EIA Quality Mark
Case Study

World Heritage Site: the Wellington Dock experience

Wellington Dock with proposed treatment facility superimposed

Key Issues –

The extension of the Liverpool Waste Water Treatment Works (WwTW) required the construction of a new secondary treatment facility, within a historic dock in the buffer zone of the Liverpool Maritime Mercantile City World Heritage Site (WHS).

Key issues included:

- A strong presumption against development within historic docks in local planning policy;
- The need to develop a design solution which respected the heritage significance of the historic dock;
- Potential for impacts on the integrity, authenticity and setting of the WHS, and the setting of surrounding Listed Buildings and conservation areas;
- Risk of call in by the Secretary of State in the event of objection by English Heritage; and
- Short timescales for Environmental Impact Assessment submission due to statutory requirement to meet water quality legislation

Purpose of the project

Liverpool WwTW treats domestic and trade waste from a catchment equivalent to 1,100,000 million people. The construction of the works enabled the treatment of waste water, causing the improvement of water quality within the River Mersey in the 1980s. Extension of the Liverpool WwTW was proposed by United Utilities (UU) to ensure that the works would continue to meet standards required under the Urban Wastewater Treatment Directive through the construction of a new secondary treatment facility.

Description of the project

Jacobs were commissioned by UU to produce a full Environmental Statement and planning application for this development within seven months of the project’s inception, which was submitted in July 2011.

Liverpool WwTW had been built in the 1980s in a historic dock on the River Mersey. Since this time, however, the understanding of the Liverpool Docks historic significance as a centre of maritime and mercantile culture had transformed, with the UNESCO designation of Liverpool city centre as a WHS.
Due to infrastructure constraints, the need to be close to the River Mersey and the availability of development land, options for the siting of the extension were limited to Wellington Dock, an historic dock adjacent to the existing works. This had been designed by same engineer as the historic docks at the core of the WHS and was located within the buffer zone of the WHS directly adjacent to the site boundary.

The development of the design for the scheme was progressed in tandem with the environmental assessment and incorporated a number of key design features to mitigate the impact on the surrounding heritage features, including:

- Sinking the new structure into the historic dock to reduce its overall height;
- Provide a gap between the new building and dock walls to ensure the historic structure remains visible and legible as a former dock;
- Infilling of the dock around the building to water level and use of green slate chippings to imitate the water’s surface;
- Retention of historic surfaces and dock furniture;
- Reversibility of design, enabling restoration of dock as a water space in the future; and
- Incorporation of a clear zone between the works and the WHS.

**Lessons learnt**

The success of overcoming the potentially significant constraint of carrying out the development within the buffer zone of WHS, within a tight programme was achieved through effective and on-going consultation with the statutory consultees. These concerns were successfully addressed in the iterative design process, where potential alternative solutions were fully explored. The project was also successfully delivered through the close working and collaboration between the different specialists, in particular for landscape and heritage, but also as the result of the close working relationship between the specialists and UU design team. This enabled often highly technical engineering constraints to be discussed in full.

The cultural heritage assessment was undertaken based on guidance on Heritage Impact Assessment for Cultural World Heritage properties published by the International Council on Monuments and Sites (ICOMOS). This provided a robust methodology for the assessment of impacts the WHS.

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