

Case study

Emirates Arena

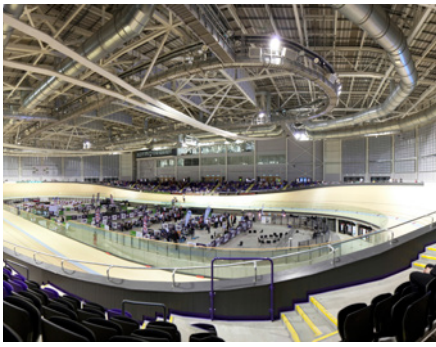
National Indoor Scottish Arena & Sir Chris Hoy Velodrome

Location
Philip Lighting

Glasgow
ArenaVision

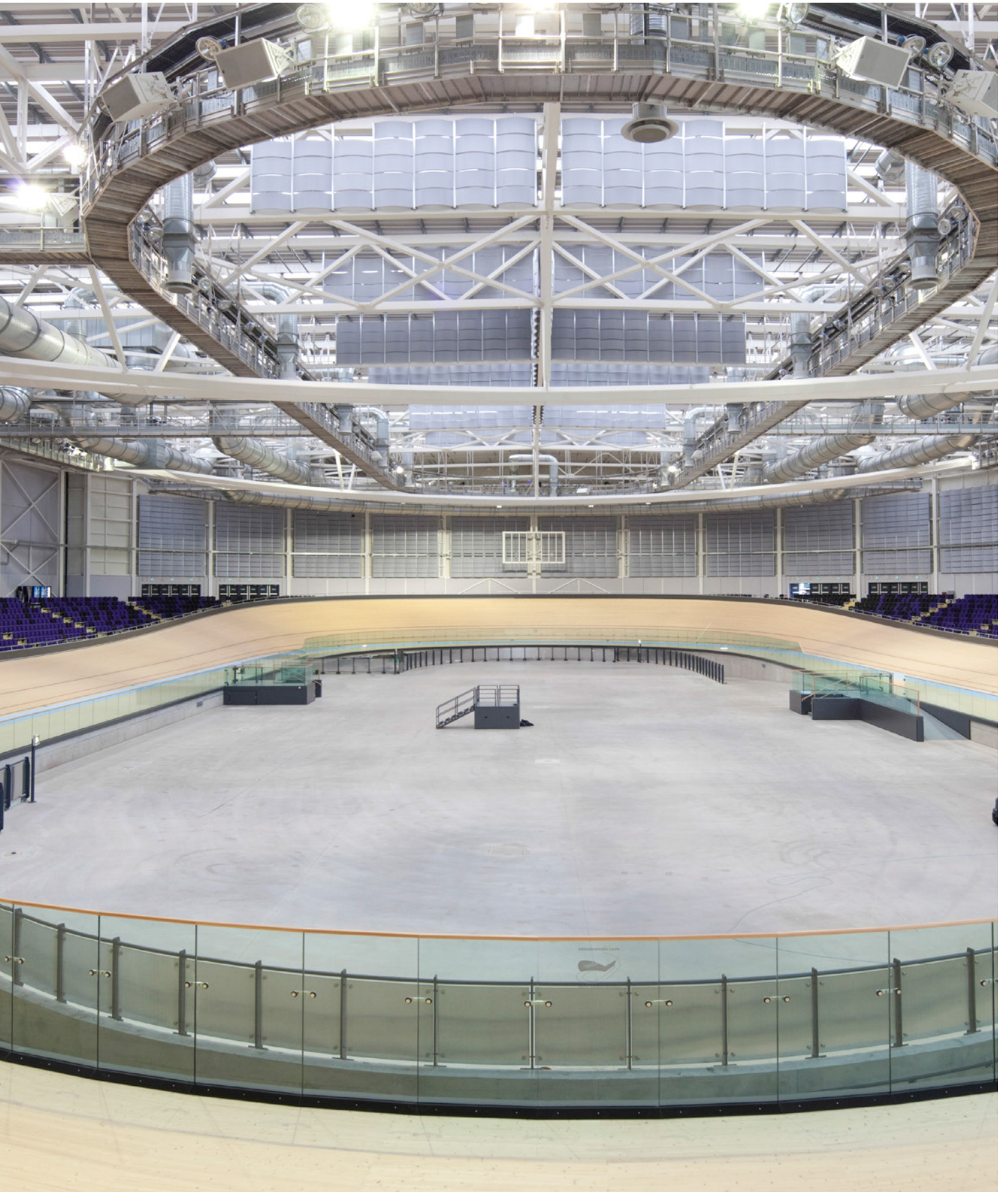


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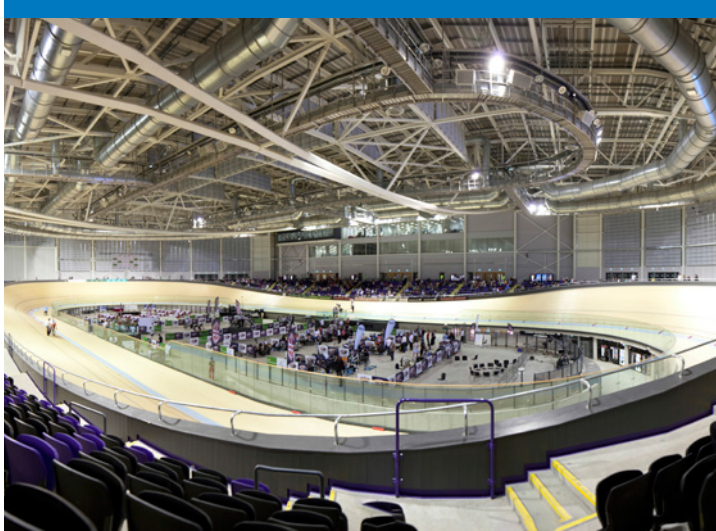


“In a high profile project like the Emirates Arena you need to have confidence that suppliers can deliver the necessary specialist expertise and experience. The professionalism of the Philips team, and the quality of the products, played a very important role in the success of this project,”

Tom Pheely, Arup



Philips ArenaVision floodlights and lighting controls are playing a key role in providing the Emirates Arena with an efficient and flexible lighting system.



Fast Facts

Customer

Emirates Arena

Location

Glasgow

Philips Products

ArenaVision

Dynalite Networked Controls

ToBe Touched Standalone Controls

After Care Services

Project Partners

Arup

Forth Electrical Services

Background

The Emirates Arena in Glasgow has been constructed by Glasgow Life to provide a new home for sport in Scotland and to host many of the key events in the 2014 Commonwealth Games. It comprises a multi-purpose arena linked to the velodrome by a connecting building that houses circulation spaces and offices.

For both venues the quality of the floodlighting is critical and Philips worked closely with consulting engineers Arup and contractors Forth Electrical Services to ensure that all criteria were met. The ArenaVision floodlights proved ideal as their advanced optical system ensures accurate and highly efficient light distribution.

"We engaged with Philips early in the design stages of the project so that we could share their experience of lighting many sporting venues, including many of those used for the London and Beijing Olympic Games," recalled Arup's Tom Pheely. "To that end we evaluated the ArenaVision fittings and worked with Philips on lighting calculations and control strategy. As well as meeting all sports lighting criteria, it was important that the system could be controlled in an energy-efficient way," he added.

