APPENDIX N

Construction Management Plan

hansen yuncken
BUILDING VALUE

Wagga Wagga Base Hospital Redevelopment

Construction Management Plan (Phase 1 - Mental Health)

Aug 2011

PREPARED BY
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CONTENTS

1 CONSTRUCTION MANAGEMENT PLAN CONTROL

1.1 Approval

Reviewed by:

National Management Systems Manager:

Name: _____

Signature: _____

Date: _____

HY Approval by:

Senior Project Manager

Name: _____

Signature: _____

Date:

Submitted to HI Project Director:

Name: _____

Position: _____

Signature: _____

Date: _____

1.2 Distribution

The Construction Management Plan is distributed to registered copyholders within Health Infrastructure. Below is the list of copyholders. The list will be controlled and updated by the Design & Construct Project Director who will ensure that revisions are issued to the registered copyholders.

Health Infrastructure shall ensure this CMP and all subsequent revisions are approved and distributed in accordance with company procedure.

Organisation	Name of Holder	Position of Holder
Health Infrastructure	Jeremy Oaks	Project Director & Principal's Representative (Management Team Chair)
Health Infrastructure	Martin Cook	Director Delivery
Health Infrastructure	Anthony Manning	Director Planning & Technical
Health Infrastructure	Lloyd Esau	Director Major Projects

1.3 Revision Status

Revision No	Date Authorised	Brief Description for Issue	Prepared By	Authorised By
01	30 June 2011	Draft Issue within 30 days of commencement	Andrew Lesh – Services Manager	John Hunt – Snr Project Manager
02	7 July 2011	Draft Issue within 30 days of commencement (Rev 1)	Dominic Clifton – Design manager	John Hunt – Snr Project Manager

2 DEFINITIONS & ABBREVIATIONS

The following definitions and abbreviations have been used in this Design & Construction Management Plan. Further definitions and abbreviations are provided in referenced and supporting procedures and plans.

CMP HY Construction Management Plan (this document)
CORP Hansen Yuncken Corporate
EPA NSW Environment Protection Authority
ESD Ecologically Sustainable Development
HI Health Infrastructure
HR Human Resources
HSE Health, Safety & Environment
HY Hansen Yuncken Pty Ltd
LCC Life Cycle Costing
MLHN Murrumbidgee Local Health Network
OHS Occupational Health and Safety

PCG Project Control Group
PMR Project Management Representative – Design Manager
PROC Procurement
PROJ Project Management
QC Quality Control
RFI Request for Information
S/C Subcontract(s) or Subcontractor(s) as the context requires
SSO HY Site Safety Officer
WOL Whole of Life

3 INTRODUCTION

3.1 Scope of Works & Phasing Arrangements

The Wagga Wagga Base Hospital is the major acute care provider and referral hospital in the Murrumbidgee Local Health Network. The redevelopment of the Hospital, once complete, will align the Hospital's facility requirements to the projected Clinical Services Plan activity projections to 2021/22.

The Principal, Health Infrastructure (HI), is responsible for the planning, design and delivery of the redevelopment works which are proposed to be undertaken in a number of Phases to facilitate the current clinical services and match the available funding.

Hansen Yuncken's GMP Offer, to be submitted by the 1 December 2011, is to include the construction of Phase 1 (former stage 1a) as described below:

- Phase 1 (former stage 1a): New facilities to accommodate acute and sub-acute mental health which will be a three storey building with acute mental health on the ground floor and sub-acute mental health on the first floor and plant area located on the third floor.
- Early Works: As a precursor to the above mentioned a series of enabling works are planned to facilitate the onset of the redevelopment. These works incorporate the construction of a new car park to the North of the existing buildings, several services relocations/diversions along with the construction of a replacement road for Lewis Drive which will be partially built over as part of the Phase 1 works. Several packages of demolition will be incorporated into the Early Works Phase to effectively clear the Phase 1 site. It is noted that the Early Works will not form part of the GMP. Rather they will be let as a series of pre GMP packages. Furthermore it is noted that only the replacement road for Lewis drive will form part of the Part 3A project application. The services diversions will be approved via Authority approvals and the packages of demolition will be approved under the Infrastructure SEPP.

3.2 Primary Responsibilities

The primary responsibilities of HY during the phase 1 works are:

3.2.1 Pre-Construction Phase

Plan and design the works in accordance with the Project Deed by:

1. Obtaining approval of final Design Development documentation by NSW Health.
2. Achieving acceptance of final Design Development documentation by Key Stakeholders.
3. Ensuring high quality construction documentation.
4. Aligning facility management requirements with the designs.
5. Planning the project in consultation with Health Infrastructure.
6. Advising Health Infrastructure on matters relating to the compliance with the Project Deed.
7. Ensure the project is designed in accordance with the requirements of the Project Deed, the Project Brief, NSW Health standards/policies, the Building Code of Australia and Authorities.
8. Ensure the design is completed in accordance with the project milestones.
9. Initiate and manage stakeholder consultation in accordance with the Project Deed.
10. Provide reporting standards aligned with Health Infrastructure requirements of the Project Deed.
11. Manage design in accordance with the Design Development Plan.
12. Coordination of early works in accordance with the Early Works Programme

3.2.2 Construction Phase

Construct and complete the works in accordance with the Project Deed by:

1. Establish and maintain clear paths of communication with Health Infrastructure and Hospital stakeholders.
2. Provide reports that align with Health Infrastructure requirements of the Project Deed.
3. Embrace an integrated approach to the construction.
4. Manage stakeholder consultation in accordance with the Project Deed.
5. Establish and administer construction management plans.
6. Correctly set out the works.
7. Construct the works in accordance with the construction management plans and the approved designs.
8. Establish, maintain and administer health and safety policies and procedures for the site.
9. Establish, maintain and administer environmental policies and procedures for the site.
10. Establish, maintain and administer industrial relations policies and procedures for the site.
11. Establish, maintain and administer a quality assurance system for the works.
12. Facilitate compliance with other obligations under the Project Deed.
13. Implement a system of cost control.

3.2.3 Completion Phase

Commission the works in accordance with the Project Deed by:

1. Manage and coordinate the occupation, operation and commissioning of the project.
2. Rectify the defects that become apparent during the Warranty Period.

3.3 CMP Approach

3.3.1 Processes

Our approach to the processes in the CMP is:

- To be project specific wherever possible.
- To differentiate between the Preconstruction, Construction and Completion Phases.
- To illustrate continuity of core processes through the project phases.

3.3.2 Project Sub Plans

The following sub plans will be developed during the planning phase:

Design Development Plan (Appendix 1)

The plan describes what HY intends to do to manage the preconstruction activities of design and Design Development Approval including stakeholder engagement. The plan also defines the outcome expectations of the processes. The design development plan is appended to the CMP. It is noted that the Design Development Plan caters for Phases 1 & 2 of the project.

Traffic Management Plan (to be developed on completion of the Traffic Engineers Report)

The plan will describes the structure of what HY intends to do to manage the traffic and public movement around construction activities. This plan will be developed

Site Management Plan (to be developed closer to the delivery phase)

The SMP will describe HY's management of site activities and construction interfaces with Hospital operations. It outlines the key intentions and constraints for construction delivery activities at the Hospital to minimise disruption to the public and the normal day-to-day Hospital activities. It is noted however that there is no physical interface between existing buildings and the Phase 1 works.

Occupational Health & Safety Plan & Environmental Management Plan (Appendix 2 & 3)

These plans describe how HY intends to develop and maintain safe work practices and a safe working environment for Hospital staff, Subcontractors and HY staff during construction

The plan describes what HY intends to do to manage the identified environmental values of Wagga Wagga Base Hospital. HY clearly recognises and understands the environmental valves of Wagga Wagga Base Hospital and intends to conserve and enhance them while enabling the ongoing use and management of the site for NSW Health purposes.

Demolition Management Plan (to be developed closer to the delivery phase)

The plan identifies the approach and policy for demolition of structures

Building Services Commissioning Plan (to be developed prior to commencement of building commissioning)

The Plan addresses technical compliance issues of building services for testing, commissioning, training and handover activities to ensure that the building systems are completed by the program milestone dates.

Building Occupation and Approvals Plan (to be developed during the delivery phase)

Documents the methodology and sequencing of works with regard to achieving approvals to occupy and operate the facilities.

Commissioning, Induction and Decanting Plan (to be developed closer to the delivery phase)

Documents the methodology and sequencing of works with regard to Hospital operations commencing on the site.

Community Consultation & Public Relations Plan (Appendix 4)

The Plan outlines strategies for consultation with the local and wider community and identifies our approach to maintaining strong public relations

Aboriginal and Equal Opportunity Plan (to be developed closer to the delivery phase)

Documents the approach to engaging indigenous communities and individuals in the Planning and Delivery Phase

Aconex Project Procedures Plan

Documents the procedures for use of the Aconex database for the WWBH project.

4 MANAGEMENT - GENERAL

4.1 Policies

The HY Policy statements have been included as an appendix to this CMP. Copies of the Policy statements shall be displayed in the site office, amenities and associated facilities.

4.2 Project Objectives

Following a review of Project Deed requirements the following objectives have been established.

4.2.1 NSW Health Objectives

NSW Health objectives are referred to in the Planning and Delivery agreement, section 2, Project Objectives and Planning outcomes

4.2.2 Hansen Yuncken Pre-Construction Phase Objectives

Quality	To achieve approval of final Design Development documentation by NSW Health. To achieve acceptance of final Design Development documentation by Key Stakeholders. To prepare high quality construction documentation. To align facility management requirements with the designs.
Cost	To ensure the cost of designs are within Hansen Yuncken's cost plan and forecast.
Time	To achieve approval and acceptance of Design Development documentation in accordance with the early target milestones dates of the Project Deed. To achieve approval and acceptance of Design Development documentation that allows procurement of the works through subcontractors in accordance with the timing of construction activities planned in the Works Program.

4.2.3 Construction Phase

Quality	All defects are rectified within one month of completion of each stage.
Cost	To ensure the cost of construction are within Hansen Yuncken's cost plan and forecast.
Time	To achieve Completion and Commencement (of soft services) in accordance with the early target date milestones of the Project Deed.
Environmental	No environmental incidents
Industrial Relations	No lost time due to industrial issues
Health and Safety	That the project achieves all Corporate targets

4.2.4 Completion Phase

Cost	Completion of all of the scope of works within the budget
Time	No lost time due to decanting discrepancies
Quality	Achieve an Integrated Construction and Hospital commissioning
Risks and Opportunities	The mitigation of risk through detailed commissioning with the execution of the Commissioning Plan
Planning	Concise completion and decanting in accordance with the pre-agreed plans.

4.3 Project Organisation and Responsibilities

References: PR-CORP-HR-02 Job Descriptions

4.3.1 Project Organisation Chart

The organisation chart and job descriptions defining reporting lines, responsibilities and authorities for the project team is located in the Planning Services Plan.

The HY Project Construction Manager shall keep the organization chart up to date at all times.

4.3.2 Project Team Responsibilities

Job Descriptions for the Project team are to be agreed between the Manager/Supervisor and the employee, signed by both parties and a copy issued to the employee.

A summary of responsibilities and authorities for key team members is provided as follows;

Senior Project Manager

Key Role

- Corporate overview and support throughout the project.

Tasks

- Executive level negotiations and project reviews.
- Ensure the implementation of and adherence to the stated project objectives.
- Oversee the activities of the Design and Construction team.
- Responsibility and authority for the project planning, design management, construction management and commissioning of the project and delegation of tasks as appropriate.
- Attend PCG Meetings.

Cost Manager

Key Role

- Cost Management and Planning during Design and Procurement phases.

Tasks

- Responsible for overseeing and coordinating all cost planning.
- Maintaining and constantly updating the cost plan throughout the project.
- Provide regular reports and cost data to the Construction Manager.
- Responsible for all estimating and tendering activities.
- Prepare subcontractor tender documentation.
- Assist in the selection of subcontractors.
- Manage subcontractor tendering and engagement.

Design Manager

Key Role

- Manage the design phase.

Tasks

- Assist Construction Manager in selection, recommendation and engagement of consultants
- Manage consultants work and design deliverables
- Appraise design while in process and make recommendations to the Construction Manager.
- Chair Design meetings
- Chair and manage Design Review Meetings as required by the Construction Manager
- Prepare Design Program and monitor/report progress
- Facilitate liaison with User Groups
- Attend Value Management reviews
- Coordination of major design reviews and checking of documentation.
- Liaise with Cost Manager to manage design within the cost plan.

Construction Manager

Key Role

- Management of the construction phase.

Tasks

- Lead and direct the project team with single point accountability for the management of the project during the Construction Phase.
- Attend PCG Meetings.
- Prepare monthly project reports.
- Establish, monitor and control the Works Program.
- Develop and implement project packaging and tendering strategies.
- Selection, recommendations and engagement of subcontractors.
- Responsible for managing all construction activity including administration, industrial relations, safety, programming, coordination, quality and environmental.
- Lead and direct the construction management team.
- Provide constructability input into the design and documentation.
- Ensure implementation of Quality, Environmental, Industrial Relations and Safety Systems and procedures.
- Prepare Construction Managers Reports, incorporated in monthly project report.
- Manage liaison with User Groups for Decanting.
- Manage Completion Phase.
- Manage Defect Liability Period, Post Occupancy Reviews and Building tuning.

Environmental/Quality Manager

Key Role

- Implementation and overview of the Integrated Management Systems Management.

Tasks

- Responsible for development, implementation and maintenance of the Design & Construction Management Plan and related management systems.
- Assist the Project Manager and Construction Manager on quality, safety and environmental issues.
- Undertake system audits.

Contract Administrator

Key Role

- Contract Administration during design and construction.

Tasks

- Assist the Cost Manager with subcontract package tender documentation issue.
- Prepare of invitations to tender.
- Assist in the preparation of contracts and letters of acceptance.
- Receive and review the subcontractors insurance Certificates of Currency.
- Prepare and arrange for the works to be measured and valued, provide appropriate checking verification.
- Submit regular payment certificates.
- Assist in review and valuation, requests for extensions of time, variations and claims for costs, etc.
- Assist in the preparation of financial information for the project monthly reports.
- Assist and attend meetings with the Construction Manager.
- Maintain management systems records and in particular those for Quality, Health and Safety and Environmental.

Site Managers(s)

Key Role

- Detailed management and coordination of construction phase.

Tasks

- Ensure adequate inspections of the entire construction works takes place in accordance with the contract.
- Check the setout of the works.
- Supervise the contracts to ensure all the work is being carried out in accordance with the contract conditions and that quality standards are being met.
- Attend and contribute to meetings as necessary.
- Inspect works prior to practical completion and prepare a list of incomplete work.
- Liaise with the Construction Manager(s) in the control and coordination of subcontractors and suppliers.
- Coordinate and direct all subcontractors.
- Ensure the ongoing verification of quality all works.
- Notification of non-compliance of specification to subcontractors.
- Ensure the requirements of the Environmental Plan are being carried out.
- Ensure information relating to Health and Safety is forwarded to all those under their direct control.
- Ensure subcontractor compliance with their Work Method Statements.
- Prepare, monitor and update regularly detailed programs (not exceeding 4 weeks) of each of the various buildings.
- Ongoing monitoring of project to identify problems and communicate to all levels of project management.

Site Safety Officer(s)

Key Role

- Supervise implementation of project construction occupational health and safety requirements.

Tasks

- Conduct site/project inductions.
- Participate in safety planning.
- Inspection of site work and reporting to Site Managers.
- Incident reporting.
- Participate in H& S Committee Meetings
- Primary First Aid provider.
- With Administrator, maintain H&S records.
- General duties of minor scaffolding, dogman, materials handling, rubbish management, general clean-up and maintenance of amenities.

4.4 Design Consultant Roles and Responsibilities

The general roles of Consultants and their responsibilities are as follows:

	Architect	Civil & Structural Engineer	Mechanical Engineer	Electrical Engineers	Hydraulics Engineer	Fire Engineer	Civil Engineer	Building Certifier	Certifiers	Specialist Subcontractors
Schematic Design										
Master Planning	●									
Layouts, Elevations and Sections	●									
Concept		●	●	●	●	●	●			
Design Development										
Architecture										
Design	●									
Documentation	●									
Civil & Structure										
Design		●								
Documentation		●								
Mechanical Services										
Design			●							●
Documentation										●
Electrical Services										
Design				●						
Documentation				●						
Hydraulic Services										
Design					●					
Documentation										●
Part 3 A Planning Consent	●			●	●	●				

	Architect	Civil & Structural Engineer	Mechanical Engineer	Electrical Engineers	Hydraulics Engineer	Fire Engineer	Civil Engineer	Building Certifier	Certifiers	Specialist Subcontractors
Building Code Compliance	●							●		
Disability Design Access (DDA)	●	●								
Medical Gas Signoff (MLHN Anesthetist)								●		
Structural Certification		●								
Construction										
Quality Assurance Inspections	●	●	●	●	●	●	●			
Completion										
Review of Commissioning Reports			●	●						
Structural Certification		●								
Fire Safety Certifications										●
Electrical Safety Compliance Certificates.										●
Radiation Safety Report									●	
Environmental Audit Statement									●	
Infection Control Inspections & Report									●	

4.5 Project Communications

4.5.1 External Communications

The line of communication to Health Infrastructure for liaison and reporting is through the Senior Project Manager. The main point of communication with HY is the Construction Manager who has the authority to release communications.

The Construction Manager shall determine:

- The distribution list for incoming communications.
- HY's team members who shall attend meetings and workshops carried out with NSW Health, MLHN and Users.

Project Control Group Meetings

Convened once every three months by Hansen Yuncken and attended by the Principal and Strategic Level Users.

Project Team Meetings

Convened monthly by HY.

Design Review Meetings

Convened at milestone dates (refer to program) by HY and attended by Principal, Users and Consultants.

Design Meetings

Convened by HY and attended by Consultants.

Design Coordination Meetings

Convened by Principal Consultant as required and attended by Consultants and HY (as required).

Strategic User Group Meetings

Convened by HY as required and attended by Strategic Level Users and Project Consultants

Operational User Group Liaison Meetings

Convened by HY as required and attended by Operational Level Users, Health Infrastructure (as required), HY Team and Consultants.

Site Meetings

Convened Weekly by HY and attended by Users (as required), Health Infrastructure, Consultants and HY team as required.

4.5.2 Internal Communications

Project Coordination Meetings

Convened fortnightly by Construction Manager with HY team.

PFR Meetings

Convened monthly by HY National Administration Manager with attendance by Project Manager, Construction Manager, Cost Manager and Project Administrator.

Site Coordination Meetings

Convened weekly by Construction Manager and attended by HY team and key subcontractors as required.

Safety Meetings

Convened fortnightly by Site Manager(s)/SSO and attended by HY team and subcontractors as required.

4.5.3 Project Communication Structure

The following communication structure will be provided on this project:

Element	Communication Requirements	Format	Distribution		By Whom
			To	Method	
Project Control	PCG Meetings	Minutes	P, PC , PC, HY	Aconex	HY
	Project Team Meetings	Minutes	HY, C	Aconex	HY
	Major Design Review Meetings	Minutes	P, PC, UG, C, HY	Aconex	HY
	Design Meetings	Minutes	PC, C, HY	Aconex	HY
	Risk Analysis and Value Management Workshop	Report	HY	Aconex	HY
	Scope Changes	Correspondence	P, PC, C, HY	Aconex	HY
	Program/Planning Changes	Correspondence/Updated Program	P, PC, UG, C, HY, SC	Aconex	HY
	Project Reports	Monthly Report	P, PC	Aconex	HY
Stakeholders	Key Stakeholder Meetings	Correspondence (as required)	P, C, HY	Aconex	HY
	User Group Meetings	Correspondence (as required)	P, UG, C,HY	Aconex	HY
	Design Reports	Report, Drawings	PC, C, HY	Aconex	HY
Design	Drawings	Drawings	HY	Aconex	PC
	Specifications		HY	Aconex	PC
	Design Changes		HY	Aconex	PC
	• Initiation	Correspondence / Minutes	HY	Aconex	PC
	• Approval	Correspondence / Minutes	HY	Aconex	PC
	• Instruction	Correspondence / Minutes	HY	Aconex	PC
	Design Queries (RFIs)	Correspondence	HY	Aconex	PC
Cost Management	Financial Reports	Monthly Report	HY	Aconex	HY
	Budget Approvals	Monthly Report	HY	Aconex	HY
	Subcontractor Recommendations	Correspondence	HY	Aconex	HY
	Subcontractor Approval	Correspondence	HY	Aconex	HY
	• Claim Submission	Correspondence	HY	Aconex	HY
	• Claim Approval	Correspondence	HY	Aconex	C
Construction	Subcontracts	Contract Document	HY, SC	Aconex	HY
	Instructions	Correspondence	HY, SC	Aconex	HY
	Site Coordination Meetings	Minutes	HY, SC	Aconex	HY
	Health and Safety Meetings	Minutes	HY, SC	Aconex	HY
	Non-conformance Reports	Correspondence	HY, SC	Aconex	HY
	Audits	Report	HY	Aconex	HY

All = P, UG, C, HY, PC, SC,	
P = Principal, NSW Health and MLHN	**HY = Hansen Yuncken**
UG = User Groups	**PC = Project Consultant**
C = Consultants	**SC = Subcontractors**

4.5.4 Publicity

HY shall not furnish any information concerning the project to the media without prior written approval of ****. HY shall refer any enquiries from the Media concerning the project to the Health Infrastructure Media Liaison.

4.5.5 Community Relations Programs

HY shall participate in MLHN Community Relations programs.

4.5.6 Direction from User Groups

HY is NOT to take direction from the User Groups, as they have NO authority to act on the Principals behalf. HY is also required to ensure Consultants and Subcontractors do likewise.

4.6 Pre-Commencement Meeting

A Pre-commencement meeting shall be held at the start of the project in accordance with company procedure. Records of the meeting shall be maintained in the project files.

Minutes of the meeting shall be recorded and the Construction Manager shall follow up and close out any actions arising from the meeting.

5 PROCEDURAL REVIEWS

5.1 Auditing

The following audits shall be conducted in accordance with the schedule. (Site OHS audits not included on the schedule for clarity).

Project Start-up	Within 4 weeks of contract award.
Site System	Within 4 weeks of commencement of site Thereafter each 6 months
Design	Quarterly from Financial Close until design documentation is complete
Site Construction	Quarterly from commencement on site.
Project Closeout	Within 4 weeks of Completion.
Site OHS	Monthly

The scope of each audit type is shown in the following table;

Function	Project Start-up	Site Systems	Design Management	Site Construction	Project Closeout
Project Management	✓	✓			✓
Quality Assurance	✓	✓	✓		✓
Design Management	✓		✓		
Procurement	✓	✓			
Construction	✓	✓		✓	
Health, Safety & Environment	✓	✓		✓	
Human Resources	✓	✓			
Plant & Equipment	✓	✓		✓	

5.2 Corrective & Preventive Action

Corrective or Preventive Action is to be developed and implemented when any of the following conditions are observed or encountered:

- Systematic or repeated Quality non-conformances in accordance with procedure PR-CORP-QC-03 Non-conformance
- HI or third party complaints received through correspondence.
- HI complaints received in accordance with procedure PR-CORP-BD-02 Customer Surveys
- Improvement actions arising from Extrinsic Audits by NSW Health, HI or Third Party Certification organisations.
- Improvement actions arising from Internal Audits in accordance with procedure PR-CORP-GEN-01 Auditing

5.3 Management Review

Management Review of the System will be undertaken to ensure continuing suitability and effectiveness of system at project level. The Operations Manager, Construction Manager, Design Manager, National Management Systems Manager, PMR, and Site Manager shall attend these meetings. The Operations Manager may invite other appropriate personnel if considered appropriate. The Operations Manager will chair Management Review meetings and record the minutes of the meetings. The Management Review meetings will be held twice a year. More frequent meetings may be held at the request of any of the regular participants.

The PMR will collate, summarise and make available at the meetings the following records:

- All corrective action reports
- Audit reports
- NSW Health, MLHN, HI or Third Party complaints
- Non-conformance reports (summary only)
- Any other relevant information

Each of the system elements (and related procedures) will be considered in turn with reference to the records listed above. An assessment will be made as to the effectiveness and continuing suitability of the approach being taken. The CMP will be updated if it:

- Does not address adequately the requirements of the Project Deed.
- No longer represents HY's current practice.
- Is causing non-conformance.

6 PROJECT PLANNING & PROGRAMMING

6.1 Programs

Programs for the project shall be developed in accordance with company procedure. The programs shall be approved and distributed in accordance with the project Document Control Procedures

- All planning and programming shall include for the following:
- Clear definition of optimum staging and constraints
- Production of Approved Program, with staging requirements from which design and subcontractor package procurement and construction programs can be developed
- Identification of critical path, testing of alternative sequencing to optimise duration
- Involvement of HI, Consultants and major subcontractors in this process.
- Identification of long lead-time items shut down requirements, decanting procedures and interface with ongoing Campus operations.
- Production of short-term programs for detailed planning and monitoring of the works.

6.2 Programming Strategy

In respect to planning and programming Hansen Yuncken generally adopts the approaches recommended by the Chartered Institute of Building (UK) and that taught in the Bachelor Degree courses for Construction Management in major Australian and Asian Universities.

- Programming will be done in accordance with the following principles:
- The project works must be planned in advance and the plan must be communicated to stakeholders.
- Recognition of the high value of programs for planning, communication and anticipation of risks.
- Recognition of the value of programs that allow progress to be reviewed at regular intervals.
- Recognition that at the early stages of a project programs may be of a broad nature reflecting the uncertainties in a project.
- Recognition that rescheduling would arise out of a significant advance of delay and that all programs and derived schedules would have to be revised and coordinated with designers, subcontractors and suppliers.
- Recognition that rescheduling or program revisions are of contractual significance, have far reaching implications and attendant risks and the decision to reschedule must be taken by senior management.

6.3 Requirements

The following is required of programs:

- That they represent as fully as information allows the scope of works of the project.
- Each activity must be independently capable of having a duration, and when necessary, a resource requirement ascribed to it.
- They must be based on a logical sequence of activities.
- They must be capable of being used to provide adequate monitoring of progress.
- They must be significant having regard to the purpose of the program.

- Programs are to be represented graphically in bar chart or linked bar chart forms when in hard copy and fully linked bar chart or network forms in digital formats. These are consistent with contemporary building industry practice.
- Short term programs may be used as an adjunct to the project program, to engage in communication at a more detailed level or as a tool in the process of correcting deviations.

Program durations are to be determined by either of the following:

- Calculation based on known quantities, units and production rates for allocated resources to be used.
- Quotation of a duration stipulated or obtained from a specialist.
- Assessment based on limited data or on experience from previous projects.

The logical sequence of activities is to be determined by either of the following:

- Good trade practice
- Technical relationships
- Provision of temporary works
- Movement with the general direction of flow of work
- Safe work practices and access
- Operating space

6.4 Tracking

The following are acceptable and recognised forms of recording performance against program including:

- Status report of the program
- Diary records
- Records of delays
- Completing a spreadsheet schedule
- Annotating drawings
- Minutes of progress meetings
- Photographs

Whether or not a project is “on program” is determined by the performance of its critical activities and that activities originally designated as critical may, as the project progresses, change and another critical path emerge.

6.5 Analysis of Delays

Delays will be assessed using a Snapshot Analysis Technique that is based on a critical path method of program analysis, i.e. the occurrence of a delaying event itself dictates what is to be analysed and at what point in the progress of the project it is analysed. The effect on the completion date is analysed at the time of the delay event and only through its impact on the critical path.

The consequential program may illustrate that the critical path remains as planned or has changed. It may also cause change to the float planned for non-critical activities. Accordingly the revisions are of contractual significance, may have far reaching implications and attendant risks and the decision to reschedule must be taken by senior management.

6.6 Programming Levels

The levels to be used are:

Level 1: Approved Program

The Approved Program will be produced by HY and approved by the HEALTH INFRASTRUCTURE.

The Approved Program will be used as a reporting tool in monthly reports and to show the Project Control Group the progress of activities at the highest level, against milestones and key dates set by the project team.

Level 2: Design Documentation, Procurement and Construction Programs

These Programs are to be of a greater detail level than the Approved Program and will be capable of showing all major works within the scope concerned. It will form the key for detailed management.

Programming will be implemented by the following means:

- Pre-planning in the design stage.
- Establishment of requirements through a correct Approved Program.
- Detailed planning of staging requirements and sequencing of design, procurement and construction activities (separate Construction Programs for each project element).
- Detailed attention to resource planning and allocation.
- Establishment of effective communication channels between Campus personnel and team members at all levels.

All programming will use PRIMAVERA SURETRACK® or Microsoft Project 2000 © (min) software.

Level 3: Four Weekly Program (Construction Program)

Produced by the site team showing a four-weekly program updated fortnightly and showing the latest information with regard to the actual construction works.

The program will include work activities to the extent of particular works identified by trade will be shown. All decanting and relocation activities will be included in this program.

6.7 Review and Reports

HY shall formally review and report on progress monthly and action or recommend (as applicable) corrective actions, if required, with the project team.

The Approved Program may only be changed with the authority of the Health Infrastructure.

6.8 Design Management

The Design Program will target signoff and completion of documentation within an adequate period to allow productive and timely progress of the construction work.

The Consultants Design Program will incorporate the Procurement Program documentation packages milestone dates. This program will be used to monitor the Consultants progress. Additionally, Consultants will be required to produce a drawing/specification production schedule to monitor progress, which will be reported on a weekly basis. The stage of completion of physical drawing/specification is the real measure of progress.

6.9 Time Extension and Claims Management

Project delays and their potential for time extensions will be managed at a number of levels during the project through:

- Rescheduling of work to expedite progress and mitigate delays;
- Contingency management by pre-planning and pre-empting potential delays; and
- Accelerating progress where possible to create float in critical path activities.

The opportunity for claims by subcontractors will be minimised through regular dialogue, distribution of regular program updates, maximising the continuity of work for critical trades, undertaking detailed site coordination and providing flexibility in the program.

Site Managers shall record within their project daily report, and advise the Construction Manager, of circumstances that may have an adverse effect on progress with the potential to lead to cost increase and/or time performance delays on the contract.

In the case of inclement weather, on site records are to be maintained in accordance with company procedure.

Immediately upon it becoming evident that the project is likely to be delayed for any of the reasons or the Construction Manager within the time frames must forward causes for which a time extension is permissible then a Notice of Likely Delay letter to the HEALTH INFRASTRUCTURE.

6.10 Contingency Management

This project will be assessed for the overall time required to complete and an acceptable level of contingency will be allowed in the program for risk areas in the design and construction stages. The objective is to expedite the project within the program and maintain the contingency allocation.

During the project, contingency will be managed by detailed pre-planning of activities, monitoring of activity float, and pre-empting of potential delays.

As activities are progressively completed, the detailed program will be upgraded to reflect the remaining contingency. This is assessed for adequacy against the remaining work to complete.

6.11 Monthly Reports

HY will provide a monthly report to Health Infrastructure addressing the issues set out in the Project Deed. The monthly report is to be structured in accordance with the Project Deed Conditions of Particular Application.

6.12 Status Photographs

The Site Manager(s) shall maintain a photographic record to adequately illustrate the progress of the project.

Printed photos shall be catalogued, labeled and filed in chronological sequence in a photo album(s) forming part of the project files.

Digital photos shall be dated, given a filename and filed in the Project Folder on the relevant State common drive in accordance with company policy.

7 DOCUMENT MANAGEMENT

7.1 Project Document Control

HY shall establish a document control system in accordance with company procedure to ensure that all critical project documentation is:

- authorised and current; and
- readily available at the point of use.

All superseded documents shall be clearly marked and removed from use. Changes to drawings shall be identified by circling changes into "clouded bags" accompanied with a new revision number and identification of the date of the change. A short description of the changes is required with the Document Transmittal. The following outlines the requirements for document control.

Control will be through Aconex © and the Aconex Information Management Process.

Records shall be retained on the project until Practical Completion when they will be returned to Head Office for the Defects Liability period after which they shall be archived in accordance with company archiving procedures.

Filing Register	Aconex©
Management Plans	Controlled documents - Aconex©
Project RDP Documents	Controlled documents - Aconex©
Project Contract Documents	Controlled documents - Aconex©
Schematic Design Review Documentation	Controlled documents - Aconex©
Design Development Review Documentation	Controlled documents - Aconex©
Drawings	Controlled documents - Aconex©
Specifications	Controlled documents - Aconex©
Design Queries and Clarifications (RFIs)	Aconex©

Change Instructions	Aconex©
Subcontractors	Aconex©
Minutes	Aconex©
Correspondence	Aconex©
Nonconformance Reports	Aconex©
Reports	Aconex©
Audits	Aconex©

7.2 Email & Internet Usage

References: PR-CORP-IT-01 Email & Internet Usage

Email and Internet (if available) shall be accessed and used in accordance with the above procedure.

7.3 Computer Records and Files

References: PR-CORP-IT-02 Computer Records and Files

A standard set of folders shall be established for the project on the State Common Drive. These folders are backed up automatically by the IT Department.

All important electronic documents and data shall be filed in the appropriate folder. Following Project Final Completion these files will be archived in accordance with PR-CORP-IT-03 Computer Based Document Archiving and removed from the common drive.

7.4 Computer Based Document Archiving

References: PR-CORP-IT-03 Computer Based Document Archiving

7.5 Email Filing

References: PR-CORP-IT-04 Email Filing

All important emails pertaining to the project shall be filed in the Project Email folder in accordance with the above procedure. The email folder is included in the standard set established for the project in accordance with PR-CORP-IT-02 Computer Records and Files.

7.6 Site Instructions

Formal instructions to S/C may be issued in accordance with the ACONEX® project protocols.

7.7 Requests for Information

Where additional technical information or clarification of details or specifications is required from the consultants an RFI form shall be used in accordance with the ACONEX® project protocols.

The Project Administrator shall establish and maintain an RFI Register in accordance with the ACONEX® project protocols for the project to record all RFI's issued and track their status and progress through to resolution.

8 COST MANAGEMENT

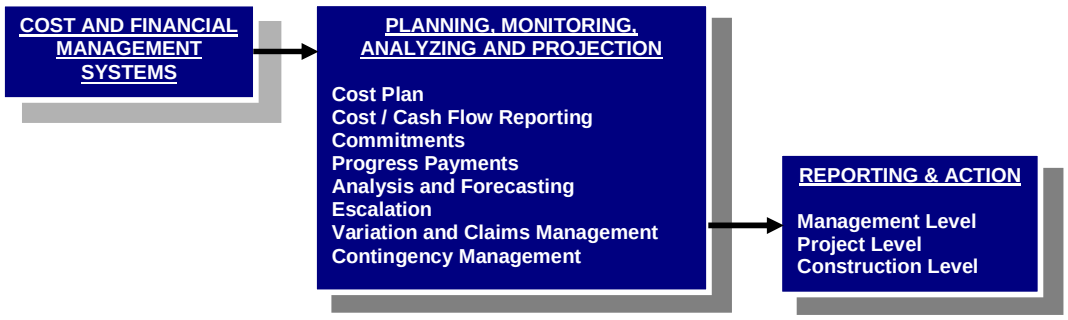
8.1 General

HY is responsible for all cost planning, control and reporting on the project to ensure that the Target Out Turn Cost is not exceeded and that the project is delivered for the best possible price.

The following are specific cost issues for this project:

- Adequacy of budget allocations for elements of the project such as site services, escalation, contingencies etc.
- Managing User Group requirements during the Schematic Design and Documentation phase within the project Target GMP Price.
- Managing the consultants to deliver a design within the Target GMP Price.
- Tendering the project during a period of buoyant market conditions in NSW.
- Managing changes and variations during the construction phases.

The general methodology for Cost Management is summarised in the chart below:



8.2 Cost Management Responsibility

HY is responsible for the cost planning and control throughout the project duration comprising the following:

- Preparation of a Cost Plan which will include:
  - Cost analysis in respect of each project element including design consultancy, escalation contingencies.
  - Cash flow requirements
  - Target Cost for the project.
- Review of the Cost Plan as design proceeds to ensure design is in accordance with the Cost Plan and to address forecast cost over-runs.
- Implement a system of cost control during construction and amend the Cost Plan to take into account tender awards and subcontract contract changes.

8.3 Cost Plan

A Cost Plan has been generated for each project element during tender.

Costs will be estimated from detailed measures of documentation as it becomes available. Costs will be monitored and re-estimated periodically for the purpose of design development and reporting.

At each re-estimate an appraisal and reassessment of escalation and contingencies will be made with particular consideration to the current (at that time) state of completion of documentation, coverage of the scope of the works, subcontract market pressures and current knowledge of existing infrastructure.

Estimates will be extended using known rates from the NSW market. Escalation shall be forecast using advice from industry specialists.

Construction pre-tender estimates will be derived from the Elemental Cost Plan at sign off of Tender Documentation. The detailed measures, which lie behind the Elemental Cost Plan, will be converted into subcontract pre-tender estimates.

All cost planning will be undertaken on BUILDSOFT© software.

8.3.1 Cost Plan Reviews

A number of Major Cost Plan Reviews will occur at key stages of the design phase in order to manage the development of the design within the Cost Plan. These milestones will be included in the Design Program.

8.3.2 Scope Management

An area schedule will be developed from the User Requirement Briefs for each building. As the User Group requirements and design/documentation are defined further, areas will be measured and compared with the User Requirement Briefs for variance. Any changes will be assessed.

8.3.3 Services Estimates

Tender services estimates are based on quotations from specialist building services subcontractors.

8.3.4 FF&E and Decanting

Costs components will be properly scoped in conjunction with the User Groups to ensure that all items are included. Consideration of reusing suitable existing FFE items will be reflected in the Cost Plan.

8.3.5 Escalation

Escalation estimates shall be based on industry forecasts and shall be applied to the forecast cash flow derived from the Approved Program.

The Cost Plan will be established in the first instance with escalation as a line item.

Major Cost Plan Reviews shall be on the basis that escalation is distributed through the elements and therefore providing end cost values for comparison purposes.

The Construction pre-tender estimate shall be established on an end cost basis.

8.3.6 Tendering Cost Control

If the subcontract quotations are over pre-tender estimates, the packages will be reviewed in terms of design and scope of works and if necessary with the lowest tenderer. If the estimate still cannot be achieved, then estimate budget will be adjusted through contingency.

8.3.7 Variation and Claim Management

Potential variations and claims submitted by consultants, subcontractors and suppliers will be reviewed and assessed against their agreed scope of work and contract conditions.

Where subcontractor claims result from HEALTH INFRASTRUCTURE initiated variations, such claims are similarly reviewed and assessed by HY prior to submission for approval.

To help avoid or minimise the number and value of potential claims, HY will ensure subcontractors and suppliers tender on fully scoped and completed documentation. A meeting with each subcontractor will be undertaken prior to acceptance to confirm program, quality requirements, staging and coordination requirements and construction methodology.

A variation status will be provided as part of the monthly report to the HEALTH INFRASTRUCTURE and with the progress claim. The variation status report will reflect costs for all submitted and approved variations and potential variations with an indicative cost will be highlighted.

8.4 Contingency Management

Separate design and constructions contingencies will be allocated and accounted in each phase according to pre-tender assessments of site condition, design, trade, FFE and other risks.

The objectives of contingency management are to minimise wherever possible commitment of the residual contingency funds in order that the project works may be delivered within the HY's budget.

The HEALTH INFRASTRUCTURE must approve all budget transfers or allocation of contingencies.

8.4.1 Purpose of Design Contingency

The purpose of design contingency is for paying for:

- Design details that have been under-estimated when establishing the budget at tender.
- Resolving design problems.
- Cost of rectification of errors, omissions and inconsistencies in construction documentation.
- Paying for additional consultancy costs not estimated.

8.4.2 Purpose of Construction Contingency

The purpose of construction contingency is for paying for:

- Cost of latent conditions.
- Work (including FF&E) for which the cost has been under-estimated in setting the trade budgets.
- Resolving construction problems.
- Paying for additional consultancy costs for rectification works.

8.5 Analysis, Reporting and Forecasting

Cost analysis, reporting and forecasting will occur at a number of management levels on this project. HY will utilise BUILDSOFT software for cost planning and CHEOPS software for cost control and reporting.

9 ADMINISTRATION

9.1 Cost/Cash Flow Reporting

Initially the cash flow will be prepared to reflect the project Cost Plan and program.

The progressive letting of consultant commissions and construction works will be monitored closely to verify that expenditure is being committed as forecast.

Project expenditure and cash flow projections will be reviewed and reported in the monthly report.

This report will include a reconciliation of any cash flow changes and will comment on their effects.

Progress claims by consultants, subcontractors and suppliers will be reviewed against physical progress achieved and submitted for payment against the terms of the contract.

A progress payment summary will be provided in the monthly report comprising a summary of the contract price, claims and a detailed makeup.

9.2 Commitments

Upon completion of the documentation phase, the Cost Plan will be converted into subcontractor package estimates and a Construction Budget. As tenders are received, the contract sum will be allocated along with allowance for provisional sums and contingencies and this amount will then be compared with the Construction Budget to show that subcontractors status.

9.3 Progress Payments

The progress claim and payments will be made in accordance with the Design and Construction Contract Conditions.

9.4 Purchasing

References: PR-CORP-PROC-01 Purchasing

9.5 Materials Receipt, Handling & Storage

References: PR-CORP-PROC-02 Materials Receipt, Handling & Storage

The Site Manager, with input from the Project Engineer, SSO and Site OHS Committee shall establish materials handling requirements and identify safe and efficient methods of handling materials which minimise the risk of injury, damage to property or materials and pollution to the environment.

Manual handling of materials shall be assessed and controlled in accordance with PR-CORP-CON-03 Manual Handling.

S/C are required to supply MSDS for chemicals/dangerous goods/materials intended to be used on site in accordance with PR-CORP-HSE-14 Material Safety Data Sheets.

Safe work methods shall be established in accordance with PR-CORP-CON-01 Work Method Statements if required including any necessary PPE in accordance with PR-CORP-HSE-04 Personal Protective Equipment, ventilation, storage, etc.

9.6 Subcontractor Hazard Review

References: PR-CORP-PROC-05 Subcontractor Hazard review

A Hazard review meeting shall be held with each S/C prior to commencing work on site. HSE hazards associated with the S/C scope of works shall be identified, assessed and control measures to eliminate or reduce risks to ALARP discussed and agreed.

Additional Hazard Review meetings may be convened during the project to review the HSE hazards and risks of upcoming activities or to review previous performance and incidents.

For each review the Hazard Identification & Control Meeting Minutes (FM-CORP-HSE-05) shall be completed and kept with the S/C file as part of the project records.

9.7 Subcontractor Process Control

The level of control required is determined by HY's assessment of the level of risk associated with a S/C non-performance, taking into account the potential impact on the overall project's performance with respect to economics, time, and QSE. The following schedule indicates the minimum requirements.

Definitions

Level 1 High risk activities which require formal planning, control and management.

Level 2 Workplaces, work methods and materials which do not represent a particular risk are still planned, supervised and managed but not in the same detail. Problems or faults that show up in these activities during final inspection and testing or in the course of the work are relatively easy, quick and inexpensive to correct and would not represent a serious safety or environmental hazard.

