VERIFICATION REPORT FOR EPD OF CONSTRUCTION PRODUCTS IN THE EPD IRELAND PROGRAMME

Revised for compliance with EN15804 +A2 2019

INTRODUCTION

This document serves as the verification report template of Environmental Product Declarations (EPDs), to meet the procedural and methodological requirements in ISO 14020/14025, the General Programme Instructions of the EPD Ireland Programme (V3 16/12/2025), the referenced Product Category Rules (PCR) (V3 16/12/2025) and the European standard EN15804:2012+A1:2013 and EN15804:2012+A2:2019.This document is based on the ECO Platform checklist in chapter 4 of the "Audit and Verification Guidelines for ECO EPD Programme Operators, Version 8 (December 2024)". This report is mandatory to use for verification of EN 15804-compliant EPDs for construction products in the EPD Ireland Programme.

A signed copy of this verification report shall be submitted to the Secretariat of the EPD Ireland Programme as a part of the EPD registration. The verification report shall be available to any person upon request.

EPD INFORMATION

Registration number of EPD(s): *As provided by the Secretariat*	
Product name(s):	
EPD owner:	
Product Category Rules (PCR): *Registration number, name and version*	
Validity date of EPD:	
Additional comments:	

VERIFICATION STATEMENT

I confirm that I have been independent in my role as a verifier in accordance with the requirements in General Programme Instructions, i.e. I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

I hereby confirm that, following the checks performed, in accordance with the limits of the scope of our appointment, nothing has come to the verifier's attention to suggest any data errors or deviations from the requirements by the above-referenced Environmental Product Declaration (EPD) and its project report, in terms of

- the underlying data collected and used for the LCA calculations,
- the way the LCA-based calculations have been carried out to comply with the calculation rules described in the reference PCR,
- the presentation of environmental performance included in the EPD, and

☐ other additional environmental information included in the declaration, if existent

with respect to the procedural and methodological requirements in ISO 14020:2000, ISO 14025:2006, the General Programme Instructions of the EPD Ireland Programme (V3 16/12/2025), the referenced Product Category Rules (V3 16/12/2025), ECO Platform rules and

☐ EN15804: 2012+A2:2019

I confirm that, in accordance with the limits of the scope of our appointment, the company-specific data has been examined as regards plausibility and consistency. The declaration owner is responsible for its factual integrity and that the product does not violate relevant legislation.

I confirm that I have sufficient knowledge and experience of the construction industry, the type of construction products covered by the EPD list above, relevant standards, and the geographical area of the EPD to carry out this verification.

Name and organization of verifier:	
Date and location:	
Signature: *Add as image or print and sign this document*	

Where review of verification is required ☐

I have reviewed the verification of this EPD but not the underlying LCA data, and in so far as is possible to ascertain this has been verified correctly in accordance with the procedures and checklists set out below.

Name and organization of verification reviewer:	
Date and location:	
Signature: *Add as image or print and sign this document*	

Additional information in case of EPD Process Certification:

Signature of EPD process owner: *Add as image or print and sign this document*	

VERIFICATION CHECKLIST PART A: CALCULATION RULES FOR THE LIFE CYCLE ASSESSMENT AND REQUIREMENTS ON THE PROJECT REPORT:

This checklist is based on the ECO Platform checklist of the ECO Platform Verification Guidelines including EN 15804+A2, version 8 December 2024.

The following issues must be checked as a minimum. The check consists of checking if the issue is described in the LCA project report and if it is line with the requirements and guidelines in the applicable reference (EN15804, other standards or PCR). Most issues are mandatory to check, some can be optional.

The Life cycle assessment must have been performed in accordance with the requirements of ISO 14040-14044, EN 15804 and applicable PCRs.

Any deviations from the requirements should be reported by the verifier. If the issue is in line with the requirements and/or accepted by the verifier, the box "done" can be ticked. If the LCA is already critically reviewed according to ISO 14044 before the verification, no duplications are necessary.

1	GENERAL INFORMATION	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
1.1	Commissioner of LCA study, LCA practitioner	M	EN 15804+A2, ch.8.2		
1.2	Date of issue of LCA report	M	EN 15804+A2, ch.8.2		
1.3	Statement that the Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804 and applicable PCR (date and version) and JRC characterization factors (version)	M	EN 15804+A2, ch.8.1+8.2 Applicable PCR, Joint Research Center: https://eplca.jrc.ec.europa.eu/LCDN/EN15804.xhtml		
1.3a	Has a specific complementary PCR (cPCR) developed by CEN Product Technical Committees for the product type or other applicable PCR in the order of preference set out in Section 5.3.2 of the General Programme Instructions been used. If no such PCR exists, has that absence been confirmed in the LCA Project Report.	M	EPD Ireland PCR v3, 1.0		
1.4	Statement of the version of EN 15804+A2:2019 used for the study and EPD	M	EN 15804+A2, ch.8.2		
1.5	Any other independent verification of the data given in the LCI/LCA documentation?	O			

2	STUDY GOAL	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
2.1	Reasons for performing the Life Cycle Assessment	M	EN 15804+A2, ch.8.2		
2.2	Intended application – (e.g. for EPD, databases, publication etc.)	M	EN 15804+A2, ch.8.2		
2.3	Target group (B2B, B2C)	M	EN 15804+A2, ch.8.2		
3	FUNCTIONAL UNIT / DECLARED UNIT	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
3.1	Functional / Declared unit, including relevant technical specification as required in "ECO Platform LCA calculation rules and specifications for EPDs"	M	EN 15804+A2, ch. 6.3.1-6.3.3 LCA Calculation Rules V2.0, ch. 3.3.1 Applicable c-PCR		
3.2	Indication of a factor for the conversion into kg, if applicable	M	EN 15804+A2, ch.6.3.2.1 + ch.6.3.3		
3.3	If product groups (similar products from one manufacturer and/or from different production plants) are declared: a. Description of the type of the EPD (e.g., average, representative product or worst-case product); b. Rules for the calculation of the declared results and content. c. Representativeness of the declared results and content.	M	EN 15804+A2, ch.8.2		
3.3a	The products included in an EPD for an "average product" shall not differ in any environmental impact indicator results by more than +/- 10%.	M	EPD Ireland PCR v3, ch2.4		
4	PRODUCT DESCRIPTION	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
4.1	Composition of the product	M	ISO 14025 LCA Calculation Rules V2.0, ch. 3.3.2		
4.2	Description of technical and functional characteristics and area of intended application in the building. In case of EPD of product group: at minimum qualitative	M	Applicable European product standard or c-PCR		

