



The canopy preserves the open character of the site and provides a safe and usable clay surface during the winter

A DEMOUNTABLE sports canopy at the National Tennis Centre in Roehampton, hailed as a world first in the sports sector, has won the ICE London Civil Engineering Special Award.

Careful teamwork between client, designers and specialist fabricators across Europe delivered the creative design solution set in Metropolitan Open Land. Composite pneumatic fabric beams spanning 42 metres support 1600sq m of translucent fabric with efficient internal steel stiffening, braced by an exo-skeleton of tensile fabric and compressive struts.

The canopy was the result of close collaboration between George Stowell architects and the engineering team comprising Arup and Airlight, to create an elegant, clear span demountable pneumatic fabric canopy supported by Y-shaped steel columns that is the first of its type in the world.

Dervilla Mitchell, from the judging panel, said: "The structure is lightweight, uses less energy than a conventional air hall and is demountable in four days. But what is more impressive is the future opportunity to use this as a low cost solution in communities and for other sports or other uses."

British tennis depends on player development through a combination of

coaching, inspiring facilities and practice on the clay surface that is the principal type used at competition level around the world. The all-weather demountable canopy provides a high quality training environment, optimising the use of clay courts at the NTC.

The canopy is a prototype for future uses including sectors outside sports and leisure and was constructed over a 12-week period within the allocated £420,000 budget that includes all above and below ground construction works and services.

The Olympic Velodrome was another 2011 winner, receiving the ICE London Civil Engineering Building Award. The venue, which will serve as an Olympic and Paralympic stadium during the Games and as a community cycling facility after 2012, incorporates a number of innovations including the uniquely designed curved cable net roof which saved 1,000 tonnes of steel and cut £4m from construction costs. With 35 per cent less embodied energy than the next best comparable venue in the world and impressive resource and energy efficiency credentials; the Velodrome is also setting new industry standards for sustainable construction.

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An all-weather demountable canopy may prove a low-cost solution for other sport sites.

# Smash hit

