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2050 Connected

#LetsGetPEDRight
Supporting practical
EERF development

GETTING PED RIGHT:

A PROPORTIONATE FRAMEWORK FOR CONFORMITY ASSESSMENT AND ASSURANCE

July 2026

Version 1

ABOUT BEAMA 2050 Connected

BEAMA 2050 Connected is a not-for-profit subscription designed to unite the energy and built environment around the goal of supply chain and business decarbonisation by 2050 and promoting a circular economy. Collaboration through BEAMA 2050 Connected offers subscribers a range of benefits, with subscribing companies gaining access to a wealth of resource and opportunities to navigate the complexities of sustainability in a supported, aligned and consistent way.

For more information:

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Introduction

Getting Product Environmental Data right requires confidence not only in the methodology used to generate data, but also in the systems used to assure it.

Confidence in environmental product data is crucial for effective policy development, procurement decisions, and supply chain management aimed at supporting decarbonisation.

Even with a voluntary Embodied Emissions Reporting Framework (EERF), there is currently no widely adopted methodology that considers embodied emissions in isolation. The methodology chosen to underpin this framework will therefore become the reference point for future product environmental data requirements, making its design critically important.

With 88%* of surveyed electrical supply chain manufacturers already providing some form of environmental data to the market, it will become the de facto system for environmental product reporting within the UK market.

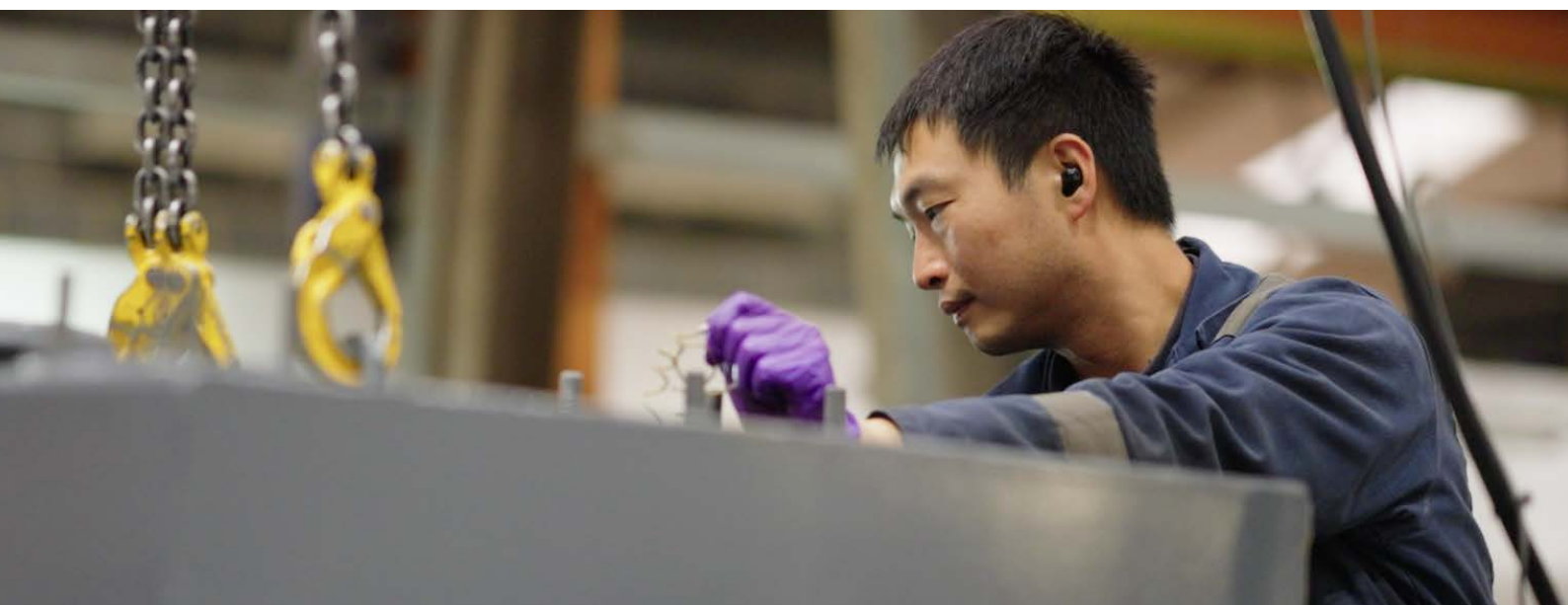
By establishing a robust and consistent Product Environmental Data (PED) framework, Government has the opportunity to create a conformity assessment and assurance system that supports UK industry, reduces unnecessary cost and administrative burden, and improves data quality and transparency while delivering environmental objectives.

