Leeds Flood Alleviation Scheme: Phase 1

In recent years flooding has had a devastating effect on peoples' lives, homes and businesses; considerable investment is now being put into addressing the issue.

One project that has grabbed the headlines in recent years is the Leeds Flood Alleviation Scheme, or Leeds FAS as it is commonly known.

Leeds has experienced numerous flood events over the centuries, with the worst recorded in 1866 when flood water 1m deep ran down Kirkstall Road and into the city. Since the year 2000, flooding has occurred in Leeds on no less than 7 occasions but on 26 Dec 2015, during the FAS scheme construction, Leeds again experienced significant and widespread flooding from some of the highest river levels ever recorded; specifically, the flooding occurred along the A65 corridor, in the city centre downstream of the railway station and the industrial area at Stourton. With flood risk in general rising across the UK, the potential for a repeat incident is considered high.

The Leeds FAS phase 1 project will provide protection to more than 3,000 homes, 500 business and 300 acres of development land against flooding from the River Aire, but in addition it is also expected to bring confidence for regeneration, economic growth and benefits to the people of Leeds and their ambition to be the 'Best City for Health & Wellbeing'.

Broken down into three elements, Phase 1 included the installation of moveable weirs, the merging of the river and canal and the construction of flood walls, glazed panels and embankments stretching more than 4.5km.

In a UK first for flood alleviation purposes, Phase 1 saw the installation of new mechanical moving weirs to replace the existing weir structures at Knostrop and at Crown Point. The new mechanical weirs maintain a navigable water level during normal water flows, where the Aire and Calder navigation meets the Leeds to Liverpool canal, however, during periods of dangerously high flood levels, these weirs can be progressively lowered to reduce the height of the flooding to the lowest practicable level.

IBS Engineered Products was awarded the contract by Main Contractor BMMJV (a joint venture between BAM Nuttall and Mott MacDonald), on behalf of the client Leeds City Council and the Environment Agency, to design, manufacture and co-ordinate the installation of glass flood walls, floodgates, property level flood

continued...

Sector: **Flood**

Client: **Leeds City Council**

Location: **Leeds**

Main Contractor:
BAM Nuttall and Mott MacDonald (BMMJV)

Size: **Various**

Product/s:
- **Glass Flood Walls**
- **Floodgates**
- **Demountable Barriers**
- **Non-Return Valves**

Leeds Flood Alleviation Scheme: Phase 1

protection and flap valves, including pre-design work to agree bespoke details of the glass systems to suit client demands on aesthetics.

The contract required IBS to undertake the design and development work for all products, manufacture (at IBS HQ in Germany) and implement staged deliveries to site during the contract period to enable co-ordination of installation works using a specialist sub-contractor.

A particularly challenging project, IBS was required to work closely with the project designers, main contractor and specialist sub-contractor, in order for works to be completed on schedule. To facilitate installation work on site, mechanical lifting equipment, a glass suction lifter and a barge crane were used to lift some of the glass panels into position.

The project - which cost in total circa. £50m - commenced January 2015 and was officially opened in October 2017.

The project and work undertaken by IBS was considered a great success, with the project itself winning a number of awards, including NEC Project of the Year Award, the Yorkshire Society Regeneration Project of the Year Award, Constructing Excellence Yorkshire & Humber Civils Project of the Year and the Royal Institution of Chartered Surveyors Awards for Design through Innovation.

IBS Engineered Products Ltd, Unit 7, Brunel Park, Off Blyth Road, Harworth, Doncaster, South Yorkshire DN11 8NE.
T: +44 (0)1302 630015 E: info@ibsengineeredproducts.co.uk