

# Summary of submissions received during consultation on the Draft Protocol for Waste Derived Fill

A total of 13 submissions were received during consultation on the Draft Protocol for Waste Derived Fill (WDF). Below is a table representing the responses received relating to each part of the protocol. (Due to the title change, the document is referred to as 'the standard' through out this paper).

## Submissions received on each part of the protocol

Part	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
General	3	1	4
Summary	1	2	3
Introduction	1	2	4
EPA's statutory framework	-	-	-
Key considerations	2	1	4
Wastes and suitability for use as Fill	-	-	3
Approvals and licensing	1	2	6
EPA submissions for reuse proposals	-	-	1

## General

Three submissions commended the EPA for the development of the standard. The majority of submissions sought clarity on the meaning and application of the standard.

The EPA acknowledges that the standard is detailed and legalistic in places however this is to ensure full clarity and ensure the legal issues are accurately addressed. To assist with understanding of the standard, the summary has been expanded to provide a clear overview of the standard and the key issues. A promotional brochure has also been developed to assist with interpretation.

The EPA supports the waste hierarchy and it is integral to the draft Waste to Resources Environment Protection Policy (W2R EPP) and South Australia's Waste Strategy. While the diversion of waste from landfill is supported, it needs to be done in a suitable, sustainable manner.

One submission noted that as the industry divert more materials from landfill, more risk is involved where material will be stockpiled above ground prior to processing. This supports the clear need for this standard and the other waste derived product standards.

The document will form a standard under clause 4 of the draft W2R EPP and the title of the document has been modified to reflect this. The document will be renamed *Standard for the production and use of Waste Derived Fill*.

## Summary

Part	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
Risk-based approach	-	1	3
EPA use of protocol	-	-	1
Disclaimer	1	1	1

Clarification on the rationale behind the risk-based approach has been added to the standard. The approach is based on the risks associated with both the chemicals present within the WDF and the source of the waste. The requirements for WDF are less stringent if it meets waste fill chemical criteria when compared to the requirements if it exceeds waste fill chemical criteria, due to the greater risk of the higher chemical concentrations. The EPA has also put an upper chemical limit above which the EPA requires the waste be either remediated or disposed to a secure and specifically authorised landfill.

Through the development of the standard, the EPA reviewed the suitability of the waste fill chemical criteria as the threshold for low risk use of WDF. The chemical criteria for waste fill as defined under the *Environment Protection Regulations 2009* were drawn from sound sources including ANZECC<sup>1</sup>, NEPM<sup>2</sup> and OCPMP<sup>3</sup>. WDF exceeding these criteria has an inherently higher risk and thus the use of an auditor for assessment of site-specific reuse of this WDF is deemed an appropriate higher level of control. The waste fill chemical criteria are generally consistent with interstate criteria applied to fill, as is the policy approach to use this classification as a low risk threshold for use of fill with a higher level of control applied to more contaminated material.

Submissions received suggested that the origin of the material should not be a factor in determining EPA requirements. However, the source of the waste influences the chemical substances that are present and the physical attributes of the waste. Knowledge of the source assists in determining if any substances in addition to those listed in the waste fill criteria need assessment, while knowledge of the physical attributes of the waste assists in determining the geotechnical suitability of the material for use as fill.

The requirements for WDF again vary slightly depending on the risk associated with the source of the material. For example, soil for reuse that is sourced from a residential property has less stringent requirements than soil from an industrial site (ie has or has had a potentially contaminating activity occurring).

The EPA has taken a policy position to not permit industrial residues for use in sensitive areas. The EPA does not deem this to be appropriate, and believes the community would not consider it acceptable for childcare centres and residential areas to receive and be exposed to WDF-containing industrial residues.

