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ANNEX 2

ANNEX

to the

**COMMISSION DELEGATED REGULATION (EU) .../...**

**supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to the sustainable use and protection of water and marine resources, to the transition to a circular economy, to pollution prevention and control or to the protection and restoration of biodiversity and ecosystems and for determining whether that economic activity causes no significant harm to any of the other environmental objectives and amending Delegated Regulation (EU) 2021/2139 and Delegated Regulation (EU) 2021/2178**

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## ANNEX II

### **Technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to the transition to a circular economy and for determining whether that economic activity causes no significant harm to any of the other environmental objectives**

#### **1. MANUFACTURING**

##### **1.1. Manufacture of plastic packaging goods**

###### *Description of the activity*

Manufacture of plastic packaging goods.

The economic activities in this category could be associated with NACE code C22.22 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

###### *Technical screening criteria*

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###### Substantial contribution to the transition to a circular economy

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1. The activity complies with one of the following criteria:

- (a) design for reuse: the packaging product has been designed to be reusable within a reuse system<sup>1</sup>. The system for reuse is established in a way that ensures the possibility of reuse in a closed-loop or open-loop system which:
  - (i) provides a defined governance structure and keeps records on the number of fillings, re-uses, rejects, collection rate, number of reusable packaging placed on the market and units of sales or equivalent units;
  - (ii) provides rules on the product scope and packaging formats, as well as on the collection of reusable packaging, including incentives for consumers;
  - (iii) ensures open and equal access and conditions for all economic operators wishing to become part of it, including proportionate distribution of costs and benefits for all system participants;
- (b) use of circular feedstock: at least 65% of the packaging product by weight consists of mechanically recycled post-consumer material for non-contact sensitive packaging and at least 50% for contact sensitive packaging<sup>2</sup>. Where producing mechanically

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<sup>1</sup> 'Reusable' and 'reuse system' are defined and implemented in accordance with applicable European law and standards including any standards related to the number of rotations in a system for reuse.

<sup>2</sup> 'Contact sensitive packaging' means packaging that is intended to be used in any packaging applications in the scope of Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition (OJ L 268, 18.10.2003 p. 29), Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on

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recycled material is not technically feasible or economically viable, the product may consist of at least 65% of chemically recycled material;

- (c) use of bio-waste feedstock: at least 65% of the packaging product by weight consists of sustainable bio-waste feedstock<sup>3</sup>. Agricultural based bio-waste used for the manufacture of plastic packaging complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest based bio-waste used for the manufacture of plastic packaging complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.

2. The packaging produced is recyclable in practice and at scale, and complies with all of the criteria specified below.

2.1. The unit of packaging<sup>4</sup> is designed to be recyclable, so that it can be sorted and recycled at the end of life and that the resulting recycled material is of such quality that it can be used again in the same or similar packaging applications. Colours, additives or design elements of the packaging that contaminate the recycling stream once packaging becomes waste and substantially reduce the quality of the resulting recyclates are not used. At best, the unit of packaging is made from the same material (mono-material solution) or, as a minimum, the materials present in the packaging are compatible with the existing recycling streams and sorting processes. Where all packaging components are not compatible with the existing recycling streams and processes, the packaging must allow for separation of its non-recyclable components, either manually by consumers or within the existing sorting and recycling processes.

2.2. In addition, the packaging is evaluated as recyclable at scale where it complies with one

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materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC (OJ L 338, 13.11.2004, p. 4), Regulation (EC) No 767/2009 of the European Parliament and of the Council of 13 July 2009 on the placing on the market and use of feed, amending European Parliament and Council Regulation (EC) No 1831/2003 and repealing Council Directive 79/373/EEC, Commission Directive 80/511/EEC, Council Directives 82/471/EEC, 83/228/EEC, 93/74/EEC, 93/113/EC and 96/25/EC and Commission Decision 2004/217/EC (OJ L 229, 1.9.2009, p. 1), Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products (OJ L 342, 22.12.2009, p. 59), Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC (OJ L 117, 5.5.2017, p. 1), Regulation (EU) 2017/746 of the European Parliament and of the Council of 5 April 2017 on in vitro diagnostic medical devices and repealing Directive 98/79/EC and Commission Decision 2010/227/EU (OJ L 117, 5.5.2017, p. 176), Regulation (EU) 2019/4 of the European Parliament and of the Council of 11 December 2018 on the manufacture, placing on the market and use of medicated feed, amending Regulation (EC) No 1831/2005 of the European Parliament and of the Council and repealing Council Directive 90/167/EEC (OJ L 4, 7.1.2019, p. 1), Regulation (EU) 2019/6 of the European Parliament and of the Council of 11 December 2018 on veterinary medicinal products and repealing Directive 2001/82/EC (OJ L 4, 7.1.2019, p. 43), Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use (OJ L 311, 28.11.2001, p. 67), or Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods (OJ L 260, 30.9.2008, p. 13).

<sup>3</sup> Sustainable bio-waste feedstock refers to industrial bio-waste and municipal bio-waste, it excludes primary biomass in the absence of legally agreed sustainability criteria.

<sup>4</sup> 'Unit of packaging' means a unit as a whole, including any integrated or separate components, which together serve a packaging function such as the containment, protection, handling, delivery, storage, transport and presentation of products, and including independent units of grouped or transport packaging where they are discarded prior to the point of sale.

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of the following criteria:

- (a) collection, sorting, and recycling is proven to work in practice and at scale: the plastic packaging material of the unit of packaging achieves the minimum recycling rate<sup>5</sup> target for plastic packaging waste set by the Directive 94/62/EC of the European Parliament and of the Council<sup>6</sup>, either in the national jurisdiction where the packaging is put on the market, regardless of the jurisdiction's size, or in Member States that collectively represent at least 100 million inhabitants;
- (b) collection, sorting, and recycling is proven to be on track to work in practice and at scale: sorting and recycling processes are available at the Technology Readiness of Level 9 as defined by ISO 16290:2013<sup>7</sup>.

3. When the packaging material is produced, the following substances presenting hazardous properties specified below are not added to the feedstock:

- (a) substances meeting the criteria laid down in Article 57 and identified in accordance with Article 59(1) of Regulation (EC) No 1907/2006;
- (b) substances meeting the criteria for classification as carcinogenic category 1 or 2 in accordance with Regulation (EC) No 1272/2008 of the European Parliament and the Council<sup>8</sup>;
- (c) substances meeting the criteria for classification as mutagenic category 1 or 2 in accordance with Regulation (EC) No 1272/2008;
- (d) substances meeting the criteria for classification as toxic for reproduction category 1 or 2 in accordance with Regulation (EC) No 1272/2008;
- (e) substances meeting the criteria for classification as endocrine disruptors for human health category 1 or for environment category 1 in accordance with Regulation (EC) No 1272/2008;
- (f) substances meeting the criteria for classification as persistent, bioaccumulative and toxic in accordance with Regulation (EC) No 1272/2008;
- (g) substances meeting the criteria for classification as very persistent and very bioaccumulative in accordance with Regulation (EC) No 1272/2008;
- (h) substances meeting the criteria for classification as persistent, mobile and toxic in accordance with Regulation (EC) No 1272/2008;
- (i) substances meeting the criteria for classification as very persistent and very mobile in accordance with Regulation (EC) No 1272/2008;
- (j) substances meeting the criteria for classification as respiratory sensitiser category 1 in accordance with Regulation (EC) No 1272/2008;

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<sup>5</sup> 'Recycling rate' is the proportion of waste generated that is recycled.

<sup>6</sup> European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (OJ L 365, 31.12.1994, p. 10).

<sup>7</sup> ISO 16290:2013, Space systems — Definition of the Technology Readiness Levels (TRLs) and their criteria of assessment, available at: <https://www.iso.org/obp/ui/#iso:std:iso:16290:ed-1:v1:en>.

<sup>8</sup> Regulation (EC) No 1272/2008 of the European Parliament and the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).

- (k) substances meeting the criteria for classification as skin sensitiser category 1 in accordance with Regulation (EC) No 1272/2008;
- (l) substances meeting the criteria for classification as having chronic hazard to the aquatic environment category 1, 2, 3 or 4 in accordance with Regulation (EC) No 1272/2008;
- (m) substances meeting the criteria for classification as hazardous to the ozone layer in accordance with Regulation (EC) No 1272/2008;
- (n) substances meeting the criteria for classification as having specific target organ toxicity – repeated exposure category 1 or 2 in accordance with Regulation (EC) No 1272/2008;
- (o) substances meeting the criteria for classification as having specific target organ toxicity – single exposure category 1 or 2 in accordance with Regulation (EC) No 1272/2008.)

4. The use of compostable materials in packaging applications is considered sustainable only for very lightweight plastic carrier bags, tea bags, coffee pads and sticky labels attached to fruit and vegetables.

Do no significant harm (‘DNSH’)

(1) Climate change mitigation

For plastic manufactured from chemical recycled feedstock, life-cycle GHG emissions of the manufactured plastic, excluding any calculated credits from the production of fuels, are lower than the life-cycle GHG emissions of the equivalent plastic in primary form manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using Commission Recommendation 2021/2279/EU<sup>9</sup> or, alternatively, using ISO 14067:2018<sup>10</sup> or ISO 14064-1:2018<sup>11</sup>. Quantified life-cycle GHG emissions are verified by an independent third party.

Life-cycle GHG emissions of plastic manufactured from sustainable bio-waste feedstock are lower than the life-cycle GHG emissions of the equivalent plastics in primary form manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.

<sup>9</sup> Commission Recommendation (EU) 2021/2279 of 15 December 2021 on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organisations (OJ L 471, 30.12.2021, p. 1).

<sup>10</sup> ISO Standard 14067:2018, Greenhouse gases – carbon footprint of products – requirements and guidelines for quantification (version of August 2018: <https://www.iso.org/standard/71206.html>).

<sup>11</sup> ISO standard 14064-1:2018, Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals (version of [adoption date]: <https://www.iso.org/standard/66453.html>).

(2) Climate change adaptation	The activity complies with criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	<p>The activity complies with criteria set out in Appendix B to this Annex.</p> <p>The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in Article 2, points (21) of Regulation (EU) 2020/852 and in accordance with Directive 2008/56/EC, which requires in particular that the appropriate measures are taken to prevent or mitigate impacts in relation to the descriptors laid down in Annex I to that Directive, taking into account the Commission Decision (EU) 2017/8489<sup>12</sup> in relation to the relevant criteria and methodological standards for those descriptors.</p>
(5) Pollution prevention and control	<p>The activity complies with criteria set out in Appendix C to this Annex.</p> <p>For the products manufactured from plastic materials in primary form, emissions from the manufacturing of those plastic materials are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the relevant best available techniques (BAT) conclusions, including:</p> <ul style="list-style-type: none"> <li>(a) the best available techniques (BAT) conclusions for common waste water and waste gas treatment/management systems in the chemical sector<sup>13</sup>, for emissions to water where relevant emission thresholds apply;</li> <li>(b) the best available techniques (BAT) conclusions for common waste gas management and treatment systems in the chemical sector<sup>14</sup> for emissions to air of new installations (or for existing installations within 4 years of the BATC publication)</li> </ul>

<sup>12</sup> Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU (OJ L 125, 18.5.2017, p. 43).

<sup>13</sup> Commission Implementing Decision (EU) 2016/902 of 30 May 2016 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for common waste water and waste gas treatment/management systems in the chemical sector.( OJ L 152, 9.6.2016, p. 23).

<sup>14</sup> Commission Implementing Decision (EU) 2022/2427 of 6 December 2022 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions, for common waste gas management and treatment systems in the chemical sector (OJ L 318, 12.12.2022, p. 157).

	<p>where relevant conditions apply;</p> <p>(c) the Best Available Techniques Reference Document (BREF) for the Production of Polymers<sup>15</sup> for the production processes under conditions not covered by the BATC mentioned above;</p> <p>(d) the Best Available Techniques Reference Document (BREF) for the Large Volume Inorganic Chemicals – Solids and Others industry<sup>16</sup>;</p> <p>(e) the Best Available Techniques Reference Document (BREF) for the manufacture of Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers<sup>17</sup>;</p> <p>(f) the Best Available Techniques Reference Document (BREF) for Manufacture of Organic Fine Chemicals<sup>18</sup>;</p> <p>(g) the Best Available Techniques Reference Document (BREF) for the production of speciality inorganic chemicals (SIC)<sup>19</sup>.</p> <p>No significant cross-media effects occur.</p>
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with criteria set out in Appendix D to this Annex.

## 1.2. Manufacture of electrical and electronic equipment

### *Description of the activity*

Manufacturing of electrical and electronic equipment for industrial, professional and consumer use.

This activity includes manufacturing of rechargeable and non-rechargeable portable batteries<sup>20</sup>. The activity does not include manufacturing of other battery types.

<sup>15</sup> Best Available Techniques (BAT) Reference Document for the Production of Polymers (version of [adoption date]: [https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/pol\\_bref\\_0807.pdf](https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/pol_bref_0807.pdf))

<sup>16</sup> Best Available Techniques (BAT) Reference Document for the Large Volumes Inorganic Chemicals-Solids and Others industry, (version of [adoption date]: [https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/lvic-s\\_bref\\_0907.pdf](https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/lvic-s_bref_0907.pdf)).

<sup>17</sup> Best Available Techniques (BAT) Reference Document for the manufacture of Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers (version of [adoption date]: [https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/lvic\\_aaf.pdf](https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/lvic_aaf.pdf)).

<sup>18</sup> The Best Available Techniques Reference Document (BREF) for Manufacture of Organic Fine Chemicals, available at [https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/ofc\\_bref\\_0806.pdf](https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/ofc_bref_0806.pdf).

<sup>19</sup> The Best Available Techniques Reference Document (BREF) for the production of speciality inorganic chemicals (SIC), available at <https://eippcb.jrc.ec.europa.eu/reference/production-speciality-inorganic-chemicals>.

<sup>20</sup> Portable batteries are sealed and weigh less than or equal to 5kg.



The economic activities in this category could be associated with several NACE codes, in particular C26 and C27 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. Where the economic activity manufactures electrical and electronic equipment complying with all EU Ecolabel criteria applicable to that specific product category, in accordance with Regulation 66/2010/EC of the European Parliament and of the Council<sup>21</sup>, the manufacturer provides the proof of compliance with all requirements listed, in accordance with the verification criteria foreseen by the EU Ecolabel criteria.

2. Where no product specific EU Ecolabel criteria exist, or the economic operator has not used them, the economic activity manufacturing electrical and electronic equipment complies with all of the following criteria:

##### 2.1. Design for long lifetime

2.1.1. All versions of software components, software support and software/firmware, including updates, are made available to users for the lifetime of an item as defined under Directive 2009/125/EC and implementing acts adopted under that Directive. Where the availability of software updates is not regulated, the availability is at least eight years. Functionality and lifetime of the product are not reduced through software updates or lack of software updates.

2.1.2. Products incorporating portable batteries ensure that those batteries are readily removable and replaceable by the end-user at any time during the lifetime of the product, without requiring the use of specialised tools (unless the tools are provided free of charge with the product), proprietary tools, thermal energy, or solvents to disassemble, except when batteries are designed in such way to make battery removable and replaceable only by independent professionals in case of:

- (a) appliances specifically designed to operate primarily in an environment that is regularly subject to splashing water, water streams or water immersion and that are intended to be washable or rinseable and where it is required to ensure the safety of the user and the appliance;
  - (b) professional medical imaging and radiotherapy devices, as defined in Article 2(1) of Regulation 2017/745/EU of the European Parliament and of the Council<sup>22</sup>, and in-vitro
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<sup>21</sup> Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel (OJ L027 30.1.2010, p. 1).

<sup>22</sup> Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices (OJ L 117, 5.5.2017, p. 1).

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diagnostic medical devices, as defined in Article 2(2) of Regulation 2017/746/EU of the European Parliament and of the Council<sup>23</sup>.

2.1.3. Software is not used in order to affect the replacement of a portable battery, and correct battery replacement does not affect the functioning of the product.

## 2.2. Design for repair and guarantee

2.2.1 Where a product specific repair scoring systems is established in accordance with the Union Law, manufacturer ensures that products have the highest reparability class<sup>24</sup>.

2.2.2. Manufacturers provide access to information to professional repairers<sup>25</sup> throughout the lifetime of the product. The information includes the following elements, where applicable:

- (a) the unequivocal appliance identification;
- (b) a disassembly map or exploded view;
- (c) list of necessary repair and test equipment;
- (d) technical details of the components and diagnosis information, such as minimum and maximum theoretical values for measurements;
- (e) wiring and connection diagrams;
- (f) diagnostic fault and error codes, including manufacturer-specific codes;
- (g) data records of reported failure incidents stored on the product;
- (h) electronic board diagrams;
- (i) technical manual of instructions for repair, including marking of the individual steps;
- (j) instructions for software and firmware, including reset software;
- (k) information on how to access data records of reported failure incidents stored on the device, where applicable, with the exception of personal identifiable information such as related to user behaviour and location information.

2.2.3. Key spare parts<sup>26</sup>, whether new or used, such as motors, batteries, and any part or component essential to the good functioning of the product, are available to professional repairers and end-users, after placing the last unit of the model on the market, for one additional year compared to the requirements on the availability of spare parts under Directive 2009/125/EC and implementing acts adopted under that Directive. Where the availability of spare parts for the relevant products is not regulated, key spare parts are available for at least eight years after placing the last unit of the model on the market.

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<sup>23</sup> Regulation (EU) 2017/746 of the European Parliament and of the Council of 5 April 2017 on in vitro diagnostic medical devices (OJ L 117, 5.5.2017, p. 176).

