



**REPORT ON THE REGULATORY IMPACT ANALYSIS OF THE DRAFT ORDER
ESTABLISHING THE CRITERIA FOR DETERMINING WHEN TREATED ELECTRIC ARC
FURNACE SLAG FOR USE AS IRON AND STEEL AGGREGATE CEASES TO BE
WASTE IN ACCORDANCE WITH LAW 7/2022 OF 8 APRIL 2011 ON WASTE AND
CONTAMINATED SOIL FOR A CIRCULAR ECONOMY.**

07 July 2026

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EXECUTIVE SUMMARY SHEET

Ministry/body proposer	Spanish Ministry for Ecological Transition and the Demographic Challenge. Directorate-General for Environmental Quality and Assessment	Date	07/07/2026
Title of the standard	Draft Order establishing the criteria for determining when treated electric arc furnace smelting slag, for use as iron and steel aggregate, ceases to be waste under Law 7/2022 of 8 April 2011 on contaminated waste and soil for a circular economy.		
Type of report	Normal ☒ Abbreviated ☐		
TIMELINESS OF THE PROPOSAL			
Situation being regulated	Regulation of end-of-waste criteria for certain smelting slags after treatment.		
Objectives pursued	To establish criteria allowing the use and transport as products of certain treated slag, subject to certain conditions and only for certain uses.		
Main alternatives considered	The main alternatives considered were: a) Not setting requirements for certain iron and steel slags to achieve end-of-waste status. b) Establish requirements for certain steel slags to achieve end-of-waste status. The second alternative has been chosen, since, as explained throughout the report, establishing requirements for certain end-of-waste steel slags gives rise to several benefits for the protection of human health and the environment. The result of not laying down any rules would be that, in the case of the same type of waste, its use as treated slag is possible only in the territory of the Autonomous Communities that have legislated in this regard.		



CONTENT AND LEGAL ANALYSIS	
Type of regulation	Order
Structure of the Regulation	It consists of an explanatory part and an operative part with six articles, a transitional provision, two final provisions and seven annexes.
Reports gathered	• Ministry of Health, as provided for in the first paragraph of Article 26 (5) of Government Law 50/1997 of 27 November. (06/10/2025) • Ministry of Social Rights, Consumer Affairs and Agenda 2030, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November. (08/10/2025) • Ministry of Industry and Tourism, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November. (15/10/2025) • Ministry of Economy, Trade and Enterprise, provided for in the first paragraph of Article 26.5 of Government Law 50/1997 of 27 November. (16/10/2025) • Ministry of Territorial Policy and Democratic Memory, in accordance with the sixth paragraph of Article 26 (5) of Law 50/1997 of 27 November. (20/10/2025) • Ministry of Agriculture, Fisheries and Food, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November. (22/10/2025) • Ministry of Transport and Sustainable Mobility, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November. (04/11/2025) • Ministry of Housing and Urban Agenda, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November. (07/11/2025) • Report from the National Commission on Markets and Competition, pursuant to Article 5 (2) of Law 3/2013 of 4 June establishing the National Commission on Markets and Competition. (29/10/2025) • Ministerial Commission on Digital Administration of the Ministry for the Ecological Transition and the Demographic Challenge. (29/09/2025) • Environmental Advisory Council (CAMA) provided for in Article 19 of Law 27/2006 of 18 July 2006 regulating the



	rights of access to information, public participation and access to justice in environmental matters (incorporating Directives 2003/4/EC and 2003/35/EC). (11/05/2023) • Technical Secretariat-General of the Ministry for the Ecological Transition and the Demographic Challenge, as proposing department, required by Article 26.4 (5) of Law 50/1997, 27 November. (23/02/2026) • Prior approval by the Ministry for Digital Transformation and the Civil Service, provided for in the fifth paragraph of Article 26 (5) of Law 50/1997 of 27 November. (pending) • Opinion of the Council of State pursuant to Article 22 (3) of Organic Law 3/1980 of 22 April of the Council of State. (pending)
Initial public consultation	In accordance with Article 26 (2) of Law 50/1997 of 27 November, the prior public consultation procedure was available on the public participation section of the web portal of the Ministry for the Ecological Transition and the Demographic Challenge from 28 July to 30 September 2021 inclusive.
Hearing and public information procedure	The following steps have been taken: • Public information through publication on the website of the Ministry for the Ecological Transition and the Demographic Challenge. (17 April to 19 May 2023 inclusive) • Hearing of Autonomous Communities and local authorities via the Waste Coordination Committee. (17 April to 19 May 2023 inclusive) • Hearing of interested parties. (17 April to 19 May 2023 inclusive)
Other consultations	Notification to the European Commission under Directive (EU) 2015/1535 of the European Parliament and the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services. (pending)
ANALYSIS OF IMPACTS	
Matching skills	The Order is issued under Article 149 (1.23) (a) of the Spanish Constitution, which gives the State exclusive



	competence over basic legislation on environmental protection, without prejudice to the powers of the Autonomous Communities to establish additional standards of protection.	
Economic and budgetary impact	Effects on the wider economy	This draft order has positive effects on the economy.
	Effects on SMEs	This draft order has a positive impact on SMEs.
	On competition, market unity and competitiveness	☐ The rule has no significant effect on competition. ☒ The rule has positive effects on competition, market unity and competitiveness. ☐ The regulation has negative effects on competition.
	In terms of the administrative burden	☒ It lessens the administrative burden. Estimated quantification: EUR 52/year. ☐ It incorporates new administrative burdens for the private sector. Estimated quantification: — ☐ It does not affect administrative burdens.
	The standard has an impact on market unity	Negative ☐ Null ☐ Positive ☒



	From a budgetary point of view, the rule: ☐ Affecting the budget of the State Administration ☐ Affecting the budgets of other territorial administrations ☒ Has no effect on budgets	☐ It involves expenditure. ☐ Entails revenue.
Gendered impact on children and adolescents and the family	The impact of the regulation on gender issues is	Negative ☐ Null ☒ Positive ☐
	Impact on children and adolescents	Negative ☐ Null ☒ Positive ☐
	The standard has an impact on the family	Negative ☐ Null ☒ Positive ☐
Impact on equal opportunities, non-discrimination and universal accessibility for persons with disabilities	The standard has an impact on equal opportunities, non-discrimination and universal accessibility for persons with disabilities	Negative ☐ Null ☒ Positive ☐
Climate change impact	Climate change impact, to be assessed in terms of climate change mitigation and adaptation	Negative ☐ Null ☒ Positive ☐
Other impacts	Environmental impact	Negative ☐ Null ☐ Positive ☒



	Impact due to the development or use of digital government means and services:	Negative ☐ Null ☒ Positive ☐
	Impact by social name	Negative ☐ Null ☒ Positive ☐

INTRODUCTION.

This report on the regulatory impact analysis analyses the draft order establishing the criteria for determining when electric arc furnace slag (carbon steel, copper and silico-manganese) intended for use as aggregate in bound and unbound applications and as a raw material in the manufacture of cement and clinker construction products cease to be waste under Law 7/2022 of 8 April 2011 on waste and contaminated soil for a circular economy.

This report is drawn up in accordance with Article 26 (3) of Government Law 50/1997 of 27 November. This report also includes a description of the processing required under Law 27/2006 of 18 July 2006 regulating the rights of access to information, public participation and access to justice in environmental matters (incorporating Directives 2003/4/EC and 2003/35/EC).

I. TIMELINESS OF THE PROPOSAL.

1. Motivation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives ('the Waste Framework Directive') and its transposition into Spanish law by Law 22/2011 of 28 July on waste and contaminated soil introduced a set of requirements that must be met in order for a given waste stream, following recovery, to cease to be considered waste.



According to Article 6 of the Waste Framework Directive as amended by Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste, the legal concept of end-of-waste status may be applied at European Union level, at Member State level or on a case-by-case basis.

At the first level, the European Commission may assess the need to establish such criteria for certain waste streams by means of implementing acts, at European Union-wide level.

At the second level, where they have not been established at that level, it is up to the Member States to establish such criteria for certain types of waste. In both cases, the end-of-waste requirements contained in the Directive apply to the following: permissible waste input material for the recovery operation; allowed treatment processes and techniques; the quality criteria to be met by materials in order for them to cease to be waste after the recovery operation, in line with applicable product standards and including limit values for polluting substances where necessary; the requirements of the management systems to demonstrate compliance with the defined criteria, in particular for quality control and self-monitoring, and accreditation, where applicable; and finally, the submission of a declaration of conformity.

In the third scenario, the so-called case by case scenario, where there are no established criteria at either EU or national level, it is up to the Member States to decide on a case by case basis for certain waste streams. The Waste Framework Directive provides that, in each case, the same requirements as set out for the two options described above can be reflected, where considered necessary. In addition, in the latter case, the limit values for pollutants and any negative impact on the environment and human health shall also be taken into account.

The possibility of development at national level is provided for in Article 5 of Law 7/2022 of 8 April 2007, which provides that, by regulation, the head of the Ministry for the Ecological Transition and the Demographic Challenge may lay down the specific criteria that certain waste must meet in order for it no longer to be regarded as waste, taking into account the applicable case-law, the precautionary and prevention principles, any harmful impacts of the resulting material and, where necessary, the appropriateness of including limit values for polluting substances.

In accordance with the aforementioned Article 5 of Law 7/2022 of 8 April 2007, waste that is a candidate for this procedure must always meet all of the following conditions:

- a) The resulting substances, preparations or objects must be used for specific purposes.
- b) There is a market or demand for those substances, preparations or articles.
- c) The resulting substances, preparations or articles meet the technical requirements for specific purposes, existing legislation and product standards.
- d) The use of the resulting substance, preparation or object does not lead to adverse impacts on the environment or human health.



Therefore, by order, in accordance with paragraph 2 (b) of the fourth final provision of Law 7/2022 of 8 April, the specific criteria for determining end-of-waste status that certain waste must meet, once subject to recovery operations, including recycling, may be established, provided that the four conditions mentioned above are met.

The legal status of slag and its classification as a product, waste or by-product has been under discussion for decades, with the result that it has been classified differently in different Member States. In 2014, the European Commission's Joint Research Centre (JRC) published a study entitled '*Study on methodological aspects regarding limit values for pollutants in aggregates in the context of the possible development of end-of-waste criteria under the EU Waste Framework Directive*'.

In order to clarify the matter, the then Ministry of Agriculture, Food and the Environment commissioned EMGRISA to draw up the document 'Analysis of the current situation of the management of slags in the iron and steel sector in the European Union and in Spain and Assessment of compliance with the requirements to be considered a by-product or declassified as waste' in 2015. This document found different interpretations of slag in the Member States.

In 2016 and 2017, various industrial groupings and companies asked the Waste Coordination Committee of the Ministry for the Ecological Transition, now the Ministry for the Ecological Transition and the Demographic Challenge (MITECO), to declare certain slags, including black and white slag, silico-manganese slag, copper slag (or iron silicate) from the electric arc furnace smelting process, as a by-product. EMGRISA was entrusted with a specific study for each of the applications.

Subsequently, MITECO presented its first conclusions within the Waste Coordination Committee at the meeting of the Working Group on By-products and End-of-Waste, held on 27 November 2019. As the main conclusion of the meeting held, it was mostly considered that the end-of-waste status figure was the most appropriate for these materials, since as a by-product they would not meet the legal condition of being directly usable without having to undergo further processing other than normal industrial practice.

In order to ensure adequate protection of human health and the environment in the use of the treated slag, and in the absence of European Union legislation, it was considered appropriate to develop, for the entire territory of the State, the order establishing the criteria for determining when slag from electric arc furnace smelting, carbon steel, copper and silico-manganese, for use as aggregate (in bound and non-bound applications) and other uses: as a raw material in the manufacture of construction products (cement and clinker) and as an abrasive material they cease to be waste under Law 7/2022 of 8 April 2007 and may be marketed as a product.

2. Objectives

The draft order sets out the requirements for permissible slag, as well as the treatments to be applied and the criteria to be met by the treated slag.



Conversely, slag which does not meet the end-of-waste criteria laid down in the order must be regarded as continuing to be waste. They must therefore be managed in accordance with the legal regime laid down in Law 7/2022 of 8 April 2003.

This order, which defines and establishes the criteria, aims to ensure greater legal certainty, in order to determine in which cases slags are covered by waste legislation and in which cases they are not.

In addition to the above, there is a need to promote the circular economy in Spain through, inter alia, the development of end-of-waste criteria that guarantee the safe reuse of materials from waste in certain production cycles.

The direct benefits of having these end-of-waste criteria at national level may be increased collection of slag, increased use in subsequent uses and therefore lower landfill rates.

In addition, the end of waste status for this stream will reduce the administrative formalities relating to the shipment of waste, unlike in the field of waste, where its control is indispensable.

The importance that this rule may have is seen in relation to the large volume of iron and steel slag generation in Spain, which gives an idea of the magnitude of the material that may be affected by this rule.

3. Option analysis

The alternatives assessed were as follows:

- a) Failure to establish end-of-waste criteria for this stream by regulation, so that it would be considered waste at the inlet of subsequent uses.
- b) Establish end-of-waste conditions for this stream.

The second alternative has been chosen, as explained above. Setting end-of-waste criteria, in particular for slags, can have several benefits. These include greater legal certainty for operators, encouraging material recovery, and better integrating these by-products into the circular economy.

4. Alignment with the principles of good regulation

The draft Order complies with the principles of good regulation laid down in Article 129 of Law 39/2015 of 1 October 2015 on the Common Administrative Procedure of Public Administrations.

Firstly, the standard complies with the principles of necessity and effectiveness, as the initiative is justified on grounds of general interest by encouraging the separation, treatment and return to the production process of electric arc furnace slags, thus facilitating



a genuine transition of the economy towards a more circular model. Moreover, it is based on a clear identification of the aims pursued and is not only the most appropriate instrument to achieve them, but the adoption of a ministerial order is the only instrument available to ensure this.

This rule complies with the principle of proportionality, as it regulates the aspects necessary to clarify when electric arc furnace slag, after treatment, can finally be considered as a product, and when it should be considered as waste.

In accordance with the principle of legal certainty, the legislation is consistent with the rest of the national and international legal order, specifically, it complies with Law 7/2022 of 8 April, which transposes Directive 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste. In addition, clarifying the end-of-waste criteria for steel slag and, consequently, when it acquires product status, creates a stable, predictable, integrated, clear and certain regulatory framework, which makes it easier for companies to understand and understand them and, consequently, to act and take decisions.

It also complies with the principle of transparency, since all the information and public hearing procedures have been scrupulously followed and are described in detail in the 'description of the procedure' section of this report.

Finally, in application of the principle of efficiency, this rule ensures maximum effectiveness in achieving its objectives at the lowest possible costs in its application.

II. CONTENT

With regard to the content and structure of the legislation, it should be noted that, in order to achieve greater clarity and legal certainty, it has been decided to maintain the same structure in this order as in the end-of-waste orders previously approved and published in our country.

The draft order consists of an explanatory part, an enacting terms, and is supplemented by several annexes, structured as follows:

- Explanatory part.
- Enacting terms, comprising six articles and three provisions. It is supplemented by seven annexes. It is summarised below:

Article 1. Subject-matter and scope: It defines the purpose of the standard, setting out the criteria for determining when certain slag that has been treated and is subsequently diverted to different uses ceases to be waste. It is also specified that slags that do not comply must be disposed of as waste, in accordance with the law.

Article 2. Definitions Section: A total of 12 terms are included, the definition of which has been assessed as indispensable for the application of the standard.



Article 3. End-of-waste criteria: The criteria, which must be met simultaneously, have been arranged in a split manner according to the chronological order of the processing:

- (1). (a) The waste to be treated must be only that which meets the criteria in Annex I
- (2). (b) The treatment operations to be carried out on slag in accordance with Annex I
- (c) The permitted and constraining destinations for the treated material shall be those listed in Annex I (3).
- (d) The obligations imposed by the legislation on producers, holders and importers in Articles 4, 5 and 6.

Article 4. Statement of Conformity Similarly to what has been established by European regulations and other published orders regulating end-of-waste status for certain waste, and as regulated by Law 7/2022 of 8 April, it is essential to draw up this document, which is mandatory, for each consignment of steel aggregate from treatment facilities. Reference is made to the model declaration set out in Annex VI to the Order.

Article 5. Management system: This includes the necessary points to be addressed by the management system, as an essential tool aimed at meeting the established end-of-waste criteria. Certification by a third party is also included: an accredited conformity assessment body, certifying that management system put in place and appropriate to the requirements of the Order. In line with the End-of-Waste Orders adopted in our country, there is no longer a specific reference to the Eco-Management and Audit Scheme (EMAS). As a new feature compared to previous orders, the holder must have a management system in place for certain uses.

Article 6. Other obligations of the producer: Other types of obligations for producers are detailed: the inclusion of information in the chronological file drawn up by waste managers, as well as the retention of that information and the obligations to comply with European legislation that applies once steel aggregate is no longer considered waste.

Single transitional provision. Transitional arrangements. It sets a deadline of three months from the entry into force of the Order to achieve the necessary harmonisation between the conditions and recovery operations included in each permit of the operators treating this waste stream, regardless of where each facility is located.

First final provision Competence. Under Article 149 (1.23) of the Spanish Constitution, which confers on the State exclusive competence in relation to basic legislation on environmental protection

Second final provision Entry into force on the day following the publication of the Order in the Official State Gazette.

Annexes



Annex I End-of-waste criteria

Annex II Conditions relating to the leaching of steel aggregate for non-bound applications and bound applications

Annex III Indications on sampling plan and sampling

Annex IV Reference documents for quantitative risk analysis

Annex V Minimum content of the communication to the corresponding regional authority regarding compliance with this Order

Annex VI Declaration of compliance with the criteria for determining when iron and steel aggregate ceases to be waste

Annex VII Compendium of technical standards covering the use of aggregates for information purposes

III. LEGAL ANALYSIS

1. Legal basis and legal status

The choice of the form of order is due to the fact that, in accordance with the criteria set out in Article 5 of Law 7/2022 of 8 April and the fourth final provision, point 2 (b), of the same law, end-of-waste status criteria must be established by ministerial order.

2. Link with national law

With the entry into force of Law 22/2011 of 28 July 2007, the concept of 'end-of-waste status' was incorporated into the Spanish regulatory framework, establishing, in Article 5 thereof, that 'by order of the Minister for the Environment and Rural and Marine Affairs, specific criteria may be established that certain types of waste, which have undergone a recovery operation, including recycling, must meet in order to cease to be considered as such, for the purposes of this Law and provided that the following conditions are met:

- (a) the resulting substances or objects are commonly used for specific purposes;
- (b) there is a market or demand for those substances or objects;
- (c) the resulting substances or objects meet the technical requirements for specific purposes, existing legislation and product standards; y
- (d) the use of the resulting substance or object does not lead to adverse environmental or health impacts.'

Subsequently, with the entry into force of Law 7/2022, of 8 April, repealing Law 22/2011, of 28 July, compliance with the conditions was worded as follows: 'Certain types of waste which have undergone a recovery operation, including recycling, may no longer be regarded as such for the purposes of this Law, provided that all of the following conditions are met:

- (a) the resulting substances, preparations or objects must be used for specific purposes;
- (b) there is a market or demand for those substances, preparations or articles;



- (c) the resulting substances, preparations or articles fulfil the technical requirements for the specific purposes, and the existing legislation and standards applicable to products; y
- (d) the use of the resulting substance, preparation or object does not lead to overall adverse impacts on the environment or human health.'

In addition, as in the repealed law, Law 7/2022 of 8 April 2013 provides that, in the regulatory determination of the specific criteria, for the end-of-waste status of a given stream, account is to be taken of the prior studies carried out for that purpose, which will be analysed in the Waste Coordination Committee and which will take into account what is established, where appropriate, by the European Union, the applicable case-law, the principles of precaution and prevention, any harmful impacts of the resulting material and, where necessary, the appropriateness of including limit values for polluting substances. However, as a novelty, Law 7/2022 of 8 April states, in line with Directive 2018/851 of the European Parliament and of the Council of 30 May 2018, which it transposes, that the regulatory determination of the specific criteria shall include:

- (a) waste authorised as input for the recovery operation.
- (b) The permitted treatment procedures and techniques.
- (c) Quality criteria for materials that cease to be waste after the recovery operation, in line with applicable product standards, including limit values for polluting substances where necessary.
- (d) The requirements for management systems to demonstrate compliance with end-of-waste criteria, in particular for quality control and self-monitoring and accreditation, where applicable.
- (e) The requirement to have a declaration of conformity.

Finally, in accordance with the fourth final provision of Law 7/2022 of 8 April 2007, the specific criteria for certain types of waste to cease to be considered as such shall be laid down by order.

This Order is therefore in line with the provisions of Law 7/2022 of 8 April.

In addition, this Order is structured and consistent with the other Ministerial Orders on end-of-waste status that have been approved in our country in accordance with the repealed Law 22/2011, of 28 July. These orders are as follows: order APM/205/2018 of 22 February 2011 establishing the criteria for determining when processed waste oil from the treatment of waste oils for use as fuel ceases to be waste in accordance with Law 22/2011 of 28 July 2011 on waste and contaminated soil; order APM/206/2018, of 22 February, establishing the criteria for determining when MARPOL type C for use as fuel on ships ceases to be waste in accordance with Law 22/2011, of 28 July, on waste and contaminated soil, both amended by Order TED/363/2020, of 22 February; order TED/426/2020 of 8 May 2011 establishing the criteria for determining when recovered paper and cardboard intended for the manufacture of paper and cardboard ceases to be waste in accordance with Law 22/2011 of 28 July 2011 on waste and contaminated soil; order TED/1522/2021 of 29 December 2011 establishing the criteria for determining when



granulated rubber and rubber powder obtained from the treatment of end-of-life tyres and intended for certain applications cease to be waste in accordance with Law 22/2011 of 28 July 2011 on waste and contaminated soil and amending Orders TED/426/2020 of 8 May 2011, APM/205/2018 of 22 February 2011 and APM/206/2018 of 22 February 2011 establishing the criteria for determining when recovered paper and cardboard intended for the manufacture of paper and cardboard, processed waste oil from the treatment of waste oils for use as fuel and recovered fuel from the treatment of MARPOL type C waste for use as fuel on ships cease to be waste in accordance with Law 22/2011 of 28 July 2011 on waste and contaminated soil; and Order TED/646/2023, of 9 June, establishing the criteria for determining when thermoplastic waste subjected to mechanical treatment and intended for the manufacture of plastic products ceases to be waste in accordance with Law 7/2022, of 8 April, on waste and contaminated soil for a circular economy.

3. Link with European Union law

The Waste Framework Directive and its transposition into Spanish law by means of the now repealed Law 22/2011, of 28 July, introduced a set of requirements that must be met in order for a given waste stream, after recovery, to cease to be considered waste. It is the concept that has been referred to in both pieces of legislation as 'end-of-waste status'.

Subsequently, Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending the Waste Framework Directive, incorporated into the Spanish regulatory framework by Law 7/2022 of 8 April, finally lays down the specific requirements to be met for this change of legal status, which are as follows: the resulting substance, preparation or object is used for specific purposes; there is a market or demand for those substances, preparations or articles; the resulting substances, preparations or articles meet the technical requirements for the specific purposes, existing legislation and product standards; and, finally, that the use of the resulting substance, preparation or object does not lead to adverse environmental or health impacts.

The Waste Framework Directive, as amended by Directive (EU) 2018/851 of the European Parliament and the Council of 30 May 2018, provides that the concept of end-of-waste status may be applied at European Union level, at Member State level or on a case-by-case basis.

At a first level, the European Commission can assess the need to establish detailed criteria for certain waste streams at European Union-wide level, which it will do by means of implementing acts. At the second level, where they have not been established at that level, it is up to the Member States to establish such criteria for certain types of waste. In both cases, the end-of-waste requirements contained in the Directive apply to the following: permissible waste input material for the recovery operation; allowed treatment processes and techniques; the quality criteria to be met by materials in order for them to cease to be waste after the recovery operation, in line with applicable product standards and including limit values for polluting substances where necessary; the management systems to demonstrate compliance with the defined criteria, in particular for quality control and self-



monitoring, and accreditation, where applicable; and finally, the submission of a declaration of conformity.

At the third level defined on a case-by-case basis, where there are no criteria established at either European Union or national level, it is up to the Member States to decide on a case-by-case basis for certain waste streams. The Directive provides that, in each case, the same requirements as set out for the two options described above can be reflected, where considered necessary. In addition, in the latter case, the limit values for pollutants and any negative impact on the environment and human health shall also be taken into account.

With the transposition of Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018, Law 7/2022 of 8 April brings national legislation into line with European legislation.

In addition, this Order follows the criteria of the European Union end-of-waste regulations on other waste streams, such as Council Regulation (EU) No 333/2011 of 31 March 2011 establishing criteria determining when certain types of scrap metal cease to be waste under Directive 2008/98/EC of the European Parliament and of the Council; Commission Regulation (EU) No 1179/2012 of 10 December 2012 establishing criteria determining when glass cullet ceases to be waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council; and Commission Regulation (EU) No 715/2013 of 25 July 2013 establishing criteria determining when copper scrap ceases to be waste under Directive 2008/98/EC of the European Parliament and of the Council.

4. Entry into force

The law shall enter into force indefinitely on the day following its publication in the Official State Gazette.

This Order does not impose new obligations on natural or legal persons engaged in an economic or professional activity, so Article 23 of Law 50/1997 of 27 November 2003 does not apply.

5. Repeal of regulations

That order does not derogate from any other provision.

IV. ALIGNMENT OF THE RULE TO THE ORDER OF DISTRIBUTION OF COMPETENCES

This rule has the legal nature of basic legislation in accordance with Article 149 (1.23) (a) of the Spanish Constitution, which confers on the State exclusive competence over basic legislation on environmental protection, without prejudice to the powers of the Autonomous Communities to establish additional standards of protection.



V. DESCRIPTION OF THE PROCEDURE

Initially, the sectors concerned submitted, under the previous Law 22/2011 of 28 July, various requests for steel slag to be declared a by-product. However, after analysing them in the Working Groups on Subproducts and End of Waste Condition, it was concluded that they did not fall under this concept and that, since treatment on waste was necessary in order to be used, they had to go through the end-of-waste route.

The project has been processed in accordance with the provisions of Law 50/1997, of 27 November, and Law 27/2006, of 18 July, as it is a law with an environmental impact. The steps taken to draw up this standard are as follows:

1. Initial public consultation

In accordance with Article 26 (2) of Law 50/1997 of 27 November, the prior public consultation was conducted on the website of the Ministry for the Ecological Transition and the Demographic Challenge from 28 July to 30 September 2021 inclusive.

The consultation consisted of proposing a series of specific questions on the appropriateness and appropriateness of legislating on the matter, as well as the uses involved and their technical, use and environmental constraints. The issues raised in the previous public consultation were:

- 1. Does it consider it necessary and appropriate to establish end-of-waste status criteria throughout the territory of the State for the slags referred to above obtained from the smelting processes in those industries?*
- 2. Do you consider that there is any impediment or limitation to the subsequent specific uses of the treated slag, raised as authorised uses within the framework of this end-of-waste status? (See tables in annexes showing uses)*

This consultation was addressed both to the Autonomous Communities, the cities of Ceuta and Melilla and local authorities, as well as to the sectors potentially affected and the general public.

During this prior public consultation, replies were received from the following entities:

- o Subdirectorate-General for Pollution Prevention of the Ministry for the Ecological Transition and the Demographic Challenge.
- o GLOBAL ADEC.
- o Andalusian Siderurgical Aggregates, S.L.U (Asidan).
- o Atlantic Cooper.
- o BEFESA Zinc Aser, S.A.U.



- o Federation of Aggregates.
- o Spanish Federation for Recovery and Recycling (Federación Española de la Recuperación y el Reciclaje – FER).
- o FerroAtlántica de Boo, S.L.U. (Ferroglobe).
- o FORMIGRUP. (SORRES I GRAVE EGARA S.S., FORMIGONS MONTCAU S.A).
- o Instituto Español del Cemento y sus aplicaciones (IECA) (Spanish Institute of Cement and its Applications).
- o METALLO SPAIN, S.L.U.
- o Spanish cement manufacturers' group (OFICEMEN).
- o Association of Infrastructure Builders and Concessionaires (SEOPAN).
- o Union of Iron and Steel Enterprises (UNESID).
- o Xallas Electricidad y Aleaciones, S.A.U. (Xeal).

All the comments received have been analysed and assessed to determine whether it was appropriate and appropriate to incorporate them into the drafting of the standard, and those considered appropriate have been incorporated.

Most of the comments received emphasise the extension of the proposed uses for the treated slag, as well as the modification of some points of the required technical, use and environmental constraints.

The comments received and their assessment have been included in Part 1 of Annex I to this report.

2. Hearing of the Autonomous Communities and local authorities.

The Autonomous Communities, the cities of Ceuta and Melilla and local authorities were heard via the Waste Coordination Committee. Other ministerial departments were also consulted through the Working Group on Subproducts and End of Waste Condition of this Coordination Committee.

The text of the draft order together with MAIN was available on the department's web portal from 17 April to 19 May 2023 inclusive.

A reply was received from:

- o Directorate-General for Biodiversity, the Environment and Climate Change of the Government of Cantabria.
- o Catalonia Waste Agency.
- o Directorate for Environmental Quality and Circular Economy of the Basque Government.



All the comments received have been analysed and assessed to determine whether it was appropriate and appropriate to incorporate them into the drafting of the standard, and those considered appropriate have been incorporated.

The submissions received were very diverse. They mainly requested changes to the definitions, wording, extension of permitted uses or modification of the conditions for each use.

The arguments of the Autonomous Communities are set out in Part 2 of Annex I to this MAIN.

3. Information procedure and public hearing.

In accordance with Article 26 (6) of Law 50/1997 of 27 November, as amended by Law 40/2015 of 1 October, on the Legal Regime for the Public Sector, this draft Order was made available to interested parties and potentially affected citizens through the public information procedure by being published on the department's web portal.

The interested parties were heard during the same period. The text of the draft order together with MAIN was available on the department's web portal from 17 April to 19 May 2023 inclusive.

All the comments received have been analysed and assessed to determine whether it was appropriate and appropriate to incorporate them into the drafting of the standard, and those considered appropriate have been incorporated.

During this public information procedure, replies were received from the following entities:

- o AENOR (Spanish Standardisation Agency).
- o ANEFA (National Association of Aggregate Manufacturers).
- o Asidan (Andalusian Siderurgical Aggregates).
- o ATLANTIC COOPER.
- o FDA (Federation of Aggregates).
- o FER (Spanish Federation for Recovery and Recycling).
- o FORMIGRUP.
- o HEIDELBERG MATERIALS
- o Sierúrgica Sevillana, S.A.
- o TECNALIA Certification.
- o Unesid (Union of Iron and Steel Companies)

- o Cedex (Centre for Transport Studies).



The comments received were of a very varied nature. They mainly focused on requesting the acceptance of new uses, changes to the constraints of permitted uses, greater precision and clarity in complying with the requirements, and changes to definitions.

CEDEX's proposals were of a technical nature and proposed changes to the conditions set out in Annex II to the Order.

These claims are set out in Part 3 of Annex I to this MAIN.

4. Reports from ministries and public bodies.

The Technical Secretariat-General of the Ministry for the Ecological Transition and the Demographic Challenge requested a report from the following ministries and public bodies:

- o Ministry of Health, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November, without comment. (06/10/2025)
- o Ministry of Social Rights, Consumer Affairs and Agenda 2030, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November, without comment. (08/10/2025)
- o Ministry of Industry and Tourism, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November, receiving the following comments on the text of the draft legislation (15/10/2025):
 - A general revision of the text of the Order is recommended in order to correct clerical errors. Accepted and corrected in the text.
 - A general revision of the legislative text is recommended in accordance with paragraph (a) of the appendices to the Regulatory Technical Guidelines approved by Agreement of the Council of Ministers of 22 July 2005 on the specific use of capital letters in legislative texts, and in accordance with Guideline 72 on citation of the Spanish Constitution. It is revised and corrected.
 - With regard to Article 3 (1), it is recommended that a more precise wording be used, which leaves no room for doubt as to whether or not all the elements referred to in points (a) to (d) should be verified concurrently. It is accepted and amended in the text of the draft legislation.
 - In relation to Article 4 (4) of the draft, it should be considered whether the issuance of documents in physical paper format complies with Article 14 of Law 39/2015 of 1 October on the Common Administrative Procedure of Public



Administrations, and the other implementing legislation regarding the use of electronic means when dealing with the Administration. Accepted and amended in the text, without prejudice to the fact that the submission may include a physical copy of the DoC.

- o Ministry of Economy, Trade and Enterprise, provided for in the first paragraph of Article 26.5 of Law 50/1997 of 27 November, without comments. (16/10/2025)
- o Ministry of Territorial Policy and Democratic Memory, pursuant to the sixth paragraph of Article 26 (5) of Government Law 50/1997 of 27 November, receiving the following comments (20/10/2025):
 - It is stated that the option of processing the project as a ministerial order should be exceptional and that the Royal Decree should be preferred as a legislative instrument in these cases. However, the choice of the form of order is due to the fact that, in accordance with the criteria set out in Article 5 of Law 7/2022 of 8 April and the fourth final provision (2) (b) of the same law, end-of-waste status criteria must be established by ministerial order.
 - We would inform you that, despite the fact that the Order complies with the mandate contained in Law 7/2022 of 8 April 2003, in the terms laid down therein, three Autonomous Communities (the Basque Country, Cantabria and Catalonia) have regulated the recovery and use of certain slags, and therefore it cannot be ruled out that the project may give rise to jurisdictional disputes.
- o Ministry of Agriculture, Fisheries and Food, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November, without comments. (22/10/2025)
- o Ministry of Transport and Sustainable Mobility, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November, receiving the following comments (04/11/2025):

Comments on both the draft order and MAIN

- It is proposed to make express reference to Article 5(2) of Law 7/2022, of 8 April, in order to make the text clear and consistent. However, it is considered



that the legal basis for it is sufficiently justified in the text and is therefore not accepted.

- In the preamble, on page 6, second paragraph, where it is stated “This order, which consists of six articles, one transitional provision and two final provisions (...)”, it is suggested to also mention the seven annexes that the draft includes. Accepted and mentioned in the text.
- It is suggested to add to the penultimate paragraph of the preamble a reference to the fourth final provision of Law 7/2022, of 8 April, which expressly empowers the head of the Ministry for the Ecological Transition and the Demographic Challenge to establish, by ministerial order, the specific criteria for certain types of waste provided for in Article 5 to cease to be considered as such. Accepted and added to the text.
- In Article 3 (1) (b), a change in wording is proposed. Not accepted as throughout the text the term ‘steel aggregate’ is used to refer to slags that have already reached end-of-waste status and the term ‘treated slags’ for which they are on track. Therefore, in Article 3 (1) (b) it is still appropriate to use the term “treated slag”.
- Article 5.4 of the draft cites specific UNE rules, but also states that its ‘most up-to-date and current’ version must be applied. This formula creates legal uncertainty as it indirectly delegates regulatory capacity to private entities such as UNE or CEN. It is therefore recommended to keep the reference to each standard with its year of publication and to delete expressions such as “in its most up to date and current version”. This recommendation also applies to other articles and annexes of the draft where UNE standards are cited, especially when test methods are linked to regulatory limit values. It is accepted and amended in the text where a UNE-EN standard is mentioned.
- In Annex I, paragraph 3. Permitted destinations and constraints for traced material, Table 2. Permitted destinations, technical and environmental conditions and conditions of use for black steelworks slag, it is suggested, in the technical conditions column, to amend the term ‘regulations’ to ‘regulations’, for greater clarity, avoiding any confusion with voluntary standards (UNE or UNE-EN). Accepted and amended.
In the same Table 2, as regards the use of black slag from steelworks, the application scenario as ‘aggregate in bound applications’ intended for ‘concrete production’, it is proposed to mention that the use of these aggregates is not expressly provided for in the regulation for structural concrete (Royal Decree 470/2021 of 29 June approving the Structural Code). This clarification has been included to make it clear that the use of these aggregates is not expressly provided for in the legislation applicable to



structural concrete. However, this absence is interpreted as a lack of specific regulation and not as a prohibition on their use.

- In Annex I, paragraph 3. Permitted destinations and constraints for traced material, Table 3. Permitted destinations, technical and environmental conditions and conditions of use for silico-manganese slag, it is stated that these slags could be used as a minority component in the manufacture of cements covered by harmonised standard UNE-EN 197-1: 2011. 'Compliance with the requirements for pozzolanic material in the manufacture of commercial cements regulated in Standard UNE-EN 197-1: 2011. It is recommended that a maximum of 5 % be added in compliance with the requirements of the aforementioned standard, as long as its use in legislation as a main component is not approved. Compliance with requirements laid down in Annex AIII.2.3 (P, Q) to Royal Decree 256/2016 of 10 June approving the Instruction for the reception of cements (RC-16)'. However, cements covered by standard UNE-EN 197-1 are CE-marked cements, covered by that harmonised standard published in the OJEU. These cements are in turn included in Royal Decree 256/2016 of 10 June approving the Instruction for the reception of cements (RC-16), as indicated in the draft. However, harmonised standard UNE-EN 197-1 (and therefore RC-16) expressly regulates the components of these types of cement, establishing that only 'natural mineral materials or materials derived from the clinker manufacturing process' could be used as additional minority components (less than 5 %). *It is understood that these aggregates do not comply with the provisions of the current regulation, which derives directly from European regulation, and therefore cements of standard UNE-EN 197-1 could not contain this type of material. The proposed use is accepted and deleted.*

In the same table 3, as regards the use of silico-manganese slag, the application scenario as 'aggregate in bound applications' intended for 'concrete production', it is proposed to make the same reference as indicated in the previous point, indicating that the use of these aggregates is not expressly provided for in the regulation for structural concrete (Royal Decree 470/2021 of 29 June approving the Structural Code). Finding accepted.

- Finally, a number of amendments and corrigenda are proposed for consideration. Accepted and corrected in the text.