It was suggested that criteria be developed for specific uses however this does not allow for consideration of the complexity of the receiving site. The source and quality of the WDF together initially determine the potential uses to be investigated. Where required, the Auditor Protocol then allows for the site-specific factors to be considered on a risk basis to determine the suitability of the WDF at a particular site. However, the EPA will also consider the circumstance where an industry sector wishes to develop an industry specific code of practice with specific criteria for the source material,

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<sup>1</sup> *Guidelines for the Assessment and Management of Contaminated Sites* (1992) [environmental investigation values unless otherwise stated].

<sup>2</sup> *National Environment Protection (Assessment of Site Contamination) Measure 1999*. The NEPM is currently under review and, if the criteria are amended, the EPA may consider a review of the waste fill criteria.

<sup>3</sup> National Organochlorine Pesticide Management Plan

chemical and physical quality, and beneficial uses and limitations. This process will need to be thoroughly prepared and based on robust and sound science.

Additional information has been added to explain that the standard aims to provide clarity to industry on the EPA's expectations by listing the issues that need to be addressed in proposals for WDF. The standard covers, within the one document, the requirements of the *Environment Protection Act 1993* (EP Act), including clauses relating to site contamination, and the *Land and Business (Sale and Conveyancing) Act 1994*, as they relate to the use of fill and relevant assessments and reports related to land.

The summary has been modified to indicate that the EPA does not endorse or guarantee that the WDF will confer any benefit stated by the producer and a proponent may still be liable if harm arises from the use of the WDF. This is consistent with EPA licences which authorise a company to undertake an activity, and that licensee may still be liable if their activity causes harm to the environment.

The summary was also updated to include information on common areas of confusion including the types of waste suitable for use as WDF and the rationale behind disclosure of WDF use at a site upon sale of that site.

## Part 1 Introduction

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
Role of EPA and the auditor	-	-	2
When a waste becomes a product	-	1	-
Scope	1	1	1
Figure 1	-	-	1
Figure 2	-	-	2
Figure 3	-	-	1

Clarification has been added to the standard to indicate that the EPA, as regulator, is responsible for reviewing and approving WDF proposals irrespective of auditor involvement in the proposal. However, approval will rely on the expert information provided by the auditor and is contingent upon compliance with the Auditor Protocol. The EPA may also advise on any other relevant legal requirements of the EP Act such as if a licence is required. This is separate from the role of the auditor in assessing harm and suitability of land for a particular use.

The EPA's role in determining if a material is a waste or product was questioned however no changes to the standard were made. The EP Act scope covers the regulation of waste. This standard helps industry to understand the processes to recover waste such that, for the purposes of the EP Act, it is considered a product and is no longer subject to regulation under the EP Act.

This is consistent with approaches in other jurisdictions, such as NSW, the directive of the National Waste Policy, and the European Union (EU). NSW requires compliance with resource recovery exemption regulations for a material to no longer be subject to regulation as a waste. For example there are regulatory exemptions that specify chemical criteria, responsibilities and testing regimes for Excavated natural material (waste soil), Recovered fines from C&D waste and Recovered aggregate<sup>4</sup>.

<sup>4</sup> <[www.environment.nsw.gov.au/waste/RRecoveryExemption.htm](http://www.environment.nsw.gov.au/waste/RRecoveryExemption.htm)>.

The EU has an 'end of waste' concept as part of the Waste Framework Directive that specifies:

...a provision by which certain specified waste shall cease to be waste when it has undergone a recovery operation and complies with specific criteria developed in accordance with a number of conditions.

These conditions are:

- a) the substance or object is commonly used for specific purposes;
- b) a market or demand exists for such a substance or object;
- c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and
- d) the use of the substance or object will not lead to overall adverse environmental or human health impacts.

The criteria shall include limit values for pollutants where necessary and shall take into account any possible adverse environmental effects of the substance or object.

To support this, the EU has established Guiding Principles and processes that include the need to address the input material, processes and techniques, product quality and an operational procedure guideline<sup>5</sup>.

The standard now explains that the scope of materials potentially suitable for use as fill must be similar to materials naturally present in the soil profile. It also clarifies that due to their variability and their nature as an industrial by-product, fines and by-products from mixed waste recycling need to be assessed as industrial residues.