<sup>24</sup> 'Reparability class' means a class expressing the capacity of a good to be repaired, based on a method established in accordance with Union law [placeholder: Article XX of the Energy Labelling act].

<sup>25</sup> 'Professional repairer' means an operator or undertaking which provides services of repair and professional maintenance of products under this activity.

<sup>26</sup> For products covered by requirements on the availability of spare parts under Directive 2009/125/EC and implementing acts adopted under that Directive, key spare parts are considered to be those listed in Annex to the most recent implementing act for each product group.

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2.2.4. Where there are no significant health and safety risks presented by the product repair, manufacturers provide clear disassembly and repair instructions, including through hard or soft copy or a video, and make them publicly available for the lifetime of the product, to enable a non-destructive disassembly of products for the purpose of replacing key components or parts for upgrades or repairs. Where significant safety concerns connected to the repair exist, manufacturer ensures access to independent certified professional repairers. The manufacturer's website indicates the process for professional repairers to register for access to relevant information or share the information on a publicly available free access website.

2.2.5. For electrical and electronic equipment for consumer use, the manufacturer provides commercial guarantee for one additional year compared to requirements under Directive 2019/771/EU of the European Parliament and of the Council<sup>27</sup> at no extra cost.

### 2.3. Design for reuse and remanufacturing

2.3.1. Where the products are able to store data, data encryption is required, alongside a software function that resets the device to its factory settings and erases by default the encryption key.

2.3.2. The stored data can be easily and fully transferred to another product.

### 2.4. Design for dismantling

2.4.1. Information on product's end of life management is publicly available for the lifetime of the product, including all information required under Directive 2012/19/EU. For each type of new product placed for the first time on the Union market, the manufacturer shares, free of charge, relevant information with centres which prepare for re-use and treatment and recycling facilities through Information for Recyclers Platform<sup>28</sup> or through another relevant channel in accordance with Article 15(1) of Directive 2012/19/EU. Dismantling information includes the sequence of dismantling steps, tools or technologies needed to access the targeted component.

2.4.2. For components rich in critical raw materials, information is provided on the presence and weight of critical raw materials<sup>29</sup>.

2.4.3. The activity provides tracking information on substances identified as substance of very high concern (SVHC) and for substances meeting the criteria for substance of very high concern (SVHC), by complying with at least one of the two disclosure frameworks listed below:

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<sup>27</sup> Directive (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC (OJ L 136, 22.5.2019, p. 28).

<sup>28</sup> I4R Platform – I4R Platform (i4r-platform.eu)

<sup>29</sup> Critical raw materials are defined as the elements listed in the EU Critical Raw Materials List (established through Communication from the Commission to the European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability (COM/2020/474 final)) or other relevant Union legislation.

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- (a) product information on substances is available publicly, in SCIP database<sup>30</sup> for products that contain > 0.1% (w/w) of an identified substance of very high concern or in a specific public tool provided by company;
  - (b) product information on substances is available publicly, following IEC62474<sup>31</sup> (for electrical and electronic equipment) and future IEC82474-1<sup>32</sup> (dual logo project).

## 2.5. Design for recyclability

The economic activity manufactures products with demonstrated superior recyclability. Assessment of recyclability relies on EN 45555:2019<sup>33</sup> or on any product-specific EN standard relying on EN 45555:2019. The economic activity complies with the following requirements:

- (a) single polymer or recyclable polymer blends are used;
- (b) plastic enclosures do not contain moulded-in or glue-on metal;
- (c) materials which cannot be recycled together are easy to access and have the ability to be separated;
- (d) improving recyclability does not harm the durability of the system itself;
- (e) parts of the product containing substances, mixtures and components that are to be removed during depollution are easy to identify, such as through marking for sorting provided by the manufacturer, and visible on the product;
- (f) components rich with critical raw materials are easy to access and to remove from product;
- (g) parts that reduce the recyclability according to the reference end-of-life treatment scenario, such as plastic using certain fillers or certain flame retardants, are easy to access and remove;
- (h) joining, fastening or sealing techniques do not prevent the safe and readily achievable removal of the components specified in Directive 2012/19/EU [or in **Directive 2023/XX/EC** of the European Parliament and of the Council<sup>34</sup>], where present.

## 2.6. Proactive substitution of hazardous substances

2.6.1. The economic activity manufactures products which demonstrate proactive substitution of hazardous substances.

2.6.2. The product does not contain substances of very high concern included in Annex XIV to Regulation 1907/2006/EC.

2.6.3. Exemptions to Restrictions of Hazardous Substances are limited to the following cases:

- (a) lead in high melting temperature type solders covered by the exemption entry 7(a) in

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<sup>30</sup> Available at <https://echa.europa.eu/scip-database>.

<sup>31</sup> IEC 62474 - Material Declaration for Products of and for the Electrotechnical Industry.

<sup>32</sup> IEC 82474- Material declaration — Part 1: General requirements

<sup>33</sup> EN 45555:2019 General methods for assessing the recyclability and recoverability of energy-related products.

<sup>34</sup> [Update the reference to the new Batteries Regulation once formally adopted, currently political agreement.]

Annex III to Directive 2011/65/EU;

- (b) electrical and electronic components containing lead in a glass or ceramic covered by the exemption entries under 7(c) in Annex III to Directive 2011/65/EU.

2.6.4. The hazardous substances specified in table below are not introduced to or formed in the specified sub-assemblies and component parts at or above the specified concentration limit.

Substance group	Scope of restriction	Concentration limits (where applicable)
ii) Polymer stabilisers, colourants and contaminant	<p>The following organotin stabiliser compounds are not present in external cables:</p> <p>Dibutyltin oxide  Dibutyltin diacetate  Dibutyltin dilaurate  Dibutyltin maleate  Dioctyl tin oxide  Dioctyl tin dilaurate</p> <p>External housing do not contain the following colourants: Azo dyes that may cleave to the carcinogenic aryl amines listed in Appendix 8 of the Regulation (EC) No 1907/2006, or Colourant compounds included in the IEC 62474 declarable substances list.</p>	N/A
ii) Polymer stabilisers, colourants and contaminant	<p>Polycyclic Aromatic Hydrocarbons (PAHs) are not present at concentrations greater than or equal to individual and sum total concentration limits in any external plastic or man-made rubber surfaces.</p> <p>The presence and concentration of the following PAHs is verified:</p> <p>PAHs restricted by the Regulation (EC) No 1907/2006:</p> <p>Benzo[a]pyrene Benzo[e]pyrene  Benzo[a]anthracene  Chrysen  Benzo[b]fluoranthene  Benzo[j]fluoranthene</p>	<p>The individual concentration limits for PAHs restricted under Regulation (EC) No 1907/2006 is 1 mg/kg</p> <p>The sum total concentration limit for the 18 listed PAHs is not greater than 10 mg/kg</p>

	<p>Benzo[k]fluoranthene</p> <p>Dibenzo[a,h]anthracene</p> <p>Additional PAHs subject to restriction:</p> <p>Acenaphthene</p> <p>Acenaphthylene</p> <p>Anthracene</p> <p>Benzo[ghi]perylene</p> <p>Fluoranthene</p> <p>Fluorene</p> <p>Indeno[1,2,3-cd]pyrene</p> <p>Naphthalene</p> <p>Phenanthrene</p> <p>Pyrene</p>	
iii) Biocidal products	<p>Biocidal products intended to provide an anti-bacterial function</p> <p>Derogation for materials sold in hospitals and for healthcare applications</p>	N/A
v) Glass fining agents	<p>Arsenic and its compounds is not used in the manufacturing of LCD display unit glass and screen cover glass.</p>	0,0050% w/w
vi) Chlorine based plastics	<p>Plastic parts &gt;25g do not contain chlorinated polymers.</p> <p>Note: For this specific sub-requirement, plastic cable housing is not considered as a 'plastic part'.</p>	N/A

2.6.5. The products do not contain halogen beyond the limits which can be detected in line with the measurement specified in existing standards for all its components: cables (EN IEC 60754-3), plastic parts (EN50642), electronic components (EN IEC 61249-2-21 or JS709C), consumables (EN IEC 61249-2-21 and IPC J-STD-004B).

2.6.6. The products do not contain fluor gas.

2.6.7. Use of Tetrabromobisphenol A (TBBPA) is allowed as reactive component for Printed Circuit Boards only.

2.7. Information to customers:

2.7.1. The operator of the activity provides information to customers regarding options to use

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the product considering the environmental benefits, in particular the lifetime extension of the products associated with the different modes of the product.

2.7.2. The operator of the activity provides information to customers regarding the buy-back, sell-back and take-back options for the product, information on separate collection and collection points for waste electrical and electronic equipment (WEEE), as well as information on re-use options. For portable batteries, information is provided on separate collection and collection points for waste batteries.

2.7.3. For electrical and electronic equipment, the operator of the activity appropriately marks the product with the symbol indicating separate collection for electric and electronic equipment as set out in Annex IX to the Directive 2012/19/EU. The operator of the activity provides the consumer with relevant information on costs of collection, treatment and disposal of the product in an environmentally sound way as set out in Article 14(1) of that Directive.

## 2.8. Producer responsibility:

2.8.1. The operator of the activity, when placing electrical and electronic equipment on the market of the Member States, establishes an individual or participates in a collective extended producer responsibility schemes in all the Member States in which the product is placed on the market, in line with Directive 2012/19/EU. The financial contributions to the collective schemes are based on eco modulation and cover the costs of separate collection and treatment of WEEE.

2.8.2. For portable batteries, the producer establishes waste portable battery take-back and collection systems, which include collection points, in all Member States in which the product is placed on the market.

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## Do no significant harm ('DNSH')

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(1) Climate change mitigation	Where the manufactured product contains refrigerants, it complies with the GWP performance laid down in the Regulation (EU) No 517/2014 of the European Parliament and of the Council <sup>35</sup> . The activity does not manufacture products containing Sulfur hexafluoride (SF6).  Where applicable, the manufactured product does not score lower than the third significantly populated class <sup>36</sup> of energy efficiency in
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<sup>35</sup> Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006 (OJ L 150, 20.5.2014, p. 195).

<sup>36</sup> The requirement targets the three highest classes of energy efficiency that are populated, in which at least some products are on the market. To understand which classes are the highest populated in which at least some products are on the market, an overview of the available products on the market (based on official data) is provided by European Product Database for Energy Labelling.

	accordance with Regulation (EU) 2017/1369 of the European Parliament and of the Council and delegated acts adopted under that Regulation <sup>37</sup> .
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	<p>The activity complies with the criteria set out in Appendix B to this Annex.</p> <p>The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in Article 2, points (21) of Regulation (EU) 2020/852 and in accordance with Directive 2008/56/EC, which requires in particular that the appropriate measures are taken to prevent or mitigate impacts in relation to the descriptors laid down in Annex I to that Directive, taking into account the Commission Decision (EU) 2017/8489 in relation to the relevant criteria and methodological standards for those descriptors.</p>
(5) Pollution prevention and control	<p>The activity complies with criteria set out in Appendix C to this Annex.</p> <p>For manufacturing of portable batteries, batteries comply with the applicable sustainability rules on the placing on the market of batteries in the Union, including restrictions on the use of hazardous substances in batteries, including Regulation (EC) No 1907/2006 and Directive 2006/66/EC of the European Parliament and of the Council<sup>38</sup>.</p>
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

<sup>37</sup> Regulation (EU) 2017/1369 of the European Parliament and of the Council 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU (OJ L 198, 28.7.2017, p.1).

<sup>38</sup> Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC (OJ L 266, 26.9.2006, p. 1).



## 2. WATER SUPPLY, SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES

### 2.1. Phosphorus recovery from waste water

#### *Description of the activity*

Construction, upgrade, operation and renewal of facilities for recovery of phosphorus from on-site waste water treatment plants (WWTP) (aqueous phase and sludge) and from materials (i.e. ashes) after thermal oxidation (i.e. incineration) of sewage sludge.

The economic activity only includes the facilities and processes that make phosphorus recovery possible, not the previous steps, such as waste water treatment or incineration facilities.

The economic activities in this category could be associated with several NACE codes, in particular E37.00, E38.32 and F42.99 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

#### *Technical screening criteria*

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Substantial contribution to the transition to a circular economy

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1. For the process integrated at the WWTP, covering mainly phosphorus salts such as struvite–magnesium ammonium phosphate ( $\text{NH}_4\text{MgPO}_4 \cdot 6\text{H}_2\text{O}$ ), the phosphorus recovery process recovers at least 15% of the incoming phosphorus load. Only the harvested material, such as struvite, is counted for the calculation of this threshold.
  2. For down-stream recovery after sewage sludge thermal oxidation with chemical phosphorus recovery or after sewage sludge thermal oxidation with thermo chemical phosphorus recovery, the process recovers at least 80% of the incoming phosphorus load from the respective input material, such as sewage sludge ash.
  3. The phosphorus extracted out of the system is used either as a component material in a fertilising product compliant with Regulation (EU) 2019/1009 of the European Parliament and of the Council<sup>39</sup> or national fertiliser legislation where it is more stringent, or in another field of application, where the recovered phosphorus fulfils specified functions, in accordance with the respective regulations.
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Do no significant harm ('DNSH')

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(1) Climate change mitigation	N/A
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<sup>39</sup> Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products and amending Regulations (EC) No 1069/2009 and (EC) No 1107/2009 and repealing Regulation (EC) No 2003/2003 (OJ L 170, 25.6.2019, p. 1)

(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	Key performance parameters, including a mass balance for phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) and key environmental parameters in relation to the identity and quantity of emissions and waste streams generated, are monitored.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

## 2.2. Production of alternative water resources for purposes other than human consumption

### *Description of the activity*

Construction, extension, operation and renewal of facilities for producing reclaimed water<sup>40</sup>, facilities for harvesting rain and storm water and facilities for collection and treatment of grey water<sup>41</sup>.

These alternative water resources are used to replace water from abstraction or from the drinking water supply systems and can be used for aquifer recharge, irrigation, industrial reuse, recreation and any other municipal use.

The economic activity only includes the facilities and processes that make it possible for the water to be reused, such as facilities for recharging aquifers or surface water storages, and does not include the previous steps, such as primary and secondary steps in the waste water treatment plant or the subsequent steps, necessary for the final reuse of these alternative water resources, such as irrigation systems.

The economic activity does not include desalination (see Section 5.13. of Annex II to Delegated Regulation (EU) 2021/2139).

<sup>40</sup> 'Reclaimed Water' means urban waste water that has been treated in compliance with the requirements set out in Directive 91/271/EEC and which results from further treatment in a reclamation plant.

<sup>41</sup> 'Grey water' means untreated waste water that has not been contaminated by any toilet discharge. Grey water includes waste water from bathtubs, showers, bathroom sinks, clothes washing machines and laundry sinks.

This economic activity does not include supply of water for the purpose of human consumption (see Section 2.1. of Annex I).

The economic activities in this category could be associated with several NACE codes, in particular E37.00 and F42.9 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. For production of reclaimed water, the activity complies with the following criteria:

- (a) the reclaimed water is suitable for reuse. For use in agriculture, the reclaimed water complies with EU requirements, such as those set out in Regulation (EU) 2020/741 of the European Parliament and of the Council<sup>42</sup>. For uses other than agricultural irrigation, the final quality of reclaimed water is fit for purpose and compliant with existing national legislation and standards;
- (b) the water reuse project has been authorised by the competent authority, in the framework of integrated water management, having as a priority taken into account viable water demand management and efficiency measures, in consultation with the water management authorities. This may be proven by its inclusion in a water management plan or drought management plan. For reuse in agriculture, the assessments of the environmental risks, including those related to the quantitative status of water bodies, are fully taken into account in the risk management plans, required by Regulation (EU) 2020/741.

2. For facilities for harvesting rain and storm water, the activity complies with the following criteria:

- (a) the resource (rain or storm water) is segregated at source and does not include waste water;
- (b) the water is suitable for use after proper treatment depending on the level of contamination and ulterior use;
- (c) the facility is included in an instrument of urban planning or permitting, such as Master Plan or municipal planning.

3. For facilities for collection and treatment of grey waters, the activity complies with the following criteria:

- (a) the resource (grey water) is segregated at source;
- (b) the water is suitable for reuse after proper treatment depending on the level of contamination and ulterior reuse;
- (c) the performance is attested by a building certification or is available in the technical design documents.

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<sup>42</sup> Regulation (EU) 2020/741 of the European Parliament and of the Council of 25 May 2020 on minimum requirements for water reuse (OJ L 177, 5.6.2020, p. 32).

Do no significant harm ('DNSH')

(1) Climate change mitigation	For the production of reclaimed water, an assessment of the direct GHG emissions from the reuse treatment, has been performed <sup>43</sup> . The results are disclosed to investors and clients on demand.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	For the uses prescribed in the EU Regulation (EU) 2020/741, the activity complies with that Regulation or with applicable national legislation where it is stricter. Aquifer recharge and infiltration of surface runoff waters comply with the Directive 2006/118/EC or with applicable national legislation where it is stricter.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

### 2.3. Collection and transport of non-hazardous and hazardous waste

#### *Description of the activity*

Separate collection and transport of non-hazardous and hazardous<sup>44</sup> waste aimed at preparing for reuse<sup>45</sup> or recycling<sup>46</sup>, including the construction, operation and upgrade of facilities

<sup>43</sup> For example, following IPCC guidelines for national GHG inventories for waste water treatment (version of [adoption date]: [https://www.ipccnggip.iges.or.jp/public/2019rf/pdf/5\\_Volume5/19R\\_V5\\_6\\_Ch06\\_Wastewater.pdf](https://www.ipccnggip.iges.or.jp/public/2019rf/pdf/5_Volume5/19R_V5_6_Ch06_Wastewater.pdf))

<sup>44</sup> 'Hazardous waste' is waste which displays one or more of the hazardous properties listed in Annex III of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3). It includes streams such as hazardous waste fractions produced by households, waste oils, batteries, non-depolluted waste from electrical and electronic equipment (WEEE), non-depolluted end-of-life vehicle, medical waste, etc. A comprehensive classification of hazardous waste can be found in the European List of Waste (Commission Decision 2000/532/EC).

involved in the collection and transport of such waste, such as civic amenity centres and waste transfer stations, as a means for material recovery.

