

# Sustainability in construction

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15 June 2022

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The built environment contributes 40% of the UK's overall carbon emissions. The construction sector contributes c.11% of global emissions. With the UK's target to be net-carbon neutral by 2050, and have a 68% national emissions reduction by 2030, the construction sector has a critical role in the realisation of these goals.

There are several practical solutions that can be implemented to accelerate emission reductions, some on a large scale but some are more akin to changes in behaviour and decision making. Only by implementing change across the whole construction sector will meaningful and real change be achieved. There is acknowledgement that this is a transition, and investment will be needed to reach the targets, but it is now necessary and must be done at pace.

At Browne Jacobson, we recently ran a roundtable discussion with our construction, manufacturing and energy clients exploring, amongst other things, best practice in low carbon procurement and construction across both public and private sectors. Outlined below is some commentary and suggestions as to how the government can help streamline sustainability.

## Adopting sustainable practices

Reducing emissions is a challenge to be tackled at all stages of the construction process. Adopting the most sustainable practices on site and in the planning stages is a necessary step to see actual success.

There are several aspects of sustainable construction practices, but they all fall within the umbrella of decision-making and behaviours. This is a non-exhaustive list but highlights some of the 'key actions' companies can take: source sustainable/green materials, monitor and reduce fossil fuel consumption on site, assess viability of green machinery, recycle unused and waste materials, and incentivise employees on site to stick with the sustainable agenda.

Sourcing sustainable materials is a critical step every company can take to hasten their emission reductions. Detailed consideration is required at the design stage, but this up-front planning will have a drastic effect on overall emissions output. Concrete and Steel industries, as two of the largest carbon emitters, have taken large steps to reduce their emissions, but companies need to ensure all of their materials are from sustainable sources.

Anything that is measured can be addressed. Data is an invaluable component in the race to net-zero. It allows businesses to track and analyse trends and make informed change. Tracking the level of fossil fuels used on site is the first step to seeing where savings can be made. Where wastage and/or excessive use of fossil fuels is identified, the next steps would be to identify how this can be reduced or eliminated entirely.

Similarly, to sourcing sustainable materials, ensuring that unused and waste materials are recycled and re-used is important in reducing the wasteful emissions of a construction project. With some forward planning and organisation, excess materials can be used on other

projects and waste materials repurposed. This would curb waste emissions on existing projects and assist future projects to reduce their supply chain emissions.

## **Sustainable design and utilising technology**

Before any physical work begins on a project, the sustainability of the designs must be assured. Traditional building design has been focused on cost and aesthetics, not necessarily sustainability. This led to sustainability corners being cut in favour of cheaper, more carbon-intensive materials and designs.

To enact change on site and see the successes of championing sustainability in construction, firms must ensure the principles of sustainable construction are not superseded by cost and aesthetics. There are always compromises and unforeseen circumstances, but decisions should be taken to find the most sustainable and cost-effective combination.

As mentioned above, data is a key component of measuring the success of any initiative. This applies to building design. Using modern technology and software to assist with the design of a building, along with tracking the lifetime emissions of the buildings after completion can be a valuable tool for business to take a holistic view of speeding up their emission reduction.

## **Sustainable supply chains**

No business will be able to mitigate 100% of the sustainability risks from every level of the supply chain. This does not mean there is nothing that they can do to minimise their exposure to unsustainable supply chains.

Creating a sustainable supply chain is recognised as a need on a global scale. As an example, the EU Sustainability Directive, agreed to in February 2022, will create a general obligation for large companies to conduct due diligence across their entire supply chains. While this applies to large companies in the EU and Third Country companies that have a net turnover of \$150M, it highlights that change from the highest levels is coming. These changes will not come into force for some years, meaning this is a longer-term solution, but businesses can pre-empt these obligations by preparing and understanding the climate risks from their supply chains now.

Having a greater understanding of the sustainability risks from a whole supply chain can assist business make more informed choices about where they source their materials and services. This level of transparency will provide the foundation for a real and pro-active shift towards reducing emissions on a global scale, with incentives for all levels of the supply chain to focus on reducing emissions.

## **Key metrics to measure performance**

Without a robust way to measure and chart performance and adherence to making construction a more sustainable sector, there is a real risk of greenwashing. Applying industry standard metrics to the construction sector will mean everyone is on a level playing field when it comes to emissions targets.

These metrics should be government backed and factored into the initial procurement process. This will highlight the importance of factoring in the sustainability targets into the design and construction phases. However, this needs to be a 'way of life' rather than a 'tick-box exercise'.

Implementing effective and accurate Whole Life Carbon Assessments into a project can help to provide a well-rounded, holistic view of the potential carbon impact of a project. This will assist with benchmarking and provide a comparison to other projects to identify successes and failures regarding emission reduction. It can effectively highlight high emissions areas to be tackled in the future.

## **Next steps in reducing emissions**

Businesses should seriously review how they operate and the effect it has on the environment. Assessing supply chains and making the most informed decisions based on sustainability, with the goal of reducing emissions, is the first step many businesses can take immediately.

Creating strategic plans to source sustainable materials and introduce Whole Life Carbon Assessments to future projects are some simple steps businesses can take to accelerate their emission reduction. There are many more practical steps and businesses can create and innovate their own direction to achieve the goal. It is clear there will be a cost involved in all of this, but highly sustainable building and infrastructure does attract a higher value when completed. Investing in reducing emissions now will provide more than financial value in the future.

This was first published in the June edition of [Construction Law](#).

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