

Final Single Case End-of-Waste decision Art28-0030
of 20th May 2026
establishing criteria determining when recovered glass produced by
Gannon Eco Ltd. of Split Hill Quarries, Hazelwood, Kilbeggan, Co. Westmeath, N91 TNK3
ceases to be waste
under Regulation 28 of the European Union (Waste Directive) Regulations 2011 – 2020

Section 1

Subject matter

Art28-0030 establishes criteria determining when recovered glass 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 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 Gannon Eco Ltd. of Split hill quarries, hazelwood, Kilbeggan, Co. Westmeath
- (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) 'batch' defined as either 1,000 m³ or one calendar month's production- per product stream- whichever occurs first;
- (4) 'consignment' means a delivery quantity of recovered glass which leave the production facility and may be contained in either one or several transport units;
- (5) 'consumer' means a natural person (whether in the State or not) who is acting for purposes unrelated to the person's trade, business or profession;
- (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 recovered glass;
- (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 recovered glass 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 recovered glass;
- (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 recovered glass can be used;
- (15) 'statement of conformity' means a statement/declaration that the recovered glass conform to end-of-waste criteria, product standards and specifications, and includes details of restrictions on the use of the recovered glass;
- (16) 'user' means manufacturers, supply companies, contractors and all those organisations or individuals responsible for the end use of the product; and
- (17) 'visual inspection' means inspection using human senses or any non-specialised equipment.
- (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 recovered glass

1. Recovered glass shall cease to be waste where all of the following conditions are demonstrated as fulfilled:
 - (a) the recovered glass results from a recovery operation undertaken under an appropriate waste authorisation;
 - (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 recovered glass 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 & restrictions on use

1. Recovered glass 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 recovered glass, whichever is of smaller quantity.
2. The statement of conformity shall be issued as documented evidence that the recovered glass 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 recovered glass 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 recovered glass. 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 of the recovered glass 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;
 - (a) due diligence assessment (knowledge of inputs), including assessment of inputs for potential contamination for pollutants beyond those listed in Tables 1-3 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;
 - (b) monitoring of the treatment processes and techniques described in Part 2 of Annex I;
 - (c) monitoring of the quality of recovered glass resulting from the recovery operation as set out in Parts 3 & 4 of Annex I (including sampling and testing);
 - (d) storage of recovered glass as set out in Part 5 of Annex I;
 - (e) completion and sign-off of a statement of conformity as set out in Annex III;
 - (f) quarantine, segregation, control and quantification of non-conforming outputs from the recovery process;
 - (g) feedback from customers or product accreditation body concerning compliance with recovered glass quality, including assessment, investigation, corrective actioning and tracking of non-conformance reports;
 - (h) record keeping of the results of monitoring conducted under points (a) to (g). All records including controls, inspections and training shall be maintained for a minimum of 5 years, which may include electronic records;
 - (i) review and improvement of the management system;
 - (j) 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:
 - (a) waste used as input for the recovery operation per list of waste code;
 - (b) recovered glass that have been recovered and can be demonstrated to meet these criteria;
 - (c) recovered glass which meet 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 make available on request by the competent authorities the management system and records for inspection.

Section 7

Entry into effect

Single case End-of-Waste Criteria No. Art28-0030 shall be available for use immediately following publication on the Agency's website.

Section 8

Compliance

The producer or holder of recovered glass 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 Recovered Glass

Part 1. Waste used as input for the recovery operation

Criteria		Monitoring requirements
1.1	Inputs shall be restricted to the following list of waste codes: <ul style="list-style-type: none"> • 10 11 12 - waste glass other than those mentioned in 10 11 11 • 10 11 14 - waste glass polishing glass sludge • 15 01 07 - glass packaging • 16 01 20 – glass • 17 02 02 – glass • 19 12 05 – glass • 20 01 02 – glass 	Acceptance control of all waste received (by visual inspection) and of the accompanying documentation shall be carried out by qualified staff which 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 waste glass and on material components or features that indicate these properties.
1.2	Inputs shall meet the incoming waste acceptance criteria of the produced.	
1.3	Each load of waste input shall be assigned a unique identifier.	
1.4	Non-conforming waste shall be quarantined and managed in accordance with Gannon Eco's internal QC procedures and Environmental Management System (EMS).	Non-conforming waste shall be managed in accordance with quarantine requirements specified in the waste authorisation.
1.5	A characterisation of the waste inputs shall be conducted prior to waste acceptance from the source sites- identified on risk-based manner- and on an annual basis thereafter. This characterisation shall include screening for specific parameters arising from due diligence carried out in accordance with Section 6, 2(b). Gannon Eco will advise the relevant local authority and the EPA of any changes that affect the EoW decision.	The producer shall regularly review and revise QC procedures to ensure they reflect current standards and operational requirements.