The economic activities in this category could be associated with several NACE codes, in particular E38.11, E38.12 and F42.9 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. All separately collected and transported waste that is segregated at source is intended for preparation for reuse or recycling operations.

2. Source segregated waste consisting of (i) paper and cardboard, (ii) textiles<sup>47</sup>, (iii) biowaste, (iv) wood, (v) glass, (vi) waste from electrical and electronic equipment (WEEE) or (vii) any type of hazardous waste is collected separately (i.e. in single fractions) and not commingled with other waste streams.

For source segregated non-hazardous waste other than the fractions mentioned above, collection in co-mingled fractions takes place only where it meets one of the conditions laid down in Article 10, paragraph 3, indents (a), (b) or (c) of Directive 2008/98/EC of the European Parliament and of the Council<sup>48</sup>.

Different types of hazardous waste may be placed together in a hazardous waste box, cabinet or similar solution under the condition that each waste type is properly packaged to keep the waste separate in the box or cabinet and that hazardous waste is sorted in waste types after collection from households.

3. For municipal waste streams, the activity complies with one of the following criteria:

- (a) the activity carries out municipal solid waste collection mainly via door-to-door collection schemes or supervised collection points to ensure a high level of separate collection and low rates of contamination;
  - (b) the activity carries out separate waste collection within publicly organised waste management systems where waste producers are charged based on a pay-as-you-
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<sup>45</sup> 'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing.

<sup>46</sup> 'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

<sup>47</sup> This includes textiles, footwear, and accessories, such as clothes/wearing apparel belts or hats.

<sup>48</sup> Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3).

throw (PAYT) mechanism, at least for the residual waste stream or there are other types of economic instruments in place that incentivize waste segregation at source<sup>49</sup>;

- (c) the activity carries out separate waste collection outside of publicly organised waste management systems that apply deposit and refund systems or other types of economic instruments that directly incentivize waste segregation at source.

4. The activity continuously monitors and assesses the quantity and quality of wastes collected based on predefined Key Performance Indicators (KPIs) to comply with all of the following criteria:

- (a) fulfilling reporting obligations vis-a-vis relevant stakeholders, such as public authorities, Extended Producer Responsibility (EPR) schemes;
- (b) periodically communicating relevant information to waste producers and the public in general, in cooperation with relevant stakeholders, such as public authorities, EPR schemes;
- (c) identifying needs for and undertaking corrective action where the KPIs deviate from applicable targets or benchmarks, in cooperation with relevant stakeholders, such as public authorities, EPR schemes, value chain partners.

Do no significant harm ('DNSH')

(1) Climate change mitigation	N/A
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	<p>The activity complies with the criteria set out in Appendix B to this Annex.</p> <p>The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in Article 2, points (21) of Regulation (EU) 2020/852 and in accordance with Directive 2008/56/EC, which requires in particular that the appropriate measures are taken to prevent or mitigate impacts in relation to the descriptors laid down in Annex I to that Directive, taking into account the Commission Decision (EU) 2017/8489 in relation to the relevant criteria and methodological standards for those descriptors.</p>

<sup>49</sup> See European Commission 'Guidance for separate collection of municipal waste', section 3.1 (Economic incentives), available at: <https://op.europa.eu/en/publication-detail/-/publication/bb444830-94bf-11ea-aac4-01aa75ed71a1>.

(5) Pollution prevention and control	<ol style="list-style-type: none"> <li>1. The activity utilises waste collection vehicles which conform to at least EURO V standards<sup>50</sup>.</li> <li>2. Hazardous waste is collected separately from non-hazardous waste to prevent cross-contamination. Appropriate measures are taken to ensure that during separate collection and transport, hazardous waste is not mixed either with other categories of hazardous waste or with other waste, substances or materials. Mixing includes the dilution of hazardous substances.</li> <li>3. Proper collection and handling prevent leakage of hazardous waste during collection, transport, storage and delivery to the treatment facility permitted to treat hazardous waste.</li> <li>4. Hazardous waste is packaged and labelled in accordance with the international and Union standards in force in the course of collection, transport and temporary storage.</li> <li>5. The operator collecting hazardous waste complies with record-keeping obligations, including as regards quantity, nature, origin, destination, frequency of collection, mode of transport and treatment method, set out in applicable Union and national legislation</li> <li>6. For waste from electrical and electronic equipment (WEEE): <ol style="list-style-type: none"> <li>(a) the main categories of end-of-life Electrical and Electronic Equipment (EEE) set out in Annex III to Directive 2012/19/EU are collected separately;</li> <li>(b) collection and transport preserve the integrity of WEEE and prevent the leakage of hazardous substances, such as ozone-depleting substances, fluorinated greenhouse gases or mercury contained in fluorescent lamps.</li> </ol> </li> <li>7. A management system is set up by the collection and logistics operator to manage environmental, health and safety risks.</li> </ol>
(6) Protection and restoration of biodiversity and ecosystems	N/A

## 2.4. Treatment of hazardous waste

### *Description of the activity*

Construction, upgrade, and operation of dedicated facilities for the treatment of hazardous waste as a means for material recovery operations.

<sup>50</sup> In accordance with Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (OJ L 151, 14.6.2018, p. 1).

This economic activity covers both in-situ and ex-situ material recovery operations of waste classified as hazardous waste in accordance with the European List of Waste established by Commission Decision 2000/532/EC<sup>51</sup> and in accordance with Annex III to Directive 2008/98/EC. This includes the following streams:

- (a) solvent reclamation or regeneration;
- (b) regeneration of acids and bases;
- (c) recycling or reclamation of inorganic materials other than metals or metal compounds;
- (d) recovery of components from catalysts;
- (e) re-refining of oil lubricants and other industrial waste oils (excluding for use as fuel or incineration).

The economic activity does not include the reuse of substances that do not qualify as waste, such as by-products or residues from production activities, in accordance with Article 5 of Directive 2008/98/EC.

The economic activity does not include recovery of materials from batteries, Waste from Electrical and Electronic Equipment (WEEE), End-of-Life Vehicles (ELV), inorganic materials from incineration processes, such as ashes, slags or dust. The economic activity does not include the treatment and recovery of nuclear waste.

The economic activities in this category could be associated with several NACE codes, in particular E38.22, E38.32, F42.9 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

#### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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The activities consist exclusively of the material recovery of secondary raw materials (including chemical substances and critical raw materials) from source segregated hazardous waste.

The recovered materials are substituting primary raw materials, including critical raw materials, or chemicals in production processes<sup>52</sup>.

The recovered materials comply with the applicable industry specifications, harmonized standards, or end-of-waste criteria, as well as relevant applicable Union and national legislation.

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<sup>51</sup> Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (OJ L 226, 6.9.2000, p. 3).

<sup>52</sup> Production processes refer to any kind of economic activity that produces a material, product or asset; recovered materials refer to the output of the recovery process.



Do no significant harm ('DNSH')

(1) Climate change mitigation	<p>The activity, on a life-cycle basis, does not increase GHG emissions as compared to the production based on the equivalent primary raw material(s).</p> <p>Life-cycle greenhouse gas emissions are calculated using Commission Recommendation 2013/179/EU<sup>53</sup> or, alternatively, using ISO 14067:2018<sup>54</sup> or ISO 14064-1:2018<sup>55</sup>. Quantified life-cycle GHG emissions are verified by an independent third party.</p>
(2) Climate change adaptation	<p>The activity complies with the criteria set out in Appendix A to this Annex.</p>
(3) Sustainable use and protection of water and marine resources	<p>The activity complies with the criteria set out in Appendix B to this Annex.</p> <p>Relevant techniques are deployed for the protection of water and marine resources, as set out in the best available techniques (BAT) conclusions for waste treatment<sup>56</sup>.</p> <p>The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in Article 2, points (21) of Regulation (EU) 2020/852 and in accordance with Directive 2008/56/EC, which requires in particular that the appropriate measures are taken to prevent or mitigate impacts in relation to the descriptors laid down in Annex I to that Directive, taking into account the Commission Decision (EU) 2017/8489 in relation to the relevant criteria and methodological standards for those descriptors.</p>
(5) Pollution	<p>All substances, and mixtures recovered comply with the applicable</p>

<sup>53</sup> Commission Recommendation of 9 April 2013 on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations (OJ L 124, 4.5.2013, p. 1).

<sup>54</sup> ISO 14067:2018(en), Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification, available at: <https://www.iso.org/obp/ui/#iso:std:iso:14067:ed-1:v1:en>.

<sup>55</sup> ISO 14064-1:2018(en), Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, available at: <https://www.iso.org/obp/ui/#iso:std:iso:14064:-1:en>.

<sup>56</sup> Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council (OJ L 208, 17.8.2018, p. 38-90).

prevention and control	<p>relevant legislation, such as Regulation (EC) No 1907/2006, Regulation (EU) 2019/1021, Regulation (EC) No 1272/2008 and Directive 2008/98/EC.</p> <p>The activity deploys relevant techniques for pollution prevention and control, as set out in the best available techniques (BAT) conclusions for waste treatment<sup>57</sup>.</p>
(6) Protection and restoration of biodiversity and ecosystems	<p>The activity complies with the criteria set out in Appendix D to this Annex.</p>

## 2.5. Recovery of bio-waste by anaerobic digestion or composting

### *Description of the activity*

Construction and operation of facilities for the treatment of separately collected bio-waste through anaerobic digestion or composting with the resulting production and utilisation of biogas, digestate, compost or chemicals.

The economic activities in this category could be associated with several NACE codes, in particular E38.21 and F42.9 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

### *Technical screening criteria*

#### Substantial contribution to the transition to circular economy

1. The bio-waste that is used for anaerobic digestion or composting is source segregated and collected separately. Where bio-waste is collected in biodegradable bags, the bags have the appropriate compostable certification standard EN 13432:2000<sup>58</sup>.
2. In these anaerobic digestion plants, source segregated bio-waste from separate collection constitutes at least 70% of the input feedstock, measured in weight, as an annual average. Co-digestion may cover up to 30% of the input feedstock of advanced bioenergy feedstock listed in Annex IX to Directive (EU) 2018/2001, which may not include contaminated feedstock coming from biomass fraction of mixed municipal and industrial waste. The input does not include feedstock excluded in Part II of Annex II to Regulation (EU) 2019/1009, for Component Material Category (CMC) 3 (Compost) in accordance with point (c) of that category and for Component Material Category (CMC) 5 (Digestate other than fresh crop digestate) in accordance with point (c) of that category.

<sup>57</sup> Implementing Decision (EU) 2018/1147.

<sup>58</sup> EN 13432:2000 Packaging - Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging.

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3. The activity produces one of the following:

- (a) compost or digestate complying with Regulation (EU) 2019/1009, in particular with requirements of Annex II on the Component Material Categories (CMC), referring specifically to CMC 3 (Compost) and CMC 5 (Digestate other than fresh crop digestate) or with national rules on fertilisers or soil improvers, with equal or stricter requirements compared to those of Regulation 2019/1009;
- (b) chemicals through the conversion of organic waste to carboxylates, carboxylic acids or polymers by fermentation with mixed cultures.

4. Quality assurance of the production process is performed using Module D1 set out in Regulation (EU) 2019/1009.

5. Compost and digestate complying with Regulation (EU) 2019/1009 or equivalent national rules is not landfilled.

The digestate is preferably composted after anaerobic digestion to maximise benefits to the soil it is applied to afterwards, and minimises some potential agro-environmental issues such as release of ammonia and nitrates.

6. Where anaerobic digestion is installed, the produced biogas is used directly for the generation of electricity or heat, or upgraded to bio-methane for use as a fuel (possibly with direct injection in the gas grid) or as industry feedstock to produce other chemicals or converted into hydrogen for use as a fuel.

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Do no significant harm ('DNSH')

(1) Climate change mitigation	A monitoring and contingency plan is in place to minimise methane leakage at the facility.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	For anaerobic digestion plants treating over 100 tonnes per day and for composting plants treating over 75 tonnes per day, the activity complies with best available techniques (BAT) conclusions for waste treatment <sup>59</sup> or equal or stricter national regulation, in order to reduce emissions to

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<sup>59</sup> Implementing Decision (EU) 2018/1147.

	<p>air and to improve the overall environmental performance as well as to select the waste input and to monitor or control the key waste and process parameters.</p> <p>Emissions to air and water are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set for, respectively, anaerobic and aerobic treatment of waste in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for waste treatment<sup>60</sup>.</p> <p>For anaerobic digestion, the nitrogen content of the digestate used as fertilisers or soil improver is communicated to the buyer or the entity in charge of taking off the digestate, either in compliance with Regulation (EU) 2019/1009, or with tolerance level <math>\pm 25\%</math>.</p>
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

## 2.6. Depollution and dismantling of end-of-life products

### *Description of the activity*

Construction, operation and upgrade of facilities dismantling and depolluting complex end-of-life products, movable assets and their components for materials recovery or preparation for re-use of components.

The economic activity includes the dismantling of end-of-life products and movable assets and their components of any type, such as automobiles, ships, computers, televisions, components from wind turbines, and other equipment, for material recovery. It also includes the dismantling and depollution of temperature exchange equipment.

The economic activity does not include the treatment of batteries stemming from separate collection or removed during dismantling and depollution activities, and the demolition and wrecking of buildings and other structures (see Section 3.3. of this Annex).

The economic activities in this category could be associated with several NACE codes, in particular E38.31, E38.32, E46.77 and E42.9 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

### *Technical screening criteria*

Substantial contribution to the transition to a circular economy

<sup>60</sup> Implementing Decision (EU) 2018/1147.

1. The economic activity dismantles and depollutes separately collected waste, in state-of-the-art facilities, from complex end-of-life products, such as automobiles, electrical and electronic equipment (EEE) or ships, in order to:

- (a) harvest parts and components that are suited for re-use;
- (b) separate non-hazardous and hazardous waste fractions suited for material recovery including recovery of critical raw materials;
- (c) remove hazardous substances, mixtures and components, so that these are contained in an identifiable<sup>61</sup> stream or that are an identifiable part of a stream within the treatment process, and send them to facilities permitted for proper treatment and disposal of hazardous waste;
- (d) enclose documentation of the materials that are sent for further treatment or reuse.

2. For the dismantling and depollution of scrap ships, the facility is included in the European List of ship recycling facilities as laid down in Commission Implementing Decision (EU) 2016/2323<sup>62</sup>. For the construction of a new facility or the upgrade of an existing facility which is not yet included in the European List of ship recycling facilities, the facility fulfils all requirements set out in Article 13 of Regulation (EU) No 1257/2013<sup>63</sup> and has applied to be included in the European List of ship recycling facilities.

3. For the dismantling and depollution of Waste from Electrical and Electronic Equipment (WEEE) and End-of-Life vehicles (ELVs), waste originates from collection points meeting the applicable requirements set by Union<sup>64</sup> and national legislation.

Do no significant harm ('DNSH')

(1) Climate change mitigation	N/A
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use	The activity complies with the criteria set out in Appendix B to this

<sup>61</sup> A substance, mixture or component is identifiable if it can be monitored to verify environmentally safe treatment.

<sup>62</sup> Commission Implementing Decision 2016/2323 establishing the European List of ship recycling facilities pursuant to Regulation (EU) No 1257/2013 of the European Parliament and of the Council on ship recycling (OJ L 345, 20.12.2016, p. 119).

<sup>63</sup> Regulation (EU) No 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC (OJ L 330, 10.12.2013, p. 1).

<sup>64</sup> At Union level, applicable requirements are set for WEEE by Directive 2012/19/EU and for ELVs by Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of-life vehicles (OJ L 269, 21.10.2000, p. 34).

and protection of water and marine resources	<p>Annex.</p> <p>The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in Article 2, points (21) of Regulation (EU) 2020/852 and in accordance with Directive 2008/56/EC, which requires in particular that the appropriate measures are taken to prevent or mitigate impacts in relation to the descriptors laid down in Annex I to that Directive, taking into account the Commission Decision (EU) 2017/8489 in relation to the relevant criteria and methodological standards for those descriptors.</p>
(5) Pollution prevention and control	<ol style="list-style-type: none"> <li>1. The facility is equipped to manage and store safely and in an environmentally sound manner hazardous substances, mixtures and components removed during the depollution operations.</li> <li>2. For end-of-life vehicles (ELVs), the facility complies with the requirements for storage, treatment, depollution and treatment operations set in Annex I to Directive 2000/53/EC.</li> <li>3. For waste from electrical and electronic equipment (WEEE), the facility complies with the requirements for proper treatment set out in Article 8 of Directive 2012/19/EU, in particular with the requirements for selective treatment for materials and components of WEEE set out in Annex VII to Directive 2012/19/EU and for storage and treatment operations set out in Annex VIII to Directive 2012/19/EU.</li> </ol> <p>The facility complies with normative requirements relevant to its activities for de-pollution set out in the standards EN 50625-1:2014<sup>65</sup>, EN 50625-2-1:2014<sup>66</sup>, EN 50625-2-2:2015<sup>67</sup>, EN 50625-2-3:2017<sup>68</sup> and EN 50625-2-4:2017<sup>69</sup>.</p> <p>Implementation of such measures can also be demonstrated through compliance with regulatory requirements that are equivalent to those set out in the EN standards mentioned above.</p> <p>For the treatment of WEEE containing volatile fluorocarbons (VFCs) and volatile hydrocarbons (VHCs) and WEEE containing mercury,</p>

<sup>65</sup> EN 50625-1:2014 Collection, logistics & Treatment requirements for WEEE - Part 1: General treatment requirements.