Comments on the regulatory impact analysis report (MAIN)

- In Section III. Legal analysis, point 4, entry into force, it is proposed to mention the indefinite or temporary validity of the Order, in accordance with Article 2 (1) (b) (4) of Royal Decree 931/2017 of 27 October regulating the Regulatory Impact Analysis Report. Accepted and incorporated in the text.



- In the section on the prior approval of the Ministry for Digital Transformation and the Civil Service, it is considered appropriate to expressly specify the paragraph on which this report is based. In this case, this is the fifth paragraph of Article 26 (5) of Government Law 50/1997 of 27 November. It was accepted and was already included.
- In paragraph VII. Analysis of impacts, paragraph 9. Other impacts, it is proposed to include the potential social impact, in accordance with Article 2 (1) (g) of Royal Decree 931/2017. We agree to incorporate this impact, with no result.
- Finally, it is proposed that a clerical error be corrected. Accepted and corrected. Technical comments from CEDEX
- In the first paragraph of section II of the preamble (page 3), it is proposed to clarify that there are three types of electric arc furnace (EAF) smelting slag: carbon steel slags, copper and silico-manganese slags. In addition, it is proposed to include, just after the references to 'steel slag', the words 'carbon', as this is the name used in the annexes. Accepted and included.
- In Annex I, paragraph 2. Treatment of slag, silico-manganese slag and copper slag are to be found under carbon steel slag. It is suggested to consider including it under another heading. Accepted and amended for clarity.
- In Annex I, paragraph 3. Permitted destinations and constraints for the treated material, it is suggested, for consistency with the order in the rest of the text, that the first table refer to black slag and the next one to white slag. Finding accepted.
- In Annex I, paragraph 3. Permitted destinations and constraints for treated material, compared to Table 2. Permitted destinations, technical and environmental conditions and conditions of use for black slag from steelworks, reference is made to the destination as a sub-ballast of railway tracks. This use contradicts the rules on the use of sub-ballast, which state that the material must come from rock. Therefore, this criterion would require an amendment of this FOM Order. The proposed use is accepted and deleted.
- In Annex II, in the first table, Limit values for leaching of steel aggregate for unrelated applications (mg/kg), it is proposed to refer to standard UNE-EN 17196. This is not accepted. The proposed UNE standard is already referred to in various permitted uses.
- In Annex II, a possible disparity of criteria has been detected as regards the tests used to establish the limit values for the elements Cu, Zn and chloride in the table 'Limit values for leaching of the resulting material (steel aggregate) for non-bound applications in accordance with standard UNE-EN 16637-3 (mg/kg).' The amendment to the requested values is accepted.



- o Ministry of Housing and Urban Agenda, provided for in the first paragraph of Article 26 (5) of Law 50/1997 of 27 November, receiving the following comments (07/11/2025):
 - No technical comments are made on the draft legislation, but proposals are made of a formal nature and a regulatory technique, accepting all the proposals for improvement of the wording in reference to the Regulatory Technical Guidelines. However, we do not accept the deletion of references to repealed legislation in relation to waste, as we understand that they are references to such legislation.
 - The MAIN accepted the formal revision of the legislation as set out in its comments on the legislative text. The reasons why the climate impact is zero are justified, as the draft standard does not affect either mitigation or adaptation. We accept the inclusion of CEDEX's comments in the ministerial reports, as has been the case, but we respect the comments made during the public consultation.
- o Comisión Nacional de los Mercados y la Competencia (National Commission on Markets and Competition), pursuant to Article 5 (2) of Law 3/2013 of 4 June, receiving the following comments on the text of the draft legislation (29/10/2025):
 - It is recommended that all the requirements be reconsidered in order to complete the process of transforming waste into a product that can be reused, with a view to eliminating or making more flexible administrative procedures, such as the renewal of authorisations or the requirements for verification of the management system. This comment is not accepted.

In relation to the renewal of authorisations, it is clarified that this is not a renewal as such, but an update of the existing authorisation already held by authorised waste managers. In order to ensure the traceability of operators entering the new regulatory framework, it is considered necessary to establish a maximum period for them to submit the request for adaptation.

This request shall be deemed to have been validly communicated using the model set out in Annex V, in accordance with point 2 thereof.

With regard to the verification of the management system, it is considered necessary for an independent third party to demonstrate



compliance with the order. This criterion is aligned with the End of Waste Condition Regulations already published by the European Commission, and with those currently being developed.

— In line with the rules on the provision of services in the internal market, access to or exercise of a service activity should not be made subject to an economic test, it is suggested that the competent authorities interpret this requirement in a flexible manner.

We agree with the idea of applying a flexible interpretation of this requirement, in line with the rules on the provision of services in the internal market. In practice, it is considered sufficient for the receiving undertaking to express its willingness to receive the material, which makes it possible to justify economic viability without the need for a formal assessment.

- o Ministerial Commission on Digital Administration of the Ministry for the Ecological Transition and the Demographic Challenge, without comments. (29/09/2025)

2. Report of the Environmental Advisory Council

In accordance with Article 19 of Law 27/2006 of 18 July, the text of the draft Order was sent for submission to the Environmental Advisory Council, and a certificate was received that it had been submitted on 11 May 2023. No claims were received at this stage.

However, the time that has elapsed since the submission to the Advisory Council for the Environment, it has not been considered necessary to request a new report, given that the amendments that may be made to the draft order following the information procedures will be of a purely technical nature. Such changes do not alter the substance of the standard, nor do they significantly affect the overall impact on the sectors concerned or non-governmental organisations, nor do they have a significant impact on the environment.

3. Report of the Technical Secretariat-General of the Ministry for the Ecological Transition and the Demographic Challenge, pursuant to Article 26 (5) (4) of Law 50/1997 of 27 November. (23/02/2026).

On 23 February 2026, the report was received from the Technical Secretariat-General of this Ministry, with comments on both the draft Royal Decree and this report.



The most relevant observations and their assessment by the project's proposing management are set out below:

- 1) **Comment by the Technical Secretariat-General (SGT):** *'An error has been detected in the explanatory part of the text, specifically in the penultimate paragraph on page 1, where it states 'establishing that the resulting substance or object must be used by you', it should read 'establishing that the resulting substance or object must be used'.*

Assessment by the Directorate-General for Environmental Quality and Assessment (hereinafter DGCEA): Finding accepted.

- 2) **TSG remark:** *"It is considered appropriate to amend the promulgating formula by adding the term heard/in agreement with the Council of State as the opinion of the said body has not yet been obtained".*

DGCEA assessment: Finding accepted.

- 3) **TSG remark:** *"It is recommended to delete the term "ministerial", therefore the following wording is suggested for the first paragraph of Article 1:*

The purpose of this Order is to establish the criteria for determining when electric arc furnace slag (carbon steel, silico-manganese and copper) intended for use as aggregate (in bound and unbound applications) and for use as a raw material in the manufacture of construction products, namely cement and clinker, ceases to be waste pursuant to Law 7/2022 of 8 April 2011 on waste and contaminated soil for a circular economy.'

DGCEA assessment: The other occasions appearing in both the draft Royal Decree and in this report have been accepted and the word 'ministerial' has been deleted.

- 4) **TSG remark:** *"In section 4, II Content on page 13, it is recommended to replace the term "standard format" by the structure of the standard."*



DGCEA assessment: Finding accepted.

- 5) TSG remark:** *'It is considered appropriate to assess the need to delete Section VI on the Annual Regulatory Plan, since, as specified in the MAIN, the aforementioned Plan does not cover ministerial orders.'*

DGCEA assessment: Finding accepted.

4. Prior approval by the Ministry for Digital Transformation and the Civil Service.

The prior approval referred to in Article 26 (5) of Law 50/1997 of 27 November was requested on 24/02/2026 and a reply was received on 06/03/2026 stating that there was no need to process the prior approval since its current content does not affect the matters referred to in the fifth paragraph of Article 26 (5) of Law 50/1997 of 27 November on the Government.

5. Referral to the European Commission as a technical rule (pending).

Prior to the referral to the European Commission, within the scope of the CIAUE, comments were received from:

- The Ministry of Transport and Sustainable Mobility aimed at correcting clarifications on two feet, but did not stop the procedure, which were accepted.
- the Ministry of Industry and Tourism requested that certain environmental requirements be relaxed and new uses allowed. Following an exchange of views, it was decided to delete the references to the reference levels for uses with a lower environmental impact, in order to be able to continue the procedure.

This draft Order, since it involves the establishment of technical requirements, has been sent to the European Commission in accordance with the procedure for the provision of information in the field of technical standards and regulations and of regulations on Information Society services, provided for in Directive (EU) 2015/1535 of the European Parliament and the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services. Under notification number (---) the project has been available for this procedure for the period from (---). Finally, on (---), the Ministry of Foreign Affairs, European Union and Cooperation issued a certificate stating that notification of the draft legislation had been



subject to the procedure laid down in Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 and that that procedure was deemed to have been completed.

6. Opinion of the Council of State. (pending).

Under Article 22 (3) of Organic Law 3/1980 of 22 April on the Council of State.

VI. ANALYSIS OF IMPACTS

1. Economic impacts.

- **Overall economic impact**

On the overall economic impact and effects on productivity, this standard will make it possible to advance the promotion of the circular economy, as it encourages the introduction of materials into production processes, thereby reducing the consumption of virgin raw materials that are replaced by steel aggregates that have reached end-of-waste status.

In turn, promoting the early stages of the waste hierarchy, which is one of the bets of the circular economy, leads to the emergence of new jobs associated with those early options (prevention, preparation for re-use and recycling), which are more job-seekers than the lower options in the hierarchy (landfilling in this case).

- **Effect on SMEs**

With regard to the possible effects on SMEs, the draft Order establishes a clear and homogeneous framework on how these types of companies should manage steel aggregates and encourages their movement between companies, as it is expected that there will be greater demand for these materials that have achieved end-of-waste status, as they are no longer considered waste. Although the main steel companies do not fall into the category of SMEs, they do exist in the sector and it is considered that this draft regulation will have a positive impact on them.

- **Effects on competition in the market, market unity and competitiveness**

As regards compliance with Law 20/2013 of 9 December 2013 on market unity, the draft Order takes account of the principles of that Law, since no new economic requirements are imposed on operators. No new barriers or obstacles are established due to the fact that no new permits, registrations or requirements are required for access to end-of-waste status.

The draft order has a positive impact on competition by establishing for the entire territory of the State single criteria for considering steel aggregates to have reached end-of-



waste status. This avoids situations of inequality between the different Autonomous Communities and ensures the same level of environmental protection for all of them.

In short, the draft legislation is consistent with market unity, has a positive effect on competition and respects the principle of freedom of action throughout the territory of the State, since no different economic requirements are imposed on the basis of territory.

2. Budgetary impact.

The draft Order does not create economic obligations for public administrations, and has no budgetary impact on the budgets of the General State Administration, nor on the budgets of the Autonomous Communities.

Furthermore, the application of this Order will not entail any changes in expenditure or revenue, nor will there be any staff costs associated with it.

3. Analysis of administrative burdens

With regard to administrative burdens, it should be noted that this Order will require producers wishing to manage iron and steel slag as a product to submit a signed communication to the competent regional authority, stating that they comply with the provisions of this Order, as specified in Article 3 (2). In addition, the producer or importer shall issue for each consignment of steel aggregates a declaration of conformity, as set out in Article 4.1, that declaration of conformity shall be kept for five years.

The quantification of this administrative burden is shown in the following table, for the calculation of which the Simplified Method for the Estimation and Reduction of Administrative Burdens has been followed:

Draft Order establishing the criteria for determining when electric arc furnace (carbon steel, manganese silicon and copper) smelting slag for use as aggregate in bound and unbound applications, and as raw material in the manufacture of cement and clinker construction products, ceases to be waste pursuant to Law 7/2022 of 8 April 2011 on waste and contaminated soil for a circular economy						
Obligations of an administrative nature	Article	Type of load	Unitary cost	Frequency	Population	Annual cost
Communication with the Autonomous Communities	3.2	6	2	1	20 ¹	40
Declaration of conformity	4.1	8	2	$\frac{1}{2}$	20	40



ANNUAL COST OF CHARGES

80

1. *Estimated number of companies which, by virtue of their activity, could benefit from the draft order.*

In this case there is no multiplication of frequency and population as both data coincide. It is considered that the indications on page 77 of the Methodological Guide for the preparation of MAIN would apply: "When the obligation occurs when an event occurs, for example when an undertaking is set up, in the event of an accident at work or a dismissal, the only way to establish the frequency is to estimate the number of files per year. In this case it will NOT be multiplied by the population, as the frequency and the population are the same."

Furthermore, Article 6 (1) obliges the waste manager to keep a chronological file containing different information. This charge was previously imposed by Law 7/2022, of 8 April, through its Article 64, so it is not a new charge generated by this draft Order. The same applies to the obligation for the producer, importer or trader to keep the declaration of conformity for five years, as set out in Article 4 (3) of the draft order.

The administrative burdens entailed by this draft regulation (EUR 80/year) must be compared with the burdens that would arise if this order were not applied to them.

The charges linked to the national movement of iron and steel slag applying Royal Decree 553/2020 of 2 June regulating the shipment of waste within the territory of the State and Regulation (EU) 2024/1157 of the European Parliament and of the Council of 11 April 2024 on shipments of waste, amending Regulations (EU) No 1257/2013 and (EU) 2020/1056 and repealing Regulation (EC) No 1013/2006 are shown in the following tables, respectively:

Royal Decree 553/2020 of 2 June						
Obligations of an administrative nature	Article	Type of load	Unitary cost	Frequency	Population	Annual cost
Keeping a copy of the identification document.	6.2	11	20	0.33 ¹	20	132
ANNUAL COST OF CHARGES						132



1. Value 0.33 stems from the obligation to keep documentation for three years, as laid down in Royal Decree 553/2020 of 2 June.

Regulation (EU) 2024/1157 of the European Parliament and of the Council of 11 April						
Obligations of an administrative nature	Article	Type of load	Unitary cost	Frequency	Population	Annual cost
Information accompanying certain wastes	18	8	2	— ¹	20	40
Keeping of documents and information	20	11	20	0.33 ²	20	132
ANNUAL COST OF CHARGES						172

1. In this case there is no multiplication of frequency and population as both data coincide. It is considered that the indications on page 77 of the Methodological Guide for the preparation of MAIN would apply: “When the obligation occurs when an event occurs, for example when an undertaking is set up, in the event of an accident at work or a dismissal, the only way to establish the frequency is to estimate the number of files per year. In this case, it will NOT be multiplied by the population, since the frequency and population are the same.” In this case, the specific event is the shipment of certain waste that will be accompanied by the documentation to be signed by the person who arranges the shipment before it starts.

2. Value 0.33 stems from the obligation to keep documentation for three years, as laid down in Regulation (EU) 2024/1157 of the European Parliament and of the Council of 11 April.

In accordance with the above, waste managers benefiting from the future Order will have to bear an estimated burden of EUR 80/year. If they decide not to do so, the burdens they will have to bear will be those resulting from the Royal Decree, if they only carry out national shipments of waste. Therefore, using the future order will result in a burden reduction of EUR 52/year (132-80).

In the event that national shipments and shipments are carried out within the European Union and waste managers decide not to rely on the future order, they will apply the burdens arising from the Royal Decree and the European Regulation to them. This burden will be EUR 304/year (132 + 172). If waste managers follow the future order, they will charge them EUR 80/year, which will mean a reduction of EUR 224/year (132 + 172-80).

4. Gender impact



For the purposes of the provisions of Law 30/2003, of 13 October, on measures to incorporate gender impact assessment into the legislative provisions drawn up by the Government and Article 19 of Organic Law 3/2007, of 22 March, for effective equality between women and men, this draft Order is considered to be based on a situation in which there are no inequalities of opportunity or treatment between men and women, and no provision is made for a change to this situation, so it can be stated that the provisions contained in the Order do not contain any aspect from which negative consequences or discrimination may arise and that it does not contain specific gender-related provisions, so the gender impact of this Order is null and void.

There is no assessment of the gender impact in relation to the elimination of inequalities between women and men, or in relation to the achievement of the objectives of equality policies, since it does not follow from the very purpose of the legislation or from its application that there are inequalities in this area.

5. Impact on children and adolescents

In accordance with the provisions of Article 22d of Organic Law 1/1996 of 15 January 1996 on the legal protection of minors, partially amending the Civil Code and the Code of Civil Procedure, as amended by Law 26/2015 of 28 July 2009 amending the system for the protection of children and adolescents, the draft legislation has no impact on children and adolescents, since it deals exclusively with technical matters and does not have direct legal effects on natural persons.

6. Impact on the family

In accordance with the tenth additional provision of Law 40/2003, of 18 November, on the Protection of Large Families, introduced by the fifth final provision of Law 26/2015, of 28 July, amending the system of protection for children and adolescents, the draft legislation has no impact on the family, as it deals exclusively with technical matters and does not have direct legal effects on natural persons.

7. Impact on equal opportunities, non-discrimination and universal accessibility for persons with disabilities

On the basis of the consolidated text of the General Law on the Rights of Persons with Disabilities and their Social Inclusion, approved by Royal Legislative Decree 1/2013 of 29 November 2015, this draft Order has no impact on grounds of equal opportunities, non-discrimination and universal accessibility for persons with disabilities, as it deals exclusively with technical matters and does not have direct legal effects on natural persons.

8. Climate change impact

The study of this type of impact was included in the drafting of the MAIN from the entry into force of Law 7/2021 of 20 May on climate change and energy transition, the fifth



final provision of which amended Article 26 (3) of Law 50/1997 of 27 November, introducing a new point (h) stating that: "Climate change impacts should be assessed in terms of climate change mitigation and adaptation". In this regard, it is considered that this draft order will have no impact due to climate change, as it has no effects on mitigation or adaptation.

9. Other impacts

Environmental impact

A positive impact on the environment is expected as the slag processed and reincorporated into the production process replaces virgin raw materials, resulting in lower raw material consumption and a move towards a circular economy. At the level of energy consumption, energy consumption clearly decreases when secondary raw materials are used and reused, compared to what the production of natural aggregates entails. At the same time, increased use of treated slag is to be expected, with a reduction in the percentage going to landfill.

Impact due to the development or use of digital government means and services

It is expected that this draft legislation will have no impact on citizens and the public administration as a result of the development or use of digital government resources and services, since the digital obligations imposed by this Order were already covered previously by other legislation.

Social impact

No impact is expected from a social point of view as the draft order is limited to a specific part of the industrial sector and the use of waste.

VII. EX POST EVALUATION

Having considered the provisions of Article 28 (2) of Law 50/1997 of 27 November, as well as Article 3 of Royal Decree 286/2017 of 24 March, it is considered that the standard should not be subject to evaluation due to its results and therefore no ex-post evaluation mechanisms are envisaged.

ANNEX I. SUMMARY TABLE OF CONTRIBUTIONS DURING THE PRIOR PUBLIC CONSULTATION PROCEDURE, HEARING OF THE AUTONOMOUS COMMUNITIES, HEARING AND PUBLIC INFORMATION.

1. Prior Public Consultation

ADM Pública/Agente econm.	Name	Comment and Justification	Alternative proposal	Val uation
Public WMD	Subdirectorate- General for Clean Air and Industrial Sustainability	General comment: BREF documents are mentioned differently in the text. It would be advisable to name them as BREF documents in order to unify criteria; furthermore, for the sake of clarity and consistency, we consider it appropriate to use expressions that are already coined for integrated pollution prevention and control (IPPC) issues.	When a BREF document is first named in the document, it is proposed to name it as follows: "BREF documents (Best Available Techniques Reference Documents)" For subsequent mentions it is proposed to name them only as "BREF document (s)"	Finding accepted. References will be amended whenever they appear in the future order.
Public WMD	Subdirectorate- General for Clean Air and Industrial Sustainability	Pages 101 and 102 mention: "Also, the use of steel furnace slag in road construction is one of the applications provided for in the BAT document on iron and steel production ⁷⁷ , in the BREF document on forging and funding ⁷⁸ for external reuse of solid waste generated by foundries, and in best available techniques (BAT) conclusions for steel production ⁷⁹ ." The 'BAT iron and steel production	The following amendment is proposed: "The use of steel furnace slag in road construction is also one of the applications. foreseen in the BREF document for the steel production ⁷⁷ and in the BREF document of Forging and Foundation ⁷⁸ for external reuse	Finding accepted. References will be amended whenever they appear in the future order.



		document' referred to is an obsolete BREF document published in 2001, which has been revised and replaced by the BREF document for the steel production published in 2013. It is proposed to refer to the new version of the Reference Document. The 'Best Available Techniques (BAT) conclusions for iron and steel production' referred to correspond to a chapter included in the BREF document for the steel production published in 2013. It is therefore proposed that this reference be deleted, since the information contained in the BAT conclusions is included in the BREF document referred to above and, therefore, the reference to the BREF also includes a reference to the Decision.	of solid waste generated by foundries."	
Public WMD	Subdirectorato-General for Clean Air and Industrial Sustainability	In line with the above comment, update reference 77 on page 101.	Replace reference 77 by: 'JRC Reference Report. Best Available Techniques (BAT) Reference Document for Iron and Steel Production. 2013"	Finding accepted. References will be amended whenever they appear in the future order.
Public WMD	Subdirectorato-General for Clean Air and Industrial Sustainability	In line with the comment above, delete reference 79 on page 102.	Delete reference 79.	Finding accepted. References will be amended whenever they appear in the



				future order.
Public WMD	Subdirectorate-General for Clean Air and Industrial Sustainability	Pages 101 and 102 refer to the BREF document of the smitheries and foundries, but reference 78 on page 102 refers to the translation of the BREF document of the smitheries and foundries published in 2009. As the text refers to the BREF document published in 2005, reference 78 should also refer to this document and not to its translation.	Amend reference 78 to read: ‘European Commission. Reference Document on Best Available Techniques in the Smitheries and Foundries Industry. 2005’	Finding accepted. References will be amended whenever they appear in the future order.
Public WMD	Subdirectorate-General for Clean Air and Industrial Sustainability	On page 127, reference is made to ‘For this application, the Best Available Techniques (BAT) document for the production of cement, lime and magnesia oxide ¹¹⁶ identifies as BAT the “use of waste as raw materials or fuels”, namely those “wastes with no high calorific value but with mineral constituents that, when used as raw materials, contribute to the production of clinker as an intermediate product”. This information refers to the BREF document for the manufacture of cement, lime and magnesium oxide published in 2010. However, this document has been revised and replaced by the BREF document for the manufacture of cement, lime and	Refer to the BREF document for the manufacture of cement, lime and magnesium oxide published in 2013 and update the above-mentioned information (use of waste as a raw material or fuel), specifically those “wastes with no high calorific value but with mineral components that, when used as a raw material, contribute to the manufacture of clinker as an intermediate product”) as set out in that BREF document. Possible text: “With regard to this application, the BREF document for the manufacture of cement, lime and magnesia oxide ¹¹⁶ indicates as	Finding accepted. References will be amended whenever they appear in the future order.



		magnesium oxide published in 2013.	BAT..."	
Public WMD	Subdirectorate-General for Clean Air and Industrial Sustainability	On page 127, reference 116 is not appropriate. The current and official name of the document is 'Best Available Techniques (BAT) Reference Document for the Production of Cement, Lime and Magnesium Oxide.' Published in 2013	Replace reference 116 "European Commission. Reference Document on Best Available Techniques the Cement, Lime and Magnesium Oxide Manufacturing Industries. May 2010.' under the heading 'Natural persons' shall be replaced by: 'JRC Reference Report. Best Available Techniques (BAT) Reference Document for the Production of Cement, Lime and Magnesium Oxide. 2013.'	Finding accepted. References will be amended whenever they appear in the future order.
Economic agent.	BEFESA S.A.U.	We consider it necessary and appropriate to establish end-of-waste status criteria throughout the territory of the State for all the slags referred to and also for other high-volume slag streams obtained in other metallurgical processes with similar characteristics.	Inclusion of slags from the Waelz process for the treatment and recovery of electric arc furnace (Ferrosita) steelworks powders in the MO subject to this public exhibition in order to establish the criteria that will be applied to it for the purposes of determining the end-of-waste status also for Ferrosite, taking into account that: • Ferrosita's annual production volume in the Basque Country and Spain is around	Not acceptable. The slag in question is outside the scope of the steel slag in the future order. The feasibility of Waelz slag has not been analysed in the Study.



			100.000 tonnes. • Given its high volume of generation, this material is one of the priority streams of waste defined by the Basque Government and is included in the 2030 Basque Country Waste Prevention and Management Plan, which is currently being processed. • Both the physical and mechanical characteristics and the chemical composition of Ferrosite are very similar to those of black slag from steelworks.	
Economic agent.	BEFESA S.A.U.	We understand that there is no impediment or limitation to the subsequent specific uses of the treated slag put forward as authorised uses within the end-of-waste framework, both with regard to the slags covered by this M.O. project and with regard to other slag streams obtained in other metallurgical processes with similar characteristics.	For the purposes of determining Ferrosite's end-of-waste status via O.M., we request that the specific uses of this material be equated with those of black steelworks slag, bearing in mind that: ✓ La Ferrosite, or Waelz slag, is a by-product of the Waelz pyrometallurgical process of recovering electric arc furnace (EAF) steelworks dust, composed primarily of iron, lime and silica oxides, which is	Not acceptable. The slag in question is outside the scope of the steel slag in the future order. The feasibility of Waelz slag has not been analysed in the Study.



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			marketed as a secondary raw material for various industrial uses, including: - o Manufacture and additives of cement - o Manufacture of ceramic bricks - o Manufacture of tiles - o Asphalt Agglomerate - o Manufacture of concrete (solders and prefabricated) - o Other applications in construction and civil engineering ✓ Ferrosite is also registered as a product under the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation and currently has CE marking as aggregate for various applications (non-structural concrete and bituminous mixtures for floorings). Note: In order to support and provide documentary justification for this request by Befesa Zinc Aser, S.A.U. to include Waelz slags in this or another separate draft order setting out the criteria for determining Ferrosite's end-	
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			of-waste status, Ferrosite undertakes to provide MITERD with all the technical information required for that purpose.	
Economic agent.	SORRES I GRAVES EGARA S.S., FORMIGONS MONTCAU S.A.	In our opinion, the Order of 15 February 1996 on the recovery of slag published in the Official Gazette of the Government of Catalonia No 2181 of 13.3.1996 should have been analysed.		Not acceptable. It was not considered necessary as the specific decrees of the Autonomous Communities were assessed.
Economic agent.	SORRES I GRAVES EGARA S.S., FORMIGONS MONTCAU S.A.	The use of granular layers such as slabs in sub-bases should be allowed under concrete floorings that ensure impermeability		Finding accepted.
Economic agent.	SORRES I GRAVES EGARA S.S., FORMIGONS MONTCAU S.A.	CSF for aggregates from incineration of municipal waste still to be analysed		Not acceptable. The slags covered by the future order are only those slags from electric arc furnace (EAF) smelting.
Economic agent.	SORRES I GRAVES EGARA S.S., FORMIGONS MONTCAU S.A.	As well as the production of soils and substrates from waste	Manufacture of recycled soils from waste Official Gazette of Galicia No 136 of 2005 and No 18 of 2008 technosoles	Not acceptable. This is not the purpose of the proposed uses for the future order.
Economic agent.	UNESID	General comment (referred to comments from the EMGRISA study). Try to rearrange the report as far as possible so that it is in line with the justification for the 4 conditions that		Not acceptable. The Annexes proposed in the Study are the basis for the future Order and will be the



		the materials assessed meet to qualify as PE under the Directive and the Waste Act.		parts of the Study that may be amended.
Economic agent.	UNESID	General comment Technical conditions. The technical conditions should have the character of a recommendation, the last word being the regulation. technique for use and optional steering. This is an aspect that we refer to repeatedly over the course of of the comments, referring where necessary to the relevant technical standards. For example: In general conditions for the uses of black slag it is better to refer to CE marking and in bituminous mixtures and railway layers to very high standards of MITERD and MITMA. For white slag, reference should be made to buyer constraints and technical and/or usage constraints (example: cement conditions as different cement companies may apply for different conditions). Black slag. As aggregates, either	It is proposed to add the following under the headings corresponding to the technical conditions of use of black slag in mortar, bituminous mixed concrete or granular layers: "Compliance with the CE marking"	A general comment is accepted to focus the technical conditions on the regulations and not to reflect the conditions of use that were based on studies and technical documents consulted. Finding accepted.



		linked or non-linked applications. Concretes, mortars, bituminous mixtures or granular layers. Such aggregate, as any intended use in a mortar, bituminous mixed concrete or granular layers, shall comply with the relevant entries of the standards governing the CE marking of such aggregate. In the near future, the following standards will be replaced by harmonised standard PNE-prEN 17555 Aggregates for construction works (at an advanced stage of development), which will govern the CE marking: or UNE-EN 12620: 2003 + A1: 2009 Aggregates for concrete. or UNE-EN 13043/AC: 2004 Aggregates for bituminous mixtures and surface treatments of roads, airports and other paved areas. or UNE-EN 13139/AC: 2004 Aggregates for mortars. or UNE-EN 13139: 2003 Aggregates for mortars. or UNE-EN 13242: 2003 + A1: 2008 Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of pavements.		
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Economic agent.	UNESID	Preliminary remarks: Restrictions on environmental conditions. It is not understood to be a limitation to ballast and rural roads if the specific environmental constraints for linked or unlinked uses that apply to them are met. This could even apply to sites with special environmental protection features, given that in these cases it would apply the existence of a specific study under the conditions that will be dictated in the future (as early and as concrete as possible). In cases where a specific risk analysis is applied or allowed, this option should be chosen, not prohibiting its use a priori. This applies to certain situations or even uses below the groundwater level or in contact with water. Several studies indicate that steelworks slag can even lead to the regeneration of certain areas due to the input of iron, which is essential for the development of biota (example: estuaries in the Netherlands or reefs in Egypt).	It is requested that either desirable general criteria be defined or that they be permitted subject to specific studies, to which we will refer later.	It is not accepted to include ballast or other uses not included in the Annexes, not requested by the companies in the corresponding applications for by-product that could not be properly assessed.
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Economic agent.	UNESID	General: Conduct of specific studies for certain conditions of use/applications. If the risk analysis option is chosen for certain uses, it should assess the construction/application solution (s) chosen as a whole (exposure scenario), as a good specific risk study. They should consider, if necessary, the necessary parameters taking into account aggregates mixtures, their particle sizes, thicknesses, permeabilities, distribution and those aspects with technical or environmental relevance. In any event, such uses are subject to the carrying out of such analyses. This should therefore serve to reassure administrations against possible malpractice. In addition, in a subsequent comment, it is requested that they be developed as soon as possible and that as much information as possible be provided on this type of study in order to be able to start work in this field as soon as possible. In Spain, the steel sector has pioneered the development of an	In those applications that are ultimately required to undergo specific studies, that these relate to the conditions of use to be performed or generalisable conditions if relevant in the case of recurrent uses.	Not acceptable. The MIRAT environmental risk analyses provided for in the Regulation partially implementing Law 26/2007 of 23 October on Environmental Liability, approved by Royal Decree 2090/2008 of 22 December, based on standard UNE 150.008 or other equivalent standards, which provides guidelines for assessing the risks of accident scenarios, are not considered valid for assessing the risks associated with a long-term application scenario, such as the application of slag in the soil. For uses considered
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		approved methodology (often referred to by MITERD itself) for environmental risk analysis (SID-MIRAT). This could be applied to slag either by developing specific models, which could be carried out more or less according to the possible use and information available, or by adapting the models to be developed by the Ministry itself.		to present a higher environmental risk, a quantitative risk analysis (RRA) will be required depending on the characteristics of the target industry.
Economic agent.	UNESID	Black slag. As aggregate unbound applications cover not entirely impermeable. Any use. Environmental conditions. Regarding the column test values (percolation) on page 8 of the Annex, it should be better stated how the test is assessed. It is necessary to clarify that fractions are concerned by the measure. It is common to refer to first extractions in the case of landfill acceptance criteria (Council Decision of 19 December 2002).	Clarification needed	Partially accepted. It shall be carried out in accordance with the requirements set out in the technical specification PNE-prEN 16637-3 Construction products – Assessment of release of dangerous substances – Part 3: Horizontal up-flow percolation test.
Economic agent.	UNESID	General comment Soil concept and application of NGR to materials on the ground. It does not seem appropriate for uses with a partially impermeable cover solely because they are in contact with the soil to be required to comply	The application of the NGRs in general terms a situations of unconnected uses in the with an impermeable layer above or partially impermeable does not look like	Not acceptable. Annex II TO DECREE 64/2019 OF 9 April 2011 on the recovery of slag from the Basque Country already includes this



		with 'NGRs' in general terms, even for aggregates with layers with reduced permeability. If for some reason we do not want to opt for a better definition of the concept of soil, and its application when non-indigenous (exogenous) materials overlap or mix, then another option may be to establish a derogatory situation when it refers to the application of the conditions defining an end of waste status of the materials referred to here (or any other where typologies of similar uses come together in the future). Otherwise, it could have a multitude of technological implications on the road construction process itself (e.g. soil stabilisation with slabs, gravel or mother-in-law). Although not relevant for the use of steel aggregate, the specific or general approximation is made if it is relevant or may have implications for the stabilisation process with lime or cement additions) or if other materials such as construction and demolition	the more reasonable approximation. This does not mean excluding a reasonable precautionary principle from the respective uses. Such non-applicability (or limited applicability) could be legally articulated in several ways, including a possible derogation regime. A legal report will be prepared for an office of recognised standing in the area, which will be handed over to the Ministry a few days after the public exhibition in order to elaborate on legal alternatives that allow for a rational use regime, both for the economic activities involved and their uses and for environmental safety, without forgetting the role of legal certainty for administrations and administrators. A technical report on this subject prepared in 2013 is attached, stating that it can be a soil and not, although the options being	requirement, which has been maintained.
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		waste are to be used. This can be extended to other future cases of materials of an inert granular nature considered as aggregates or even with chemical activity that could give the soil certain geotechnical characteristics desirable for the required construction process. There are also other legal regimes that continue to apply to any material applied that could lead to alleged soil contamination, without, however, requiring NGRs to be applied as a general approximation in the VCF regime.	assessed are broader. One of the possible options is to better clarify when something is a soil, when it is not and when compliance with NGRs should be required from exogenous materials.	
Economic agent.	UNESID	White slag. Manufacture of Clinker in cement works. Technical conditions. If the white slag is used in the furnace, the control of expansivity is neither relevant nor necessary. White slag, rich in free lime (expansive compound), is precisely what makes it relevant to the cement production process itself. The particle size distribution should be a specification of each cement company.	'Fluoride control in accordance with requirements of the cement plant. Expansivity control: < 5 % MgO. Particle size distribution, in accordance with uniform cement plant requirements < 50 mm."	Finding accepted. Amended annexes.
Economic agent.	UNESID	White slag. Manufacture of Clinker in cement works. Conditions for use.	'Dosage: to be defined for each cement producer, generally up to	Finding accepted.