In addition, if waste soils are received at a recycling depot, then they must be assessed in the same manner as WDF produced from Construction and Demolition Waste. This ensures that all waste received at a recycling facility is subject to a Recovered Products Plan (RPP).

The RPP is to be specifically developed for each site and needs to specify what waste is received, segregation and sorting of mixed waste, how the waste is processed, product quality control procedures and removal and disposal of inappropriate wastes, eg asbestos.

Clarification on the relationship between road profilings and WDF was sought. No changes were made to the standard however, for clarification; the use of excavated road surface materials (asphalt and bitumen) in new road surface is not considered as WDF and thus does not require assessment under this standard<sup>6</sup>. However any soils or road base materials sourced from below a road surface that are proposed for use as fill, do need to be assessed in accordance with the standard.

Figures 1, 2 and 3 were updated to reflect other changes made within the standard. In addition, in response to submissions:

- Definitions for the broad terms used in Figure 1 are provided in the Glossary.
- All potential producers and users of WDF should read Figure 2 as it outlines the process that all proponents must follow.

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<sup>5</sup> <<http://susproc.jrc.ec.europa.eu/activities/waste/documents/Endofwastecriteriafinal.pdf>>.

<sup>6</sup> The only caveat on this is where there is known or suspected road surface material from before the late 1960s. Today, asphalt mixes are made with bitumen but in the past, coal tar and other tar distillates were in extensive use (often referred to as Tar Macadam Pavements being a basic macadam road with a tar-bound surface). This has left the troublesome legacy of high PAH content in some asphalt pavements. All such materials must be disposal of to an authorised landfill.

- Asbestos is a prohibited waste (as listed in Figure 2) and should be removed from the environment by disposing of to an authorised landfill. The EPA does not endorse any particular level of asbestos as safe for reuse in the environment. However the EPA does recognise that some fibres may present that cannot be removed. In this case, if the proponent believes the asbestos-containing material (ACM) is suitable for reuse rather than disposal, then the WDF needs to be assessed in accordance with the Auditor Protocol for a site specific reuse to ensure that there will be no risk to human health. Where this cannot be assured then the ACM must be disposed to an authorised landfill.
- Soil based material produced from mixed waste recycling [eg Material Recycling Facilities receiving Commercial and Industrial Waste (General)], including secondary materials or industrial residues and by-products, (mentioned in Figure 3), has the potential to be highly variable. As such, more comprehensive testing is required to ensure the material is used appropriately. The process for dealing with residual waste needs to be covered in the RPP.

A mechanism has been added to the standard to allow for the development of industry or waste-specific codes of practice. The code of practice would need to fit under the umbrella of the standard including meeting the principles and being able to provide a specification and a range of specific uses, controls and limitations that are agreed to be implemented. EPA approval requirements for individual proposals within the code of practice would be determined through the development of the standard. The code of practice may then be able to be specifically referenced under the W2R EPP.

Section 1.3 Using this standard, was modified to reflect the changes within the standard.

## Part 2 EPA’s statutory framework

No significant changes were made to this section.

## Part 3 Key considerations

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
Waste hierarchy	1	-	2
Immediate market	1	1	1
Risk-based approach	-	-	2
Prevent environmental harm	1	-	3
Beneficial purposes	1	-	-
No dilution	-	1	1
Consistent regulation	-	-	1

### 3.1 The importance of appropriate support for the waste hierarchy

The relationship between waste soil and site contamination was questioned. No specific changes were made to the standard however site contamination involves assessment and remediation or other management of in situ historic contamination at an existing site. When a soil is excavated for removal as it is not required at the site, then the soil becomes a waste and must be managed accordingly.

The Site Contamination NEPM is designed to determine whether site contamination poses an actual or potential risk to human health and the environment, either on-site or off-site, of sufficient magnitude to warrant remediation appropriate to the current or proposed land use to manage legacy contamination.

The standard is designed to outline the process for determining if a waste is suitable for reuse as WDF. The two scenarios are different and thus the policies and approaches are not synonymous nor directly interchangeable.

