Interreg CENTRAL EUROPE

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ReBuilt

D 3.1.2 Review of existing End-of-Waste criteria and proposal for new

POR with other Interreg CE ReBuilt partners

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1. Introduction

The construction sector is one of the most resource-intensive industries in Europe. It accounts for more than 50% of extracted raw materials, approximately 50% of water consumption, and one third of total energy use. At the same time, it generates over one third of all waste and contributes roughly one third of greenhouse gas emissions. Strengthening the circular economy (CE) in this sector therefore has a significant potential impact on resource efficiency, environmental performance, and overall societal wellbeing in Central Europe.

The innovation ecosystems supporting circular and digital construction across Central Europe differ substantially, particularly in the development and application of End-of-Waste (EoW) criteria for mineral construction and demolition waste (CDW), which are critical instruments for enabling the transition of construction and demolition waste into products. EoW criteria provide legal certainty, define quality and environmental standards, and create the foundation for market uptake of secondary raw materials (SRMs). While some countries in the region (e.g. Austria, Italy and Croatia) have adopted structured and functional EoW frameworks that support higher-value recycling and circular construction practices, others rely only on general regulatory provisions and have not yet established specific criteria for mineral CDW (e.g. Slovenia, Poland, Slovakia, Hungary) or. In several cases, overly strict or non-realistic limit values may unintentionally hinder the use of recycled materials in construction, slowing rather than accelerating circular economy progress. At the same time, in regions where dedicated EoW frameworks are lacking or limited, CDW management often remains focused primarily on backfilling instead of material recovery at higher value levels. Addressing these disparities and strengthening demand-side measures, including the review and improvement of End-of-Waste criteria, is therefore one of the key objectives of the Interreg Central Europe ReBuilt project.

Since the preparation of the ReBuilt project proposal, significant progress has been made at the European level regarding End-of-Waste criteria for construction and demolition waste. In June 2025, the Joint Research Centre (JRC) published a draft technical proposal for EU-wide End-of-Waste criteria for mineral construction and demolition waste. This development represents a major step toward harmonisation across Member States and may has a direct implications for existing and future national regulatory frameworks.

In this context, Deliverable D.3.1.2 aims to:

- Introduce the fundamental concept of End-of-Waste and its role within EU waste legislation and circular economy policy;
- Provide a detailed review of the national level End-of-Waste criteria and regulatory frameworks for mineral CDW (where existing) established in the partner countries (Slovenia, Croatia, Italy, Poland, Slovakia, Czech Republic, Hungary, Germany, and Austria);
- Analyse and compare national approaches with the draft EU-wide criteria proposed by the JRC;
- Highlight key differences and identify good practices within national frameworks;
- Provide policy recommendation that may serve as reference points for future development and harmonisation.

This comparative overview will offer policymakers, practitioners and other stakeholders a structured understanding of possible future changes in the End-of-Waste landscape within each partner country. It will

also support informed decision-making and strategic alignment with forthcoming EU harmonisation efforts, thereby contributing to a more integrated and functional market for secondary raw materials in Central Europe.

2. End-of-Waste Criteria in the EU Legal Context

2.1. Lack of Harmonisation as a Barrier to the Circular Economy

One of the structural barriers to the development of a well-functioning circular economy within the European Union is the lack of harmonisation of End-of-Waste (EoW) criteria across Member States. While Article 6 of the Waste Framework Directive (WFD)[1] allows Member States to establish national EoW criteria, divergent approaches, limit values, procedural requirements and quality standards have resulted in fragmented regulatory landscapes.

This fragmentation creates legal uncertainty for:

- Waste operators carrying out recovery activities;
- Traders involved in cross-border shipment;
- End-users of recycled materials in construction and other sectors.

Materials that have ceased to be waste in one Member State may still be legally considered waste in another, leading to complications in shipment procedures, increased administrative burden, additional permitting requirements, and potential barriers to the free movement of goods. In practice, this situation undermines the development of a stable internal market for secondary raw materials.

As announced in the Circular Economy Action Plan[2], the European Commission recognised the need to assess the potential for developing additional EU-wide EoW criteria for relevant waste streams. The objective is to promote recycling, increase market confidence in secondary raw materials, and ensure a level playing field across the Union.

The implementation of harmonised EoW criteria can significantly reduce administrative and economic burdens, particularly in relation to shipment procedures. For construction and demolition waste (CDW), EU-wide criteria would clearly define when mineral CDW ceases to be waste and can be placed on the market and transported as a product rather than under waste shipment rules. Such harmonisation would directly address the existing legal uncertainties faced by operators and traders.

2.2. Legal Basis for End-of-Waste under the Waste Framework Directive

Article 6(1) of the Waste Framework Directive establishes the general conditions under which waste may cease to be waste. Member States shall ensure that waste which has undergone a recycling or other recovery operation is considered to have ceased to be waste if it complies with the following conditions:

[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008L0098-20251016

[2] COM/2020/98: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN

(a) the substance or object is to be used for specific purposes;
(b) a market or demand exists for such a substance or object;
(c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products;
(d) the use of the substance or object will not lead to overall adverse environmental or human health impacts.

These four cumulative conditions define the conceptual foundation of the EoW mechanism. The transition from waste to product status is not automatic; it requires both technical compliance and market validation, combined with environmental safeguards.

2.3. Methodological Framework for Developing EoW Criteria

2.3.1. Union-wide EoW criteria

Under Article 6(2), the Commission is required to:

- Monitor the development of national EoW criteria in Member States;
- Assess the need for Union-wide criteria;
- Adopt implementing acts establishing detailed criteria for specific waste streams where appropriate, to uniform the application of the conditions from Article 6(1).

Union-wide EoW criteria must ensure a high level of environmental and human health protection, and prudent and rational use of natural resources.

The Directive specifies that detailed criteria shall include:

(a) permissible waste input material for the recovery operation;

(b) allowed treatment processes and techniques;

(c) quality criteria for end-of-waste materials resulting from the recovery operation in line with the applicable product standards, including limit values for pollutants where necessary;

(d) requirements for management systems to demonstrate compliance with the end-of-waste criteria, including for quality control and self-monitoring, and accreditation, where appropriate; and

(e) a requirement for a statement of conformity.

An important clarification introduced by the 2018 amendment of the Waste Framework Directive is that, when developing Union-wide criteria, the Commission shall take as a starting point the most stringent and environmentally protective **national EoW criteria already established in Member States**. This ensures that harmonisation does not lead to a lowering of environmental standards. Moreover, the Commisssion is not basing its work on case-by-case decisions (chapter 2.3.3. below) – these are also not required to be notified to the Commision.

2.3.2. End-of-Waste criteria established by Member States

Where criteria have not been set at Union level as explained above, Member States may establish detailed criteria on the application of the conditions from Article 6(1) to certain types of waste. Those detailed criteria shall take into account any possible adverse environmental and human health impacts of the substance or object and shall satisfy the requirements of points (a) to (e) of Article 6(2), i.e. permissible waste input material, allowed treatment processes and techniques, quality criteria, requirements for management systems and a requirement for a statement of conformity.

2.3.3. Case-by-case decisions

Where criteria have not been set at either Union level (as explained in chapter 2.3.1. above) nor at national level (as explained in chapter 2.3.2 above), a Member State may decide on a case-by-case basis, or take appropriate measures to verify, that certain waste has ceased to be waste on the basis of the conditions laid down in Article 6(1) and, where necessary, reflecting the requirements laid down in points (a) to (e) of Article 6(2), and taking into account limit values for pollutants and any possible adverse environmental and human health impacts.

2.4. Existing Union-wide End-of-Waste Criteria

To date, Union-wide EoW criteria have been successfully adopted for specific waste streams:

- Iron, steel and aluminium scrap (Commission Regulation (EC) No 333/2011);
- Glass cullet (Commission Regulation (EU) No 1179/2012);
- Copper scrap (Commission Regulation (EU) No 715/2013).

Additionally, the Commission has adopted Component Material Criteria (CMC) under the Fertilising Products Regulation (EU) No 2019/1009, allowing certain waste-derived materials to cease to be waste under defined conditions.

Technical proposals for Union-wide plastic EoW criteria have been published but have not yet been adopted as binding regulations. Furthermore, the JRC is currently developing technical proposals for Union-wide EoW criteria concerning the preparing for re-use and recycling of textile waste.

Related to Interreg CE ReBuilt project, JRC is currently developing technical proposals for Union-wide EoW criteria concerning mineral construction and demolition waste (JRC draft published on 11 June 2025).

3. Interreg CE ReBuilt Methodology for National Review and Comparative Assessment of End-of-Waste criteria established by Member States

In line with the ReBuilt project application, this deliverable focuses specifically on construction and demolition waste (CDW), and in particular on mineral CDW suitable for recycling into aggregates and other construction materials.

As noted above, in June 2025 the Joint Research Centre (JRC) published a draft technical proposal for EU-wide End-of-Waste (EoW) criteria for mineral construction and demolition waste. Stakeholders were invited to provide feedback on the draft proposal, which has since been analysed by the JRC. A revised version is currently under preparation. A stakeholder event to present the final proposal is planned for March 2026, with the publication of the final Technical Proposal for EU-wide EoW Criteria for CDW expected in June 2026.

In this context, Deliverable D.3.1.2 focuses primarily on comparing national approaches (End-of-Waste criteria established by Member States) with the draft EU-wide criteria proposed by the JRC, in particular Chapter 5.2 ("Proposed EoW criteria for mineral CDW suitable for recycling") — see Annex 1 for reference below.

To ensure consistency and comparability, national criteria were assessed using a common template against the structure defined in Article 6(2) of the Waste Framework Directive (WFD) and reflected in the JRC proposal. The comparison covers:

(a) Permissible waste input materials for the recovery operation;
(b) Allowed treatment processes and techniques;
(c) Quality criteria for end-of-waste materials, including pollutant limit values;
(d) Management system requirements, including quality control and self-monitoring;
(e) Requirements for a statement of conformity.

In addition, project partners were asked to highlight key differences and identify good practices within their national frameworks.

This comparative overview provides policymakers, practitioners and other stakeholders with a **structured understanding of potential future developments in the End-of-Waste landscape in partner countries.** It also supports informed decision-making and strategic alignment with forthcoming EU harmonisation efforts, thereby contributing to a more integrated and functional market for secondary raw materials in Central Europe.

The Interreg Central Europe ReBuilt project partnership includes representatives from the following countries:

- Slovenia
- Croatia
- Italy
- Poland
- Slovakia

- Czech Republic
- Hungary
- Germany
- Austria

The research findings indicate that in Slovenia, Poland, Slovakia, and Hungary no national End-of-Waste criteria established by Member States (as described in Chapter 2.3.2) currently exist. Consequently, no further comparative assessment was carried out for these countries.

On the other hand, national End-of-Waste criteria have been established in Italy, Croatia, Austria, the Czech Republic and Germany*. The corresponding reviews for these countries are provided in the **Annexes 2-6** below:

Annex 2 – Italy

Annex 3 - Croatia

Annex 4 - Austria

Annex 5 – Czech Republic

Annex 6 - Germany

4. Good practices within national frameworks that may serve as reference points for future development and harmonisation

The review of national End-of-Waste frameworks shows that Italy, Croatia, Austria, the Czech Republic and Germany have developed useful regulatory approaches that could support future EU-level harmonisation. While the systems differ in legal structure, scope and administrative intensity, several practices stand out as transferable examples.

Italy

Italy provides a particularly structured and enforceable model for inert construction and demolition waste. Its use of a closed list of eligible waste codes reduces uncertainty for operators and authorities and limits the risk of unsuitable materials entering the recovery process. The explicit exclusion of soil and stones from contaminated sites is also a strong preventive measure.

The framework is operationally detailed, requiring trained staff, documented acceptance procedures, dedicated storage for non-conforming materials, and clear traceability and non-conformity workflows.

A key strength is the use-driven approach to quality criteria, where limit values are defined according to the intended end-use, ensuring a risk-based and practical system.

Italy also applies a lot-based conformity model, linking each lot to analytical evidence and a declaration of conformity. This declaration is notified to authorities (including ARPA), retained for five years, and supports strong regulatory oversight.

Additional good practices include a clear link between intended use, technical standards and quality requirements, a strong evidentiary approach through archived samples, and using EMAS/ISO 14001 as a lever (via targeted exemptions) is a smart way to raise baseline quality governance without universal mandates.

Croatia

Croatia's framework is characterised by strong procedural control and traceability. The use of detailed waste-code lists for recycled aggregate and backfilling materials provides clear guidance on permissible inputs, while the requirement that recovery is carried out only by authorised operators with R5 permits strengthens regulatory accountability.

A key good practice is the batch-by-batch testing system, where each batch must comply with defined leaching and contaminant limits. Sampling and testing are performed by authorised or accredited laboratories, ensuring reliability and consistency. In addition, Croatia requires proof that recycled aggregate does not pose a higher hazardous-property risk than natural aggregate, providing a clear and practical environmental safeguard.

The framework also includes precise definitions of intended uses and corresponding technical documentation requirements, improving clarity for both regulators and market actors.

Finally, Croatia introduces a clear requirement to demonstrate market demand (e.g. contracts or declarations of intended use) before granting End-of-Waste status. This helps prevent overproduction and stockpiling, ensuring that recycled materials are directly linked to real market applications.

Austria

Austria provides a highly developed and structured framework with clear and precise lists of allowed and prohibited materials, including specific rules for recycled gypsum (RC gypsum). The detailed exclusions go beyond general EU categories, helping operators proactively avoid problematic inputs.

A key strength is the advanced quality assurance system, combining internal factory production control with external declaration testing. This dual approach ensures both continuous monitoring and independent verification of compliance.

Austria also requires batch testing and retention of physical samples, enabling reliable ex-post verification. In addition, the extended retention period for conformity documentation (7 years), together with the obligation for both producers and purchasers to retain records, strengthens traceability and accountability across the value chain.

Czech Republic

The Czech framework is characterised by the absence of a permanent national End-of-Waste decree for mineral CDW, resulting in variability between regional decisions and lower legal certainty for operators. However, transitional national EoW criteria (valid until 31 December 2027) provide an interim solution and are notably broad in scope, applying also to "other wastes of the same material composition," thereby extending applicability beyond standard CDW streams.

A distinctive feature is the two-step compliance model. Even after achieving End-of-Waste status, materials must still comply with full construction product legislation (e.g. declaration of conformity/performance, factory production control, marking). This means that EoW status alone is not sufficient for market placement.

This dual system—combining environmental (EoW) and product-performance requirements—provides stronger guarantees of safety, technical performance and market confidence compared to systems where EoW status alone is considered sufficient.

Germany

Germany regulates mineral construction and demolition waste primarily through the Substitute Building Materials Ordinance (EBV). While it does not formally establish End-of-Waste status, it already incorporates many equivalent elements, including requirements for material production, classification and use.

A key strength is the detailed classification of substitute building materials and their link to specific installation conditions. Materials are assigned to quality classes and permitted uses in technical structures, creating a risk-based system that aligns environmental protection with actual application conditions.

Another important practice is the emphasis on separate collection of mineral waste streams, improving input quality for recycling. At the same time, Germany introduces pragmatic exceptions, allowing mixed collection where separate collection is technically impossible or economically unreasonable. This adds flexibility while maintaining overall system efficiency.

Cross-cutting practices relevant for harmonisation

Across the five national systems, the most transferable practices that could inform future EU-wide End-of-Waste criteria (for mineral CDW or other waste streams) include:

- **Establishing clear and unambiguous input criteria**, preferably through defined material lists and explicit exclusions of hazardous or contaminated waste streams;
- **Ensuring strong operational control at facility level**, including mandatory acceptance procedures, staff competence, and management of non-conforming materials;
- **Implementing robust traceability systems**, based on lot- or batch-level control linked to analytical evidence and documentation;
- **Requiring regular, standardised testing**, supported by accredited laboratories, to guarantee consistent material quality;
- **Adopting risk-based quality approaches**, including use-specific thresholds or classification systems aligned with intended applications;
- **Strengthening the link between EoW status and construction product legislation**, ensuring compliance with technical standards and market requirements;
- **Defining permitted uses of recycled materials**, to align environmental protection with practical application conditions;

- **Requiring effective quality management systems**, combining internal control with appropriate levels of external verification;
- **Ensuring comprehensive documentation and retention**, enabling ex-post verification and regulatory oversight;
- **Using conformity declarations as a key enforcement tool**, supporting transparency and accountability across the value chain;
- **Integrating market-based conditions**, such as proof of demand or intended use, to avoid overproduction and ensure real circular use;
- **Allowing controlled flexibility**, including justified exemptions (e.g. for separate collection), while maintaining core environmental safeguards;
- **Promoting advanced management practices**, such as EMAS or ISO systems, through incentives rather than strict universal mandates.

These practices could serve as reference points for future EU-wide criteria by combining environmental protection, legal certainty and practical usability for operators and end-users.

Annex 1 – JRC Draft

a) Permissible waste input material

Requirements on input materials: Hazardous and POP containing mineral CDW - Criterion 1.1[3]

Mineral CDW classified as **hazardous waste** (Annex III of the Directive (EC) No 2008/98 (Waste Framework Directive)) shall not be used as input.

Mineral CDW containing **POP concentrations** above the limit values pursuant to Annex IV to Regulation (EU) No 2019/1021100 on persistent organic pollutants (POPs) shall not be used as input.

Requirements on input materials: Minimum requirements - Criterion 1.2

CDW and manufacturing waste from source separated collection or after sorting and pretreatment shall only **contain physical impurities** (e.g. soil or parts of soils (peat, clay, silts, sand), wood, glass, plastics, rubber, metals) that can be removed by the recycling operation **to an extent to fulfil the requirements of the output material.**

Requirements on input materials: Restriction of input material - Criterion 1.3

Mineral CDW to be used as input **may originate from any source under scope.** The following materials shall not be used as input material:

a) non-mineral CDW and mineral CDW fractions **predominantly consisting of materials not under scope** (e.g. gypsum, glass)[4];

b) mineral CDW and manufacturing waste known or suspected to be **radioactive**[5] or containing **asbestos**[6].

Mineral CDW shall not contain visually detectable[7]:

(a) **artificial fibres** (e.g. rock or glass wool);

(b) **mineral oil**;

(c) **paint** or similar visible treatments;

[3] JRC proposes to exclude mineral CDW classified as hazardous and mineral CDW with POP concentrations above the limit values pursuant to Annex IV to Regulation (EU) No 2019/1021

[4] CDW known or suspected to contain high quantities of the following fractions shall be excluded for the production of RA: insulation material (i.e., rock and glass wool), gypsum and asphalt. On the other hand, track ballast and excavated soil (consisting of stones and stones sorted out of excavated soils) are CDW fractions that are not excluded for the production of RA.

[5] The JRC is of the opinion that CDW or manufacturing waste known or suspected to be radioactive shall be entirely banned as input material.

[6] JRC is of the opinion that certain materials or substances should be explicitly restricted to enter a recycling facility, namely asbestos.

[7] JRC is of the opinion that certain materials or substances should be explicitly restricted to enter a recycling facility, namely artificial fibres (e.g. rock or glass wool), mineral oil, paint or similar visible treatments, coal tar, and bitumen.

(d) **coal tar**;

(e) **bitumen**, and

(f) deleterious constituents with adverse effect on the output material.

b) Allowed treatment processes and techniques

Requirements on processes and techniques: Storage of input and output materials - Criterion 2.1

Mineral CDW waste eligible to be used as **input** material shall, once received by the operator of the treatment facility, be **stored separately from noneligible input materials** to avoid contamination.[8]

Output materials that comply with the EoW criteria shall be **stored separately from any waste material not complying** with the EoW criteria.[9]

The output material shall be stored and handled in such a way that it does not affect the material quality.

Requirements on processes and techniques: Treatment steps[10] - Criterion 2.2

The recycling operation **shall include all treatment steps needed** to prepare the output material to be used for unbound application or ready for use in bound construction materials.[11]

The requirements on product quality shall be achieved by the waste input materials and the applied treatment steps and **not by mixing** with natural aggregates.[12]

c) Quality criteria for end-of-waste materials

Requirements on product quality: Compliance with legislation - Criterion 3.1

The output materials from the recycling process shall demonstrably fulfil the following legal requirements:

[8] JRC proposes that mineral CDW eligible for to be used as EoW input shall be stored separately from any other waste not eligible to be used as input. This approach ensures better quality control and prevents contamination.

[9] The JRC proposes that output materials that comply with the EoW criteria shall be stored separately from any material not complying with the EoW criteria. However, the JRC refrains from more detailed separate storage requirements at the EU level, based on specific properties of RA or their intended applications.

[10] Regarding sorting and pre-treatment The JRC refrains from setting technical requirements for the sorting and pre-treatment steps of CDW and thus preserves a technologically open approach.

[11] The JRC aims at technological neutrality in the EoW criteria. Each recycling plant might achieve the output quality requirements with different technologies depending on the local variability on inputs and market requirements. Therefore, the JRC believes that, if RA meet the EoW quality criteria, it is preferable to refrain from dictating how this is achieved, as this could hinder innovation. Therefore, it does not seem appropriate to impose mandatory recycling treatment steps.

[12] The JRC is of the opinion that the required output quality shall be achieved by proper management of the input material and the applied treatment steps and not by mixing or blending with natural aggregates during the recycling process. This could lead to mineral CDW with a high impurity or contamination content being mixed with natural aggregate, and the limit values proposed for the output material could only be achieved through dilution. The JRC therefore suggests that mixing with natural aggregates shall only be done after the EoW conformity of the RA is confirmed.

