

Final Single Case End-of-Waste decision ART28-0063
of 24th of August 2026
establishing criteria determining when recycled aggregate produced by
Starrus Eco Holdings Limited
of Starrus Eco Holding Ltd. 24 Ballymount Rd Upper, Ballymount Dr, Kilnamanagh, Dublin
ceases to be waste under Regulation 28 of the European Union (Waste Directive) Regulations
2011 – 2020

Section 1

Subject matter

ART28-0063 establishes criteria determining when recycled aggregate resulting from a recovery operation ceases to be waste.

These criteria do not:

- affect the obligation of the producer to hold and comply with a waste collection permit, certificate of registration, waste facility permit, waste/ industrial emissions licence or any other National or European legislation which may apply when transporting, handling, storing or processing waste;
- affect permitting or any other legal requirements that do not depend on the status of the material as a waste; and
- negate the producers or users statutory obligations or requirements under any other authorisations (including planning permission), enactments or regulations.

The Environmental Protection Agency (herein referred to as the Agency) accepts no responsibility for material produced in compliance with these criteria. It is the producer's responsibility to ultimately ensure the material is fit for the intended use. It is the user's responsibility to store and use the material as specified by the producer.

Any person who:

- deliberately or carelessly provides false or misleading information; or
- declares that waste has ceased to be waste, where the relevant end-of-waste criteria have not been demonstrated to have been fulfilled following recovery of waste;

commits an offence, under the Waste Management Act 1996 (End-of-waste) Regulations 2024.

Section 2

Definitions

For the purposes of this Decision, the definitions set out in the European Union (Waste Directive) Regulations 2011 – 2020 and Waste Management Act 1996, as amended shall apply.

In addition, the following definitions/ interpretations shall apply:

- (1) 'applicant' is Starrus Eco Holding Ltd. 24 Ballymount Rd Upper, Ballymount Dr, Kilnamanagh, Dublin, D24 E097;
- (2) 'authorised waste facility' means a facility which has been granted a waste authorisation in the form of an Industrial Emissions licence, a waste licence, a waste facility permit or a certificate of registration;
- (3) 'load' is defined as an incoming delivery or collection quantity of construction and demolition waste which may originate from one or more sources.
- (4) 'batch' is defined as 2,000 tonnes of recycled aggregate produced from accepted construction and demolition waste under conditions that are presumed uniform, that can be regarded as a single unit and has a unique reference;
- (5) 'consignment' means a delivery quantity of recycled aggregate which leaves the production facility and may be contained in either one or several transport units;
- (6) 'competent authority' means any of the following: the Environmental Protection Agency (hereafter referred to as the Agency); a local authority, the National Waste Collection Permit Office, the Health and Safety Authority; the National Transfrontier Shipments of Waste Office, National Building Control and Market Surveillance Office; Transport

Infrastructure Ireland, Geological Survey Ireland, Competition and Consumer Protection Commission, Food Safety Authority of Ireland or any other National or Irish governmental regulation body who may need to assess compliance with these criteria or any associated activity;

- (7) 'holder' means the natural or legal person who is in possession of recycled aggregate;
- (8) 'management system certification body' is a body which has an accreditation certificate issued by the Irish National Accreditation Board (INAB), or equivalent European accreditation body, to undertake quality management system certification to an approved standard;
- (9) 'POPs Regulation' means European Union regulation 2019/1021 concerning the regulation of Persistent Organic Pollutants;
- (10) 'producer' means the waste operator who produces the recycled aggregate under a waste authorisation;
- (11) 'qualified person' means suitably qualified, trained and experienced person who has the requisite knowledge and experience required for sampling, testing and waste characterisation;
- (12) 'qualified staff' means staff which are qualified by experience or training to monitor and assess the properties of recycled aggregate;
- (13) 'recovery operation' has the same meaning as 'waste recovery activity' assigned in the Waste Management Act 1996, as amended;
- (14) 'specified use' means the suitable specific circumstances, as declared in the statement of conformity, under which the recycled aggregate can be used;
- (15) 'statement of conformity' means a statement/declaration that the recycled aggregate conforms to end-of-waste criteria, product standards and specifications, and includes details of restrictions on the use of the recycled aggregate;
- (16) 'user' means manufacturers, supply companies, contractors and all those organisations or individuals responsible for the end use of the product;
- (17) 'visual inspection' means inspection using human senses or any non-specialised equipment; and
- (18) 'waste' is as defined in the Waste Management Act 1996 as amended.