This is reflected in the Site Contamination NEPM which states that the specified investigation levels:

are not cleanup or response levels **nor are they desirable soil quality criteria. They are to be used for assessment of existing contamination only** and are intended to prompt an appropriate site-specific assessment when they are exceeded. Inappropriate use of investigation levels as default remediation criteria may result in unnecessary remediation adding to development costs, causing unnecessary disturbance to the site and local environment, and potential waste of valuable land fill space. Similarly, it is an abuse of investigation levels if they are interpreted as condoning contamination to these levels.

### **3.2 The need for an immediate market**

The need for an immediate market was questioned however no changes were made to this requirement. Any new application needs to have investigated likely potential markets to ensure success. The EPA supports the waste hierarchy and diversion of waste from landfill should only occur if it is safe and sustainable to do so. This is consistent with the EU's 'end of waste' concept outlined in the response to Part 1 Introduction. The diversion of waste and production of a WDF with no market would result in speculative stockpiling and avoidance of disposal costs.

The EPA recognises that there may be need to stockpile material for a period of time in preparation for a project, thus has added clarification to the standard to indicate that in this circumstance, appropriate materials balance and flow management needs to be in place. Producers will need to be able to demonstrate responsible and sustainable management of the WDF rather than continuous sourcing of input waste, production of WDF and stockpiling with no likely or known use.

### **3.3 The requirement for a risk-based approach**

It was raised that all sites need to be 'risk characterised' on an individual basis. This is the intent of the Auditor Protocol for WDF exceeding waste fill criteria.

It was requested that the EPA develop clear guidelines on what the EPA would consider 'sound and robust methods' and 'sufficient sampling'. The level of QA/QC, including sampling, required will differ based on the scale, waste type and waste variability as such should be individually developed for each proposal. General guidance is provided with in the standard.

For industrial residues and construction and demolition waste, sampling and assessment QA/QC procedures need to form part of the RPP that is developed with appropriately qualified and experienced persons. There is existing guidance available including Australian Standards, the Victorian EPA and US test methods to assist with the development of testing regimes. The EPA can provide guidance through the process however it is the responsibility of the proponent and the suitably qualified consultant to develop an appropriate sampling and assessment programme as part of the RPP to be approved by the EPA.

### **3.4 Prevention and minimised potential for harm**

It was submitted that prevention of risk should be done on an individual site, not a blanket approach. No changes were made to the document as this is the approach used. The initial assessment needs to be done based on the risk associated with both the chemicals present within the WDF and the source of the waste. This determines the amount of assessment required, including the need for the Auditor Protocol for higher risk materials. The Auditor Protocol requires assessment of the suitability of the WDF on an individual site-specific basis.

Where waste soil meets waste fill criteria and is from a site where a potentially contaminating activity (PCA) has or is occurring, only an auditor can approve this material being reused at a sensitive site. This approach is consistent with the level of auditor endorsement required when a site that has had a PCA is re-zoned to a more sensitive land use.

### 3.5 Demonstration of beneficial purposes

Clarification was added to this section to highlight that demonstration of beneficial purposes, including geotechnical suitability, must occur prior to transport and reuse at the receiving site.

### 3.6 No dilution of waste or chemical substances

Some confusion arose with an error in the draft South Australian Biosolids Guideline for the safe handling and reuse of biosolids which states that dilution is allowed. The EPA allows the mixing of ingredients which each have beneficial properties however combining multiple substances for the purposes of contaminant dilution is not supported. This principle is broadly applied across the world for solid waste management as a best practice approach.

### 3.7 A consistent approach to regulation

No significant changes were made to this section and comments received on the risk based approach have been addressed earlier in this document.

