



## Consultation summary

*Guideline: Submitting an application for the use of waste-derived materials (case-by-case determination)*

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## Background

On 30 April 2015, the Department of Environment Regulation (DER) released the draft *Guideline: Submitting an application for the use of a waste-derived material (case-by-case determination)*. Comments were invited on any aspect of the draft guideline in addition to questions on issues of particular interest to DER.

Consultation closed on 27 May 2015. This document summarises the submissions, key issues raised, and responses to these issues.

## Summary of consultation submissions

Fourteen submissions were received in relation to the draft guideline. Key issues raised in the submissions were:

- a need for clarification of DER's assessment process;
- the cost to the applicant of developing an application and its potential impact on business and markets for waste-derived materials (WDMs);
- clarification of the relationship between the guideline, DER's regulatory processes, and codes of practice or other standards;
- clarification that the WDM must replace a raw material or fossil fuel;
- a suggestion to include alternate application pathways for low risk materials in the application process; and
- clarification of the requirement for detailed risk assessments to undergo independent review by an accredited contaminated sites auditor.

## Summary of responses to submissions

The final *Guideline: Submitting an application for the use of waste-derived materials* includes a number of amendments that address or clarify key issues raised in the consultation:

- Procedures for assessing and making determinations will be developed separately noting that this is a new process and adjustments will be made based on experience. Contact details for queries and submission of applications have been added.
- Following public consultation, DER will generally prepare and publish a material guideline for an approved WDM where a case-by-case application has been approved.
- The extent of information required for an application is based on the potential risk to human health and the environment and the need for controls on the WDM. It is therefore reasonable that where detailed information is necessary to support the use of the WDM, the cost of the application is borne by the business.
- Premises that produce WDMs may require a licence under Part V Division 3 of the *Environmental Protection Act 1986* (EP Act). If a prescribed premises that produces WDMs is already licensed under the EP Act, applicants need not submit an application through this process unless they wish to have the WDM assessed and considered by DER not to be waste.

- Applicants may draw on existing, recognised codes of practice, standards or specifications and provide relevant information to support an application. Codes of practice or standards not developed or adopted by DER cannot be used as a substitute for DER's application requirements.
- In line with the *Guidance statement: Regulating the use of waste-derived materials*, WDMs considered under the end-of-waste framework must be used to replace or reduce the demand for a raw material (for example sand, clay, hard rock, limestone, gravel, and other natural materials) or fossil fuel (for example gas, petrol, diesel, kerosene).
- The guideline is designed to ensure that WDMs do not cause an unacceptable risk to human health or the environment. WDMs, including by-products of normal day-to-day commercial and industrial activities, may contain a variety of contaminants and an application is required to demonstrate that the potential risks have been considered and addressed. Where an applicant believes a particular WDM is inert and may be considered low risk, their application should provide evidence to support this.
- The definition of the independent reviewers includes auditors accredited under any scheme approved by DER which provides appropriate flexibility.

## Consultation submissions

The consultation paper specifically sought comments in relation to four questions, namely:

1. Are there any parts of the guideline where the requirements are not clear?
2. Are the application requirements sufficient to allow applicants to demonstrate that a WDM does not pose an unacceptable risk to human (or public) health and the environment?
3. DER has introduced the concept of 'comparator' to streamline risk assessment for WDMs that are being used to replace a raw material in an equivalent use, where the WDM has comparable characteristics to the raw material. Comments are sought on the appropriateness of this approach.
4. The draft guideline outlines the general application process and information requirements for the use of WDMs. Noting that additional requirements for manufactured fill are currently being prepared, for what types of WDMs should additional guidelines be considered?

Fourteen submissions were received as listed in Table 1.

**Table 1: Consultation submissions received**

Organisation
Alcoa
City of Busselton
ChemCentre
Douglas Partners Pty Ltd
Eclipse
Landcorp
Lomwest Pty Ltd
Peel-Harvey Catchment Council
Phoenix Energy Australia Pty Ltd
Tronox Management Pty Ltd
Urban Development Institute of Australia (WA)
Waste Management Association of Australia (WA)
Wesfarmers Chemicals, Energy, Fertilisers
Western Australian Local Government Association

## Are there any parts of the guideline where the requirements are not clear?

### Summary of submissions

The key issues requiring clarity related to the application, assessment and determination of applications, including:

- who to contact in DER for application process information and queries;
- how applications would be prioritised;
- assessment timeframes and application fees;
- whether an appeal process would apply;
- if public consultation is undertaken on applications; and
- what determinations would consist of, and whether they would be published.

