage commuting mass transport on site and minimise impact to local neighbourhood associated with car parking congestion.
Management Strategy	Inform and promote alternative transports options on site.
Control Measures	Project Manager shall ensure that: - <ul style="list-style-type: none"> • Inductions and Safety Meetings address and promote carpooling, company buses, or public transport options. • Nearby public transport hubs should be identified during inductions. • Provide shuttle bus service during peak morning and afternoon times to/from site to local public transport hub/exchange.
Performance Indicators	<ul style="list-style-type: none"> • Site personnel are using alternative means of transport.
Reporting	<ul style="list-style-type: none"> • Performance to be noted in monthly PCG report.
Reference	<ul style="list-style-type: none"> • None • REF Conditions: 7, 20

Aspect 5.8

Accidental Discovery of Artefacts

Objective	Avoid damage or disturbance to archaeological/cultural artefacts including skeletal remains, shell middens or other cultural artefacts.
Management Strategy	<ul style="list-style-type: none"> • Review historical information of the site (where available) to establish, as far as practical, the likelihood of existence of archaeological/cultural artefacts. • Site environmental induction to address possibility of discovery of archaeological/cultural artefacts • Excavation personnel to remain vigilant over ground penetration points.
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Where archaeological/cultural artefacts are discovered, personnel cease work in the subject area and call a heritage specialist for advice. • The Client and the NSW Heritage Office is promptly advised of significant discoveries. This would be most likely done through the engagement of a heritage consultant. • Directions from the NSW Heritage Office are followed • If suspected human remains are discovered that work is ceased and the Site Manager, Police and State Coroner’s Office are contacted, and if applicable, Aboriginal Affairs NSW • In the event that archaeological ‘relics’ are unexpectedly discovered during excavation; work must immediately cease in the affected area and the Client and historical specialist contacted to inspect and record the remains. The NSW Heritage Council must be notified in writing of the discovery of any relics. Depending on the nature of the discovery, additional assessment and approval may be required prior to the recommencement of excavation in the affected area. • If any Aboriginal objects are discovered on the site, excavation or disturbance is to cease and the Client and NSW National Parks and Wildlife Service is to be informed.
Performance Indicators	<ul style="list-style-type: none"> • No damage, or minimal disturbance, to any archaeological/cultural artefacts discovered.
Reporting	<ul style="list-style-type: none"> • Superintendent is immediately notified of any discovery • Daily monitoring reflected in daily site diary entries • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Reference	<ul style="list-style-type: none"> • Environment Protection and Biodiversity Conservation Act 1999 • Heritage Act 1977 • Aboriginal and Torres Strait Islander Heritage Protection Act 1984 • Aboriginal and Torres Strait Islander Heritage Protection Regulations 1984 • Australian Heritage Council Act 2003 • Environmental Planning and Assessment Act 1979 • SSD Conditions: B22, C18 • REF Conditions: 7, 20, 24

Aspect 5.9	
Demolition Works	
Objective	Avoid, control, or minimise disruptive or damaging environmental effects of demolition works.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address issues of air quality, noise, vibration and vermin/pests, and relevant protective measures. • Implement site-wide measures for control and minimisation of dust, odours, fumes, noise, vibration, and vermin/pests.
Control Measures	<p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • All demolition work is undertaken in accordance with AS2601-2001: Demolition of Structures. • Dust is minimised throughout work areas. During the demolition phase dust will be minimised by heavy duty shade cloth, water suppression and demolition strategy. • Plant and equipment are operated and maintained in accordance with acceptable industry standards and will be turned off when not in use. • Trucks are not overloaded, and load covers are used when demolished material is transported from site. • All construction activities will be undertaken mindful of the provisions of AS 2436:1981 - Guide to Noise Control on Construction & Demolition Sites. • Each item of plant is fitted with effective noise suppression devices (generally exhaust mufflers) as applicable. • All plant, equipment and machinery are operated and maintained in accordance with acceptable industry standards and turned off when not in use. • Vibration is controlled in accordance with AS 2670.2. • Six weeks prior to the commencement of any demolition, individual blocks, properties and the surrounding area should be inspected in order to identify the presence and extent of any infestations. Where infestations are identified, appropriate treatments must be implemented by licenced Pest Control Contractors to eliminate infestation before demolition.
Performance Indicators	<ul style="list-style-type: none"> • Visual observance of timber condition before and after felling. • Acceptance by the artist engaged by the client or another authorised client's representative.
Reporting	<ul style="list-style-type: none"> • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form, in accordance with Aspect 5.2 above.
Reference	<ul style="list-style-type: none"> • Australian Standard 2601-2001: Demolition of Structures • Australian Standard 2436-1981: Guide to Noise Control on Construction, Maintenance and Demolition Sites • SSD Conditions: A6, B26, C22, AN8 • REF Conditions: 6, 7, 14, 15, 20, 25, 26