TRADE PACKAGE		Construction Process Control Schedule		COMMENT
		Level 1	Level 2	
1	Piling	N/a		
2	Demolition	✓		WMS
3	Excavation	✓		Erosion, dust, Traffic disruption. Traffic Management Plan reqd.
4	Paving		✓	
5	Stormwater	✓		Trench excavations, bending, fencing. WMS
6	Concrete		✓	
7	Formwork		✓	
8	Reinforcement		✓	
9	Structural Steel	✓		Access equipment. WMS

10	Partitions		✓	
11	Ceilings		✓	
12	Roofing	✓		Access equipment. WMS
13	Windows		✓	
14	Carpentry		✓	
15	Joinery		✓	
16	Glazier	✓		Roof skylights, access equipment. WMS
17	Painter		✓	
18	Tiler		✓	
19	Carpet/Vinyl		✓	
20	Curtains/Blinds	N/a		
21	Doors	✓		Roller doors, lifting equipment. WMS
22	Hardware		✓	
23	Plastering		✓	
24	Mechanical	✓		Access & lifting equipment. WMS
25	Electrical	✓		Access & lifting equipment. WMS
26	Fire	✓		Access & lifting equipment. WMS
27	Hydraulics	✓		
28	Masonry		✓	
29	Metalwork		✓	
30	Precast Erection	✓		Access & lifting equipment. WMS

9.8 Subcontractor Variations and Extensions of Time

References: PR-CORP-PROC-07 Subcontractor Variations & Extensions of Time

9.9 Subcontractor Progress Claims

References: PR-CORP-PROC-08 Subcontractor Progress Claims

9.10 Subcontractor Practical Completion

References: PR-CORP-PROC-09 Subcontractor Practical Completion

9.11 Subcontractor Final Completion

References: PR-CORP-PROC-11 Subcontractor Final Completion

10 PRE-CONSTRUCTION – DESIGN DEVELOPMENT

References: Design Development Plan (appended to this CMP)

11 PRE-CONSTRUCTION – PROCUREMENT

11.1 General

Hansen Yuncken will subcontract all Consultancy services and construction works.

The process will comply with the national Code of Practice for Tendering and NSW Government procurement policies for FF&E.

The objectives for procurement are:

- To achieve value for money
- To achieve high level of certainty of final costs within the first 6 months of the project
- To minimise errors and inconsistencies between scopes of works and services that lead to late drawdowns on construction contingencies
- To maximise the level of coordination and cooperation within the project
- To minimise the risk of consultant and subcontractor poor performance in areas of program, health and safety, industrial relations and environment.

11.2 Procurement Program

Hansen Yuncken will prepare a detailed procurement program as part of his master programs for design and construction phases and submit it to the Health Infrastructure for approval.

11.3 Subcontractor Engagement

The works will be constructed using Subcontractors supervised by Hansen Yuncken.

References: PR-CORP-PROC-03 Subcontract Letting

Hansen Yuncken shall select S/C who are able to comply with the QSE requirements specified for the project in accordance with the above procedure. Evaluating potential S/C previous performance prior to engagement and careful review of purchasing data ensures this.

11.4 FF&E Procurement

FF&E will be procured in accordance with NSW Health constructed using Subcontractors supervised by Hansen Yuncken.

References: PR-CORP-PROC-03 Subcontract Letting

11.4.1 FF&E Procurement Plan

HY to prepare a FF&E Procurement Management Plan for incorporation into the PMP noting the requirements of the NSW Health Purchasing & Supply Manual

NOTE THIS PLAN IS TO BE DEVELOPED FULLY WITH THE DECANTING PLAN DURING THE CONTRACT.

Group 1 FF&E where hard fixed in place is to be incorporated into building designs for procurement through building trades (e.g. joinery).

Otherwise the equipment is to be scheduled and procured as supply items.

11.4.2 FF&E Groups

FF&E is described generally as follows:

Group 1:	Supplied, paid for, owned and installed by the Contractor
Group 2:	Supplied and paid for by Health Support Services, installed by the Contractor
Group 3:	Provided by Health Support Services and installed by a Health appointed Contractor or third party (lessor). The Contractor must provide access to the providers and coordinate the building works necessary to complete the installation

And:

Sub-Classification T:	Group 2T is either: Existing Equipment that may be transferred to the Contractor, at their nomination, and may need to be relocated from an existing NSW Health Facility and installed and commissioned by Contractor, or Clinical Equipment owned by NSW Health and may need to be relocated from an existing NSW Health Facility and installed and commissioned by the Contractor; Group 3T is either: Clinical Equipment that may need to be relocated, installed and commissioned by NSW Health; Major Medical Equipment (leased by NSW Health) that may need to be relocated from an existing NSW Health Facility, installed and commissioning by a third party and possibly managed by the Contractor;

11.4.3 Scope of FF&E

The Equipment Schedules in will describe the full extent of FF&E required by NSW Health.

11.4.4 Training

HY will only provide training to qualified personnel.

Training will be limited to the conduct of one only structured course for each asset, asset system or asset group.

NSW Health is to ensure personnel will have prior experience and established expertise in the respective asset types.

11.4.5 Health AMMS

NSW Health requires that all FF&E including Clinical equipment must be scheduled and room located on HealthAMMS.

12 CONSTRUCTION - SITE MANAGEMENT

The site will be managed in accordance with the following management plans:

- Site Logistics
- Dilapidation
- Traffic Management
- Demolition
- Construction Security
- Site Clearing
- Hazardous Materials

- Hospital and Public Protection
- Protection of Existing Services
- Community Consultation and Public Relations
- Training Management Plan
- Aboriginal Participation
- Local Industry Participation

13 CONSTRUCTION – HEALTH AND SAFETY

13.1 OH&S Management Plan

Reference: OH&S Management Plan

The site and construction works will be managed in accordance with the OH&S Management Plan.

13.2 HSE Risk Management

References: PR-CORP-HSE-01 HSE Risk Management

Detailed risk analyses will be completed prior to commencement of work on site.

The risk analysis will include but not be limited to:

- Safety in design
- Identification of construction risks
- Identification of public risks

Details of risk controls including construction methodologies will be incorporated into the program planning, subcontracts, work methods and inductions.

A further risk assessment shall be undertaken for each S/C package at a Subcontractor Hazard Identification & Control meeting in accordance with PR-CORP-PROC-05 Subcontractor Hazard Review. The risks shall be assessed using the methodologies and categories in the above procedure.

As a result of the risk assessment each S/C shall be assigned a risk Class as defined in the above procedure and the level of process control determined in accordance with the Subcontractor Process Control section of the CMP.

14 CONSTRUCTION - ENVIRONMENTAL

14.1 Environmental Management Plan

Reference: Environmental Management Plan

The site and construction works will be managed in accordance with the Environmental Management Plan.

15 CONSTRUCTION - INDUSTRIAL RELATIONS & HUMAN RESOURCES

15.1 Enterprise Bargaining Agreement

References: EBA-NSW-IR-01 NSW Enterprise Bargaining Agreement

The management of industrial relations during the construction process is a key function of HY.

HY's strategy focuses on addressing both project specific and general issues.

15.2 Industrial Relations Management

15.2.1 Project Specific Issues

National Code of Practice	HY's approach, policies and procedures comply with the National Code of Practice and Construction Implementation Guidelines. In particular we endorse the Code's emphasis on freedom or association and S/C compliance.
Training/Induction	All S/C, employees and their supervisors will be instructed in HY's Management System requirements and site procedures for access, security and services interruptions. All site personnel will attend a Site Induction. All visiting union representatives will obtain permission and a security pass prior to proceeding onto the site. Once on site these representatives will in the first instance report to the Site Manager.
Subcontractors	HY will employ S/C who have a record of good industrial relations performance and who can demonstrate a commitment to compliance with the National Code of Practice and Implementation Guidelines.
Security of Payment	All S/C entered into will be structured to reflect the principles of National Code of Practice compliance and Security of Payment as summarised within the National Code.

15.2.2 General Issues

Agreement	HY will concentrate on productivity, flexibility, open communications and elimination of disputes. We abide by the provisions of relevant awards and Enterprise Agreements.
Cooperation	HY will strive to organise the work so that all workers are cooperatively effective and derive job satisfaction.
Feedback	HY will keep staff and employees well informed.
Unions	HY will recognise the legitimacy of Unions in the representation of their members' interests.
Freedom of Association	HY will not require or compel any person to join or not to join representative bodies nor do we discriminate in any way on the basis of a person's choice. We respect and adhere to the principles of Freedom of Association.
Subcontractors	HY will employ S/C who have a record of good industrial relations.
Subcontractor Procurement	HY's Board of Directors has set rigorous standards for tendering to ensure maintenance of the highest ethical principles of competitive behavior and unquestionable adherence to both our legal obligations and the ethical principles now embodied in the National Code.
Industry	HY recognises a responsibility to other employers in the industry and will not take unilateral action that could have an adverse effect throughout the industry.
Consistency	HY will strive to ensure the provision of a consistent and uniform approach, which assures that the required standards of industrial relations are attained and maintained.

As indicated above, a critical aspect of our Industrial Relations Strategy is ensuring sub-contractors compliance with the National Code of Practice and Implementation Guidelines. HY's procedures for achieving this are summarised as follows:

- A S/C condition requiring all sub-contractors to comply with the National Code and Implementation Guidelines for the industrial relations and occupational health and safety components of the National Code.
- All S/C will be required to attend a S/C Pre-Award meeting in accordance with PR-CORP-PROC-03 Subcontract Letting chaired by HY which will be minuted, will induct them into the specific requirements of the project including:
  - i) Special Conditions of Project Deed
  - ii) Site access and security procedures to be complied with
  - iii) Requirements of that National Code of Practice and Implementation Guidelines
  - iv) Their award and statutory obligations including Workers Compensation, Superannuation, etc.
  - v) Evidence that the S/C has not had a sanction imposed by the Commonwealth or any State/Territory Government as contemplated by the National Code which would preclude the sub-contractor from tendering on the project
  - vi) The requirement for the S/C to sign the 'Undertaking of Compliance with the National Code' form
  - vii) Advice that failure to comply with the National Code of Practice could lead to sanctions being imposed.
- All S/C employees will be required to attend a site induction undertaken by the SSO detailing IR and OHS requirements applicable to the project and which are in accordance with the National Code of Practice and Implementation Guidelines.
- HY will report to the Superintendent with each monthly progress report, on compliance status with the contractor's and S/C obligations under the National Code of Practice and Implementation Guidelines.
- HY will ensure adequate records of compliance with the National Code and Implementation Guidelines by the Company and its S/C are maintained.

HY's strategy will also address the following:

Duties and Responsibilities – HY will ensure that the duties and responsibilities of key personnel with respect to IR management are clearly defined.

Construction Manager – will be responsible for and have overall authority for the resolution of all matters affecting the implementation and operation of the project.

Site Manager – will be responsible for implementing the IR Plan and most importantly, maintaining open communications with S/C and employees.

a) Key Management Areas

i)	Organisation	Production targets, site procedures and regulations must be clearly and fully specified and clarified if required.
ii)	Involvement of Employees	The participation in the planning and development of work methods and construction aids with engineers, supervisors and leading hands will foster an active interest and sense of ownership by the workforce.
iii)	Amenities Standard	A good standard of facilities and clean, well maintained lunchrooms, ablutions and change sheds help in providing good site conditions.
iv)	Occupational Health & Safety	It is essential to the confidence and wellbeing of the workforce that health and safety matters are incorporated at the planning stages of a project and that they are continually developed throughout the project. OHS matters will be addressed in the workplace through employee consultation and participation in Site OHS Committee meetings.
v)	Safe Plant and Equipment	All plant equipment should be provided and maintained in safe working order and is appropriate for the particular task for which it is to be used. Employees must not be instructed to use equipment for which they have not received

		training.
vi)	Communications With Employees	Good communications and contact through involvement encourages employees to participate and contribute.
vii)	Communication with Unions	The Construction Manager will arrange procedures for discussing issues. Visiting union officials would normally hold discussions with the Site Manager or Construction Manager depending on the issue.
viii)	Subcontractors	S/C will be required to report all issues to our Site Manager for consideration prior to any action being taken. All employees go through a comprehensive site induction and have their details recorded on a site register prior to commencing. S/C ensure that at all times wages and allowances that are due and payable have been paid in full.

All employees go through a comprehensive site induction and have their details recorded on a site register prior to commencing. S/C ensure that at all times wages and allowances that are due and payable have been paid in full.

b) Dispute Resolution

Continued alertness for grievances and potential disputes will be maintained at all levels through contact with the workforce and prompt action taken at the lowest level to rectify problems before they become issues. It is far better to act first than to have to react later to industrial pressure.

15.3 Employment & Recruitment

References: PR-CORP-HR-01 Employment & Recruitment

15.4 Training

References: PR-CORP-HR-04 Training

Training is provided, where necessary, to ensure that personnel have the specific skills and/or qualifications to perform their work.

A copy of the records of HY employee training and qualifications shall be kept on the project files with the original record forwarded to the Training Coordinator in the State office for filing in personnel files and updating of the training database.

15.5 Stress Prevention

References: PR-CORP-HR-05 Stress Prevention

15.6 Harassment Complaints

References: PR-CORP-HR-06 Harassment Complaints

If a harassment complaint is received on the project, the Harassment Complaint form (FM-CORP-HR-38) must be completed by the Manager / Supervisor to whom the complaint is reported. The State Manager must be verbally notified immediately a complaint has been made.

If the complaint cannot be resolved amicably in an informal manner it shall be referred to the State Manager who will manage the complaint in accordance with the above procedure.

All original forms and associated paperwork are to be forwarded under “confidential” seal to the State Manager for information, follow-up and filing. **UNDER NO CIRCUMSTANCES ARE ANY COPIES TO BE TAKEN OF ANYTHING RELATING TO THE REPORT.**

15.7 Timesheets

References: PR-CORP-HR-08 Timesheets

The Site Manager shall ensure Timesheets are completed for HY employees and forwarded to the State Office payroll department.

15.8 Site Inductions

References: PR-CORP-HR-10 Site Inductions

All HY and S/C employees, consultants and visitors are required to undertake a site-specific induction in accordance with the above procedure. The induction is carried out by the Site Safety Supervisor or delegate.

The induction for each person shall be recorded on the Induction Checklist (FM-CORP-HR-05) which shall be signed by both the Inductor and Inductee at the completion of the induction. After signing each inductee shall be issued with a HY Induction Sticker to be affixed to their hard hat.

Records of the Induction shall be kept on an Induction file subdivided by Subcontractor and kept with the project files.

16 CONSTRUCTION - QUALITY ASSURANCE

16.1 Equipment Calibration

References: PR-CORP-PLANT-01 Equipment Calibration

All inspection, measuring and test equipment shall be;

- Calibrated prior to use
- Calibrated at regular nominated intervals
- Registered by the PMR

All S/C shall provide records of calibration of their equipment. The PMR shall maintain calibration records with the project files.

16.2 Inspection & Testing

References: PR-CORP-QC-01 Inspection and Testing

Inspection, monitoring and testing of the works shall be conducted in accordance with the above procedure to verify that specified requirements are met and relevant legislation is complied with.

Records of the Inspections and tests shall be maintained in order to demonstrate compliance with these requirements.

Inspection and test requirements for each S/C package shall be discussed and agreed with each S/C during the Quality Assurance Meeting in accordance with PR-CORP-PROC-03 Subcontract Letting.

Equipment used for inspecting and testing of the works shall be calibrated and controlled in accordance with PR-CORP-PLANT-01 Equipment Calibration.

An Inspection and Test Plan (ITP) will be drafted. The ITP addresses the requirements of the specification and relevant Australian Standards. The ITP includes Hold Points, Witness Points, all the necessary tests and inspections (specified or considered by the Project Team/HEALTH INFRASTRUCTURE as appropriate), samples to be submitted and approved, shop drawings approval, hand-over documentation (refer section 6.12).

Note that where a hold point is specified, the work will not proceed unless a written Hold point release is issued by the HEALTH INFRASTRUCTURE, Construction Manager or Consultants as appropriate. The status of hold points will be indicated in the monthly report.

The Site Manager and Engineering Manager are responsible for arranging, undertaking and documenting the necessary inspections and tests as nominated in ITP's.

The QMR is responsible for collating and maintaining the records associated with the ITP in accordance with the Project Records and Filing procedure.

The HEALTH INFRASTRUCTURE will have access to all quality records, which will be:

- identified
- indexed
- filed
- maintained and archived

in accordance with the relevant procedure.

16.2.1 Witness Testing Plan

An integral component to successfully commissioning the project will be witness testing:

- Instigation of a three-stage functionality test procedure. At completion of each system installation the subcontractor is required to carry out their own operational checking procedures. Correct functionality is then demonstrated by the discipline subcontractors to HY satisfaction prior to witness testing by the Consultants.
- Management and programming of all authority witness testing requirements to achieve approvals and certifications, i.e. Fire authority, Building Surveyors certification etc.
- Scheduling and management of all witness testing procedures including Consultant and Principal representatives if required.
- Overall management of the witness testing programs to ensure key personnel attendance and involvement to achieve the required acceptance status.

16.3 Samples and Prototypes

References: PR-CORP-QC-02 Samples & Prototypes

Sample and prototype submission requirements shall be identified from the specification and discussed & agreed with each S/C at the Quality Assurance Meeting in accordance with PR-CORP-PROC-03 Subcontract Letting.

A Sample/Prototype Approval form (FM-CORP-QC-04) shall be raised for each sample/prototype and each sample/prototype shall be uniquely numbered and registered.

16.4 Nonconformance

References: PR-CORP-QC-03 Nonconformance

A Nonconformance Report (FM-CORP-QC-06) shall be raised when works not meeting specified requirements are considered "major" or where it is apparent that it is associated with a quality system failure (for example inadequate inspections).

The PMR shall establish and maintain a Nonconformance Register (FM-CORP-QC-07) for the project.

Major or repetitive Nonconformance's and Quality System failures shall be assessed and improvement actions developed and implemented to prevent a recurrence where practicable in accordance with PR-CORP-GEN-11 Corrective & Preventive Action.

16.5 Defects Management

References: PR-CORP-QC-04 Defects Management

Minor defects are recorded on a Defect List (FM-CORP-QC-05) and gradually rectified during the life of the project prior to Practical Completion. Any minor defects can be transformed into a Nonconformance Report if not rectified by the date stated.

HY will implement the following processes to ensure defect free completion:

- Meetings early in project with the Project Consultant, User Groups/consultants and subcontractors to ensure that design details and required functionality are understood and achievable, together with quality of finishes.

- Submission of sample materials and equipment for all trades for approval and sign-off, together with a detailed numbered transmittal.
- Provision of prototypes for compliance with specification and standard of finish, for review and approval. Prototypes become standard for whole project.
- Undertake internal inspections and prepare defects lists and distribute to all subcontractors.
- On completion of internal defects lists, a penultimate clean is carried out prior to inspection by the Project Consultant at which point rectification schedule (IRS) commences.

The IRS is a pre-programmed schedule of progressive inspection by all consultants which includes:

- time allowed for inspection;
- duration for preparation of defects lists and issue to subcontractors;
- duration for re-inspection by consultants; and
- duration for final rectification, if any, final clean and handover.

17 COMPLETION – BUILDING SERVICES

17.1 Building Services Commissioning Plan

17.1.1 Services Commissioning Plan

References: Services Commissioning and Handover Plan

Proper commissioning of building services is crucial to ensuring the correct operation of the system and its associated building services plant. Commissioning involves witnessing the quality of the works and the testing of all systems and sub-systems to validate that they are fit and ready for the purpose intended. All works are to be commissioned in accordance with the design intent.

The purpose of this plan is to establish a measurable framework in order to ensure correct and timely implementation. This plan has been developed in accordance with the CIBSE Code M Commissioning Management Guide lines.

This plan is to include the following minimum items:

- The composition of the Commissioning team, including responsibilities
- The proposed date(s) for Commissioning activities
- The scope and schedule of the intended Commissioning activities, including advice of relevant design certifications, and any other inspections undertaken
- Witness and hold points
- Identify any manufacturer's equipment that should be directly involved in the commissioning process
- Any off site pre-commissioning activities
- Any resource implications in conduct of the Commissioning activities
- The designated deliverables (including performance criteria, documentation and legislative) required at Commissioning
- Method of transfer of commissioning information to the client

17.1.2 Commissioning Workgroup

HY will form a Commissioning Workgroup to provide a management, monitoring and reporting mechanism for this phase of the project.

HY will liaise with Project Consultant and User Groups on the development of area/Building handover and coordinate associated programming activities.

Strategies to be employed by this working party include:

- The provision of adequate programme allowances for system and equipment commissioning procedures.

- Programming completion of key building works necessary to allow commencement of commissioning and testing procedures.
- Coordination of other service trade completion activities to allow commencement of commissioning and testing procedures.
- Clear identification of all systems and equipment subject to commissioning procedures including any transfer items.
- Derive subcontractor completion plan procedures and formalise into one concise Completion Plan Document.
- Provide Quality Assurance in accordance with HY's project specific requirements.
- Provide progressive defect identification and rectification management for all components of the building including fabric, fittings and services in conjunction with the design consultants. This occurs from the first day of on-site commencement to ensure any defective works are identified and rectification procedures implemented and is further supplemented by our Quality Assurance System.
- Manage the procurement of the required regulatory compliance records, completion records, as installed documentation and operational maintenance manuals, warranties and guarantees, keying system hardware and any equipment spare parts required, in preparation for practical completion.
- Instigation of a maintenance management system for the defect liability period which clearly identifies the scope of responsibilities or subcontractor, suppliers and the Principal. The system will include detailed schedules of action requirements for breakdown situations, including comprehensive 24 hours contact details, identification of priority of call, i.e. Critical service, major service and minor or non-urgent type, including appropriate response times for each priority type.

17.1.3 Training

HY will only provide training to qualified personnel.

Training will be limited to the conduct of one only structured course for each asset, asset system or asset group.

NSW Health is to ensure personnel will have prior experience and established expertise in the respective asset types.

18 COMPLETION - ASSET MANAGEMENT

An operational asset management and maintenance system is required for each Works Package or Project to enable and ensure the efficient operation and maintenance of both the existing assets and assets contained, created and/or acquired under the Project Deed. NSW Health has adopted a computerised maintenance management system referred to as HealthAMMS (Asset Management and Maintenance System). This system is to capture all relevant asset, maintenance and drawing information and to make it available to local asset managers to support their ongoing activities. To support this system the Wagga Wagga Base Hospital Project is to supply data in a fully electronic format for up-load into the AMMS system without additional re-work, data capture, or other expenses and costs.

- All Consultants and Subcontractors must comply with the requirements of HealthAMMS in providing Asset Management Information.
- All Asset Management Information provided by the Hansen Yuncken and its Consultants, Subcontractors and Suppliers will be in a format that is compliant with the requirements of HealthAMMS as set out in HealthAMMS Data Collection for Capital Works Projects, Version 3b provided in the Principal's Documents.
- The collection, verification and provision of all Asset Management Information as described in this Clause 1 will be part of the work and services in the Management Items.
- Hansen Yuncken must ensure its Consultants, Subcontractors and Suppliers will utilise HealthAMMS and its operating systems to program and record all maintenance work undertaken before and during the period after completion under the Subcontracts.

The scope of asset management and maintenance will include as a minimum:

- Supply of Asset, Maintenance and related data in a format to meet NSW Health requirements for transfer to the HealthAMMS (Maximo) system
- Supply of certain Spatial Information to meet NSW Health requirements for transfer to the HealthAMMS (Aperture) system
- As Built drawings in electronic format to meet NSW Health requirements
- Provision of Operations and Maintenance Manuals in hard copy formats as required
- To assist with implementation of asset management, training, HealthAMMS system and to utilise the system during the defects liability period to record and manage all maintenance and defect works.

18.1 HealthAMMS

HealthAMMS utilises two applications:

1. Maximo Equipment and Maintenance Information ("Maximo"). Maximo is used to capture relevant asset data and maintenance information for preventive and corrective works.
2. Aperture Spatial Information ("Aperture"). Aperture is used to display spatial information to support Health Operations and its efficient use of space within a health facility.

18.1.1 Maximo Equipment and Maintenance Information

The scope of asset data collection for Maximo includes all maintenance items for existing plant and equipment, including major medical equipment, and any assets acquired under the Project Deed.

The HY will work with the Principal to establish a database of maintenance items for existing plant and equipment, including major medical equipment, on HealthAMMS and to create links to the new assets acquired under the Project Deed.

Asset data stored in Maximo will be used for management and maintenance purposes of all plant and equipment, including major medical equipment, including any assets acquired under the Project Deed.

Asset data will be provided for each of the following standardised categories:

- identification of equipment/facilities and their corresponding location;
- equipment specifications;
- commissioning;
- "as constructed costs" and capitalisation of financial assets;
- operations and maintenance; and
- warranties.

HY will instruct Subcontractors and Suppliers to submit asset data for all plant and equipment acquired under this Project Deed in the following format:

- WebFM Health module (an application available under NSW Supply Project Deed ITS 2305)

To achieve standardised asset management and maintenance practices across all Departments and Units, HY, its Consultants, its Subcontractors and Suppliers will provide the asset data for all plant and equipment, including major medical equipment, acquired under the Project Deed, in accordance with the following standardised data sets:

- Classification for Equipment and Facilities;
- Master Equipment Item Codes;
- Master Codes for the Identification of Area Health Services and Sites (facilities);
- Master Point Names;
- Master Measure Points;
- Master Maintenance Operations;
- Master Job Plans; and
- Master PM's (preventative maintenance).

Copies of the full HealthAMMS data structure and codes are available in the document HealthAMMS Data Collection for Capital Works Projects, Version 3b.

18.1.2 WEBFM Health module

HY is to utilise the WebFM Health module when supplying data. Asset related data is collected, verified and provided using this application, a web-enabled operations and maintenance tool that enables Consultants, Subcontractors and Suppliers to create operations and maintenance manuals on-line.

The WebFM Health module is to be accessed by the HY and all relevant consultants, subcontractors and suppliers to enter project asset and maintenance data.

The WebFM Health module has been specifically tailored to suit the data standards required by NSW HealthAMMS and its Maximo system.

18.1.3 Capture of Asset ,Maintenance and Operations Data

The WebFM Health module will allow HY and its proponents to capture all relevant asset, maintenance and operations data in accord with the electronic and hard copy formats specified elsewhere for NSW HealthAMMS Maximo.

18.1.4 Handover of Asset, Maintenance and Operations Data

HY is to advise the OHARS Design & Construct Project Director and MLHN when the Operations and Maintenance data is complete and accurately reflects the works. Upon notification HY will supply 2 copies of the finalised electronic data in CD format for handover to the Principal.

Should the Principal identify any errors or omissions in the final copies supplied then the Contractor is required within 14 days of such notification to rectify any items and to pay all such costs that may be incurred to re-issue the final data.

WebFM has standardised headings for asset, operations and maintenance manuals:

- Introduction and Scope;
- Assets;
- Maintenance;
- Operations Data;
- Spare Parts;
- Warranty and Certificates;
- Drawings and Reference; and
- Help and Contact.

HY, its Consultants, its Subcontractors and Suppliers can use WebFM to produce hard copies of operations and maintenance manuals. HY may print and bind hard copies of the WebFM Health module data pages in accord with the format for Hard Copy Operations and Maintenance Manuals for submission to the Principal.

18.2 Aperture Spatial Information

Data collection for Aperture is limited to:

- drawing data; and
- numerical and textual data.

HY will work with the Principal to establish a database of existing Asset Management Information on HealthAMMS and to create links to the new assets and asset data created under this Project Deed.

Asset data stored in Aperture will be used for space management purposes within each Department or Unit to enable enhanced effectiveness and efficiency in space utilisation of new and existing assets.

18.2.1 Drawing Data

There are four drawing types required by Aperture:

1. system administration, which are created at establishment of HealthAMMS and may include:

a. building photographs including aerial photographs,
b. initial screen design, and
c. navigation functions between drawings and drawing types;

2. maps, such as a site map containing location icons for each building, property owned and/or occupied by the Health Service including property leased to others, unoccupied sites, etc.;
3. floor plans for each floor of every building that is owned and/or occupied by the Health Service including property leased to others, unoccupied sites, etc.;
4. site plans, identifying the location of multiple buildings, for each site owned and/or occupied by the Health Service including property leased to others, unoccupied sites, etc.

18.2.2 Drawing Name Conventions

HY is to instruct, and must ensure, Subcontractors and Suppliers use the drawing conventions specified in the document HealthAMMS Data Collection for Capital Works Projects, Version 3b.

18.2.3 Migration, Conversion and Creation of Existing Asset Data

HY will work with the Principal to migrate, convert and/or create existing asset data so that the data can be input into Aperture and establish the HealthAMMS database.

There are three methods to establish existing asset data onto Aperture:

1. migration for asset data available on CAD;
2. conversion for asset data available on paper; and
3. creation of asset data where data is not available.

Aperture has standard capabilities to enable migration of existing asset data.

Conversion and/or creation of asset data will require the asset data to be “Aperturised” prior to its input into Aperture.

Conversion of paper-based asset data can be achieved by:

- manually measuring the building; or
- using a vectoring service to scan and clean up the drawing and produce a pre-defined CAD layer; or
- redrawing the existing drawing in accordance with pre-defined CAD and Aperture layers.

Where no asset data is available for an existing asset, creation of a floor plan in CAD is sufficient. The CAD drawing must be completed to scale, the current aspect and the correct proportional representation.

This will create a CAD file that can be imported into Aperture.

18.2.4 Data Entry and Maintenance

After confirming the accuracy of data collected for the HealthAMMS database for existing assets, data made available for purposes of Aperture by HY will be limited to the following data elements:

- new drawings of the asset created under the Project Deed;
- work-as-executed drawings of the asset created under the Project Deed; and
- work-as-executed drawings of the asset created under the Project Deed modified to reflect correction of any defect.

18.2.5 Equipment and Labeling

All plant and equipment, including major medical equipment, supplied and/or installed under this Project Deed must have a unique permanent identifier attached to, or stamped on, it.

HY will instruct, and ensure, Subcontractors and Suppliers use the Principal’s current labeling identifier system, materials, labeling system and attachment methods.

HY will confirm with the Principal the requirements for equipment and labeling at least 28 days prior to such activities proceeding.

All equipment labeling shall be accurately reflected in the asset data. HY and its Subcontractors and Suppliers will ensure this.

18.2.6 Document Format

Asset data documents include but are not limited to reports, drawings, specifications, designs, surveys, plans, maps, illustrations, schedules, certificates, test results, commissioning data manuals or similar.

All asset data documents will be provided to the Principal in an editable format.

CAD computer files will comply with the conventions required by Aperture.

Submit the documents in both electronic format and in hard copy format. Supply hard copy drawings in two sizes - 'full size' and A3 size. 'Full size' means the largest size of drawing issued for its intended purpose. Where reference is made elsewhere to the number of hard copies of drawings to be supplied, each hard copy is considered to be one full size drawing plus one A3 size drawing unless otherwise instructed.

18.2.7 Document Submission

Integrate the collection of asset data documents, and their subsequent production and submission into the Contractor's Project Plan (including Inspection and Test Plans), to ensure the timely collection of information, accuracy of detail and progressive submission of documents (hard copy and electronic). Ensure, using the Project Plan, that information is collected progressively as it becomes available and is progressively made available to the Principal.

Submit complete information within 28 days of completion of appropriate packages of work (such as operable systems, types of facilities, geographic areas and the like) agreed with, or in the absence of agreement directed by, the Principal.

Submit two unbound draft hard copies of the Asset Management Information 14 days prior to the required submission dates. Submit two unbound draft hard copies of all information related to proposed tests 14 days before such tests.

Review and act on comments made on, and correct faults in, the draft copies and supply the final bound hard copy sets and electronic sets incorporating all the changes needed by the required submission dates.

Submit a Schedule, coordinated with the Project Deed Program, reflecting the above requirements and including the required submission dates within 28 days of the Date of Project Deed of each Subcontract.

Allow in all Subcontracts that in the event of failure to provide the asset data documents and/or the Schedules, payment for up to 10% of the value of the related parts of the Works completed may be retained until such time as the Information and Schedules are submitted. The Subcontracts must also require the asset data to be provided for Completion of the parts of the Works.

Submit to the Principal three complete bound hard copy sets, and two electronic copies, of the asset data covering all the assets created under the Project Deed.

Verify the correctness and completeness of all asset data and upload into Aperture (drawings) and WebFM Health (equipment and maintenance information and operations and maintenance manuals) and submit to the Principal before Practical Completion.

18.2.8 Work-as-Executed Drawings

Submit to the Principal work-as-executed drawings in hard copy and electronic formats for Subcontract and Supplier packages showing the works as completed, within 28 days of completion of that work. Verify each drawing certifying accuracy, completeness, correctness and compliance with Aperture conventions.

Ensure the content, accuracy and level of detail of work-as-executed drawings are equivalent to those in the detail design drawings used for construction and are sufficient to describe, and sufficient to enable and ensure the efficient operation of the assets created under the Project Deed. Where required to describe the Works, include digital photographs of specific aspects of the Works in work-as-executed drawings or operations and maintenance manuals.

Include in work-as-executed drawings a survey drawing indicating the position of the Works relative to a primary survey grid. Certify survey drawings using a Registered Surveyor where required by the Principal.

Comply with the AS1100 series of standards unless otherwise instructed.

18.3 Operations and Maintenance Manuals

Contractors, their Subcontractors and Suppliers will use the WebFM Health application to produce Operations and Maintenance manuals.

HY is to provide Operation and Maintenance Manuals to the Principals Representative

Operation and Maintenance Manuals are to be of sufficient detail to enable the Principal to take over any maintenance, operation or use of the works and to do so in a safe, effective and efficient manner.

The scope of the information is to cover as a minimum the following:

1. Identification of Equipment/Facilities and their corresponding Locations
2. Equipment Specifications
3. Commissioning
4. “As Constructed Costs” and Capitalisation of Financial Assets
5. Operations and Maintenance
6. Warranties

18.3.1 Format

Operation and Maintenance Manuals are to be provided in Hard copy printed format and fully electronic format for data transfer to the NSW HealthAMMS (Asset Management and Maintenance System).

18.4 Asset Management Support

18.4.1 Requirement

HY is required to provide ongoing support to the Health Service over the 12 month defects liability period for each works package. That support will include:

Operator Training

On-site implementation and use of HealthAMMS during the Defects period

18.4.2 Operator Training

Organise training courses, covering all the assets, including facilities, plant and equipment (and other Materials), created under the Project Deed, for the personnel nominated by the Principal involved in the operation, maintenance, service and repair of the assets. Conduct and complete the courses prior to the commencement of commissioning and cover:

1. start up and shutdown procedures for both automatic and manual modes;
2. start up and shutdown during emergency or abnormal conditions; and
3. general operation and maintenance duties.

Carry out training with the aid of the operations and maintenance manuals, and include all aspects of the operation and maintenance of the assets.

Ensure training courses instruct and train the personnel nominated by the Principal in any special techniques which may be necessary for checking, testing, adjusting and operating the plant or services under normal and emergency operating conditions.

Ensure training also includes the theory of operation; mechanical, electrical and hydraulic systems; control instrumentation; safety and any other matters relevant to the successful operation and maintenance of the assets.

Ensure appropriately qualified and experienced personnel engaged by the Contractor or Subcontractors conduct all training.

Submit a content plan and schedule of the proposed courses before any training program is commenced.

Complete all the training within the time before Completion.

18.4.3 On-Site Implementation

During the Defects Period, HY is to provide support to Health Service Staff to implement the HealthAMMS system for each Project Deeded Works package. This support will include using the HealthAMMS system to:

Correct and update asset, maintenance, operations and related data to ensure it is appropriate for Health use in the HealthAMMS system

Record all defect works covering initial request, status update and completion

Manage all preventive maintenance works required by the Contractor and or its subcontractors and suppliers during the defects period to record the commencement, completion and other information of those works as they occur during the defects period

Ensure all data is entered in a prompt and timely manner to ensure the HealthAMMS system reflects the current status on works on a daily basis during the defects period.

19 COMPLETION – BUILDING OCCUPANCY AND APPROVALS

19.1 Commissioning, Induction and Decanting Plan

References: Building Occupation and Approvals Plan

The purpose of this Building Occupation and Approvals Plan is to establish a framework to ensure complete and timely statutory consents and approvals for occupation and contract approvals each new facility.

20 COMPLETION - COMMISSIONING, INDUCTION & DECANTING

20.1 Commissioning, Induction and Decanting Plan

References: Commissioning, Induction and Decanting Plan

The purpose of this Commissioning, Induction and Decanting Plan is to establish a framework to ensure sensitive, timely and thorough commencement of operations in each new facility.

This plan is to include the following minimum items.

- Separation from but reliance on commissioning of building systems
- Separation from but reliance on satisfactory statutory consents and approvals for occupation
- Installation and commissioning of all Groups of FF&E
- Provision of suitable staff training procedures for all systems, services and equipment installed.
- Provision of a fixture, furniture and equipment management system.
- Relocation and decanting management strategy.

20.2 Staff Training

Following successful completion of the witness testing and acceptance activities for the various systems and equipment installed, the appropriate procedures associated with staff training will be implemented. Instigation of an appropriate training schedule and program will be integral to the success of this project completion component.

- Consultation with the nominated end users to identify the key personnel to be associated with the staff training procedures.
- Training sessions will incorporate regulatory issues such as emergency escape routes, security procedures and fire-drill procedures. These sessions will also include members of local authority departments as required.

Feedback will be pursued on the adequacy of the training sessions and should shortcomings be identified, rescheduling of each session would occur as required.

HY will only provide training to qualified personnel.

Training will be limited to the conduct of one only structured course for each asset, asset system or asset group.

NSW Health is to ensure personnel will have prior experience and established expertise in the respective asset types.

21 MANAGEMENT PLANS

Appended:

- Design Development Plan – Appendix 1
- Occupational Health & Safety Plan Appendix 2
- Environmental Management Plan – Appendix 3
- Demolition Management Plan – Appendix 4
- Community Consultation Public Relations Plan – Appendix 5

The following plans will be developed closer to and during the delivery phase:

- Traffic Management Plan
- Site Management Plan
- Building Services Commissioning Plan
- Building Occupation and Approvals Plan
- Commissioning, Induction and Decanting Plan
- Aboriginal and Equal Opportunity Management Plan

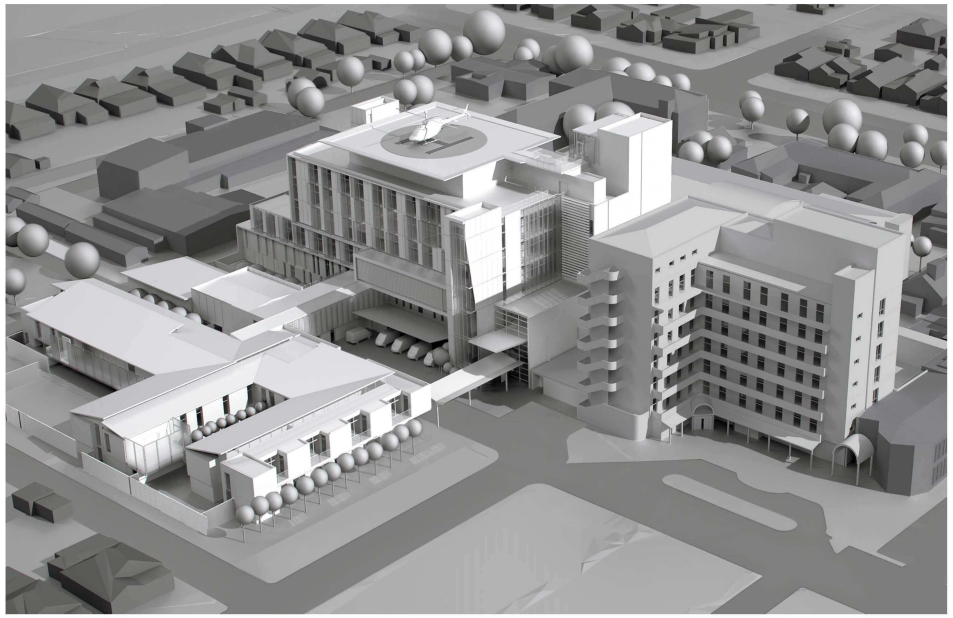
22 POLICIES & STATEMENTS

POL-CORP-HR-01	EEO & Affirmative Action Policy
POL-CORP-HR-02	Harassment Policy
POL-CORP-HSE-01	Occupational Health & Safety Policy
POL-CORP-HSE-02	Environmental Policy
POL-CORP-HSE-03	Rehabilitation Policy
POL-CORP-QC-01	Quality Policy

Appendix 1: Design Development Plan

hansen yuncken
BUILDING VALUE

Design Development Plan



Revision 02 – Issued 29th July 2011

Wagga Wagga Base Hospital Redevelopment

NSW GOVERNMENT
HEALTH INFRASTRUCTURE
NSW HEALTH

Contents

DOCUMENT CONTROL & REVIEW PROCEDURES

1.0 Document Status

REVISION NO	DATE AUTHORISED	BRIEF DESCRIPTION FOR ISSUE	PREPARED BY	AUTHORISED BY
01	30 June 2011	Draft Issue within 30 days of commencement	Dominic Clifton - Design Manager	John Hunt – Snr Project Manager
02	29 July 2011	Issue within 60 days of commencement	Dominic Clifton - Design Manager	John Hunt – Snr Project Manager
03		Issue within 120 days of commencement		
04		Issue within 180 days of commencement		

2.0 Updating Procedure

Hansen Yuncken will update the Design Development Plan at the following times specified to take into account changes to the performance of the Design Services and any delays which have occurred and as otherwise requested by the Principal's Representative:

a) Initial draft within 30 days

b) updates on 60 days, 120 days and 180 days

c) at any time, if reasonably requested by the Project Director to do so

Hansen Yuncken will submit any revised Design Development Plan to the Principal's Representative for review in accordance with the Review Procedures.

The updated Design Development Plan must comply with the requirements of the Agreement regardless of the content of the initial Design Development Plan.

3.0 Distribution Procedure

The Design Development Plan is distributed to registered copyholders involved in the Wagga Wagga Hospital Redevelopment. The list will be controlled and updated by Hansen Yuncken's Senior Project Manager who will ensure that revisions are issued to the registered copyholders.

Hansen Yuncken's Senior Project Manager shall ensure this and all subsequent revisions are approved and distributed in accordance with company procedure.

The initial draft 30 day submissions will be issued to Health Infrastructure representatives only (as listed in the following table).

Hansen Yuncken will further issue this document to the additional project Stakeholders (as listed in the following table). Only when instructed to do so by Health Infrastructure. We acknowledge Health Infrastructures right to add to, or reduce the document distribution list as it sees fit.

The initial draft document submission will be issued in hard copy and will be accompanied by a CD containing an electronic version (in PDF format) of the report. For future submissions the electronic version of the document will be transmitted via Aconex.

ORGANISATION	NAME OF HOLDER	POSITION OF HOLDER
Health Infrastructure	Jeremy Oaks	Project Director & Principal's Representative (Management Team Chair)
Health Infrastructure	Martin Cook	Director Delivery
Health Infrastructure	Anthony Manning	Director Planning & Technical
Health Infrastructure	Lloyd Esau	Director Major Projects
Murrumbidgee Local Health Network	Susan Weisser	Acting Chief Executive Officer
Murrumbidgee Local Health Network	Jill Ludford	Operations Director
Murrumbidgee Local Health Network	Darren Green	Capital Works Manager

The Design Development Plan will be issued to Hansen Yuncken's internal staff as nominated in Schedule 1, item 5 of the Planning and Delivery Agreement.

4.0 Submitted Documents

This document is titled – *Design Development Plan* and is submitted as a requirement of the Planning and Delivery Agreement for the design and construction of the Wagga Wagga Base Hospital Redevelopment

This document is submitted in compliance with Clause 8.4 of the above mentioned Agreement. This document will be revised in accordance with Schedule 1 item 10 of the above mentioned Agreement.

5.0 Principals Review

Hansen Yuncken acknowledges the Principals right to review this document in accordance with the Agreement and request further information as may be required for the Principal to effectively conduct their review. Hansen Yuncken will make available on request appropriately qualified people to assist in the Principals review as necessary.

6.0 Register of Submitted Documents

As a supplement to this document Hansen Yuncken provide a draft copy of the Register of Submitted Documents for the Principals review, comment and use. The Register of Submitted Documents aims to satisfy the management of Schedule 4 Item 5.2 a) & b). The Register of Submitted Documents will be issued monthly with Hansen Yuncken's project report.

