



WASTE MANAGEMENT PLAN

**Bass Point Quarry Extension
Lot 22 DP 1010797**

PREPARED FOR: HANSON CONSTRUCTION MATERIALS PTY LTD

MAY 2010

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HANSON CONSTRUCTION MATERIALS PTY LTD****LOT 22 DP 1010797**

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1. SUBJECT LAND

1.1 Site Address

Bass Point Quarry (Lot 22 DP 1010797)

Applicant

Hanson Construction Materials Ltd
C/- Insite Planning Engineering Economic & Social
PO Box 93 Cessnock NSW 2325

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1.2 Buildings and other structures currently on site

There are a range of structures on the site including:

- Existing offices, amenities buildings, and associated administration buildings;
- Existing workshop buildings;
- An existing concrete plant (to be relocated);
- Existing material processing equipment, including crushing equipment, conveyors and the like as well as appropriate buildings in which some of these items are located (large steel buildings);
- Much of the remainder of the site has been subject to previous extractive activities.

The location of structures on the land is shown in the aerial photograph of the subject land is shown in **Figure 1**.

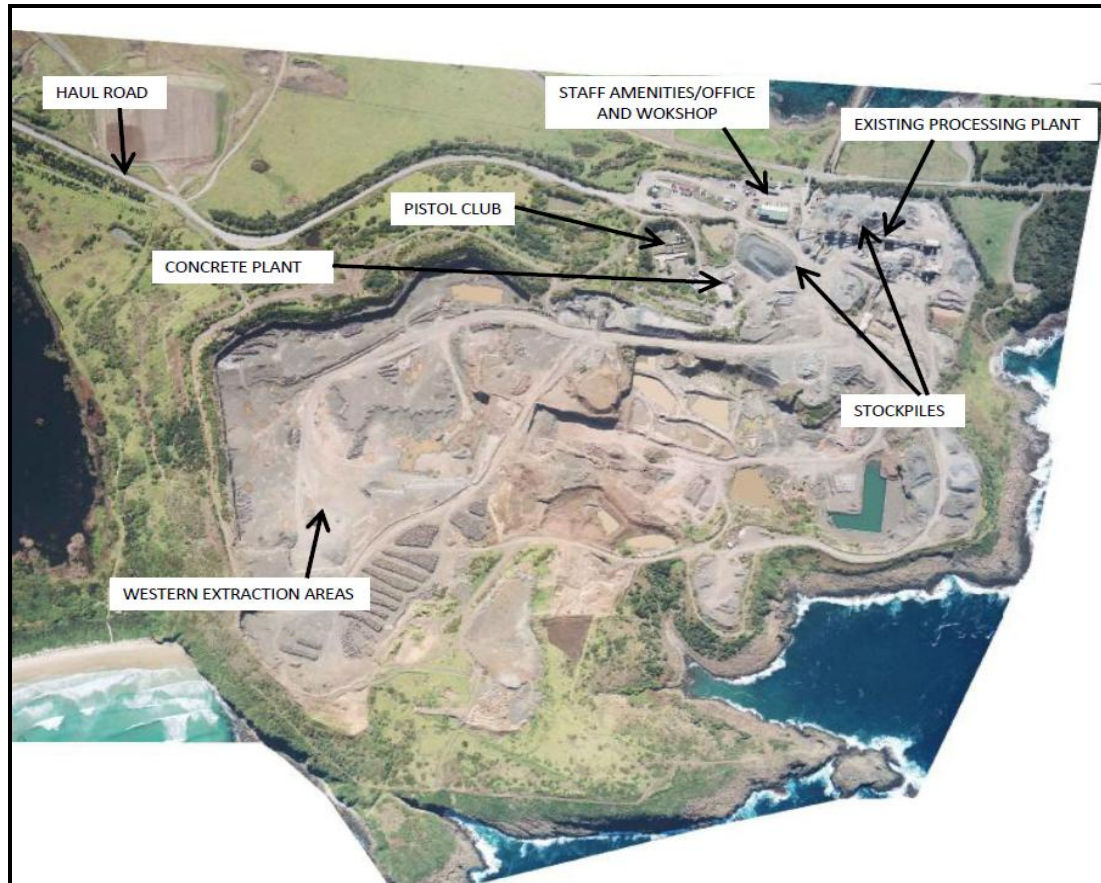


Figure 1: Aerial Photograph of the subject land



Existing crushing and sorting plant with conveyors







2. BRIEF DESCRIPTION OF PROPOSAL

2.1 Objective

The principal objectives for the proposed development is:

