Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014

The Downer bituminous pavement order 2020

Introduction

This order, issued by the Environment Protection Authority (EPA) under clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 (Waste Regulation), imposes the requirements that must be met by suppliers of Downer bituminous pavement to which 'the Downer bituminous pavement exemption 2020' applies. The requirements in this order apply in relation to the supply of Downer bituminous pavement for application to land as a road making or road maintenance material.

1. Waste to which this order applies

1.1. This order applies to Downer bituminous pavement. In this order, Downer bituminous pavement means bituminous pavements that contain TonerPlas or MTP. It may also include reclaimed asphalt pavement that meets the requirements of *The reclaimed asphalt pavement order 2014*, recovered glass sand that meets the requirements of *The Recovered Glass Sand Order 2014,* and crumb rubber from tyres that meets the requirements of *The Recovered Tyres Order 2014*. Downer bituminous pavement may contain up to 0.75% Tonerplas or up to 0.7% MTP for mixed asphalt pavements, and up to 0.15% MTP in sprayed seal pavements.

2. Persons to whom this order applies

2.1. The requirements in this order apply, as relevant, to Downer EDI Works Pty Limited.

2.2. This order does not apply to the supply of Downer bituminous pavement to a consumer for land application at a premises for which the consumer holds a licence under the POEO Act that authorises the carrying out of the scheduled activities on the premises under clause 39 'waste disposal (application to land)' or clause 40 'waste disposal (thermal treatment)' of Schedule 1 of the POEO Act.

3. Revocation

3.1. The "The Downer bituminous pavement order November 2019", which commenced on 20 November 2019, is revoked from 6 May 2020.

4. Duration

4.1. This order commences on 6 May 2020 and is valid until 5 May 2022 unless revoked by the EPA in writing at an earlier date.

5. Processor requirements

The EPA imposes the following requirements on the processor who supplies Downer bituminous pavement.

General requirements

5.1. On or before supplying Downer bituminous pavement, the processor must ensure that the Downer bituminous pavement (and constituent parts) meets the specifications given in the "Reconophalt Quality Management Process" (Appendix 1).

Notification

5.2. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the Downer bituminous pavement:

- a written statement of compliance certifying that all the requirements set out in this order have been met;
- a copy of the 'Downer bituminous pavement exemption 2020' or a link to the Downer website where the 'Downer bituminous pavement exemption 2020' can be found; and
- a copy of the 'Downer bituminous pavement order 2020' or a link to the Downer website where the 'Downer bituminous pavement order 2020' can be found.

Record keeping and reporting

5.3. The processor must keep a written record of the following for a period of six years:

- the quantity of the Downer bituminous pavement supplied; and
- the name and address of each person to whom the processor supplied the Downer bituminous pavement.

5.4. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 5.1.

6. Definitions

In this order:

application or apply to land means applying to land by:

- spraying, spreading or depositing on the land; or
- ploughing, injecting or mixing into the land; or
- filling, raising, reclaiming or contouring the land.

asphalt means a solid material typically composed of sand, aggregates and similar materials bound together with bituminous and/or other similar binders.

consumer means a person who applies, or intends to apply, Downer bituminous pavement to land.

Modified Toner Polymer (MTP) means a granulated material supplied by Tonerplas Pty Ltd (or its successors or assigns) containing:

- waste toner (post-consumer recycled toner powder), and
- waste oil (medium grade engine oils and greases).

processor means a person who processes, mixes, blends, or otherwise incorporates Tonerplas or MTP into Downer bituminous pavement for supply to a consumer. The processor in this order is Downer EDI Works Pty Ltd (ABN: 66 008 709 608).

Tonerplas means a granulated product containing

- waste toner (post-consumer recycled toner powder),
- waste oil (medium grade engine oils and greases), and
- post-consumer plastic bags and packaging, being predominately low-density polyethylene (LDPE), with some high-density polyethylene (HDPE), polypropylene (PP) and small amount of polyethylene terephthalate (PET).

transaction means:

- in the case of a one-off supply, the supply of a batch, truckload or stockpile of Downer bituminous pavement that is not repeated.
- in the case where the supplier has an arrangement with the recipient for more than one supply of Downer bituminous pavement the first supply of Downer bituminous pavement as required under the arrangement.

5.5.20

Director Environmental Solutions (CLR)
Environment Protection Authority
(by delegation)

Notes

The EPA may amend or revoke this order at any time. It is the responsibility of each of the generator and processor to ensure it complies with all relevant requirements of the most current order. The current version of this order will be available on www.epa.nsw.gov.au

In gazetting or otherwise issuing this order, the EPA is not in any way endorsing the supply or use of this substance or guaranteeing that the substance will confer benefit.