## Part 4 Wastes and suitability for use as fill

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
Asbestos	-	-	3
Prohibited wastes	-	-	1

### 4.1 Asbestos

It was requested that the standard include a percentage for the amount asbestos allowed in WDF. The major risk associated with asbestos is to human health. There is no specified amount of asbestos that is published by health or OH&S authorities as being suitable for exposure. As such the EPA does not believe it is appropriate to set a limit as allowable in WDF. It is a high expectation of the community that they be protected from risks posed by asbestos. Thus the EPA's position is that waste asbestos needs to be removed from the environment to the maximum extent possible and disposed of to secure landfill and prevented from inclusion in fill products.

It is recognised that some Construction and Demolition Waste may contain small amounts of asbestos despite segregation and removal procedures. This material is considered as asbestos containing material (ACM). To avoid this scenario, ACM should be segregated from all other wastes at the source of its generation (e.g. when buildings are demolished). If the ACM is proposed for reuse as WDF the Auditor Protocol applies to ensure an auditor deems it fit for purpose for use at a specific site, prior to the material leaving the production site. However, asbestos needs to be removed to the maximum extent possible.

#### ***Prohibited waste table***

Clarification was added to indicate that hazardous waste cannot be directly disposed to landfill in South Australia. Hazardous waste must first be treated to remove the hazard and ensure that relevant chemical criteria for disposal are not exceeded. There are some hazardous wastes that for which no treatment technology exists that will achieve requisite disposal standards. In these cases the Hazardous Waste may need to be destroyed by incineration (such as occurs with Medical waste in SA) or be sent interstate to appropriate treatment facilities. Interstate transportation of Hazardous Waste can only occur in accordance with the National Environment Protection (Movement of Controlled Waste) Measure.

## Part 5 Approvals and licensing

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
General	-	-	2
Potentially contaminating activities and vendor notification	-	2	1
Waste soils	-	1	2
Wastes or residues from industrial activities	1	-	3
Recycled waste products	-	-	2

Clarification has been added to indicate that testing of WDF and demonstration of its suitability must be done prior to transferring the WDF to the reuse site. The results of the testing need to confirm suitability prior to sending the material off site. This aims to avoid the risk of abandoned stockpiles, avoid unsuitable materials being received at the reuse use, and avoid potential harm. Thus project planning needs to ensure the required assessment time and storage space is accounted for. Insufficient forward planning may result in oversupply of untested material. This material is still considered waste and, irrespective of lack of storage space, cannot be used as WDF until certified.

A summary of the information required to be submitted to the EPA for each type of WDF has been added as well as clarification on the waste fill criteria.

For each type of WDF, the following information has been added:

- additional information on testing for asbestos has been added to the notes on sampling and assessment for each type of WDF
- auditor responsibilities
- a summary of important facts to note
- clarification on the interim arrangements before the W2R EPP becomes operational.

Although no changes were made to the document, proponents should note that fill material should not be abandoned or deposited on land purely for convenience. This is not considered genuine reuse.

### Potentially contaminating activities (PCA) and vendor notification

The need for the acceptance of WDF at an industrial site to be classed as a potentially contaminating activity (PCA) was questioned. No changes were made to the document as the classification of the 'importation of soil or other fill originating from a site at which another potentially contaminating activity has taken place' as a PCA is legislated under the Environment Protection Regulations 2009. The need for a vendor to indicate that a PCA has or is occurring on their site is also a legislative requirement under the Land and Business (Sale and Conveyancing) Act 1994. Due to the range of PCAs, many industrial sites would already have a PCA occurring on the site. Thus, irrespective of importation of WDF, the vendor of an industrial facility would most likely need to indicate that a PCA has or is occurring on their site.

Recording the information on what activities have occurred on the site, as well as if any environmental assessments have been conducted, has two purposes. Firstly, it provides the purchaser with information to which they are entitled regarding the site they are buying. Secondly it can provide historical information on the site if it is ever considered for a change in land use.

It was also noted that operation of a C&D recycling facility would be considered a PCA and that all material received for reuse from that site would need to be flagged on the title of the reuse site. This material is received at the C&D recycling facility, processed, subject to QA/QC and product criteria rather than being used directly from its source. As such it is considered a product and reuse of this material as fill is not considered a PCA. However, if the C&D recycling facility was excavated and the waste soil proposed for reuse as fill, this would be a PCA.