(a) the output material resulting from the recycling operation shall not be classified as hazardous pursuant to Article 3 of and Annex I to Regulation (EC) No 1272/2008 (**CLP**);[13]

(b) substances on their own or in mixtures, resulting from the recycling operation shall comply with Regulation (EC) No 1907/2006 (**REACH**), including but not limited to compliance with Article 56 setting out authorisation provisions for uses of substances listed in Annex XIV to REACH and for their placing on the market as well as the conditions laid down in Article 67 for the manufacture, placing on the market and use of substances restricted in Annex XVII37 to REACH;[14]

(c) substances on their own or in mixtures, resulting from the recycling operation meet the provisions limiting the manufacturing, placing on the market and use of persistent organic pollutants (**POPs**) pursuant to Article 3 of and Annex I to Regulation (EU) No 2019/1021;[15]

(d) when placed on the market, the obligations in relation to the output material under Regulation (EU) No 305/2011 or Regulation (EU) 2024/3110 (**CPR**), whichever applies, are fulfilled.[16]

Requirements on product quality: Compliance with specifications and standards - Criterion 3.2

The output materials from the recycling process shall comply with **customer specifications, industry specifications or technical standards** for its intended specific use, including the cross-referenced standards.[17]

Requirements on product quality: Threshold for constituents and asbestos - Criterion 3.3

The **output** materials shall comply with the following **limit values**[18]:

(a) Asbestos: max. 100 mg/kg DM

(b) Floating materials (FL): $\leq$ 5 cm3/kg;

(c) Glass and other materials (Rg+X): $\leq$ 1% by mass.

(d) Bituminous material: (Ra): $\leq$ 0,1% mass.

Compliance with output quality requirements shall be assessed no longer than **24 months** prior to handing over the output material to the next holder.

[13] To place a substances and mixtures on the market, they have to be classified, labelled and packed according to the CLP Regulation. To ensure a high level of protection of human health and the environment, the JRC proposes that a RA placed on the market shall not be classified as hazardous according to Article 3 and Annex I of the CLP Regulation.

[14] JRC proposes that the output material should meet all requirements set out in REACH

[15] The JRC proposes that RA have to comply with the POPs Regulation (Article 3), including the limit values imposed therein (Annex I) to reach EoW status.

[16] The JRC is of the opinion that output material has to comply with both the previous (Regulation (EU) No 305/2011) and also the latest version of the CPR (Regulation (EU) No 2024/3110).

[17] The JRC is of the opinion not to refer to any EU standards or specifications in the EoW criteria, as such a list would inevitably be non-exhaustive and subject to periodic updates. It is the recyclers responsibility to ensure that the latest version is referred to. This does not exclude the possibility that recyclers may need to comply with certain industry or costumer specification if requested by the next holder.

[18] JRC recommends avoiding references to specific EU standards in the EoW criteria. Instead, the operator can freely choose which method to use to quantify asbestos, allowing for flexibility and adaptability to future updates and developments in standardisation.

Requirements on product quality: Thresholds for other contaminants - Criterion 3.4

The output materials shall comply with the limit values for

(a) **leaching**;[19]

(b) **total content**[20]

(see Table below).

Compliance with output quality requirements shall be assessed no longer than **24 months** prior to handing over the output material to the next holder.[21]

Table: Leaching and total content limit values (JRC proposal). All values in mg/kg dry matter.

	Leaching:	
Parameter	**Concrete, bound and unbound-capped;**	**Unbound-uncapped**
Arsenic (As)	0.9	0.5
Cadmium (Cd)	0.4	0.05
Chromium (Cr)	1.9	0.6
Copper (Cu)	15.4	6.9
Mercury (Hg)	0.1	0.01
Lead (Pb)	2.1	0.5
Nickel (Ni)	1	0.5
Zinc (Zn)	17.4	4.5
Antimony (Sb)	1.3	0.2
Molybdenum (Mo)	3.9	0.6
Vanadium (V)	2.4	1
Cobalt (Co)	2.1	0.4
Selenium (Se)	0.5	0.1
Barium (Ba)	29.4	23
Bromide (Br-)	20	4
Fluorides (F-)	56	12.1
Chlorides (Cl-)	7750	944
Sulphates (SO42-)	9750	1270
Cyanides (CN-)	0.5	0.1

[19] JRC is of the opinion that even if several tests can be used for the same purpose, whenever there is discrepancy of compliance in the results, preference should be given to the EN 16637 percolation test, which is specific for RA to be used as construction product, and the test simulates the effect of rain episodes percolating through the granular material.

[20] The JRC refrains from prescribing specific laboratory preparation and analysis methods for total content measurement. However, analyses have always to be performed by an accredited laboratory, using accredited test methods (where available).

[21] JRC proposes that compliance with output quality requirements for other contaminants (environmental parameters) shall be assessed within 24 months prior to handing over the output material to the next holder. It is proposed to document these procedures in the quality management system. In case the RA are handed over after this time period, re-testing is necessary and in case the RA does not fulfil the EoW requirements, the RA shall be deemed to be waste again.

Ammonium (NH4+)	400	80
Nitrites (NO2-)	27	5.4
Dissolved Organic Carbon	360	180

Parameter	**Total content**
Hydrocarbons (C10-C40)	825
PAHs	50
BTEX	44
PCBs	2
Phenol	37

Requirements on product quality: Restriction of application (environmental protection) - Criterion 3.5

The output materials (bound or unbound) shall not be used for applications[22]:

a) in contact with **water intended for human consumption**;

b) in contact with **groundwater and surface water**;

c) in **areas with high probability of floods** according to Article 6 (3c) of Directive EC No 2007/60 on the assessment and management of flood risks;

d) in **safeguard zones (zone 1) for the abstraction of drinking water** according to Water Framework Directive (EC 2000/60; Article 7 (3)).

d) Requirements for management systems (quality control, monitoring, accreditation)

Requirements on quality assurance procedures - Criterion 4.1

1. The operator of the treatment facility shall **implement a quality management system** suitable to demonstrate compliance with the end-of-waste criteria.[23]

[22] JRC is of the opinion that construction materials partly or fully based on RA should not be used for construction works in contact with ground- or surface water, in areas with high probability of floods and in safeguard zones (zone 1) for the abstraction of drinking water. JRC also proposes that construction materials partly or fully based on RA should not be in contact with water intended for human consumption (e.g. during abstraction, treatment, storage or distribution). By excluding such intended uses, the risk for negative environmental impacts can be reduced significantly. At the same time, these restrictions will only affect a small proportion of potential applications for RA. RA represent 8% of the EU+EFTA aggregate demand and the use of all aggregates (including RA) that are used in infrastructure, for which some of the infrastructure may come into contact with water (e.g. bridges, harbours, and offshore pipeline stabilisation), is limited.

[23] JRC proposes that the operator of the treatment facility should be required to implement a QMS to keep track of defined procedures and to demonstrate compliance with the EoW criteria. Besides a mandatory QMS the JRC also proposes that self-monitoring requirements shall be proposed for each criterion. However, the JRC refrains from prescribing 'designated persons in charge' for the QMS.

2. The quality management[24] system shall include a set of documented procedures concerning each of the following aspects:

• monitoring of waste used as **input material** for the recycling operation and acceptance control (including risk management and control measures);

• monitoring of the **treatment processes and techniques**;

• monitoring of the **quality of the output material** resulting from the recycling operation (including instructions for sampling and analysis and frequency of verification);

• collection and processing of **feedback from customers** concerning the quality of the output material to improve the performance of the recycling operation;

• record-keeping of the **results of monitoring** conducted under points (a) to (c);

• record-keeping of the **actions taken to improve the performance** of the recycling operation, in the case of **non-conformity** with the end-of-waste criteria;

• **review and improvement** of the quality management system; and

• **training of staff**.

3. All documented procedures shall be maintained for a minimum of **5 years**, which may include electronic records.

4. The quality management system shall also **prescribe the specific self-monitoring requirements** set out in the end-of-waste criteria for each criterion.

5. The **quality management system shall be certified** by one of the following:

a) a **conformity assessment body** which is accredited by an accreditation body successfully peer-evaluated for this activity by the body recognised in Article 14 of Regulation (EC) No 765/200843, or

b) by an **environmental verifier** which is accredited or licensed by an accreditation or licensing body, as defined respectively in Article 2(30) and 2(31) of Regulation (EC) No 1221/200944, which is also subject to peer-evaluation according to Article 31 of Regulation (EC) No 1221/2009. Verifiers who want to operate in third countries must obtain a specific accreditation or licence, in accordance with the specifications laid down in Regulation (EC) No 765/2008 or Regulation (EC) No 1221/2009, the latter together with Commission Decision (EU) No 2011/83245, or

c) **notified body** that is notified to carry out the assessment and verifications according to the Regulation (EU) No 305/2011 or Regulation (EU) No 2024/3110 or the respective products covered by harmonised technical specification for aggregates cited under one of these regulations.

6. The importer of construction and demolition material resulting as output of treatment facilities based in third countries shall **require third-country suppliers to implement a quality management system** which complies with the requirements of points 1 to 4 of this criterion and which has been verified by an independent external verifier.

7. A conformity assessment body, as defined in Regulation (EC) No 765/2008, which has obtained accreditation in accordance with that Regulation, or an environmental verifier, as defined in Article 2(20)(b) of Regulation (EC) No 1221/2009, which is accredited or licensed in accordance with that Regulation, shall

[24] JRC proposes not to mandate the application of specific international, EU or national standards for the QMS. Important arguments against the implementation of a standardised QMS are the expected additional administrative burden and costs, which can pose a financial burden, in particular on small and medium-sized companies. Furthermore, these standards were not specifically designed for the quality assurance in the context of achieving EoW status, and this approach is in line with the implemented EU-wide EoW criteria (e.g. glass cullet, iron and steel scrap).

verify that the **quality management system fulfils the requirements** on quality assurance procedures. The **verification shall be carried out every 3 years.**[25]

8. Only verifiers with the following scopes of **accreditation or licence based on the NACE Codes** as specified in Regulation (EC) No 1893/200646 are regarded as having sufficient specific experience to perform the verification mentioned in this Regulation: (1) NACE Code 23 (Manufacture of other non-metallic mineral products); or (2) NACE Code 38 (Waste collection, treatment and disposal activities; material recovery); (3) NACE Code 41 (Construction of buildings) (4) NACE Code 42 (Civil engineering) (5) NACE Code 43 (Specialised construction activities including for example 43.1 - Demolition and site preparation)

9. The operator of the treatment facility shall give competent authorities, as defined in Article 2(26) of Regulation (EC) No 1221/2009, **access** to the quality management system upon request.

e) Requirement for a statement of conformity

Requirements on provision of information - Criterion 5.1[26]

The producer or the importer shall issue, for each consignment of output material complying with end-of-waste criteria, a statement of conformity as set out in the template.

The producer or the importer shall transmit the statement of conformity to the next holder of the consignment. They shall retain a copy of the statement of conformity for at least 3 years after its date of issue and shall make it available to competent authorities upon request.

The statement of conformity is preferably issued in electronic form.

JRC technical proposal for the statement of conformity template[27]

1.

Unique identification code of the consignment:

Producer/importer of the recycled aggregates:

[25] JRC proposes a verification interval of 3 years for the QMS procedures.

[26] Objective: The requirements on provision of information are complementary to quality criteria. In order to minimise the risk that EoW output materials are diverted to uses different from the intended use in construction works, additional requirements are needed, specifically on the statement of conformity, which is to be issued by producer of the recycled EoW aggregates.

[27] JRC proposes the following elements for a template for the statement of conformity:

— Unique identifier: It is proposed to add a unique identifier code, to easily identify EoW consignments which may have been used for other purposes;

— Contact details of the producers (name, address, contact person, telephone number, email address);

— Quantity of the consignment (in t);

— Name or code of the RA category in accordance with a customer specification, an industry specification or standard;

— Main technical provisions of the customer specification, industry specification or standard including compliance with end-of-waste product quality requirements on limit values (total content and eluate) for the different intended uses;

— Compliance with customer specification, industry specification or standards;

— Compliance with meeting the EoW criteria or input materials, treatment processes and techniques and on product quality;

— Compliance with relevant legislation;

— Application of a verified quality management systems;

— Intended use of the of the RA: RA shall only be used for the application for which a certificate of conformity has been issued;

— Restriction of use in construction works under certain conditions;

— Declaration of the producer/importer including the date of signature.

Name:

Address:

Contact person:

Tel.:

E-mail:

2. Quantity of the consignment in tonnes:

3.

a) Name or code of the RA category in accordance with a customer specification, an industry specification or standard:

b) Main technical provisions of the customer specification, industry specification or standard including compliance with end-of-waste product quality requirements on limit values defined in criterion 3.3 and 3.4 for the different intended uses:

4. The recycled aggregates consignment complies with a customer specification, industry specification or a standard referred to in point 3.

5. The recycled aggregates consignment meets the criteria on input materials (1.1, 1.2 and 1.3), on treatment processes and techniques (2.1 and 2.2), and on product quality (3.1, 3.2, 3.3, 3.4 and 3.5).

6. The recycled aggregates in this consignment are not classified as hazardous pursuant to Article 3 of and Annex I to Regulation (EC) No 1272/2008 (CLP);

The substances contained within the RA in this consignment comply with Regulation (EC) No 1907/2006 (REACH), including but not limited to compliance with Article 56 setting out authorisation provisions for uses of substances listed in Annex XIV to REACH and for their placing on the market as well as the conditions laid down in Article 67 for the manufacture, placing on the market and use of substances restricted in Annex XVII to REACH;

The substances contained within the RA in this consignment meet the provisions limiting the manufacturing, placing on the market and use of persistent organic pollutants (POPs) pursuant to Article 3 of and Annex I to Regulation (EU) No 2019/1021; and

When placed on the market, the obligations in relation to the output material under Regulation (EU) No 305/2011 or Regulation (EU) 2024/3110 (CPR), whichever applies, are fulfilled.

7. The producer of the recycled aggregates applies a quality management system verified by an accredited conformity assessment body, or by an environmental verifier or by a notified body, or where construction and demolition waste which has ceased to be waste is imported into the customs territory of the European Union, by an independent external verifier.

8. The recycled aggregates in this consignment are intended to be used exclusively for unbound and bound construction works. It must not be used for backfilling according to Article 11(2) of the Waste Framework Directive or any other purpose. Where these conditions are not met, the user of the RA shall handle it as waste and shall inform the producer, for the purpose of maintaining and reporting correct information on end-of-waste volumes.

9. The RA in this consignment shall not be used for applications:

• in contact with water intended for human consumption;

• in contact with groundwater or surface water;

• in areas with high probability of floods according to Article 6 (3c) of Directive EC No 2007/60 on the assessment and management of flood risks;

• in safeguard zones (zone 1) for the abstraction of drinking water according to Water Framework Directive (EC 2000/60; Article 7 (3)).

10. Declaration of the producer/importer of the recycled aggregates:

I certify that the above information is complete and correct to the best of my knowledge:

Name:

Date:

Signature:

Annex 2 - Italy

Report Prepared By: Open Content SRL
Date: January 2026 and updated February 2026

1. National Framework

Is there a national End-of-Waste (EoW) criterion related to CDW? (yes/no/in preparation)
Status: Yes.

Legal reference: (title of act, regulation, year, link if available)

Italian Ministerial Decree (Ministero dell'Ambiente e della Sicurezza Energetica) Decreto 28 giugno 2024, n. 127 - "Regolamento recante disciplina della cessazione della qualifica di rifiuto dei rifiuti inerti da costruzione e demolizione, altri rifiuti inerti di origine minerale, ai sensi dell'articolo 184-ter, comma 2, del decreto legislativo 3 aprile 2006, n. 152/2006." (eng.: MINISTRY OF THE ENVIRONMENT AND ENERGY SECURITY, DECREE 28 June 2024, n. 127: Regulation governing the cessation of waste classification for inert construction and demolition waste and other inert waste of mineral origin, pursuant to Article 184-ter, paragraph 2, of Legislative Decree No. 152/2006 of 3 April 2006. (24G00144) (Official Journal General Series No. 213 of 11-09-2024)

- The decree entered into force on 26/09/2024 and is currently applicable.
- The decree abrogates DM 27/09/2022, n. 152 from the date of entry into force (26/09/2024).
- Scope: It sets EoW criteria for (i) non-hazardous inert CDW (EER (eng: *European Waste Catalogue (EWC)),* Chapter 17, limited to those listed) and (ii) other non-hazardous inert mineral-origin wastes (non-Chapter 17, limited to those listed), producing "aggregato recuperato" (recovered aggregate).
- Key operational concepts:
  - "Lot" definition: max 3,000 m^3 per lot of recovered aggregate.
  - EoW compliance attested via Declaration of Conformity (per lot), using Annex 3 template; sent to competent authority and the regional environmental agency within defined timelines; records retained.
- Link: https://www.gazzettaufficiale.it/eli/id/2024/09/11/24G00144/sg

2. Comparative Review with EU JRC Draft Criteria (June 2025)

a) Permissible waste input material

National provision:

Italy uses a closed list of eligible non-hazardous waste codes in Annex 1, Table 1. It includes specific EER codes from Chapter 17 (e.g., 170101, 170102, 170103, 170107, 170302, 170504, 170508, 170904) and selected non-Chapter 17 mineral wastes (e.g., 010408, 010409, 010410, 010413, 101201, 101206, 101208, 101311, 120117, 191209, plus limited 200301 fraction).

Additional explicit exclusions:

- No buried wastes allowed.
- EER 170504 (soil & stones) from contaminated sites under remediation is not allowed.

Table 1 – Waste Eligible for the Production of Recovered Aggregate

1. Inert Waste from Construction and Demolition Activities
(Chapter 17 of the European List of Waste)

Code	Description
170101	Concrete
170102	Bricks
170103	Tiles and ceramics
170107	Mixtures or fractions of concrete, bricks, tiles and ceramics other than those referred to in 170106
170302	Bituminous mixtures other than those referred to in 170301
170504	Soil and stones other than those referred to in 170503, excluding those from contaminated sites under remediation
170508	Railway track ballast other than that referred to in 170507
170904	Mixed construction and demolition waste other than those referred to in 170901, 170902 and 170903

2. Other Inert Waste of Mineral Origin
(Not belonging to Chapter 17 of the European List of Waste)

Code	Description
010408	Waste gravel and crushed rocks other than those referred to in 010407
010409	Waste sand and clay
010410	Dust and similar residues other than those referred to in 010407
010413	Waste from stone cutting and sawing other than those referred to in 010407
101201	Residues from mixture preparation not subjected to thermal treatment
101206	Discarded moulds consisting exclusively of scraps and waste of raw glazed and fired ceramic products or fired brick and expanded clay scraps possibly coated with raw glaze in concentration < 10% by weight
101208	Waste ceramics, bricks, tiles and construction materials (subjected to thermal treatment)
101311	Waste from the production of cement-based composite materials other than those referred to in 101309 and 101310
120117	Waste blasting material residues other than those referred to in 120116 consisting exclusively of waste abrasive sands
191209	Minerals (e.g., sand, stones, inert materials)
200301	Mixed municipal waste, limited to the inert fraction of abandoned construction and demolition waste

Comparison:

- Strong alignment with an “inert/mineral-only” approach, but more prescriptive because it is a fixed EER list rather than a broader category definition.
- Italy introduces a specific exclusion for contaminated-site soils (170504) which is often a sensitive edge case in EU-level discussions.

Good practices identified:

- Closed-list approach reduces ambiguity and enforcement variance across regions.
- Explicit contaminated-site exclusion is clear and conservative for environmental protection.

b) Allowed treatment processes and techniques

National provision:

Annex 1(b) requires a formal waste acceptance procedure including:

- Document checks, visual inspection, and supplementary checks (including analytical) when needed.
- Trained personnel; separation/removal of foreign materials; weighing and recording; dedicated storage for non-conforming waste; dedicated storage for conforming waste preventing any mixing with non-eligible waste; traceability and non-conformity handling.
- Integration into EMAS/ISO 14001 environmental management systems where applicable.

Annex 1(c) defines a minimum mechanical process, typically including crushing, screening/grading, separation of metals and undesired fractions; recovery may also be satisfied by controls demonstrating compliance with the quality criteria.

During conformity verification, lots must not be mixed (lot integrity during verification)

Comparison:

Italy is aligned in substance with the EU draft (separate storage of eligible/non-eligible inputs and compliant/non-compliant outputs; handling that preserves quality), but is more operationally prescriptive, specifying: trained staff, documented checks, dedicated storage for non-conforming loads, and explicit traceability/non-conformity workflows.
Compared to the EU draft, Italy is less explicit on the EU principle that quality must not be achieved by dilution/mixing with natural aggregates (the decree focuses instead on acceptance, segregation, mechanical treatment, and compliance testing).

Good practices identified:

Embedding acceptance controls into EMS (EMAS / ISO 14001) supports auditability and continuous improvement.

c) Quality criteria for end-of-waste materials

National provision:

Italy sets use-linked quality criteria per “lot” (max 3,000 m^3) for recovered aggregates.

Scope of allowed uses (closed list): recovered aggregate may be used only for the purposes listed in Annex 2:

a) environmental recovery/fill/backfilling (“recuperi ambientali, riempimenti e colmate”);
b) earthworks embankments;
c) asphalt mixtures and subbases for roads/rail/airports/yards;
d) foundation layers for transport infrastructure and yards;
e) ancillary layers (e.g., anti-capillary/anti-frost/drainage);
f) hydraulically bound mixtures;
g) concrete production;
h) clinker production;
i) cement production.

1. Total content / material quality limits: Annex 1(d.1), Table 2 defines parameters and limit values (use-dependent), including: asbestos (100 mg/kg), BTEX and aromatic sum, PAHs and PAH sum, phenol, PCB,

heavy hydrocarbons (C>12), Cr(VI), plus physical impurities (floating materials, foreign fractions). Note that parameters and limit values are differentiated by intended use:

a) One set for use (a) (typically most stringent);
b) One set for uses (b–g);
c) For uses (h) and (i) only the asbestos limit applies.
Table 2 includes, among others: asbestos (100 mg/kg DM); aromatic hydrocarbons (incl. benzene and "sum of aromatic organics"), PAHs (including a summed PAH group), phenol, PCB, heavy hydrocarbons (C>12), Cr(VI), plus physical impurities where not already defined by applicable product standards (floating materials <5 cm^3/kg, foreign fractions <1% by mass).

