

WATPAC CONSTRUCTION (NSW) PTY LTD ABN: 20 103 211 141

PROJECT ENVIRONMENTAL MANAGEMENT PLAN

Central Park Project

Document Reference	: WAT– N-176–PEMP
Revision	: 5
Issue Date	: 12.07.2012

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The Project Environmental Management Plan for "Central Park" has been prepared in compliance with the "NSW Government Environmental Management System Guidelines - 2009".

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1. DOCUMENT CONTROL

1.1 Project Environmental Management Plan (PEMP) Amendments Register

This Project Environmental Management Plan (PEMP) has been developed by Watpac Construction (NSW) Quality Manager, in conjunction with the Project Environment Advisor, Project Manager (Operations) and Project Engineer.

Revisions to this PEMP will be distributed by the nominated Project Document Controller, to all holders of controlled copies via ACONEX. The holder is responsible for destroying superseded versions of this document.

The Register Below identifies previous revisions of this document and respective changes implemented. All revisions to appendices are detailed in section 6.1 of this PEMP.

Date	Revision	Action/Amendment	Amendment Sign Off
21.08.2010	0	Initial issue of Project Environmental Management Plan with Tender	SK
06.12.2010	1	Construction Issue of Project Environmental Plan	AM
22.03.2011	2	 Grammatical Amendments throughout document Amendment of Document Header (project specific) Inclusion Of Appendices: Watpac Environmental Policy Watpac ISO 14001 Certification OCP Organisational Chart Environmental Roles & Responsibility Matrix Objectives & Targets Environmental Aspect Analysis Matrix Aspect, Impact and Legal Requirements Risk Register Environmental Legislation (Legal Compliance) EMS Referenced Documents Emergency Response Plan PEMP Checklist Amendments to section; "7.0 External Reference Documents" Inclusion of; Sustainability, Hours of Operation, Dust management, Vehicle & Machinery Management and Hazardous Substances Procedures. Removal of procedures: Asbestos, Acid Sulphate Soil, Unexploded Ordinances & Chlorofluorocarbons (CFC's) 	PC
19.06.12	3	 Amendment of Document Header to include Park Lane Updated for change of state authority (DECCW to OEH) 	BS
10.07.12	4	 Amendments to Noise section "5.13.2 Management Strategy" 	BS
12.07.12	5	 Amendments to include 7.00pm – 10.30pm Restricted Working Hours 	BS

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1.2 Distribution List

The below register identifies the distribution and registered holders of all controlled copies of this PEMP.

This document is distributed in "PDF" Format, electronically through ACONEX. A Transmittal (distribution) list is available form the Document Controller (via Aconex).

Printed copies of this document are considered "Controlled" only on the day of print.

Controlled Copy No.	Issue Date	Registered Holder Name	Registered Holder Position
Master	22.02.2011	PATRICK CARNUCCIO	Quality Manager
"pdf"/ Aconex Copy		Refer Aconex Transmittal	-

2. SYSTEM APPLICATION

2.1 General

2.1.1 Scope & Application

The aim of Watpac Construction (NSW) Pty Ltd is to undertake the construction of the "Central Park" project, in full consideration of their environmental impact during the course of the works.

This PEMP has been generated to satisfy the requirements of "AS/NZS ISO 14001:2004, *Environmental management systems – Requirements with guidance for use*". It establishes guidelines and controls for all Watpac activities that may impact the surrounding environment for the duration of the works, including; air, water, land, natural resources, flora, fauna, humans, and their interrelation. Furthermore, it has been designed to embrace the environmental management requirements, both in terms of the Contract and generally, to demonstrate Watpac Construction (NSW) Pty Ltd, as an environmentally responsible organisation to the broader community.

2.2 Client Requirements

The Client's requirements as related to Environmental Management for the Works and the construction phase of the **Central Park** project are as set out in the Contract specifications.

This PEMP has been developed to satisfy the requirements of the environmental performance requirements set out in the Specification for the Works.

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2.3 Validity

The currency of this PEMP remains valid from the date of issue until Practical Completion or until withdrawn by Watpac NSW Senior Management.

The Project staff under the authority of Project Director may develop additional supporting documents, to meet other Contractual or Statutory obligations, however all such documents should form part of this plan and should be read in conjunction with the plan.

2.4 Confidentiality

This Environmental Management Plan and any attachments thereto shall not be copied or reproduced without the express written permission of the Quality Manager, Watpac Construction (NSW) Pty. Ltd.



3 PEMP AUTHORISATION

3.1 Authorisation

The issue and use of this Environmental Management Plan is approved for implementation on the **Central Park** Project by the Project Director, Watpac Construction (NSW) Pty Ltd.

Signed;

Leon Taylor Project Director Watpac Construction (NSW) Pty Ltd

Date: 12 / 07 /2012

3.2 Project Statement

It is the aim of Watpac Construction (NSW) Pty Ltd to deliver the **Central Park** project, which meets the environmental requirements of the Construction Specification, Complying Development Certificate and applicable legislation, Codes and Standards.

To meet these objectives, this Project Environmental Management Plan has established for the performance of the Construction Phase, of the **Central Park** project.

For the construction of the project, all personnel and consultants will be fully familiar with Watpac Construction (NSW) Pty Ltd's environmental objectives and all activities will be undertaken in accordance with this plan.

Signed;

Brad Sugar// Project Manager (Operations) Watpac Construction (NSW) Pty Ltd

Date: 12 / 07 /2012



4 ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) REQUIREMENTS

4.1 Purpose

This PEMP has been developed to enable all personnel with the means to understand their responsibilities and to meet Watpac's statutory, contractual and procedural obligations relating to environmental management.

This PEMP seeks to comply with the requirements as set out in the NSW Government Environmental Management Systems Guidelines (2009) - Part 3; "Environmental Management Plans".

The PEMP provides guidance for a systematic approach to continually improve Watpac Construction (NSW) Pty Ltd's EMS. It seeks to raise employee's awareness and knowledge of how construction activities impact on the environment and also to demonstrate written evidence of compliance with statutory requirements.



4.1.1 **Project Description**

Central Park will be a sustainable designed and operated mixed use development on the site formerly occupied by the CUB Brewery at Chippendale, approximately 2 km to the south of the Sydney CBD. The project is targeting a 5 star Green Star Rating, "Design" and "As Built"

The site represents a significant addition to the urban environment in this location, located close to the University of Technology Sydney, existing residential and commercial zones, Central Railway station and the CBD.

The Central Park project comprises of:

- **Block 2 & 2A** a 34 storey mixed use building. Block 2 will include 15,169m₂ of retail space above a 5-level basement car park. Two towers will be built above the retail floors with 622 residential apartments;
- **Block 5** consists of three towers, Block 5A, 5B and 5C. This Block is predominantly residential apartments with some retail on lower ground and ground levels (Block 5A has 9 storeys and contains 133 apartments and Block 5B has 19 storeys and contains 186 apartments). Block 5C has 27 storeys and contains 398 residential apartments.

This PEMP applies to the 5 level Basement common to each of Blocks 2, 2A and 5.

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4.1.2 Scope of Works

The Central Park Scope of Works comprises of;

- Bulk Excavation of the site (estimated 289,000m³ of soil/rock)
- A combined / integrated car park below Blocks 2 and 5. The Car park is 4 levels below ground under Block 2, 5 Levels below Ground below the terraces and 6 Levels below ground under blocks 5. The car park also includes the construction of a Water recycling plant under block 2 [MP No. 09_0042].
- New mixed use retail, commercial and residential building with ancillary retail uses consisting of two towers (east tower maximum 133.0m AHD and west tower maximum 79.5m AHD) located above a podium accommodating:
 - Residential floor space comprising up to 1787 residential apartments (subject to amended Planning approval)
 - Retail floor space comprising of food court, speciality retail and a supermarket
 - Commercial floor space [MP No. 09_0078]
- Construction of terraces (landscape platforms) which rise from the plaza to podium level 2 of the new building on Block 2A [MP No. 09_0078].
- Installation of a heliostat / reflector structure; consisting of mirrors which are orientated to focus sunlight onto the landscaped platforms [MP No. 09_0078].
- Construction of surrounding public domain [MP No. 09_0078].

