Hanson Concrete Batch Plant

Bridge Rd, Glebe

Development Application- Demolition of concrete overhead aggregate bins and batch plant.

Blackwattle Bay Concrete Plant

Demolition, Glebe, NSW

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Date: June 2017

Contents

1 Background

1.1 Introduction

This Demolition Management Plan (DMP) has been prepared by Hanson Construction Materials Pty Ltd (Hanson) for the demolition of the Blackwattle Bay (BWB) Concrete Plant (Plant) and Quarry Depot (Depot). The DMP provides a system and procedures to address and manage potential environmental impacts associated with the demolition of the project.

This DMP outlines the key steps to be taken by all site personnel (Hanson and sub- contractors), to manage the environmental hazards and risks associated with the project and to effectively minimise the potential for environmental harm. All Hanson and sub-contractor personnel engaged on the Project will be required to comply fully with the requirements of this DMP in order to limit the potential for environmental harm and regulatory non-compliance.

This DMP is submitted to the NSW Minister for Planning for approval. No demolition works will commence until Hanson has received Ministerial approval of the DMP.

1.2 Project Description

The demolition works involve the demolition of all structures and materials however affixed, whether penetrating the wharf deck structure, fixed to, on or suspended above the wharf deck structure. In addition to make good and make safe the site, remove any hazardous material and remediate any contamination from the wharf deck structure.

1.3 Location

The BWB Plant site is located on Bridge Road, Glebe. The proposed works will be undertaken on land owned by Roads and Maritime Services ABN 21 220 712 305, namely part Lot 5 DP 1064339 and Part Lot 107 DP 1076596 as shown on **Figure 1** adjoining Bridge Road, Glebe.

1.4 Project Activities

A description of activities and timing that will be undertaken as part of the works is described in **Table 1** below.

Table 1- Construction Program

Activity	Description	Timing (indicative)
Development Approval (DA)	ƒSubmission and approval.	**3 months**
Site Establishment	Establish site office facilities. Construct Environmental Controls such as sediment fences, hay bales, diversion drains.	**1 week**

Demolition	The following buildings will be demolished and all material taken off site to either landfill or recycler – Building 1 – Office, switch room & amenities; Building 2 – Aggregate bin and conveyors; Building 3 – Quarry depot; Building 4 – Silos; Building 5 – Overhead bins; Building 6 – Batch room; Building 7 – Washout pits; Building 8 – Acid storage; Building 9 – Admixture storage; Building 10 – FS ground bin; Building 11 – MS ground bin;	**9 weeks**
Remediation	**Excavation and stockpiling of Contaminated Material.**	**2 weeks**

The location of each of the buildings in **Table 1** is shown below in **Figure 2**.