		The dosages should depend on each cement plant, as it is the raw materials that will regulate the amount of white slag that can be incorporated into the process. It would be interesting to include the reference to the content (generally between 5-15 %) in the EMGRISA technical document, but not in the OM, given that in practice each cement must decide how much to use depending on the other raw materials used.	5 % of white slag, up to a maximum of 15 %."	
Economic agent.	UNESID	White slag. Manufacture of Clinker in cement works. (See introductory comment on white slag) The chemical substance is similar to r among is Secondary Metallurgic Coria from the recycling route and route from iron ore (EINECS 266-004-1 Cas 65996-71-6) (SMS Slag, Secondary Metallurgic Slag Steelmaking), this application can be generalised as a by-product. These slags are also called white slag, refining slag, secondary metallurgy slag. (This applies to the next use discussed).	Iron and steel slag from secondary metallurgy. Manufacture of Clinker in cement works.	Not acceptable. There is no information available to assess whether this is the same slag, nor has it been requested in the corresponding by-product application.
Economic	UNESID	Iron and steel slag from secondary	'In backfilling and restoration of	Not acceptable. This



agent.		metallurgy. Restoration of degraded areas. It is proposed to include the use of degraded areas in restoration exactly as proposed by Decree 32/2009 of Catalonia. This use is approved and currently used, and is similar to soil stabilisation due to the effect of clays.	areas degraded by extractive activities on clay soils or in clay restoration. Environmental constraints: 'appropriate sealing.'	use has also not been considered for other types of slag, such as black slag. Furthermore, the Catalan decree only regulates black slag, in line with the definition of iron and steel slag included in that decree.
Economic agent.	UNESID	Iron and steel slags from secondary metallurgy. Cement manufacturing (new). It has been shown that slag can be used as an element in cement production by partially replacing clinker or with alternative formulas to 'classical' cements. Already today, properly treated white slag (screening or grinding) can partially or fully replace portland cement in applications without structural responsibility (fluid fillings, cleaning concretes, prefabricated parts of non-structural requirements, etc.). These uses have been neglected and are not covered in the RCF document.	Include the proposed use: 'Iron and steel slag from secondary metallurgy. Cement manufacturing (new).' Technical constraints: Slag must comply with shelf-life requirements (non-permanent and therefore short-lived uses). Environmental constraints: Comply with the leaching of material to be taken to landfill for inert waste.'	Not acceptable. This use has not been requested in the corresponding applications for by-product and has therefore not been analysed. Furthermore, according to the literature review, the only suitable use for white slag is in the production of clinker. The latest studies consulted analyse the valorisation of white slag as a partial or even full replacement



		The technical constraints with which the slags shall be related to useful life compliance (non-permanent and therefore short uses duration). In relation to constraints environmental requirements for material leaching to be taken to inert landfill.		of natural aggregate or cement in the manufacture of mortars and concretes, concluding that in order to standardise its use on the market, more research is needed to clarify its technological performance, associated with its effect on the cementitious matrix.
Economic agent.	UNESID	White slag. Use for backfilling and restoration of degraded clay areas. Annex IV to the current Decree 32/2009 (Catalonia) allows the use of 'in the filling and restoration of areas degraded by extractive activities on clay soils or in the restoration of clays. Although this use was not specifically covered in the application submitted to the Ministry at the time, the need to disaggregate the uses in such detail was not initially assessed either.	Maintain the use proposed by Decree 32/2009 (DOGC): 'White slag. Use for backfilling and restoration of degraded clay areas. Technical constraints: Adequate surface sealing and rainwater drainage. Environmental constraints: Comply with leachate of inert material.'	Not acceptable. This use has also not been considered for other types of slag, such as black slag. Furthermore, the Catalan decree only regulates black slag, in line with the definition of iron and steel slag included in that decree.
Economic	UNESID	White slag. As a raw material in the	Allow the use of white slag in	Not acceptable. This



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agent.		manufacture of construction products. The objective of the standard is that slag can be used as a raw material in the manufacture of construction products (cement and Clinker), but alternatives for cement use or cement replacement are not available. White slag can be used as an alternative cementitious in combination with cement or other materials that generate the properties required for specific applications (mortars, non-structurally underperforming concretes, etc.).	combination with cement or other materials that generate a binder that meets the technical specifications for volumetric stability (depending on each application) and environmental stability (leaching as an inert material).	use has not been requested in the corresponding applications for by-product and has therefore not been analysed. Furthermore, according to the literature review, the only suitable use for white slag is in the production of clinker. The latest studies consulted analyse the valorisation of white slag as a partial or even full replacement of natural aggregate or cement in the manufacture of mortars and concretes, concluding that, in order to standardise its use on the market, more research is needed to clarify its technological performance,
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				associated with its effect on the cementitious matrix.
Economic agent.	UNESID	Black slag. As aggregate linked applications. Mortars. Technical conditions. Propose limits to expansiveness, which we should henceforth call volumetric stability. As regards expansivity, use the limits found in the Port of Bilbao (0.5 %), which already have a very restrictive characteristic. Nowadays it is the evidence that is absolutely proven with guarantees. It is possible that upper limits could be verified with assurance in the future.	'Granulometry: Fine additions or appropriate grinding may be necessary. Expansivity control: < 25mm' Technical constraints: Volumetric expansivity V0,5 (in accordance with Standard UNE EN 1744-1)'. In general, a call is made to unify the concept of 'swelling', replacing it with that of volumetric stability (Standard UNE1744-1), referred to in Standard prEN UNE 17555-1, which simplifies many of the property rules and includes specific references to steelworks slag), which also specifically refers to iron and steel slag.	Partially accepted. It is accepted that the term 'expansivity' should be deleted from the expansivity check and that the term 'expansivity' should be changed to 'volumetric stability'. The volumetric stability check shall be carried out in accordance with standard UNE-EN 1744-1 in such a way as to guarantee the mortar specifications in accordance with the rules, standards or technical specifications of the project.
Economic agent.	UNESID	Black slag. Such as Árido. Linked applications. Bituminous mixtures. Technical conditions. Some concepts not properly	Proposal: "According to MITMA NT 03/2020" Alternatively, correct the values	Finding accepted. Generally amended annexes for bituminous mixtures.



		interpreted have been identified. In order to avoid such situations, it is proposed to refer directly to the Technical Note (NT 03/2020) on the use of steel aggregate in bituminous mixtures MITMA. For example: Bulk density refers to variability (%) not values. Report density and absorption (to be reviewed in accordance with MITMA NT 03/2020).	and constraints. Cold micro-conglomerates: Have an expansivity of less than three with five per cent ($< 3.5 \%$) by volume (UNE-EN 13043). Variation in bulk density (Standard UNE-EN 1097-6), with with respect to its declared value or value used in the design of mixtures, obtained in any material quality control test shall be less than 10 % and that of the aggregate mixture shall be less than 7.5 %. Bituminous concrete: Have an expansivity of less than three with five per cent ($< 3.5 \%$) by volume (UNE-EN 13043). The variation in its bulk density (standard UNE-EN 1097-6), compared to its declared value or used in the design of mixtures, obtained in any of the material quality control tests shall be less than 10 % and that of the aggregate mixture shall be less than 7.5 %. Steel aggregate, from any source, shall meet the following	The term expansion has been amended by expansivity or volumetric stability and the variation in bulk density has been added.
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			additional requirements: Have an expansivity of less than three with five per cent ($< 3.5 \%$) by volume (UNE-EN 13043). The variation in its bulk density (standard UNE-EN 1097-6), compared to its declared value or used in the design of mixtures, obtained in any of the material quality control tests shall be less than 10 % and that of the aggregate mixture shall be less than 7.5 %. SMA BITUMINOUS MIXTURES: Steel aggregate, from any source, shall meet the following additional requirements: Have an expansivity of less than three with five per cent ($< 3.5 \%$) by volume (UNE-EN 10343). The variation in its bulk density (standard UNE-EN 1097-6), with regard to its declared value or used in the design of mixtures, obtained in any of the material quality control tests shall be less than 10 % and that of the aggregate mixture shall be less than 7.5 %. ten tenths of a gram per cubic	
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			centimetre ($< 0.10 \text{ g/cm}^3$). Where mixtures of aggregates and aggregates are produced from slag, the above constraints shall be appropriately corrected for their relative weights and densities.	
Economic agent.	UNESID	Black slag. Arid. Linked applications. Manufacture of Concrete. Technical conditions. There is no reason why the use of steel aggregates should be limited to resistances of less than 60 N/mm^2 and prestressed concrete, if the volumetric stabilities are very restrictive. On the contrary, with V0,5 volumetric stabilities, it has been shown that steel aggregates of black slag from steelworks generate highly resistant concrete even with lower cement consumption as they generate a very strong adhesion to aggregate cement. There is no constraint on expansion. It is proposed to include the condition defined in standard PNE-prEN 17555 Aggregates for construction works (under	'For prefabricated, prestressed and structural or mass concrete, the aggregate shall have a volumetric stability V 0,5 (according to aggregates standards, stability classes). If necessary, a supporting technical study approved by the project management shall be required." Applications on concrete with a resistance of more than 60 N/mm^2 and prestressed concrete are excluded.' Mass concrete (non-structural and roads). Non-structural uses. Volume stability class V 3.0 (see PNE-prEN 17555 Aggregates for construction works (under development)).	Partially accepted. The strength requirement has been removed. Volume stability control will be carried out in accordance with standard UNE-EN 1744-1 and other requirements for granular material, ensuring compliance with the specifications established in accordance with the rules, standards or PPT of the project.



		development), which will replace the current applicable standard for concrete (see comment # 2). The Basque Country standard recommends an expansion of ≤ 0.4-0.5 % (experience of concrete in the port).		
Economic agent.	UNESID	Black slag. Arid. Linked applications. Manufacture of Concrete. Technical conditions. There are non-structural uses of concrete with many minor technical requirements. This is the case for non-structural prefabrications, e.g. New Jersey type road protections, setts, floors. There are well-established experiences of such uses which do not require such strict structural stability, precisely because they do not correspond to elements of a structural nature.	'For aggregate applications for non-structural concrete, volumetric stability of V1,5 shall be required.'	Not acceptable. The final concrete must conform to the specifications laid down for each type (structural or not), in accordance with the rules, standards or PPT of the project.
Economic agent.	UNESID	Black slag. As aggregate in linked applications. Manufacture of concrete. This section brings together different applications of black slag in concrete. Due to the mechanical and safety	Consider the technical conditions for: 'Structural concretes: by meeting a volumetric stability	Not acceptable. The final concrete must conform to the specifications laid down for each type



		demand each type of concrete should be taken as one entity. Structural concretes and non-structural concretes should have different constraints.	V0.5 % in order to maintain the integrity of the structure.” ‘Non-structural concrete, such as filling concrete, with a shelf life of less than 5 years, aggregates with a volumetric stability V1.5 % are valid.’	(structural or not), in accordance with the rules, standards or PPT of the project.
Economic agent.	UNESID	Black slag. As aggregate in linked applications. The use in prefabricated materials without structural responsibility such as New Jersey type concrete barriers has not been considered, as have setts, etc. In the latter case there are companies such as ICA Sorigué that have received certificates of sustainable materials for the use of steel aggregates (certificate from ICA Sorigué attached).	‘Use of steel aggregates in prefabricated concrete without structural responsibility. Technical constraints with a volumetric stability V1.5 %. Additional physical and mechanical requirements depending on the final product.’	Not acceptable. The final concrete must conform to the specifications laid down for each type (structural or not), in accordance with the rules, standards or PPT of the project.
Economic agent.	UNESID	Black slag. As aggregate non-linked applications. Slash for pavements. Conditions for use. This limitation does not correspond to the current process of processing black slag recovery, which obtains steel aggregates with guaranteed volumetric stability.	‘They shall have a volumetric stability class V1,5 (or lower). The layers in which they are used should be properly drained, avoiding water stagnation. They shall be located in the structural layer of the road surface (base or sub-base layer) above the esplanade and under the	Partially accepted. The proposed term “shall not be used in areas that keep the material completely contained” has been added. The volumetric stability



		It seems that this requirement stems from bad practices (from applications more than 20 years ago), in which slag was processed without a good criterion, including the mixing of primary (black) smelting slag with secondary metallurgy slag (also known as white or refining slag), believing that the combination could improve the absence of fine slag from the former by improving its compactness and making it somewhat cementitious. However, the latter, due to their chemical characteristics with high lime content, give it hygroscopic potential, which makes them unsuitable for such use. This processing method was changed many years ago and both slags are now treated completely independently, so that products with guaranteed volumetric stability can be obtained exclusively from black slags. This stability is also ensured by the corresponding tests. We understand that the requirement of volumetric stability would be more than sufficient to remove the limitation	pavement which shall ensure a high waterproofing coverage. Only in certain situations where demand on the road is low would it be possible to accept volumetric stabilities of V3,5 class with the favourable opinion of the optional management.'	check shall be carried out in accordance with standard UNE-EN 1744-A and other requirements such as granular material in such a way as to ensure compliance with the technical specifications of the zahorra in accordance with the rules, standards or PPT of the project.
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		relating to confinement, as it is much more demanding even than what is generally required. In order to put it into context, it should be noted that Article 510.3 of the PG-2.1 on slabs refers to 5 % expansivity (according to UNE-EN 1744-1). The use of the slipper between kerbs on streets, pavements, bike lanes, sports tracks, car parks, etc. is a very common situation, where the conditions of impermeable cover and small thicknesses are guaranteed. Its use is widely tested both technically and environmentally. If necessary, dozens of examples could be provided. Multiple or less demanding constraints depending on thicknesses and lockdowns could be included, but this, especially in this type of smaller works, would create uncertainties among the builders that would only harm the profusion of use without bringing any improvement to it. As this is a very relevant use, closely linked to the proximity economy, it is		
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		important to carefully assess any technically irrelevant constraints that only create uncertainty for users.		
Economic agent.	UNESID	Black slag. As aggregate non-linked applications. Scarf for embankments. Technical conditions. We should not talk about swelling, but rather of volumetric stability according to EN 1744-1, which includes a reference to this test precisely for iron and steel slag. The draft standard prEN 17555-1: 2021) when talking about volumetric stability: '4.1.8.3 volume stability of steel slag. The volume stability of steel slag shall be determined in accordance with EN 1744-1: 2009 + A1: 2012'. This standard specifically includes a specific reference to a study of the volumetric stability of steelworks slags). The edometer free swelling test (UNE-103601: 1996), which is relevant for the geoengineering assessment and the Suel study or not for granular materials, does not	'Volumetric stability class V 3.5 according to UNE EN 1744-1, and which will have a specific reference to the volumetric stability of steelworks slags in the standard, currently under development, PNE-prEN 17555 Aggregates for construction works'.	Partially accepted. The term expansion has been deleted and replaced by expansivity or volumetric stability, referring to standard UNE EN 1744-1.



		apply to steel aggregate. It is proposed to include the condition defined in standard PNE-prEN 17555 Aggregates for construction works (under development), which will replace the current standard applicable for aggregate uses in non-bound applications (see comment # 2). For this use (according to the Decree of the Basque Country and Cantabria) a volumetric stability of V3,5 is required and then the Zahorra must also comply with what is required of it, normally in the case of public road works the requirements required by the construction specifications, usually PG3-2014 or the recently approved Structural Code (concerning concrete and replacing EHE-08).		
Economic agent.	UNESID	Black slag. As aggregate non-linked applications. Waterproof cover. Scarf for embankments. Environmental conditions. The content of potentially polluting elements in the slag in most cases exceeds the NGR of other uses.	Need for clarification on the concept and applicability of soils and NGR, as well as their relevance in some of the the uses included in this draft Order.	Not acceptable. In ANNEX II TO DECREE 64/2019 OF 9 April 2011 on the recovery of slag from the Basque Country, this requirement, which has been



		Refer to specific comment on the relevance of NGRs.		retained here, is not added.
Economic agent.	UNESID	Black slag. As aggregate linked applications. Waterproof cover. Grava-cement/cement soil/stabilised floors. There are other types of uses similar to concrete, but less compact and with different names. Although they belong to the same family of linked applications, they should be made explicit in order to avoid possible misunderstandings when they are applied, as they are not strictly concrete. Stabilised soil (low cement content < 4 %). Suelocement (cement contents between 3 and 5 %, according to work formula). Gravacemento (cement contents between 3 and 7 %). Cement additions depend on the specific working formula. It is used as a constructive solution to stabilise the structure and there is a lot of experience with aggregate	Include the same general requirements as for concrete with regard to volumetric stability. "Volumetric stability of classes V0,5" is required. Only in certain situations where the demand on the road is low would it be possible to accept volumetric stabilities of V1,5 class with the favourable opinion of the optional management.	Not acceptable. MITMA note NT03/2020. They should never be used in cement-stabilised layers or together with factory works or other elements that restrict possible expansions. CEDEX factsheet. Never be used in cement-stabilised layers or together with factory or other works elements restricting possible expansions.



		produced from iron and steel slags. Being a structure that will have more road structures above it is important that the volumetric stability is high. Cement gravel forms an additional layer on the road surface, analogous to a slab but of greater load-bearing capacity, even though it is not a concrete structure, such as a shoe or star. However, it is reasonable to apply the generic volumetric stability class limitation for applications linked to concrete of structural character V0,5. It is only in certain situations where demand on the road is low that slightly higher volumetric stabilities up to V1,5 could be allowed.		
Economic agent.	UNESID	As aggregate unbound applications cover not entirely impermeable. Ballast (new destination). Add a new use (ballast) above sub-ballast. In any event, the mere fact that the ballast represents only the upper portion of the railway structure, with	Add a new use (ballast) above sub-ballast. “Destination: Ballast. Technical conditions: Compliance with standard UNE-EN 13450 Aggregates for ballast. Terms of use: Ballast and sub-ballast.	It is not accepted to include ballast or other uses not included in the Annexes, not requested by the companies in the corresponding applications for by-



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		very small thicknesses, already limits in itself any environmental risk that might be associated with it, which is of course minimal given the characteristics of the slags under consideration. This does not mean that the technical constraints of wear and tear in the Angeles: < 12 implies that the care over the production and valuation process for the production of steel aggregate to obtain it is extremely demanding. In non-public roads subject to fewer requirements, somewhat more permissive values of this coefficient could be accepted.	Compliance with technical specifications (including technical requirements) in accordance with Order FOM 1269/2007en public use case. In the case of private uses, they must comply with the requirements laid down by means of a technical supporting study approved by the project managers. Environmental conditions: Limit values for leaching for the acceptance of inert waste in landfills (excluding fluorides). They may be used where a certain limitation of infiltration is ensured, either by the type of material itself or by the adoption of complementary measures. (Same comments as for sub-ballast applicable).	product that could not be properly assessed.
Economic agent.	UNESID	Black slag. As aggregate unbound applications cover not entirely impermeable. Sub-ballast. Destinations.	'Sub-ballast of railway tracks and formwork layers. Usage constraints: According to order FOM	Not acceptable. It must comply with the volume stability check in accordance with standard UNE-EN



		It is feasible to use steel aggregate also in layers of shape, which are after all quite similar to road slabs, similar to the case of bituminous mixtures, following the constraints indicated in 2007 by the Ministry of Public Works. In this case, two applications should be included: — Formwork layers — Sub-ballast Both the shape layer and the sub-ballast are part of the railway track structure and their use will depend on the quality of the esplanade. Order FOM 1269/2007 regulates the characteristics that the two types of layers must meet. These uses should include as a technical requirement that slags meet a volume expansion of less than V2.0 %. Note on admission to the Inertes landfill. Contrary to what might be thought,	1269/2007en public use case. In the case of private uses, they must comply with the requirements laid down by means of a technical supporting study approved by the project managers. Environmental constraints: comply with leaching criteria for the acceptance of inert waste in landfill.'	1744-1 and other requirements such as granular material in such a way as to ensure compliance with the material specifications in accordance with the regulations, standards and PPT of the project.
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		when the Commission and the Member States decided to set an acceptance criterion for the landfills currently known as Inertes (2002), the criteria were restrictive and demanding. The approximation for such a criterion is based on the fact that a material ending up in such a landfill would have very little control, and it would therefore have to be ensured that it did not pose any future risk. For this reason, several legislations have already provided for derogations, exemptions in specific values, or even for specific materials.		
Economic agent.	UNESID	Black slag. As aggregate unbound applications cover not entirely impermeable. Sub-ballast. Technical conditions. An expansion value should be specified. It is proposed to include the condition defined in standard PNE-prEN 17555 Aggregates for construction works (under development), which will replace the current standard applicable to aggregates for non-bound applications (see comment # 2).	'Granulometry: Fine additions may be necessary. Volumetric stability class V 3.5 (see PNE-prEN 17555 Aggregates for construction works (under development)).'	Not acceptable. It must comply with the volume stability check in accordance with standard UNE-EN 1744-1 and other requirements such as granular material in such a way as to ensure compliance with the material specifications in accordance with the regulations, standards



				and PPT of the project.
Economic agent.	UNESID	Black slag. As aggregate unbound applications cover not entirely impermeable. Sub-ballast. Environmental conditions. Propose fluoride value: Fluorides (on leachate EN 12457) Basque Country legislation (18 mg/kg).	'Fluorides (on leachate EN 12457) 18 mg/kg).'	Finding accepted. Value already covered.
Economic agent.	UNESID	Black slag. As aggregate in landfills. Sealed layer. Technical conditions. An expansion that did not cause cracks or cracks in time should be specified. It is proposed to include the condition defined in standard PNE-prEN 17555 Aggregates for construction works (under development), which will replace the current applicable standard for the use of sealing aggregates in landfills (see comment # 2).	'Volume stability class V 3.5 (see PNE-prEN 17555 Aggregates for construction works (under development)).'	Not acceptable. The volumetric stability check shall be carried out in accordance with standard UNE-EN 1744-A and other requirements as granular material in such a way as to ensure compliance with the technical specifications of the zahorra in accordance with the rules, standards or PPT of the project.
Economic agent.	UNESID	Black slag. As aggregate non-bound applications cover not entirely impermeable without direct ground contact. Technical conditions.	'Volume stability class V 3.5 (see PNE-prEN 17555 Aggregates for construction works (under development)).'	Not acceptable. The volumetric stability check shall be carried out in accordance



		An expansion value must be specified to ensure the structural safety of the work. It is proposed to include the condition defined in standard PNE-prEN 17555 Aggregates for construction works (under development), which will replace the current standard applicable to aggregate for non-linked applications (see comment # 2).		with standard UNE-EN 1744-A and other requirements as granular material in such a way as to ensure compliance with the technical specifications of the zahorra in accordance with the rules, standards or PPT of the project.
Economic agent.	UNESID	Black slag. As aggregate non-bound applications cover not entirely impermeable without direct ground contact. Environmental conditions. At least those already included in the Basque Decree and including its environmental conditions according to Table 1, type 2 of Annex II should be accepted (see said table in comment #35). This approximation is similar to the one proposed by France. Clarification is needed on the type of risk analysis posed in order to be able to carry them out if necessary.	Include the type of uses specified in the Basque Decree in this case, citing some of them in general terms. Embankment slope areas, embankments in conveyances, walls, piping, levelling of terrain and embankments Environmental constraints Add those in Table 1, Type 2 of Annex II to the same Regulation. (see comment #35 on this table) Additional general comment. For uses that require a specific	Not acceptable. All types of filling are already permitted in the annexes, which it was considered appropriate to consider on the basis of the analysis carried out. The only difference is that fillings from exposed slopes (slopes) and foundations on embankments, as well as localised fillings that can be assimilated to embankments under



			comment, the typology of the specific study to be carried out and the technical requirements according to the uses should be clarified.	cover that is not completely impermeable, have been classified as posing a higher environmental risk, requiring compliance with certain conditions.
Economic agent.	UNESID	Black slag. As aggregate non-bound applications cover not completely impermeable with direct contact to the ground. Technical conditions. The case of transfers is the same case of limited material, so it is more relevant to specify an expansion value. It is proposed to include the condition defined in standard PNE-prEN 17555 Aggregates for construction works (under development), which will replace the current standard applicable to aggregate for non-linked applications (see comment # 2-renumeration).	'Volume stability class V 3.5 (see PNE-prEN 17555 Aggregates for construction works (under development)).'	Not acceptable. The volumetric stability check shall be carried out in accordance with standard UNE-EN 1744-A and other requirements as granular material in such a way as to ensure compliance with the technical specifications of the zahorra in accordance with the rules, standards or PPT of the project.
Economic agent.	UNESID	Black slag. As aggregate non-bound applications cover not completely impermeable with direct contact to the ground. Environmental conditions.	Regardless of the need to clarify, as indicated in other comments, when and as the concept of NGRs is relevant, we request	Quantitative Risk Analysis (ACR) shall be carried out according to the



		Clarification is needed on the type of risk analysis posed in order to be able to carry them out if necessary.	that the typology/requirements/etc. of the specific study to be carried out be clarified as much as possible and as quickly as possible, depending on possible uses.	requirements linked to subsequent use.
Economic agent.	UNESID	Black slag. As aggregate non-bound applications cover not completely impermeable with direct contact to the ground. Environmental conditions. On the one hand, the NGRs are specific to each community and, on the other hand, the concept for which they are intended is completely different, since that exogenous material is not a soil as such (see comment 3).	Need for clarification on the concept and applicability of soils and NGR, as well as their relevance in some of the uses included in this draft Order. Concrete action would be welcome.	Not acceptable. In ANNEX II TO DECREE 64/2019 OF 9 April 2011 on the recovery of slag from the Basque Country, this requirement, which has been retained here, is not added.
Economic agent.	UNESID	Black slag. As aggregate unbound applications totally impermeable cover with direct ground contact. Localised fillings under completely impermeable cover. In order to clarify the type of uses to which reference is to be made, it is proposed, as in point 6 of the legislation of the Basque Country; list some of them.	Add specific typology: "ditches, embroidery, wall/bridge hangers, pipe-covering fillings, etc.)". As in the previous point, maintain the approximation of the Basque Decree (Decree 64/2019).	Not acceptable. The description of the fillings is not included so as not to limit them, as long as they comply with the technical regulations and environmental limitations.
Economic agent.	UNESID	Black slag. As aggregate in non-bound applications under totally impermeable cover.	As in the previous point, maintain the approximation of the Basque Decree (Decree 64/2019).	Not acceptable. The infiltration rate value of less than



		Doubts arise as to the approach to the measurement of the infiltration rate (in mm/year). There is the specific value proposed of 6 mm/year in the Cantabria Decree, but it restricts its application exclusively to the restoration of areas degraded by extractive activities (a very specific situation of Article 8 (1.2)) and has nothing to do with the general regime of civil road construction works, welded or similar. The generalisation of that value for a context as general as that of the two headings where it appears in the draft order is not considered appropriate, since neither that decree nor that of the Basque country opts for that approximation gives rise to a general regime. The approximation made in the Basque Decree (Decree 64/2019) Table 1 is being considered. Types of application of steel aggregates, conditions of use and waterproofing elements. Annex II — 1- environmental criteria. Table 1 by type 3 (see table attached). It should be noted that this Decree is the most current regulation	Environmental criteria. Types of application of steel aggregates, conditions of use and waterproofing elements. Annex II — 1- table 1 according to type 3 Basque Decree (Decree 64/2019) Approach performed in (a)	6 mm/year is maintained as a condition of use, as used in the ORDEN of 12 January 2015 of the Regional Ministry of the Environment and Territorial Policy of the Basque Country, which establishes the requirements for the use of recycled aggregates from the recovery of construction and demolition waste.
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		available to us in this specific area, which reflects the reality of the studies carried out so far in the clearest possible way.		
Economic agent.	ADEC	The document mentions in its Pag 1. "In addition, a reduction in the administrative formalities relating to the shipment of waste is to be expected...". The above approach may result in non-competent entities or entities without environmental permits wishing to carry out slag recovery. Currently, the Catalan (32/2009), Cantabrian (104/2006) and Basque (64/2019) Decrees state that the recovery activity must have an environmental permit and the facilities must comply with the technical conditions laid down in those Decrees.	Specify that the shipment, handling, treatment or recovery of slag must be entities that comply with environmental permits. Similarly, the installations for the processing of slags must comply with the technical requirements to be specified in the RCF decree. The requirements can be taken from the slag recovery decrees of the different Autonomous Communities. Failing this, the approaches set out in the recovery decrees should be maintained. the requirements to be met by recovery entities.	Partially accepted. Only waste managers, who are authorised as such, and who comply with all the provisions of the future Order, may process slag.
Economic agent.	ADEC	In Pag 2, Objectives of the standard, it is mentioned "as a raw material in the manufacture of construction products (cement and clinker)...". Within these uses, applications of white or black slag as an individual binder or in combination with other materials are left out. Not mentioning these	Add the use of slag as an individual binder material or in combination with other products that may partially or fully replace a conventional cementitious. In its application, the volumetric stability of the final material and the environmental compliance of	Not acceptable. The uses referred to are not specified in detail. However, in any case, these uses were not assessed as they were not included in the corresponding



		potential applications would limit the end use of slag and its disposal on the market. Research projects are currently being carried out at national and international level to obtain alternative cements with steelworks slag in combination with Portland cement or through alkaline activators that would open up other market opportunities.	the final material must be ensured in order to be deposited in a landfill for inert waste.	applications for by-product, so their inclusion in the study is not accepted.
Economic agent.	ADEC	Question 3 of the submitted questionnaire, page 1, asks. Does it consider it necessary and appropriate to establish end-of-waste status criteria throughout the territory of the State for the slags referred to above obtained from the smelting processes in those industries? Respond: Yes, as handling, shipment, recovery should be harmonised at national level to avoid that slag is inadequately treated (mismanagement, mixing of slag, etc.) and creates problems that have been solved today but have arisen in the past.		Finding accepted.
Economic agent.	ADEC	On page 3, question 2. Do you consider that there is any impediment or limitation to the subsequent specific uses of the treated slag, raised as authorised uses within the framework	Add the proposals for use set out in the comments made in the following sections.	



		of this end-of-waste status? Respond: Yes, there are obstacles raised in this document (mentioned below), as well as limitations to uses that are now established and already part of the knowledge of the construction sector.		
Economic agent.	ADEC	In Annex 1. Use with lower environmental risk: White slag: Manufacture of Clinker in cement works. The document provides for control of fluoride content, control of expansivity, particle size less than 50 mm and dosages of 5 to 15 %. The limitation of the above aspects is not in line with the possible requirements of cement plants, since the amount of white slag, expansion, particle size distribution and the content of elements will determine each process, i.e. each cement plant.	In the section on technical conditions, adopt: The quantity, expansion, particle size distribution and quantity of each element of white slag shall be defined by the cement plant using it as raw material for clinker production, provided that the requirements for the final material (Clinker or cement) are met.	Finding accepted. Amended annexes.
Economic agent.	ADEC	In Annex 1. Use with lower environmental risk: White slag. The use of white slag as aggregate in bound applications has been omitted. Projects are currently being carried out at international and national level to promote the industrial use of white slag as a partial or total replacement for Portland cement, using the activation of Portland cement	Include the use of white slag in application scenarios: as aggregate in bound applications or as alternative cementitious material. The final destinations will be sustainable concretes, mortars and cements. The technical constraints will be: The white slag must undergo screening processes to obtain a	Not acceptable. Firstly, these uses were not assessed as they were not included in the corresponding applications for by-product. Moreover, according to the literature (CEDEX



		(individually or in combination with other materials) to obtain sustainable cement. An example of such uses is the Keops project, led by Cementos La Cruz and involving ADEC Global as a supplier of raw materials (slags and construction waste).	specific particle size (< 5mm) or undergo grinding processes. The following must also be complied with: volumetric stability of final materials and environmental requirements must be met at the end of life as material to be deposited in an inert landfill.	fiche), the only appropriate use for white slag is its use as in clinker production to replace marl. As indicated, it appears that the uses in the other related applications indicated are research projects.
Economic agent.	ADEC	In Annex 1. Use with lower environmental risk: White slag. The use of white slag as a material in landfills has been omitted. The Decree on the recovery of iron and steel slag in Catalonia (DOGC 32/2009 of 24 February) states that slag can be used 'in the filling and restoration of areas degraded by extractive activities on clay soils or in the restoration of clays. Adequate sealing of the surface and drainage of rainwater must be carried out.' One of the applications so far, in the Catalan domain, has been the previous one, which would limit the use of slag if not raised in this RCF document.	Include the use of white slag as laid down in Decree 32/2009. The conditions of use shall be: the backfills may be located in the regularisation layer, directly on the waste disposal site and under the different layers that ensure the sealing of the landfill site. As a constructive material to be used whenever treated within the waterproofing zone of the pour glass. The environmental conditions to be met are the material leaching limits for the type of landfill where the final material is used.	Not acceptable. In any case, this use was not assessed because it had not been requested in the corresponding applications for by-product, so its inclusion in the document is not accepted. Furthermore, it has not been identified that the Decree of Catalonia regulates the use of white slag or the use in landfills. Finally, in any event, the RCF order will not limit the use of slags



				under the legal regime of waste.
Economic agent.	ADEC	In Annex 1. Use with lower environmental risk: Black slag: As aggregate in linked applications. The use of materials stabilised with cement or lime, such as stabilised floors or soil-cement and gravel cement, has been omitted. Steel materials all of them (0/25mm for example individually or in combination with natural aggregates) can replace what PG3-2014 considers to be a soil, provided that they comply with the requirements set out in the PG513- (Article 512 and).	Include the use of black iron and steel slags as materials that can be used in stabilised soil and soil-cement applications. The technical requirements to be met by the materials shall be those specified in PG3-2014, next to the requirement for a maximum volumetric expansion of 0.5 % (according to UN 1744-1). In environmental terms, it must comply with the material requirements in order to be landfilled with inert material.	Not acceptable. MITMA note NT03/2020. They should never be used in cement-stabilised layers or together with factory works or other elements that restrict possible expansions. CEDEX factsheet. Never be used in cement-stabilised layers or together with factory or other works elements restricting possible expansions.
Economic agent.	ADEC	In Annex 1. Use with lower environmental risk: Black slag: As aggregate in non-bound applications under totally impermeable cover: Conditions of use, it is proposed that the material will not be used in areas confined or bounded by kerbs. In these cases the slag is in an area that is not completely contained and has therefore been used in this way to date.	Change the use condition “in areas bounded by kerbs” to areas that keep the material completely contained.	Partially accepted. The proposed term “shall not be used in areas that keep the material completely contained” has been added.



		Similarly, in the case of slag with an expansion of 0.5 %, permitted in concrete (Basque Country), it will be possible to apply it as the risk of damage is minimised.		
Economic agent.	ADEC	In Annex 1. Use with lower environmental risk: Black slag: As aggregate in non-bound applications under totally impermeable cover. The uses of slag alone or in combination with natural aggregates have been omitted for uses as embankments, pedraplenes, localised fillers, all-one fillers, terminations, etc.	Include in slag uses as materials for use in embankments, pedrapens, localised fillings, todoone, etc. The technical requirements shall be those specified in PG3 2014 Part 3. It must also be stated that the volume expansion must be less than 2.0 %. Environmental requirements must comply with the leaching levels for inert materials.	Not acceptable. Localised embankments and fillings have been included in the annexes. The types of filling omitted are those for which inclusion in the Annexes has not been considered.
Economic agent.	ADEC	In Annex 1. Use with lower environmental risk: Black slag: As aggregate in non-bound applications under totally impermeable cover: Environmental conditions, it is proposed that in cases where the material is located on natural land, it must comply with the established limit values for total content (NGR – Other uses). However, the application scenario already suggests that there is totally impermeable coverage, so the possibility of environmental risk is	Change the environmental conditions as regards compliance with NGR values as the material is in an application with impermeable coverage. In this case it should be requested that the material complies with the leaching of inert materials.	Not acceptable. In ANNEX II TO DECREE 64/2019 OF 9 April 2011 on the recovery of slag from the Basque Country, this requirement, which has been retained here, is not added.



		minimal, as the same document suggests.		
Economic agent.	ADEC	In Annex 1. Use with lower environmental risk: Black slag: As aggregate in non-bound applications under non-totally impermeable cover... Slag has not been used as a shape layer material. That layer is similar to the road base and sub-base layers and must comply with the technical requirements specified for those materials. ADEC Global has participated in the ASICAP project, confirming, at laboratory and practical level, the use of naturally occurring mixed aggregate black slags in that application. Similarly, ADEC Global has participated in the LIFE GAIN project together with COMSA ENTE in order to export the methodology for processing, obtaining and implementing the material to other countries of the European Union. Sheets are attached.	Include the use of black slag as material in railway track shaped layers. The technical conditions to be met are those relating to such materials, as well as those having a volumetric expansion of less than 1.5 %. With regard to environmental conditions, it must comply with the leachate limit for a material sent to an inert landfill.	Partially accepted. The use of black slags treated as sub-ballast on railway tracks is accepted, but volume stability will be controlled in accordance with UNE-EN 1744-1 and other requirements as granular material in such a way as to ensure compliance with the material specifications according to the rules, standards or PPT of the project.
Economic agent.	ADEC	In Annex 1. Use with higher environmental risk: Black slag: As aggregate in non-bound applications under cover not totally impermeable without thickness restriction and without direct contact with soil. For the	Changing the environmental conditions for previous applications. The environmental condition to be met by the final material shall be the total element content limit values	Not acceptable. Compliance with the leaching limit values according to a Quantitative Risk Analysis is necessary



		proposed destinations such as trellises and foundations, etc., their use is subject to leaching values established on the basis of a quantitative risk analysis. These applications are made with black slag mixed with fine natural aggregates in order to improve the cohesion and compaction of the material. This situation leads to a change in the exposure of the slag and therefore no leachate analysis would be required, but the final material (black slag + natural fines) would comply with the NGR requirements.	(NGR-Other uses).	due to the higher environmental risk, together with compliance with the total content limit values (NGR-Other uses)
Economic agent.	ASIDAN	Black slag. As aggregate in non-bound applications under totally impermeable cover. Technical conditions: — Expansivity < 5 % (UNE- EN 1744 – 14) — Particle size ageing index < 1 % (NLT-361) — Free lime < 5 % — Swelling < 0.5 % The edometer free swelling test (UNE-103601: 1996) is a test intended for the study of soils and not for granular materials.	Black slag. As aggregate in non-bound applications under totally impermeable cover. Technical conditions: — Expansivity < 5 % (UNE- EN 1744 – 14) — Particle size ageing index < 1 % (NLT-361) — Free lime < 5 % Black slag. As aggregate in non-bound applications under totally impermeable cover.	Partially accepted. The volumetric stability check shall be carried out in accordance with standard UNE-EN 1744-A and other requirements as granular material in such a way as to ensure compliance with the technical specifications of the zahorra in accordance with the



		We consider that the volumetric stability is guaranteed by the expansivity test. Black slag. As aggregate in non-bound applications under totally impermeable cover. Terms of use: Shall not be used in confined areas, such as bases or sub-bases limited by kerbs. The layers in which they are used should be properly drained, avoiding water stagnation. They shall be located in the structural layer of the road surface (base or sub-base layer) above the esplanade and under the pavement which shall ensure a high waterproofing coverage. Comments: This limitation does not correspond to the current process of processing black slag recovery, which obtains steel aggregates with guaranteed volumetric stability. It seems that this request comes from bad practices more than 20 years ago! In these cases, slag was processed without good criteria, including the mixing of primary smelting slag (black slag) with slag from secondary metallurgy (also	Terms of use: 'They shall have a volumetric stability class V1,5 (or lower). The layers in which they are used shall be drained appropriately, avoiding water stagnation. They shall be located in the structural layer of the road surface (base or sub-base layer) above the esplanade and under the pavement which shall ensure a high waterproofing coverage.'	rules, standards or PPT of the project. Under conditions of use they shall not be used in areas where the contained material is maintained.
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		known as white slag or refining slag), with the view that the combination could improve the absence of fine slag from primary metallurgy by improving its compactness and giving it a certain cementative character. However, the latter, due to their chemical characteristics with high lime content, give it hygroscopic potential, which makes them unsuitable for such use. This processing method was changed many years ago and both slags are now treated completely independently, so that products with guaranteed volumetric stability are obtained exclusively from black slags. We consider that the requirement of volumetric stability would be sufficient to remove the restriction on confinement. The use of the slipper between kerbs in streets, pavements, cycle lanes, sports tracks, etc. is one of the most common situations, and where the conditions of impermeable cover and small thicknesses are guaranteed. In order to put it into context, it should be noted that Article		
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		510.3 of GP-2.1 on slaves refers to 5 % expansivity (according to UNE – EN 1744 – 1).		
Economic agent.	ASIDAN	Black slag. As aggregate in non-bound applications under totally impermeable cover. Environmental conditions: Application of the treated slag under an impermeable layer, ensuring at least a water infiltration rate of less than 6 mm/year. Comments: Clarification is requested on this point. We have doubts as to whether this is the impermeable layer condition. is this the imperviousness that the cover must provide? with which test is it measured?	Black slag. As aggregate in non-bound applications under totally impermeable cover. Environmental conditions: The imperviousness of the cover shall be ensured by means of one of the coverages laid down in DECREE 64/2019 of 9 April of the Autonomous Community of the Basque Country.	The application shall be under an impermeable layer, which shall ensure an infiltration of less than 6 mm/year. No specific test is proposed to determine this, the test will depend on the subsequent use to be made of it.
Economic agent.	ASIDAN	Black slag. As aggregate in non-bound applications under totally impermeable cover. Destination: — Localised fillings under completely impermeable cover. Comments: We consider that it would be beneficial to clarify the types of filling permitted, as is the case in	Black slag. As aggregate in non-bound applications under totally impermeable cover. Destination: — Localised fillings under completely impermeable cover. — Trench fillings, piping and levelling fillings beneath pavements. — Embossed under floors.	Finding accepted. In the case of fillings under completely impermeable cover, the following text is added: ‘ <i>Localised fillings (inside concrete drawers, beneath pavements, stuffing of rear walls of underpasses,</i>



		DECREE 64/2019 of 9 April of the Autonomous Community of the Basque Country.	— Filling of handrails of underpass walls. — Filling of bridge handrails. — Filling of supporting wall traps (low carriageway). — Packing of containment wall traps. — Inner filling of closed concrete drawers.	<i>bridge steps, undercarriageway support, retaining wall)</i> corresponding to the permitted types of fillings. Filling for the covering of pipes is not permitted.
Economic agent.	ASIDAN	Black slag. As aggregate in non-bound applications under totally impermeable cover. Destination: Employment in urbanisation works should be included, as stated in DECREE 64/2019 of 9 April of the Autonomous Community of the Basque Country.	Black slag. As aggregate in non-bound applications under totally impermeable cover. Destination: Urban development works	Not acceptable. The annexes set out the permitted applications (slabs, fillings, etc.) that can be carried out in urbanisation projects or in other types of projects.
Economic agent.	ASIDAN	Implementation scenario: Black slag. As aggregate in non-bound applications under cover that is not completely impermeable, in which, due to constructive constraints, a maximum thickness limitation is ensured. Comments: We consider that it would be clearer to specify a maximum value of that thickness, regardless of whether it is used as a sub-ballast or	Implementation scenario: Black slag. As aggregate in non-bound applications under non-totally impermeable cover, in which: due to constructive constraints, a maximum thickness limitation of 70 cm is guaranteed. Where the construction of the structural layers is carried out by mixing the recoverable steel slag with other traditional materials, the 70 cm thick can be corrected	Not acceptable. The use in sub-ballast is already considered as use of lower environmental risk. No maximum thickness has been set because it is considered that this will be laid down in the technical specifications.



		other similar application, as a shape layer, for example, so that this situation could be considered as “lower environmental risk”.	upwards according to the percentage of recoverable steel slag used in the mixture.	
Economic agent.	ASIDAN	Black slag. As aggregate in non-bound applications under cover that is not completely impermeable, in which, due to constructive constraints, a maximum thickness limitation is ensured. Destinations: Sub– rail ballast Comment: The use of steel aggregates as a shape layer can also be considered.	Black slag. As aggregate in non-bound applications under cover that is not completely impermeable, in which, due to constructive constraints, a maximum thickness limitation is ensured. Destinations: — Railway sub-ballast — Shape layer.	Partially accepted. Use as a track sub-ballast is accepted, but it is not accepted as a layer of form as this scenario has not been assessed in detail, as well as compliance with all the necessary technical and environmental requirements.
Economic agent.	ASIDAN	Steelworks slags. General comment: As regards the scenarios for the application of black slags, which are the subject of all our comments, we find Annex I, which is difficult to interpret in a number of cases. We consider that the wording of DECREE 64/2019 of 9 April of the Autonomous Community of the		Partially accepted. A clearer layout of the tables will be sought.