2. Leaching test: each lot must undergo a leaching test against Table 3 limit values (e.g., nitrates 50 mg/L; fluorides 1.5 mg/L; cyanides 50 µg/L; Ba 1 mg/L; Cu 0.05 mg/L; Zn 3 mg/L; Ni 10 µg/L; As 50 µg/L; Cd 5 µg/L; Cr(total) 50 µg/L; Pb 50 µg/L; Hg 1 µg/L; COD 30 mg/L; sulphates 750 mg/L; chlorides 750 mg/L; pH 5.5–12). The method references UNI 10802 (Appendix A) and UNI EN 12457-2, with a specific handling instruction for very fine-grained samples (ultracentrifuge step before filtration).

3. Testing exemptions: lots destined for certain concrete (NTC 2018, class ≥ C12/15) and for clinker/cement production are excluded from the leaching test.

4. Link to technical standards / market placement: Annex 2 and Table 5 map each allowed use to relevant harmonised product standards and "idoneità tecnica" references; CE marking under CPR applies where relevant, and specific sector constraints (e.g., REACH Annex XVII entry 47 on Cr(VI) in cement-containing applications) are explicitly recalled for certain uses.

5. Special case - clinker production performance limits: Annex 2, Table 6 defines performance parameters (TOC, Hg, Tl+Cd, chlorides, sulfates, MgO) for recovered aggregate used for clinker

Comparison:

Italy's approach is broadly consistent with the EU draft's intent (quality thresholds + standards linkage + legal compliance), but it is structured differently:

- Use-driven thresholds: Italy hard-codes different limit sets by end-use class (Annex 2 letters), whereas the EU draft expresses limits and restrictions in a more uniform EU-wide framing.
- Leaching metrics differ in expression: Italy sets leaching as concentrations in eluate (mg/L or µg/L) under UNI EN 12457-2; the EU JRC draft table is expressed as mg/kg dry matter. A rough comparability can be made assuming L/S = 10 L/kg (UNI EN 12457-2), i.e., mg/kg ≈ mg/L × 10:
    - As: IT 50 µg/L ≈ 0.5 mg/kg (similar to EU uncapped 0.5; stricter than EU capped 0.9)
    - Cd: IT 5 µg/L ≈ 0.05 mg/kg (aligned with EU uncapped 0.05; stricter than EU capped 0.4)
    - Cu: IT 0.05 mg/L ≈ 0.5 mg/kg (stricter than EU 6.9–15.4)
    - Ni: IT 10 µg/L ≈ 0.1 mg/kg (stricter than EU 0.5–1)
    - Zn: IT 3 mg/L ≈ 30 mg/kg (weaker than EU 4.5–17.4)
    - Chlorides: IT 750 mg/L ≈ 7,500 mg/kg (≈ EU capped 7,750; much weaker than EU uncapped 944).

Overall, Italy is more stringent on several metals (notably Cu, Ni, Cd), but less stringent on some parameters compared to the EU uncapped scenario (notably chlorides, sulphates) and on Zn.

Good practices identified (e.g., strict limit values, alignment with product standards):

- End-use traceability through threshold design: use-specific limit sets in Table 2 make the regime practical for operators and regulators (clear "if use X → apply column Y").
- Method-level reproducibility: the explicit reference to UNI/EN methods (including fine-sample handling) reduces ambiguity and improves comparability of lab results.

- Standards mapping (Annex 2/Table 5): directly linking allowed uses to harmonised standards supports procurement/specification work and "placing on the market" discipline.

d) Requirements for management systems (quality control, monitoring, accreditation)

National provision:

Italy requires the recovered-aggregate producer to operate within a management system designed to demonstrate compliance with the regulation, explicitly including quality control and self-monitoring (Art. 6(1)); the decree allows this to be pursued "also via access to accreditation procedures".

In addition, the regulation allocates responsibilities and proof duties along the chain (Art. 5):

- The original waste producer is responsible for correct waste code assignment, hazard classification, and the completion of the waste identification/transport documentation (FIR) (Art. 5(1)).
- The recovered-aggregate producer must take and keep an archived compliance sample from each lot, with sampling in accordance with UNI 10802 (and potentially UNI/TR 11682), kept for one year from the date the declaration for that lot is sent; sampling for conformity with technical standards in Table 5 is done per UNI EN 932-1, and storage conditions must allow repeat analyses (Art. 5(4)).
- Exemption: the sample retention obligation in Art. 5(4) does not apply to organisations registered under EMAS or certified UNI EN ISO 14001 by an accredited body (Art. 6(2)).

Comparison:

There is a conceptual match (both require a system that demonstrates compliance), but the EU draft is more explicit and formalised:

- EU draft: detailed QMS procedure set (inputs/process/output/customer feedback/training/continuous improvement), 5-year record retention, and mandatory third-party verification/certification with periodic re-verification.
- Italy: requires a management system with QC + self-monitoring, but does not hard-code a comparable level of external verification across the board; instead, it incentivises EMAS/ISO 14001 (via exemptions) and references "accreditation procedures" more generally.

Good practices identified (e.g., mandatory accreditation, transparent reporting):

- Regulatory incentive design: tying relief (sample retention exemption) to EMAS/ISO 14001 encourages higher organisational maturity without mandating it universally.
- Strong evidentiary approach: per-lot archived samples (where applicable) provide robust ex-post verifiability.

e) Requirement for a statement of conformity

National provision:

Italy uses a per-lot Declaration of Conformity (a "self-declaration" under DPR 445/2000) to attest that the lot meets the end-of-waste criteria (Art. 5(2)). Key features:

- Per-lot issuance: a declaration is made for each lot of recovered aggregate produced.

- Transmission to authorities: it must be sent to the competent authority and the territorially competent regional environmental protection agency (ARPA) within 6 months from production of the lot and in any case before the lot leaves the plant. Declarations may also be sent in cumulative form using digital transmission modalities foreseen by the CAD framework (Art. 5(2)).
- Retention: the producer must retain a copy (including electronically) for 5 years from the date of transmission and provide it to control authorities on request (Art. 5(3)).
- Template content (Annex 3): the form captures, at minimum, the declaration/lot identifier and year; producer and plant identification and authorisation; the lot quantity (volume); and the intended use(s)/technical conformity framework (with checkboxes linking the lot to the Annex 2 use-categories and to the referenced technical standards). The declaration is signed and includes awareness of liability for false declarations; it is accompanied by identity documentation and the analytical report.

Comparison:

Both regimes rely on a formal conformity statement, but they differ in "who receives it" and the unit of control:

- EU draft: statement of conformity is issued per consignment, delivered to the next holder, retained ≥3 years, preferably electronic.
- Italy: statement is issued per lot and is explicitly notified to authorities (and ARPA), retained 5 years, and is structurally designed for traceability and enforceability at regulator level (it can also support customer transfer, but the decree's explicit obligation is authority notification).

Good practices identified:

- Authority-facing transparency: mandatory notification to authority/ARPA creates a strong compliance trail (useful for consistent enforcement across regions).
- Lot-based verifiability: pairing the declaration with sampling/archiving logic and analytical evidence strengthens credibility and supports audits/controls.

3. General Observations

Strengths of national approach (compared to EU draft):

- High enforceability via closed lists: Italy defines eligible inputs via a fixed EER list (and explicit exclusions) and eligible outputs via a closed list of uses, reducing interpretive variance in permitting and inspection.
- Strong operational governance: explicit acceptance/segregation requirements and lot logic make compliance auditable and practical on-site (not just principle-based).
- Use-differentiated thresholds: Table 2 ties chemical limits to exposure-relevant use cases (a vs b–g vs h–i), which is a pragmatic risk-proportional design.
- Method-level clarity for leaching: Italy specifies the test method stack and even fine-sample handling, improving reproducibility.
- Robust compliance trail to regulators: per-lot declaration + mandatory authority/ARPA notification + retention duties strengthen oversight.

Weaknesses or gaps identified:

- Potential rigidity / limited innovation pathway: closed lists can exclude “safe but non-listed” mineral streams, forcing case-by-case 184-ter authorisations.
- Partial mismatch to EU leaching framing: Italy uses mg/L (eluate concentrations) while the EU draft uses mg/kg DM; comparisons are feasible but not direct, and some parameters (e.g., Zn; salts vs EU uncapped) can be less stringent depending on the scenario.
- External verification less explicit than EU draft: Italy requires a management system and incentivises EMAS/ISO 14001, but does not specify the EU-style mandatory third-party QMS verification regime.

Any innovative or transferable practices worth highlighting at EU level:

- “Use → standard” mapping as market-enablement: linking each allowed use to harmonised standards and technical references is a transferable pattern for reducing procurement uncertainty.
- Authority-notified, lot-based conformity model: lot-based declarations with regulator notification + retention provides a strong blueprint for harmonised enforcement.
- Incentivised EMS maturity: using EMAS/ISO 14001 as a lever (via targeted exemptions) is a smart way to raise baseline quality governance without universal mandates.

Annex 3 - Croatia

Report Prepared By: Project of Sustainable Development d.o.o.
Date: November 2025

1. National Framework

Is there a national End-of-Waste (EoW) criterion related to CDW? (yes/no/in preparation) Yes

Legal reference: (title of act, regulation, year, link if available)

Waste Management Act, Official Gazette (NN) 84/21, 142/23, in force since 31 July 2021/ Zakon o gospodarenju otpadom (https://www.zakon.hr/z/2848/zakon-o-gospodarenju-otpadom)

Regulation on the End-of-Waste Status, Official Gazette (NN) 55/2023 / Pravilnik o ukidanju statusa otpada, (https://narodne-novine.nn.hr/clanci/sluzbeni/2023_05_55_947.html), generally and specifically Annex 1 (*Special Criteria for the End-of-Waste Status -> 3. Special Criteria for the End-of-Waste Status for Recycled Aggregate and Backfilling Material*).

2. Comparative Review with EU JRC Draft Criteria (June 2025)

a) Permissible waste input material

National provision:

A person performing waste recovery must ensure that the waste entering the recovery process, depending on its intended use, complies with the prescribed waste type in accordance with Table 3.1 and 3.2 of the Annex.

Table 3.1. Types of Waste Entering the Recovery Process for the Production of Recycled Aggregate

Key number	Name of waste
01 01 02	Waste from excavation of non-metallic mineral resources
01 04 08	Waste gravel and crushed stone, not listed under 01 04 07*
01 04 09	Waste sand and waste types of clay
01 04 13	Waste from cutting and sawing stone, not listed under 01 04 07*
10 11 03	Glass-based fibrous materials
15 01 07	Glass packaging
17 01 01	Concrete
17 01 02	Brick
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, brick, tiles and ceramics not listed under 17 01 06*

Key number	Name of waste
17 02 02	Glass
17 03 02	Bituminous mixtures not listed under 17 03 01*
17 05 04	Soil and stones not listed under 17 05 03*
17 05 06	Dredging spoil not listed under 17 05 05*
17 05 08	Track ballast not listed under 17 05 07*
17 09 04	Mixed construction and demolition waste not listed under 17 09 01*, 17 09 02* or 17 09 03* - includes only mineral materials
19 12 05	Glass
19 12 09	Minerals (e.g. sand, stones)
20 01 02	Glass
20 02 02	Soil and stones

Table 3.2. Types of Waste Entering the Recovery Process for the Production of Backfilling Material

Key number	Name of waste
01 04 08	Waste gravel and crushed stone, not listed under 01 04 07*
01 04 09	Waste sand and waste types of clay
01 04 13	Waste from cutting and sawing stone, not listed under 01 04 07*
17 01 01	Concrete
17 01 02	Brick
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, brick, tiles and ceramics not listed under 17 01 06*
17 05 04	Soil and stones not listed under 17 05 03*
20 02 02	Soil and stones

Comparison:

Croatia defines input material strictly through **closed lists of waste codes** in Tables 3.1 and 3.2, specifying exactly which mineral waste types are allowed for recycled aggregate and for backfilling material. This creates a clear, prescriptive scope. In contrast, the EU proposal uses **a principle-based approach**, setting conditions rather than lists. The EU excludes hazardous mineral CDW, POP-contaminated materials, materials outside its scope, and waste containing asbestos, radioactivity, visible oil, bitumen, paints, artificial fibres, or other harmful constituents. The EU text also emphasises that impurities must be removable through the recycling process and that input must come from source-separated or pre-treated streams.

Croatia's model therefore focuses on **positive identification** (what is allowed) through detailed waste codes, while the EU focuses on **negative restrictions** (what must not be present) and on meeting quality-based criteria rather than waste-code based eligibility. Croatia also allows some materials (e.g., certain glass, dredging spoil, soils) that the EU proposal partly restricts, indicating a somewhat broader scope than the EU's more risk-managed, quality-controlled approach.

Good practices identified:

Croatia's use of explicit waste-code lists provides regulatory clarity, simplifies enforcement, and prevents misclassification of unsuitable materials. This structured, unambiguous approach can be considered a good practice for ensuring preventing inappropriate materials from entering the recycling process.

b) Allowed treatment processes and techniques

National provision:

Depending on the type of waste and the method of recovery, the person carrying out the recovery must hold an appropriate waste management permit for the recovery activity under procedure R5 – Recycling/recovery of other inorganic waste materials (this includes soil recovery and the recycling of inorganic construction materials), for the relevant waste listed in table 3.1 (and 3.2.) above.

Comparison:

The Croatian provision defines the allowed treatment process primarily through a permitting requirement: only operators holding an R5 recovery permit for relevant inorganic waste streams may produce recycled aggregate or backfilling material. This approach focuses on legal compliance and the formal scope of recovery activities but does not describe how treatment should be carried out or how input and output materials must be controlled during the process.

The EU proposal introduces a much more detailed operational framework. It requires strict separate storage requirements, and specifies that treatment must include all necessary steps to ensure the output is ready for use but maintains technological neutrality, intentionally avoiding prescriptive requirements for sorting or pre-treatment. The EU proposal explicitly prohibits achieving quality through dilution with natural aggregates before EoW status is confirmed, emphasising genuine recovery rather than blending.

Overall, the EU proposal provides a functional system centred on contamination prevention and technological flexibility, whereas the national rule centres on regulatory authorisation without operational detail.

Good practices identified:

The Croatian permit-based system clearly defines responsibility and ensures that only authorised operators with verified competence can conduct R5 recovery for specific waste types. This clear legal framing can help enforcement authorities and provides certainty regarding the operator's scope of activity, which supports traceability and regulatory accountability.

c) Quality criteria for end-of-waste materials

National provision:

Quality criteria that recycled aggregate (and backfilling material) must meet after the waste recovery process

(1) The recovered waste may have its waste status removed and be used as recycled aggregate for the intended use listed in Table 3.3, point 1, if the **assessment and verification of constancy of performance**

have been carried out in accordance with **harmonized technical specifications or Croatian technical specifications**, and if a **declaration of performance has been issued** in accordance with the special regulations governing construction products, along with an **analysis demonstrating that the use of the recycled aggregate will not cause a higher level of risk** in terms of hazardous properties than the risk associated with using aggregate produced from mineral deposits.

(2) The recovered waste may have its waste status removed and be used as recycled aggregate for the intended use listed in Table 3.3, point 2 (for use in accordance with the building project), or as backfilling material (listed in Table 3.4, point 1 of the Regulation), if an **Examination Report** prepared in accordance with special regulations of the **competent construction authority demonstrates compliance with project requirements or alignment with technically recognized professional rules.**

(3) The recovered waste referred to in points 1 and 2 of this section may have its waste status removed if the **values of the eluate parameters or leaching tests are less than or equal to the limit values** shown in Table 3.5.

Table 3.5. Limit values of leachate/leaching test parameters for recycled aggregate (and backfilling material)

Parameter	L/S = 10 l/kg (mg/kg dry matter)	Parameter	L/S = 10 l/kg (mg/kg dry matter)
As	0.5	Pb	0.5
Ba	20	Sb	0.06
Cd	0.04	Se	0.1
Total Cr	0.5	Zn	4
Cu	2	Chloride	800
Hg	0.01	Fluoride	10
Mo	0.5	Sulfate	1000
Ni	0.4	Phenolic index	1

In addition to the limit values for leachate/leaching test parameters, the recycled aggregate (and backfilling material) must also meet the following additional limit values:

Parameter	Value (mg/kg)
BTEX (benzene, toluene, ethylbenzene and xylenes)	6
PCB (polychlorinated biphenyls, 7 congeners)	1
Mineral oil (C10 to C40)	500
PAH (polycyclic aromatic hydrocarbons)	10

(4) The **eluate analysis** must be carried out in accordance with the standards HRN EN 16192 (Waste characterization – Analysis of eluates) and HRN EN 14039 (Waste characterization – Determination of hydrocarbon content from C10 to C40 by gas chromatography), and the **leaching test** in accordance with the standard HRN EN 12457-4 (Waste characterization – Leaching – Compliance test for leaching of granular waste materials and sludges – Part 4). **Testing is conducted for every batch.**

(5) The person performing the recovery is required, through a **laboratory authorized** under special regulations of the competent construction authority, to carry out sampling and testing of recycled aggregate (and backfilling materials) for the purpose of meeting the requirements of point 2.

(6) The person performing the recovery is required, through an **accredited laboratory** and **accredited methods** in accordance with the relevant standards, to carry out sampling and testing of the waste to meet the requirements of points 1, 2, 3, and 4.

(7) Recovered waste from which recycled aggregate (or backfilling material) entered into the Register for the removal of waste status is produced, shall have its **waste status removed at the moment it is sold to another person or at the moment it is used,** if it is used by the same person who performed the recovery.

(8) (For waste that is allowed to be treated through recovery by backfilling under procedure R5, entry in the Register of collectors and recoverers for the backfilling procedure removes the obligation to revoke waste status.)

Permitted uses of recycled aggregate (and backfilling material) produced by ending waste status

(1) Recycled aggregate generated through recovery may be used for the purposes listed in Table 3.3, (and backfilling material may be used for the purposes listed in Table 3.4.)

(2) (Waste that is permitted to be treated within recovery by backfilling under procedure R5 and has undergone the backfilling recovery process may be used for the remediation of excavated areas or for technical purposes in landscape design, whereby the waste is used as a substitute for non-waste material in the quantity necessary to achieve these purposes, such as for the construction or repair of rural, field, and forest roads, access roads, and similar.)

Table 3.3. Recycled aggregate: Intended use and demonstration of properties

Intended use	Properties and essential characteristics	Demonstration of environmental and human-health safety	Document proving the properties of recycled aggregate
1. Aggregates for: Bituminous mixtures Unbound and hydraulically bound materials for use in construction and road building Concrete Mortar Railway ballast Rock armour Recycled asphalt aggregate Lightweight aggregates for concrete, mortar, and grouting Lightweight aggregates for bituminous mixtures, surface treatments, and for use in unbound and bound mixtures Other aggregates intended for use in roads and other engineering structures	According to the harmonised technical specifications* or Croatian technical specifications** * "Harmonised technical specifications" has the meaning defined by the special regulation governing the establishment of harmonised conditions for placing construction products on the market (i.e., harmonised standards and European documents for harmonisation). ** "Croatian technical specifications" has the meaning defined by the special regulation governing construction products in the non-harmonised area (i.e., technical regulation, Croatian standard referenced by the technical regulation, and Croatian assessment document).	Proof that the use of recycled aggregate will not cause a higher risk in terms of hazardous properties than the risk associated with the use of aggregate produced from mineral deposits, and that the tested parameter values are less than or equal to the limit values shown in Table 3.5.	▫ Declaration of performance in accordance with the special regulation governing construction products, and accompanying reports confirming that the construction material sample produced by recovery of waste with key numbers from Tables 3.1 and/(or 3.2) meets the conditions of the relevant standard for the intended use + ▫ Declaration of conformity on the form from Annex II of this Regulation

2. For use in accordance with the building design (project documentation)	According to the requirements of the building design	Proof that the use of recycled aggregate will not cause a higher risk in terms of hazardous properties than the risk associated with aggregate produced from mineral deposits.	▫ Test report prepared in accordance with the special regulation of the competent construction authority + ▫ Declaration of conformity on the form from Annex II of this Regulation

Table 3.4. Backfilling material: Intended use and demonstration of properties – information can be obtained in Regulation itself.

Comparison:

Croatia and the EU proposal both set quality requirements for recycled aggregates, but they differ significantly in structure, scope and regulatory philosophy.

Croatia uses a nationally standardised, construction-product-oriented approach, where EoW status is granted only when recycled aggregate meets:

- harmonised or Croatian technical specifications,
- a declaration of performance,
- proof of no increased hazardous-property risk compared to natural aggregates, and
- strict leaching and content limits (Table 3.5).

Testing is batch-based, following Croatian/EN standards, and sampling must be done by authorized or accredited laboratories. EoW status is linked directly to sale or use, and permitted uses are codified in Tables 3.3(-3.4).

The JRC proposal adopts a broader, legally harmonised EU approach based on:

- compliance with CLP, REACH and POPs requirements,
- meeting technical specifications required by the customer or industry standards,
- limits for asbestos, impurities and contaminants,
- leaching and total content thresholds for a wide parameter set, and
- restrictions on use in environmentally sensitive locations.

Croatia applies a **much stricter environmental protection approach**, using **lower leaching and total content limits** across nearly all contaminants.

The EU proposal is technology-neutral and avoids referencing specific standards, allowing operators to choose test methods (with a preference for EN 16637 in case of conflicting results). Testing must be done by accredited laboratories, with validity limited to 24 months before material handover.

Good practices identified (e.g., strict limit values, alignment with product standards):

Despite differences, several features of the Croatian EoW regulation can be considered good practices:

1. Strong linkage to construction product regulations

Croatia directly requires conformity with harmonised technical specifications, Croatian technical specifications, and a declaration of performance, integrating EoW with construction product legislation. This ensures that EoW aggregates meet the same technical reliability expectations as virgin materials—something the JRC leaves to general product compliance obligations.

2. Clear hazard-risk comparison with natural aggregates

Croatia explicitly requires proof that using recycled aggregate will not cause greater hazardous-property risks than natural aggregates. This is a robust, practical safeguard not formulated in the EU criteria.