## **5.1 Waste soils**

The application of the less stringent requirements for less than 100 tonnes of waste soil from sites which have or have had a PCA occurring was questioned. The 100 tonnes threshold only applies to a site that has not had a PCA occurring and which is not known or suspected of being contaminated. This is a policy decision to avoid excessive requirements on lower risk material and for non-commercial activities. In contrast, any waste soil from a site which has or has had a PCA occurring, irrespective of volume, has the potential to contain contaminants and thus needs to be subjected to testing.

Clarification has been added to the document to indicate that the more stringent requirements (those for more than 100 tonnes) apply in the following circumstances:

- multiple loads from a single site and reused at a single site, even though each load is less than 100 tonnes
- multiple loads from a single site (total greater than 100 tonnes) and reused at multiple sites, even though each load is less than 100 tonnes
- multiple loads of less than 100 tonnes from various sources being reused at a single site (if total volume received is greater than 100 tonnes).

The 100-tonne threshold is designed to reduce the burden for sampling and testing in the specific circumstance of a once off reuse of soil product by a householder at another single site. It is consistent with Schedule 1 of the EP Act which indicates that handling of less than 100 tonnes of waste purely for reuse does not require a licence. There are some waste types which have a different threshold [refer to activity 3(3) under Schedule 1 of the EP Act for details]. It is expected that commercial operations would apply a higher level of due diligence in ensuring any material used as fill is suitable.

It has been clarified that, irrespective of destination, use of any waste soil from a site where a PCA has or is occurring, is considered a PCA in itself.

## **5.2 Industrial residues**

In response to comments, the term 'secondary materials' has been replaced with the term 'residual waste'. For example, soil based material produced from mixed waste recycling [eg Material Recycling Facilities receiving Commercial and Industrial Waste (General)] is a residual waste. Residual wastes are likely to be of varied composition, thus pose a higher risk and, for the purposes of this document, will be treated as industrial residues. The level of testing will be specified in the RPP and may vary depending on factors such as mechanisms in place to control the sources and prevent mixing with other material once on site, consistency of the inputs and WDF and QA/QC.

It was suggested that the RPP be produced and submitted by the user of WDF rather than the producer. This is not suitable as the purpose of the RPP is for licensees who produce waste, and want to supply it for reuse as a fill product rather than dispose to an authorised landfill, to develop a product QA/QC document for approval by the EPA. The purchaser or user of a WDF should be entitled to know the quality of material being supplied as part of the producer's duty of care to ensure their products are fit for purpose and will not cause harm. That document needs to set out:

- a detailed description of the wastes that are received, produced and recycled at the premises
- the QA/QC processes that will ensure no unsuitable wastes are received and that the WDF produced for use as a WDF will be suitable.

The WDF must be demonstrated as fit for purpose before transferring to the reuse site.

It was suggested that there should be a trigger of chemical contamination above which the producer would need to engage a qualified person. This level already exists in the standard and is the waste fill criteria.

### **5.3 Recycled waste products**

The title of this section has been amended to reflect the source of the waste used to produce the WDF—Construction and Demolition Waste.

The purpose of the RPP is outlined above and should assist the facility to:

- manage the material received at the site (knowing the source will assist with knowing possible contamination)
- determine testing and other QA/QC requirements (level of testing required may vary depending on the waste received at the facility and variability of the WDF product)

It was suggested that the EPA should regulate the inputs to a licensed facility thus giving it greater freedom with recycled products. The EPA will use the Recovered Product Plan and licences to regulate the material received at a facility. However, the EPA also has a role of protecting the environment thus also has a role in ensuring that waste derived fill leaving the site is used in an appropriate manner.

## **Part 6 EPA submissions for reuse proposals**

The application of the criteria for intermediate soil and level 1 waste has been clarified to indicate these are maximum criteria that EPA has set for consideration by the auditor and the auditor must determine the precise criteria for the specific site as well as any requisite physical criteria that deems the material fit for the specific site purpose.