Aspect 5.10	
Waste Management	
Objective	To control the disposal of waste generated from construction activities.
Management Strategy	<ul style="list-style-type: none"> • Site induction to address the issue of waste management and protective measures to prevent environmental incidents caused by inappropriate methods of waste disposal. • Designated bin storage locations (for both wheelie bins & skips), and an appropriate regime for clearance.
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • A Waste Management Plan (C-PLA-012) is developed and implemented to ensure at least 80% of waste generated during demolition and construction by weight is reused or recycled. • The SDS of Chemicals and Hazardous Substances should be consulted before disposal instructions, which will usually involve dropping of containers to Chemical Waste/Hazardous Collection stations. Containers must not be washed out and disposed of as normal. • Waste is minimised through the use of detailed measurement and conservative ordering to prevent oversupply of materials. • All waste will be sorted (including that from clearing, demolition, off cuts, etc.) into appropriate categories for recycling or disposal. • Spoil is to be loaded directly to appropriate vehicle for transport to approved disposal or recycling facility (if pre-classified) or stockpiled in a designated area on site to enable samples to be collected for chemical testing. Spoil that can be classified as VENM by observation does not require chemical testing. VENM classifications are to be made by an environmental specialist and documented. • All waste (liquid and non-liquid) must be classified prior to disposal/ reuse/ recycling. Contact the Watpac HSE Manager to confirm waste classification requirements or refer to the Watpac Waste Classification Procedure. • Where required, ensure waste transportation company is appropriately licensed (refer Watpac Waste Classification Procedure). • Ensure hazardous waste transporters and receiving facilities are licenced to transport and receive hazardous waste. Obtain copies of licences. • Watpac will ensure that all recyclables are placed into appropriate recycling processes and uses (e.g. scrap metal, mulch, road base) and that wastes are safely disposed of. • Work with the waste contractor engaged for the project to ensure that all practicable initiatives to minimise, segregate, re-use and recycle construction waste are identified and implemented. • “Ship to point of use” techniques will be deployed where practical to minimise protective wrappings or enclosures. • Waste skips/bins are covered and located to be easily accessible and protected from weather. • A recycling bin will be provided separately to the bin for Construction waste material and general waste (food scraps, cans, etc). • Paper and toner waste will be collected and recycled in specific office bins. • The construction site is kept free from build-up of waste materials by directing regular clean-ups by subcontractors. • No burning of waste takes place on-site. • Concrete washouts will be provided on site, allowing evaporation of slurry water. Refer to C-PLA-014 for more info on correct establishment. • Paint washouts will be provided. • Neither Watpac nor any subcontractor will discharge or dump any deleterious materials into the drainage system, onto any roads or at any locations that have not been reviewed and approved by the Principal. • Limit the storage of chemicals (e.g. fuels, lubricants, hydraulic fluids, etc) on site. Where chemicals are stored on site, they must be stored appropriately (location and storage) in accordance with the WHS Act and Regulation 2011, and AS 1940 – 2004: The Storage and Handling of Flammable and Combustible Liquids and the chemical's

	<p>Safety Data Sheet (SDS).</p> <ul style="list-style-type: none"> The SDS for Hazardous Chemicals should be consulted for disposal instructions, which will usually involve dropping of containers to Chemical Waste/Hazardous Collection stations (or collection by supplier). Containers must not be washed out and disposed of as general waste. Any liquid waste, including backwash of wet trades, should be collected by a licensed liquid waste collection contractor (look for 'Waste Reduction and Disposal Services')
Performance Indicators	<ul style="list-style-type: none"> No incidents arising from the disposal of end waste.
Reporting	<ul style="list-style-type: none"> Waste Reports including details of the percentage of waste diverted from landfill, to be maintained, where applicable Daily monitoring of waste facilities reflected in daily site diary entries Weekly Inspections undertaken and recorded on the Weekly Environment Inspection (C-FRM-061)
Reference	<ul style="list-style-type: none"> National Environment Protection (Movement of Controlled Waste between States and Territories) Measure. Protection of the Environment Operations Act 1997 Protection of the Environment Operations (Waste) Regulation 2014 Waste Avoidance and Resource Recovery Act 2001 EPA Waste Classification Guidelines 2014 Construction and Demolition Waste Guide - Recycling and Reuse across the Supply Chain National Waste Policy: less waste, more resources 2009 National Packaging Covenant Work Health and Safety Act 2011 Work Health and Safety Regulation 2011 AS 1940 – 2004: The Storage and Handling of Flammable and Combustible Liquids and the chemical's Safety Data Sheet (SDS)SSD Conditions: B17, B22, B26, C14-16, C32-34. REF Conditions: 7, 14, 20 CG21 Preliminaries: 5.16, 6.3

Aspect 5.11	
Hazardous Substances and Dangerous Goods	
Objective	To avoid contamination of the environment or risk to human health To appropriately manage the discovery of Hazardous Materials on site
Management Strategy	<p>Site environmental induction to make personnel aware of the project handling and storage procedures to manage Hazardous Substances and Dangerous Goods</p> <ul style="list-style-type: none"> • All hazardous materials introduced onto site must be accompanied by a MSDS and the material entered onto the project register. • All hazardous materials must be stored in compliance with the manufacturer's recommendations and in accordance with Australian Standards • No bulk fuels are to be retained on site. Refuelling of plant is to be undertaken on as required basis and only within a prepared designated area (or as otherwise approved). • Any discovery of a hazardous material is immediately reported to the client.
Control Measures	<p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • The quantities of Hazardous Substances and Dangerous Goods on site are minimised • Fuelling and maintenance of vehicles and equipment on site is avoided. Where refuelling is unavoidable, the location and procedures will be strictly controlled. • Subcontractors advise the Site Manager of the type of material, location, volume and any special handling / storing precautions in relation to any dangerous gases or flammable materials that are proposed to be brought on site. • Subcontractors do not use any materials which are classified as Hazardous in or adjacent to occupied areas without the prior approval of the Site Manager. • Subcontractors provide a current MSDS for all Hazardous Substances and Dangerous Goods proposed to be brought onto site. • A Site MSDS Register is developed and maintained. • Storage and handling of hazardous materials is monitored daily. • A Spill Kit and Site Emergency Plan are readily accessible. • Clean up materials are disposed of in compliance with regulatory requirements. • All oxygen and acetylene cylinders are properly stored in an upright position and adequately restrained away from heat sources.
Performance Indicators	<ul style="list-style-type: none"> • No spillages, incidents or complaints
Reporting	<ul style="list-style-type: none"> • Licenced removal contractor to provide site safety clearance certificate and documented evidence of proper disposal. • Health Infrastructure must be notified in accordance with the HI Stakeholder Management Plan Process. Refer to Appendix 6.1
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 (NSW), s 357 • National Code of Practice for the Storage and Handling of Workplace Dangerous Goods [NOHSC: 2017 (2001)]. • Environmentally Hazardous Chemicals Act 1985 (NSW) • SSD Conditions: B5-8, B17, B26, C12-17, C35, AN8, AN9 • REF Conditions: 7, 10, 14, 15, 20, 25, 26 • CG21 Preliminaries: 5.6, 5.7