	description of the products included and qualitative description of ranges of functions.				
4.3	Flow diagram of the product system, divided into the life-cycle stages, showing the main processes included and the system boundary of the LCA. The stages may be further divided into modules.	M	EN 15804+A2, ch.7.2.1		
5	SYSTEM BOUNDARIES IN ACCORDANCE WITH THE MODULAR DESIGN OF THE EN 15804+A2	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
5.1	Description of Life Cycle stages/modules declared. Omissions of the life cycle stages declared. Visualization of system boundaries. Level of detail: see LCA calculation rules and specifications for EPDs	M	EN 15804+A2, ch. 5.2 (incl. Figure 1)		
5.2	Comprehensive declaration of modules A1-A3, C and D as a minimum requirement, unless conditions for excluding C and D in EN 15804+A2 ch. 5.2 are met.. If necessary, A1-A3 can be reported. separately or as an aggregated module. Recommendation: A1-A3 must, if declared separately, also be reported in an aggregated column to facilitate comparison	M	EN 15804+A2, ch. 5.2 and ch. 6.3.5 LCA Calculation Rules V2.0 ch. 3.3.3		
5.3	A1 to A3: System boundary • Clear description of what the modules cover; • System boundary to nature (e.g. in the case of forests between nature and technosphere); • Use of secondary materials and secondary fuels and waste produced (check end-of-waste state); Fulfilment of requirements regarding offsetting	M	EN 15804+A2, ch. 6.3.5.2 and applicable c-PCR		
5.4	A4 to A5 optional module, thus if covered: Clear description of system boundaries	M	EN 15804+A2, ch. 6.3.5.3 and applicable PCR		
5.5	Accounting impact of losses in the modules in which they arise	M	EN 15804+A2, ch. 6.2.1 and 6.3.5.1 and 6.3.5.3		
5.6	B1 to B7 (optional modules except for products using energy in the use stage, thus if covered): Clear description of system boundaries	M	EN 15804+A2, ch. 6.3.5.4 and applicable PCR		

5.7	**In addition for products using energy in the use stage: and permanently installed into building or infrastructure (defined by the manufacturer):** B6 is mandatory for EPDs of products using energy in the use stage. Any maintenance [B2], repair [B3] and replacement [B4] processes which are required to achieve the stated service life of the products using energy in the use stage and emissions in use [B1] shall also be described as technical scenarios in the EPD.	M	LCA Calculation Rules V2.0, ch. 4.2		
5.8	C1 to C4: Clear description of system boundaries	M	EN 15804+A2, ch. 6.3.5.5 and applicable PCR		
5.9	C3 Clear description of the declared scenarios, like: • Waste treatment • Materials for recycling • Impacts of recycling processes to achieve end of waste • Justification of the “end-of-waste state” a. Existing purpose b. Existing market or demand c. Compliance with technical requirements and legal guidelines Fulfils limit values for Substances of Very High Concern (SVHC)	M	EN 15804+A2, ch. 6.3.5.5 and table 8 and ch. 7.2.4.4 and annex B.1 and applicable PCR		
5.10	C4: Is the complete waste disposal process included in this module? Is its inclusion described transparently and is it plausible? Carefully check the correct allocation for deposition of biogenic material.	M	EN 15804+A2, ch. 6.3.5.5 and ch. 6.3.5.6 LCA Calculation Rules V2.0, ch. 3.3.3		
5.11	D: System boundary and loads and benefits of all relevant modules shall be clearly described and justified Assumptions with regard to substituted processes in D incl. year of reference (e.g. assumptions with regard to substitution of energy production).	M	EN 15804+A2, ch. 6.3.5.6		
5.12	D: Check if the net flow calculation is done correctly taking into consideration relevant factors, e.g.: • Processing losses over the whole life cycle (including collection and pre-processing); • Inputs in Modules A1 to A3 (and A4 to B5 if necessary); The reaching of end-of-waste-state by all waste flows considered in module D.	M	EN 15804+A2, ch. 6.3.5.6 and 6.4.3.3		