Part 2. Treatment process & techniques

Criteria		Monitoring requirements
2.1	All treatment processes needed to prepare the waste glass for direct input into final use shall have been completed.	Treatment processes shall be undertaken in accordance with the waste authorisation under which the recovered glass products are produced.
2.2	Recovery shall be carried out via a multi-stage treatment process under controlled conditions, as set out in Gannon Eco's internal specification GMP 2018, as updated, and associated Standard Operating Procedures.	The producer shall regularly review and revise QC procedures to ensure they reflect current standards and operational requirements.
2.3	Each batch of the recovered glass produced shall be assigned a unique identifier for traceability.	

Part 3. Quality of recovered glass resulting from the recovery operation.

Criteria		Monitoring requirements
3.1	Each batch of recovered glass product shall be verified in accordance with Gannon Eco's internal specifications GMP 2018, as updated. The batch must meet the relevant specification parameters outlined in GMP 2018 and be supported by a Certificate of Analysis (CoA) issued by an accredited laboratory.	<p>Qualified staff shall grade/classify each batch of recovered glass.</p> <p>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.</p> <p>The producer shall regularly review and revise QC procedures to ensure they reflect current standards and operational requirements.</p>
3.2	<p>Verification of compliance shall be supported by testing carried out using recognised national or international standards, including:</p> <ul style="list-style-type: none"> • ISO 11127 parts 1-7 for abrasive media (EcoBlast), • EN 12902:2005 and EN 16713-1:2016 for filtration media (EcoPure), • EN 12620:2002+A1:2008 for Filler media (E-filler) 	As technical standards and specifications are subject to regular review, it is the producer responsibility to ensure that the latest version is referred to.
3.3	<p>The recovered glass shall, as required, comply with the relevant provisions of:</p> <ul style="list-style-type: none"> • EU Regulation 1179/2012 on recycled glass cullet • Persistent Organic Pollutants (POPs) Regulation (EU) 2019/1021 	As regulations are subject to amendment and replacement, it is the producer's responsibility to ensure that current regulations are referred to.
3.4	The recovered glass shall comply with the specifications in Tables 1-3 and sampling and testing requirements set out in Part 4.	<p>A qualified person shall undertake sampling and testing.</p> <p>A qualified person shall review the test results and determine material as compliant or non-compliant with this criterion.</p> <p>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-</p>

		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.
--	--	---

Table 1: 'EcoBlast' Verification Parameters for all grades**Grade / Grain Size (mm):**

Grade 0: <0.2, Grade 1: 0.2–0.5, Grade 2: 0.5–1.2, Grade 3: 1.2–1.5 Grade 4: 1.2-2, Grade 5: 2-4

Parameter	Acceptance Criteria
SiO ₂ content	60–80%
Ferrous metals	≤ 50 ppm
Non-ferrous metals	≤ 60 ppm
Organics	≤ 2000 ppm
Non-glass inorganics	<100 ppm (>1 mm) / <1500 ppm (≤1 mm)
Measure of Hardness scale	6
Colour (processed)	Off-white to mixed
Shape	Angular to sub-angular

Table 2 – 'EcoPure' Verification Parameters for all grades**Grade / Effective Size (d10 mm):**

Grade 1: 0.16–0.27, Grade 2: 0.34–0.55, Grade 3: 0.64–1.2, Grade 4: 1.2-2, Grade 5: 2-4

Parameter	Acceptance Criteria
Uniformity coefficient	< 2.12
SiO ₂ content	60–80%
Ferrous metals	≤ 50 ppm
Non-ferrous metals	≤ 60 ppm
Organics	≤ 2000 ppm
Non-glass inorganics	<100 ppm (>1 mm) / <1500 ppm (≤1 mm)
Bulk density (loose)	~1.3–1.5 kg/m ³
Turbidity reduction	≥ 90% (after 20 cycles)
Filtration efficiency	≥ 99.8% (45 µm, before and after backwash)
Filtration ratio (S80)	15–18 µm

Table 3 – 'E-Filler' Verification Parameters for all grades**Grade / Particle Size (mm):**

Standard Lab Sieve (SLS) 60: 0–0.06, SLS 150/60: 0.06–0.150, SLS 150: 0–0.150, SLS 150/500: 0.15–0.5, SLS 500/1000: 0.5-1, SLS 1000/2000: 1-2, SLS 0/4000: 0-4, SLS 2000/4000: 2-4, SLS 0/8000: 0-8, SLS 4000/8000: 4-8, SLS 0/1200: 0-12, SLS 8000/12000: 8-12

Parameter	Acceptance Criteria
SiO ₂ content	60–80%
Dry bulk density	~1100 kg/m ³
Moisture content	<0.05%
Ferrous metals	≤ 50 ppm
Non-ferrous metals	≤ 60 ppm
Organics	≤ 2000 ppm
Non-glass inorganics	<100 ppm (>1 mm) / <1500 ppm (≤1 mm)
Shape	Sub-angular
Colour (processed)	Off-white to light grey

