



Why is making progress on Net Zero important to your business?

“Since the publication of *Modernise or Die* in 2016 I have been determined to ensure Cast is at the leading edge of changing the construction industry. Our actions in driving decarbonisation is central to that through the advice we are asked to give policy makers, investors, developers and manufacturers and the influence we have in procurement and supply chain assembly on projects.”

Mark Farmer,
Cast CEO and Founding Director

Cast is committed to playing its part in the decarbonisation of the construction industry and being an exemplar for how SME consultancies can make a difference in construction.

Despite being just over 80 people strong and only 5 years old, we have a disproportionate impact on the industry's direction through advising some of the leading clients in the residential development and investment market and our participation in wider industry change initiatives. This is our business focus in relation to Scope 3 emission impact whilst also developing our strategy on our more directly controlled Scope 1 and 2 business emissions.

We are currently developing a corporate plan with specialist consultancy, Greengage, to enable us commit to a deliverable plan. Through this we will report publicly on the difference we are making and ensure our Cast team is proud to work for a company that is genuinely committed to the Race to Zero.

Our guiding principles for the formulation of our corporate strategy will be the 4 pillar framework set out in *The 1.5°C Business Playbook*.

EXPONENTIAL ROADMAP INITIATIVE

PILLAR

1

Reduce
your own
emissions

PILLAR

2

Reduce
your value
chain
emissions

PILLAR

3

Integrate
climate in
business
strategy

PILLAR

4

Influence
climate
action in
society

Which of the 9 priorities are more relevant to your business and clients and why?

Our biggest single priority area in terms of ability to make an impact is **Priority 2 – maximising use of MMC**.

Our leadership role in the industry on this issue means we have the ability to influence on the broadest possible scale, from policymakers to investors, to developers to designers to manufacturers to constructors.

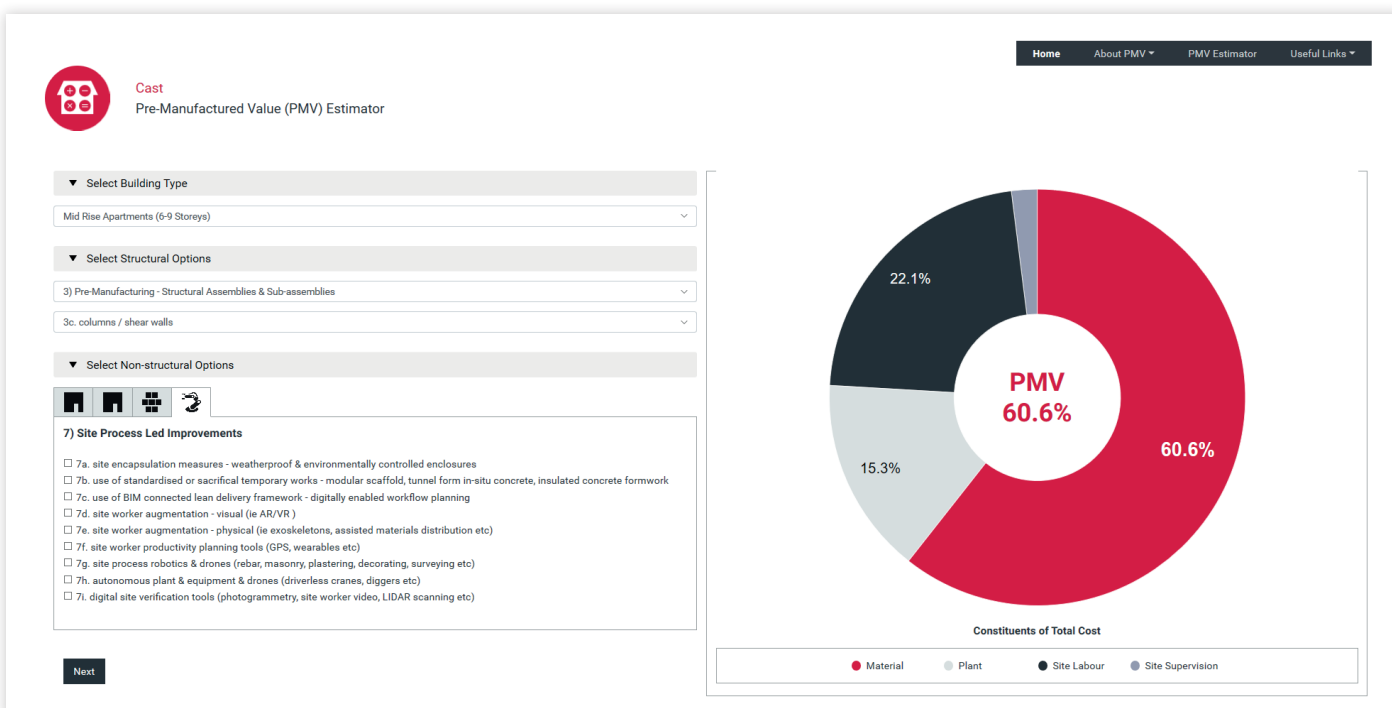
The profile and engagement we have on this on the back of our CEO's authorship in 2016 of *The Farmer Review: Modernise or Die* means this is a central part of our business strategy. We are using the concept of Pre-Manufactured Value (PMV) to drive improvement into industry and we firmly believe that PMV directly correlates with embodied and operational carbon credentials as part of the seven benefits that we show in the infographic on the right.