PART A: PLANNING PHASE & PROJECT OVERVIEW

1.0 The Wagga Wagga Base Hospital Redevelopment

1.1 Project Overview

The Wagga Wagga Base Hospital Redevelopment is the major acute care provider and referral hospital in the Murrumbidgee Local Health Network. The redevelopment of the Hospital, once complete, will align the Hospital's facility requirements to the projected Clinical Services Plan activity projections to 2021/22.

The Principal, Health Infrastructure (HI), is responsible for the planning, design and delivery of the redevelopment works which are proposed to be undertaken in a number of Phases to facilitate the current clinical services and match the available funding.

Hansen Yuncken's GMP Offer, to be submitted by the 1 December 2011, is to include the construction of Phase 1 (former stage 1a) and Phase 2 (former stages 1b and 2a, as described below:

- **Phase 1 (former stage 1a):** New facilities to accommodate acute and sub-acute mental health which will be a three storey building with acute mental health on the ground floor and sub-acute mental health on the first floor and plant area located on the third floor.

- **Early Works:** As a precursor to the above mentioned a series of enabling works are planned to facilitate the onset of the redevelopment. These works incorporate the construction of a new car park to the North of the existing buildings, several services relocations/diversions along with the construction of a replacement road for Lewis Drive which will be partially built over as part of the Phase 1 works. Several packages of demolition will be incorporated into the Early Works Phase to effectively clear the Phase 1 site. It is noted that the Early Works will not form part of the GMP. Rather they will be let as a series of pre GMP packages. Furthermore it is noted that only the replacement road for Lewis drive will form part of the Part 3A project application. The services diversions will be approved via Authority approvals and the packages of demolition will be approved under the Infrastructure SEPP.

1.2 The function of the Planning Phase

The intention for early appointment is to ensure that Hansen Yuncken is integrally involved in finalisation of the schematic design, design development and User Group and Stakeholder Consultation, driving design outcomes specifically through being responsible for managing the design and with the goal of achieving, or bettering the budget and in line with the program.

The output of the Planning Phase is intended to facilitate the preparation of a GMP offer for the delivery phase that works within the GMP target price and enables completion within the GMP completion date. The overarching aim of the Planning Phase is to generate project planning that encompasses value for money solutions, collaborative approaches, thus ensuring user and Stakeholder satisfaction and total project team buy in. The Planning Phase outcomes are to ensure project compliance with both the project brief, the Principals requirements and relevant statutory requirements. The successful Planning Phase conclusion will see the achievement of the overall project objectives.

1.3 Achieving the Planning Phase Outcomes

The key objective at the conclusion of the Planning Phase is to finalise the GMP Price, under budget, while maintaining the original scope of works and have Hansen Yuncken warrant the design.

For this key objective to be realised, the following outcomes are to be achieved:

a) enable HI to engage Hansen Yuncken to undertake the Works within the GMP Budget Target Price and by the GMP Completion Date

b) facilitate HI achieving value for money in the procurement of the Works

c) reflect the outcome of collaboration with and input by the HI, User Groups and Project Stakeholders in accordance the Design Development Process

d) comply with any requirements of HI including any comments notified to Hansen Yuncken in accordance with the Review Procedures

e) subject to the Design Departures Schedules, comply with the Project Brief

f) comply with all relevant Statutory Requirements

g) facilitate the achievement of the objectives and any further planning document developed during the Planning Phase

h) facilitate the achievement of the Project Objectives

i) are capable of being further developed (as part of the Works) into a detailed design which can be constructed on the Site

j) ensure that HI has an understanding of any issues and risks which may adversely impact on the Works and has the opportunity to develop strategies for managing such issues and risks prior to the Delivery Phase.

Whilst HI is intending to lock in the GMP Price based upon a fixed scope once Detailed Design is approximately 85% - 90% complete, in certain circumstances, including the event when substantially less than 85% of Detailed Design has been achieved, HI may elect for the parties to agree upon a GMP Price for part of the current scope only.

This method will provide HI with a high degree of flexibility and with potentially the same start on-site date. Trade package provisional sum lettings would be handled in a similar manner to a Manager Contractor style of contract and with the option of progressive lump summing which would provide HI with cost certainty.

In addition, as part of 'future-proofing' new Health facilities, HI has mandated a 'modular design' principle that is based upon a standardised structural grid irrespective of the use of the space and will be adaptable to a shell and core approach to maintain long term flexibility.

Hansen Yuncken will take full responsibility for controlling, coordinating, administering and directing all activities necessary for ensuring the Planning Outcomes are achieved including:

a) Management of design and any early works construction processes

b) Engagement, control, coordination and direction of design consultants and the execution of consultancy services

c) Engagement, supervision, control and coordination of all subcontractors and the execution of any early works construction and commissioning activities

d) Submission of initial GMP Estimate within 60 days, with updated estimates submitted within 120 days and 180 days

e) Achieving acceptance of final Design Development documentation by key stakeholders

f) Ensuring high quality construction documentation
g) Aligning facility management requirements with the designs
h) Planning the project in consultation with Health Infrastructure and Hospital Stakeholders
i) Undertake site investigations necessary for the design of the project
j) Ensure the project is designed in accordance with the requirements of the Project Agreement, the Design requirements, State standards and policies, the Building Code of Australia and Authorities
k) Ensure the design is completed in accordance with the Master Works Program
l) Advising Health Infrastructure on matters relating to departures from the Functional and Design Requirements, Australian Health Facility Guidelines, Architectural Specifications and Technical Specifications
m) Ensure that the GMP Offer is submitted by no later than 1 December 2011

1.4 Key Milestone Dates

	PLANNING DELIVERABLES	MILESTONE DATE (PERIOD AFTER COMMENCEMENT DATE)
1	Planning Services Program, Planning Services Plan and Design Development Plan	Initial draft 30 days and then updates on 60 days, 120 days and 180 days
2	Master Works Program and Construction Management Plan	Initial draft 30 days and then updates on 60 days, 120 days and 180 days
3	GMP Estimate	Initial GMP Estimate 60 days, with update on 120 days and 180 days
4	Design Documents (where clause 8.5A applies)	Design Documents 50% Complete stage after 120 days
5	GMP Offer	Submitted by 1 December 2011

1.5 Project Objectives

The Project Objectives are to deliver a Health Campus that aligns with the following.

a) Which is highly regarded and supported by all Project Stakeholders and recognised for timely and efficient delivery of health services
b) Which promote and protects the health of the people of the Murrumbidgee Local Health Network through excellence in clinical leadership, health care, education and research
c) Which promotes innovation within health care delivery, education and training
d) Which facilitates future flexibility and adaptability particularly in respect to technology, clinical functions and relationships between clinical specialists
e) Which facilitates operational efficiencies in the provision of clinical services at the Works
f) which facilitate the provision of patient-centred continuum of care across and integrated area and principal network of services
g) Which provides a clinical outreach service in support of the increased role of the general hospital
h) Which is safe, economical and efficient to maintain over its operational life
i) Which incorporates and reflects environmentally sustainable practices
j) Which is energy efficient and which facilitates the achievement of ecologically sustainable practices
k) Within the GMP target price; and
l) Within the GMP completion date

2.0 The Design Development Process

2.1 The Design Development Plan

The Design Development Plan details the strategy, structures, processes and procedures under which the Planning Phase design management, communication and collaboration will be realised.

The Design Development Plan is prepared to aid in the provision of a consistent approach to the Planning Phase for the Wagga Wagga Base Hospital Redevelopment. The plan seeks to identify and consolidate Hansen Yuncken's strategies for achieving the Planning Phase outcomes specific to design development as set out in the Planning and Delivery Agreement.

As the Design Development Plan is centred specifically on Hansen Yuncken's approach to design management, communication and collaboration it is recommended that it be read in connection with the Planning Services Plan and Planning Services Program to ensure Hansen Yuncken's holistic approach to the Planning Phase is both conveyed and understood.

The Design Development Plan has been established to identify Hansen Yuncken's proposed strategy for ensuring that the design documents comply with the requirements of the Project Brief along with the Principals and Stakeholders requirements.

The Design Development Plan outlines Hansen Yuncken's proposed design management methodology including:

a) Details of the design team including the roles, level of commitment and relevant experience of each member;

b) The proposed strategy and methodology for collaboration between the Contractor, the Design Consultants , the Principal, the User Groups and Project Stakeholders generally;

c) Methodology for working with, the Project Team;

d) Methodology for providing the Principal with information required from User Groups and Project Stakeholders in a timely manner and so that the Principal can successfully arrange for User Group and Project Stakeholder input;

e) Methodology for assisting the Principal to manage multiple User Groups and Project Stakeholders generally;

f) Methodology for ensuring that the User Groups and their members and the Project Stakeholders each have sufficient information and understanding of the design to meaningfully review the Design Documents; and

g) Methodology for taking into account and incorporating the Principal, User Group and Project Stakeholder feedback in the Design Documents;

h) An account of proposed User Group / Stakeholder meetings;

i) Procedures for ensuring compliance with the Review Procedures.

2.2: Key Milestone Dates

The Design Development Plan will be submitted in alignment with the Planning and Delivery Phase Agreement. These requirements are set out in the following table:

SUBMISSION	DESIGN DEVELOPMENT PLAN DELIVERABLES	SUBMISSION TIMEFRAMES (from commencement)	SUBMISSION DATES
1	Draft Design Development Plan	@ 30 days	1st July 2011
2	Updated Design Development Plan	@ 60 days	31st July 2011
3	Updated Design Development Plan	@ 120 days	29th September 2011
4	Updated Design Development Plan	@ 180 days	28th November 2011

Further to the above mentioned Design Development Plan submissions Hansen Yuncken will re-submit the plan after the initial draft submission at any time, if reasonably requested by the Project Director to do so.

PART B: STRATEGIES FOR ACHIEVING COMPLIANCE

1.0 Planning Phase Design Obligations

1.1 Primary Design Responsibility during the Planning Phase

Hansen Yuncken will progressively review the Project Documentation and work with the Principal and Project Team to develop the design to achieve outcomes that assist with good building practice, for both off and on-site activities. This on-going planning activity will provide advice in respect of buildability issues, including analyses of proposed construction techniques and methodology, and the impact of different options during design, construction and whole of life (WOL) benefits on the cost and delivery of the Project.

The primary responsibilities of Hansen Yuncken for design management during the Planning Phase are to:

- Assist the Principal to plan and design the works in accordance with the project brief and all associated Statutory Requirements
- Obtain approval of final Design Development documentation by NSW Health.
- Achieve acceptance of design development documentation by key Stakeholders.
- Ensure high quality construction documentation.
- Align facility management requirements with the designs.
- Plan the project in consultation with Health Infrastructure and the Project Team.
- Make recommendations for further site investigations necessary for the design of the project.
- Ensure the project is designed in accordance with the requirements of the Project Deed, the Project Brief, NSW Health standards/policies, the Building Code of Australia and Statutory/local Authorities.

1.2 Planning Phase Design Outputs

Hansen Yuncken under the Planning and Delivery Phase Agreement must undertake the Planning Services in accordance with the directions of the Principals Representative so that each of the final design documents will at the time of their submission to the Principal be fit for the purpose of designing and constructing a Health Campus:

- Which achieves the project objectives
- Which satisfies the requirements of the Project Brief
- Which will accommodate the equipment identified as Group Equipment
- Which satisfies all applicable Statutory Requirements
- Within the GMP Target Price, and;
- By the GMP Target Date

The Planning Phase design outputs shall include the following:

- Documentation to support development approval as required for Early Works under the ISEPP
- Documentation to support procurement and construction of Early Works
- Documentation to support development approvals as required for Part 3A Planning Consent (amended if required)
- Schematic design – 100% completion for both Phase 1 and Phase 2
- Detail Design Documentation – 85- 90% completion for Phase 1 and as a minimum 50% completion for Phase 2

1.3 Compliance with design Standards

The Standards and Guidelines specific to design and preparation of documentation are referenced below. It is noted that the Project Team will meet or better the requirements of the following standards as amended from time to time:

- Australasian Health Facility Guidelines (AHFG), NSW Health
- Technical Series TS11 - Engineering Services & Sustainable Development Guidelines (TS11),
- NSW Health policies
- The Building Code of Australia (BCA) including specific NSW amendments for Health Care Buildings.
- All relevant Australian Standards and Statutory Requirements.
- National Building and Services Reference Specification (Natspec Reference Specification)
- Occupational Health & Safety Act 2000
- The requirements of the NSW Department of Planning
- The requirements of the local council and the local supply authorities.
- All relevant legislation and regulation.

The requirements set out in the above mentioned regulations, Standards and Guidelines are deemed to form part of the minimum requirements of the Project Brief.

Unless otherwise specified, the Facility must/will be designed and constructed in accordance with all relevant Acts, Regulations, Codes and Guidelines. Where conflict may exist between guidelines and standards, Hansen Yuncken will advise the Project Director to enable informed decision making, that provides both compliant outcomes and fit for purpose facilities.

As a lasting record of decision making and project compliance Hansen Yuncken will maintain throughout the Planning Phase the Design Departures Schedule identifying any divergences from the Project Brief or applicable Codes and Guidelines. We understand that although the above mentioned design standards will form the basis of design preparation and decision making, from time to time special requirements are either briefed or raised as user requirements that will not comply with certain industry reference material. Hansen Yuncken acknowledges the importance of sound decision making with regard to design departures as inherently these carry significant risk. The design departures schedule will not simply act as a record of decision making it will facilitate the assessment of risk, any possible scope creep and design non-conformances.

This approach to tracking and assessing design departures will mitigate any ill effect the departure may carry if not identified or mismanaged.

1.4 Compliance with Planning Phase Reference Documents

In delivering the Planning Services outcomes and design development requirements Hansen Yuncken will comply with the regulations & guidelines as documented in the reference documents detailed in the table on the following page. In addition to this Hansen Yuncken will oversee the wider Project Teams compliance with the Planning and Delivery Phase Agreement Reference Documents.

These reference documents will help direct a ‘best practice’ approach through the benchmarking of industry standards.

The reference documents will act as a framework for adherence with both Health and public sector capital works protocol and delivery.

DOCUMENT TITLE	AVAILABLE AT	FORMS PART OF THE AGREEMENT
Process of Facility Planning	http://www.health.nsw.gov.au/assets/pofp/process_of_facility_planning_v_3_1.pdf	No
NSW Government Procurement Policy	http://www.nswprocurment.com.au/government-procurment-frameworks.aspx	No
The following Treasury assessment and decision tools: *Sustainable Development, Heritage Asset Management, Life Cycle Costing, Economic/Financial Appraisal, Risk management, and, Asset Information*	http://www.msmnsw.treasury.nsw.gov.au/tam/tam-assess	No
Gateway Review Process	http://www.treasury.nsw.gov.au/gateway/gateway_introduction	No
Code of Practice for Procurement	http://www.nswprocurment.com.au/government-procurment-frameworks.aspx	No
Conservation Management Plan Guidelines	http://www.heritage.nsw.gov.au/docs/hm_conservationman2002.pdf	No
Australia Health Facility Guideline	http://www.healthfacilityguidelines.com.au/	No
Standard Facility Cost Planning Guidelines	http://www.healthfacilityguidelines.com.au/hfg_content/guidlines/hfg_cost_planning_guidelines_definiton_7_13.pdf	No
Health facility Briefing System	http://www.healthdesign.com.au/nsw.hfg/hfbs.htm	No
NSW Health Interim Guidelines for Economic Appraisal of Capital Projects (June 2008)	Provided by HI on request	No
Health Infrastructure CAD Requirements	http://www.hinifr.health.nsw.gov.au/statement_of_business_ethicsa	No
Wagga Wagga Base Hospital Stage 1 Redevelopment – Business Case v1.7, 9 Dec 2010	Annexure 1 of the Planning and Delivery Agreement (full doc supplied by HI on CD)	Yes
Wagga Wagga Base Hospital Existing Drawings – Nov 2010	Full doc supplied by HI on CD	Yes

PART C: DESIGN MANAGEMENT METHODOLOGY

1.0 Key Personnel – Planning Phase

1.1 Project Director

NAME	ROLE & RESPONSIBILITIES	PROJECT EXPERIENCE	LEVEL OF COMMITMENT	QUALIFICATIONS	PHONE	MOBILE	EMAIL
David Beslich	**Project Director** Planning Phase contract negotiations Staging and delivery strategies Planning Phase reporting Submission and negotiation of the GMP Contract	Project Director: Orange Hospital & Associated Health Services - PPP Villawood Immigration Detention Facility - MC BER South Western Sydney - MC Schools - PPP 1 & Schools - PPP 2	As Required to support the Project Team	Bachelor of Architecture	02 9770 7600	0411 752 442	dbeslich@hansenyuncken.com.au

1.2 State Executive & Corporate Support

NAME	ROLE & RESPONSIBILITIES	PROJECT EXPERIENCE	LEVEL OF COMMITMENT	QUALIFICATIONS	PHONE	MOBILE	EMAIL
Chris Bulmer	**NSW State & ACT Manager** Responsible for resourcing the planning phase and executive support	General Management over all projects delivered by Hansen Yuncken over last five years, including six health development projects	As Required to support the Project Team	Bachelor of Applied Science (Building Services) Graduate Diploma in Land Economy Carpentry & Joinery Trade Certificate Fellow, Australian Institute of Building (FAIB) Associate, Australian Property Institute (AAPI) Member, Australian Institute of Management (AIMM) Vice President – Australian Institute of Building, NSW Chapter Justice of the Peace, NSW (application pending)	02 9770 7600	0412 997 173	cbulmer@hansenyuncken.com.au
Chris Bellemore	**NSW Construction Director** Staging, site planning, construction systems and resource planning	General management of construction teams on all projects over last five years, including six health development projects	As Required to support the Project Team	Carpentry & Joinery Trade Certificate (Hons) Clerk of Works Certificate Licensed Builder (Gold Licence NSW)	02 9770 7600	0401 997 840	cbellemore@hansenyuncken.com.au
Thien Foo Ko	**NSW Commercial Manager** Planning Phase Contract, Design Consultant novation, GMP Contract	Contract, Insurance and Financial management over all projects delivered over last three years	As Required to support the Project Team	Bachelor of Building Construction Management Grad Diploma in Construction Law	02 9770 7600	0413 277 470	TKo@hansenyuncken.com.au

NAME	ROLE & RESPONSIBILITIES	PROJECT EXPERIENCE	LEVEL OF COMMITMENT	QUALIFICATIONS	PHONE	MOBILE	EMAIL
John Wilson	NSW Operations Manager Overarching management of systems development and implementation Management systems audit	25 years' experience in leading the development and implementation of Hansen Yuncken Management Systems	As Required to support the Project Team	Carpentry & Joinery Trade Certificate Personnel Administration (TAFE) Industry specific studies	02 9770 7600	0411 752 389	jwilson@hansenyuncken.com.au
Adam Towner	**NSW Design Manager** Negotiation with design consultants Overarching design management control	8 years' experience in Design Management leadership across all D&C projects, including Orange Hospital & Associated Health Services and the Medica Centre, Hurstville	As Required to support the Project Team	Bachelor of Science Construction Management Green Star Accredited Professional	02 9770 7600	0423 029 087	atowner@hansenyuncken.com.au
John Goodchap	**National Manager, Health** Health Adviser / Peer Review Buildability / Staging / Value Add Input	26 years' health experience in senior positions on both the client and contractor sides in the public and private sectors. Initial 10 years as Construction Manager within large healthcare organisation, Health Care of Australia (HCOA) provided training in all aspects of health care operations. Hands-on design & delivery experience in over 50 health/medical research projects.	As Required to support the Project Team	Carpentry & Joinery Trade Certificate Licensed Builder (Gold Licence NSW) Member Australian Institute of Management	02 9770 7600	0419 264 799	jgoodchap@hansenyuncken.com.au

1.3 Design Team – Planning Phase

NAME	ROLE & RESPONSIBILITIES	PROJECT EXPERIENCE	LEVEL OF COMMITMENT	QUALIFICATIONS	PHONE	MOBILE	EMAIL
John Hunt	**Senior Project Manager** **Stakeholder Manager - HI** Project lead throughout Planning & Delivery Phases Overarching control of all activities and resources on site Direct liaison with Health Infrastructure and communication with Planning teams	Over 35 years construction of all forms of projects including Latrobe Hospital, Prince of Wales Spinal Rehabilitation Unit and several major public buildings. Last three years, Senior Project Manager for delivery of the Orange Hospital and Associated Health Facilities PPP	100%	Chartered Institute of Building Final Examinations Postgraduate Master of Building Studies Master of Business Administration	02 9770 7600	0411 094 678	jhunt@hansenyuncken.com.au

NAME	ROLE & RESPONSIBILITIES	PROJECT EXPERIENCE	LEVEL OF COMMITMENT	QUALIFICATIONS	PHONE	MOBILE	EMAIL
Keith Mackinder	**Estimating Manager** Co-ordination of GMP Price preparation including liaison with subcontractors	Over 40 years of experience as an Estimator with a vast knowledge of current construction rates and the subcontract market. Recently prepared a tender for Bathurst Hospital additions and previously worked on tenders for projects at Prince of Wales Hospital, Nepean Hospital, Campbelltown Hospital and Wollongong Hospital.	50%	Bachelor of Applied Science (Building) Hons	02 9770 7600	0419 200 702	kmackinder@hansenyuncken.com.au
Peter Gall	**Cost Planner** Point of reference for cost plan within GMP Preparation of cost plan for Stage 2B	Recent cost planner experience includes Lyell McEwin Hospital, Orange Hospital & Associated Health Services and New Royal Adelaide Hospital Managing Contractor and PPP Planning Phases, through to award of GMP	50%	Bachelor Applied Science (Building)	02 9770 7600	0418 700 281	pgall@hansenyuncken.com.au
Paul Blair	**Senior Design Manager** Management of the Design Team Management of the design procurement process Assist Principal in obtaining planning approvals	As Senior Design Manager for the Orange Hospital & Associated Health Services, maintained progress of project against milestones and budget. Also ensured that objectives relating to the quality of documentation, drawings and information required for construction were achieved. On the HMAS Creswell Defence project, led the design team in value engineering a reduction in construction costs by $5M with nil loss of function for the user groups. Very experienced in achieving safety in design, effects design has on recurrent costs and whole of life design considerations.	100%	Bachelor of Architecture Registered Architect	02 9770 7600	0439 620 646	pblair@hansenyuncken.com.au
Dominic Clifton	**Design Manager** Management of the Design Team Management of the design procurement process Assist Principal in obtaining planning approvals	Senior Project Engineer on the $250M Orange Hospital, as a client Project Manager on the $20M Manilla Combined MPS and HealthOne and as Project Engineer on the $50M Concord Mental Health. Valuable client side project management experience in aged care from the Storm and BUPA Abaglasslyn Retirement Village development projects. Previous experience managing the development of initial concepts into schematics, DA and Part 3A documentation and tender/construction documentation.	100%	Bachelor of Construction Management (Building) Hons Carpenter & Joiner	02 9770 7600	0409 580 104	dclifton@hansenyuncken.com.au

NAME	ROLE & RESPONSIBILITIES	PROJECT EXPERIENCE	LEVEL OF COMMITMENT	QUALIFICATIONS	PHONE	MOBILE	EMAIL
Adnan Diab	**Senior Services Manager** Services design and coordination Management of the Services Design Consultants	Previous involvement in numerous large scale developments through his experience working in both Australia and in the Gulf States where sustainability was a large focus. Experienced in leading large teams on complex and challenging multidisciplinary projects. Especially well-suited to projects with multiple stakeholders who rely on disruption free operations and has proven ability to carefully balance the needs of user groups to ensure the engineering services requirements of the brief are satisfied in design, construction, commissioning and maintenance.	50%	Master of Engineering Science, UNSW Bachelor of Aeronautical Engineering, UNSW	02 9770 7600	TBA	adiab@hansenyuncken.com.au
Andrew Lesh	**Services Manager - Site Based** **Stakeholder Manager - Hospital** Site investigations and reports Early Works Direct liaison with Hospital and Local Health Network representatives Together with the PM and DMs, planning, establishing and implementing the User group consultation	Most recently the Services Engineer on the Orange Hospital and Associated Health Facilities PPP project. Prior to Orange, was responsible for completion of the MPS projects in Tingha, Bingara, Merriwa and Warrialda in regional NSW. Prior to joining Hansen Yuncken, Andrew worked as a site engineer from 2005 – 2007 on the $250 million Section 84 project in Canberra.	100%	Bachelor of Engineering (Systems), Australian National University, 2004 Graduate Member, Institute of Engineers, Australia	TBA	0488 218 643	alesh@hansenyuncken.com.au
Leigh McIntosh	**ICT Manager** Management of ICT Design Value Engineering	Previously engaged on the Orange Hospital & Associated Health Services in the role of ICT Manager, responsible for managing procurement, implementation and ongoing functionality of a new LAN/WLAN and VOIP infrastructure. Also responsible for the ongoing project management and provision of technical advice throughout the preparation of the LAN/WLAN & VOIP design utilising the latest Cisco equipment to suit both the current and future requirements of NSW Health	10%	Certificate II Telecommunications Cabling Certificate III Information Technology Diploma of PC and LAN Support	TBA	TBA	TBA

NAME	ROLE & RESPONSIBILITIES	PROJECT EXPERIENCE	LEVEL OF COMMITMENT	QUALIFICATIONS	PHONE	MOBILE	EMAIL
Jeremy Ell	**Contracts Manager** Preparation of trade/supply budgets Negotiation of subcontracts and supply agreements Administration of head contract and subcontracts Monthly reporting	Commercial Manager with Hansen Yuncken for over five years. During that time he has undertaken key project start up roles for major Hansen Yuncken projects most recently the Orange Hospital and previously the Woolworths Distribution Centre. Prior to joining Hansen Yuncken, worked as an independent commercial consultant, two years with Multiplex completing the Luna Park, Sydney refurbishment and for Concrete Constructions/Walter Constructions for almost 10 years.	20%	Bachelor of Arts (History and Philosophy), University of NSW Bachelor of Building, University of NSW	02 9770 7600	0402 953 457	jell@hansenyuncken.com.au
David Uttley - Solid Support	**Programmer** Short term and look ahead programs Site planning diagrams, including diagrams and programs for Safe Work Method Monthly reporting	Solid Support is Hansen Yuncken's external consultant providing the highest quality planning services. Has proven capabilities and experience to communicate in a meaningful and practical manner.	As Required	Maintain ISO Quality Management System certification Listed as Pre-qualified Consultants (PQC) to be engaged on State and ACT Government projects.	02 9743 4666	N/A	Communications to be directed through Hansen Yuncken

2.0 Methodology for Working with the Team

2.1 Design Team Deliverables

Hansen Yuncken's Planning Phase design team will lead and coordinate the design development process. Two key Design Managers under the guidance of the Senior Project Manager and with the assistance of Services Managers, an ICT Manager and the Hansen Yuncken Executive team will implement the design management strategies as described throughout this plan to ensure that the Planning Phase is executed in a timely manner, in accordance with the Project Brief and Stakeholder requirements and to ensure the Principal of a value for money outcome.

Hansen Yuncken's design team will be responsible for:

- Managing the Design Consultants' design and documentation processes to ensure User Group Requirements are satisfied, that the design will be buildable, and that the requirements of the Project Brief are satisfied.
- Managing and co-ordinating the Design Consultants by ensuring that the planning services are undertaken in accordance with the requirements of the Planning Services Plan, the Design Development Plan and the Planning Services Program.
- Providing input to the Design to ensure Design Documents which are buildable and fit for purpose, are delivered in a timely manner and facilitate the objective of achieving the Planning Outcomes within the complexities of an operational hospital.
- Reviewing and confirming that the design assumptions used by the Design Consultants are appropriate for the purposes of the Project, including for any User Group Requirements and operational and maintenance requirements.
- Reviewing and proactively providing input into the design to ensure that the issues of safety in construction, operation and maintenance are fully considered.
- Reviewing the design packages as produced and advising upon buildability issues and any changes to the Design Documents which may result in cost savings. This may include changing the materials to be used, construction methods and staging of the works to accommodate operational requirements.
- Managing and co-coordinating the design of the Project, to ensure that the Design Documents will produce a quality product in accordance with the Project Brief and the requirements of the Agreement, including whole-of-life objectives and lessons learnt on similar Hospital projects.
- Regular reviews of Quality Management systems including external audits to ensure that the Project Team are complying with the Quality Plan and maintaining a consistently high standard with all Design Documentation.
- The Design Team will progressively review the Project Documentation and work with the Principal and Project Stakeholders to develop the design to achieve outcomes that assist with good building practice, for both off, and on-site activities. This on-going Planning Phase activity will provide advice in respect of buildability issues, including analyses of proposed construction techniques and methodology, and the impact of different options during design, construction and whole of life benefits on the cost and delivery of the Project.

2.2 Design Consultant Team

The Principals current design Consultant Team is nominated in the following table:

NAME of ORGANISATION	ROLE of ORGANISATION
Rice Daubney	Architectural Services – Coordinating Design Consultant
Sinclair Knight Mertz	Engineering Services – Civil / Structural /Services/Traffic & Transport
Phillip Chun & Associates	BCA Consultant
LFA (Pacific) Pty. Ltd.	Urban Planning
Site Image	Landscape Architect
Aitken Rowe Testing Laboratories / Douglas partners	Geotechnical Engineers
Webb, McKeown & Associates Pty. Ltd.	Flood Management
Weir Phillips	Heritage Consultant
AHMS	Archaeology
Heli Consultants Pty. Ltd. / Wilkinson Marry	Helicopter Consultant

2.3 Design Program

The Planning Phase design program is described in detail in the Planning Services Program and master works program.

3.0 Design Milestones & Review Process

3.1 Design Staging and Review

Hansen Yuncken is proposing to align the main design stage document deliverables with the User Group process and consultation. This approach will see key design review milestones occurring in sequence with the delivery of documentation to the Users. The intent will be to provide project User Groups and key Stakeholders with tangible documentation incrementally, and in advance of the programed User Group meetings/workshops. This will allow adequate critique of the documentation prior to meetings and workshops.

As above the proposed internal design reviews at key stages of document delivery will align with User and Stakeholder reviews. This will ensure the Project Design Teams progression of documentation parallels the User and Stakeholder development and assessment of functional and clinical outcomes. By maintaining a level of concurrence maximum efficiencies will be achieved and risk associated with aborted design or recurrent design modification will be alleviated. Figure 1 on the following page identifies the proposed formal review and appraisal process that will be implemented during the various phases of design development. This figure also shows the relationships between user group workshops and forecast design progression at completion of the Planning Phase.

To accommodate the proposed project phasing, the Mental Health design will be required to be prioritised and advance to ensure the Phase 1 procurement and delivery program can be met. In addition to this, design development of the generic Architectural arrangements that are consistent across the entire facility will be developed in parallel with the Phase 1 design to ensure continuity amongst departments. Whilst the design development of the General Hospital will cross over with the Mental Health the expectation is that it will be finalised post the GMP Target Date (1st December 2011).

As a centralised approach to engineering services is being developed by the Design Team and with respect to the requirement for full integration of the new buildings the services design will be delivered as a holistic package. Obviously there will be a need to drill down on the specific servicing requirements for Mental Health and General Hospital and their associated departmental break up and functional relationships. This will be accommodated in the department specific User consultation. However, to satisfy total facility assimilation with regard to servicing the design development will take a universal approach.

In a similar arrangement to the services design and consultation the development of the façade will be via a common approach. Again the Mental Health arrangements will need to be finalised in advance of the General Hospital. However, to maintain an aesthetic consistency that is realised through mutual construction techniques and methodologies the façade will be treated universally.

This method for delivery of design documentation will ultimately shape the approach to the GMP submission. Hansen Yuncken recognise the need to further discuss and agree the GMP strategy with Health Infrastructure so as to minimise design related risk and achieve best value for money costing.

The proposed design development staging will enable Hansen Yuncken's technical, value for money and buildability driven reviews to parallel The Architectural and Engineering development which in turn will reflect the Users/Stakeholders functional and clinical reviews to ensure total design development continuity.

The approach to design staging and review is further detailed in the following sections. This approach has been developed with respect to the current completeness of design documentation as at Hansen Yuncken's Planning Phase commission.

3.2 Design Documentation Process – Schematic Design Phase

The initial stage of the Design Phase involves the finalisation of the Part 3A documentation which supports the submission of the project Environmental Application to the Department of Planning. Development of these documents will see the formulation of the final Schematic Design or 50% complete documentation.

Schematic Design endorsement will be confirmed as an outcome of the final Schematic Design User Group meeting/Workshop. Final Schematic Design documents and reports will be submitted by the Principals design consultants as confirmation of the endorsement.

With consideration to the current completeness of design documentation only 1 round of User Group meetings/workshops have been scheduled for this phase. These meetings/workshops are intended to be the forum for final Schematic Design sign off which must incorporate initial coordination with the engineering schematic design documents. Hansen Yuncken acknowledges that several Architectural Schematic design meetings/workshops have previously been conducted. However, we strongly recommend that a true, accurate and complete Schematic design be presented to ensure a seamless transition to the developed and detailed design phase devoid of any requirement to re-work general arrangement.

3.3 Design Documentation Process –Design Development Phase

The Design Development Phase serves as an interim stage between the finalisation of the Schematic Design and commencement of the Detailed Design. The design development phase will be used to establish generic Architectural details that are consistent across the entire facility. This approach will help to maintain functional and clinical continuity and ensure a single approach to generic design driven by operational requirements.

As with the Schematic Design Phase a single round of User Group meetings/workshops will be conducted for the Developed Design phase. Several of these meetings/workshops will run in parallel with the Schematic Design Phase so as to achieve maximum efficiencies and design outputs.

3.4 Design Documentation Process – Detailed Design Phase

Detailed Design will commence on the understanding and acceptance of the general arrangements presented and reviewed in the Schematic and Developed Design Phases. Detailed design development will progress in line with the Planning Services Phase Program. It will require a staged process of submissions to enable adequate examination of the project complexities. This staged approach will also allow the project Stakeholders to assess the developing design in a piecemeal fashion which in turn facilitates manageable absorption and comprehension of the developing detail.

The Detailed Design Phase will incorporate three rounds of formal User Group meetings/workshops. The Detailed Design will be reviewed at agreed stages and for agreed outcomes. Hansen Yuncken's Design Managers will be responsible for carrying out internal reviews in conjunction with the Design Team having engaged with the necessary Stakeholder and User Group representatives. These reviews are intended to confirm that the design appropriately complies with Project Objectives and design requirements whilst accommodating Stakeholder and User requirements.

The Detailed Design is to be documented to meet procurement and cost plan reviews. Further User Group involvement beyond the three phase consultation program may be required post the Detailed Design phase and during the delivery phase to formalise specific finishing and technical details.

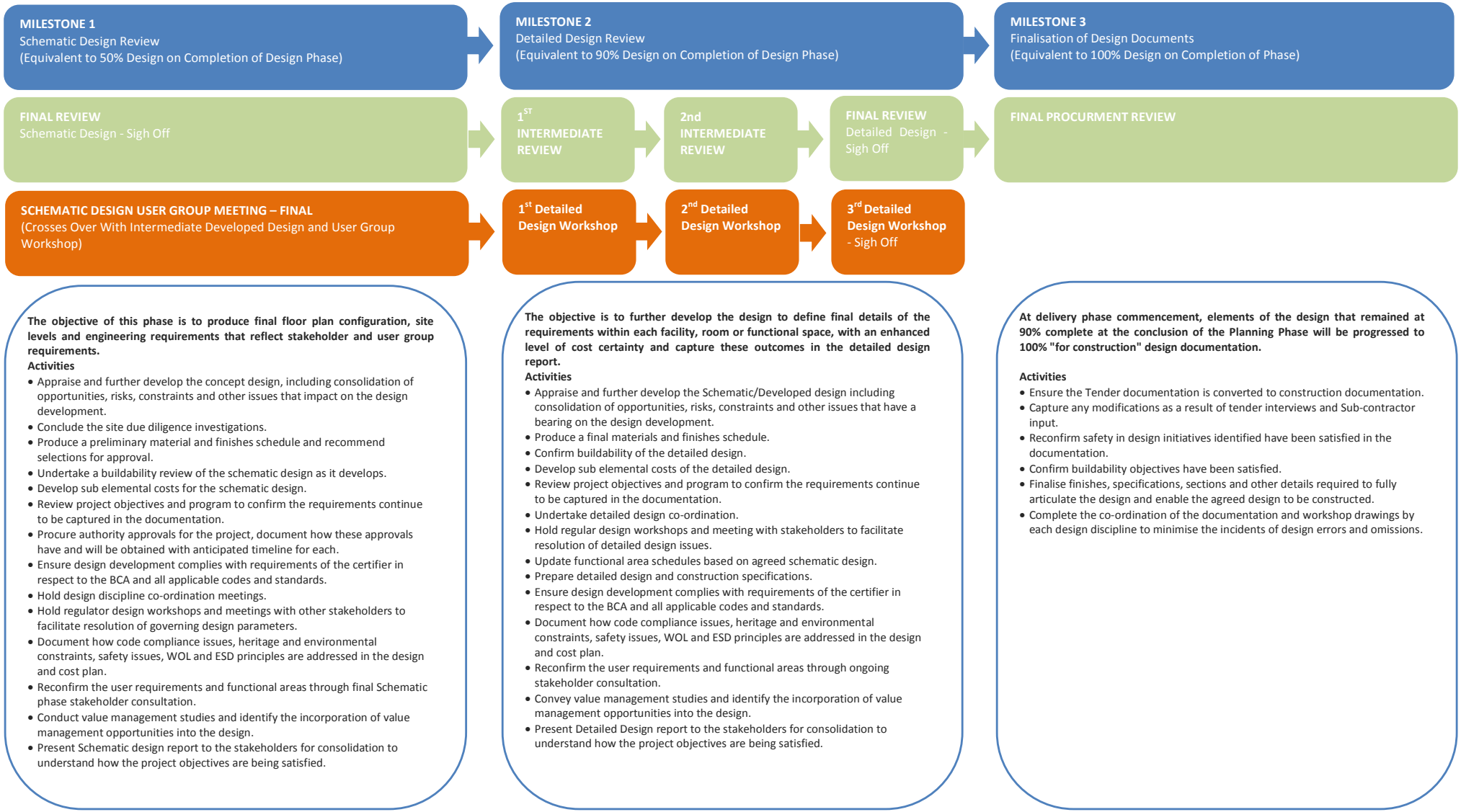

MILESTONE 1
Schematic Design Review
(Equivalent to 50% Design on Completion of Design Phase)
MILESTONE 2
Detailed Design Review
(Equivalent to 90% Design on Completion of Design Phase)
MILESTONE 3
Finalisation of Design Documents
(Equivalent to 100% Design on Completion of Phase)
FINAL REVIEW
Schematic Design - Sigh Off
1ST INTERMEDIATE REVIEW
2nd INTERMEDIATE REVIEW
FINAL REVIEW
Detailed Design - Sigh Off
FINAL PROCURMENT REVIEW
SCHEMATIC DESIGN USER GROUP MEETING – FINAL
(Crosses Over With Intermediate Developed Design and User Group Workshop)
1st Detailed Design Workshop
2nd Detailed Design Workshop
3rd Detailed Design Workshop
- Sigh Off
The objective of this phase is to produce final floor plan configuration, site levels and engineering requirements that reflect stakeholder and user group requirements.
Activities
• Appraise and further develop the concept design, including consolidation of opportunities, risks, constraints and other issues that impact on the design development.
• Conclude the site due diligence investigations.
• Produce a preliminary material and finishes schedule and recommend selections for approval.
• Undertake a buildability review of the schematic design as it develops.
• Develop sub elemental costs for the schematic design.
• Review project objectives and program to confirm the requirements continue to be captured in the documentation.
• Procure authority approvals for the project, document how these approvals have and will be obtained with anticipated timeline for each.
• Ensure design development complies with requirements of the certifier in respect to the BCA and all applicable codes and standards.
• Hold design discipline co-ordination meetings.
• Hold regulator design workshops and meetings with other stakeholders to facilitate resolution of governing design parameters.
• Document how code compliance issues, heritage and environmental constraints, safety issues, WOL and ESD principles are addressed in the design and cost plan.
• Reconfirm the user requirements and functional areas through final Schematic phase stakeholder consultation.
• Conduct value management studies and identify the incorporation of value management opportunities into the design.
• Present Schematic design report to the stakeholders for consolidation to understand how the project objectives are being satisfied.
The objective is to further develop the design to define final details of the requirements within each facility, room or functional space, with an enhanced level of cost certainty and capture these outcomes in the detailed design report.
Activities
• Appraise and further develop the Schematic/Developed design including consolidation of opportunities, risks, constraints and other issues that have a bearing on the design development.
• Produce a final materials and finishes schedule.
• Confirm buildability of the detailed design.
• Develop sub elemental costs of the detailed design.
• Review project objectives and program to confirm the requirements continue to be captured in the documentation.
• Undertake detailed design co-ordination.
• Hold regular design workshops and meeting with stakeholders to facilitate resolution of detailed design issues.
• Update functional area schedules based on agreed schematic design.
• Prepare detailed design and construction specifications.
• Ensure design development complies with requirements of the certifier in respect to the BCA and all applicable codes and standards.
• Document how code compliance issues, heritage and environmental constraints, safety issues, WOL and ESD principles are addressed in the design and cost plan.
• Reconfirm the user requirements and functional areas through ongoing stakeholder consultation.
• Convey value management studies and identify the incorporation of value management opportunities into the design.
• Present Detailed Design report to the stakeholders for consolidation to understand how the project objectives are being satisfied.
At delivery phase commencement, elements of the design that remained at 90% complete at the conclusion of the Planning Phase will be progressed to 100% "for construction" design documentation.
Activities
• Ensure the Tender documentation is converted to construction documentation.
• Capture any modifications as a result of tender interviews and Sub-contractor input.
• Reconfirm safety in design initiatives identified have been satisfied in the documentation.
• Confirm buildability objectives have been satisfied.
• Finalise finishes, specifications, sections and other details required to fully articulate the design and enable the agreed design to be constructed.
• Complete the co-ordination of the documentation and workshop drawings by each design discipline to minimise the incidents of design errors and omissions.
PHASE 1 (MENTAL HEALTH) DESIGN PROGRESSION - PLANNING PHASE
PHASE 1 PROCUREMENT - CONSTRUCTION
PHASE 2 (GENERAL HOSPITAL) DESIGN PROGRESSION - PLANNING PHASE

Figure 1

3.5 Design Development and User Group Deliverables

The following tables set out the design team inputs required to achieve the User Group meetings/workshop outputs that are required to facilitate the planned progression of design development. The following table should be read in conjunction with User Group Schedule and Calender as displayed in Part C, Section 7.8.

