

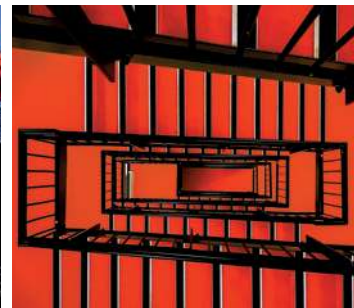
CONSTRUCTION VIEW

ISSUE 45

FUTURE-PROOFED
ENERGY CENTRE, WOKING | P4

ThamesWey

www.thamesweygroup.co.uk





The Business of Sustainability

Photos: ThameWey

ThamesWey is an independent limited company with a single shareholder in Woking Borough Council.

It was set up in 1999 to deliver on the council's strategic objectives which, at the time, were mainly focused on tackling climate change through carbon reduction. Those environmental priorities have since evolved into the Woking 2050 strategy which places sustainability at the heart of broader efforts to meet the demands of development and the local economy.

This means that ThamesWey can deliver on sustainability commitments in ways that purely commercial companies can't, while having the freedom to compete in open markets. The result is high quality projects that fund further sustainability work and provide a source of revenue for Woking Borough Council that helps keep important services running.

ThamesWey has found that delivering public benefit for communities is good business.

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POOLE ROAD ENERGY CENTRE, WOKING

ThamesWey is one of the UK's longest established district energy companies, having been set up by Woking Borough Council in 1999 to supply low carbon heat, power and cooling (trigeneration) energy to public sector, commercial and residential customers. The company's first energy station was completed in Woking town centre in 2001 followed by a 6MW heat and scheme in central Milton Keynes in 2005.

By 2016 growth in demand for energy from new commercial, retail and residential development in Woking town centre led ThamesWey to start planning a second energy centre in the town. The brief required the facility to be capable of supplying up to 10MW of heat (a 500% increase in energy generation over its existing plant), with the aim of supporting new development in the town centre beyond 2030, ultimately enabling its first energy centre to be de-commissioned. With a design life of 50 years, the brief required the building to be highly flexible, accommodating phased expansion of generating capacity. Crucially, the energy centre had to deliver the company's decarbonisation plan.

As ThamesWey's Chief Operating Officer, Sean Rendall, explains, "We set a highly demanding design brief for the team; the energy centre had to be ready in time to supply the first new customers –including over 420 high rise apartments, a new 200 bed Hilton hotel and retail scheme already under construction. But decarbonising the UK's energy means we don't know for sure what technologies we will be using in 20 years to generate heat and power, let alone in 2070. We just know it's highly unlikely to be dependent on fossil gas. So the challenge we set the team was to deliver an energy centre with the capacity to meet future demands for energy, whilst being flexible enough to enable re-planting 2-3 times during its lifetime without knowing what that future plant will be. In short, the entire brief was about future-proofing."

Photo: Vital Energi





Photos: ThamesWey



The design concept was also driven by the desire to create a new operational and business headquarters for the ThamesWey group of companies, complete with engineering workshops and stores and a second floor office capable of accommodating more than 60 staff. Hence, the finished building had to combine energy production whilst also being an attractive workspace and flagship HQ. As the ThamesWey Group's activities also include housing development providing high quality affordable and market-rent units, the building is capable of upward extension to up to 17 storeys to provide residential co-living accommodation. This presented particular challenges in terms of organisation of access to the building and movement within it, along with practical considerations such as closely managing its acoustic performance. Future-proofing included detailing the structural frame for extension and provision of spare risers and lift cores.

The decision was taken to celebrate the industrial purpose of the building with external plant and equipment expressed as features including the chimney flues painted in bright orange and installed in a black exoskeleton lattice tower of steelwork (the choice of colours reflecting ThamesWey's corporate branding). Two large thermal stores, also in bold orange, are located to the front of the building, making a clear statement about the energy centre's purpose. These are set against the main façade comprising matt black vertical fins rising 14m from ground level to the top of the double height plant rooms on the ground and first floors. The closely spaced fins wrap around all sides of the building, mimicking the radiators of a giant heating element.

Internally, the building is fitted out with exposed services emphasising its industrial purpose, and the bright orange theme continues from industrial floor finishes to more subtle touches in the office accommodation. The effect is to create a warm glow throughout the building, reminding occupants of its purpose to provide heating to over 4,000 residents in the town centre.

The rapid build programme driven by critical heat-on dates for ThamesWey's customers broke ground shortly before the first covid lockdown in March 2020 with construction continuing throughout three lockdowns. Nonetheless, the first heat flowed through over a kilometre of new heat mains in April 2021. **As Sean Rendall reflects,** "We set out to build a future-proofed energy centre, driven by the need to meet the challenges of uncertainty. Covid has reminded us to expect the unexpected and Poole Road energy centre will help us meet the challenges of a post-covid, post-energy crisis world."

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