This framework can be proportionate, building on the strong foundations of existing product conformity assessment systems that have successfully supported product safety and regulatory compliance for decades.



Importantly, this can be achieved without mandating, or indirectly requiring, third party verification of all environmental data. Such an approach would create significant cost and resource burdens across supply chains, particularly for complex products and SMEs, while also creating significant capacity challenges for verification bodies. Instead, third party verification should remain available where markets choose to use it as a means of differentiation and additional assurance, with average additional reported cost to upgrade from a self-declared assessment to an EPD of £3,240*.

The growth of environmental verification schemes has largely been driven by concerns around consistency, comparability and confidence in environmental data. As Government sets a common PED policy framework and methodology, many of these challenges will be addressed through improved standardisation, transparency and accountability. This would allow third party verification to evolve into a value added assurance mechanism rather than a de facto market access requirement.



Within this document, we demonstrate how an established product conformity assessment and assurance model can be adapted for Product Environmental Data.

The proposed approach applies proven principles from product safety frameworks to environmental information. This familiar, mandatory method creates a practical and scalable system that supports confidence in data quality.

The model leverages industry benchmarking, transparency mechanisms and peer accountability to strengthen trust in environmental data, providing a proportionate route to assurance that supports confidence, improves data quality and avoids unnecessary burdens on manufacturers and supply chains.



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Why a broader Product Environmental Data Framework is required

Government's approach to Product Environmental Data can produce a framework which supports transparency, comparability and accountability, whilst drawing on established conformity assessment principles already used successfully within product safety regulation.

The revised EU Construction Products Regulation (CPR) demonstrates the growing importance of environmental performance data within product regulation. Regulation(EU) 2024/3110 requires manufacturers to draw up a Declaration of Performance and Conformity (DoPC) where a construction product is placed on the market and is covered by a harmonised technical specification.

The revised CPR introduces environmental performance within this declaration framework. Annex II defines essential environmental characteristics that may be required to be declared, including climate-related indicators covering:

Climate Change - Total

Climate Change - Fossil

Climate Change - Biogenic

Climate Change - Land Use and Land-use change





Why a broader Product Environmental Data Framework is required

However, CPR obligations apply only where a product is covered by a harmonised technical specification. In practice, many electrical, electromechanical and building services products are not currently covered by harmonised standards under the CPR and therefore fall outside its declaration framework.

As a result, a significant proportion of products used within buildings are not captured by CPR environmental reporting requirements and instead remain regulated under other established product regimes, including low voltage, machinery, electromagnetic compatibility, and Eco design legislation.

Furthermore, for many of these products, environmental performance is influenced not only by the product itself but also by system design, installation, use, maintenance and end of life management. This means that environmental performance cannot always be represented solely through product-level declarations in the same way as traditional construction products and highlights why the creation of CIBSE TM65 represented an important milestone for the building services sector.

A broader Product Environmental Data framework is therefore required, one that:

- Applies consistently across all relevant product sectors.
- Supports the reporting of embodied and operational carbon impacts where appropriate.
- Utilises International standards.
- Aligns with existing conformity assessment and market surveillance systems.
- Enables transparent, comparable and verifiable environmental data.
- Provides proportionate assurance mechanisms without creating unnecessary barriers to market access.





Learning from Established Product Assurance Frameworks

Existing product safety legislation demonstrates how conformity assessment, technical documentation, market surveillance and enforcement can work together successfully to create confidence in product conformity.

EU Directive: Low Voltage Directive: 2014/35/EU

Ensures that electrical equipment within certain voltage limits provide a high level of consumer protection for EU market.

UK Regulation: The Low Voltage Electrical Equipment (Safety) Regulations 2016

Ensures that electrical equipment within certain voltage limits provide a high level of consumer protection for UK market.

How is Compliance Evidenced?

Manufacturers ensure their products meet the essential requirements of the legislation by utilising designated and/or harmonised standards which provide presumption of conformity.

Mandates Technical File

Manufacturers are obligated to ensure that an evidence-based technical file is maintained for the duration of the product life cycle and beyond, requestable by the market surveillance authority at anytime.

Declaration of Conformity Created

Signed and approved by a responsible and accountable person.

ISO 9001, ISO 50001 & IMS

Ongoing 3rd party assessments of the organisation for Quality Assurance of the products and manufacturing processes and facilities.

Certification Marking Affixed (UKCA / UKNI / CE)

When the technical folder is completed, the certification marking can be affixed to the product which is now deemed as suitable for placement in the relevant territories.