<sup>66</sup> EN 50625-2-1:2014 Collection, logistics and treatment requirements for WEEE - Part 2-1: Treatment requirements for lamps.

<sup>67</sup> EN 50625-2-2:2015 Collection, logistics & Treatment requirements for WEEE - Part 2-2: Treatment requirements for WEEE containing CRTs and flat panel displays.

<sup>68</sup> EN 50625-2-3:2017 Collection, logistics & treatment requirements for WEEE - Part 2-3: Treatment requirements for temperature exchange equipment and other WEEE containing VFC and/or VHC.

<sup>69</sup> EN 50625-2-4:2017 Collection, logistics & treatment requirements for WEEE - Part 2-4: Treatment requirements for photovoltaic panels.

	<p>emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges as set out in the best available techniques (BAT) conclusions for waste treatment<sup>70</sup>.</p> <p>4. For ship recycling, the facility complies with the requirements set out in Article 13 of Regulation (EU) No 1257/2013 and is included in the European List of ship recycling facilities established under that Regulation. The facility complies with the requirements set out in Article 7 of that Regulation with regards to the preparation of a ship-specific recycling plan prior to any recycling of a ship.</p>
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

## 2.7. Sorting and material recovery of non-hazardous waste

### *Description of the activity*

Construction, upgrade, and operation of facilities for the sorting and recovery of non-hazardous waste streams into high quality secondary raw materials using a mechanical transformation process.

The economic activity does not include sorting and recovery of combustible fractions from mixed residual waste for the production of refuse derived fuel, such as in mechanical and biological treatment plants.

The economic activities in this category could be associated with several NACE codes, in particular E38.32 and E42.9 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

### *Technical screening criteria*

Substantial contribution to the transition to a circular economy

#### 1. Origin of the feedstock material

The non-hazardous waste feedstock originates from one or multiple of the following sources:

- (a) separately collected and transported waste, including in commingled fractions<sup>71</sup>;
- (b) non-hazardous waste fractions originating from dismantling and depollution activities from end-of-life products;

<sup>70</sup> Implementing Decision (EU) 2018/1147.

<sup>71</sup> In accordance with Article 10(3) of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3) and with the national legislation and waste management plans.

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- (c) construction and demolition waste from selective demolition or otherwise segregated at source;
  - (d) non-hazardous waste fractions originating from sorting of mixed waste intended for recycling where the facility meets a defined quality of performance and the waste is coming from areas complying with separate collection obligations laid out in Directive 2008/98/EC.

## 2. Material recovery

The activity attains or exceeds existing plant-specific material recovery rates by competent authorities set in applicable waste management plans, permits or contracts or by Extended Producer Responsibility (EPR) schemes. The facility implements internally defined Key Performance Indicators (KPIs) to track performance or attainment of applicable recovery rates.

For materials for which separate collection is mandatory, the activity converts at least 50 %, in terms of weight, of the processed separately collected non-hazardous waste into secondary raw materials that are suitable for the substitution of primary raw materials in production processes.

## 3. Proper management of waste

The facility recovering non-hazardous waste has implemented Best Available Techniques (BAT) based on BAT 2 on improving overall environmental performance of the plant set out in the best available techniques (BAT) conclusions for waste treatment<sup>72</sup> including:

- (a) a waste characterisation procedure and a strict waste acceptance procedure regarding the quality of incoming waste;
- (b) a tracking system and inventory aiming to track the location and quantity of waste in the plant;
- (c) an output quality management system to ensure that the output of the waste treatment is in line with applicable quality requirements or standards, using for example existing EN or ISO standards;
- (d) the relevant waste segregation measures or procedures to ensure that waste, after separation, is kept separated depending on its properties in order to enable easier and environmentally safer storage and treatment;
- (e) the relevant measures to ensure waste compatibility prior to mixing or blending of waste;
- (f) the facility has installed the sorting and material recovery technology and processes to meet relevant technical specifications, quality standards or end-of-waste criteria. The activity uses state-of-the-art technologies suited to the waste fractions processed including optical separation by near-infrared spectroscopy or X-ray systems, density separation, magnetic separation or size separation.

## 4. Quality of secondary raw materials

The activity converts or allows the conversion of waste into secondary raw materials,

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<sup>72</sup> Implementing Decision (EU) 2018/1147.



including critical raw materials, that are suitable for the substitution of primary raw materials in production processes.

Do no significant harm ('DNSH')

(1) Climate change mitigation	N/A
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	For activities falling under the scope of the best available techniques (BAT) conclusions for waste treatment <sup>73</sup> , the activity implements the relevant techniques for pollution and prevention control and meets the relevant associated emission limits (BAT-AELs).
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

### 3. CONSTRUCTION AND REAL ESTATE ACTIVITIES

#### 3.1. Construction of new buildings

##### *Description of the activity*

The development of construction projects for residential and non-residential buildings by combining financial, technical, and physical means with a view to sell the building upon delivery or at a later date, as well as the construction of complete residential or non-residential buildings, on own account for sale or on a fee or contract basis.

The economic activities in this category could be associated with several NACE codes, in particular F41.1, F41.2 and F43, in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

<sup>73</sup> Implementing Decision (EU) 2018/1147.

Substantial contribution to the transition to a circular economy

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1. All generated construction and demolition waste is treated in accordance with Union waste legislation and with the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems<sup>74</sup>. At least 90 % (by weight) of the non-hazardous construction and demolition waste generated on the construction site is prepared for re-use<sup>75</sup> or recycling<sup>76</sup>. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC. The operator of the activity demonstrates compliance with the 90% threshold by reporting on the Level(s) indicator 2.2<sup>77</sup> using the Level 2 reporting format for different waste streams.
  2. The life-cycle Global Warming Potential (GWP) of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand<sup>78</sup>.
  3. Construction designs and techniques support circularity via the incorporation of concepts for design for adaptability and deconstruction as outlined in Level(s) indicators 2.3 and 2.4
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<sup>74</sup> EU Construction & Demolition Waste Management Protocol, Annex F, September 2016: <https://ec.europa.eu/docsroom/documents/20509/>.

<sup>75</sup> 'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

<sup>76</sup> 'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

<sup>77</sup> See Level(s) indicator 2.2: Construction and demolition waste and materials, User Manual: overview, guidance and instructions (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.2\\_v1.1\\_40pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.2_v1.1_40pp.pdf). For reporting, the Excel spreadsheet available on the Commission website is to be used: Construction and Demolition Waste (CDW) and materials excel template: for estimating (Level 2) and recording (Level 3) amounts and types of CDW and their final destinations (version 1.1), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

<sup>78</sup> The GWP is communicated as a numeric indicator for each life cycle stage expressed as kgCO<sub>2</sub>e/m<sup>2</sup> (of useful internal floor area) averaged for one year of a reference study period of 50 years. The data selection, scenario definition and calculations are carried out in accordance with EN 15978 (BS EN 15978:2011). The scope of building elements and technical equipment is as defined in the Level(s) common EU framework for indicator 1.2. Following the Level(s) indicator 1.2 reporting format, the indicator is communicated as GWP fossil, GWP biogenic, GWP land use and land use change, as well as the sum of these (GWP overall). Where a national calculation tool exists or is required for making disclosures or for obtaining building permits, the respective tool may be used to provide the required disclosure. Other calculation tools may be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework, see Level(s) indicator 1.2: Lifecycle Global Warming Potential (GWP), User manual: introductory briefing, instructions and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_1.2\\_v1.1\\_37pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_1.2_v1.1_37pp.pdf).

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respectively. Compliance with this requirement is demonstrated by reporting on the Level(s) indicators 2.3<sup>79</sup> and 2.4<sup>80</sup> at Level 2.

4. The use of primary raw material in the construction of the building is minimised through the use of secondary raw materials<sup>81</sup>. The operator of the activity ensures that the three heaviest material categories used to construct the building, measured by mass in kilogrammes, comply with the following maximum total amounts of primary raw material used:

- (a) for the combined total of concrete, natural or agglomerated stone a maximum of 70% of the material come from primary raw material;
- (b) for the combined total of brick, tile, ceramic, a maximum of 70% of the material come from primary raw material;
- (c) for biobased products, a maximum of 80% of the total material come from primary raw material;
- (d) for the combined total of glass, mineral insulation, a maximum of 70% of the total material come from primary raw material;
- (e) for non-biobased plastic, a maximum of 50% of the total material come from primary raw material;
- (f) for metals, a maximum of 30% of the total material come from primary raw material;
- (g) for gypsum, a maximum of 65% of the material come from primary raw material.

The thresholds are calculated by subtracting the secondary material from the total amount of each material category used in the works measured by mass in kilogrammes. Where the information on the recycled content of a construction product is not available, it is to be counted as comprising 100% primary raw material. Where a construction product is re-used, it is to be counted as comprising zero primary raw material. Compliance with this criterion is demonstrated by reporting in accordance with the Level(s) common EU framework for indicator 2.1<sup>82</sup>.

5. The operator of the activity uses electronic tools to describe the characteristics of the building as built, including the materials and components used, for the purpose of future

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<sup>79</sup> See Level(s) indicator 2.3: Design for adaptability and renovation, User manual: introductory briefing, instruction and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.3\\_v1.1\\_23pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.3_v1.1_23pp.pdf).

<sup>80</sup> See Level(s) indicator 2.4: Design for deconstruction user manual: introductory briefing, instructions and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.4\\_v1.1\\_18pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.4_v1.1_18pp.pdf).

<sup>81</sup> Including recycled or re-used products.

<sup>82</sup> See Level(s) indicator 2.1: Bill of Quantities, materials and lifespans, User manual: introductory briefing, instructions and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.1\\_v1.1\\_34pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.1_v1.1_34pp.pdf). For reporting, the Excel spreadsheet available on the Commission website is to be used: Bill of Quantities, materials and lifespans excel template: for estimating (Level 2) and recording (Level 3) purchases of material quantities and costs (version 1.2), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

maintenance, recovery, and reuse, for example using EN ISO 22057:2022 to provide Environmental Product Declarations<sup>83</sup>. The information is stored in a digital format and is made available to the client. In addition, the operator ensures the long-term preservation of this information beyond the useful life of the building by using the information managing systems provided by national tools, such as cadastre or public register.

Do no significant harm ('DNSH')

(1) Climate change mitigation	<p>The building is not dedicated to extraction, storage, transport or manufacture of fossil fuels.</p> <p>The Primary Energy Demand (PED)<sup>84</sup> setting out the energy performance of the building resulting from the construction does not exceed the threshold set for the nearly zero-energy building (NZEB) requirements in national regulation implementing Directive 2010/31/EU of the European Parliament and of the Council<sup>85</sup>. The energy performance is certified using an as built Energy Performance Certificate (EPC).</p>
(2) Climate change adaptation	<p>The activity complies with the criteria set out in Appendix A to this Annex.</p>
(3) Sustainable use and protection of water and marine resources	<p>Where installed, except for installations in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to Annex I to Delegated Regulation (EU) 2021/2139:</p> <ul style="list-style-type: none"> <li>(a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min;</li> <li>(b) showers have a maximum water flow of 8 litres/min;</li> <li>(c) WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum</li> </ul>

<sup>83</sup> ISO standard 22057:2022, Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM) (version of April 2022), <https://www.iso.org/standard/72463.html>

<sup>84</sup> The calculated amount of energy needed to meet the energy demand associated with the typical uses of a building expressed by a numeric indicator of total primary energy use in kWh/m<sup>2</sup> per year and based on the relevant national calculation methodology and as displayed on the Energy Performance Certificate (EPC).

<sup>85</sup> Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (OJ L 153, 18.6.2010, p. 13).

	<p>average flush volume of 3,5 litres;</p> <p>(d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre.</p> <p>To avoid impact from the construction site, the activity complies with the criteria set out in Appendix B to this Annex.</p>
(5) Pollution prevention and control	<p>Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex.</p> <p>Building components and materials used in the construction that may come into contact with occupiers<sup>86</sup> emit less than 0,06 mg of formaldehyde per m<sup>3</sup> of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m<sup>3</sup> of test chamber air, upon testing in accordance with CEN/EN 16516<sup>87</sup> or ISO 16000-3:2011<sup>88</sup> or other equivalent standardised test conditions and determination methods.<sup>89</sup></p> <p>Where the new construction is located on a potentially contaminated site (brownfield site), the site has been subject to an investigation for potential contaminants, for example using standard ISO 18400<sup>90</sup>.</p> <p>Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.</p>
(6) Protection and restoration of biodiversity and ecosystems	<p>The activity complies with the criteria set out in Appendix D to this Annex.</p> <p>The new construction is not built on one of the following:</p> <p>(a) arable land and crop land with a moderate to high level of soil fertility and below ground biodiversity as referred to the EU LUCAS survey<sup>91</sup>;</p>

<sup>86</sup> Applying to paints and varnishes, ceiling tiles, floor coverings, including associated adhesives and sealants, internal insulation and interior surface treatments, such as those to treat damp and mold.

<sup>87</sup> CEN/TS 16516: 2013, Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air.

<sup>88</sup> ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method.

<sup>89</sup> The emissions thresholds for carcinogenic volatile organic compounds relate to a 28-day test period.

<sup>90</sup> ISO 18400 series on Soil quality — Sampling.

<sup>91</sup> JRC ESDCA, LUCAS: Land Use and Coverage Area frame Survey (version of [adoption date]: <https://esdac.jrc.ec.europa.eu/projects/lucas>).

	<p>(b) greenfield land of recognised high biodiversity value and land that serves as habitat of endangered species (flora and fauna) listed on the European Red List<sup>92</sup> or the IUCN Red List<sup>93</sup>;</p> <p>(c) land matching the definition of forest as set out in national law used in the national greenhouse gas inventory, or where not available, is in accordance with the FAO definition of forest<sup>94</sup>.</p>
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### 3.2. Renovation of existing buildings

#### *Description of the activity*

Construction and civil engineering works or preparation thereof.

The economic activities in this category could be associated with several NACE codes, in particular F41 and F43 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

#### *Technical screening criteria*

Substantial contribution to the transition to a circular economy

1. All generated construction and demolition waste is treated in accordance with Union waste legislation and the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems and pre-demolition audits<sup>95</sup>. At least 70% (by weight) of the non-hazardous construction and demolition waste generated on the construction site is prepared for re-use<sup>96</sup> or recycling<sup>97</sup>. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Commission Decision

<sup>92</sup> IUCN, The IUCN European Red List of Threatened Species (version of [adoption date]: <https://www.iucn.org/regions/europe/our-work/biodiversity-conservation/european-red-list-threatened-species>).

<sup>93</sup> IUCN, The IUCN Red List of Threatened Species (version of [adoption date]: <https://www.iucnredlist.org>).

<sup>94</sup> Land spanning more than 0,5 hectares with trees higher than five meters and a canopy cover of more than 10 %, or trees able to reach those thresholds in situ. It does not include land that is predominantly under agricultural or urban land use, FAO Global Resources Assessment 2020. Terms and definitions. (version of [adoption date]: <http://www.fao.org/3/I8661EN/i8661en.pdf>).

<sup>95</sup> EU Construction & Demolition Waste Management Protocol, Annex F, September 2016: <https://ec.europa.eu/docsroom/documents/20509/>.

<sup>96</sup> ‘Preparing for re-use’ means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

<sup>97</sup> ‘Recycling’ means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

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2000/532/EC. The operator of the activity demonstrates compliance with the 70% threshold by reporting on the Level(s) indicator 2.2<sup>98</sup> using the Level 2 reporting format for different waste streams.

2. The life cycle Global Warming Potential (GWP)<sup>99</sup> of the building's renovation works has been calculated for each stage in the life cycle, from the point of renovation, and is disclosed to investors and clients on demand.

3. Construction designs and techniques support circularity via the incorporation of concepts for design for adaptability and deconstruction as outlined in Level(s) indicators 2.3 and 2.4 respectively. The operator of the activity demonstrates compliance with this requirement by reporting on the Level(s) indicators 2.3<sup>100</sup> and 2.4<sup>101</sup> at Level 2.

4. At least 50% of the original building is retained. This is to be calculated based on the gross floor area retained from the original building using the applicable national or regional measurement methodology, alternatively using the definition of 'floor area' contained in the International Property Measurement Standards<sup>102</sup>.