3. Batch-by-batch testing requirement

Croatia requires testing for every batch, whereas JRC requires testing at least every 24 months. Batch testing is stricter and more protective, especially in facilities with variable inputs.

4. Mandatory specialised sampling and testing

Croatia distinguishes: authorised labs for project-based uses, and accredited labs for leaching and contaminant testing. This two-tier system ensures competence aligned with the intended use.

5. Detailed permitted-use provisions

Croatia provides precise definitions of intended uses (Table 3.3 and 3.4) and technical documentation required. JRC relies on generic customer specifications, which gives flexibility but may reduce legal clarity.

d) Requirements for management systems (quality control, monitoring, accreditation)

National provision:

Special criteria for ending waste status:

The application of a **quality management system** in the waste recovery process, which includes inspections and record-keeping, as well as appropriate documentation in written or electronic form for each individual received shipment of waste and each batch:

- visual inspection of the waste shipment and the information stated in the accompanying consignment note

- a record of the inspection of the incoming waste shipment and accompanying documentation, containing the following: date, consignment note number, and the name and surname of the person who carried out the inspection

- a record of the recovery inspection containing the following: a link between the individual consignment note and the corresponding batch number, the date the batch was formed, and dates with corresponding measurement procedures and handling of the batch in accordance with the special criteria from Annex I of this Regulation

- a record of the inspection of the batch that has undergone the recovery process, containing entries on the verification procedures undertaken to meet the prescribed conditions in accordance with the special

criteria, the appropriate standards or specifications for the particular batch, as well as the results of the corresponding tests and/or certifications carried out pursuant to Annex I of this Regulation and other regulations governing the placing of products on the market, performed by authorised bodies, authorised/accredited laboratories, notified and/or approved bodies

- a record of non-conformities and corrective measures

(Compliance of the management system is demonstrated by a certificate of conformity (certificate) of the quality management system, covering the subject of registration, in accordance with the international standard HRN EN ISO 9001 Quality Management Systems – Requirements or another system applied in accordance with a special regulation, and by an Accreditation Certificate of the certification body issued by the competent accreditation authority. The certificate of conformity is issued by a certification body accredited by the competent accreditation authority in accordance with the standard HRN EN ISO/IEC 17021-1 Conformity assessment – Requirements for bodies providing audit and certification of management systems – Part 1: Requirements. The scope of accreditation must correspond to the national classification of activities for waste recovery and the production of products/raw materials obtained through waste recovery.)

Furthermore, it is also required: **evidence of meeting the conditions for registration in the Registry for Ending Waste Status:**

- **a contract** or other document regulating the business relationship between the holder of the substance or object for which registration in the Registry for Ending Waste Status is sought and the future user, which **demonstrates that the market/demand is ensured**

- a **declaration of intent to use** that substance or object and evidence supporting it, in cases where the substance or object for which waste status is to be ended will be used in the production process of the person submitting the application for ending waste status, or will be used by that person for beneficial purposes

- a **waste management permit** for the recovery activity using the appropriate procedure for the specific type of waste.

Comparison:

The Croatian regulation prescribes a highly structured and detailed quality management system (QMS) that must be implemented by operators seeking to obtain EoW status for recycled aggregates. It specifies mandatory procedures such as visual inspection of every incoming shipment, traceability linking consignment notes to batch numbers, detailed batch records, documentation of all measurements and verifications, non-conformity logs, and corrective measures. Compliance must be demonstrated through a certified ISO 9001 QMS, certified by an accreditation body under ISO/IEC 17021-1, with accreditation scope aligned with waste recovery activities. In addition, operators must provide proof of a secured market (contract or declaration of intent), and a valid permit for waste management and recovery.

The EU proposal takes a different approach: it requires a QMS suitable for demonstrating compliance, but does not prescribe a specific standards-based system such as ISO 9001. Instead, it defines the required functions of the QMS: monitoring input controls, monitoring treatment processes, monitoring output quality, managing customer feedback, maintaining records, implementing corrective actions, and ensuring staff training. The system must document all procedures for at least five years and include self-monitoring provisions for each EoW criterion. Certification of the QMS is required, but operators may use accredited conformity assessment bodies, EMAS environmental verifiers, or CPR-notified bodies. Verification must occur every three years. The EU proposal also defines acceptable verifier accreditation scopes (NACE codes) and requires equivalent QMS verification for imported materials from third countries.

The key difference is that Croatia adopts a prescriptive, standard-based, mandatory ISO approach, while the EU draft adopts a function-based, technologically neutral approach which aims to reduce administrative burden, especially for SMEs. Croatia's system ensures rigid traceability and strong procedural discipline, whereas the EU system prioritises flexibility, outcome-based verification, and harmonised certification mechanisms across Member States.

Good practices identified (e.g., mandatory accreditation, transparent reporting):

The Croatian system includes several strong procedural safeguards that exceed the stringency and practical clarity of the EU proposal. These can be considered good practices:

1. Detailed and mandatory traceability from input to batch output.

Croatia requires complete documentation linking each waste shipment to each batch, including dates, sampling events, testing methods, and all processing steps. This provides a transparent audit trail that significantly reduces the risk of mixing unsuitable materials.

2. Mandatory batch-level inspection and documentation.

Every batch must undergo documented verification procedures, including evidence of compliance with standards and test results. This ensures that EoW status is granted based on discrete, well-controlled production units, supporting market confidence.

3. Integration of waste shipment control (visual checks + documentation checks).

The explicit requirement for visual inspection and documentation verification for every incoming shipment ensures systematic prevention of inappropriate inputs before contamination enters the process.

4. Mandatory ISO 9001-based QMS certification with accredited bodies.

This provides a robust, internationally recognised framework for procedural control and continual improvement, ensuring consistency and reliability. While it may be more administratively demanding, it creates a high level of assurance.

5. Clear requirement to demonstrate market demand before granting EoW status.

This is absent in the EU draft. By requiring contracts or declarations of intended use, Croatia ensures that EoW material is not produced without a defined market, reducing stockpiling and environmental or economic risks.

6. Explicit requirement for waste management permits covering the appropriate recovery process.

This guarantees that only legally authorised operators can apply for EoW status, strengthening regulatory oversight.

e) Requirement for a statement of conformity

National provision:

DECLARATION OF CONFORMITY
1.
Manufacturer's company name:
Registered office address:
OIB or MBO:
Name and surname of contact person:
Telephone:
E-mail:

2.
a) Name of the substance or object.
b) Declaration of properties, technical specification of the substance or object, declaration of the main technical characteristics of the substance (state the designation of the physico-chemical analysis, product conformity certificate, test report, or similar, in accordance with the special criteria for end-of-waste status, and the name of the institution that prepared it).

3. Shipment mass (kg), Batch number:, Address of waste recovery.

4. This shipment complies with the specification in point 2 of this Declaration.

5. This shipment complies with the data in point 2 of this Declaration, the conditions prescribed by the Waste Management Act, the Regulation on End-of-Waste Status and/or a special regulation governing end-of-waste status (state the name of the special regulation).

6. The manufacturer applies the prescribed quality management system (state the name of the system, the certification body, and the date of the last certification).

7. The substance or object comprising this shipment, dispatched from the waste recovery location, is intended for use in:

8. I declare that the above information is complete and true.
Responsible person of the manufacturer/importer:
Name and surname, signature.
In (place, date).

Comparison:

Croatia's national declaration of conformity focuses primarily on administrative and technical identification of each batch: producer details, a description of the material, reference to the technical specifications and analyses used, confirmation of compliance with national EoW rules, a statement that a quality management system is applied, and final confirmation by the responsible person.

The EU JRC proposal takes a more structured and legally integrated approach. It expands the purpose of the statement beyond identification and compliance confirmation to preventing misuse of EoW materials. The EU template includes mandatory legal compliance statements (CLP, REACH, POPs, CPR), explicit confirmation that all EoW criteria for inputs, process, and outputs are met, and precise restrictions on where the material may not be used. The EU template also requires a unique identification code, a clearer link to intended use, and explicit mention of storage and application restrictions. It also requires that the quality management system be verified by an accredited, licensed or notified body and that the producer keep the declaration for at least three years.

Good practices identified:

1. Strong batch traceability and documentation.

Croatia requires detailed records linking each shipment and batch to specific analyses, permits, and test documents. This ensures clear transparency and is more prescriptive than the EU proposal.

2. Integration with national permitting and market-demand evidence.

The Croatian declaration reflects the national rule that EoW status depends on proven future use. The EU does not require such confirmation in the statement.

3. General Observations

Strengths of national approach (compared to EU draft):

Croatia's system is characterised by high procedural detail, strict testing frequency, and very clear administrative control, which ensures traceability and reduces uncertainty for regulators and operators. The national rules follow a batch-by-batch testing regime, requiring accredited or authorised laboratories for every batch, which leads to consistently high material quality at the output stage. Croatia also provides precise leaching and total-content limit values, detailed technical norms, and explicit links to harmonised or national technical specifications, which makes the system easy to apply for operators familiar with construction-product regulations.

Another strength is the detailed documentation and record-keeping requirements, including batch inspection logs, visual checks, and cross-referencing of consignment notes with batch numbers. The requirement to issue both a Declaration of Performance (where applicable) and a Declaration of Conformity ensures a clear regulatory interface between waste law and construction products legislation.

Compared with the EU proposal, Croatia's approach introduces a high level of legal certainty, because all required steps (testing, sampling, analysis, documentation, QMS use) are explicitly prescribed, leaving little room for interpretation.

Weaknesses or gaps identified:

Mandatory batch testing, explicit specification of test methods, and compulsory use of ISO 9001-based QMS impose higher administrative and financial burdens, particularly for small and medium-sized recyclers. Unlike the EU proposal, the national rules do not allow flexibility in test methods, QMS design, or verification frequency, and do not reflect the technological neutrality emphasised by the EU draft.

In terms of limit values, the Croatian thresholds are covering fewer contaminants and without differentiating between capped/unbound applications. This may lead to under in some cases (e.g., lack of a broader list of parameters such as DOC, ammonium, nitrites, bromide, vanadium, cyanides, etc. as required in the EU draft). The national regulation also lacks explicit restrictions of use (e.g., prohibition in flood zones, groundwater zones, or in contact with drinking water), which are emphasised strongly in the EU proposal for environmental protection.

Additionally, the national system places strong emphasis on proof of market demand and contractual documentation for end-of-waste status. While this ensures traceability, it does not exist in the EU proposal and may limit market development.

Any innovative or transferable practices worth highlighting at EU level:

Croatia's approach demonstrates several good practices that could be considered by EU-level policymakers:

• The batch-specific traceability model, which links each input shipment to a clearly documented batch, ensuring accountability at each stage.

• The integration of construction-product requirements (harmonised or national specifications) directly into end-of-waste criteria ensures that recycled aggregates are not only environmentally safe but also technically suitable for real-world applications.

• The dual-document system (Declaration of Performance + Declaration of Conformity) ensures that materials transitioning from waste to product status remain fully aligned with both waste legislation and construction product legislation, reducing ambiguity for market actors.

• The requirement to demonstrate secured demand (marketability) before obtaining EoW status could be a useful instrument to avoid accumulation of unused EoW materials and promote responsible material flows.

Annex 4 - Austria

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Date: November 2025

1. National Framework

Is there a national End-of-Waste (EoW) criterion related to CDW? (yes/no/in preparation)

Legal reference: (title of act, regulation, year, link if available)

The most important legal reference on the topic of EOW related to CDW is the Recycling Building Materials Ordinance.The following list also includes other important regulations and documents:

A general definition of the end of waste critieria can be found in the Waste Management Act (Bundesgesetz über eine nachhaltige Abfallwirtschaft (Abfallwirtschaftsgesetz 2002 – AWG 2002) StF: BGBl. I Nr. 102/2002).

Link:
https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20002086

Criteria related to CDW can be found in the Recycling Building Materials Ordinance (Verordnung des Bundesministers für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft über die Pflichten bei Bau- oder Abbruchtätigkeiten, die Trennung und die Behandlung von bei Bau- oder Abbruchtätigkeiten anfallenden Abfällen, die Herstellung und das Abfallende von Recycling-Baustoffen (Recycling-Baustoffverordnung – RBV), StF: BGBl. II Nr. 181/2015)

Links:

https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20009212

Specific information for Gypsum can be found in the Recycling Gypsum Ordinance (Verordnung der Bundesministerin für Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie über die Behandlung von Gipsabfällen und die Herstellung und das Abfallende von Recyclinggips (Recyclinggips-Verordnung), StF: BGBl. II Nr. 415/2024)

Link:

https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20012808

Further important document on regulation of waste is the federal waste management plan.

Link:

https://www.bmluk.gv.at/service/publikationen/klima-und-umwelt/federal-waste-management-plan-2023-part-1.html

2. Comparative Review with EU JRC Draft Criteria (June 2025)

a) Permissible waste input material

National provision:

For CDW, excluding Gypsum, Section 3 and Appendix 1 of the Recycling Building Materials Ordinance regulate allowed raw materials and which materials must be separated beforehand. Only the following types of waste are allowed for recycled building materials production.

- Converter slag
- Bricks
- construction waste (excluding construction site waste)
- road rubble
- track gravel
- slag-containing asphalt
- slag-containing technical fill material
- bitumen and asphalt

The following materials should be avoided as far as possible:

- Asbestos
- Artificial mineral fibers
- (H)CFCs (e.g. in extruded polystyrene (XPS), polyurethane (PU))
- PAHs (e.g. tar)
- PCBs
- Phenols
- mineral oil
- gypsum (see also Recycling Gypsum Ordinance)
- magnesite and cement-bonded wood wool insulation boards
- cement-bonded wood chip concrete
- fire protection boards
- artificial marble

Furthermore waste where contamination is known or suspected is not to be used.

For RC-Gypsum only Gypsum is allowed as input whereas the following materials should be avoided as far as possible (Recycling Gypsum Ordinance §5 and Appendix 1):

- Asbestos
- Artificial mineral fibers
- Tiles and tile adhesives
- Gypsum plasters
- (Cement) plasters
- Sand-lime brick
- Aerated concrete
- Bricks

- Flowing screeds (e.g., calcium sulfate screed)
- Electrical installations (e.g., cables, pipes)
- Insulations, thermal insulation materials (including composite panels)
- Foils, plastic, and other plastic parts
- Wood and wood wool (e.g., lightweight panels)
- Reed and straw mats (also in gypsum boards)
- Organic substances (e.g., seals, adhesives)
- Other waste (e.g., cans, food leftovers, empty containers, protective equipment, bulky waste)

Comparison:

The national regulation gives a detailed framework for using recycled building materials, listing specific allowed waste types (converter slag, bricks, road rubble, …) and materials to avoid (asbestos, artificial mineral fibers, PCBs, gypsum with contaminants, and other harmful substances). For recycled gypsum (RC gypsum), only gypsum is allowed, excluding tiles, plasters, plastics, wood, and organic matter. It also bans any waste with known or suspected contamination.

The EU proposal is more general. It prohibits hazardous mineral construction and demolition waste (CDW) and CDW with persistent organic pollutants (POPs) above limits, requires CDW to be pre-sorted and free of removable physical impurities, and restricts non-mineral CDW, radioactive waste, asbestos, artificial fibers, mineral oils, paints, coal tar, bitumen, and other harmful materials.

Overall, the national regulation lists materials in detail, while the EU proposal focuses on broader categories and general rules.

Good (national) practices identified:

- **clear, precise lists of allowed and prohibited materials**
- Separate rules for RC gypsum
- Detailed exclusions go beyond EU general categories, potentially helping producers **avoid problematic inputs proactively**

b) Allowed treatment processes and techniques

National provision:

Demolition that generates a total of more than 750 tons of construction or demolition waste, excluding excavated soil, must be carried out in accordance with ÖNORM B 3151 “Dismantling of buildings as a standard demolition method”. Components that can be prepared for reuse and are in demand by third parties must be removed and handed over in such a way that subsequent reuse is not made difficult or impossible. Contaminants and impurities that make recycling difficult must be removed before. (see point a) Permissible waste input material.))

In Point 3.2.11 of The Federal Waste Management Plan objectives are set and and a general description of how a facility can achieve the production of recycled aggregate from allowed inputs can be found. However, there are no specific processes or techniques mentioned that have to be followed.

According to Section 15, Paragraph 2 of the Waste Management Act, mixing of waste is not permitted if the only way to comply with the limit values is through the mixing. Therefore, recycled aggregate can only be mixed after it passed the EOW.

Comparison:

There is no specific mentioning of separate storage between allowed and noneligible input materials on treatment sites in Austria. However, it is a logical conclusion of the process of demolition in accordance with ÖNORM B 3151. Since the mixing of waste and material that fulfils the EOW is against the AWG it is once again implied that storing it separately is a necessity. EU Proposal and current Austrian law both do not specify how treatment must be done regarding techniques. Both define the target end product by setting limits. Austrian law and EU Proposal differ mainly in the mandatory dismantling of buildings in accordance with ÖNORM B 3151 which is not mandatory in the EU Proposal.

Good practices identified:

- Dismantling of Buildings as standard practice ensures that a lot of contamination and impurities are removed before the treatment of CDW continues at the treatment facilities. This ensures easier treatment processes with larger amounts of high-quality end products.

c) Quality criteria for end-of-waste materials

National provision:

For Recycled construction materials technical parameters and limit values can be found in appendix 2 of the Recycling Building Materials Ordinance. There are limits for eluate at a fixed ratio of solvent and substrate, total content, and contamination (Floating material as well as glass and other materials). A distinction is made depending on the intended use of the produced material where each has different thresholds. Depending on which thresholds are reached a quality class is assigned. However, only U-A material (the highest quality class) fulfils the criteria to reach the EOW. Other material is still considered waste material until its use according to its quality class. The uses or classes are as follows:

- Unbound as well as for hydraulic or bituminous-bound use (classes U-A and U-B)
- Use in the trapezoidal section of the track bed or in traffic areas according to § 13 Z 4, as well as for hydraulic or bituminous-bound use (class U-E)
- Exclusively for the production of concrete from strength class C 12/15 or for the production of concrete of strength class C 8/10 from exposure class XC1 (class H-B)
- Exclusively for the production of asphalt mix or for the production of an unbound upper load-bearing layer according to § 13 Z 9 (classes B-B, B-C, B-D)
- For aggregates made from steelworks slag directly from production, which are exclusively used for the production of asphalt mix (class D)

Appendix 3 addresses “Quality assurance with regard to environmental compatibility” this includes how and when tests must be performed as well as who is responsible and details on reporting.

The following tables gives the limits for quality class U-A.

Table 1: Limits for quality class U-A

Eluate for solvent/substrate 10	Total content [mg/kg TM]

pH []	7.5 - 12.5	Pb [mg/kg TM]	150
EC [mS/m]	150	Cr [mg/kg TM]	90/300
Cr [mg/kg TM]	0.6	Cu [mg/kg TM]	90/300
Cu [mg/kg TM]	1.0	Ni [mg/kg TM]	60/100
Ni [mg/kg TM]	0.40	Hg [mg/kg TM]	0.7
NH_4 [mg/kg TM]	4.0	Zn [mg/kg TM]	450
Cl [mg/kg TM]	800	HC-Index [mg/kg TM]	150
NO_2-N [mg/kg TM]	2.0	Σ16PAH [mg/kg TM]	12.0
SO_4 [mg/kg TM]	2500		
TOC [mg/kg TM]	100		
impurities			
Fl [cm^3/kg TM]	≤ 4		
Rg+X [M-%]	≤ 1		

For Gypsum Appendix 1 of the Recycling Gypsum Ordinance regulates technical parameters and limit values for RC-Gypsum. Material that does not exceed these limits can reach EOW status. The following table gives the limits for RC-Gypsum.

Table 2: Limits for RC-Gypsum

Moisture [M-%]	10
$CaSO_4$ x $2H_2O$ [M-%]	> 80
TOC [M-%]	2.0
Smell []	neutral
MgO (water soluble) [M-%]	0.1
Na_2O (water soluble) [M-%]	0.04
K_2O (water soluble) [M-%]	0.06
Cl [M-%]	0.02
pH []	5-9
Total content	
As [mg/kg TM]	5.1
Ba [mg/kg TM]	58
Sb [mg/kg TM]	10
Be [mg/kg TM]	3.0
Pb [mg/kg TM]	84
Cd [mg/kg TM]	2.4

Cr [mg/kg TM]	30
Co [mg/kg TM]	8.0
Cu [mg/kg TM]	32
Mn [mg/kg TM]	76
Mo [mg/kg TM]	10
Ni [mg/kg TM]	40
Hg [mg/kg TM]	1.4
Se [mg/kg TM]	92
Sn [mg/kg TM]	6.0
Te [mg/kg TM]	4.0
Tl [mg/kg TM]	6.0
V [mg/kg TM]	30
Zn [mg/kg TM]	94
Σ16PAH [mg/k g TM]	0.2
PCDD/PCDF [ng TE*/kg TM]	1.0
Asbestos [M-%]	0.008
Radioactivity according to RP 112 (index)	0.5

* Toxicity equivalents (TE) according to Waste Incineration Ordinance 2024, BGB II No. 118/2024

Comparison:

There is no defined allowed asbestos amount in recycled aggregate for Austria, just a general ban. Up to 0.008 M-% is allowed in RC-Gypsum. The Proposed EU regulation states 100 mg/kg which is equal to 0.01 M-% so in conclusion the proposed EU regulation is less strict. Austria is also stricter on PAH and Hydrocarbon (C10-C40) content. The limit values for contamination (floating material as well as glass and other materials) are the same in Austria as in the EU proposal. For other constituents the EU proposal looks stricter at first but is not comparable for most elements since eluates and total content can't be compared without further information. A further difference is the use of dissolved organic carbon in the EU Proposal while total organic carbon is measured in the national regulation for Austria. To summarize a comparison of thresholds is not easily available but for the comparable values Austria has in general stricter or equal limits.