5.13	D: No benefits or loads of allocated co-products	M	EN 15804+A2, ch. 6.3.6.5 and ch.6.4.3.3		
6	POWER MIX	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
Info	**Terms & Definitions** Definitions for the terms “market based approach”, “location based approach”, “Contractual Instrument”, “reliable and transparent book and claim registry”, “Guarantee of Origin (GO)”, “Consumption Mix” and “Residual Mix” are provided in EN 15941, ISO 14067 and/or the LCA Calculation Rules ch. 2.5.		EN 15941, ISO 14067, LCA Calculation Rules ch. 2.5.	n/a	y
6.1	Do the main LCA results in the EPD follow the EPD programme’s the choice of the Market Based Approach (contractual instruments allowed) or Location Based Approach (contractual instruments not allowed) for electricity?	M	LCA Calculation rules ch. 2.5, EN 15941 and applicable PCR		
6.2	ELECTRICITY RULES IF THE MARKET BASED APPROACH IS USED FOR EITHER THE MAIN RESULTS OR FOR AN ADDITIONAL SET OF RESULTS (RULES IN ADDITION TO ISO 14067 AND EN 15941)	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
6.2.1	If Contractual instruments (e.g. GO) have been used: Is there a registry for the Contractual instrument and is the registry a “reliable and transparent book and claim registry”? Validity period of the certificates for contractual instruments (date of purchase must relate to period of production and primary data collection on site) in accordance with the PCR? If these requirements have not been met for contractual instruments, has the residual mix been used?	M	Applicable PCR LCA Calculation Rules V2.0, ch. 2.5		
6.2.2	For an entity producing more than one product, electricity with contractual instruments shall not be virtually allocated to specific products unless a separate energy supply and contract is in place.	M	LCA Calculation Rules V2.0, ch. 2.5		
6.2.4a	**For manufacturers in Ireland and Northern Ireland using grid electricity,** has the *EPD Ireland Additional Guidance on modelling of Electricity for Ireland and Northern Ireland v.1.0* been followed?	M	EPD Ireland Additional Guidance on modelling of Electricity for Ireland and Northern Ireland v.1.0		
6.2.4	**Foreground data in the control of the manufacturer**	M	ISO 14067		

	Case 1: Manufacturer produces energy on site or is directly linked to plants nearby: Check on electricity amounts from accounts. Check if any contractual instruments have been generated and supplied into the market for the electricity used on site. If yes, then has residual mix been used? In case of any export, contractual instruments can only cover the exported electricity Has the generated mix been modelled correctly? Note 1: Attention: LCA-models for CO2 figures (or other indicators in the contractual instrument documentation and/or on energy bills may be different from LCA models needed to fulfil EN 15804+A2/ISO 21930 and construction related PCRs/this guidance paper on hand. The figures cannot replace each other. **Case 2: Electricity provider chosen from national state with legislation for electricity labelling*, e.g. Austria, Ireland, Northern Ireland:** Energy mix is found in detail on contracts/bills, registry for proof of origin existing, no residual mix necessary, everything is marked. Check on documentation as required in ECO Platform LCA calculation rules and specifications for EPDs. For Ireland and Northern Ireland, see also 6.2.4a above. Has the provider energy mix been used? **Case 3: Electricity provider chosen from national state with a "reliable and transparent book and claim registry" [e.g. covered by AIB registry in EU]** If compliant contractual instruments (see 6.2.2) have been provided, has the supplier mix been used? If no compliant contractual instruments have been provided, has grid electricity been modelled with the residual mix using the published mix if provided [case 3a)], or calculated correctly based on the calculation rules ch. 2.5 if not published [case 3b)]? **Case 4a: EU/EAA national states (or federal states) with no registry** – all EU/EAA states are covered by the AIB registry, see Case 3a). **Case 4b: Energy provider from national states (or federal states) with no registry (outside EU and EEA).**		EN 15941 LCA Calculation Rules V2.0, ch. 2.5 table 2		

	Check the ECO Platform List to ensure that no registry exists for the state or region. Only if there have been no compliant Contractual Instruments and registry can consumption mix be used, otherwise consider as per the ECO Platform list (case 2/3a/3b/4c as appropriate). **Case 4c: Energy provider from national state with one or more registry but no "single reliable and transparent book and claim registry", outside EU, e.g. Turkey, US.** If valid contractual instruments been provided, has the contractual mix been modelled? If not, has grid electricity been modelled on the residual mix, calculated according to the calculation rules?				
6.2.4	Background data: have the recommendations of Table 3 in the LCA Calculation rules been applied? Has justification been provided if they have not been followed?	O	LCA Calculation Rules V2.0, ch. 2.5		
6.2.5	If location based modelling is used for the main results or to provide additional information, Has the national consumption mix shall been used (except for Australia, Brazil, Canada, China, India, and USA sub-national consumption mix shall be used)?	M	Applicable PCR		
6.2.5	Reporting and communication done as required in EN 15941:2024 and the LCA Calculation Rules. The report clearly states which approach [market based or location based] has been used for electricity for any modelling and results. The required documentation is provided, and meets the requirements of the Calculation Rules, for: - Any on-site generated electricity - Any directly connected electricity - Any electricity supplied for Case 2 - Any use of contractual instruments - The calculation of the residual mix The modelling of electricity [datasets used, reference year, GWP/kWh] in the foreground system has been described and meets the requirements of the calculation rules.	M	EN 15941 LCA Calculation Rules V2.0, ch. 3.3.4		

6.3	BIOGAS (EN 15941 ANNEX E2.3)	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
6.3.1	If a PO allows the calculation of Biogas (the market-based approach): Are the LCA Calculation rules for any on-site generated biogas or directly connected biogas met? Is the supplier able to guarantee that any contractual instrument meets the requirements for tracking and traceability, see EN 15941 E.2.1. For gas purchased without contractual instruments, has the residual mix been applied?	M	EN 15941 annex E2.1 and E2.33 LCA Calculation Rules V2.0, ch. 2.5.2		
6.3.2	If a PO does not allow the calculation of Biogas (the location-based approach): Has the consumption mix been used for gas from the gas network, and any biogas from a directly connected supplier and/or internally generated biogas been modelled based on the supplied gas?	M	LCA Calculation rules V2.0, ch. 2.5.2		
6.3.3	Additional information for transparency given as stated in the ECO Platform LCA Calculation Rules The report clearly states which approach [market-based or location-based] has been used for biogas for any modelling and results. The required documentation is provided, and meets the requirements of the Calculation Rules, for: - Any on-site generated biogas - Any directly connected biogas - Any use of contractual instruments - The calculation of the residual mix If gas accounts for more than 30 % of the total energy use in stage A1-A3, provide in the Project Report, the GWP-total of the applied gas mix in kg CO2e/MJ, e.g. of any gas purchased with contractual instruments or biogas used in the foreground manufacturing processes, and any other processes which the manufacturer has direct control over	M	LCA Calculation Rules V2.0, ch. 2.5.2; EN 15941, Annex E 2.8.1		