1. To deepen and extend the extraction area so as to extend the life of the quarry and to maximise winning of an important and valuable resource, enabling Hanson to continue to produce a range of high quality aggregate and road construction materials; and
2. To relocate and upgrade the out-of-date and inefficient processing equipment, such that the site is more appropriately laid out and that Hanson can make the best use of modern, efficient technology and locate equipment on the site which is more suitable in terms of quarry operations and minimises impacts on adjoining lands.

2.2 Project Overview

As previously indicated, the proposed development is to be undertaken in two (2) stages (with three separate components). **Figure 2** sets out the proposed development.

Stage 1 - Part 1

Part 1 involves the:

- Erection of new processing plant centrally in the quarry extraction area, and decommissioning the existing processing plant from the north-eastern portion of the site.
- Relocation of associated stockpiles from the north-eastern portion of the site to also be located centrally on the site near to the new processing plant.
- The proposed development will locate new processing plant/equipment and stockpiles at a level of approximately 16 m AHD. This is a position significantly below the 20-25 m AHD level of the current equipment.
- Relocation of the office, workshop and amenities as shown in **Figure 2**.
- Relocation concrete batching plant – essentially involving the same plant with minor upgrades.
- A defined parking area located near to the new office and workshop areas;
- The installation of a new weighbridge adjacent to the office and administration area.