Regarding the requirement that the WDM replace a raw material, some respondents observed that:

- the limitation to raw materials will preclude the use of some WDMs, such as waste-derived fuel, and that raw materials should be better defined; and
- the WDM should be able to supplement as well as replace a raw material.

### Response to submissions

The final guideline clarifies that DER's Contaminated Sites has primary responsibility for the assessment and determination of applications.

DER will determine the priority for applications-based considerations, including the capacity of the WDM to meet the targets and objectives of the Western Australian Waste Strategy: *Creating the right environment* and the provision of appropriate supporting documentation with the application.

Procedures for assessing and making determinations will be developed separately noting that this is a new process and adjustments will be made based on experience. Consultation inputs will further inform the development of these procedures. As this is an administrative process, there is no application fee nor are there any appeals. However, this will be reviewed in the context of any regulatory reform.

DER will generally prepare and publish a material guideline for an approved WDM following public consultation.

The final guideline clarifies that all WDMs considered under the end-of-waste framework must be used to replace or reduce the demand for a raw material (for example sand, clay, hard rock, limestone, gravel, and other natural materials) or fossil fuel. This is consistent with the *Guidance statement: Regulating the use of waste-derived materials* and addresses the issues raised in submissions.

# Are the application requirements sufficient to allow applicants to demonstrate that a WDM does not pose an unacceptable risk to human health and the environment?

## Summary of submissions

Some respondents considered that the guideline assumes that all WDMs pose a risk to human health and the environment and suggested that alternative assessment pathways be provided for low risk materials.

In relation to the requirement to use Leaching Environmental Assessment Framework (LEAF) testing for leaching testing, respondents commented that:

- many Perth laboratories are not yet set up or National Association of Testing Authorities (NATA) accredited for LEAF testing;
- one Perth laboratory is in the process of adopting LEAF testing and recommended including all four LEAF test methods—1313, 1314, 1315 and 1316;
- raw leach data can be used as an initial screen to determine elements and modeling is required to determine release over time and compare to guidelines; and
- the wide range of pH testing required for LEAF is not generally applicable to the Swan Coastal Plain.

One respondent added that further guidance on selecting the appropriate receptor and environmental criteria for risk assessment may be required by some applicants. Another noted that the guideline includes an example of rural assessment levels, but not urban assessment levels.

A number of respondents referred to the requirement for detailed risk assessments to be reviewed by an accredited independent auditor, and noted that:

- contaminated sites auditors may not have the required experience to audit all types of WDMs;
- the cost of engaging an auditor may impact business and markets for WDMs;
- the requirement for an accredited contaminated sites auditor was restrictive and considered that the requirement should be broadened to include experts in waste and WDMs or risk assessment; and
- it was not clear how the auditor's report would be used by DER in making a determination.

Respondents sought clarity on the requirement to seek advice or prior written approval from relevant government agencies, including which agencies should be consulted on a case-by-case basis and the development of a consistent and aligned interagency review process.

Respondents raised the following technical issues on the application requirements set out in Section 4:

- Quantitative limits, particularly at the smaller scale, to determine whether an application is necessary should be provided.



- The role and purpose of the criteria contained in the National Environment Protection (Assessment of Contaminated Sites) Measure and *Contaminated Sites Act 2003* should be clarified.
- Best practice materials hazard assessment and deconstruction techniques should be considered in the guideline.
- Non-waste inputs, as well as waste inputs, should be characterised when materials are blended.
- The frequency of audits should be clarified and an audit template considered.

## Response to submissions

The guideline combines features from other jurisdictions and applies them to the Western Australian context, considering lessons learned through implementation of the end-of-waste project to date, local environmental conditions, and DER's resource capacity.