Good practices identified (e.g., strict limit values, alignment with product standards):

- Stricter regluations or limits for:
  - Asbestos
  - PAH
  - Hydrocarbon (C10-C40)
- Separate regulation for Gypsum recycling in Austria with its own limit values

d) Requirements for management systems (quality control, monitoring, accreditation)

National provision:

Quality assurance requirements are found in § 10 and Appendix 3 of the Recycling Building Materials Ordinance.

General Requirements:

- Every **batch of recycled construction material** must undergo **analytical testing** to verify environmental compliance (total and leachate limits found in Annex 2).
- All Materials must be **stored until positive test results** are confirmed, unless specific on-site use conditions are met.
- All testing and analytical procedures must comply with the Landfill Ordinance**, Annex 4 Part 1**, and relevant **ÖNORM standards**.
- For multiple products differing only by grain size, testing the **finest fraction** is sufficient if consistent quality is assured. All batches produced at the same time are assigned to the quality class determined by examining the batch with the finest grain distribution.
- **Retained samples (at least 2 kg)** must be kept for **at least six months**.

Procedures for quality assurance

The quality assurance system consists of two complementary parts:

1. **External Declaration Testing**

- Conducted by an accredited expert or institution for the first batch (≥200 t) and at least once per production year thereafter.
- Each batch (≤50 production hours) is tested via minimum 10 subsamples combined into one representative field sample.
- Results determine assignment to a defined quality class; non-conforming batches must be reprocessed, reclassified, or disposed of.
- A detailed assessment report must document sampling, analysis, limits, quality class, and usage restrictions.

2. **Internal Factory Production Control (FPC)**

- Performed by the producer for all batches.
- Same sampling and testing requirements as declaration testing.
- Ensures continuous monitoring.
- Results and corrective actions must be fully documented (batch ID, production time, analysis reports, classification, permitted uses).

Accreditation and Monitoring

- All external testing must be performed by **qualified, authorized, or accredited experts/laboratories**.

- Internal quality systems must ensure:
    - **Traceable documentation** of sampling, testing, and evaluation.
    - **Retention of test samples and records** for verification.
    - **Regular review and corrective measures** in case of deviations.

Manufacturers of recycled building materials **must electronically record and report** the type, quantity, origin, and destination of all waste used in production, according to §12 and Annex 5 of the Recycling Building Materials Ordinance.

Requirements for RC gypsum:

- Sampling, preparation, and testing must be done by authorized external experts or accredited labs.
- Initial testing occurs every two years; follow-ups are quarterly with multiple samples per lot.
- All lab samples must be retained for at least one year.
- Results are documented in an assessment report with manufacturer, sampling, and analysis details.
- **electronic reporting to the ministry is mandatory**

Comparison:

- **Testing frequency:**
  In Austria, every batch must be sampled and tested before use. The EU system emphasizes periodic verification (every three years) rather than continuous batch-by-batch checks.
- **Technical specificity:**
  Austria provides detailed technical rules for sampling, grain size testing, and sample retention. The EU proposal sets general principles, leaving specifics to later technical standards.
- **Traceability:**
  Austrian rules require retaining physical samples and detailed batch documentation. The EU framework focuses on record-keeping for at least five years but does not require samples to be kept.
- **Quality control system:**
  Austria has a two-part system combining internal factory control and external declaration testing. The EU proposal builds on a certified QMS, verified by accredited or environmental bodies every few years.

Good practices identified (e.g., mandatory accreditation, transparent reporting):

- Mandatory batch testing
- Uniform testing due to use of technical rules and standards
- Dual control system (internal and external)
- Samples are retained, not only documents

e) Requirement for a statement of conformity

National provision:

The declaration of conformity is mandatory and must be kept for 7 years by both the producer and the purchaser. The following must be confirmed:

- quality assurance was carried out according to §10 Recycling Building Materials Ordinance
- the material meets the limit values of quality class U-A (end-of-waste status under §14 Recycling Building Materials Ordinance).

The declaration can be combined with the EU Construction Products Regulation performance declaration.

The Recycling Building Materials Ordinance does not contain a template, however for gypsum Annex 2 of the *Recycling* Gypsum Ordinance includes a template for the declaration of conformity.:

Conformity Declaration

1. *Number.*
2. *Name of Issuer:*

   Address of Issuer:
3. *Subject of the Declaration:*
4. *The product described above is in conformity with the requirements of the following documents:*
   § 6 and Annex 1 of the Recycled Gypsum Ordinance, BGB II No. 415/2024
5. *Additional Information:*
   - Identification of the corresponding assessment certificate:
   - Validity of the corresponding assessment certificate:
   - The examinations were carried out by the following authorized external expert or institution:

   - Information on the intended use:
6. *Signed for and on behalf of:*

   (Place and date of issue)

   (Name, function) (Signature or equivalent, authorized by the issuer)

Comparison:

In both Austria and the proposed EU framework, producers must issue and retain declarations confirming that recycled materials meet quality and compliance requirements for end-of-waste status. Both systems require verification of material quality and intended use, supported by appropriate documentation.

Key Differences:
• Retention period of the declaration in Austria is 7 years for producer and purchaser while its only 3 years in the EU proposal.
• Austria only has a gypsum-specific template which is simpler than the EU's template.

Good practices identified:

- **Retention period**: 7 years vs EU's 3 years
- **Dual retention**: Both producer and purchaser must keep a copy, this is not cleary stated in the EU proposal
- **specific template for gypsum**: Simpler and tailored for practical application

3. General Observations

Strengths of national approach (compared to EU draft):

- **Clear and comprehensive lists of allowed and prohibited input materials**, including specific exclusions for RC gypsum with focus on **known or suspected contamination**
- **detailed technical rules** (sampling, testing, batch retention, and conformity declarations)
- **Dual quality control system** (internal FPC + external declaration testing)
- Batch testing ensures quality for every batch
- **Mandatory electronic reporting**
- Retention of physical samples
- Longer retention of conformity declarations

Weaknesses or gaps identified:

- Missing template for conformity declaration
- Batch testing can resource intensive; EU proposal uses **periodic verification**, which may reduce material, staff, and administrative costs.

The following points are, based on the current status of the EU document as a proposal, not really a weakness but a difference nonetheless:

- No explicit requirement for systematic feedback from customers for quality improvement (as in the EU draft).
- Less emphasis on training staff and continuous improvement of the QMS, compared to the EU proposal.

Any innovative or transferable practices worth highlighting at EU level:

- **Dual control system** (internal + external testing) for higher reliability and continuous monitoring
- **Detailed material acceptance criteria** with lists for hazardous or incompatible inputs
- **Retention of physical samples** for verification purposes (reanalysis), ensuring traceability beyond just electronic records
- **Specific RC gypsum rules**

Annex 5 – Czech Republic

Report Prepared By: Marie Koflak, CZGBC
Date: December 2025 and updated February 2026

1. National Framework

Is there a national End-of-Waste (EoW) criterion related to CDW? (yes/no/in preparation)

Status: Yes / In force via national framework – with transitional national EoW criteria for mineral CDW under Decree 273/2021 Coll. On Waste Management, §83, extended to 31 December 2027 by Decree 18/2025 Coll.; general case-by-case EoW decisions by Regional Authorities remain available under Act No. 541/2020 Coll.

The Czech Republic regulates End-of-Waste (EoW) conditions for construction and demolition waste (CDW) through a combination of **binding legal acts** and **methodological guidelines** issued by the Ministry of the Environment (MŽP). Together, these documents define when and under what conditions waste ceases to be waste, how recycled CDW can be placed on the market as a product, and what environmental and quality requirements apply.

1. **Act No. 541/2020 Coll., on Waste** *(effective 1 January 2021)*
   This is the **main national waste framework law**. It defines the fundamental principles of waste management, including when waste can cease to be waste (§ 9) and the procedure for **case-by-case EoW decisions** issued by the competent regional authority (§ 10). Each such decision must specify:
   - permissible waste input materials,
   - recovery processes and techniques,
   - quality criteria for resulting materials,
   - verification and self-monitoring systems, and
   - the exact moment when waste ceases to be waste.

   The Act also mandates the National Waste Management Plan **(POH ČR)** as a strategic document.
   Official text (CZ)
2. The **Czech Building Act (Act No. 283/2021 Coll.)** does not directly regulate End-of-Waste criteria, but it strongly influences the generation, separation and quality of construction and demolition waste (CDW). For any demolition, construction or major renovation, the Act requires project documentation for the removal of a structure ("projekt bouracích prací"), which must include a waste-management plan describing how CDW will be identified, separated, handled and safely removed. The Act also mandates procedures that ensure protection of human health and the environment, which in practice requires identifying hazardous materials (e.g., asbestos, PCB) and planning selective demolition. Through these obligations, the Building Act creates the legal basis for upstream measures — selective dismantling, clean material streams and controlled handling — that are essential for high-quality recycling and for producing CDW suitable for End-of-Waste processes.

   Official text (CZ)
3. **Government Regulation No. 119/2024 Coll. (amending Government Regulation No. 163/2002 Coll. on technical requirements for selected construction products***), in force from 1 January 2025*

This regulation updates the Czech national system for placing construction products on the market under Government Regulation No. 163/2002 Coll. (the national route parallel to CPR for products not covered by harmonised EN standards). The amendment strengthens the **Declaration of Conformity** system, expands required product characteristics, and clarifies marking obligations.

Once a mineral CDW material (e.g., recycled aggregate) stops being waste, it **must comply** with this regulation if it is placed on the Czech market as a construction product not covered by a harmonised EN standard.

Therefore, Government Regulation 119/2024 Sb. acts as the **post-EoW regulatory step**, ensuring that CDW-derived products entering the market have:

- documented technical performance,
- conformity marking,
- verifiable and stable quality,
- and traceable documentation consistent with the EoW Statement of Conformity.

Together with the Waste Act, Decree 273/2021 Coll. and MPO's methodology on construction products from waste, this regulation ensures that **EoW for CDW is not the final step** — recycled construction and demolition waste materials must also meet **construction-product legislation** before use. This tight linkage between EoW → product compliance is a **positive example from the CZ practice** supporting quality and market acceptance of CDW recyclates.

Official text (CZ)

4. **Decree No. 273/2021 Coll., on Details of Waste Handling** *(effective 7 August 2021, as amended by **Decree No. 18/2025 Coll.**)*

This decree implements the Waste Act and specifies **detailed technical and procedural rules**. Its **Section § 83** provides **transitional End-of-Waste criteria for mineral CDW**, defining conditions under which **inert mineral recycled materials** (such as recycled aggregates from CDW, soils, and natural stone fractions) **cease to be waste**.

- Requirements include mechanical treatment (size reduction, sorting, grading into fractions) and the intended use of the recycled product.
- The **2025 amendment (Decree No. 18/2025 Coll.) extends** the validity of these transitional EoW criteria **until 31 December 2027** and clarifies that the criteria also apply to "other wastes of the same material composition." This mechanism effectively bridges the gap until harmonized EU-wide EoW criteria are adopted.

Decree 273/2021 Official text (CZ) – the separate Amendment by Decree 18/2025 here: Official text (CZ)

5. **Decree No. 283/2023 Coll. - Decree laying down the conditions under which reclaimed asphalt mixture and reclaimed penetrating macadam are considered to be by-products or cease to be waste**

While Decree 283/2023 Coll. does not itself define the legal moment when the material ceases to be waste, it establishes a complete set of conditions that operate as a stream-specific regulatory regime for reclaimed asphalt mixtures.These conditions include:

- **explicit PAH (PAU) thresholds** and corresponding *quality classes ZAS-T1 to ZAS-T4* defined in Annex 1,
- input requirements for admissible waste materials,

- mandatory sampling and testing procedures,
- documentation rules, and
- a set of permitted uses linked to the PAH-based quality classes.

Because the decree directly regulates PAH content — a key determinant of environmental and health risk — the compliance with these PAH thresholds is central to determining whether the material can be treated as a by-product or as a candidate for End-of-Waste status. End-of-Waste is then formally granted under §§9–10 of the Waste Act, but **the PAH limits and quality classes set in the decree function as the technical criteria underpinning that decision**.

Official text (CZ)

6. **Methodological Guideline of the Waste Department of the Ministry of the Environment for the Management of Construction and Demolition Waste and its Disposal** *(MŽP, 2018)*
This **non-binding but authoritative guideline** provides **operational and quality-management instructions** for stakeholders handling CDW. It sets out procedures for **selective demolition**, **on-site sorting**, **clean separation of material streams**, and **documentation of quality assurance** so that recycled materials can meet product-standard requirements (e.g. EN 13242 for aggregates). It can be used by regional authorities and industry as the de facto implementation tool for achieving EoW-quality outputs. **However, due to its non binding character, we cannot presume to what extent it is used by the Regional Authorities.** Additionaly, the Methodology in some cases refer to the **obsolete decrees,** which has to be taken into account for the analysis, and an update of the Methodology would be desirable.
Source: "Metodický návod pro řízení vzniku stavebních a demoličních odpadů a pro nakládání s nimi," MŽP 2018.

7. **Methodological Guideline for Managing the Generation of Waste Containing Asbestos during Construction and Demolition and for Handling such Waste**, *MŽP (2018)*
A complementary document focusing on **asbestos-containing materials (ACM)** within CDW. It establishes procedures for **identification, safe removal, packaging, transport and disposal** of asbestos waste and clarifies the responsibilities of construction/demolition operators. This guidance ensures that hazardous CDW streams are excluded from recycling and managed separately, in line with EoW safety criteria.

Source: "Metodický pokyn pro řízení vzniku odpadů obsahujících azbest při výstavbě a demolici staveb a pro nakládání s těmito odpady," MŽP (2018)

8. **Waste Management Plan of the Czech Republic 2025-2035 (POH ČR 2025-2035)** *(approved July 2025)*
The **national strategic plan** prepared under the Waste Act. It sets quantitative targets for CDW recovery and qualitative measures to improve material circulation.
    - It sets **ambitious recycling targets for CDW (83% by 2030 and 87% by 2035, see page 351 of the Plan)**— above the EU Taxonomy/DNSH threshold of 70%—and introduces system measures that directly enable EoW compliance: **selective demolition**, **mandatory separate collection of key CDW fractions**, support for **high-quality recycling**, and the development of **national EoW criteria** if EU-wide rules are not finalised. Yet to be noted that the regional Waste Management Plans still use 70% threshold and an update of these Plans is still pending.
    - POH ČR also promotes the use of CDW recyclates in public construction and the recovery of **critical raw materials**.
    - It emphasizes **high-quality recycling of CDW**, development of **EoW criteria** aligned with EU proposals, and **support for markets for recycled aggregates**.

- It also includes **specific measures for asbestos management**, such as updating the 2018 methodology and strengthening enforcement.

Source: "Plán odpadového hospodářství České republiky 2025-2035 (Final, July 2025)."

9. **List of waste and products made from waste that cease to be waste when certain criteria are met, for which the Ministry of Industry and Trade (MPO) does not issue a statement, MPO (2023)**

   This official list adopted by the Ministry of Industry and Trade identifies waste types and products for which End-of-Waste status is considered sufficiently defined by existing legislation.

   - For **mineral CDW recyclates**, the list confirms that EoW is **governed exclusively by §83 of Decree 273/2021 Coll.,** and no individual confirmation by MPO is required once the §83 criteria are met.
   - It also clarifies that §83 applies equally to "other wastes of the same material composition", allowing broader use of the transitional EoW regime beyond classical CDW codes.

     Source: „Seznam odpadů a výrobků z odpadů, které přestávají být odpadem při splnění stanovených kritérií, pro které MPO nevydává vyjádření" MPO (2025)

10. **Methodological Rules: Rules for placing construction products on the market for construction products made from waste, MPO (2025)**

    This non-binding methodology explains how a recycled material that has ceased to be waste (EoW) must be **placed on the market as a construction product**, in line with CPR and Czech technical regulations (e.g. Government Decree 163/2002 Coll.).
    It clarifies that manufacturers of CDW-based products (e.g. **recycled aggregates**) must:
    - follow **relevant ČSN EN standards** (EN 13242, EN 12620, EN 13043),
    - issue the **Declaration of Performance (DoP)** or **Declaration of Conformity**,
    - ensure **factory production control (FPC)**,
    - document **intended use** and **performance characteristics**.

    The Methodology bridges **EoW to CPR compliance**, ensuring that CDW-derived aggregates are legally placed on the construction market as products meeting the same requirements as primary materials.

Source: Pravidla pro uvádění výrobků na trh pro stavební výrobky vyrobené z odpadů

Legal reference: (title of act, regulation, year, link if available)

Acts and legally binding documents:

- Act No. 541/2020 Coll., on Waste
- Act No. 283/2021 Coll., Building Act
- Government Regulation No. 119/2024 Coll.
- Decree No. 273/2021 Coll., on Waste Management (incl. Decree No. 18/2025 Coll.)
- Decree No. 18/2025 Coll.Decree amending Decree No. 273/2021 Coll., on details of waste management, as amended, and other related decrees in the field of waste management
- MPO List of waste and products that cease to be waste (2025)

Additonal guidelines:

- Methodological guidelines from the Waste Department of the Ministry of the Environment for the management of construction and demolition waste and its disposal, 2018 (obsolete)
- Methodological guidelines for managing the generation of waste containing asbestos during the construction and demolition of buildings and for handling such waste, 2018

- Rules for placing construction products on the market for construction products made from waste, 2025

Strategic Framework:

- Waste Management Plan of the Czech Republic 2025-2035 (POH ČR 2025-2035)
- Regional Waste Management Plans

Out-of-scope but relevant for the analysis:

1. Decree No. 169/2023 Coll. – EoW Conditions for Solid Recovered Fuels / Biomass Fuels

The Decree is not directly targeted at CDW, but it serves as a model of a fully codified EoW decree Although this decree regulates solid fuels produced from waste, it is an important precedent: It contains full EoW architecture, including:

- defined input waste types,
- detailed quality parameters and numeric contaminant limits,
- sampling and testing methods,
- verification procedures,
- mandatory Statement of Conformity (průvodní dokumentace),
- and the defined moment when material ceases to be waste.

  This Decree shows that the Czech legal system already uses EU-style, JRC-style EoW decrees, which provides a ready-made model structure for developing a future permanent EoW decree for mineral CDW after 2027.

2. Comparative Review with EU JRC Draft Criteria (June 2025)

a) Permissible waste input material

National provision:

Act No. 541/2020 Coll., on Waste → Core legal basis for defining permissible waste inputs in EoW decisions

The Act empowers the **regional authority (krajský úřad)** to issue an **individual decision** specifying the conditions under which waste ceases to be waste.That decision **must explicitly define the types and origin of waste materials (inputs)** permitted for recovery. The provision ensures that **only specific, well-characterized waste streams** are accepted into an EoW process, in line with environmental safety and product-quality standards.

For CDW, this means the authority must list **which CDW codes (e.g. 17 01 01 concrete, 17 01 02 bricks, 17 01 07 mixtures of concrete, bricks, tiles and ceramics)** may enter the recycling process. These inputs are usually identified by reference to the **European Waste Catalogue (EWC)**. §9(7) functions as a general enabling clause for issuing national EoW decrees, rather than a directly applicable CDW-specific criterion. It is included here for completeness.

Decree No. 273/2021 Coll., on Details of Waste Handling (as amended by Decree No. 18/2025 Coll.)

→ Transitional national EoW criteria for recycled outputs from CDW

In the Czech Republic, §83 of Decree No. 273/2021 Coll. establishes transitional national End-of-Waste conditions for mineral construction and demolition waste (CDW) until 31 December 2027. Recycled aggregates may cease to be waste when they are produced exclusively from *clean inert mineral inputs*,

specifically waste codes: 01 01 01, 01 01 02, 01 04 08, 01 04 09, 01 04 13, 17 01 01 (concrete), 17 01 02 (bricks), 17 01 03 (tiles and ceramics), 17 01 07 (mixtures of concrete, bricks, tiles and ceramics), 17 05 04 (soil and stones), 17 05 08 (track ballast), 19 12 09 (minerals from mechanical treatment only where consisting of concrete extracted from WEEE Group 4), 20 02 02 (soil and stones from gardens and parks), and 10 13 14 (boiler ash and slag from foundries).

These materials must undergo mechanical processing (crushing and grading into size fractions) and be used solely in permitted construction applications defined by national law, while meeting technical standards for the intended use and complying with environmental and ecotoxicity limit values as stipulated in Article 83 (2) b:

- **Recycled aggregate** as a substitute for natural aggregate in uses defined by technical standards.
- **Unbound and hydraulically bound base layers** of lower-class roads, local roads, parking areas, pavements, airport or similar transport surfaces.
- **Protective layers** of roads or airport surfaces.
- **Unbound structural layers of forest and agricultural roads.**
- **Backfilling of utility trenches and engineering networks.**
- **Unbound and hydraulically bound structural layers of railway construction.**
- **Temporary construction-site roads and surfaces.**
- **Sub-base layers for terrain levelling prior to construction of buildings or engineering structures** (with the obligation to remove the material if the construction does not take place).
- **Road embankments**, in accordance with Czech technical standard ČSN 73 6133.

Selective demolition obligations under Annex 24 further support clean input streams.

Annex 24 of Decree 273/2021 lists CDW fractions that must be collected separately during demolition; it functions as a selective-demolition obligation ensuring cleaner input materials but does not itself define EoW input criteria.

Methodological Guideline of the Waste Department (MŽP), 2018 – Management of CDW

→ **Practical interpretation of "permissible inputs"**

The 2018 MŽP Methodological Guideline clearly distinguishes between **acceptable mineral inputs** (concrete, bricks, ceramics, natural aggregates, non-tar asphalt, gypsum, mineral insulation) and **materials that must never enter recycling lines** (asbestos, tar-containing asphalt, PAH-rich materials, impregnated wood, PCB components, CFC-containing insulation, contaminated soil, fire-damaged debris). Although non-binding, the guideline can be used by regional authorities when assessing **"permissible input materials"** under §10 of the Waste Act. However, it is to be noted, that we are not aware of any study analyzing the real use of this Methodology by the Regional Authoroties.