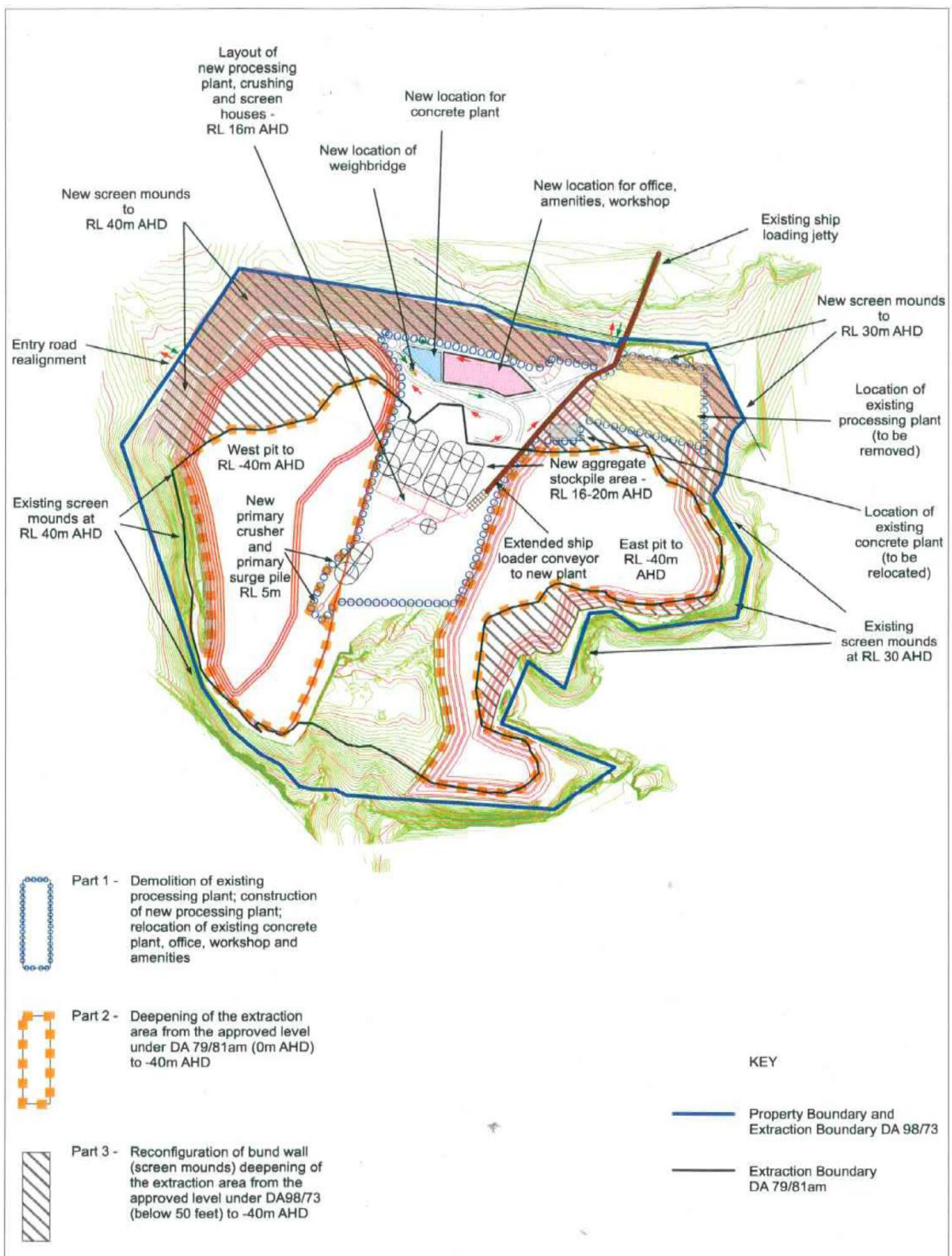


Figure 2: Proposed Development

Stage 1 -Part 2

- Approval is sought to deepen the extraction level approved under DA79/81 from approximately 0m AHD to -40m AHD. This area is shown broken edging Orange in **Figure 2**.

Stage 2 – Part 3

- Approval is sought for the reconfiguration of the Bund Wall, approved by Shellharbour City Council under DA947/2002 and lateral extension of the extraction area (as shown hatched in **Figure 2**).
- Approval is also sought to deepen the extraction area within the defined 'stage 2' area from the currently approved level under DA98/73 (for extraction to a level of 50 feet) to -40m AHD.

2.3 Waste Sources

Waste sources for the proposed development would be primarily from:

- Demolition and relocation of the office and amenities buildings which would result in general demolition waste from the removal of the existing buildings;
- Removal of the existing processing equipment which will be replaced by new processing and sorting equipment. Note that some of the machinery may be re-used or stored for use as spares. The majority of waste produced during this process would be steel associated with the infrastructure;
- Relocation of the concrete plant will generate minimal waste as it is anticipated that this will simply involve the relocation of the existing equipment, rather than disposal and re-acquisition of new equipment.





3. RELEVANT POLICY DOCUMENTS & LEGISLATION

The following policy documents are relevant to the management of waste from the proposed development:

-  NSW Occupational Health and Safety Regulation 2001 (OH&S Regulation)
-  The Department of Environment, Climate Change and Water (DECCW) *Waste Classification Guidelines*; and
-  Shellharbour Waste Minimisation and Management Development Control Plan

3.1 Waste Classification Guidelines

In April 2008 DECC (now DECCW) replaced the *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-liquid Wastes* with the *Waste Classification Guidelines*. This document outlines a simple step-by-step process for waste generators to follow to classify their waste for disposal.

Waste classification helps those involved in the management and treatment of waste for disposal to ensure the environmental and human health risks associated with it are managed appropriately and in accordance with the *Protection of the Environment Operations Act 1997* (the POEO Act) and its associated regulations.

Classifying wastes into groups that pose similar risks to the environment and human health facilitates their management and appropriate disposal.

Six waste classes are used:

-  Special waste
-  Liquid waste
-  Hazardous waste
-  Restricted solid waste
-  General solid waste (putrescible)
-  General solid waste (non-putrescible)

Each of these waste types are defined within the *Waste Classification Guidelines*.

3.1.1 Classification of Wastes under the Waste Classification Guidelines

General solid wastes (non-putrescible)

A review the *Waste Classification Guidelines* reveals that the majority of wastes from the site would be best defined as **General solid waste (non-putrescible)**.

Attachment 1 contains the details from the Waste Classification Guidelines as to what comprises 'General solid waste (non-putrescible)'.

Note that a vast proportion of the general solid waste (non-putrescible) on the site will be capable of being sorted and recycled or re-used. For example, corrugated iron sheeting from sheds and buildings, timber from various structures, and fittings/fixtures will be recycled/re-used as appropriate. Concrete and concrete products, bricks and the like can be either re-used or transported to appropriate recycling businesses. Suitable topsoil, vegetated matter, trees and other material will be utilized for re-vegetation/rehabilitation purposes either within the existing quarry or as part of the proposed bunding around the new extraction area.