		Basque Country represents a great reference, very clear in the permitted applications and conditions necessary to be able to use the steel aggregates obtained from the recovery process. We understand that a wording of the Order along these lines would facilitate the use of steel aggregates obtained from the recovery process.		
Economic agent.	ATLANTIC COPPER/IECA	ANNEX III COPPER SLAG. Technical conditions Correct the text as follows: The addition of corrective components (in this case iron) for recovery on a limited scale ranging from 1 to 2 %, which may be as high as 5 % (in accordance with standard UNE-EN 197-1). Minimum iron content around 40 %, 50 % or 55 % expressed as Fe₂O₃. Maximum sulphur content of 4 % SO₃. Maximum moisture content of 2 %, 5 % or 14 % expressed as H₂O depending on the cement type. Justification 1a: Harmonised European standard UNE-EN 197-1:	Correct the text as follows: The addition of corrective components (in this case iron) is only possible on a limited scale ranging from 1 to 2 %, and may reach 5 % (in accordance with standard UNE-EN 197-1). Minimum iron content around 40 %, 50 % or 55 % expressed as Fe₂O₃. Maximum sulphur content of 4 % SO₃. Maximum moisture content of 2 %, 5 % or 14 % expressed as H₂O depending on the cement type.	Finding accepted. Annexes amended, as each cement plant has its own specifications.



		2011 does not specify the content of either raw materials or corrective materials. Justification 2a: Harmonised European standard UNE-EN 197-1: 2011 does not specify the maximum moisture content of Portland cement, clinker, raw materials or corrective materials. Therefore, in application of the principles of good regulation laid down in Article 129 of Law 39/2015 of 1 October on the Common Administrative Procedure of Public Administrations (Law 39/2015), the proposed amendments must be incorporated.		
Economic agent.	ATLANTIC COPPER/IECA	ANNEX III. COPPER SLAG. Technical conditions. Include the following: Implementation scenarios: As aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling. — Slabs for road surfaces: under construction of pavements (base, sub-	Include the following: Implementation scenarios: As aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling. — Slabs for road pavement construction: — Under construction of	Partially accepted. It is not accepted to consider the destination of beds for pipes. According to the assessment made, the use of copper slag for use as aggregate in pipe bed is not considered safe and therefore its



		base, improved esplanade), as granular material for base/sub-base of pedestrian, cyclist and sports tracks and as material for improved esplanade. Technical conditions: Leaching limit values set out in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill. The current legislation provides for the tipping leaching test as a reference method. The tipping leaching test consists of a compliance test that provides information on the leaching of granular residues under specific conditions. It can be seen from the technical report that: 'The tipping leaching test (UNE-EN 12457), also referred to as conformity, is the reference test in the European decision on the acceptance of waste in landfills (2003/33/EC) and is considered appropriate for intermediate plant controls. On the basis of the results obtained, the copper slag samples tested can be	pavements (base, sub-base, improved esplanade, as granular material for base/sub-base of pedestrian tracks, cyclists and sports tracks and as material for improved esplanade. Technical conditions: Leaching limit values set out in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill.	consideration in the Annexes was ruled out, due to the higher likelihood of contact with water, which could lead to an increased leaching of the components present in the copper slag. For the remaining slags covered by the study (steelworks slag, silico-manganese slag) no such use has been requested. With regard to the other non-bound applications, it is accepted to consider the same permitted uses for SiMn slag and black slag as filler and as slash for the construction of pavements, provided
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		considered an inert residue, in accordance with standard UNE-EN 12457-2, for an L/S ratio of 10 l/kg dry matter and for materials with a particle size of less than 4 mm “.		that they meet all the technical and environmental requirements required for these uses. For other slag types, column test results are not available and applications not bound by these results shall not be discarded. Based on the flare test, the limit values used as a reference would not be exceeded. For leaching values, this is not accepted. The values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill cannot be considered representative of a
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				scenario in which slag is applied as aggregate under a cover that is not completely impermeable and without thickness restriction, since they have been established for a scenario that, according to the applicable legislation, must be designed to ensure that leachates are impervious and collected effectively by combining a geological barrier and an artificial impervious coating under the mass of waste, in addition to having measures in place to control contamination both of the soil and of groundwater and surface water.
Economic	ATLANTIC	ANNEX III. COPPER SLAG.	Include the following:	Partially accepted.



agent.	COPPER/IECA	Technical conditions. Include the following: Implementation scenarios: as aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling. — Slabs for road pavement construction: under construction of pavements (base, sub-base, improved esplanade), as granular material for base/sub-base of pedestrian, cyclist and sports tracks and as material for improved esplanade. Technical conditions: Leaching limit values set out in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill. Justification: Similarly to black slag, it is proposed to apply: As aggregate in non-bound applications under totally impermeable cover. Environmental conditions: Limit values for leaching from the	Implementation scenarios: as aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling. — Slabs for road pavement construction: under construction of pavements (base, sub-base, improved esplanade), as granular material for base/sub-base of pedestrian, cyclist and sports tracks and as material for improved esplanade. Technical conditions: Leaching limit values set out in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill.	It is not accepted to consider the destination of beds for pipes. According to the assessment made, the use of copper slag for use as aggregate in pipe bed is not considered safe and therefore its consideration in the Annexes was ruled out, due to the higher likelihood of contact with water, which could lead to an increased leaching of the components present in the copper slag. Although the study states that limit values for certain metals are exceeded in the column test provided, this conclusion has not been used as an argument to exclude this use.
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		acceptance of inert waste in landfills (tipping test in accordance with standard UNE-EN-12457-4), compliance with the table 'Annex I. Table I. Leaching limit values for unbound applications (mg/'kg)', as for all other slags. Annex I is attached. Report justifying the Iron Silicate (copper slag) as a slab for the construction of road surfaces and materials for filling ditches on site.		For the remaining slags covered by the study (steelworks slag, silico-manganese slag) no such use has been requested. With regard to the other non-bound applications, it is accepted to consider the same permitted uses for SiMn slag and black slag as filler and as slash for the construction of pavements, provided that they meet all the technical and environmental requirements required for these uses. For other slag types, column test results are not available and applications not bound by these results shall not be
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				discarded. Based on the flare test, the limit values used as a reference would not be exceeded. From a technical point of view, according to the supporting report provided, Atlantic Copper's iron silicate (copper slag) is CE marked according to the Construction Products Regulation (CPR). It has a factory production control certificate of conformity issued for the first time on 22 January 2008 and with an expiry date of 22 January 2023 (Figure 6). Therefore, all mandatory tests are carried out to maintain this marking in accordance with harmonised standard UNE-EN 13242: 2003
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				'Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of pavements'. For leaching values, this is not accepted. The values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill cannot be considered representative of a scenario in which slag is applied as aggregate under a cover that is not completely impermeable and without thickness restriction, since they have been established for a
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				scenario that, according to the applicable legislation, must be designed to ensure that leachates are impervious and collected effectively by combining a geological barrier and an artificial impervious coating under the mass of waste, in addition to having measures in place to control contamination both of the soil and of groundwater and surface water.
Economic agent.	ATLANTIC COPPER/IECA	ANNEX III. COPPER SLAG. Technical conditions. Include the following: Implementation scenarios: as aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling.	include the following: Implementation scenarios: as aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling. — Slabs for road pavement construction: under construction	Partially accepted. It is not accepted to consider the destination of beds for pipes. According to the assessment made, the use of copper slag for use as aggregate in pipe bed is not considered safe and therefore its



		— Slabs for road pavement construction: under construction of pavements (base, sub-base, improved esplanade), as granular material for base/sub-base of pedestrian, cyclist and sports tracks and as material for improved esplanade. — Technical conditions: Leaching limit values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill. Justification: The CEDEX report states that: 'the leaching test for tipping (UNE-EN 12457), also referred to as conformity testing, is the reference test in the European decision on the acceptance of waste in landfills (2003/33/EC) and is considered suitable for intermediate plant controls. Based on this and in view of the results obtained, the EFC sample tested can be considered an inert residue, according to standard UNE-EN 12457-2, for an L/S ratio of 10 l/kg dry matter and for materials with a particle size of less than 4 mm' (CEDEX key: 32-419-0-005).	of pavements (base, sub-base, improved esplanade), as granular material for pedestrian track base/sub-base, cyclists and sports tracks, as granular material for pedestrian track base/sub-base, and as material for improved esplanade. Technical conditions: Leaching limit values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill.	consideration in the Annexes was ruled out, due to the higher likelihood of contact with water, which could lead to an increased leaching of the components present in the copper slag. Although the study states that limit values for certain metals are exceeded in the column test provided, this conclusion has not been used as an argument to exclude this use. For the remaining slags covered by the study (steelworks slag, silico-manganese slag) no such use has been requested. With regard to the other non-bound
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		Therefore, since compliance with the leaching limit values for inert waste acceptance in landfills, as with the other slags in the draft Order, we request the inclusion of the following applications: — Non-linked applications: Use of granular materials compacted into layers for the execution of various civil engineering units, without any conglomerate addition, covering two possible scenarios, which will be associated with the leaching of the material and the conditions of use (waterproofing, under impermeable or not fully impermeable material covers).		applications, it is accepted to consider the same permitted uses for SiMn slag and black slag as filler and as slash for the construction of pavements, provided that they meet all the technical and environmental requirements required for these uses. For other slag types, column test results are not available and applications not bound by these results shall not be discarded. Based on the flare test, the limit values used as a reference would not be exceeded.
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				For leaching values, this is not accepted. The values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill cannot be considered representative of a scenario in which slag is applied as aggregate under a cover that is not completely impermeable and without thickness restriction, since they have been established for a scenario that, according to the applicable legislation, must be designed to ensure that leachates are impervious and collected effectively by combining a geological barrier and an artificial
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				impervious coating under the mass of waste, in addition to having measures in place to control contamination both of the soil and of groundwater and surface water.
Economic agent.	ATLANTIC COPPER/IECA	ANNEX III. COPPER SLAG. Technical conditions. Include the following: Implementation scenarios: as aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling. — Slabs for road pavement construction: under construction of pavements (base, sub-base, improved esplanade), as granular material for base/sub-base of pedestrian, cyclist and sports tracks and as material for improved esplanade. — Technical conditions: Leaching	include the following: Implementation scenarios: as aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling. — Slabs for road pavement construction: under construction of pavements (base, sub-base, improved esplanade), as granular material for pedestrian track base/sub-base, cyclists and sports tracks, as granular material for pedestrian track base/sub-base, and as material for improved esplanade. Technical conditions: Leaching	Partially accepted. It is not accepted to consider the destination of beds for pipes. According to the assessment made, the use of copper slag for use as aggregate in pipe bed is not considered safe and therefore its consideration in the Annexes was ruled out, due to the higher likelihood of contact with water, which could lead to an increased leaching of the components present in the copper slag. Although the



		limit values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill. Justification: The applicable regulation for the classification of hazardous to human health and the environment is Regulation 1272/2008 CLP, for waste and for products. As required by the REACH Regulation, a comprehensive assessment of the risks to human health and the environment has been made in the registration dossier for copper slag, demonstrating safe use for all registered uses: — The transformation/dissolution performance was evaluated following the recommendations of OECD Guidance Document 29 on Transformation/Dissolution (T/D) (OECD, 2001). The study carried out, which concludes that copper slag does not meet the criteria for classification as dangerous for the environment, is attached as Annex II. — A bioelution test was carried out. The study carried out, which concludes that copper slag does not	limit values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill.	study states that limit values for certain metals are exceeded in the column test provided, this conclusion has not been used as an argument to exclude this use. For the remaining slags covered by the study (steelworks slag, silico-manganese slag) no such use has been requested. With regard to the other non-bound applications, it is accepted to consider the same permitted uses for SiMn slag and black slag as filler and as slash for the construction of pavements, provided that they meet all the
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		meet the criteria for classification as dangerous for human health, is attached as Annex III.		technical and environmental requirements required for these uses. For other slag types, column test results are not available and applications not bound by these results shall not be discarded. Based on the flare test, the limit values used as a reference would not be exceeded. For leaching values, this is not accepted. The values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill cannot be considered representative of a
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				scenario in which slag is applied as aggregate under a cover that is not completely impermeable and without thickness restriction, since they have been established for a scenario that, according to the applicable legislation, must be designed to ensure that leachates are impervious and collected effectively by combining a geological barrier and an artificial impervious coating under the mass of waste, in addition to having measures in place to control contamination both of the soil and of groundwater and surface water.
Economic	ATLANTIC	ANNEX III. COPPER SLAG.	include the following:	Partially accepted.



agent.	COPPER/IECA	Technical conditions. Include the following: Implementation scenarios: as aggregate in non-bound applications. Destinations: Pipe beds. — Trench filling.-Zahorra for road construction: under construction of pavements (base, sub-base, improved esplanade), as granular material for base/sub-base of pedestrian, cyclist and sports tracks and as material for improved esplanade. — Technical conditions: Leaching limit values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill. Justification: The applicable regulations for the classification of hazardous to human health and the environment would be Regulation 1272/2008 CLP for waste (Article 1 of Regulation (EU) No 1357/2014) or products (Article 112 of Regulation (EU) No 1907/2006 (REACH)). As required by the REACH Regulation, a comprehensive assessment of the risks to human health and the environment has been made in the	Implementation scenarios: as aggregate in non-bound applications. Destinations: — Bedding for pipes. — Trench filling. — Slabs for road pavement construction: under construction of pavements (base, sub-base, improved esplanade), as granular material for pedestrian track base/sub-base, cyclists and sports tracks, as granular material for pedestrian track base/sub-base, and as material for improved esplanade. Technical conditions: Leaching limit values set out in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill.	It is not accepted to consider the destination of beds for pipes. According to the assessment made, the use of copper slag for use as aggregate in pipe bed is not considered safe and therefore its consideration in the Annexes was ruled out, due to the higher likelihood of contact with water, which could lead to an increased leaching of the components present in the copper slag. Although the study states that limit values for certain metals are exceeded in the column test provided, this conclusion has not been used as an argument to exclude this use.
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		registration dossier for copper slag, demonstrating safe use for all registered uses. The chemical safety report for copper slag has demonstrated safe uses for all registered uses. Figure 1 corresponds to Table 4 of the chemical safety report included in the registration dossier and lists the safe uses assessed. These include uses as unbound applications (Use of slags for stabilisation of mining and quarries, Use of slags for construction (road, embankment)). There is therefore no justification, from a technical and purely environmental point of view, for the slag not to be used as aggregate in non-bound applications and, in particular, as pipe beds, trench filling and road-pavement slag. From a legal point of view, there is also no rule that I would prevent. Moreover, in application of the principles of good regulation in Article 129 of Law 39/2015, the future Order should provide for this. Thus, this is a consequence of the principles of proportionality and efficiency, which		For the remaining slags covered by the study (steelworks slag, silico-manganese slag) no such use has been requested. With regard to the other non-bound applications, it is accepted to consider the same permitted uses for SiMn slag and black slag as filler and as slash for the construction of pavements, provided that they meet all the technical and environmental requirements required for these uses. For other slag types, column test results are not available and applications not bound by these results shall not be
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		require that the regulatory initiative avoid unnecessary or ancillary burdens or impose measures restricting rights or obligations on addressees that are not indispensable, as would be the case here. Moreover, imitating the use would frustrate the achievement to be pursued by the future order. End-of-waste status is the instrument for establishing measures to facilitate the reintroduction of waste into the production cycle. It is therefore the figure that fulfils one of the main axes of the circular economy, consisting of implementing the necessary measures to facilitate the reintroduction of materials into the production cycle. Limiting the use of the resulting slag without a justified reason would discourage the application of the end-of-waste status without any environmental or legal justification. As set out in the Study prepared by the Joint Research Centre of the European Commission JRC on the methodology to develop end-of-waste criteria: "While it is necessary to		discarded. Based on the flare test, the limit values used as a reference would not be exceeded. For leaching values, this is not accepted. The values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill cannot be considered representative of a scenario in which slag is applied as aggregate under a cover that is not completely impermeable and without thickness restriction, since they have been established for a
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		consider potential uses to establish the market or demand and the environmental risks associated with such use, it is anticipated that end-of-waste criteria cannot actually regulate or control such use. Doing so would render end-of-waste criteria useless by imposing an equivalent or even higher regulatory burden than waste legislation. For example, if scrap metal could only cease to be waste at the point of loading to a melting manhole, or if compost could only cease to be waste applied to land, then there is no effective change from continuing to apply waste legislation.”		scenario that, according to the applicable legislation, must be designed to ensure that leachates are impervious and collected effectively by combining a geological barrier and an artificial impervious coating under the mass of waste, in addition to having measures in place to control contamination both of the soil and of groundwater and surface water.
Economic agent.	ATLANTIC COPPER/IECA	ANNEX III. COPPER SLAG. Technical conditions. Correct the text as follows: 2. Copper slag treatments: The copper slag recovery process consists of certain steps to ensure optimal qualities and sizes of the resulting granular material, in order to be commercialised for its different end	Correct the text as follows: 2. Treatment of copper slag: The recovery process for copper slag consists of certain steps to ensure optimal qualities and sizes of the supernatant granular material, in order to be commercialised for its different end applications. Not all steps are necessary, as some steps	Finding accepted. Amended Annex III.



		applications. Not all steps are necessary, as some steps will apply depending on the end-uses. Justification: some steps, such as cooling, are common to all uses, but the rest are optional in function of the end use of the slag.	will apply depending on the end-uses.	
Economic agent.	ATLANTIC COPPER/IECA	ANNEX III COPPER SLAG. Technical conditions Correct the text as follows: 2. Screening and stockpiling: The resulting material should be sorted and coupled according to differentiated particle size fractions, depending on further use. <u>These particle sizes shall be mounted on an impermeable surface.</u> Requirements for storage facilities: <u>Copper slag recovery facilities must have an impermeable layer in those storage areas of untreated slag and in the collectors of treated slag, as well as adequate pavement and slope design in the storage and treatment areas to drive rainwater that could drain leachate.</u>	Correct the text as follows: 2. Screening and stockpiling: The resulting material should be sorted and coupled according to differentiated particle size fractions, depending on further use. <u>These particle sizes shall be mounted on an impermeable surface.</u> Requirements for storage facilities: <u>The copper slag recovery facilities must have an impermeable layer in those areas where untreated slag is stored and in the collectors of treated slag, as well as adequate pavement and slope design in the storage and treatment areas to drive rainwater that could drain leachate.</u>	Not acceptable. The same stockpiling conditions are maintained as for the three types of slag, a requirement also required by the available slag recovery decrees.



		Cooling facilities must have a collection system for leachates and rainwater for monitoring and subsequent treatment before final discharge, so that these waters do not reach the soil, groundwater and surface water. Justification 1a: untreated (uncooled) copper slag is not stored and goes directly from the electric furnace to the cooling process. And indicated in the public consultation report (Annex III), recovery operations do not alter the chemical composition or intrinsic properties of copper slag. Justification 2a: already treated (cooled) copper slag does not meet the criteria for classification as hazardous to the environment in CLP Regulation 1272/2008 on classification, labelling and packaging of substances and mixtures, applicable to products, by-products and waste. Justification 3a: the copper slag already treated (cooled) complies with	Cooling facilities must have a collection system for leachates and rainwater for monitoring and subsequent treatment before final discharge, so that these waters do not reach the soil, groundwater and surface water.	
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		the leaching limit values laid down in Royal Decree 646/2020 of 7 July 2011 regulating the disposal of waste by landfill.		
Economic agent.	ATLANTIC COPPER/IECA	ANNEX III COPPER SLAG. Technical conditions Correct the text as follows: The plants must have an adequate treatment system for the leachates and water collected, especially at the irrigation ageing stage, so that compliance with the emission limit values laid down in the relevant discharge authorisation can be achieved. Justification: the already treated (cooled) copper slag does not need an ageing step, as indicated in the technical report itself.	Correct the text as follows: The plants must have an adequate treatment system for the leachates and water collected, especially at the irrigation ageing stage, so that compliance with the emission limit values laid down in the relevant discharge authorisation can be achieved.	Partially accepted. Only the phrase 'especially in the ageing stage with irrigation' has been removed from the text, as this stage is not necessary in the case of copper slags.
Economic agent.	FERROGLOBE/XEAL	Include the uses already approved in Cantabria Decree 100/2018 (restoration of degraded spaces and filling of concrete crates for dykes).	The Decree has received a favourable report from the Council of State.	Not acceptable. Those uses were not covered by the initial applications.
Economic agent.	FERROGLOBE/XEAL	Do not refer to a black slag recovery guide.	Benchmark SiMn slag studies and literature	All references to documents consulted and analysed have already been included in the study.



Economic agent.	FERROGLOBE	Accredited certificate of analysis with a angels coefficient of 29.	Extend the use in traffic categories of T00 A T2.	Not acceptable. This certificate of analysis is not available.
Economic agent.	FERROGLOBE	Certificates of analysis accredited with total soluble salts of 0.12 % and 0.18 %.	Extend the use in any area of the embankment.	Not acceptable. All uses considered appropriate to allow are already covered in the tables.
Economic agent.	FERROGLOBE	Leachate analyses have been carried out for 10 years, with values well below the legal limits of the Decree.	Maintain the parameters to be analysed, as well as the periodicity of the Decree.	Not acceptable. It shall comply with the values of the future order.
Economic agent.	FERROGLOBE	Ensure infiltration rate below 6 mm/year, only for the restoration of degraded areas.	As laid down in Cantabria Decree 100/2018.	Not acceptable. The infiltration rate value of less than 6 mm/year is maintained as a condition of use, as used in the ORDEN of 12 January 2015 of the Regional Ministry of the Environment and Territorial Policy of the Basque Country, which establishes the requirements for the use of recycled aggregates from the recovery of



				construction and demolition waste.
Economic agent.	FERROGLOBE	Requirements for storage facilities: In cases of low environmental risk or for aggregate use, it makes sense to allow the storage and stockpiling of slag on land without waterproofing.	Allow storage and stockpiling of slag on unpaved ground in cases of low environmental risk.	Not acceptable. It is essential to make the collection area impermeable in order to avoid any impact on the environment.
Economic agent.	FERROGLOBE/XEAL	Annex II — Table IV Manufacturing destination of Clinker, maximum cement dosage 3 %: Tests have been carried out with good results allowing a maximum dosage of 5 %	Maximum cement dosage of 5 %.	Finding accepted. However, no specific value shall be established but indicated according to cement specifications.
Economic agent.	FERROGLOBE/XEAL	Annex II — Table IV Intended use in the manufacture of Clinker. In the production of different qualities of SiMn, the content of MnO in slag can be as high as 12 %.	Maximum slag content of 12 % in MnO.	Finding accepted. However, no specific value shall be established but indicated according to cement specifications.
Economic agent.	FER (Spanish Federation of Recovery and Recycling)	RES would not like to point out that we do not agree that end-of-waste status should be applied instead of the concept of by-product. End-of-waste status can only be applied by managers, it cannot be applied by other industries or companies. As laid down in Directive 2008/98/EC on waste, as amended by	Clearly specify that end-of-waste status may only be applied by the operator authorised to carry out the necessary specific treatment operations. It can never be applied by anyone who is not an authorised waste manager.	Partially accepted. Only waste managers who are authorised as such and who, in addition, comply with all the provisions of the Order will be eligible for the future Order.



		Directive 2018/851, and transposed by Law 22/2011 on waste and contaminated soil. Article 5 of Law 22/2011 provides: '1. By order of the Minister for the Environment and Rural and Marine Affairs, specific criteria may be established which certain types of waste, which have undergone a recovery operation, including recycling, must meet in order to cease to be regarded as such, for the purposes of this Law and provided that the following conditions are met...' In order to be declassified as waste, that waste must therefore have undergone a recovery operation. As laid down in Article 3 (q) of Law 22/2011, this is a processing operation: (Q) 'Treatment' means: recovery or disposal operations, including preparation prior to recovery or disposal. Treatment operations can only be		
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		carried out by waste managers authorised to treat the specific LER code. It is of paramount importance that, if the end-of-waste status application for slags is maintained, it is very clearly specified that it can only be applied by waste managers authorised to treat that input LER code. Otherwise, people and plants not authorised for this purpose would be allowed to carry out management operations. This would be a serious breach of European and national legislation and would seriously harm the managers who are authorised. It also falls into very serious unfair competition that would jeopardise the viability of many managers.		
Economic agent.	FER (Spanish Federation of Recovery and Recycling)	We insist on the vital importance that these facilities that want to apply end-of-waste status must be authorised as waste managers to carry out the treatment operations described in the order, and that they are necessary to be able to declassify the slags. It must be a sine qua non in order to be able to apply end-of-waste status.	Clearly specify the recovery operations to which waste managers wishing to apply end-of-waste status must be authorised, as well as the ERL codes to be included in their permit, both in terms of input (not only scrap) and output of the process by which slag is declassified.	Partially accepted. It will be analysed whether the specific processing operations are included in the future order. LER codes for input waste shall be included.



		In addition, the treatment operations that must be included in the operator authorisation must be specified, in addition to the ERL codes to which they must be authorised, not only at the outlet (e.g. 10 06 01 'Slags (first and second smelting)' or 10 02 01 'Waste from slag treatment'), but also at the inlet. For example, your authorisation must contain the code LER 10 02 02 "untreated slags".		
Economic agent.	FER (Spanish Federation of Recovery and Recycling)	Nor do we agree with the view that the third condition for declaring a by-product is not met, since the raw material in the production process is waste (in this case scrap metal). The third condition for a by-product declaration concerns: (c) the substance or object is produced as an integral part of a production process. And a production process can be defined as: The production of goods and services which basically consists of a transformation process, which follows		Not acceptable. The waste must undergo some sort of recovery, which is a specific condition of the VCF and is not present in the case of materials that are candidates for by-product use.



		organised action plans; according to which inputs of production factors, such as materials, knowledge and skills, become the desired products through the application of labour, a certain technology and the necessary provision of capital. The process by which slag is obtained in a secondary manner is perfectly in line with this definition. Neither Directive 2008/98/EC nor Law 22/2011 on waste restricts the use of waste in the production process. But above all we would like to stress that the process of melting involves oxidation, dephosphoration and slag formation. Therefore, the raw materials of the process undergo a physical and chemical transformation resulting in the final product. This is another factor that reaffirms that slag is produced as an integral part of a production process. We therefore consider that, regardless of whether the raw		
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		material in the production process is waste or not, if it is obtained as an integral part of a production process (as is the case here), the third condition of being considered a by-product should be considered to be met.		
Economic agent.	FER (Spanish Federation of Recovery and Recycling)	With regard to copper slag, we would point out that the permitted uses in Annex I do not include copper slag in related applications, such as: — Manufacture of concrete. — Manufacture of precast concrete. - Manufacture of asphalt. The eligibility of these uses would be in line with the general trend described in the EMGRISA report itself (Germany, the Netherlands and Flanders). In fact, the BAT document for non-ferrous metallurgy includes as BAT: Use the final slag from the furnaces as a (road) building material or abrasive or for another viable application. At regional level there are also already rules that generally accept bound applications for iron and steel slag, although we take them as a reference for copper slag:	Therefore, in relation to Cu's slag, we request: 1. Including bound applications (manufacture of concrete, mortar, bituminous mixtures, precast concrete). 2. Non-linked applications are permitted under conditions similar to those of the Basque Decree (no contact with the soil).	1. The use of copper slag treated in bound applications has not been requested by Atlantic Copper. There does not seem to be an environmental problem, but there is no information available to check compliance with technical requirements, so it is not accepted. 2. With regard to the other non-bound applications, it is accepted to consider the same permitted uses for SiMn slag



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ASSESSMENT

		Catalonia had an Order regulating unrelated applications (with limits on composition and leachate), which has been repealed by Decree 32/2009, of 24 February, on the recovery of iron and steel slag. This new standard allows non-linked uses by setting leaching limits only. Cantabria allows tied and unbound applications for different types of slag (iron and steel, foundry, etc.) without setting compositional limits, only leaching limits. The Basque Country admits black slag as materials suitable for bound applications, generally and without major constraints. Even non-linked applications are accepted, this time setting compositional and leaching limits; in case the slag meets leachate limits but does not comply with compositional limits, it can be used in non-bound applications that do not always come into direct contact with the soil. Furthermore, these slags comply with the leaching limit values laid down for inert waste landfills in Royal Decree 646/2020. We consider that the use of copper		and black slag as filler and as slash for the construction of pavements, provided that they meet all the technical and environmental requirements required for these uses.
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		slag in those linked applications is justified, since if the starting material is inert, the construction product manufactured with it cannot lose the status of inert. Such applications involve the use of binders that further contribute to the stabilisation and immobilisation of hazardous substances, ensuring an adequate level of protection of both the environment (soil and groundwater) and human health.		
Economic agent.	Federation of Aggregates	The technical conditions must be the same for each destination in all permitted uses. For example, in non-linked applications with lower environmental risk, these conditions are different for the same destination at higher environmental risk, which is inconsistent.	To standardise criteria and establish the same technical conditions for each destination in all permitted uses.	The technical conditions for each of the permitted applications shall be those laid down in the relevant regulations specific to each use.
Economic agent.	Federation of Aggregates	Annex II containing specifications for silico-manganese slags with regard to active addition it sets a maximum of 5 %. This is not an active addition but a minority component (0-5 %). 1) has medium pozzolanic activity, rapid cooling, additions ≤ 10 %. (2) complying with the chemical		Partially accepted. The following text on compliance with the specifications laid down for pozzolans in the regulations on cement has been added: Compliance with Annex AIII.2.3



		requirement of ≥ 25 % reactive silica. (3) fineness equal to or greater than the reference cement (remove 6.600 U. Blaine and 1h grinding) (4) mixed cements comply with the chemical regulatory requirements (Cl and SO₃)		Pozzolanas (P, Q) to Royal Decree 256/2016 of 10 June approving the Instruction for the reception of cements (RC-16)
Economic agent.	Federation of Aggregates	Annex III, which sets out the specifications for copper slags, states that, as a pozzolana in eco-cements, average activity, substitution percentages ≤ 10 % or as a minority component ≤ 5 %.		Not acceptable. Copper slag is not used as a pozzolana but as an iron corrector
Economic agent.	Federation of Aggregates	Annex I, II and III The reference test method for assessing slag leaching behaviour is not specified. The emission limit values for hazardous substances differ depending on the reference method. The legislation regulating the disposal of waste by landfill (RD 646/2020) determines the limit values for leachates obtained by means of two different standardised test methods: turning test in accordance with standard UNE-EN 12457-4 and column percolation test in accordance with standard UNE-EN 14405. Experimental results in slag analysis	Establish as the reference method the column percolation test, in accordance with standard UNE-EN 14405, until the final publication of standard UNE-EN 16637-3 and its implementation in the aggregates legislation. Include in the tables in the ANNEXES setting out the various uses, in the column 'Environmental conditions', the following text: "Limit values for leaching from landfills for inert waste into eluates obtained in accordance with UNEEN 14405", replacing the current one.	Partially accepted. The column leaching test shall be carried out in accordance with technical specification PNE-pr EN 16637-3.



		in the CEDEX Road Materials Laboratory, they show that, depending on the reference test method considered (column tipping or percolation), different conclusions can be reached regarding its classification as inert for landfilling. The column percolation test (UNE-EN 14405 and prEN 16637-3) is the most comprehensive to study the leaching behaviour of granular materials, while the flare test (UNE-EN 12457-4) is a simpler and less precise compliance test, commonly applied in plants as a control of output. The results of this test should be traceable to those of a more comprehensive reference method, such as the column percolation test. Harmonised aggregates standards provide for regulating leaching of polluting substances into granular materials according to the column percolation test in accordance with prEN 16637-3, which is in the final stage of development.		
Economic agent.	Federation of Aggregates	Annex I, II and III Royal Decree 646/2020 on the	Delete from the tables in ANNEXES I and II, in the column	Not acceptable. However, the text has



		disposal of waste in landfills also establishes limit values for fluoride leaching, for inert waste, of 10 mg/kg of dry matter (by the UNE-EN 12457-4 tipping test) and 2.5 mg/l (by the UNE-EN 14405 column test), without indicating any exceptions in this regard.	“Environmental conditions”, the following text: “(except fluorides)”.	been clarified: except fluorides, with a value of 18 mg/kg.
Economic agent.	Federation of Aggregates	To assess leaching performance in bound applications (bitumen, cement, lime...) the reference test for the environmental characterisation of the aggregate is the Dynamic Leaching for Monolithic Materials (DSLIT) test. Harmonised product standards for aggregates provide for regulating leaching of polluting substances into monolithic materials according to the surface dynamic leaching (DSLIT) test according to prEN 16637-2, which is in the final stage of development. The use of certain types of slag as aggregate in bound applications is accepted, without including environmental constraints.	Add the following to the tables in the ANNEXES containing the possible linked uses, in the column “Environmental conditions”: ‘Control of polluting substances by dynamic leaching test for monolithic materials, in accordance with standard UNE-EN 15863, until the final publication of standard UNEEN 16637-2 and its implementation in the regulations on aggregates’. Note: limit values from other European countries where regulation is in place could be used as reference values. For example, in the Netherlands there are leaching limit values for building materials, set out in the Dutch Soil Quality Decree. Consider extending the authorised uses of slag bound	Not acceptable. It is true that the Netherlands legislation provides for a category for formed material, that is to say, for building material consisting of large fragments (volume greater than 50 cm ³) with practically no risk of erosion or wear under normal conditions (bricks, asphalt, etc.). In our country it may resemble the monolithic term. However, it is considered that the control of polluting substances in the



			applications, taking into account the conditions of use of the material and based on the results of leaching tests for monolithic materials, so as to ensure the absence of adverse effects on the environment.	leachate should be carried out on the granular material to be used as aggregate, in this case slag, and therefore the proposed leaching test is suitable for granular materials.
Economic agent.	Federation of Aggregates	In the tables in Annexes I and II, the column "Environmental conditions" indicates in some cases: "Leaching limit values established on the basis of a quantitative risk analysis". However, it does not specify what that quantitative risk analysis consists of.	Include in the tables in Annexes I and II, in the column "Environmental conditions", what type of information the quantitative risk analysis should include.	Quantitative Risk Analysis (ACR) shall be carried out according to the requirements linked to subsequent use.
Economic agent.	Federation of Aggregates	With regard to the technical requirements for steel aggregate for use in concrete, it is only specified with regard to particle size conditions that 'fine aggregate may need to be added'.	Provide for the express possibility of mixing natural aggregate with steel aggregate once the latter has met the environmental requirements, in order to improve technical conditions.	Partially accepted, it must comply with all the conditions.
Economic agent.	Federation of Aggregates	For use in concrete, the Order provides for the exclusion of applications in concrete with a resistance of more than 60 N/mm ² and prestressed concrete.	Refer only to compliance with the technical specifications, in order to avoid inconsistencies regarding possible uses.	Partially accepted.