Part 4. Sampling & testing

Criteria		Monitoring requirements
4.1	<p>A verification sample shall be collected and tested as per batch of recovered product. Samples and testing of recovered glass shall be conducted as follows:</p> <ul style="list-style-type: none"> i. at an accredited laboratory, using accredited test methods, where available, for all parameters specified in Tables 1 – 3 respectively; and ii. Complies with Regulation (EU) 1179/2012; and iii. Complies with ISO 11127 parts 1-7 for abrasive media (EcoBlast); and iv. Complies with EN 12902:2005 and EN 16713-1:2016 for filtration media (EcoPure); and v. Complies with EN 12620:2002+A1:2008 for filler media (E-Filler). 	<p>The laboratory selected shall be able to achieve detection limits for each parameter specified in Table 2.</p> <p>Laboratory analysis shall be undertaken in accordance with I.S. EN ISO-IEC 17025: General requirements for the competence of testing and calibration laboratories.</p> <p>Samples shall be collected by a qualified person.</p> <p>A sample shall comprise a composite of a minimum of 3 no. sub-samples</p>
4.2	<p>Internal sampling shall be conducted- during active production periods- with Particle Size Distribution (PSD) testing performed daily per recovered glass product and X-ray fluorescence (XRF) - elemental composition verification- testing performed weekly per recovered glass product. These procedures shall be formally documented within the site's Quality Control framework (GMP 2018) and embedded in the site's EMS.</p>	<p>Samples shall be collected by qualified personnel with training records of competence recorded in the sites EMS.</p> <p>A sample shall comprise a composite of a minimum of 3 no. sub-samples.</p>

Part 5. Storage

Criteria		Monitoring requirements
5.2	<p>Prior to dispatch or use, recovered glass that fulfil the criteria shall be kept in designated areas, separate from any other products or waste.</p>	<p>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.</p> <p>Any recovered glass stored greater than 12 months shall be re-classified as waste and managed accordingly until classified otherwise.</p>
5.3	<p>The recovered glass shall not be stored for a period greater than 12 months. Products that exceed the time limit for storage of a period of 12 months shall be deemed a waste unless otherwise demonstrated by re-testing as per Part 3.1.</p>	

ANNEX II

Specific use & restrictions on use

1. Specific uses

The recovered glass products- EcoBlast, EcoPure and E-Filler- that are produced in compliance with these criteria shall only be suitable as an abrasive media, filtration media or filler media (respectively). EcoBlast & E-filler are suitable in industrial applications only.

2. Restrictions on use

2.1 EcoBlast and E-Filler shall not be used:

- By consumers and in applications involving direct human contact or ingestion
- In sensitive environments such as food production

2.2 EcoPure shall not be used:

- By consumers
- In the treatment of water intended for human consumption, until such time as compliance can be demonstrated with the appropriate CE mark requirements - and the relevant regulations, being the European Union (Drinking Water) Regulations 2023 (S.I. No. 99 of 2023) and the Drinking Water Directive (Directive (EU) 2020/2184)¹.

2.3 The recovered glass 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.

¹ Directive (EU) 2020/2184 of the European Parliament and of the Council of 16 December 2020 on the quality of water intended for human consumption (recast), including Implementing Acts and Delegated Regulations addressing minimum hygiene requirements for materials that come into contact with water intended for human consumption in accordance with Article 11 of said Directive.

ANNEX III

Statement of conformity with the end-of-waste criteria

1.	<p><u>Producer of the recovered glass</u> Producer Organisation Name: Registered Company Address: Waste Authorisation Ref. No.: Address & Eircode of Production: Contact Tel: Contact E-mail: Date of production:</p>
2.	Quantity of the consignment in kg:
3.	<p><u>Classification/ specification & 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></p> <ul style="list-style-type: none"> •
4.	<p>The recovered glass in this consignment complies with the customer specification, industry specification or standard listed below:</p> <ul style="list-style-type: none"> •
5.	<p><u>Restrictions on use</u> The material in this consignment is <u>not suitable</u> for use in:</p> <ul style="list-style-type: none"> •
6.	The recovered glass in this consignment meets the criteria specified in Single Case End-of-Waste decision Art28-0030 for recovered glass.
7.	The producer of recovered glass 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.	The material has been tested at an accredited laboratory, using accredited test methods, where available, for all parameters listed in Tables 1 - 3 .
9.	<p>Declaration of the producer of recovered glass in this consignment: I certify that the above information is complete and correct to the best of my knowledge: Name: Date: Signature:</p>
10.	<p><u>Chain of custody</u> Producer As per Item 1. Date of transfer to next holder:</p> <hr/> <p>Any other holder (where applicable) Organisation Name: Contact Tel: Contact E-mail: Date of transfer to next holder:</p> <hr/> <p>User Organisation Name (if applicable): Name: Contact Tel: Contact E-mail: Use Location:</p> <hr/> <p>NOTE: it is the responsibility of the holder who transfers the recovered glass to the next holder to ensure the chain of custody has been completed to include details of the next holder.</p>