5. The use of primary raw material in the renovation of the building is minimised through the use of secondary raw materials<sup>103</sup>. The operator of the activity ensures that the three heaviest material categories that have been newly added to the building in the renovation of the building, measured by mass in kilogrammes comply with the following thresholds regarding the maximum amount of primary raw material used:

- (a) for concrete, natural or agglomerated stone a maximum of 85% of the material come from primary raw material;

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<sup>98</sup> See Level(s) indicator 2.2: Construction and demolition waste and materials, User Manual: overview, guidance and instructions (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.2\\_v1.1\\_40pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.2_v1.1_40pp.pdf). For reporting, the Excel spreadsheet available on the Commission website is to be used: Construction and Demolition Waste (CDW) and materials excel template: for estimating (Level 2) and recording (Level 3) amounts and types of CDW and their final destinations (version 1.1), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

<sup>99</sup> The GWP is communicated as a numeric indicator for each life cycle stage expressed as kgCO<sub>2</sub>e/m<sup>2</sup> (of useful internal floor area) averaged for one year of a reference study period of 50 years. The data selection, scenario definition and calculations are carried out in accordance with EN 15978 (BS EN 15978:2011. Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method). The scope of building elements and technical equipment is as defined in the Level(s) common EU framework for indicator 1.2. Where a national calculation tool exists, or is required for making disclosures or for obtaining building permits, the respective tool may be used to provide the required disclosure. Other calculation tools may be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework, see Level(s) indicator 1.2: Lifecycle Global Warming Potential (GWP), User manual: introductory briefing, instructions and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_1.2\\_v1.1\\_37pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_1.2_v1.1_37pp.pdf).

<sup>100</sup> See Level(s) indicator 2.3: Design for adaptability and renovation, User manual: introductory briefing, instruction and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.3\\_v1.1\\_23pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.3_v1.1_23pp.pdf).

<sup>101</sup> See Level(s) indicator 2.4: Design for deconstruction user manual: introductory briefing, instructions and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/productbureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.4\\_v1.1\\_18pp.pdf](https://susproc.jrc.ec.europa.eu/productbureau/sites/default/files/2021-01/UM3_Indicator_2.4_v1.1_18pp.pdf).

<sup>102</sup> International Property Measurement Standards: All Buildings. Published by the International Property Measurement Standards Coalition (IPMSC), <https://ipmsc.org/>.

<sup>103</sup> Including recycled or re-used products.

- (b) for brick, tile, ceramic, a maximum of 85% of the material come from primary raw material;
- (c) for biobased products, a maximum of 90% of the material come from primary raw material;
- (d) for glass, mineral insulation, a maximum of 85% of the material come from primary raw material;
- (e) for non-biobased plastic, a maximum of 75% of the material come from primary raw material;
- (f) for metals, a maximum of 65% of the material come from primary raw material;
- (g) for gypsum, a maximum of 83% of the material come from primary raw material.

The thresholds are calculated by subtracting the secondary material from the total amount of each material used in the works measured by mass in kilogrammes. Where the information on the recycled content of the construction product is not available, it is to be counted as comprising 100% primary raw material. Where a construction product is re-used, it is to be counted as comprising zero primary raw material. Compliance with this criterion is demonstrated by reporting in accordance with the Level(s) common EU framework for indicator 2.1<sup>104</sup>.

6. The operator of the activity uses electronic tools to describe the characteristics of the building as built, including the materials and components used, for the purpose of future maintenance, recovery, and reuse, for example using EN ISO22057:2022 to provide Environmental Product Declarations<sup>105</sup>. The information is stored in a digital format and is made available to the client. In addition, the operator of the activity ensures the long-term preservation of this information beyond the useful life of the building by using the information managing systems provided by national tools, such as cadastre or public register.

Do no significant harm ('DNSH')

(1) Climate change mitigation	The building is not dedicated to extraction, storage, transport or manufacture of fossil fuels.
(2) Climate change	The activity complies with the criteria set out in Appendix A to this

<sup>104</sup> See Level(s) indicator 2.1: Bill of Quantities, materials and lifespans, User manual: introductory briefing, instructions and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.1\\_v1.1\\_34pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.1_v1.1_34pp.pdf). For reporting, the Excel spreadsheet available on the Commission website is to be used: Bill of Quantities, materials and lifespans excel template: for estimating (Level 2) and recording (Level 3) purchases of material quantities and costs (version 1.2), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

<sup>105</sup> ISO standard 22057:2022, Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM) (version of April 2022), <https://www.iso.org/standard/72463.html>.



adaptation	Annex.
(3) Sustainable use and protection of water and marine resources	<p>Where installed as part of the renovation works, except for renovation works in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to Annex I to Delegated Regulation (EU) 2021/2139:</p> <p>(a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min;</p> <p>(b) showers have a maximum water flow of 8 litres/min;</p> <p>(c) WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres;</p> <p>(d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre.</p>
(5) Pollution prevention and control	<p>Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex.</p> <p>Building components and materials used in the construction that may come into contact with occupiers<sup>106</sup> emit less than 0,06 mg of formaldehyde per m<sup>3</sup> of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m<sup>3</sup> of test chamber air, upon testing in accordance with EN 16516 or ISO 16000-3:2011<sup>107</sup> or other equivalent standardised test conditions and determination methods.</p> <p>Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.</p>
(6) Protection and restoration of biodiversity and ecosystems	N/A

<sup>106</sup> Applying to paints and varnishes, ceiling tiles, floor coverings (including associated adhesives and sealants), internal insulation and interior surface treatments, such as to treat damp and mould.

<sup>107</sup> ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method (version of [adoption date]: <https://www.iso.org/standard/51812.html>).

### 3.3. Demolition and wrecking of buildings and other structures

#### *Description of the activity*

The demolition and wrecking of buildings, roads and runways, railways, bridges, tunnels, waste water treatment works, water treatment works, pipelines, wells and boreholes, power-generating plants, chemical plants, dams and reservoirs, mines and quarries, offshore structures, near shore works, ports, waterway works or land formation and reclamation<sup>108</sup>.

For projects associated with the activities Construction of New Buildings or Renovation of existing buildings (see Sections 3.1. and 3.2. of this Annex), where the demolition works and the construction or renovation works are procured under the same contract, the technical screening criteria for the construction or renovation activities apply.

The economic activity does not include the demolition and wrecking of buildings and other structures carried out as part of the activity Remediation of contaminated sites and areas (see Section 2.4. of Annex III).

The economic activities in this category could be associated with NACE code F43 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

#### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. Prior to the start of the demolition or wrecking activity, at least the following aspects from the Level 1 design concept checklist of the Level(s) indicator 2.2<sup>109</sup> checklist are discussed and agreed upon with the client:

- (a) definition of key performance indicators and target ambition level;
- (b) identification of project-specific constraints that may compromise the target ambition level (such as time, labour and space) and how to minimise these constraints;
- (c) details of the pre-demolition auditing procedure;
- (d) an outline waste management plan that prioritises selective deconstruction, decontamination and source separation of waste streams. Where these actions are not prioritised, an explanation is provided to justify why selective deconstruction, decontamination or source separation of waste streams are not technologically

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<sup>108</sup> See activities listed by the International Cost Management Standard in the ICMS: Global Consistency in Presenting Construction Life Cycle Costs and Carbon Emissions 3rd edition, Table 1: ICMS Projects with their corresponding codes, [https://icmscblog.files.wordpress.com/2021/11/icms\\_3rd\\_edition\\_final.pdf](https://icmscblog.files.wordpress.com/2021/11/icms_3rd_edition_final.pdf)

<sup>109</sup> See Level(s) indicator 2.2 : Construction and Demolition waste and materials, User manual: introductory briefing, instructions and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.2\\_v1.1\\_40pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.2_v1.1_40pp.pdf)

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feasible in the project. Cost or financial considerations are not an acceptable reason to avoid complying with this requirement.

2. The operator of the activity conducts a pre-demolition audit in line with the EU Construction and Demolition Waste Management Protocol<sup>110</sup>.
  3. All demolition waste generated during the demolition or wrecking activity is treated in accordance with Union waste legislation and the full checklist of the EU Construction and Demolition Waste Protocol<sup>111</sup>.
  4. At least 90 % (by weight) of the non-hazardous demolition waste generated on the demolition site is prepared for re-use<sup>112</sup> or recycling<sup>113</sup>. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Commission Decision 2000/532/EC. The operator of the activity demonstrates compliance with the 90% threshold by reporting on the Level(s) indicator 2.2<sup>114</sup> using the Level 3 reporting format for different waste streams. Alternatively, at least 95% for mineral<sup>115</sup> fraction and 70% for the non-mineral fraction for non-hazardous demolition waste is
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<sup>110</sup> Guidelines for the waste audits before demolition and renovation works of buildings. EU Construction and Demolition Waste Management, May 2018: <https://ec.europa.eu/docsroom/documents/31521/attachments/1/translations/en/renditions/native>. For reporting the estimates of Level 2 Demolition Waste, the Excel spreadsheet available on the Commission website is to be used: Construction and Demolition Waste (CDW) and materials excel template: for estimating (Level 2) and recording (Level 3) amounts and types of CDW and their final destinations (version 1.1), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

<sup>111</sup> Guidelines for the waste audits before demolition and renovation works of buildings. EU Construction and Demolition Waste Management, May 2018: <https://ec.europa.eu/docsroom/documents/31521/attachments/1/translations/en/renditions/native>. For reporting the estimates of Level 3 Construction and Demolition Waste, the Excel spreadsheet available on the Commission website is to be used: Construction and Demolition Waste (CDW) and materials excel template: for estimating (Level 2) and recording (Level 3) amounts and types of CDW and their final destinations (version 1.1), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>. For this, each type of demolition waste is tagged with the appropriate six-digit code from the European List of Waste established by Commission Decision 2000/532/EC. When including the type of waste treatment in the Excel spreadsheet (i.e. preparation for reuse, for recycling, material recovery, energy recovery or disposal), evidence is included that the economic operators receiving the waste has the technical capability to carry out this treatment. Such evidence may consist in a link to the company's webpages where this is documented or a signed statement from a representative of the company. Where the treatment takes place on the demolition site, such as onsite reuse or recycling, acceptable evidence may consist in a signed statement from a representative of the company.

<sup>112</sup> 'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

<sup>113</sup> 'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

<sup>114</sup> See Level(s) indicator 2.2: Construction and demolition waste and materials, User Manual: overview, guidance and instructions (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.2\\_v1.1\\_40pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.2_v1.1_40pp.pdf)

<sup>115</sup> See Annex III to Commission Regulation 849/2010 for a categorisation of mineral non-hazardous construction and demolition waste, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010R0849&from=EN>

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separately collected and prepared for reuse or recycled.

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Do no significant harm ('DNSH')

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(1) Climate change mitigation	<p>The building owner or contractor ensures that during renovation, refurbishing or demolition activities implying the removal of foam panels<sup>40</sup>, or laminated boards<sup>41</sup> installed in cavities or built up structures, that contain foams with Fluorinated greenhouse gases, saturated and unsaturated Hydrofluorocarbons, and Ozone Depleting Substances, as defined in Regulation (EU) No 517/2014 and in Regulation (EU) No 1005/2009, the emissions are avoided to the extent possible by handling the foams or the gases contained therein in a way that ensures the—reuse or destruction of the foam panels or the gases contained in the foams. The recovery of the gases contained in the foams is carried out by appropriately trained personnel.</p> <p>Where recovery of these foams is not technically feasible, the operator shall draw up documentation providing evidence for the infeasibility of the recovery in the specific case. Such documentation is retained for five years and is made available, on request.</p>
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	<p>The activity complies with the criteria set out in Appendix B to this Annex.</p> <p>The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in Article 2, points (21) of Regulation (EU) 2020/852 and in accordance with Directive 2008/56/EC, which requires in particular that the appropriate measures are taken to prevent or mitigate impacts in relation to the descriptors laid down in Annex I to that Directive, taking into account the Commission Decision (EU) 2017/8489 in relation to the relevant criteria and methodological standards for those descriptors.</p>
(5) Pollution prevention and control	Measures are taken to reduce noise, dust and pollutant emissions during demolition and wrecking works.
(6) Protection and restoration of	The activity complies with the criteria set out in Appendix D to this

### 3.4. Maintenance of roads and motorways

#### *Description of the activity*

Maintenance of streets, roads and motorways, other vehicular and pedestrian ways, surface work on streets, roads, highways, bridges or tunnels, aerodrome runways, taxiways and aprons, defined as all actions undertaken to maintain and restore the serviceability<sup>116</sup> and level of service of roads<sup>117</sup>. For bridges and tunnels, the economic activity only includes the maintenance of the road that runs on the bridge or through the tunnel. It does not include the maintenance of the bridge or tunnel itself.

The economic activity includes routine maintenance, which can be scheduled on a periodical basis. The economic activity also includes preventive maintenance and rehabilitation which are defined as works undertaken to preserve or restore serviceability and to extend the service life<sup>118</sup> of an existing road. The maintenance operation is mainly dedicated to pavement management and concerns only the following main elements of the road: binder course, surface course and concrete slabs. The roads in the scope of this economic activity are made of asphalt, concrete or asphalt concrete.

The economic activities in this category could be associated with NACE code F42.11 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

#### *Technical screening criteria*

#### Substantial contribution to the transition to a circular economy

1. Where main road elements (binder course, surface course or concrete slabs) are demolished or removed, 100% (by mass in kilogrammes) of the non-hazardous waste generated onsite is prepared for re-use<sup>119</sup> or recycling<sup>120</sup>. This excludes naturally occurring material referred to in

<sup>116</sup> 'Serviceability' refers to the conditions under which a built asset is still considered safe to use.

<sup>117</sup> 'Level of service' refers to a qualitative or quantitative measure to assess the infrastructure's ability to cater to the traffic demands placed on it.

<sup>118</sup> 'Service life' refers to the period of use in service, i.e. from the date of construction until the date of reconstruction or demolition.

<sup>119</sup> 'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

<sup>120</sup> 'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of

category 17 05 04 in the European List of Waste established by Commission Decision 2000/532/EC.

2. Where road elements are newly installed after demolition or removal, at least 50% (by mass in kilogrammes) of the structural road elements used are re-used or recycled materials.

3. The re-used or recycled materials are not moved over distances greater than 2.5 times the distance between the construction site and the nearest production facility for equivalent primary raw materials, to avoid that the use of re-used or recycled materials leads to higher CO<sub>2</sub> emissions than the use of primary raw materials.

4. Where newly installed, the binder course has a service lifetime no shorter than 20 years<sup>121</sup>.

5. The use of primary raw material for road furniture is minimised through the use of re-used or recycled products. The operator of the activity ensures that for metals, such as steel barriers, a maximum of 30% of the material come from primary raw material.

Do no significant harm ('DNSH')

(1) Climate change mitigation	A traffic congestion mitigation plan to be implemented during the maintenance works is presented.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	Measures are taken to reduce noise, dust and pollutant emissions during construction and maintenance works. When choosing road surface types, low noise road surfaces are preferred, in accordance with the comprehensive criterion B7 'minimum requirements for low-noise pavement design' of the EU Green Public Procurement Criteria for Road Design, Construction and Maintenance <sup>122</sup> .

organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

<sup>121</sup> Commission Staff Working Document. EU Green Public Procurement Criteria for Road Design, Construction and Maintenance, 2016, p. 17:  
<https://ec.europa.eu/environment/gpp/pdf/toolkit/roads/EN.pdf> .

<sup>122</sup> Commission Staff Working Document. EU Green Public Procurement Criteria for Road Design, Construction and Maintenance (SWD(2016) 203), 2016, p.15, column 'comprehensive criteria', GPP criteria Roads (2016) 203.pdf (europa.eu), (version of [adoption date]).

(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.
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### 3.5. Use of concrete in civil engineering

#### *Description of the activity*

Use of concrete for new construction, reconstruction, or maintenance<sup>123</sup> of civil engineering objects, except concrete road surfaces on streets, motorways, highways, other vehicular and pedestrian ways, bridges, tunnels and aerodrome runways, taxiways and aprons that are covered under the economic activity ‘Maintenance of roads and motorways’ (See Section 4.1. of this Annex).

An economic activity in this category could be associated with several NACE codes, in particular F42.12, F42.13, F42.2, F42.9, in accordance with the statistical classification for economic activities established by Regulation (EC) No 1893/2006.

#### *Technical screening criteria*

#### Substantial contribution to the transition to a circular economy

1. All generated construction and demolition waste is treated in accordance with Union waste legislation and the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems<sup>124</sup>. At least 90 % (by weight) of the non-hazardous construction waste deriving from concrete products is prepared for re-use<sup>125</sup> or recycling<sup>126</sup>. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Commission Decision 2000/532/EC. The operator of the activity demonstrates compliance with the 90% threshold by reporting on the Level(s) indicator 2.2 using the Level 2 reporting format for different waste streams.

2. Construction designs and techniques support circularity via the incorporation of concepts for adaptability and deconstruction as outlined in Level(s) indicators 2.3 and 2.4 respectively.

<sup>123</sup> ‘Maintenance of civil engineering objects’ is defined as all actions undertaken to maintain and restore the serviceability and level of service of roads.

<sup>124</sup> EU Construction & Demolition Waste Management Protocol, Annex F, September 2016: <https://ec.europa.eu/docsroom/documents/20509/>.

<sup>125</sup> ‘Preparing for re-use’ means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

<sup>126</sup> ‘Recycling’ means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Compliance with this requirement is demonstrated by reporting on the Level(s) indicators 2.3<sup>127</sup> and 2.4<sup>128</sup> at Level 2.

3. The use of primary raw material is minimised through the use of recycled products. For concrete, a maximum of 70% of the material comprises primary raw material. This criterion applies to in-situ poured concrete, pre-cast products, and all constituent materials, including any reinforcement.

4. The re-used or recycled materials is not moved over distances greater than 2.5 times the distance between the construction site and the nearest production facility for equivalent primary raw materials, to avoid that the use of re-used or recycled materials leads to higher CO2 emissions than the use of primary raw materials.

5. The operator of the activity uses electronic tools to describe the characteristics of the building as built, including the materials and components used, for the purpose of future maintenance, recovery, and reuse, for example using EN ISO 22057:2022<sup>129</sup> to provide Environmental Product Declarations<sup>130</sup>. The information is stored in a digital format and is made available to the client. In addition, the operator ensures the long-term preservation of this information beyond the useful life of the building by using the information managing systems provided by national tools, such as cadastre or public register.

