

Final Single Case End-of-Waste decision Art28-0097
of September 16th, 2025
establishing criteria determining when recovered woodchip produced by
Tiger Woodchip Ltd.
of Fassaroe, Bray, County Wicklow
ceases to be waste under Regulation 28 of the European Union (Waste Directive) Regulations
2011 – 2020

Section 1

Subject matter

Art28-0097 establishes criteria determining when recovered woodchip 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 Tiger Woodchip Ltd.(TWC), Fassaroe, Bray, County Wicklow;
- (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' is defined as the weekly output of recovered woodchip produced from accepted waste wood under uniform processing conditions;
- (4) 'consignment' means a delivery quantity of recovered woodchip which leaves the production facility and may be contained in either one or several transport units;
- (5) '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;

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

1. Recovered woodchip shall cease to be waste where all of the following conditions are demonstrated as fulfilled:
 - (a) the recovered woodchip 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 woodchip 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, in relation to each batch;
 - (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 woodchip 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 woodchip, whichever is of smaller quantity.
2. The statement of conformity shall be issued as documented evidence that the recovered woodchip 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 woodchip 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 woodchip. 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 woodchip 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 recovered woodchip resulting from the recovery operation as set out in Parts 3 & 4 of Annex I (including sampling and testing);
 - (e) storage of recovered woodchip 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 recovered woodchip 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 (g). 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:
 - (a) waste used as input for the recovery operation per list of waste code;
 - (b) recovered woodchip that have been recovered and can be demonstrated to meet these criteria;
 - (c) recovered woodchip 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. Art28-0097 shall be published on the Agency's website and shall be available for use following the construction and commissioning of the dedicated Grade A wood input/output segregation shed.

Section 8

Compliance

The producer or holder of recovered woodchip 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 Woodchip

Part 1. Waste used as input for the recovery operation

Criteria		Monitoring requirements
1.1	Inputs shall be restricted to the list of waste codes: <ul style="list-style-type: none"> • 03 01 01 – Waste bark and cork • 03 01 99 – Wood wastes not otherwise specified • 03 03 01 – Waste bark and wood • 15 01 03 – Wooden packaging • 17 02 01 – Wood • 19 12 07 – Wood other than that mentioned in 19 12 06 • 20 01 38 – Wood other than that mentioned in 20 01 37 	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 wood 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 recovered woodchip is produced and shall be subject to the acceptance and rejection procedures set out in TWC's Supplier Advisory Procedure (GA-01). including, but not limited to: <ul style="list-style-type: none"> • Visual inspection of all incoming loads; • Verification of supplier declarations; 	Non-conforming waste shall be managed in accordance with quarantine requirements specified in the waste authorisation.
1.3	Each load of waste input shall be assigned a unique identifier.	The producer shall regularly review and revise QC procedures to ensure they reflect current standards and operational requirements.
1.4	Non-conforming waste shall be quarantined and managed in accordance with TWC's QMS and internal procedures, namely rejection or diversion of non-conforming loads in accordance with the facility's non-conformance procedures (GA-01a)	
1.5	A characterisation of the waste inputs shall be conducted prior to waste acceptance from the source sites 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). TWC will advise the EPA of any changes that affect the EoW decision.	

Part 2. Treatment process & techniques

Criteria		Monitoring requirements
2.1	All treatment processes needed to prepare the waste wood 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 woodchip is produced.
2.2	The treatment process shall include mechanical and manual sorting, shredding, metal removal, optical sorting, and screening to produce clean, specification-compliant woodchip	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 woodchip produced shall be assigned a unique identifier for traceability.	

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

Criteria		Monitoring requirements
3.1	Each batch of recovered woodchip shall be verified in accordance with TWC's internal QC procedures.	<p>Qualified staff shall grade/classify each batch of recovered woodchip.</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>The recovered woodchip shall, as required, comply with the relevant provisions of the:</p> <ul style="list-style-type: none"> i 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.
3.3	The recovered woodchip must meet the specification requirements of EN ISO 17225-4: <i>Solid Biofuels – Fuel Specifications and Classes – Part 4: Graded Wood Chips</i>	As technical standards and specifications are subject to regular review, it is the producer responsibility to ensure that the latest version is referred to.
3.4	The recovered woodchip shall comply with the specifications in Table 1 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-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.</p>

Table 1: Recovered Woodchip (Output) – Specifications

Parameter	Unit	Basis	Method	Min	Typical	Max ¹
Total Moisture	% w.t.	As Rec'd.	BS EN 14774 (2): 2009	20.00		Not defined ²
Ash	% w.t.	Dry	BS EN 14775: 2009		1.20	5.00
Gross Calorific Value	MJ/kg	Dry	BS EN 14918: 2009	18.00	19.50	22.00
Dust	% w.t.	1mm screen	EN 15149-1: 2010			1.00
Bulk Density	kg/m ³	As Rec'd.	EN 15103: 2009	>300		
Wood Spec Size	mm	As Rec'd				45
Ultimate Analysis						
Nitrogen	%	Dry	BS EN 15104: 2011		0.50	1.00
Sulphur	%	Dry	BS EN 15289(1): 2009		0.03	0.1
Trace Elements						
Chlorine	%	Dry	BS EN 15289: 2011		0.02	0.05
Sodium ³	%	Dry	Standard accredited laboratory method			0.02
Potassium	%	Dry	Standard accredited laboratory method			0.05
Ash Fusion						
Initial Deformation Temperature (reducing)	°C		CEN/TS 15370-1: 2006	1100	1300	1500
Impurities						
Foreign Matter	% w.t.	As Rec'd.	Gravimetric	Absent		