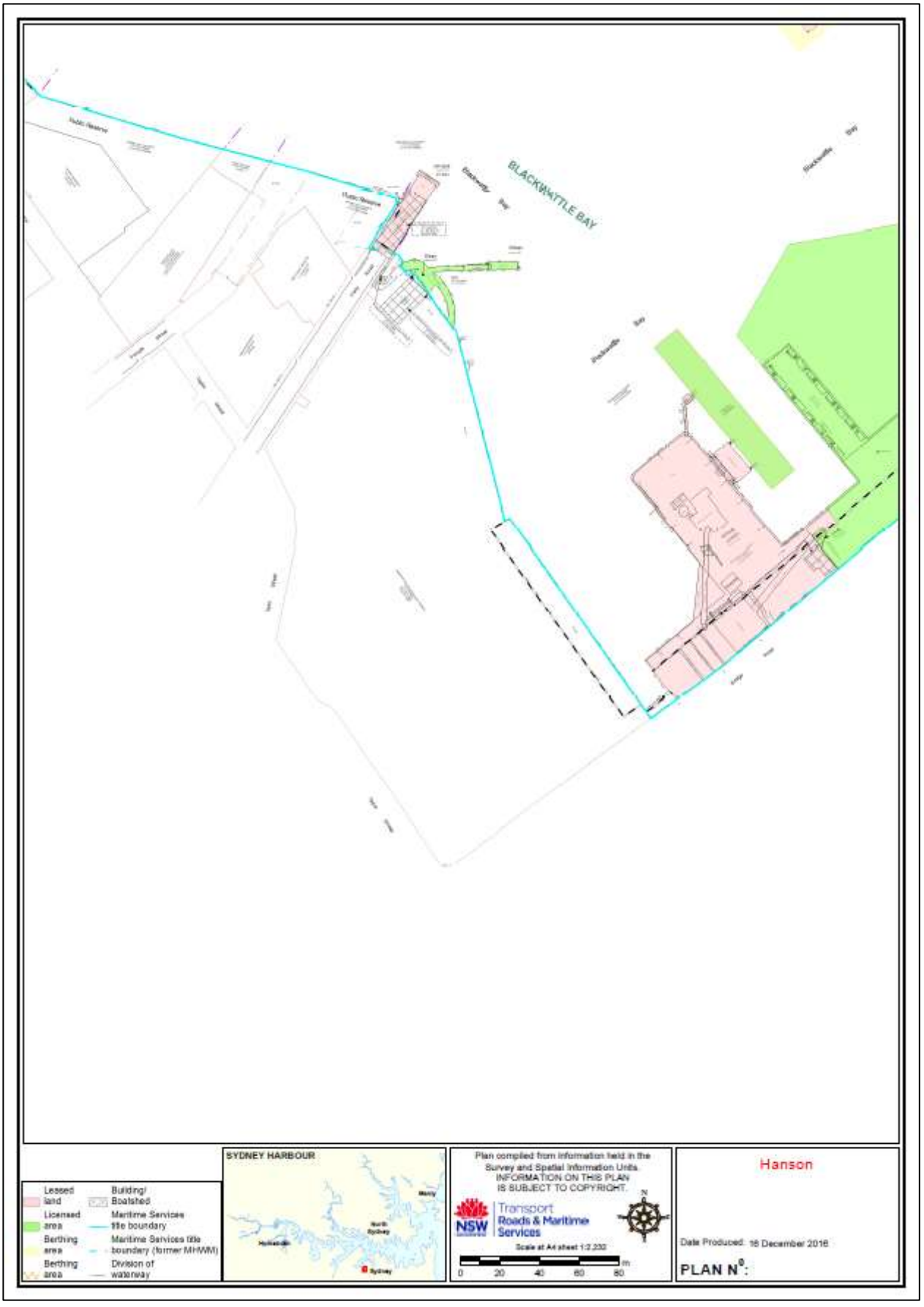

Figure 1- Blackwattle Bay Concrete Plant site and surrounding area.

Figure 2- Building locations for demolition

2 Project Specific Approvals and Permits

All demolition and remediation site work shall be undertaken with the appropriate regulatory approvals, or permits in place and shall comply with applicable environmental regulatory and legislative requirements. The approvals which will be required prior to initiating works are listed in Table 2 below.

Table 2- Required Approvals and Permits

Regulatory Authority	Licence/Permit/Approval	Purpose	Approval Holder
NSW Minister for Planning	Approval under the Environmental Planning and Assessment Act (1979). Minister for Planning (refer Schedule 6 cl 4(2) of SEPP (State Significant Precincts).	To comply with conditions provided to ensure a high standard of development having regard to the effect upon the environment	**Hanson**
NSW Workcover	Demolition Permit	Demolition to be undertaken by WorkCover licensed Sub-Contractor.	**Demolition Sub Contractor**
NSW Workcover	AS1 Permit	Removal of Asbestos	**Demolition Sub Contractor**

3 Environmental Management

3.1 On Site Structure and Responsibility

Figure 3 outlines the structure of responsibility of key positions in relation to environmental management.

3.2 Operations Manager

The Operations Manager is responsible for the overall control of the Project and the DMP. The Operations Manager also:

- ensures resources are made available to enable the Project works to comply with the DMP and relevant legislation; and
- liaises with the Project Manager and approval authorities as required