Hazardous Wastes - Asbestos

In addition, the age and nature of the amenities and office buildings may result in them being potential sources of Asbestos Wastes. Note that an inspection of the shed as part of the Phase 1 Contamination Assessment did not reveal any such asbestos. However, such materials may not be readily identifiable as a result of being concealed by paint or beneath other materials. For this reason, details of dealing with asbestos have been included in this Waste Management Plan as a precaution.

In accordance with the *Waste Classification Guidelines*, 'asbestos waste' is defined as:

'Asbestos' means the fibrous form of those mineral silicates that belong to the serpentine or amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos) and tremolite.'

'Asbestos waste' means any waste that contains asbestos.'

Any waste containing asbestos must be dealt with as 'hazardous waste' in accordance with the DECCW *Waste Classification Guidelines*.



3.2 NSW Occupational Health and Safety Regulation 2001 (OH&S Regulation)

The NSW OH&S Regulation, 2001 is relevant to the proposed development given the potential presence of asbestos material on the site.

WorkCover NSW requires that certain asbestos removal work be licensed under the *OH & S Regulation* and provides the approval mechanism and requirements for works involving waste asbestos materials.

There are generally two (2) types of asbestos wastes identified under the OH&S Regulation:

1. **bonded asbestos material** means any material (other than friable asbestos material) that contains asbestos (generally including fibro, compressed asbestos cladding, asbestos pipes and the like); and
2. **friable asbestos material** means any material that contains asbestos and is in the form of a powder or can be crumbled, pulverised or reduced to powder by hand pressure when dry.

Any asbestos material located on the site likely to be **bonded asbestos material**, comprising asbestos sheeting used in the cladding for the amenities buildings. The presence and nature of asbestos material on site will be evaluated by a suitable asbestos consultant prior to any works/demolition commencing (see **Section 4.3** of this Waste Management Plan).

3.3 Shellharbour Waste Minimisation & Management Development Control Plan

The purpose of this plan is to provide Council's requirements for the management of waste including storage, handling and disposal of waste and recyclable materials on individual sites in the Local Government Area.

Part 3 sets out the aims of the DCP in this regard:

'Aims of the Plan

'Waste minimisation

- a. *to maximise avoidance, reuse and recycling of building and construction materials and materials from subdivision;*
- b. *to encourage a shift in attitude from demolition as destruction of a building to demolition as de-construction and re-allocation of resources;*
- c. *to provide advice for applicants on how to minimise, reuse and recycle waste from demolition, construction and subdivision developments;*
- d. *to facilitate improved project planning and management which results in efficient use of resources, efficient building techniques and minimisation of waste;*
- e. *to reduce the environmental impacts of waste collection, storage and disposal;*
- f. *to foster the principles of Ecological Sustainable Development;*



Waste management

- a. *to provide guidance in regards to space, storage, amenity and management of waste management facilities;*
- b. *to ensure waste management systems are compatible with collection services;*
- c. *to minimise risks associated with waste management at all stages of development;*
- d. *to minimise potential adverse impacts relating to the management of waste on the amenity of adjoining properties and within the development.'*

3.3.1 Waste Minimisation & Management Plans

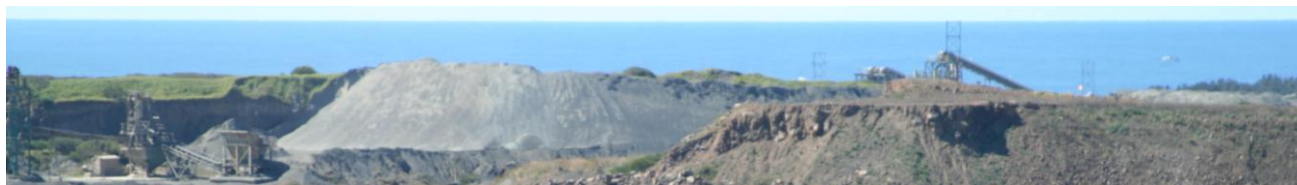
The Development Control Plan requires that a 'Site Waste Minimisation & Management Plan' (SWMMP) shall be prepared to accompany development applications.

