CIM
Carbon Impact Model

All about the Carbon Impact Model

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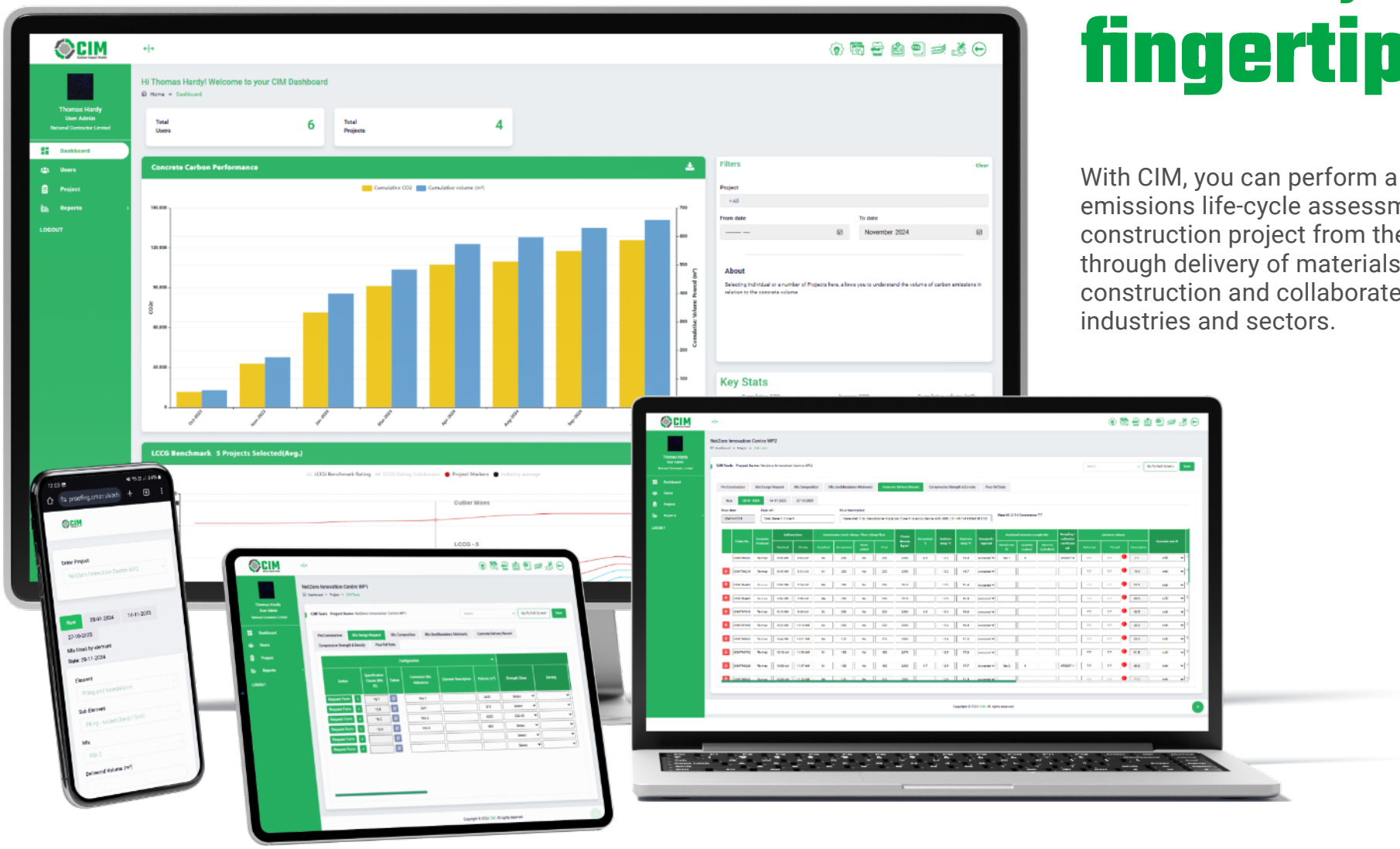
Decarbonisation strategies require intelligent data

Contents

Real-time data at your fingertips



With CIM, you can perform a carbon emissions life-cycle assessment of any construction project from the design phase, through delivery of materials to construction and collaborate with other industries and sectors.

Predict

Easily predict the carbon intensity of a construction project at design stage.