The arena has the capacity to hold up to 7,000 spectators and features a 200m, 6-lane running track which can be hydraulically operated to allow for other events, such as the badminton that will be hosted during the Commonwealth Games. In addition, the venue regularly hosts tennis, table tennis, judo, boxing and many other sports – all with different lighting requirements.

The Solution

To address these requirements, 188 ArenaVision floodlights have been installed and these can be individually switched to achieve different light levels. Light levels are influenced by a range of criteria, such as the status of the event (e.g. competition, training) and whether it is being televised.

Different zones within the arena can also be lit to different illuminance levels.

Control is through a central, PC-based Philips Dynalite lighting management system that is operated by arena staff, who have received training from Philips. They are able to select from 40 different pre-defined switching levels. To ensure even lamp burning hours and facilitate group lamp replacement the system automatically cycles which fittings are used when non-televised light levels are required.

The velodrome is set to become the home of Scottish cycling, with fixed seating for up to 2,000 spectators and space for a further 2,000 temporary seats during major events. As well as hosting key events in the cycling calendar it is available for anyone to sample the unique experience of velodrome cycling.

A particular challenge of lighting the velodrome was ensuring consistent light levels on all parts of the curved track. To achieve this, Philips carried out extensive modelling when finding the right solution and also undertook the aiming and commissioning of the 272 ArenaVision floodlights installed to ensure the end result was as expected.

The visual comfort of people using offices and other spaces in the connecting building between the arena and the velodrome has also been taken into account by using Philips Lighting Control Modules linked to standalone ToBe Touched controllers in the spaces. Using Philips' dynamic 'light wheel' the ToBe Touched units allow users to adjust their lighting in relation to a range of parameters including brightness, colour, colour temperature and saturation.

Philips' involvement with the project will continue through an after-care package that will ensure the lighting continues to deliver optimum performance.



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