Additional guidance – Asbestos and hazardous materials:

Methodological Guideline for Waste Containing Asbestos (MŽP, 2018, Chapter 4.3) explicitly states that **asbestos-containing CDW** and any **hazardous demolition residues cannot be used as permissible inputs** for recycling or recovery leading to EoW status. These materials must be separately managed and disposed of at authorized facilities.

Comparison:

Compared with the EU draft Criteria 1.1–1.3, the Czech system regulates input materials through a mix of **closed positive lists and case-by-case permits**, rather than only generic exclusions. EU rules set uniform minimum conditions for all Member States: hazardous or POP-containing mineral CDW is strictly banned, inputs must be source-separated with only removable impurities, and materials with asbestos, radioactivity, tar/bitumen, oils, paints, artificial fibres or other deleterious constituents are not allowed.

The Czech framework achieves the same objectives by

- listing **exact EWC codes** of admissible inert mineral wastes in §83 of Decree 273/2021,
- using dedicated hazardous-properties and asbestos guidance to filter out dangerous streams, and
- requiring each EoW decision under the Waste Act to **explicitly define permissible inputs** for a given facility.

In short, the EU provides a **harmonised, criteria-based floor**, while Czech law adds **more detailed, material-specific and permit-based control** on what can and cannot enter the EoW recycling process.

Good practices identified:

1. The 2018 CDW Methodological Guideline gives very concrete lists of what may/must not enter recycling:
   - acceptable: concrete, bricks, tiles, ceramics, natural aggregates, non-tar asphalt, etc.
   - excluded: asbestos, tar-asphalt, PAH-rich materials, impregnated wood, PCB components, CFC-insulation, contaminated soil, fire debris, other hazardous materials.
2. Czech methodology and the national Waste Management Plan promote pre-demolition audits and selective demolition so that mineral CDW is already source-separated and cleaner at origin.
3. Czech law uses a dedicated decree for hazardous properties of waste and an asbestos guideline.In practice, hazardous CDW, asbestos, POP-problematic materials, tar-asphalt, contaminated soil etc. are systematically excluded before they even reach the EoW process.

b) Allowed treatment processes and techniques

National provision:

Sorting:

***Act No. 541/2020 Coll., on Waste* — § 10(3)(d)**

Under Czech law, the processing steps leading to End-of-Waste status must be explicitly defined in the **regional authority's EoW decision**. According to §10 of the Waste Act, the authority must specify the permitted input materials, the required treatment operations, the output quality criteria and the methods for verification, making these processing requirements legally binding and integrated into the facility's operating permit. In practice, this ensures that only the authorised unit operations—such as pre-sorting, removal of hazardous components, crushing, screening or other mechanical treatments—may be used, providing a controlled and transparent pathway to achieving compliant EoW output.

Methodological Guideline of the Waste Department (MŽP), 2018 — "Management of CDW and its disposal"

The 2018 Methodological Guideline of the Waste Department provides the national practical framework for CDW treatment. It defines treatment as any operation that alters the waste's properties, with key CDW processes including crushing, screening and metal separation, and it views CDW recovery primarily as R5 recycling of inorganic materials. The guideline also emphasises upstream requirements—pre-demolition audits, selective demolition, on-site separation, acceptance controls and QA/QC—which are essential for producing clean input streams and achieving compliant recycled aggregates. Although not legally binding, the guideline functions as the Czech "operational manual" that authorities routinely use when setting EoW permit conditions on allowed treatment techniques and process controls.

Handling and collection:

Decree No. 273/2021 Coll. regulates the requirements for **handling** demolished construction materials during the demolition, execution, or maintenance of a building. This issue is addressed in Part 4 of the Decree, specifically in *Section 42 – Handling of Demolished Construction Materials during Demolition, Construction, or Maintenance of a Building, § 1.*

During the demolition, execution, or maintenance of a building, the following materials must ***be collected separately****:*

- *Demolished construction materials and products that can be reused, or construction and demolition waste (CDW) that can be recycled; this obligation applies at least to the materials or waste listed in Part 1 of Annex No. 24 to this Decree;*
- *Demolished construction materials that can be further used as by-products; this obligation applies at least to the materials or waste listed in Part 2 of Annex No. 24 to this Decree;*
- *Construction and demolition waste containing hazardous components; this obligation applies at least to the waste listed in Part 3 of Annex No. 24 to this Decree.*

The Annex No. 24 *"Demolished Construction Materials, Products, By-products, and Construction and Demolition Waste that Must Be Collected Separately"*, lists, among others, the following materials from the category of inert mineral waste:

Uncontaminated demolished construction materials and products that can be reused or CDW that can be recycled:

- *Concrete and reinforced concrete structures,*
- *Bricks and masonry elements,*
- *Roof tiles,*
- *Ceramic tiles, other facing elements, and sanitary ceramics,*
- *Asphalt mixtures not containing hazardous substances,*
- *Soil and stones not containing hazardous substances,*
- *Ballast from railway tracks not containing hazardous substances,*
- *Mixtures of concrete, bricks, tiles, and ceramic products not containing hazardous substances.*

Demolished construction materials that are considered by-products:

- *Soil and stones,*
- *Reclaimed asphalt mixtures.*

Based on national legislation (§ 10 Waste Act (No. 541/2020 Coll.) and Decree 273/2021 Coll. and the practice of regional permits, the following processes are generally allowed and commonly used in Czechia:

1. **Mechanical treatment** – crushing, grinding, screening, sieving, and separation of impurities (metals, wood, plastics).
2. **Physico-chemical processes** – washing and water-based separation of inert materials, removal of contaminants (e.g. fine particles, unwanted minerals).
3. **Stabilisation and mixing** – addition of binders (cement, fly ash) to produce stable recycled materials suitable for construction applications.
4. **Pre-treatment for energy recovery** – for non-inert fractions (e.g. contaminated wood, mixed waste unsuitable for material recovery).

5. **Sorting and selective demolition** – processes ensuring the separation of reusable, recyclable, and hazardous components at the source.

Waste Management Plan of the Czech Republic 2025-2035 (POH ČR)

The plan proposes to legislate selective demolition, ensure separate collection of core CDW fractions, and align with EU EoW; this is meant to enable high-quality recycling by guaranteeing feedstock purity so that standard mechanical processes (crushing/screening/separation) consistently deliver to product specifications. It has the folowing practical effect. While POH is strategic (not a permit condition), it **signals** that allowed/required processes in future binding acts or permit templates will hinge on **selective demolition and rigorous upstream sorting**, reinforcing the processing techniques already used in practice.

Comparison:

In the Czech Republic, the rules governing *allowed treatment processes and techniques* for construction and demolition waste (CDW) recycling are defined mainly in the Waste Act No. 541/2020 Coll. and Decree No. 273/2021 Coll., which establish a **permit-based approach rather than a fixed list of permitted technologies and it is in the responsibility of regional authorities.** Regional authorities issue *end-of-waste* (EoW) permits that specify acceptable treatment processes, quality control measures, and verification methods (§ 10 (3)(d)–(f) of the Act).

Decisions issued by regional authorities and the practices of authorized facilities show that the permitted technologies include, in particular:

- **Mechanical treatments:** crushing, sorting, grinding, sieving, and removal of impurities (such as metals, wood, plastics).
- **Physico-chemical processes:** washing of inert materials, water-based separation, and removal of contaminants.
- **Stabilization and mixing processes:** e.g., conditioning of recycled materials by adding binders (cement, fly ash) for construction use.
- **Pre-treatment for energy recovery:** applied to non-inert fractions.

Each process must be described in the facility's operational plan, which forms part of the permit application and is reviewed by the regional authority. Recycled aggregates must be safe for reuse in construction and meet relevant technical standards (e.g. ČSN EN 13242+A1).

The Czech Environmental Inspectorate (ČIŽP) oversees compliance, and any change in technology requires a permit amendment (§ 10 (6)). Compared with the EU-level proposal for End-of-Waste criteria for mineral CDW, which limits treatment techniques to mechanical processing and explicitly excludes chemical alteration, the **Czech framework allows greater flexibility**, provided the process ensures product safety, marketability, and environmental protection. This individualized system thus enables regional authorities to adapt conditions to specific materials and technologies while remaining consistent with the EU Waste Framework Directive's general principles (Directive 2008/98/EC, Annex II).

Good practices identified:

1.The 2018 guideline gives concrete instructions: selective dismantling, removal of non-mineral components, then crushing, screening and metal separation in dedicated recycling lines. Authorities can use it as when drafting EoW conditions; however, the practical application of all requirements may be difficult due to missing infrastructure and businesses involved in the reverse value chain (e.g. lack of storage facilities for the dismantled components, missing sufficient number of mobile recycling facilities).

2. Each EoW permit under §10 of the Waste Act must explicitly define the treatment process (steps, input conditions, output criteria, verification). This makes the allowed techniques legally binding and tailored to the specific facility, not just generic.

c) Quality criteria for end-of-waste materials

National provision:

In Czechia, the quality of materials that cease to be waste **is not governed by a single national EoW regulation with fixed contaminant limits (as proposed by the EU)**, but by a combination of the Waste Act, product standards, and individual EoW decisions issued by regional authorities.

1. Legal basis:

Under the Waste Act No. 541/2020 Coll. (§9–§10), any material seeking EoW status must:

- meet all technical standards applicable to its intended use,
- comply with product legislation and chemicals legislation (CLP, REACH, POPs, CPR),
- pose no unacceptable risk to human health or the environment.

Regional authorities must therefore set explicit quality criteria and verification methods (sampling, testing) for each operator in the EoW permit. This decentralised approach means that specific limits and testing frequencies vary by facility.

2. Product-standard requirements:

For mineral CDW recyclates (recycled aggregates), quality parameters such as grading, fines, mechanical performance and impurities are determined by the relevant ČSN/EN standards (e.g. EN 13242, EN 12620, EN 13043).
Decree No. 273/2021 Coll. (§43) reinforces this link by requiring that recycled construction materials used in construction must comply with these standards.

3. Contaminants, asbestos and hazardous substances:

Czech law does not provide a national EoW impurities table or numeric asbestos limits equivalent to EU Criterion 3.3. Instead:

- hazardous-substance requirements follow EU rules (CLP/REACH/POPs) and national procedures for hazardous-waste assessment,
- the CDW Methodological Guideline (2018) and the Asbestos Guideline (2018) exclude asbestos and other hazardous components at input stage, ensuring they cannot enter the recycled output,
- Annex 5 of Decree 273/2021 Coll. contains contaminant limits (Table 5.1) and ecotoxicity thresholds (Table 5.3). These limits apply both to waste used for recovery on the surface of terrain (e.g. backfilling) and, under Article 83(2), to recyclates from construction and demolition waste that cease to be waste.

4. Bituminous CDW (reclaimed asphalt):

Decree No. 283/2023 Coll. establishes a stream-specific quality regime for reclaimed asphalt mixtures, including:

- PAH contamination classes (ZAS-T1–T4),
- numeric PAH limits and sampling/testing rules,
- permitted uses based on contamination level.

The decree does not define the EoW moment, but it provides a complete set of quality conditions that operators must meet before EoW can be granted under the Waste Act. This makes it a **useful model for future mineral CDW EoW regulation, even though it only applies to asphalt.**

5. Restrictions on use:

Czech legislation **does not contain a single negative list of prohibited applications** as in the EU proposal. Instead, restrictions arise from:

- the individual EoW decision (must define allowed uses),
- §83 of Decree 273/2021 (permitted uses for mineral recyclates),
- water-protection and construction legislation,
- the rules for reclaimed asphalt under Decree 283/2023 Coll.

Comparison:

Czechia currently uses a **permit-based and standards-based system** for determining EoW quality criteria. Unlike the EU draft, there is **no uniform national table of impurity or leaching limits for mineral CDW**; instead, authorities combine EU chemicals legislation, technical standards and case-specific EoW conditions. Decree 283/2023 Coll. demonstrates that the Czech system is capable of issuing detailed, stream-specific EoW-type rules, which could be expanded to mineral CDW once EU-wide EoW criteria are adopted.

Good practices identified (e.g., strict limit values, alignment with product standards):

Czechia does not yet have a decree that sets numeric End-of-Waste quality criteria for mineral CDW (such as recycled aggregates). However, Decree No. 283/2023 Sb. (Decree laying down the conditions under which reclaimed asphalt mixture and reclaimed penetrating macadam are considered to be by-products or cease to be waste) shows that the Czech system *is capable* of issuing detailed, stream-specific EoW rules: it provides explicit input conditions, contaminant limit values, sampling and testing requirements, and documentation duties for reclaimed asphalt. This decree therefore illustrates the regulatory model that could be used in future for mineral CDW.

d) Requirements for management systems (quality control, monitoring, accreditation)

National provision:

The Waste Act (§10(3)(e-f)) requires regional authorities to define, in every EoW decision, the exact quality parameters the output must meet and the methods for verifying them, including sampling, testing and documentation; the Act also obliges operators to maintain full traceability, record-keeping and process separation (§13, §16). Although the Waste Act **requires EoW decisions to specify verification procedures, it does not mandate the implementation of a formal quality-management system** (QMS); such systems arise from permitting conditions, product-legislation obligations and methodological guidance.

Decree No. 273/2021 Coll., - the Decree does not explicitly require laboratory accreditation in § 83, compliance must be verified by sampling and testing in accordance with the Waste Act, which in practice requires testing by competent (typically accredited) laboratories.

The 2018 MŽP Methodological Guideline for CDW expands this into a practical QA/QC framework covering acceptance inspections, sampling per EN standards, continuous documentation, and the use of quality-management systems (ISO 9001, ISO 14001, EMAS).

Excerpt: Methodological guidelines from the Waste Department of the Ministry of the Environment for the management and disposal of construction and demolition waste – Chapter 2.4 Quality control and assurance

*Quality control is extremely important in all stages of the construction and demolition waste management process. Environmentally sound use of recycled waste can be ensured by introducing **controls and quality management tools at all stages of the recycling process**: 1. at demolition sites; 2. during transport and transshipment of waste; and 3. at construction and demolition waste recycling sites. There should be documented procedures for all these stages and appropriate procedures for the traceability of the resulting products should be in place. It is **recommended** to use existing general quality management systems such as ČSN EN ISO 9001 /22/ and environmental management systems such as ČSN EN ISO 14001 /23/ and EMAS /24/. The EMAS system is a voluntary environmental protection tool that can be viewed as an extension of the management system according to ČSN EN ISO 14001.*

Comparison:

Czech legislation requires that each EoW decision issued under the Waste Act (§10) defines specific quality parameters, sampling and testing methods, and documentation duties; operators must also ensure traceability and process separation (§13, §16). However, the Act **does not mandate a formal quality-management system** (QMS). Quality assurance therefore arises mainly from individual permitting conditions, product-legislation obligations and the 2018 MŽP Methodological Guideline, which recommends (but does not require) **systems such as ISO 9001, ISO 14001 or EMAS.**

Good practices identified (e.g., mandatory accreditation, transparent reporting):

1. **Mandatory reporting through the Integrated Reporting System (ISPOP) system**, which provides harmonised records of waste generation, treatment and outputs. While not EoW-specific, it enables centralised oversight and traceability of material flows relevant to EoW decisions.
2. **The widespread use of ISO/IEC 17025-accredited laboratories** for regulatory sampling and testing. Although not explicitly required for EoW, accredited analytical results are considered best practice by authorities and ensure reliable verification of quality and contaminant criteria.

e) Requirement for a statement of conformity

National provision:

In Czechia, any material that ceases to be waste must be accompanied by documentation ("průvodní dokumentace") proving compliance with all conditions set in the EoW decision. **Although Czech legislation does not define a standalone Statement of Conformity, the documentation accompanying the EoW output functions as such.**

The obligation arises from **§9 and §10 of the Waste Act (No. 541/2020 Coll.),** which require that every EoW output be accompanied by *„průvodní dokumentace"* confirming that the material meets all quality criteria, technical standards, environmental and health requirements, and other applicable legislation.

Each regional EoW decision specifies the required documentation, including information on input materials, treatment processes and verification of quality criteria, as required by §10(3)(c–g). Operators must maintain traceability, record-keeping and documentation until the material leaves the facility (§9(5–6), §13, §16).

Decree No. 273/2021 Coll. does not require a formal "statement of conformity" in the sense of EU product legislation. However, for recycled mineral materials ceasing to be waste under § 83, it requires mandatory accompanying documentation demonstrating origin, compliance with contaminant and ecotoxicity limits, intended use, and fulfilment of applicable product requirements. Functionally, this documentation performs a role comparable to a conformity statement within the waste-to-product transition framework.

Government Regulation No. 119/2024 Coll. (amending Government Regulation No. 163/2002 Coll. on technical requirements for selected construction products) - Although the regulation does *not* define EoW criteria, it directly impacts any recycled construction product derived from CDW once it has ceased to be waste under an EoW decision or no longer fulfils the definition of waste; materials used under §83 remain waste and are not construction products. After achieving EoW, the material becomes a construction product, and this regulation requires:

- Declaration of Conformity with a full set of declared technical properties that affect basic construction requirements (strength, reaction to fire, stability, etc.) (§13(1)(f)).
- Permanent compliance with declared characteristics, ensuring the product maintains its performance throughout use (§13(1)(h) amended).
- Use of the Czech conformity mark, visibly and permanently affixed to the product or its documentation (§2(3–5)).
- Making the product suitable for proper design and safe incorporation into structures, supported by initial type testing, performance levels, and product-specific classes.
- Full applicability to recycled aggregates, masonry units, or other CDW-derived products that fall under the national route of technical requirements.

Comparison:

Czechia requires that any material ceasing to be waste be **accompanied by documentation** demonstrating compliance with the conditions set in the individual End-of-Waste decision. Unlike the EU proposal, Czech legislation **does not define a harmonised national template** or the specific form of this documentation; its structure and content are **determined case-by-case by the regional authority** under §§9–10 of the Waste Act. The accompanying documentation must prove compliance with all quality criteria, technical standards and environmental requirements, with traceability ensured through statutory record-keeping obligations (§13, §16) and facility operational rules determined in waste-treatment permits.

By contrast, the EU proposal introduces a single, harmonised conformity-statement template with prescribed content, explicit legal references (CLP, REACH, POPs, CPR), minimum retention periods and integration with a certified quality-management system. The SoC confirms compliance with the full set of EoW criteria, including use-restriction criteria defined at EU level.

Importantly, Czech legislation includes an additional regulatory layer after the EoW stage. Once a CDW-derived material ceases to be waste, **its placing on the market** as a construction product must comply with Government Regulation No. 163/2002 Coll., as amended by Government Regulation No. 119/2024 Coll. This requires a Declaration of Conformity, conformity marking and compliance with performance requirements under national product legislation. Thus, the CE marking/DoC obligations apply in addition to EoW documentation and ensure that the material meets both environmental safety criteria and construction-product requirements.

Good practices identified:

1. Unlike most EU Member States, Czechia applies a two-step compliance model: once a CDW-derived material achieves End-of-Waste status, it must still comply with full construction-product legislation before being placed on the market (DoC/DoP, FPC, marking) under Government Regulation No. 163/2002 Coll. and No. 119/2024 Coll. This means that End-of-Waste does not automatically make a material a product. Instead, Czechia requires the material to undergo both environmental/waste criteria (EoW) and product-performance criteria. This dual system provides significantly stronger safety, performance and market-confidence guarantees compared with most EU Member States, where EoW often serves as the only compliance step.

3. General Observations

Strengths of national approach (compared to EU draft):

- Clear regulatory linkage to product legislation (Government Regulation No. 163/2002 Coll. and Government Regulation No. 119/2024 Coll.), so CDW recyclates that cease to be waste must also meet full construction-product requirements (DoC/DoP, testing, marking).
- Detailed methodological guidelines for CDW and asbestos, promoting selective demolition, separate collection and QA/QC across the whole chain (demolition → transport → recycling). Although non-binding and partly outdated, these documents provide a practical framework to which regional authorities can refer.

Weaknesses or gaps identified:

- **Fragmented legislation and rules** - Application restrictions and some quality aspects are spread across multiple acts (waste, water, construction law), making the system **complex and less readable** compared to a single EU EoW act.
- **Absence a permanent national EoW decree** for mineral CDW means significant variability between regional decisions and less legal certainty for operators.
- **Decentralisation of decisions on EOW to the regional governments -** No single harmonised **national SoC template** or unified QMS requirement; documentation and QA/QC are defined case-by-case in permits, which can reduce transparency and consistency.
- To enable a stable, predictable and high-quality End-of-Waste system in Czechia, **the permitting regime for recycling facilities** should be aligned with EoW requirements. This includes harmonised criteria for regional authorities, a proportionate permitting system for mobile facilities, unified

quality and traceability obligations, and the establishment of clear test methods and limit values for EoW products rather than waste. **Strengthening enforcement against illegal landfilling** and ensuring consistency across waste, environmental and construction legislation is essential to create a functional market for EoW-compliant recycled aggregates.

Additionally, **the Secondary Raw Materials Policy by MPO (2019-2022) provides the following evaluation (page 37):**

- "The production of construction and demolition waste represents the largest material flow by weight of all waste. Recycled aggregate is partially used in construction, but **mostly for inferior purposes (backfilling of utility networks, temporary landscaping on construction sites, etc.).** The possibilities of application are defined in the relevant ČSN ISO standards applicable to aggregates used for construction purposes.
  Greater use of recycled aggregates (recycled inert mineral construction waste) is still hampered by unfounded **mistrust** and the resulting **reluctance** of most **construction designers** to use these materials more often.
  Among other things**, the absence of more precise legislation on the demolition of buildings** prevents higher quality recycled aggregates. **There is no effective tool that would create conditions for the complete dismantling of buildings prior to demolition and for the separation** of individual types of construction and demolition waste during demolition (brickwork, concrete, ceramics, asphalt, soil, etc.). The development of construction and demolition waste recycling is constantly threatened by the existence of a number of speculative reclamation or landscaping projects, especially near large urban agglomerations, where construction and demolition waste is dumped without any treatment."