7	CRITERIA FOR EXCLUDING INPUTS AND OUTPUTS	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
7.1	Selection of the cut-off criteria, description of application of the criteria and assumptions in line with standard and PCR? (Note: A complete mass balance is normally not possible without high effort. This is why cutoff decisions are often based on assumptions about the effect of the flow that has been cut off).	M	EN 15804+A2, ch. 6.3.6 and ch. 8.2; applicable PCR		
7.2	List of excluded processes declared?	M	EN 15804+A2, ch. 8.2		
8	DATA COLLECTION, ELECTING BACKGROUND DATA	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
8.1	Selection and use of background data (specific and/or generic) justified and validity demonstrated?	M	EN 15804+A2, ch. 6.3.7; EN 15941; applicable PCR		
8.2	Data collection, including data quality issues, according to LCA rules: • Assessment period for each module considered in the Life Cycle Assessment (e. g. one year average, etc.) • Appropriateness of background data (temporal, geographical, technological) • Other assumptions concerning background data, e.g. about data gaps • Assumptions regarding energy and electricity production incl. year of reference. It should also be transparent which electricity/energy model is applied as avoided product if energy recovery is included in the optional Module D. • • Assumptions concerning other relevant background data where relevant for the system boundary	M	ISO 14044:2006, section 4.3.2; ISO 14040 section 5 (and 6); EN 15804+A2, ch. 6.3.7 + ch. 6.3.8; EN 15941, ch. 7.3.2		
9	VALIDITY OF DATA	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
9.1	• Represent a reference year within 10 years for generic data • Represent a reference year within 5 years for specific data • Specific data based on 1 year average, unless an exception is justified • Time period of 100 years over which inputs and outputs from the product system shall be accounted for. In case of landfill scenario: longer, if relevant	M	EN 15804+A2, ch. 6.3.8; EN 15941; applicable PCR		

	• Technical coverage of data complies with physical reality • Integrity of generic data records, system boundary and cut-off criteria for generic data records validity demonstrated				
9.2	Documentation on background data (specific and/or generic): • name of the data record, • its source (database, bibliographic source, etc.), • year of data collection and its representativeness Handling missing data Assessing data quality (time, geographical and technological representativeness). Documentation of data quality for all datasets with a major contribution, together contributing to at least 80% of the results of the core environmental impact indicators. Check on plausibility, comparison of indicators with others from datasets verified EN 15804+A2 and applicable c-PCR or comparison of flows and/or indicators of other significant sources of information.	M	Pr EN15941 and applicable PCR EN15804+A2, Annex E		
9.2a	The most recent version of the reference LCI database should be used; where the latest version is not used, has this been justified in the project report?	M	EPD Ireland PCR v3, ch.4.1		
10	DEVELOPMENT OF SCENARIOS AT PRODUCT LEVEL IN MODULES A4-A5-B-C-D	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
10.1	Statement that the scenarios included are currently in use and are representative for one of the most likely scenario alternatives. Declaration of additional representative scenarios for the relevant region(s) is permissible.	M	EN 15804+A2, ch. 6.3.9 ; applicable PCR		
10.2	Documentation of the relevant technical information, e.g. recycling or reuse rates, with references?	M	EN 15804+A2, table 8		
10.3	Default values in CEN TC c-PCR shall be checked on applicability for the product. Deviations from these values must be justified.	M	Applicable cPCR		
10.4	Do the scenarios for transport (A4 and C2) follow the guidance in EPD Ireland PCR v3, ch 5.1	M	EPD Ireland PCR v3, ch. 5.1		

10.5	Does the scenario for site wastage (A5) follow the guidance in in EPD Ireland PCR v3, ch 5.2	M	EPD Ireland PCR v3, ch. 5.2		
10.6	Do the scenarios for end of life (A5 and C1-C4 and Module D) follow the guidance in EPD Ireland PCR v3, ch 5.3	M	EPD Ireland PCR v3, ch. 5.3		
10.7	Does the scenario for Module D follow the guidance in EPD Ireland PCR v3, ch. 5.4	M	EPD Ireland PCR v3, ch. 5.3		
11	ALLOCATIONS	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
11.1	General allocation principles applied (avoidance of allocation, no double counting (unless due to a conservative assumption) or omissions, uniform application of the allocation rules, sum of inputs and outputs of a unit process after allocation must be equivalent to sum of inputs and outputs before allocation etc.)	M	ISO14044:2006 4.3.4		
11.2	Presentation and justification of allocations in the use of secondary materials or secondary fuels as raw materials	M	EN 15804+A2, ch. 6.4.3 + 8.2; applicable PCR		
11.3	Presentation and justification of allocations in the plant (allocation between different products/production lines in a plant)	M	EN15804+A2. 6.4.3 and 8.2 and applicable PCR		
11.4	If applicable: Presentation and justification of allocation of multi-input processes (e.g. landfilling or incineration)	M	Applicable PCR		
11.5	Allocation of co-products: • Selection of the allocation factors for co-product allocation and justification of allocation method; • Justification of allocation method (e.g. if data are not available to allocate according to the EN15804 rules); • Presentation of the energy and material flows in case of deviating allocation method; • No declaration of loads and benefits in Module D of flows undergone co-product allocation (which includes any flows leaving A1-A3).	M	EN15804+A2 ch. 6.4.3.2 and applicable PCR		
11.5.1	Economic allocation for processes producing co-products used in cement and concrete, e.g. blast furnace slag, crystallised basic oxygen furnace slag, fly ash, artificial gypsum, silica fume, aluminium-oxide-containing co-products • Economic allocation has been used to assign impact to these low value co-products.	M	EN 15804, CEN/TR 16970, EN 16908 and ECO Platform decision		