Calculate

Auto-calculate the actual carbon intensity of specific concrete compositions.

Quality Assurance

Record

Record and report accurate concrete consumption and carbon intensity.

Report

Report concrete mix application against each type of element on a project, business, regional or industry level.

What is **CIM?**

Purpose-Built for Construction: Designed by industry professionals to forecast, calculate, record, and report carbon intensity in construction projects.

Performance Tracking: Enables insights into concrete usage across regions and measuring progress on carbon reduction targets.

Sophisticated Web Application: Features an intuitive, multi-level content management system.

Real-Time Data Analysis: Allows organisations to instantly collate and analyse concrete supply chain data for their projects.

Quality Assurance: CIM records the fresh and hardened properties of the concrete that is being used on the project to allow analysis on minimum cement contents and carbon vs strength.

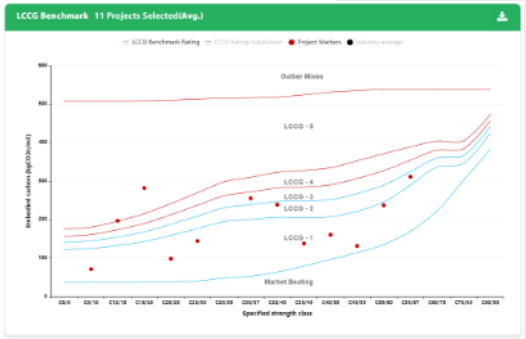
How it works

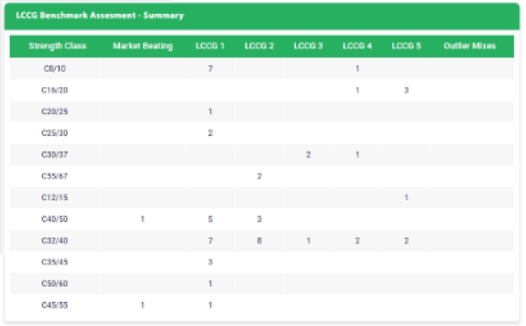
The Carbon Impact Model (CIM) is designed to help the supply chain, involved in construction projects and regardless of sector, to collaborate towards its decarbonisation targets using information that is already being recorded, but not necessarily shared or in one place.

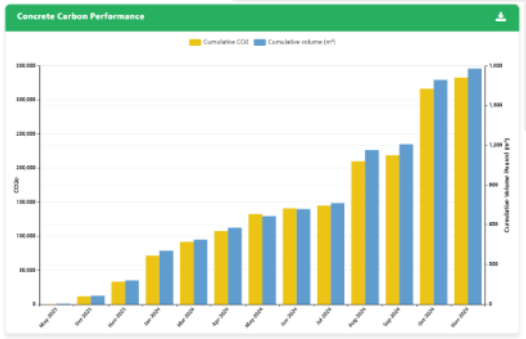
CIM calculates, tracks, and reports concrete design consumption and carbon intensity for projects regardless of size and duration.

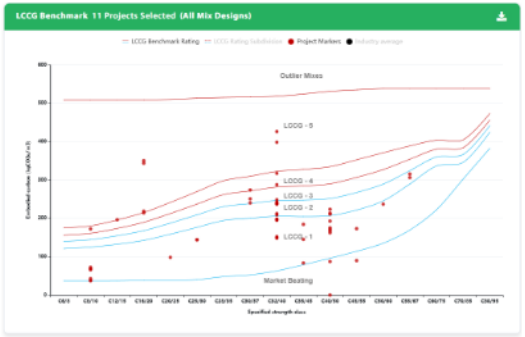
No additional resources are required as the data captured by CIM is already recorded by projects, albeit in multiple locations.

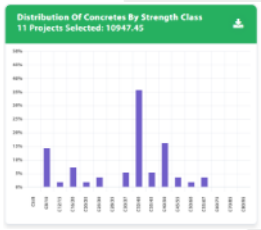
The process is streamlined into three main stages: **Input**, **Calculation**, and **Reporting**.

