



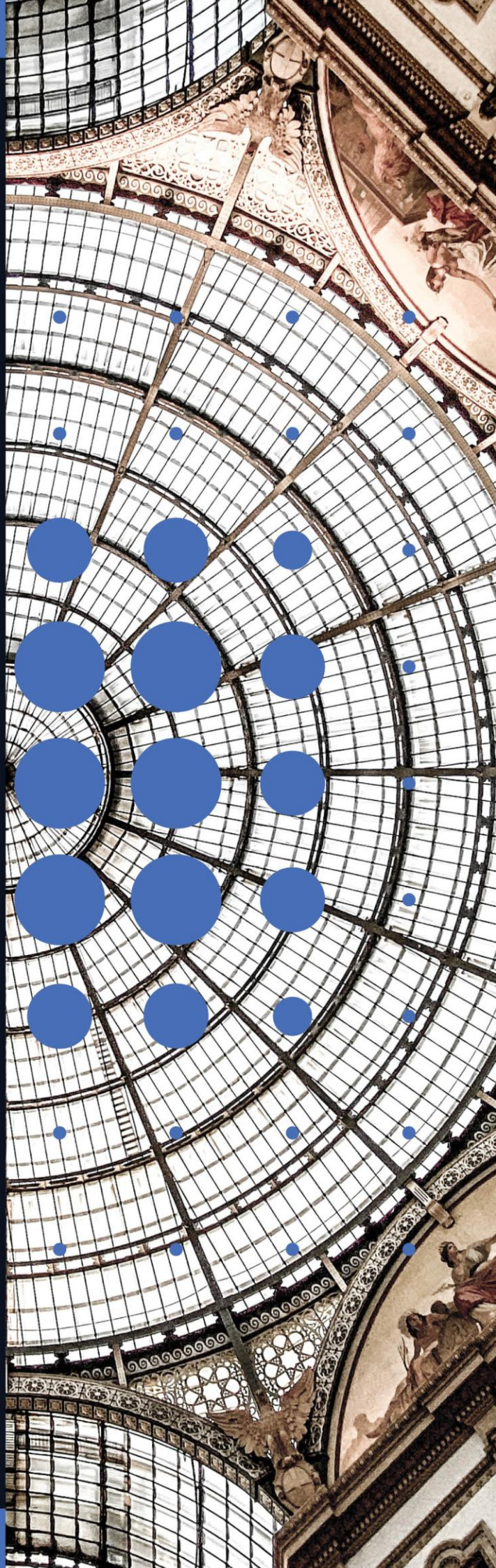
hiperpile™

A foundation for change

Hiperpile: An Introduction



Redefining sustainable construction



At Hiperenergy we redefine the link between sustainability and tangible value. We deliver integrated, thermal energy-based infrastructure that enhances asset value, better serving the needs of developers, businesses and communities.

At the heart of our solutions lies our USP, the **Hiperpile: the next generation energy pile**.

Our patented Hiperpile foundation system is a groundbreaking and award-winning technology, winning the ICE Brunel Medal for low-carbon solution within the built environment in 2025. The hallmark of the Hiperpile is its ability to reduce whole-life cost and carbon, we achieve this by integrating structural, geotechnical and geothermal design principles into a singular foundation solution.

Key Benefits:

Embodied Carbon Reduction: Our methodologies lead to a substantial reduction in the embodied carbon associated with piled foundations, achieving reductions ranging from 20% to 30%

Reduced Electrical Demand: Depending on the building typology and use, as a result of the high coefficient of performance of our ground source energy-based system, we are able to significantly reduce the electrical demand for space heating & cooling.

Hiperpile enables developers to:

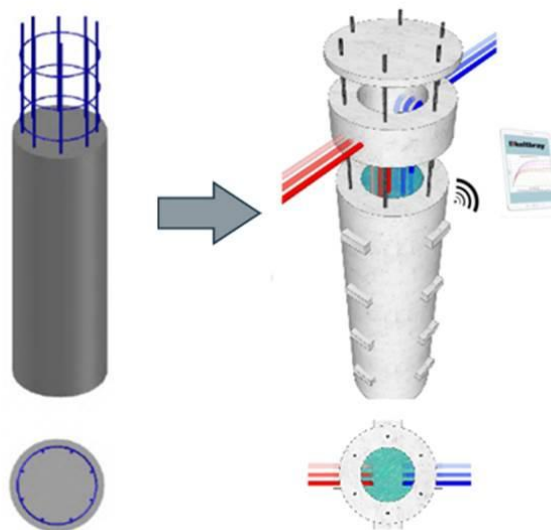
- Deliver on their carbon pledges and reduce their upfront Section 106 carbon offset obligations
- Enhance their asset's value by reducing operational costs and carbon.
- Enhance the construction safety and reduce the overall environmental impact of construction works, specifically by reducing the volume of construction traffic.

The three key USP elements to the Hiperpile:

1. **Lower Carbon Footprint** – Our piled foundation system cuts embodied carbon in deep foundations typically by 20-30% and optimises the substructure to further reduce carbon impact.
2. **Energy Flexibility & Efficiency** – We enable energy storage in the ground, balancing heating and cooling cycles to enhance performance whilst reducing operational carbon and costs.
3. **A Reliable Thermal Pile System** – Our next-generation thermal energy pile eliminates traditional issues by separating thermal pipe installation from piling and groundworks activities, ensuring a reliable and fully functional thermal foundation system.

Our Hiperpile Technology

The Hiperpile is a suite of innovative solutions which, when combined deliver significant sustainability benefits with the ability to harness the earth's geothermal energy within the building foundations themselves. The Hiperpile comprises a hollow void, thus reducing the material volume and embodied carbon required to construct piled foundations. The central void is then utilised as a geothermal exchange mechanism through the installation of geothermal loops which extract and inject heat from the ground, providing the building with heating and cooling respectively. The Hiperpile compared to a traditional piled foundation is presented below.



The heating and cooling potential of the Hiperpile system is not limited to the building or development it is used on but also extends to adjacent plots or heat networks, acting as an additional energy source as well as a large thermal store. The Hiperpile system redefines piled foundations as energy enabled assets which provide significant value to the development and surrounding region and are a step change in the move towards Net Zero.

Depending on the scheme, tangible benefits include:

- Greater quality control with the adoption of DfMA technology,
- Fewer vehicle movements during construction (up to 15%),
- Thermal energy storage capacity and enhanced peak lopping performance,
- Reduced whole life cost and space advantages over solutions such as air source solutions,
- Revenue opportunities as hub supplier to local heat networks,
- Use & re-use warranty