	• Even where the co-product's contribution to the overall revenue of the co-production process is less than 1%, economic allocation has been used to assess the impact, even if small, for low value co-products. When assessing steel, coal-fired electricity, and other processes producing these co-products, physical partitioning and other forms of allocation have not been used to assign impact to low value co-products.				
11.6	Documentation of allocation factors used and their (independent) sources				
11.7	Allocation process for reuse, recycling and recovery, check specifically: • End-of-waste state, Consistency with other scenarios of waste management • technology representativeness for the region / country • Specification and justification of end-of-waste state where applicable • If applicable (module D): Selecting substituted processes in accordance with the PCR or (if no PCR is available) representative actual processes NOTE: Application of the “polluter pays” principle to the use of waste as substitute for primary fuels or materials is left to the programme operator. • If applicable (substitution in Module D): Calculation of net flows • Conservative approach, i.e. choice of those scenarios and calculation rules that reflect the highest environmental impacts in comparison to other choices	M	EN 15804+A2, ch.6.4.3.3; applicable PCR		
11.8	Justification if generic data is applied which does not comply with the allocation principles, or where this compliance is not known and there are reasons to doubt it. Expert guess of how this influences the indicator results should be provided. If the allocation principles are not followed, or it is unknown whether or not they are followed, conservative assumptions should be done, for example by modifying the generic data.	M	Applicable pcr		
11.9	If applicable: transparent documentation of the calculations of biogenic carbon content of product and packaging in CO2-eq. The conversion factor shall be stated	M	EN 15804+A2, ch.7.2.5 (table 9)		

11.10	If packaging contains biogenic carbon, has this been balanced out in A1-A3 if A5 is not reported? If balanced out in A5, have other relevant impacts for A5 been reported?	M	LCA Calculation Rules V2.0, ch. 2.11		
12	LIFE CYCLE MODELLING INFORMATION	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
12.1	Transparent presentation of LCA modelling (for example by tables, screenshots from LCA software programmes etc.)	M	EN 15804+A2, ch.8.4		
12.2	Clear description how specific (company) data are used. Is the assignment of company data to the datasets provided by the LCA software, described transparently and is it plausible?	M	EN15804+A2 ch.8.4		
12.3	Assignment of process data to the LC modules plausible?	M	EN15804+A2 ch8.4		
12.4	For several locations/products: Presentation of modelling of all manufacturing sites (name and address to at least the country and city level: this applies for manufacturers and organizations providing products for sale/resellers) and products as well as any weighting thereof	M	EN15804+A2 ch 7.1 a) LCA calculation rules and specifications for EPDs 4.3.2		
12.5	Plausibility and consistency of data (mass balance, energy balance) This can only be fulfilled with random checks if the effort for a verification shall be reasonable, e. g.: • Check on equations and total sums: Mass balance of inputs and outputs, e.g. mass balance of (renewable and non-renewable) material resource (feedstock) inputs and outputs (products/waste/emissions/secondary materials) • CO and CO2 emissions coherent with the mass input of fossil energetic resources Are the energy indicators coherent with the energy resources used?	M	EN15804+A2 ch.8.4		
12.5a	Has the guidance on Treatment of incineration and co-incineration of waste and use of secondary fuels in production of cement and other construction products in the EPD Ireland PCR been followed	M	EPD Ireland PCR v3, ch. 6.2		
12.6	BMB (biomass balance) and/or recycled content allocation (attribution) approaches like “mass balance credit method” and/or “book and claim” methods as per ISO	M	LCA Calculation Rules V2.0, ch. 2.4 based on ECO Platform		

	22095 have not been used. Biogas used for energy purposes is exempt from this rule, if allowed by the PO, see 6.1.		position paper from January 2023		
13	INDICATORS OF THE LIFE CYCLE INVENTORY (LCI) AND LIFE CYCLE IMPACT ASSESSMENT (LCIA)	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
13.1	Presentation of the parameters in tabular form for all modules A1 to D.	M	EN 15804+A2, ch. 7.2.2.		
13.2	Presentation of the indicators describing: EN 15804+A2: • Core environmental impacts (13 indicators), • Additional environmental impacts (6 indicators) and coherent disclaimers. Table 4 shall be included in the EPD for the declared additional environmental indicators. If additional indicators are not declared, they shall be mentioned in the EPD, e.g. as an entry of "ND" to Table 4 or as text. • the use of resources (10 indicators), • the waste categories (3 indicators) • output material flows (4 indicators) And other environmental performance indicators required by the PCR. Note: The sum of GWP fossil + GWP biogenic + GWP Land use and land use change shall be equivalent to GWP Total	M	EN 15804+A2, ch. 6.5, 7.2.3 – 7.2.5, Table 4; applicable PCR		
13.3	Has the packaging been included in the declaration of the LCI related indicators, e.g. in the quantification of the content of primary energy?	M	EN 15804+A2, ch.6.3.5.2 + ch. 7.2.5 (Table 9), also some other chapters regarding modules B and C		
13.4	Selection of correct characterisation factors and elimination of long-term emissions (> 100 years) Has the latest version of characterisation factors released by JRC been used taking account of the period of transition? Version of CF Factors to be stated to facilitate comparison	M	EN15804+A2 ch.8.2 and annex C and applicable PCR Note: some CEN TC product c-PCR documents contain additional and/or more appropriate CF Factors missing in the JRC tables.		