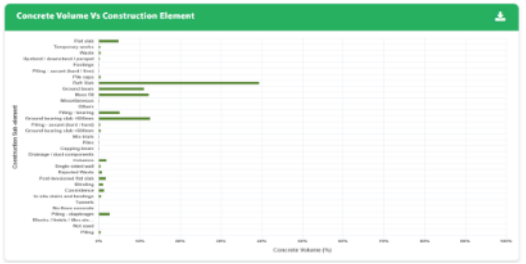


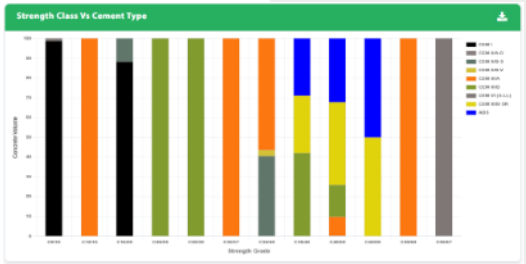












The **Input** Stage

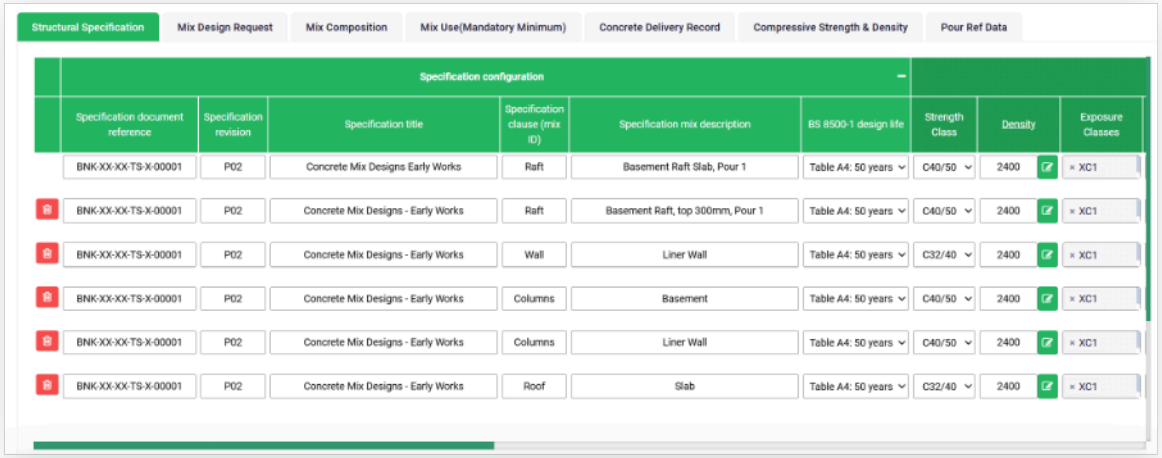
The structural engineer starts the process by entering concrete specification information.

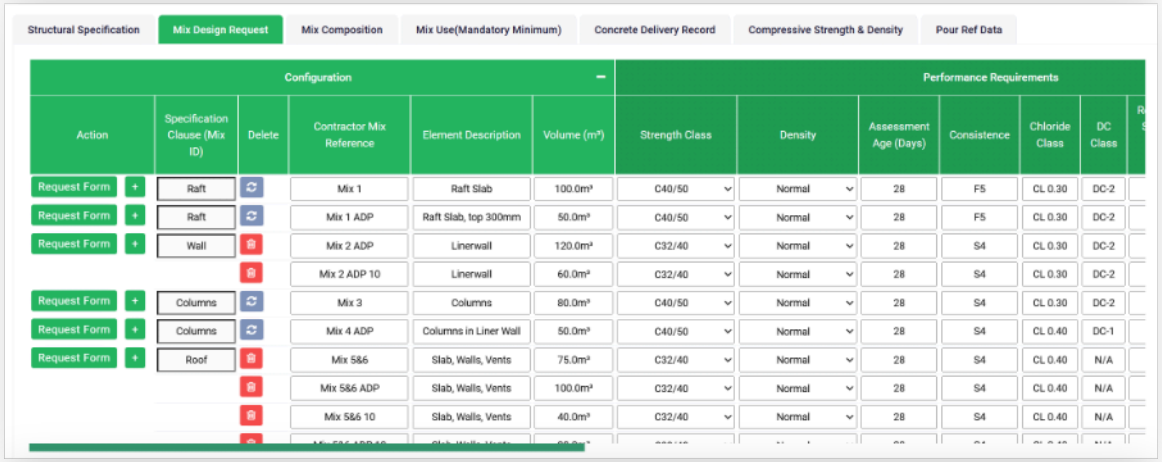
The contractor then reviews and provides more information to pass to the concrete producer, which is the Mix Design Request.