The list of definitions and interpretations above is intended to assist understanding of these criteria and does not purport to be a legal interpretation of said terms.

Section 3

Criteria for recycled aggregate

1. Recycled aggregate shall cease to be waste where all of the following conditions are demonstrated as fulfilled:
 - (a) the recycled aggregate results from a recovery operation undertaken at an authorised waste facility;
 - (b) the waste used as input for the recovery operation complies with the criteria set out in Part 1 of Annex I;
 - (c) the waste used as input for the recovery operation has been treated in accordance with the criteria set out in Part 2 of Annex I;
 - (d) the quality of the recycled aggregate complies with the criteria set out in Part 3 of Annex I;
 - (e) the producer has satisfied sampling and testing requirements set out in Part 4 of Annex I;
 - (f) the producer has satisfied storage requirements set out in Part 5 of Annex I;
 - (g) the producer has satisfied requirements set out in Sections 4 to 6;
 - (h) the producer has satisfied requirements within any guidance issued by the Agency in relation to these criteria.

Section 4

Specific uses and restrictions on use

1. Recycled aggregate fulfilling the criteria set out in Section 3 shall only be specified in the statement of conformity as suitable for use for purposes listed in Part 1 of Annex II.

2. The restrictions on use as listed in Part 2 of Annex II shall be specified in the statement of conformity.

Section 5

Statement of conformity

1. The producer shall issue a statement of conformity using the template set out in Annex III for each batch or consignment of recycled aggregate, whichever is of smaller quantity.
2. The statement of conformity shall be issued as documented evidence that the recycled aggregate meets these criteria and that the material ceases to be waste.
3. The statement of conformity shall state the suitable specific use(s) for the recycled aggregate and any associated restrictions as set out in Section 4.
4. The producer shall transmit the statement of conformity to the next holder of the recycled aggregate. The producer shall retain a copy of the statement of conformity for a minimum of 5 years after its date of issue and shall make it available to competent authorities upon request.
5. The statement of conformity may be in electronic form.
6. The producer shall give competent authorities access to the statements of conformity upon request.
7. A safety data sheet for the recycled aggregate shall be included in the statement of conformity.

Section 6

Management system

1. The producer shall implement a management system suitable to demonstrate compliance with the criteria referred to in Sections 3 to 5, and specific monitoring requirements set out in Annex I for each criterion.
2. The management system shall include a set of documented Quality Control (QC) Procedures concerning each of the following aspects:
 - (a) acceptance, control and quantification of waste used as input for the recovery operation as set out in Part 1 of Annex I, including quarantine, segregation, and control of non-conforming waste inputs;
 - (b) due diligence assessment (knowledge of inputs), including assessment of inputs for potential contamination for pollutants beyond those listed in Table 1 of Annex I; This shall include an assessment for the presence of hazardous substances as may be identified in association with the source of the waste inputs;
 - (c) monitoring of the treatment processes and techniques described in Part 2 of Annex I;
 - (d) monitoring of the quality of recycled aggregate resulting from the recovery operation as set out in Parts 3 & 4 of Annex I (including sampling and testing);
 - (e) storage of recycled aggregate as set out in Part 5 of Annex I;
 - (f) completion and sign-off of a statement of conformity as set out in Annex III;
 - (g) quarantine, segregation, control and quantification of non-conforming outputs from the recovery process;
 - (h) feedback from customers or product accreditation body concerning compliance with recycled aggregate quality, including assessment, investigation, corrective actioning and tracking of non-conformance reports;
 - (i) record keeping of the results of monitoring conducted under points (a) to (h). All records including controls, inspections and training shall be maintained for a minimum of 5 years, which may include electronic records;
 - (j) review and improvement of the management system;
 - (k) training of staff on all aspects of the criteria including the sampling, testing, treatment system, monitoring, control and record keeping.
3. The management system shall be certified by a Management System Certification Body accredited by the Irish National Accreditation Board, or equivalent European accreditation body. This certification shall verify that the management system complies with the requirements of this Section. The verification shall be carried out annually.
4. The producer shall maintain records of the quantities of:

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- (a) waste used as input for the recovery operation per list of waste code;
 - (b) recycled aggregate that has been recovered and can be demonstrated to meet these criteria;
 - (c) recycled aggregate which meets these criteria and have been dispatched;
 - (d) non-conforming outputs from the recovery operation; and
 - (e) any non-conforming outputs reintroduced into the recovery operation.
5. The producer shall give competent authorities access to the management system and records upon request.
6. The producer shall make the management system and records available for inspection.

