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UPDATE ARTICLE
Our environmental product data journey - December 2024

In 2022, the Ibstock Group set out a series of commitments and ambitious targets as part of its ESG 2030 Strategy. The strategy focuses on three key pillars:

- Addressing Climate Change
- Improving Lives
- Manufacturing Materials for Life

The Manufacturing Materials for Life pillar focuses on evolving the Group's diverse range of building products, processes, and services. This includes a strong emphasis on producing lower embodied carbon products across its eight expanding building product categories, along with supporting environmental product data.



Image: Our eight expanding building product categories

This important work around data transparency will help customers to consider sustainability performance, such as embodied carbon, as another important factor in their design choices. In addition, it is an important tool to help organisations prioritise decarbonisation efforts.

In this update article, we speak to Emily Landsborough, Head of ESG at Ibstock who shares the Group's progress on environmental product data. Emily recaps on why it is becoming increasingly important, along with some of the key learnings and challenges.

Q: Why is environmental product data transparency important?

A: The built environment has an important role to play in the UK's overall efforts to reduce carbon and achieve net zero by 2050. As an energy intensive manufacturer, we know that we have a responsibility to reduce our own carbon emissions as part of the transformation of the sector.

A key part of reducing emissions is understanding where the carbon impacts are now and how they are likely to change in the next 5 to 10 years.

Providing customers with environmental product data now, in an understandable and transparent way, is another tool to help prioritise carbon reduction. The saying 'what gets measured gets managed' applies here, currently carbon data is not readily measured or available and therefore making informed decisions to manage and reduce carbon is more difficult.

Having transparent carbon data will enable the environmental impacts of products to be part of the decision-making process in both design and procurement. We absolutely recognise it is not the only decision point, but it needs to be considered in the design process alongside quality, performance, aesthetics, and cost.

To support this, housebuilders, architects, and bodies like the Future Homes Hub are driving for measurement of whole life carbon for new build homes, using Environmental Product Declarations (EPDs).



Whilst EPDs are not a legislative requirement just yet – they are becoming increasingly important for building materials.

Q: What is an Environmental Product Declaration (EPD)?



A: An EPD is a document that provides information about the environmental impact of a product such as its water usage, or its embodied carbon. An EPD uses a life cycle assessment - from raw material extraction, to manufacture, transportation, through its useful life, re-use or disposal. Data within the EPD includes carbon data at various stages of the lifecycle which enables architects, specifiers, designers, developers and property owners to include carbon in their decisions when selecting building materials.

Currently, EPDs use a standard 60-year building lifetime, which is aligned to the Royal Institution of Chartered Surveyors (RICS) design standard.

Q: What progress has been made at Ibstock on EPDs?

A: I am delighted Ibstock have invested time and resources in developing EPDs across our eight growing product categories. We invested in a licence-based software tool to support the life cycle analysis (LCA) of our products and a knowledgeable EPD writer to identify and understand the data required for the tool.

We are sharing EPDs with customers, along with support in understanding them. The information in an EPD can be complex, and have a number of different variables, so we strongly recommend customers speak to one of our expert design advisors to help make informed decision choices.

Our dedicated inhouse design advisors continue to provide specific one to one support to our customers, delivering a range of continuous professional developments (CPD), with the most recent being an EPD master class which I am delighted to say has been very well received.

You can see some examples of our EPDs here on our website, along with details on how you can sign up to one of our CPDs.

Q: Have you encountered any challenges with EPDs?

A: Like with most things connected to sustainability, environmental data and frameworks are always evolving, and we are all learning and adapting as we go.

- 1) In reality, EPDs are at an early stage of maturity, and will no doubt continue to improve in accuracy and comparability over time. In the interest of progress over perfection there are some challenges that can be highlighted but haven't yet been overcome. For example, EPDs can be quite complex documents – and whilst they bring a lot of information into one place, finding the data point you need and the right measure of that data is not simple, along with different variables. This can make comparisons complicated and lead to misinformation.

The way we are trying to simplify this for our customers is by providing



the Global Warming Potential (GWP) figures for A1 – A3 (cradle to gate manufacturing stage) in a summary table at the end of the EPD document. We are converting the data into the various units our customers might need for example: an architect may prefer carbon per m², where as a procurement team will want carbon per 1000 bricks. We are also offering support from our expert team of design advisors and through CPDs.