Any innovative or transferable practices worth highlighting at EU level:

Introduce Pre-Demolition Audit Framework

According to Pavlů and Pešta (2024)[28], a new Czech national standard on pre-demolition audits and selective deconstruction is being prepared, with the purpose of "prescribing how the processes should proceed, what information they should contain, and how the deconstruction of a building can be carried out in order to achieve the maximum possible utilisation of the recovered materials" . The authors note that demolition must be accompanied by documentation including "sampling of construction materials, their testing, and using the results as a basis for waste classification and for preparing the demolition documentation" . The upcoming standard also describes a procedure of "progressive clearing, stripping and final selective deconstruction and demolition," including the removal of components that complicate recycling . Since current Czech legislation addresses the handling of demolition materials only in a general way, the authors explain that "a standard for pre-demolition audit and selective deconstruction is being developed," along with supporting methodologies for "assessing the properties of materials obtained during demolition".

Building on this emerging national standard, Czechia should introduce a **fully integrated, legally defined pre-demolition audit framework** that formalises the audit as a required component of demolition permitting. Such a system should:

- **Establish a legal definition of a pre-demolition audit**, aligned with the structure already proposed in the new UCEEB-led standard (mapping, inspection, sampling, identification of hazardous and recyclable materials, planning of selective demolition) .
- **Specify qualified persons** who may conduct the audit (e.g., certified auditors, engineers trained in hazardous substances, circular construction), ensuring consistency and reliability.

[28] Pavlů, T., & Pešta, J. (2024). *Pre-demolition audit and building deconstruction as a standard demolition procedure*. TZB-info. https://stavba.tzb-info.cz/hruba-stavba/27279-preddemolicni-audit-a-demontaz-budovy-jako-standardni-postup-odstraneni

- **Require standardised procedures** for building inspection, documentation, sampling, material surveys, and identification of elements suitable for reuse, preparation for reuse, and high-grade recycling.
- **Integrate the audit directly into demolition documentation**, replacing the current generic "waste-management plan" with a comprehensive material inventory and deconstruction plan.
- **Define rules for safe extraction and traceability of materials**, including what may remain non-waste (reuse), what becomes waste, and what can meet EoW conditions.
- **Ensure verification**, e.g. through the demolition authority or independent reviewers, especially for hazardous substances and material quality.
- **Connect audits with broader circular-economy systems**—material passports, demolition maps, digital building documentation, and open publication of audit results (when possible)—to support market planning for recycled materials and help manufacturers anticipate available secondary resources.

Separate backfilling from recycling in legislation and practice

Introduce a clear legal distinction between material recovery (recycling) and backfilling, ensuring that backfilling does not count towards recycling targets and is limited only to cases where recycled aggregate cannot be used as a product. In the Czech context, stakeholders report that a considerable share of CDW is still directed to lower-value applications that correspond, in practice, to backfilling-type uses rather than true recycling. Such applications do not lead to End-of-Waste status or product-quality compliance. Clarifying the boundary between R5 and R10 in national guidance and permitting practice would help avoid misclassification and reduce the risk of "pseudo-recycling," while supporting higher-quality uses of mineral recyclates.

Introduce bonus mechanisms for higher levels of CDW recycling

As recommended by EQAR[29], public procurement and permitting could include **bonuses or preferential scoring** for projects achieving high material recovery rates (e.g., above 80%, resp. 70%), high use of recycled aggregates, or demonstrable design-for-disassembly. This would create market incentives for higher-grade recycling and support the uptake of EoW-compliant materials.

Design for Disassembly and Mandatory Deconstruction Planning

Czechia could introduce mandatory deconstruction or disassembly plans as part of building permits, following the practice of several EU countries. This would ensure that key construction components (e.g., windows, insulation, façades, roofing, gypsum boards) can be removed cleanly and prepared for high-quality recycling. While this measure would significantly improve CDW management, a longer-term and more ambitious option would be to move towards full Extended Producer Responsibility (EPR) schemes for selected construction products.

[29] European Quality Association for Recycling (EQAR) (2025): EQAR-Statement for the EU consultation on the "Circular Economy Act". Vienna, 28 October 2025.

Annex 6 - Germany

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Date: February 2026

1. National Framework

Is there a national End-of-Waste (EoW) criterion related to CDW? (yes/no/in preparation)

According to § 5 (1) of the **Circular Economy Act (German Closed Substance Cycle Waste Management Act) (KrWG)** a substance ceases to be waste once it has undergone a recycling process and is in such a condition that

- it is used for specific purposes
- there is a market or demand for it
- all technical requirements applicable to the respective intended use are met
- all legal provisions and applicable standards for products are fulfilled
- the **use does not lead to any harmful effects on humans or the environment**.

Circular Economy Act (German Closed Substance Cycle Waste Management Act) (KrWG)

https://www.bundesumweltministerium.de/fileadmin/Daten_BMU/Download_PDF/Gesetze/novelle_krwg_bf.pdf

Many of the elements that would be required for an End-of-Waste regulation in accordance with national German Circular Economy Act (KrWG) are already included in **Substitute Building Materials Ordinance (Ersatzbaustoffverordnung - EBV)**. However, this Ordinance does not currently provide for End-of-Waste. Technical standards for **specific recycled materials** is as the **EBV. EBV** regulates the safe use of certain mineral waste in technical structures by specifying requirements for the production, classification, and installation of mineral substitute building materials. EBV refers to the replacement of substitute building materials in areas in **contact with the ground**.

Substitute Building Materials Ordinance (Ersatzbaustoffverordnung - EBV) August 2023:

https://www.gesetze-im-internet.de/ersatzbaustoffv/

The German Federal Government set itself the goal of developing specific criteria for achieving the EoW for certain CDW. In order to realise this goal, the BMUV (Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection) has decided to define corresponding criteria for mineral substitute building materials that originate from the processing of mineral waste and whose further intended use can exclude their waste status. A key point paper on the End-of-Waste Ordinance for certain mineral substitute has been formulated[30], which also provides a comparison table between the KrWG requirements and existing EBV regulations.

[30] BMUV. (2023). Eckpunktepapier zur Abfallende-Verordnung für bestimmte mineralische Ersatzbaustoffe. Referate T II 4, T II 2 und T II 1. 1–17

2. Comparative Review with EU JRC Draft Criteria (June 2025)

a) Permissible waste input material

National provision:

German **Construction and Demolition Waste (CDW) regulations** focus on mandatory source separation and strict pollutant limits under the Commercial Waste Ordinance (GewAbfV) and the **Circular Economy Act (Kreislaufwirtschaftsgesetz - KrWG)** (2012/2018).

These laws mandate strict separation, sorting, and recycling of specific waste streams, including concrete, stone, timber, metal, glass, and plastic, prioritizing material recovery over disposal. Only clean or sorted material fractions are accepted for high-quality recycling (e.g., aggregate production). Contaminated, mixed debris (hazardous waste) is restricted and must be heavily treated.

According to §1 EBV:

1) The provisions of this regulation govern the following regarding mineral substitute building materials within the meaning of § 2 (1):1. Requirements for the production of these mineral substitute building materials in mobile and stationary facilities and for the marketing of mineral substitute building materials,

2. requirements for the sampling and testing of unprocessed soil material and unprocessed dredged material that is to be excavated or removed,

3. requirements for the installation of these mineral substitute building materials in technical structures, and

4. requirements for the separate collection of mineral waste from technical structures.

However, the Ordinance does not apply to:

- Natural raw materials extracted from quarries or mines
- The use of mineral substitute materials in rootable soil layers (e.g. agricultural or green areas)
- Certain specific uses, such as landfill construction, mining, dyke construction, water bodies, and specific road construction applications under separate guidelines
- Temporary storage or relocation under certain construction or remediation conditions
- Certain hydraulically bound mixtures regulated under building or transport laws

In short, the Ordinance mainly applies to the production, marketing and use of mineral substitute building materials in technical construction works, while excluding natural raw materials and specific special-use cases regulated elsewhere.

§2: This section defines different types of mineral materials and wastes covered by the Ordinance:

- Blast furnace slag
- Granulated blast furnace slag
- Steel mill slag
- Foundry cupola furnace slag
- Foundry cupola furnace slag
- Copper smelter material:
- Foundry residual sand
- Melting chamber granulate from the melting combustion of hard coal

- Hard coal fly ash
- Lignite fly ash
- Municipal waste incineration ash
- Recycled building material
- Dredged material
- Track ballast
- Brick material
- Soil material

Taking the above considerations into account, the following material streams are eligible for inclusion in a waste-end regulation as a first step:

- Soil and stones – According to the Substitute Construction Materials Ordinance (ErsatzbaustoffV), the material classes for soil material (BM-0, BM-0*, and BM-F0) and track ballast (GS-0)

- RC construction materials (RC1)– Material class RC-1 according to the Substitute Construction Materials Ordinance

- Brick material (ZM)– Material class ZM according to the Substitute Construction Materials Ordinance

The operator of the processing plant must **classify the mineral substitute building material into a material class (§11 and §16 EBV),** provided that several material classes are defined for a mineral substitute building material in Annex 1. The classification must be carried out immediately after the evaluation of the test.

Comparison:

For **mineral CDW** there is no significant difference

Good practices identified:

- In German (EBV) there are clear criteria for the processing and use of mineral substitute building materials (MEB) – such as RC building materials and soil material – promote their use in technical structures (roads, paths, excavation pits). This conserves natural resources.
- Improved environmental protection: The regulation sets binding limits for pollutants. It ensures that materials used in construction do not leach pollutants into the soil and groundwater through precipitation, which is in line with the precautionary principle of water law.
- Clear definitions: The regulation precisely differentiates between different material classes and installation methods, which facilitates the planning and implementation of construction projects.

b) Allowed treatment processes and techniques

National provision:

This results according to EBV from the requirements for the separate collection and recycling of mineral waste from technical structures (Section 24 (1)-(4)) and from further regulations on separate storage (Section 3 (2)):

§ 24 (EBV) Separate collection and recycling of mineral waste from technical structures

(1) Producers and owners shall collect the mineral substances and mixtures specified in §2 above, which are generated as waste during the demolition, renovation, or repair of technical structures, **separately from each other** and from waste from primary building materials, transport them, and, in accordance with the Closed Substance Cycle Waste Management Act (KrWG), primarily for preparation for reuse or recycling. If this waste is intended for use in technical structures but is not directly suitable for this purpose, the producers and owners of the waste fractions must deliver it to a suitable treatment facility.

(2) Mineral substitute building materials collected separately in accordance with paragraph 1, sentence 1 may be reused in a technical structure if they have been clearly identified according to the type of mineral substitute building material and its material class.

(3) Not withstanding paragraph 1, sentence 1, recycled building materials may be collected and transported together with similar waste fractions from primary building materials.

(4) The obligations under paragraph 1, sentence 1 shall not apply if the separate collection of the respective waste fraction is technically impossible or economically unreasonable. Separate collection is technically impossible in particular if there is not enough space available to set up waste containers for separate collection. The separate collection of the waste fractions referred to in paragraph 1, sentence 1 is economically unreasonable if the costs of separate collection, in particular due to a high level of contamination or a very small quantity of the respective waste fraction, are disproportionate to the costs of mixed collection. Costs that could have been avoided by technically feasible and economically reasonable measures of selective dismantling shall not be taken into account when assessing economic reasonableness.

Further regulation on separate storage:

According to EBV: § 3 Acceptance inspection

When mineral waste is delivered to a treatment plant and there is suspicion that certain pollution limits might be exceeded, the waste must be separated, sampled and tested before it can be processed.

Comparison:

There are similar rules and legislations in Germany and EU. But in Germany there is an exception from the collecting strictly separately. If separate collection is technically impossible in particular if there is not enough space available to set up waste containers for separate collection. In EU draft that is not mentioned.

Good practices identified (e.g., strict limit values, alignment with product standards):

Eventhough the treatment steps are not mentioned in EBV or KrWG, we need to mention the good practice identified in Germany:

Crushing and sorting of recycled material is done very well in Germany, the result is a very good sorted nearly single-type recycled material without foreign substances like wood, metal, plastics,….

c) Quality criteria for end-of-waste materials

National provision:

The quality criteria to be complied with — including pollutant limit values and technical requirements — are defined in the provisions governing the acceptance of mineral waste (Section 3) and the installation of mineral substitute building materials (Sections 19 and 20).

§ 3 (EBV) Acceptance inspection

(1) The operator of a processing plant in which recycled building materials are produced must immediately carry out an acceptance inspection upon delivery of mineral waste and document the results.

The acceptance inspection includes a visual inspection and findings regarding the characterization,

in particular the determination of

1. the name and address of the collector or transporter,

2. the mass and area of origin of the delivered waste,

3. the waste code in accordance with the annex to the Waste Catalog Regulation,

4. the name of the construction project or information on the place of origin,

5. the composition, contamination, consistency, appearance, color, and odor.

The acceptance check may also include further determinations for characterization, in particular with regard to the

1. material values according to Annex 1 Tables 1 and 4 and monitoring values according to Annex 4 Table 2.2 for recycled building materials and

2. material values according to Annex 1 Tables 3 and 4 for soil material.

List of abbreviations and material values for the mineral substitute building materials specified in the annexes

MEB	Mineral substitute building material
HOS-1, HOS-2	Blast furnace slag of classes 1,2
HS	Blast furnace slag
SWS-1, SWS-2	Steel mill slag of classes 1, 2
CUM-1, CUM-2	Copper smelter material of classes 1, 2
GKOS	Foundry cupola furnace slag
GRS	Foundry sand
SKG	Melting chamber granulate from the melting combustion of hard coal
SKA	Coal boiler ash
SFA	Coal fly ash
BFA	Lignite fly ash
HMVA-1, HMVA-2	Municipal waste incineration ash of classes 1,2
RC-1, RC-2, RC-3	Recycled building materials of classes 1, 2, 3
BM-0, BM-0*, BM-F0*, BM-F1, BM-F2, BM-F3	Ground material of classes 0, 0*, F0*, F1, F2, F3
BG-0, BG-0*, BG-F0*, BG-F1, BG-F2, BG-3	Excavated material of classes 0, 0*, F0*, F1, F2, F3
GS-0, GS-1, GS-2, GS-3	Track ballast of grades 0, 1, 2, 3
ZM	brick material

Annex 1 table 1 (EBV) for regulated substitute building materials excluding track ballast, soil material, and dredged material

MEB		RC-1	RC-2	RC-3	HOS-1	HOS-2	HS	SWS-1	SWS-2	GKOS
Parameter	Dim.									
pH value[1]		6 - 13	6 - 13	6 - 13	9 - 12	9 - 12	8 - 12	9 - 13	9 - 13	7 - 12
Electrical conductivity [2]	µS/cm	2 500	3 200	10 000	5 000	7 000	4 000	10 000	10 000	1 500
Chloride	mg/l									
Sulfate	mg/l	600	1 000	3 500	1 300	3 600	350			
Fluoride	mg/l							1,1	4,7	
DOC	mg/l									
PAK_{15}[3]	µg/l	4	8	25						
PAK_{16}[4]	mg/kg	10	15	20						
Antimony	µg/l									
Arsenic	µg/l									
Lead	µg/l									90
Cadmium	µg/l									
Chrome, total	µg/l	150	440	900				110	190	150
Copper	µg/l	110	250	500						
Molybdenum	µg/l							55	400	
Nickel	µg/l									30
Vanadium	µg/l	120	700	1 350			55	180	450	55
Zinc	µg/l									

Continued Table 1

MEB		CUM-1	CUM-2	GRS	SKG	SKA	SFA	BFA	HMVA-1	HMVA-2
Parameter	Dim.									
pH value[1]		6 - 10	6 - 10	> 9	6 - 10	7 - 12	8 - 13	11 - 13	7 - 13	7 - 13
Electrical conductivity [2]	µS/cm	300	300	2 700	10 - 60	2 100	10 000	15 000	2 000	12 500
Chloride	mg/l								160	5 000
Sulfate	mg/l					600	4 500	2 500	820	3 000
Fluoride	mg/l			8,7						
DOC	mg/l			30						
PAK_{15}[3]	µg/l									
PAK_{16}[4]	mg/kg									
Antimony	µg/l	25	25						10	60
Arsenic	µg/l	55	65	65						
Lead	µg/l			90						
Cadmium	µg/l									
Chrome, total	µg/l			110			1 000	150	150	460
Copper	µg/l	55	110	110					110	1 000
Molybdenum	µg/l	110	110	55		400	7 000	400	55	400
Nickel	µg/l			30						
Vanadium	µg/l			200		230	300		55	150

Zinc	µg/l			160							

1 Only for GRS limit values, otherwise substance-specific guidance values; in case of deviations, the cause must be investigated.

2 Substance-specific orientation value; in case of deviations, the cause must be investigated.

3 PAK_{15}: PAK_{16} without naphthalene and methylnaphthalene.

4 PAK_{16}: Representing the group of polycyclic aromatic hydrocarbons (PAHs), 16 selected PAHs are examined according to the list of the Environmental Protection Agency (EPA): acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene.

Annex 1 table 4 **additional material values** for specific load parameters of soil material and dredged material.

Additional material values for untreated construction waste (in accordance with Section 3 (1) sentence 3 number 1, to be applied in the event of indications of these pollutants).

Parameters	Dim.	BM-F0*, BG-F0*	BM-F1, BG-F1	BM-F2, BG-F2	BM-F3, BG-F3
Inorganic substances					
Antimony	µg/l	7,5	7,5	7,5	15
Molybdenum	µg/l	55	55	55	110
Vanadium	µg/l	30	55	450	840
Organic substances					
BTEX	mg/kg	1	1	1	1
EOX	mg/kg	3	3	3	10
MKW	µg/l	150	160	160	310
LHKW	mg/kg	1	1	1	1
Cyanides	mg/kg	3	3	3	10
Tributyltin cation	mg/kg	20	100	100	1 000
Phenols	µg/l	12	60	60	2 000
PCB_6 and PCB-118	µg/l	0,02	0,02	0,02	0,04
PCB_6 and PCB-118	mg/kg	0,15	0,15	0,15	0,5
Chlorophenols, total	µg/l	1,5	10	10	100
Chlorobenzenes, total	µg/l	1,5	1,7	1,7	4
Atrazine	µg/l	0,2	0,4	0,5	1,3
Bromacil	µg/l	0,2	0,2	0,3	0,4
Diuron	µg/l	0,1	0,1	0,2	0,3
Glyphosate	µg/l	0,2	0,6	2,2	4,0
AMPA	µg/l	2,5	2,5	2,5	4,0
Simazine	µg/l	0,2	0,6	1,2	4,0
other herbicides[1]	µg/l	0,2	0,7	1,0	4,0
Hexachlorobenzene	µg/l	0,02	0,02	0,02	0,04

[1] Individual values for each dimefuron, flazasulfuron, flumioxazine, ethidimuron, thiazafluron, and newly approved active substances.

Annex 4 Table 2.2 **monitoring values** (solid content values) for RC building materials monitoring values according to Annex 4 Table 2.2 for recycled building materials

Parameters	Dim.	
Arsenic	mg/kg	40
Lead	mg/kg	140
Chrome	mg/kg	120
Cadmium	mg/kg	2
Copper	mg/kg	80
Mercury	mg/kg	0,6
Nickel	mg/kg	100
Thallium	mg/kg	2
Zinc	mg/kg	300
Hydrocarbons[1]	mg/kg	300 (600)

PCB_6 and PCB-118	mg/kg	0,15

[1] The specified value applies to hydrocarbon compounds with a chain length of C10 to C22. The total content (C10 – C40) determined in accordance with DIN EN 14039, January 2005 edition, must not exceed the value specified in
brackets. Exceedances attributable to asphalt components do not constitute grounds for exclusion.

material values according to Annex 1 Tables 3 and 4 (see above) for soil material.

Annex 1 Table 3 material values for soil material[1] and dredged material

Parameter	Dim.	BM-0 BG-0 sand[2]	BM-0 BG-0 Lehm, Schluff[2]	BM-0 BG-0 Ton[2]	BM-0* BG-0*[3]	BM-F0* BG-F0*	BM-F1 BG-F1	BM-F2 BG-F2	BM-F3 BG-F3
Mineral impurities	Vol. %	to 10	to 10	to 10	to 10	to 50	to 50	to 50	to 50
pH value[4]						6,5 - 9,5	6,5 - 9,5	6,5 - 9,5	5,5 - 12,0
Electrical conductivity[4]	µS/cm				350	350	500	500	2 000
Sulfate	mg/l	250[5]	250[5]	250[5]	250[5]	250[5]	450	450	1 000
Arsenic	mg/kg	10	20	20	20	40	40	40	150
Arsenic	µg/l				8 (13)	12	20	85	100
Lead	mg/kg	40	70	100	140	140	140	140	700
Lead	µg/l				23 (43)	35	90	250	470
Cadmium	mg/kg	0,4	1	1,5	1[6]	2	2	2	10
Cadmium	µg/l				2 (4)	3,0	3,0	10	15
Chrome, total	mg/kg	30	60	100	120	120	120	120	600
Chrome, total	µg/l				10 (19)	15	150	290	530
Copper	mg/kg	20	40	60	80	80	80	80	320
Copper	µg/l				20 (41)	30	110	170	320
Nickel	mg/kg	15	50	70	100	100	100	100	350
Nickel	µg/l				20 (31)	30	30	150	280
Mercury	mg/kg	0,2	0,3	0,3	0,6	0,6	0,6	0,6	5
Mercury[12]	µg/l				0,1				
Thallium	mg/kg	0,5	1	1,0	1,0	2	2	2	7
Thallium[12]	µg/l				0,2 (0,3)				
Zinc	µg/l	60	150	200	300	300	300	300	1 200
Zinc	µg/l				100 (210)	150	160	840	1 600
TOC	M%	1[7]	1[7]	1[7]	1[7]	5	5	5	5

Hydrocarbons	mg/kg				300 (600)	300 (600)	300 (600)	300 (600)	1 000 (2 000)
Benzo(a)pyrene	mg/kg	0,3	0,3	0,3					
PAH_{15}[9]	µg/l				0,2	0,3	1,5	3,8	20
PAH_{16}[10]	mg/kg	3	3	3	6	6	6	9	30
Naphthalene and methylnaphthalene, total	µg/l				2				
PCB[6] and PCB-118	mg/kg	0,05	0,05	0,05	0,1				
PCB[6] and PCB-118	µg/l				0,01				
EOX[11]	mg/kg	1	1	1	1				

1 The material values apply to soil material and dredged material with up to 10 percent by volume (BM and BG) or up to 50 percent by volume (BM-F and BG-F) of mineral foreign matter within the meaning of Section 2(8) of the Federal Soil Protection and Contaminated Sites Ordinance with only negligible amounts of impurities within the meaning of Section 2(9) of the Federal Soil Protection and Contaminated Sites Ordinance. Soil material of class BM-0 and dredged material of class BG-0 meet the value-based requirements for application or introduction in accordance with Section 7 (3) of the Federal Soil Protection and Contaminated Sites Ordinance. Soil material of class BM-0 and dredged material of class BG-0 sand meet the value-based requirements
for application or incorporation in accordance with Section 8 (2) of the Federal Soil Protection and Contaminated Sites Ordinance; Class BM-0* soil material and class BG-0* dredged material meet the value-based requirements for application or introduction in accordance with Section 8 (3) No. 1 of the Federal Soil Protection and Contaminated Sites Ordinance.