The guideline's application requirements were adapted from the New South Wales application process for resource recovery orders and exemptions. The risk-based approach to streaming applications and the review of higher risk applications by an independent accredited reviewer were adapted from the South Australian Waste to Resources Environmental Protection Policy. The use of a raw material comparator as an alternate risk assessment pathway was adapted from the United Kingdom Environment Agency's end-of-waste program.

The information requirements are structured to account for the potential range of chemical, physical and biological contaminants that may be present in WDMs. The information is intended to assist DER's determination of when the waste is no longer waste, and support the use of the WDM so that it does not pose an unacceptable risk to human health or the environment.

Where a WDM is replacing or reducing demand for a raw material (for example sand, clay, hard rock, limestone, gravel, and other natural materials), the guideline provides for a less rigorous risk assessment using that natural raw material as the comparator.

### LEAF testing and detail risk assessment

It is DER's intention to adopt the United States Environmental Protection Agency's (USEPA) Leaching Environment Assessment Framework. On 3 July 2015, the draft *DER Environmental Standard – Assessing leachates from waste-derived materials* and background paper were released for a period of public consultation closing on 3 August 2015.

The draft environmental standard identifies and outlines the four leachate testing methods—1313, 1314, 1315 and 1316—for WDMs when they are proposed to be applied to land or used as soil amendment agents.

DER acknowledges that a transition period may be necessary while the capacity of WA laboratories is developing and this will be clarified through the consultation on the draft environmental standard.

Raw leach data should be seen as a trigger in the risk assessment process, and applicants should undertake modelling as required for their WDM.

Relevant assessment levels will apply to all applications that require a detailed risk assessment unless the applicant clearly demonstrates that the use or application of

the WDM poses no significant risk to the receptor. For WDMs that follow the comparator risk assessment path, the leachate quality of the WDM is compared to the leachate quality of the raw material.

For WDMs that require leach testing, the LEAF testing method should be used, which involves a stepped leaching process across a range of pH values. An applicant may constrain the proposed use of the WDM as a means of managing risks to human health or the environment. For example, if a risk were identified at a particular pH range, and the applicant proposed to restrict the use of the WDM to locations where the local pH of soil or groundwater was outside the risk range, DER would consider this in the assessment of the application.

With regard to the appropriate assessment levels in rural and urban areas, the final guideline provides (Appendix C) that where WDMs are used in urban areas, non-potable groundwater quality guidelines may be appropriate. In rural areas, the appropriate assessment levels may be for potable water use (Australian Drinking Water Guidelines), stock drinking water and/or irrigation water quality. Further information is available in DER's [Assessment and management of contaminated sites](#) and the [Australian and New Zealand Guidelines for Fresh and Marine Water Quality \(2000\)](#).

#### Review by independent accredited reviewer

DER recognises the importance of independent accredited auditors and their specialist teams as having the particular technical expertise to review an application for any WDM. The final guideline provides that independent reviewers include auditors accredited under any scheme approved by DER which provides appropriate flexibility.

The review by independent accredited auditors will clarify for applicants and DER:

- the robustness of the application and whether good practice has been used;
- that all potential risks relating to the WDM and its proposed use(s) has been identified and mitigated; and
- whether or not the WDM and its proposed use(s) poses an unacceptable risk to human health or the environment.

#### Other agency approvals

Where appropriate and depending on the type of waste involved, applicants should seek advice or prior written approval from other relevant government agencies to ensure that the WDM does not pose an unacceptable risk to human health.

DER has previously consulted with the Department of Health, the Radiological Council and the Department of Water on the implementation of the end-of-waste framework as these agencies potentially have relevant requirements associated with the use of WDMs. The final guideline lists the contacts for these departments and their scope of input.

#### Technical issues on application requirements

In determining whether an application is necessary, applicants should refer to section 3.1 of the guideline. Quantitative limits are not one of the factors that determine whether an application is necessary.

Section 4 of the guideline provides the following relevant guidance on the NEPM:

The investigation and screening levels in the NEPM were not developed as criteria for determining the suitability of a WDM to replace or reduce the demand for a raw material or fossil fuel. Increasing concentrations of chemical substances at a site up to the investigation and screening levels set out in the NEPM by the application or use of a WDM is therefore not acceptable.

