

Combined Heating and Power Systems for New Housing Development in Surrey

Client: Willmott Dixon

Location: Mitcham, Surrey

Products & Services supplied: CHP Maintenance Contracts | G59 Testing and Commissioning

Overview

A contemporary apartment development in Mitcham, Surrey, managed by Willmott Dixon Homes and Notting Hill Housing, in conjunction with the Homes and Communities Agency was initiated in order to provide affordable homes that meet level 4 of the Code for Sustainable Homes. shentongroup was chosen to provide two Tedom Micro T30 Combined Heat and Power systems to supply a total of 169 dwellings located across 8 housing blocks with affordable, greener electricity and hot water supplies.

The Problem

Located in a leafy residential area, close to Mitcham town centre, Surrey, the 460-acre Mitcham Common, Brenley Park is a lifestyle location that offers modern, well-specified energy-efficient apartments and penthouses in a secluded, green environment. Part of a £19 million development, the joint venture is in partnership with national housing and regeneration body, the Homes and Communities Agency which owns the site and has contributed grant funding of £6 million to support the delivery of affordable housing.

With more and more local authorities and housing and generation bodies requiring builders to comply with Level 4 of the Code for Sustainable Homes, the standard measures the sustainability of new homes against nine categories; energy/CO2 emissions; water; materials; surface run-off; waste; pollution; health and well-being; management; ecology. Therefore, it was clear that Combined Heat and Power was the preferred power supply solution to enable the development to reach many of these criteria.



“shentongroup was chosen by Willmott Dixon Housing to provide a Combined Heat and Power system”

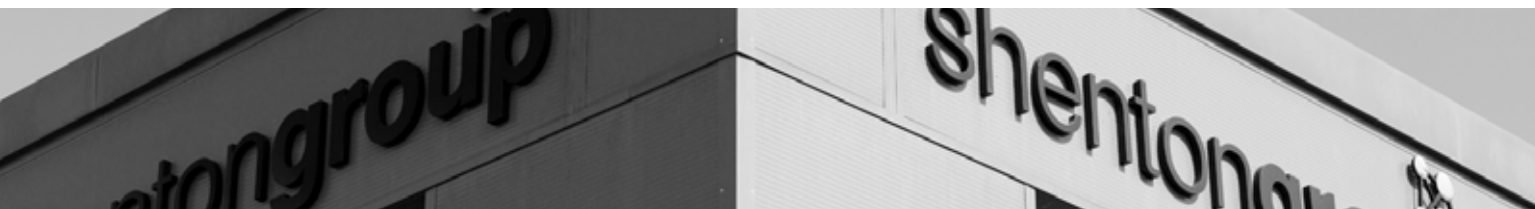
Solution

shentongroup was chosen by Willmott Dixon Housing to provide a Combined Heat and Power system that supplies electricity, hot water and heating to 169 residential properties across 8 of the development's housing blocks. Two Tedom Micro T30 CHP systems will serve a district-heating scheme, taking heating water around the whole site, including the more remote blocks of flats. As the heat demand varies, the CHP units are able to modulate their output to suit the varying requirements. This maximises savings by enabling the units to stay 'on duty' for more hours each year.

A specialist supplier of power generation and energy support systems and sole UK provider of the highly acclaimed Tedom CHP units, shentongroup prevailed against strong competition from three other companies to win this

prestigious project. Jason Bedford, Senior Building Manager at Willmott Dixon Housing's Brenley Park explained; "We chose shentongroup because they were able provide us with an excellent, cost-effective product, backed by first-rate engineering expertise". Mr. Bedford added; "The company liaised closely with all parties to resolve technical challenges and ensure we conformed to all compliance requirements, including G59 regulations".

The units will be installed in a plant room in one of the blocks below residential flats and living areas. To minimise sound levels and prevent disturbance during night time running, the CHP units are housed in soundproof containers with sounds levels of just 60 dB(A) at one metre.



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 Power Therm

 Power Care

“Rydale Leisure Centre’s Tedom Micro T30 system delivers cheaper power throughout the complex”

Outcomes

shentongroup’s Sales and Marketing Director, Curtis Meek, detailed the solution his company supplied; “We specified the two Tedom Micro T30 units because they are low emission and high performance units and will provide the power availability and reliability that this development demands”. Curtis added; “Coupled with shentongroup’s Infinium24 CHP maintenance and support contract, Brenley Park really will enjoy cheaper, greener and extremely reliable continuous power supplies”.

The Tedom CHP units are ‘Zero Nox’ emission-rated, making them the ideal solution for installations within a built environment in urban areas. The high efficiency Tedom CHP systems provide 95% efficiency which means that the scheme’s landlord profits from a significant reduction on his energy costs whilst the developer and tenants benefit from compliance with carbon reduction legislation.

To guarantee trouble-free continuous operation of the CHP installation, as Tedom’s sole authorised supplier and servicing specialist in the UK and Ireland, shentongroup was commissioned to provide a comprehensive CHP Maintenance Contract. The two CHP units will be maintained under shentongroup’s Infinium24 programme, which is a scientifically designed and monitored “perpetual renewal protocol” that constantly renovates and re-engineers components before their projected replacement date. This fixed cost service means that Brenley Park residents have the peace-of-mind of an 8,000-hour support contract, charged at a fixed hourly rate which covers all parts, labour, travel, fuels, engineers’ accommodation and sundries.

About shentongroup

shentongroup is the UK’s leading technical expert in standby power, uninterrupted power supplies, and combined heat and power supplies. The company provides continuous power supply solutions to, not only residential developments, but to organisations spanning key sectors including; healthcare, telecoms, manufacturing, retail, education, government, utilities, and sport and leisure.

With the flexibility to support both inside and outside applications, shentongroup is a leading force in the provision of Combined Heat and Power solutions and supplies a range of CHP systems under its Powertherm label. CHP is increasingly becoming the choice for projects that require large volumes of hot water. Generating power from a number of sustainable fuels, including less-expensive natural gas, the heat generated from this process is channeled into heating, hot water supplies and even air conditioning, proving to be a more affordable, greener alternative. CHP reduces overall energy consumption and thereby enables commercial and industrial customers to offset gas and electricity consumption. The system’s very low exhaust emissions ensure that Powertherm complies with, or exceeds UK regulations.

As detailed, shentongroup provides comprehensive support and maintenance of the CHP systems it supplies and the Infinium24 programme monitors the system 24 hours a day. With an 8,000-hour support contract charged at a fixed hourly rate which covers all parts, labour, travel, fuels, and engineers expenses. There is a minimum annual charge of 2,000

hours, therefore making predictable budgeting much easier, and as each year passes, you’re likely to save even more money – this is because mains power and fuel prices typically rise, whereas your good-as-new Powertherm CHP generator will be performing just as well as when we first installed it.

About Willmott Dixon

Founded in 1852, Willmott Dixon is a family-led business with branches spanning; construction, residential development and property support services. In addition to their Mitcham development, major projects include; Woolwich Central, the largest ever development by Tesco’s in-house development business.

It’s development division, Regen, is working with Poplar HARCA to redevelop the Aberfeldy estate over a ten year period to create 1,176 new homes, shops, healthcare and community facilities and it’s working with Circle to create Orchard Village, the regeneration of a 1960’s-era estate into modern homes for scores of families.

In addition, Willmott Dixon was announced as developer of Brentford FC’s new Community Stadium at Lionel Road South, Brentford, London. This exciting development comprises a 20,000 capacity stadium, 910 homes and community facilities, as well as the redevelopment of the club’s former ground, Griffin Park, into 70 new homes.



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