Aspect 5.12	
Spill Management and Response	
Objective	Control, minimise or avoid spillage of hazardous or prohibited substances, and react quickly to contain spills in the event they occur.
Management Strategy	<ul style="list-style-type: none"> • Induct all personnel to handle chemicals with care. • Provide spill kits to all sites.
Control Measures	<p>In event of spill:</p> <ul style="list-style-type: none"> • Assess: Evaluate the spill to determine if it can be dealt with by an individual, the spill response team or if outside assistance is required i.e. hazchem, police, fire brigade, specialist spill response company. • Secure: Make the site safe for all personnel and the general public. • Contain: Spill response equipment such as spill booms, drain covers or bunding can be used to contain the spill. For solids, tarps may be used to cover and prevent dampness to granules or possible dispersion by wind. • PPE: Identify the liquid and check the MSDS to ascertain the required PPE. • Absorb: Once the liquid is contained, it will need to be converted to a solid by absorption. Use the appropriate absorbing pads or absorbent (according to the type of material spilled) to soak up the spill by placing them over the liquid. Remove the saturated pads and replace as necessary. On porous surfaces, sprinkle loose absorbent over the spill and broom through until surface appears dry. • Dispose: Place the spent absorbent in the disposal bags. Correctly dispose of contaminants off site using a licensed contaminated waste disposal contractor. • Report: Document the incident and include what happened, when it happened, where it happened; and what was done to eliminate or minimise the impact. • Restock: Order and replace used up PPE and absorption materials. <p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Spill containment and treatment equipment and materials will be available near storage areas of hazardous materials. Spill kits and other suitable incident response equipment will also be located at other key points around the site and maintained ready for use. • Subcontractors will be required to maintain their own spill kits where required. • Spills of hazardous materials will be collected by licensed contractor and collected for treatment at a licensed waste disposal facility. • All hazardous waste will be tracked as per the Protection of the Environment Operations (Waste) Regulation 2014 and the NSW EPA Waste Classification Guidelines 2014 • Contaminated ground is remediated in accordance with the Contaminated Land Management Act 1997 and Regulation 2013. • SWMS must be submitted and approved for the handling and use of hazardous chemicals. • Any waste oils, lubricants and contaminated cloths, resulting from maintenance of plant on-site, are placed in suitable containers prior to removal and disposal at an approved waste receiving facility. • Wastes generated on site are to be managed in accordance with the Watpac Waste Management Plan (C-PLA_012). • Project Environment Consultant to prepare a Remediation Plan for the management of all contaminated soil. The Remediation Plan shall be submitted to Principal for approval.
Performance Indicators	<ul style="list-style-type: none"> • No spillages. • Spill kits readily accessible.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form (C-FRM-061) • Health Infrastructure must be notified in accordance with the HI Stakeholder Management Plan Process. Refer to Appendix 6.1
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 (NSW)

- Protection of the Environment Operations Act 1997 (NSW)
- Protection of the Environment Operations (Waste) Regulation 2014
- EPA Waste Classification Guidelines 2014
- National Code of Practice for the Storage and Handling of Workplace Dangerous Goods [NOHSC: 2017 (2001)].
- SSD Conditions: B22, C15, C35
- REF Conditions: 7, 17, 19, 20, 21

Aspect 5.13	
Management of Radiation and Radioactive Material	
Objective	To avoid contamination of the environment or risk to human health during demolition, construction, commissioning and post-handover operation.
Management Strategy	<p>Site induction to make personnel aware of the radiation-specific design and construction requirements of the Medical Imaging building and any other location where radiation-related activities will be required during operation of the facility.</p> <p>Certification of compliance with the <i>Radiation Control Act 1990</i> and <i>Radiation Control Regulation 2013</i> before commencement of construction works and again before commencement of hospital operation by a suitably qualified radiation consultant.</p>
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Site induction makes personnel aware of the radiation-specific design and construction requirements of the Medical Imaging building and any other location where radiation-related activities will be required during operation of the facility. • Prior to the release of the certificate under Section 109R of the EP&A Act 1979, certification of design compliance with the <i>Radiation Control Act 1990</i> and <i>Radiation Control Regulation 2013</i> is provided to the certifying authority. • Construction works are undertaken in accordance with the Radiation Shielding Assessment Report (dated 22/04/2016 by Radiation Services Group, received as part of the tender documentation). • Prior to commencement of hospital operation, certification from a suitably qualified radiation consultant is provided to verify that the construction of the work satisfies all relevant requirements. <p>All subcontractors engaged by Watpac are to ensure:</p> <ul style="list-style-type: none"> • They are aware of the radiation-specific design and construction requirements of the Medical Imaging building and any other location where radiation-related activities will be required during operation of the facility as detailed in the site induction. • Their works are undertaken in accordance with the Radiation Shielding Assessment Report (dated 22/04/2016 by Radiation Services Group, received as part of the tender documentation), as well as the <i>Radiation Control Act 1990</i> and <i>Radiation Control Regulation 2013</i>.
Performance Indicators	<ul style="list-style-type: none"> • Certifications of compliance received. • No incidents or complaints.
Reporting	<ul style="list-style-type: none"> • Works to be certified by a suitably qualified radiation consultant; certifications to be provided to the Principal.
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 (NSW) • Radiation Control Act 1990 • Radiation Control Regulation 2013 • Radiation Shielding Assessment Report (dated 22/04/2016 by Radiation Services Group, received as part of the tender documentation) • REF Conditions: 7, 13, 28