4.1.3 Surrounding Environment

The **Central Park** project is located on the southern edge of the Sydney Central Business District (CBD). The site is in close proximity to Central Station, Broadway Shopping Centre and the University of Technology, Sydney. The site is L-shaped (Refer **Figure 1 -** below) with an area of 7,550m₂. It has a frontage to Broadway and Kent and Balfour Streets with Tooth Lane running through the site.





To the immediate north (Broadway side) of the site is the University of Technology Sydney (UTS). To the east are the County Clare Hotel, the Tooths Brewery Administration Buildings (identified as Buildings 10a and 10b and the Tooth and Co Brewery Gate, all of which are heritage listed.

To the immediate South of the (Block 2) site is the Main Park and Block 5. South of the park and Block 5 are Blocks 10 and 11. Further south of the **One Central Park** site is the suburb of Chippendale which comprises a mix of residential and commercial development.

To the immediate west of Block 2 will be the Foster + Partners commercial building which is located on Blocks 1 and 4 of the **Central Park** site. Abercrombie Street forms a physical barrier on the western side of the site. On the opposite side of Abercrombie Street is Notre Dame University. Further west is City Road, Victoria Park and Sydney University.

4.1.4 Construction Programme

The One Central Park project has an overall programme of 130 weeks, comprising of: -

Milestone	Finish Date
Excavation	April 2011
Carpark	July 2012
West Tower	December 2012
East Tower	December 2012
Practical Completion	April 2013

4.1.5 Application

This EMP applies to all Watpac Construction (NSW) Pty Ltd personnel, visitors, subcontractors, consultants, client, client representatives, authority representatives and all suppliers conducting business to and or from the **Central Park** project.

4.1.6 PEMP Interrelationship with Other Project Management Documents

This PEMP forms part of Watpac's Environmental Management, and interfaces with the company's Quality & Safety Management Systems. Furthermore, this PEMP is an integral part of **Central Park** Construction Management Plan, which includes (but is not limited to) the:

- Project Quality Plan;
- OH&S Project Management Plan;
- Project Waste management Plan;
- Traffic Management Plan;
- Design Plan;
- Training Plan; and
- Project Procedures Manual.





4.2 Watpac Construction (NSW) Pty Ltd Environmental Policy

Watpac's Environmental Management Policy Statement (attached as **Appendix 1**), details the company's commitment "to the adoption of environmentally appropriate work practices that ensure construction activities are performed within Legislative requirements and without harm to the environment".

This policy statement forms the basis Watpac's Environmental Objectives and Targets. It is circulated to all employees and is posted on the Watpac (NSW) Intranet and at each Site.

4.3 Environmental Planning

In accordance with the contractual requirements, applicable legislation, and in keeping with proper environmental practices, Watpac has instituted a methodology which is reflective of observes the requirement, as set out in AS/NZS ISO 14001:2004.

4.3.1 Environmental Aspects & Impact

(Ref: Watpac Company Procedure "WAT-N-ENVP-4310 Environmental Aspects")

All activities related to the **Central Park** project, which are enacted by or on behalf of Watpac, are identified in Form WAT-N-ENVF-4310a "Environmental Aspect Analysis Matrix" (attached as **Appendix 6**). For each activity the environmental aspects and associated actual and potential impacts are identified as they relate to the following environmental elements:

- Emissions to Air;
- Releases to Water;
- Releases to Land;
- Use of Raw Materials & Natural Resources;
- Use of Energy;
- Waste and Bi-Products;
- Community & Neighbours;
- Flora & Fauna; and
- Heritage & Cultural.

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The environmental impacts are then assessed for significance by using the Risk Assessment Register; WAT-N-ENVF-4310 "Environmental Aspects, Impacts, Legal and Other Requirements Risk Register" (attached as **Appendix 7**). Each identified potential impact is rated (Risk rating) in relation to its predicted likelihood and consequence.

4.3.1.1 WORK METHOD STATEMENTS

For each activity rated as a significant risk (i.e. Risk Score >18) to the environment, a further Risk assessment is undertaken and any additional controls identified in a Work Method Statement, detailing the steps involved, the hazards, control measures and persons responsible. Furthermore, a Tool Box Talk will be completed, involving all workers responsible for completing the "significant Risk activity.

4.3.2 Legal and Other Requirements

(*Ref: Watpac Company Procedure "WAT-N-ENVP-4320 Legal and Other Requirements, including Evaluation of Compliance"*)

A procedure has been developed to identify legal and other requirements that are applicable to the **Central Park** project, and to ensure the accessibility of the information. The procedure is applicable to those activities and functions that have the potential to interact with the environment.

A register identifying applicable legislation and associated regulations relevant to environmental issues is maintained by Watpac (Refer Appendix 7; WAT-N-ENVF-4320 Environmental Management Acts & Regulations). This includes, but is not limited to Legislation relating to; -

- energy use,
- water and land management,
- air emissions,
- waste management,
- transport,
- building and construction,
- flora & fauna and
- chemicals management,

This document is reviewed and updated annually and or when significant changes to legislation occur. Access to OEH website (<u>http://www.environment.nsw.gov.au/</u>) and CCH subscription allow for regular updates to be provided to Watpac Employees, advising of changes to environmental legislation.



4.3.3 Objectives & Targets

(Ref: Watpac Company Procedure "WAT-N-ENVP-4330 Objectives and Targets")

Watpac Construction (NSW) Pty Ltd has established environmental objectives and targets to comply with the requirements of AS/NZS 14001:2004 and further allow the monitoring of environmental performance.

These objectives and targets are reviewed annually, and identify:

- Watpac's objective to develop and establish relevant Environmental Management processes, as applicable to construction activities;
- the commitments made in the Environmental Policy Statement;
- compliance to legal and other requirements;
- operational requirements; and
- views and expectations of the Watpac's Clients, stakeholders and community groups.

Watpac's Environmental Objectives and Targets are documented in "WAT-N-ENVF-4330 Register of Environmental Objectives and Targets", which can be viewed on request.

4.3.3.1 Project Objectives and Targets

Project Objectives are established in relation to specific project works and are consistent with the corporate objectives.

The site management team has established clear, quantifiable, and time bound performance of measurable targets as they relate to the environmental deliverables for this project.

In formulating project specific performance objectives, the site management team has considered:

- Identification of project specific performance targets;
- how these objectives will be achieved;
- responsibilities for achieving objectives and targets;
- timeframes in which objectives and targets will be achieved;
- assessment of performance against the targets at predetermined intervals and upon completion of the project

Monthly Project reports provide details of environmental performance, including (but not limited to):-

- Environmental Incidents (incl. Corrective and preventive actions)
- Waste management reporting (incl. Recycling statistics)
- Additional Implemented preventive controls to address Environmental impacts
- Complaints management

The current Project Objectives and Targets are documented and included in this PEMP as **Appendix 5**.



4.4 Implementation and Operation

4.4.1 Resources, Roles, Responsibility and Authority

(Ref: Watpac Company Procedure "WAT-N-ENVP-4410 Resources and Responsibility")

Watpac's Management identifies and provides the resources for implementing, maintaining and improving the environmental management system, through the use of management meetings and planning.

Resources requirements to be considered include:

- the number of personnel in relation to tasks;
- an assessment of the training needs of personnel;
- confirmation of training effectiveness;
- equipment, systems, project facilities and materials.

