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Earthcare Recycling (ECR) Response to Issues paper: Waste not, want not: valuing waste as a resource

Introduction

Earthcare Recycling (ECR) is pleased to provide this response to DWER addressing issues raised in the Issues paper: Waste not, want not: valuing waste as a resource.

We acknowledge the commitment of this Government to creating a sustainable, low-waste, circular economy and the significant work completed to-date specifically with regards to amendments to the EP Regulations for clean fill and uncontaminated fill and the definitions and threshold levels of waste and waste derived products.

Notwithstanding these legislative reforms, there remains a critical need to resolve existing policy and regulatory issues that are impeding the growth for the application of waste-derived materials in the development sector.

A more fit-for-purpose nuanced response is required to address these concerns and support the new business model of product development, such as separation-at-source recycling collecting and processing excess materials exclusively from new home construction.

The responses to this Issues Paper will hopefully assist in this reform process.

Executive Summary:

Business Licenses:

- Establish fit-for-purpose licencing (and testing regimes) for the business, based on the specific business model and source derivation of materials.
- This relates specifically to the ERC model of collecting new, clean materials exclusively from new home construction and within new subdivision developments.
- Legislate exemptions for “approved suppliers” based on the specific business model and source derivation of materials – consistent with NSW and Victorian legislations.

Testing requirements of waste-derived materials is problematic and onerous.

- Notwithstanding clean-fill amendments, testing seems to assume all materials may have pollutants regardless of the source derivation.
- A more bespoke and nuanced regulatory framework is required to ensure fit-for-purpose for reuse applications.

Positive procurement:

- Concurrent with developing a legislative and regulatory framework for 'waste'-derived materials, government, both state and local, needs to help and create demand for new recycled products to support new business models and to achieve Waste Strategy targets.

Terminology needs to reflect new recycled products:

- The term 'waste' is redundant and needs to be re-defined as a resource within a closed loop system.

Separate Construction from Demolition:

- The grouping of construction with demolition does not reflect that there is a clear distinction in material derived during the new build construction process, and materials derived from demolition. This also may assist with issues and costs around asbestos testing, which is much more onerous on demolition sourced material.
- Construction materials can be defined as newly manufactured materials that are clean and comply with Australian Standards.

Waste derived materials is a misnomer:

- The ECR model collects only newly manufactured, clean materials which are excess to the build requirements and which require minimal sorting and processing to be fit and ready for reuse and re-application.

About ECR

This information is provided to give a clear context and the specific issues faced by ECR.

ECR has a unique separation-at-source recycling system which utilises a multiple skip-bin system to collect excess 'waste'¹ materials exclusively from new home construction and predominantly within new subdivision developments.

The ECR Business Process Model is characterised as separation at source, based on the use of multiple bins to collect excess materials from each of main building activities throughout the construction lifecycle, such as sand, bricks and concrete rubble, fibre cement, gyprock, timber, metal, plastic, cardboard, paper.

ECR works in on new land development and new building construction housing sites that require multiple servicing (up to 10 times per build, as distinct from the conventional large volume mixed bin collection) and processing in multiple yards located throughout Perth's large Metropolitan area (130km x 50km wide – 6,500km²). Throughout each stage of building, ECR collects and removes excess material resources, thereby ensuring a cleaner product for reuse and recycling. ERC services greater than 1,500 construction sites annually, representing 15% of the Perth market. There is some additional processing in the yards to screen and remove foreign materials that are put into the wrong bines.

The separation at source model achieve a greater than 95% recycling rate, meaning less than 5% goes to landfill.

The goal of ECR is to achieve 100% reuse and recycling of new building excess materials

Main material components are sand, bricks and concrete rubble. In 2017-18, ECR collected over 125,000 tonnes of material, including:

- 80,000 tonnes of sand
- 40,000 tonnes of brick and concrete
- 3,000 tonnes in timber
- 1,000 tonnes in metal
- 1,000 tonnes in plastics
- 3,000, tonnes plasterboard and fibre cement
- 250 tonnes of cardboard

The overall volume of sand increased since 2015 from 20,000 tonnes to over 80,000 tonnes annually in 2018 and is still growing.

Crushed material (bricks and concrete) suitable for reuse is currently 40,000 tonnes a year and growing.

Clean sand and crushed aggregates for fill and building applications is a limited resource, with projections that Perth will run out within 10 years. Other sources of clean-fill materials are needed, which can include recycled 'manufactured sand' which is certificated as a clean-fill replacement.

Whilst these are resources of potential high value, due to commercial and regulatory factors, there are major costs imposts.

ECR is contributing significant funds from its operations budget to undertake necessary research and development required to comply with regulatory requirement and commercialise these and other products.

ECR is committed to recycling 100% of all collected material in marketable form – i.e. materials of a quality that is clear of contaminants and packaged for easy of transportation.

Response

Reuse of waste-derived materials

Following the Eclipse case, DWER amended the Environmental Protection Regulations 1987 and the Landfill Classification and Waste Definitions to provide for the use of clean fill and uncontaminated fill without the requirement to hold a licence or pay the waste levy.

Many of Perth's large developers, and their consultant engineers are taking a highly risk-averse view to the use of recycled materials, specifically recycled sand and crushed aggregate as clean fill.

Even when the recycled materials, which have been screened and tested, are proposed to be used below 3 metres of fill, they are still worried about possible litigation.

Business Licenses

ECR is one of the businesses referred to in the Issues Paper as

“the department receives occasional requests to ‘approve’ the use of waste-derived materials in certain circumstances.”