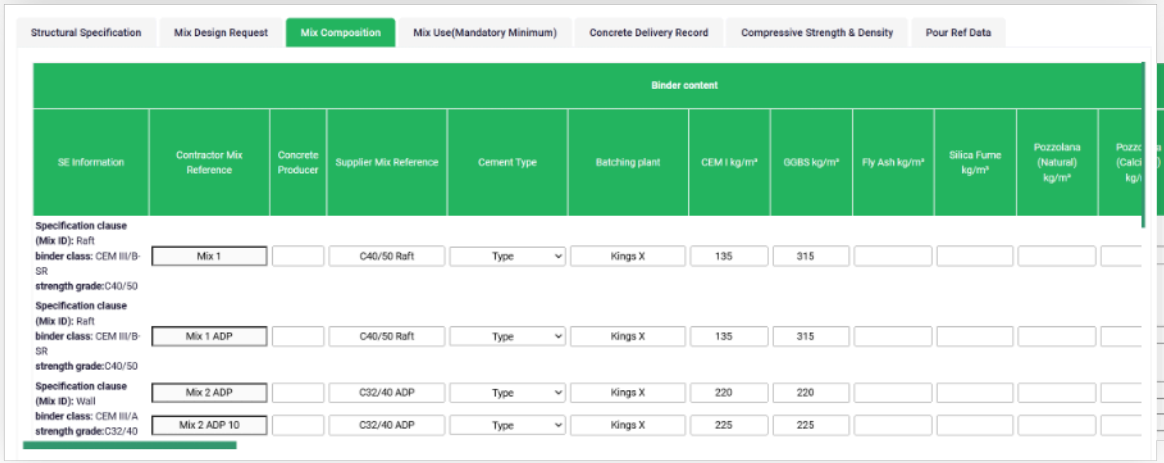
Concrete producer either enters the mix composition information into the tool or issues a mix design certificate for the contractor to enter the material information.

Input concrete mix data, including material proportions (cement, aggregates, admixtures).

Concrete Delivery Record auto-populates mix references, carbon values, total concrete consumption for each application.