Aspect 5.14	
Landscape Maintenance	
Objective	Avoid, control, or minimise damage to landscaped areas within the contractor's site boundary and associated loss of amenity for hospital users/stakeholders.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address preservation of landscaped areas that are within the contractor's site boundary but are not targeted for construction/demolition works. • Allow for landscaping subcontractor to make good any damaged landscaped areas that are not included with the scope of works for new landscaping.
Control Measures	All subcontractors engaged by Watpac are to ensure: <ul style="list-style-type: none"> • Vehicles are not driven or parked on landscaped areas. • Landscaped areas are not used as materials storage areas.
Performance Indicators	<ul style="list-style-type: none"> • Visual observance of landscaped areas.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required. • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form, in accordance with Aspect 5.2 above.
Reference	<ul style="list-style-type: none"> • Protection of the Environment Operations Act 1997 (NSW) • Environmental Planning and Assessment Act 1979 (NSW) • Native Vegetation Act 2003 (NSW) • SSD Conditions: D8, E7 • REF Conditions: 27

Aspect 5.15	
Construction Site Management	
Objective	To avoid nuisance, disruption or danger to local residents and hospital staff, patients and visitors.
Management Strategy	Site induction to make personnel aware of the rules and requirements of the site, and relevant workplace safety legislation and principles. Vigilant monitoring of site conditions and subcontractor behaviour by Watpac staff.
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Site induction makes personnel aware of the rules and requirements of the site, and relevant workplace safety legislation and principles. • Construction fencing is installed and maintained along the site boundary, and around any zones of work that are required outside of the established boundary. Vehicle and workforce access points and roads to the construction compounds are clearly designated and controlled for authorised access only. • The worksite is left tidy and free of rubbish each day prior to leaving the site and at the completion of works. • Suitable arrangements are made for temporary parking for hospital staff, visitors, patients and construction workers for the duration of the construction program. • All materials on-site or being delivered to the site are wholly contained within the site. The requirements of the <i>Protection of the Environment Operations Act 1997</i> are to be complied with when placing/stockpiling loose material or when disposing of waste products or during any other activities likely to pollute drains or watercourses. • The public roadway and internal roadway are not obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances, except without prior approval of the road authority under the <i>Roads Act 1993</i>. • A copy of the approved and certified plans, specifications and documentation shall be kept on site at all times and shall be available for perusal. • Any contractor(s) meets all workplace safety legislation and requirements. • Any loose material stockpiles are stored within the temporary construction compound(s) and are protected from possible erosion.
Performance Indicators	<ul style="list-style-type: none"> • No incidents or complaints.
Reporting	<ul style="list-style-type: none"> • Daily monitoring reflected in daily site diary entries when required. • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form.
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 (NSW) • Protection of the Environment Operations Act 1997 (NSW) • Environmental Planning and Assessment Act 1979 (NSW) • SSD Conditions: A23, B22, B23-31, C1-C37 • REF Conditions: 7, 20

Aspect 5.16	
Site Accommodation	
Objective	<ul style="list-style-type: none"> Control, minimise or avoid contamination or spoiling of areas in the establishment, operation and disestablishment of temporary site accommodation facilities.
Management Strategy	<ul style="list-style-type: none"> Establish temporary site offices, amenities and ablution facilities, including provision for sanitary waste, in accordance with the requirements of the relevant local authority, all relevant Acts and Regulations and industry best practice. Remove all temporary buildings and facilities from site when no longer needed and make good all disturbed areas, including landscaping where required.
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> Site offices, amenities and ablution facilities are located and operated in such a manner as not to cause environmental concern Site offices, hoarding, crossovers and fencing complies with the approved Site Plan or approved revision The site is made good upon disestablishment of the site accommodation facilities. Adequate firefighting equipment is provided and maintained for the works Required permits and approvals are received prior to commencing works Install automatic shut-off taps to water points and utilise low voltage luminaries to site facilities No trees or vegetation is damaged or removed for site accommodation facilities. Adequate tree protection will be provided. The Contractor must ensure that construction routes are cleaned regularly at weekly intervals or as required. The hours of work for the project are: <ul style="list-style-type: none"> - Monday to Friday – 7:00am – 6:00pm - Saturday 8:00am – 1:00pm - Excluding Public Holidays No work is undertaken outside the specified Hours of Work without Contract Administrator approval
Performance Indicators	<ul style="list-style-type: none"> Appropriate location and operation of all facilities. Site reinstated upon completion of project.
Reporting	<ul style="list-style-type: none"> Daily monitoring reflected in daily site diary entries when required Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form (C-FRM-061)
Reference	<ul style="list-style-type: none"> Approved Site Plan Australian Standard 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites Hornsby Shire Council Local Environment Plan Environmental Planning and Assessment Act 1979 (NSW) Native Vegetation Act 2003 (NSW) Protection of the Environment Operations (Noise Control) Regulation 2008 (NSW)

