



EVENING MEETING

MONDAY 21st MAY 2012 at 6:00pm

One Great George Street, London

(Nearest tube: Westminster)

The St Petersburg Barrier

By

David Edwards (Senior Project Director, Halcrow)

For a brief synopsis see overleaf

Admission free

Teas available from 5.30pm

For more information please contact

**Tim Fuller (BDS Secretary) on 020 7665 2234 or
email : bds@ice.org.uk**

This meeting will also be streamed live on the internet. For more details on how to view this meeting online please visit the BDS website.



The St Petersburg Barrier

By

David Edwards (Senior Project Director, Halcrow)

Synopsis

Known as the Venice of the North, Russia's St Petersburg is one Europe's most beautiful cities, but also one prone to significant flooding. Since its founding in 1703, St Petersburg has experienced floods on average once a year due to storm surges originating in the Gulf of Finland. The Russian Government of the day decided in 1979 to implement a scheme to protect the city. However, the project was disrupted and delayed by a variety of factors until in 2003 the Russian Government re-started the project with the appointment of Halcrow as the General Designer. The commission required the completion of design works, including updating the environmental data and the design to modern national and international codes.

The barrier is located approximately 25km to the west of the city and is 25.4km long. It includes 11 rock and earth embankment dams separated by two channel openings for navigation to the city's port and six sluice complexes, each housing 10 or 12 steel radial gates 24m wide, which allow water flow during normal conditions but can be closed in times of flood. The larger of the two navigation channels is 200m wide and has the capacity to allow ships of up to 100,000 tonnes through. In order to close this channel, two of the largest floating gates in the world have been built. The other navigation channel is 110m wide and is closed by a single vertical steel lifting gate.

The project also includes a six-lane highway forming part of the city's outer ring road. A tunnel has been constructed as an integral part of the works at the 200m wide opening, and the road crossing at the 110m opening incorporates approach viaducts and a steel lifting bridge.

Focusing on the dam-related structures, David will describe various aspects of design and construction of the project in relation to its successful conclusion.

Biography details for presenter

David has over 40 years experience in the design and construction of major engineering projects. He has played a major role in the design and construction of a wide variety of projects including hydroelectric and thermal power projects, marine works, roads, bridges, and tunnels involving design work in the UK and overseas, often working with, and directing, local counterpart staff.

For the last 8 years he has been based in St Petersburg working on the management of the design of the £2.3 billion St Petersburg Flood Protection Barrier, Russia.