The conditions set out in this order are designed to minimise the risk of potential harm to the environment, human health or agriculture, although neither this order nor the accompanying exemption guarantee that the environment, human health or agriculture will not be harmed.

Any person or entity which supplies Downer bituminous pavement should assess whether the material is fit for the purpose the material is proposed to be used for, and whether this use may cause harm. The supplier may need to seek expert engineering or technical advice.

Regardless of any exemption or order provided by the EPA, the person who causes or permits the application of the substance to land must ensure that the action is lawful and consistent with any other legislative requirements including, if applicable, any development consent(s) for managing operations on the site(s).

The supply of Downer bituminous pavement remains subject to other relevant environmental regulations in the POEO Act and Waste Regulation. For example, a person who pollutes land (s. 142A) or water (s. 120), or causes air pollution through the emission of odours (s. 126), or does not meet the special requirements for asbestos waste (Part 7 of the Waste Regulation), regardless of this order, is guilty of an offence and subject to prosecution.

This order does not alter the requirements of any other relevant legislation that must be met in supplying this material, including for example, the need to prepare a Safety Data Sheet. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.

APPENDIX 1

Reconophalt Quality Management Process

Reconophalt

Quality Management Process

March 2020

Downer

Relationships creating success

1 CONTEXT

Downer, together with Close the Loop, have formulated products using waste toner collected from printer cartridges, soft plastics, and waste oil. These products enhance the physical properties of the asphalt product, continues to be 100% recyclable and contributes to the significant social issue of waste.

Downer has been granted a 'Downer bituminous pavement order and exemption' by New South Wales' Environment Protection Authority (EPA) in November 2019 in relation to the supply of Downer bituminous pavement for application to land as a road making material in New South Wales.

This document provides an overview of the process in procuring the above material, including the Quality Control and Assurance processes practiced by our industry partners, Close the Loop and RED Group (through the REDCycle Program).

2 SUPPLIER QUALITY MANAGEMENT

Close the Loop Quality Management System

Close the Loop have a formal integrated management system in place, and have the following certifications and accreditations:

- ISO 9001:2018
- ISO 14001:2018
- OHSAS 18001:2019
- AS/NZS 4801:2019
- Zero Waste to Landfill
- Responsible Recycling (R2) Rev. 7/2013

RAW MATERIALS

TONER:
Toner is a pigmented polymer powder, with a melt point of approximately 85°C. The polymers used in toners are styrene acrylates and polyester. Close the Loop collects mixed residual toner from its recycling operation, during the cartridge and toner bottle shredding process. Residual toner is a homogenous mixture of toners (from most of the major printer manufacturers) that is collected (via a dust extraction system during cartridge shredding), sieved and stored in bulk bags (as a raw material).

OIL:
Re-refined recycled mineral oil.
Sourced externally with a defined specification.

SOFT PLASTICS

Mixture of recovered post-consumer soft plastics from food and household packaging, predominately LDPE (low density polyethylene).

Close the Loop sources this stream of soft plastics predominately from RED Group (via the Coles and Woolworths REDCycle supermarket collection program), plus minor amounts from Plastic Police. Close the Loop and RED Group (through the REDCycle Program) have a Supply Agreement which captures the expectations Close the Loop have on feedstock volume and incoming material quality acceptance criteria.

RED Group have quality requirements imposed to ensure that only soft plastics are supplied for processing, which includes a comprehensive list of what they accept for recycling and supply to Close the Loop. This is strictly adhered to by supply partners to ensure a repurposed end-of-life for produced soft plastic streams. Should REDCycle broaden the remit of plastic streams currently accepted, this will be communicated with Close the Loop, who will review the impact this may have on the material quality specifications.

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Error! Reference source not found.1 captures the overall material flow process for REDCycle operations

Should there still be contamination found in soft plastic bails delivered to Close the Loop (e.g. presence of PET bottles, metal sheets etc.), this is either subsequently picked out whilst loading into the plant, or communicated back to REDCycle, who will arrange for pick-up of the returned bail (see below pics). REDCycle works closely with their participating stores and partners to relay any contamination concerns and further raise awareness on acceptance criteria if needed.

