



*Highest Efficiency Proven Reliability Dependable Service*

## Beckton and Crossness Sewage Treatment Works



Edina CHP Container offloaded at Crossness STW

As part of their on-going development programme, Thames Water appointed Tamesis (a Joint Venture of Imtech Process and Laing O'Rourke), to co-ordinate the projects at Beckton and Crossness. Their aim was to expand the sewage treatment works in anticipation of increased population and to treat the waste to a higher standard, whilst also preventing sewage overflow into the River Thames. Their location in Newham and Greenwich, London makes them among the largest sewage works in Europe.

Aware of Edina's involvement with many sewage treatment projects, Tamesis invited Edina to submit proposals for the sewage gas utilisation through CHP (Combined Heat and Power) production. Following the acceptance of Edina's proposal, a full-time Project Manager was appointed to oversee and co-ordinate the works.

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This involved close liaison with other contractors on site, full HAZOP (Hazard and Operability) participation and careful consideration to concurrent site operations.

The chosen generation set is the MWM TCG2020V20 with an output of 2MWe, due to its high electrical efficiency which combined with a fully inclusive maintenance contract provides the client with the lowest lifecycle operating cost. The power produced will be used to supplement site demand. The engine jacket water heat will be used for digester heating with the exhaust fed to waste heat boilers for steam production to assist the advanced digestion process.



Edina's Manufacturing facility

The six gen-sets supplied will therefore provide 12MWe, sufficient to power 24,000 homes. These sets habitually operate at an overall efficiency in excess of 85% with uptime of >92%. The gen-sets are containerised and all ancillary equipment is assembled and tested at Edina's factory, thereby reducing site installation time and cost. This makes possible a "plug and play" unit with full adherence to all UK, European and Ireland Regulations. The experience and ability of Edina to containerise the 2MWe gen-set, sets it apart from its competitors and was a key factor in Tamesis' choice.

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The Edina group of companies has specialised in onsite power generation for over 25 years. With over 140 qualified staff operating at 5 locations in 2 countries “true” national coverage for all service and maintenance requirements is provided. The spectrum of fuel sources are catered for in the product range, diesel, natural gas, biogas and synthetic gases. Edina offers design, supply, hire and full turnkey solutions and constructs the container and all related operational products at its manufacturing premises in Lisburn, Northern Ireland.

Edina Group is the official distributor in the UK and Ireland of the MWM engine range. MWM is the oldest manufacturer of gas powered generating equipment, being in the business since 1881. Gen-sets are noted for their market leading efficiency and proven track record for dependable and predictable service, thus making them the most cost effective, efficient solution.

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