DESIGN / USER GROUP PHASING	USUER GROUP MEETING REFERENCE	MEETING REFERENCE	DESIGN TEAM INPUTS	USER GROUP/STAKHOLDER INPUTS	CONSULTATION OBJECTIVES (OUTPUTS)
SCHIMATIC DESIGN PHASE	Departmental Specific	SD - 1	Provide Architectural Site Plan – 1:500 Provide Floor Plates (GA's) – 1:250 Provide Draft Fire Compartment Drawings – 1:250 Draft Room Layout Sheets and RDS – 1:50 Draft Finishes sample board	Attendance – Design Review – Sign off	The objective of these workshops is to present the Macro-Planning (broad departmental inter-relationships), and provide an overview of the preliminary micro planning within each of the departments. This period will allow the Users to consider the macro planning and provide sign-off. It will also provide department reps an opportunity to review the micro planning as a lead into the first of the Design Development Meetings. Milestone sign-off of Macro-Planning. Sign-off to be provided subject to any comments noted & recorded at the meeting
	Services Arrangements	SD - 1	Provide Draft Site Plan – 1:500 or 1:200	Attendance – Design Review – Sign off	
	External Architectural Arrangements	SD - 1	Provide Architectural Site Plan – 1:200 Provide Roof Plan 1:250 Draft Finishes sample board	Attendance – Design Review – Sign off	
	Facade	SD - 1	Provide External Elevations – 1:250 Provide Overall Building Sections – 1:250	Attendance – Design Review – Sign off	

DESIGN / USER GROUP PHASING	USUER GROUP MEETING REFERENCE	MEETING REFERENCE	DESIGN TEAM INPUTS	USER GROUP/STAKHOLDER INPUTS	CONSULTATION OBJECTIVES (OUTPUTS)
DEVELOPED DESIGN PHASE	Generic Architectural Arrangements	DDev - 1	Provide Floor Plates (GA's) – 1:250 Draft Room Layout Sheets and RDS – 1:50 Draft Generic Internal Elevations – 1:50	Attendance – Design Review	
	Specific Architectural Arrangements	DDev - 1	Provide Floor Plates (GA's) – 1:250 Draft Room Layout Sheets and RDS – 1:50 Draft Generic Internal Elevations – 1:50 Provide sketch details (options)	Attendance – Design Review	The Objective of these workshops is to Review rooms that are to be developed as generic rooms across the project, eg., bed-rooms, utilities, etc to facilitate a universal functional and operational approach to standard Architectural arrangements.
	Departmental Specific	DDev - 1	Provide Updated Floor Plates (GA's) – 1:250 Provide Updated Fire Compartment Drawings – 1:250 Provide Updated Room Layout Sheets and RDS – 1:50 Updated Finishes sample board	Attendance – Design Review	This period will allow the Users to consider the preliminary detail for generic arrangements which will form the backbone of the departmental set up across the entire facility. No formal sign offs are to be sought during this phase.
	Services Arrangements	DDev - 1	Provide Updated Site Plan – 1:500 or 1:200 Provide Updated Architectural Floor Plates (GA's) – 1:250 Provide Updated Architectural Fire Compartment Drawings – 1:250 Introduce single Line Diagrams (Schematic)	Attendance – Design Review	

DESIGN / USER GROUP PHASING	USUER GROUP MEETING REFERENCE	MEETING REFERENCE	DESIGN TEAM INPUTS	USER GROUP/STAKHOLDER INPUTS	CONSULTATION OBJECTIVES (OUTPUTS)
DETAILED DESIGN PHASE 1	Generic Architectural Arrangements	DD - 1	Provide Updated/Final Floor Plates (GA's) – 1:250 Provide Updated Room Layout Sheets and RDS – 1:50 Provide Updated Generic Internal Elevations – 1:50 Introduce Draft 'Kit of Parts' (Generic Vertical Control) – 1:20	Attendance – Design Review	The Objective of these workshops is to direct the Users focus toward the emerging detail that will be introduced as a result of both the Schematic and Developed design phases. The initial Detailed Design workshops will see the finalisation of the general arrangement layouts a will be the first opportunity for User representatives to move beyond clinical and functional relationships and commence detail planning. No formal sign offs are to be sought during this phase. However, with the onset of the detail planning significant feedback will be required.
	Specific Architectural Arrangements	DD - 1	Provide Updated Room Layout Sheets and RDS – 1:50 Provide Updated Generic Internal Elevations – 1:50 Introduce Draft 'Kit of Parts' (Generic Vertical Control) – 1:20	Attendance – Design Review	
	Departmental Specific	DD - 1	Provide Updated/Final Floor Plates (GA's) – 1:250 Provide Updated Room Layout Sheets and RDS – 1:50 Introduce room specific Internal Elevations – 1:50 Introduce Draft 'Kit of Parts' (Generic Vertical Control) – 1:20 Introduce Draft Fit Out Plans – 1:50 Introduce Draft Floor and Partition Plans – 1:100 Introduce Draft Reflected Ceiling Plans – 1:50 Introduce Draft Finishes Plans – 1:50 Introduce Draft Item Control Schedule	Attendance – Design Review	
	Services Arrangements	DD - 1	Provide Updated/Final Site Plan – 1:500 Update single line diagrams (Schematic) Introduce Draft Services General Arrangements – 1:100 Introduce Reflected Ceiling Plans – 1:00 Introduce fit out plans - 1:50	Attendance – Design Review	
	External Architectural Arrangements	DD - 1	Provide Updated/Final Architectural Site Plan – 1:200 Provide Updated/Final Roof Plan 1:250 Introduce Stair plans/sections – 1:50 Provide concept landscape Plans – 1:250	Attendance – Design Review	
	Facade	DD - 1	Provide Updated External Elevations – 1:250 Provide Updated Overall Building Sections – 1:250 Introduce Detail façade Wall Sections – 1:20 Introduce Detail Roof Plans – 1:100 Present Final Finishes sample board	Attendance – Design Review	

DESIGN / USER GROUP PHASING	USUER GROUP MEETING REFERENCE	MEETING REFERENCE	DESIGN TEAM INPUTS	USER GROUP/STAKHOLDER INPUTS	CONSULTATION OBJECTIVES (OUTPUTS)
DETAILED DESIGN PHASE 2	Generic Architectural Arrangements	DD - 2	Provide Updated Room Layout Sheets and RDS – 1:50 Provide Updated Generic Internal Elevations – 1:50 Provide Updated 'Kit of Parts' (Generic Vertical Control) – 1:20 Introduce Draft Finishes Schedule	Attendance – Design Review	
	Specific Architectural Arrangements	DD - 2	Provide Updated Room Layout Sheets and RDS – 1:50 Provide Updated Generic Internal Elevations – 1:50 Provide Updated 'Kit of Parts' (Generic Vertical Control) – 1:20 Introduce Draft Window & Door/Hardware Schedule	Attendance – Design Review	
	Departmental Specific	DD - 2	Provide Updated Room Layout Sheets and RDS – 1:50 Provide Updated room specific Internal Elevations – 1:50 Provide Updated 'Kit of Parts' (Generic Vertical Control) – 1:20 Provide Updated Fit Out Plans – 1:50 Provide Updated Floor and Partition Plans – 1:100 Provide Updated Reflected Ceiling Plans – 1:50 Provide Updated Finishes Plans – 1:50 Provide Updated Item Control Schedule Introduce Draft Partition Details/Sections – 1:10 & 1:5 Introduce Draft Ceiling Details/Sections – 1:10 & 1:5 Introduce Draft Standard and Special Joinery Details – 1:5, 1:10 & 1:20 Introduce Stair plans/sections – 1:50 Introduce Draft Door & Window details – 1:10 & 1:5 Introduce Draft Metalwork Details – 1:5, 1:10 & 1:20 Introduce Draft Specifications	Attendance – Design Review	The Objective of these workshops is to progress and further develop the detail design that was established from the first detailed design workshops. More specific detail will be released that will require the users to drill down on their finite operational needs and requirements to facilitate development of specific detail. Again, no formal sign offs are to be sought during this phase. In saying this design team will be seeking preliminary validation of the developed detailed to act as a precursor to the final phase of consultation.
	Services Arrangements	DD - 2	Provide Updated General Arrangements – 1:100 Provide Updated Reflected Ceiling Plans – 1:00 Finalise single line diagrams (Schematic) Provide Updated Fit Out Plans 1:50 Introduce Draft Specifications	Attendance – Design Review	

DESIGN / USER GROUP PHASING	USUER GROUP MEETING REFERENCE	MEETING REFERENCE	DESIGN TEAM INPUTS	USER GROUP/STAKHOLDER INPUTS	CONSULTATION OBJECTIVES (OUTPUTS)
DETAILED DESIGN PHASE 3	Generic Architectural Arrangements	DD - 3	Provide Final Room Layout Sheets and RDS – 1:50 Provide Final Generic Internal Elevations – 1:50 Provide Final 'Kit of Parts' (Generic Vertical Control) – 1:20 Provide Final Finishes Schedule	Attendance – Design Review – Sign off	The Objective of these workshops is to finalise the detail to enable completion of the documentation. Final presentation of developed interior architecture and schedules to be utilised across the project. Specific detail fine tuning as a result of the previous user review will facilitate the preparation of documentation ready for tender. These workshops will seek final User Group sign offs to accommodate the preparation of 'for construction' documentation.
	Specific Architectural Arrangements	DD - 3	Provide Final Room Layout Sheets and RDS – 1:50 Provide Final Generic Internal Elevations – 1:50 Provide Final 'Kit of Parts' (Generic Vertical Control) – 1:20 Provide Final Window & Door/Hardware Schedule	Attendance – Design Review – Sign off	
	Departmental Specific	DD - 3	Provide Final Room Layout Sheets and RDS – 1:50 Provide Final room specific Internal Elevations – 1:50 Provide Final 'Kit of Parts' (Generic Vertical Control) – 1:20 Provide Final Fit Out Plans – 1:50 Provide Final Floor and Partition Plans – 1:100 Provide Final Reflected Ceiling Plans – 1:50 Provide Final Finishes Plans – 1:50 Provide Final Item Control Schedule Provide Final Partition Details/Sections – 1:10 & 1:5 Provide Final Ceiling Details/Sections – 1:10 & 1:5 Provide Final Standard and Special Joinery Details – 1:5, 1:10 & 1:20 Provide Final plans/sections – 1:50 Provide Final Door & Window details – 1:10 & 1:5 Provide Final Metalwork Details – 1:5, 1:10 & 1:20 Provide Final Specifications	Attendance – Design Review – Sign off	
	Services Arrangements	DD - 3	Provide Final General Arrangements – 1:100 Provide Final Reflected Ceiling Plans – 1:00 Provide Final Fit Out Plans 1:50 Provide Final Specifications	Attendance – Design Review – Sign off	
	External Architectural Arrangements	DD - 3	Provide Final Roof Plan 1:250 Provide Final plans/sections – 1:50 Provide Final landscape Plans – 1:250 Provide Final Sections/Details 1:10 & 1:20	Attendance – Design Review – Sign off	

3.6 Early Works Design Packages

It is anticipated that a package of Early Works design documents will be prepared to enable construction to proceed in parallel to the Schematic and Developed design phases. Specific documentation will be required to support planning applications under the Infrastructure State Environmental Planning Policy (ISEPP). This documentation will also need to support trade procurement during the latter half of 2011 which is reflected in the Planning Services Phase program.

3.7 Response to Statutory Consent Conditions

It is understood that the Project Part 3A application will be submitted in the near future and as such consideration should be given to the possibility of having to modify or adjust certain parts of the design to suit internal reviews conducted by the Department of Planning and associated consultative Authorities.

Several key stages of the Part 3A process have been identified that may require document modification, adjustment or additional design. The Part 3A process has been detailed in the Planning Services Program with timeframes attached so as to give a realistic forecast for consent approval and to factor in periods for design re-work or addition. The table below summarises the various stages under a Part 3A arrangement and highlights were possible design re-work or additions may be required.

PART 3A MILESTONES	POSSIBLE ADDITIONAL DESIGN REQUIRMENTS
Department of Planning issues Director Generals Requirements	Design Team may need to respond to conditions not catered for in the current design to allow finalisation of Draft Environmental Assessment
Department of Planning conducts Test of Adequacy and issues report	Design Team may need to respond to assessment criteria established during the Test of Adequacy
Department of Planning issues exhibition submissions	Design Team may need to respond to Authority or public submissions

4.0 Design Management & Administration

4.1 Design Coordination and Checking

Hansen Yuncken's Design Managers will chair weekly Design Team meetings. The intent of Design Team meetings will be to ensure that project objectives with respect to design inputs, contract requirements, statutory compliance, constructability, Cost Plan and programme are being met.

Separate impromptu design meetings will be held on a needs basis to cover off on any specific detailing or complexities. Design coordination meetings will take focus on the 'at hand' issues and development staging. These meetings will also be used to drive design progression and ensure design milestones are being achieved in alignment with key program deliverables. Information flow and meeting content will be managed and captured through Design Team meeting minutes with clear and concise actions and timeframes. Design Team meeting actions will be statused weekly to ensure adequate progression and closure of issues.

Hansen Yuncken's Cost Planners shall attend a proportion of the Design Team meetings to ensure budgets are maintained and value engineering options are integral criteria to key decision making. Our Cost Planners will work with the Principals appointed Cost Consultant to ensure estimates are indicative of forecast trade pricing and generally to ensure budget surety.

Hansen Yuncken's Senior Project Manager will also attend a proportion of the Design Team Meetings to ensure design outcomes complement buildability, project phasing, project budgets and on a holistic level, Project Objectives.

As a supplement to these meeting and aside from the formal review milestones the Design Managers will adopt a continuous approach to design and document analysis and appraisal. These informal reviews will be carried out in conjunction with the design consultants. The purpose of these reviews is to improve the document completeness and accuracy with an aim to mitigate the number of design errors and/or omissions and to guarantee 'fit for purpose' outputs.

4.2 Document Control

Control of Design Documentation shall be in accordance with the Project Document Control procedures detailed in the Planning Services Plan. This procedure nominates the use of the Aconex WebBased document management system to control this process.

The Aconex database will be used to register, store and transmit controlled design documentation.

In addition to this Aconex will be used for general project correspondence and will provide a centralised project database with secure access for all project related documents.

4.3 Design Non-conformance

Detection, analysis, resolution and reporting of design non-conformances shall be in accordance with Hansen Yuncken's Quality Assurance procedures. Design consultants along with Health Infrastructure will be notified formally of any non-conformances with the subject matter raised and discussed during both Project Team and Design Team meetings to ensure acceptable remedies are identified and agreed solutions met.

This process will coincide with the upkeep of the Design Departures Schedule which will track design development decisions that impact or fall outside of the Project Brief and/or associated design standards.

4.4 Design Changes and Modification

Design Modifications and or change can be anticipated to occur during the early Schematic and Design Development phase. Further to this some design modification and/or change may occur up until the issue of "For Construction" documents.

Hansen Yuncken will establish a formal process for design modification and change that will nominate formal process for approval, review and acceptance by the Principal. Whilst we acknowledge the presence of change and modification during design development we strictly enforce full consultation with the Principal and wider project Stakeholders to ensure ample opportunity for appraisal and acceptance (or rejection) is offered.

It is recognised that during the design phase, designs may be re-assessed by the Project Team and rationalised whilst still maintaining the intent, function and quality of the original design.

Final decision making is ultimately the Principals responsibility. However, Hansen Yuncken will support this decision making through informed recommendations and prior assessment. Any modification which is likely to incur costs shall be immediately referred to Health Infrastructure.

It is recommended that a major design changes register be maintained in connection with the Design Departures Schedule. As this project will incorporate many Stakeholders and complexities it is critical that major design related decision making is tracked and recorded for the duration of the project.

All design documents will include for a change register to support the documentation of change. Amendments shall be clouded on the drawing and recorded in the change register by the design consultant. Significant changes will be recorded in the major design changes register.

The following details will be submitted to the Principal for review and final determination and/or comment:

- Description of the revision
- What generated the revision, eg. change to client requirement, user request etc
- Necessary Coordination with other Consultant and with which Consultant
- Rationalisation of details
- Timeframe for completion of details and correction or errors
- Any Authority requirements.

Client initiated changes shall be made by written notice or Project Managers Instruction (PMI). Such notice shall be deemed to be a "Design Brief". All Project Managers Instructions issued during the Design Phase shall be distributed to all Consultants with instruction for action as necessary.

4.5 Consultant Design Verification and Certification

Each consultant shall be responsible for verifying that their design output meets the design input requirements. The design consultants shall provide (in accordance with their scope) certificates to certify that their work is in accordance with the project requirements and is fit for its intended purpose.

Notwithstanding any of the above Hansen Yuncken acknowledges its responsibility to warrant the design.

4.6 Quality System Compliance and Design Audits

The Design Management of this Project will be managed, in compliance with Hansen Yuncken's ISO 9001 – Quality Systems Accreditation. Compliance for assurance of Quality Systems within the Design Management process will be undertaken incompliance with Hansen Yuncken's Quality Assurance procedures.

In line with these procedures an Audit Schedule shall be applied to the project processes including Design.

Hansen Yuncken at the request of the Principal will conduct quality systems audits on any or all of the design consultants to ensure adequate Quality Control and Quality Assurance are being maintained.

Each principal design consultant shall also provide and maintain a project specific Quality Assurance System that complies with the requirements of AS/NZS ISO 9001:2000 as appropriate to the Services, and comply with all requirements and obligations of the Hansen Yuncken's Design Management Plan together with any other obligations in terms of the Contract.

4.7 Design Consultant Performance

Hansen Yuncken will submit the following Design Consultant Assessment with its monthly report. The Principal will be immediately notified of any performance related issue whether it is contractual or other. Hansen Yuncken acknowledges the conditions of design consultant engagement during the Planning Phase and seeks to represent Health Infrastructure as an extension of their internal resource. Design Consultants will be notified of any performance issues and instructed to enforce corrective action as need be.

DESIGN CONSULTANT PERFORMANCE ASSESSMENT

To be completed during the Planning Phase and submitted with Hansen Yunckens monthly Report

PROJECT:		JOB No:		ASSESSED BY	Name(s):	Date:

DESIGN CONSULTANT				PERFORMANCE RATING (1 – Excellent, 2 – Good, 3 – Average, 4 – Poor, 5 – Bad)												COMMENTS
Company	Principal Contact (Name)	Discipline (Architect, Mechanical, Civil etc)	Contract Value ($1000's)	Administration	Coordination	Cost Management	Experience/ Expertise	Cost Effectiveness	Presentation Capability	Quality of Deliverables	Resources	Scope Management	Time Management	General Attitude	Value for Money	

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Figure 2

Figure 2 represents the performance assessment tool as outlined in Hansen Yuncken's QA procedures

4.8 ICT Design Management

Based upon the previous Orange Health Service PPP project, one of the standout areas for improvement in the process in its entirety is that of end to end ownership of the Project's ICT component by all parties involved.

To address this identified shortcoming Hansen Yuncken recommends the engagement of a proven IT project management consultant to be involved in the IT planning and design as early as possible to provide the interface in User Group sessions and to enable the productive input by key client IT representatives. It is imperative this resource can provide the translation required to convert this input into the briefings, designs and ultimate outcomes.

Utilising our experience and with current clinical and administrative IT based healthcare systems and channelling this through a dedicated resource we can facilitate highly effective ICT User Group sessions as well as provide a further level of input into the other traditionally non-IT based systems such as fully integrated patient healthcare systems which incorporate previously disparate systems. Throughout this process we would draw upon previous NSW Health project experience to identify and engage all key client stakeholders into overall input and ownership of this process.

Following the User Group sessions we will work closely with Health Infrastructure to ensure that all briefed design requirements are included and are designed to maximise the end outcome for all parties involved.

4.9 OH&S Safety in Design

Hansen Yuncken is acutely aware of the importance to provide a design that complies with O&HS legislation, requirements and best practice. OH&S audits and reviews will be conducted on two levels to ensure the design mitigates any risk associated with either the construction or operations of the facility.

OH&S risk assessment and reviews will be conducted on the design as it develops for both

- OH&S during the delivery phase, and;
- Operational OH&S with regard to the built environment

The health and safety of Hansen Yuncken and NSW Health staff, subcontractors, suppliers and agents is paramount and needs to be considered throughout all phases of planning and delivery.

Below figure 3 details an extracts from Hansen Yuncken's safety in design performance assessment tools for OH&S risk assessment and Control during the building/delivery phase. A similar assessment tool has also been developed for operation OH&S design analysis.

DESIGN OHS RISK ASSESSMENT

PROJECT:										
HAZARD		OHS RISK LEVEL BY DESIGN PHASE							DESIGN CHANGE	
Hazards are to be reviewed at each design phase and the risks to Construction Workers assessed (see accompanying Likelihood, Consequence and Risk Class table for details).		Conceptual	50%	75%	Tender	For Construction		Hierarchy No	Where practicable, design changes are to be made to reduce class 1 (high) & 2 (medium) risks to class 3 (low) using the hierarchy of controls. Where a design change is to be made, provide a description of the change and indicate the hierarchy level adopted (see accompanying Risk Class and Hierarchy of Controls table for details).	
Assessment details	Assessment Date									
	Assessed by									
Disciplines assessed (tick relevant disciplines)	Architectural									
	Structural									
	Mechanical									
	Electrical									
	Hydraulic									
	Other									
Category	Description	RISK LEVEL (1, 2 or 3 – see Risk Table)								
Access/ egress	Access/exit point locations									
	Size/width									
	Obstructions									
Energy	Low/high energy									
	Tension/compression									
	Potential/kinetic									
	Inertia/moment									
Ergonomics	Posture whilst working									
	Manual handling									
External	Adjacent activities									
	Adjacent property/buildings									
Geotechnical	Groundwater/seepage									
	Contaminated land									
Heights/ Depths	Fall from Heights									
	Falling objects									
	Scaffolding (space)									
Position/	Too high									

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"Think About It – Safety First!"

Figure 3

5.0 Management of Design Related Risk

5.1 Design Risk Management

The extract (shown as Figure 5) on the following page from the project risk matrix developed during our tender submission identifies the significant design risks, and the control strategy that will be utilised to manage the risk. Hansen Yuncken's Planning Phase Team will be responsible for implementation, monitoring and reporting on any increase or changed design risk profile.

Risk management on a holistic project level will be conducted during the Planning phase and is further described in the Planning Services Plan.

We have studied the client's risk matrix and undertaken a risk review of the major design related risks. Following is our risk matrix addressing those risks which directly impact on achievement of the Project Outcomes and proposed outline management and mitigation strategies. The risk register is based on the following risk class calculator (shown as figure 4).

RISK CLASS CALCULATOR:

RISK CLASS CALCULATOR		Likelihood (L)					Description of Consequence
		A	B	C	D	E	
		Very Likely	Likely	Possible	Remotely Possible	Very Unlikely	
Consequence (C)	Significant	1	1	1	2	2	Potentially the Project will not start or be completed.
	Major	1	1	2	2	2	The Project objectives are not met.
	Moderate	1	2	2	2	3	Significant project delays and excessive costs.
	Minor	2	2	2	3	3	Project delays and minor changes to the objectives.
	Insignificant	2	2	3	3	3	Minor project delays but objectives are achieved

Figure 4

Risk				Consequence	RISK			CONTROL MEASURES		RISK
No	Phase	Description	Project Objective affected		L	C	Class	Description	Responsible	Residua
1	Design	Modifications in scope to meet budget results in compromise of facility and/or service.	(a), (d), (e), (h), (j)	The Project objectives are not met.	C	1	1	Required scope changes to meet budget to be agreed with all stakeholders. Project objectives to be considered through a value engineering process	DT / HY / Health Infrastructure (HI) NSW Health Dept. (NSWHD)	3
2	Design	Inappropriate user level representation.	(a), (b), (d), (e), (f), (g), (k), (l)	Increased design phase completion date, increased GMP completion date, increased GMP budget	C	1	1	Identify all user groups at an early stage. Provide training and briefing on the design process and set target dates for milestones to be achieved. Manage the process	UG / DT / HY	3
3	Design	Lack of/poorly set out infrastructure.	(i), (e), (f), (g), (h), (j)	Project objectives not met. High operational/recurrent costs	C	1	1	Ensure all user groups and stakeholders are involved in the design process. Facilities and maintenance mgt. to be consulted.	DT/UG/SH	3
4	Design	Different user group depts. do not give a good collective briefing to the design team.	(a), (b), (c), (d), (e), (g), (h)	Project objectives not met. High operational/recurrent costs	C	1	1	Develop operational models within the functional briefs with consultation and representation from all user groups	UG / HY/DT	3
5	Design	Facility does not match user requirements/expectations.	(a), (b), (c), (d), (e), (f), (g), (h)	Facility does not meet the requirements of users. Project Objectives are not met.	D	2	2	Ensure that all design phase milestones are achieved and that the design team, user groups and stakeholders participate in achieving these goals.	DT / UG / HY	3
6	Design	Design does not consider maintenance of the facilities.	(b), (e), (h), (j)	Increased maintenance costs and unsafe working environments.	C	2	2	Ensure maintenance and facilities managers are consulted as part of the user group consultation process. Contractor to be involved in early design process.	All	3
7	Design	Existing infrastructure unable to support new facilities.	(d), (e), (h), (j), (k)	Higher infrastructure costs. Increased GMP budget and increased GMP completion date	C	1	1	Early investigations with level 3 contractors/services engineers and facilities managers. Use construction contingency to facilitate additional service upgrades	All	3
8	Design	Building has recurring costs due to out dated building services.	(k), (l)	High recurrent costs	A	2	1	Investigate the costs of updating the current infrastructure. Consider incorporating Central Plant.	HY/DT	3
9	Design	Design does not permit future expansion of services that are projected to grow beyond the 2021 planning horizon.	(a), (b), (c), (d), (e), (h), (i), (j)	Project objectives are not met. Limited future opportunities. Increased costs for future developments.	B	2	1	Identify future growth areas within the facility. Allocate areas for future growth development and ensure that infrastructure is installed to service these areas.	DT/HY/UG	3
10	Design	Facility solution is not flexible or adaptable to reconfiguration in the future except at significant cost.	(a), (b), (c), (d), (e), (h), (i), (j)	Limited future opportunities. Future stages are more costly.	C	2	2	Design to recreate opportunities for future-proofing/future expansion space (soft expansion zones, appropriate locations for shell, and flexible/modular design).	ALL	3
11	Design	Inadequate user consultation limits value of process and potentially misses constructive input.	((a), (b), (c), (d), (e), (h), (j)	Project objectives are not met. High recurrent costs. The facility does not work as intended.	C	4	2	Identify all user groups at an early stage. Provide training and briefing on the design process and set target dates for milestones to be achieved. Manage the process	UG/HY/DT	3
14	Design/ Construct.	Unidentified latent conditions	(k), (l)	Increased GMP budget and increased GMP completion date	C	2	2	Build contingency into project budget and program for latent conditions. Analyse the site for potential risks and commence early mitigation procedures	All	3
17	Design/ Construct.	Local Authority does not approve the proposed Traffic Management Plan.	(k), (j)	Delays in both design and construction phases. Increased GMP Budget as a result	C	2	2	Commence dialogue with statutory authorities at beginning of project. Get early understanding of timeframes for planning process and approvals.	DT / HY / UG	3
19	Design/ Construct.	Facility Solution creates OH&S issues due to design/specification/construction errors resulting in serious injury.	(a), (b), (e), (f), (h)	Facility does not meet the required project objectives. Injury or loss of life. Increased costs for reworking and increased GMP budget.	D	1	2	User groups to advise on operational requirements and design team to use due diligence and adhere to BCA requirements in all areas. Contractor to ensure quality assurance procedures are completed during construction	DT/UG/HY	3

Figure 5

6.0 Methodologies and Strategies for Collaboration

6.1 Introduction

The following section of the Design Development Plan should be read in connection with Part E of the Planning Services Plan: *Stakeholder Communications Plan*. The Stakeholder Communications Plan provides a framework for communications and engagement with all stakeholders associated with the Wagga Wagga Hospital Redevelopment project. As a continuation of the Stakeholder Communication Plan the Design Development Plan aims to drill down on the specific methodologies for communication and collaboration amongst the Project Team and wider Stakeholder groups.

The following section of the Design Development Plan endeavours to provide Hansen Yuncken's methodology for:

- Detail communications levels, methods and strategies for the Stakeholders and User Groups to be consulted
- Identify the agencies to be informed and engaged, and supported by the Plan, include definition of their roles, responsibilities and input requirements
- Clearly define lines of communication and responsibilities
- Detail the practical implementation of approved engagement and communications protocols and strategy to meet the overall Project strategy
- Detail the Stakeholders and User Groups to be consulted and invited to design reviews; workshops and meetings to be conducted to gather and review User Requirements; detail the schedule of workshops and meetings and the information to be gathered from or provided to each User Group
- Detail the practical implementation of the engagement and communications with stakeholders to meet the overall project strategy
- Detail Stakeholder lists broken down to the Works Element including those that require approval sign-off, review or lower orders of input
- Define the process to identify and consult with the Stakeholders and the management of design changes requested by Stakeholders

The criteria as outlined above will also be structured with sufficient flexibility to enable regular review and adjustment to accommodate the evolution of the Project and to the changing needs of Health Infrastructure

6.2 Collaborative Contracting at an Executive Level

We appreciate Health Infrastructures requirement to procure and rely on our skills to develop the design and associated documentation for the Delivery Phase to a challenging time frame and budget. To ensure successful delivery of the project outcomes Hansen Yuncken will maintain throughout the Planning Phase, the team as nominated in Part C, Section 1. This team has proven experience in collaborative contracting with specific knowledge of the Health sector, and having capability in delivering the Hansen Yuncken's obligations for the Project.

David Beslich, Project Director and Company Director of Hansen Yuncken will monitor the cultural strength of the collaborative relationship with Health Infrastructure and the wider project Stakeholder groups for the Project on a routine basis and will provide relationship feedback to continually evaluate and improve collaborative processes. David, will be available to assist in the resolution of any material relationship issues should it be required.

Further to the above mentioned and in alignment with the Planning and Delivery Phase Agreement formal Representation for Health Infrastructure and Hansen Yuncken will be satisfied by the Principals and Contractors representatives as nominated below:

Principals Representative:

Name: Jeremy Oakes

Position: Project Director, Health Infrastructure

Facsimile: 02 8904 1377

Telephone: 02 9978 5455

Email: Jeremy.oakes@hinfa.health.nsw.gov.au

Principals Representative:

Name: Chris Bulmer

Position: NSW State & ACT Manager, Hansen Yuncken Pty Ltd

Facsimile: 02 9770 7601

Telephone: 02 9770 7600

Email: cbulmer@hansenyuncken.com.au

The Contractors Representative will be available at all times during the Planning and Delivery Phases of the Project and will assist the Project Director in providing leadership and the establishment of a positive project culture. Both the Project Director and Contractors Representative will be supported by the NSW Executive team who in turn will provide high level support to the Project Team.

6.3 Collaborative Contracting at a Project Level

At a more focused project level John Hunt, Senior Project Manager will be responsible for those stakeholders that are generally within the immediate sphere of influence and direction. He is generally responsible for the tier of stakeholders known as the client and executive groups. Ultimately, John will bring together the whole understanding of project objectives and high level stakeholder management issues within the project team.

Assisting John in is management off and collaboration with project Stakeholders will be Design Managers Paul Blair and Dominic Clifton. The Design Managers will act as the conduit between the design consultant team, the Principal and the user group representatives to ensure both Principal and user requirements are identified assessed and realised within the design. As a continuation of this project team support Andrew Lesh, Service Manager will also act as the site based Stakeholder and Communications Manager to ensure at a local level Stakeholders have a tangible sounding board and point of contact.

Our choice of Executive and Project team members has revolved around proven experience and track record. We seek to engage on the basis that those who design and plan the Project will deliver the Project. To that end, Hansen Yuncken will wherever possible not change either the executive team throughout the Project phases. Where changes have to be made, a transition plan will be implemented. Further, our project team organisation has within it the expertise and flexibility to reform with no impact on the Project.

6.4 Communication Objectives

The following strategic communications objectives have been developed based on our understanding of the project objectives. These Objectives will be tested and refined with further input from Health Infrastructure over the duration of the Planning Phase.

Key communication objectives are to:

- Reach out and build trust through targeted communication and engagement with stakeholders and users
- Seek stakeholder input into the design process and ensure they are satisfied with the iterative communication process
- Ensure the safety of site personnel, Health personnel, community, visitors within the Hospital Campus
- Maximise opportunities for Health Infrastructure and NSW Health to leverage positive media coverage
- Minimise the opportunity for negative project media coverage
- Position the project positively with key stakeholders
- Be accessible, visible and responsive in support of media communications to stakeholders and ensure a point of contact for enquiries and emerging issues
- Be accessible, visible and responsive in support of the user's hierarchy to ensure accurate and timely information on which those users can base their own operational decisions.

6.5 Communication Methodology

These strategic communications objectives will be achieved by:

- **Integrating communication:** Communication must be clear, concise, consistent and timely, demonstrating Health Infrastructure and NSW Health commitment to keeping all stakeholders informed.
- **Recognising differences:** Communication activity must be tailored for different stakeholders and their needs.
- **Opening lines of communication:** Ensuring mechanisms are in place to know who to contact for information and action and to head off any misinformation; protect the right of reply and control the messages rather than stakeholders rely on third party sources for information.
- **Proactively managing issues:** Identify, mitigate and manage issues early and effectively.
- **Leveraging existing relationships:** Using communication methods and pre-existing organisational relationships to maintain stakeholder satisfaction..
- **Communicating the vision:** Support Health Infrastructure and NSW Health Communication Teams in building anticipation and excitement in the lead-up to key milestones within the Project.

To enable the methodology for communication to be effective from the very onset of the Planning Phase Hansen Yuncken have developed the following summary of key communication and consultation tasks that will need to be satisfied as soon as possible to adequately facilitate the communication and collaboration framework.

- Finalise list of stakeholders and maintain stakeholder database.
- Analyse stakeholders to ensure accurate and timely engagement.
- Inform, communicate, engage and consult with stakeholders through face-to-face meetings, workshops, presentations, design reviews.
- Work with Health Infrastructure and the wider Project Team to inform the users of construction activities.
- Develop protocols on the management of public enquiries with media and appointed media or Public relations resources.
- Maintain an enquiries and complaints register.
- Maintain project information display areas to inform Health personnel & campus visitors of the project details and status.

6.6 Enhanced Hospital Community Communications

Hansen Yuncken proposes to establish a Project Website dedicated to the Wagga Wagga Base Hospital Redevelopment. Similar in structure and content to that now operating on the Orange Hospital project, the website provides a level of communication far superior to traditional approaches normally employed. All relevant project information, including planning information, progress reports, site photos, changes to vehicle and pedestrian access and special interest features will be regularly updated and available.

Prior to establishing this site, Hansen Yuncken will agree the structure and level of content with the Principal.

Another innovation proposed, is the production of a DVD that would be made available for distribution to all Stakeholders and other hospital personnel. Scheduled for release prior to the first handover milestone, the DVD would highlight the key characteristics of the new facility, including any changes to the model of care, operational procedures, change management or any other relevant information. Again, this concept was implemented successfully at Orange Hospital and was very well received by both the Stakeholders and NSW Health.

6.7 Monthly Reports

No later than five (5) Business Days prior to submitting a payment claim in accordance with Clause 11.2, Hansen Yuncken will submit a detailed monthly report to the Principal in relation to the performance of the Planning Services in the month the subject of the relevant payment claim (Monthly Report).

Hansen Yuncken requests that the Design Consultants provide a copy of their monthly report for review.

6.8 Project Meetings Structure

Project meetings will play an integral role in galvanising the Project Team and Executive Stakeholders. Planned meetings will provide a regular forum on multiple project levels for communication, project assessment and review.

Pre and post meeting planning such as the preparation of agendas and briefing information, the preparation of minutes and action items and the follow up of queries and concerns will aid in the organic development of the design and general project progression.

The table on the following page identifies our understanding of Project related meetings and their associated governance:

MEETING TITLE	MEETING FREQUANCY	MEETING DAY	MEETING TIME	MEETING LOCATION	ATTENDANCE REQUIRED BY HANSEN YUNCKEN
Executive Steering Committee	Monthly	TBA	TBA	TBA	As required
Project Control Group (PCG)	Monthly	TBA	TBA	TBA	As required
Project Planning – Team Meeting	Weekly	Thursday	8:30am	TBA	YES
Design Team Meetings	Weekly	Thursday	10:00am	Rice Daubney's Offices – Nrth Syd	YES
Services Coordination Meetings	Weekly	Thursday	1:00pm	SKM's offices – St Lennard's	YES
User Group Meetings	As Scheduled	As Scheduled	As Scheduled	TBA – Wagga Wagga Base Hospital	YES
Value Management Workshops	TBA	TBA	TBA	TBA	YES
Options Development Workshops	TBA	TBA	TBA	TBA	YES
Value Engineering Reviews	TBA	TBA	TBA	TBA	YES
Buildability Reviews	TBA	TBA	TBA	TBA	YES
Risk management Workshops	TBA	TBA	TBA	TBA	YES
Authority Meetings	TBA	TBA	TBA	TBA	As required
Community liaison Meetings	TBA	TBA	TBA	TBA	As required

7.0 User Group and Stakeholder Management

7.1 Stakeholder Objectives and Framework

Managing Stakeholder and User Group interaction and participation will be a key element of Hansen Yuncken's role and will require special Stakeholder Management skills to achieve a successful outcome. This role will be undertaken by Planning Phase Team who will implement a subtle combination of the ability to listen and the capacity to lead. Hansen Yuncken's methodology for Stakeholder and User Group interaction and consultation is structured to allow all parties to:

- Provide professionally competent input into designs in their assigned areas of expertise
- Provide feedback as to compliance of the designs in the context of the NSW Health's model of care for the new Facility and the Facility's Functional Brief
- Provide feedback to improve outcomes for the fitness for purpose tests
- Provide a positive contribution towards the success of the project
- Clearly understand each party's role within the commercial framework of the project
- Communicate openly, honestly and respectfully.

7.2 Liaison and Engagement

Appropriate Stakeholder involvement is fundamental to achieving assurance of the quality of the designs and for completing the works. NSW Health involvement includes the engagement of Health Infrastructure, The Murrumbidgee Local Health Network representatives and any nominated Stakeholders and User Group representatives. NSW Health will be involved in:

- Providing clarification of design intent against any Health Policy and Guidelines
- Reviewing for functional and Health planning compliance

This procedure relates to the incorporation of NSW Health into the design process and to ensure they are informed at critical stages of the Projects design such as:

- Finalisation and acceptance of the Schematic Design
- Lodgement of Development Application
- Development of the detailed design.

Hansen Yuncken shall assemble NSW Health representatives authorised to provide requirement inputs, to review and comment on design and to assess compliance with respective Brief requirements.

To ensure the engagement of Stakeholders positively supports the Project Team in the development of the design documentation, Hansen Yuncken will assist the Murrumbidgee Local Health Network Representatives in the their understanding of and responsibility for:

- Fully understanding and articulating their requirements.
- Ensuring they have a full understanding of the Project Brief.
- Communicating to their respective personnel.
- Communicating their requirements to the Design Team
- Reviewing designs and providing comments (at design submissions) on the design compliance to the current NSW Health Polices and Guidelines.

7.3 Approach to Stakeholder Engagement – Generally

Hansen Yuncken intends that the processes of Stakeholder and User Group engagement, as with other management processes, be managed at three levels – strategic, management and operational.

The Stakeholder and User Group engagement process will be managed so as to:

- Be flexible and allow Users to provide professional input into designs
- Provide feedback as to compliance of the designs in the context of the NSW Health's Model of Care for the new facility and the Project Brief
- Provide feedback to improve design outcomes.
- Provide a positive contribution towards the success of the Project and to promote positive engagement and wider ownership of the Project.

The diagram below graphically represents our approach to Stakeholder engagement

Stakeholder/User Group Establishment

We believe that managing the multiple stakeholders requires a carefully considered strategy, a robust and enquiring style and disciplined execution of the a defined process and plan.

Our approach to stakeholder engagement is outlined briefly below.

We will always apply a systems engineering approach to design and have a set of key steps to follow for each significant phase.

Design of technical facilities requires a continuous loop whereby each loop is repeated such as

- inform;
- engage;
- analyse;
- report;
- inform;
- engage and;
- analyse;

This feedback loop will ensure any emerging issue are addressed before it becomes a reality. In particular, this approach will ensure individual facilities benefit from shared learning and continuous improvement through a centrally controlled process of information collection and dissemination.

7.4 Approach to Stakeholder Engagement – Project Planning & Design

Key stakeholder input is vital to the success of the project especially during the Design and Planning phase. Our approach is illustrated below. During this phase we will ensure a collaborative process is in place whereby information is shared, challenged, analysed and feedback to inform the design process.

KEY STEPS	HOW GOAL WILL BE ACHIEVED
Hold regular Project Team and Design Team coordination meetings (weekly)	Coordination of specific activity to reduce disruption and maximise project delivery.
Hold regular PCGs (monthly)	Measure and confirm project performance and decisions during project
Conduct Staged User Group Workshops	Provide a recurrent forum for project user groups to review current planning and provide input into future project planning. In addition provide one-to-one briefing sessions to key project user groups for areas of specific focus or technical complexity
Gather vital information from stakeholders	Hold collaboration workshops at a central (local) location for stakeholders. A regular and constant approach to site visits by Senior Stakeholder Manager and Design Managers.
Assess the information gathered from the workshop and stakeholder sessions. Challenge and test that information	Maintain constant engagement with Health Infrastructure to confirm findings, risks, opportunities, information requirements
Research: Risk Workshop	Workshop with key stakeholders to incorporate opportunities and risks into design
Value Engineering	Involve key stakeholders in value management reviews, staging and decanting

Develop a design to the most complete level possible at the strategic level to reduce costs and ensure user predictability Confirm processes, milestones, and engagement for continuing engagement	Test and adjust designs and supporting plans with Health Infrastructure and key Stakeholders to confirm its aim in supporting the whole capability

Hansen Yuncken recommends a continuous and deliberate approach to stakeholder engagement which remains consistent across the overall project staging, which includes:

- Planning Phase: Design, Planning and Programming
- Delivery Phase: Construction, Testing and Certification.

To meet the above, we will program meetings and workshops to ensure the various Stakeholder and User Groups are informed and briefed on the project development. These meetings and workshops are intended to facilitate a forum that enables Stakeholder groups to make comment on current project planning as well as contribute to future project planning.

Hansen Yuncken's project team have commenced planning for user groups and staged design sign offs. With reference to the current completeness of documentation we understand that a number of user group discussions have already taken place with the Co-ordinating Consultant Rice Daubney. Further to this we understand Schematic design sign off is being pursued for mid to late June 2011.

Hansen Yunckens early assessment of document completeness recognises significant progression of the Architectural schematic design. However, we highlight the fact that the engineering designs do not appear to align with the level of Architectural completeness. We acknowledge the current Architectural design has allowed for development of functional and clinical relationships but lacks coordination with the yet to be determined civil, structural and services arrangements. Whilst the development of functional and clinical relationships is integral to a successful schematic design it is imperative that full coordination be realised before presenting a complete schematic package. In addition to this it is our assessment that further studies on building code compliance with particular reference to fire strategies need to be assessed and finalised to allow actual completion of the scheme design.

With the above mentioned in mind Hansen Yuncken have commenced the scheduling of User Group workshops from the final stages of Schematic design. We strongly recommend that the Architectural design be allowed to take stock of the developing engineering design to ensure

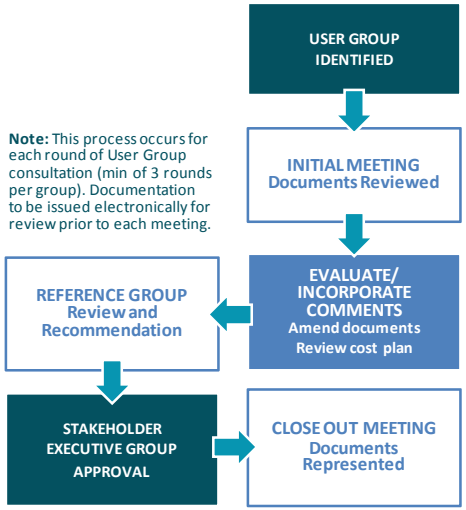
Immediately following exchange of documents, Phase One will involve finalising and agreeing with Defence on the communication and engagement activities. This is critical to the life of the Project as it lays the foundations for efficient and effective teamwork and documents specific plans to mitigate anticipated issues.

Rounded and complete Schematic design proposal is presented at the final Schematic Design User Group meeting/workshop

Hansen Yuncken will engage collaboratively with strategic users to develop project wide policy frameworks. Through challenging the desires and needs with engineered solutions and applying those across the Project, we will develop a value approach and bring certainty to users.