13.5	Justification of indicators and characterisation methods applied in case they are not among the mandatory indicators/methods of the EN 15804+A2 and applicable PCR	M			
13.6	Information on the environmental impacts in the project report: • Reference to characterisation models and factors Statement that the estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks	M	EN15804+A2 ch.8.2		
14	INTERPRETATION	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
14.1	Interpretation of the results based on a dominance/ contribution analysis of elected indicators?	O			
14.2	Is the relationship between the results of the LCI and the results of the LCIA plausible? Examples: • Relationships are checked, e.g. wood-mass balance, input-material, compare with order of scale/order of magnitude. • Insight into the model is important, where does the link between life cycle inventory and impact happen in the model. The link happens in the software… • Check orders of scale/magnitude, especially for indicators that are changed manually. • Currently, the following results shall be the same: Coherence of primary energy (n.e.) with ADPF values. • Check allocations, consistency with physical flows	M	EN 15804+A2, ch.8.2		
14.3	Assumptions and restrictions as regard the interpretation of results in the EPD, in terms of both methods and data	M	EN 15804+A2, ch.8.2		
14.4	In the case where an EPD is for a product group a statement to that effect shall be included in the declaration together with a description of the range/ variability of the LCIA results if significant; The description of the range can be qualitative or quantitative	M	EN 15804+A2, ch. 7.1 + 8.2; EN 15941, ch. 7.3.2		

14.5	Interpretation of the influence of data quality. An assessment of data quality should be provided if the data quality differs for significant data.	O	EN 15804+A2, ch. 6.3.8 + 8.2 + Annex E; ISO 14040 and EN15941		
14.6	Comprehensive transparency as regards value decisions, justifications and expert judgements, i.e. transparency to avoid misinterpretation	M	EN 15804+A2, ch.8.2		
15	ADDITIONAL INFORMATION	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
15.1	If additional information is given, check the documentation: • Laboratory results/measurements listed in the content declaration • Laboratory results/measurements listed in the functional/ technical performance • Documentation on the declared technical information on individual life cycle stages not taken into consideration in the construction product's LCA (but applicable building assessment (e.g. transport routes, energy consumption during the use stage, cleaning cycles etc.) • Laboratory results/measurements pertaining to the declared emissions in indoor air, oil or water during the use stage • All declared information is in line with requirements in the PCR	M	EN 15804+A2, ch.8.3 ; applicable PCR		
15.2	Where relevant: ensure that information additional to EN 15804+A2 is either verified or has been verified/ certified by others e.g. by reference to standards or other publicly accepted test requirements.	M	LCA Calculation Rules, V2.0, ch. 2.13		
16	LIFESPAN AND REFERENCE SERVICE LIFE (RS)	MANDATORY (M) OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
16.1	The RSL shall be declared, if applicable (i.e., if defined as part of the functional unit). The lifespan of the product shall be declared, if applicable (e.g., if module B is declared). The lifespan may or may not be identical to the RSL Note: The lifespan shall be representative for the declared product and the calculation of the lifespan shall be documented and, if relevant, follow the PCR.	M	EN 15804+A2, ch. 6.3.4 and normative Annex A		

EXAMPLE DIALOGUE BETWEEN VERIFIER/PROGRAM OPERATOR AND EPD OWNER/PRACTITIONER DURING THE VERIFICATION PROCESS

Any deviations from the requirements for the Project Report and the EPD must be reported by the verifier, and the dialogue between verifier and LCA practitioner should be made transparent including the improvements made following the verification process. This dialogue may be documented separately from the checklist. The format to do so is free to choose. Examples are given below:

Example:

Verification Issue Number	Question / Comment	Response

Example (partly based on XP TS14071):

N.	CHAPTER ARTICLE PARAGRAPH	ALINEA TABLE	TYPE OF COMMENT (ED, TE, GE)	REFERENCE TO ECO CHECKLIST (OR PROGRAMME RULES) SECTION	VERIFIER COMMENT AND RECOMMENDATION	EPD OWNER/LCA PRACTITIONER ANSWER	FINAL VERIFIER STATEMENT
1							
2							
...							

VERIFICATION CHECKLIST PART B: REQUIREMENTS ON THE EPD

This whole section is mandatory to verify. The rules for the EPD format can be found in the EN15804 Section 7 and the EN15942: everything that is included in the master ITM (information transfer matrix), should somewhere be documented in the EPD. Additional information in the EPD shall be verified too.

The EPD Ireland EPD template is based on the ECO Platform developed voluntary "Best Practice example" for the EPD format. The Best Practice example describes the agreed content of an EPD for members of the ECO Platform. In addition to the EPD content requirements of EN 15804 ch.7 (both revisions/amendments – A1 and A2 respectively) and EN 15942, this includes:

- A statement of the applied background database and software,
- A description of representativity in average EPD,
- A table for declaring biogenic carbon (ISO DIS 21930 rev)
- A place for additional impact or LCI indicators,
- A place for additional environmental information

0	FORMAL REQUIREMENTS	REFERENCE	CHECKED AND APPROVED	N/A
0.1	Is the ECO Platform EPD Format Best Practice example applied? If not, a simple statement explaining why PO did not follow ECO Platform Best Practice example	Eco Platform Best practice example		

1	REQUIREMENTS	REFERENCE	CHECKED AND APPROVED	N/A
1.1	EPD include as general information: On the frontpage / titlepage / cover page: • Text "Environmental Product Declaration in accordance with ISO 14025 and EN 15804+A2", prominently visible in the EPD • Name of declared product • Programme Operator (Name) • Name and address of manufacturer/association • Date of issue + validity (5 years)/date of expiry + date of update if relevant • EPD identification (registration number of the EPD on programme operator level). • Logo of ECO Platform	EN 15804+A2 ch. 7.1 List of content to declare in an ECO EPD (see above and chapter 2.4 of this document on hand)		

