



WASTE MANAGEMENT PLAN

Sand Quarry Extension

Lot 10 DP 1090880, Keighley Road, Somersby
(Existing Quarry Located on Lot 33, DP 755246 Reservoir Road, Somersby)

PREPARED FOR: HANSON CONSTRUCTION MATERIALS PTY LTD

SEPTEMBER 2009

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This document has been authorised by _____

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1. SUBJECT LAND

1.1 Site Address

Lot 10 DP 1090880, Keighley Road, Somersby
(Existing Quarry Located on Lot 33, DP 755246
Reservoir Road, Somersby).

1.2 Applicant

Hanson Construction Materials Ltd
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1.3 Buildings and other structures currently on site

There are a range of structures on the site including:

☞ An existing weatherboard/fibro clad and iron roofed dwelling fronting Keighley Avenue with associated

residential curtilage, landscaping and the like;

☞ Four (4) poultry sheds located in the north-western corner of the property, ranging from 90 metres to 180 metres in length;

☞ A number of farm sheds established in conjunction with the agricultural use of the land – currently used for storage of farm equipment, chemicals and other goods;

☞ Two large water tanks located near the farm storage sheds;

☞ A small timber milling area, including saw; and

☞ Existing orchard occupying much of the southern and eastern portions of the subject area.

The location of structures on the land is shown in the survey plan included as **Attachment 2**. An aerial photograph of the subject land is shown in **Figure 1**.



Figure 1: Aerial Photograph of the subject land



2. BRIEF DESCRIPTION OF PROPOSAL

The proposed development involves two primary components:

- 1 A boundary adjustment between Lot 33 DP 755246 Reservoir Road, Somersby (the existing quarry) and the adjoining Lot 10 DP 1090880, Keighley Road, Somersby for the purposes of adding approximately 8 hectares of additional area to the quarry (the subject land); and
- 2 Expansion of the resource extraction operations of the existing quarry into the subject land.

The following details the specific characteristics of the proposal which are relevant to this Waste Management Plan (note, please see Environmental Assessment for more specific detail on the project):

2.1 Boundary Adjustment

- ☞ An addition of 8 hectares to the quarry footprint through boundary adjustment between the two lots;

2.2 Preparation for Extraction

- ☞ Existing improvements will be removed from the subject land (including the poultry sheds, orchards, machinery sheds and associated buildings/infrastructure).
- ☞ Topsoil will be stripped from the site to expose friable sandstone underneath (note that topsoil on the site is very minimal and limited to depths of generally less than 600mm. In the areas around the existing chicken sheds, the land is devoid of topsoil altogether);
- ☞ Access to the new extraction area will be provided from within the existing quarry (ie, access to the new extraction area will not utilise Keighley Road);

- ☞ A 5 metre soil bund will be constructed around the perimeter of the new extraction area. Material for this bunding will be provided from the existing quarry and by utilising topsoil from the new extraction area. Bunding will be vegetated immediately upon construction of the bund to prevent erosion and dust nuisance;

2.3 The Extraction Process

- ☞ Once the site has been cleared and bunding constructed, the extraction process will commence. Given the nature of the resource in the locality (ie friable sandstone), no blasting is required. The extraction process involves 'loosening' the material with the blade of a bull-dozer, and loading into trucks. The trucks will then transport the material to the on-site grading/sorting facilities located which are existing within current quarry footprint. Note that the trucks involved in the extraction process will not exit the site or use any public roads and will transport the resource within the quarry area only.
- ☞ The material will then go through the same sorting and grading process that is undertaken on site, which results primarily in a high quality sand resource for the manufacture of concrete for the construction industry;
- ☞ The resource is stock-piled on the site and then collected via road registered trucks which transport the material to concrete batching plants, construction sites or other areas across the Central Coast, Lower Hunter and Greater Sydney areas.



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
- ☞ Gosford Development Control Plan – Waste Management Controls

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*.

3.2 Classification of Wastes under the Waste Classification Guidelines

3.2.1 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 3 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.

3.2.2 Hazardous Wastes - Asbestos

The Preliminary Contamination Assessment included as part of the Preliminary Environmental Assessment noted that there are potential sources of Asbestos Wastes located on the property (particularly in the lining/construction of the existing poultry sheds).