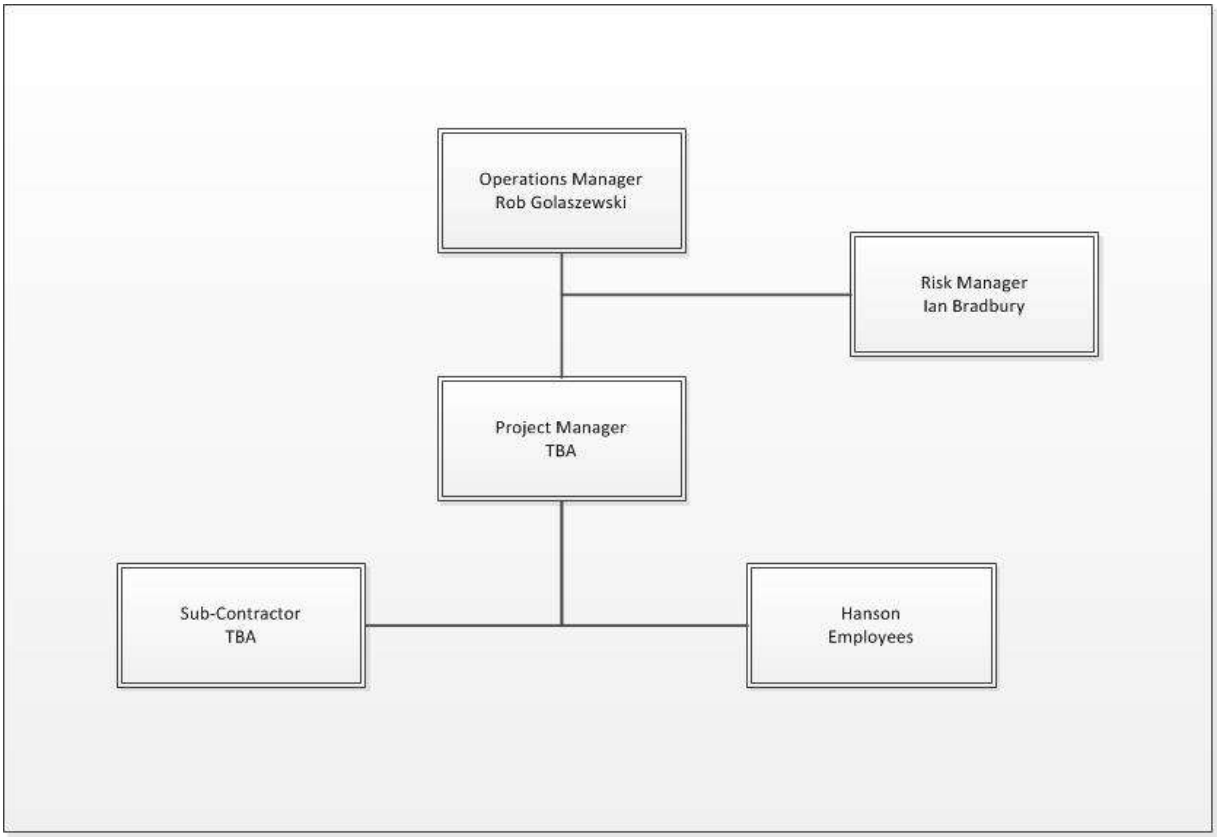

Figure 3- Project Organisation Structure

3.3 Risk Manager

The Risk Manager is a functional member of the Project team and is the Environmental Management Representative for the BWB Plant demolition.

The Risk Manager is responsible for:

- advising on environmental matters specified in the specifications and conditions of approval;
- liaising with relevant authorities on environmental matters;

3.4 Project Manager

The Project Manager (PM) is responsible to the Operations Manager for the formal implementation of the DMP.

Specifically, the HPM is responsible for:

- reviewing, implementing and maintaining the provisions of the DMP;
- undertaking a review of environmental aspects at the Project launch;
- ensuring all licenses, permits and approvals are obtained by the responsible entity, copies are kept in the Project filing system for the duration of the project and any conditions are complied with;
- providing required resources necessary to ensure the DMP is properly implemented;
- ensuring all personnel are inducted as to the Project environmental requirements prior to commencement on site;

- ensuring suppliers receive the Project environmental induction, or are made aware of the environmental objectives pertaining to them through conditions of contract, as applicable;
- ensuring personnel are adequately trained to undertake their tasks in an environmentally responsible manner;
- ensuring environmental inspections and monitoring is carried out in accordance with the Contract;
- ensuring accurate records are kept of all environmental monitoring and inspections;
- attending to environmental emergencies which occur on site after working hours (first point of contact); and
- undertaking environmental monitoring and inspections in accordance with the requirements of the DMP;
- initiating remedial works to ensure environmental controls are effectively maintained;
- maintaining records of all monitoring and inspection activities;
- developing and reviewing all erosion, sediment and water pollution plans, controls and measures prior to installation;
- fortnightly inspection and review of all erosion and sediment controls, at a minimum, until the Date of Completion; and
- assisting in Project training regarding Project erosion and sediment control issues
- the immediate verbal reporting to the Operations Manager of all environmental incidents, non-conformances, or concerns and the timely implementation of corrective actions or remediation strategies to control or ameliorate the extent of environmental harm;
- ensure that all environmental complaints are handled in a prompt and courteous manner and in compliance with the guidelines contained in this DMP

3.5 Sub-Contractor

The Sub-Contractor is responsible to the PM for:

- ensuring all workers and subcontractors under their control are properly inducted and instructed in the requirements of the DMP pertaining to their part of the work;
- ensuring all work under their control is undertaken in accordance with the DMP and statutory environmental requirements; and
- identifying, recommending and initiating solutions to any Project environmental risk
- the submission to PM of their own documentation which complies with Federal, State, and Local Authority regulations, the contents of this DMP,
- the preparing and implementing of and specific environmental control plans deemed necessary by the PM or his nominee to correctly identified deficiencies or to enhance overall environmental performance and compliance on the Project;
- taking all necessary precautions or actions in relation to any activity conducted on the Project that may potentially cause environmental harm and ensuring compliance with this Project DMP and relevant regulations including the development and implementation of an environmental monitoring program;
- providing initial and ongoing environmental awareness training including induction training for all new employees detailing each person's individual environmental responsibilities and key aspects of the Project DMP and their own environmental

objectives and compliance plans, and any other details specific to their individual work scope on the Project;

- the immediate verbal reporting to the PM of all environmental incidents, non-conformances, or concerns and the timely implementation of corrective actions or remediation strategies to control or ameliorate the extent of environmental harm;
- ensure that all environmental complaints are handled in a prompt and courteous manner and in compliance with the guidelines contained in this DMP

3.6 Employees

All project employees are responsible for undertaking their work in accordance with the DMP and Hanson's Environmental Policy as directed at their induction and as instructed by their supervisor.