7.5 Conducting User Group and Stakeholder Meetings

Hansen Yuncken proposes to implement a structured User Group consultation process, with appropriate time and resources allocated to ensure that the outcomes from the process align with the Project Brief, Project Objectives and design development. Equally important is supplying the Users with the correct level of information with sufficient time expectations to enable them to absorb, review and make comment as the design develops. The process involves the following actions:



- Organise, manage and conduct planned meetings with the User Groups to ensure that they have significant input into the Planning Process and are otherwise regularly informed concerning the development of the design and key decision making.
- provide written notice to each of the Facility User Group members of meetings that they are required to attend
- Give all Facility User Group members a minimum of 10 Business Days' notice of the conduct of such meetings
- Co-ordinate meetings with Facility User Group members and arrange for meetings to be held on days and at times that typically enable the members to attend the meetings
- Prepare detailed notes and minutes of each of the Facility User Group meetings which at a minimum include the date and time of the meeting, persons in attendance and absentee members, items discussed at the meeting and agreed outcomes of the meetings. Minutes will also include action items and time frames in anticipation of the following meeting.
- Provide copies of the proposed minutes of the meetings to the Principal's Project Director and Project Manager along with any necessary briefing to ensure they are fully across the associated inputs and outcomes.
- Incorporate any changes or amendments to the proposed minutes of the meetings reasonably requested by the Principal or its representatives.
- Retain notes (including any marked up or annotated drawings) and minutes prepared for all Facility User Group meetings within each of the electronic files in a manner and so as to facilitate easy access to such information.

7.6 Formulation of User Groups

It is imperative that User Groups be established based on classifications of departmental and facility breakdown to ensure adequate representation and information capture throughout the entire design. Generally Hansen Yuncken has used a departmental breakdown structure to isolate specific User Groups. Consideration must also be given to interdepartmental relationships and use. For this reason it may be necessary to involve key staff across multiple Departmental User Groups. Some efficiency may also be gained through the grouping of like departments such as Medical and Surgical IPU's. However, in saying this it is important to recognise to subtle operational differences in like facilitates and avoid standardisation that lacks specific operational differentiation.

In addition to the specific departmental User Groups, workshops have been scheduled for generic Architectural details that will appear throughout the entire facility. This approach will ensure continuity of typical rooms and facility which in turn supports holistic operational procedures.

As previously discussed the Mental Health and General Hospital User Groups will be split to support the phasing and delivery arrangements. It is however noted that key user group members from both Mental Health and General Hospital disciplines will be required to cross pollenate due to the physical and environmental building connections. Similarly, operational arrangements will require the coming together of Mental Health and General Hospital disciplines.

The proposed User Groups structures are provided in the following section.

7.7 Proposed User Group Structures

GENERIC ARCHITECTURAL ARRANGEMENTS - MENTAL HEALTH & GENERAL HOSPITAL

- **PATIENT AREAS**
  - MH Bedrooms
  - MH Ensuits (inboard, Shared, Accessible)
  - GH Bedrooms (1 bed, 2 bed, 4 Bed)
  - GH Ensuits (inboard, shared, Accessible)

- **CLINICAL AREAS**
  - Treatment Rooms
  - Procedure Rooms

- **STAFF AREAS**
  - Staff Stations / Reception
  - Clinical Work rooms (handover)
  - Photocopy Rooms
  - Multifunction Rooms
  - Offices
  - Meeting Rooms
  - Staff Rooms
  - Staff Storerooms
  - Consult/Interview Rooms

- **FRONT OF HOUSE**
  - Lift lobby's
  - Waiting Areas

- **BACK OF HOUSE**
  - Clean Utilities
  - Dirty Utilities
  - Bays - Linen / Trolley / Equipment
  - Stores - Equipment / General
  - Disposal Rooms
  - Cleaners Rooms

- **WC'S - PUBLIC, STAFF, ACCESSIBLE**

- **INTERIOR DESIGN (GENERAL)**

SPECIFIC ARCHITECTURAL ARRANGEMENTS - MENTAL HEALTH & GENERAL HOSPITAL

- **MEDICAL PANELS (POWER, GAS, NURSE CALL, IT)**
- **DOOR HARDWARE & OPERATION**
- **KEYING**
- **SIGNAGE**

SERVICES ARRANGEMENTS - MENTAL HEALTH & GENERAL HOSPITAL

- **FACILITIES MAINTENANCE & ENGINEERING**
  - Mechanical
  - Electrical
  - Hydraulic
  - Fire (electrical)
  - Fire (hydraulic)
  - Medical Gas
  - BMS

- **PLANT ROOMS**
  - Functionality/Location
  - Access

- **OPERATIONS**
  - Services ESD and Lifecycle Efficiencies
  - Future Proofing
  - Metering/BMS

- **SECURITY**
  - Duress (Fixed and Mobile)
  - Intercoms & CCTV
  - Door Security
  - Fire Egress

- **ICT & INTEGRATION**

- Nurse call
- Telephony (PABX/VOIP/DECT)
- Pagers
- LAN/WAN integration

- **FF&FE - SERVICES**
  - Group 1 (General)
  - Group 2 & 3 (General)
  - Major Medical
  - Minor Medical

PHASE 1: DEPARTMENT/AREA SPECIFIC - MENTAL HEALTH

- **ACUTE**
- **SUB-ACUTE**
- **SECURE DROP OFF – ACUTE**
- **COURTYARDS – ACUTE**
- **COURTYARDS - SUB-ACUTE**

PHASE 2: DEPARTMENT/AREA SPECIFIC - GENERAL HOSPITAL

- **AMBULANCE AREA**
- **EMERGENCY DEPARTMENT & EMU**
- **AMBULATORY CARE**
- **PAEDIATRIC TREATMENT**
- **ACUTE TREATMENT AREA**
- **NON ACUTE TREATMENT AREA**
- **MORTUARY**
- **SSU**
- **POST-OP AREA (DAY ONLY)**
- **PRE-OP AREA**
- **1ST STAGE RECOVERY**
- **PROCEDURES CENTRE**
- **OPERATING THEATRE**
- **IMAGING (FUTURE)**
- **OBSTETRICS & GYNAE**
- **LDRP**
- **BIRTHING - SCN**
- **MEDICAL / STROKE IPU**
- **ORTHOPAEDIC / SURGICAL IPU**
- **MEDICAL / SURGICAL IPU**
- **HELIPAD**

EXTERNAL ARCHITECTURAL ARRANGEMENTS - GENERAL HOSPITAL

- **LANDSCAPING**
- **SERVICE YARD (LOADING ZONE)**
- **CARPARKING**

FACADE DESIGN MENTAL HEALTH & GENERAL HOSPITAL

- **FACADE**

FF&FE

- **MENTAL HEALTH**
- **GENERAL HOSPITAL**

7.8 User Group Meeting Schedule and Calendar

To support the project time frames and to ensure key design milestones as nominated in the Planning Services Program are maintained. Critical management of User Group meeting/workshop scheduling and allocation is essential. In conjunction with this, Hansen Yuncken fully appreciates that User Group participants are acting in work hours and combining these responsibilities with their day to day clinical duties.

With this in mind we understand the imperative need to make User Group meetings/workshops efficient and effective through careful pre planning and preparation. We also appreciate that the User Group meeting schedule needs to be flexible to compliment the provision of the Health Service.

To aid in the communication and management of user group meetings a User Group Meeting schedule is included on the following pages. The Schedule identifies the following:

- Extent of user group meetings
- Time and date of user group meetings
- Date for issue of User Group meeting minutes
- Preparation of revised documents in anticipation of the next User Group Meeting
- Revised Documentation review Period prior to the next User Group Meeting

In addition to this and to help simplify the communication and management of User Group meetings/Workshops a Calender has been prepared to supplement the User Group Schedule.

Appendix 2: Occupational Health & Safety Plan

hansen yuncken
BUILDING VALUE

Wagga Wagga Base Hospital Redevelopment

OH&S Management Plan

Aug 2011

PREPARED BY
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Mascot NSW 1460
ABN 38 063 384 056

CONTENTS

INTRODUCTION

1.1 Scope of Work

The Wagga Wagga Base Hospital is the major acute care provider and referral hospital in the Murrumbidgee Local Health Network. The redevelopment of the Hospital, once complete, will align the Hospital's facility requirements to the projected Clinical Services Plan activity projections to 2021/22.

The Principal, Health Infrastructure (HI), is responsible for the planning, design and delivery of the redevelopment works which are proposed to be undertaken in a number of Phases to facilitate the current clinical services and match the available funding.

Hansen Yuncken's GMP Offer, to be submitted by the 1 December 2011, is to include the construction of Phase 1 (former stage 1a) as described below:

- Phase 1 (former stage 1a): New facilities to accommodate acute and sub-acute mental health which will be a two storey building with acute mental health on the ground floor and sub-acute mental health on the first floor.

- Early Works: As a precursor to the above mentioned a series of enabling works are planned to facilitate the onset of the redevelopment. These works incorporate the construction of a new car park to the North of the existing buildings, several services relocations/diversions along with the construction of a replacement road for Lewis Drive which will be partially built over as part of the Phase 1 works. Several packages of demolition will be incorporated into the Early Works Phase to effectively clear the Phase 1 site. It is noted that the Early Works will not form part of the GMP. Rather they will be let as a series of pre GMP packages. Furthermore it is noted that only the replacement road for Lewis drive will form part of the Part 3A project application. The services diversions will be approved via Authority approvals and the packages of demolition will be approved under the Infrastructure SEPP.

1.2 Definitions & Abbreviations

The following definitions and abbreviations have been used in this Plan. Further definitions and abbreviations are provided in referenced procedures and plans.

HSE Health, Safety & Environment
HY Hansen Yuncken Pty Ltd
LTI Lost Time Injury
MTI Medical Treatment Injury
MSDS Material Safety Data Sheet
NMSM HY National Management Systems Manager
OHS Occupational Health & Safety
CMP HY Project Management Plan
S/C Subcontract(s) or Subcontractor(s) as the context requires.
SSO Site Safety Officer
WMS/JSA Work Method Statement/ Job Safety Analysis

1.3 Construction Management Plan & OHS Responsibilities

1.3.1 Construction Management Plan (CMP)

The CMP is an integral component of the Hansen Yuncken Integrated Management System and is developed at the start of each project to define the roles, responsibilities, practices and procedures to be implemented by the project team.

The CMP is designed to operate in conjunction with the on-line Project Management Manual. The CMP format consists of a matrix which lists all the components of the Project Management System and is developed by the project team to define individual roles and responsibilities for the project. This OHS Management Plan should be read in conjunction with section 9 (HSE) of the CMP.

1.3.2 OHS Responsibilities

The responsibilities for the implementation the various elements of this plan shall be included in the HY Project Responsibilities Matrix included in the CMP.

1.3.3 Project Organisation Chart

The project team shall be shown on the organisation chart in the appendices of the CMP.

1.4 OHS Objectives & Targets

The OHS Objectives and Targets for the project shall be included in the CMP

1.5 OHS Management System

The OHS Management of this project shall be conducted in accordance with the Hansen Yuncken OHS Management System which is Third Party Certified by Bureau Veritas Certification as complying with AS/NZS 4801: OHS Management Systems – Specification with Guidance for Use.

1.6 OHS Document & Records Management

Hansen Yuncken's OHS Management System documents including procedures, work instructions, checklists, forms and electronic data is available to all personnel via the HY Intranet.

Identification, recording, filing, retrieval and retention of OHS documents on site is managed with a HY Master Filing System

1.7 Auditing

Internal audits shall be carried out to provide an independent assessment of;

- compliance with Hansen Yuncken systems and procedures,
- compliance with ISO 9001, ISO 14001 and AS/NZS 4801
- the timely provision and correctness of information,
- compliance with contractual & legislative requirements,
- the identification, assessment and control of potential and actual risks,
- the effectiveness of the Management System.

1.8 Plan Review & Approval

Position	Name	Sign	Date
Review			
Project Manager			
Site Manager			

Foreman			
Site Safety Officer			
Approval			
Construction Manager			
NSW OHS Manager			

2 OHS MANAGEMENT PROCEDURES

2.1 HSE Risk Assessment

2.1.1 Relevant Legislation, Standards & Codes of Practice

The Hazard Identification, Risk Assessment and Control (HIRAC) process shall be conducted and documented in accordance with the following Legislation, Standards and Codes of Practice;

Codes of Practice

- NSW Risk Assessment 2001
- Standards
- AS/NZS 31000:2009 Risk Management - Principles & Guidelines

2.1.2 Project HSE Risk Assessment

Project HSE Hazards shall be identified, risk assessed and controls developed as follows;

Project Risk and Opportunity Workshop

An initial risk assessment of the overall HSE aspects of the project is to be conducted prior to commencement and subsequently reviewed as part of the Project Risk & Opportunity Workshop.

Project HSE Risk Assessment

An ongoing identification of HSE hazards and assessment of risks (HIRAC) shall be conducted at least monthly using the Project HSE Risk Assessment form (FM-CORP-HSE-15).

The HIRAC should be conducted by the following personnel as a minimum who have received instruction from the State HSE Coordinator in the HIRAC methodology to be used;

- Project Manager (prefereble)
- Site Manager (mandatory)
- Site Safety Officer (mandatory)

The assessment is to focus on the construction activities to be undertaken in the following month or period and the controls to be implemented for High (Class 1) and Medium (Class 2) risks.

In conducting the risk assessment the following information on the hazard shall be considered;

- Records of incidents, illness and disease
- Safety Alerts

A copy of the current Project HSE Risk Assessment is to be kept in the Project HSE Risk Assessment file and made available to all S/C & HY employees on site if required by State OHS Legislation.

A copy shall be displayed in the site induction room if required.

Copies of all risk assessments for the project shall be kept in the Project HSE Risk Assessment file. All risk assessments other than the current assessment shall be clearly marked as superseded.

At the time of conducting the risk assessment, the Subcontractor SWMS Compliance Audit/Task Observation schedule for the next month should also be prepared.

Environmental Monitoring & Health Surveillance Programs

Environmental monitoring and Health Surveillance programs shall be established for the site if the relevant hazards are assessed as presenting a significant (High or Medium) risk to workers. These hazards are normally

- Asbestos
- Contaminated Land

The above procedures provide guidance on the controls required and the development of suitable programs.

Environmental monitoring and Health Surveillance may be required for other hazards. If required, expert advice shall be obtained (eg/Environmental Hygienist) in the development of the program.

Where a Health Surveillance health surveillance program is developed, reports of an individual's surveillance results shall be kept confidential in accordance with HY's Privacy Policy and shall be kept under Authorised access only files in accordance with procedure 5.6 Project Records and Filing. An individual's reports shall be made available to the employee upon request.

2.1.3 Design Change Risk Assessment

The construction OHS risks of changes to the design of the work shall be assessed as follows.

As revised drawings are placed in the HY controlled drawing set they shall be stamped with the HY OHS Risk Assessment stamp.

The Site Manager shall review the revision(s) to the drawing and assess the OHS risks to construction workers from the revision and record the assessment (High, Medium or Low) on the stamp as provided.

Where the risk is assessed as High (Class 1) or Medium (Class 2), the Site Manager shall indicate on the stamp whether a new SWMS, or revision to an existing SWMS, is to be developed to define the controls required to eliminate or minimise the risks. These shall be developed and reviewed in accordance with the SWMS procedures.

2.2 Site Induction

2.2.1 Industry Standard Induction

It is HY Policy that all Subcontractor employees on HY projects must have completed the State Construction Industry OHS Induction or recognised Interstate equivalent.

Workers without a current Construction Industry card will not be given a HY Site Induction and as such will not be permitted to commence work.

The card number is to be recorded on the HY Site Induction Record.

2.2.2 Site Induction Register

A Site Induction Register (FM-CORP-HSE-31) shall be established and maintained for each project.

2.2.3 Site Induction Content

Presentation of inductions by Site Union Delegates is not permitted on any HY site.

The content of the Site Induction shall consist of the following;

- Site Induction DVD Presentation
- Site Specific HSE Requirements
- Site Induction Quiz

Site Induction DVD Presentation

The standard HY Site Induction DVD shall be shown to inductees. This contains details of HY's HSE requirements on all sites.

Site Specific HSE Requirements

A project specific Site Induction Handbook shall be developed in accordance with procedure 2.15 Site Induction Handbook.

The Site Induction Handbook sets out the content of the Site Specific component of the Induction which shall normally be covered following the completion of the Site Induction DVD Presentation. In particular the following items shall be covered;

- Site Layout Plan
- Incident Reporting procedures
- Emergency Response Plan

Site Induction Quiz

All inductees shall be required to successfully complete a site induction quiz prior to approval to commence work. This is to establish and verify the inductee's understanding of information provided at the induction.

2.2.4 Personnel to be Inducted

All HY and S/C employees (excluding visitors and minor deliveries) are required to undertake a HY Site Induction which is to be presented by the SSO or nominated HY Representative.

2.2.5 Site Induction Record

The induction for each person shall be recorded on the Site Induction Record Form (FM-CORP-HSE-01) which shall be signed by both the Inductor and Inductee at the completion of the induction.

2.2.6 Site Induction Sticker or Card

After signing the Site Induction Record, each inductee shall be issued with a HY Induction Sticker to be affixed to their hard hat.

The Induction number on the sticker or card shall correspond to the Induction number from the Site Induction register.

2.2.7 Tickets & Licences

Where copying facilities are available, the HY Representative shall take a copy of all relevant tickets and licences at the induction, verify currency (for those with an expiry date) and file with the inductee's induction record.

NSW Certificates of Competency issued prior to 1997 are no longer valid. Only National Certificates of Competency licences or licences still valid in the issuing State (eg/QLD, VIC etc) shall be accepted.

2.2.8 Site Induction File

Records of the induction shall be kept in the Site Induction file forming part of the Project Records.

Access to the file shall be by authorised HY personnel only due to National Code of Practice for the Construction Industry and Privacy Legislation requirements.

2.3 Air Quality & Dust

2.3.1 Construction Impacts on Air Quality

The impacts of construction activities on Air quality shall be assessed as part of the Project HSE Risk Assessment.

Controls shall be developed to ensure the requirements of relevant legislation, standards and contract requirements are met.

2.3.2 Airconditioners

An Airconditioner Filter Record (FM-CORP-HSE-09) shall be affixed to the wall immediately adjacent to each airconditioner in site offices, lunchrooms and amenities.

Airconditioner filters shall be cleaned monthly.

As the airconditioner filter is cleaned the record shall be completed.

Completed (full) records shall be removed from the wall and filed in the project HSE files.

2.3.3 Dust Control

Dust generation minimisation and suppression shall be controlled using one or more of the following methods;

- During dusty conditions a water cart from an on-site contractor will be used to control dusty areas.
- Disturbed areas will be stabilised as soon as practicable to minimise wind blown dust
- Trucks transporting material from the site will be covered or watered down immediately after loading to prevent wind blown dust emissions and spillage
- Construction activities producing dust that cannot be controlled by water or other control means will be reviewed and could cease through agreement
- Application of chemical suppressant to exposed areas (eg/Dustbinder)

The method(s) to be implemented shall be indicated in the CMP.

All dust control equipment will be kept in good operating condition. The equipment will be operable at all times with the exception of shutdowns required for maintenance.

2.4 Alcohol and Drugs

2.4.1 Alcohol

No HY or S/C employee shall be permitted to work whilst under the influence of alcohol.

Should a person work or attempt to work whilst under the influence of alcohol, they shall be prevented from doing so and misconduct procedures implemented.

Refer to HY Misconduct procedures for details.

2.4.2 Drugs

The use of non–prescription drugs is not allowed on site during working and after hours. Offenders shall not be allowed to work on site and their Employer notified.

The requirement for employees to inform the Site Manager or SSO if they are on prescription medication, where this medication may effect the safe performance of their normal duties, shall be included in the Site Induction.

2.4.3 Counselling

HY or S/C employees suspected of having an alcohol or drug abuse problem shall be referred to suitable counselling services.

2.5 Archaeology & Cultural Heritage

Upon discovery of aboriginal or historical artefacts or anything considered to be of archaeological interest the Site Manager shall arrange for works to be ceased in the area and contact the Client for further directions.

The Project Team will take all necessary measures to protect the artefacts from being damaged or destroyed.

Works will not re-commence in the area until a written instruction from the Senior Project Manager is received.

2.6 Concrete Waste & Washout

2.6.1 Truck & Pump Washout

Concrete trucks and pumps shall be washed out at designated locations as shown on the site layout plan. Washout of concrete pumps and agi's in other areas will not be permitted.

Washout shall be captured using membranes or other suitable means and allowed to set. Waste shall be placed in bins for disposal with site waste.

2.6.2 Excess Concrete

Excess concrete shall be returned to the concrete plant for disposal or re-use.

2.7 Contaminated Soil

2.7.1 Identification of Contaminated Soil

During construction it shall be necessary to monitor soil contamination levels, dust levels and water runoff quality, to ensure that health and environmental standards are not compromised. This is especially important as contaminated soil may be excavated and transported around the site.

Upon discovery of contaminated soil the HY Site Manager shall arrange for works to be ceased immediately in the area and contact the Senior Project Manager for further directions.

Contaminated waste shall be collected, contained, stored, handled and disposed of in accordance with relevant legislation and Codes of Practice.

Appendix Part 2 to Schedule 1 to the Protection of the Environment Operations Act (NSW) 1997 classifies the types of inert waste as follows:

Types of inert waste

1. Virgin excavated natural material (e.g. clay, gravel, sand, soil and rock) that is not mixed with any other waste and that:
    a. has been excavated from areas that are not contaminated, as the result of industrial, commercial, mining or agricultural activities, with manufactured chemicals and that does not contain sulphidic ores or soils, or
    b. consists of excavated natural materials that meet such criteria as may be approved by the EPA.
2. Building and demolition waste (eg bricks, concrete, paper, plastics, glass, metal and timber), being material resulting from the demolition, erection, construction, refurbishment or alteration of buildings or from the construction, repair or alteration of infrastructure-type development such as roads, bridges, dams, tunnels, railways and airports, and which:
    a. is not mixed with any other type of waste, and
    b. does not contain any asbestos waste.
3. Asphalt waste (e.g. resulting from road construction and waterproofing works).
4. Biosolids categorised as Unrestricted Use, or as Restricted Use 1, in accordance with the criteria set out in the Biosolids Guidelines.
5. Used, rejected or unwanted tyres (including shredded tyres or tyre pieces).
6. Office and packaging waste (eg paper, plastics, glass, metal and timber) that is not mixed with any other type of waste.

2.7.2 Exposure of Potentially Contaminated Sites During Earthworks

If potentially contaminated material is encountered on the site, an assessment shall be made of the level of contamination and whether this exceeds the relevant acceptance criteria.

Similarly, any other material that is odorous or has the appearance of being likely to be contaminated, and is assessed unsuitable from a geotechnical point of view, shall be excavated and stockpiled while testing is carried out.

If testing shows that the material exceeds the criteria, it shall be removed from site to an EPA approved landfill site. Offsite disposal of material to landfill shall be undertaken in accordance with EPA procedures.

If testing shows that the material is below the criteria the material may be stockpiled or used as fill on site as approved and directed by the Senior Project Manager.

2.7.3 Risk of Exposure of Construction Personnel to Soil Contaminants

It is important to minimise such risks by adopting appropriate site controls and industrial hygiene practices. Site controls may include:

- defining certain areas as contaminated and restricting access to them;
- appropriate signage;
- training construction employees in industrial hygiene procedures;
- keeping non-essential motor vehicles such as personal cars out of contaminated areas;
- regular medical checks of construction personnel who are exposed to contaminated soils;
- keeping stockpiles of contaminated material watered down to minimise dust generation in accordance with any water restriction requirements and ensure that runoff is not generated from excessive watering;
- covering truck loads with tarpaulins and watering material when loading and unloading;
- wheel washes for trucks and vehicle leaving the contaminated areas;
- regular road sweeping and cleaning;
- dust monitoring and adjustment of construction programs to accommodate high risk periods when conditions are windy or very dry; and
- monitoring of concentrations of volatiles.

Industrial hygiene practices may include:

- wearing long sleeved shirts and trousers or overalls to minimise dermal exposure;
- wearing gloves when handling soils;
- washing hands and faces before eating, drinking or smoking;
- leaving overalls at site for laundering;
- showering and washing facilities; and
- wearing respiratory equipment during times of high dust or volatile emissions.

2.7.4 Release of Contaminants to Soil and Groundwater

Water spraying of stockpiles and of soils being loaded and unloaded from trucks, covering of truck loads with tarpaulins and other measures described in the previous section would minimise the potential for dust to be generated.

If heavily contaminated soil is placed in contact with clean soils, contaminants could be mobilized by rainwater or chemical/physical reactions and affect the clean soils to a limited extent. Similarly there is a risk that contaminated soil is not clearly differentiated from clean soil and that mistakes could occur which cause the materials to be mixed or wrongly handled or disposed of.

This shall be overcome by implementing a material tracking system for all contaminated soils and ensuring that construction staff are trained how to use the system. This shall involve documenting areas containing contaminated soil, and putting signage near stockpiles that indicated the type of material present and its contamination status.

It shall also require supervision and documentation of all movements of contaminated materials around the site.

Avoiding contact between stormwater and contaminated soils is difficult to achieve if larger areas of a site are being exposed within a short period, because it does not allow for minimizing the amount of soil that is uncovered or placed in temporary stockpiles. Therefore it is necessary to manage stormwater in such a way that it does not mobilize contaminants and transfer them to clean areas.

This may be achieved by:

- covering stockpiles of contaminated soil;
- placing stockpiles of contaminated soil on bitumen or other sealed areas;
- installation of adequate bunding or other approved method to contain runoff;

- collecting stormwater run-off from stockpile areas; and
- analytical testing of collected stormwater prior to its release.

Erosion and sediment control procedures in accordance with the relevant Code of Practice may also be applied, but with the additional objective of keeping water that is exposed to contaminated soils separate from water that has only come into contact with clean soils.

Groundwater could potentially be impacted by contaminants mobilized from stockpiled contaminated soil or by buried material. Minimising runoff from stockpiles, as outlined above would reduce the risk to groundwater. Land filling of contaminated material which is below the relevant criteria for soil contamination above the water-table, and capping the landfill area with low permeability material would minimise the risk of groundwater contamination from infiltration of stormwater into buried soils.

2.7.5 Heavy Metal Contamination

Any suspicious industrial wastes encountered will be immediately isolated to enable these assumptions to be confirmed by analytical testing.

2.7.6 Landfill Facilities

Every landfill facility will be in one of the following classes or subclasses[1]:

Inert: Class 1
Class 2
Solid: Class 1
Class 2
Industrial

Each facility will have licence conditions stating what waste it can and cannot accept.

In the case of inert waste, to qualify as Class 2 waste the waste (as well as meeting the criteria above) must not contain material which is “physically, chemically or biologically fixed, treated or processed”.

[1] EPA Guidelines for the Assessment, Classification & Management of Liquid & Non-Liquid Wastes 1999.

2.8 Delivery Vehicles

2.8.1 Traffic Control

Where delivery vehicles entering and exiting the site are required to temporarily stop traffic or enter the traffic flow other than under normal road use conditions, a Traffic Guidance scheme shall be developed in accordance with procedure 9.37 Traffic Management.

2.8.2 Delivery Driver Sign In

Delivery drivers shall be required to report to the site office, read and sign the Site Delivery Sign In form (FM-NSW-HSE-04) PRIOR to proceeding onto site to make their delivery.

2.9 Electrical Supply & Equipment

2.9.1 Temporary Electrical Supply

A certificate of compliance shall be obtained from the installing electrician for each temporary electrical supply to the site (Site Offices, lunchrooms, distribution boards).

All installations shall comply with

- Relevant State Codes of Practice; and
- AS 3012: Electrical Installations - Construction & Demolition Sites

2.9.2 Electrical Tools & Equipment

Electrical equipment shall be tested and tagged on site and in the Site office in accordance with;

- Relevant State Codes of Practice; and
- AS 3012: Electrical Installations - Construction & Demolition Sites

If satisfactory an inspection tag shall be affixed to the item.

If unsatisfactory the item shall be repaired immediately or removed from use and a “Do Not Use” tag affixed until the item has been repaired by a licenced electrician.

All portable generators shall be RCD protected and earthed prior to use.

2.9.3 Distribution Boards

Distribution boards shall comply with;

- Relevant State Codes of Practice; and
- AS 3012: Electrical Installations - Construction & Demolition Sites

At the time of installation the installing electrician shall complete the HY Distribution Board Checklist (FM-CORP-HSE-39). Should the board comply with requirements the electrician shall and affix a COPY of the checklist to the board and submit the ORIGINAL to HY along with the Certificate of Electrical Compliance.

Should the board NOT comply with requirements, the electrician shall ensure the board is not used in accordance with Lock out/Tag out procedures and notify the HY Site Manager or Safety Officer who shall arrange for a HSE Suspension/Improvement Notice to be issued to the Supplier of the board. The board shall not be used until the HSE Suspension/Improvement Notice has been closed out.

The COPY of the Distribution Board Checklist shall remain on the board to allow verification of compliance during Site Inspections.

2.10 Emergency Response

2.10.1 Relevant Legislation, Standards and Codes of Practice

The following legislation, standards and codes of practice are relevant to this procedure;

Standards

- AS 1851: 2005 Maintenance of fire protection systems and equipment
- AS/NZS 2293.2: 1995 Emergency evacuation lighting for buildings - Inspection and maintenance
- AS 3745: 2002 Emergency Control Organisation and Procedures for Buildings, Structures and Workplaces

2.10.2 Emergency Response Plan

A site specific Emergency Response Plan (ERP) shall be developed for each site using the ERP Template (PLN-CORP-HSE-03) and included as an appendix to the Project Management Plan (CMP).

The ERP Template contains response procedures for a range of potential emergency events including but not limited to;

- Fire
- Site evacuation
- Arrested Fall in a Harness
- Trench Collapse
- Medical Emergency

In developing the ERP for the site, these potential Emergency Events are to be reviewed along with any others identified from the Project HSE Risk Assessment and site specific emergency procedures developed. This may require the following;

- Adoption, removal or modification of procedures in the ERP Template
- Development of procedures for potential emergency events not included in the ERP template.

Once finalised, Emergency Response procedures, Site Layout Plan and emergency contact details shall be displayed in site offices, lunch rooms and on notice boards.

2.10.3 Emergency Equipment

Emergency Equipment shall be managed as follows;

Suitability, Location and Accessibility of Emergency Equipment

The suitability, location and accessibility of emergency equipment shall be assessed by the Site Manager in conjunction with the SSO and the State HSE Coordinator.

For complex sites, advice from Emergency Services organisations (eg/First Five Minutes, Fire Brigade, SES) shall be obtained.

The locations of the equipment shall be shown on the Site Layout Plan.

Inspection, Maintenance and Testing of Emergency Equipment

Emergency equipment shall be inspected during Site Inspections, Site OHS Committee Inspections and HSE Audits.

Maintenance and testing of emergency equipment shall be undertaken in accordance with the relevant standards and the manufacturer's recommendations including but not limited to;

- A push button test of evacuation sirens shall be conducted monthly (minimum)
- Emergency Lighting - Discharge test shall be conducted 6 monthly in accordance with AS/NZS 2293.2; cl.3.2.
- Fire extinguishers & hose reels shall be serviced 6 monthly in accordance with AS1851.1; Section 3 & AS1851.2; Section 3.
- Emergency Lighting shall be cleaned and visually inspected annually in accordance AS/NZS 2293.2; cl.3.3.

The completion of the above maintenance and testing shall be reported in the QSE section of the Project Monthly Report.

2.10.4 Emergency Contact Details

The emergency contact details for the project shall be included as an appendix to the ERP.

These shall be displayed in prominent locations in site offices and lunch rooms on site.

The SSO shall keep these details up to date at all times.

2.10.5 Emergency Procedure Awareness

Emergency procedure requirements shall be included in the Site Induction Handbook and covered at the Site Induction.

2.10.6 Evacuation Muster Area

The location of the evacuation muster area shall be shown on the Site Layout Plan and shall be clearly identified during the Site Induction and through site signage.

All personnel shall gather at the muster area in accordance with the Site Evacuation procedure. Each S/C Supervisor will advise the SSO or Site Manager of the current attendance and that all employees are accounted for.

2.10.7 Emergency Response Plan Reviews

The Emergency Response Plan and procedures shall be reviewed for effectiveness and ongoing suitability as follows;

Site Evacuation Drills

The Site Manager and SSO shall arrange for Site Evacuation drills which shall occur at least annually during the project where this can be arranged with the Client. Following each drill a review of the evacuation process shall be undertaken and action implemented as required. A record of the review shall be kept.

Where action is required to address unsatisfactory aspects of an evacuation drill, a subsequent drill shall be scheduled and conducted to test the effectiveness of the improvements.

Desktop Review

For those response procedures where a practice drill is not practicable, the ERP shall be reviewed as follows;

- As part of the six (6) monthly review of the Project Management Plan
- Following an actual Emergency event

The review shall be instigated by the Project Manager and shall involve a review by the Site OHS Committee (if formed).

2.10.8 Defibrillator Training, Installation, Use and Maintenance

This clause only applies if a defibrillator has been provided on site.

Training

It is acknowledged Defibrillator Units provide detailed voice activated instructions on their usage once the unit has been opened for application. In addition accredited First Aid training (Senior First Aid, and Occupational First Aid) include the purpose and use of Defibrillators.

The ERP shall nominate the HY Defibrillator Officers who shall be required to be trained by St John's Ambulance Service in the correct use of defibrillators. Training is valid for two (2) years after which a refresher course is required.

Where a nominated Defibrillator Officer has not received this training, the Project Manager shall ensure that such training is provided in accordance with HR procedure 18 Training.

A copy of the Defibrillator Officer current training certificate is to be displayed in the First Aid Room/Facility.

Installation

The Defibrillator Units are to be mounted on the approved wall brackets supplied with the unit in a prominent and safe position in the site First Aid Room/ Facility.

Servicing & Maintenance

In accordance with the manufacturers (Australian Defibrillators), and suppliers (St. Johns Ambulance) Defibrillator Units the Defibrillator units require minimal routine maintenance. This consists of;

- Daily, weekly, and monthly self test of battery and components
- year full operational replacement battery guarantee
- 7 year Unit warranty
- year Electrode Pad life

Use

Defibrillators are only to be operated by the Defibrillator Officer(s) nominated in the ERP.

The operation of the Defibrillator is fully automated. A Rescue Coach voice prompt guides the rescuer through the rescue process. This includes instructions for CPR and a metronome to assist with frequency of compressions.

Once used, the defibrillator is to be returned to St. John Ambulance for reassembly, replacement of used components, and returned to HY with appropriate warranties in place.

Inspection

The Site Safety Officer is to check the installation, servicing & maintenance status of the defibrillator(s) on site on a monthly basis and instigate action if required.

A detailed check is to take place when units are relocated, or moved from or within site.

Support

HY will have put in place access to St. John Australia for any further advice, instructions, or services. Contact details TBA

2.10.9 Emergency Response Personnel Training

The State HSE Coordinator shall liaise with the HR Coordinator to ensure the training of emergency response personnel is included in the State Training Plan in accordance with the procedure for Training. This is generally required for the following personnel who are more likely to have responsibilities in an emergency situation such as a Fire or Evacuation Warden;

- Site Managers
- Site Safety Officers/Supervisors

Training shall also be provided for State Office Wardens. Such training shall include but not be limited to;

- Evacuation Warden
- Fire Warden
- Fire extinguisher

The HSE Coordinator shall review and monitor the Emergency Response Plans developed for projects to ensure all required personnel receive such training. This may also include specialist emergency training such as;

- Arrested fall response
- Trench collapse

2.11 Erosion and Sedimentation Control

Pollution or contamination of stormwater runoff from the site shall be minimised by one or more of the following methods. The method(s) to be implemented shall be indicated on the CMP.

- “Clean” stormwater shall be diverted around the site where possible
- All existing stormwater pits and drains subject to HY construction works will be silt protected with geo-fabric and/or granular socks. Drains will be monitored and maintained by HY
- Stockpiles to be established at HY approved locations
- Sediment fences shall be installed at required locations at the perimeter of the site
- Stormwater shall be diverted to retention basins

The location and details of permanent controls shall be included on the Site Layout Plan.

2.12 Excavations and Trenches

2.10.8 Standards & Codes of Practice

Excavation & trenching works shall be conducted in accordance with ;

- relevant State Codes of Practice
- S/C WMS/JSA
- AS 2294 Earth moving machinery - protective structures
- AS 2763 Vibration & shock - Hand transmitted vibration - Guidelines for measurement & assessment of human exposure
- AS 3798 Guidelines on earthworks for commercial & residential developments

2.12.2 Barricading Around Excavations and Pits

To provide a consistent standard for fencing edge protection around excavations, pits or any other situation that requires fencing the following will apply;

Excavations and Pits Less than 1.5m Deep

Positively drive star-picket posts uprights into the ground at a distance of not more than 2.5 meters apart.

Positively fasten to each upright post 1 meter barricade fencing material so that the material rests on the bottom edge on the ground surface.

Excavations and Pits Over 1.5m Deep

Positively drive star-picket posts uprights into the ground at a distance of not more than 2.5 metres apart.

Positively fasten to each upright post 1 metre barricade fencing material so that the material rests on the bottom edge on the ground surface.

Positively fasten to each upright post lengths of 75mm x 50mm Oregon timber (or other suitable strength material) to form the top guardrail at such position that the distance from the top edge to the bottom level is one (1) metre.

Safety signage shall be posted on the barricading using the wording “CAUTION EXCAVATIONS”.

2.12.3 Excavation Permit or Permit to Dig

An Excavation or “Permit to Dig” Work Permit system shall be established in accordance with procedure 9.45 Work Permits if required by the contract or the Project HSE Risk Assessment in accordance with procedure 9.1 HSE Risk Assessment.

2.12.4 Protection to Pits, Sumps and Penetrations

Where possible all permanent Pit and Sump covers are to be installed immediately, if this is not possible the following controls are to be implemented.

- Barrier mesh / bunting to be placed to isolate the pit / sump
- 19 mm ply to be secured to the top of the pit sump so as to ensure the ply cannot be dislodged , covers must also be clearly marked i.e. ‘’do not remove’’.
- Where the possibility of a substantial fall from heights exists i.e. over two metres, covers are to be bolted in position and marked as previously noted.
- In areas affected by vehicular traffic pit / sump covers are to be ‘’highlighted’’ by placing high visibility cones or bollards.
- Areas adjacent to pits and sumps (within exclusion area) are to be ‘’made safe’’ to enable clear and unobstructed access.
- Should covers be removed for any reason they are to be reinstated immediately upon completion of works.

2.12.5 Excavation or Trench Collapse Emergency Response

For excavations or trenches greater than 1.5m deep, an excavation or trench collapse response procedure shall be included in the Emergency Response Plan for the project in accordance with procedure 9.10 Emergency Response.

2.13 Federal Safety Commission Monthly OHS Report

The Federal Safety Commission Monthly OHS Report (FM-CORP-HSE-101) is to be completed and forwarded to the NMSM within 14 days of the end of each month for submission to the FSC for the following projects awarded to HY after 1st October, 2007;

- All directly funded Australian Government contracts of $3M + (GST inclusive)
- All contracts indirectly funded by the Australian Govt with contributions of at least;
    - $5M and at least 50% of project value; or
    - $10M irrespective of %

2.14 Fencing

Temporary fencing will be provided to cordon off the construction works from the public or Client operations as shown on the Site Layout Plan.

2.15 Fire Fighting Equipment

2.15.1 Equipment Type & Installation

The number, type and location of fire extinguishers and fire blankets shall be in accordance with;

- AS 2444: Portable Fire Extinguishers & Fire Blankets - Selection & Location

Only the following extinguisher types shall be used on HY sites;

- Powder (dry chemical) extinguishers complying with AS/NZS 1841.5
- Carbon Dioxide extinguishers complying with AS/NZS 1841.6

Water type extinguishers shall not be used.

The location of fire extinguishers and blankets (if installed) on site shall be included on the Site Layout Plan.

2.15.2 Servicing & Maintenance

Fire extinguishers, fire blankets and fire hose reels (if installed) on site and in the Site office shall be tested and serviced in accordance with;

- AS/NZS 1850: Portable Fire Extinguishers - Classification, rating & performance testing.

This shall be at six monthly intervals as noted in the QSE section of the PMR.

2.16 First Aid

2.16.1 Assessment of First Aid Facilities and Resources

An assessment of the First Aid requirements for the site shall be conducted to assess the whether the first aid facilities, resources and systems in place are appropriate to the worksite and organizational risks.

This shall be conducted throughout the project to ensure the assessment reflects the changing needs and phases of a construction site.

The assessment shall be conducted in accordance with procedure 2.1 HSE Risk Assessment. Where the first aid facilities, resources or systems are assessed as inadequate, this shall be recorded on the Project HSE Risk Assesment form (FM-CORP-HSE-15) as a High or Medium risk as appropriate and the action(s) required recorded in the Controls section of the form.

When actions have been completed, the risk level can be reduced to Low at the subsequent Project HSE Risk Assessment.

2.16.2 First Aid Officers

The HY First Aid Officer(s) shall be identified on the Site Safety Notice Board and at the Site Induction.

A HY or S/C First Aid Officer shall be on site at all times when HY or S/C employees are working.

Where work is to be conducted outside of normal work hours, at least 2 people shall be in attendance and at least one of these shall be First Aid qualified.

2.16.3 First Aid Kits & Facilities

First Aid Facilities shall be established in accordance with the relevant State OHS Regulations or Codes of Practice.

The location of the First Aid Room or facility is to be included on the Site Layout Plan (refer Construction Management Plan) and covered at the Site Induction (refer procedure 2.2 Site Induction).

A First Aid kit shall be established on each site and located in the First Aid Room/facility.

First Aid kits are to be serviced regularly to ensure the requirements of the State OHS Regulations or Codes of Practice are included in each kit.

2.16.4 First Aid Work Method Statement

A First Aid WMS/JSA shall be established for the site for personnel administering First Aid.

An example WMS/JSA Administering First Aid (WMS-CORP-HSE-906) is provided on the Intranet.

2.16.5 First Aid Injury Reporting

First aid injuries shall be reported and investigated in accordance with following procedure: 2.22 Incident Reporting & Investigation; and the HSE Incident Report (FM-CORP-HSE-11) respectively.

2.16.6 Vaccinations

Any worker who is undertaking first aid will be offered all relevant vaccinations.

2.16.7 Clinical Waste

Clinical waste will be stored in a weatherproof secure location, a sharps disposal container will be ridged walled, puncture resistant and labelled with the biohazard symbol.

Sharps will not be bent, cut, burnt or manipulated in any way.

Clinical waste containers will be clean, leak-proof, clearly, labelled and non-reusable.

HY will engage a specialist clinical waste removalist to transport and dispose of according to relevant legislation.

2.17 Foreign Object Damage (FOD)

FOD procedures shall be developed in conjunction with the Client and implemented to prevent damage to aircraft. Such procedures shall include but not limited to;

- Cleaning of plant and equipment (removal of stones, debris etc)
- Site housekeeping (waste, dust)
- Rubbish Control (collection, containment, storage, handling & disposal)

Items allowed to fall into the apron area are often the cause of damage to aircraft tyres/thrust reverses/engines, etc, consequently risking the safety of the aircraft.

Examples of such items are:-

- Scattered stones, concrete rubble.
- Wind blown dust.
- Bottles and cans (drink cans).
- Splintered wood.
- Metal or fiberglass packaging bands.
- Plastic bags and sheeting.
- Styrene foam.
- Nuts and bolts.
- Paper and cardboard.

Any foreign object can cause damage.

2.18 Hazardous Materials

2.18.1 Handling

Hazardous materials shall be controlled in accordance with the requirements of the relevant MSDS.

2.18.2 Storage

A hazardous material store shall be established on site. The location of the store shall be shown on the Site Layout Plan.

Materials shall be stored in accordance with the applicable NSW Code of Practice.

No hazardous materials shall be stored in Site Offices, Lunchrooms, First Aid facility or Change rooms.