Section 6.2 of the DCP sets out that the SWMMP shall include details on:

- a) volume and type of waste and recyclables to be generated
- b) storage and treatment of waste and recyclables on site
- c) disposal of residual waste and recyclables
- d) operational procedures for ongoing waste management once the development is complete.

A pro-forma application form is provided which can be used as a basis for the preparation of a Waste Management Plan.





4. WASTE MANAGEMENT PLAN

4.1 Demolition of Amenities Buildings, Processing Plant & Relocation of Concrete Plant

4.1.1 Amenities & Office Buildings

The demolition of the office and amenities buildings will involve the removal of any materials, fixtures and fittings which are available for re-use or recycling. This will include the removal of all fittings and fixtures (electrical fittings, bathroom fittings, hot water heater, plumbing fittings, lighting and so on).

These will be sold to demolition yards/building materials recycling businesses.

As much timber, roofing iron and cladding will also be salvaged for re-use/recycling including timber doors, framing, roofing iron and the like.

Any bricks, tiles, concrete etc will be provided to local recycling firms for re-use.

All wastes that cannot be removed will be disposed of via an approved waste contractor to a suitable waste management facility.

Amenities & Office Buildings		
Waste Type	Volume (approx)	Comments
Cladding/fibro	10m ³	Recycled where appropriate, if not able to be re-used, this will be disposed of via an approved waste contractor
Timber	5m ³	Recycled where possible to building recycling yard or building salvage businesses
Iron roofing	3m ³	Recycled where possible to builders yard
Fittings fixtures and materials (ie lighting, electrical equipment, laundry fittings, bathroom fittings etc)	1m ³ (plus larger fittings such hot water heater, windows and the like)	Recycled where appropriate to building yards. Any equipment which cannot be salvaged will be disposed of via an approved waste contractor to an appropriate waste management facility
Bricks/concrete/tiles	3m ³	Clean fill used throughout the existing quarry site for rehabilitation purposes. Any mixed concrete/bricks will be disposed of through an approved concrete recycling facility (ie Concrush)
Assorted mixed wastes	2m ³	Assorted mixed waste to be disposed of via an approved waste removal contractor to an approved waste management facility.
Asbestos Materials	Yet to be determined – will be determined by hazardous materials survey if asbestos is identified in any part of the building.	Disposal of asbestos to be undertaken by an approved and licensed contractor in accordance with legislative requirements (See Section 4.3)

4.1.2 Processing/Crushing Plant & Associated Equipment, Workshop & Concrete Plant

Although the concrete crushing plant and workshop building will produce the most significant amount of waste, these wastes can be relatively easily sorted for re-use/recycling. Most significantly, steel from buildings and infrastructure is likely to make up the vast proportion of wastes from the site.

Many of the more specialized items (such as crushing equipment) will be stored for spare parts or transferred to other quarry locations for re-use. Some of the more modern equipment may be integrated into the new crushing/sorting facilities.

Relocation of the concrete plant is unlikely to result in any significant wastes, as the plant is to be relocated in its entirety. There may be a small amount of metal/steel infrastructure.

Processing/Crushing Plant & Associated Equipment, Workshop and Concrete Plant		
Waste Type	Volume (approx)	Comments
Iron Roofing and cladding from sheds and buildings.	15m ³	Recycled where possible to building salvage businesses or used on property in the construction of new buildings.
Metal Framing and fixtures	100m ³	Recycled where possible to builders yard and/or metal recyclers. The majority of this steel will be easily recyclable and can be removed and sorted without being contaminated with other materials.
Concrete	100m ³	Crushed and used on the site of the existing quarry for rehabilitation/fill purposes. Where this is not suitable, the concrete will be disposed of via a suitable concrete recycling business (ie Concrush)
Assorted mixed wastes	10m ³	Assorted mixed waste to be disposed of via an approved waste removal contractor to an approved waste management facility. This is expected to be a very small proportion of the overall wastes from the site.

4.2 Stage 3 – Ongoing Quarrying Operations

Ongoing quarry operations within the subject land will not produce any significant wastes. All material that is extracted is suitable for sale to market, as such, there is no material that requires disposal.

All other wastes (ie office staff, machinery wastes, oils etc) are to be managed through the existing facilities located on the quarry site.

4.3 Management of Asbestos Wastes

The management of asbestos waste is dealt with under the Protection of the Environment Operations Amendment (Scheduled Activities and Waste) Regulation 2008.