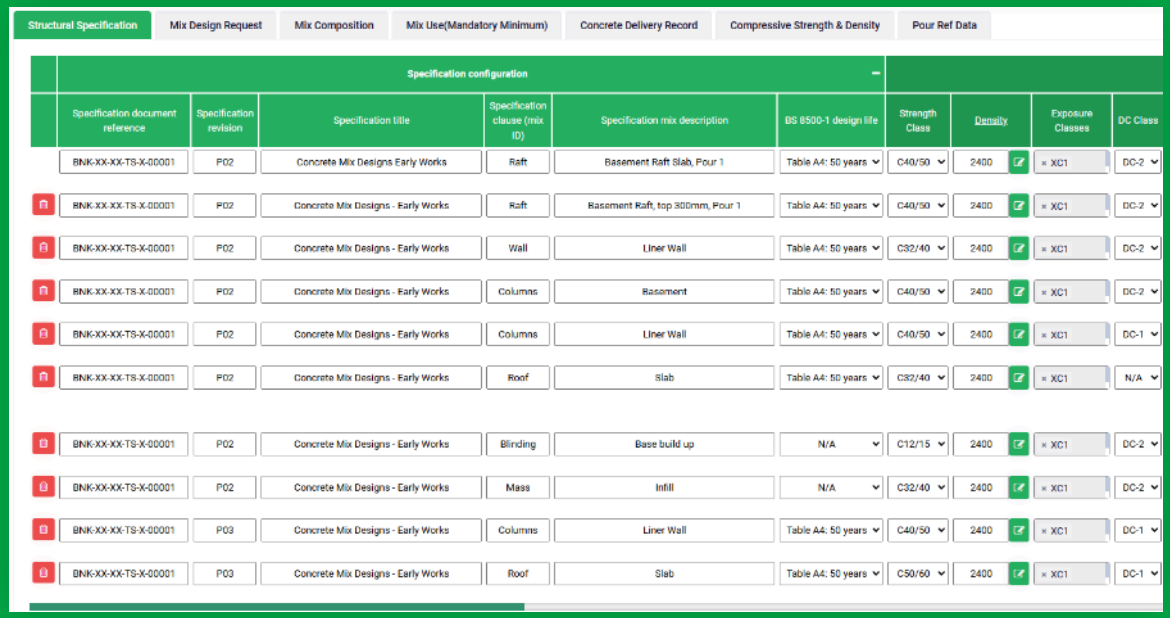


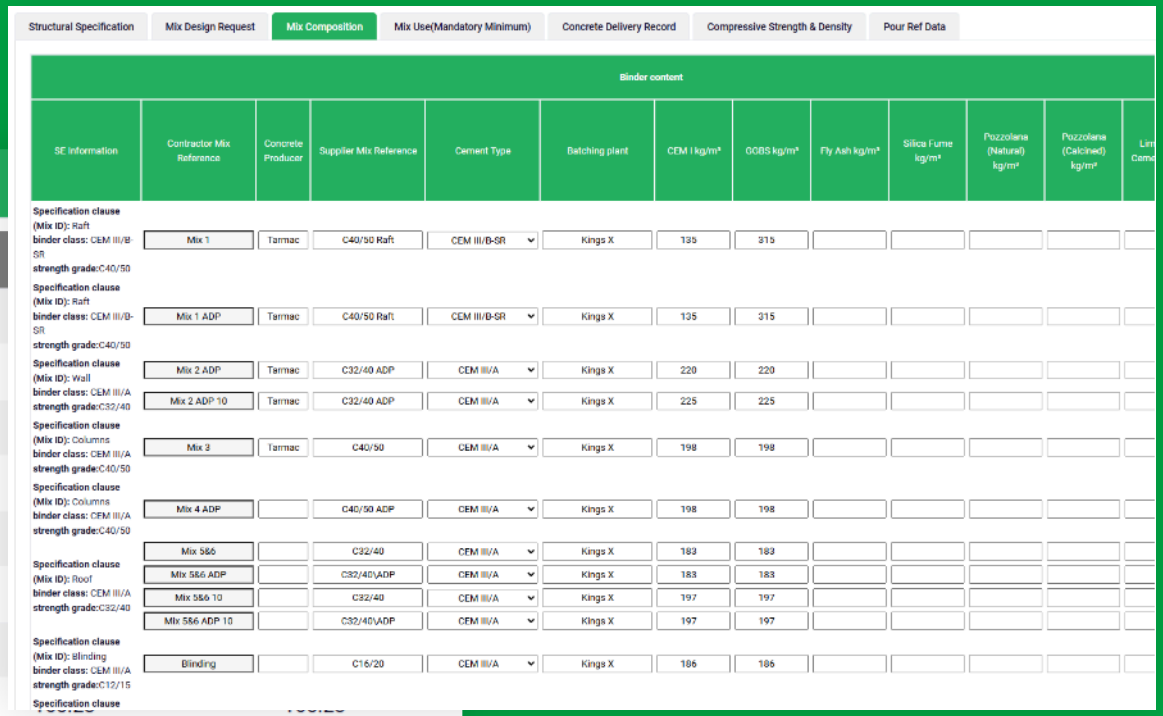


The **Calculation** Stage

Once the data is entered, the CIM platform performs advanced calculations to determine the carbon intensity of your project.

Detailed Emissions Breakdown: Analyses emissions by materials, transport, and other factors for a comprehensive view.