2)The other area I would call out, is the limitation that the existing 60-year EPD assessment can have when looking at the whole life carbon of long-lasting materials like our range of clay bricks.

EPDs currently use a standard 60-year building lifetime, which as I've said before is aligned to the current RICS design standard. However, very few new homes are designed to only last 60 years - they would be very difficult to mortgage! So, while this timeframe may be suitable for some building products, it can be misleading for durable products like our range of clay bricks which are proven to last for hundreds of years.

Whilst some products with lower upfront carbon in their EPDs may seem more environmentally friendly now, these products often require replacement or significant maintenance within and beyond the 60-year period. In contrast, when you spread the upfront carbon in clay bricks over 150 years lifetime you get a much lower long-term impact. Add to that the minimal maintenance requirement, and the fact that clay bricks get more and more beautiful in time ... they are much more likely to be retained rather than replaced.

I will certainly advocate for the limitations of the 60-year assessment period to be recognised if we are considering the long-term impacts of our actions, as we are at risk of making potentially misleading comparisons in the short term.

This video [here](#) may help bring this to life.

Q: What have you learnt since starting your work on EPDs?

A: One of the greatest benefits we have seen is the deeper insight and understanding that we now have internally, with the life cycle analysis data at our fingertips.

We have quickly been able to add the LCA process as a key step in our new product development decision making. We are able to analyse the potential carbon impact of a product at early design and concept phase as well as understand in greater detail the impact of more micro improvements we make as new products reach pilot and full product testing phase. This is a really important step for us as we design, and manufacture products fit for a net zero future.

Q: How often will you need to update EPDs?

A: An EPD is based on 12 months production data and, once it has received third party verification, it can be valid for up to 5 years. The pace of change in decarbonisation across the industry, and certainly at Ibstock, means that often EPDs will be out of date much more quickly than this period.

The information contained in an EPD is not static and it will continue to improve as we progress our carbon reduction journey and our ambition to achieve net zero operations by 2040. As we make step changes in carbon reduction at a specific factory or for a specific product, we will update our EPDs to reflect this.

Recent examples of this have been at our Thornley factory where we have reduced the carbon in our concrete rail utility troughs significantly, investment in heat recycling for our dryers at our Aldridge clay brick factory is another example. The products at our new redeveloped Atlas pathfinder factory will also be c.50% less embodied carbon than the previous factory. So, yes we will need to frequently update our EPDs as we progress over the coming years with our carbon reduction commitments.

You can read more on our ESG 2030 Strategy and carbon roadmap on our website [here](#).



Q: What are your thoughts on industry average EPDs?

A: Industry averages are an important reference point especially for smaller manufacturers and for very complex products where investment in EPDs is expensive, highly technical and time consuming. However, product specific EPDs are more accurate and can help to eliminate error and misinformation when trying to reduce carbon.

There is an industry average EPD for UK facing bricks. This was developed by the Brick Development Association (BDA) several years ago and provides customers with an indication of the carbon of the product.

Ibstock's product specific EPDs show that we have a good number of products which are well below the industry average. This for me demonstrates the importance of product level data, as it not only helps us prioritise our own carbon reduction journey, but also enables better decision making when it comes to design choice options.

To bring this to life more, let me share an example:

If an architect is comparing a product specific render EPD with the industry average EPD for brick (based on A1-A3 GWP cradle to gate) to find the lowest carbon option for their design the comparison would at first glance favour render. However, if you compare Ibstock Chesterton brick EPD with a product specific render EPD - the clay brick is more favourable. On top of that render requires replacement and upkeep throughout its lifetime which clay brick does not - so the comparison can be easily skewed.

Q: Any recommendations for other business who are considering undertaking EPD development?

A: My recommendation is of course to go for it! I know it is a lot of work, time, and investment - but the insights are so valuable for both your own business and supporting your customers. It may not be the perfect solution yet, but it is certainly a step in the right direction. I would also say you need a data whiz to really get under the skin of the life cycle assessment – that should not be underestimated.