4 Competence, Training and Awareness

A record of inductions and training attendance is maintained and kept on site in the Training matrix and register. This register records the topics, dates, names of attendees, and trainer qualifications.

4.1 Competence

The Project Manager is responsible for the monitoring of environmental training needs to ensure that all personnel with environmental responsibility on the project are competent to perform their environmental duties. Training is provided to personnel with specific environmental responsibilities. This may include but is not necessarily limited to training in the areas of:

- emergency response;
- erosion and sediment control;
- environmental sampling; and
- environmental auditing

4.2 Induction Training

Prior to commencing work on site, all Project personnel including subcontractors, attend a site induction. Where personnel are visiting, personnel attend a visitor induction.

All Project personnel, subcontractors and consultants will be required to undertake a site induction which will, as a minimum, address the following environmental topics:

- The DMP and consequences of non-compliance with the DMP;
- The requirements of due diligence and duty of care;
- Conditions of environmental licences, permits, notifications and approvals;
- Location of significant environmentally and socially sensitive areas and protected ecological communities;
- Incident management procedures (e.g. the action to be taken in emergencies, communication lines and contact details for emergency services and site representatives);
- An overview of the Environmental policy;
- Roles and responsibilities of all personnel in achieving environmental conformance;

- Definition and management of environmental incidents and operation of pollution/ spill control equipment;
- Definition and management of waste and an explanation of a waste minimisation and recycling strategy; and
- Processes for refuelling and the management and use of hazardous substances.
- Records of training, competency and qualifications including dates, names and trainer details, will be registered in the Inductions Register and kept with the Project Safety Manager.

4.3 Site Induction

The Project Manager or delegate conducts inductions in conjunction with the site safety induction prior to any person working on site. This induction process familiarises the staff and workforce with Hanson's commitments and policies, the project site and all specific requirements for the project in terms of safety and environmental controls. These can include, but are not limited to, site specific areas (e.g. environmentally sensitive areas, limits of construction, no-go zones), cultural heritage issues, definition and management of environmental incidents, refueling, waste management and disposal. The induction will include an overview of the content and intent of the DMP, including the expectations of staff and subcontractors to comply with the DMP and environmental legislation and relevant approvals and permits.

Regular visitors and Contractors required to spend time on site unaccompanied, will also be inducted prior to them going onto the site.

4.4 Visitor Induction

Visitor inductions are provided for personnel visiting (not physically working on) the Project and where there is minimal potential for environmental harm. All visitors must undergo a visitor's induction. All visitors shall be under the control and supervision of a person who has been fully inducted.

Records of training, competency and qualifications including dates, names and trainer details, will be registered in the Inductions Register and kept with the Project Safety Manager.

5 Emergency Contacts and Response

In addition to the environmental training, selected persons will be trained in emergency procedures for chemical spills, or other potential incidents, including use of spill kits provided on site. In the event of an emergency the persons/authorities nominated on the Emergency Contact List shall be notified as applicable.

A Hanson delegated person will have the authority to stop or direct works in an emergency situation. Procedures as detailed in the project Safety Plan and Incident Management Plan will be followed in the event of an emergency.

The Emergency Contacts List, Evacuation Procedure and Emergency Evacuation Plan (Marshalling Areas) is included with, and displayed in accordance with, the procedure in the *Emergency and Crisis Plan.*

Environmental emergency situations are managed in accordance with the Emergency and Crisis

Management Plan. Incidents are recorded in the Hanson database.

5.1 After Hours Response

Upon becoming aware of an environmental incident outside of normal working hours, the Project Manager or Sub- Contractor shall attend the site to determine if any immediate remedial works are required and shall arrange for such works to be completed as soon as possible.

5.2 Oil & Fuel Spills

The environmental risks posed by fuel and oil spills will be minimised through the provision of appropriate storage for fuels, oils and chemicals.

Approved hydrocarbon spill kits capable of containing or cleaning up a spill of 100 litres minimum will be strategically located and readily available. Several people trained in the use of the spill kit shall be on site whilst work is being undertaken.

Where safe and practical, the spill kit or other containment measures will be used as soon as possible after an incident. The hydrocarbon spill kit shall be replenished as soon as possible after the event.

Where the use of the spill kit or other containment measures would be ineffective, or the spill is of a scale where it can't be safely handled on site, then the Fire Brigade (spill response unit) will be called in accordance with the Emergency and Crisis Plan.

Approved contractors shall be engaged for the appropriate disposal of soil affected by the spill and residual absorbents.

Transportation and landfill dockets shall be provided to Hanson by the disposal contractor.

5.3 Control of Fire

Fire response measures are detailed in the Emergency Preparedness and Response Sub Plan. Relevant fire response contacts have been included in the site's 24 hour Emergency Contact List.

Inducting site personnel in good housekeeping and safe working practices will reduce the risk of fire breaking out.