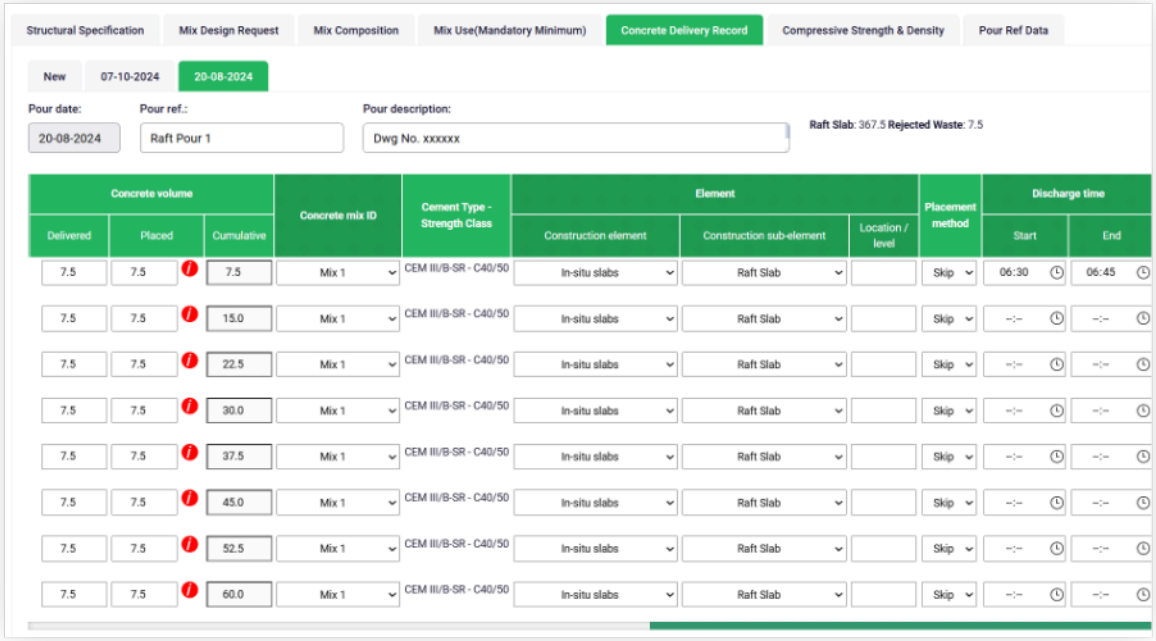


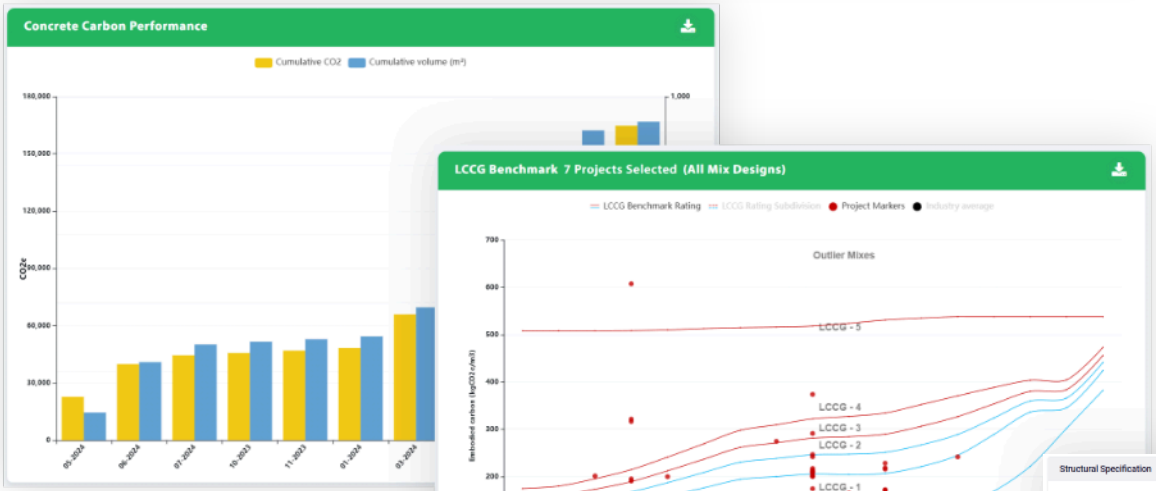


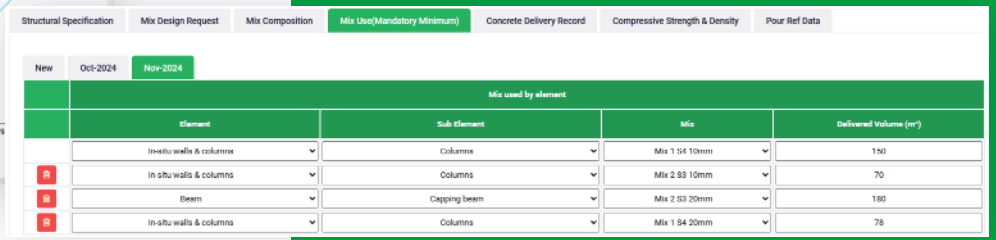
Mix Design Assesment - Summary

Mix Design	Qty Mix Designs	eCO2 Low		
C8/10	8	99.44		
C12/15	1	201.58		
C16/20	5	190.88		
C20/25	2	12.63		
C25/30	2	120.90		
C30/37	2	92.81		
C32/40	17	122.20		
C35/45	1	165.23		
C40/50	7	156.67	228.54	190.44
C50/60	1	241.92	241.92	241.92

The **Reporting** Stage







Once the calculations are complete, you can create detailed reports using the platform's built-in tools:

Customisable Reports: Compile data into easy-to-understand charts, graphs, and tables that summarise the carbon impact of your project.