		The structural code explicitly covers only blast furnace steel aggregates for structural concrete (Article 30 Aggregates) and steel slag suitable for cleaning concrete (in Annex 10).		
Economic agent.	Federation of Aggregates	The Guide to the application of the Basque Country Government'S DECREE OF VALORITY ACTIVITIES FOR NEGAL STOCKS FOR THE FABRICATION OF STEEL STOCKS IN ELECTRIC ARCO HORES AND THEIR USE AS SIDERUGICAL ACTIVITIES, which is under no circumstances mandatory, includes Table 1 with recommendations for admissible expansion values in concrete, although it does not indicate what they are based on (there is not even a reference to the testing standard in the case of structural, non-structural precast concrete, cleaning or filling).	Always consider the applicable reference testing standard for any prescriptions.	Finding accepted.
Economic agent.	Federation of Aggregates	The application analysis document states at various points that one of the key parameters to be monitored is the content of potentially expansive compounds in aggregates from electric furnace steelworks slags.	It is proposed that the Technical Conditions always include a sentence in this regard, either limiting expansivity (as is done for slabs or bitumen) or warning of the need to do so, for example: < < adequate volume stability should be controlled by	Partially accepted.



			expansion tests > > for concrete and mortars.	
Economic agent.	Federation of Aggregates	With the proper treatment of slag (residue) and having met the criteria set out in the future Order, the aggregate produced will be called steel or artificial aggregate. This name is ignored throughout the document, and it is necessary to incorporate it in order to ensure proper standardisation of terms.	Include the name of the resulting aggregate as steel or artificial, and include this product in the definitions section.	Finding accepted. The definition of the treated slag shall be included.
Economic agent.	Federation of Aggregates	Taking the view that the public exhibition is the result of a prior public consultation on a draft Order, we consider it interesting to have included information on all the criteria that must be met in order for slag to achieve end-of-waste status. Both the authorised waste with input material for the recovery operation and the quality criteria and limit values for polluting substances are set out, but it would be necessary to also include a description of the permitted treatment procedures and techniques, the requirements of the management systems demonstrating compliance with these requirements or the content of the declaration of conformity for those uses that are not	Include these aspects in the next phase of public participation so that they can be analysed in synergy with the requirements.	Finding accepted. The information will be collected in the Public Information process.



		covered by the Construction Products Regulation and do not require CE marking. Furthermore, in order to ensure a proper understanding of the requirements subject to public consultation, the proposal should also include the main definitions.		
Economic agent.	Federation of Aggregates	Just as the need to comply with the specifications for the resulting artificial or steel aggregate is expressly mentioned, compliance with the European Construction Products Regulation (EU) 305/2011 should also be mentioned, in particular for those harmonised uses (mortars, bituminous mixtures, concrete, solids, etc.).	Including mandatory CE marking in harmonised uses.	Finding accepted.
Economic agent.	METALLO	Metallo is a FUNDITION that generates a Cu slag. For this slag the Order allows the uses “abrasive material” and “clinker”, but we miss the linked applications (Germany, the Netherlands and Flanders). The MNF BREF includes: Use slag as a building or abrasive material or for another viable application. Catalonia, Cantabria and the Basque Country accept linked applications for iron and steel slag (and others) in	Therefore, in relation to Cu’s slag, we request: 1. Including bound applications (manufacture of concrete, mortar, bituminous mixtures, precast concrete). 2. Non-linked applications are permitted under conditions similar to those of the Basque Decree (no contact with the soil).	It is partially accepted that it will publish a draft Order in Public Information. According to the information analysed, the copper slags generated by Metallo are not accepted as being the same as those generated by Atlantic Cooper.



		similar terms: They accept linked uses and, under certain conditions, non-linked uses. We are providing you with the results we are obtaining with the support of TECNALIA and the Basque Government. Cu de Metallo's slag shows negligible leaching values, always below the eligibility limits established for inert waste landfills, on the one hand by Royal Decree 646/2020 of 7 July 2006 regulating the disposal of waste by landfilling and, on the other hand, by Decree 49/2009 of 24 February 2006 regulating the disposal of waste by landfilling and the execution of backfills. The analytical results of the external laboratory are attached. This analysis is fully representative, since the slag is generated continuously, with a stable process and a mix of raw materials that is homogeneous over time. We consider the use of our slag in these linked applications to be perfectly justified, since, if the starting material is inert, the construction	3. To allow us to participate in the process of drafting the Order by having access to the drafts in order to be able to provide input.	
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		product manufactured with it cannot lose the status of inert. Such applications involve the use of binders that further contribute to the stabilisation and immobilisation of hazardous substances, ensuring an adequate level of protection of both the environment (soil and groundwater) and human health. This is reflected in the results we are obtaining in collaboration with TECNALIA, DIEGO excavations and Gutram, with the support of IHOBE – Basque Government. 2020-2021. Collaboration with Excavaciones de Diego and Gutram. Various possibilities of use are explored with these companies, as partners for the promotion of new departures. Some results: — Engineering report establishing the conditions of use of the slag, in accordance with the regulations in force. It enables certain uses, including linked applications. Project subsidised by IHOBE – Basque Government, with the support of TECNALIA: HORVARI project, focusing on technical demonstration		
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		in linked applications for slag. Pilots: production of prefabricated blocks and concrete and asphaltting of a CDW plant designed as a test and stress bench, with favourable results in all cases.		
Economic agent.	OFICEMEN	ANNEX I STEELWORKS SLAGS. Remove the 'technical conditions', relating to the control of expansivity and granulometry, included for the use of WHITE ESCORIA as a raw material in the 'Manufacture of clinker in cement' as they are intended for the use of cement on site and are therefore not applicable for the production of clinker. Justification: Control of the expansivity and particle size distribution of aggregates is important to ensure the necessary properties of concrete and mortar according to their final application. In the case of clinker manufacturing, these parameters have no relevance as the quality control of the final product applies to the clinker and cement produced and not to the raw materials that can be very diverse.	ANNEX I STEELWORKS SLAGS. WHITE SLAG. Destination: Cement clinker production. Technical conditions: Control of fluoride content, in accordance with the requirements of cement plants. — Expansivity check: < 5 % MgO — Uniform particle size < 50 mm.	Finding accepted. The Annexes are amended
Economic agent.	OFICEMEN	ANNEX I STEELWORKS SLAGS.	ANNEX I STEELWORKS SLAGS. BLACK SLAG.	Partially accepted. The Annexes are



		Include additional 'technical conditions', for control of expansivity and Cr (VI) content, for the use of ESCORIA NEGRA as aggregate in applications linked to 'Mortars' that guarantee the final properties of the product and the health of workers when it is applied. As set out. Justification: Control of the potential expansivity of aggregates is common in all aggregates that may contain expansive components, as is the case for the MgO content in ESCORIA NEGRA. With regard to the use of aggregates, it is important to note that compliance with the requirements laid down in Royal Decree 470/2021, Order FOM/2523/2014 must be ensured in accordance with the standardised tests in accordance with standards UNE-EN 1367-2 and UNE-EN 13286-49. The placing on the market and use of cement and cement mixtures are subject to restrictions on the Cr (VI) content (Annex XVII to REACH, Chapter 47 Chromium (VI))	Destination: Mortars. Technical conditions: Granulometry: Fine additions or appropriate grinding may be necessary — Expansivity check: < 5 % MgO — Less than 0.0002 % of water-soluble Cr (VI) verified according to UNE EN 196-10 to ensure compliance with OM PRE/1954/2004 and Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and its subsequent amendments as regards its Annex XVII.	amended with the exception of the reference to the MgO, which has been deleted in accordance with previous claims.
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		compounds): 1. 'Cement and cement-containing mixtures may not be used or placed on the market if, when hydrated, their soluble chromium VI content exceeds 2 mg/kg (0.0002 %) of the total dry weight of the cement.' In order to ensure that mixtures containing cement do not exceed the maximum Cr (VI) content and do not pose a risk to workers' health, the other components of such mixtures should also have a limited Cr (VI) content.		
Economic agent.	OFICEMEN	ANNEX I STEELWORKS SLAGS. Include additional 'technical conditions', for the control of expansivity and Cr (VI) content, for the use of ESCORIA NEGRA as aggregate in applications linked to 'Manufacture of concrete' that guarantee the final properties of the product and the safety of workers when applying it. Justification: Control of the potential expansivity of aggregates is common in all aggregates that may contain	ANNEX I STEELWORKS SLAGS. BLACK SLAG. Destination: Manufacture of concrete. Technical conditions: Granulometry: Fine additions or appropriate grinding may be necessary — Expansivity check: < 5 % MgO — Less than 0.0002 % of water-soluble Cr (VI) verified according to UNE EN 196-10 to ensure compliance with OM	Partially accepted. The Annexes are amended with the exception of the reference to the MgO, which has been deleted in accordance with previous claims.



		expansive components, as is the case for the MgO content in ESCORIA NEGRA. With regard to the use of aggregates, it is important to note that compliance with the requirements laid down in Royal Decree 470/2021, Order FOM/2523/2014 must be ensured in accordance with the standardised tests in accordance with standards UNE-EN 1367-2 and UNE-EN 13286-49. The placing on the market and use of cement and cement mixtures are subject to restrictions on the Cr (VI) content (Annex XVII to REACH, Chapter 47 Chromium (VI) compounds): 1. 'Cement and cement-containing mixtures may not be used or placed on the market if, when hydrated, their soluble chromium VI content exceeds 2 mg/kg (0.0002 %) of the total dry weight of the cement.' In order to ensure that mixtures containing cement do not exceed the maximum Cr (VI) content and do not pose a risk to workers' health, the other components of such mixtures should also have a limited Cr (VI)	PRE/1954/2004 and Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and its subsequent amendments as regards its Annex XVII.	
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		content.		
Economic agent.	OFICEMEN	ANNEX II SILICO MANGANESE SLAG. Delete the “conditions of use”, relating to dosage and maximum content, including their use as raw material in the ‘Manufacture of cement clinker’ as they are intended for the use of cement on site and are therefore not applicable for the production of clinker. Justification: Dosage, maximum slag content and moisture are important to ensure the necessary properties of concrete, mortar and cement according to their final application. In the case of clinker manufacturing these parameters are of no relevance. In this respect, it should be recalled that the constituents of common Portland cements are defined in the harmonised European standard UNE-EN 197-1: 2011. No Member State may unilaterally change its content. Furthermore, cements usable in Spanish structural concretes are regulated in Royal Decree 256/2016	ANNEX II SILICO MANGANESE SLAG. Destination: Cement clinker production. Terms of use: — Maximum cement dosage of 3 %. — Maximum slag content of 8 % MnO and 5 % moisture.	Finding accepted. The Annexes are amended.



		of 10 June approving the Instruction for the reception of cements (RC-16) and in Royal Decree 470/2021 of 29 June approving the Structural Code. This Order cannot correct the content of the aforementioned Royal Decrees.		
Economic agent.	OFICEMEN	ANNEX II SILICO MANGANESE SLAG. Amend the 'conditions of use', including their use as a raw material in the 'Active addition to the manufacture of cement as a pozzolanic material', to ensure consistency with the requirements and conditions laid down in Standard UNE-EN 197-1: 2011. Justification: The constituents of common Portland cements are defined in the harmonised European standard UNE-EN 197-1: 2011. No Member State may unilaterally change its content. Furthermore, cements usable in Spanish structural concretes are regulated in Royal Decree 256/2016 of 10 June approving the Instruction for the reception of cements (RC-16) and in Royal Decree 470/2021 of 29	ANNEX II SILICO MANGANESE SLAG. Destination: Active addition in the manufacture of cement as a pozzolanic material. Terms of use: — As pozzolanic material in the manufacture of commercial cements regulated in standard UNE-EN 197-1: 2011 type II up to a mixture of 30 %, although it is recommended that a maximum of 5 % be added in addition to the requirements of the aforementioned standard, until its use is approved in legislation. — Acceptable finesse (6.600 of Blane finesse) with a minimum grinding of 1 h or more. They should have at least an average diameter of 10 microns.	Finding accepted. The Annexes are amended



		June approving the Structural Code. This Order cannot correct the content of the aforementioned Royal Decrees.		
Economic agent.	OFICEMEN	ANNEX III COPPER SLAG. Amend the 'technical conditions' included for use as a raw material in the 'Manufacture of cement clinker (Portland cement)' to ensure consistency with the requirements and conditions laid down in Standard UNE-EN 197-1: 2011. Justification: Harmonised European standard UNE- EN 197-1: 2011 does not specify the content of either raw materials or corrective materials. Harmonised European standard UNE- EN 197-1: 2011 does not specify the maximum moisture content of Portland cement, clinker, raw materials or corrective materials.	ANNEX III COPPER SLAG. Destination: Cement clinker production (Portland cement). Technical conditions: — The addition of corrective components (in this case iron) depends on the need for the element in the raw material for the production of clinker only possible on a limited scale ranging between 1 and 2 %, which may be as high as 5 % (in accordance with standard UNE- EN 197-1). — Minimum iron content around 40 %, 50 % or 55 % expressed as Fe₂O₃. — Maximum sulphur content of 4 % SO₃. — Maximum moisture content of 2 %, 5 % or 14 % expressed as H₂O depending on the type of cement.	Finding accepted. The Annexes are amended
Economic agent.	SEOPAN	As regards the draft order determining when electric arc furnace slag can		The product warranty shall be the result of



		obtain end-of-waste status, we consider that, in the terms in which it is drafted, it is insufficient for such slag to provide guarantees as a construction product in a comprehensive and homogeneous manner throughout the national territory.		compliance with all the requirements set out in the future Order.
Economic agent.	SEOPAN	Use as raw material in cement production. This 'cement' would not be included in the current cement classification of RC-16, which only collects blast furnace slag as possible additions to portland cements. It should be clarified for which uses this cement would be permitted, outside the norm, and it should be made clear that under no circumstances for structural elements covered by the instructions currently in force. Furthermore, cement is currently manufactured under harmonised standard UNE EN 197-1. It should therefore be made clear that it would be used in solutions that do not require products under the CE marking, provided that the project provides for it and under the responsibility of the designer.		Not acceptable. The applicable standard for aggregates to be used in a mortar, bituminous mixed concrete or granular layers are the following which, in the near future, will be replaced by the harmonised standard PNE-prEN 17555 Aggregates for construction works, which will be the standard governing the CE Marking: or UNE-EN 12620: 2003 + A1: 2009 Aggregates for concrete.



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				or UNE-EN 13043/AC: 2004 Aggregates for bituminous mixtures and surface treatments of roads, airports and other paved areas. or UNE-EN 13139/AC: 2004 Aggregates for mortars. or UNE-EN 13139: 2003 Aggregates for mortars. or UNE-EN 13242: 2003 + A1: 2008 Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of pavements. The future European (harmonised) standard does cover manufactured aggregates, and will specify the
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				characteristics of aggregates for use in• concrete for buildings, roads and other civil engineering works,• mortar• bituminous mixtures and surface treatments for roads, aerodromes and other traffic areas,• unbound and hydraulically bonded materials for use in civil engineering works and road construction. Aggregates to be included in this European Standard are obtained by processing natural, manufactured or recycled materials and mixtures of these materials. Families of aggregates shall include coarse aggregates, grains, fine aggregates, naturally sorted
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				aggregates, all-inclusive aggregates and fillers.
Economic agent.	SEOPAN	Use as aggregate in mortar-bound applications. The mortar resulting from this combination could not be used as part of the factories listed in the CTE, as they require mortars to comply with the harmonised standard UNE EN 998-2: 2018 (CE marking). This standard does not cover the use of recycled aggregates for the manufacture of recycled aggregates. It could not be used in mortars with CE marking and would again be in the situation indicated for use in cements.		Not acceptable. The applicable standard for aggregates to be used in a mortar, bituminous mixed concrete or granular layers are the following which, in the near future, will be replaced by the harmonised standard PNE-prEN 17555 Aggregates for construction works, which will be the standard governing the CE Marking: or UNE-EN 12620: 2003 + A1: 2009 Aggregates for concrete. or UNE-EN 13043/AC: 2004 Aggregates for bituminous mixtures and surface



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				treatments of roads, airports and other paved areas. or UNE-EN 13139/AC: 2004 Aggregates for mortars. or UNE-EN 13139: 2003 Aggregates for mortars. or UNE-EN 13242: 2003 + A1: 2008 Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of pavements. The future European (harmonised) standard does cover manufactured aggregates, and will specify the characteristics of aggregates for use in• concrete for buildings, roads and other civil engineering works,•
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				mortar• bituminous mixtures and surface treatments for roads, aerodromes and other traffic areas,• unbound and hydraulically bonded materials for use in civil engineering works and road construction. Aggregates to be included in this European Standard are obtained by processing natural, manufactured or recycled materials and mixtures of these materials. Families of aggregates shall include coarse aggregates, grains, fine aggregates, naturally sorted aggregates, all-inclusive aggregates and fillers.
Economic agent.	SEOPAN	Use as aggregate in bound applications, bituminous mixtures. It		Not acceptable. The risks referred to are



		does not seem appropriate to allow the use of these materials as blend aggregate by allowing an expansivity of up to 3.5 %, which would not be accepted with a natural aggregate (Article 542.2.3.1 PG3). This potential expansivity is linked to its calcium oxide and magnesium oxide content, as indicated in the technical data sheet provided by CEDEX. It is a very limited process and should be controlled at the iron and steel aggregate slag processing plant. For example, if enough time is left to the weather, or if the process is hydrated, or accelerated thermally, that expansivity shifts when the reactions with those oxides come to an end and only then could they be used in a somewhat safer way. This is not feasible at the construction stage. Specific pre-treatment protocols should be established (collection conditions, machaking, screening, ageing processes, chilling, etc.), all of which should be detailed with exposure times, associated controls and limit values, according to the intended commercial uses.		for the slag as obtained (due to its expansivity). The scope of the future OM includes slag once it has undergone recovery treatment, so that it meets the same technical and environmental requirements as natural aggregates. Article 542.2.3.1 of PG3 for bituminous mixtures allows other types of aggregates, such as artificial aggregates: <i>Aggregates to be used in bituminous mixtures may be of natural, artificial or recycled origin provided that they meet the specifications set out in this Article.</i> The only thing they indicate with regard to
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		This would provide quality controls at source that cannot be transferred to the works. In the past, these slags were used indiscriminately without taking this into account and this was what subsequently led to poor results. These expansivity and swelling characteristics make their direct use as building materials impossible or reduced to very specific cases without risk. In addition, the regulations applicable to the usual materials under construction (aggregates for concrete, aggregates for asphalt mixtures, granular subbases, additives for cements, etc.) have become increasingly demanding and standardised at European level, with the CE marking being compulsory for most of them. In this regard, the harmonised standards related to some of the uses listed in the Order should be reviewed and require values, for example expansivity values, that give the same level of assurance as a natural aggregate. The frequency of testing, which is currently biannual for expansivity, is usually insufficient		expansivity is that: <i>Aggregates shall not be susceptible to any significant weathering or physico-chemical alteration under the most unfavourable conditions likely to occur in the area of use. Durability in the long term must be ensured.</i> <i>time, such as not causing water, solutions that can cause damage to structures or other layers of the pavement, or contaminate water streams.</i> In this regard, MITMA Technical Note NT03/2020 sets the 3,5 volumetric stability value for bituminous mixtures, which is considered appropriate as a
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		for a construction product with such heterogeneity at source, and is so sensitive to this characteristic. Due to the intrinsic characteristics of this material (heterogeneity in its composition due to its provenance, expansiveness, lime content, magnesia content, etc.), we consider that its use in road projects poses a very high risk (latent risk of expansion) and we believe that it should be clarified that its use as aggregate of mixtures can only be used in works where the movements and changes in the volume of the surface layer do not have a significant impact.		reference document. With regard to expansivity, and the need to establish specific pre-treatment protocols, the annexes already set out the treatment or recovery process that must be carried out on the slag in order to obtain a treated slag, also referred to as steel aggregate (if it comes from black slag) in various references, such as the Basque Country Decree. In this regard, quality controls are not transferred to the works, but must be carried out at the treatment plants in such a way that they meet the technical specifications
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				required by the applicable implementing legislation or harmonised standards depending on their subsequent destination. Finally, in relation to requiring expansivity values that give the same level of assurance as natural aggregates, the annexes require compliance with the same requirements (such as volumetric stability) and constraints (such as frequency of testing) as for natural aggregates.
Economic agent.	SEOPAN	Aggregate use in bound applications, structural concretes. For the reasons set out above, it does not seem appropriate to allow the use of a potentially expansive material as aggregate for structural concrete. The		The annexes state that: All the conditions laid down must be without prejudice to the provisions of the specific legislation in



		use set out in this draft Order is in contradiction with the EHE-08 standard itself and the already published STRUCTURAL CODE. These texts only allow the use of recycled aggregates from crushing CDW (concrete), by up to 20 % replacement in the coarse aggregate fraction and in concrete up to 40 MPa both in mass and armed.		force in each specific case, as well as those laid down in the Special Technical Specifications for the relevant project. Consequently, the use of slag as aggregate in concrete will always be subject to compliance with all the specifications laid down in the relevant implementing legislation.
Economic agent.	SEOPAN	Use as a slate and localised fillings, in the core and embankment of embankments in the construction of pavements under completely impermeable cover. 'Totally impermeable coverage' is a technically feasible concept. For example, Article 510.2.2.1 of the current GP3 states: <i>these materials may not be used if they exhibit appreciable physico-chemical changes under the most unfavourable conditions likely to occur in the area of use.</i>		If the treated slag meets the technical requirements of Article 510 of PG-3, it is considered that it can be used for this use. It is considered that the treated slag will no longer exhibit expansivity phenomena or, if present, it must comply with the limit values specified in these regulations for



		No one can guarantee that no water will enter a barge or a embankment kernel or crown. For some of these uses, the current applicable rules set maximum parameters that are not compatible with the guarantee they must offer to the works. This is the case for steel aggregate used as slabs, for which Article 510 of the PG-3 limits expansiveness to 5 % and the harmonised standard (UNE EN 13242) includes up to 10 %. This percentage would be much lower in the case of an aggregate iron and steel. This is essential, since a steel aggregate with an expansivity of 4 % would be declared as 'non-expansionary' in its declaration of performance and would therefore comply, in the case of slabs, with Article 510, but these values are nevertheless unacceptable in practice. It is impossible to ensure the total impermeability of the cover for a firm layer, therefore this material would indeed have a physico-chemical alteration. The conditions of use indicated are impossible or at least		aggregates in order to be used.
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		high-risk: <i>'Shall not be used in confined areas, such as bases or sub-bases limited by kerbs. The layers in which they are used should be properly drained, avoiding water stagnation. They shall be located in the structural layer of the road surface (base or sub-base layer) on the esplanade and under the pavement which shall ensure a high level of waterproofing.'</i> <i>'The fillings shall be located under pavements, floors, road surfaces or other types of waterproofing which ensure a high level of waterproofing.'</i> The characteristics required of this material for use in embankments in core and crowding layers would correspond to a marginal material whose use would be subject to a special study, approved by the Director of Works, which would once again assume responsibility for the placement of a material with a latent expansiveness potential (PG3 Art. 330.4.4)		
Economic agent.	SEOPAN	Sub-ballast use of railway tracks under not fully impermeable cover. We do not know how a sub-ballast		It is considered that, if the treated slag meets the



		layer can be achieved without the top ballast being fully permeable. Discard all uses that are not supported by a harmonised standard. This is the case for sub-ballast. The restrictions contained in the order on whether or not water is present cannot be used as an argument for the slag ceasing to be regarded as waste. The reasons for acquiring end-of-waste status cannot be at the destination, but at the origin.		specifications laid down in the specific regulations applicable to natural aggregates which may be used for this purpose, it may be accepted.
Economic agent.	SEOPAN	With regard to its use in exposed areas of slope and embankment foundations, we refer to the previous sections to justify the fact that this material transfers to the project a very high risk that should be borne by the designer, since the regulations that must be complied with require the materials to have qualities that are impossible to guarantee with an aggregate from scrap recycling. Their use should be limited to areas outside the scope of road surfaces		Only the types of filling considered to be the most environmentally safe have been covered by the study, namely: — Fillings under completely impermeable cover: localised fillings (inside concrete crates, beneath pavements, filling of conveyors of underpass walls, bridge steps, undercarriageway



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				support, retaining wall) and embankments (only core and crowding) requiring them to set limit values for leaching inert waste into landfill and, in the event of contact with soil, not to exceed the NGR for the category other land uses. — Fillings under cover which is not completely impermeable: in exposed areas of slopes (slopes) and foundations in localised embankments and fillings, compliance with limit values for leaching is required on the basis of a risk analysis. From a technical point of view, it has been considered that if they meet the
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				specifications laid down in the specific applicable legislation, as well as in the corresponding standards, they can be accepted.
Economic agent.	SEOPAN	In the case of combining different fractions of electric arc furnace slag with aggregates commonly used in the manufacture of bituminous mixtures (nature: limestone, silica, optics) it is important to note that EAF slags have a different specific weight and as a result may alter the dosage of the asphalt mixtures; changes in% of bitumen binder,% of filler. A previous laboratory study adapted to the characteristics of this material should therefore be taken into account. • In addition, this material has a high absorption, which means that a higher binding or bitumen dosing will be required, which under normal temperature and traffic conditions does not have to have negative effects, but under extreme conditions high temperature or high intensity of vehicles or ramp areas may cause		In MITMA Technical Note NT02/2020 for bituminous mixtures, paragraph 2.2.1.4. Design of the mixture (page 11), it is already stated that: The use of iron and steel aggregate must not change the volumetric design criteria (blend hollows or binder film thickness, for example), perF107: f109° results in different weighted proportions than those typical of bituminous mixtures produced with natural aggregates, irrespective of the



		that extra bitumen% to increase the deformability rate of the asphalt mixture. Therefore, the requirements of the runway test must be checked (UNE-EN 12697-22). • Due to the nature of this type of material, manufacturing and commissioning temperatures and compaction energy should be thoroughly monitored and adapted to the new material.		methodology followed. to determine the optimal binder content. The volumetric analysis should consider all aspects necessary to verify that the weightings obtained, although different from the usual weightings, are correct. And in the conclusions section: The use of steel aggregates in the production of bituminous mixtures presents advantages as well as some specific difficulties, as already highlighted in the previous paragraph. It is therefore necessary, in short, to design and put into operation correctly, in order to take advantage of the
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				former and avoid the latter.
Economic agent.	SEOPAN	The harmonised standards related to some of the uses listed in the order must necessarily be revised and require values and test frequencies appropriate to the nature of these slags. The applicable technical regulations (PG3 and other Autonomous Community texts) have to revise the limit values for expansiveness, first to give guarantees to the works and second to be taken as a reference by the manufacturer of those slags. Any value outside that limit value shall prevent the use of unfit slag.		The harmonised standards and technical regulations applicable to the permitted uses of the treated slag, depending on the uses, have been adopted.
Economic agent.	SEOPAN	From an environmental point of view, it should be noted that these materials are produced in very localised areas of the Spanish geography, especially in northern Spain. High density means that they are transported from their place of production. up to the point of employment, it is long-distance and with heavy means of transport, resulting in high greenhouse gas emissions that are incompatible with greenhouse gas reduction strategies to minimise the		Not acceptable. The annexes already require leaching tests and compliance with a number of limit values, as well as risk analysis studies (which require long-term modelling), for those uses where it has been considered that there may be a higher environmental



		global temperature and the consequences of climate change. Either within a new harmonised standard or with another legal instrument, iron and steel aggregates from black slag shall be subjected to leaching tests, long-term behavioural modelling and ecotoxicological analyses. These checks must be carried out at the place of origin.		risk. These constraints have been proposed on the basis of the previous analysis carried out, in which analyses, long-term modelling studies, REACH registration dossiers, scientific studies, etc. have been evaluated.
Economic agent.	SEOPAN	It would be desirable to include in the order that the use of these materials entails an increase in quality control in order to validate them on receipt, since the risks associated with changes in the characteristics of the product make it necessary to compare all the consignments received in the work.		Not acceptable. The quality control shall be carried out by the facility carrying out the treatment or recovery of the slag to obtain a treated slag that can be used as artificial aggregate, depending on the specific applicable regulations, the quality requirements required by the purchaser of the treated slag and the technical and environmental criteria required in the future



				OM.
Economic agent.	SEOPAN	The quality control to be carried out on site requires the existence of a sustainable laboratory infrastructure and supply (laboratories that are capable and experienced in testing this type of material are very limited at national level. This situation does not occur throughout the territory. Similarly, the use of slag, as described above, also requires some experience based on official public studies that has only been included in regional legislation in the Autonomous Communities of Cantabria and the Basque Country. The use of slag should be limited to the Autonomous Communities that have regulated its use.		Not acceptable. The Slag Study has been carried out on the basis of studies and literature in the sector. The permitted uses will be those included in the future order, within its scope.



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2. Hearing of the Autonomous Communities.

Public administration/ economic agent	Name	Article/Annex	Comment and Justification	Alternative proposal	Valuation
ADM. Public	Directorate-General for Biodiversity, Environment and Climate Change of	Article 2	In line with the terminology commonly used in relation to waste and the definitions in Law	'Manager' means: the authorised waste manager who carries out the treatment operations for each type of slag, set out in Annex I, by obtaining treated slag and who transfers it to another holder for the first time as material that has ceased to	NOT ACCEPTABLE. By using the term "product", the European rules on VCF are followed as a model.



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	the Government of Cantabria		7/2022 of 8 April 2007 itself, the figure to which this definition refers is a waste	be waste.	
ADM. Public	Directorate- General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Article 2	When defining 'other uses', only the use as raw material in the manufacture of construction products, namely cement and Clinker, is indicated. Since it refers to a single use, it would be clearer to replace the expression 'other uses' with the specific use, as has been done in the title of the Order, but not in the body of the Order.	Throughout the Decree, replace the term 'other uses' (when referring to cement and Clinker production) with the specific use defined. This is as a raw material in the production of construction products, namely cement and Clinker.	ACCEPTED



ADM. Public	Directorate-General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Annex I.3.2	Decree 100/2018, of 20 December, on the recovery of slag in the Autonomous Community of Cantabria, allows the use of black slag from steelworks in the manufacture of ferro-alloys.	It is proposed to add the following use in the application scenario "as aggregate in linked applications": As a raw material in the manufacture of ferro-alloys	NOT ACCEPTABLE. The specific destinations are those requested by the applicants; the suitability of ferro-alloys as a destination has not been studied.
ADM. Public	Directorate-General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Annex I.3.2	Decree 100/2018, of 20 December, on the recovery of slag in the Autonomous Community of Cantabria, allows the use of black slag from steelworks in the filling of the interior of closed concrete crates, used for the construction of docks in port works.	It is proposed to add the following use in the application scenario "as aggregate in non-bound applications under totally impermeable coverage": As a filling of the interior of closed concrete drawers, used for the construction of docks in port works.	NOT ACCEPTABLE. The destinations related to the production of concrete are included only in linked applications



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ADM. Public	Directorate-General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Annex I.3.2	We do not consider it appropriate to have to comply with total content values corresponding to the NGR of each AC when the slag is used directly on natural land. On the one hand, it is necessary to distinguish between the content of certain elements in a substance and the ability to release those elements into the environment. It may be that a substance has high values of certain elements, but does not release them into the medium, so their condition	Remove as environmental conditions compliance with the limit values for total content (NGR category other uses in each AC) when they are located directly on natural land. If this obligation is maintained, which we repeat we do not consider necessary, this aspect should be regulated (how the intermediate layer should be so that they are not considered to be applied directly on natural land).	NOT ACCEPTABLE. If there is direct contact with the soil, it is understood that the leaching values are not sufficient to ensure protection of the environment.
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			would be minimal. This is why we believe that monitoring of leaching values is sufficient, as this is where the impact on the environment is actually reflected. On the other hand, there are Autonomous Communities where there are no established NGRs. what do you compare with in this case? In addition, what do you refer to when located directly on natural land? Would the use of a layer of any type of material be sufficient to consider that they are no longer directly located		
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			on natural land?		
ADM. Public	Directorate-General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Annex I.3.2	In the use of slag as a rail sub-ballast, slag is directly exposed to atmospheric agents, generating a leachate that will percolate into the soil and can easily reach the groundwater. We do not see how limiting infiltration can be ensured in this use.	It is proposed to delete the use as a railway sub-ballast. And if the use is maintained, indicate that the level of infiltration limitation is required.	FINDING ACCEPTED. The level of infiltration limitation required is indicated (infiltration rate < 6 mm/year).
ADM. Public	Directorate-General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Annex I.3.2	For the use "as aggregate in landfill" It is proposed to apply as limit values for the use of slag those corresponding to the acceptance criteria for the type of landfill in question and not those in Annex II	It is proposed to remove the obligation to comply with the leaching values in Annex II and instead require compliance with the acceptance criteria for the type of landfill in which they are to be used. It is also proposed that compliance with the REACH Regulation should not be mandatory in this case.	NOT ACCEPTABLE. The value of the Basque Country Decree has been chosen for fluoride, as the more favourable conditions of use of that Decree allow a higher value to be set. Limit values for leaching from inert landfills are required as they are the most restrictive and ensure greater environmental protection. Compliance with REACH



			for all types of landfill. It makes no sense for slags (as waste) that do not comply with the values in Annex II and cannot be used as material to be deposited in the landfill beaker. Similarly,		legislation is required as the treated slag has ceased to be waste and has become a product.
ADM. Public	Directorate-General for Biodiversity, Environment and Climate Change of	Annex I.3.2	It does not seem operational to have to carry out risk analyses for established uses. If any use for any	It is proposed to remove the obligation to carry out a risk analysis.	NOT ACCEPTABLE. Quantitative Risk Analysis is a necessary tool for uses with the highest environmental impact.



	the Government of Cantabria		type of slag could be environmentally problematic, it would be better		
ADM. Public	Directorate- General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Annex I.3.3	Same comments as for steelworks slags with the exception of the one concerning the proposed use in the manufacture of ferro-alloys. The proposed use in the restoration of areas degraded by extractive activities has been added (see below).		NOT ACCEPTABLE. The use of waste as backfilling should be done through operation R0508. It is not one of the destinations assessed in the Study or initially requested.
ADM. Public	Directorate- General for Biodiversity, Environment and Climate	Annex I.3.3	Decree 100/2018, of 20 December, on the recovery of slag in the Autonomous	It is proposed to include the following use in the application scenario "as aggregate in non-bound applications under totally impermeable coverage": In the restoration of areas degraded by	NOT ACCEPTABLE. The use of waste as backfilling should be done through operation R0508. It is not one of the destinations



	Change of the Government of Cantabria		Community of Cantabria, allows the use of ferro-alloy slag in the restoration of	extractive activities. In this case, conditions should be included to ensure that slag does not affect the environment, such as the obligation to submit prior reports from the body responsible for	assessed in the Study or initially requested.
ADM. Public	Directorate-General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Annex II — Vanadio limit value	It is proposed to delete this element as it is not included in the parameters for the acceptance of inert waste in landfill, nor in the rules governing the use of construction materials. what was the criterion for including this element and not others? and what was the criterion for setting the limit value? On	It is proposed to delete this element as it is not included in the parameters for the acceptance of inert waste in landfill, nor in the rules governing the use of construction materials. And, if maintained, set the limit value at 4 mg/kg.	NOT ACCEPTABLE. Vanadium should be taken into account as it is an element of concern in the case of carbon steel slags. Column Type 2 of the Basque Country Decree was chosen as several permitted uses of carbon steel slags are in non-bound applications under not entirely impermeable cover.



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			the other hand, Decree 64/2019, of 9 April, from which this value has been taken, establishes different values depending on whether or not there is impermeable cover. Given that most uses in non-bound applications are under totally impermeable cover (except for use as a sub-ballast, with which we do not agree, where the limitation of infiltration must be demonstrated), the value of 4 mg/kg (non-bound applications		
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			under totally impermeable		
ADM. Public	Directorate- General for Biodiversity, Environment and Climate Change of the Government of Cantabria	Annex II — Limit value for fluorides	Why has the limit value for the acceptance of inert waste in landfill not been taken into account, as in the other cases for which this value exists?	It is proposed to leave 10 mg/kg as limit value for fluorides.	NOT ACCEPTABLE. The value of the Basque Country Decree has been chosen for fluoride, as the more favourable conditions of use of that Decree allow a higher value to be set.
ADM. Public	Directorate- General for Biodiversity, Environment and Climate Change of the Government of Cantabria		It is considered appropriate to establish reporting obligations on the part of the recoverer so that the use of slag during construction can be monitored when it is used in unrelated applications. There is no provision for prior	It is proposed to establish reporting obligations on the part of the recoverer to allow monitoring of the use of slag during construction when used in unrelated applications.	FINDING ACCEPTED. The information requested in Annex V shall be added.



			information to be sent to the authorities to enable checks to		
ADM. Public	Waste Agency of Catalonia	Paragraph II Preamble Last paragraph	The order refers to the treated slag "... which has been collected separately and handed over to an authorised waste manager...". Some producers can carry out internal treatment management at their own facilities.	We propose the following wording: "which have been collected separately and recovered by an authorised facility which treats them, stores them according to type..."	FINDING ACCEPTED. And is amended in the text.
ADM. Public		Paragraph v Preamble, 6nd paragraph	The wording states that 'a single transitional provision is included, the purpose of which is to give room for adaptation to	We propose the following wording: '... a single transitional provision is included which aims to give room for adaptation to those installations for which authorisation as waste managers had been granted allowing the slag treated with the status of product to be obtained. In all other cases, on the understanding that they	PARTIALLY ACCEPTED. No specific authorisation is required in order to benefit from the Order. It is accepted to delete "only" so that it does not give the impression that it is only sufficient to communicate it.



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	Waste Agency of Catalonia		those installations for which authorisation as waste managers had been granted, allowing the slag treated as a product to be obtained. In all other cases, on the understanding that they represent the majority of treatment plants, only the corresponding Autonomous Community administration will need to be notified. before carrying out the first shipment, that the criteria are met at your facility and that they therefore decide to qualify for end-	represent the majority of treatment plants, it will be necessary to obtain the relevant authorisation that includes obtaining the slag treated as a product.'	
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			of-waste status” It is not clear what the term refers to “other cases” (new activities, activities that were so far removing slags as waste,...). The wording is not clear as for installations that		
ADM. Public			The article states: In addition, in the annual report provided for in Article 65 of Law	We propose the following wording: ‘In addition, in the annual report provided for in Article 65 of Law 7/2022 of 8 April, the producer must include information on the amount of treated slag placed on the	FINDING ACCEPTED.