Aspect 5.17	
Site Amenities	
Objective	Maintain hygiene and reduce nuisance created by site accommodation.
Management Strategy	<ul style="list-style-type: none"> • Keep site clean and tidy • Monitor area
Control Measures	<p>Project Manager shall ensure that: -</p> <ul style="list-style-type: none"> • Septic waste issues from overflowing portable toilets and unaccounted sewerage pipe burst is avoided. • Adequate lavatory systems are provided within reasonable proximity of working areas • Septic waste removal service is scheduled • Toilet facilities are well maintained • Clean up procedures are included in induction • There is bunting around temporary septic systems • There is a suitable and adequate amount of signage • Site induction demonstrate proper site behaviour • Waste paper waste from site office is collected in paper recycling bins and regularly collected. • Cardboard waste bin is provided on site. • All putrescible waste is stored in secure containers until removal and disposal off site. • A daily 'sweep' of the entire area is done to remove any stray/windblown litter. • Designate specific areas on site for the temporary management of waste; i.e. general domestic waste, works waste and contaminated waste. • Waste streams will be segregated to enhance recycling opportunities where practicable i.e. general domestic waste, works waste and contaminated waste. • All domestic and hazardous waste to be disposed of in dedicated industrial bins. • Waste bin lids to be closed at all times to avoid rainwater ingress, windblown littering, access by birds and scavenging by vermin, birds or native wildlife. • Waste oils to be recycled where practicable. • No waste will be burnt on site.
Performance Indicators	<ul style="list-style-type: none"> • No odour or vermin present
Reporting	<ul style="list-style-type: none"> • Monthly waste reports from waste contractor
Reference	<ul style="list-style-type: none"> • None

Aspect 5.18	
Identification and Protection of Existing Utility Services	
Objective	Avoid damage to, or unplanned interruption of, utility, overhead and underground services.
Management Strategy	<ul style="list-style-type: none"> • Site environmental induction to address location of and protective measures for utility services. • Identify, mark and protect utility services (electricity, water, gas etc.). • Ensure all necessary interruptions to utility services are planned and communicated to all relevant persons and Authorities.
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Existing services plans will be studied, and services will be located and marked prior to commencing any works. • Comprehensive “consolidated services plans” will be procured and prepared for all works areas including type, location, depth etc. of all known or identifiable services (to be prepared by surveyor). • Services Detection will be undertaken wherever services are likely to be encountered. • Non-destructive excavation techniques to be implemented wherever possible, especially around existing services. • Contact telephone numbers for emergency services for utilities are established and readily available in the Site Emergency Plan • Storage areas are located remote from utility services. • Access ways, haul roads and turning points are arranged to avoid possible clashes with utility services. • Overhead protection/warning is provided for high loads, vehicles, cranes etc. • Spotters are provided when work is undertaken beneath overhead power lines. • Where it is found necessary to temporarily interrupt, remove, divert or make connection to an existing service or other existing work beyond the control of the Watpac, written approval from the Principal will be sought prior to undertaking Works.
Performance Indicators	<ul style="list-style-type: none"> • No unplanned interruptions to any utility service.
Reporting	<ul style="list-style-type: none"> • Health Infrastructure must be notified in accordance with the HI Stakeholder Management Plan Process. Refer to Appendix 6.1 • Notification to relevant authorities • Daily monitoring reflected in daily site diary entries • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Applicable Permits	<ul style="list-style-type: none"> • Dial Before You Dig • Permit to Dig (Watpac NSMS Form)
Reference	<ul style="list-style-type: none"> • Work Health and Safety Act 2011 • Energy and Utilities Administration Act 1987 (NSW) • SSD Conditions: B32, B33, C33 • REF Conditions: 7, 18, 20 • CG21 Preliminaries: 5.4, 5.15

Aspect 5.19	
Vermin and Pest Control	
Objective	Minimise the possibility of infestation from rats, mice, insects, bats, possums etc.
Management Strategy	<ul style="list-style-type: none"> • Keep site clean and tidy • Monitor area for infestation • Consult Pest Management Contractor if required
Control Measures	<p>Project Manager shall ensure that: -</p> <ul style="list-style-type: none"> • Keep site clean and tidy with daily clean-ups. • Ensure all putrescible waste is disposed of in an appropriately sealed receptacle. • Six weeks prior to the commencement of any demolition, individual blocks, properties and the surrounding area should be inspected in order to identify the presence and extent of any infestations. Where infestations are identified, appropriate treatments must be implemented by licenced Pest Control Contractors to eliminate infestation before demolition. • Minimise ponding and exposed water sources to prevent mosquitos and midgeys. • Ideally, licenced Pest Control Contractors should be consulted for management strategies after the substructure is completed. Frequently the dark cold environment can be a pest habitat which presents an unacceptable working environment. • To prevent rat egress from live drains and sewers to new systems, the live systems should be temporarily sealed off with expanding drainage stoppers until connection to new drainage is completed. • Where vermin present itself as a problem on site, consult a Pest Control company for advice. Do not attempt to address the problem internally.
Performance Indicators	<ul style="list-style-type: none"> • No infestations.
Reporting	<ul style="list-style-type: none"> • None
Reference	<ul style="list-style-type: none"> • Work Health and Safety Regulation 2011 • CG21 Preliminaries: 6.4

