

Case Study - Pre-insulated pipes Media City, Manchester

The Brief:

Based at Salford Quays in south-west Manchester, Media City is set to become a new media enterprise zone for the North, delivering media content across the UK and beyond. With the BBC set to relocate five of its departments from London to the new site by 2011, with the creation of an iconic new complex, and the construction of over 7 million sq ft of new and refurbished floor space for business, retail and residential property, the £415 million Peel Holding's development is one of the most exciting projects currently taking place in the UK.

Media City integrates sustainability measures throughout its planning, design and construction. The BBC buildings are being built to BREEAM excellent rating, the remaining buildings are being constructed to BREEAM 'Very Good' rating. Beyond the architecture, the development integrates low and zero carbon technologies including a tri-generation system based on energy efficient combined heat and power technology providing a proportion of the site's energy needs on phase one of this project. This environmentally friendly solution will reduce carbon emissions by approximately 20,000 tonnes per annum. Vital Energi was appointed by Building Services company Elyo Suez to supply and install a network of underground pre-insulated pipes, linking the tri-generation schemes energy centre, housed within a purpose built 2000 space multi story car park on the site, to nearby buildings including the University of Salford, distributing heating, power and cooling to those working and living in the new media hub.

Our Response:

The entire installation covers two thousand meters of pipe using some of the largest pipe products from Vital Energi's range, the biggest with a 520 mm outer casing, further enhanced by the use of a "Band Muff" fusion welded joint system that extends the design lifespan from 30 to 50 years. The large diameter pipes had to be installed within relatively small trenches, and in close co-ordination with many other services as well as subcontractors, requiring the technical expertise of our engineering team. An example of this involved installing pipeline next to communication ducts; vital for the technical requirements of running a media centre. In order to ensure that none of these ducts were damaged, the Vital Energi team worked very closely with the 3D model team, who produced a detailed representation of the entire zone using 3D modelling techniques.

The site is designed around a curvature so Vital Energi commissioned uniquely designed pre-curved pipes manufactured in Denmark to fit the project needs. In fact throughout the project, Vital Energi was called upon to provide design input with regards to the full integration of the pipe network.

The Benefits:

- Environmentally friendly long-term solution - state-of-the-art insulation techniques provide consistent CO₂ reductions.
- Long term solution - each pipe section is connected with the most reliable joint system available
- Financial savings



Client:

Elyo Suez

Main Contractor:

Bovis Lend Lease

Timescale:

March 2008 to July 2008

Contract Value:

£1.7 million

Project: Supply and Installation of pre-insulated pipes for heating and cooling



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With health and safety being of paramount importance, installing the pipe network on such a high-profile and congested project brought its own particular challenges. Due to the high levels of activity on site, with various teams working in a relatively condensed space, regular co-ordination was needed between service teams to resolve conflicting access needs. Worth specific mention was the Health and Safety award that was presented by Management Contractor Bovis Lend Lease to Vital Energi for their diligence in obtaining the 'signing off' of work permits at the end of each job.

Key Achievements:

Vital Energi's contract works were delivered on time despite tough deadlines and access constraints. The design of the network also includes a feed for a further seven buildings to be linked up to the system at a later date, benefiting from the environmental and financial benefits the installation provides. Vital Energi's knowledge and professional expertise on this scheme has resulted in Elyo Suez awarding Vital Energi a further contract to undertake design works relating to construction of the tri-generation energy centre. Hopefully Vital Energi will be involved in future phases as the development of the 37 hectares media city continues.