	Waste Agency of Catalonia	Article 6. Other obligations of the producer.	7/2022 of 8 April, the producer must include information on the amount of treated slag placed on the market as a product, and its first destination. Provision should be made for the possibility of an 'intermediate storage facility' (a facility which receives the treated slag from a waste manager, which fulfils the end-of-waste status, and stores it for subsequent use). This installation should comply with the conditions for collecting treated slag set out in Annex I, paragraph 2. The	market as product and final destination'.	
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			obligations for such installation should be laid down in Articles 4, 5 and 6. It should be clarified what is meant by the first destination.		
ADM. Public	Waste Agency of Catalonia	Point 3 of the table in ANNEX I, 1. Waste subject to recovery treatment	It is not necessary to indicate that hazardous waste is not admissible, as in point 1 it is indicated that the only waste accepted is waste with LER code 100202 i 100601, both classified as non-hazardous.	Delete point 3 from the table in ANNEX I, 1. Waste subject to recovery treatment	FINDING ACCEPTED.
ADM. Public	Waste Agency of Catalonia	Annex I.3	We consider that there is a lack of uses permitted under Decree 32/2009, of 24 February, on the recovery of iron and steel slag,	It is proposed to include the use of backfilling inside closed concrete crates, used in the construction of docks in port works, and the backfilling and restoration of areas degraded by extractive activities on clay soils or clay restoration.	PARTIALLY ACCEPTED. Uses in the manufacture of concrete shall be those that meet the requirements of Annex I (3). The use for backfilling and restoration of degraded areas is not accepted, the use of waste



			which is currently applicable in Catalonia.		as backfilling must be done through operation R0508. It is not one of the
ADM. Public	Waste Agency of Catalonia	Annex III	It is not clear who should collect the samples in order to carry out the characterisations, it seems that the producer of the slags could be responsible for carrying them out, which could influence the results obtained.	It is proposed to indicate that the sampling plan and the sampling itself must be carried out by an accredited body for sampling.	FINDING ACCEPTED. It has already been stated that the Management System must include the sampling methodology in accordance with UNE standards. The Management System must be certified.
ADM. Public	Directorate for Environmental Quality and	Article 2 (f)	The treated slag may or may not reach End of Waste Condition after treatment. The treated slag reaching the End	Replace the term 'processed slag' with 'iron and steel acid' in the definition in Article 2 (f) and throughout the draft Order.	FINDING ACCEPTED. Only for the purposes of this order.



	Circular Economy of the Basque Government.		of Waste Status is transformed into 'Steel Aids'. Moreover, the technical regulations which expressly provide		
ADM. Public	Directorate for Environmental Quality and Circular Economy of the Basque Government.	Article 2 (c)	It is proposed to include the CNAE in the definition of trader. It is considered to facilitate the work of the inspection services in monitoring the irregular marketing of steel aggregates.	'Trader' means: any natural or legal person from CNAE 08.11 46.13? 46.73, which is involved in the purchase of treated slag, etc.	FINDING ACCEPTED.
ADM. Public	Directorate for Environmental Quality and Circular	Article 2 (m)	The term Productor of the Order leads to confusion between whether	Art 2.m slag recovery	NOT ACCEPTABLE. Both in previous OM and in European regulations on VCF, the term 'producer' is used. It is understood that it



	Economy of the Basque Government.		it is the producer of the waste (Article 2ac L 7/2022) or whether it is the slag recoverer that gives it end-		is clear from the definition that it is who carries out the processing.
ADM. Public	Directorate for Environmental Quality and Circular Economy of the Basque Government.	Article 2 (j)	It is proposed that the name "Other uses" be replaced by the name of section 3 of Annex I: 'Feedstock uses in the manufacture of construction products' and to open it to other similar products: mortars, etc. In this way, the term 'other uses' can	Article 2 (j) – Use as raw material in the manufacture of construction products (...), and other similar	NOT ACCEPTABLE. The Study that has been the basis of the project has only focused on clinker and cement, not on other building materials. Adding "other similar" could mean that waste for which the suitability has not been studied would be covered by the OM.



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			be associated with uses other than those referred to in the draft Order so that they can be subject to another regime: for example,		
ADM. Public	Directorate for Environmental Quality and Circular Economy of the Basque Government.	Article 2 (I)	In the definition of holder (of iron and steel aggregate), it is not known whether it refers to the recoverer prior to shipment, the trader prior to placing it on the market, the transporter or the end user of the	Article 2. User: a natural person who ultimately uses iron and steel aggregate for the purposes set out in this Order.	PARTIALLY ACCEPTED. For the sake of clarity, the sentence '... that possesses the steel aggregate that has ceased to be waste' has been added.



			same. We therefore request clarification as to		
ADM. Public	Directorate for Environmental Quality and Circular Economy of the Basque Government.	Article 3.1	It is proposed to break down Article 3 (1) in a manner equivalent to the breakdown in Article 5 of Law 7/2022 on ending waste status. Article 5 (1) of Law 7/2022 focuses on what the resulting substances, preparations or objects must respond to in order to achieve end-of-waste status. It is proposed that Article 3 (1) be structured in accordance with	Article 3.1 (a) Steel aggregates from treated slag shall be used for the specific purposes listed in section 1 of Annex I as permitted uses/application scenario/destinations. Article 3.1.b There is a market and demand for these materials if they are used under one of the rules listed in Annex XXVIII. Article 3.1 (c) Steel aggregates are deemed to comply with the technical conditions of use for which they are intended if they demonstrate and reflect in their Declaration of Benefits that they meet the requirements of the standard applicable to the use for which they are intended. Article 3.1.d It is considered that the uses of steel aggregates under the conditions laid down in this Order do not pose serious risks to the environment if the steel aggregates used do not exceed the thresholds laid down in Annex II.	NOT ACCEPTABLE. Compliance with the RCF conditions for iron and steel slag has already been assessed in the past, and we believe that including it in the legislative text would add further confusion.



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			the structure of Article 5 (1) and		
ADM. Public	Directorate for Environmental Quality and Circular Economy of the Basque Government.	Article 3.1	Article 5.2 of Law 7/2022 focuses on the requirements to be met by authorised recovery agents in order for the treated slag to reach end-of-waste status and be transformed into steel aggregate. It is proposed that Article 3 (1) be structured in accordance with the structure of Article 5 (2) of Law 7/2022.	3.2.a the waste authorised as input for the recovery operation shall be that listed in section 1 of Annex I. Article 3 (b) The minimum treatment procedures and techniques to which slag from electric arc casting shall be subject are those listed in section 2 of Annex I. Article 3.2 (c) The quality criteria for iron and steel aggregates are set out in the rules applicable to the intended use. Some of them are listed in Annex XXVIII. Compliance with this requirement shall be certified in accordance with the applicable legislation and shall be set out in the performance document. In addition, it must prove and record in the Supply Document that the steel aggregates do not exceed the environmental thresholds set out in Annex II. Article 3.2 (d) shall have the management system referred to in Article 5. Article 3.2 e It shall comply with the Declaration of Conformity referred to in Article 4.	NOT ACCEPTABLE. We understand that the structure of the current rule is the clearest and that it has been used to date for homogeneity.
ADM. Public		Art 3.2	Waste management	Article 3.3 Authorised slag recyclers intending to declare end-of-waste status	NOT ACCEPTABLE. Same reasons as above.



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	Directorate for Environmenta l Quality and Circular Economy of the Basque Government.		activities in the field of production are subject to authorisation: Article 20.1 of Law 7/2022. Management activities in the field of production may be exempted from authorisation:	under the provisions of this Order must prove to the competent body that they comply with the provisions of paragraphs 3.1 and 3.2 of this Order.	
ADM. Public	Directorate for	Art 4	Declaration of conformity. The standard to which the Declaration of Conformity		NOT ACCEPTABLE. Although the reference to the Regulation is important and the Annex very specific, we understand that the



	Environmental Quality and Circular Economy of the Basque Government.		conforms should be indicated. The proposed regulation is Regulation (EU) No 305/2011 laying down		declaration of compliance of the draft OM is sufficient for this area.
ADM. Public	Directorate for Environmental Quality and Circular Economy of the Basque Government.	Art 5.1	Give examples of management systems to be implemented.	5.1....., e.g. systems based on ISO 9000 or ISO 14000.	NOT ACCEPTABLE. It is not appropriate to include examples directly in the articles. The management system can be any one that complies with Article 5.
ADM. Public	Directorate for Environmental	Art 6	In general, in the Autonomous Community of the Basque Country, producers only own treatment facilities, which	Article 6 other obligations of slag recovery agents	NOT ACCEPTABLE. The term 'producer' is retained both here and in the definitions. We understand the special nature of this and, once the Order has been published,



	I Quality and Circular Economy of the Basque Government.		are authorised as waste treatment facilities in their Integrated Environmental Authorisation. They are generally operated by		clarifications can be made.
ADM. Public	Directorate for Environmental Quality and Circular Economy of the Basque Government.	Art 6.1	The chronological archive is regulated by Article 64 of Law 7/2022 and the content of its summary in Annex XV. The aim is to ensure that every standard published does	6.1.- the slag recoverer shall keep and forward, together with the summary memory of the chronological file, information relating to the batches placed on the market (batch, date of departure, identification of the customer used and quantity) and the results of representative analyses and tests.	NOT ACCEPTABLE. The information requested in Article 6 is specific to the Order and necessary.



			not change the content of the chronological file and its summary.		
ADM. Public	Directorate for Environmental Quality and Circular Economy of the Basque Government.	Annex I	It is proposed to In order to encourage slags to be used under the conditions set out in the Order, it is proposed that, in addition to the column 'Conditions of use in Annex I', they appear in an article in the body of the Order in a generic manner.		PARTIALLY ACCEPTED. It is already referred to in Article 3 (1) (c).
ADM. Public		Annex II	It is proposed that an upward column leaching test in accordance with technical		NOT ACCEPTABLE. After consultation, technical specification pr-EN 16637-3 will be adopted shortly and in any case will be approved at the time of publication of



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	Directorate for Environmenta l Quality and Circular Economy of the Basque Government.		specification PNE-prEN 16637-3 Construction products – Assessment of release of dangerous substances – Part 3: Horizontal up- flow percolation test. It is not considered appropriate to require testing of a standard that is still at the draft stage. If it is considered necessary to carry out a percolation test, it is proposed to carry out the percolation test set out in section 3.2 of Annex II to RD 646/2020: Test UNE-EN 14405: 2017:		the standard.
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			Waste characterisation: Leaching behaviour test:		
ADM. Public	Directorate for Environmenta l Quality and Circular Economy of the Basque Government.	Annex VI:	It is proposed that it be aligned with the Declaration of Performance set out in Annex III to Regulation (EU) No 305/2011 laying down harmonised conditions for the marketing of construction products, to which environmental performance is added as set out in the proposed Order. Given that there is no European legislation		NOT ACCEPTABLE. The DoC should follow the model already set out in previous published End-of- Waste Orders.



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			regulating steel aggregates, it would not be necessary, although recommended, for the tests and analyses to be carried out by European Technical Assessment Bodies. They		
ADM. Public		Annex II (2)	Newly drafted Annex incorporating a Compendium for	Compilation for information purposes only of technical rules covering the use of steel aggregates. https://www.cedexmateriales.es/catalogo	FINDING ACCEPTED. An annex will be included with the reference standards.



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	Directorate for Environmental Quality and Circular Economy of the Basque Government.		information purposes only of technical standards covering the use of aggregates. It is understood that slag recoverers should cite the technical standard the technical specifications of which they declare to comply with and which guide the user to choose the steel aggregate appropriate to the uses they intend to use. It is proposed to agree with CIEMAT and CEN to update the catalogues of technical standards in order to facilitate	-de-residuos/25/escorias-de-aceria-de- horno-de-arco-electrico/58/normativa- técnica.html	
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			the market introduction of		
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3. Public information.

Public administrati on/economi c agent	Name	Article/ Annex	Comment and Justification	Alternative proposal	Valuation
ADM. Public	CEDEX	Annex I (3) 'Permitted destinations and constraints for treated material' and ANNEX II	Environmental conditions are not required for applications such as bound aggregate (mortar, bituminous mixtures and concrete manufacture). It is necessary to assess the actual effect of attenuation on the release of hazardous substances, resulting from their bound application (such as the type and quantity of binder used). For bound applications there is a specific test method according to prEN 16637-2. As there is no national regulation on limit values for linked uses, it is proposed to use the Dutch regulation on soil quality.	Add on page 17 of ANNEX I, for black steelworks slag, for "Bituminous mixtures", the following environmental conditions: " Compliance with the leaching limit values in Annex II ". Add in ANNEX II Conditions relating to the leaching of treated slag for non-bound and bound applications.' Limit values for leaching of treated slag for non-bound applications according to prEN 16637-2 (mg/m ²) and according to the Dutch soil quality regulation: Antimony: 8 '7,	FINDING ACCEPTED.



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				arsenic: 260, barium: 1500, cadmium: 3 '8, chromium: 120, Cobalto: 60, copper: 98, Mercury: 1 '4, lead: 400, molybdenum: 144, nickel: 81, selenium: 4 '8, tin: 50, vanadium: 320, zinc: 800, bromide: 670, chloride: 110000, fluoride: 2500 and Sulphates: 165000	
ADM. Public	CEDEX	Annex I (3) 'Allowed destinations and constraints for treated material'	When establishing environmental conditions in use as aggregate in related applications, it is necessary to comply with the limit values for total content without indicating the method of determination. For building materials there is a specific method according to prEN 17196.	In ANNEX I, under the column "Environmental conditions", add pages: 18, 20, 22, 25, 27 and 28, the following text: "Compliance with the limit values for total content... determined in accordance with standard prEN 17196, expressed in mg/kg."	FINDING ACCEPTED.
ADM. Public	CEDEX	Annex I (3) 'Permitted destinations and constraints for treated material' Page 27	In the 5th column "Environmental conditions", the last paragraph is incomplete: "Compliance with the total content limit values (NGR category other uses of each AC) when directly located on..."	Adding: '... natural land '	PARTIALLY ACCEPTED. The term 'soil' shall be used instead of 'natural land'.
ADM. Public	CEDEX	Annex II Table 'Limit values for	The table below does not fully define the origin of Decree 64/2019.	Adding: '(1) <i>limit values for the acceptance of inert waste in landfill, except in the case of</i>	FINDING ACCEPTED.



		leaching of treated slag for non-bound applications (mg/kg)' Page 30		<i>fluoride, vanadium and chromium VI, which correspond to those laid down in Decree 64/2019 of the Basque Country...'</i>	
ADM. Public	CEDEX	—	Several errors are indicated in red: "... according to technical specification PNE-prEN 16637-3 Construction products – Assessment of release of dangerous substances – Part 3: Horizontal up-flow percolation test, for a liquid-solid ratio (L/S) of 10 L/kg),..." Limit values for leaching of the resultant material (treated slag) for non-bound applications according to PNE-prEN 16637-3 (mg/kg)"	Amend to read: "... in accordance with technical specification prEN 16637-3 Construction products: Assessment of release of dangerous substances – Part 3: Horizontal up-flow percolation test, for a liquid-solid ratio (L/S) of 10 l/kg,... "Limit values for leaching of the resultant material (treated slag) for non-bound applications according to prEN 16637-3 (mg/kg)"	FINDING ACCEPTED.
ADM. Public	CEDEX	Annex II Table 'Limit values for leaching of the resulting material (treated slag) for non-bound	The leaching limit values given in the table by the ascending flow percolation test (prEN 16637-3) are rather low for some parameters: CD, Cr, Cu, Zn and chlorides, compared with the limits for the acceptance of inert waste in landfills, by the tipping test (UNE-EN 12457-4), for the same L/S ratio of 10 l/kg. The column percolation test lasts approximately	The leaching limit values for the column percolation test should not be lower than those for the flare test, i.e. landfill limits for inert waste.	FINDING ACCEPTED.



		applications according to PNE-prEN 16637-3 (mg/kg)' Pages 31 and 32	20 days, while the flare test is only 24 hours, so concentrations released by percolation can be expected to be higher than those released by flare. It would be interesting to carry out a full environmental study of iron and steel slag using percolation leaching and tipping tests. The CEDEX Centre for Transport Studies has environmental information on this type of material.		
Economic operator		Article 5 point 6	In our opinion, this text should be aligned with the European regulations on end-of-waste status, such as: Regulation no333/2011; Regulation (EU) No 1179/2012; Regulation (EU) No 715/2013	A conformity assessment body as defined in Regulation (EC) No no765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, which has obtained accreditation in accordance with that Regulation, or any other environmental verifier as defined in Article 2(20)(b) of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community	NOT ACCEPTABLE. Conformity assessment must be carried out by means of Regulation (EC) No 765/2008 in order to ensure performance as a product.
	AENOR				



				eco-management and audit scheme (EMAS), shall verify whether the quality	
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Statement of reasons	Reference is made to choosing the term 'treated slag' from the materials that have reached End of Waste Condition and it is a mistake. First, because it is not necessary to include the qualifier 'treated' in order to make it clear that they have lost their waste status, it creates confusion because it does not provide information as to whether that treatment has resulted in full compliance with this MPA or not. According to the same example, the name 'recycled aggregate' should be replaced by 'treated construction and demolition waste', which, far from reflecting the loss of waste status, raises doubts as to its status. On the other hand, to avoid naming these materials as artificial aggregates or iron and steel aggregates, it is necessary to introduce a new, undefined term and to introduce a new barrier to their use, since European and national product legislation already provides for the use of these	Replace the concept of treated slag with that of artificial aggregates or iron and steel aggregates	FINDING ACCEPTED. Only for the scope of this Order.



			materials under the real name: • Structural code (BOE-A.2021-13681 page 98164, steel aggregates) • GP3 Article 540.2.3./542.2.3/543.2.3/510.9/... artificial aggregates) • Harmonised standards: • IN 13242: 2002: Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of finish (Artificial Aggregates and Steel Aggregates), and other aggregates standards • MITMA NT 03/2020 (artificial and iron and steel aggregates) • Etc.		
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Article 2. Definitions; (b) 'Non-linked applications'	The draft Order defines 'Non-linked applications' as: applications in which compacted materials are used in layers, without the addition of a conglomerate; We understand that this definition has been incorporated since Decree 64/2019 of the Basque Country, but it should be pointed out that an untied application does not have to be compacted, so that this circumstance should not be included in the definition. The fact that an application is made with unbound materials simply means that no hydraulic binders have been added. Furthermore,	'Non-linked applications' means: applications in which compacted materials are used in layers, without the addition of a conglomerate;	NOT ACCEPTABLE. Although it may be understood that not all linked applications may require compaction in layers, all the uses conceived in this Order, for non-linked applications, will need it to varying degrees.



			neither the type nor the degree of compaction required in those uses is defined, which may be significant for the operation to be considered environmentally safe.		
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Article 2. Definitions. (c) "Trader"	The draft Order includes the definition of "dealer" as any natural or legal person involved in the purchase of treated slag, which has ceased to be waste under this Order, and subsequent sale, even if not physically possessed; We consider that, if the secondary raw material has lost its waste status and is already a product, it should not include subsequent checks beyond those required by product legislation. The traceability of the work must be included in the documentation relating to the work. The case may be similar to the requirement for CE marking, where the responsibility of each link in the marketing chain is not specified, beyond the requirement of CE marking by the consignees.	Remove the trade figure from the draft order (pages 7 and 8 thereof)	NOT ACCEPTABLE. The figure that is in charge of purchasing the waste that has reached the VCF should be defined. The definition has been included in already published Ministerial Orders.
Economic operator	ANEFA National Association of Aggregate Manufacturers and	Article 2. Definitions. Treated slag	The draft Order includes the definition of 'treated slag' as slag from electric arc furnace casting that has been treated in accordance with the specifications of this Order and complies with the technical, environmental and use conditions set out therein; Although the definition is	'Steel aggregate' means an artificial aggregate resulting from the treatment of electric arc furnace slag which has been treated in accordance with this Order and complies with the technical,	FINDING ACCEPTED.



	FdA Aggregates Federation		appropriate, we insist that the name is not.	environmental and use conditions set out herein;	
Economic operator	ANEFA National Association of Aggregate Manufactur ers and FdA Aggregates Federation	Article 2. Definitions. Lot	The draft Order defines a lot as: unit of treated slag of the same quality generated in a treatment plant and in which the requirements laid down in Annex I (3) are verified. The concept of batch should be narrowed down and nuanced according to the type of use and a time horizon.	unit of treated artificial aggregate slag of the same quality intended for the same use, generated in a treatment plant, and in which the requirements laid down in Annex I (3) are verified. The definition of the lot shall be at the discretion of the producer, the maximum time limits being those laid down in Annex I	PARTIALLY ACCEPTED. "Same quality" is replaced by "intended for the same use".
Economic operator	ANEFA National Association of Aggregate Manufactur ers and FdA Aggregates Federation	Article 2. Definitions. Producer	The draft Order defines as (m) 'Producer': the authorised waste manager who carries out the treatment operations for each type of slag, set out in Annex I, by obtaining treated slag and who transfers it to another holder for the first time as material that has ceased to be waste. According to the terminology of waste legislation, this would be the recovery and not the producer. It is the producer of the waste who generates it	Replace here and in the following, producer by recoverer: natural or legal person carrying out slag recovery operations	NOT ACCEPTABLE. Although, in the field of waste, it is the producer who produces the waste, Law 7/2002 refers to 'producer of waste'. The term 'producer' is maintained in the Order in line with orders and regulations of VCF already published.
Economic operator	ANEFA National Association	Article 3. End-of- waste	Paragraph 1 of the draft Order provides that treated slag destined for the uses referred to in this Order shall cease to be	Remove this material transfer constraint	NOT ACCEPTABLE. Although it might be the case that the



	of Aggregate Manufactur ers and FdA Aggregates Federation		waste when it is transferred from the producer to another holder. We do not agree that it is necessary to transfer these materials from the producer to the holder in order for them to lose their waste status. Following compliance with the provisions of the Order, the material can be considered as a product, even if it is coupled in the recovery facility. As with other waste, once it fulfils the established conditions and criteria, it can already be treated as a product.		producer and the holder are the same person, the slag loses its waste status at the time it is used in the permitted destinations. Treatment and storage cannot be understood as compliance with the Order, which must be understood and applied as a whole.
		criteria.			
Economic operator	ANEFA National Association of Aggregate Manufactur ers and FdA Aggregates Federation	Article 4. Declaration of conformity.	Paragraph 2. It could be clearer about the roles of the different actors. According to the text, the producer, importer or trader will transmit the declaration of conformity to the next holder of the shipment of treated slag that has ceased to be waste. It is understood that the producer refers to the producer of the steel aggregates, but in its capacity as manager, it should replace producer by manager, and remove the figure of the trader, which is merely an intermediary that may or may not exist.	New wording: The manager producing the steel aggregates or the importer shall transmit the declaration of conformity to the next holder of the batch of steel aggregates.	NOT ACCEPTABLE. The term 'producer' is retained as manager. It is necessary to include the term "trader" as it may exist.
Economic operator	ANEFA National	Article 5. Managemen	In addition to Regulation (EC) No 765/2008 of the European Parliament	Include reference to Regulation EU No 305/2011 of the	PARTIALLY ACCEPTED. The



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				GAP 26 4. Permitted destinations, technical and environmental conditions and conditions of use for steel aggregates from copper slag.	
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Annex I End-of-waste criteria 1. Waste subject to recovery treatment	With regard to the control requirements included in the table, the following is specified: 'If necessary, laboratory tests shall be carried out in accordance with the applicable legislation for the determination of the hazardous properties of the waste'. We believe that the conditions under which laboratory testing may be necessary should be specified. Such an important aspect as the environmental characterisation of input waste should not be left undefined.	Specify in which cases the control of hazardous substances in waste accepted for treatment may be necessary (PE: where deviations of more than X% occur in the limit values of dangerous substances analysed in the product, etc.)	PARTIALLY ACCEPTED. The paragraph in question has been deleted so as not to give the impression that a certain degree of hazardousness is accepted in the input waste.
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Annex I End-of-waste criteria 3. Permitted destinations and constraints for treated material Table 2	Table 2 sets out the permitted destinations for black slag when used as a mortar, and establishes the following as a technical constraint: volumetric stability check in accordance with standard UNE-EN 1744-1 Standard UNE-EN 13139: 2003 Aggregates for mortars, in its current version, does not provide for volumetric stability testing to determine the suitability of these materials for the stated use, not	Volumetric stability check in accordance with standard UNE-EN 1744-1 and other compliance with requirements such as granular material, in such a way as to guarantee the mortar specifications in accordance with the rules, standards or PPT of the project.	NOT ACCEPTABLE. Some form of volumetric stability check should be performed.



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			like the other standards that do consider it.		
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Annex I End-of-waste criteria 3. Permitted destinations and constraints for treated material Table 2	Table 2 lists the permitted uses of black slag for use in bituminous mixtures, and sets out as a technical constraint: Compliance with specifications Technical Note MITMA NT 03/2020. However, it does not detail the control of volumetric stability in accordance with standard UNE-EN 1744-1, as in the case of other uses, which is a requirement under standard UNE-EN 13043 for aggregates for bituminous mixtures.	Volumetric stability check in accordance with standard UNE-EN 1744-1 and other requirements such as granular material in such a way as to guarantee the specifications set out in Technical Note MITMA NT 03/2020, other implementing legislation, standards or the project's PPT.	FINDING ACCEPTED. Reference shall be made to standard UNE-EN 1744-1.
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Annex I End-of-waste criteria 3. Permitted destinations and constraints for treated material Table 2 and Table 3, Table 4	The draft Order lays down (for both black steelworks slag and silico-manganese or copper slag) limitations on its use as a zahorra and lists examples of its use, including: Zahorra for road pavement construction: — Under construction (base, sub-base, improved esplanade) — As granular material for pedestrian track base/subbase, cyclists and sports tracks – as material for improved esplanade In addition to repeated use as material for improved esplanade, materials for the execution of improved esplanades should not be referred to as slabs. The category of materials would be different, being	Zahorra for road pavement construction: — Under construction (base, sub-base, improved esplanade) — As granular material for pedestrian track base/subbase, cyclists and sports tracks As aggregate materials for improved esplanade (not included in the Zahorra category, as a separate section)	FINDING ACCEPTED.



			assimilated to natural materials such as soils. As we are unable to use this concept, we propose aggregates for improved esplanades, as is done in the 'aggregate in landfills' scenario.		
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Annex I End-of-waste criteria 3. Permitted destinations and constraints for treated material. Table 2, Table 3 and Table 4	The draft Order lays down (for both black steelworks slag and silico-manganese or copper slag) limitations on its use as a slash for embankments, and this designation may be misleading. It is proposed to replace with aggregates for embankments, as it is done in the "landfill aggregate" scenario.	Zahorra Aggregates for: embankments. Only kernel and crowns may be used.	FINDING ACCEPTED.
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Annex I End-of-waste criteria 3. Permitted destinations and constraints for treated material Table 2 and 3	The draft Order establishes as a possible application scenario (for both black steelworks slag and silico-manganese or copper slag) the use as aggregate in non-bound applications, under cover that is not totally impermeable without thickness restriction and without direct contact with the soil, and then regulates another similar condition in which it does have direct contact with the soil. Subsequently the other columns (destination, technical, environmental and conditions of use) are	As aggregate in non-bound applications under cover not wholly impermeable without thickness restriction I, with or without direct contact with soil	NOT ACCEPTABLE. There is a difference in the environmental conditions, so that if there is direct contact with the soil or natural land, compliance with the total content limit values is also necessary.



			identical for the two situations (in direct contact with the ground and without direct contact). It is proposed to combine the two scenarios		
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Annex I End-of-waste criteria 3. Permitted destinations and constraints for treated material Table 2 and 3	There is no need to consider the case-by-case nature of the use of these materials specifically in the restoration of mining operations, which would be considered as an untied application, under cover that is not entirely impermeable in the short term, but which can influence the state of the natural soil by means of waterproofing, limit the thickness of the layer or achieve a certain compaction of the layer.	Include this case in the proposed scenario for each type of slag established	NOT ACCEPTABLE. The use of waste as backfilling should be done through operation R0508. It is not one of the destinations assessed in the Study or initially requested.
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation	Annex I End-of-waste criteria 3. Permitted destinations and constraints for treated material Table 2	For both the storage of waste prior to treatment and the subsequent storage, following the operations established for its management, provision is made for a system for the collection and treatment of such leachates. We consider that leachates should be collected and managed in an appropriate manner, but that such management may also be the handing over of leachates to authorised managers, without their processing being carried out by the slag manager.	A system for collecting and treating such leachates shall be in place. If the slag manager does not process the slag, it must be handed over to an authorised slag manager for treatment.	FINDING ACCEPTED.
Economic operator		Annex II Conditions	The Annex provides for the possibility of uses with a higher environmental risk	To regulate, prior to the approval of this Order, the	PARTIALLY ACCEPTED. For



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	ANEFA National Association of Aggregate Manufactur ers and FdA Aggregates Federation	for leaching of treated slag for non- bound applications	after determining limit values other than those established on the basis of a quantitative risk analysis. Although the draft Order contains a series of reference documents when carrying out this type of study, it is considered that the establishment of limits on dangerous substances is one of the major assets of this standard, and that the vast majority of uses of these materials should not be left to the case by case, all the more so considering that both the methodology for carrying out quantitative risk analyses and the criteria for determining limit values are not specifically developed, as well as the procedure and responsibilities for this assessment where appropriate.	content, methodology, criteria, procedures and responsibilities of quantitative risk analyses. If there is no option to develop this prior regulation, it is proposed to establish leaching values for these new scenarios as developed in other Autonomous Community regulations.	uses that require them, the quantitative risk analysis must be carried out in accordance with standard UNE 150008: 20008.
Economic operator	ANEFA National Association of Aggregate Manufactur ers and FdA Aggregates Federation	Annex II Conditions for leaching of treated slag for non- bound applications	Note 1 sets out the regulatory origin of the established limit values (Royal Decree 646/2020 and Decree 64/2019 of the Basque Country). We do not consider it necessary to include these references because the bases for pre-normative research are already covered in the previous public exhibitions of the Order.		NOT ACCEPTABLE. It is considered interesting to know the source of the data.
Economic operator	ANEFA National Association	Annex II Conditions for leaching	The draft Order establishes 2 methodologies to determine compliance with environmental constraints, the flare	Remove the obligation to carry out the column leaching test until European product	NOT ACCEPTABLE. A column leaching test is necessary to



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	of Aggregate Manufactur ers and FdA Aggregates Federation	of treated slag for non- bound applications	leaching test and the ascending flow column test. There is currently no offer available to carry out this test, and only the CEDEX Laboratory has the equipment and authorisation to comply with this Order. Apart from the fact that there is no supply, that the only laboratory is the public administration and that it is not currently the standard test for the environmental characterisation of materials.	standards are published, including and endorsing this methodology. Establish a possible reduction in their performance on the basis of repeated compliance with the minimum values.	ensure the suitability of the slags. The technical specification referred to is expected to be published before the publication of the Order.
Economic operator	ANEFA National Association of Aggregate Manufactur ers and FdA Aggregates Federation		Neither in the articles nor in Annex I is there any mention of the possibility of mixing with other types of materials in order to improve technical constraints, as is the case with the Decision of 20 September 2022 of the Regional Ministry of Autonomous Administration, the Environment and Climate Change establishing the requirements, uses and environmental conditions for decisions authorising the management of waste steelworks slag and slag debris involving end-of-waste status in the Principality of Asturias: For example: Type IV: Unbound and unbound applications in mixtures for filtration and drainage fillings. Description: This includes applications involving the use of	Include a prior note in the header of the Annex (or elsewhere if so determined: The use of iron and steel aggregates with other granular materials (of an inert nature and preferably of secondary origin, such as construction, demolition and excavation waste from treatment plant or mining waste) is permitted for the specified uses	NOT ACCEPTABLE. By definition, if a product is mixed with waste, the set shall be understood as waste. Therefore, if slag that has reached the end of the condition is mixed with waste, it would lose the VCF status.



			slag mixed with other granular materials (of an inert nature and preferably of secondary origin, such as construction, demolition and excavation waste from treatment plant or mining waste) for backfilling applications for drainage and filtration purposes. Requirements: the final mixture shall be prepared at the recovery facility and shall comply with the maximum permissible values for polluting elements in the following tables of Annex I.		
Economic operator	ANEFA National Association of Aggregate Manufacturers and FdA Aggregates Federation		No conditions have been included for slag recovery and storage facilities. The conditions of the management facilities should be laid down, whether inside or outside the production site, as established in the Decision of 20 September 2022 of the Regional Ministry of Autonomous Administration, the Environment and Climate Change establishing the environmental requirements, uses and conditions for the authorisation decisions for the manager of waste steelworks slag and slag debris involving end-of-waste status in the Principality of Asturias.	Include description of facilities necessary for recovery and subsequent storage	NOT ACCEPTABLE. All storage or recovery facilities that meet the requirements of the Order may be covered by the standard.
Economic operator		ANNEX I Paragraph 3	Under the heading 'Allowed destinations, technical and environmental conditions and conditions of use for black slag from	The alternative proposal is: The layers in which they are used shall be properly drained,	PARTIALLY ACCEPTED. Some kind of limitation is



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	Mr Asidan Áridos Siderurgico s Andaluces SLU	Destinations permitted and constraints for a material Treaty. Sub paragraph 2. Destinations permitted, derogation character technician and environment al and conditions of use for slag black steelworks.	steelworks.', conditions of use for 'aggregate in non-bound applications under totally impermeable cover' exclude use in areas that keep the material completely contained. This limitation, which we consider to have no environmental justification, since it is the most limiting in leachate generation, means in practice and from our experience a very significant reduction of more than 90 %, according to our own and our stimuli, in the use of treated slag, since this situation occurs in practically all jobs as a sub-base (cycle lanes, streets, steelworks, parking areas, sports tracks, subbase in industrial installations under concrete slabs or asphalt pavements, etc.), especially in urban environments. In addition, in these situations, the usual thicknesses are 200 centimetres, in some cases two layers, with a maximum thicknesses of 25 centimetres, i.e. we are always talking about reduced thicknesses. We understand that this limitation is linked to the expansive potential of black slags, a problem that is currently resolved, as black slags exhibit an expansivity very close to 0 % (volumetric stability control in accordance	avoiding stagnation of water. They shall be located in the layer according to the volumetric stability control test in accordance with standard UNE-EN 1744-1, in areas that maintain the fully contained 'structural' material of the road surface on the esplanade and under pavement that ensures high waterproofing coverage. The paragraph 'shall not be used in areas where the material is kept completely contained ' has been deleted. If, however, it is considered necessary to maintain some limitation for this situation, its use under fully confined conditions could be restricted to slag treated with expansivity values lower than 1 % according to the volumetric stability control test in accordance with standard UNE-EN 1744-1. This value is 5 times lower than that allowed by the General Technical Specifications for Roads and Bridges (PG-3), in	needed, so the first part of the proposal is not accepted, but a limit value of 1 % is set.
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			with standard UNE-EN 1744-1). Asidan can provide a large number of examples, several years old, of treated slag applied in confined spaces that do not present, nor have presented any problems, which can be found on our website www.asidan.es ** Annexes 1 and 2 are attached. show the historical results of the slag expansivity test Siderúrgica Sevillana and the calculation of volume increases by expansivity on black slags of steelworks.	Article 510.2.1 on artificial slabs, which limits the maximum expansivity value to 5 % (according to UNE-EN 1744-1). The alternative text would then be: "Slag treated with expansivity values greater than 1 % shall not be used"	
Economic operator	Mr Asidan Áridos Siderurgicos Andaluces SLU	Annex I (3) Permitted destinations and constraints for treated material. Sub-section 2. Permitted destinations, technical and environmental conditions and conditions of	In the submission process of the public consultation September 2021 Asidan raised a claim corresponding to use as 'aggregate' in low non-bound applications totally impermeable cover" for black slag from steelworks in localised fillings, which was accepted, and which allows employment in: Localised fillings (inside drawers of concrete, low pavements, stuffed with transfers of underpass walls, of bridge steps, supporting low carriageway, of containment wall)" This claim is not included in the current one.	Implementation scenario: As aggregate in non-bound applications under totally impermeable cover Destinations Localised fillings under completely impermeable cover. Technical conditions Stability control volumetric according to standard UNE-EN 1744-1 and others material requirements granular, so that ensure compliance with the specifications of the material of	FINDING ACCEPTED.



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				filling in accordance with the rules, project standards or TPP. Terms of use Localised fillings (indoor) concrete drawers, under pavements, stuffing of tarpaulins from walls of underpasses, of steps of low support bridges carriageway, of containment wall) under road or other road surfaces types of hedges that insure a high level of waterproofing (rate infiltration < 6 mm/year *). * Or conditions to be decided to ensure coverage impermeable.	
Economic operator		use for black steelworks slag. ANNEX I Paragraph 3 Destinations permitted and constraints	project Under the heading 'Destinations' allowed, character conditions technical and environmental conditions use for black steelworks slags.'; under Conditions of Use for As aggregate in non-bound applications not fully covered impermeable, in which	The alternative proposal is: authorisation of the use of slags treated as Capa de Shape, with the same technical constraints and environmental conditions other than sub-ballast, provided that this layer is not	NOT ACCEPTABLE. The requested material has not been studied for that proposed purpose.