2 Main soil type groups according to the Soil Mapping Manual, 5th edition, Hanover 2005 (KA5);
heavily silty sands, loamy-silty sands, and heavily loamy sands, as well as materials that cannot be assigned to a specific soil type, are to be classified as loam or silt according to the soil type.

3 With the exception of the eluate value for sulfate, the eluate values in column 6 are only relevant if the respective solid value for the substance in question is exceeded according to columns 3 to 5. The eluate value for PAK_{15} and naphthalene and methylnaphthalene, total, is relevant if the solid value for PAK_{16} in columns 3 to 5 is exceeded. The values in brackets apply to a TOC content of ≥ 0.5%.

4 Substance-specific orientation value; in case of deviations, the cause must be investigated.

5 If the value is exceeded, the cause must be investigated. If the sulfate concentrations are naturally elevated, utilization within the affected areas is possible. Outside these areas, the suitability for utilization must be decided on a case-by-case basis and in consultation with the competent authority.

6 The value of 1 mg/kg applies to soil material of the soil types sand, loam, and silt. For soil material of the
soil type clay, the value of 1.5 mg/kg applies.

7 Soil material-specific orientation value. In the case of heterogeneous mineral soil conditions, the TOC content of the mass of the material produced can be used as a decisive factor for recycling in the vicinity of the material produced and use under the same conditions. During installation, volume stability and settlement processes as well as the requirements of Section 6 (11) sentences 2 and 3 of the Federal Soil Protection and Contaminated Sites Ordinance must be taken into account. During installation, volume stability and settlement processes must be taken into account.

8 Die angegebenen Werte gelten für Kohlenwasserstoffverbindungen mit einer Kettenlänge von C10 bis C22. Der Gesamtgehalt bestimmt nach der DIN EN 14039, „Charakterisierung von Abfällen – Bestimmung des Gehalts an Kohlenwasserstoffen von C10 bis C40 mittels Gaschromatographie“, Ausgabe Januar 2005 darf insgesamt den in Klammern genannten Wert nicht überschreiten.

9 PAH_{15}: PAH_{16} without naphthalene and methylnaphthalene.

10 PAH_{16}: representative of the group of polycyclic aromatic hydrocarbons (PAHs) According to the list of the US Environmental Protection Agency (EPA), 16 selected PAHs are examined: acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene.

11 If the values are exceeded, the materials must be examined for case-specific stresses.

12 For mercury and thallium, the specified total content is decisive for classification in material classes BM-F0*/BG-F0*, BM-F1/BG-F1, BM-F2/BG-F2, BM-F3/BG-F3. The eluate value of material class BM-0*/BG-0* must be complied with.

For extracted mineral substitute building materials that can be clearly determined according to type and material class, the respective material-specific material values according to Annex 1 Table 1 apply. For the determination of the pollutant content in mineral waste, existing test results or results from the Preliminary investigation of structures or soils. Any information available on pollutants must be submitted by the waste producer or owner to the operator of the facility upon delivery. As part of the preliminary investigation, in-situ tests, in particular in accordance with DIN 19698 "Testing of solids – Sampling of solid and compact materials," Parts 5 (2018-06) and 6 (2019-01), are permissible.

(2) If, upon delivery of mineral waste to a treatment plant, the characterization findings give rise to the suspicion that material values for Class 3 recycled construction materials – RC- 3 – according to Annex 1, Table 1, or material values that exceed the solid values for Class F3 soil material – BM-F3 – Annex 1 Table 4, this waste must be stored separately and sampled and examined separately by a testing laboratory prior to treatment. The same applies if there is suspicion that monitoring values according to Annex 4 Table 2.2, or, in the case of non-treated soil material, material values for soil material of class F3 – BM-F3 – according to Annex 1 Table 3 or 4. Sections 8 and 9 apply accordingly. If there are indications that the mineral waste delivered has elevated levels of other substances not limited by the material values, these substances must also be analyzed.

(3) If the analysis shows that one or more measured values exceed the material values specified in paragraph 2 or the monitoring values specified in § 10, these wastes may not be mixed with other wastes or materials. Separate processing to comply with the material values specified in Annex 1 is permissible. In the case of elevated levels of other pollutants for which no material values have been specified and which prevent proper and harmless recovery in accordance with Section 7 (3) of the Circular Economy Act shall apply mutatis mutandis.

And according to §19 and §20 (EBV) regulations about installations.

§ 19 Basic requirements

(1) The builder or user **may only install mineral substitute building materials or mixtures** in technical structures if there is no risk of adverse changes to the groundwater quality and harmful soil changes in accordance with paragraphs 2 and 3.

(2) In the case of mineral substitute building materials, adverse changes in groundwater quality and harmful soil changes are not to be expected if the mineral substitute building materials to be installed comply with the requirements of Section 3, Subsection 1 or 3, and

1. the mineral substitute building materials are only installed in the manner permitted for them in accordance with Annex 2 or 3, or

2. Class 0 soil material (BM-0) or Class 0 dredged material (BG-0) is installed.

(3) In the case of mixtures, there is no need to worry about adverse changes in groundwater quality or harmful soil changes if

1. all mineral substitute building materials contained in the mixture comply with the requirements of Section 3, Subsection 1 or 3, and

2. notwithstanding paragraph 2, number 2, installation is only carried out in a manner that is permissible for each individual mineral substitute building material in accordance with Annex 2 or 3.

(4) The installation of mineral substitute building materials or mixtures in technical structures may only be carried out to the extent necessary for the respective structural engineering purpose.

(5) Mixtures may only be produced for the purpose of improving structural properties.

(6) In Zone I water protection areas and Zone I medicinal spring protection areas, the use of mineral substitute building materials or mixtures in technical structures is not permitted. In Zone II water protection areas and Zone II medicinal spring protection areas, only the following mineral substitute building materials may be used in technical structures:

1. Class 0 soil material – BM-0 –,

2. Class 0 dredged material – BG-0 –,

3. Melting chamber granulate – SKG –,

4. Class 0 track ballast – GS-0 – and

5. Mixtures containing the mineral substitute building materials listed in numbers 1 to 4.

If no Zone II is designated in a water protection area, the provisions of sentence 2 shall apply within a radius of 1,000 meters around the water intake. The installation of mineral substitute building materials in water protection areas of Zone III A and Zone III B, in medicinal spring protection areas of Zone III and Zone IV, and in water priority areas may only be carried out in the manner permitted in accordance with Annexes 2 and 3. If only Zone III is designated in a water protection area, the regulations of Zone III A shall apply. Regulations based on Sections 51 to 53 of the Water Resources Act take precedence. If the regulations in sentence 6 do not contain any provisions on mineral substitute building materials within the meaning of Section 2 (1), the regulations of this ordinance shall apply.

(7) If particularly sensitive areas, such as karst areas or areas with highly fissured, particularly water-permeable subsoil, are designated by statutory order under state law, the use of Class 3 recycled building materials – RC-3, soil material of class F3 – BM-F3, dredged material of class F 3 – BG-F3, and track ballast of class 3 – GS-3, or mixtures containing these substitute building materials, in technical structures.

(8) Installation must take place above the groundwater cover layer specified in Annex 2 or 3. This may be natural or artificial. If the groundwater cover layer is artificial, this requires the approval of the competent authority. The soil type of the groundwater cover layer must correspond to the main soil type groups of sand, loam, silt, or clay in accordance with the Soil Science Mapping Guidelines, 5th edition, Hanover 2005 (KA5) or classified as fine-grained, mixed-grained, or coarse-grained soil in accordance with DIN 18196 “Earthworks and foundation engineering – Soil classification for civil engineering purposes,” May 2011 edition, with the exception of the groups with the group symbols GE, GW, GI, GU, and GT. In a structural engineering assessment in accordance with DIN 18196, May 2011 edition, coarse-grained soils, with the exception of the groups with the group symbols GE, GW, and GI, are to be classified as sand, and fine- or mixed-grained soils, with the exception of the groups with the group symbols GU and GT, are to be classified as loam, silt, or clay. A favorable characteristic of the groundwater cover layer within the meaning of Annex 2 or 3 exists if the groundwater-free seepage distance at the respective installation site is more than 1 meter plus a safety margin of 0.5 meters. An unfavorable property of the groundwater cover layer is present if, in the case of mineral substitute building materials, recycled building materials of class 1 – RC-1, soil material of class 0* – BM-0*, soil material of class F0* – BM-F0*, soil material of class F1 – BM-F1, dredged material of class 0* – BG-0*, soil material of class F 1 – BG-F1, track ballast of class 0 – GS-0, track ballast of

class 1 – GS-1, steelworks slag of class 1 – SWS-1, copper smelter material of class 1 – CUM-1, blast furnace slag of class 1 – HOS-1, granulated blast furnace slag – HS, melting chamber granulate – SKG, the groundwater-free seepage distance is at least 0.1 to 1 meter and, for all other substances or material classes regulated in this ordinance, 0.5 to 1 meter, plus a safety margin of 0.5 meters in each case. The builder or user must assess the groundwater cover layers on the basis of a soil analysis of soil samples or of building site investigations in accordance with soil mechanics or soil science standards.

(9) Embankments and dams with defined technical safety measures in accordance with installation methods 9 and 10 of Appendix 2 must be planned, constructed, and inspected in accordance with the "Information sheet on construction methods for technical safety measures when using soils and building materials with environmentally relevant constituents in earthworks" – M TS E – (FGSV, 2017 edition). The client or user must have the technical safety measures checked during construction in accordance with the requirements of this information sheet. For the inspection, the client may only commission testing laboratories which, depending on the construction method, are accredited for the specialist areas of soil (A), layers without binders (I) or geosynthetics (K) in accordance with the "Guideline for the Accreditation of Testing Laboratories for Building Materials and Building Material Mixtures in Road Construction", 2015 edition, – RAP Stra 15 – of the Road and Transportation Research Association (FGSV). If the requirements according to sentence 1 are met, the commissioned testing agency shall issue a test certificate to the client. Unless the client is the property owner, the client must hand over the test certificate to the property owner. The property owner must keep the test certificate until the structure is demolished. Notwithstanding sentences 5 and 6, the test certificate may also be handed over to the operator who uses the structure for commercial purposes and kept there with the consent of the property owner.

§ 20 Additional installation restrictions for certain slags and ashes

(1) The mineral substitute building materials listed below may only be used in technical structures in minimum installation quantities. The following minimum installation quantities must be observed

1. at least 250 cubic meters for
    a) Class 2 municipal waste incineration ash – HMVA-2,
    b) Class 2 steelworks slag – SWS-2,
    c) Class 2 copper smelter material – CUM-2,
2. of at least 50 cubic meters for
    a) Lignite fly ash – BFA,
    b) Hard coal boiler ash – SKA,
    c) coal fly ash – SFA,
    d) municipal waste incineration ash of class 1 – HMVA-1,
    e) steelworks slag of class 1 – SWS-1,
    f) blast furnace slag of class 2 – HOS-2,g) Class 1 copper smelter material – CUM-1,
    h) Foundry residual sand – GRS, and
    i) Foundry cupola furnace slag – GKOS.

If these mineral substitute building materials are part of a mixture, the respective minimum installation quantity must be observed for each mineral substitute building material.

(2) The minimum installation quantities specified in paragraph 1 do not apply to repair or supplementary measures on technical structures if the respective mineral substitute building material has already been used at the installation site.

Comparison:

The comparison of total values of PAH in EU and German legislation is difficult because of the variety of different PAHs , which are focused. In German´s legislation EBV the focus is on 16 most important sorts of PAHs. The limit values of PCBs, and BTEX are in EU legislation very much higher than for all sorts of recycled materials according to EBV in Germany. Hydrocarbons limit values according to EU are also higher than according to german´s EBV. Phenol values in Germany vary greatly depending on the class of recycled materials according to EBV (from 12-2000µg/l). EU limits is only given in mg/kg dry matter, so the comparison is difficult.

The EBV legislation in Germany always makes differences according to the installation and the class of recycled materials.

Comparing heavy metals is difficult because eluate values in the EU legislation are given in mg/kg dry matter as leaching values, that can´t be compared with EBV values in µg/l.

Good practices identified (e.g., strict limit values, alignment with product standards):

Recycle materials for use in the ground, which fulfill all requirements of EBV and also water and soil legislation can achieve the end-of-waste status, after they are installed. Limit values seems to be most time lower, partially significant lower, than in EU legislation.

As a good practice could be mentioned, that EBV legislation in Germany always makes differences according to the installation and the class of recycled materials.

d) Requirements for management systems (quality control, monitoring, accreditation)

National provision:

The requirements for management systems and for demonstrating compliance with end-of-waste criteria are set out in the provisions on quality monitoring of the production of mineral substitute building materials (MEB) in Section 3 (Subsections 1, 2 (new), and 3).

As per Section 3 Production of mineral substitute building materials of the EBV, the following applies

Subsection 1. Quality control: Operators of treatment plants must carry out comprehensive quality control, which includes **proof of suitability, factory production control, and external monitoring**. Proof of suitability is required when the plant is commissioned or modified and includes an **initial inspection and operational assessment by an external monitoring body**. The results must be documented in a test certificate. Factory production control must be carried out independently and covers various requirements regarding material values. In third-party monitoring, external bodies check whether the specified values are being complied with.

Subsection 2. Quality control associations: These associations can take on quality control on behalf of operators, but must be recognized by the competent authority. This recognition requires that the association acts independently and has appropriate monitoring and investigation bodies at its disposal. They perform

tasks such as preliminary inspections of businesses, checking the reliability and expertise of operators, and providing support with factory production control.

Subsection 3. Documentation and measures in the event of defects: Operators must carefully document the test certificates, sampling protocols, and evaluation of the test results and retain them for a specified period of time. If defects are identified by **external monitoring,** the materials concerned may only be reused or disposed of under certain conditions. In the event of persistent defects, external monitoring may be suspended until the requirements are met again. These requirements ensure that mineral substitute building materials are produced, monitored, and documented in compliance with strict quality standards in order to guarantee their suitability and safety for the intended use.

Comparison:

The requirements for quality control, monitoring, accreditation are similar, but in Germany there is no final decision of end of waste as a "product" without installing in a technical structure. And in Germany you must carry out comprehensive quality control, which includes proof of suitability, factory production control, and external monitoring, in the EU proposal is called shall.

Good practices identified (e.g., mandatory accreditation, transparent reporting):

The mandatory quality control, documentation and the mandatory quality control and association is different to EU proposal with a recommendation to that.

e) Requirement for a statement of conformity

National provision:

According to EBV § 25 Delivery note and cover sheet

(1) The whereabouts of a mineral substitute building material or mixture must be documented by the distributor and user from the time it is first placed on the market until it is installed in a technical structure. To this end, the operator of the processing plant or the person who places unprocessed soil material or unprocessed dredged material on the market must issue a delivery note in accordance with the model in Annex 7 at the latest upon delivery, which must contain the following information:

1. the distributor,

2. the name of the mineral substitute building material and the material class and, in the case of mixtures, the names of the individual mineral substitute building materials contained in the mixture and their material classes,

3. in the case of waste, the waste codes in accordance with the Waste Catalogue Ordinance,

4. the monitoring body or testing body,

5. information on compliance with the requirements specified in the footnotes of the respective installation table for specific installation methods in accordance with Annex 2 or 3,

6. the delivery quantity in tons and the date of delivery,

7. the delivery grain size or soil group and

8. the carrier.

(2) The operator of the treatment plant or the person who places untreated soil material or untreated dredged material on the market must sign the completed delivery note and hand it over to the carrier. The carrier must hand over the completed and signed delivery note to the user.

(3) The user must compile the delivery notes received in the course of a construction project immediately upon receipt and document them with a cover sheet in accordance with the template in Annex 8. The cover sheet must contain the following information:

1. the user,

2. the builder, if they're not the user,

3. the date of delivery,

4. a sketch of the installation site, construction project,

5. the description of the installation methods according to Appendix 2 or 3, stating the respective number,

6. the soil type of the groundwater cover layer, such as “sand” or “loam, silt, or clay,”

7. information on the highest expected groundwater level with regard to the property “favorable” or “unfavorable” according to Annex 2 or 3, and

8. the location of the construction project with regard to water protection areas, medicinal spring protection areas, or water priority areas according to columns 4 to 6 of Annex 2 or 3. The delivery note can be omitted for soil material of class 0 – BM-0, soil material of class 0* – BM-0*, soil material of class F0* – BM-F0*, dredged material of class 0 – BG-0, dredged material of class 0* – BG-0*, dredged material of Class F0* – BG-F0*, track ballast Class 0 – GS-0 and melting chamber granulate – SKG if the total amount installed in a technical structure does not exceed 200 tons. The user must sign the cover sheet immediately after completion of the installation work and, unless he is the building owner himself, hand it over to the building owner together with the delivery notes. Unless he is the property owner himself, the building owner must hand over the cover sheet and the delivery notes to the property owner immediately after completion of the entire construction project. If the construction work involves the construction, expansion, or maintenance of critical infrastructure, in particular the laying of an underground cable, sentence 5 shall apply with the proviso that the cover sheet and delivery notes must be handed over to the operator of the critical infrastructure.

(4) The operator of the treatment plant or the person who places untreated soil material or untreated dredged material on the market must keep a copy or duplicate of the delivery note for five years from the date of issue. The landowner must keep the cover sheet and delivery notes from the time of receipt for as long as the respective substitute building material is installed. Paragraph 3, sentence 6 applies accordingly. These documents must be presented to the competent authority upon request.

Appendix 7 (to Section 25 (1) sentence 2) shows a sample delivery note

1. Operator of the processing plant, distributor of unprocessed soil material or other distributor of the mineral substitute building material or mixture (company headquarters)

   1.1 Company/corporation ...
   1.2 Street and house number ...
   1.3 Postal code ...
   1.4 City ...
   1.5 Telephone and fax ...
   1.6 Email ...

2. Type and properties of the mineral substitute building material or mixture
   2.1 Mineral substitute building material

      2.1.1 Name of the mineral substitute building material, abbreviation, and material class 2.2 Mixture

      2.2.1 Mineral substitute building materials contained in the mixture, associated abbreviations, classes, and their proportions ...

   2.3 In the case of waste Waste code in accordance with the Waste Catalog Ordinance (for the purpose of assignability, e.g., for existing registration requirements) ...

3. Quality control body
   3.1 Name ...

   3.2 Street and house number ...
   3.3 Postal code ...
   3.4 City ...
   3.5 State ...

4. Requirements for specific installation methods

   4.1 Information on compliance with the requirements specified in the footnotes of the respective installation table for specific installation methods in accordance with Appendix 2 or 3 ...

5. Delivery details

   5.1 Delivery quantity (in tons) ...
   5.2 Delivery date ...
   5.3 Delivery grain size or soil group ....

6. Carrier of the mineral substitute building material or mixture (company headquarters)

   6.1 Name/company/corporation ...
   6.2 Street and house number ...
   6.3 Postal code ...
   6.4 City ...
   6.5 State ...
   6.6 Telephone and fax ...
   6.7 Email ...

7. Date and signature

   7.1 Date ...
   7.2 Signature of the distributor (as assurance of the accuracy of the information provided) ...

Comparison:

The requirements are similar, but the end-of waste status could be achieved in Germany only with installation in a new technical application. Recycled aggregates for concrete are not getting an end-of-waste status in Germany.

Clear guidelines for documentation are very good to make the path of the waste tracebale, but it is a lot of bureaucratic burden.

Good practices identified:

Clear guidelines for documentation are very good to make the path of the waste tracebale.

3. General Observations

Strengths of national approach (compared to EU draft):

Classification in different classes of recycled materials and according to the way of installation the limit values are fixed.

Weaknesses or gaps identified:

End-of-waste regulation exists but not as a product after the treatment. That needs to be improved. Planners, builders, and construction companies would prefer a recycled product, which has a status of a product and not the name “waste”.

EBV regulates the recycled materials but better would be to come to end-of-waste after treatment.

Standardization Needs: While some regional/national criteria exist for materials like aggregate, there is a recognized need for more uniform, possibly EU-wide, criteria to increase market potential.

The European Construction Products Regulation together with REACH seems to be a problem **for the recycled aggregates as a product.** According to REACH these substances always need values in a limited range. But recycled aggregate cannot become a product because characteristic values fluctuate too greatly. Standards would have to stipulate that the characteristic values are allowed to fluctuate more, no narrow limits, but maximum values. Maybe classes on pollution would be a solution.

Problem is the higher price in regions, where natural aggregates are available, the price for recycling material is then higher than for natural material. That leads to too little acceptance.

Any innovative or transferable practices worth highlighting at EU level:

In Germany the legislation for EBV, water and soil laws are not harmonised, so there are too many regulations and too many regulations to comply with, so the use of recycled aggregate is too complicated and expensive. That should be easier and European and national regulations should be harmonised.