	In other chapters of the EPD: • Programme Operator / publisher, and name, address, logo, website as relevant • Name of declared product • Electricity mix (market-based approach or location based approach used for main results as per the PCR) • Statement that “EPD of construction products may not be comparable if they do not comply with EN 15804+A2” • Geographical area, i.e. market range, where the product is produced, where it may be applied and where the end-of-life is assumed • For EPDs of product group: a statement that the EPD covers a product group and a description of the type of such EPD (e.g., average, representative product or worst-case product); • Names of manufacturer(s) when the EPD declares an average of several manufacturers. • A statement of the applied background database(s) and software, and both its versions • A statement, if ecoinvent is used, of the LCA-method Cut-off by classification or Cut-off, EN 15804+A2 • A statement which version of Characterisation factors was used			
1.2	PCR name PCR version (MM YYYY) If applicable: c-PCR (complementary PCR from product TC) Applicable PCR from European product TCs and or PCR from PO	Applicable PCR from European product TCs and or PCR from PO		
1.3	Demonstration of verification: external independent verification, name of third-party verifier EN 15804+A2, ch.7.1 Table 2	EN 15804+A2, ch.7.1 Table 2		
1.4	Information on the validity: Does it corresponds with the specifications in the project report?			
1.5	Appropriateness of logos of the company, programme operator and ECO Platform. Appropriateness of pictures. List of content to declare in an ECO EPD	List of content to declare in an ECO EPD (		

1.6	Products using energy in module B6 of the use stage and permanently installed into building or infrastructure (defined by the manufacturer):: Statement that this EPD follows additional requirements for such products.	LCA Calculation Rules V2.0, ch. 2.10		
2	PRODUCT	REFERENCE	CHECKED AND APPROVED	N/A
2.1	The product description is in line with the project report, and clearly enough described to identify the declared product unambiguously. Name and location of production site(s).	List of content to declare in an ECO EPD		
2.2	If applicable: Explanations on calculations of averages within a product group, and representativeness: Information on restrictions to the use of the EPD; Required information in the EPD for the representativity and data quality of the average and collective EPD according to EN 15941: A technical description of the average product group (such as density or a property like U-value); The number of manufacturing plants included in the EPD; and/ or The names of manufacturing companies or brands or associations; Sampling process if only representative companies/sites are chosen; Geographical coverage; The range of products for which the EPD is relevant, even if data from some products has not been used directly in producing the EPD For collective EPD (commonly called “sector EPD) the following are additionally required: • The number of products and/or sites included in the EPD Recommendation: description of the relative production volume covered by the EPD.	EN 15804+A2, ch.7.1; EN 15941, ch. 7.3.3 List of content to declare in an ECO EPD (		
2.3	Unambiguous identification of the product(s), by standards, concessions or other means	EN 15804+A2, ch.7.1; List of content to declare in an ECO EPD		
2.4	Indication of the intended use Application and technical functions of the product	EN 15804+A2, ch.7.1; List of content to declare in an ECO EPD		

2.5	Relevant technical data (additional information is possible) including RSL if applicable (Average values or range in case of product groups)	Applicable PCR		
2.6	The test standards to which the technical data refers			
2.7	A description of the main product components and or materials is provided in accordance with the specifications of the PCR (if available) and LCA project report. As a minimum substance that are listed in the latest “Candidate List of Substances of Very High Concern for authorisation” if their content exceeds the limits for registration	EN 15804+A2, ch.7.1; applicable PCR		
2.8	Description of the manufacturing processes / all processes if several locations are involved	EN 15804+A2, ch.7.1;		
3	LCA RULES	REFERENCE	CHECKED AND APPROVED	N/A
3.1	Information on the declared / functional unit corresponds with the specifications of the PCR (if available) and project report?	Applicable pcr		
3.2	Indication of the EPD type and declared/undeclared modules through a table of modules (ND=Module not declared) EPD types applicable in EN 15804+A2: • cradle-to-gate with modules C1-C4 and module D • cradle-to-gate with options, modules C1-C4 and module D • cradle-to-grave and module D • cradle-to-gate (exemption requirements apply) • cradle-to-gate with options (exemption requirements apply)m	EN 15804+A2, ch. 7.2.2		
3.3	EPD contains a (simple) flow diagram in accordance with the modular approach	ISO 14044, ch. 4.3.2.2		
3.4	Description of the system boundary (can be simplified, as a picture or in wording), including the assignment of the analysed processes to the life cycle modules	List of content to declare in an ECO EPD best follow ISO 14044, ch. 4.3.2.2		
3.5	Indication of the key assumptions and estimates for interpretation which are not depicted elsewhere in the EPD			

3.6	Presentation of the application of cut-off criteria in accordance with the project report			
3.7	Source of background data used, name and dated version. Description of what upstream and/or downstream data has been applied is optional.	List of content to declare in an ECO EPD		
3.8	Indication of the age of background data used (e.g. last update or version of the database)	List of content to declare in an ECO EPD		
3.9	Information on the data collection period and resulting averages			
3.10	Presentation of the allocations of relevance for calculation in accordance with the minimum requirements of the PCR.			
3.11	BMB (biomass balance) and/or recycled content allocation (attribution) approaches like “Mass balance credit method” and/or “Book and Claim” methods as per ISO 22095 cannot be used in connection with ECO EPDs.	LCA Calculation Rules V2.0, ch.2.4 based on ECO Platform position paper from January 2023		
4	LCA: SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION	REFERENCE	CHECKED AND APPROVED	N/A
4.1	Mandatory for all declared modules beyond A3: declaration of the assumptions pertaining to the scenarios of the declared modules in accordance with the project report. Information on undeclared modules is optional.	EN 15804+A2, ch. 7.3		
4.2	If a reference service life (RSL) or lifespan is declared in the EPD, declaration of the scenario on which the RSL is based, in accordance with the project report	EN 15804+A2, ch. 7.3.3.2 + Annex A ; applicable PCR		
5	LCA: RESULTS	REFERENCE	CHECKED AND APPROVED	N/A
5.1	Description of the declared / functional unit			
5.2	Identification of the declared/undeclared modules: Table of Modules/indicators, illustrating the type of EPD ND = module not declared Full declaration of all indicators of EN 15804+A2 required	List of content to declare in an ECO EPD EN 15804+A2, ch.7.2.3, 7.2.4, 7.2.5 and ch.7.5		