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*.



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

The NSW OH&S Regulation, 2001 is relevant to the proposed development given the likely 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.

From a review of material on site, it appears that the material located is restricted to **bonded asbestos material**, comprising asbestos sheeting used in the cladding for the poultry sheds. The presence and nature of asbestos material on site will be evaluated by a suitable asbestos consultant prior to any works/demolition commencing (see **Sections 4.4.2 and 4.4.3** of this Waste Management Plan).

3.4 Gosford Development Control Plan – Waste Management Controls

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 Gosford Local Government Area.

Section 104 sets out the aims of the plan.

'The aims of the plan are:

- *to identify Council's expectations and requirements for the management of waste (not including sewage) on individual sites including information required in development applications;*
- *to identify approaches and techniques which promote waste minimisation in Gosford City; and*
- *to promote best practice in waste management and quality environmental outcomes.'*

3.4.1 Waste Management Plans

The development control plan requires that a Waste Management Plan shall be prepared to accompany development applications, provide the following information:

- the type and amount of waste / recyclable material to be generated;
- how waste / recyclable materials will be stored and treated on site;
- how disposal of waste / recyclable materials will take place; and
- how waste management will be accommodated in the design of the building or use.

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 Stage 1 – Demolition of Buildings

4.1.1 Dwelling

The demolition of the dwelling 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 as possible 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 (ie Concrush) for re-use.

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

Dwelling		
Waste Type	Volume (approx)	Comments
Cladding/fibro	4m ³	Recycled where appropriate, if not able to be re-used, this will be disposed of via an approved waste contractor
Timber	2m ³	Recycled where possible to building recycling yard or building salvage businesses
Iron roofing	2m 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 as bath-tub, hot water heater 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.

4.1.2 Poultry Sheds and Machinery Sheds

Although the Poultry Sheds and Machinery Sheds will produce the most significant amount of waste, these wastes can be relatively easily sorted for re-use. Most significantly, concrete from the base of the poultry sheds is likely to make up the vast proportion of wastes from the site.

Note that the poultry sheds are likely to contain asbestos material, as such, any demolition (or preparatory) work must not be undertaken until such times as appropriate assessments are undertaken and works prepared (see **Section 4.4.2 and 4.4.3**)

Poultry Sheds and Machinery Sheds		
Waste Type	Volume (approx)	Comments
Iron Roofing and cladding	15m ³	Recycled where possible to building salvage businesses or used on adjoining property for construction of machinery shed.
Metal Framing and fixtures	3m ³	Recycled where possible to builders yard. Remainder disposed of via suitable waste contractor to approved waste management facility.
Concrete	750m 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	5m 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	Disposal of asbestos to be undertaken by an approved and licensed contractor in accordance with legislative requirements (See Section 3.3)

4.2 Stage 2 – Construction/Preparation Stage

4.2.1 Vegetation, Organic Material & Soil

The vegetation and topsoil from the site can be used extensively for the construction of the proposed earth bund, rehabilitation on the existing quarry site and for other environmental benefits.

All vegetation, logs, grasses and other materials as well as all soils will be utilized for environmental improvements. The exception will be any soils identified as being unsuitable as a result of contamination or other impacts.

Vegetation, Organic Material & Soils		
Waste Type	Volume (approx)	Comments
Trees/logs and vegetation	20m ³	All trees will be mulched or used in log form for the purposes of rehabilitation and erosion control, this will include use for re-vegetation activities for rehabilitation areas within the existing quarry and assisting in establishing vegetation and erosion control measures for the earth bund to be constructed around the proposed extraction area.
Soils	15,000m ³	Topsoil from the site will be stripped and either used immediately for the creation of the earth bund around the extraction area or in rehabilitation works within the existing quarry site. A small amount of topsoil may be stockpiled for future rehabilitation works/processes.
Potentially Contaminated Materials (Soils)	Undetermined at this stage.	Any contaminated soils will be treated as per the specialist contamination report to accompany the Environmental Assessment.



4.3 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 waste, machinery wastes, oils etc) are to be managed through the existing facilities located on the quarry site.

4.4 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).

4.4.1 NSW OHS Regulation 2001

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

- INSITE National Occupational Health and Safety Commission (NOHSC) code of practice and guidance material on asbestos; and
- INSITE 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.