Ongoing Market Surveillance

Market surveillance regulated by responsible agencies such as OPSS (Office for Product Safety and Standards), ASA (Advertising Standards Agency), CMA (Competition & Markets Authority), TSA (Trading Standards) and HSE (Health & Safety Executive).

Outcome

Products regulated, designed, released, controlled and monitored for the following themes, many of which are life-safety critical: Electrical safety; mechanical safety; ATEX (explosion); hazardous substances (RoHS & REACH); Construction etc.



Illustrative Framework for UK Product Environmental Data Assurance

Building on these established principles, the following illustrative framework demonstrates how conformity assessment and assurance mechanisms could be adapted to support Product Environmental Data.

UK Regulation: Embodied Emissions Reporting Framework [NEW]

Guidance for measuring, reporting and verifying the embodied emissions of products, underpinned by life cycle assessment standards and methodologies. Uses similar approaches to horizontal Regulations such as RoHS/WEEE

How is Compliance Evidenced?

A list of standards are provided in the Designated Standards List for this new framework, which manufacturers can use to evidence compliance.

Voluntary Technical Folder

Manufacturers ensure that an evidence-based technical folder is maintained for the duration of the product lifecycle and beyond, requestable by the market surveillance authority at any time.

Declaration of Conformity Created

Signed and approved by a responsible and accountable person.

ISO 9001, ISO 50001 & IMS

Ongoing 3rd party assessments of the organisation for Quality Assurance of the products and manufacturing processes and facilities.

EERF Marking Affixed

Once the technical file is complete and conformity has been established, an EERF marking may be used within relevant product material, showing alignment to the framework.

Ongoing Market Surveillance

Market surveillance regulated by responsible agencies such as OPSS (Office for Product Safety and Standards), ASA (Advertising Standards Agency), CMA (Competition & Markets Authority), TSA (Trading Standards) and HSE (Health & Safety Executive).

Outcome

Products regulated, designed, released, controlled and monitored in the same way other life-safety critical compliance categories: Manufacturers self declare through evidence based testing and are subject to independent audits for ISO9001 plus market surveillance scrutiny.

Key Principles of the Proposed Framework

- Builds on established conformity assessment principles.
- Supports confidence in environmental data.
- Avoids unnecessary additional third party verification requirements.
- Enables market-led third party assurance where appropriate.
- Aligns with existing regulatory structures.
- Minimises burden on manufacturers and SMEs.
- Supports transparency, comparability and accountability.
- Provides a scalable approach suitable for future regulatory development.

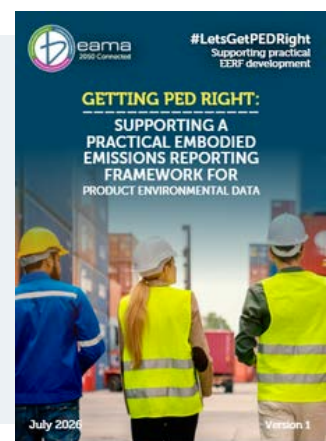
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By building on the principles that underpin existing product safety frameworks, Government can establish a Product Environmental Data system that delivers confidence in environmental information while remaining practical, scalable and cost-effective for manufacturers and supply chains.

The illustrative framework set out in this paper demonstrates how Product Environmental Data assurance can be achieved through proportionate conformity assessment, transparency and market surveillance, without creating unnecessary barriers to market access.

As Government develops the Embodied Emissions Reporting Framework, there is a clear opportunity to ensure that assurance mechanisms are consistent, scalable and aligned with real world manufacturing supply chains, avoiding unnecessary cost and complexity while strengthening confidence in data quality.

This paper forms part of BEAMA's wider #LetsGetPEDRight campaign, which brings together industry perspectives to support the development of a coherent, workable and proportionate approach to Product Environmental Data.



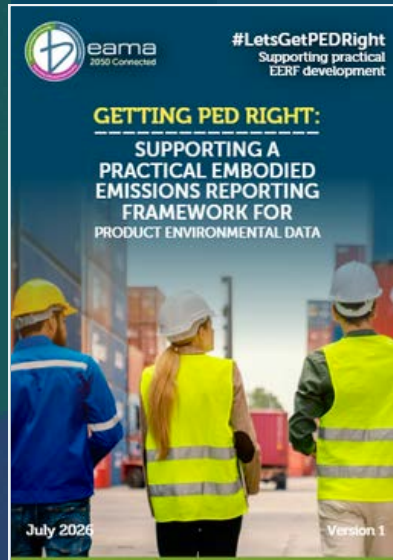


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Key principles to
underpin PED policy.



Policy wording proposal
for the EERF.

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