6. Bridges, tunnels, dikes, and sluices are equipped with monitoring functions to predict maintenance needs.

Do no significant harm ('DNSH')

(1) Climate change mitigation	<p>The built asset is not dedicated to the extraction, storage, transport or manufacture of fossil fuels.</p> <p>The concrete used in this activity includes cement, for which the greenhouse gas emissions<sup>131</sup> from the production processes are:</p> <p>(a) for grey cement clinker, lower than 0,816<sup>132</sup> tCO2e per tonne of grey cement clinker;</p>
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<sup>127</sup> See Level(s) indicator 2.3: Design for adaptability and renovation, User manual: introductory briefing, instruction and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.3\\_v1.1\\_23pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.3_v1.1_23pp.pdf).

<sup>128</sup> See Level(s) indicator 2.4: Design for deconstruction user manual: introductory briefing, instructions and guidance (Publication version 1.1), [https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3\\_Indicator\\_2.4\\_v1.1\\_18pp.pdf](https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.4_v1.1_18pp.pdf).

<sup>129</sup> ISO 22057:2022, Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM) <https://www.iso.org/standard/72463.html>.

<sup>130</sup> ISO standard 22057:2022, Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM) (version of April 2022), <https://www.iso.org/standard/72463.html>.

<sup>131</sup> Calculated in accordance with Regulation (EU) 2019/331.

<sup>132</sup> Reflecting the median value of the installations in 2016 and 2017 (t CO2 equivalents/t) of the data collected in the context of establishing the Commission Implementing Regulation (EU) 2021/447,



	(b) for cement from grey clinker or alternative hydraulic binder, lower than 0,530 <sup>133</sup> tCO <sub>2</sub> e per tonne of cement or alternative binder manufactured.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	<p>Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex.</p> <p>Building components and materials used in the construction that may come into contact with occupiers<sup>134</sup> emit less than 0,06 mg of formaldehyde per m<sup>3</sup> of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m<sup>3</sup> of test chamber air, upon testing in accordance with CEN/EN 16516<sup>135</sup> or ISO 16000-3:2011<sup>136</sup> or other equivalent standardised test conditions and determination methods.<sup>137</sup></p> <p>Where the new construction is located on a potentially contaminated site (brownfield site), the site has been subject to an investigation for potential contaminants, for example by using standard ISO 18400.</p> <p>Measures are taken to reduce noise, dust and pollutant emissions during construction works.</p> <p>Where appropriate, given the sensitivity of the area affected, in particular in terms of the size of population and fauna affected, noise</p>

determined on the basis of verified information on the greenhouse gas efficiency of installations reported pursuant to Article 11 of Directive 2003/87/EC.

<sup>133</sup> Reflecting the median value of the installations in 2016 and 2017 (t CO<sub>2</sub> equivalents/t) of the data collected for grey cement clinker in the context of establishing the Commission Implementing Regulation (EU) 2021/447, multiplied by the clinker to cement ratio (0.65), determined on the basis of verified information on the greenhouse gas efficiency of installations reported pursuant to Article 11 of Directive 2003/87/EC.

<sup>134</sup> Applying to paints and varnishes, ceiling tiles, floor coverings, including associated adhesives and sealants, internal insulation and interior surface treatments, such as those to treat damp and mold.

<sup>135</sup> CEN/TS 16516: 2013, Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air.

<sup>136</sup> ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method.

<sup>137</sup> The emissions thresholds for carcinogenic volatile organic compounds relate to a 28-day test period.

	and vibrations from construction, use and maintenance of infrastructure are mitigated by acoustical planning introducing open trenches, wall barriers or other appropriate measures in compliance with Directive 2002/49/EC of the European Parliament and of the Council <sup>138</sup> .
(6) Protection and restoration of biodiversity and ecosystems	<p>The activity complies with the criteria set out in Appendix D to this Annex.</p> <p>Where protective areas of fauna and flora are affected, an Environmental Integration and a Restoration Plan<sup>139</sup> is developed and implemented in order to restore ecosystems across land and sea after completion of the proper civil engineering measure. For this, measures are taken, such as sustainable forest management and avoidance of deforestation, wildlife passages across the construction or nature-based solutions that protect, sustainably manage, and restore natural or modified ecosystems, and that address societal challenges effectively.</p>

## 4. INFORMATION AND COMMUNICATION

### 4.1. Provision of IT/OT data-driven solutions and software

#### *Description of the activity*

Manufacturing, development, installation, deployment or maintenance of:

- (a) software<sup>140</sup> and information technology (IT) or operational technology (OT) systems<sup>141</sup>, including artificial intelligence (AI) based solutions, such as for automated machine learning, built for the purpose of remote monitoring and predictive maintenance, including systems for
  - (i) remotely collecting, processing, transferring, and storing data from equipment, products or infrastructure during their use or operation;
  - (ii) analysing the data and generating insights about the operational performance and condition of the equipment, product or infrastructure;
  - (iii) providing remote maintenance and recommendations about measures required to avoid operational failure and maintain the equipment / product /

<sup>138</sup> Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise - Declaration by the Commission in the Conciliation Committee on the Directive relating to the assessment and management of environmental noise (OJ L 189, 18.7.2002, p. 12).

<sup>139</sup> For activities in third countries, the Kunming-Montreal global biodiversity framework under the Convention on Biological Diversity could be used as an alternative to the Environmental Integration and Restoration Plan. See: Convention on Biological Diversity, the Kunming-Montreal global biodiversity framework, 2022, available at: <https://www.cbd.int/article/cop15-cbd-press-release-final-19dec2022>.

<sup>140</sup> 'Software' includes on-premise and cloud-based software.

<sup>141</sup> 'IT or OT systems' include connectable products, sensors, analytics and other software, and information and communication technologies (ICT) for the transmission, storage and display of data and system management.

infrastructure in an optimal operating condition and prolong their useful life and reduce resource use and waste;

- (b) tracking and tracing software and IT or OT systems built for the purpose of providing identification, tracking and tracing of materials, products and assets through their respective value chains (including digital material and product passports) with the predominant objective to support the circularity of material flows and products or other objectives set out in Regulation (EU) 2020/852;
- (c) lifecycle assessment software supporting the lifecycle assessment and related reporting for products, equipment or infrastructures;
- (d) design and engineering software supporting the eco-design of products, equipment, and infrastructure;
- (e) supplier management software supporting green procurement of material, products and services with low environmental impact, but excluding the operation of market places supporting the trading of such goods;
- (f) lifecycle performance management software supporting the monitoring and assessment of the circularity performance of products, equipment, or infrastructures during their lifecycle.

The economic activities in this category could be associated with several NACE codes, in particular C26.3, C26.52, C27.12, C27.9, J58.29, J61, J62 and J63.1 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

An economic activity in this category is an enabling activity in accordance with Article 13(1), point (1), of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this Section.

#### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. The economic activity provides users and operators with capabilities specified below. Where these capabilities are part of a broader software or IT/OT offering, only specific software add-ons implementing these capabilities qualify. Where multiple capabilities are listed under a single bullet point below, all capabilities are to be met for the system or software to qualify.

2. For remote monitoring and predictive maintenance systems, the following capabilities qualify:

- (a) capturing sensor data from sensors (such as power, temperature, vibration, video, sound, viscosity) built into a product, equipment, or infrastructure; collecting and transmitting such data to a data repository (edge or cloud) for the purpose of data analysis; alerting the user to abnormal sensor values, and assessing the status of the product, equipment, or infrastructure, detecting wear and tear or electrical issues, or drawing conclusions about the exact nature of abnormal operating conditions by means of advanced analytical methods;
  - (b) predicting the expected remaining lifetime of a product, equipment, or infrastructure,
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and recommending measures to extend the remaining lifetime;

- (c) predicting an upcoming product, equipment or infrastructure failure and recommending measures to prevent such failure;
- (d) providing recommendations about the highest value next use cycle, such as reuse, recovering components through parts harvesting for remanufacture, or recycling, taking into consideration a combination of factors regarding the product's condition.

IT/OT systems aimed at (i) monitoring for the replacement of consumables<sup>142</sup>, such as printer ink, (ii) remote monitoring and remote maintenance of power generation plants that are more greenhouse gas intensive than 100 gCO<sub>2</sub>e/kWh, or (iii) monitoring and remote management of any type of fossil fuel engine do not qualify.

3. For tracking and tracing software and IT/OT systems, the following capabilities qualify:

- (a) providing identification, tracking and tracing of materials, products and assets through value chains in order to make accessible structured data (such as material content, substances, environmental information) required for lifecycle assessments or material declarations according to relevant standards, such as Commission Recommendation 2021/2279, ISO 14067<sup>143</sup> or ISO 14040<sup>144</sup>, and sharing of such data with value chain partners, consumers, and other economic actors in compliance with relevant standards regarding data modelling, interoperability, data privacy and data security;
- (b) provisioning and sharing of documents and data directly supporting the repair and maintenance of products and equipment, such as repair instruction, test equipment, wiring and connection diagrams, diagnostic fault and error codes, disassembly instructions;
- (c) supporting reverse logistics, including the take-back of products for remanufacturing, refurbishment or recycling, by managing steps and transactions in the take-back process, such as pick-up order placement, tracking of sales transaction data, decomposition of product into materials to be re-injected into circular material flows, and by optimising decisions to prevent downcycling and maximise resource recovery. Digital product passports meeting the minimum requirements in Union law are not considered as taxonomy aligned;
- (d) supporting optimisation and intensification of the use of products, through circular business models such as providing products as a service or peer-to-peer sharing.

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<sup>142</sup> 'Consumables' are non-durable commodities that are intended to be used, depleted or replaced. They may be required for the functioning of a consumer product, or be used in fabrication, without being incorporated into the finished product.

<sup>143</sup> ISO standard 14067: Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification (version of [adoption date]): <https://www.iso.org/standard/71206.html>.

<sup>144</sup> ISO standard 14040: Environmental management — Life cycle assessment — Principles and framework.

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4. For lifecycle assessment software, the following capabilities qualify:

- (a) supporting the life cycle assessment of products, equipment or infrastructure with software-implemented methods and algorithms according to relevant standards such as Commission Recommendation (EU) 2021/2279, ISO 14067<sup>145</sup> or ISO 14040<sup>146</sup>;
- (b) providing data required for lifecycle analysis, such as standard carbon emission values and other environmental impacts for frequently used products and materials or production steps;
- (c) providing recommendations for improving the design of a product, equipment, or infrastructure so as to minimize their material and carbon footprint.

5. For design and engineering software, the following capabilities qualify:

- (a) supporting users to formulate, document and manage product-specific circularity and other environmental design goals and requirements, such as design-for-remanufacturability, design-for-serviceability, minimal environmental impact from using or operating the product, minimal waste during production or construction and tailored production to eliminate over-specification and reduce material inputs;
- (b) supporting users to explore product designs for the purpose of assessing and optimizing product designs against specified circular or other environmental objectives, or finding the best trade-off between conflicting design goals, such as robustness vs. material use, greener material vs. costing or installing schedule or cost of downstream reuse and recycling systems;
- (c) validating a design through analysis and simulation against specified circularity and other environmental design goals and requirements;
- (d) supporting the computer-aided product design process – including mechanical, electrical, electronic or recipe design – with data and information about the impact of design and construction decisions on circularity and environmental performance;
- (e) supporting the selection of materials and components with a low environmental impact through the provision of data about market-available materials and components and their cost;
- (f) tracking the composition of a product over its life cycle with the predominant objective to manage its global level of circularity.

6. For supplier management software, the following capabilities qualify:

- (a) providing the user with information about suppliers and supplies of circular products, immediate products, components and materials that are designed for closed loop systems, reuse, remanufacturing or repurposing. The information provided exceeds the minimum information requirements in existing Union law<sup>147</sup>;
  - (b) supporting the management and tracking suppliers' compliance with standards and
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<sup>145</sup> ISO standard 14067: Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification (version of [adoption date]: <https://www.iso.org/standard/71206.html>).

<sup>146</sup> ISO standard 14040: Environmental management — Life cycle assessment — Principles and framework.

<sup>147</sup> Minimum information include energy labelling, information under the scope of Regulation (EC) No 1272/2008 or the Substances of Concern In articles as such or in complex objects (Products) established under Directive 2008/98/EC, safety information or warranty.

certifications related to the provision of such materials, products, and components;

- (c) supporting the exchange with suppliers of data required to verify the environmental performance of supplied materials, products, and components;
- (d) supporting the trading and matchmaking between suppliers and purchasers of circular, eco-designed or otherwise eco-friendly products, materials, and components;
- (e) supporting reverse logistics.

7. For lifecycle performance management software, the following capabilities qualify:

- (a) supporting the monitoring and assessment of the circularity performance<sup>148</sup> of a product, equipment or infrastructure during its lifecycle over time;
- (b) comparing circularity performance against original circularity design goals, analysing deviations and their root causes;
- (c) supporting the planning and documentation of measures required to prolong the useful life of the product, equipment or infrastructure, such as maintenance, retrofit, or other services;
- (d) supporting the impact assessment of such measures on circularity performance;
- (e) providing the user with data required to take decisions on the future use of the product, equipment, or infrastructure, such as retrofit, change of use, decommissioning and recycling.

8. All IT/OT data-driven solutions should meet the following criteria:

- (a) a waste management plan is in place and ensures maximal recycling at end of life of electrical and electronic equipment, including through contractual agreements with recycling partners, reflection in financial projections or official project documentation;
- (b) at its end of life, the equipment undergoes preparation for re-use, recovery or recycling operations, or proper treatment, including the removal of all fluids and a selective treatment in accordance with Annex VII to Directive 2012/19/EU.

Do no significant harm ('DNSH')

(1) Climate change mitigation	N/A
(2) Climate change	The activity complies with the criteria set out in Appendix A to this

<sup>148</sup> 'Circularity performance' is to be assessed on the basis of: i) product durability, reliability, reusability, upgradability, reparability, ease of maintenance and refurbishment; ii) presence of substances that inhibit the circularity of products and materials; iii) energy use or energy efficiency of products; iv) resource use or resource efficiency of products; v) recycled content in products; vi) ease of disassembly, remanufacturing and recycling of products and materials; vii) life-cycle environmental impact of products, including their carbon and environmental footprints; viii) preventing and reducing waste, including packaging waste.

adaptation	Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	The equipment used to operate the software meets the requirements laid down in Directive 2009/125/EC for servers and data storage products. The equipment used does not contain the restricted substances listed in Annex II to Directive 2011/65/EU, except where the concentration values by weight in homogeneous materials do not exceed the maximum values listed in that Annex.
(6) Protection and restoration of biodiversity and ecosystems	N/A

## 5. SERVICES

### 5.1. Repair, refurbishment and remanufacturing

#### *Description of the activity*

Repair<sup>149</sup>, refurbishment<sup>150</sup> and remanufacturing<sup>151</sup> of goods that have been used for their intended purpose before by a customer (physical person or legal person).

The economic activity does not include replacement of consumables<sup>152</sup>, such as printer ink, toner cartridges, lubricants for moving parts or batteries.

The economic activity relates to products that are manufactured by economic activities classified under the NACE codes C13 Manufacture of textiles, C14 Manufacture of wearing apparel, C15 Manufacture of leather and related products, C16 Manufacture of wood and of

<sup>149</sup> 'Repair' means the process of returning a faulty product to a condition where it can fulfil its intended use, either as a service or with a view to the subsequent resale of the repaired product.

<sup>150</sup> 'Refurbishment' means testing and where necessary repairing, cleaning or modifying a used product to increase or restore its performance or functionality or to meet applicable technical standards or regulatory requirements, with the result of making a fully functional product to be used for a purpose that is at least the one that was originally intended and to maintain its compliance with applicable technical standards or regulatory requirements originally conceived at the design stage.

<sup>151</sup> 'Remanufacturing' means a standardised industrial process that takes place within industrial or factory settings, in which products are restored to original as-new condition and performance or better, typically placed on the market with a commercial guarantee.

<sup>152</sup> Goods, components or materials that must be replaced regularly because they either wear out or are used up.

products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials, C22 Manufacture of rubber and plastic products, C23.3 Manufacture of clay building materials, C23.4 Manufacture of other porcelain and ceramic products, C25.1 Manufacture of structural metal products, C25.2 Manufacture of tanks, reservoirs and containers of metal, C25.7 Manufacture of cutlery, tools and general hardware, C25.9 Manufacture of other fabricated metal products, C26 Manufacture of computer, electronic and optical products, C27 Manufacture of electrical equipment, C28.22 Manufacture of lifting and handling equipment, C28.23 Manufacture of office machinery and equipment (except computers and peripheral equipment), C28.24 Manufacture of power-driven hand tools, C28.25 Manufacture of non-domestic cooling and ventilation equipment, C28.93 Manufacture of machinery for food, beverage and tobacco processing, excluding machinery for tobacco processing, C28.94 Manufacture of machinery for textile, apparel and leather production, C28.95 Manufacture of machinery for paper and paperboard production, C28.96 Manufacture of plastic and rubber machinery, C31 Manufacture of furniture and C32 Other manufacturing.

The economic activities in this category have no dedicated NACE codes as referred to in the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

#### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. The economic activity consists of extending the lifetime of products by repairing, refurbishing or remanufacturing products that have already been used for their intended purpose by a customer (physical person or legal person).