A copy of the Organisational Chart for this Project has been attached as **Appendix 3**. Responsibilities have been established for key personnel under this PEMP and are attached as **Appendix 4**.

4.4.2 Delegation of Authority

Any delegation of authorities and responsibilities contained in this PEMP shall be in writing, with notification provided to the Client, or the Client's Representative.

4.4.3 Competence Training and Awareness

(*Ref: Watpac Company Procedure "WAT-N-ENVP-4420 Competence Awareness and Training"*)

As part of the Site induction/training all personnel engaged in the works shall be made aware of the provisions of this Project Environmental Plan in order to promote a general awareness of the environment and to minimise any potential impact to it.

Environmental induction and training shall be appropriately commensurate with their roles and environmental responsibilities on the project.

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

4.4.4 Communication

(Ref: Watpac Company Procedure "WAT-N-ENVP-4430 Communication")

Where appropriate, Watpac will advise adjacent property owners/managers of the timing and duration of activities likely to give rise to environmental concerns e.g. ground works, Plant installations.

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Similarly, to avoid possible inadvertent activation of security systems, managers of adjacent buildings shall be advised of any activities that are proposed to be undertaken outside standard hours.

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

On the **Central Park** project, Watpac will make use of the following methods of internal communication (not limited :

- Email;
- Aconex
- Induction Training
- Site notice boards;
- Watpac Intranet; and
- Regular meetings.

4.4.5 Documentation

(Ref: Watpac Company Procedure "WAT-N-ENVP-4430 EMS Documentation")

Watpac's EMS has been documented in to reflect the requirements of AS/NZS ISO 14001:2004 and includes but is not limited to:

- Environmental Policy Statement;
- EMS objectives and targets;
- Evaluation and Risk assessment of Environmental Aspects and Impacts;
- EMS procedures;
- EMS Forms
- Organisational charts and responsibilities;
- Legal and statutory compliance requirements; and
- Project emergency plans.

All current revisions of Watpac's EMS Procedures and Forms as listed in **Appendix 9**, are made available to all Watpac Employees via the Intranet.

4.4.6 Control of Documents

(Ref: Watpac Company Procedure "WAT-N-ENVP-4450 Document Control")

The Project Manager (Operations) is responsible for the issue of the Project Environmental Management Plan (PEMP).

A complete list of PEMP holders, together with the revision records, is to be held and maintained on project records by the Project Environmental Representative on a Controlled Document Register.

Controlled copies of this PEMP shall be issued as minimum to the Project Manager (Operations), Project Environmental Representative, Site Manager, Foreman and the Client. The Project Manager (Operations) shall determine who shall be issued additional copies.



All external copies of this PEMP will be distributed via ACONEX in a protected format (e.g. "pdf").

Revisions to the Project Environmental Management Plan are to be made to reflect the environmental requirements of the Project. Such revisions shall be numbered consecutively and effected by replacement of the whole document.

The Project Environmental Representative or delegate person, shall distribute all revisions of the Plan to all registered holders and update the project Controlled Document Register.

It shall be the responsibility of all registered Plan holders to update the Plan assigned to them and to destroy the obsolete copy.

4.4.7 Operational Control

(Ref: Watpac Company Procedure "WAT-N-ENVP-4460 Operational Control")

Watpac's Environmental Policy Statement confirms the objectives of the Watpac's EMS, to minimise environmental impacts and where practicable eliminate impacts altogether.

A procedure has been developed to ensure activities and processes associated with identified significant environmental aspects are controlled.

4.4.8 Emergency Preparedness and Response

(Ref: Watpac Company Procedure "WAT-N-ENVP-4460 Operational Control")

An Emergency Response Plan will be developed (in accordance with the aforementioned procedure) and implemented to specify the actions to be taken in the event of an environmental incident – Refer **Appendix 10**.

Emergency evacuation procedures in line with the Project Safety Plan, will form part of the induction process and emergency contact/service numbers will be displayed on site.

4.4.8.1 ENVIRONMENTAL INCIDENTS

Should an environmental incident occur during the course of the works, Watpac shall take prompt action to minimise any impact and inform the Client or the Client's Representative accordingly. (Form WAT – N - ENVF - 4521)

Subcontractors who become aware of an environmental incident shall report the matter to Watpac in the first instance.

Where necessary Watpac shall seek the advice of the Relevant Authorities and follow their instructions.



4.5 Checking

4.5.1 Monitoring and Measurement

(Ref: Watpac Company Procedure "WAT-N-ENVP-4510 Monitoring and Measurement")

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

More specifically the Project Environmental Representative shall monitor each element of the construction process to ensure that appropriate environmental protection/procedures are in place.

By way of evidence the Project Environmental Representative shall provide a daily report to the Project Manager (Operations) and maintain the relevant registers on the project records. (Form WAT – N – ENVF – 4510)

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

4.5.2 Evaluation of Compliance

(Ref: Watpac Company Procedure "WAT-N-ENVP-4520 Evaluation of Compliance")

An evaluation for Legal compliance is undertaken as part of the "Environmental Aspects, Impacts, Legal and other Requirements Risk Assessment", prior to the commencement of any site activities (Refer **Appendix 7**). It is the responsibility of the assigned personnel to ensure compliance to:

- Acts of Parliament;
- OEH Environmental Guidelines;
- Australian Standards;
- Industry Environmental Codes of Practice; and
- Local Government and Development Consent Conditions.

A comprehensive listing of Environmental Legislation applicable to this project, is provided as **Appendix 8**.

4.5.3 Nonconformity, Corrective and Preventive Action

(*Ref: Watpac Company Procedure "WAT-N-ENVP-4530 Non-Conformity, Corrective and Preventive Action"*)

Watpac has developed a procedure for corrective and preventive action, which deals with:

- environmental-related problems;
- complaints arising from adverse conditions arising form site activities;
- Infringement notices; and
- preventing the occurrence or recurrence of all the above.

The Project Manager (Operations) and Supervisors are responsible for managing the corrective and preventive actions required to control and prevent recurrence in their areas of operation.

Records are maintained and reviewed by Project team and where required under contract, non-conformance reports issued to the client/Client representative.

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4.5.4 Control of Records

(Ref: Watpac Company Procedure "WAT-N-ENVP-4520 Control of Records")

Watpac has developed a procedure to identify and specify the method of collection, retention and disposition of its EMS records. Records are filed in accordance with the company's Filing System, as detailed in Company Procedure; "WAT-N-CP-4205".

The Project Manager (Operations) or delegated person is required to implement and maintain project environmental records. The Project Environmental Representative is responsible for the implementation and control of project environmental records.

4.5.5 Internal Audit

(Ref: Watpac Company Procedure "WAT-N-ENVP-4550 Internal EMS Audits")

In addition to regular monitoring set out in section 4.5.1 of this PEMP, Environmental Management System audits shall also be regularly undertaken by the Watpac Quality Manager or his delegate.

System deficiencies, adverse or potentially adverse environmental conditions arising from site activities may be subject to the issue of Environmental Non-conformances or Corrective Action Requests (Forms WAT–N–ENVF–4520 & WAT-N–TYP–8501).

4.6 Management Review

(Ref: Watpac Company Procedure "WAT-N-ENVP-4600 Management Review")

Management Review is to take place to ensure that the Management Systems suitability and effectiveness in meeting the specified statutory legislation, policies, objectives and procedures within the corporate and project levels is achieved.

Management Review meetings are to be scheduled and carried out at least every 12 months on a corporate and project level.