4.4.2 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'*, and
- ☞ 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.

4.4.3 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

Aerial Photograph



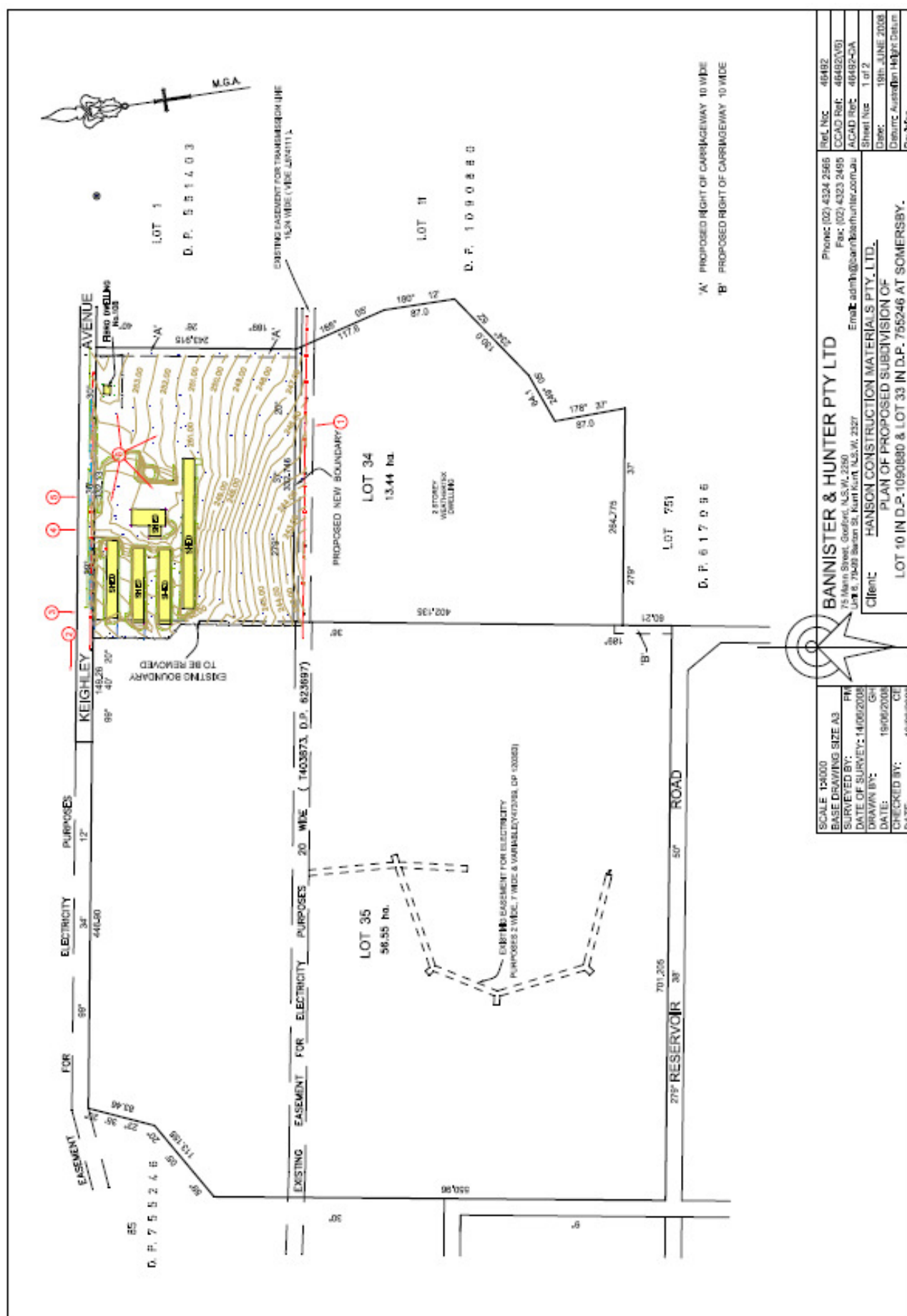
Survey aerial photograph showing existing improvements



ATTACHMENT 2

Survey Plan





ATTACHMENT 3

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)':

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.