hiperpile™

SECTOR ANALYSIS

Hiperpile is a low-carbon foundation system, enabling efficient, reliable, and sustainable thermal energy for all - reducing overall energy system costs while enhancing efficiency.

Lower Carbon Footprint – our piled foundation system cuts embodied carbon in deep foundations by 20-30% and optimises the substructure to further reduce carbon impact.

Energy Flexibility & Efficiency – we enable energy storage in the ground, balancing heating and cooling cycles to enhance performance whilst reducing operational carbon and costs.

Innovative Thermal Pile System – our next-generation thermal energy pile eliminates traditional issues by separating pipe installation from piling and groundworks, ensuring a reliable and fully functional thermal foundation system.

Infrastructure and Aviation

Infrastructure projects such as highways, bridges and airports benefit significantly from the multifunctional components of the Hiperpile system. Government infrastructure typically leads the way with ambitious sustainability targets and Net Zero goals, and Hiperpile technology facilitates the achievement of these goals. The system's low-carbon and geothermal energy elements make it suitable for various applications, including:

- **Airports:** provides a low-carbon foundation system, reducing construction activities and material deliveries in restricted environments. Terminals and runways require thermal energy for space heating, cooling, and hot water. Additionally, ground source energy from Hiperpile ensures a frost-free environment, optimising airport operations
- **Highways:** heavy viaducts typically need large diameter and deep piles. By adopting Hiperpile we significantly reduce material use and associated embodied carbon in these structures
- **Underground/Rail:** Hiperpile technology when installed beneath station structures may capture waste heat within underground tunnels, providing readily available thermal energy for adjacent buildings. Additionally, the system can be integrated with thermal loops in tunneling structures to provide a thermally active foundation system

Key Benefits:

- Savings in materials and embodied carbon, helping reach industry sustainability targets
- Reduction in operational cost and carbon
- Readily available thermal energy for space heating, cooling, hot water, and other processes

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