2. The economic activity complies with the following criteria:

- (a) the replaced parts, the refurbished products or the remanufactured products are covered by a sales contract where relevant and in accordance with provisions as regards conformity of the product, liability of the seller<sup>153</sup> (including the option of a shorter liability or limitation period for second hand products), burden of proof, remedies for lack of conformity, the modalities for the exercise of those remedies, repair or replacement of the goods, and commercial guarantees;
  - (b) the economic activity implements a waste management plan that ensures that the product's materials, particularly critical raw materials, and components that have not been reused in the same product are reused elsewhere, or, where reuse is not possible (due to damage, degradation or hazardous substances), are recycled, or, only where reuse and recycling is not viable, are disposed of in accordance with applicable Union and national legislation. For remanufacturing, the waste management plan is accessible to the public.
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#### Do no significant harm ('DNSH')

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<sup>153</sup> The conformity of the product and the period of liability of the seller are set in accordance with the relevant provisions of Directive (EU) 2019/771.



(1) Climate change mitigation	Where the activity involves on-site generation of heat/cool or co-generation including power, the direct GHG emissions of the activity are lower than 270 gCO <sub>2</sub> e/kWh.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	<p>The activity complies with the criteria set out in Appendix C to this Annex.</p> <p>Spare parts installed through repair, refurbishment or remanufacturing comply with all relevant Union rules on the restriction of the use of hazardous substances, of generic nature or with specific relevance to that product category, such as Regulation (EC) No 1907/2006, Directive 2011/65/EU, and Directive (EU) 2017/2102 of the European Parliament and of the Council<sup>154</sup>.</p> <p>For repair or refurbishment activities, those requirements do not apply to the original components that have been retained in the product.</p> <p>For installations falling within the scope of Directive 2010/75/EU of the European Parliament and of the Council<sup>155</sup>, emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the latest relevant best available techniques (BAT) conclusions and ensures at the same time that no significant cross-media effects occur.</p>
(6) Protection and restoration of biodiversity and ecosystems	N/A

<sup>154</sup> Directive (EU) 2017/2102 of the European Parliament and of the Council of 15 November 2017 amending Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (OJ L 305, 21.11.2017, p. 8).

<sup>155</sup> Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17).

## 5.2. Sale of spare parts

### *Description of the activity*

Sale of spare parts<sup>156</sup>.

The economic activity does not include replacement of consumables, such as printer ink, toner cartridges, lubricants for moving parts or batteries and maintenance.

The economic activity relates to spare parts that are used in products manufactured by economic activities classified under the NACE codes C26 Manufacture of computer, electronic and optical products, C27 Manufacture of electrical equipment, C28.22 Manufacture of lifting and handling equipment, C28.23 Manufacture of office machinery and equipment (except computers and peripheral equipment), C28.24 Manufacture of power-driven hand tools and C31 Manufacture of furniture.

The economic activities in this category have no dedicated NACE code as referred to in the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. The economic activity consists of the sale of spare parts beyond legal obligations.
2. The economic activity complies with the following criteria:
  - (a) each sold spare part is covered by a sales contract where relevant and in accordance with provisions as regards conformity of the product, liability of the seller<sup>157</sup> (including the option of a shorter liability or limitation period for second hand products), burden of proof, remedies for lack of conformity, the modalities for the exercise of those remedies, repair or replacement of the goods, and commercial guarantees;
  - (b) each sold spare part for a product replaces, or intends to replace in the future, an existing part in order to restore or upgrade the product's functionality, in particular in case where the existing part is broken.
3. Where the economic activity involves delivery of packaged products to customers (physical person or legal person) including when the activity is operated as an e-commerce<sup>158</sup>, the primary and secondary packaging of the product complies with one of the following criteria:

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<sup>156</sup> 'Spare part' means a separate part of a product that can replace a part of a product with the same or similar function. The product cannot function as intended without that part of the product. The functionality of a product is restored or is upgraded when the part is replaced by a spare part in line with Directive 2011/65/EU. Spare parts may be used parts.

<sup>157</sup> The conformity of the product and the period of liability of the seller are set in accordance with the relevant provisions of Directive (EU) 2019/771.

<sup>158</sup> 'E-commerce' can be defined generally as the sale or purchase of goods or services, whether between businesses, households, individuals or private organizations, through electronic transactions conducted via the internet or other computer-mediated (online communication) networks, see Eurostat Statistics

- (a) the packaging is made of at least 65% recycled material. Where the packaging is made from paper or cardboard, the remaining primary raw material are certified by the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification Schemes (PEFC International), or equivalent recognised schemes. Coatings with plastics or metals are not used. For plastic packaging only mono-materials without coatings are used, halogen-containing polymers are not used. A declaration of compliance is provided specifying the material composition of the packaging and the shares of recycled and primary raw material;
- (b) the packaging has been designed to be reusable within a reuse system<sup>159</sup>. The system for reuse is established in a way that ensures the possibility of reuse in closed-loop or open-loop system and is consistent with requirements for such system specified under point 1.a of the criteria for manufacture of plastic packaging goods set in Section 1.1. of this Annex.

Do no significant harm ('DNSH')

(1) Climate change mitigation	<p>Where the activity involves on-site generation of heat/cool or co-generation including power, the direct GHG emissions of the activity are lower than 270 gCO<sub>2</sub>e/kWh.</p> <p>The activity develops a strategy to account for and reduce the GHG emissions arising from transport along the value chain, including shipping and returns, to the extent these are traceable.</p>
(2) Climate change adaptation	<p>The activity complies with the criteria set out in Appendix A to this Annex.</p>
(3) Sustainable use and protection of water and marine resources	<p>The activity complies with the criteria set out in Appendix B to this Annex.</p>
(5) Pollution prevention and control	<p>The activity complies with the criteria set out in Appendix C to this Annex.</p> <p>Sold spare parts comply with all relevant EU rules on the restriction of the use of hazardous substances, of generic nature or with specific</p>

Explained Glossary, available at <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Category:Glossary>.

<sup>159</sup> 'Reusable' and 'reuse system' are defined and implemented in accordance with applicable European law and standards including any standards related to the number of rotations in a system for reuse.

	relevance to that product category, such as Regulation (EC) No 1907/2006, Directive 2011/65/EU, and Directive (EU) 2017/2102.
(6) Protection and restoration of biodiversity and ecosystems	N/A

### 5.3. Preparation for re-use of end-of-life products and product components

#### *Description of the activity*

Preparation for re-use of products and components at the end of life<sup>160</sup>.

The economic activity does not include repair activities, which are performed during the product's use stage.

The economic activity relates to products and their components manufactured by economic activities classified under the NACE codes C13 Manufacture of textiles, C14 Manufacture of wearing apparel, C15 Manufacture of leather and related products, C16 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials, C18 Printing and reproduction of recorded media, C22 Manufacture of rubber and plastic products, C23.3 Manufacture of clay building materials, C23.4 Manufacture of other porcelain and ceramic products, C25.1 Manufacture of structural metal products, C25.2 Manufacture of tanks, reservoirs and containers of metal, C25.7 Manufacture of cutlery, tools and general hardware, C25.9 Manufacture of other fabricated metal products, C26 Manufacture of computer, electronic and optical products, C27 Manufacture of electrical equipment, C28.22 Manufacture of lifting and handling equipment, C28.23 Manufacture of office machinery and equipment (except computers and peripheral equipment), C28.24 Manufacture of power-driven hand tools, C28.25 Manufacture of non-domestic cooling and ventilation equipment, C28.93 Manufacture of machinery for food, beverage and tobacco processing, excluding machinery for tobacco processing, C28.94 Manufacture of machinery for textile, apparel and leather production, C28.95 Manufacture of machinery for paper and paperboard production, C28.96 Manufacture of plastic and rubber machinery, C29 Manufacture of motor vehicles, trailers and semi-trailers, C30.1 Building of ships and boats, C30.2 Manufacture of railway locomotives and rolling stock, C30.3 Manufacture of air and spacecraft and related machinery, C30.9 Manufacture of transport equipment n.e.c., C31 Manufacture of furniture and C32 Other manufacturing.

The economic activities in this category have no dedicated NACE code as referred to in the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

<sup>160</sup> Preparing for re-use is an operation or set of operations by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. It is the highest waste treatment option on the waste hierarchy (after waste prevention).

Substantial contribution to the transition to a circular economy

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1. The activity prepares for re-use products or components of products that have become waste so that they can be re-used without any other pre-processing.
  2. The activity's waste feedstock originates from separately collected and transported waste in source segregated or comingled fractions<sup>161</sup>.
  3. The activity has implemented acceptance, safety and inspection procedures that comply with the following criteria:
    - (a) a procedure is in place to check the suitability for preparing for re-use or recycling, and that the activity implements a publicly available waste management plan, which ensures that discarded end-of-life products not suitable for preparing for re-use (due to damage, degradation or hazardous substances) are sent for recycling or, only where reuse and recycling is not viable, disposed of;
    - (b) the procedure which can be based on visual or manual external inspection against pre-determined criteria is suited to the category of discarded end-of-life products, which are prepared for re-use;
    - (c) proper training is provided and ensures that the re-use operators are qualified for the preparing for re-use activities of the discarded end-of-life products at stake.
  4. The activity uses the tools and equipment suited for the preparation for re-use of discarded end-of-life products.
  5. The activity has a system to report recovery rate and, where applicable, targets for preparing for re-use or recycling set out by Union or national legislation.
  6. The activity complies with the following criteria:
    - (a) the output of the activity are products or components of products which are suitable for re-use without any other processing;
    - (b) sold goods are covered by a sales contract where relevant and in accordance with provisions as regards conformity of the product, liability of the seller<sup>162</sup> (including the option of a shorter liability or limitation period for second hand products), burden of proof, remedies for lack of conformity, the modalities for the exercise of those remedies, repair or replacement of the goods, and commercial guarantees.
  7. For the preparation for re-use of Waste from Electrical and Electronic Equipment (WEEE),
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<sup>161</sup> In the Union, the activity is in line with Article 10(3) of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3), or sectoral Union legislation related to waste and the national legislation and waste management plans.

<sup>162</sup> The conformity of the product and the period of liability of the seller are set in accordance with the relevant provisions of Directive (EU) 2019/771.

the economic activity is permitted to treat waste and implements an environmental management system using ISO 14001:2015<sup>163</sup>, the EU Eco-Management and Audit Scheme (EMAS) in accordance with Regulation (EC) 1221/2009 of the European Parliament and of the Council<sup>164</sup> or equivalent and a Quality management system using ISO 9001:2015<sup>165</sup>.

Do no significant harm ('DNSH')

(1) Climate change mitigation	Where the activity involves on-site generation of heat/cool or co-generation including power, the direct GHG emissions of the activity are lower than 270 gCO <sub>2</sub> e/kWh.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	The activity complies with the criteria set out in Appendix C to this Annex. The activity implements safety procedures required to protect the health and safety of workers carrying out preparing for re-use operations.
(6) Protection and restoration of biodiversity and ecosystems	N/A

<sup>163</sup> ISO 14001:2015, Environmental management systems — Requirements with guidance for use, available at: <https://www.iso.org/standard/60857.html>.

<sup>164</sup> 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), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC (OJ L 342, 22.12.2009, p. 1).

<sup>165</sup> ISO 9001:2015, Quality management systems — Requirements, available at: <https://www.iso.org/standard/62085.html>.

## 5.4. Sale of second-hand goods

### *Description of the activity*

Sale of second-hand goods that have been used for their intended purpose before by a customer (physical person or legal person), possibly after repair, refurbishment or remanufacturing.

The economic activity relates to products manufactured by economic activities classified under the NACE codes C13 Manufacture of textiles, C14 Manufacture of wearing apparel, C15 Manufacture of leather and related products, C16 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials, C18 Printing and reproduction of recorded media, C22 Manufacture of rubber and plastic products, C23.3 Manufacture of clay building materials, C23.4 Manufacture of other porcelain and ceramic products, C25.1 Manufacture of structural metal products, C25.2 Manufacture of tanks, reservoirs and containers of metal, C25.7 Manufacture of cutlery, tools and general hardware, C25.9 Manufacture of other fabricated metal products, C26 Manufacture of computer, electronic and optical products, C27 Manufacture of electrical equipment, C28.22 Manufacture of lifting and handling equipment, C28.23 Manufacture of office machinery and equipment (except computers and peripheral equipment), C28.24 Manufacture of power-driven hand tools, C28.25 Manufacture of non-domestic cooling and ventilation equipment, C28.93 Manufacture of machinery for food, beverage and tobacco processing, excluding machinery for tobacco processing, C28.94 Manufacture of machinery for textile, apparel and leather production, C28.95 Manufacture of machinery for paper and paperboard production, C28.96 Manufacture of plastic and rubber machinery, C29 Manufacture of motor vehicles, trailers and semi-trailers, C31 Manufacture of furniture, C32 Other manufacturing.

The economic activities in this category could be associated with several NACE codes, in particular G46 and G47 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. The economic activity consists of selling a second-hand product that had been used for its intended purpose by a customer (physical person or legal person), potentially after its prior cleaning, repair, refurbishment or remanufacturing.
  2. The sold product is covered by a sales contract where relevant and in accordance with provisions as regards conformity of the product, liability of the seller<sup>166</sup> (including the option of a shorter liability or limitation period for second hand products), burden of proof, remedies
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<sup>166</sup> The conformity of the product and the period of liability of the seller are set in accordance with the relevant provisions of Directive (EU) 2019/771.

for lack of conformity, the modalities for the exercise of those remedies, repair or replacement of the goods, and commercial guarantees.

3. Where the product has been repaired, refurbished or remanufactured before reselling, the activity implements a waste management plan that ensures that the product's materials and components that have not been reused in the same product, are reused elsewhere, or where reuse is not possible (for example due to damage, degradation or hazardous substances), are recycled, or, only where reuse and recycling are not viable, are disposed of. For remanufacturing, the waste management plan is accessible to the public.

4. Where the economic activity involves delivery of packaged products to customers (physical person or legal person) including when the activity is operated as an e-commerce<sup>167</sup>, the primary and secondary packaging of the product complies with one of the following criteria:

- (a) the packaging is made of at least 65% recycled material. Where the packaging is made from paper or cardboard, the remaining primary raw material are certified by the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification Schemes (PEFC International), or equivalent recognised schemes. Coatings with plastics or metals are not used. For plastic packaging only mono-materials without coatings are used, halogen-containing polymers are not used. A declaration of compliance is provided specifying the material composition of the packaging and the shares of recycled and primary raw material;
- (b) the packaging has been designed to be reusable within a reuse system<sup>168</sup>. The system for reuse is established in a way that ensures the possibility of reuse in closed-loop or open-loop system and is consistent with requirements for such system specified under point 1.a of the criteria for manufacture of plastic packaging goods set in Section 1.1. of this Annex.

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Do no significant harm ('DNSH')

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(1) Climate change mitigation	<p>Where the activity involves on-site generation of heat/cool or co-generation including power, the direct GHG emissions of the activity are lower than 270 gCO<sub>2</sub>e/kWh.</p> <p>The activity develops a strategy to account for and reduce the GHG emissions arising from transport along the value chain, including shipping and returns, to the extent these are traceable.</p> <p>Where the sold product is initially produced by the activities classified</p>
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<sup>167</sup> 'E-commerce' can be defined generally as the sale or purchase of goods or services, whether between businesses, households, individuals or private organizations, through electronic transactions conducted via the internet or other computer-mediated (online communication) networks, see Eurostat Statistics Explained Glossary, available at <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Category:Glossary>.

<sup>168</sup> 'Reusable' and 'reuse system' are defined and implemented in accordance with applicable European law and standards including any standards related to the number of rotations in a system for reuse.



	<p>under NACE codes C29, and is a vehicle, mobility component, system, separate technical unit, part or a spare part as defined in Regulation (EU) 2018/858, when sold in the secondary market after 2025 and before 2030 the following criteria apply:</p> <ul style="list-style-type: none"> <li>(a) vehicles of category M1 and N1 classified as light-duty vehicles should comply with specific emissions of CO<sub>2</sub>, as defined in Article 3(1), point (h), of Regulation (EU) 2019/631 of the European Parliament and of the Council<sup>169</sup> lower than 50gCO<sub>2</sub>/km (low- and zero-emission light-duty vehicles);</li> <li>(b) vehicles of category L(82) with tailpipe CO<sub>2</sub> emissions equal to 0g CO<sub>2</sub>e/km calculated in accordance with the emission test laid down in Regulation (EU) 168/2013 of the European Parliament and of the Council(83);</li> <li>(c) vehicles of categories N2 and N3, and N1 classified as heavy-duty vehicles, not dedicated to transporting fossil fuels with a technically permissible maximum laden mass not exceeding 7,5 tonnes that are ‘zero-emission heavy-duty vehicles’ as defined in Article 3, point (11), of Regulation (EU) 2019/1242;</li> <li>(d) vehicles of categories N2 and N3 not dedicated to transporting fossil fuels with a technically permissible maximum laden mass exceeding 7,5 tonnes that are zero-emission heavy-duty vehicles’, as defined in Article 3, point (11), of Regulation (EU) 2019/1242 or ‘low-emission heavy-duty vehicles’ as defined in Article 3, point (12) of that Regulation.</li> </ul> <p>Where the product, initially produced by the activities classified under NACE codes C29, and being a vehicle, mobility component, system, separate technical unit, part or a spare part as defined in Regulation (EU) 2018/858, is sold in the secondary market after 2030 specific emissions of CO<sub>2</sub>, as defined in Article 3(1), point (h), of Regulation (EU) 2019/631 are zero.</p> <p>Where product sold is initially produced by the activities classified under NACE codes C26 or C27, the product complies with Directive 2009/125/EC and the implementing regulations adopted under that Directive.</p>
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.