Section 7

Entry into effect

Single case End-of-Waste Criteria No. Art28-0063 shall be available for use immediately following publication on the Agency's website.

Section 8

Compliance

The producer or holder of recycled aggregate shall comply with any request made by a competent authority in relation to the provision of evidence of compliance with these criteria or any associated waste, product, or health and safety requirements.

Any person who:

- deliberately or carelessly provides false or misleading information; or
- declares that waste has ceased to be waste, where the relevant end-of-waste criteria have not been demonstrated to have been fulfilled following recovery of waste;

commits an offence, under the Waste Management Act 1996 (End-of-waste) Regulations 2024.

ANNEX I

Criteria for recycled aggregate

Part 1. Waste used as input for the recovery operation

Criteria		Requirements and Monitoring
1.1	Inputs shall be restricted to the following non-hazardous list of waste (LoW) code: 19 12 12: other wastes (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11. The 19 12 12 wastes shall be restricted to those originating from the processing of 17 01 01, 17 01 02, 17 01 03, 17 01 07, 17 05 04 and 17 09 04.	Acceptance control of all waste received (by visual inspection) and of the accompanying documentation shall be carried out by qualified staff who are trained on how to recognise waste that does not fulfil the criteria set out in this section. Where visual inspection or due diligence assessment raises any suspicion of possible hazardous properties or contamination, further appropriate monitoring measures shall be taken, such as sampling and testing where appropriate. The staff shall be trained on potential hazardous properties or contamination that may be associated with recycled aggregate and on material components or features that indicate these properties.
1.2	All incoming waste shall meet the incoming waste acceptance criteria of the waste authorisation under which the recycled aggregate is produced and shall be subject to the acceptance and rejection procedures set out in GR-01 Waste Input Control Procedure, the applicant's internal quality control procedures.	
1.3	Each load of waste input shall be assigned a unique identifier.	
1.4	Waste input, once received by the producer, shall be kept permanently separate from contact with any other waste.	
1.5	Waste inputs shall not contain the following substances or materials: - asbestos or asbestos containing material; - epoxy resin; - paint or other similar visible treatments; - municipal waste; - granulated tyre materials; - bio-waste; - waste originated from electrical and electronic equipment; - persistent organic pollutants; - coal tar; - invasive species; - waste generated arising from remediation of deleterious materials e.g. pyrite remediation, or defective concrete block remediation etc.; - hazardous wastes - C&D fines; and - any other substance or material identified as unsuitable by the Agency.	An asbestos survey shall be undertaken prior to any demolition activities from which input material is sourced. Asbestos and asbestos containing materials are not permitted in the input material, therefore records of inspection of asbestos surveys completed for the source sites shall be maintained. Non-conforming waste shall be managed in accordance with quarantine requirements specified in the waste authorisation. The producer shall regularly review and revise quality control procedures to ensure they reflect current standards and operational requirements. Prior to waste acceptance, new suppliers of any material which has undergone sorting or pretreatment must provide; - A description of the mechanical processing undertaken; - Details of sorting and pre-treatment steps; - A description of equipment used (screens, magnets, eddy currents, crushers, etc.); - Quality control procedures implemented; - Removal procedures for deleterious materials; - Evidence that non-permitted materials are excluded; and - Confirmation that the supplied material is as per Part 1.1
1.6	A due diligence assessment for each new source of input waste shall be completed to identify any potential for contamination. Where potential for chemical contamination is identified, any additional contaminants of concern, other than those specified within Table 1, shall be quantified via testing and shall be recorded. Testing shall be carried out in accordance with Part 4.2 of Annex I.	
1.7	Non-conforming waste shall be quarantined and managed in accordance with the applicant's quality management system and internal procedures (GR-01 Waste Input Control Procedure).	