¹ Should any of the pollutant limits under EN ISO 17225-4 be amended, including the addition of any pollutants, the most recent version of the pollutant limits shall be complied with. It is the responsibility of the producer and users to ensure that the most up to date version of the technical standard is being complied with.

² Maximum Moisture % is not Defined – however as products are paid for on an Energy Basis delivery of Very High Moisture Content material e.g. 65% + will attract a reduced rate (as stated by Edenderry Power)

³ The specification and pollutant limits for dust, sodium, potassium, Initial Deformation Temperature and foreign matter are not specified in EN ISO 17225-4 and originate from Edenderry Powers customer specification.

Part 4. Sampling & testing

Criteria		Monitoring requirements
4.1	Incoming waste wood shall be verified on-site using TWCs internal QC procedures, namely the Grade A Wood Input Inspection Sheet (GA-01a), and with reference to the criteria outlined in Table 2: Input Material Specifications.	Samples shall be collected by a qualified person and be in accordance with the sampling and monitoring conditions of the site's IEL.
4.2	<p>Each consignment of recovered woodchip shall be subject to daily sampling and on-site testing in accordance with TWC's internal quality control procedures (GA-02, GA-02a & GA-02b). A 1 kg sample shall be collected per consignment, with results recorded for moisture content, particle size distribution, and presence of non-wood materials, including MDF and treated wood.</p> <p>A weekly composite sample shall be prepared from the daily composites. Testing of the weekly composite sample shall be conducted as follows:</p> <ol style="list-style-type: none"> at an accredited laboratory, using accredited test methods, where available, for all parameters specified in Table 1; and With confirmation that the recovered product meets the requirements of EN ISO 17225-4; and is free of Persistent Organic Pollutants (POPs), 	<p>The laboratory selected shall be able to achieve detection limits for each parameter specified in Table 1.</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 be a composite sample prepared from approximately 10 individual 1 kg samples taken from each daily consignment loaded.</p>

Table 2: Input Material Specifications

Parameter	Acceptance Criteria	Action if Non-Compliant
Treated wood (e.g. MDF, chipboard)	Absent	Reject or divert to non-Grade A processing
Plastics, metals, textiles	Absent or minimal (visually screened)	Remove manually or reject load
Moisture content	Visually dry (quantitative testing in Quality Assurance procedures)	Divert or reject if saturated
Load documentation	Complete and matches supplier declaration	Hold or reject pending clarification
Segregation at source	Confirmed via self-declaration	Audit supplier if repeated non-compliance

Part 5. Storage

Criteria		Monitoring requirements
5.1	Recovered woodchip pending the results of testing, shall be identified and physically separated into individual batches per representative sample and stored in designated bays within the designated shed.	<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 woodchip stored greater than 12 months shall be re-classified as waste and managed accordingly until classified otherwise.</p>
5.2	Prior to dispatch or use, recovered woodchip that fulfil the criteria shall be kept in designated areas, separate from any other products or waste.	
5.3	The recovered woodchip 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.	

ANNEX II

Specific use & restrictions on use

1. Specific uses

The recovered woodchip that is produced in compliance with these criteria shall only be suitable for use as a biomass fuel at Edenderry Power Station.

2. Restrictions on use

The recovered woodchip is restricted to exclusive use as a biomass fuel at Edenderry Power Station and shall not be used for any other purpose.

ANNEX III

Statement of conformity with the end-of-waste criteria

1.	<u>Producer of the recovered woodchip</u> Producer Organisation Name: Registered Company Address: Waste Authorisation Ref. No.: Address & Eircode of Production: Contact Tel: Contact E-mail: Date of production:
2.	Quantity of the consignment in kg:
3.	<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> <ul style="list-style-type: none"> •
4.	The recovered woodchip in this consignment complies with the customer specification, industry specification or standard listed below: <ul style="list-style-type: none"> •
5.	<u>Restrictions on use</u> The material in this consignment is <u>not suitable</u> for use in: <ul style="list-style-type: none"> •
6.	The recovered woodchip in this consignment meets the criteria specified in Single Case End-of-Waste decision Art28-0097 for recovered wood.
7.	The producer of recovered woodchip 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 Table 2.
9.	Declaration of the producer of recovered woodchip in this consignment: I certify that the above information is complete and correct to the best of my knowledge: Name: Date: Signature:
10.	<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 recovered woodchip to the next holder to ensure the chain of custody has been completed to include details of the next holder.