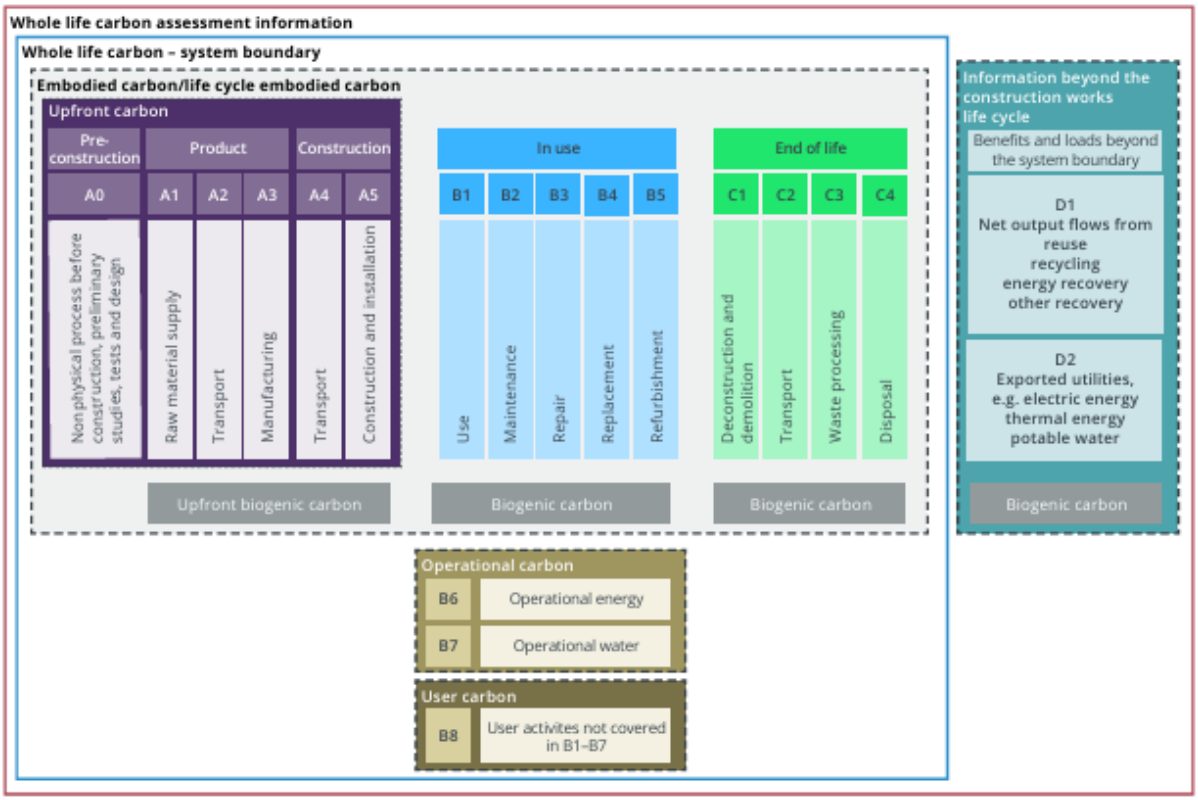
# CASE STUDY: Whole Life Carbon Assessment (WLCA) for PAS 2080 Compliance

## What are PAS2080 and WLCA?

The PAS 2080 is a global standard for carbon management in buildings & infrastructure. It promotes a value chain-wide approach to identifying and reducing carbon across the entire lifecycle of infrastructure assets (reference). For suppliers working with clients pursuing PAS 2080 certification, conducting Whole Life Carbon Assessments (WLCA) is a key requirement.

WLCA is a methodology used to calculate the total carbon emissions of a product or asset across its full lifecycle – from material extraction and manufacturing, through to construction, operation, and eventual end-of-life, including deconstruction, recycling, or disposal (reference).




WLCA modules (Reference)

## Why was this important?

Our client, a supplier to a water company undergoing a PAS 2080 audit, needed to report the carbon impact of their products. Beyond compliance, this exercise opened up access to new markets and clients who are also under increasing regulatory and sustainability pressures.

| WLCA of | In | Delivering | For at least |
|---|---|---|---|
| 2 | 1.5 | 5 | 10% |
| Key products | Months | Key strategies | Carbon reduction |

## What did we do and how?

We attended workshops on our client's behalf conducted by the water company to deliver the carbon reports and collaborated with other suppliers to match their formats and gain clarity on deliverables.

We defined the scope of the assessment and system boundaries in line with the WLCA framework, keeping the CEO and MD in the loop. This involved translation of the framework to the company-specific case. For instance, since the client was not involved in raw material extraction, the carbon associated with the A1 module would be for manufacturing the component parts of the product.

Further, we engaged with the storeman to revise and update the Bill of Materials for each product, ensuring it was both accurate and formatted appropriately for such assessments. We worked alongside the operations manager to gather detailed, process-level information about how products were assembled and transported. In parallel, we reached out to suppliers and manufactures to collect critical data, including Environmental Product Declarations (EPDs) of their parts, Certificates of Origin, and any available environmental or regulatory certifications.

Throughout the process, we made and documented a number of assumptions to address data gaps, taking care to validate them with the client's operations team and secure their sign-off before proceeding.

We completed the full WLCA for two of the client's key products and delivered the carbon report to the water company for their audit.

## How did we build long-term capability?

Our involvement didn't end with the delivery of the reports. A key objective for us was to ensure the client could replicate the WLCA process in the future without external support. To this end, we thoroughly documented the process and delivered a guidance document to carry out similar assessments independently. We also provided an overview of carbon hotspots across the product lifecycle and outlined practical opportunities for reduction.

Additionally, we developed rough carbon intensity values for the assessed products, which the client could use as indicative figures in future tenders or product comparisions, although it was made clear that the accuracy of these values would increase as more products were assessed and the dataset grew.

To support broader internal alignement, we briefed their procurement team about upcoming challenges related to sustainability reporting and carbon efficiency. We also highlighted key weaknesses in data documentation across their supply chain, flagging these as areas for future improvement.

## What were the added benefits?

Through this process, the client gained a clearer understanding of their carbon footprint and supply chain vulnerabilities. This insight gave them a strategic advantage, both in preparing for future regulatory changes and in responding to shifts in the global market. The identification of carbon hotspots also enabled them to better manage their operations and prioritise areas for efficiency gains.

**How will it be taken forward?**

Building on this foundation, a re-evaluation of their supply chain will be undertaken. They are also planning a re-examination in their operational efficiency and additions in their future tenders for preference of suppliers that report carbon, amongst other sustainability-focused changes. The assessment has also strengthened the business case for fleer decarbonisation, with clearer evidence and data to support future investment. Finally, improved internal data systems mean that WLCA of other products can now be conducted more efficiently and accurately and that the company has more visibility and grip on its Scope 3 carbon.

**Need support?**

If you would like to learn more about our work or how we can help your organisation achieve similar results, please get in touch with us at info@pragmaticconsultancylimited.co.uk or visit What We Do - Pragmatic Consultancy Limited.

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