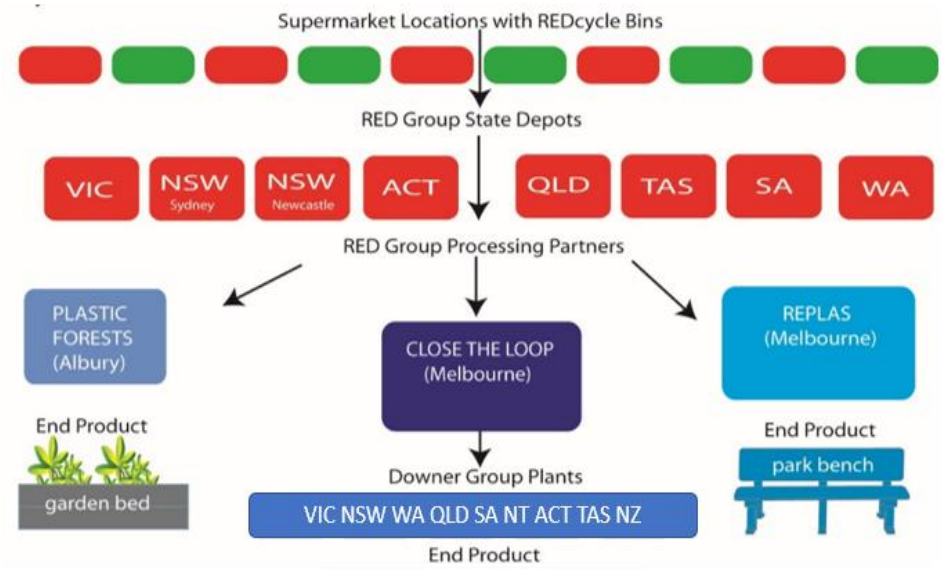

Figure 1 – REDCycle Process Flow

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TonerPlas Production

Close the Loop's Quality Plan outlines the TonerPlas production process as well as the controls in place to ensure the output quality of the product (including decontamination).

Close the Loop's Material Specification details the output quality requirements of TonerPlas, including the properties that need to be adhered to, for acceptance into Downer's asphalt manufacturing process.

3 DOWNER QUALITY REVIEW

Downer has finalised a formal renewed Supply Agreement with Close the Loop following the trials conducted across New South Wales. This Supply Agreement captures the technical specification expectations of the TonerPlas product, as well as Downer's expectations on Close the Loop's internal quality management process. The Downer-Close the Loop Supply Agreement also captures the legal responsibility Close the Loop have in informing Downer of any major discrepancies in processes, including significant adjustments to their incoming material streams.

The process of validating the quality of the TonerPlas deliveries are outlined in the table below, however each site modifies to their need

3.1 Batch Validation Management Procedure

Step	Actions	Responsible Role
1 **Order Material at Asphalt Plant**	Place order of TonerPlas quantity required (number of bags) with Close the Loop	Production Supervisor
2 **Receipt of Material at Recovery Plant**	Material is only released to Downer that has successfully passed the specification requirements, with supporting data and certification (accessible by Downer). The material is delivered by Close the Loop, in bulk bags (500-750kg) and unloaded off the truck with Downer forklift and stored undercover Downer staff will conduct a visual check for visible contamination or deformities and/or unsuitable material. The stock is reconciled each month with theoretical usage from production.	
3. Traceability of material	Each Tonerplas Bulker Bag has a Batch ID Number which Downer can reference with Close the Loop (see below images) Prior to loading into asphalt plant, material is further assessed for suitability. Samples of material during unloading or immediately after unloading may be taken at this point for retention along with lot numbers from each delivery bag. Should any product quality issues be encountered, retained samples can be tested for conformance. Asphalt testing is undertaken at specified testing frequency to assure Asphalt Performance Properties are within Specifications.	

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Resource Recovery Exemption under Part 9, Clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014

The Downer bituminous pavement exemption 2020

Introduction

This exemption:

- is issued by the Environment Protection Authority (EPA) under clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014 (Waste Regulation); and
- exempts a consumer of Downer bituminous pavement from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and the Waste Regulation in relation to the application of that waste to land, provided the consumer complies with the conditions of this exemption.

This exemption should be read in conjunction with 'the Downer bituminous pavement order 2020'.

1. Waste to which this exemption applies

1.1. This exemption applies to Downer bituminous pavement that is, or is intended to be, applied to land for road construction or road maintenance activities.

1.2. Downer bituminous pavement means bituminous pavements that contain TonerPlas or MTP. It may also include reclaimed asphalt pavement that meets the requirements of *The reclaimed asphalt pavement order 2014*, recovered glass sand that meets the requirements of *The Recovered Glass Sand Order 2014,* and crumb rubber from tyres that meets the requirements of *The Recovered Tyres Order 2014*. Downer bituminous pavement may contain up to 0.75% Tonerplas or up to 0.7% MTP for mixed asphalt pavements, and up to 0.15% MTP in sprayed seal pavements.

2. Persons to whom this exemption applies

2.1. This exemption applies to any person who applies, or intends to apply, Downer bituminous pavement to land as set out in clause 1.