5 ENVIRONMENTAL MANAGEMENT

5.1 General

Further to roles and responsibilities, detailed previously in this PEMP and in Appendices 4 and 7, the following management controls are included to specifically address **Central Park** requirements:

- 5.2 Environmental Complaints
- 5.3 Project Hours of Operation
- 5.4 Sustainability
- 5.5 Environmentally Sensitive Areas ,Flora and Fauna , Vegetation and Tree Protection
- 5.6 Archaeological Management, Heritage Buildings / Cultural Artefacts
- 5.7 Identification and Protection of Utility Services
- 5.8 Site Accommodation
- 5.9 Water Quality Conservation, Erosion and Sedimentation Control
- 5.10 Land Contamination
- 5.11 Waste Management
- 5.12 Vibration
- 5.13 Noise
- 5.14 Dust
- 5.15 Air Quality
- 5.16 Lighting
- 5.17 Vehicular and Pedestrian Traffic Management
- 5.18 Vehicle and Machinery Management
- 5.19 Hazardous Substances
- 5.20 Contaminated Land



5.2 Environmental Complaints

5.2.1 Objective

To ensure that any complaint from neighbouring residents, businesses, other community members or stakeholders during the construction phase is recorded, communicated to management and acted upon.

5.2.2 Management Strategy

A register of complaints is required to be maintained recording any complaint that may be received and documenting the response to the complainant.

A contact phone number for community enquiries and complaints will be posted at the Site entrance on commencement of the project.

The Project Manager (Operations) or delegated person, is responsible for ensuring that any complaint received will be diplomatically handled and the information passed on to the appropriate person for inclusion in the complaints register and actioned.

In responding to complaints Watpac personnel will assist and co-operate with the Client as required.

All personnel on-site are responsible for ensuring that all complaints are reported to the Site Manager or nominated person.

5.2.3 Action

- a. The Watpac Project Manager (Operations) and /or the Project Environmental Representative shall investigate all environmental complaints, within 24 hours on receipt of complaint.
- b. All complaints received by the project shall be recorded on Form; **WAT–N–ENVF–4430** Complaints Register.
- c. The Register will detail the nature of any complaint and the proposed course of action considered necessary.
- d. Where a non-conformance report is issued or arises from a complaint, details of this will be recorded on the complaint register.
- e. Watpac shall notify the Client or the Client's Representative of complaints received.
- f. Complaints received by the Client or the Client's Representative and directed to Watpac will be registered on the project records and be subject to investigation by Watpac as appropriate.



5.2.4 Performance Indicators

- a) Minimise Environmental Complaints, related to:
 - Emission to air
 - Discharges to water
 - Waste & Bi-product
 - Releases to Land
 - Flora & Fauna concerns
 - Cultural & Heritage concerns
- b) Investigation to be commenced within 24 hour from receipt of complaint.
- c) All complaints to be closed out within an appropriate and practical timeframe.

5.2.5 Reporting

Complaint status will be reviewed monthly and form part of the project team meeting agenda. Similarly, all recorded complaints and status thereof will be communicated to Watpac's executive management via the monthly project reporting mechanism.

5.3 **Project Hours of Operation**

5.3.1 Objective

To minimise inconvenience to adjoining residents, businesses and other community members during the construction phase, within the appropriate hours of; **7am - 7pm Monday-Friday**, **7am - 5pm Saturday and restricted work between 7pm – 10.30pm Monday-Friday**.

5.3.2 Restricted work Hours

Works permitted within restricted hours:

- Use of the two nominated external hoists on the western facades of the Block 2 towers, operating between the basement levels and the full extent of the hoist. Other hoists will not be used. Purpose is to distribute material that has been delivered during the day from the basement up to the tower floors as this is a bottleneck point for materials handling during the 7-7 current working hours.
- Internal fitout works on levels with a closed facade only, works to include plasterboard, tiling, joinery, painting and the like
- The main site entry point on the corner of Kensington and Regent Streets will not be used as the exit point, all pedestrian traffic leaving the site at the end of the later working shift will go through a gate on Balfour Street directly onto Broadway.
- No deliveries to site or vehicular traffic around the site will be allowed
- No use of cranes
- No work outside of, and including, the facade
- No floodlighting or additional lighting over and above current lighting levels required for safety and access, ie. no change from current lighting levels

5.3.3 Management Strategy

The normal hours of building activity allowed are detailed in the OEH legislation and / or Local Council Permit.

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During the construction period Watpac will work with the Client and/or their representative to maintain contact with neighbours and others affected to ensure ample notice is given regarding any approved "Out of Hours" work.

(The main impact of "Out of Hours" work is considered to be noise; this is further detailed in Section 5.14)

5.3.4 Action

- a) Appropriate noise mitigation measures will be implemented and maintained for instances where "Out of Hours" work is approved.
- b) Complaints will be monitored, which arise as a result of "Out of Hours" construction activities.

5.3.4 Performance Indicators

- a) Complaints received as a result of "Out of Hours" construction activities.
- b) Minimising Impact to neighbours during the construction phase.

5.4 Sustainability

5.4.1 General

The **Central Park** project promotes the sustainable use of resources and avoids, where practicable, the use of materials which deplete natural resources or create toxic pollutions in their manufacture, use or disposal.

5.4.2 Management Strategy Actions

The following project specific strategies and actions are to be implemented:

- All steel used in the construction to include a maximum recycled content as far as is practicable;
- Cement to be minimised by using an extender such as fly ash, as far as is practicable;
- Recycled timber products are to be utilised wherever possible. Plantation timber is to be used where appropriate recycled timber cannot be sourced;
- All PVC materials used on the project are to be PVC that is manufactured under 'Best Practice Guidelines';
- Request all suppliers to supply materials with minimal packaging;
- Select materials with durable, low maintenance surfaces to minimize the need for surface finishing activities at site in the short and long term;
- Water and energy conservation measures to be adopted on site. These may include the capture and reuse of water, low pressure taps and hoses where appropriate, maintaining equipment in good operating condition etc; and
- Adopt design and construction principles, techniques, materials and methodologies so as to achieve the requirements of **5 Star** GreenStar sustainability.



5.4.3 Sustainability; Environmental Design Actions

5.4.3.1 ENERGY USE AND CONSERVATION

The design of the building shall ensure/include:

- Where practical implement the use of Low Embodied Energy Materials and or Long Life Materials with Relative Embodied Energy (such as materials which use minimal energy to; obtain raw elements, manufacture and are durable/last a long time). Refer to Commonwealth Government ESD Guide; <u>http://www.environment.gov.au/sustainability/government/publications/esddesign/pubs/esd-design-guide.pdf</u>);
- That the building design achieves a minimum predicted rating using the BASIX scheme (and NatHERS modeling), and GreenStar rating;
- Extensive dwelling metering to enable the user to view and manage their individual energy consumption behaviours;
- Movement sensored and automatically switched lighting zones in common areas and car parking to ensure minimal energy use, on an as required basis.

5.4.3.2 SOCIAL / COMMUNITY / PEOPLE

The building design allows provisions to reflect and assist the occupants to achieve their social and living environment objectives.

Watpac will encourage the building designers to ensure/include:

- Compatibility in height and bulk appropriate to the planned use of the site;
- Orientation and massing to support as closely as possible the overall environmental and social objectives;
- Achievement of efficient location, orientation and views;
- Equitable access to and within building;
- Provision of bicycle parking space;
- Provision of a safe, secure and inviting environment for all users;
- Proximity to public transport services;
- Provision of separate recycling facilities for waste streams;
- Encourage occupants to utilise building in its intended manner so as to provide ongoing environmental performance of the facility.

5.4.3.3 <u>ECONOMIC</u>

Provide a building that reflects the objectives of the Principal and potential tenants for "whole of life" consideration of the building elements.

The design of the building should include:

- Measures to reduce operating costs for resource consumption (i.e. water and energy); and
- finishes integrated with services to optimise energy, time and cost efficiencies.