The CIM platform provides comprehensive data collection or, as an option, the basic but mandatory minimum.

Narrative Options: Add your own narrative to the report, explaining the results and their significance to your business or stakeholders.

Export to PDF: Finally, the report can be exported to PDF format, providing you with a professional document ready for internal business updates or client presentations.

Uniform Reporting from industry

The Carbon Impact Model (CIM) is designed to drive cross-industry collaboration, providing a clear and efficient solution for reporting the carbon impact of concrete use in construction.

Pathway

Clients play a key role in driving decarbonisation by signalling demand to the supply chain. While pathways vary by industry, concrete carbon assessments are essential across all sectors. CIM provides a consistent system for clients to integrate into projects.

Principles

Key principles for decarbonisation include using materials efficiently and understanding available technologies in each region. By recording and demonstrating material performance through CIM, organisations can promote new solutions and optimise designs.

Enablers

Since 2022, the Low Carbon Concrete Group route map has initiated workstreams aimed at NetZero strategies. These enablers, like sharing knowledge, trial data, and carbon intensity, guide decarbonisation. CIM supports these efforts within throughout the industry.

Operations

Tender documents increasingly request carbon credentials from the supply chain. Using CIM streamlines ongoing carbon assessments for both clients and suppliers involved in repeat projects. CIM also helps the supply chain track progress toward business and project goals.

Adoption of CIM

Supporting the wider industry

Uniform reporting is essential to carry out detailed but timely analysis leading to confident procurement decisions.

The uniform reporting aspect translates into immediately recognisable performance comparisons and provides instant status reports for progress on the trajectory towards Net Zero targets.

Information and data is key to measure but only if it is accurate relevant and recent.

The Carbon Impact Model, when adopted, will provide that information which will directly support analysis and measurement being carried out by the Low Carbon Concrete Group across multiple workstreams that include:

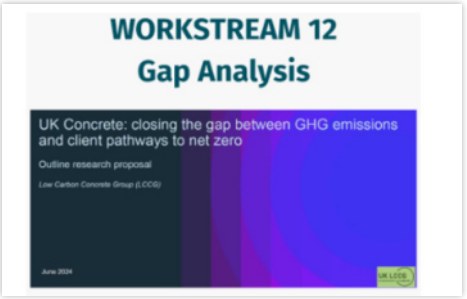
WS 3 Flex 350 – Ongoing funding contribution to future revisions.

WS 5 Continuous Benchmarking – Contribution towards experts analysing benchmark data yearly.

WS 10 Pilots and Trials – Contribution towards the administration of updating case studies and publications.

WS 11 Insurance Sector - Contribution towards the publication of guidance documents as well as part remuneration for the establishment of a Technical Committee for ABS.

WS 12 Gap Analysis – An important body of work that will be part funded by CIM to enable yearly assessments of the trajectory towards Net Zero.



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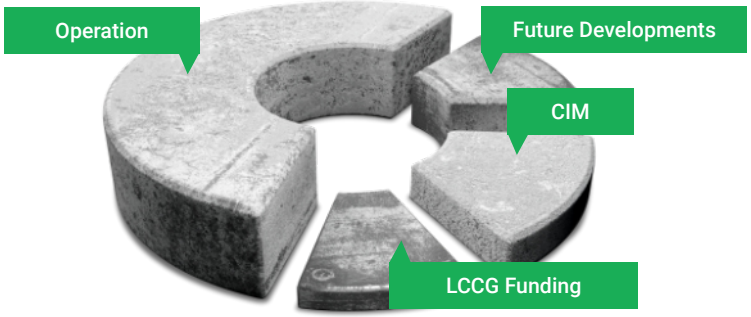

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