We are collaborating with technology companies, the supply chain as well as broader industry metric initiatives through Construction Leadership Council, Infrastructure & Projects Authority, Homes England and Be The Business. All of these link the concepts of productivity, manufacturing thinking with Carbon performance. We want Cast to lead the industry in embedding this measure as a proxy for positive outcomes, including whole life Carbon. To this end we have developed our own [PMV Estimator](#) and [Technical Guidance](#).

With Liverpool City Region Combined Authority we are helping to facilitate an industry-leading opportunity to drive a manufactured retrofit solution to existing housing stock.



Cast PMV Estimator Tool



What are you doing to make progress against the relevant priorities in the short and long-term?

Our focus is on driving a range of initiatives that, in combination, will accelerate the effective deployment of MMC into residential construction and achieve the benefits associated with PMV that we outlined on the previous page.

These initiatives range from our advocacy with Government and funding bodies, through the development of new tools and approaches, to real on-site delivery that has been shown to achieve meaningful improvements in carbon performance.



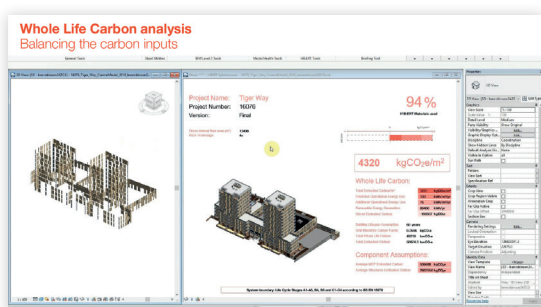
Government Consulting & Advocacy

Our consultancy and advocacy work enables our biggest impacts in reducing carbon in construction. Our client base of national and regional Government bodies covers every part of Britain and through our work we advocate for change and improvement in delivery. Examples of our influence in these areas includes the development of a comprehensive regional strategy for MMC growth in the West Midlands, the creation of the world's first open-source design configuration app – focussed on MMC – in London, and the development of a collaborative procurement solution to enable net-zero residential development for the Scottish Futures Trust.



Affordable Housing Funding

In a specific example of our advocacy and influence, we worked closely with Homes England to embed the concept and measurement of PMV within the funding rules for its Affordable Housing Programme from 2021-2026. Homes England now requires a minimum of 25% of homes to be built with MMC, homes which should achieve a minimum PMV of 55% as estimated by our PMV tool. As a result, over the coming five years Homes England will enable a step change in the delivery of homes with the capability to meet higher standards of fabric performance while creating less construction waste and fewer vehicle movements.