Aspect 5.20	
Environmental Emergency Plans	
Objective	<p>The Project Manager shall ensure that: -</p> <ul style="list-style-type: none"> • A Spill kit is available on site at all times • All reasonable measures are taken to prevent environmental emergencies • The Project Emergency Plan is readily accessible to all site personnel • Emergency Plans are part of site Inductions
Reporting	<ul style="list-style-type: none"> • Health Infrastructure must be notified in accordance with the HI Stakeholder Management Plan Process. Refer to Appendix 6.1 • All emergency situations to be reported, investigated and recorded
In the event of an environmental incident	<ul style="list-style-type: none"> • Stop work and secure the area if safe to do so • Initiate the Project Crisis Checklist • Prevent the incident from escalating • Notify applicable management, emergency services and authorities • Clean up the affected area. Engage specialist help if required • Investigate the circumstances • Record the incident • Implement actions to prevent a recurrence • Follow-up to ensure the actions were correctly implemented and effective
In the event of an incident involving a dangerous goods spill, leak or explosion;	<p>In event of spill:</p> <ul style="list-style-type: none"> • Assess: Evaluate the spill to determine if it can be dealt with by an individual, the spill response team or if outside assistance is required. • Secure: Make the site safe for all personnel and the general public. • Contain: Spill response equipment such as spill booms, drain covers or bunding can be used to contain the spill. For solids, tarps may be used to cover and prevent dampness to granules or possible dispersion by wind. • PPE: Identify the liquid and check the MSDS to ascertain the required PPE. • Absorb: Once the liquid is contained, it will need to be converted to a solid by absorption. Use the appropriate absorbing pads or absorbent to soak up the spill by placing them over the liquid. Remove the saturated pads and replace as necessary. On porous surfaces, sprinkle loose absorbent over the spill and broom through until surface appears dry. • Dispose: Place the spent absorbent in the disposal bags. Correctly dispose of contaminants off site using a licensed contaminated waste disposal contractor. • Report: Document the incident and include what happened, when it happened, where it happened; and what was done to eliminate or minimise the impact. • Restock: Order and replace used up PPE and absorption materials.
Extreme Weather	<p style="text-align: center;">Wet</p> <ul style="list-style-type: none"> • Alert site personnel and stop all external work on if applicable • Check site for plant, equipment and materials and secure anything not in immediate use • Check water outlets, water catchments, stormwater and sedimentation controls
Unplanned Interruptions to Existing Services	<ul style="list-style-type: none"> • Shut down and isolate plant if safe to do so • Immediately notify relevant emergency services and service providers • Secure the area and erect hazard markers as required • Protect stormwater outlets, implement controls if required. • Do not recommence work until approved by the relevant authority
High Wind Warning	<ul style="list-style-type: none"> • Alert outdoor workers of potential dangers and stop all external work • Secure any loose object that could become missiles
Discharge to Trade Waste	<ul style="list-style-type: none"> • Immediately notify relevant authorities of any event relating to a discharge to sewer that may: cause a breach of the trade waste agreement; endanger the life or compromise the safety of water authority workers; prevent or disrupt the operation of any sewerage; treatment plant; detrimentally affect any aspect of the environment

Aspect 5.21	
Earthworks and Groundwater Contamination	
Objective	<p>To detect and manage contaminated land, prevent leaching of contaminated materials or groundwater infiltration during earthworks, and detect services prior to commencement</p> <p>Mitigate potential environmental and operational consequences of encountering groundwater during excavation and piling.</p> <p>Avoid or minimise contamination of land caused by the use of imported materials, or by spillage of fuels, paint, form oil, chemicals etc.</p>
Management Strategy	<ul style="list-style-type: none"> • Expert consultants are engaged to investigate project site geotechnical conditions and provide a detailed assessment of the quality of the earth, and existence of groundwater table, before earthworks begin. • Services will be identified before earthworks commences • Controls are in place to capture and treat contaminated soil and groundwater. • An 'unexpected finds protocol' would be prepared and included to assist with the identification, assessment, management, health and safety implications, remediation and/or disposal (at an appropriately licenced facility) of any potentially contaminated soil and/or water. • If dewatering is required during construction, the water would be tested (and treated if necessary) prior to re-use, discharge or disposal.
Control Measures	<p>Project Manager shall ensure:</p> <ul style="list-style-type: none"> • Obtain soil testing for waste classification prior to excavation and removal off site. Tests would confirm the presence and type of any contaminants and classify the soil for the purpose of spoil management and removal. • Hoarding is in place prior to any excavations being undertaken on-site. • Dial Before You Dig permits will be obtained before earthworks commence. • All materials on-site or being delivered to the site shall be contained within the site. The requirements of the Protection of the Environment Operations Act 1997 shall be complied with when placing/stockpiling loose material or when disposing of waste products or during any other activities likely to pollute drains or watercourses. • Cease work in the immediate vicinity of any areas of suspected contamination that are identified prior to or during work. Ensure that these areas are not disturbed and are cordoned off as a safety risk. • In the event that indicators of contamination are encountered during construction (e.g. odours or visually contaminated materials), work in the area will cease until an occupational hygienist can advise on the need for remediation or other action. • If remediation is required, then a Remedial Action Plan is to be prepared and remediation works are to be carried out in accordance with State Environmental Planning Policy No. 55 – Remediation of Land. • Plant and equipment to be inspected prior to start up. Any defects that may result in an environmental incident (spills, leaks, etc.) are to be repaired prior to operation. <ul style="list-style-type: none"> - Check machinery daily for oil, fuel or other liquid leaks. - No water used or generated by machinery or equipment is to be discharged to stormwater, drainage lines, water course/bodies, or the sewage system unless a permit/license is acquired. • Where reasonably practicable, contingent timing of earthworks when water levels are low, that is, avoiding periods of heavy rain to avoid extensive soil saturation. • Remediation plans will be developed if required. This will either involve off-site disposal or on-site remediation, which may be stockpiling and treating. <ul style="list-style-type: none"> - If disposal, a permit for removal and disposal of contaminated soil will be required • Imported materials will be certified as being as per the specifications and free from deleterious organic matter. <ul style="list-style-type: none"> - All imported materials are procured from known sources and must be validated to ensure it is suitable for the proposed land use from a contamination perspective in accordance with National Environment