2.19 Hepatitis & HIV Prevention

2.19.1 Code of Practice

Practices for the prevention of infection of Hepatitis & HIV shall be in accordance with the National Code of Practice for the Control of Work-related exposure to Hepatitis & HIV (blood borne) Viruses [NOHSC 2010: (2003)].

2.19.2 Sources of Infection

The primary source of Hepatitis and HIV is blood & body fluids/substances from persons who are infected with the viruses.

Body fluids are defined as Blood, Vomit, Faeces or Urine.

2.19.3 Protective clothing (PPE)

Workers involved in cleaning must wear protective clothing including gloves, face and eye shields, waterproof apron to prevent contamination of clothing.

Gloves used should be the heavy duty Tuff Coat 100% Kevlar type glove.

2.19.4 Spill Containment & Management

Confine and contain the spill.

Cover the spill with paper towels or absorbent granules, depending on the size of the spill, to absorb the bulk of the blood or body fluid/ substance.

Treat debris as clinical waste which must be in sealed in a leak proof yellow bag with bio hazard symbol.

Contaminated areas should be cleaned thoroughly with warm water and neutral detergent.

2.19.5 Toilet Cisterns

Before any work is carried out, the water supply to the cistern is to be isolated and the cistern is to be flushed. A visual inspection of the inside of the cistern must then be carried out before any work commences. Gloves should be worn.

2.19.6 Traps and Drains

Due to the difficult access to these areas, any blockages should be cleared by mechanical means or by using a hand probe. Again, gloves should be worn.

Repairs to damaged drains should be carried out only when wearing gloves.

2.19.7 Disposing of Rubbish from Amenities

Wherever possible, rubbish should be tipped into garbage bags or emptied from the rubbish bins straight into the site disposal bin, depending on the type of rubbish.

Garbage bags should be tied so as to contain the rubbish in the bags. All bags to be carefully handled and preferably transported to the site disposal bin in a wheelbarrow

Whilst cleaning amenities, gloves should be worn.

Do not manually compress bags, when carrying garbage bags do not hold them close to your body or from the base of the bag.

2.19.8 Immunisation

Persons engaged in administering first aid and cleaning of amenities will be offered the option of receiving and immunisation shot against potential diseases as recommended by their doctor.

2.19.9 Finding a Needle Stick

Once a needle stick has been found on site, DO NOT touch with your bare hands, warn others nearby of the threat. Sharps are only to be handled with appropriately designed tongs or forceps. In the absence of such

equipment workers should not improvise (e.g. use a stick), it is safer to dispose of the sharp by holding the barrel of the syringe with a gloved hand. The gloves that are used must be puncture resistant. The sharp will then be placed in a sealable rigid-walled, puncture-resistant container.

Never attempt to bend, break or re-cap the needle.

Throw forceps away into clinical waste bin do not reuse.

2.19.10 Needlestick Injury First Aid Treatment

When a needle stick injury has occurred the following first aid procedure shall be followed;

- Promptly flush the wound under running water
- Wash the wound using warn water and liquid soap
- Thoroughly pat –drying the area
- Apply a sterile waterproof dressing
- Follow procedure 3.6 for disposal of the needle
- Ensure that the employee is provided with immediate medial treatment by a professional
- Accompany the employee to the doctor and ensuring the doctor is provided with the sealed container with the syringe inside
- Offer the employee trauma counselling
- Ensure that confidentiality of the incident and anonymity of the injured person is maintained
- Notify WorkCover as per Clause 341 of the NSW OHS Regulations 2001

2.19.11 Needlestick Injury Incident Reporting

Full accident report in accordance with Incident procedures is to be completed and filed even if injury occurs to a Trade Contractor employee and/or no lost time involved.

If exposure to a needle does occur WorkCover NSW must be notified.

2.20 Housekeeping

The site shall be maintained in a clean and tidy manner.

Each S/C shall ensure all waste and debris form their work is progressively collected and disposed of in HY supplied bins/skips.

2.21 HSE Suspension/Improvement Notices

2.21.1 HSE Suspension/Improvement Notice Register

A HSE Suspension/Improvement Notice Register (FM-CORP-HSE-33) shall be established for the project by the SSO.

The SSO shall monitor the register to ensure all Notices are closed out in a timely manner. A HY Suspension/Improvement Notice Register (FM-CORP-HSE-33) shall be established for the project by the SSO.

2.21.2 Issue of HSE Suspension/Improvement Notices

HSE Suspension/Improvement Notices shall be issued as follows;

Issue of Notices

A HY HSE Suspension/Improvement Notice (FM-CORP-HSE-32) shall be generated, registered and issued to the relevant S/C when any of the following conditions are observed or encountered:

- Actions arising from OHS Audits by the Client or Statutory Authority
- S/C activities are identified as not complying with OHS Legislation, Standards or Codes of Practice or the S/C SWMS during;
- Site Inspections

- Site OHS Committee Inspections
- SWMS Compliance Audits/Task Observations
- Plant & Equipment safety is assessed as unacceptable

Suspension Notices

Notices shall be issued as Suspension (Stop Work) Notices for;

- Noncompliance with a SWMS identified during a SWMS Compliance Audit/Task Observation
- Class 1 (High) risk identified presenting an immediate and significant risk to Safety
- Improvement Notices not addressed by a Subcontractor within the specified timeframe

Improvement Notices

Notices may be issued for hazards and risks other than the above where time may be given to the Subcontractor to address the risk or noncompliance.

The HY Representative issuing the Notice shall determine a reasonable timeframe and include details on the Notice.

Where the Subcontractor does not address the hazard or noncompliance within the specified timeframe the Notice shall be upgraded to a Suspension Notice.

2.21.3 HSE Suspension Notice Review & Closeout

The Subcontractor shall complete the HSE Suspension/Improvement Notice with details of the actions taken to address the hazard or noncompliance which is the subject of the Notice and submit to HY.

The HY Representative who issued the Notice (normally the Site Manager or SSO) shall review the Notice to assess whether the underlying (root) cause of the hazard or noncompliance has been adequately addressed by the Subcontractor.

If the actions taken by the Subcontractor are acceptable, the HY Representative shall close out the Notice and arrange for the HSE Suspension/Improvement Notice Register to be updated accordingly.

2.22 Incident Reporting and Investigation

2.22.1 Purpose & Scope

All HSE Incidents are to be recorded on the HSE Incident Report (FM-CORP-HSE-11) which contains the following parts;

- Part A: Incident Notification
- Part B: Incident Investigation & Improvement Action
- Part C: Incident Review and Closeout

2.22.2 Incident Notification

This clause sets out the requirements for completion of Part A: Incident Notification of the HSE Incident Report (FM-CORP-HSE-11).

Section 1: Incident Registration

Tick the relevant State and Division in section 1 Incident Registration of the report and include details of the Workplace (Project Name or Office) along with the Job Number if the incident occurred on a project.

The Incident details are to be added to the relevant State Incident Register located in the State HSE Database Workbook. The Incident Number from the register is to entered on to the Incident Report.

Section 2: Incident Details

Details of the incident are to be included in section 2 Incident Details of the Report. Tick the relevant incident type(s);

- First Aid
- Near Miss
- MTI (Medical Treatment Injury)

- LTI (Lost Time Injury)
- Fatality
- Environment
- Property Damage
- Electrical
- Complaint
- Other

Section 3: Injured or Involved Person Details

Include details of the people involved in the incident in section 3 Injured or Involved Person Details of the report. If more than one (1) person is involved complete and attach additional records to the report.

Section 4: Witnesses

Include details of any witnesses to the Incident. If possible obtain a statement from the Witness of what they saw and attach to the report.

Section 5: Injury Treatment Details

Tick the type of treatment provided to the injured person(s) and indicate who provided the treatment. More than one treatment tye may be involved. For example, an injured person may be sent to a Medical Centre for examination following initial First Aid Treatment on site. In this situation both First Aid and Medical Treatment boxes would be ticked and details provided.

Section 6: Incident Analysis Codes

To provide a consistent basis for analysis of incidents, a set of Incident Analysis Codes (FM-CORP-HSE-13) has been developed from AS 1885.

Enter the relevant codes into the following fields;

- Nature of Injury
- Agency
- Mechanism
- Bodily Location

If you are unsure of the correct code to use, contact the State OHS Manager or HSE Coordinator for clarification.

Section 7: Incident Notification

Tick the box(es) of the person(s) or organisation(s) who have been issued with a copy of Part A of the HSE Incident Report.

If the Incident is deemed to be a "Notifiable Incident" under the relevant State OHS Legislation, notify the Authority in accordance with clause 9.22.6 of this procedure.

2.22.3 Lost Time Injuries

A Lost Time Injury (LTI) is defined in AS 1885 as an occurrence that results in a fatality, permanent disability or time lost from work of one day/shift or more.

LTI's to either HY or S/C employees are to be reported to;

- State HSE Coordinator within 24 hours
- For serious LTI's, the Construction Manager, State Manager and CEO are to be notified within 24 hours

2.22.4 Medical Treatment Injuries

Any person referred for medical treatment where a potential for Lost Time exists shall be notified to the State HSE Coordinator.

An alternate duties list shall be issued to the injured employee for presentation to the Doctor.

MTI's are to be reported to the State HSE Coordinator within 1 week.

2.22.5 Workers Compensation Insurance Notification

All MTI's and LTI's to HY employees shall be notified to the Workers Compensation Insurance provider immediately.

2.22.6 State OHS Authority Incident Notification

Notifiable incidents as defined in the State OHS Legislation shall be reported to the State OHS Authority using the Authority's Incident Report form (if specified).

A copy of the State OHS Authority Report shall be attached to the HY Incident Report.

2.22.7 Federal Safety Commission Incident Notification

The following incident reporting requirements apply to ALL projects $3M+ (GST inclusive) awarded to HY on or after 1st October 2007;

- A FSC Incident Report (FM-CORP-HSE-102) is to be submitted to the FSC for all notifiable incidents as defined in the relevant State OHS legislation within 48 hours of the incident.
- For all fatalities or serious incidents, the FSC are to be notified immediately on freecall 1800 652 500.
- A serious incident is defined as a non-fatal injury that involves the loss of a body part or body function. Examples are;
  - amputation
  - loss or partial loss of sight
  - loss or partial loss of hearing
  - permanent injury to the brain
  - permanent damage to a nerve, muscle or tendon
  - bone or joint injury that leaves the injured worker with a permanent loss of function in the affected limb

2.22.8 Incident Investigation & Improvement Action

This clause details the requirements for Part B: Incident Investigation and Improvement Action of the HSE Incident Report (FM-CORP-HSE-11).

Section 8: Actual or Potential Consequence and Investigation Level

The actual or potential consequence of the incident shall be assessed and the incident Class determined from the table below. Note that the actual consequences may differ significantly from the potential consequences such as in a Near Miss incident where the difference between and Class 1 and Class 3 consequence may just be a few seconds or millimetres.

Class	Occupational Health & Safety	Environment
1	Loss of life Serious injury or disease. Extended medical treatment required.	Irreversible or major harm to the environment. Serious disruption/nuisance to the Client or the public.
2	Medical treatment required and Lost time.	Major harm to the environment. Major disruption to the Client or the public.
3	Medical treatment required and No lost time.	Minor impact on the environment. Minor disruption to the Client or the public.

The assessed class shall be indicated on the Incident Report.

The position responsible for conducting the investigation into the Incident is shown on the Incident Report which vary depending on the Class of the Incident.

The State HSE Coordinator shall schedule Incident Investigation training in the State Training Plan for all Project Manager's, Site Managers & SSO's.

Section 9: Description of Events

Include a description of the events leading up to, during and after the incident. These should be arranged in a chronological (time/date) sequence. Attach an additional investigation report if required.

Section 10: Contributing Factors/Root Cause Analysis

Following the investigation the root causes of the incident are to be identified so these can be addressed in developing actions to prevent a recurrence in accordance with section 12 of the Incident report.

Section 11: Attachments to Investigation Report

Indicate the documents attached to the report. This is to ensure that all such documents are accounted for with both the ORIGINAL and any COPIES of the Incident Report,

Section 12: Actions to Prevent a Recurrence

The actions to be implemented on Site to prevent a recurrence of the Incident are to be included. These actions are to address the assessed root causes of the incident as identified in section 10.

The Corrective Actions shall be developed in accordance with the Hierarchy of Controls in the following order as practicable;

1. Eliminate the risk. If elimination of the risk is not reasonably practicable, minimize the risk through measures which must be considered in the following order:
2. Substitute the hazard giving rise to the risk with a hazard that gives rise to a lesser risk;
3. Isolate the hazard from persons who might be put at risk;
4. Minimise the risk by engineering means;
5. Apply administrative measures such as the adoption of safe systems of work; and
6. Use personal protective equipment.

The level(s) of the hierarchy adopted for the control(s) are to be ticked in the LHS of this section.

Section 13: Actions Completed

When all actions have been completed, the Project Manager shall liaise with the Site Manager and SSO to review the effectiveness of the actions taken and if so, sign and date the report.

2.22.9 SMWS Development & Review Following an Incident

Following an LTI, MTI or Near Miss Incident, the relevant SWMS shall be reviewed to re-assess the adequacy of the SWMS with respect to the Work Process definition, Hazard Identification & Risk Assessment and Controls defined.

This is a mandatory requirement of section 12: Action(s) to Prevent a Recurrence of the Incident Report.

Where a change to work practices is required as part of the Corrective Action to be taken to prevent a recurrence of the Incident, the SWMS shall be revised accordingly.

The processes of SWMS Review, Induction and Compliance Audit shall be completed following the revision.

2.22.10 Senior Management Incident Review

The following requirements relate to Part C: Incident Review and Closeout of the Incident report.

All incidents other than First Aid (FA) shall be reviewed by Senior Management and closed out as follows.

1. The Site Safety Officer, Site Manager and Project Manager shall review, sign and date the report.
2. The ORIGINAL of the report shall be issued to the Construction Manager for review. A COPY of the full report shall be retained on site.
3. The Construction Manager and State HSE Coordinator shall review, sign and date the report.
4. For all Incidents assessed as Actually or Potentially Major & Catastrophic the State HSE Coordinator shall arrange for the State Manager and CEO to review, sign and date the report.

5. The State HSE Coordinator shall enter the close out date of the Incident Report into the State Incident Register and return a COPY of the completed Part C of the Incident Report to site for filing with the Site COPY.
6. The State HSE Coordinator shall file the completed ORIGINAL of the Incident Report in Incident number sequence in the State Incident Report file.

2.22.11 Incident Statistics

Monthly project man hour and incident data is to be reported in the QSE section of the Project Monthly Report (PMR).

The State HSE Coordinator shall collect & collate incident statistics from the PMR such as HY & S/C man hours worked and input relevant data into the State HSE Database.

2.22.12 State Incident Register

The State HSE Coordinator shall enter Incident data into the State Incident Register included in the State HSE Database maintained on the State Common Drive.

In particular the assessed Actual or Potential Class of the incident shall be entered. The Incident Register will "flag" incidents as Overdue where the date of closeout of the Incident Report has not been entered within the following timeframes;

- Class 1: 1 week
- Class 2: 2 weeks
- Class 3: 3 weeks

This is to ensure Incident Reports are followed up and closed out commensurate with the severity of the incident.

2.22.13 Workers Compensation Claims

All MTI's and LTI's to HY employees shall be notified to the Workers Compensation Insurance provider immediately.

Workers Compensation Claims shall be processed in accordance with procedure PR-CORP-HSE-11 Workers Compensation Claims.

2.22.14 Rehabilitation & Return to Work

Rehabilitation and Return to Work of HY employees involved in Lost Time Incidents shall be managed in accordance with the procedure for Rehabilitation of Injured Employees.

2.23 Material Safety Data Sheets (MSDS)

An MSDS file shall be established for the project. An MSDS Register (FM-CORP-HSE-27) shall be established at the front of the file.

Details of each MSDS shall be entered onto the register. MSDS' shall be filed in the same order as they are registered so they can be quickly located if required.

A risk assessment of the hazardous material shall be conducted as noted on the MSDS register. Where a material is assessed as presenting a Class 1 or 2 risk a detailed risk assessment shall be conducted using the Hazardous Substance Risk Assessment form (FM-CORP-HSE-06) and required controls implemented.

The MSDS file shall be kept at the First Aid facility to ensure availability of information in a first aid situation.

The MSDS' issue date from the manufacturer is to be less than 5 years old. The register is to be monitored to ensure all MSDS' are current.

2.24 Method of Work Plans (MOWP)

If required by contract conditions, Method of Work Plans shall be developed using the MOWP Template (PLN-CORP-HSE-04) (available via the HY Intranet) and included as an appendix to the CMP.

2.25 Mobile Phones

It is HY policy that the use of mobile phones is prohibited whilst undertaking the following activities;

- Operation of mobile plant
- Operation of cranes and hoists
- Where a SWMS identifies use of a phone is a significant risk

2.26 Noise & Vibration

2.26.1 Purpose & Scope

The purpose of this procedure is to;

- prevent hearing damage to employees due to exposure to loud noise
- minimise disturbance to adjacent property owners and the public due to noise and vibration from construction activities
- prevent damage to adjacent properties due to vibration from construction activities
- ensure compliance with the following;
    - AS/NZS 1269 – 2005 Occupational Noise Management
    - National Standard for Occupational Noise [NOHSC 1007 (2000)] published by the Australian Safety & Compensation Council
    - National Code of Practice for Noise Management & Protection of Hearing at Work [NOHSC 2009 (2004)] published by SafeWork Australia
    - NSW OHS Regulation 2001: Division 4 - Noise Management

2.26.2 Noise Levels

A worker shall not be exposed to greater than 85dB(A) for an eight (8) hour period. The value of 85 dB(A) over 8 hours is equivalent to;

- 88dB(A) over 4 hours
- 91dB(A) over 2 hours
- 94dB(A) over 1 hour
- 97dB(A) over 30 minutes
- 100dB(A) over 15 minutes

Also, a worker shall not be exposed to a C-weighted peak sound pressure of more than 140 dB(C).

2.26.3 Noise Measurement & Monitoring

State HSE Coordinators shall obtain and maintain a Noise Level Meter for use in their State and make it available to sites for use.

Where noisy activities are to be conducted on site, the Site Manager or SSO shall arrange with the HSE Coordinator for a measurement of noise levels to be taken.

Measurement of noise generated by mobile plant shall be taken in acccordance with AS 2012 Acoustics – Measurement of Airborne Noise Emitted by Earthmoving Machinery & Agricultural Tractors.

Where the noise levels exceed the above limits, action shall be taken to reduce noise emissions.

Where noise generation is not able to be reduced to levels below the above limits action shall be taken to reduce the exposure of workers to the noise using one or more of the following methods;

- Barricading & signage
- Hearing protection
- Conducting activities outside of normal work hours (where this will not create unacceptable disturbance to others

- Noisy activities such as concrete breaking and jack hammering shall be programmed in consultation with HY.
- Work Permits for entry into areas with excessive Noise Levels
- Re-sequencing/organising the works to minimise concurrent noise generation from multiple activities in an area
- Plant & equipment shall be fitted with an effective and operational noise suppression device.
- Implementation of controls in accordance with AS 2436 Guide to Noise Control on Construction, Maintenance & Demolition Sites
- All plant and equipment shall be regularly maintained and serviced to the manufacturer's specifications to ensure noise generation is minimised

Controls to implemented shall be defined in the relevant Work Method Statement(s).

2.26.4 Barricading & Signage

Where noise generation is not able to be reduced to levels below the above limits barricading and signage may be erected to advise personnel that hearing protection shall be worn beyond the barricade.

2.26.5 Hearing Protection

Hearing protection shall comply with AS/NZS 1270 Acoustics - Hearing Protectors.

2.26.6 Radios, iPods & MP3 Players

The use of radios, iPods or MP3 players or similar are prohibited on site and in all work areas at all times. They may be used in the site lunchrooms during breaks on condition that they not disturb others using the facilities.

2.27 Notices of Disruptions

Notice of Disruptions will be submitted to affected parties for approval with sufficient notice prior to the termination of any existing services.

2.28 Passive Smoking

2.28.1 Purpose & Scope

Hansen Yuncken has a duty of care to provide a safe and healthy working environment for all employees under the relevant State Occupational Health and Safety Act.

Passive smoking increases the risk of lung cancer and heart disease, and is also dangerous for people with existing heart or lung conditions. Passive smoking can trigger asthma attacks, increase the chance of chest infections, cause watery eyes, headaches and sore throats.

Hansen Yuncken considers that to allow smoking in a number of areas conflicts with its legal obligations to provide a safe working environment.

Therefore to protect all office and on-site workers from the effects of environmental tobacco smoke, smoking shall be prohibited in all enclosed work areas.

This procedure shall be enforced areas in all enclosed areas in which Hansen Yuncken employees, trade contractors or visitors may reasonably expect to occupy during working hours.

2.28.2 Definitions & Abbreviations

Passive Smoking: (the inhalation of side stream or mainstream smoke)

2.28.3 Requirements

While the Company encourages the total absence from smoking, this non-smoking policy will not be enforced in open, well ventilated areas.

Where any doubt exists in respect to areas in which smoking is condoned the matter shall be determined by the appropriate employee representative in conjunction with the Safety Officer or the Site Safety Committee in accordance with the procedure for Site OHS Committees.

An employee who has a grievance relating to this policy should speak to their Health & Safety Representative or Supervisor or Safety Officer.

The Site Manager/Foreman and Safety Officer shall be responsible for enforcing this policy on site.

Hansen Yuncken employees, trade contractors, visitors and clients must comply with this policy.

Implementation of this policy will be monitored and evaluated by the Company Health & Safety Committee.

2.29 Personal Protective Equipment (PPE)

Hard hats, safety shoes and high visibility clothing are the minimum requirement for HY sites unless assessed otherwise from the Project HSE Risk Assessment.

The requirement for additional PPE shall be identified from SWMS'.

2.30 Precast & Tilt Up Work

2.30.1 Purpose and Scope

The purpose of this procedure is to ensure that Precast & Tilt Up Work is conducted safely and in compliance with the following as applicable;

- AS 3850 - 2003:Tilt Up Concrete Construction
- National Code of Practice for Precast, Tilt Up and Concrete Elements in Building Construction 2008 published by the Australian Safety & Compensation Council
- Guide to Tilt Up Design & Construction 2005 published by Cement Concrete & Aggregates Australia

The procedure does NOT apply to precast concrete members such as columns, beams, flooring panels and façade panels that are not rotated about one edge and/or temporarily braced before being incorporated into the final structure.

2.30.2 Precast & Tilt Up Construction Audit

On projects where Precast or Tilt Up work is to be constructed an audit shall be conducted during the first erection of panels using the Tilt Up & Precast Concrete Panel Erection Audit Report (FM-CORP-HSE-50).

Where erection or documentation is identified as not being in compliance with requirements a HSE Suspension/Improvement Notice shall be issued.

2.31 Plant and Equipment

2.31.1 Plant Register

A Plant Register (FM-CORP-HSE-17) shall be established for each site where major plant is to be operating.

Where an item of plant is scheduled to be on site for one week or more it shall be entered on to the register with all details completed. This is to assist in tracking plant currently on site and for monitoring plant servicing and maintenance activities.

When the plant leaves site the date shall be entered on to the register.

2.31.2 Plant Safety Verification

Prior to allowing the use of major items of Plant (eg/ Cranes, Backhoes, Excavators, Scissor Lifts, Forklifts etc), on site the Site Manager or SSO shall check plant log books, S/C inspection records, registration details and certificates and complete (or have the S/C complete) the Plant Safety Verification Report (FM-CORP-HSE-18).

Where plant is assessed as unacceptable a HY Suspension/Improvement Notice shall be issued.

2.31.3 Plant Risk Assessment

S/C and external hire companies shall be required to submit a Plant Risk Assessment in accordance with the National Standard for Plant (NOHSC 1010 (1994) prior to commencement.

The HY Plant Risk Assessment form (FM-CORP-HSE-37) is available for use.

Plant Risk Assessment examples are available on the Intranet for a range of plant types.

The following hazards have been identified as common risks to be considered:

- plant operated near persons
- plant operated near underground or above-ground electric cables
- reversing plant
- loading or unloading vehicles
- operator driving too fast for the prevailing conditions
- moving plant onto a public road from site
- the operator or maintenance personnel not fully qualified or conversant with the machine
- unauthorised access
- working too close to a shoulder or embankment
- failing to engage low gear before negotiating a steep gradient
- crossing logs, stumps or drains or pushing trees
- parking plant in a dangerous location
- not using adequate packing
- not applying safety locks or pins when conducting maintenance, servicing or
- adjustments
- working near rail lines carrying rail traffic

2.31.4 Control of Common Plant Risks

The use of specific measures to eliminate or control identified risks should be done on the basis of the risk assessment. In particular, consider the following:

- isolating vehicles and plant used in or around the site and work area from persons on the site or work area. For example, vehicles or persons may be guided around or past the work area
- using fencing, barriers, barricades, temporary warning or control signs, or a combination of these to secure the area where moving plant is used
- planning the direction that plant moves, so the visibility of operators is not restricted
- using spotters/safety observers to control traffic movement
- training persons carrying out work on or near public roads in accordance with AS 1742.3-2002 Manual of uniform traffic control devices – Traffic control devices for works on roads and the 1998 Roads and Traffic Authority Manual: Traffic control at worksites and Manual of Uniform Traffic Control Devices
- implementing safe working distances
- using audible reversing alarms and/or other technologies or other safe work practices.
- minimising the amount of moving plant working at one time. Where multiple plant is operated around the work site a competent person should be used to direct the plant:
    - operating in close proximity to each other
    - when reversing
    - where persons are on the ground
    - in other situations as indicated by the risk assessment

- implementing systems of control and notices at all entrances and exits where construction vehicles or plant enter or leave the work area by public roads, to protect and warn all persons approaching or in the vicinity
- identifying designated delivery and turning areas. The movement of delivery vehicles on construction sites often presents a hazard, particularly when reversing, loading and unloading. Procedures should be implemented to warn all workers of the potential hazard. These procedures should include:
    - the requirement for truck drivers to report to a suitably signposted area on the site and/or
    - the requirement for a designated worker to act as an observer to ensure all persons are clear of the reversing vehicle, and
    - a system of communication and warning to persons near the delivery point.

2.31.5 Safety Controls on Plant

Safety controls such as guards, warning devices, auto stops etc., are fitted to the plant for protection and must not be removed or made inoperative unless authorised personnel (competent persons) are carrying out repairs and adjustments. In such circumstances, the guards etc, must be reinstated and be fully operational prior to returning the plant to service.

Where guards have been provided on machinery, equipment or plant, employees will not use the equipment unless the guard is in the authorised position and is operable. Faulty guards are to be reported to the Site OHS Supervisor or Site Supervisor immediately.

2.31.6 Controls for Pedestrians Near Moving Plant

When plant is operated in the vicinity of other plant or people, a competent person should be used as a spotter. The operator should observe the following procedures:

- where practicable plant should always move in a forward direction
- ensure no persons are at risk before reversing
- avoid hazards by facing and maintaining attention in the direction of travel
- spotter should always be in the sight of the plant operator
- clear communication systems should be in place.

2.31.7 Plant Operation Near Roads

Where work is carried out on or near public, private or government roads, plant movement and traffic control procedures should be developed in accordance with AS 1742.3-2002 Manual of uniform traffic control devices – Traffic control devices for works on roads.

Refer to the Traffic Management Plan for further details.

2.31.8 Servicing & Maintenance Schedules/Programmes

S/C and external hire companies shall be required to submit Servicing & Maintenance Schedules/Programs for major plant & equipment to ensure items are scheduled to be serviced and maintained in accordance with manufacturer's recommendations.

Service intervals may vary between equipment types, however, all plant is to be serviced & maintained in accordance with the established schedule.

Repairs and maintenance to any plant will only be done by persons qualified or authorised to do so. All damaged or faulty plant is to be reported to the Employer or Hire Company immediately.

Replacement of belts or removal of foreign material from plant shall not be undertaken without first shutting off the machine, and either tagging the switch or locking the switch in the off position.

Electrical repairs shall only be carried out by a competent person in accordance with relevant State Legislation.

2.31.9 Servicing & Maintenance Records

S/C shall also submit plant servicing and maintenance records whilst the plant is on site as evidence that S/C are maintaining their plant in a safe condition and in accordance with manufacturer's recommendations.

2.31.10 Servicing & Maintenance and Refuelling SWMS'

S/C shall also submit SWMS' for plant servicing & maintenance and refuelling activities if these are to be conducted on site. See procedure 2.43 Work Method Statements for further details.

2.31.11 Stability of Plant

To ensure that plant is stable on slopes or uneven ground surfaces consider:

- whether plant is suitable for use on the slope or uneven ground
- tyre condition and pressure
- risk involved in raising the load when the crane or load shifting plant is articulated
- load is properly secured before moving
- loads are loaded in a controlled manner, not dropped
- operators are paying full attention during the load shift or whilst operating moving plant
- carrying or lifting equipment is not overloaded. The rated capacity of the machine must be checked before operation and observed
- no persons are in the vicinity during unloading or tipping.

2.31.12 Operation of Plant

Employees must not operate vehicles or plant unless they have the appropriate current licence if required, or have been trained, or are undergoing training in the proper and safe use of the vehicle, plant or equipment.

Particular care should be taken to ensure the safety of persons working at or near locations where plant is used. Systems of work must ensure that no persons are at risk when working near or with moving plant and that plant is operated safely.

At a minimum, consideration should be given to the following:

- competence of persons working with plant – only persons who are competent, and where required hold the appropriate certificate of competency in accordance with the Regulation, must be permitted to operate plant or perform any installation or maintenance work on powered mobile plant.
- capability of operators – operators should never be permitted to operate plant while they are under the influence of alcohol or any substance or drug, including prescription and non-prescription drugs, which may adversely affect their ability to operate the plant in a safe manner
- vehicle movement procedures for positioning and re-positioning of plant – these procedures should include specific procedures when plant is operated near persons, near underground or above-ground services, moving plant onto a public road from site or reversing plant
- suitability and condition (state of maintenance and repair) of the plant to perform the intended task – this should also include the size and type of equipment required, ensuring its reach, capacity etc. are properly specified and that log books are available.
- instruction and information about hazards – all persons who perform work using (or on) powered mobile plant must be adequately instructed in the hazards associated with the plant and carrying out the work on site and in the control measures for safe work. Safe operating procedures should be available covering the use and maintenance of powered mobile plant
- available information – ensure that all available manufacturer's information on the safe operation of the plant is provided, and that essential operating information is displayed, eg. rated capacity, radius and basic operating instructions are displayed on cranes
- special requirements – any special requirements should be clearly identified and communicated, eg. as the need for the plant to move when fully laden, the requirement for any accessories such as special slings, spreader beams, load stability plates or matting and counterweights

- site conditions – any limitations posed by the worksite (such as floor loadings or ground load limits) should be checked by an engineer prior to selecting the appropriate plant for the task
- appropriate staffing – the number of personnel required to perform the tasks safely.

2.31.13 Cranes & Load Shifting

Where cranes are used, persons responsible for slinging the load and/or directing the crane operator in the movement of the load when it is out of the operator's view must have a Dogging Certificate in accordance with the relevant State Legislation.

Systems of work must ensure the safety of persons who are moving loads and materials, as well as persons in the vicinity of materials or loads being moved. At a minimum, consideration should be given to:

- ensuring that there is sufficient room to move materials or loads, and that the area is clear of persons, especially when moving long materials
- the size/mass of the load
- the stability of the load/centre of gravity
- the lifting capacity of the plant
- providing unrestricted vision of driver/operator or observer/spotter
- ensuring that plant moves in a forward direction where practicable
- safely controlling/securing the load, eg. use tag lines, strapping.

2.31.14 Plant Shutdown

When leaving plant unattended, you must ensure it is left in a safe condition and not able to cause damage to surrounding works or personnel.

If leaving an item of mobile plant unattended, the following specific measures should be taken:

- select a safe, secure place to park
- park on a flat surface if possible
- park across a slope, where the degree of the slope allows stability, rather than up or down
- neutralise the transmission where applicable and apply any safety locks
- lower all moveable implements to the ground where this does not create an additional hazard such as tripping
- turn off motor
- remove keys from plant to prevent use by unauthorised persons
- implement plant security measures to prevent unauthorised access.

2.31.14 Plant & Equipment Cleaning

Wash down facilities are to be provided at work faces in accordance with the Provision of Facilities requirements of the Subcontract and as shown on the Site layout Plan.

Cleaning of plant will be undertaken only when plant is stationary and the motor shut down.

2.31.15 HSE Equipment

Inspection, measuring and test equipment related to HSE (eg/ Noise meters, Dust gauges etc) shall be maintained and stored in accordance with the manufacturer's recommendations. Calibration of such equipment shall be controlled as follows;

Hansen Yuncken Equipment

All HY inspection, measuring and test equipment shall be uniquely identified (Asset number or serial number) and calibrated in accordance with;

- AS/NZS ISO 10012 Measurement management systems— Requirements for measurement processes and measuring equipment.

Projects shall establish a register of equipmment on their site to track status.

Subcontractor Equipment

Where S/C are to operate such equipment HY shall obtain a copy of the calibration record and enter details on to the register to monitor next calibration requirements.

2.32 Site Inspections

2.32.1 Site Safety Officer Inspections

To be completed by the SSO daily using the Site OHS Supervisor Daily Report (FM-CORP-HSE-10) form. The original is to be issued to the Site Manager then Project Manager for review.

After review, the original is to be filed in the Project files.

HSE hazards identified should be addressed "on the spot" and recorded on the Daily Report however should the hazard present a significant risk (High or Medium) to workers, after addressing the issue a HSE Suspension/Improvement Notice is to be issued to the relevant Subcontractor to instigate actions to prevent a recurrence of the hazard and risk.

The SSO shall follow up the actions taken at subsequent inspections to assess the effectiveness of the actions in preventing a recurrence.

2.32.2 Site Inspections

If a Site OHS Committee has not been formed (refer section 2.33 Site OHS Committees), the Site Manager shall ensure that a formal inspection of the site is conducted at least fortnightly.

The Site Manager shall arrange for Subcontractor representatives to participate in the inspection.

The Site HSE Inspection Report (FM-CORP-HSE-02) shall be used for the inspection.

The Site Manager shall ensure that all actions arising from the inspection are recorded on the Action List, followed up and closed out in accordance with the priority levels of the actions however should the hazard present a significant risk (High or Medium) to workers, after addressing the issue a HSE Suspension/Improvement Notice is to be issued to the relevant Subcontractor to instigate actions to prevent a recurrence of the hazard and risk.

The Site Manager shall follow up the actions taken at subsequent inspections to assess the effectiveness of the actions in preventing a recurrence.

Following the inspection the Site Manager shall convene a Toolbox Meeting (refer procedure 9.36 Toolbox Meetings) with workers on site to discuss observations made during the inspection and improvement actions required.

2.33 Site OHS Committee

2.33.1 Site OHS Committee Establishment

A Site OHS Consultation Statement shall be established for each site using the OHS Consultation Statement - NSW template (FM-NSW-HSE-05) as a basis.

A Site OHS committee will be established on site in accordance with the NSW OHS Act & Regulations as soon as practicable when 20 or more HY and S/C employees are on site.

2.33.2 Site OHS Committee Constitution

A Site OHS Committee Constitution shall be developed where a Committee is to be formed using the OHS Committee Constitution – NSW (FM-NSW-HSE-16).

The Committee shall be chaired by an elected representative of the site workforce and be attended by HY Representatives nominated in the Constitution.

Major S/C groups are represented on the committee and a mixture of management and employees is considered ideal, with a majority of HY & S/C employee representatives.

OHS Committee members are required to have read and agreed to the Constitution which shall be recorded on a sign off sheet.

2.33.3 Site OHS Committee Meetings

Meetings shall be conducted fortnightly as a minimum, recorded on the Site OHS Committee Meeting Minutes (FM-CORP-HSE-03) and distributed as shown on the form.

Actions arising from each meeting shall be promptly followed up, closed out and verified at the next meeting.

The SSO shall raise relevant issues from the Site OHS Committee at the NSW HSE Committee meeting.

2.33.4 Site OHS Committee Members & Training

Site OHS Committee Members (including S/C) shall have received OHS Consultation training as required by the NSW OHS Act & Regulations.

These requirements shall be verified at Committee meetings and recorded on the minutes.

2.33.5 Site OHS Committee Inspections

The Site OHS Committee Site Inspection report shall be completed using the Site HSE Inspection Report (FM-CORP-HSE-02). The report is to be distributed as follows;

- Project Manager (copy)
- Notice Boards and/or Lunch sheds (copy)
- Subcontractors (copy)

The original Inspection report is to be filed in the Project files.

The Committee shall ensure that all actions arising from the inspection are recorded on the Action List, followed up and closed out in accordance with the priority levels of the actions however should the hazard present a significant risk (High or Medium) to workers, after addressing the issue a HSE Suspension/Improvement Notice is to be issued to the relevant Subcontractor to instigate actions to prevent a recurrence of the hazard and risk.

The Committee shall follow up the actions taken at subsequent inspections to assess the effectiveness of the actions in preventing a recurrence.

2.33.6 Site Inspection, Communication & Consultation if Committee Not Formed

Should a Site OHS Committee not be formed, an Inspection of the Site shall be conducted at least fortnightly in accordance with procedure 9.33 Site Inspections using the Site HSE Inspection Report (FM-CORP-HSE-02).

Following the inspection HY shall convene a Toolbox meeting with all employees on the site in accordance with procedure 9.36 Toolbox Meetings to convey and discuss the findings of the inspection and agree actions to be taken.

2.34 Subcontractor Project Safety Plans

S/C Project Safety Plans shall be assessed using the S/C Project Safety Plan Review guide (FM-CORP-HSE-14). The completed form is to be filed with the relevant Project Safety Plan in the S/C file.

A S/C Project Safety Plan Compliance Audit schedule shall be established and maintained for the project. Audits shall be scheduled to be conducted within the first month of commencement of the relevant S/C.

The Site Manager and/or SSO shall conduct an audit of S/C activities against the requirements of the relevant Project Safety Plan in accordance with the schedule. If S/C activities are found to be compliant with the Project Safety Plan, audits may then be scheduled on a quarterly basis.

2.35 Toolbox Meetings

Toolbox meetings are to be conducted by all S/C (other than single person S/C or where only one person from a S/C is on site).

These meetings shall be convened by S/C to disseminate information to their employees and to raise issues for discussion by the Site OHS Committee.

A Toolbox Meeting can also be convened by S/C to develop or induct their employees into a WMS/JSA.

Where the S/C does not have a suitable proforma the HY Toolbox Meeting record (FM-CORP-HSE-26) may be issued to the S/C for use.

Records of the meetings shall be obtained and filed in the Toolbox meeting section of the S/C file.

2.36 Traffic Management

2.36.1 Traffic Guidance Schemes

Development, installation and operation of traffic guidance schemes shall be in accordance with Section 2 of AS 1742.3 Manual of Uniform Traffic Control Devices – Part 3: Traffic Control Devices for Works on Roads.

If developed, the Traffic Management Plan(s) shall be included as an appendix to the CMP.

Approval of Traffic Guidance Schemes shall be in accordance with relevant State Legislation and Traffic Authority requirements.

Traffic guidance schemes shall be developed in the following situations;

Short-term and mobile works not involving road closure

Planning in these cases shall comprise the development of procedures and the provision of appropriate sets of signs and devices to cover all of the routine tasks the workers will encounter. The procedures should be documented by means of WMS/JSA's supported if necessary by standard plans showing, for example, the processional order and separation distances of items in a mobile works gang.

Works involving relatively simple part-roadway closures

Planning in these cases shall comprise a minimum requirement to sketch the protective devices and delineation required on a road construction or similar plan, and to prepare a list of devices required for the job. A reference to a Field Guide figure or similar standardized illustration may be substituted for the sketch or plan provided it matches adequately the situation.

Works involving complex traffic arrangements or staging, or both

Planning in these cases shall comprise the preparation of a fully documented traffic management plan providing the following:

Plans showing temporary traffic paths, their delineation and the position of traffic control or warning devices.

On multi-stage works, a separate set of plans for each stage.

Details of after-hours traffic arrangements, on separate plans if they cannot be adequately incorporated into the above.

All necessary instructions for the installation, operation, between-stage rearrangement and ultimate removal of devices at the conclusion of the job.

2.36.2 Traffic Controllers

Situations requiring control of traffic by traffic controllers are listed below as per AS 1742.3 Table 4.3

- Bituminous surfacing under traffic
- Single-lane operation
- Low-speed operation
- Temporary total closures
- Plant crossings
- Limited sight distance within work site
- Emergency situations

Where required, a WMS/JSA shall be developed. Controls defined in the WMS/JSA shall be in accordance with section 4.6 of AS 1742.3. A WMS/JSA example is available on the HY Intranet for use – Traffic Control with Stop/Slow Bat (WMS-CORP-HSE-309).

2.36.3 Protection and Delineation at Excavation Works

The need for traffic protection or delineation, or both, adjacent to longitudinal excavations shall be established and implemented in accordance with Appendix E of AS 1742.3.

2.36.4 Daily Routine Tasks

During the operation of a Traffic Guidance scheme, daily routing tasks shall be undertaken in accordance with Appendix A of AS 1742.3;

- Before work starts
- During hours of work
- Closing down at the end of the day
- After hours

2.36.5 Record Keeping & Daily Report

Records shall generally be kept in accordance with Appendix A of AS 1742.3.

During the operation of a Traffic Guidance Scheme, a daily report shall be completed using the Traffic Management Report form (FM-CORP-HSE-08) or equivalent.

2.37 Training

HSE training for HY personnel shall be provided in accordance with the State Training plan.

2.38 Ultraviolet Radiation

All HY and S/C employees shall be encouraged to wear long-sleeved shirts and long trousers.

The SSO shall ensure all HY & S/C employees have access to Solar Protection Factor (SPF) 30+ broad spectrum sun screen.

The location of HY supplied sun screen shall be included in the Site Induction.

2.39 Unexploded Ordnance (UXO)

Where unexploded ordnance (typically Defence projects) is identified as a hazard on a project, procedures for removal and clearance of areas shall be developed in conjunction with the Client and included as an appendix to the CMP and incorporated into the Site Induction Handbook.

2.40 Visitors

2.40.1 Visitor Sign In

All visitors (excluding minor deliveries) must report to the Site Office when entering and leaving the site and sign the Site Visitors Register (FM-CORP-PROJ-33) upon arrival at the site office.

2.40.2 Visitor PPE Requirements

Visitors shall be required to wear the following PPE as a minimum;

- Hard hat
- Hi-visibility clothing or vest
- Suitable footwear (eg/enclosed shoes, no high heels)

Additional PPE may be required depending on site specific hazards and policies.

2.40.3 Visitor Escort

All visitors must be escorted around the site by a Site Inducted HY or S/C Representative.

The HY or S/C Representative shall ensure that the Visitor is made aware of Emergency Response requirements and that they are to follow the directions of the Representative in an Emergency situation.

2.41 Waste Management

2.41.1 Waste Reduction

Waste generated as a result of construction will be minimised, recycled, reused or recovered, where practical.

HY has accepted the challenge to reduce waste on construction projects, particularly in materials transferred to landfill.

The strategy for reducing the waste on the project will be made up of three strategies as detailed below in order of priority. The prime objective is to keep the amount of materials transferred to landfill from this project to the minimum possible amount.

1. Reduce the amount of waste material produced on the project by ensuring that only enough materials required to perform the works are ordered.
2. Any excess materials from particular work areas are to be retained and incorporated into other work areas where practical.
3. Encourage “just in time” delivery of construction materials (minimum storage on site) to reduce the potential of loss / waste due to damage prior to usage.

2.41.2 Non-recyclable wastes

Non-recyclable waste will be disposed of at an EPA approved landfill or transfer station.

2.41.3 Waste Collection & Disposal

Appropriate waste bins are to be provided by HY and made available to all S/C.

All S/C shall be directed to place waste in the bins provided. This shall be included in the Site Induction.

Waste collection points are nominated on the Site Layout plan.