The design of the building will consider:

• Whole life cycle assessments carried out on key environmental initiatives (including water, energy, materials and greenhouse emissions) and to quantify capital cost and communicate environmental and cost benefits in detail;

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- That all components are fully accessible and regular maintenance and replacement (i.e. simple, accessible and cost efficient); and
- An energy sub-metering linked to the reporting system of the Building Maintenance System as required.

5.4.3.4 <u>BIODIVERSITY</u>

The design of the building should ensure:

- That existing land and water sources are appropriately protected during construction activities; and
- That species and habitats introduced are protected during subsequent construction stages.

The design of the building will consider:

• The ecological value of a development site with purpose to not diminish but rather enhance its ecological value beyond its previously existing state.

5.4.3.5 WATER USAGE AND CONSUMPTION

Provide a building that incorporates water conservation measures contributing to the reduction in potable water demand, where specified.

The design of the building will consider:

- Greywater, blackwater or rainwater harvesting, collection, treatment and re-use in areas of the building to reduce potable water consumption for sanitary use where applicable; and
- cooling systems designed to achieve reduced water consumption.

5.4.3.6 CONSTRUCTION MATERIALS SELECTION

Provide a building that promotes the sustainable use of resources and avoids, where practicable, the use of materials which deplete natural resources or create toxic pollutions in their manufacture, use or disposal.

The design of the building will minimise the use of:

- Insulation and other materials used, which have been produced using ozone depleting substances where practical;
- CFC based refrigerants;
- building timber not sourced from sustainable growth forest plantation or recycled; and
- waste generation through efficient design.

The design of the building will consider:

- Undertake environmental life cycle assessment on key building materials to determine potential to mitigate environmental impacts;
- Maximise the amount of materials predicted to be re-usable at decommissioning;
- Minimise or eliminate (where practicable) the use of toxic pest/vermin treatments such as CCA treated timber or chemical termite treatments;
- Minimise embodied energy & Carbon emissions from the building construction; and

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• Increasing % recycled content of structural concrete and steel used in the building construction or refurbishment.

5.4.3.7 INDOOR AIR QUALITY

The design of the building should include:

- Optimising daylight penetration into interior spaces.
- Optimise indoor emission control with use of low VOC paint systems.
- Minimise the use of products with Halogens, where practical.
- E1 low emission plantation (or lower) softwood particle-board only to be used where practical.
- Minimising usage of finishing materials and installation methods that result in high emissions of VOC.
- Enhanced lighting performance to improve operational energy efficiency and greenhouse emissions.

The design of the building will consider:

- Providing user control of air supply rates, air temperature or radiant temperature to individual occupancy/tenancy building areas.
- Provide individual user control of ventilation openings for naturally ventilated areas.

5.4.3.8 TRANSPORT

The design of the building will ensure compliance to Green Star Requirements and include:

• Provision of bicycle storage area for tenants.

The design of the building will consider:

• Provision of bicycle storage for visitors.

5.4.3.9 QUALITY OF ACOUSTIC ENVIRONMENT

Provide a building that meets acoustic standards consistent with use.

The design of the building will ensure/include:

• Acoustic requirements for indoor ambient environment in accordance with the applicable building codes and standards.

5.4.3.10 WASTE AVOIDANCE AND MANAGEMENT

Provide a building, that (where practical):

- maximises the use of recycled materials;
- minimises waste generation; and
- maximises awareness and participation in waste avoidance, re-use and recycling initiatives.

The design of the building will ensure/consider:

• Recycling facilities are provided for the separation, collection and ease of recycling of waste.

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5.4.4 Performance Indicators

Minimise impact on the Environment through an Ecologically Sustainable Development and "Whole of Life" Design Principles.

5.4.5 Reporting

Monthly reporting of achieved sustainability performance against planned performance, in accordance with the agreed energy performance benchmarks associated with BASIX and or Green Star matrix requirements.



5.5 ENVIRONMENTALLY SENSITIVE AREAS - Protection of Flora & Fauna, Vegetation and Tree Protection

5.5.1 Objective

To preserve and protect native wildlife and forestry areas from injury or harm as a consequence of construction activities and as far as practical, minimise disturbance to animal habitats.

5.5.2 Management Strategy

- Site environmental induction shall address issues of potential harm to native flora and fauna.
- Confine site clearance to minimum requirements.
- Relocate logs or branches deemed to be fauna habitat to the parkland/forest.
- Apply appropriate controls for noise abatement and dust control to minimise disturbance.
- Register contact telephone numbers for NSW Parks & Wildlife Service on project records.

5.5.3 Action

Project Manager (Operations) shall ensure that: -

- Close delineation & supervision is maintained in site clearance activities to avoid excessive clearance.
- Noise & Dust suppression controls are monitored.
- Protective fencing is provided as required.

Prior to commencement of construction, trees should be fenced (in groups where possible) to form tree protection zones.

Signage should be displayed on the fence as follows;

THIS IS A TREE PROTECTED AREA – NO ENTRY IS PERMITTED – ENQUIRIES TO THE SITE MANAGER.

5.5.4 Performance Indicators

No harm or damage to native fauna and flora and trees that are protected.

5.5.5 Reporting

- Monitoring records to be maintained.
- NSW Parks & Wildlife are promptly advised of any injured fauna.



5.6 ARCHAEOLOGICAL MANAGEMENT; Heritage Buildings/Cultural Artefacts

5.6.1 Objective

- Avoid damage or disturbance to archaeological/heritage/cultural artefacts including skeletal remains, shell middens or other cultural artefacts.
- Manage such activities in accordance with the Archaeological Management and Heritage Management Plans designed for this Project.

5.6.2 Management Strategy

- The client has conducted a historical investigation of the site as part of the demolition and site clearing works and has appropriately managed any located archaeological/cultural artefacts.
- Site environmental induction to address likelihood of discovery of archaeological/cultural artefacts.
- Excavation personnel to maintain watchful eye over ground penetration points.

5.6.3 Action

Project Manager (Operations) shall ensure that: -

- Where archaeological/cultural artefacts are discovered, personnel cease work in the subject area and effect practical protection measures;
- The client is promptly advised of significant discoveries; and
- Action as required by the specific plans.

5.6.4 Performance Indicators

No damage, or minimal disturbance, to any archaeological/cultural artefacts discovered

5.6.5 Reporting

Report to client and appropriate authorities.



5.7 IDENTIFICATION & PROTECTION OF UTILITY SERVICES

5.7.1 Objective

Avoid damage to, or unplanned interruption of, utility services.

5.7.2 Management Strategy

- Site induction is to address location of and protective measures for, utility services.
- Identify, mark and protect utility services (electricity, water, gas etc.).
- Ensure all necessary interruptions to utility services are planned and communicated to all relevant persons and Authorities.

5.7.3 Action

Project Manager (Operations) shall ensure that: -

- Contact telephone numbers for emergency services for utilities are established and readily available;
- Storage areas are located remote from utility services;
- Access ways, haul roads and turning points are arranged to avoid possible clashes with utility services;
- Overhead protection/warning is provided for high loads, vehicles, cranes etc;
- Spotters are provided when work is undertaken beneath overhead power lines; and
- Relevant Authorities are notified, required permits are obtained and affected line users are advised of when planned interruptions to utility services will occur.

5.7.4 Performance Indicators

No unplanned instances of interruptions to any utility service.

5.7.5 Reporting

• Notification to relevant Authorities.



5.8 SITE ACCOMMODATION

5.8.1 Objective

Control, minimise or avoid contamination or spoiling of areas in the establishment, operation and disestablishment of temporary site accommodation facilities.