	according to the modular approach Result Table contains: No blank cells, hyphens, or other symbols. The value 0 only for parameters that have been calculated to be 0, or below a limit value (former MNR/MNA etc). Footnotes shall be used to explain any limitation to the result value. Additional indicators included or marked as Not Declared ("ND") in table or as text passages, justifications for not declaring indicators as per EN 15804+A2?			
5.3	Biogenic carbon content (in product and packaging) in kg C	EN 15804+A2, ch. 7.2.5		
5.4	Programme operators may allow optional additional impact indicators and LCI indicators. These shall be identified as "additional" to the indicator basket of EN 15804+A2, either in the EPD itself or in an annex.	List of content to declare in an ECO EPD		
5.5	The declared indicator and other quantitative results shall be identical with the respective values in the project report	EN15804+A2 ch. 6.2.1 and 6.3.5.1 and 6.3.5.3		
5.6	In case of product averages: description of the range /variability of the LCIA results. This may be qualitative information.	EN 15804+A2, ch.7		
5.7	Deletion of module columns which are not declared (permissible for the Results part)	List of content to declare in an ECO EPD		
5.8	Formatting the table framework and parameter addressed in accordance with the specifications of the PCR or the programme operator rules			
6	DATA QUALITY INFORMATION IN EPD ACCORDING TO EN 15941	REFERENCE	CHECKED AND APPROVED	N/A
6.1	Data quality information shall be provided in a prominent section of the EPD reporting data quality according to EN 15941. This text shall be in line with the information on data quality reported in the Project Report and shall be a reasonable summary of it.	EN 15804+A2, ch. 6.3.8.3; EN 15941, ch. 7.3.3		

6.2	Any use of relevant data assessed for either time, geography or technology according to 7.1 and EN 15804+A2, 6.3.8.3 to be: - poor or very poor data - fair data that has more than 30 % for any core indicator has been noted in the EPD. *If any specific EPD are used in modelling, this should be mentioned.*	EN 15941, ch. 7.1 + 7.3.3		
6.3	Any text describing data quality shall use the terminology provided for quality level in EN 15804+A2, Table E.1 and Table E.2 to describe data quality in relation to time, geography and technology (see Annex C for examples).			
6.4	EPD shall not declare any misleading or exaggerated claims with respect to data quality			
6.5	The EPD specifies which table from EN 15804+A2, Annex E has been used to assess the data quality of relevant data.			
7	EVIDENCE FOR TESTS OR CERTIFICATES, DEPENDING ON REQUIREMENTS IN PCR.	REFERENCE	CHECKED AND APPROVED	N/A
7.1	Additional information is provided to indoor air or oil/water, if applicable	EN15804+A2 ch.7.4		
7.2	Other additional environmental information if relevant for a country.	List of content to declare in an ECO EPD		
7.3	Declaration of the relevant evidence. Information where to find this evidence	EN 15804+A2, ch.7.2; applicable PCR		
7.4	Approach Power Mix: Reporting done as required in EN 15941. Market-based approach or location-based approach to be specified for any results provided.	EN 15941		
7.5	Additional rules for transparency in the EPD: • If electricity accounts for more than 30 % of the total energy use in stage A1-A3, provide in the EPD the GWP-total of the electricity in kg CO2e/kWh used in foreground processes and any other processes in the direct control of the manufacturer. Indication of energy modelling, minimum: residual mix, consumption mix and any modelled mix. Any mix of energy carriers should be described. Information if any contractual instruments are used must be declared.	ECO Platform LCA Calculation Rules V2.0, ch. 2.5 List of content to declare in an ECO EPD EN 15941		

	Justification if any background data does not follow the recommendations of Table 3 of the LCA Calculation Rules.			
8	ADDITIONAL INFORMATION IN THE EPD OR ANNEXES	REFERENCE	CHECKED AND APPROVED	N/A
8.1	Where relevant: ensure that information additional to EN 15804+A2 is either verified or has been verified/certified by others e.g. by reference to standards or other publicly accepted test requirements.	LCA Calculation Rules V2.0, ch. 2.13		
8.2	Any additional information in the EPD or annexes meets the requirements of the LCA Calculation Rules V2.0. No use of non-compliant methodological approaches. Additional indicators to EN 15804+A2 calculated using compliant methodology may be provided.	LCA Calculation Rules V2.0, ch. 2.13		
9	REFERENCES	REFERENCE	CHECKED AND APPROVED	N/A
9.1	Full indication of all referenced sources (excluding standards already quoted in full and standards concerning evidence)	List of content to declare in an ECO EPD		
10	ANNEX	REFERENCE	CHECKED AND APPROVED	N/A
	An Annex may contain all additional information required for specific national use in different countries	List of content to declare in an ECO EPD		

VERIFICATION CHECKLIST PART C: REQUIREMENTS FROM OTHER STANDARDS AND REFERENCES

This whole section is mandatory to verify. It has been added to ensure that e.g. any programme-specific requirements that are not included in Parts A and B are part of the verification.

1	OTHER STANDARDS AND REFERENCES	REFERENCE	CHECKED AND APPROVED	N/A
1.1	Compliance with other requirements in ISO 14020	ISO 14020		
1.2	Compliance with other requirements in ISO 14025	ISO 14025		
1.3	Compliance with other requirements in EN 15804:2012+A1:2013 (if applicable)	EN 15804:2012+A1:2013		
1.4	Compliance with other requirements in EN 15804:2012+A2:2019 ((if applicable)	EN 15804:2012+A2:2019		
1.4	Compliance with other requirements in General Programme Instructions in the EPD Ireland Programme	General Programme Instructions		
1.5	Compliance with other requirements in referenced Product Category Rules (PCR) available at www.igbc.ie	Applicable PCR		