Part 2. Treatment process and techniques

Criteria		Requirements and Monitoring
2.1	All treatment processes needed to prepare the recycled aggregate for direct input into final use shall have been completed as per internal procedure GR-02 Treatment, Processing and Storage Procedure.	Treatment processes shall be undertaken in accordance with the waste authorisation under which the recycled aggregate is produced.
2.2	The treatment process shall include waste acceptance, inspection, shredding, removal of non-conforming material and particle size screening to produce clean, specification-compliant recycled aggregate.	The producer shall regularly review and revise quality control procedures to ensure they reflect current standards and operational requirements.
2.4	The treatment process shall include processes sufficient to reduce physical contaminants to levels as specified in Table 1.	Qualified staff shall visually inspect outputs from the treatment process. Qualified staff shall monitor and review the efficacy of the treatment process regularly.
2.3	Each batch of the recycled aggregate produced shall be assigned a unique identifier for traceability.	

Part 3. Quality of recycled aggregate resulting from the recovery operation.

Criteria		Requirements and Monitoring
3.1	Each batch of recycled aggregate shall be verified in accordance with the applicant's internal quality control procedures namely GR1.2-02a Product Specification, Quality Control and Testing Procedure.	Qualified staff shall grade/classify each batch of recycled aggregate. A register of non-conforming products for these criteria shall be maintained by the producer. The register shall contain information as to the reasons for the non-conformance and the manner in which the non-conformance was rectified. The producer shall regularly review and revise quality control procedures to ensure they reflect current standards and operational requirements.
3.2	The recycled aggregate shall, as required, comply with the relevant provisions of the: i. Classification, Labelling and Packaging (CLP) ¹ Regulation; ii. Construction Products Regulations². iii. REACH³ Regulation; and iv. POPs Regulation.	As regulations are subject to amendment and replacement, it is the producer's responsibility to ensure that current regulations are referred to.
3.3	The recycled aggregate must meet the specification requirements of Breedon Cement Ltd.	As technical standards and specifications are subject to regular review, it is the producer's responsibility to ensure that the latest version is referred to.
3.4	The recycled aggregate shall comply with the specifications in Table 1, Table 2 and sampling and testing requirements set out in Part 4.	A qualified person shall undertake sampling and testing. A qualified person shall review the test results and determine material as compliant or non-compliant with this criterion.

		A register of non-conforming product for these criteria shall be maintained by the producer. The register shall contain information as to the reasons for the non-conformance and the manner in which the non-conformance was rectified. The register shall also include information on the outlet for the non-conforming product, for example whether it is re-introduced to the start of the process, disposed of, or recovered as waste.
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Table 1 Physical Contaminant Thresholds

Physical Contaminant	Test Method / Relevant Standard	Maximum Threshold (by weight)
Ferrous and non-ferrous metals	I.S. EN 933-11: Test for Geometrical properties of aggregate: Classification test for the constituents of coarse recycled aggregate	Up to 1%
Soils (including topsoil, clay and sediment)		Up to 1%
Gypsum		Up to 1%
Glass		Up to 1%
Wood		Up to 1%
Plastic		Up to 1%
Electrical Cable		Up to 1%
Plasterboard		Up to 1%
Rubber		Up to 1%
Bituminous materials		Up to 1%
Asbestos	Visual inspection for asbestos fibres as per HSG 248 Second edition (2021)	No asbestos detected
Odour	Sensory evaluation	No odour detected
Total	1% combined physical contaminants	

Table 2 Physical Parameters of Green Rock 1.2

Parameter	Test Method / Relevant Standard	Typical Value	Maximum Threshold	Units
Particle Size	ISO17827-1/ISO17827-2 (Mechanical sieving)	10-100	150	mm
<10mm screening		10	20	%
>100mm screening		10	20	%
Moisture	BS EN 14774 (2): 2009	25	40	%

¹ Classification, Labelling and Packaging - Regulation (EC) No 1272/2008 (CLP)

² Construction Products Regulation - Regulation (EU) No. 305/2011 (CPR)

³ Registration, Evaluation, Authorisation and Restriction of Chemicals - Regulation 1907/2006/EC (REACH)