When including general information on waste inputs (Section 4.1), applicants should describe any practices that have been adopted, including materials hazard assessment and deconstruction techniques.

The guideline clarifies that the final WDM is required to meet the specification and therefore:

- waste inputs to the WDM manufacturing process do not need to be validated as meeting the specification; and
- non-waste inputs to blended products are not required to be characterised.

The final guideline requires that applicants propose an audit schedule and an audit report template based on an appropriate standard.

## The comparator risk assessment approach

### Summary of submissions

The draft guideline introduced the concept of a 'comparator' to streamline risk assessment for WDMs that are being used to replace a raw material in an equivalent use, where the WDM has comparable characteristics to the raw material. Comments were sought on the appropriateness of this approach.

Five of the seven submissions that addressed the comparator risk assessment approach were supportive, observing that it provides a flexible and streamlined approach and could negate the need for a detailed risk assessment.

Two submissions observed that the comparator process was onerous for inert materials, such as road base, when locally sourced materials such as limestone and gravel are not subject to the same scrutiny.

Respondents suggested that:

- some WDMs would not be covered by a single raw material comparator, but single elements of several raw materials could provide a comparison;
- assessment be based on leachability and not total composition; and
- the requirement that WDM leachates meet the appropriate assessment levels and be comparable to the raw material comparator should be clarified.

### **Response to submissions**

Both the comparator and the detailed risk assessment pathways provide a mechanism to determine whether a WDM is inert or its leachate (or other relevant qualities) poses an unacceptable risk to human health or the environment. Where an applicant believes a particular WDM is inert, evidence for this should be provided in the application.

The comparator pathway has been included as an alternative to undertaking a detailed risk assessment for WDMs that replace or reduce the demand for a raw material in an equivalent use. This comparator pathway is only suitable to WDMs that replace a single raw material comparator.

For WDMs that follow the comparator risk assessment path, the leaching test results for the WDM are compared to the leaching test results for the raw material, and not to assessment levels.

## **For what types of WDM should additional application guidance be considered?**

### **Summary of submissions**

Respondents were asked to comment on for what other types of WDMs additional application guidance should be considered, noting that additional requirements for manufactured fill are being developed as an addendum to this general guideline.

Two respondents suggested WDMs that could be considered as addendums to the guideline were:

- Soil amendments;
- Composts with mineral additives;
- Road construction materials; and
- Waste-derived fuels.

### **Response to submissions**

The priority for development of material guidelines was set out in the consultation summary report for the *Guidance statement: Regulating the use of waste-derived materials* released in November 2014. The priority streams identified at the time were fill materials, soil products and construction products.

Since then, the *Material Guideline: Construction products* was released in January 2015, which provides the standard for recycled road base and drainage rock in road construction. Waste-derived road construction products that do not meet the requirements of the *Material Guideline: Construction products* may use the application process set out in this guideline.

The *Material Guideline: Clean fill*, released in January 2015, provides the standard for the generation of clean fill from waste. Fill materials that do not meet the requirements of the *Material Guideline: Clean fill* may use the application process set out in this guideline in conjunction with the draft addendum on manufactured fill, which was released for a period of public consultation on 30 June 2015.

In relation to soil amendments, Alcoa and Iluka are currently progressing the development of application information to use specific WDMs as soil amendments for determination in consultation with DER. This consultation has informed the development of the application information requirements in this guideline.

The guideline outlines an application process that is new and DER anticipates the outcome of applications made through this guideline will inform improvements to the application process, as well as the development of any additional application information requirements for specific WDMs.

The final guideline provides that premises that produce WDMs may require a licence under Part V Division 3 of the EP Act. This would include sites that manufacture compost and blend soil as they are regulated as prescribed premises under the *Environmental Protection Regulations 1987*.

## General comments

### Summary of submissions

Some respondents noted that the application information requirements had the potential to create a barrier to developing WDMs for use and were expensive. Respondents sought clarification that the outcome of the process was consistent with the Western Australian Government's aims for diversion of waste from landfill.