5.8.2 Management Strategy

- Establish temporary site offices, amenities and ablution facilities, including provision for sanitary waste, in accordance with the requirements of the relevant Local Authority, all relevant Acts & Regulations and industry code of practice.
- Remove all temporary buildings and facilities from site when no longer needed and make good all disturbed areas, including landscaping where required.

5.8.3 Action

Project Manager (Operations) shall ensure that: -

- Site offices, amenities and ablution facilities are located and operated in such a manner as not to cause environmental concern; and
- The site is made good upon disestablishment of site accommodation facilities.

5.8.4 Performance Indicators

- Appropriate location and operation of all facilities.
- Site reinstated upon completion of project.

5.8.5 Reporting

Monitoring records to be maintained.



5.9 WATER QUALITY CONSERVATION, EROSION AND SEDIMENTATION CONTROL

5.9.10bjective

- Avoid, or minimise and control, contamination caused by sedimentation run-off or the discharge of pollutants into waterways or established drainage systems.
- Conserve the use of water to minimal requirements.

5.9.2Management Strategy

Site induction to address:

- The issues in relation to conservation of water usage in construction activities;
- The issue of water quality and protective measures to prevent avoidable discharge into, or contamination of, waterways or established drainage; and
- The site specific Erosion & Sedimentation & Control Plan to be implemented & maintained.

5.9.3Action

Project Manager (Operations) shall ensure, where possible that: -

- Water points within the site are drip free;
- Application of water in activities controlled by pressure trigger valves or twist nozzles to hoses with cutting devices with water saving/cut off switches;
- Silt traps, fences or mats are provided where necessary around the perimeter of the site;
- Shake-down grids, haul roads or bunds are provided at vehicle exit points where necessary;
- Sullage pits, or dedicated sedimentation tanks, are provided to facilitate the limited wash-out of concrete agitator trucks, concrete pumps and wet trades (plasterer, painter, tiler etc.);
- Use of water for wet trades clean-up is minimal;
- Quantities of paint, solvents, oils etc. are correctly stored;
- Stockpiles of bulk materials are located well clear of any waterway or drainage systems; and
- Storm water run-off is directed to sediment basins and flocculated where necessary prior to discharge off site.

5.9.4Performance Indicators

- Number incidents of inadvertent waste of water
- No sedimentation run-off.
- No pollution or contamination of waterways.

5.9.5Reporting

Daily monitoring records to be maintained.



5.10 LAND CONTAMINATION

5.10.1 Objective

Avoid or minimise contamination of land caused by use of imported materials, or by spillage of fuels, paint, form oil, chemicals etc.

5.10.2 Management Strategy

Site induction is to address issues of land contamination, storage & handling of hazardous goods & fuels and spill control procedures.

5.10.3 Action

Project Manager (Operations) shall ensure that: -

- All imported materials are procured from known sources and subject to QA testing;
- Contaminated ground is made good and contaminated material to be removed from site is disposed of in an approved manner;
- Safe storage facility for hazardous goods & fuels is established;
- Spill kits are established and readily available;
- Any waste oils, lubricants and contaminated cloths, resulting from maintenance of plant on site, are placed in suitable containers prior to removal and disposal at an approved waste receiving facility; and
- Significant spillage events are investigated and aspects rectified through material or procedural changes.

5.10.4 Performance Indicators

• Number of notified spillages.

5.10.5 Reporting

- Daily monitoring records to be maintained.
- Significant incidents to be reported to the appropriate authorities.



5.11 WASTE MANAGEMENT

(Ref; Watpac Waste Management Plan WAT–N-WMP)

5.11.1 Objective

To control the disposal of end waste generated from construction activities.

5.11.2 Management Strategy

Site induction is to address the issue of waste management and protective measures to prevent environmental incidents caused by inappropriate methods of disposal of end waste.

5.11.3 Action

Project Operations Manager and the Waste Management Contractor shall ensure that: -

- Construction waste material and general waste (food scraps, cans, paper etc.) is placed in separate covered waste skips/bins.
- Full waste skips/bins are promptly removed from site and conveyed to respective approved disposal areas.
- The construction site is kept free from build up of waste materials by directing regular clean-ups by subcontractors.
- Where practical, recyclable materials are segregated from general waste.
- No burning takes place on site.

5.11.4 Performance Indicators

• Number of incidents arising from the disposal of end waste.

5.11.5 Reporting

- Waste bins records are to be maintained.
- Recycling and Waste Management Reports from Waste Management Contractor.



5.12 VIBRATION

5.12.1 Objective

Control, minimise or avoid disturbance caused by vibration in ground works or other structural activities.

5.12.2 Management Strategy

- Site induction is to address the issue of vibration and protective measures to prevent disturbance/incidents caused by vibration.
- As far as practical identify and isolate high-risk areas where possible.
- Consultation/liaison with adjacent property owners/occupiers.

5.12.3 Action

Project Manager (Operations) shall ensure that: -

- All construction activities will be undertaken mindful of the provisions of "AS 2436:2010 - Guide to Noise Control and Vibration on Construction, Demolition and Maintenance Sites";
- A survey of properties in the immediate precinct of the site is undertaken and notes made, together with a photographic record of existing conditions;
- All equipment and machinery is operated and maintained in accordance with industry standards and the Client Requirements; and
- Any blasting, rock breaking, drilling or piling activities are carried out under strictly controlled conditions

5.12.4 Performance Indicators

• Number of disturbances/incidents or complaints.

5.12.5 Reporting

Monitoring records to be maintained during construction activities with potential to generate sustained vibration.



5.13 NOISE

5.13.1 Objective

- Control, minimise or avoid environmental nuisance caused by "unreasonable" levels of noise.
- Only approved construction activities are completed within the restricted working hours

5.13.2 Management Strategy

Site induction is to address the issue of noise and protective measures to prevent "excessive" noise caused by construction activities.

Additional site training and induction of work crews involved in evening internal fit out work. Especially regarding works behind glazed façade only. Proposed Mon-Fri works 7.00 pm – 10.30 pm. Compliance with recommendations of acoustic report

5.13.3 Action

Project Manager (Operations) shall ensure that: -

- All construction activities will be undertaken mindful of the provisions of "AS 2436:2010 - Guide to Noise Control and Vibration on Construction, Demolition and Maintenance Sites";
- All construction activities on site are conducted between the approved hours of work;
- No construction activities are undertaken on Sundays or Statutory holidays unless approved by the Local Authority;
- Each item of plant is fitted with effective noise suppression devices (generally exhaust mufflers) as applicable;
- All plant, equipment and machinery is operated and maintained in accordance with acceptable industry standards;
- Two-way radios are used for site signalling and communication;
- When construction work is permitted outside of designated hours, notice is given to occupiers of properties within the immediate precinct of the Works giving details of the work to be done, together with the hours to be worked;
- Power generators used for after-hours lighting are positioned and acoustically treated, as far as practical, to minimise noise emissions; and
- Noise monitoring is undertaken on the site boundaries and at other locations during construction activities, which may result in "excessive" noise and or as necessary.
- Traffic movements to be restricted (between 7.00am 7.00pm)
- Recommendations of acoustic report (for additional hours)

5.13.4 Performance Indicators

Number Complaints concerning noise nuisance.

5.13.5 Reporting

Monitoring records to be maintained.

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DUST Control & Monitoring

5.13.6 Objective

To minimise the generation and implement appropriate controls to suppress dust and other suspended particulates generated by construction activities.

5.13.7 Management Strategy

Construction operations on-site have a high potential to generate dust during dry weather periods. The activities that may cause problems include traffic movements on unsealed roads and on working areas, vehicles transporting soils and construction materials, excavation works, drilling, earthworks and the movement of soils. Dust control planning will consider seasonal weather conditions.