Part 4. Sampling and Testing

Criteria		Requirements and Monitoring
4.1	Incoming waste shall be verified on-site using the applicant's internal quality control procedures, namely; • GR1.2-01 Waste Input Control Procedure • GR1.2-01a Waste Input Inspection Sheet and with reference to the criteria outlined in Table 1.	Samples shall be collected by a qualified person and be in accordance with the sampling and monitoring conditions of the site's waste facility permit.
4.2	A composite sample shall be prepared for visual and organoleptic analysis. Testing of the composite sample shall be conducted as follows: - at a frequency of every batch produced; - for all parameters specified in Table 1 and Table 2; - with confirmation that the recovered product meets the requirements of Breedon Cement Limited's technical specification; and - is free of Persistent Organic Pollutants (POPs).	Samples shall be collected by a qualified person. A sample shall be a representative, composite sample consisting of a minimum of 3 partial samples in accordance with IS EN 932-1:1997 ⁴ Tests for general properties of aggregates. Samples shall be weighed, and hand sorted in accordance with IS EN 933-11 ⁵ into the various constituents, which shall then be separately weighed so the percent by weight of the overall sample can be calculated.

⁴ Tests for General Properties of Aggregates - Part 1: Methods for Sampling

⁵ Tests for Geometrical Properties of Aggregates - Part 11: Classification Test for The Constituents of Coarse Recycled Aggregate

Part 5. Storage

Criteria		Requirements and Monitoring
5.1	Recycled aggregates pending the results of testing shall be identified and physically separated into individual batches per representative sample.	A storage and labelling plan shall be established and maintained. Qualified staff shall regularly monitor storage and labelling plans and records and undertake a review thereof bi-annually. Any recycled aggregate stored greater than 24 months shall be re-classified as waste and managed accordingly until classified otherwise.
5.2	Prior to dispatch or use, recycled aggregates that fulfil the criteria shall be kept in designated areas, separate from any other products or waste.	
5.3	The recycled aggregate shall not be stored for a period greater than 24 months. Products that exceed the time limit for storage of a period of 24 months shall be deemed a waste unless otherwise demonstrated by re-testing as per Part 3.4.	

ANNEX II
Specific use and restrictions on use
1. Specific uses

The recycled aggregate that is produced in compliance with these criteria shall only be suitable for use as a raw material in the manufacture of cement.

2. Restrictions on use

1. The recycled aggregate for use as a raw material in the manufacture of cement is limited to sale and use in Breedon Cement Limited's licensed site (P0487-07) or another licensed site.
2. The recycled aggregate is limited to sale and use in Ireland and in any other destination country where approval has been attained from the country's relevant competent authority that the recovered material is recognised by the competent authority in that jurisdiction as a non-waste prior to the material being placed on that market.
3. In the event of the material being exported, the National Transfrontier Shipments Office shall be contacted, and confirmation attained that they recognise this approval from another jurisdiction prior to the material being placed on an export market.

ANNEX III

Statement of conformity with the end-of-waste criteria

1.	<u>Producer of the recycled aggregate</u> Producer Organisation Name: Registered Company Address: Waste Authorisation Ref. No.: Address and Eircode of Production: Contact Tel: Contact E-mail: Date of Production: Batch Identifier:
2.	Quantity of the consignment in kg: Green Rock Product (1.2, 3 or 4):
3.	<u>Classification/ specification and suitability for use</u> (a) The material in this consignment is only suitable for the following specified use(s): <i>Specify applicable suitable uses</i> •
4.	The recycled aggregate in this consignment complies with the customer specification, industry specification or standard listed below: •
5.	<u>Restrictions on use</u> The material in this consignment is <u>not suitable</u> for use in: •
6.	The recycled aggregate in this consignment meets the criteria specified in Single Case End-of-Waste decision Art28-0063 for recycled aggregate.
7.	The producer of recycled aggregate in this consignment applies a management system certified by a Management System Certification Body accredited by the Irish National Accreditation Board, or equivalent European accreditation body.
8.	Declaration of the producer of recycled aggregate in this consignment: I certify that the above information is complete and correct to the best of my knowledge: Name: Date: Signature:
9.	<u>Chain of custody</u> Producer As per Item 1. Date of transfer to next holder: Any other holder (where applicable) Organisation Name: Contact Tel: Contact E-mail: Date of transfer to next holder: User Organisation Name (if applicable): Name: Contact Tel: Contact E-mail: Use Location: NOTE: it is the responsibility of the holder who transfers the recycled aggregate to the next holder to ensure the chain of custody has been completed to include details of the next holder.