Five respondents requested clarity on the relationship between the guideline, the EP Act and subsidiary legislation, and standards or codes of practice including:

- requirements for WDMs produced on sites that are regulated under Part V Division 3 of the EP Act;
- information on how the guideline would be formalised in regulation, and if a regulatory impact study has been undertaken;
- the potential for amendments to the definition of waste under the EP Act and the *Waste Avoidance and Resource Recovery Act 2007*;
- guidance on the requirements for applicants that are acquiring approvals under the EP Act but have not yet produced WDMs that can be tested;
- guidance on the regulation of field trials and other product testing;
- the effect of updates or amendments to relevant legislation, the guideline, NEPM or associated guidelines on WDMs that DER has determined as no longer waste;
- applicant's responsibilities in terms of the requirements for quality assurance and control processes;
- the producer and end user responsibilities for WDMs;
- the requirement that relevant approvals under the *Planning and Development Act 2005* be obtained prior to seeking a determination that a WDM is no longer waste; and
- if an application is still required if a WDM meets national codes of practice or other product requirements, and if the requirements of Section 4.1 *Characteristics of the WDM* can be aligned with the format of a material safety data sheet.

## Response to submissions

The Western Australian Waste Strategy *Creating the Right Environment*, published in March 2012, sets targets for the diversion of municipal waste, construction and demolition waste, and commercial and industrial waste from landfill by 2015 and 2020.

The end-of-waste framework supports the targets set out in the Waste Strategy by recognising that uncertainty about when waste ceases to be waste can be a barrier to the development of markets for waste-derived materials. The end-of-waste framework consists of the *Guidance statement: Regulating the use of waste-derived materials*, associated material guidelines (clean fill and construction products) and the *Guideline: Submitting an application for the use of waste-derived materials (case-by-case determination)*. The implementation of the end-of-waste framework will inform the development of a regulatory framework and the requirements for regulatory impact assessment.

The final guideline clarifies the relationship between the guideline and Part V Division 3 of the EP Act and provides that:

Premises that produce WDMs may require a licence under Part V Division 3 of the EP Act. If a prescribed premises that produces WDMs is already licensed under the EP Act, applicants need not submit an application through this process unless they wish to have the WDM assessed and considered by DER not to be waste.

The definition of waste under the EP Act and *Waste Avoidance and Resource Recovery Act 2007* is intended to be broad to capture the many types of waste. The end-of-waste framework is intended to provide clarity as to when DER would consider waste ceases to be waste for the purposes of these Acts. DER is considering the development of a regulatory framework to support this approach.

DER will develop material guidelines using information provided in applications for the determination as to whether the WDM is no longer waste. The required information comprises key considerations for the production and use of WDMs which cannot be substituted by a desktop study.

Applicants should contact DER to ensure they have the required approvals before implementing WDM field trials or testing associated with the development of an application.

Applicants are responsible for ensuring that they consider updates or amendments to the guideline and its addendums, or material guidelines, or any other regulations or legislation that may affect an existing determination that a WDM has ceased to be waste.

The requirements in section 4.1.3 for quality assurance and control procedures are intended to allow the applicant to demonstrate that the final WDM meets the proposed specification and does not pose an unacceptable risk to human health or the environment. These should also clearly identify the point at which the applicant considers that the WDM ceases to be waste and waste management controls are no longer required.

DER's determination may include restrictions on the end use of WDMs where relevant, for example that a WDM may not be used in close proximity to a wetland. The guideline provides that it is the end user's responsibility to ensure that the use of

WDMs is technically suitable and otherwise fit for their purpose and that they do not cause environmental harm, pollution, unreasonable emissions or unauthorised discharges contrary to the EP Act or other legislation related to WDMs.

The final guideline clarifies that in regard to approvals, under the *Planning and Development Act 2005*:

If a WDM is proposed to be used to facilitate development, all relevant approvals, including approval under the *Planning and Development Act 2005*, must have been granted before DER would approve a WDM application.

Applicants may draw on existing, recognised codes of practice, standards or specification and provide relevant information to support an application. Codes of practice or standards not developed or adopted by DER cannot be used as a substitute for DER's application requirements

The reference for a material safety data sheet in the guideline is included so that applicants can provide the occupational health and safety requirements that may be necessary for some WDMs.