



PROJECT SUMMARY:



CLIENT
Cofely

PROJECT
Trigeneration

TIMESCALE:
2008 - 2010

CONTRACT VALUE:
£7 million

OVERVIEW

Based at Salford Quays in south-west Manchester, MediaCityUK is set to become a new media enterprise zone for the North, delivering content across the UK and beyond.

Phase one covers an area equal to 18 football pitches and yet it only equates to one fifth of the land available for future growth. Once fully developed the MediaCityUK development could utilise a total of 200 acres and is set to provide more than 15,000 jobs and accommodate 1,000 businesses.

The £650million MediaCityUK project is being developed and managed by

Peel Media, a division of Peel Holdings one of the UK's leading property and transport companies with an asset value in excess of £5 billion. MediaCityUK is the first development in the world to become a BREEAM approved sustainable community and achieved the highest environmental saving rating in the world through the use of a highly efficient low carbon site based tri-generation system for the local generation of heat, cooling and electricity which will save approximately 20,000 tonnes of CO2 per annum.

CHALLENGE

The BBC became the catalyst for the development of MediaCityUK with the announcement of their decision to search for a new Northern Centre, as a result the BBC is set to relocate 5 of its departments to the new northwest site in 2011.

Others moving to the site include the University of Salford which is set to create a Higher Education Centre forming an extension of the University's main campus expected to accommodate over 700 students and staff. and the Northwest Vision and Media organisation who are responsible for leading, promoting and supporting the regions creative and digital industries.

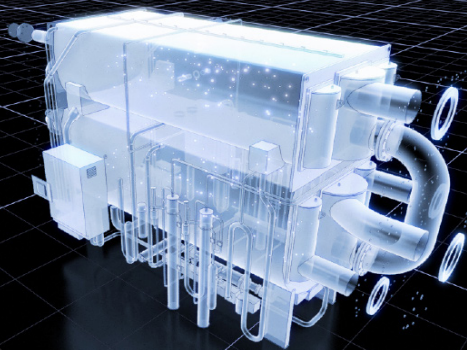
Northwest Vision and Media relocated to MediaCityUK in autumn 2009.

The UK Governments stringent Building Regulations coupled with Peel's ambitious energy commitment meant it was essential to employ an energy company with experience as well as the depth of knowledge required to help and advise on how best to deliver both the trigeneration system as well as the associated energy infrastructure. Vital Energi carried out Phase 1 of the district heating installation connecting the tri-generation Energy Centre to surrounding buildings for the purpose of distributing the heating and cooling.

THE BENEFITS:

- > First BREEAM approved sustainable community
- > Winner of 2009 CHPA Industrial & Commercial Award
- > Novel on-site canal cooling system
- > Future-proofed for new technologies

Vital Energi designed, supplied and installed the highly efficient low carbon site based tri-generation system as well as a 2MWe CHP engine, 2x9MWth Boiler, an Absorption Chiller and 3km of District heating pipework. MediaCityUK is also recognised as the world's first BREEAM approved sustainable community.



“Environmental issues are important today but, when the site is up and running in 2011, these issues will be all the more critical. We are working hard to make sure mediacity:uk is future-proof by incorporating the very best environmental and sustainable credentials into every aspect of the development”

ED BURROWS, PROPERTY DIRECTOR, PEEL MEDIA

THE SOLUTION

The district heating network comprises of over two thousand metres of preinsulated underground pipe using some of the largest pipe products from Vital Energi's range; the biggest having a 520mm outer casing benefitting from enhanced longevity through the use of the patented "Band Muff" fusion welded joint system that extends the design life span of the pipe system from 30 to 50 years.

The network infrastructure was installed in new spine roads constructed across the development whilst adjacent building foundation works were taking place. Very close co-ordination and co-operation was required to plan and manage the new utility services and building foundation designs, utilising 3D modelling techniques. With over 2,000 people working on the construction of MediaCityUK it is a complex undertaking and Vital Energi worked flexibly with others to optimise the resource planning of the various contractor's installation works.

Vital Energi's team of experts are very familiar with the challenges involved on such complex projects and were not only able to integrate easily and flexibly into the larger scheme construction process but also received recognition for their ability to do so in a Safe manner with the award by Bovis of a Health and

Safety Award for diligence.

Impressed with Vital Energi's performance in the installation of the district heating and cooling infrastructure network, Vital Energi were subsequently awarded the design, supply and installation of the trigeneration Energy Centre.

The 40MW trigeneration system simultaneously produces heat, cooling and power through a centralised Energy Centre whereby a Combined Heat and Power (CHP) engine generates heat and electricity simultaneously whilst an absorption chiller creates chilled water from the recovered waste heat which circulates in a water jacket around the CHP engine. The simultaneous generation of energy coupled with the use of recovered energy means that the system operates with very high efficiency compared to traditional forms of energy generation.

The energy centre is designed in a modular fashion, to be installed in two phases as the MediaCityUK site develops to its full potential size. Vital Energi have recently handed over the first completed phase of the installation which includes two 9MW gas boilers, a 2MW CHP engine and a 1.5MW absorption chiller which will provide cooling to the BBC film studios.

THE CONCLUSION:

Vital Energi achieved early heat on one month before the completion date despite starting works nearly three months after the original planned date. The system is also future proofed and has the unique ability to adapt to incorporate the use of other forms of energy generation which may become commercially viable in future years as technology develops.

**REDUCED CO2
EMISSIONS BY
APPROXIMATELY
20,000
TONNES PA**

Bovis Lend Lease were so pleased with the trigeneration scheme that they have used Vital Energi's 3D animation of the energy centre to apply for a Construction News Environmental Project award as well as awarding us with a Health and Safety Award for diligence.