Where work is undertaken which may involve a risk of fire spreading to adjacent vegetation and/or properties, appropriate preventive measures will be implemented in accordance with the JSEA/SWMS.

If a fire breaks out and cannot be controlled by use of immediate resources (fire extinguisher, hose etc.) the fire brigade will be requested to attend.

5.4 Dust Generated On Site

In the event of dust causing a nuisance to surrounding and adjacent properties or roadways, or when directed by the Project Manager to cease work, the following procedure will be followed:

- The Project Manager shall halt works and plant movement immediately to prevent further dust from being generated;

- A water cart shall be used to spray the area where the dust generation has occurred, or stockpiles shall be covered or dampened as necessary;
- Where possible, working operations shall be relocated to another section of the site, provided that wind/weather conditions are favourable;
- Where a complaint is received from any adjoining property owner, the property shall be inspected by the delegated personnel and corrective actions determined;
- Details shall be recorded in the Hanson Database; and
- Work shall not resume in the affected area until conditions ensure visible dust will not escape the confines of the site.

Table 3 lists the contact personnel and their details for emergency responses in relation to environmental management during demolition and remediation works. Hanson's Emergency Response Contacts is contained in **Table 3**.

Table 3- Emergency Response Contacts

Position	Contact	Business Address	Phone Number
Operations Manager	Rob Golaszewski	Level 18 2-12 Macquarie St, Parramatta NSW	**0419 901 543** **02 9354 2600**
Risk Manager	Ian Bradbury	Level 18 2-12 Macquarie St, Parramatta NSW	**0417 423 467** **02 9354 2600**
Project Manager	TBA	TBA	**TBA**
Sub-Contractor	TBA	TBA	**TBA**

5.5 Relevant Legislation and Guidelines

Under the State Environmental Planning Policy (State Significant Precincts) 2005, Clause 9A of the SEPP states that the Minister is the consent authority under Part 4 of the Act for any development requiring consent under that Part that is of a kind described in Schedule 6.

Clause 4 of Schedule 6 states:

> **4 Port and related employment lands**
>
> (1) (Repealed)
>
> (2) **Sydney Harbour**
>
> Development within the area identified as Glebe Island, White Bay, Rozelle Bay and Blackwattle Bay on the Sydney Harbour Port and Related Employment Lands Map, being development with a capital investment value of not more than $10 million that is carried out by a person other than a public authority.

A general list of the relevant legislation applicable or potentially applicable to the demolition works is contained in Table 3 below:

Table 3: Project Specific Legislation and Guidelines

Legislation	Summary
Environmental Planning and Assessment Act 1979 – Part 4	The BWB Plant & Depot demolition works must comply with Council's Conditions of Approval.
Protection of the Environment Operations Act 1997	The Project must comply with section 120 of the POEO Act 1997 which prohibits the pollution of waters.
Australian Standard (AS2601-2001)- The demolition of Structures	Provides guidance to planners, owner, engineers, contractors and interested parties on the planning and procedures for the demolition of a structure. The demolition works must comply with AS2601-2001.
DECCW (EPA) Interim Construction Noise Guideline (ICNG) 2009	The ICNG sets out ways to deal with noise impacts on residents and other sensitive land uses by presenting assessment approaches that are tailored to the scale of construction projects and indicate how work practices can be modified to minimise impacts. The ICNG sets out guideline management levels for noise impacts.

6 Proposed Demolition Methodology

6.1 Site Establishment

Upon commencement ~~of~~ the contractor will establish site sheds on terra firma generally on the west elevation and to the left of the site entrance. All inductions, training and risk assessments will be conducted during this first week on site. All services to the site shall be disconnected by prior to establishment. Power for the contractor's works will be utilised from a generator and water will be tapped via a temporary connection.

6.2 Office, Switch Room, Amenities Removal

Hazardous materials that have been identified in the Environmental Site & Hazardous Materials Assessment provided will be removed by qualified and trained asbestos removal personnel, all offices, amenities and weighbridges etc. will be soft stripped of loose furnishings prior to mechanical demolition.

6.3 Aggregate Bin & Conveyor Removal

Demolition personnel working from elevated working platforms will prepare conveyor C1 & C2 for dual mobile crane lift. Documentation such as lift studies and structural engineering

certificates of approval will be provided with every crane lift performed during the works. Once the structure has been lowered to ground level it will then be processed by a 36t hydraulic excavator with shear attachment. The combined offices, amenities and switch room will also be mechanically demolished with the hydraulic excavator. All waste materials will be sourced separated to ensure waste minimisation and maximum recycling is achieved.

6.4 Hoarding and Protective Scaffolding

Concurrently to the above tasks, subcontractors will be utilised to tiger tail power lines on Bridge Road, erect a B class gantry hoarding and erect protective scaffolding including mesh to the south elevation, east and west returns of the concrete aggregate storage bin structure.

6.5 Quarry Depot Demolition

A mobile crane will be situated on the west of the structure to assists in the dismantling of the steel roof structure. The roof structure will initially be prepared for lifting by demolition personnel working from EWP's and within the structure subject to further on site investigation.

