Delivering Beyond Net Zero

UK concrete is essential, sustainable, protecting people, innovating, helping to tackle climate change and enabling great design
Concrete is essential for our economy and our way of life, now and in the future. New homes, schools, hospitals, workplaces, roads and railways, as well as the infrastructure that provides us with clean water, sanitation and renewable energy, all create the demand for concrete and cement. Achieving net zero carbon emissions requires the wholesale decarbonising of all aspects of production and supply. The concrete and cement industry will play its part in the UK’s transition to a net zero economy, switching energy sources, product innovation, changing production processes, modernising transportation and solving built environment challenges.

Delivering beyond net zero

Concrete is the world’s most versatile and sought-after man-made material, made by mixing aggregates with cement and water. Concrete is essential for our economy, homes, buildings, infrastructure and quality of life. Concrete has the unique potential to go beyond net zero by 2050 with scope to deliver net negative emission removals. The challenge of achieving this is considerable and the solutions are not taken for granted, as much work is required to demonstrate that they are technically and economically deliverable.

Our plan for concrete

Concrete and cement are essential to delivering a net zero carbon and circular economy, and already deliver a substantial biodiversity ‘net gain’. To realise our ambition, UK Concrete will set out a bold and credible path beyond net zero, potentially removing carbon dioxide from the atmosphere.

In this document UK Concrete, part of the Mineral Products Association (MPA) and representing the UK’s concrete industry, states how it is addressing the challenge of delivering net zero as a top priority.

The roadmap being created by UK Concrete, which details how the industry will deliver beyond net zero, will also provide a framework for other MPA sectors.

Together these sector plans will become a net zero approach for mineral products. These products, aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand, represent the largest material flow in our economy and are critical to our quality of life.

Concrete’s versatility provides uses that form the foundation and fabric of our built environment, both onshore and offshore, above ground, on the ground and below our feet.

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Policy enablers

Implementing these technological and systemic changes will require very significant investment by industry which will require support from Government, similar to the policy and financial support that has driven renewables development and deployment. Energy Intensive Industries offer great potential for deep decarbonisation yet currently this presents unmanageable competitive and financial risk.

System wide changes

Government intervention and assistance is essential to set the economic and industrial framework to deliver our net zero roadmap.

How we account for carbon dioxide is vitally important. Measuring emissions associated with our consumption, not just production, is essential if the UK is to take responsibility for the emissions it causes. This avoids the ‘easy option’ of offshoring production, which only moves rather than cuts emissions, to meet UK domestic targets as well as damaging the UK economy and putting UK jobs at risk.

Government should not rely on climate change mitigation alone, as that leaves the UK vulnerable to the inaction of other regions. Precautionary climate change adaptation is an important part of the policy to protect our communities and critical national infrastructure. Our industry stands ready to supply the resilient materials needed.

Technology and infrastructure

Government needs to quickly set the framework in which rapid industrial decarbonisation can take place.

Large scale infrastructure for transport and storage of CO₂, deployment of a hydrogen network, facilitating large scale bio-energy and increased grid capacity to enable electrification are all areas where Government should take the lead.

As a major consumer of mineral products Government procurement should support locally produced low carbon concrete and cement in preference to imported construction materials.

Financial

Implementing the innovations needed to decarbonise requires financial support of the key technologies. This is especially relevant for the capital and operational costs of carbon capture. Support is needed so that CCUS is an investable proposition but also to enable the development of CO₂ utilisation processes and markets for products consuming captured CO₂.

The concrete and cement industry supports the ambition to decarbonise as soon as possible and is working hard every day to achieve it, but we will not be able to do it alone. The industry will work with Government to realise our shared goal as well as setting out in our roadmap what will be required to achieve beyond net zero carbon emissions by 2050.