Multi-disciplinary collaboration – Emission Reduction Tool – (HVB:ERT) Hawkins\Brown

We are working in close partnership across disciplines as we further develop our focus on PMV and our PMV estimator tool. A good example is our on-going partnership research with Hawkins Brown on the development of their HVB:ERT embodied carbon measurement tool to incorporate PMV data. HVB:ERT enables users to estimate the embodied carbon of their projects based on REVIT models, and we aim to build on that by enabling users to see PMV and carbon assessments side-by-side, thereby enabling informed options appraisal for clients.



N06 East Village

This landmark Build to Rent development for Delancey, on which Cast is project manager, is on the site of the former 2012 Athletes Village in Stratford, London. Here we have supported a best-in-class approach to Design for Manufacture and Assembly (DfMA) and supply chain engagement with Mace to enable a highly innovative delivery model combining pre-manufactured slabs, façades, cores, bathroom and utility pods and other pre-manufactured elements to achieve the highest PMV score we have seen outside of volumetric modular MMC. This in turn has enabled significant carbon benefits including a 40% reduction in vehicle movements and 70% less site waste.



Blackhorse Mills

Blackhorse Mills is a landmark 479 unit Build to Rent scheme in Walthamstow, London developed by Legal and General, through their LGIM Real Assets platform. Cast acted as project manager and cost consultant for the project and guided the project through a DfMA approach that enabled synergy between key Build to Rent design principles and efficiencies for on-site and offsite construction methods. The project is the largest residential development to achieve the Home Quality Mark status from BRE Global in the UK, signifying that the development achieved an enhanced level of technical and environmental performance.

How have you helped your supply chain understand what is required against the 9 priorities?

As a consultant we do not have an extensive direct supply chain beyond our direct Scope 2 impact for premises, energy and administrative supplies. We are formulating our strategy for Scope 1 and 2 emissions, including engaging and consulting with our employees to drive buy-in. We will publish our strategy in the near future.

In your view what is the one innovation or change that is going to have the biggest impact on carbon or progress in our industry?

At present the range and complexity of measures, targets and solutions for reducing carbon in construction makes it a difficult subject for clients to engage with, while construction as an industry does not have an extensive track record of adaptation in response to complex challenges. This combination of complexity and historic inflexibility presents a real challenge for everyone in the sector, especially in advising and enabling our clients to make meaningful changes with real carbon reduction impacts.

Despite being an SME and being at the start of our sustainability journey ourselves, at Cast we feel we can make a significant impact in resolving this challenge especially in our advocacy and influencing role. The one innovation that we see cutting through and enabling a step change in delivery would be a move to increased PMV across all types of construction through a combination of technology enabled MMC application and new skills being developed across design, procurement, manufacture and assembly.

Through greater PMV across the industry we will support a series of key enablers for new build decarbonisation including the reduction of process waste, optimising the use of low carbon materials, the ability to create high performance buildings, and the establishment of new technological solutions such as smart sensors and decarbonised energy networks.



Jeff Endean

Jeff is a Director at Cast with responsibility for Strategic Advisory and Sustainability Services and will be Cast's Business Champion for the Co2nstruct Zero programme.

Throughout his career Jeff has been committed to driving innovation and change in housing delivery, from his leadership of award-winning MMC and custom-build housing developments in his previous local government role to his broader focus at Cast now, supporting clients nationwide to transform their approach to housing delivery.

Jeff leads the sustainability agenda for Cast, co-ordinating the wide range of our activities – from policy advocacy through digital transformation to achieving better carbon performance in construction delivery – to ensure our impact continues to be disproportionate to our SME status.



Joel Hallam

Joel is an Associate Director at Cast and leads on our business-wide programme of carbon reduction and will be Cast's Young Ambassador for the Co2nstruct Zero programme.

Joel actively champions the net zero carbon agenda at Cast, leading the review of Cast's own direct Pillar 1 carbon emissions and implementing carbon measurement strategies to reduce carbon emissions. Joel has built knowledge within the business by upskilling colleagues, establishing working groups and role modelling new behaviours.

Joel is also an industry advocate, supporting one of Cast's key clients in a review of embodied carbon and operational carbon emissions across several projects in order to achieve net zero carbon. As a result, he has access to tangible data and live case studies through which he supports the Net Zero priorities within Cast and with our clients.