A summary of the information required to be submitted to the EPA for each type of WDF and the purpose of the Recovered Products Plan have been added. The minimum information to be submitted has been modified to more clearly describe the requirements.

A flowchart outlining the process and clarification on timing of the audit statement have been added to clarify the Auditor Protocol.

Clarification has been added to explain the intent of materials for reuse in relation to contaminants. WDF needs to be similar to materials naturally present in the soil profile. Inclusions must only be there after processing to remove such materials to the maximum extent practicable has occurred. Any minor amounts of such wastes that may remain within the WDF must be assessed to determine whether they will cause harm and must only be present to a negligible extent. The auditor must take account of the effect of any such inclusions in their assessment of suitability. A comment was received suggesting whether specified limits should be placed on such inclusions. The EPA intends to look to interstate guidance for maximum percentage inclusions of specific foreign materials<sup>7</sup>. These percentages would be maximum limits to account for the potential for the unavoidable presence of inclusions to a trivial extent and not targets for adding materials to WDF to meet such limits.

An auditor must not be assessing and endorsing a reuse site that requires similar controls to a landfill due to the nature of the inclusions. If the material amounts to waste, then it require disposal to an authorised facility.

## **Glossary**

Definitions have been amended to reflect the EPA publication, *Waste Definitions*.

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<sup>7</sup> For example NSW Resource Recovery Exemptions for Recovered Aggregate, Recovered Fines from C&D Processing and Excavated Natural Material <[www.environment.nsw.gov.au/waste/RRRecoveryExemptions.htm](http://www.environment.nsw.gov.au/waste/RRRecoveryExemptions.htm)>.

## **Appendices 1 and 2**

The criteria in Appendices 1 and 2 were queried. Information on the derivation and application of these criteria can be found in the *Guidelines for the assessment, classification and disposal of solid waste* and its *Supporting document*, and values have been amended inline with that document accordingly.

## **Response to other comments**

The EPA is well placed to administer this standard and the others developed under the Waste Reform Project. The EPA will implement the standard on a priority and risk basis in a practical manner. Illegal operators will be managed through the Cross Agency Management Protocol. The CAMP seeks to establish principles and objectives which encourage a shared approach to the management of unauthorised waste activities using the relevant agency, legislation and associated compliance and enforcement provisions available. The EPA takes the lead on unauthorised waste activities on private land and provides advice and assistance to councils as required who are leading investigations. If illegal dumping of waste on public land has the potential to cause material or serious environmental harm then the EPA will become the lead authority in accordance with the CAMP.

It was suggested that the risk of using fill in the environment is comparable to disposal to landfill, as not all landfills are lined. However, authorised landfills are required to meet published liner standards, leachate controls and groundwater monitoring programs and all landfills in SA must be compliant, or have approved plans for compliance, with these standards by June 2010, or must cease operation. All major metropolitan landfills and many regional landfills already have such controls in place and the EPA uses conditions of licence to control the type of waste permitted to be accepted at a landfill. Only certain landfills are allowed to accept waste soil exceeding Intermediate Soil Criteria or waste exceeding Level 1 Waste criteria.

The risk associated with the use of fill must not be such that the reuse site requires ongoing monitoring and management (ie like those required at a landfill). Thus determining if material is suitable for use as WDF needs to be considered on a case by case basis, and if the risks are too high, disposal to an authorised landfill is required.

The EPA has been involved in a number of projects and activities in and along the River Murray which involve Potential and Actual Acid Sulfate Soils (PASS and AASS). This involvement ranges from the active management and treatment of exposed lake bed soils and water courses, to direction of dredging activities and treatment options prior to disturbance and disposal of ASS sediment. Care has been taken to consult with representatives from the Department of Health before issuing advice and carrying out programs. The EPA will continue to work with other government departments to protect the lakes as best as possible in these conditions.