



CASE STUDY

Wimbledon Centre Court Roof

May 2009



The heavy beams carrying the roof membrane run on two rails at each side of the court.

Gantrail were subcontractors to Street Crane Xpress who engineered the control technology and mechanical systems, as well as weatherproofing and drainage equipment, for the 5,200 square metre retractable roof over Wimbledon's Centre Court. This was designed by structural design consultants Bianchi Morley. The roof concertinas so that it can be folded into the ends of the building, and translucent to give the court an open feel when closed.

Gantrail were consulted during the design phase on the best ways of mounting the rails and on the likely deflection of the rails under load. This detail was important for ensuring that the spread of loading between the wheels of the beam end carriages were equally distributed on the four rails. Subsequently Gantrail won the contract to supply and install all the rails and the associated materials.

END USER:

The Lawn Tennis Association

OPERATOR:

The All England Lawn Tennis and Croquet Club

CONTRACTOR:

Street CraneXpress Ltd

LOADS:

2000 tonnes

KEY BENEFITS:

- The oldest established Grand Slam tennis tournament can be completed without interruptions from rain.
- The beam, rail, translucent cover arrangement allows the cover to be parked so the grass grows well.

AIMS

Since the first Championships in 1877, the Wimbledon tennis tournament has grown to be the senior Grand Slam tournament with a following of millions around the world. It is the only one played on natural grass and for many years it has been interrupted with rain stopping play. With sporting facilities around the world having stadia with retracted roofs it was time for Wimbledon to act. But the problem of ensuring sound grass growth in sports facilities has been a big problem when sunlight is limited by roof mechanisms.

TIMESCALE

Gantrail were subcontractors to Street Cranes Express. We originally supplied materials for a Mock Up Rail which was built at Stripworth Mills in Rotherham. After successful trials Gantrail were awarded the contract for the supply and install of the complete rail system. This comprised a total of 336 metres of Mrs 87A Crane Rails together with Gantrail 9216/08 Clips and Gantrail MKV11 Pad. The work was completed in time for the Wimbledon Tournament in 2008 after which the installation of the roof itself was completed in time for the 2009 Wimbledon Tournament.

INSTALLATION

Gantrail provided supervision, labour, plant, equipment and consumables to install 4 x 84m runs of MRS87A crane rail. The rails were fixed with Gantrail 9216 adjustable clips and mounted on Gantrail Mark VII pad. The rail joints were welded using the puddle or enclosed arc weld method. The rails were installed to the accuracy required in British Standard BS466: 1984 Appendix F.

ROI

The roof was closed for the Wimbledon Opening Event - Centre Court, Sunday 17th May 2009. It was closed in earnest during the first year of its availability although the tournament was fortunately played in fine weather for the majority of the two weeks.



With two rail 'Welding the rails after they had been accurately aligned.'



With one rail 'All clips are finally tighten after the rails are welded.'

Gantrail - A world of crane rail expertise.

Gantry Railing Limited

Sudmeadow Road, Hempsted, Gloucester GL2 5HG
www.gantrail.com

Tel: **01452 300688**
Fax: **01452 300198**

International: **+44 1452 300688**
email: info@gantrail.com