A long reach excavator and 70t hydraulic excavator with pulveriser attachments will work in tandem to demolish the structure. The long reach will be utilised for the safe demolition of the southern wall, working from a rubble mound created by the 70t excavator. This will ensure maximum safety and control during demolition. As the demolition progresses scaffolding will be removed level by level until the precast section of wall has been reached.

This section of wall along with scaffolding protection and hoarding will be utilised as an environmental barrier while the 70t excavator with concrete cracker attachment demolishes the remainder of the aggregate bin storage structure. A 36t excavator will assist in processing the concrete, removing the reinforcement and loading trucks as demolition progresses.

6.6 Overhead Bins, Silos, Batch room and Washout Pits

Due to the loading limitations on the wharf it is intend to utilise a crane mounted barge to demolish the batching plant tanks, silos and associated infrastructure. Demolition personnel working from EWP's will carry out preparation works to the structures including the C11 conveyor. Once preparation works have been completed the barge will be floated to site and located on the western elevation. The batching plant infrastructure will be rigged, cut, lifted and lowered to ground level in pre-engineered lift sections and transferred to the processing area for downsizing and loadout.

6.7 Acid Storage, Admixture Storage, FS & MS Ground Bins, Slump Stands

The last phase of the works involves the demolition of the Acid Storage, Admixture Storage, FS & MS Ground Bins, Slump Stands, bund walls, ramps, pits, plinths and any remaining structures down to slab level, this will be carried out by a hydraulic excavator with hammer & pulveriser attachment.

7 Environmental Assessment

7.1 Air Quality

Air quality can have major impacts on human and environmental wellbeing. Management

principles are designed to reduce and control the effects of air pollution generated from site activities on adjacent receptors, travelling public, workers.

Roles:

Project Manager, Sub-Contractor, Employees, Project Personnel

Mitigation measures

The techniques adopted for stripping out and for demolition shall minimize the release of dust into the environment**.** Where there is a danger of an accumulation of dust into the environment, it shall be controlled. This may involve vacuuming, or hosing down.

Dust generated during stripping, or during the breaking down of the building fabric to removable sized pieces, shall be kept damp until it is removed from the site or can be otherwise contained. The use of excess water for this purpose shall be avoided.

7.2 .Noise & Vibration

Demolition noise impacts in these areas will be temporary and generally restricted to standard working hours, unless otherwise required by the service provider. Management principles are designed to reduce and abate the effects of noise generated on adjacent receivers.

Roles:

Project Manager, Sub-Contractor, Employees, Project Personnel

Mitigation measures

- Install temporary noise barriers close to plant if required;
- Schedule demolition activities;
- Where relevant, inform potentially affected residences in advance as to the extent and timing of potentially noisier construction activities and responsibly advise when noise levels during such works may be relatively high;
- Where known to be readily available, deploy plant having lower noise emission levels;
- Apply residential class mufflers to all mobile equipment used;
- Properly maintain plant to ensure rated noise emission levels are not exceeded;
- Undertake monitoring of plant identified as being excessively noisy. Where monitoring indicates that the plant emissions exceed their rated sound power levels, the sub-contractor should be instructed to modify the item accordingly or remove it from the site;
- A contact telephone number will be provided via which public may seek information or make a complaint. A log of complaints should be maintained and actioned by the site superintendent in a responsive manner; and
- Undertake demolition activities as guided by Australian Standard (AS)2436-1981.

7.3 Protection of Services

Before a contractor is engaged, a competent person shall determine, as far as practicable, the location and extent of all services (e.g. gas, hydraulic, communications and electrical) and watercourses. No demolition refuse or waste shall be allowed to enter public sewers, drains or watercourses and all live services adjoining the site shall be protected.

Roles:

Project Manager, Sub-Contractor, Employees, Project Personnel

Mitigation measures

- Stockpiles will incorporate water management controls designed to direct any stockpile water runoff to sediment control systems and divert “clean” stormwater around stockpiles and exposed areas;
- Areas to be disturbed at any one time will be minimised;
- Water runoff generated from the demolition site will be intercepted and treated (eg. Sediment filters and traps, etc). Sediment and erosion controls will be installed where required prior works commencing and maintained in an effective condition until works have been completed and construction areas rehabilitated;
- Control of fuels, oils and other chemicals will be undertaken in accordance with EPA’s Bunding and Spill Management Guidelines and any relevant legislation or Australian Standard;
- Monitor weather forecasts and plan works accordingly;
- Machinery will be checked before being used onsite through plant risk assessment, and daily during plant pre-starts checks; and
- Vehicle loads will be covered to prevent the release of material.

7.4 Waste

A general environmental duty of care exists to manage and control waste materials. The DECCW Waste Management Hierarchy will be implemented for the construction and demolition: avoidance of unnecessary resource consumption, resource recovery (including reuse, reprocessing, recycling and energy recovery), and disposal.