The ECR business viability is constantly challenged due to the acknowledge uncertainty – as stated:

“...the legislation does not allow the department to approve such requests, even if the use is beneficial and has very low risk to the environment and human health.”

The ERC products derived directly from new builds and new development sites, specifically sand and crushed aggregates, could be classified as a 'beneficial use with a very low risk to the environment and human health.'

These products are essentially low risk bespoke waste-derived materials that require fit-for-purpose assessment.

ERC is looking to establish clarity and certainty with regard to:

- Establishing fit-for -purpose licencing (and testing regimes) for the business based on the source derivation of materials.
 - a. This relates specifically to the ERC model of collecting materials exclusively from new home construction and predominantly within new subdivision developments.
- Classification of sand and crushed masonry products for reuse within land development areas, and the parameters regarding testing and approvals of these materials.

Testing:

Testing requirements of waste-derived materials is problematic and onerous.

ECR collects only newly manufactured, clean materials from new building and which are excess to the build requirements and which require minimal sorting and processing to be fit and ready for reuse and re-application.

Even after testing some developers are asking for further testing for additional processed sand that will likely be placed some metres below the final ground level?

We have provided them the DWER Fact Sheet, and advised them (as per the classification of clean fill and uncontaminated fill) that if the source material does not come from a contaminated site – i.e. clean fill sand from site scrapes from the same new development area - no test is required.

Even so they are still not comfortable using these materials.

Due to this issue, since late 2018, ECR have lost significant recycled sand supply contracts that have had major financial impact affecting business viability.

Conclusions:

- The limitations of the current legislative framework do not provide for a comprehensive framework to encourage reuse of waste-derived materials – or more specifically - construction materials are newly manufactured, are clean and comply with Australian Standards, and require minimal sorting and process to be fit and ready for reuse and re-application.
 - A more bespoke and nuanced regulatory framework is required to ensure fit-for-purpose for reuse applications
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Temporary licences for crushing

The EP Act currently requires ECR to licence its yards for the receipt and processing of C&D Inert waste materials.

There are no temporary licences for crushing, and even though the noise and dust for demolition generally falls below the EPA levels for construction noise and emissions, crushing is assessed under a much more stringent noise and dust regime for the EP Act.

The EP Act requirements for civil works and construction are less-onerous for noise and dust than 'waste' processing activities (crushing and screening), however general crushing and screening activities do not necessarily create any more noise or dust. Both these activities are often undertaken as part of the civil works to manage existing materials and there is no concerns regarding noise and dust.

A number of ERC compounds have been exclusively located within land designated as developable through the Metropolitan Region Scheme and zoned for Local Structure Planning and Subdivision approval. The location of these compounds allows for a closed loop system to operate with far less emission and transport as the material collected from building sites is then ideally processed and used by the developer in the civil and landscape construction. Benefits include, reducing the use of virgin materials, less emissions – the ECR model generates .4 of tonne reduction on GHG, reduced congestions and transport.

As ECR operations operate only in new housing areas and therefore are temporary, the company essential form part of civil and construction works process for site preparation and development.

ECR recognises its obligation to comply with EP regulation to 'prevent, reduce and control emissions and discharges to the environment and to the monitoring and reporting of them.'

Given ERC operations are located on development approved sites and fall within the civil works categorisation of forward works, clarity is sort on legal requirements for licensing of each of the individual compound for the re-processing of inert clean fill building materials.

A final issue around the matter of Temporary Licences is in the redevelopment of Brown Field sites. ECR was involved the LandCorp Hamilton Hill redevelopment and advised LandCorp on the opportunity to reuse all aspects of the buildings for future road and landscape construction material. The demolition process with multiple machines had less compliance requirements that the crushing, that necessitate large expenditure on reports and a delay in works. Most developers would not proceed with the approach in the current regulatory environment.

Currently DWER cannot grant licences for mobile equipment, because the licence is tied to the prescribed premises location.

Conclusions:

- Resolving this apparent anomaly would certainly provide greater certainty for crushing and reuse within development sites.
 - This issue should be considered as part of this review of the EP Act.
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Table 5 - Legislative frameworks in Australia

You asked for comments on the best legislative approach for waste-derived materials if reference to Table 5 - Legislative frameworks in Australia that encourage the use of waste-derived materials.

The following extracts provide a solution to the issues raised above, specifically for bespoke fit-for-purpose requirements:

NSW

- 'Exemptions operate to exempt consumers of certain wastes/waste-derived materials from particular legal requirements (e.g. relating to the licensing of premises and the payment of waste contributions); and
- 'General and specific orders and exemptions are only issued by the NSW EPA if a proposed use of a waste/waste-derived material is genuine, rather than a means of waste disposal, beneficial or fit-for-purpose and will not cause harm to human health or the environment.'

SA:

- The system of 'standards' establishes that a waste-derived material is not considered to be 'waste' for the purposes of the SA legislation governing the licensing of premises and payment of waste levy if it:
(b)... it constitutes a product that is 'ready and intended for imminent use without the need for further treatment to prevent any environmental harm that might result from such use'.

Queensland

- A waste producer may supply a waste as a resource under an EOW code provided they have registered with the Department of Science and Environment (DSE) and can comply with the requirements of the EOW code.
 - Where the use of a waste as a resource has been demonstrated to have benefits through sustainable use and negligible environmental risks, consideration may be given to developing an EOW code.
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