2.41.4 Waste Reporting

Waste generation is monitored by HY on monthly basis to ensure that the Company’s waste reduction objectives are achieved. Waste disposal quatities are monitored monthly by HY to ensure compliance.

The Project Administrator shall record waste disposal data in the QSE section of the PMR.

Waste quantities from the PMR shall be entered into the State HSE Database for analysis and reporting against HY Waste reduction targets.

2.42 WorkCover NSW

2.42.1 WorkCover NSW Inspections

Any WorkCover NSW Inspections of the project shall be notified to the NSW Construction Manager immediately.

In circumstances where either HY or one of the S/C working on the site are issued with a WorkCover Notice (either improvement or prohibition);

- a copy of the notice must be forwarded to the NSW Construction Director within 24 hours.
- a fully detailed response must be prepared either by the S/C or HY and issued to WorkCover within the stipulated timeframe. A copy of the response must be forwarded to the NSW Construction Director.
- a toolbox talk must be held with the workforce to communicate the contents of the notice and improvements to be implemented.

2.42.2 Prohibition & Improvement Notices

All Prohibition & Improvement Notices issued by WorkCover NSW on HY projects (either to HY or S/C) shall be notified immediately to the NSW Construction Manager and HSE Coordinator. Actions to close out the Notice shall be developed and implemented immediately.

All Notices shall be forwarded to the NSW HSE Coordinator. The ORIGINAL Notice shall be issued with the Project retaining a COPY on the project files.

2.43 Work Method Statements

2.43.1 Relevant Legislation, Standards & Codes of Practice

The Hazard Identification, Risk Assessment and Control (HIRAC) process shall be conducted and documented in accordance with the following Legislation, Standards and Codes of Practice;

Codes of Practice

- NSW Risk Assessment 2001
- Standards
- AS/NZS 31000:2009 Risk Management - Principles & Guidelines

2.43.2 Example SafeWork Method Statements (SWMS)

Example SWMS' exist for a range of generic activities and are available via the HY intranet.

2.43.3 HY Safe Work Method Statements

HY SWMS' are to be developed using the SWMS Template (FM-CORP-HSE-30) on a project specific basis for activities undertaken by HY in consultation with employees required to undertake the activity.

Once these SWMS' have been developed each person required to undertake an activity shall review and sign off the relevant SWMS.

2.43.4 Subcontractor SWMS Submission & Review

Each site shall establish & maintain a S/C SWMS Review Register (FM-CORP-HSE-05) for the project.

The Site Manager or SSO shall use the SWMS Review form (FM-CORP-HSE-12) to assess the adequacy of S/C SWMS PRIOR to commencing the relevant activity.

The relevant Trade SWMS Review Checklist (FM-CORP-HSE-13) shall be used to assist in the review. The checklist provides guidance on the required content for the SWMS on a Trade by Trade basis for such items as;

- hazards
- relevant legislation, standards and codes of practice requirements

In reviewing the SWMS and the S/C assessment of risks, the following information on the relevant hazard shall be considered;

- Records of incidents, illness and disease
- Safety Alerts

Each review shall be entered onto the review register & a copy of the review form shall be filed with the relevant SWMS in the S/C OHS file maintained by the SSO.

2.43.5 Subcontractor Employee SWMS Awareness & Involvement

Records of the involvement of S/C employees in the development of their SWMS shall be submitted to HY and verified PRIOR to commencing the relevant activity. This may take the form of;

- SWMS Signoff
- Toolbox meeting record
- Induction or training record

S/C shall not be permitted to commence the works covered by a SWMS until records of the involvement of the S/C employees have been received and verified by HY.

A copy of the records shall be kept with the relevant SWMS in the Project files.

2.43.6 Subcontractor Task Observations

Audits of compliance (Task Observations) of S/C with their SWMS shall be conducted.

Task Observation Register

The SSO shall establish and maintain a S/C Task Observation Register (FM-CORP-HSE-29) for the site.

Task Observation Schedule

A S/C Task Observation schedule shall be established and maintained for the project. The schedule shall be prepared at the same time as conducting the Project HSE Risk Assessment and shall list the audits scheduled for the following month.

Audits shall be scheduled to be conducted within the first month of commencement of the relevant S/C and shall focus on S/C undertaking High Risk Construction work.

A copy of the schedule shall be issued by each project to the State HSE Coordinator/OHS Manager each month for review. For example, the schedule showing the compliance audits to be conducted in November shall be issued at the end of October/early November.

A copy of the Task Observation Register showing audits actually conducted in the previous month shall be forwarded with the Audit Schedule.

Subcontractor Involvement

A representative of the Subcontractor shall be involved in the Task Observation and shall be recorded on the Task Observation Report.

Task Observation Report

Audits shall be recorded on the NSW Task Observation Report (FM-NSW-HSE-06).

SWMS Noncompliance

If S/C activities are identified as not complying with the requirements of their SWMS a HY HSE Suspension/Improvement Notice shall be raised to bring the S/C practice into compliance.

A copy of the Task Observation report shall be issued to the S/C with the Suspension/Improvement Notice attached (if required).

A follow up Task Observation of the applicable SWMS shall be scheduled in the next month to assess the effectiveness of corrective actions taken in preventing further noncompliance with the SWMS.

2.43.7 Design OHS Risk Assessment

Where HY have Design Responsibility for a project (normally D&C or MC delivery methods) a Design OHS Risk Assessment shall be conducted in accordance with procedure 6.14 Safety in Design.

The records of the Design OHS Risk Assessment for the "For Construction" issue of design documents shall be incorporated into the Project Management Plan as an appendix.

This assessment may result in design changes to eliminate or reduce risks to Construction workers however some residual risk may remain.

These residual risks shall be incorporated into the review of the S/C SWMS and recorded on the S/C SWMS Review Record.

2.44 Work Permits

2.44.1 Requirement for Permits

As a result of the Project HSE Risk Assessment, WMS/JSA reviews, or if required by the Client, Work Permit procedures may be required as a control.

Work Permits may be required for but not limited to;

- Hot Works
- Excavation
- Demolition
- Roof Access

- Piling
- Coring

If implemented, relevant work shall not commence until a permit has been issued by the Site Manager and shall be conducted in accordance with any conditions on the permit.

A set of standard Work Permit proformas is available via the HY Intranet. As a result of the Project HSE Risk Assessment or WMS reviews, Work Permit procedures may be required as a control.

If implemented, relevant work shall not commence until a permit has been issued by the Site Manager and shall be conducted in accordance with any conditions on the permit.

A set of standard Work Permit proformas is available via the HY Intranet.

2.44.2 Hot Works

Hot work refers to any temporary operation that produces flames, heat and/or sparks. Examples include the following:

- welding
- burning
- flame cutting
- flame heating
- brazing, soldering
- plasma cutting
- metal spraying
- grinding.

For the purpose of this procedure hot work does not include work that produces flames, heat and/or sparks:

- in areas specifically constructed, protected, and arranged to accommodate safe hot work processes; and
- in ongoing work process/environments that are adequately risk assessed and controlled. This may be specific operations in workshops, kitchens or plant rooms.

The permit may be either the Hansen Yuncken Hot Work Permit or a contractor's Hot Work Permit providing it meets the requirements of this procedure and is authorised by a Hansen Yuncken Site Safety Officer/HSE Coordinator or Supervisor (Foreman, Site Manager, Project Manager or Site Engineer).

A Hot Work Permit is valid for a maximum of 12 hours on the day it is authorised for unless specifically noted otherwise on the Permit.

2.44.3 Expiry and Close Out of Permits

Each permit shall be valid for the duration defined on the permit.

The Site Manager shall monitor the relevant activity and ensure that work is not conducted after the expiry of the permit.

The Site Manager shall check that works have been completed in accordance with the permit and close out the permit.

Where work has not been completed within the approved duration, an additional permit may be issued.

2.45 Working at Height

2.45.1 Purpose & Scope

The purpose of this procedure is to prevent injury to people from;

- falling from a height; or
- being struck by an object falling from a height
- comply with the Legislation, Standards & Codes of Practice listed below

The procedure applies to all Hansen Yuncken controlled workplaces, particularly where work is being conducted at a height of more than 2 metres.

2.45.2 Legislation, Standards & Codes of Practice

Legislation

- NSW OHS Regulation 2001: Division 2 - Fall Prevention

Codes of Practice

National

- National Code of Practice for the Prevention of Falls in General Construction – April 2008

New South Wales

- Identification Tool for Aluminium Mobile Scaffolds 2008
- Safe Work on Roofs - Commercial & Industrial Buildings 1993
- Safety Line Systems 1995
- Scaffolding 2008
- Overhead Protective Structures 1993

Standards

- AS 1577 Scaffold Planks
- AS 4576 Guidelines for scaffolding
- AS/NZS 1891 Industrial fall arrest systems & devices
- AS/NZS 4488 Industrial rope access systems - Selection, use & maintenance
- AS/NZS 4994 Temporary edge protection
- AS/NZS 1800 Occupational protective helmets - Selection, care & use
- AS/NZS 1801 Occupational protective helmets
- AS/NZS 1892 Portable ladders

2.45.3 Ladders

Ladder type and use shall be in accordance with AS/NZS 1892 Portable Ladders.

Ladder Selection & Types

Working off ladders is deemed “High Risk Work” , therefore working off A-Frame or Extension Ladders should be the last alternative after all other avenues have been exhausted and a risk assessment has been carried out.

Scissor lifts, mobile scaffolds or appropriate working platforms should be the preferred option were possible and the use of appropriate platform ladders would be desirable when these options are not viable.

Ladders should be used primarily as a means of access to or egress from a work area. They should only be used as a work platform if:

- other methods of working at the required height are not practicable; and
- a risk assessment is carried out to minimise the risks associated with the work to be done from the ladder.

Metal ladders and metal - reinforced ladders shall not be used for live electrical work. Only non-conductive (eg/fibreglass, timber) ladders shall be used.

Ladders shall be industrial grade, not domestic grade.

Trestle Ladders

Trestle ladders shall only be used for light duty work and the minimum width of the working platform shall not be less than 450mm.

Only trestle ladders (not step ladders or saw horses) shall be used to support any plank upon which a person stands to work.

Ladder Set Up

When setting up a ladder, users shall;

- set-up portable ladders on a surface that is solid and stable.
- set up single and extension ladders at a slope of 4 to 1 and secured at both the top and bottom with the top of the ladder extending a minimum of 1 metre (1000mm) above the step-off point.
- set up step-ladders in the fully open position.

When setting up a ladder, users shall not:

- set up a ladder in places, such as driveways and doorways, where a person or vehicle could hit it. If necessary, erect a barrier or lock the door shut (but do not block emergency exits);
- set up a ladder on top of scaffolding or an elevating work platform to gain extra height;
- set up a ladder next to open floor penetrations, near power lines or in very wet or windy conditions

Ladder Use

When using a ladder, users shall;

- maintain three points of contact at all times (e.g., foot-foot-hand, or hand-hand-foot)
- wear slip-resistant shoes;
- always face the ladder while climbing up or down;
- ensure no other person is on the ladder at the same time;
- ensure their body is centred between side rails at all times;

When using a ladder, users shall not;

- not hold material or tools while climbing the ladder (tools should be carried in a tool belt or side pouch);
- over-reach
- carry out work from a step ladder if they are standing higher than the third rung from the top.
- perform work on a trestle platform that is over two metres above ground level unless edge protection is incorporated
- use a ladder for hot work such as welding or oxy cutting
- use any power (air, hydraulic, electric or battery) equipment or tool specifically designed to be operated with two hands, such as concrete cutting saws and circular saws from a ladder;
- use tools that require a high degree of leverage type force, which, if suddenly released, will cause the user to over-balance or fall (e.g. stillsons or pinch bars) from a ladder
- use tools requiring the use of both hands and dynamic movement, such as crow-bars and axes.

2.45.4 Saw Horses

The maximum height of single plank Saw Horse as a working platform to carry out Light Duty tasks is 550mm in height.

Only minor tasks can be performed i.e. Painting, Sanding. Signwriting etc it also must have provision for safe access and egress from that height, i.e. provide steps.

The Light Duty tasks will be restricted to the range of the body (Biomechanics) meaning only working from Head height downward only.

All work above Head height will be classified as Heavy Duty tasks which will require a proper working platform with a much larger work surface of 450 mm wide. The working platform must comply with the Code of Practice for Scaffolding" AS 4576 - safe access and egress must also be provided.

2.45.5 Swing Stage Scaffolds

The erection, maintenance and use of swing stage scaffolds shall be in accordance with the relevant sections of the Queensland Scaffolding Code of Practice 2009 published by Workplace Health & Safety Queensland.

In particular, commissioning of the scaffold and compliance inspections shall be conducted by a Certified Engineer.

2.45.6 Roofing

Fall protection by roofing S/C shall be an engineered control system such as perimeter handrails. The proposed engineered control system shall be submitted to HY as part of the SWMS.

The use of harnesses as a fall protection control method shall only be used where the use of an engineered control is not practicable and then only if approved by HY.

2.45.7 Fall Protection Equipment

Requirement for the Use of Fall Protection Equipment

The requirement to use fall protection equipment shall be assessed in accordance with the Hierarchy of Controls and then only allowed if more effective measures in the Hierarchy are not reasonably practicable. For example the use of perimeter guardrails on a roof is more effective than a harness. That is, prevent the fall rather than catching a person during a fall.

This shall be assessed as part of the HY SWMS Review process.

Instruction and Training in the Use of Fall Protection Equipment

Personnel required to wear or use fall protection equipment shall be instructed and trained in the correct use of such equipment.

The requirement for S/C to provide this instruction and training is defined in the relevant State OHS Specification for Subcontractors.

Verification that the instruction and training has been provided shall be conducted as part of the HY SWMS Review process where the use of fall protection equipment is required by the SWMS.

Attachment Points

Attachment points for fall protection equipment shall be installed by a suitably qualified person and included on the Fall Protection Equipment Register. The attachment points shall be regularly inspected and the register updated accordingly.

Fall Protection Equipment Inspection, Servicing & Maintenance

Inspection, servicing and maintenance of fall protection equipment shall be conducted in accordance with relevant Codes of Practice and Standards, in particular;

- AS/NZS 1891 Industrial fall arrest systems & devices
- AS/NZS 4488 Industrial rope access systems - Selection, use & maintenance

Where fall protection equipment is to be used, the S/C shall provide a register of Harnesses and Fall Protection System equipment showing the status of inspection, testing and certification prior to commencement of the relevant works. The S/C shall be required to keep the register up todate and submit a copy to HY as inspections and tests are conducted.

2.45.8 Scaffolds

Scaffolding shall comply with the following as applicable;

Codes of Practice

- NSW Identification Tool for Aluminium Mobile Scaffolds 2008
- NSW Scaffolding Code of Practice 2008

Standards

- AS/NZS 1576.1 - 1995: Scaffolding - General Requirements
- AS/NZS 1576.2 - 2009: Scaffolding - Couplers & Accessories

- AS/NZS 1576.3 - 1995: Scaffolding - Prefabricated & tube-and-coupler scaffolding
- AS/NZS 1576.4 - 1991: Scaffolding - Suspended scaffolding
- AS/NZS 1576.5 - 1995: Scaffolding - Prefabricated splitheads & trestles
- AS/NZS 1576.6 - 2000: Scaffolding - Metal tube-and-coupler scaffolding
- AS 1577 - 1993: Scaffold Planks
- AS/NZS 4576 - 1995: Guidelines for scaffolding

2.45.9 Falling Objects

The risk of falling objects on the site generally shall be assessed as part of the HY Project HSE Risk Assessment and required controls implemented by HY.

The risk of falling objects for particular activities shall be assessed as part of the SWMS Review process for the activity and the required controls implemented by the S/C.

2.45.10 Access/Egress to/from Elevated Work Areas

Safe access and egress to/from elevated work areas shall be provided.

Where a ladder is used to access a work platform, the ladder shall extend at least 1 metre above the work platform and be securely tied or fixed to prevent movement of the ladder. The area around the access point to the ladder shall not be kept clear and access shall not be obstructed or restricted by items such as perimeter handrails.

2.45.11 Fall from Height Emergency Response

Procedures for the response to a fall from height shall be included in the project Emergency Response Plan for such events as;

- arrested fall (eg/ suspended in a harness)
- unarrested fall (eg/ medical emergency)

2.46 Child Protection

2.46.1 Purpose & Scope

The purpose of this procedure is to;

- Protect Children from harm
- Comply with Child Protection Legislation

2.46.2 Definitions & Abbreviations

For the purposes of this procedure, the followig definitions and abbreviations apply;

Child: A child is an individual under the age of 18 years

Harm: Harm, to a child, is any detrimental effect of a significant nature on the child's physical, psychological or emotional wellbeing. This includes, but is not limited to;

- the physical injury or sexual abuse of a child or young person, or
- a child or young person suffering emotional or psychological harm of such a kind that the emotional or intellectual development of the child or young person is, or is likely to be, significantly damaged, or
- the physical development or health of a child or young person being significantly harmed,

2.46.3 Child Protection Legislation

The following is a list of Child Protection Legislation to be complied with. Access to these is available via the Legislation, Standards, BCA and Chemwatch section of the HYer Knowledge Centre of the HY Intranet.

- NSW Children and Young Persons (Care and Protection) Act 1998

- NSW Children and Young Persons (Care and Protection) Regulation 2000
- NSW Child Protection (International Measures) Act 2006
- NSW Child Protection (Offenders Prohibition Orders) Act 2004
- NSW Child Protection (Offenders Prohibition Orders) Regulation 2007
- NSW Child Protection (Offenders Registration) Act 2000
- NSW Child Protection (Offenders Registration) Regulation 2001
- NSW Child Protection (Prohibited Employment) Act 1998
- NSW Commission for Children and Young Peoples Act 1998

2.46.4 Background Checking

If required by the contract, background checking of both HY and S/C employees shall be undertaken where the site is within or adjacent to the following;

- Schools or Pre-schools
- Child Care Centres
- Kindergartens
- Detention centres
- Other locations where children are predominantly present

This background checking shall be in the form of State or Federal Police checks as to whether the employee has been found guilty of a Child Protection Offence or the subject of a Child Protection order.

If so, the employee will not be permitted to work on the site.

Where the employee has made a direct application for employment on the site, this shall be reported to the relevant Authority as required by Child Protection Legislation.

2.46.5 Site Induction

All HY & S/C employees are required to attend a Site Induction. Child Protection requirements and the Code of Behaviour is included in the Site Induction Handbook and shall be included as part of the Site Induction.

For the type of sites listed under Background Checking, inductees shall be required to complete and submit to HY a Prohibited Employment Declaration along with their Site Induction record. Once submitted, the employee shall be issued with an identity tag which is required to be worn at all times whilst on site.

2.46.6 Site Security

On all sites, fencing shll be erected to prevent;

- access by children into the site; and
- HY & S/C employees from gaining access into school and other facilities not included in the scope of works.

The fencing and "No Go" areas shall be shown on the Site Layout Plan which is covered as part of the Site Induction.

2.46.7 Site Access

On sites where Background Checking is required, HY shall liaise with the Manager or Responsible Person of the facility to discuss and agree requirements for access into designated areas to undertake the works.

The agreed requirements shall be incorporated into the Site Induction Handbook and covered at the Site Induction.

A minimum of 24 hours notice shall be provided to the person in charge of the facility when access is required to conduct works.

HY's representative or where the HY Representative is not available, the S/C's representative, shall report their presence to the person in charge of the facility on arrival each day.

HY & S/C Representatives shall record in the Site Daily Attendance Register the names of all their relevant employees working at the site each day.

2.46.8 Code of Behavior

HY will ensure that all HY & S/C employees behave in the following manner;

- On all Sites where Background Checks are required, all S/C employees must obtain permission from HY to enter the facility before commencing work and may only enter approved areas.
- Employees shall avoid talking with, touching or interacting with any children except where the work requires it or in an emergency or safety situation.
- Employees shall only use approved toilets and other facilities, unless the person in charge of the School or facility gives written authority to use alternative arrangements.
- Employees shall ensure the site is not able to be used or accessed by children. Clear signs, fencing and barricades (where appropriate) shall be used to prevent any inadvertent or unauthorised access.
- Appropriate privacy must be maintained when working on toilets and similar facilities. Employees must ensure that toilets and similar facilities are not occupied or in use by children before entering to perform work, and that work does not continue when use of the facilities is required. Where practicable male employees should perform work on male facilities and female employees on female facilities.
- Employees shall wear clothing that is tidy and in good condition, including a shirt and shorts, trousers or a skirt at all times.
- Employees shall report any concerns about inappropriate behaviour by children or child harm to HY
- Where issued, Employees shall wear their identity card at all times when on site.

The above Code of Behaviour shall be included in each State Subcontractor Specification for Occupational Health & Safety.

Breaches of the Code of Behaviour shall be treated as Serious Misconduct in accordance with the procedure for Misconduct and dealt with as a Child Protection Incident.

2.46.9 Compliance Monitoring

Compliance with the Code of Behaviour shall be regularly monitored by HY as part of the day to day site Supervision in accordance with the procedures for Site Manager and Site Safety Officer daily inspections.

Compliance with this procedure shall be assessed as part of the HSE Audits in accordance with the procedure for Auditing.

2.46.10 Child Protection Incidents

The following events shall be recorded and reported as a Child Protection Incident in accordance with the procedure for HSE Incidents;

1. Breaches of the Code of Behaviour
2. Breaches of Child Protection Legislation
3. Actual or suspected harm to a child or children

For sites where Background Checking is required, Incident Types 2 & 3 above shall be reported to the person in charge of the facility in order for them to meet their Mandatory Reporting obligations under Child Protection Legislation as required.

For other sites Incident Types 2 & 3 shall be reported to the relevant State Child Protection Authority if required by Child Protection Legislation.

2.46.11 Confidentiality

As required by Child Protection Legislation, the names of people, including children, involved in a Child Protection Incident shall not be published or broadcast in any form that may be accessible by an unauthorized person.

2.47 Asbestos

2.47.1 Discovery of Asbestos

If a material suspected of containing asbestos is located on site the following procedures shall be adhered to:

- Worker to report finding to Supervisor or Health & Safety Officer, or Representative.
- Work shall cease in immediate affected area, signage or suitable barricades shall be installed to prevent unauthorised entry.
- A qualified Occupational Hygienist shall be requested to inspect area, take samples and report back to Site Management.
- If samples are found to contain asbestos, an action plan shall be implemented.
- If samples indicate that there is no presence of asbestos, workers are to be advised of the investigation and work may resume in the previously barricaded area.

2.47.2 Emergency Procedures

In the event that during works, personnel become accidentally exposed to asbestos, the following procedures shall be followed:

- Personnel in the immediate affected area shall cease work and immediately go to the emergency showers on site.
- All contaminated clothing is to be removed and placed into a thick plastic bag. The plastic bag must then be tightly sealed and labelled as "Asbestos Contaminated Clothing".
- Personnel are to immediately decontaminate themselves in a shower and a clean set of clothes to be re-issued.
- "Asbestos Contaminated Clothing" is to be industrially cleaned or disposed of appropriately.

NOTE: It is extremely important that all site personnel are kept informed during the above procedure being actioned.

2.47.3 Asbestos Debris in Soil

In the event during excavation works, asbestos cement products are located, exposed and damaged causing minor debris the following procedures must be followed;

- The area should be immediately assessed and appropriate precautions implemented for the protection of all personnel.
- The asbestos contractor shall comply with all relevant statutory requirements and Codes of Practices which apply to the removal of asbestos. These requirements include:

Asbestos: Code of Practice, August 1988, WorkSafe Australia Code (National Occupational Health & Safety Commission) and include Guide to the Control of Asbestos Hazards in Building and Structures.

Australian Code for the Transport of Dangerous Goods by Road and Rail (Commonwealth Australian Gazette No. P15, April 1987).All work in the immediate area should cease if it becomes obvious that friable asbestos waste has been buried on the site, or if asbestos cement products are uncovered.

Relevant State Asbestos Regulations

Work to be conducted in accordance with the principals of the Recognised Victorian Industry Code.

Any other relevant Standards or Codes published by the responsible Authorities or the Standards Association of Australia.

2.47.4 Asbestos Removal

Non Friable Asbestos

Non-friable materials (up to 10m2, and involving a maximum of 1 hours work) may be removed by an appropriately trained and qualified person, as per Regulation 207 (limited removal without license).

If the extent or nature of the material is greater than setout above, a licensed person (min Class B) must be engaged to carry out the work.

If in doubt as to the nature of the materials encountered, an Occupational Hygienist should be engaged to assess the affected area, and provide direction on suitable and required procedures.

Non-friable Asbestos materials are to be bagged, sealed and disposed of in accordance with Part 8 of the Asbestos Regulations (2003).

Friable Asbestos and/or >10m2 Non-friable

The asbestos contractor to carry out this work is to be an Accredited Asbestos Removalist registered with the relevant State OHS Authority as holding a non-friable only license of the required Class.

Appropriate work methods and procedures are to be determined in accordance with the relevant Legislation, Standards and Codes of Practice. Measures include:

- The asbestos contractor shall carry out this work wet except where not practicable.
- All visible debris should be removed from the contaminated area such that any risk of fibre inhalation has been effectively eliminated.
- A P2 or P3 filter with a half face piece respirator should be the minimum respiratory protection used for this work. Decontamination procedures should be followed at every work break during this work.
- A decontamination unit should be available at all times for personnel to decontaminate as required. This unit should be positioned adjacent to the work area.
- The work area should be roped off and sign posted in order to restrict access. Signs shall conform with Australian Standard 1319 – 1983 Safety Signs for the Occupational Environment. The signs should be incorporate a visual reference to the presence of an asbestos hazard.
- Thoroughly wet the debris with a fine water spray.
- Removal of the asbestos debris if in minor quantities, is to be conducted by manually removing the asbestos debris and disposing it into asbestos hazards bags.
- During any work in the work area prior to final clearance, coveralls worn should be made from either 100% synthetic material or a mixed natural/synthetic fabric capable of providing adequate protection against fibre penetration of asbestos fibres down to a diameter of 0.5 micron and to a maximum 1% penetration of all airborne asbestos fibre. Once worn, disposable overalls are not to be reused or laundered.
- The asbestos contractor must supply management with the appropriate certified clearance and disposal certificates.

2.47.5 Air Monitoring

Boundary Air Monitoring may be required during the asbestos removal abatement works, in accordance with the Regulations and/or the directions of the Occupational Hygienist.

2.47.6 Inspection Following Removal

At the completion of the work the Occupational Hygienist will enter all space where asbestos abatement has been performed. If any asbestos containing debris is found, it should be removed.

A clearance certificate will be issued only when the Occupational Hygienist is satisfied that the works have been completed to a satisfactory standard.

2.47.7 Return to Work in Affected Area

After receipt of a clearance certificate, workers are to be informed of the outcomes, and works may safely resume in the area. If further Asbestos materials are encountered, procedures above are to be repeated.

2.47.8 Education & Training

All personnel involved in tasks which may become exposed to asbestos shall have completed an accredited asbestos awareness training course.

Where personnel may become exposed to asbestos this shall be identified as a hazard in the relevant SWMS and the required control measures defined which shall include the training above.

3 APPENDICES

3.1 Policy Statements

- OHS Policy
- Injury Management Policy

3.2 Project Organisation Chart

3.3 Site Induction Handbook

3.4 Site Layout Plan

3.5 Emergency Response Plan

3.6 Forms & Proformas

- Safe Work Method Statement Review Form

Appendix 3: Environmental Management Plan

hansen yuncken
BUILDING VALUE

Wagga Wagga Base Hospital Redevelopment

Environmental Management Plan

Aug 2011

PREPARED BY
HANSEN YUNCKEN PTY LTD
Level 6, 15 Bourke Rd
Mascot NSW 1460
ABN 38 063 384 056

CONTENTS

1. ENVIRONMENTAL MANAGEMENT PLAN REVIEW AND APPROVAL

Refer to CMP Responsibility Matrix for Environmental Management Plan responsibility, input and approval.

Position	Name	Sign	Date
Review			
Site Manager			
Site Safety Officer			
Project Manager	John Hunt		
State HSE Manager	Ray Jones		
Approval			
Construction Manager			
Client			

2. DEFINITIONS & ABBREVIATIONS

The following definitions and abbreviations have been used in this Environmental Management Plan. Further definitions and abbreviations are provided in referenced procedures and plans.

EMP Environmental Management Plan

EPA State Environment Protection Authority

ESD Ecologically Sustainable Development

HSE Health, Safety & Environment

HY Hansen Yuncken Pty Ltd

PLN HY Plan

PROJ Project Management

S/C Subcontract(s) or Subcontractor(s) as the context requires

Site Safety Supervisor Site Manager

SSO Site Safety Officer

Superintendent

SWMS Safe Work Method Statement

3. SCOPE OF WORKS

The Wagga Wagga Base Hospital is the major acute care provider and referral hospital in the Murrumbidgee Local Health Network. The redevelopment of the Hospital, once complete, will align the Hospital's facility requirements to the projected Clinical Services Plan activity projections to 2021/22.

The Principal, Health Infrastructure (HI), is responsible for the planning, design and delivery of the redevelopment works which are proposed to be undertaken in a number of Phases to facilitate the current clinical services and match the available funding.

Hansen Yuncken's GMP Offer, to be submitted by the 1 December 2011, is to include the construction of Phase 1 (former stage 1a) as described below:

- Phase 1 (former stage 1a): New facilities to accommodate acute and sub-acute mental health which will be a three storey building with acute mental health on the ground floor and sub-acute mental health on the first floor and plant area located on the third floor.

- Early Works: As a precursor to the above mentioned a series of enabling works are planned to facilitate the onset of the redevelopment. These works incorporate the construction of a new car park to the North of the existing buildings, several services relocations/diversions along with the construction of a replacement road for Lewis Drive which will be partially built over as part of the Phase 1 works. Several packages of demolition will be incorporated into the Early Works Phase to effectively clear the Phase 1 site. It is noted that the Early Works will not form part of the GMP. Rather they will be let as a series of pre GMP packages. Furthermore it is noted that only the replacement road for Lewis drive will form part of the Part 3A project application. The services diversions will be approved via Authority approvals and the packages of demolition will be approved under the Infrastructure SEPP.

4. OBJECTIVES

The HY Environmental Policy Statement provides the framework for the development of this Environmental Management Plan.

The objectives of the Environmental Management Plan are to:

- Encourage best practice environmental management through planning, commitment and continuous improvement;
- Prevent and minimize adverse impacts on the environment;
- Identify the potential for, and respond to, environmental incidents and emergency situations and take corrective actions;
- Identify and control possible environmental hazards with the works and HY activities;
- Identify and protect any special environmental characteristics of the site including cultural heritage significance;
- define roles and responsibilities and allocate the necessary resources
- ensure environmental training and awareness programmes are provided to employees and subcontractors;
- Establish mechanisms to monitor evaluate and report progress.

The HY Environment Policy commits the company to achieve the following goals:

- Develop and promote a culture of environmental leadership, responsibility and continual improvement across the HY business;
- Audit, monitor and ensure compliance with environmental legislative and regulatory obligations and other environmental commitments;
- Utilise the resources of HY to lead the way in defining and achieving best environmental practice; and
- Advance and disseminate environmental knowledge and applied environmental management through training, research and engagement with the wider community.

5. ENVIRONMENTAL PRIORITIES

5.1 ESD Vision & Principles

The project provides an opportunity for HY to expand its practical and theoretical knowledge of ESD to a level that is considered ‘best practice’ status. As such, the ESD vision and principles for HY involves:

- Identification and prioritisation of environmental risk based on AS/NZS4360:2004 and Guidelines HB436:2004, using qualitative likelihood vs. consequence methods.
- Development of management systems which build knowledge and capacity on environmental issues, principles and sustainable behaviours including training and communication.
- Reduced energy and water consumption as well as waste minimisation during the construction process.
- Environmental training and management of Trade Contractor's activities to ensure that the project ESD objectives are obtained.
- Efficient and effective use of natural resources in a way that maintains the ecological processes on which life depends
- Sustainable use of renewable energy resources.

5.2 Environmental Awareness

All HY and S/C employees shall receive an induction into the project in accordance with the site induction procedure including completing the Site Induction Record Form (FM-CORP-HSE-01). The induction shall include the requirements for the conduct of activities which have the potential for significant environmental impacts on the project which shall be outlined in the project specific Site Induction Handbook.

The Site Induction Procedure is detailed as follows:

5.2.1 Industry Standard Induction

It is HY Policy that all Subcontractor employees on HY projects must have completed the State Construction Industry OHS Induction or recognised Interstate equivalent.

Workers without a current Construction Industry card will not be given a HY Site Induction and as such will not be permitted to commence work.

The card number is to be recorded on the HY Site Induction Record.

5.2.2 Site Induction Register

A Site Induction Register shall be established and maintained for each project.

5.2.3 Site Induction Content

Presentation of inductions by Site Union Delegates is not permitted on any HY site.

The content of the Site Induction shall consist of the following;

- Site Induction DVD Presentation
- Site Specific HSE Requirements
- Site Induction Quiz

Site Induction DVD Presentation

The standard HY Site Induction DVD shall be shown to inductees. This contains details of HY's HSE requirements on all sites.

Site Specific HSE Requirements

A project specific Site Induction Handbook shall be developed.

The Site Induction Handbook sets out the content of the Site Specific component of the Induction which shall normally be covered following the completion of the Site Induction DVD Presentation. In particular the following items shall be covered;

- Site Layout Plan
- Incident Reporting procedures
- Emergency Response Plan
- HY OHS Policy
- HY Environmental Policy

Site Induction Quiz

All inductees shall be required to successfully complete a site induction quiz prior to approval to commence work. This is to establish and verify the inductee's understanding of information provided at the induction.

5.2.4 Personnel to be Inducted

All HY and S/C employees (excluding visitors and minor deliveries) are required to undertake a HY Site Induction which is to be presented by the SSO or nominated HY Representative.

5.2.5 Site Induction Record

The induction for each person shall be recorded on the Site Induction Record Form which shall be signed by both the Inductor and Inductee at the completion of the induction.

5.2.6 Site Induction Sticker or Card

After signing the Site Induction Record, each inductee shall be issued with a HY Induction Sticker to be affixed to their hard hat.

The Induction number on the sticker or card shall correspond to the Induction number from the Site Induction register.

5.2.7 Tickets & Licences

Where copying facilities are available, the HY Representative shall take a copy of all relevant tickets and licences at the induction, verify currency (for those with an expiry date) and file with the inductee's induction record.

NSW Certificates of Competency issued prior to 1997 are no longer valid. Only National Certificates of Competency licences or licences still valid in the issuing State (eg/QLD, VIC etc) shall be accepted.

5.2.8 Site Induction File

Records of the induction shall be kept in the Site Induction file forming part of the Project Records.

Access to the file shall be by authorised HY personnel only due to National Code of Practice for the Construction Industry and Privacy Legislation requirements.

5.2.9 Delivery Drivers

Delivery drivers shall be required to report to the site office, read and sign the Site Visitors Register (or similar) PRIOR to proceeding onto site to make their delivery.

Delivery drivers shall be required to report to the site office, read and sign the Site Delivery Sign In form PRIOR to proceeding onto site to make their delivery.

5.3 Environmental Impacts of Subcontractor Activities

The environmental impacts of Subcontractor activities shall be assessed during the S/C Pre-award meeting in accordance with NSW Pre-Award Meeting Minutes form and the project HSE Risk Assessment

5.4 Erosion and Sedimentation Control

Sedimentation control will be carried out in accordance with the Erosion & Sediment Control procedure. The location of permanent controls (e.g. silt fences) are shown on the Site Layout and Details Plans (C-SK-005 & 006).

Any sediment collected on silt fences or around sandbags will be disposed within site landscaping or in excavations. Siltation is to be checked following significant rain events and recorded. Digital photos are to be taken and the incident reported in the Site HSE Inspection Report

5.4.1 Erosion & Sediment Control Procedure

Pollution or contamination of stormwater runoff from the site shall be minimised by one or more of the following methods. The method(s) to be implemented shall be indicated on the CMP.

- "Clean" stormwater shall be diverted around the site where possible
- All existing stormwater pits and drains subject to HY construction works will be silt protected with geo-fabric and/or granular socks. Drains will be monitored and maintained by HY
- Stockpiles to be established at HY approved locations
- Sediment fences shall be installed at required locations at the perimeter of the site
- Stormwater shall be diverted to retention basins
- The location and details of permanent controls shall be included on the Site Layout Plan.

5.5 Air Quality & Dust Control

Air Quality and dust control shall be managed in accordance with the Air Quality & Dust control procedure Construction equipment will be properly maintained to ensure exhaust emissions comply with Clean Air regulations.

Cleared vegetation, demolition materials and other combustible waste will not be burnt on site. Prompt action will be taken to extinguish any fire.

Wherever practical, materials and processes that are non-toxic will be used and CFC-free, HFC-free and HCFC-free refrigerants and processes will be used.

Disturbed areas will be stabilised as soon as practicable to minimise wind blown dust.

Trucks transporting material from the site will be covered or watered down immediately after loading if required to prevent wind blown dust emissions and spillage.

During dusty conditions a water cart from an on-site contractor will be used to control dusty areas.

5.5.1 Air Quality & Dust control procedure

Construction Impacts on Air Quality

The impacts of construction activities on Air quality shall be assessed as part of the Project HSE Risk Assessment.

Controls shall be developed to ensure the requirements of relevant legislation, standards and contract requirements are met.

Airconditioners

An Airconditioner Filter Record (FM-CORP-HSE-09) shall be affixed to the wall immediately adjacent to each airconditioner in site offices, lunchrooms and amenities.

Airconditioner filters shall be cleaned monthly.

As the airconditioner filter is cleaned the record shall be completed.

Completed (full) records shall be removed from the wall and filed in the project HSE files.

Dust Control

Dust generation minimisation and suppression shall be controlled using one or more of the following methods;

- During dusty conditions a water cart from an on-site contractor will be used to control dusty areas.
- Disturbed areas will be stabilised as soon as practicable to minimise wind blown dust
- Trucks transporting material from the site will be covered or watered down immediately after loading to prevent wind blown dust emissions and spillage
- Construction activities producing dust that cannot be controlled by water or other control means will be reviewed and could cease through agreement
- Application of chemical suppressant to exposed areas (eg/Dustbinder)

The method(s) to be implemented shall be indicated in the CMP.

All dust control equipment will be kept in good operating condition. The equipment will be operable at all times with the exception of shutdowns required for maintenance.

5.6 Noise & Vibration

Noise and vibration shall be minimised in accordance with the following procedure:

5.6.1 Purpose and Scope

The purpose of this procedure is to:

- prevent hearing damage to employees due to exposure to loud noise
- minimise disturbance to adjacent property owners and the public due to noise and vibration from construction activities
- prevent damage to adjacent properties due to vibration from construction activities
- ensure compliance with the following;
    - AS/NZS 1269 – 2005 Occupational Noise Management
    - National Standard for Occupational Noise [NOHSC 1007 (2000)] published by the Australian Safety & Compensation Council
    - National Code of Practice for Noise Management & Protection of Hearing at Work [NOHSC 2009 (2004)] published by SafeWork Australia
    - NSW OHS Regulation 2001: Division 4 - Noise Management

5.6.2 Noise Levels

A worker shall not be exposed to greater than 85dB(A) for an eight (8) hour period. The value of 85 dB(A) over 8 hours is equivalent to;

- 88dB(A) over 4 hours
- 91dB(A) over 2 hours
- 94dB(A) over 1 hour
- 97dB(A) over 30 minutes
- 100dB(A) over 15 minutes

Also, a worker shall not be exposed to a C-weighted peak sound pressure of more than 140 dB(C).

5.6.3 Noise Measurement & Monitoring

State HSE Coordinators shall obtain and maintain a Noise Level Meter for use in their State and make it available to sites for use.

Where noisy activities are to be conducted on site, the Site Manager or SSO shall arrange with the HSE Coordinator for a measurement of noise levels to be taken.

Measurement of noise generated by mobile plant shall be taken in acccordance with AS 2012 Acoustics – Measurement of Airborne Noise Emitted by Earthmoving Machinery & Agricultural Tractors.

Where the noise levels exceed the above limits, action shall be taken to reduce noise emissions.

Where noise generation is not able to be reduced to levels below the above limits action shall be taken to reduce the exposure of workers to the noise using one or more of the following methods;

- Barricading & signage
- Hearing protection
- Conducting activities outside of normal work hours (where this will not create unacceptable disturbance to others
- Noisy activities such as concrete breaking and jack hammering shall be programmed in consultation with HY.
- Work Permits for entry into areas with excessive Noise Levels
- Re-sequencing/organising the works to minimise concurrent noise generation from multiple activities in an area
- Plant & equipment shall be fitted with an effective and operational noise suppression device.
- Implementation of controls in accordance with AS 2436 Guide to Noise Control on Construction, Maintenance & Demolition Sites
- All plant and equipment shall be regularly maintained and serviced to the manufacturer's specifications to ensure noise generation is minimised

Controls to implemented shall be defined in the relevant Safe work method statements

5.6.4 Barricading & Signage

Where noise generation is not able to be reduced to levels below the above limits barricading and signage may be erected to advise personnel that hearing protection shall be worn beyond the barricade.

5.6.5 Hearing Protection

Hearing protection shall comply with AS/NZS 1270 Acoustics - Hearing Protectors.

5.6.6 Radios, iPods & MP3 players

The use of radios, iPods or MP3 players or similar are prohibited on site and in all work areas at all times. They may be used in the site lunchrooms during breaks on condition that they not disturb others using the facilities.

The construction activity involves the use of heavy plant and machinery to undertake bulk civil works. Monitoring of equipment requirements will be continually reviewed to minimise noise impacts.

No work is planned for outside the site operation hours. Should this program change HY will notify the Superintendent in writing prior to the commencement of the work and submit a noise impact statement (if required).

5.6.7 Potential Noise & Vibration for Wagga Wagga Base Hospital redevelopment

Potential noise and vibration that could occur due to demolition include:

- Demolition of houses along Yabtree St
- Demolition of the Engineering Workshop

- Demolition of Gissing House
- Demolition of the Mortuary

Potential noise and vibration that could occur due to construction, traffic and operations includes, but is not limited to, the following:

- truck deliveries and movements;
- crane movements;
- piling;
- forklift and other lifting truck movements;
- concrete pumps;
- concrete trucks;
- formworking;
- scaffolding;
- concrete vibrators;
- generators;
- air compressors

All major motorized plant will have noise suppression equipment fitted as standard

5.7 Waste Management

The project will generate varying amounts of waste materials which are categorised below:

- General Solid Waste (non-putrescible) including excavated material such as soil, rock, uncontrolled fill, building and construction waste such as:
    - Material off cuts e.g. gypsum wall linings, timber board and framing, metal roof sheeting etc.
    - Surplus masonry e.g. kiln dried clay bricks and concrete blocks
    - Surplus concrete
- General Solid Waste (putrescible) including litter and food waste from the construction workforce
- Organic (green) waste such as grass, weeds, tress, shrubs
- Hydraulic waste such as sewage generated by the site workforce
- Hazardous waste generated through demolition of existing structures such as:
    - Asbestos
    - Lead paint
    - Synthetic Mineral Fibers

In addition to the above mentioned a significant contributor to waste generation on this project will be the demolition of existing buildings including 4 x residential dwellings (#10-16 Yabtree Street), Schofield Centre, and Gissing House. These packages of demolition will include waste materials such as concrete, masonry (bricks/blocks), timber, PVC lightweight steel framing, structural steel framing, aluminum, wall and ceiling linnings (gypsum), sheet metal roofing, concrete/terracotta roof tiles, strip and sheet flooring, ceramic tiles, carpet etc.

A licensed demolition contractor will be engaged to carry out the demolition works. Any waste materials that cannot be re-used or sold will be transported to a certified landfill to either be recycled or disposed of.