	<p>Protection Measure (NEPM: Assessment of Site Contamination) measure which defines criteria for different land uses.</p> <ul style="list-style-type: none"> - Validation as suitable clean fill must either be in the form of suitable documentation from the supplier or by sampling and analysis in accordance with relevant legislative requirements <ul style="list-style-type: none"> • Manage stockpiles by implementing sediment and erosion control devices in accordance with Managing Urban Stormwater, Soils & Construction, Volume 1 (Landcom, 2004). <ul style="list-style-type: none"> - Stockpiling will be in approved locations, and tested for contamination/suitability before being re-used on site - Stockpiles will be surrounded by sediment fences/screens and covered to prevent weather effects. - Any proposed re-use on site to be considered in accordance with NEPM (Assessment of Site Contamination) • Stabilisation of any excavated areas occurs as soon as reasonably practicable. <ul style="list-style-type: none"> - Sediment traps and cut-off drains are provided to control surface drainage. • Any contamination caused by construction related activities must be notified to the PM/CA in accordance with the environmental incident report outlined in this PEMP and fully remediated to satisfaction. All contaminated material to be managed in strict compliance with the approved remediation plan. • All waste generated from earthworks/civil works will be classified and immobilised as per EPA Waste Classification Guidelines. • If Asbestos or other extremely hazardous material (PAHs,TRHs and leads) are encountered, a hygienist will be engaged to develop a Remediation Plan. Certified asbestos removalists will be engaged and monitored by the Hygienist. <ul style="list-style-type: none"> - Asbestos removal and management in NSW is regulated under the WHS Act 2011 and WHS Regulation 2011. The handling of asbestos and asbestos work will be carried out in accordance with relevant codes/guides including, but not limited to, Code of Practice: How to Safely Remove Asbestos (Safe Work Australia, 2016) and Code of Practice for the Safe Removal of Asbestos 2nd Edition (NOHSC: 2002 (2005)). - If leads, fuels or other NPI trackable substances that do not present an immediate extreme danger are encountered, soil is to be stockpiled and the civil engineer or geotechnical engineer consulted for treatment purposes. • If any suspicious material is encountered the 'Unexpected find checklist' is followed and completed (see appendix 6.8)
Performance Indicators	<ul style="list-style-type: none"> • No pollution or contamination of waterways • No release of contaminated materials or compromised water from the site • Zero harm – no harm to anyone (worker/PCBU/hospital staff or patrons/public)
Reporting	<ul style="list-style-type: none"> • All spillages and discovery of contaminated material to be reported to the Project Manager or Contract Administrator • Daily monitoring during associated works, reflected in daily site diaries when required • Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form
Applicable Permits	<ul style="list-style-type: none"> • Permits for removal and disposal of contaminated soil
Reference	<ul style="list-style-type: none"> • NSW State Groundwater Quality Protection Policy (Department of Land & Water Conservation 1998) • Environmental Planning and Assessment Act 1979 • Protection of the Environment Operations Act 1997 • State Environmental Planning Policy No. 55 – Remediation of Land (July, 2014) • Managing Urban Stormwater, Soils & Construction, Volume 1 (Landcom, 2004) • EPA Waste Classification Guidelines (2014) • Workplace Health and Safety (WHS) Act 2011 • Workplace Health and Safety (WHS) Regulation 2011 • Code of Practice: How to Safely Remove Asbestos (Safe Work Australia, 2016) • Code of Practice for the Safe Removal of Asbestos 2nd Edition (NOHSC: 2002 (2005))

- SSD Conditions: C12, C13, C34, AN9
- REF Conditions: 7, 10, 14, 15, 20, 25, 26

Aspect 5.22

External Lighting

Objective	Control or minimize the obtrusive effects of outdoor lighting used on the project site for works, safety and/or security.
Management Strategy	Outdoor/external lighting designed and implemented in accordance with AS4282 - 1997 Control of the Obtrusive Effects of Outdoor Lighting
Control Measures	<p>Project Manager shall ensure:</p> <p>Outdoor lighting is controlled in accordance with AS4282 - 1997.</p> <p>External lighting principles, as described in Appendix A - AS4282, are adhered to where reasonably practicable:</p> <ul style="list-style-type: none"> - Switch off lights when not required for safety, security or enhancement of the night-time scene. (In this respect, one can introduce the concept of a curfew with further limitations on lighting levels between agreed hours, e.g. the reduction or switching of advertising and decorative floodlighting between 11pm and dawn. - Whenever possible, direct light downwards, not upwards, to illuminate the target area. If there is no alternative to up-lighting, then the use of shield and baffles will help reduce spill light to a minimum. - Use specifically designed lighting equipment that, once installed, minimises the spread of light near to, or above, the horizontal. - Do not 'over' light. It is a cause of light pollution and a waste of money. Recommended light levels exist for some applications – see relevant standards. - To keep glare to a minimum, ensure that the main beam angle of all lights directed towards any potential observer is kept below 70°. It should be noted that the higher the mounting height, the lower can be the main beam angle. In places with low ambient light, glare can be very obtrusive and extra care should be taken in positioning and aiming. - Wherever possible use floodlights with asymmetric beams that permit the front glazing to be kept at or near parallel to the surface being lit. <p>Lighting that efficiently directs the light into the area required, thereby minimising the energy consumption and waste light.</p> <p>Illuminance calculated as per Section 5 <i>Calculation of Light Technical Parameters</i>, AS4282.</p> <p>A survey of properties in the immediate precinct of the site is undertaken and notes made, particularly on buildings within the hospital grounds and residential buildings along Derby Road.</p> <p>Lighting is sufficient to safely carry out any works required in any given area</p>
Performance Indicators	No disturbances/incidents or complaints.
Reporting	<p>Monitoring records to be maintained during any activities with potential to generate obtrusive light infliction on local environment.</p> <p>Weekly Inspections undertaken and recorded on the Weekly Environment Inspection Form</p>
Reference	<p>AS4282 - 1997 Control of the Obtrusive Effects of Outdoor Lighting</p> <ul style="list-style-type: none"> • SSD Conditions: B4, E8