The handling and storage of asbestos waste at worksites is regulated solely by WorkCover NSW under the current provisions of the Occupational Health and Safety Regulation 2001 (OH&S Regulation).

4.3.1 NSW OHS Regulation 2001

The NSW *OHS Regulation 2001* requires demolition work, including removal of asbestos containing material, to comply with:

-  National Occupational Health and Safety Commission (NOHSC) code of practice and guidance material on asbestos; and
-  Australian Standard 2601 – Demolition of structures.

The Regulation requires a Hazardous Substances Management Plan (HSMP) to be developed by a *competent person* before commencing work.

4.3.2 Asbestos Waste Consultant

Prior to any demolition or works being undertaken on the site, an accredited asbestos consultant will be engaged to conduct a formal asbestos site audit to:

- ☞ determine to the precise location/extent of asbestos in accordance with Australian Standard 4964 – ‘*Method For the Qualitative Identification of Asbestos in Bulk Samples*’.
- ☞ prepare a Hazardous Substances Management Plan (HSMP).

The asbestos waste consultant will be appropriately experienced and accredited with suitable licensing from WorkCover NSW. All works will be undertaken by a suitably qualified consultant.

4.3.3 Removal of Asbestos – General Requirements

Following evaluation of the location/extent of asbestos and preparation of a Hazardous Substances Management Plan by the asbestos waste consultant, the following general requirements will apply to the removal of the asbestos material:

- ☞ Works will be undertaken on a day with suitable meteorological conditions (ie without significant wind);

- ☞ Asbestos materials will be dampened with water to prevent dust. Over-watering to be prevented so as not to allow run-off;
- ☞ Asbestos waste will be removed and separated from other wastes so as not to cause contamination of other materials;
- ☞ Asbestos wastes will be stored in wrapped heavy duty plastic or other suitable material and clearly marked so it can be identified;
- ☞ During demolition, the work area will be secured and waste asbestos secured to prevent unauthorized access;
- ☞ Any receptacle used to store the waste (ie skip bins) will be lined with suitable heavy duty plastic or other such material
- ☞ Waste material to be kept damp (but not wet) and covered at all times;
- ☞ Ensure that no residual wastes remain on the subject land
- ☞ Wastes to be transported to a waste disposal facility that is capable of accepting asbestos wastes and disposed of as directed by the waste management station staff
- ☞ Ensure no residual asbestos remains in vehicles or containers before they leave the landfill.



ATTACHMENT 1

Definition of 'General Solid Waste (non putrescible) from the DECCW Waste Classification Guidelines

The following wastes have been pre-classified as 'general solid waste (non-putrescible)':

- glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal
- paper or cardboard
- household waste from municipal clean-up that does not contain food waste
- waste collected by, or on behalf of, local councils from street sweeping
- grit, sediment, litter and gross pollutants collected in, and removed from, stormwater treatment devices and/or stormwater management systems that has been dewatered so that it does not contain free liquids
- grit and screenings from potable water and water reticulation plants that has been dewatered so that it does not contain free liquids
- garden waste
- wood waste
- waste contaminated with lead (including lead paint waste) from residential premises or educational or child care institutions
- containers, previously containing dangerous goods, from which residues have been removed by washing or vacuuming
- drained oil filters (mechanically crushed), rags and oil-absorbent materials that only contain non-volatile petroleum hydrocarbons and do not contain free liquids
- drained motor oil containers that do not contain free liquids
- non-putrescible vegetative waste from agriculture, silviculture or horticulture
- building cavity dust waste removed from residential premises or educational or child care institutions, being waste that is packaged securely to prevent dust emissions and direct contact
- synthetic fibre waste (from materials such as fibreglass, polyesters and other plastics) being waste that is packaged securely to prevent dust emissions, but excluding asbestos waste
- virgin excavated natural material
- building and demolition waste
- asphalt waste (including asphalt resulting from road construction and waterproofing works)
- biosolids categorised as unrestricted use, or restricted use 1, 2 or 3, in accordance with the criteria set out in the *Biosolids Guidelines* (EPA 2000)
- cured concrete waste from a batch plant
- fully cured and set thermosetting polymers and fibre-reinforcing resins, fully cured and dried residues of resins, glues, paints, coatings and inks
- any mixture of the wastes referred to above.