The following will be adhered to:

- Protection of the Environment Operations Act 1997
- Waste Avoidance and Resource Recovery Act 2001
- Protection of the Environment Operations (Waste) Regulation 2005
- Protection of the Environment Operations (General) Regulation 2009
- DECCW Waste Classification Guidelines

Roles:

Project Manager, Sub-Contractor, Employees, Project Personnel

Mitigation measures

- Waste generated during demolition activities to be disposed of in accordance with the Waste Classification Guidelines 2008 and an appropriately licenced facility;
- Waste generated on-site to be contained within the site compound until opportunities for reuse are available;
- Wastes to be separated into recyclable and non-recyclable materials and stored in appropriate containers, with recyclables sent for recycling;

- Waste that cannot be reused or recycled to be regularly disposed to an appropriately licenced facility;
- All working areas to be maintained and cleaned up on a regular basis;
- All demolition work to be carried out in accordance with AS2601-2001: The Demolition of Structure; and

7.5 Stakeholder & Community Consultation

Community management which includes, amongst other things, protocols for the distribution of letters informing the community of demolition works, and contact details for further information, or the registration of complaints.

The Hanson Project Manager shall notify the Operational Manager and Risk Manager of all site environmental issues, concerns and complaints.

Complaints from other parties shall be directed to the Project Manager for investigation.

All relevant environmental issues, concerns and complaints and include the following, are to be entered into the Hanson database:

- date and time;
- location;
- apparent cause;
- corrective action, if relevant; and
- other relevant information

Completed corrective actions shall be documented in the IRMS database.

Copies of the report shall be distributed to the relevant parties indicated on the report.

On receiving a complaint about any environmental issue, including noise and other pollution, arising from the Project works, a written notification will be submitted in the Hanson database, which will distribute to the Operations Manager and Risk Manager. The Risk Report raised in the Hanson database is to be closed out with the proposed measure to prevent the occurrence of a similar incident, within five working days.

A register of all complaints about any environmental issues will be kept for the duration of the Project.

Roles

Operations Manager, Risk Manager, Project Manager, Sub-Contractor, Employees, Project Personnel

Mitigation Measures

- A contact telephone number will be provided via which public may seek information or make a complaint. A log of complaints should be maintained and actioned by the PM in a responsive manner;
- Where relevant, inform potentially affected residences in advance as to the extent and timing of potentially noisier activities and responsibly advise when noise levels during such works may be relatively high;

- This DMP is to be made available to the public upon request; and
- If required, a “Road Opening Permit” will be obtained from the relevant authority prior to commencement of any work on Council property.

7.6 Public & Visual Amenity

Any visual impacts resulting from the works will be localised, of short duration and are not expected to be significant. In addition to stakeholder and community consultation, public and visual amenity will be protected by the implementation of appropriate mitigation measures.

Roles

Project Manager, Sub-Contractor, Employees, Project Personnel

Mitigation Measures

- Demolition works to be completed within the shortest possible timeframe;
- Waste generated to be removed from the site as soon as practical and disposed of in accordance with the NSW Waste Classification Guidelines to an appropriately licenced facility;
- The site is to be maintained in an orderly manner; and
- Any work on the Council owned nature strip adjacent to Bridge Road to be undertaken in consultation with Council

7.7 Traffic

Demolition vehicles will be using the normal site access on Bridge Road. All traffic associated with the works will be managed under the Traffic Management Plan developed for the Project.

Roles

Project Manager, Sub-Contractor, Employees, Project Personnel

Mitigation Measures

- Signs and devices will be used to warn, inform and guide road users safely around, pass by or through work areas and removed at the completion of the work;
- Work will be arranged so that workers are able to work safely and workers and road users are separated wherever possible;
- Work will be staged to ensure minimum disruption to traffic, especially at peak times; and
- Pedestrian flow will be managed through the erection of suitable barriers and signs.
- If required, a “Road Opening Permit” will be obtained from Council prior to commencement of any work on Council property.

7.8 Environmental Toolbox Training

A toolbox talk involves the dissemination of information to Project personnel at the field level. Generally toolbox talks focus on safety aspects with reference to certain Project jobs or tasks. They can be used to disseminate environmental management information.

Environmental toolbox talks will cover aspects such as:

- Explanation of new Project requirements;
- Explanation of the key environmental risks associated with an activity or specific procedures which could have potential environmental impacts;
- Explanation of mitigation strategies with reference to an activity or specific procedures which could have potential environmental impacts;
- Reminder of the importance of specific or generic environmental commitments;
- Obtaining feedback related to environmental issues;
- Changes in work process as a result of incident management; and
- Any other purpose related to the implementation of the DMP.

Toolbox training will help to ensure that relevant information is communicated to the workforce and will also provide a forum for feedback on issues of interest or concern. Toolbox training will generally be prepared and delivered by a representative of the Project Management Team but may also be delivered by other authorised persons.

