NET ZERO CARBON BUILDINGS AND CITIES: ADAPT AND DECARBONISE

CHALLENGE

New Buildings can be designed to be Net Zero Carbon today, but 80% of the buildings that will exist in 2050 are already built.

Creating the Net Zero communities of the future relies on effective decarbonisation of existing assets, as well as bringing new buildings into the mix.

Project scale can vary enormously, from individual building developments, operating or maintaining campuses or estates, to looking at how to deliver sustainable cities. For large-scale projects, consideration of the wider system and infrastructure around and within which the new or existing development resides is the key to long-term success.

Whatever the project scale, organisations are having to add Net Zero considerations and strategies to an already burdensome load of competing commercial, economic, social, and environmental priorities.

MAKE CARBON VISIBLE

We do not see carbon as clearly as we see cost. It is often invisible in the design and construction process and obscured in production behind more obvious concerns of throughput, quality and reliability. To effectively tackle carbon we must see it, clearly and in all areas where it occurs, and quantify it such that we can de-risk and overcome such challenges.

Our whole-system approach specifically targets this issue, enabling our clients to develop intelligent and cost-effective solutions where singular solutions can deliver multiple value outcomes at once.

As part of our whole-system approach, our Net Zero Building proposition is augmented by our other Net Zero propositions, which together provide our whole-system capabilities.

- **Net Zero Energy Systems**: Decarbonising existing energy systems or implementing new and innovative Net Zero energy solutions on any scale of project.
- **Strategic Carbon Advisory**: Delivering industry-leading routemaps and pathways to credible Net Zero futures.
- **Net Zero Transportation**: Decarbonising new or existing transport systems across road, rail, and aviation and developing new and novel Net Zero transportation for any scale of project.
- **Net Zero Industry and Infrastructure**: Decarbonising new and existing industrial processes and processes within existing sectors, including manufacturing, water processes, steel, and cement production.
- **Green Energy**: Powering your buildings, campuses or estates with green energy can provide supply resilience and a visible commitment to Net Zero. Whether a new or existing development, and as green energy costs fall, we can upgrade, design and support the operation of a wide range of renewable and off-grid solutions.
- **Climate Resilience and Adaptation**: Developing the right systems and strategies to manage the devastating social and economic impact of Covid-19.
- **Smart and Green Cities**: Over all the largest challenges is the scale. To effectively decarbonise our urban systems, we need to look at all elements of our urban Net Zero propositions to provide ambitious, yet pragmatic, solutions to urban decarbonisation.
- **Green Facilities Management**: Ensuring that new energy provisions from a building are produced over its operational life. Through intelligent FM, our teams can help you optimise the performance of your buildings and how people use and interact with them.
- **Green Portfolio Management**: Delivering Net Zero buildings on any scale will be largely contingent on the wider system into which they are to be integrated. From regional, local, and master planning, through to integrated systems design, our teams adopt a systems thinking approach to ensure the long-term success of the solutions while addressing the biodiversity and climate crises is of central concern to us. Our innovative designers will maximise the potential for green energy use in greening the surrounds, while improving building performance.
- **Integrated Digital Solutions / Data Capture and Management**: Delivering industry-leading Net Zero propositions to provide ambitious, yet pragmatic, approaches to urban decarbonisation.
- **Whole-System Planning and Integration**: Delivering Net Zero buildings on any scale will be largely contingent on the wider system into which they are to be integrated. From regional, local, and master planning, through to integrated systems design, our teams adopt a systems thinking approach to ensure the long-term success of the solutions while addressing the biodiversity and climate crises is of central concern to us. Our innovative designers will maximise the potential for green energy use in greening the surrounds, while improving building performance.
- **Green Surrounds**: Improving the wellbeing and productivity of those who live, work, and use buildings of all typologies, while addressing the biodiversity and climate crises is central concern to us. Our innovative designers will maximise the potential for green energy use in greening the surrounds, while improving building performance.
- **Green MNC**: Whether an independent, quantify, competent or platform, our teams can approve, design and deliver a highly integrated Net Zero offering to clients, where holistic valuation is key. Our whole-system approach considers the whole system and infrastructure around and within which the new or existing development resides is the key to long-term success.
- **Green Design**: Whether a single building, new campus, or entire Net Zero community, our teams adopt a systems thinking approach to ensure the long-term success of the solutions while addressing the biodiversity and climate crises is central concern to us. Our innovative designers will maximise the potential for green energy use in greening the surrounds, while improving building performance.

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