3. Revocation

3.1. The “The Downer bituminous pavement exemption November 2019”, which commenced on 20 November 2019, is revoked from 6 May 2020.

4. Duration

4.1. This exemption commences on 6 May 2020 and is valid until 5 May 2022 unless revoked by the EPA in writing at an earlier date.

5. Premises to which this exemption applies

5.1. This exemption applies to the premises at which the consumer’s actual or intended application of Downer bituminous pavement is carried out.

6. Exemption

6.1. Subject to the conditions of this exemption, the EPA exempts each consumer from the following provisions of the POEO Act and the Waste Regulation in relation to the consumer’s actual or intended application of Downer bituminous pavement to land when used for road making activities:

- section 48 of the POEO Act in respect of the scheduled activities described in clauses 39 and 42 of Schedule 1 of the POEO Act;
- Part 4 of the Waste Regulation;
- section 88 of the POEO Act; and
- clause 109 and 110 of the Waste Regulation.

6.2. The exemption does not apply in circumstances where Downer bituminous pavement is received at the premises for which the consumer holds a licence under the POEO Act that authorises the carrying out of the scheduled activities on the premises under clause 39 ‘waste disposal (application to land)’ or clause 40 ‘waste disposal (thermal treatment)’ of Schedule 1 of the POEO Act.

7. Conditions of exemption

The exemption is subject to the following conditions:

7.1. At the time the Downer bituminous pavement is received at the premises, the material must meet all requirements for Downer bituminous pavement that are required on or before the supply of Downer bituminous pavement under ‘the Downer bituminous pavement order 2020’.

7.2. The Downer bituminous pavement can only be applied to land in road construction and road maintenance activities. This approval permits the laying of bituminous pavements on private land, provided:

7.2.1. the Downer bituminous pavement is applied only to the minimum extent necessary for the road construction or road maintenance activity (this may, for example, include driveways, access routes and other such pavements), and
7.2.2. the road provides access (temporary or permanent) to a development approved by a Council, or
7.2.3. the works are either an exempt or complying development, or
7.2.4. a development consent has been granted under the relevant Environmental Planning Instrument (EPI).

7.3. The consumer must keep a written record of the following for a period of six years:

- the quantity of any Downer bituminous pavement received; and
- the name and address of the supplier of the Downer bituminous pavement received.

7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.

7.5. The consumer must ensure that any application of Downer bituminous pavement to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application or apply to land means applying to land by:

- spraying, spreading or depositing on the land; or
- ploughing, injecting or mixing into the land; or
- filling, raising, reclaiming or contouring the land.

asphalt means a solid material typically composed of sand, aggregates and similar materials bound together with bituminous and/or other similar binders.

consumer means a person who applies, or intends to apply, Downer bituminous pavement to land.

Modified Toner Polymer (MTP) means a granulated material supplied by Tonerplas Pty Ltd (or its successors or assigns) containing:

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- post-consumer plastic bags and packaging, being predominately low-density polyethylene (LDPE), with some high-density polyethylene (HDPE), polypropylene (PP) and small amount of polyethylene terephthalate (PET).

5.5.20

Director Environmental Solutions (CLR)
Environment Protection Authority
(by delegation)

Notes

The EPA may amend or revoke this exemption at any time. It is the responsibility of the consumer to ensure they comply with all relevant requirements of the most current exemption. The current version of this exemption will be available on www.epa.nsw.gov.au

In gazetting or otherwise issuing this exemption, the EPA is not in any way endorsing the use of this substance or guaranteeing that the substance will confer benefit.

The conditions set out in this exemption are designed to minimise the risk of potential harm to the environment, human health or agriculture, although neither this exemption nor the accompanying order guarantee that the environment, human health or agriculture will not be harmed.

The consumer should assess whether or not the Downer bituminous pavement is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

Regardless of any exemption provided by the EPA, the person who causes or permits the application of the substance to land must ensure that the action is lawful and consistent with any other legislative requirements including, if applicable, any development consent(s) for managing operations on the site(s).

The receipt of Downer bituminous pavement remains subject to other relevant environmental regulations in the POEO Act and the Waste Regulation. For example, a person who pollutes land (s. 142A) or water (s. 120), or causes air pollution through the emission of odours (s. 126), or does not meet the special requirements for asbestos waste (Part 7 of the Waste Regulation), regardless of having an exemption, is guilty of an offence and subject to prosecution.

This exemption does not alter the requirements of any other relevant legislation that must be met in utilising this material, including for example, the need to prepare a Safety Data Sheet (SDS).

Failure to comply with the conditions of this exemption constitutes an offence under clause 91 of the Waste Regulation.