5.13.8 Action

Where necessary (i.e. in the event that any visible dust is generated on the construction site), dust suppression methods, will be implemented to minimise dust generated from demolition, excavation and stockpiling of contaminated soils. This methodology / plan will consider both human health and environmental aspects.

Work methods to be applied include the following:

- Work procedures should prioritise the prevention of dust generation over dust suppression techniques;
- Weather forecast reports should be utilised to plan for adverse conditions;
- If visible dust is generated, keeping a water cart on-site to wet down access roads, working areas and exposed soil surfaces as required;
- The water used or additives added to the water to increase the dust suppression properties should have no adverse impact on the environment;
- Covering stockpiles that are to remain for any extended periods, or if weather forecasts predict strong winds;
- Construction of wind fences/barriers where appropriate;
- Attaching shade cloth to open fencing;
- Covering loads of soil and rock during transport to or from site;
- Visual surveillance of dust generation to be supported (where appropriate or specified) by dust fall measurement stations located within the site boundary;
- The emission of odorous substances or particulates that create or are likely to create objectionable conditions for the public are not permitted; and
- Dust generated during demolition and excavation works by breakers, rock sawing and/or trimming/grinding to be controlled by water suppression methods.

5.13.9 Performance Indicators

- Number of Complaints from neighbours/stakeholders.
- Dust monitoring equipment records (where appropriate/used)

5.13.10 Reporting

Monitoring records and Complaints Register.



5.14 AIR QUALITY

5.14.1 Objective

Control, minimise or avoid contaminant emissions to the atmosphere caused by rising dust, vehicle/plant emissions, noxious fumes/odours, or paint spraying activities.

5.14.2 Management Strategy

Site induction is to address the issue of air quality and protective measures to prevent avoidable discharge of contaminant to the atmosphere.

5.14.3 Action

Project Manager (Operations) shall ensure that: -

- All materials deliveries such as fill, soil, sand, gravel, landscaping supplies etc, are transported to the site under covered loads;
- Stockpiles of such materials are dampened down or covered as necessary;
- Excavated material is transported from site in covered trucks;
- Work areas are kept clean;
- All plant and equipment is operated and maintained in accordance with acceptable industry standards;
- Putrescible waste, from messing activities, is promptly removed from site; and
- External paint spraying activities are undertaken in accordance with Local Authority requirements and not carried out during adverse weather conditions.

5.14.4 Performance Indicators

Visual observance of:

- the deposition of dust or other contaminant particulate, resulting from construction activities, on flat surfaces and foliage around the precinct of the site; and
- of plant & equipment exhaust discharges to atmosphere during operation.

5.14.5 Reporting

Monitoring records to be maintained as necessary.



5.15 LIGHTING

5.15.1 Objective

Control or minimise disturbance caused by after hours lighting.

5.15.2 Management Strategy

- Work on this site is only permitted at night as per the restricted working hours.
- As far as possible, plan all construction activities for normal daytime work.
- Construction work during the restricted working hours shall not cause additional light spill over and above required safety lighting levels

5.15.3 Action

Project Manager (Operations) shall ensure that: -

- Work on this site is not permitted at night except where specified for in section 5.3.2 (Restricted Work Hours)
- All lighting equipment is installed in such a manner as not to cause a safety hazard to pedestrian or vehicular traffic within the immediate surrounds of the site;
- Where required or deemed necessary, advisory/warning signs are posted in appropriate locations; and
- Avoid light spill beyond site boundaries during normal operations.
- No floodlighting or additional lighting over and above current lighting levels required for safety and access for works beyond 7.00pm

5.15.4 Performance Indicators

• Number of incidents and or complaints.

5.15.5 Reporting

Monitoring records are to be maintained for the duration of after hours lighting if any emergency work to be conducted.



5.16 VEHICULAR & PEDESTRIAN TRAFFIC MANAGEMENT

5.16.1 Objective

Avoid interference of or obstruction to; roadways, footways or access points by the use of appropriate traffic control measures.

5.16.2 Management Strategy

- Site induction is to address issues of access and delivery arrangements for materials including timing and unloading of materials.
- Coordinate construction programme and delivery times to avoid hold-ups and traffic congestion.
- Provide appropriate fencing/hoardings and protection for the public.

5.16.3 Action

Access to the Site shall be identified and marked on Traffic Plans and Site Plans.

Project Manager (Operations) shall ensure that: -

- Site fencing/hoarding is properly secure and lockable, access points clearly designated and appropriate signage erected.
- Material set down areas, are established.
- All required Approvals are obtained and Traffic Controllers are engaged where necessary when temporary road closures are required.
- Traffic management Controls are monitored in accordance with the Traffic Management Plan.
- Vehicle movements restricted between 7.00pm 10.30pm

5.16.4 Performance Indicators

Number of reports/complaints of interruption/interference with:

- Pedestrian;
- vehicular traffic movement.

5.16.5 Reporting

Monitoring records maintained as required by the Construction Traffic Management Plan.



5.17 VEHICLE and MACHINERY MANAGEMENT

5.17.1 Objective

To ensure that there are no adverse environmental impacts related to; fauna, flora, air emissions, water quality and soil contamination discharges, in excess of regulatory limits and arising out of; exhaust emissions, hydraulic oil leaks and spills.

5.17.2 Management Strategy

- Site induction is to address issues of plant and equipment compliance requirements.
- Site controls and monitoring to detail condition and safe use of all vehicles and machinery.
- Compliance with the requirements as set out in OHS company procedure "HCP-10 Plant & Equipment"

5.17.3 Action

To ensure that all vehicles and machinery stored and used on-site during the project do not cause pollution of the environment, the following actions are implemented:

- Vehicles and machinery used on-site are adequately maintained prior to, and serviced, in accordance with the manufacturer's requirements during the works.
- Any maintenance or servicing of machinery or vehicles is undertaken in accordance with industry guidelines to minimise the potential for site contamination through oil or fuel leakage.
- Major mechanical repairs or services should, where possible be carried out off-site in an appropriate workshop or yard.
- Generally, Oil changes to vehicles are not permitted to be conducted on-site. The exception being; Tower cranes and other items of large static plant, requiring oil changes must be conducted observing SWMS procedures. Temporary bunds to be erected and surrounding the plant (where possible). No work is to proceed without first ensuring spill kit is available and easily accessible.
- Used oil filters will be drained overnight in strainer vessel, prior to enclosing in sealable container and disposed of at a regulated waste facility.
- Waste oil will be collected in drums for recycling and the drums shall be stored appropriately in covered bunded areas.
- Operating machinery and vehicles will be visually checked to ensure exhaust fumes are acceptable. Machinery and vehicles will not be allowed to operate where they emit visible smoke to the atmosphere for any period greater than:-
 - Fifteen (15) consecutive seconds for Plant not registered for use on public roads
 - Ten (10) consecutive seconds for plant registered for use in public roads.
- Mufflers/silencers fitted on all vehicles and machinery to be in good working order.
- Any vehicle that visibly leaks any oil (i.e. one drop or more) onto the ground, in the case of road registered vehicles, must be immediately removed off-site, taken for repair prior to being allowed back on-site after an all clear inspection.
- Any hydraulic leaks from non-road registrable vehicles must be repaired on-site or off-site immediately and undergo an all-clear inspection prior to being allowed to re-commence operation.
- Any vehicles involved in excavation, soil transport or movements on unsealed roads shall be cleaned to the extent that no loose soil remains attached to the vehicle

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prior to it leaving the site. Where contact with contaminated soil is apparent, the measures outlined in Section 5.22 (Contaminated Land) will be implemented.

- Wheel cleaning of vehicles leaving site must be completed (where required) to ensure materials are not tracked onto the roadways.
- The potential for spills exists whenever fuels are stored or transferred storage and handling of fuels, are outlined in Section 5.22 (Hazardous Substances).
- Vehicle & machinery engines to be switched off when not in use.