	Mr Asidan Áridos Siderurgico s Andaluces SLU	for a material Treaty. Sub paragraph 2. Destinations permitted, derogation character technician and environment al and derogation use for slag black steelworks.	constraints of a nature constructive, a maximum thickness limitation Destination Shape layer The shape layer is a layer the sub-base of the railway platform, with a reduced thickness and usually on a layer of provision of lower-quality soils technical or lower load-bearing capacity. It is under the sub-ballast. their exposure is less than this and their control would be carried out under the rules 'EN 13242: 2002 + A1: 2007 Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of pavements' and the ADIF specific legislation, therefore which can be considered as included in the uses applied for within the by-product declaration, origin of this Order.		
Economic operator		ANNEX I Paragraph 3 Destinations	Within the category of uses permitted with less environmental irrigation, in the implementation scenario, 'As	Permitted uses With lower environmental risk Implementation scenario As aggregate in applications	NOT ACCEPTABLE. CEDEX states that the use of black slag in layers with



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Economic operator		Section II	Iron silicate produced by Atlantic Copper does not fall within the scope of this order.	It is proposed to delete the references to copper slag: Electric arc furnace (EAF)	NOT ACCEPTABLE. If the materials generated by



	ATLANTIC COOPER SLU	It is noted that: 'Electric arc furnace (EAF) smelting slag is waste that is generated during the iron and steel process into which either metals or scrap are introduced as a raw material.' It is also noted that: 'In this Order, reference is made to treated slag, meaning slag from electric arc furnace smelting, from a steel process, which has been collected separately and delivered to an authorised waste manager, who treats it, stores it according to type and finally sends it according to the type of subsequent use.' Justification 1a: Unlike the other slags included in the scope, Atlantic Copper's copper slag is not produced in an electric arc furnace and should therefore not be included in the scope of this Order. Iron silicate is formed in the Horno Flash by reacting the iron contained in the concentrates with oxygen and added silica, and separated from the other fractions (mata, gaseous SO₂) that go to other production processes. The separation continues in the Electric Horn, which serves to increase the residence time, and which is favoured by the generation of a reducing atmosphere in	smelting slag is a waste that is generated during the iron and steel process into which either metals or scrap are introduced as a raw material. Steel slags are produced during the carbon steelmaking process, black slags specifically arise during the melting phase while white slags arise from the refining of liquid steel. On the other hand, copper slags arise from the smelting of copper concentrates in copper production, while silico-manganese slags are generated during the silico-manganese alloy process.	Atlantic Cooper are not produced in an electric arc furnace or during a steel process, as they point out, then the draft Order would not apply to them.
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			that Horn. Justification 2a: Atlantic Copper copper slag is not generated during a steel process. Justification 3a: Unlike the other slags included in the scope, Atlantic Copper iron silicate is not subject to any waste recovery operation, as justified in subsequent comments.		
Economic operator	ATLANTIC COOPER SLU	Section III	Iron silicate produced by Atlantic Copper does not fall within the scope of this order. It is noted that: 'Subsequently, in 2020, the European Commission published the "Study to Assess Member States (MS) Practices on by-product (BP) and End-of-waste (EoW)" which sought to provide information on the application of the concepts of by-product and end-of-waste status in the Member States. The document concludes that slags in need of treatment are more relevant to apply the end-of-waste status figure as opposed to the by-product figure.' While the BP status of slags is possible only for a limited section of non-hazardous slags that do not need further treatment beyond what is normal industrial practice. It should also be noted that: 'In Spanish	It is proposed to remove copper slags from the scope of this order.	NOT ACCEPTABLE. If the slags are not generated in the electric arc furnace and do not undergo the treatment set out in the draft Order, they will not be eligible for this project.



		legislation, three Autonomous Communities have regulated the recovery and use of certain slags (Basque Country, Cantabria and Catalonia). The types of slag regulated vary from one community to another, although in all three uses are listed as linked and non-linked applications and require, for other applications, prior authorisation from the relevant environmental body.” Justification 1a: The slag included in the scope of this Order undergoes treatment operations (storage and cooling, maturation and ageing, grinding and crushing, demetallisation, etc.). Copper slag requiring treatment is slag that undergoes a flotation process. On leaving the Flash Horn, they are cooled, crushed and ground to a fine size before being fed to the concentrator. This is the case for other European copper foundries such as Boliden Harjavalta (Finland), Boliden Rönnskär (Sweden) or Aurubis Pirdop (Bulgaria), but not for Atlantic Copper iron silicate. Justification 2a: In the above-mentioned European Commission document, the slags from Horno de Arco Eléctrico use scrap as a key raw material. In the case of Atlantic Copper iron silicate, concentrates, not		
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			scrap (waste), are used as raw materials. The concentrates and silica are fed to the Flash Horn, not to the Arco Eléctrico Horn. Justification 3a: Unlike the other slags included in the scope, there is no regional legislation on iron silicate. The slag included in the scope of this Order undergoes treatment operations (storage and cooling, maturation and ageing, grinding and crushing, demetallisation, etc.). Copper slag requiring treatment is slag that undergoes a flotation process. On leaving the Flash Horn, they are cooled, crushed and ground to a fine size before being fed to the concentrator. This is the case for other European copper foundries such as Boliden Harjavalta (Finland), Boliden Rönnskär (Sweden) or Aurubis Pirdop (Bulgaria), but not for Atlantic Copper iron silicate.		
Economic operator	ATLANTIC	Section IV	Section IV (page 4) mentions copper slag, its production data and uses. It is proposed to delete the paragraph referring to copper slags and their production and usage data. Justification 1a: See comments above.	It is proposed to delete the paragraph referring to copper slags and their production and use data: On copper slag, around 600.000 tonnes per year have been generated in Spain over	NOT ACCEPTABLE. If the slags are not generated in the electric arc furnace and do not undergo the treatment set out in the draft Order,



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Economic operator	ATLANTIC COOPER SLU	Article 1	Unlike other slags, Atlantic Copper's iron silicate does not fall within the scope of this Order, which is to establish the criteria for determining when electric arc furnace slag ceases to be waste. It is noted that: '1. The purpose of this Order is to establish the criteria for determining when electric arc furnace (EAF) smelting slag.' Justification 1a: As indicated in previous justifications, unlike the other slags included in the scope, Atlantic Copper's copper slag is not produced in an electric arc furnace, nor is it subject to any recovery operation.	It is proposed to delete the references to copper slag: 1. This order aims to establish the criteria for determining when electric arc furnace (EAF) smelting slag (carbon steel, silico-manganese and copper) "Electric arc cast slag": glassware superimposed on the crucible of electric arc furnaces when melting metals. The scope of this order includes black and white carbon steel slags, silico-manganese slags and copper slags;	NOT ACCEPTABLE. Adhering to the future Order is a voluntary act by managers, so they can continue to manage it as waste if they so wish.
Economic operator		Article 2	Unlike the other slags included in the scope of this Order, Atlantic Copper iron silicate does not fall within the definition of 'electric arc cast slag'. It is noted that:	It is proposed to amend the text as follows: (remove copper slag benchmark) (e) 'electric arc cast iron slag':	NOT ACCEPTABLE. See previous justifications.



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	ATLANTIC COOPER SLU		“(e) “electric arc cast iron slag”: glassware superimposed on the crucible of electric arc furnaces when melting metals. The scope of this order includes black and white carbon steel slags, silico- manganese slags and copper slags;’ Justification 1a: As indicated in previous justifications, unlike the other slags included in the scope, Atlantic Copper’s copper slag is not produced in an Electric Horn, nor is it subject to any recovery operation.	glassware superimposed on the crucible of electric arc furnaces when melting metals. The scope of this order includes black and white carbon steel slags, silico- manganese slags and copper slags.	
Economic operator	ATLANTIC COOPER SLU	Annex I 1. Waste subject to recovery treatment	Delete references to copper slag as Atlantic Copper iron silicate is not generated in an Electric Horn. It is noted that: ‘2. Slag that has not been generated during electric arc furnace melting is not eligible.’ Justification 1a: As indicated in previous justifications, unlike the other slags included in the scope, Atlantic Copper’s copper slag is not produced in an Electric Horn, nor is it subject to any recovery operation.	Amend the text as follows: (delete reference to smelting copper concentrates and copper slags) — during the melting of copper concentrates in copper smelting and refining processes in electric arc furnaces and having the associated REL code 10 06 01 ‘slags from primary and secondary production’.	NOT ACCEPTABLE. See previous justifications.
Economic operator		Annex I 2. Treatment of slag	The treatments referred to in point “3. Copper slag” do not apply to Atlantic Copper iron silicate, or cannot be considered waste recovery treatments according to Annex II to Law 7/2022 of 8 April 2011 on waste and contaminated	Amend the text as follows: (remove copper slag benchmark) 3. Copper slag Storage and cooling: they must be stored in conditions of	NOT ACCEPTABLE. See previous justifications.



	ATLANTIC COOPER SLU	soil for a circular economy. Justification 1a: Storage and cooling. The iron silicate produced in the Horno Flash is not stored, is at approximately 1.250 °C and is cooled with water to become solid and ready to be placed on the market. Atlantic Copper takes the view that cooling cannot be regarded as a waste treatment operation, since it is not included in Annex II to Law 7/2022 of 8 April 2003. Furthermore, any cooling of a waste (e.g. dust from a dry electrofilter) would turn all waste producers into waste managers. Justification 2a: Milling and maceration. Unlike the other slags falling within the scope of this Order, Atlantic Copper's iron silicate is not subject to milling and crushing operations. Justification 3a: Screening and stockpiling. Atlantic Copper takes the view that collection cannot be regarded as a waste treatment operation because all waste is collected, which would make all waste producers waste managers. R13 operations specifically exclude temporary storage at the place where the waste is produced. With respect to screening, only the small part of iron silicate intended for use as	adequate hygiene and safety, in accordance with Article 23 of Law 7/2022 of 8 April 2003. Storage spaces shall be subdivided and in no case may different types of slag or slag treated with untreated slag be mixed. The storage area for untreated slag shall have an impermeable layer, suitable pavement and slope design in the storage areas to drive leachates, if generated. A system for collecting and treating such leachates shall be in place. Slag cooling may be carried out either in air or by other methods. Milling and maceration: if necessary, methods shall be applied to ensure appropriate size according to the technical requirements of each use. Screening and stockpiling: treated slag shall be sorted and stuck according to subsequent use, avoiding mixing between different types of treated slag or untreated slag at all times.	
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			abrasive material is screened. Atlantic Copper considers that such screening cannot be regarded as a waste treatment operation since it does not fall within any of the recovery operations included in Annex II to Law 7/2022 of 8 April 2003. To consider it differently would mean that any separation by size (separation by fields in an electrofilter, filtration, etc.) would turn a waste producer into a waste manager.	Collection shall be carried out on impermeable surfaces with adequate pavement and slope design in the collection areas to drive leachates, if generated. A system must be in place to collect and treat these leachates in accordance with the regulations.	
Economic operator	ATLANTIC COOPER SLU	Annex I 2. Treatment of slag	Amend the requirement that: 'Collection shall be carried out on impermeable surfaces with adequate pavement and slope design in the collection areas to drive leachates, if generated. A system must be in place for the collection and treatment of such leachates in accordance with the regulations.' Justification 1a: This requirement stems from the regional decrees on the recovery of iron and steel slag, which is not the case for copper slag. However, these are slags that undergo milling and crushing operations, which increase the risk of soil contamination. Atlantic Copper iron silicate does not undergo grinding and crushing. This requirement should only apply if these operations are carried out.	Amend the text as follows: Storage and cooling: they must be stored in conditions of adequate hygiene and safety, in accordance with Article 23 of Law 7/2022 of 8 April 2003. Storage spaces shall be subdivided and in no case may different types of slag or slag treated with untreated slag be mixed. The storage area for untreated slag shall have an impermeable layer, suitable pavement and slope design in the storage areas to drive leachates, if generated. A system for collecting and treating such leachates shall be in place.	NOT ACCEPTABLE. End-of-waste status requires some form of treatment.



			Justification 2a: The requirement is stricter than that laid down in Article 23 of Law 7/2022 of 8 April 2011 on waste and contaminated soil for a circular economy for non-hazardous waste. That article provides that '[i]n the case of storage of hazardous waste, such waste shall be protected against weathering and by means of spillage and discharge retention systems.' That requirement does not apply to non-hazardous waste. It is not logical that an iron silicate non-hazardous waste does not require an impermeable layer, and exactly the same iron silicate end-of-waste does. Justification 3a: The iron silicate meets the requirements of the Order to be in direct contact with the ground.	Screening and stockpiling: treated slag shall be sorted and stuck according to subsequent use, avoiding mixing between different types of treated slag or untreated slag at all times. If they have undergone milling or crushing operations, collection shall be carried out on impermeable surfaces with suitable pavement and slope design in the collection areas to drive the leachates, if generated. A system must be in place to collect and treat these leachates in accordance with the regulations.	
Economic operator	ATLANTIC COOPER SLU	Annex I 3. Permitted destinations and constraints for treated material 4. Permitted destinations, technical	Since Atlantic Copper iron silicate does not fall within the definition of 'electric arc cast iron slag' or that of 'processed slag', it is proposed to delete the paragraph '4. Permitted destinations, technical and environmental conditions and conditions of use for copper slag'. Justification 1a: See previous justifications.	Delete the paragraph "4. Permitted destinations, technical and environmental conditions and conditions of use for copper slag".	NOT ACCEPTABLE. See previous justifications.



		and environmen tal conditions and conditions of use for copper slag			
Economic operator	ATLANTIC COOPER SLU	Annex I 3. Permitted destinations and constraints for treated material 4. Permitted destinations, technical and environmen tal conditions and conditions of use for copper slag	In the application scenario 'As arid in non-bound applications under totally impermeable coverage', the following is included in the environmental conditions: "- Compliance with the limit values for total content (NGR category other uses of each AC) when they are located directly on natural land". In the event that the NGRs are not complied with, a quantitative risk analysis should be carried out. Justification 1a: The approach should not be more restrictive than that applied to contaminated soils. Thus, Law 7/2022 of 8 April 2011 on waste and contaminated soils for a circular economy states that 'contaminated soils, due to the presence of hazardous components from human activities, assessing the risks to human health or the environment, in accordance with the criteria and standards established according to the nature of the	Amend the text as follows: — Compliance In the event of exceedance of the limit values for total content (NGR category other uses in each AC) where they are located directly on natural land, a quantitative risk analysis must demonstrate the absence of risk.	FINDING ACCEPTED. In accordance with Royal Decree 9/2005 of 14 January and regional legislation on contaminated soils.



			soils and their uses, by regulation of the Government'. In accordance with Royal Decree 9/2005, of 14 January, establishing the list of potentially soil-contaminating activities and the criteria and standards for the declaration of contaminated soils, in the event that the NGR are exceeded, a quantitative risk analysis should be carried out. Justification 2a: This requirement stems from Article 6 of Decree 64/2019 of 9 April on the recovery of slag from the Basque Country, applicable only to black slag from the manufacture of iron and steel. This is justified by the statement 'In order to comply with the soil protection requirements laid down in Law 4/2015 of 25 June 2013 on the prevention and correction of soil contamination'. However, that law states that, if the NGR is exceeded, a quantitative risk analysis is carried out. Justification 3a: Law 4/2015, of 25 June, for the prevention and correction of soil contamination, defines 'Modified soil: any soil in which, because the concentrations of the pollutants detected exceed the established reference values, it is		
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			necessary to carry out a risk analysis and this demonstrates that the soil is not contaminated.” Justification 4a: The requirement involves adopting a hazard approach, rather than the risk approach used in all European, national and regional legislation on soils, waste and REACH.		
Economic operator	ATLANTIC COOPER SLU	Annex I 3. Permitted destinations and constraints for treated material 4. Permitted destinations, technical and environmental conditions and conditions of use for copper slag	In the application scenario ‘As arid in non-bound applications under totally impermeable coverage’, the following is included in the environmental conditions: “- Compliance with the limit values for total content (NGR category other uses of each AC) when they are located directly on natural land”. In the event that the NGRs are not complied with, a quantitative risk analysis should be carried out. Justification 1a: The approach should not be more restrictive than that applied to contaminated soils. Thus, Law 7/2022 of 8 April 2011 on waste and contaminated soils for a circular economy states that ‘contaminated soils, due to the presence of hazardous components from human activities, assessing the risks to human health or the environment, in accordance	Amend the text as follows: — Compliance —In the case of exceedance of the limit values for total content (NGR category other uses in each AC) where there is direct contact with soil, the absence of risk must be demonstrated by means of a quantitative risk analysis.	FINDING ACCEPTED. In accordance with Royal Decree 9/2005 of 14 January and regional legislation on contaminated soils.



			with the criteria and standards established according to the nature of the soils and their uses, by regulation of the Government'. In accordance with Royal Decree 9/2005, of 14 January, establishing the list of potentially soil-contaminating activities and the criteria and standards for the declaration of contaminated soils, in the event that the NGR are exceeded, a quantitative risk analysis should be carried out. Justification 2a: This requirement stems from Article 6 of Decree 64/2019 of 9 April on the recovery of slag from the Basque Country, applicable only to black slag from the manufacture of iron and steel. This is justified by the statement 'In order to comply with the soil protection requirements laid down in Law 4/2015 of 25 June 2013 on the prevention and correction of soil contamination'. However, that law states that, if the NGR is exceeded, a quantitative risk analysis is carried out. Justification 3a: Law 4/2015, of 25 June, for the prevention and correction of soil contamination, defines 'Modified soil: any soil in which, because the concentrations		
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			of the pollutants detected exceed the established reference values, it is necessary to carry out a risk analysis and this demonstrates that the soil is not contaminated." Justification 4a: The requirement involves adopting a hazard approach, rather than the risk approach used in all European, national and regional legislation on soils, waste and REACH.		
Economic operator	ATLANTIC COOPER SLU	Annex I 3. Permitted destinations and constraints for treated material 4. Permitted destinations, technical and environmental conditions and conditions of use for copper slag	Including 'With higher environmental risk' in the permitted uses has not included the requested destination 'Pipe beds'. Justification 1a: In Annex II, for uses with the highest environmental risk, compliance with the leaching limit values established on the basis of a quantitative risk analysis is required. It is in this analysis where leaching values should be assessed that they pose a risk to the environment or human health.	The permitted uses 'With higher environmental risk' did not include the requested destination 'Pipe beds' with the same technical and environmental requirements as the other destinations.	NOT ACCEPTABLE. Given the risks involved, the use of pipes as beds cannot be considered safe.
Economic operator		Annex IV Reference	The list of reference documents for the quantitative risk analysis includes the	Amend the text as follows: —Soil Quality Decree in the	NOT ACCEPTABLE. Annex IV includes



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	ATLANTIC COOPER SLU		“Decree on Soil Quality in the Netherlands”. Atlantic Copper considers that the Spanish legislation on soils should be used instead of the Dutch legislation. Justification 1a: Article 4 of Royal Decree 9/2005 of 14 January 2007 establishing the list of potentially soil-contaminating activities and the criteria and standards for the declaration of contaminated soils provides that the risk assessment shall be carried out in accordance with Annex VIII to the aforementioned Royal Decree.	Netherlands. Royal Decree 9/2005 of 14 January 2011 establishing the list of potentially soil-contaminating activities and the criteria and standards for the declaration of contaminated soils.	reference documents, not normative. It must be complied with whenever it applies.
Economic operator	ATLANTIC COOPER SLU	Annex V	The description of the minimum content of the communication addressed to the relevant regional authority regarding compliance with this Order mentions copper slag (page 35). It is proposed to delete reference to copper slag. Justification 1a: See previous justifications.	Amend the text as follows: (remove copper slag benchmark) The company..... complies with all the provisions set out in the order establishing the criteria for determining when electric arc furnace (carbon steel, silico-manganese and copper) smelting slag for aggregates (in bound and unbound applications) and other uses: as a raw material in the manufacture of cement and clinker construction products, they cease to be waste in	NOT ACCEPTABLE. See previous justifications.



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				accordance with Law 7/2022 of 8 April on waste and contaminated soil for a circular economy, for slag..... and destination..... in section 3 of Annex I.	
Economic operator	ATLANTIC COOPER SLU	Annex VI:	Section 2 of the declaration of compliance with the criteria for determining when treated slag ceases to be waste includes a reference to copper slag. It is proposed to delete reference to copper slag: Justification 1a: See previous justifications.	Amend the text as follows: (remove copper slag benchmark) Treated slag resulting from the treatment of: Carbon steel slags, black slags Carbon steel slags, white slags Silico-manganese slags Copper slag	NOT ACCEPTABLE. See previous justifications.
Economic operator	ATLANTIC COOPER SLU	Annex VI:	Section 5 of the declaration of compliance with the criteria for determining when treated slag ceases to be waste includes a reference to copper slag. It is proposed to delete reference to copper slag: Justification 1a: See previous justifications.	Amend the text as follows: (remove reference to copper slag) This shipment meets the criteria mentioned in Article 3 of Order APM/XXX/20XX of XX XXXX establishing the criteria for determining when electric arc furnace (carbon steel, silico-manganese and copper) smelting slag for aggregates (in bound and unbound applications) and other uses: as a raw material in the manufacture of cement and clinker construction products,	NOT ACCEPTABLE. See previous justifications.



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				they cease to be waste under Law 7/2022 of 8 April 2011 on waste and contaminated soil for a circular economy.	
Economic operator	ATLANTIC COOPER SLU	Annex VI:	Section 6 of the declaration of compliance with the criteria for determining when treated slag ceases to be waste includes a reference to copper slag. It is proposed to delete reference to copper slag: Justification 1a: See previous justifications.	Amend the text as follows: (remove copper slag benchmark) The producer of treated slag implements a management system in accordance with Article 5 of Order APM/XXX/201XX of XX XXXX establishing the criteria for determining when slag from electric arc furnace smelting (carbon steel, silico- manganese and copper) intended for aggregates (in bound and unbound applications) and other uses ceases to be waste under Law 7/2022 of 8 April 2011 on waste and contaminated soil for a circular economy.	NOT ACCEPTABLE. See previous justifications.
Economic operator	ATLANTIC COOPER SLU	Title of the draft Order	The title (page 1) of the draft Order includes the mention of copper slag within the scope of the draft Order. Atlantic Copper considers that its iron silicate does not fall within the scope of this Order.	Amend the text as follows: (remove copper slag benchmark) Draft Order establishing the criteria for determining when electric arc furnace (carbon	NOT ACCEPTABLE. See previous justifications.



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			Justification 1a: See previous justifications.	steel, silico-manganese and copper) smelting slag for use as aggregate in bound and unbound applications, and as raw material in the manufacture of cement and clinker construction products, ceases to be waste under Law 7/2022 of 8 April 2011 on waste and contaminated soil for a circular economy	
Economic Actor/	Spanish Federation for Recovery and Recycling	Article 3. End-of-waste criteria.	It is of paramount importance to stress that installations that will implement end-of-waste status must be authorised as waste managers to carry out the treatment operations described in the draft order, and that they are necessary to be able to declassify slags. It is a sine qua non in order to be able to apply end-of-waste status. Article 5 of Law 7/2022 provides: '1. Certain types of waste, which have undergone a recovery operation, including recycling, may cease to be considered as such for the purposes of this Law, provided that all of the following conditions are met...' Therefore, in order to be declassified as	<i>1. Slag treated by a waste manager and destined for the uses covered by this Order shall cease to be waste when it is transferred from the producer to another holder and complies with the following: (a) Waste from slag to be treated must only be waste that meets the criteria in Annex I (1); (b) the waste submitted to the treatment process from which the treated slag is derived has been treated in accordance with the criteria set out in Annex I (2); (c) The treated</i>	PARTIALLY ACCEPTED. The first proposal is accepted, but not the second as it is redundant because the definition of producer itself states that it must be an authorised manager.



			waste, such waste must have undergone a recovery operation. And as laid down in Article 3 (az) of Law 7/2022, this is a processing operation: (AZ) 'Treatment' means: recovery or disposal operations, including preparation prior to recovery or disposal. The vast majority of these facilities are authorised as operators, but there are still some foundries in some ACs. AA not authorised. That is why we believe it is vital that this Order specifically sets out the obligation.	<i>slag resulting from the set of treatment operations is destined exclusively for the permitted uses and complies with the conditions set out, according to the permitted use, in Annex I (3); (d) The producer or importer has complied with the obligations laid down in Articles 4, 5 and 6. 2. Producers wishing to obtain treated slag that ceases to be waste <u>must be authorised as a manager</u> and comply with the</i>	
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Economic operator	Spanish Federation for Recovery and Recycling	Article 5. Management system	The implementation of all the Ministerial End-of-Waste Orders published to date is currently at a standstill, because the certification bodies are not certifying the management systems. The problem is that three final provisions were added to Order TED/1522/2021 amending the Public Orders earlier, removing the possibility to verify the quality system and leaving only the option of certification. (Also in Order TED/1522/2021 itself). Leaving only the certification option, the requirements are much higher than those laid down in European Regulations 333/2011, 1179/2012 and 715/2013, because ENAC has developed a specific accreditation scheme for this type of certification (RDE-10), which requires the facility wishing to apply the end of waste status to have: Have UNE-EN ISO 9001 installed in the facility. As a UNE-EN ISO 9001 has to be in place, the frequency of audits is annual, while European regulations provide for verification every three years. The option of certification is therefore much more burdensome. Furthermore, certifying bodies cannot choose between certifying certain facilities in accordance with the new requirements laid down in the Ministerial	6. A conformity assessment body accredited to carry out such certification, as defined in Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93 of 8 February 1993, which has obtained accreditation in accordance with that Regulation, or any other environmental verifier, as defined in Article 2(20)(b) of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), and repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC, shall certify that	NOT ACCEPTABLE. The idea of requiring certification instead of verification is a criterion set at European level. Conformity assessment must be carried out by means of Regulation (EC) No 765/2008 in order to ensure performance as a product.
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			Orders and verifying other facilities in accordance with the requirements laid down in European regulations. Certifying entities should opt for one or the other option. This means: If they opt for the verification option, they can check the installations that apply different European regulations (333/2011, 1179/2012 and 715/2013), but they cannot check the installations that wish to apply any of the Ministerial Orders published to date. If they opt for the certification option, they can certify the facilities that wish to apply any of the Ministerial Orders, but the facilities that already have European Regulations in place will also have to be	<u>the management system implemented by the producer complies with the requirements of this Article. The verification shall be carried out every three years. 8. The importer shall require its suppliers to implement a management system that complies with the requirements of paragraphs 1, 2, 3 and 4 of this Article and has been verified by an independent external reviewer. That management system shall be certified by a conformity assessment body accredited in</u>	
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			so far are being implemented and therefore the implementation of end-of-waste status at national level is being blocked. As set out in the Spanish Circular Economy Strategy and the first Circular Economy Action Plan: "One of the pillars on which the CS is based is the reintroduction of secondary raw materials (SRM) into the production cycle, which must be done in a way that is safe for the environment, human health and in a geographical location as close as possible. This reduces dependence on virgin raw materials while ensuring the supply of environmentally and economically viable alternatives. In this regard, the term SPM covers the legal concepts of by-product and end-of-waste status as defined respectively in Articles 4 and 5 of Law 22/2011 of 28 July on waste and contaminated soil.' However, with the disposal introduced, none of these instruments is being complied with and the transition to the circular economy is being prevented, as end-of-waste status cannot be applied at national level. This change severely harms businesses, makes no use of regulations that have struggled to be published, as they are currently useless, and the transition to a		
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			circular economy is being halted. For all these reasons, we call for the possibility of verification of the quality system to be Currently, no manager can apply Order TED/1522/2021 because no certifying body can certify the management system. Therefore, it is currently an Order which is useless due to the removal of the possibility to verify the management system. For all these reasons and for the reasons set out in the previous comment, it is vital that the possibility of verifying the management system is included again in this Order.		
Economic operator	Spanish Federation for Recovery and Recycling	New: First final provision Amendment of Order TED/1522/2021, of 29 December, establishing the criteria for determining when rubber granules and rubber powder, obtained from the treatment of end-of-life tyres and intended for certain applications, cease to be		Amendment of Order TED/1522/2021 of 29 December 2011 establishing the criteria for determining when granulated rubber and rubber powder obtained from the treatment of end-of-life tyres and intended for certain applications cease to be waste in accordance with Law 22/2011 of 28 July 2011 on waste and contaminated soil, and amending Orders TED/426/2020 of 8 May 2011, APM/205/2018 of 22 February 2011 and APM/206/2018 of 22 February 2011 establishing the criteria for determining when recovered paper and cardboard intended for the manufacture of paper and cardboard, processed waste oil from the treatment of waste oils for use as fuel and recovered fuel from the treatment of MARPOL type	NOT ACCEPTABLE. It is not the purpose of this Public Information to amend Order TED/1522/2021.



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		waste in accordance with Law 22/2011, of 28 July, on waste and contaminated soil		C waste for use as fuel on ships cease to be waste in accordance with Law 22/2011 of 28 July 2011 on waste and contaminated soil. Order TED/1522/2021, of 29 December, is amended as follows: One. Article 6.5 shall read as follows: '5. A conformity assessment body as defined in Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products, or obtained accreditation in accordance with that Regulation; or any other environmental verifier as defined in Article 2(20)(b) of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the	
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				voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) shall verify whether the quality management system complies with the requirements of this Article. The verification shall be carried out every three years.' Two. Article 6.7 shall read as follows: '7. The importer shall require its suppliers to implement a quality management system that complies with the requirements set out in paragraphs 1, 2, 3 and 4 of this Article and has been verified by an independent external reviewer.'	
Economic operator	Spanish Federation for Recovery and Recycling	New: Second final provision Amendment of Order TED/426/2020 of 8 May 2010 by the setting out the criteria	Currently, no manager can apply Order TED/426/2020 because no certifying body can certify the management system. Therefore, it is currently an Order which is useless due to the removal of the possibility to verify the management system. For all these reasons and for the reasons set out in the previous comment, it is vital	Order TED/426/2020, of 8 May, is amended as follows: One. Article 5.5 shall read as follows: '5. A conformity assessment body, as defined in Regulation (EC) No 765/2008 of the European Parliament and of the Council, which has	NOT ACCEPTABLE. It is not the purpose of this Public Information to amend Order TED/426/2020.



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		for when recovered paper and cardboard for use in the manufacture of paper and paperboard ceases to be waste within the meaning of Law 22/2011 of 28 July 2011 on contaminated waste and soil	that the possibility of verifying the management system is included again in this Order.	obtained accreditation in accordance with that Regulation, or an environmental verifier, as defined in Article 2(20)(b) of Regulation (EC) No 1221/2009 of the European Parliament and of the Council (2), which is accredited or licensed in accordance with that Regulation, shall verify whether the management system complies with the requirements of this Article. The verification shall be carried out every three years. They shall only be considered to have sufficient specific experience to perform the verification referred to in this Order if their scope of accreditation or authorisation (determined according to the codes specified in Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and	
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				amending Council Regulation (EEC) No 3037/90 as well as certain EC Regulations on specific statistical domains) corresponds to the following: (a) NACE Code 38 (Waste collection, treatment and disposal; recovery), or (b) NACE Code 4677 (Wholesale trade of scrap and waste products); or (c) NACE Code 17 (Manufacture of paper and paper products).' Two. Article 5.7 shall read as follows: '7. The importer shall require its suppliers to implement a management system that complies with the requirements of paragraphs 1, 2, 3 and 4 and has been verified by an independent external reviewer.'	
Economic operator	Spanish Federation for Recovery and Recycling	New: Final provision 3. Amendment of Order APM/205/20	We reiterate the comments made above.	Order APM/205/2018, of 22 February, is amended as follows: One. Article 5.5 shall read as follows:	NOT ACCEPTABLE. It is not the purpose of this Public Information to amend Order APM/205/2018.



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		18 of 22 February 2018 establishing the criteria determining when used oil processing from the treatment of waste oils for use as fuel ceases to be waste pursuant to Law 22/2011 of 28 July 1992 on contaminated waste and soil.		'5. A conformity assessment body, as defined in Regulation (EC) No 765/2008 of the European Parliament and of the Council, 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 of the European Parliament and of the Council (2), which is accredited or licensed in accordance with that Regulation, shall verify whether the management system complies with the requirements of this Article. The verification shall be carried out every three years.'	
Economic operator	Spanish Federation for Recovery and Recycling	New: Fourth final provision Amendment of Order APM/206/2018 of 22 February	We reiterate the comments made above.	Article 5.5 of Order APM/206/2018 of 22 February is amended as follows: '5. A conformity assessment body, as defined in Regulation (EC) No 765/2008 of the European Parliament and of the Council, which has	NOT ACCEPTABLE. It is not the purpose of this Public Information to amend Order APM/206/2018.



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		2018 establishing the criteria for determining when fuel oil recovered from the treatment of MARPOL type C waste for use as fuel on ships ceases to be waste under Law 22/2011 of 28 on July for waste and contaminated soil.		obtained accreditation in accordance with that Regulation, or an environmental verifier, as defined in Article 2(20)(b) of Regulation (EC) No 1221/2009 of the European Parliament and of the Council (2), which is accredited or licensed in accordance with that Regulation, shall verify whether the management system complies with the requirements of this Article. The verification shall be carried out every three years.'	
Economic operator	FORMIGRUP			In the second additional provision, the entry into force must be either the day following its publication in the BOE or the month of its publication.	FINDING ACCEPTED. The entry into force shall be the following day.
Economic operator	FORMIGRUP		In point 3.2 of ANNEX I, permitted destinations, technical and environmental conditions and conditions of use for black		NOT ACCEPTABLE. The uses of bituminous



			steelworks slag, in the scenario of application as aggregate in non-bound applications under totally impermeable coverage of permitted uses with lower environmental risk: — At the destination as a zahorra for the construction of road surfaces under construction of road surfaces (base, sub-base, improved esplanade), it should specify in the construction of bitumen and concrete surfaces in order to avoid possible future confusion. — At the destination as localised fillings under completely impermeable cover, it should include a sub-base under concrete slab. In environmental conditions, where compliance with the limit values for total content (NGR category other uses in each Autonomous Community) is specified when they are located directly on natural land, it should be the limit values for total NGR content category industrial use, because there is no dermal contact with the soil or ingestion of contaminated food, following the criteria for the calculation of generic reference levels in Annex VII to Royal Decree 9/2005 of 14 January establishing the list of activities potentially polluting the soil		pavements do not fall within the order as they have not been analysed and the accepted uses of concrete are those that fall within the category as aggregate in bound applications. — With regard to the category of NGR, it is not relevant to refer to industrial use, since the aim of the Order is to provide maximum protection for the environment. — Fillings located under completely impermeable cover and satisfying the conditions are permitted.
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			and the criteria and standards for the declaration of contaminated soils. In the conditions of use, where it is stated that the fillings will be located under pavements, screeds, etc., it should specify concrete screeds.		
Economic operator	FORMIGR UP		In environmental conditions intended for exposed areas of slopes (slopes) and foundations on embankments (...) of the permitted uses with the greatest environmental risk, where compliance with the limit values for total content (NGR category other uses in each Autonomous Community) is specified when there is direct contact with the soil, it should be the limit values for total NGR content category for industrial use, because there is no dermal contact with the soil or ingestion of contaminated food, following the criteria for calculating generic reference levels in Annex VII to Royal Decree 9/2005 of 14 January 2014.		NOT ACCEPTABLE. With regard to the category of NGR, it is not relevant to refer to industrial use, since the aim of the Order is the maximum protection of the environment.
Economic operator	FORMIGR UP		In point 3.3 of ANNEX I, permitted destinations, technical and environmental conditions and conditions of use for silico-manganese slag, in the scenario of application as aggregate in non-bound applications under totally impermeable coverage of permitted uses with lower environmental risk and intended as a		NOT ACCEPTABLE. Any pavement which ensures a high level of waterproofing may be used. Any type of cover which ensures the required waterproofing may



		slash for road pavement construction (...): In the conditions of use, where it says that the layers in which they are used (...) will be located in the structural layer of the road surface and low pavement that ensures a high waterproofing cover, it should specify concrete pavement. In the conditions of use, where it is stated that the fillings will be located under pavements, floors, road finishes (...) they should include fillings located under pavements, floors, concrete floorings, road finishes (...). In the environmental conditions that specify compliance with the limit values for total content (NGR category other uses in each Autonomous Community) when they are located directly on natural land, it should be the limit values for total NGR content category industrial use, because there is no dermal contact with the soil or ingestion of contaminated food, following the criteria for calculating generic reference levels in Annex VII to Royal Decree 9/2005 of 14 January 2014. In environmental conditions intended for exposed areas of slopes (slopes) and foundations on embankments (...) of the permitted uses with the greatest		be used. With regard to the category of NGR, it is not relevant to refer to industrial use, since the aim of the Order is the maximum protection of the environment.
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			environmental risk, where compliance with the limit values for total content (NGR category other uses in each Autonomous Community) is specified when there is direct contact with the soil, it should be the limit values for total NGR content category for industrial use, because there is no dermal contact with the soil or ingestion of contaminated food, following the criteria for calculating generic reference levels in Annex VII to Royal Decree 9/2005 of 14 January 2014.		
Economic operator	FORMIGRUP		In point 3.4 of ANNEX I, Permitted destinations, technical and environmental conditions and conditions of use for copper slag, in the scenario of application as aggregate in non-bound applications under totally impermeable coverage of permitted uses with lower environmental risk: In the conditions of use of the destinations for fillings located under completely impermeable cover, where it says that the fillings will be located under pavements, floors, (...) it should include fillings located under pavements, floors, concrete floorings, road pavements (...). In the environmental conditions that specify compliance with the limit values for total content (NGR category other		NOT ACCEPTABLE. With regard to the category of NGR, it is not relevant to refer to industrial use, since the aim of the Order is the maximum protection of the environment.