Any contaminated waste identified through the HAZMAT reports (to be prepared prior to any demolition works taking place) or further identified during the demolition process will be disposed of in accordance with DECCW legislation and guideline for disposal of contaminated waste.

During the construction phases the site workforce will use amenity established within the Contractors compound. The waste waters (sewage) will be disposed via plumbed connections to town infrastructure. All drainage connections for temporary site amenity will be established through the required Authority approvals.

HY will engage a waste management sub-contractor to regularly remove collected/stored waste from the site. The waste management sub-contractor will be required to:

- Comply with directions from the local waste Authorities and Council
- Provide accurate reporting and validation of waste removal/re-use/disposal

Regular consultation with sub-contractors will be conducted with specific emphasis on waste management to aid in the management of waste.

Project waste shall be collected, stored, handled and disposed of in accordance with following procedure:

5.7.1 Waste Reduction

Waste generated as a result of construction will be minimised, recycled, reused or recovered, where practical. HY has accepted the challenge to reduce waste on construction projects, particularly in materials transferred to landfill.

The strategy for reducing the waste on the project will be made up of three strategies as detailed below in order of priority. The prime objective is to keep the amount of materials transferred to landfill from this project to the minimum possible amount.

1. Reduce the amount of waste material produced on the project by ensuring that only enough materials required to perform the works are ordered.
2. Any excess materials from particular work areas are to be retained and incorporated into other work areas where practical.
3. Encourage “just in time” delivery of construction materials (minimum storage on site) to reduce the potential of loss / waste due to damage prior to usage.

Waste management will follow the resource management hierarchy principals established in the *Waste Avoidance and Resource Recovery Act, 2001*

HY will employ the following Waste Minimistaion strategy as a basis for reducing waste:

- AVOID – waste at source
- REUSE – materials and components
- RECYCLE – materials into new products
- DISPOSE – in responsible manner as last resort
- RECOVER – valuable resources from the waste stream from recycling and reuse

5.7.2 Non Recyclable Waste

Non-recyclable waste will be disposed of at an DECCW (EPA) approved landfill or transfer station.

5.7.3 Waste Collection & Disposal

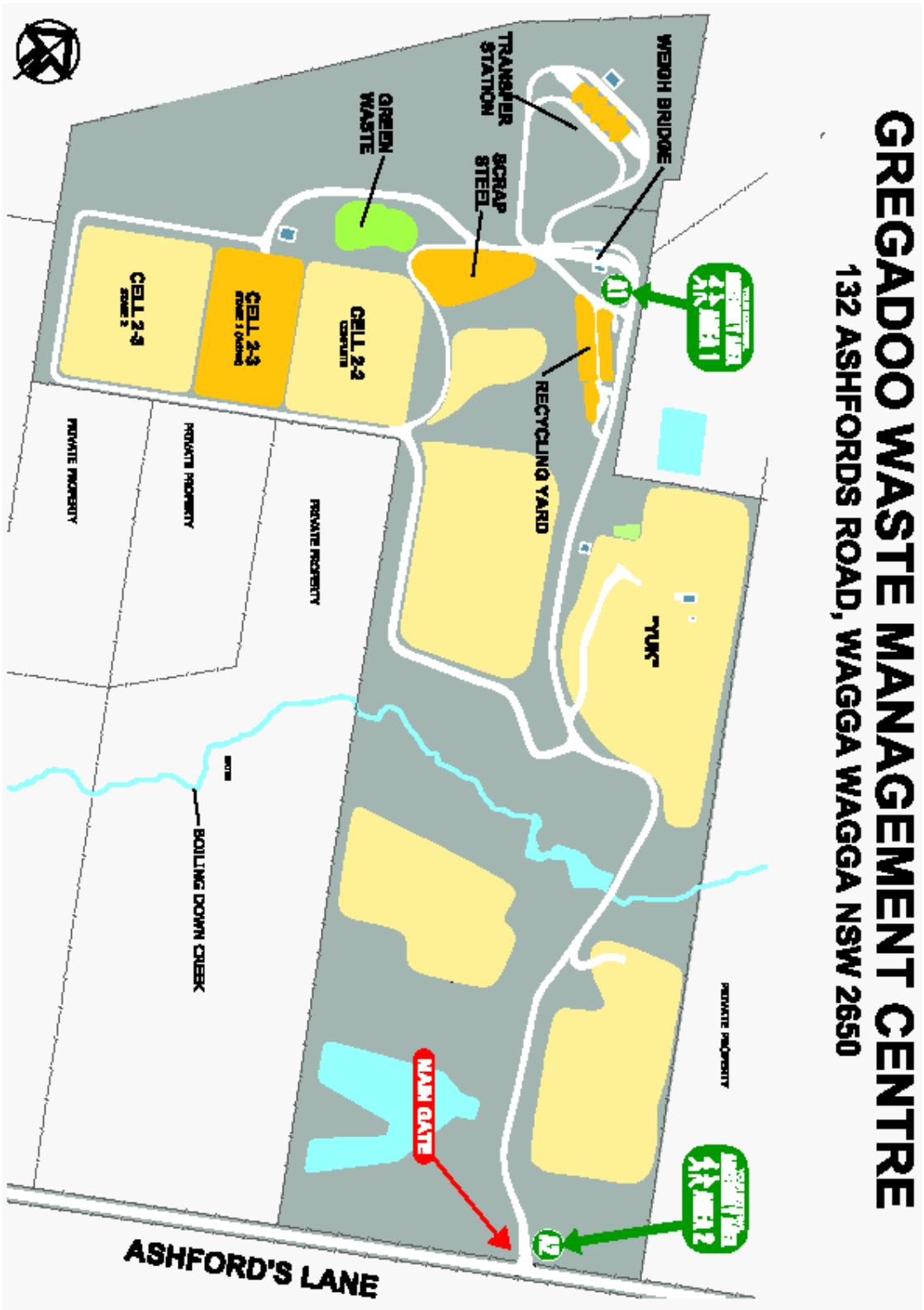
Appropriate waste bins are to be provided by HY and made available to all S/C. All S/C shall be directed to place waste in the bins provided. This shall be included in the Site Induction. Waste collection points are nominated on the Site Layout plan.

Greadoo Waste Management Centre has been identified as the largest and most capable waste disposal center in the region. The center operates as a solid waste landfill servicing the city and surrounding villages and rural areas within the Wagga Wagga local government area. At present it receives approximately 60,000 tonnes of solid waste per annum which when received is weighed at the weigh bridge and recorded along with the waste type. Direct enquires with the Local Council have been conducted and the Greegadoo Waste Management Centre has been proven to be able to cater for the project waste generation.

Gregadoo Waste Management Centre is capable of handling the following types of waste:

- Putrescible and commercial waste - Solid waste cell.
- Building refuse - Inert waste cell.
- Concrete and rubble - Reused on site where possible, or inert waste cell.
- Green waste - Mulched and used for cover material in solid waste cell, with some material being used by local composting businesses.
- Cars, whitegoods and other scrap steel - Metal recycling area.
- Mineral oils - Collection drum for recycling.
- Whole tyres - Taken away by tyre recyclers, used for drainage medium within interception trenches, or stored on site for future recycling opportunities.
- Car batteries - There is a collection point for lead acid batteries. These are collected by the Triple R contractor and on-sold to a recycler.

In addition to the use of Gregadoo Waste Management Centre further investigation will be carried out to identify masonry & concrete recyclers in the Wagga Wagga region capable of providing recycling (crushing facilities)


GREGADOO WASTE MANAGEMENT CENTRE
132 ASHFORDS ROAD, WAGGA WAGGA NSW 2650
WEIGH BRIDGE
TRANSFER STATION
GREEN WASTE
SCRAP STEEL
CELL 2-3
CELL 2-2
CELL 2-4
RECYCLING YARD
"TUK"
PRIVATE PROPERTY
PRIVATE PROPERTY
PRIVATE PROPERTY
PRIVATE PROPERTY
BOILING DOWN CREEK
MAIN GATE
ASHFORD'S LANE

5.7.4 Waste Reporting

Waste generation is monitored by HY on monthly basis to ensure that the Company's waste reduction objectives are achieved. Waste disposal quantities are monitored monthly by HY to ensure compliance.

The Project Administrator shall record waste disposal data in the QSE section of the PMR. Waste quantities from the PMR shall be entered into the State HSE Database for analysis and reporting against HY Waste reduction targets.

5.7.5 Concrete Waste and Washout

Concrete trucks and pumps shall be washed out at designated locations as shown on the site layout plan. Washout of concrete pumps and agi's in other areas will not be permitted. Washout shall be captured using membranes or other suitable means and allowed to set. Waste shall be placed in bins for disposal with site waste. Excess concrete shall be returned to the concrete plant for disposal or re-use.

Wastes likely to be generated during construction include excess spoils, concrete, steel, and other building materials. Excavated soil not required other than for construction works will be removed from site and disposed as required by the relevant legislation, standards and codes of practice.

Excavated Soil may be allowed to remain on the site however following discussion and agreement with the Superintendent.

Waste generated as a result of construction will be minimised, recycled, reused or recovered, where practical. HY will ensure that the following materials are recycled: concrete and steel. Non-recycleable products will be removed by the S/C or a competent and licensed disposer and will be disposed at an EPA approved landfill or transfer station.

5.8 Endangered Species

Areas of significant flora and fauna which have been identified on the construction site will remain bunted/ flagged during construction.

If any additional species are encountered the Site Manager shall arrange for works to be ceased in the area and contact the Superintendent for further directions.

5.9 Concrete Pump and Truck Washout

The locations for concrete washout for the project will be shown on the Site Layout Plan.

Washout of concrete pumps and agitators in other areas will not be permitted.

5.10 Contaminated Soil/ Hazardous substances

Contaminated waste shall be collected, contained, stored, handled and disposed of in accordance with relevant legislation and the Contaminated Soil procedure.

If discoloured or oily soil, any other material suspected of containing a substance listed in the NOHSC:30011 (Determining and classifying a hazardous substance) or if man-made materials such as asbestos fragments, plastic or metal indicating tipped material, are discovered during excavations, work will stop in that area and the Superintendent notified immediately.

HY will take all the necessary measures to protect from exposure all persons on site from hazardous materials.

All excavated contaminated material will be treated or maintained in a state so that dust is not produced. HY will then liaise with the EPA to determine the best solution for disposal.

5.10.1 Contaminated Soil Procedure

Identification of Contaminated Soil

During construction it shall be necessary to monitor soil contamination levels, dust levels and water runoff quality, to ensure that health and environmental standards are not compromised. This is especially important as contaminated soil may be excavated and transported around the site.

Upon discovery of contaminated soil the HY Site Manager shall arrange for works to be ceased immediately in the area and contact the Superintendent for further directions.

Contaminated waste shall be collected, contained, stored, handled and disposed of in accordance with relevant legislation and Codes of Practice.

Appendix Part 2 to Schedule 1 to the Protection of the Environment Operations Act (NSW) 1997 classifies the types of inert waste as follows:

Types of inert waste:

(1) Virgin excavated natural material (e.g. clay, gravel, sand, soil and rock) that is not mixed with any other waste and that:

(a) has been excavated from areas that are not contaminated, as the result of industrial, commercial, mining or agricultural activities, with manufactured chemicals and that does not contain sulphidic ores or soils, or

(b) consists of excavated natural materials that meet such criteria as may be approved by the EPA.

(2) Building and demolition waste (eg bricks, concrete, paper, plastics, glass, metal and timber), being material resulting from the demolition, erection, construction, refurbishment or alteration of buildings or from the construction, repair or alteration of infrastructure-type development such as roads, bridges, dams, tunnels, railways and airports, and which:

(a) is not mixed with any other type of waste, and

(b) does not contain any asbestos waste.

(3) Asphalt waste (e.g. resulting from road construction and waterproofing works).

(4) Biosolids categorised as Unrestricted Use, or as Restricted Use 1, in accordance with the criteria set out in the Biosolids Guidelines.

(5) Used, rejected or unwanted tyres (including shredded tyres or tyre pieces).

(6) Office and packaging waste (eg paper, plastics, glass, metal and timber) that is not mixed with any other type of waste.

Exposure of Potentially Contaminated Sites During Earthworks

If potentially contaminated material is encountered on the site, an assessment shall be made of the level of contamination and whether this exceeds the relevant acceptance criteria.

Similarly, any other material that is odorous or has the appearance of being likely to be contaminated, and is assessed unsuitable from a geotechnical point of view, shall be excavated and stockpiled while testing is carried out.

If testing shows that the material exceeds the criteria, it shall be removed from site to an EPA approved landfill site. Offsite disposal of material to landfill shall be undertaken in accordance with EPA procedures.

If testing shows that the material is below the criteria the material may be stockpiled or used as fill on site as approved and directed by the Superintendent.

Risk of Exposure of Construction Personnel to Soil Contaminants

It is important to minimise such risks by adopting appropriate site controls and industrial hygiene practices. Site controls may include:

- defining certain areas as contaminated and restricting access to them;
- appropriate signage;
- training construction employees in industrial hygiene procedures;
- keeping non-essential motor vehicles such as personal cars out of contaminated areas;
- regular medical checks of construction personnel who are exposed to contaminated soils;
- keeping stockpiles of contaminated material watered down to minimise dust generation in accordance with any water restriction requirements and ensure that runoff is not generated from excessive watering;

- covering truck loads with tarpaulins and watering material when loading and unloading;
- wheel washes for trucks and vehicle leaving the contaminated areas;
- regular road sweeping and cleaning;
- dust monitoring and adjustment of construction programs to accommodate high risk periods when conditions are windy or very dry; and
- monitoring of concentrations of volatiles.

Industrial hygiene practices may include:

- wearing long sleeved shirts and trousers or overalls to minimise dermal exposure;
- wearing gloves when handling soils;
- washing hands and faces before eating, drinking or smoking;
- leaving overalls at site for laundering;
- showering and washing facilities; and
- wearing respiratory equipment during times of high dust or volatile emissions.

Release of Contaminants to Soil and Groundwater

Water spraying of stockpiles and of soils being loaded and unloaded from trucks, covering of truck loads with tarpaulins and other measures described in the previous section would minimise the potential for dust to be generated.

If heavily contaminated soil is placed in contact with clean soils, contaminants could be mobilized by rainwater or chemical/physical reactions and affect the clean soils to a limited extent. Similarly there is a risk that contaminated soil is not clearly differentiated from clean soil and that mistakes could occur which cause the materials to be mixed or wrongly handled or disposed of.

This shall be overcome by implementing a material tracking system for all contaminated soils and ensuring that construction staff are trained how to use the system. This shall involve documenting areas containing contaminated soil, and putting signage near stockpiles that indicated the type of material present and its contamination status.

It shall also require supervision and documentation of all movements of contaminated materials around the site.

Avoiding contact between stormwater and contaminated soils is difficult to achieve if larger areas of a site are being exposed within a short period, because it does not allow for minimizing the amount of soil that is uncovered or placed in temporary stockpiles. Therefore it is necessary to manage stormwater in such a way that it does not mobilize contaminants and transfer them to clean areas.

This may be achieved by:

- covering stockpiles of contaminated soil;
- placing stockpiles of contaminated soil on bitumen or other sealed areas;
- installation of adequate bunding or other approved method to contain runoff;
- collecting stormwater run-off from stockpile areas; and
- analytical testing of collected stormwater prior to its release.

Erosion and sediment control procedures in accordance with the relevant Code of Practice may also be applied, but with the additional objective of keeping water that is exposed to contaminated soils separate from water that has only come into contact with clean soils.

Groundwater could potentially be impacted by contaminants mobilized from stockpiled contaminated soil or by buried material. Minimising runoff from stockpiles, as outlined above would reduce the risk to groundwater. Land filling of contaminated material which is below the relevant criteria for soil contamination above the water-table, and capping the landfill area with low permeability material would minimise the risk of groundwater contamination from infiltration of stormwater into buried soils.

Heavy Metal Contamination

Any suspicious industrial wastes encountered will be immediately isolated to enable these assumptions to be confirmed by analytical testing.

Landfill Facilities

Every landfill facility will be in one of the following classes or subclasses[1]:

Inert: Class 1
Class 2
Solid: Class 1
Class 2
Industrial

Each facility will have licence conditions stating what waste it can and cannot accept.

In the case of inert waste, to qualify as Class 2 waste the waste (as well as meeting the criteria above) must not contain material which is "physically, chemically or biologically fixed, treated or processed".

[1] EPA Guidelines for the Assessment, Classification & Management of Liquid & Non-Liquid Wastes 1999.

5.11 Archaeological Artifacts/Aboriginal Heritage

Upon discovery of aboriginal or historical artifacts or anything considered to be of archaeological interest the Site Manager shall arrange for works to be ceased in the area and contact the Superintendent for further directions. The Project Team will take all necessary measures to protect the artifacts from being damaged or destroyed.

Works will not re-commence in the area until a written instruction from the Superintendent is received.

5.12 Fuel and Chemical Spills

Response to major fuel spills shall be implemented in accordance with the fuel spill procedure in the Emergency Response Plan. The requirements for storage of large fuel and chemical quantities are not expected for this project.

A spill kit shall be located adjacent to fuel and chemical storage and dispensing areas.

5.13 Hazardous Materials

Hazardous materials shall be controlled in accordance with following procedure:

5.13.1 Handling

Hazardous materials shall be controlled in accordance with the requirements of the relevant Code of Practice and MSDS.

5.13.2 Storage

A hazardous material store shall be established on site. The location of the store shall be shown on the Site Layout Plan.

Materials shall be stored in accordance with the applicable Code of Practice.

No hazardous materials shall be stored in Site Offices, Lunchrooms, First Aid facility or Change rooms.

5.14 Site Inspections

Inspections of the site including environmental controls shall be conducted in accordance with Site HSE Inspection Report (FM-CORP-HSE-02).

5.15 Environmental Incidents

Incidents resulting in potential or actual environmental damage shall be reported and investigated in accordance with following procedure: Incident Reporting & Investigation; and the HSE Incident Report (FM-CORP-HSE-11) respectively.

5.15.1 Purpose & Scope

All HSE Incidents are to be recorded on the HSE Incident Report (FM-CORP-HSE-11) which contains the following parts;

- Part A: Incident Notification
- Part B: Incident Investigation & Improvement Action
- Part C: Incident Review and Closeout

5.15.2 Incident Notification

This clause sets out the requirements for completion of Part A: Incident Notification of the HSE Incident Report (FM-CORP-HSE-11).

Section 1: Incident Registration

Tick the relevant State and Division in section 1 Incident Registration of the report and include details of the Workplace (Project Name or Office) along with the Job Number if the incident occurred on a project.

The Incident details are to be added to the relevant State Incident Register located in the State HSE Database Workbook. The Incident Number from the register is to entered on to the Incident Report.

Section 2: Incident Details

Details of the incident are to be included in section 2 Incident Details of the Report. Tick the relevant incident type(s);

- First Aid
- Near Miss
- MTI (Medical Treatment Injury)
- LTI (Lost Time Injury)
- Fatality
- Environment
- Property Damage
- Electrical
- Complaint
- Other

Section 3: Injured or Involved Person Details

Include details of the people involved in the incident in section 3 Injured or Involved Person Details of the report. If more than one (1) person is involved complete and attach additional records to the report.

Section 4: Witnesses

Include details of any witnesses to the Incident. If possible obtain a statement from the Witness of what they saw and attach to the report.

Section 5: Injury Treatment Details

Tick the type of treatment provided to the injured person(s) and indicate who provided the treatment. More than one treatment tye may be involved. For example, an injured person may be sent to a Medical Centre for examination following initial First Aid Treatment on site. In this situation both First Aid and Medical Treatment boxes would be ticked and details provided.

Section 6: Incident Analysis Codes

To provide a consistent basis for analysis of incidents, a set of Incident Analysis Codes (FM-CORP-HSE-13) has been developed from AS 1885.

Enter the relevant codes into the following fields;

- Nature of Injury
- Agency
- Mechanism

- Bodily Location

If you are unsure of the correct code to use, contact the State OHS Manager or HSE Coordinator for clarification.

Section 7: Incident Notification

Tick the box(es) of the person(s) or organisation(s) who have been issued with a copy of Part A of the HSE Incident Report.

If the Incident is deemed to be a "Notifiable Incident" under the relevant State OHS Legislation, notify the Authority in accordance with State OH&S Authority Incident Notification procedure.

5.15.3 Lost Time Injuries

A Lost Time Injury (LTI) is defined in AS 1885 as an occurrence that results in a fatality, permanent disability or time lost from work of one day/shift or more.

LTI's to either HY or S/C employees are to be reported to;

- State HSE Coordinator within 24 hours
- For serious LTI's, the Construction Manager, State Manager and CEO are to be notified within 24 hours

5.15.4 Medical Treatment Injuries

An MTI is defined as a work related occurrence that results in treatment by, or under the order of, a qualified medical practitioner, or any injury that could be considered as being one that would normally be treated by a medical practitioner but does not result in the loss of a full day/shift.

Any person referred for medical treatment where a potential for Lost Time exists shall be notified to the State HSE Coordinator. A Letter to Treating Doctor may be presented to the treating doctor to mitigate any lost time for the injury being treated.

An alternate duties list shall be issued to the injured employee for presentation to the Doctor.

MTI's are to be reported to the State HSE Coordinator within 1 week.

5.15.5 Workers Compensation Insurance Notification

All MTI's and LTI's to HY employees shall be notified to the Workers Compensation Insurance provider immediately.

5.15.6 State OHS Authority Incident Notification

Notifiable incidents as defined in the State OHS Legislation shall be reported to the State OHS Authority using the Authority's Incident Report form (if specified).

A copy of the State OHS Authority Report shall be attached to the HY Incident Report.

5.15.7 Federal Safety Commission Incident Notification

The FSC Incident Report (FM-CORP-HSE-102) shall be completed for the following incident types where they occur on sites where HY is the head contractor. All S/C incidents shall be included:

- All fatalities irrespective of the project value (notify the FSC immediately on 1800 652 500 and provide report within 48 hours);
- Any incident resulting in a LTI or AWI (incidents where alternate duties are found) where the project value is $3 million or more (provide report within 48 hours if a notifiable incident, otherwise provide the report within 3 weeks);
- Any MTI or dangerous occurrence on FSC projects only (provide report within 48 hours if a notifiable incident, otherwise provide the report within 3 weeks).

All reporting to the FSC is to be coordinated through the State Systems or HSE Coordinator.

The FSC Incident Report is to be completed in accordance with the Guidelines for Completing the FSC Incident Report (FM-CORP-HSE-103).

Alternate Work Injuries (AWI's)

The FSC have advised that the entry of AWI data at field C10 on the FSC incident report form is optional. As HY do not currently collect this data the completion of this field is not required.

Medical Treatment Injuries (MTI's)

Where an incident is medically treated and no time is lost, the incident shall be reported as an MTI. Where an incident is medically treat AND time is lost, the incident shall be reported as an LTI.

Notifiable Incidents

Notifiable incidents need only be reported where they would be required under the criteria for incident types specified above.

Dangerous Occurrences (Near Misses)

A Dangerous Occurrence is defined by the FSC as an incident where no person is injured, but could have been injured, resulting in Serious Personal Injury, Incapacity or Death. Also commonly called a “near miss”.

Multiple Injuries

A separate copy Part C of the Incident Report form shall be completed for each person who is injured as a result of the incident.

5.15.8 Incident Investigation & Improvement Action

This clause details the requirements for Part B: Incident Investigation and Improvement Action of the HSE Incident Report (FM-CORP-HSE-11).

Section 8: Actual or Potential Consequence and Investigation Level

The actual or potential consequence of the incident shall be assessed and the incident Class determined from the table below. Note that the actual consequences may differ significantly from the potential consequences such as in a Near Miss incident where the difference between and Class 1 and Class 3 consequence may just be a few seconds or millimetres.

Class	Occupational Health & Safety	Environment
1	Loss of life Serious injury or disease. Extended medical treatment required.	Irreversible or major harm to the environment. Serious disruption/nuisance to the Client or the public.
2	Medical treatment required and Lost time.	Major harm to the environment. Major disruption to the Client or the public.
3	Medical treatment required and No lost time.	Minor impact on the environment. Minor disruption to the Client or the public.

The assessed class shall be indicated on the Incident Report.

The position responsible for conducting the investigation into the Incident is shown on the Incident Report which vary depending on the Class of the Incident.

The State HSE Coordinator shall schedule Incident Investigation training in the State Training Plan for all Project Manager's, Site Managers & SSO’s.

Section 9: Description of Events

Include a description of the events leading up to, during and after the incident. These should be arranged in a chronological (time/date) sequence. Attach an additional investigation report if required.

Section 10: Contributing Factors/Root Cause Analysis

Following the investigation the root causes of the incident are to be identified so these can be addressed in developing actions to prevent a recurrence in accordance with section 12 of the Incident report.

Section 11: Attachments to Investigation Report

Indicate the documents attached to the report. This is to ensure that all such documents are accounted for with both the ORIGINAL and any COPIES of the Incident Report,

Section 12: Actions to Prevent a Recurrence

The actions to be implemented on Site to prevent a recurrence of the Incident are to be included. These actions are to address the assessed root causes of the incident as identified in section 10.

The Corrective Actions shall be developed in accordance with the Hierarchy of Controls in the following order as practicable;

1. Eliminate the risk. If elimination of the risk is not reasonably practicable, minimize the risk through measures which must be considered in the following order:
2. Substitute the hazard giving rise to the risk with a hazard that gives rise to a lesser risk;
3. Isolate the hazard from persons who might be put at risk;
4. Minimise the risk by engineering means;
5. Apply administrative measures such as the adoption of safe systems of work; and
6. Use personal protective equipment.

The level(s) of the hierarchy adopted for the control(s) are to be ticked in the LHS of this section.

Section 13: Actions Completed

When all actions have been completed, the Project Manager shall liaise with the Site Manager and SSO to review the effectiveness of the actions taken and if so, sign and date the report.

5.15.9 SMWS Development & Review Following an Incident

Following an LTI, MTI or Near Miss Incident, the relevant SWMS shall be reviewed to re-assess the adequacy of the SWMS with respect to the Work Process definition, Hazard Identification & Risk Assessment and Controls defined.

This is a mandatory requirement of section 12: Action(s) to Prevent a Recurrence of the Incident Report.

Where a change to work practices is required as part of the Corrective Action to be taken to prevent a recurrence of the Incident, the SWMS shall be revised accordingly.

The processes of SWMS Review, Induction and Compliance Audit shall be completed following the revision.

5.15.10 Senior Management Incident Review

The following requirements relate to Part C: Incident Review and Closeout of the Incident report.

All incidents other than First Aid (FA) shall be reviewed by Senior Management and closed out as follows.

1. The Site Safety Officer, Site Manager and Project Manager shall review, sign and date the report.
2. The ORIGINAL of the report shall be issued to the Construction Manager for review. A COPY of the full report shall be retained on site.
3. The Construction Manager and State HSE Coordinator shall review, sign and date the report.
4. For all Incidents assessed as Actually or Potentially Major & Catastrophic the State HSE Coordinator shall arrange for the State Manager and CEO to review, sign and date the report.
5. The State HSE Coordinator shall enter the close out date of the Incident Report into the State Incident Register and return a COPY of the completed Part C of the Incident Report to site for filing with the Site COPY.
6. The State HSE Coordinator shall file the completed ORIGINAL of the Incident Report in Incident number sequence in the State Incident Report file.

5.15.11 Incident Statistics

Monthly project man hour and incident data is to be reported in the QSE section of the Project Monthly Report (PMR).

The State HSE Coordinator shall collect & collate incident statistics from the PMR such as HY & S/C man hours worked and input relevant data into the State HSE Database.

5.15.12 State Incident Register

The State HSE Coordinator shall enter Incident data into the State Incident Register included in the State HSE Database maintained on the State Common Drive.

In particular the assessed Actual or Potential Class of the incident shall be entered. The Incident Register will "flag" incidents as Overdue where the date of closeout of the Incident Report has not been entered within the following timeframes;

- Class 1: 1 week
- Class 2: 2 weeks
- Class 3: 3 weeks

This is to ensure Incident Reports are followed up and closed out commensurate with the severity of the incident.

5.15.13 Workers Compensation Claims

All MTI's and LTI's to HY employees shall be notified to the Workers Compensation Insurance provider immediately.

Workers Compensation Claims shall be processed in accordance with procedure PR-CORP-HSE-11 Workers Compensation Claims.

5.15.14 Rehabilitation & Return to Work

Rehabilitation and Return to Work of HY employees involved in Lost Time Incidents shall be managed in accordance with the procedure for Rehabilitation of Injured Employees.

5.16 Environmental Emergencies

Preparation for and response to the environmental impacts of emergency events shall be conducted in accordance with the project Emergency Response Plan.

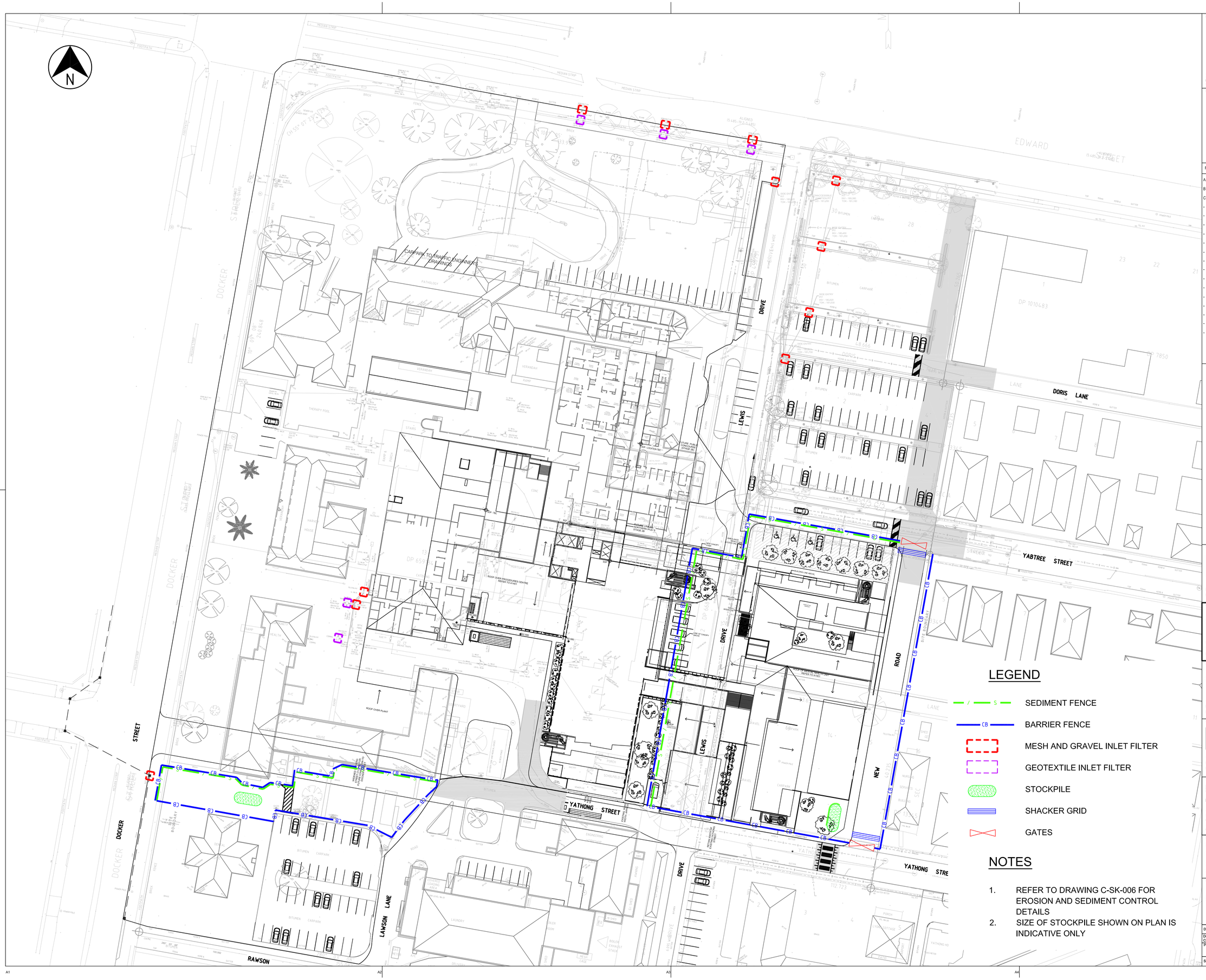
6. REFERENCES

Environmental Planning and Assessment Act 1979 No 203

Environmental Planning and Assessment Regulation 2000

AS/NZS4360:2004 Risk management

HB436:2004 Risk Management Guidelines



LEGEND

- SEDIMENT FENCE
- BARRIER FENCE
- MESH AND GRAVEL INLET FILTER
- GEOTEXTILE INLET FILTER
- STOCKPILE
- SHACKER GRID
- GATES

NOTES

1. REFER TO DRAWING C-SK-006 FOR EROSION AND SEDIMENT CONTROL DETAILS
2. SIZE OF STOCKPILE SHOWN ON PLAN IS INDICATIVE ONLY

NORTH POINT

KEY PLAN

REV	DESCRIPTION OF CHANGE	DRAWN	CHECK	DATE
A	DRAFT ISSUE	K.A	L.D	25.07.11
B	ISSUED FOR PART3A APPLICATION	K.A	B.S	16.08.11
C	RE-ISSUED FOR PART 3A APPLICATION	K.A	B.S	17.08.11

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PROJECT:
WAGGA WAGGA BASE REDEVELOPMENT
PHASES 1 & 2
EDWARD STREET
WAGGA WAGGA, NSW, 2650

DRAWING TITLE:
EROSION AND SEDIMENT CONTROL PLAN

Drawn: K.A	Designed: A.V	Reviewed Project Manager:	C.A
Drafting Check: B.S	Design Review: L.D	Aproved Project Director:	T.E
PROJECT NUMBER: NB11378	DRAWING NUMBER: C-SK-005	ISSUE: C	
SCALE:			

EROSION AND SEDIMENT CONTROLS

ES1 ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:

(A) LOCAL AUTHORITY REQUIREMENTS

(B) APPLICABLE - POLLUTION CONTROL MANUAL FOR URBAN STORMWATER

(C) DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT MANUAL- "URBAN EROSION & SEDIMENT CONTROL".

(D) NSW PROTECTION OF THE ENVIRONMENT ACT 1997

ES2 THE CONTRACTOR SHALL PREPARE EROSION AND SEDIMENT CONTROL DRAWINGS AND NOTES FOR THE WHOLE OF THE WORKS. SHOULD THE CONTRACTOR STAGE THESE WORKS THEN THE DESIGN MAY REQUIRE TO BE MODIFIED. VARIATION TO THESE DETAILS MAY REQUIRE TO BE APPROVED BY THE RELEVANT AUTHORITIES. THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED AND ADOPTED TO MEET THE VARYING SITUATIONS AS WORK ON SITE PROGRESSES.

ES3 MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY AS APPROPRIATE (IE. PRIVATE / PUBLIC LAND)

ES4 AS STORMWATER PITS ARE CONSTRUCTED PREVENT SITE RUNOFF ENTERING. ERECT SILT FENCES AROUND PITS.

ES5 MINIMISE THE AREA OF SITE DISTURBED AT ANY ONE TIME.

ES6 PROTECT ALL STOCKPILES OF MATERIALS FROM SCOUR AND EROSION. DO NOT STOCKPILE LOOSE MATERIAL IN ROADWAYS, NEAR DRAINAGE PITS OR IN WATERCOURSES.

ES7 ALL SOIL AND WATER CONTROL MEASURES ARE TO BE PUT BACK IN PLACE AT THE END OF EACH WORKING DAY, AND MODIFIED TO BEST SUIT SITE CONDITIONS.

ES8 CONTROL WATER FROM UPSTREAM OF THE SITE SO THAT IT DOES NOT ENTER THE DISTURBED SITE.

ES9 ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE VIA THE AGREED TEMPORARY CONSTRUCTION ENTRY/EXIT.

ES10 ALL VEHICLES ASSOCIATED WITH CIVIL WORKS SHALL BE CLEANED AND INSPECTED BY THE CONTRACTOR BEFORE LEAVING THE SITE .

ES11 MAINTAIN ALL STORMWATER PIPES AND PITS CLEAR OF DEBRIS AND SEDIMENT. THE CONTRACTOR SHALL INSPECT STORMWATER SYSTEM AND CLEAN OUT AFTER EACH STORM EVENT AND / OR WHEN DIRECTED

ES12 THE CONTRACTOR SHALL CLEAN OUT ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH STORM EVENT.

SEQUENCE OF WORKS

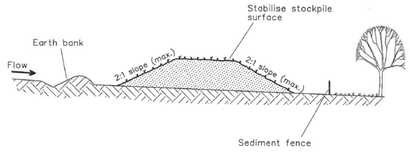
SQ1 PRIOR TO COMMENCEMENT OF EXCAVATION THE FOLLOWING SOIL MANAGEMENT DEVICES MUST BE INSTALLED.

(A) CONSTRUCT ALL SILT FENCES BELOW THE SITE AND ACCROSS ALL POTENTIAL RUNOFF SITES
(B) CONSTRUCT TEMPORARY CONSTRUCTION ENTRY / EXIT AND DIVERT RUNOFF TO SUITABLE CONTROL SYSTEMS
(C) CONSTRUCT MEASURES TO DIVERT UPSTREAM FLOWS AROUND WORK(S) AREAS
(D) CONSTRUCT SEDIMENTATION TRAPS / BASIN INLUDING OUTLET CONTROL AND OVERFLOW
(E) PROVIDE SAND BAG SEDIMENT TRAPS / GRAVEL SEDIMENT SAUSAGE UPSTREAM OF EXISTING PITS

SQ2 CONSTRUCT GEOTEXTILE FILTER PIT SURROUND AROUND ALL PROPOSED PITS AS THEY ARE CONSTRUCTED

SQ3 ON COMPLETION OF PAVEMENT PROVIDE GRAVEL SAUSAGE AT KERB INLET PITS.

SQ4 PROVIDE AND MAINTAIN A 450 WIDE STRIP OF TURN ON BOTH SIDES OF ALL PAVEMENTS AFTER CONSTRUCTION

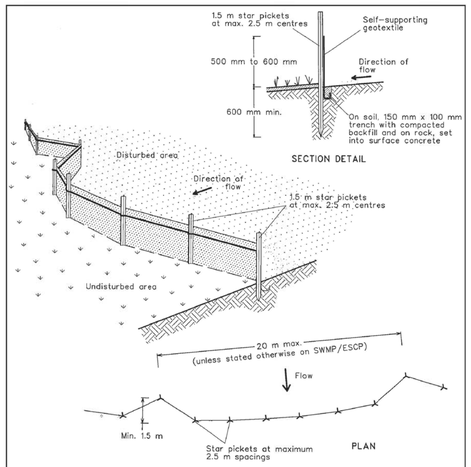


Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
5. Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES **SD 4-1**

4-5

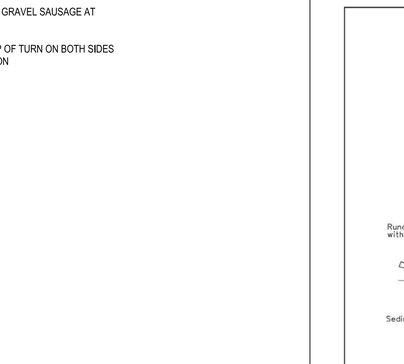


Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the gectextile.

SEDIMENT FENCE **SD 6-8**

6-36



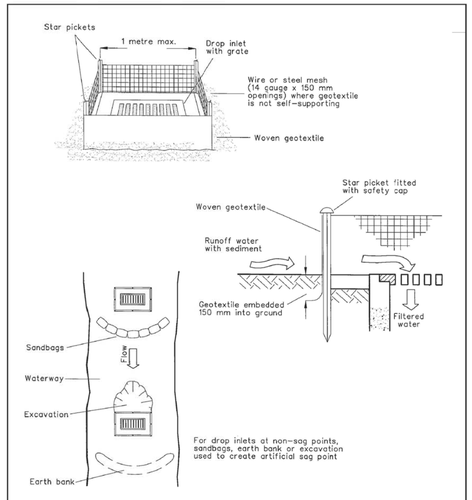
NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

Construction Notes

1. Install filters to kerb inlets only at sag points.
2. Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
3. Form an elliptical cross-section about 150 mm high x 400 mm wide.
4. Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
5. Form a seal with the kerb to prevent sediment bypassing the filter.
6. Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

MESH AND GRAVEL INLET FILTER **SD 6-11**

6-40



Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-7 and Standard Drawing 6-8 for installation procedures for the straw bales or geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

GEOTEXTILE INLET FILTER **SD 6-12**

6-41

A1 A2 A3 A4

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SCALE:			

Appendix 4: Community Consultation Public Relations Plan

hansen yuncken
BUILDING VALUE

Wagga Wagga Base Hospital Redevelopment

Community Consultation and Public Relations Plan

Aug 2011

PREPARED BY
HANSEN YUNCKEN PTY LTD
Level 6, 15 Bourke Rd
Mascot NSW 1460
ABN 38 063 384 056

CONTENTS

1. COMMUNITY CONSULTATION AND PUBLIC RELATIONS PLAN REVIEW AND APPROVAL

Review and approval sign off as per Construction Management Plan and Responsibility Matrix.

2. DEFINITIONS & ABBREVIATIONS

The following definitions and abbreviations have been used in this Traffic Management Plan. Further definitions and abbreviations are provided in referenced procedures and plans.

CORP	Hansen Yuncken Corporate
HSE	Health, Safety & Environment
HY	Hansen Yuncken Pty Ltd
PLN	HY Plan
PPE	Personal Protective Equipment
PR	Procedure
S/C	Subcontract(s) or Subcontractor(s) as the context requires

3. COMMUNITY SAFETY PROCEDURES

3.1 FENCING

The Wagga Wagga Base Hospital Redevelopment construction site will be entirely fenced off. This fence will be of a substantial height to prevent any member of the community gaining access to the construction site. The will be one vehicular entry/ exit gate to the construction site which will restrict traffic flow and enable Hansen Yuncken to monitor if traffic is authorised. Adjacent to the main vehicular gate there will be a pedestrian entry leading to the reception area. This will enable site staff to monitor access to site and prevent unauthorised persons from entering. The entry/ exit will have gates that can be locked.

3.2 SIGNAGE

The will be safety and warning signage placed at the entry to the site and at regular locations around the site. These signs will advise that the construction site is for construction personnel only. The will be signage advising that all visitors that come to site are to report to the Hansen Yuncken site office located adjacent to the site entry/ exit. Emergency contact numbers will be displayed at the front of the site. If there is an emergency a member of the public may ring one of these numbers to advise of the emergency.

3.3 SECURITY

The construction site will be locked up at times of no activity, i.e. nightly, Sundays and Public Holidays. This is to prevent anyone gaining access to the construction site. The site office will be alarmed to prevent burglary. A security contractor will be employed to conduct patrols and monitor the alarm system.

3.4 TRAFFIC MANAGEMENT

Refer to traffic management plan and site layout plans.

3.5 COMPLAINTS HANDLING

Should complaints from the community be received, HY will instigate the following procedure.

- Upon receiving a complaint HY will investigate to determine the extent and source of the issue. If received in writing, HY will also reply with a formal acknowledgement advising as to the how the complaint will be dealt with.
- HY will record the complaint using the Near-Miss Incident form and it will be recorded on the complaint register kept on site.
- Should the complaint be warranted HY will investigate potential measures / controls that will be put in place to overcoming the issue. If the complaint is deemed unwarranted, HY will reply in writing with reasons as to why.

4. COMMUNITY RELATIONS AND LIAISON

As part of maintaining good community relations, HY will undertake the following communications with the community located within proximity of the site.

During the construction works HY an information sign will be erected at the main gate informing the community of the following

- Project participants
- Contact details for HY
- Procedure of complaints reporting

Throughout the construction period HY will regularly update the community and Wagga Wagga City Council about possible disruptions as well as other issues that may be of significance to these groups.