6. Appendices

6.1. HI Incident Stakeholder Management Plan

6.2. Environmental Risk Assessment

6.3. Weekly Environmental Inspection Checklist

6.4. Project Complaint and Incident Register

6.5. Complaint and Incident Report Form

6.6. Environmental Legal and Statutory Requirements Register

6.7. Disruptive Works Notices – Process and Templates

a) Disruptive Works Notices Process

For the construction of Hornsby Ku-ring-gai Stage 2 Redevelopment and Medical Imaging Building, Watpac proposes to implement a full and partial DWN system, whereby a full DWN would be submitted for works directly affecting the NSLHD interfaces and a partial DWN as a courtesy notice for works where a Contractor may be outside the site undertaking minor works or when works are undertaken within the site that may be perceived as out of the ordinary, such as additional hours on site (if approved by the relevant authority) or increased noise or vibration.

The procedures and process for both full and partial DWN's will be consistent with the following steps undertaken:

STEP 1: PRE-PLANNING OF WORKS

- Works will be assessed with the following items considered and documented within the DWN form
 - Durations of works
 - Sequencing of works
 - – Stakeholders affected
 - – Disruptions with services shutdowns and reconnections
 - – Impacts to access and egress
 - – Temporary signage
 - – Traffic Management
 - – Potential Industrial Relations issues and sensitive matters
 - – Environmental impact
- Drawings to be provided to articulate intent of works with sequencing where required.
- DWN form to be reviewed and approved internally prior to submission to Health Infrastructure and APP

STEP 2: DRAFT DWN SUBMITTED

- Watpac will submit the DWN form to APP for review, discussion and approval
- Should any amendments be required Watpac will update the form accordingly and re-submit

STEP 3: SUBMIT DWN FORM TO APP / STAKEHOLDER

- APP will submit the DWN to the relevant stakeholder.
- If required APP will arrange a meeting with the stakeholders to discuss the works in more detail. Watpac will facilitate the meeting and incorporate any amendment to the DWN before resubmitting for final approval

STEP 4: PRIOR TO WORKS COMMENCING

- Subcontractors and direct employees involved in the works will be required to participate in a Tool Box Talk to review the proposed risk control measures and to confirm the control measures are appropriate before works proceed. A copy of the Notice of Disruptive Works Form will be attached to the Tool Box Talk.
- 24 hours prior to the work commencing Watpac will send a notice to APP confirming works will proceed as scheduled.

STEP 5: WORKS UNDERTAKEN

- Works will be undertaken in line with DWN. If these works are scheduled over a long duration Watpac will provide APP with status updates to ensure works as progressing as scheduled.

STEP 6: COMPLETION OF WORKS

- Upon completion of the works subcontractors and direct employees involved will sign off the DWN form to confirm all works are complete.
- When works are completed Watpac will send APP a notification identifying all works have ceased and confirm the area of work has been re-instated to its original condition or to the agreed condition endorsed within the DWN.

Coordination of Services Shutdowns, Diversions and Reconnection

Watpac recognises the importance of full coordination and planning when undertaking services shutdown, diversions and reconnections in order to maintain stakeholders, LHD staff and public safety at all times and minimise disruption to surrounding operational buildings business continuity. For a successful outcome all

activities must be appropriately managed through open communication and collaboration with the relevant stakeholders and staff during all stages of the process.

Watpac personnel have extensive experience with undertaking an array of different types of shutdowns, diversions and reconnection successfully on health and science projects and provide the following key principles and methodologies that apply to all situations.

Planning for the Works

When planning shutdowns, diversions and reconnections the involvement of all key stakeholders in the development of the plan facilitates a collaborative approach, avoids incorrect assumptions being made and promotes a streamlined process by reducing the production of unnecessarily documents.

Early Warning

When undertaking shutdowns, diversions and reconnections stakeholders and LHD staff will require sufficient time to coordinate and communicate the proposed activities to the relevant people affected by the works. Depending on the complexity of works several meetings may be required to confirm activities. Engineering may require a supplier / vendor / authority to undertake pre works, checks and balances prior to the commencement of the shutdown, diversion and reconnection, or supplier / vendor / authority may be required on site during the works.

Timing

Depending on the type of shutdown, diversion, and reconnection stakeholders and LHD staff may request the works are undertaken on certain days that are quieter, days when particular staff are rostered on or when case lists are not scheduled.

Open communication

Maintaining open communication channels throughout the entire process is paramount. Shutdowns, diversions, and reconnections often require real time communication on the day to coordinate the exact timing and ensure all parties aware of the situation.

Delaying or Postponing Works

If the shutdown, diversion, and reconnection affecting critical areas works may need to be delayed or postponed if for some reason there is an issue relating to safety. Typically these type of issues will normally not be known until a few minutes prior to the agreed time. Should this occur, all parties must be patient and understanding, as works must only be carried out if all parties agree it is safe to continue. While Watpac acknowledge most shutdowns, diversions and reconnection have specific methodologies and or processes to implement, the following steps outline the overarching principles for works to be implemented.

b) Disruptive Works Notice Template

c) Disruptive Works Notices Register Template

6.8. Unexpected Finds Checklist