5.17.4 Performance Indicators

• Number of incidents/ non-conformances.

5.17.5 Reporting

All collated documentation (schedules, checklists, permits, etc) is to be maintained and where required; made available for review by the client/client representative and or as required by authorities.



5.18 HAZARDOUS SUBSTANCES

5.18.1 Objective

- To receive, store, utilise, handle and dispose of chemicals in an environmentally appropriate manner.
- To prevent any contamination of site work areas and adjoining properties, including aquatic ecosystems, by chemicals or fuel used on construction sites.
- To manage and minimise the risk of exposure to hazardous building materials during construction activities.

5.18.2 Management Strategy

The following strategies will be implemented by Watpac's Project team:

- Storage of dangerous goods and pollutants on-site shall be minimised through inventory management.
- The storage and handling of fuels needs to comply with:
 - Appropriate Dangerous Goods legislation and regulations;
 - OEH guidelines;
 - Australian Standard; "AS 1940:2004 The storage and handling of flammable and combustible liquids".
- An appropriately sized spill and containment kit will be maintained in the vicinity of fuel storage areas and be easily available for clean up at all times. Personnel are to be trained in the use of spill kits.

5.18.3 Action

It is the responsibility of all personnel to prevent spills in the first instance, or take immediate action to halt and contain a spill. Every effort should be made to contain the spill to the smallest area possible to limit the extent of contamination, with priority being health and safety. Containment methods such as blocking drain inlets, temporary bunds and absorbent materials will be employed. Every effort should be made to recover spilt substances from the environment.

General measures to prevent spills are as follows:

- Fuelling of vehicles and machinery is not to be carried out in areas from which fuel or oil could be discharged to the stormwater system;
- Fuels are not to be stored along or near major drainage paths;
- Fuels are to be stored away from high traffic areas;
- Parked machinery will be positioned in such a manner to minimise the possibility of spills entering the stormwater system;
- Soil that becomes contaminated through a major fuel or oil leak is to be reported to the OEH and either remediated on-site or exported off-site according to the Contaminated Land procedure Section 5.22.

Hazardous building materials previously identified are to be managed in accordance with the Contract requirements. In the event that previously unidentified suspected hazardous building materials are discovered during the course of demolition/construction works, the following is to be adopted:

- Work shall cease in the immediate area where the suspected hazardous building material has been located.
- Site Management is to be informed immediately of the discovery and shall in turn contact a suitably qualified and experienced hazardous materials consultant.

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- The hazardous materials consultant is to provide advice, and if required, attend Site to assess the material and collect a sample for subsequent analysis.
- Where the suspected material is confirmed as hazardous, the consultant is to provide advice as to the extent of remedial action required, incorporating:
 - The extent of removal / clean-up required;
 - \circ $\;$ Precautionary measures to apply during the removal / clean-up process, and
 - Any requirements of air monitoring during and / or at the completion of the removal / clean up works.
- Following from the above advice, the necessary removal / clean-up works will be carried out by an appropriate contractor.
- Work is only to recommence in the affected area once confirmation is obtained from the Hazardous Materials Consultant that the area is safe for reoccupation by unprotected personnel.

5.18.4 Performance Indicators

• Number of incidents/non-conformances.

5.18.5 Reporting

Inspection and audit reports are to be maintained and made available on request and or as requested by regulating authorities, client and auditors



5.19 CONTAMINATED LAND

5.19.1 Objective

To manage contamination and groundwater during the site's development in a manner, to protect human health and the environment and does not create a public nuisance.

5.19.2 Management Strategy

- Implementation of a consultation program for the local community, dealing with development and contamination issues.
- Site environmental induction to make personnel aware of the provisions of the PEMP, Environmental Protection Act and all environmental policies, which affect the development of the site.
- Establishment of barriers between the contamination and users of the site (site capping).
- Application of controls and monitoring of site excavation works.
- Obtaining permits for disposal of excavated material at licensed waste receptors.

5.19.3 Action

Project Manager (Operations) shall ensure that: -

- Litter guards (boundary hoardings) are in place prior to any excavations being undertaken on site;
- Soil and refuse are exposed for a minimum period of time during excavation works;
- Where practical, excavated material is deposited directly into trucks for disposal off-site;
- Excavated material is only transported from site in trucks that have watertight bodies and are tightly covered with waterproof tarpaulins;
- Where excavated material must be stockpiled prior to disposal off-site, it is deodorised and covered when necessary;
- Sediment traps and cut-off drains are provided to control surface drainage; and
- Effective controls are implemented to prevent or reduce emissions of gas, odours or dust to the atmosphere caused by excavation activities.

5.19.4 Performance Indicators

• Satisfactory monitoring results.

5.19.5 Reporting

Community liaison programme if required. Monitoring records maintained as necessary.



6 APPENDICES

The below listed appendices have been included and form part of this PEMP:

- Appendix 1; Watpac Construction (NSW) Pty Ltd Environmental Policy
- Appendix 2; NCS International (3rd Party) Certification AS/NZS ISO 14001:2004
- Appendix 3; Watpac Construction (NSW) Pty Ltd Organisational Chart
- Appendix 4; Watpac Construction (NSW) Pty Ltd Roles & Responsibilities
- Appendix 5; Objectives and Targets
- Appendix 6; Environmental Aspects Analysis Matrix
- Appendix 7; Environmental Aspects, Impacts, Legal & Other Requirements Risk Register
- **Appendix 8**; Environmental Legislation (Legal & Other Compliance)
- Appendix 9; Watpac EMS Referenced Documents
- Appendix 10; Project Environmental Emergency Plan
- Appendix 11; Watpac Construction (NSW) PEMP Checklist

6.1 Appendices Amendments Register

The register below identifies previous revisions of attached appendices and respective changes implemented. Amendments to appendices, which do not affect the content and or applicability of the main document, are allowed independently. Where changes affect the main document a full review will be conducted and amendments detailed in section 1.1 of this PEMP.

It is the responsibility of the Project Environmental Representative to ensure all changes are recorded and respective amended appendices are distributed in accordance with the PEMP distribution list (refer section 1.2)

Date	Revision	Appendix	Action/Amendment	Amendment Sign Off
22.03.2011	0	All	Initial issue of all appendices	PC
31.10.2011	1	1 2 10	Revised Quality Policy Statement (27.10.2011) AS/NZS ISO 14001 (NCSI Certificate) Emergency Plan (Updated personnel changes)	BS
31.10.2011	3	6 7	Aspects Analysis Matrix (Revised Activities & Aspects) Aspects/Impacts Register (Revised Risk controls)	BS
Nov. 2011	1	3	Updated Organisational Chart (Nov. 2011)	BS
18.06.12	3	3	Updated Organisation Chart (June 2012)	BS
18.06.12	3	4	Updated to include new roles	BS
18.06.12	4	7	Aspects/Impacts Register (Revised Responsibility)	BS



Appendix 1 Watpac Construction (NSW) Pty Ltd – Environmental Policy



Appendix 2: NCS International (3rd Party) Certification; AS/NZS ISO 14001:2004



Appendix 3: Watpac Construction (NSW) Pty Ltd; Organisational Chart



Appendix 4: Watpac Construction (NSW) Pty Ltd; Roles & Responsibilities



Appendix 5: Objectives and Targets



Appendix 6: Environmental Aspects Analysis Matrix



Appendix 7: Environmental Aspects, Impacts, Legal & Other Requirements Risk Register



Appendix 8: Environmental Legislation (Legal & Other Compliance)



Appendix 9: Watpac EMS Referenced Documents



Appendix 10: Project Environmental Emergency Plan



Appendix 11 Watpac Construction (NSW) – PEMP Checklist