<sup>169</sup> Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO<sub>2</sub> emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 (recast) (OJ L 111, 25.4.2019, p. 13).

(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	<p>The activity complies with the criteria set out in Appendix C to this Annex.</p> <p>Where the sold product is initially produced by the activities classified under NACE codes C29, and is a vehicle, mobility component, system, separate technical unit, part or a spare part as defined in Regulation (EU) 2018/858, it complies with the requirements of the most recent applicable stage of the Euro VI heavy duty emission type approval set out in accordance with Regulation (EC) No 595/2009 or with the requirements of the most recent applicable stage of the Euro 6 light-duty emission type-approval set out in accordance with Regulation (EC) No. 715/2007 or their successors. For road vehicles of categories M and N, tyres comply with external rolling noise requirements in the highest populated class and with Rolling Resistance Coefficient (influencing the vehicle energy efficiency) in the two highest populated classes as set out in Regulation (EU) 2020/740 of the European Parliament and of the Council and as can be verified from the European Product Registry for Energy Labelling (EPREL). Tyres comply with successors of Regulation (EC) No. 715/2007 and Regulation (EC) No 595/2009.</p>
(6) Protection and restoration of biodiversity and ecosystems	N/A

### 5.5. Product-as-a-service and other circular use- and result-oriented service models

#### *Description of the activity*

Providing customers (physical person or legal person) with access to products through service models, which are either use-oriented services, where the product is still central, but its ownership remains with the provider and the product is leased, shared, rented or pooled; or result-oriented, where the payment is pre-defined and the agreed result (i.e. pay per service unit) is delivered.

The economic activity covers products that are manufactured by economic activities classified under the NACE codes C13 Manufacture of textiles, C14 Manufacture of wearing apparel, C15 Manufacture of leather and related products, C16 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials,

C22 Manufacture of rubber and plastic products, C23.3 Manufacture of clay building materials, C23.4 Manufacture of other porcelain and ceramic products, C25.1 Manufacture of structural metal products, C25.2 Manufacture of tanks, reservoirs and containers of metal, C25.7 Manufacture of cutlery, tools and general hardware, C25.9 Manufacture of other fabricated metal products, C26 Manufacture of computer, electronic and optical products, C27 Manufacture of electrical equipment, C28.22 Manufacture of lifting and handling equipment, C28.23 Manufacture of office machinery and equipment (except computers and peripheral equipment), C28.24 Manufacture of power-driven hand tools, C28.25 Manufacture of non-domestic cooling and ventilation equipment, C28.93 Manufacture of machinery for food, beverage and tobacco processing, excluding machinery for tobacco processing, C28.94 Manufacture of machinery for textile, apparel and leather production, C28.95 Manufacture of machinery for paper and paperboard production, C28.96 Manufacture of plastic and rubber machinery, C31 Manufacture of furniture and C32 Other manufacturing.

The economic activities in this category could be associated with NACE code N.77 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

#### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. The activity provides the customer (physical or legal persons) with access to, and use of product(s), while ensuring that the ownership remains with the company providing this service, such as a manufacturer, specialist or retailer. The contractual terms and conditions ensure that all the following sub-criteria are met:

- (a) there is an obligation for the provider of the service to take back the used product at the end of the contractual agreement;
- (b) there is an obligation for the customer to give back the used product at the end of the contractual agreement;
- (c) the provider of the service remains owner of the product;
- (d) the customer pays for access to and use of the product, or the result of access to and use of this product.

2. The activity leads to an extended lifespan or increased use intensity of the product in practice. The product offered through this activity complies with one of the following criteria:

- (a) a lifespan of at least twice the Union average for that product category, accounting for differences between Business to Business (B2B) and Business to Customers (B2C) contexts, under the condition of an average use intensity;
  - (b) a use intensity of at least twice the Union average for that product category, accounting for differences between B2B and B2C contexts, under the condition of an average lifespan;
  - (c) a combination of extended lifespan and increased use intensity, so that 'lifespan times use intensity' is at least twice the Union average, accounting for differences
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between B2B and B2C contexts.

4. Where the economic activity involves delivery of packaged products to customers (physical person or legal person) including when the activity is operated as an e-commerce<sup>170</sup>, the primary and secondary packaging of the product complies with one of the following criteria:

- (a) the packaging is made of at least 65% recycled material. Where the packaging is made from paper or cardboard, the remaining primary raw material are certified by the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification Schemes (PEFC International), or equivalent recognised schemes. Coatings with plastics or metals are not used. For plastic packaging only monomaterials without coatings are used, halogen-containing polymers are not used. A declaration of compliance is provided specifying the material composition of the packaging and the shares of recycled and primary raw material;
- (b) the packaging has been designed to be reusable within a reuse system<sup>171</sup>. The system for reuse is established in a way that ensures the possibility of reuse in closed-loop or open-loop system and is consistent with requirements for such system specified under point 1.a of the criteria for manufacture of plastic packaging goods set in Section 1.1. of this Annex.

4. For wearing apparel, where the economic activity involves laundry and dry-cleaning of used wearing apparel, the activity complies with an ISO type 1 ecolabel or equivalent.

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Do no significant harm ('DNSH')

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(1) Climate change mitigation	<p>Where the activity involves on-site generation of heat/cool or co-generation including power, the direct GHG emissions of the activity are lower than 270 gCO<sub>2</sub>e/kWh.</p> <p>The activity develops a strategy to account for and reduce the GHG emissions arising from the services upstream and downstream of the value chain, including:</p> <ul style="list-style-type: none"><li>(a) intermediate products and raw materials;</li><li>(b) transport along the value chain, including shipping and returns;</li><li>(c) maintenance and operations, including laundry and cleaning;</li><li>(d) end of life, including waste management.</li></ul>
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<sup>170</sup> 'E-commerce' can be defined generally as the sale or purchase of goods or services, whether between businesses, households, individuals or private organizations, through electronic transactions conducted via the internet or other computer-mediated (online communication) networks, see Eurostat Statistics Explained Glossary, available at <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Category:Glossary>.

<sup>171</sup> 'Reusable' and 'reuse system' are defined and implemented in accordance with applicable European law and standards including any standards related to the number of rotations in a system for reuse.

(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	The activity complies with the criteria set out in Appendix C to this Annex.
(6) Protection and restoration of biodiversity and ecosystems	N/A

## 5.6. Marketplace for the trade of second-hand goods for reuse

### *Description of the activity*

Development and operation of marketplaces<sup>172</sup> and classifieds<sup>173</sup> for the trade (sale or exchange) of second-hand products, materials or components for reuse, where the marketplaces and classifieds act as an intermediary to match buyers seeking a service or product with sellers or providers of those products or services.

The economic activity covers marketplaces and classifieds supporting B2B, B2C and Customer to Customer (C2C) sales. The activity covers services such as buyer-seller linking, payment or delivery service.

The economic activity does not include the wholesale or retail trade of second-hand goods.

The economic activity relates to products that are manufactured by economic activities classified under the NACE codes C10 Manufacture of food products, C11 Manufacture of beverages, C13 Manufacture of textiles, C14 Manufacture of wearing apparel, C15 Manufacture of leather and related products, C16 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials, C17 Manufacture of paper and paper products, C18 Printing and reproduction of recorded media, C22 Manufacture of rubber and plastic products, C23.3 Manufacture of clay building materials, C23.4 Manufacture of other porcelain and ceramic products, C24 Manufacture of

<sup>172</sup> 'Marketplaces' are platforms that connect buyers and sellers and facilitate transaction via technology enablement or services, such as payment gateway or logistics services.

<sup>173</sup> 'Classifieds' are platforms that connect buyers and sellers.

basic metals, C25.1 Manufacture of structural metal products, C25.2 Manufacture of tanks, reservoirs and containers of metal, C25.7 Manufacture of cutlery, tools and general hardware, C25.9 Manufacture of other fabricated metal products, C26 Manufacture of computer, electronic and optical products, C27 Manufacture of electrical equipment, C28.22 Manufacture of lifting and handling equipment, C28.23 Manufacture of office machinery and equipment (except computers and peripheral equipment), C28.24 Manufacture of power-driven hand tools, C28.25 Manufacture of non-domestic cooling and ventilation equipment, C28.93 Manufacture of machinery for food, beverage and tobacco processing, excluding machinery for tobacco processing, C28.94 Manufacture of machinery for textile, apparel and leather production, C28.95 Manufacture of machinery for paper and paperboard production, C28.96 Manufacture of plastic and rubber machinery, C31 Manufacture of furniture and C32 Other manufacturing.

The economic activities in this category could be associated with several NACE codes, in particular J58.29, J61, J62 and J63.1 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

An economic activity in this category is an enabling activity in accordance with Article 13(1), point (1), of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this Section.

#### *Technical screening criteria*

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#### Substantial contribution to the transition to a circular economy

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1. The economic activity consists of developing and operating marketplaces or classifieds to support the sale or reuse of second-hand products, components or materials.

The activity enables the trade (sale or exchange) for reuse of second-hand goods as specified in the activity description that have already been used for their intended purpose before by a consumer or an organisation, with or without repair.

2. Where servers and data storage products are being used:

- (a) the equipment used comply with the requirements for servers and data storage products set out in accordance with Directive 2009/125/EC;
  - (b) the equipment used does not contain the restricted substances listed in Annex II to Directive 2011/65/EU, except where the concentration values by weight in homogeneous materials do not exceed those listed in that Annex;
  - (c) a waste management plan is in place to favour reuse as a priority and recycling at the end of life of electrical and electronic equipment, such as contractual agreements with recycling partners;
  - (d) at its end of life, equipment undergoes preparation for reuse, recovery or recycling operations, or proper treatment, including the removal of all fluids and a selective treatment in accordance with Annex VII to Directive 2012/19/EU.
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Do no significant harm ('DNSH')

(1) Climate change mitigation	Where data centres are being used and operated, the activity has demonstrated best efforts to implement the relevant practices listed as 'expected practices' in the most recent version of the European Code of Conduct on Data Centre Energy Efficiency, or in CEN-CENELEC document CLC TR50600-99-1 'Data centre facilities and infrastructures - Part 99-1: Recommended practices for energy management' <sup>174</sup> and has implemented all expected practices that have been assigned the maximum value of 5 according to the most recent version of the European Code of Conduct on Data Centre Energy Efficiency.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	The activity complies with the criteria set out in Appendix C to this Annex.
(6) Protection and restoration of biodiversity and ecosystems	N/A

<sup>174</sup> Issued on 1 July 2019 by the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC), (version of [adoption date]: [https://www.cenelec.eu/dyn/www/f?p=104:110:508227404055501:::FSP\\_ORG\\_ID,FSP\\_PROJECT,FS P\\_LANG\\_ID:1258297,65095,25](https://www.cenelec.eu/dyn/www/f?p=104:110:508227404055501:::FSP_ORG_ID,FSP_PROJECT,FS P_LANG_ID:1258297,65095,25)).

## APPENDIX A: GENERIC CRITERIA FOR DNSH TO CLIMATE CHANGE ADAPTATION

### I. Criteria

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

- (a) screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime;
- (b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
- (c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

- (a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
- (b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios<sup>175</sup> consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports<sup>176</sup>, scientific peer-reviewed publications, and open source<sup>177</sup> or paying models.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

<sup>175</sup> Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

<sup>176</sup> Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, <https://www.ipcc.ch/reports/>.

<sup>177</sup> Such as Copernicus services managed by the European Commission.



For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions<sup>178</sup> or rely on blue or green infrastructure<sup>179</sup> to the extent possible.

## II. Classification of climate-related hazards<sup>180</sup>

	Temperature-related	Wind-related	Water-related	Solid mass-related
Chronic	Changing temperature (air, freshwater, marine water)	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion
	Heat stress		Precipitation or hydrological variability	Soil degradation
	Temperature variability		Ocean acidification	Soil erosion
	Permafrost thawing		Saline intrusion	Solifluction
			Sea level rise	
Acute			Water stress	
	Heat wave	Cyclone, hurricane, typhoon	Drought	Avalanche
	Cold wave/frost	Storm (including blizzards, dust and sandstorms)	Heavy precipitation (rain, hail, snow/ice)	Landslide
	Wildfire	Tornado	Flood (coastal,	Subsidence

<sup>178</sup> Nature-based solutions are defined as ‘solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions’. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services.(version of [adoption date]: <https://ec.europa.eu/research/environment/index.cfm?pg=nbs> ).

<sup>179</sup> See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe’s Natural Capital (COM/2013/0249 final).

<sup>180</sup> The list of climate-related hazards in this table is non-exhaustive, and constitutes only an indicative list of most widespread hazards that are to be taken into account as a minimum in the climate risk and vulnerability assessment.

			fluvial, pluvial, ground water)	
			Glacial lake outburst	

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## **APPENDIX B: GENERIC CRITERIA FOR DNSH TO SUSTAINABLE USE AND PROTECTION OF WATER AND MARINE RESOURCES**

Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed with the aim of achieving good water status and good ecological potential as defined in Article 2, points (22) and (23), of Regulation (EU) 2020/852, in accordance with Directive 2000/60/EC<sup>181</sup> and a water use and protection management plan, developed thereunder for the potentially affected water body or bodies, in consultation with relevant stakeholders.

Where an Environmental Impact Assessment is carried out in accordance with Directive 2011/92/EU and includes an assessment of the impact on water in accordance with Directive 2000/60/EC, no additional assessment of impact on water is required, provided the risks identified have been addressed.

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<sup>181</sup> For activities in third countries, in accordance with applicable national law or international standards which pursue equivalent objectives of good water status and good ecological potential, through equivalent procedural and substantive rules, i.e. a water use and protection management plan developed in consultation with relevant stakeholders which ensures that 1) the impact of the activities on the identified status or ecological potential of potentially affected water body or bodies is assessed and 2) deterioration or prevention of good status/ecological potential is avoided or, where this is not possible, 3) justified by the lack of better environmental alternatives which are not disproportionately costly/technically unfeasible, and all practicable steps are taken to mitigate the adverse impact on the status of the body of water.

## APPENDIX C: GENERIC CRITERIA FOR DNSH TO POLLUTION PREVENTION AND CONTROL REGARDING USE AND PRESENCE OF CHEMICALS

The activity does not lead to the manufacture, placing on the market or use of:

- (a) substances, whether on their own, in mixtures or in articles, listed in Annexes I or II to Regulation (EU) 2019/1021, except in the case of substances present as an unintentional trace contaminant;
- (b) mercury and mercury compounds, their mixtures and mercury-added products as defined in Article 2 of Regulation (EU) 2017/852;
- (c) substances, whether on their own, in mixture or in articles, listed in Annexes I or II to Regulation (EC) No 1005/2009;
- (d) substances, whether on their own, in mixtures or in an articles, listed in Annex II to Directive 2011/65/EU, except where there is full compliance with Article 4(1) of that Directive;
- (e) substances, whether on their own, in mixtures or in an article, listed in Annex XVII to Regulation (EC) 1907/2006, except where there is full compliance with the conditions specified in that Annex;
- (f) substances, whether on their own, in mixtures or in an article, meeting the criteria laid down in Article 57 of Regulation (EC) 1907/2006 and identified in accordance with Article 59(1) of that Regulation, except if it is assessed and documented by the operators that no other suitable alternative substances or technologies are available on the market, and that they are used under controlled conditions<sup>182</sup>.
- (g) other substances, whether on their own, in mixtures or in an article, that meet the criteria of Regulation (EC) No 1272/2008 in one of the hazard classes or hazard categories mentioned in Article 57 of Regulation (EC) 1907/2006, except if it is assessed and documented by the operators that no other suitable alternative substances or technologies are available on the market, and that they are used under controlled conditions<sup>183</sup>.

<sup>182</sup> The Commission will review the exceptions from the prohibition from manufacturing, placing on the market or use of the substances referred to in points (f) and (g) once it will have published horizontal principles on essential use of chemicals.

<sup>183</sup> The Commission will review the exceptions from the prohibition from manufacturing, placing on the market or use of the substances referred to in points (f) and (g) once it will have published horizontal principles on essential use of chemicals.

## APPENDIX D: GENERIC CRITERIA FOR DNSH TO PROTECTION AND RESTORATION OF BIODIVERSITY AND ECOSYSTEMS

An Environmental Impact Assessment (EIA) or screening<sup>184</sup> has been completed in accordance with Directive 2011/92/EU<sup>185</sup>.

Where an EIA has been carried out, the required mitigation and compensation measures for protecting the environment are implemented.

For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment<sup>186</sup>, where applicable, has been conducted and based on its conclusions the necessary mitigation measures<sup>187</sup> are implemented.

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<sup>184</sup> The procedure through which the competent authority determines whether projects listed in Annex II to Directive 2011/92/EU is to be made subject to an environmental impact assessment (as referred to in Article 4(2) of that Directive).

<sup>185</sup> For activities in third countries, in accordance with equivalent applicable national law or international standards requiring the completion of an EIA or screening, for example, IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks.

<sup>186</sup> In accordance with Directives 2009/147/EC and 92/43/EEC. For activities located in third countries, in accordance with equivalent applicable national law or international standards, that aim at the conservation of natural habitats, wild fauna and wild flora, and that require to carry out (1) a screening procedure to determine whether, for a given activity, an appropriate assessment of the possible impacts on protected habitats and species is needed; (2) such an appropriate assessment where the screening determines that it is needed, for example IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

<sup>187</sup> Those measures have been identified to ensure that the project, plan or activity will not have any significant effects on the conservation objectives of the protected area.