7.9 Work Procedure Training

All personnel that have specific responsibility for implementing the DMP are trained in the relevant work procedures prior to undertaking the activity. Work procedure training is recorded in the training attendance record.

7.10 Review and Monitor

The key activities of the Project that may have a significant impact on the environment are monitored on a regular basis.

A range of information is documented to enable performance to be monitored. Detailed records of all environmental inspections and performance checks are maintained.

7.11 Inspection and Surveillance

In addition to the specific environmental monitoring set out in the environmental management Sub Plans, the following environmental inspections are undertaken:

- The Principal Contractor as part of their daily duties conduct inspections of the Project (including all subcontractor activities). Only unresolved issues are noted in their daily diaries and communicated to the Project manager for inclusion in the IRMS database; and
- The PM conducts formal inspections of the Project. An environmental inspection checklist is developed to ensure compliance with the DMP and that conditions nominated in license/permits/approvals are assessed. Actions arising from environmental inspections are recorded, tracked, communicated and closed out in accordance with the procedure detailed in Figure 2 below.

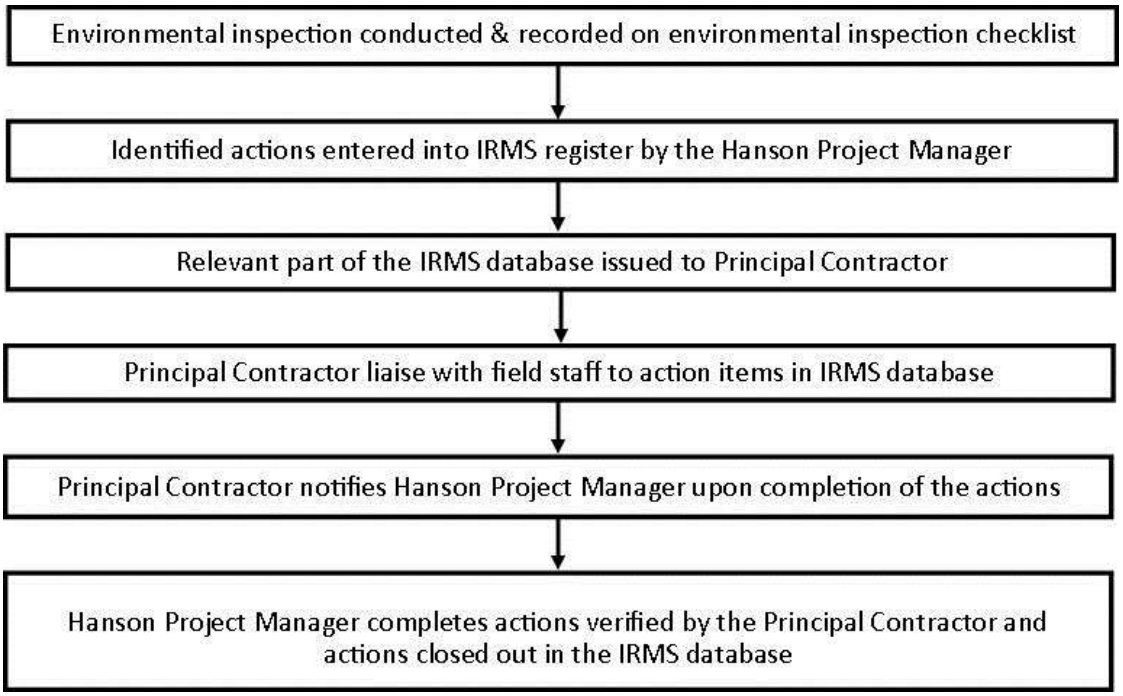

Figure 2: Procedure for Environmental Inspection

7.12 Environmental Sampling

Environmental sampling involves collecting and interpreting data to verify the effectiveness of the DMP and environmental control measures. All environmental sampling details are contained in the relevant sub plans. Where sampling results are outside the nominated acceptance criteria, an incident report or non-conformance is raised in the IRMS database.

7.13 Incident Reporting and Investigation

Incidents and Emergencies shall be managed in accordance with the *IRMS* guidelines document.

These detail how to:

- prevent and/or prepare for emergency situations;
- respond in the event of different emergency scenarios;
- notify required persons;
- report; and
- undertake incident investigation.

Where required, the *Emergency and Crisis Management Plan* may be enacted for major or extreme incidents.

A record of all incidents is recorded in Hanson's IRMS database.

7.14 Environmental Alerts

As part of Hanson's commitment to environmental hazard identification, control and improvement, an Environmental Alert system is utilised. When an incident occurs or a potential hazard is identified externally or internally, an alert may be developed.

Alerts are distributed through email and printed off at each site and placed on site notice boards and communicated to the Project team at Toolbox meetings. The Environmental Alert

identifies the key issues relating to the incident or hazard, the controls that are to be put in place to ensure the incident or hazard does not reoccur and key learning's from the event.

The Hanson Regional Risk Manager is responsible for preparing and disseminating alerts within four weeks of the incident or hazard.