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			uses in each Autonomous Community) when located directly above, the limit values for total NGR content category industrial use should be used, because there is no dermal contact with the soil or ingestion of contaminated food, in accordance with the criteria for calculating generic reference levels set out in Annex VII to Royal Decree 9/2005 of 14 January 2014. At the same time, the sentence should end when they are located directly on natural land.		
Economic operator	FORMIGR UP		In environmental conditions intended for exposed areas of slopes (slopes) and foundations on embankments (...) of the permitted uses with the greatest environmental risk, where compliance with the limit values for total content (NGR category other uses in each Autonomous Community) is specified when there is direct contact with the soil, it should be the limit values for total NGR content category for industrial use, because there is no dermal contact with the soil or ingestion of contaminated food, following the criteria for calculating generic reference levels in Annex VII to Royal Decree 9/2005 of 14 January 2014.		NOT ACCEPTABLE. With regard to the category of NGR, it is not relevant to refer to industrial use, since the aim of the Order is the maximum protection of the environment.
Economic operator	HEIDELBERG	Article 510.2.1 of the	510.2.1 general characteristics Artificial zahorra materials shall come	In compliance with Law 7/2022 of 8 April 2011 on waste and	NOT ACCEPTABLE. The proposal



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	MATERIAL S	“General Technical Specifications for Road and Bridge Works (PG-3)”	from the total or partial crushing of quarry stone or gravel. natural environment For natural zahorra, they shall come from natural gravel or reservoirs, natural soils or a mixture of both. Recycled granular materials, aggregates may be used for heavy traffic categories T2 to T4 iron and steel, by-products and inert waste products, in compliance with the Agreement of the Council of Ministers of 1 June 2001 approving the National Plan for Construction and Demolition Waste 2001-2006, provided that they satisfy the technical requirements of this Article and the origin of the materials, as laid down in Community legislation on these matters. Delete “<u>For the use of these materials: the conditions for their treatment and application must be expressly laid down in the Specification. special Technical Prescriptions</u>”, as this clause prevents many work directorates from using recycled and steel materials.	contaminated soil for a circular economy, TITLE II Waste prevention Article 17. Waste prevention objectives. 1. To break the link between economic growth and impacts on human health and the environment associated with the generation of waste, waste prevention policies shall aim to achieve a reduction target in weight of waste generated, according to the following timetable: (a) In 2025, by 13 % compared to those generated in 2010. (b) In 2030, by 15 % compared to those generated in 2010. 2. In order to achieve the objectives set out in the previous paragraph, the Government shall: in the light of the information available, it shall lay down specific objectives by regulation. prevention and/or reuse, <u>as well as prioritisation of the use</u>	received refers to Law 7/2022 and not to the draft Order being processed.
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				<u>of both construction and demolition recycled materials and steel aggregates.</u>	
Economic operator	HEIDELBERG MATERIALS	Article 33.3.1 of the "General Technical Specifications for Road and Bridge Works (PG-3)"	330.3 MATERIALS 330.3.1 general criteria. The materials to be used in embankment type fillings will generally be local floors or materials. they shall be obtained from excavations carried out on site, <u>recycled steel aggregates from CDW</u> , from loans defined in the Project or which will be authorised by the Director of Works	In compliance with Law 7/2022 of 8 April 2011 on waste and contaminated soil for a circular economy, TITLE II Waste prevention Article 17. Waste prevention objectives. 1. To break the link between economic growth and impacts on human health and the environment associated with the generation of waste, waste prevention policies shall aim to achieve a reduction target in weight of waste generated, according to the following timetable: (a) In 2025, by 13 % compared to those generated in 2010. (b) In 2030, by 15 % compared to those generated in 2010. 2. In order to achieve the objectives set out in the previous paragraph, the Government shall: in the light of the information	NOT ACCEPTABLE. The proposal received refers to Law 7/2022 and not to the draft Order being processed.



				available, it shall lay down specific objectives by regulation. prevention and/or reuse, <u>as well as prioritisation of the use of both construction and demolition recycled materials and steel aggregates.</u>	
Economic operator	Seville iron and steel industry	ANNEX I Paragraph 3, Permitted destinations and constraints for treated material	In section 3, subsection 2 'Allowed destinations, technical and environmental conditions and conditions of use for black steelworks slag', in the conditions of use for the application scenario 'as aggregate in non-bound applications under totally impermeable cover', excludes use in areas that keep the material completely contained, the text is as follows: 'They shall not be used in areas that The alternative proposal is: The layers in which they are used shall be properly drained, avoiding stagnation of water. They shall be located in the structural layer of the road surface above the esplanade and under pavement that ensures a high waterproofing coverage. The paragraph has been deleted. "Shall not be used in areas where the material is kept completely contained" keep material completely contained" With regard to this limitation, we consider	The alternative proposal is: The layers in which they are used shall be properly drained, avoiding stagnation of water. They shall be located in the structural layer of the road surface above the esplanade and under pavement that ensures a high waterproofing coverage. The paragraph has been deleted. "Shall not be used in areas where the material is kept completely contained"	PARTIALLY ACCEPTED. The 1 % limitation is accepted.



		that there is no environmental justification, since it is the most limiting in leachate generation, in practice and based on our experience, it represents a very significant reduction, exceeding 90 % according to our estimates, in the use of treated slag, since this situation occurs in almost all jobs as a sub-base (cycle lanes, streets, steelworks, parking areas, sports tracks, sub-base in industrial installations under concrete slabs or asphalt floorings, etc.), especially in urban environments. We understand that this limitation is linked to the expansive potential of black slag, which is currently resolved. If, however, it were considered necessary to maintain any limitation for this situation, its use in fully confined conditions could be restricted to slags treated with expansivity values of less than 1 % according to the volumetric stability control test in accordance with standard UNE-EN 1744-1. This value is 5 times lower than that allowed by the General Technical Specifications for Roads and Bridges (PG-3), in Article 510.2.1 on artificial slabs, which limits the maximum expansivity value to 5 % (according to		
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			UNE-EN 1744-1). The alternative text would then be: the black slag has an expansivity very close to 0 % (volumetric stability check in accordance with standard UNE-EN 1744-1). Sisiderúrgica Sevillana, S.A. can provide examples of treated slag applied in confined spaces that do not present, nor have they presented, any problems in works carried out on our own premises, and also in works carried out by third parties.		
Economic operator	Seville iron and steel industry	ANNEX I Paragraph 3, Permitted destinations and constraints for treated material	Within section 3, subsection 2 'Allowed destinations, technical and environmental conditions and conditions of use for black steelworks slags', in the category of permitted uses with lower environmental risk, in the application scenario, 'As aggregate in related applications', there is no provision for the destination of SUELOCEMENT and GRAVACEMENTO, which, in accordance with its definition in Article 2 (a); “‘Linked applications’: those applications in which materials mixed with conglomerate are used, giving cohesion to the whole” it would be part of this category. We therefore request that the uses of	Adding: Permitted uses With lower environmental risk Implementation scenario As aggregate in linked applications Destinations Suelocement, gravaccent Technical conditions Control of volumetric stability in accordance with standard UNE-EN 1744-1 and other requirements such as granular material, in such a way as to guarantee the specifications of the sole, gravel in accordance with regulations, standards, the	NOT ACCEPTABLE. CEDEX states that the use of black slag in layers with cement is not recommended because of its expansive potential.



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			SUELOCEMENTO and GRAVACEMENTO be included as a linked application, subject to the technical constraints set out in the General Technical Specifications for Road and Bridge Works (PG-3). Although the CEDEX factsheet for 2013 restricts this use, we have not found any technical justification, we believe that not all the research carried out subsequently in this area, which is very abundant, is being considered.	General Technical Specifications for Works of Roads and Bridges (PG-3) or the PPT of the project. Environmental conditions Not required	
Economic operator	Seville iron and steel industry	ANNEX II Conditions related to leaching of treated slag for non-bound applications	It is required that upstream column leaching is tested at least once a year in accordance with technical specification PNE-prEN 16637-3 and limit values for leaching of the resulting material are set. This is a requirement for which there is no experience. Currently, leaching control of treated slag is carried out by means of a flare test in accordance with standard UNE-EN-12457-4. We believe that there should be a deadline for this requirement to be required, once sufficient experience has been gained, or for the standard to cease to be a draft (prEN) and definitively to be a European standard (EN).	Add paragraph: "The results of the bottom-up column leaching tests shall be considered as experimental until the PNE-prEN 16637-3 reaches the status of European Standard EN".	NOT ACCEPTABLE. You have already achieved EN standard status.
Economic operator	Seville iron and steel	ANNEX I Paragraph	Within section 3, subsection 2 'Allowed destinations, technical and environmental	We propose to delete this requirement as it is not	NOT ACCEPTABLE. For applications with



	industry	3, Permitted destinations and constraints for treated material	conditions and conditions of use for black steelworks slag', in the category of permitted uses with higher environmental irrigation, in the two permitted scenarios, 'compliance with the leaching limit values established according to a quantitative risk analysis for both scenarios' is required under the 'environmental conditions'. According to Article 5 (5), quantitative risk analysis shall be included in the management system to be put in place by the holder.	considered necessary due to lack of rationale and feasibility.	a higher environmental risk, a Quantitative Risk Analysis is required.
Economic operator	Seville iron and steel industry	ANNEX I Paragraph 3, Permitted destinations and constraints for treated material	Within section 3, subsection 2 'Allowed destinations, technical and environmental conditions and conditions of use for black steelworks slag', in the category of permitted uses with higher environmental irrigation, in the two permitted scenarios, 'compliance with the limit values for total content (NGR category other uses in each Autonomous Community) when there is direct contact with the soil' is required in the 'environmental conditions'. According to Article 5 (5), quantitative risk analysis shall be included in the management system to be put in place by the holder. The scenario within which such a risk assessment is proposed is a scenario of	Delete this request.	NOT ACCEPTABLE. The two scenarios with the highest environmental risk referred to imply coverage that is not completely impermeable'.



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			minimal environmental risk, as it is assigned under totally impermeable cover. In such a situation the mobilisation of pollutants (if any) would remain minimal.		
Economic operator	Seville iron and steel industry	ANNEX I Paragraph 3, Permitted destinations and constraints for treated material	In the submission process of the public consultation of September 2021, Asidan raised a claim for use as 'aggregate in non-bound applications under totally impermeable cover' in localised fillings, which was accepted, and which allows use in: Localised fillings (inside concrete drawers, beneath pavements, stuffing of conveyors of underpass walls, bridge steps, undercarriageway support, retaining wall)' This claim is not included in the current draft.	Implementation scenario: As aggregate in non-bound applications under totally impermeable cover. Replenished destinations located under totally impermeable cover. Technical conditions Checking volumetric stability in accordance with standard UNE-EN 1744-1 and other requirements such as granular material, so as to ensure compliance with the specifications of the filling material in accordance with the rules, standards or PPT of the project. Terms of use Localised fillings (inside concrete drawers, beneath pavements, filling of handrails of underpass walls, bridge steps, undercarriageway support, retaining wall) under	FINDING ACCEPTED.



				road surfaces or other types of coverings that ensure high waterproofing (infiltration rate < 6 mm/year *). * Or conditions to be decided in order to ensure impermeable cover.	
Economic operator	Seville iron and steel industry	ANNEX I Paragraph 3, Permitted destinations and constraints for the material Treaty	Within section 3, subsection 2 'Allowed destinations, technical and environmental conditions and conditions of use for black steelworks slag', in the category of permitted uses with lower environmental irrigation, in the permitted scenarios, 'compliance with the limit values for total content (NGR category other uses in each Autonomous Community) when there is direct contact with the soil' is required in the 'environmental conditions'. The current draft Order places NGRs on an equal footing with limit values for total content. The NGRs, with the scope and characteristics defined by the legislation on contaminated soils and consequently linked to the formulation of a Quantitative Risk Analysis ('ACR'), are neither technically nor legally appropriate as an environmental condition for the determination of the new legal regime for steelworks slag as an end-of-waste status.	Remove as an environmental condition: 'compliance with the limit values for total content (NGR category other uses in each Autonomous Community) when they are located directly on natural land.	NOT ACCEPTABLE. The performance of an ACR is linked to permitted uses with higher environmental risk for leaching limit values. A reference such as NGR is needed when there is direct contact with the soil, in order to ensure better environmental protection.



Economic operator	Seville iron and steel industry	ANNEX I Paragraph 3 Permitted destinations and constraints for the material Treaty	Under the heading 'Permitted destinations, technical and environmental conditions and conditions of use for black steelworks slag', conditions of use for aggregate in non-bound applications under non-totally impermeable cover, in which, due to constructive constraints, a maximum thickness limitation is guaranteed Shape layer The shape layer is a subbase layer of the rail platform, with a reduced thickness and usually on an input layer of soils of lower technical quality or lower load-bearing capacity. It is under the sub-ballast, therefore its exposure is lower than the sub-ballast and its control would be carried out under the regulations 'EN 13242: 2002 + A1: 2007 Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of pavements' and the specific regulations of ADIF, therefore it can be considered included in the uses requested under the by-product declaration, origin of this Order.	The alternative proposal is: authorisation for the use of slag treated as 'Capa de Forma', subject to the same technical and environmental constraints as the sub-ballast, provided that this layer is not in contact with the natural soil. In the hypothetical event that it is in contact with the natural soil, the environmental constraints that will finally be established for this situation will be adopted.	NOT ACCEPTABLE. The requested material has not been studied for that proposed purpose.
Economic operator	Seville iron and steel industry	Annex I (3) Permitted destinations and	Under the heading 'Permitted destinations, technical and environmental conditions and conditions of use for black steelworks slag', conditions of use for	The alternative proposal is to authorise the use of slag treated as 'Capa de Forma', with the same technical and	NOT ACCEPTABLE. The requested material has not been studied for that



		constraints for treated material. Sub-section 2. Permitted destinations, technical and environmental conditions and conditions of use for black steelworks slag	aggregate in non-bound applications under non-totally impermeable cover, in which, due to constructive constraints, a maximum thickness limitation is ensured. Destination Shape layer The shape layer is a subbase layer of the rail platform, with a reduced thickness and usually on an input layer of soils of lower technical quality or lower load-bearing capacity. It is under the sub-ballast, therefore its exposure is lower than the sub-ballast and its control would be carried out under the regulations 'EN 13242: 2002 + A1: 2007 Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of pavements' and the specific regulations of ADIF, therefore it can be considered included in the uses requested under the by-product declaration, origin of this Order.	environmental constraints as the sub-ballast, provided that this layer is not in contact with the natural soil. In the hypothetical event that it is in contact with the natural soil, the environmental constraints that will finally be established for this situation will be adopted.	proposed purpose.
Economic operator	TECHNICAL CERTIFICATION		In the control of incoming waste (Section 1 of Annex I to the Order), the following MRLs are identified: — LER 100202 untreated slag (white, black and silico-manganese) — LER 100601 slags from primary and secondary (copper) production — Although this appears to be a mistake		PARTIALLY ACCEPTED. White slags from the refining process (secondary metallurgy) are included in the draft Order, but EAF-S



			since the white slag comes from the subsequent process refining in the ladle furnace, the order states that 'slag that has not been generated in an electric arc furnace'. — In the same vein, it is also not clear to me whether the EAF-S slags also obtained in the electric arc furnace for the production of stainless steel are covered by the Order or not (and those of its ODA converter equivalent to white converter, same). It should be clarified whether both types of slag is covered by the order or not		slags, only category EAF-C, are not included in the draft Order.
Economic operator	TECHNICAL CERTIFICATION		For all non-linked applications, the need to control leaching is established by testing. annual percolation (prEN 16637-3) and leaching newspaper (EN 12457-4). The latter, however, responds Basque Decree 64/2019 for its type 2 scenario (non-linked applications under coverage not fully covered) impermeable), the least demanding scenario for cases under impermeable cover disappears. (type 3). In practice this can have a very negative impact on the ordinary production of the		NOT ACCEPTABLE. Even if there are uses that involve a lower environmental risk, there needs to be some type of test that verifies the leaching values.



			steelworks		
Economic operator	TECHNICAL CERTIFICATION		In addition, for uses with high environmental risk, it is stated that leaching limits must be applied. by means of a quantitative risk analysis, without further specification		NOT ACCEPTABLE. The quantitative risk analysis shall be carried out in accordance with standard UNE 150008: 2008.
Economic operator	TECHNICAL CERTIFICATION		On the other hand, in non-linked applications where the waste will be in direct contact with the land. underlying natural: — In order to check the composition of the Autonomous Communities in accordance with the general rules laid down in Royal Decree 9/2005, it is established that: the most demanding scenario of other uses should be applied. Failure to differentiate between the different uses of the soil could be a handicap — Strangely, the railway sub-ballast is exempted from assessing its composition, perhaps because it is limited in thickness. Confirm this exemption		NOT ACCEPTABLE. The Other Uses category has been chosen as it implies a more demanding scenario of environmental protection. For the use of sub-ballast for railways, NGRs are not required as there is a maximum thickness limitation and the material will be between the shape layer and the ballast layer.
Economic operator	TECHNICAL CERTIFICATION		It would also be useful to clarify the scenario in which the waste 'is found in direct contact with the underlying natural		NOT ACCEPTABLE. Input embankments and fillings would not



	ATION		land'. It is understood that, in the construction of a road, the unbound layers as bases and sub-bases of the pavement and improved esplanades placed on other layers unbound that are input fillings (embankments, pedrapens and all-one) are not considered to 'enter' in direct contact with the underlying natural terrain' even if there is no impermeable layer between the two. From 2 similarly, in the works it is common for excavation material to be used as a filler of contribution to the esplanade of the work being carried out, so that the layers are a priori placing on it would also be exempted		be considered natural soil, although in certain situations there may be direct contact of the sub-base with the natural soil. In the latter case, for example, compliance with the total content limit values would be necessary.
Economic operator	TECHNALI A CERTIFIC ATION		Finally, on the need for an accredited conformity assessment body certify at installation/operator level that the technical criteria of Annex I are met (reception, processes treatment and requirements for recovered waste), the frequency and type of recovery is unclear. evaluations (I understand that annual audits)		NOT ACCEPTABLE. The frequency and type of assessments shall be determined by the obligations to which the assessment body accredited in accordance with Regulation (EC) No



Economic operator	UNESID		White slag is secondary metallurgy slag (SMS), also referred to as refining slag, which regardless of the route in which it is generated (recycled or mineral) corresponds exactly to the same chemical with the same EINECS number 266-004-1 and CAS number 65996-71-6. View REACH registration.	Replace: "white slag" by "white slag (EINECS 266-004-1 and CAS 65996-71-6) "	765/2008 is subject. NOT ACCEPTABLE. It is true that having a non-REACH would make it easier to classify the material. However, it is not clear what is not specifically allocated to slag of a different type and this could be exclusionary for other producers who, for whatever reason, have another CAS or EC No assigned.
Economic operator	UNESID	General	In order to avoid misunderstandings (that is univoc between the material considered within the VCF and that registered under REACH), define the EINECS number for black slags. It should be remembered that registration under REACH is a prerequisite for placing substances (such as steel slag) on the market as VCF – and even as a sub-product. View REACH registration.	Replace: 'black slag' is replaced by 'Black slag (EINECS 932-275-6) '.	NOT ACCEPTABLE. It is true that having a non-REACH would make it easier to classify the material. However, it is not clear what is not specifically allocated to slag of a different type and this could be exclusionary for other producers who, for whatever



					reason, have another CAS or EC No assigned.
Economic operator	UNESID	Article 3 (page 8)	Article 3 of the POM states that treated slag ceases to be waste when it is transferred from the producer to another holder and complies with the defined requirements. This in practical terms would imply that the accumulation of processed slag waiting for the buyer is de facto a deposit of waste even in compliance with the use requirements. This is particularly relevant since supply in public works is not constant, and requires sufficient stocks to be able to be maintained on a continuous basis (from the perspective of the works).	Edit text: '1. Treated slag intended for the uses referred to in this Order shall cease to be waste when it can be secured before delivery to a new holder that already meets the technical and environmental requirements of the applications for which it will be used.'	PARTIALLY ACCEPTED. Given the specificities of the sector, the obligation to transfer from the producer to the holder in order to reach the VCF has been removed, although they must ensure that they are intended only for the permitted uses and in compliance with the conditions.
Economic operator	UNESID	Article 4 (page 8)	Currently, recovered slag is used in the uses permitted by the Autonomous Community Decrees without the need to accompany each consignment with any document. Requiring this document for each consignment increases the administrative burden.	It is proposed to remove the requirement to accompany each transport with a copy of the declaration of conformity.	NOT ACCEPTABLE. A document is needed to ensure traceability.
Economic operator	UNESID	Article 5 (page 9)	Paragraph 5.5 states that '5. For those uses of treated slag where a quantitative risk analysis is required, such analysis shall be included in the management system to be put in place by the holder.';	It is proposed to qualify the need to carry out quantitative risk analyses for exceptional applications, based on a cost-benefit analysis:	NOT ACCEPTABLE. Applications with higher environmental risk will pose a risk



			In order to ensure safe use and legal certainty for producers, holders and users of the material under analysis, quantitative risk analyses should be required for uses of that material in exceptional situations (such as applications of these materials in areas of proven sensitivity). We do not see the value of carrying out such analyses for everyday, safe and widely known uses of the material.	'5. For those uses of treated slag where a quantitative risk analysis is required (cases where material is applied in sensitive locations such as areas under protection), this analysis shall be included in the management system to be put in place by the holder. '	regardless of whether the area is under any form of protection or not, so a quantitative risk analysis is necessary.
Economic operator	UNESID	Annex I, Section 2 (page 13)	It is stated that storage areas for untreated and also treated slag must have an impermeable layer... As they have leachate treatment and are on already compacted soils, it is proposed that instead of an obligation it should be stated that storage and recovery areas should preferably be paved with impermeable concrete and asphalt floors.	Edit: 'The storage area for untreated slag should preferably be paved with impermeable concrete and asphalt screeds and slope design in the storage areas to drive leachates, if generated.' "Screening and stockpiling: treated slag shall be sorted and stuck according to subsequent use, avoiding mixing between different types of treated slag or untreated slag at all times. Collection shall be carried out on preferably impermeable surfaces with suitable	NOT ACCEPTABLE. Non-affection to soil and water should be prevented. The existence of compacted soils does not guarantee this non-affection.



				pavement and slope design in the collection areas to drive leachates, if generated.'	
Economic operator	UNESID	Annex I, Section 2, Subsection 1 (page 13)	It is stated that 'Storage spaces shall be compartmentalised and under no circumstances different types of slag may be mixed, nor may slag treated with slag be mixed without treat.' In view of the uncertainty as to the type of compartmentalisation that may arise, it is proposed to change to the attached text.	Edit: 'Storage and cooling: once generated, they must be stored in conditions of adequate hygiene and safety, in accordance with Article 23 of Law 7/2022 of 8 April 2003. Storage spaces shall be delimited and in no case may different types of slag be mixed, nor shall slag treated with untreated slag.'	FINDING ACCEPTED.
Economic operator	UNESID	Annex I, Section 3, Subsection 1 (new, to be included on page 16)	White slag. Use for backfilling and restoration of degraded clay areas. Annex IV to the current Decree 32/2009 (Catalonia) allows the use of 'in the filling and restoration of areas degraded by extractive activities on clay soils or in the restoration of clays. Although this use was not specifically covered in the application submitted to the Ministry at the time, the need to disaggregate the uses in such detail was not initially assessed either. However, the steel sector can provide sufficient	Maintain the use proposed by Decree 32/2009 (DOGC): 'White slag. Use for backfilling and restoration of degraded clay areas. Technical constraints: Adequate surface sealing and rainwater drainage. Environmental constraints: Comply with leachate of inert material."	NOT ACCEPTABLE. The use of waste as backfilling should be done through operation R0508. It is not one of the destinations assessed in the Study or initially requested.



			scientific evidence to support the safe use of the slag under analysis in the proposed application/use.		
Economic operator	UNESID	Annex I, Section 3, Subsection 1, 'Composite raw material in the manufacture of construction products', Destinations (p. 16)	Only white slag is currently allowed to be used as a raw material in the manufacture of Clinker. Although this is one of the most common uses today, other uses such as direct use as part of cement for its pozzolanic properties (permitted use for silico-manganese slag) are starting to consolidate.	Add for uses of white slag: 'Destinations: As a minority component in the manufacture of cement as a pozzolanic material. Technical conditions: Compliance with the requirements for pozzolanic material in the manufacture of commercial cements regulated in Standard UNE-EN 197-1: 2011. It is recommended that a maximum of 5 % be added in compliance with the requirements of the aforementioned standard, as long as its use in legislation as a main component is not approved. Compliance with the requirements of Annex AIII.2.3 (P, Q) to Royal Decree 256/2016 of 10 June approving the Instruction for the reception of cements (RC-16).	NOT ACCEPTABLE. The requested material has not been studied for that proposed purpose.



				Environmental conditions: None required. Terms of use: __”	
Economic operator	UNESID	Annex I, Section 3, Subsection 2, General Commentary (pages 16-20)	General comment Technical conditions. Black slag. As aggregates, either linked or non-linked applications. Concretes, mortars, bituminous mixtures or granular layers. Such aggregate, as any intended use in a mortar, bituminous mixed concrete or granular layers, shall comply with the relevant entries of the standards governing the CE marking of such aggregate. In the near future, the following standards will be replaced by harmonised standard PNE-prEN 17555 Aggregates for construction works (at an advanced stage of development), which will govern the CE marking: or UNE-EN 12620: 2003 + A1: 2009 Aggregates for concrete. or UNE-EN 13043/AC: 2004 Aggregates for bituminous mixtures and surface treatments of roads, airports and other paved areas. or UNE-EN 13139/AC: 2004 Aggregates	It is proposed to refer to: “Compliance with the CE marking”	FINDING ACCEPTED.



			for mortars. or UNE-EN 13139: 2003 Aggregates for mortars. or UNE-EN 13242: 2003 + A1: 2008 Aggregates for granular layers and layers treated with hydraulic conglomerates for use in structural layers of pavements.		
Economic operator	UNESID	Annex I, Section 3, Subsection 2, 'as aggregate in bound applications' , Destinations (p. 16)	There is no provision for the use of mother-in-law and gravel, which, according to its definition in Article 2 (a) 'Linked applications': applications in which materials mixed with conglomerate are used, giving cohesion to the whole" would be part of this category. We therefore request that the uses of sleeping and gravel be included as a linked application, subject to the technical constraints set out in the General Technical Specifications for Road and Bridge Works (PG-3) and the same environmental constraints as mortars and concrete production. Although this use was not specifically covered in the application submitted to the Ministry at the time, the need to disaggregate the uses in such detail was not initially assessed either. However, the steel sector can provide sufficient	Adding: 'Destinations: Suelocemento, gravaccient. Technical conditions: Control of volumetric stability in accordance with standard UNE-EN 1744-1 and other requirements such as granular material, so as to guarantee the specifications of the sole, gravel in accordance with regulations, standards, the General Technical Specifications for Works of Roads and Bridges (PG-3) or the project's PPT. Environmental conditions: Not required."	NOT ACCEPTABLE. CEDEX states that the use of black slag in layers with cement is not recommended because of its expansive potential.



			scientific evidence to support the safe use of the slag under analysis in the proposed application/use.		
Economic operator	UNESID	Annex I, Section 3, Subsection 2, 'as aggregate in non-bound applications under totally impermeable cover', Conditions of use (p. 17)	The use of aggregates in areas where the material is kept completely contained is excluded. This exclusion does not take into account environmental considerations such as the possible generation of leachates. We understand that this limitation is linked to the expansive potential of black slags, a problem that is currently resolved, as black slags have minimal expansions (volumetric stability control in accordance with standard UNE-EN 1744-1). These conditions of use exist in a large number of jobs as a sub-base (cycle lanes, streets, pavements, parking areas, sports tracks, sub-base in industrial installations under concrete slabs or asphalt pavements, etc.), especially in urban environments. If required, the steel sector can provide examples of treated slag applied in confined spaces that do not present or	Delete under 'Conditions of use': "Shall not be used in areas where the material is kept completely contained" .	NOT ACCEPTABLE. It is accepted to put the 1 % limitation as in previous comments.



			have presented any problems in works carried out in our own facilities, and also in works carried out by third parties. Although in the previous round of submissions the sector supported the removal of technical constraints from the VCF (stating that this is where they appear if necessary), if, alternatively, it were considered necessary to maintain some limitation for this situation, its use under conditions of total confinement could be restricted to slags treated with expansivity values of less than 1 % according to the volumetric stability control test in accordance with standard UNE-EN 1744-1. This value is 5 times lower than that allowed by the General Technical Specifications for Roads and Bridges (PG-3), in Article 510.2.1 on artificial slabs, which limits the maximum expansivity value to 5 % (according to UNE-EN 1744-1).		
Economic operator	UNESID	Annex I, Section 3, Subsection 2, 'Compositio	Doubts arise as to the approach to the measurement of the infiltration rate (in mm/year). There is the specific value proposed of 6 mm/year in the Cantabria Decree, but it restricts its application	Same approximation as in Commentary V and Cr (VI). If it is considered appropriate to maintain this requirement, to apply it to the case raised in the	NOT ACCEPTABLE. It is necessary to establish an infiltration rate that has been proven by



		n of aggregate in non-bound applications under totally impermeable cover' (page 18)	exclusively to the restoration of areas degraded by extractive activities (a very specific situation of Article 8 (1.2)) and has nothing to do with the general regime of civil road construction works, welded or similar. The generalisation of this value for a context as general as that of the two headings where it appears in the draft order is not considered appropriate.	Decree from which it has been extracted, and not to define the applicability of the requirement without evidence of risk endorsing it.	previous experience.
Economic operator	UNESID	Annex I, Section 3, Subsection 2, 'as aggregate in non-bound applications under cover not entirely impermeable... with maximum thickness limitation' (page 19)	As aggregate unbound applications cover not entirely impermeable. Ballast (new destination). Add a new use (ballast) above sub-ballast. In any event, the mere fact that the ballast represents only the upper portion of the railway structure, with very small thicknesses, already limits in itself any environmental risk that might be associated with it, which is of course minimal given the characteristics of the slags under consideration. This does not mean that the technical constraints of wear and tear in the Angeles: < 12 implies that the care over the production and valuation process for the	Add a new use (ballast) above sub-ballast. "Destination: Ballast. Technical conditions: Compliance with standard UNE-EN 13450 Aggregates for ballast. Terms of use: Ballast and sub-ballast. Compliance with technical specifications (including technical requirements) in accordance with Order FOM 1269/2007en public use case. In the case of private uses, they must comply with the requirements laid down by	NOT ACCEPTABLE. It would be an application without any coverage.



MINISTRY FOR
THE GREEN TRANSITION
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			production of steel aggregate to obtain it is extremely demanding. In non-public roads subject to fewer requirements, somewhat more permissive values of this coefficient could be accepted. Although this use was not specifically covered in the application submitted to the Ministry at the time, the need to disaggregate the uses in such detail was not initially assessed either. However, the steel sector can provide sufficient scientific evidence to support the safe use of the slag under analysis in the proposed application/use.	means of a technical supporting study approved by the project managers. Environmental conditions: Limit values for leaching for the acceptance of inert waste in landfills (excluding fluorides). They may be used where a certain limitation of infiltration is ensured, either by the type of material itself or by the adoption of complementary measures.	
Economic operator	UNESID	Annex I, Section 3, Subsection 2, 'as aggregate in non-bound applications under cover not entirely impermeable... with maximum thickness limitation'	Black slag. As aggregate unbound applications cover not entirely impermeable. Sub-ballast. Destinations. It is feasible to use steel aggregate also in layers of shape, which are after all quite similar to road slabs, similar to the case of bituminous mixtures, following the constraints indicated in 2007 by the Ministry of Public Works. In this case, two applications should be included: — Formwork layers	'Sub-ballast of railway tracks and formwork layers. Usage constraints: According to order FOM 1269/2007en public use case. In the case of private uses, they must comply with the requirements laid down by means of a technical supporting study approved by the project managers.	NOT ACCEPTABLE. The requested material has not been studied for that proposed purpose.



		(page 19)	— Sub-ballast Both the shape layer and the sub-ballast are part of the railway track structure and their use will depend on the quality of the esplanade. Order FOM 1269/2007 regulates the characteristics that the two types of layers must meet. These uses should include as a technical requirement that slags meet a volume expansion of less than V2.0 %. Note on admission to the Inertes landfill. Contrary to what might be thought, when the Commission and the Member States decided to set an acceptance criterion for the landfills currently known as Inertes (2002), the criteria were restrictive and demanding. The approximation for such a criterion is based on the fact that a material ending up in such a landfill would have very little control, and it would therefore have to be ensured that it did not pose any future risk. For this reason, several legislations have already provided for derogations,	Environmental constraints: comply with leaching criteria for the acceptance of inert waste in landfill.	
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			exemptions in specific values, or even for specific materials.		
Economic operator	UNESID	Annex I, Section 3, Subsection 2 'as aggregate in non-bound applications under non-totally impermeable cover without thickness restriction and without direct contact with soil' and 'as aggregate in non-bound applications under non-totally impermeable cover without thickness restriction	'Compliance with the leaching limit values established on the basis of a quantitative risk analysis for both scenarios' is required under 'environmental conditions'. According to Article 5 (5), quantitative risk analysis shall be included in the management system to be put in place by the holder. The scenario within which such a risk assessment is proposed is a scenario of minimal environmental risk, as it is assigned under totally impermeable cover. In such a situation the mobilisation of pollutants (if any) would remain minimal. Carrying out such an assessment, precisely under the use of fillings (low added value), would make this use practically unfeasible. This scenario has been widely used, with examples of use including ports and state roads, as well as at Autonomous Community level. This scenario should only be applicable	We propose to delete this requirement as it is not considered necessary due to lack of rationale and feasibility.	NOT ACCEPTABLE. Quantitative risk analysis is required where there is a cover that is not completely impermeable. The mobilisation of pollutants, even if minimal, should be controlled and characterised by such analysis.



		and with direct contact with soil' (page 20)	to uses within protected areas, where the cover is not completely impermeable.		
Economic operator	UNESID	Annex I, Section 3, Subsection 2, 'Lower environmental risk' (page 18) 'as aggregate in non-bound applications under totally impermeable cover', 'as aggregate in non-bound applications under non-totally impermeable cover without thickness restriction and without direct	'Compliance with the limit values for total content (NGR category other uses in each Autonomous Community) where there is direct contact with the soil' is required under 'environmental conditions'. The current draft Order places NGRs on an equal footing with limit values for total content. Reference is made to the existence of such a reference in Basque legislation on the use of steel slag with NGR values from that community. There is no such intention in the Basque Decree tables, as UNESID has been informed. Although the numerical values of the Basque Decree resemble the numerical values of the NGRs, at no point does the Basque Decree refer to the concept of NGR. The NGRs, with the scope and characteristics defined by the legislation on contaminated soils and consequently	Remove as an environmental condition: 'compliance with the limit values for total content (NGR category other uses in each Autonomous Community) when there is direct contact with the soil'.	NOT ACCEPTABLE. Reference to NGRs where there is direct contact with soil is necessary to achieve an acceptable level of environmental protection.



		contact with soil' and 'as aggregate in non-bound applications under not totally impermeable cover without thickness restriction and with direct contact with soil' (page 20)	linked to the formulation of a Quantitative Risk Analysis ('ACR'), are neither technically nor legally appropriate as an environmental condition for the determination of the new legal regime for steelworks slag as an end-of-waste status. The regulatory definition of soil (Article 2 (a) of RD 9/2005) leads to the conclusion that steel aggregate or steelworks slag applied to natural soil (as is the case for other materials such as concrete floorings, asphalt mixtures in vials or other surface coatings) are not confused with soil. The soil and the material applied to it have clearly distinct legal regimes; this is without prejudice to the need to lay down technical criteria to prevent soil quality from deteriorating as a result of the direct application of steel aggregate to soil. For this reason, we attach, in part, a specific legal report (and its executive summary) which specifically analyses the legal aspects related to the 'concept of soil, contaminated soil and the		
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			consideration of gene reference levels' to assess the use of non-indigenous materials directly on the soil or not, in order to provide certain technical characteristics. The implications could go far beyond the use of "alternative" materials, and could also have implications for any material, even natural or currently used industrial.		
Economic operator	UNESID	Annex II, Periodicity of analysis (page 31)	The V and Cr (VI) do not appear in the criteria for the acceptance of non-hazardous waste in inert landfills, on the basis of Royal Decree 646/2020 of 7 July regulating the disposal of waste by landfill (2.1.2.1 Limit values for leaching). These parameters are not included in the Decrees of Catalonia or Cantabria. The use of slag to date has not given rise to any environmental problem justifying an increase in the number of parameters to be monitored. In those territories where control over these parameters has been included, less demanding limit values have been established for the same uses without any problems having been demonstrated in the applications of slag. The	It is proposed to delete V and Cr (VI) from the table in Annex II. Alternatively: In the event that it is decided to include V and Cr (VI) because this is regulated in Decree 64/2019, of 9 April, on the legal regime applicable to the recovery of black slag from the production of steel in electric arc furnaces (this being the Autonomous Community with the greatest experience in the use of iron and steel slag), it should be ensured that the limit values are in line with each of the uses (not taking the most limiting one without any scientific justification):	NOT ACCEPTABLE. For reasons of consistency, vanadium and chromium VI must have the same values as the other elements, which correspond to Type 2 of the Basque Country Decree. In addition, for such problematic elements, the highest safety for health and the environment must be ensured.



			establishment of these different leaching requirements for these elements has emerged from the corresponding risk reports. Setting such restrictive limit values for more general uses (without high environmental risk) may compromise current slag recovery levels. The criterion set has always been to check the elements contained in the decree regulating the disposal of waste in landfill (inert board). Furthermore, the limit values established for these two elements correspond to Table 2 of Decree 64/2019 (uses without totally impermeable cover), whereas in reality they should correspond to Table 3 corresponding to uses with totally impermeable cover.	— V: or 1.5 mg/kg for non-bound applications under non-totally impermeable cover or <u>4 mg/kg for non-bound applications with totally impermeable cover.</u> — CR (VI): or 0.1 mg/kg for non-bound applications under non-totally impermeable cover or <u>0, 4 mg/kg for non-bound applications with totally impermeable cover.</u>	
Economic operator	UNESID	Annex II, Periodicity of analysis (page 31)	It is required that upstream column leaching is tested at least once a year in accordance with technical specification PNE-prEN 16637-3 and limit values for leaching of the resulting material are set. This is a requirement for which there is no experience. Currently, leaching control	Delete: 'At least once a year, a flow column leaching test shall be performed. ascending, according to technical specification PNE-prEN 16637-3 Construction products	NOT ACCEPTABLE. The test referred to is necessary as it better reflects the actual conditions and long-term behaviour of the chemical



			of treated slag is carried out by means of a flare test in accordance with standard UNE-EN-12457-4. We consider it appropriate to use this method to promote knowledge, but under no circumstances should it be a method that has not been sufficiently proven and be part of an Order regulating the conditions under which a material may no longer be considered waste.	— Assessment of release of dangerous substances – Part 3: Horizontal up-flow percolation test, for a liquid-solid ratio (L/S) of 10 L/kg), the exceedance of the following limit values are given in the following table:”.	compounds present in the aggregates, when in contact with water.
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