



PHILIPS

Sports & Area Lighting

Avantridrome
Cambridge



Our stories

Lighting to rely on for safety and speed

See how lighting created the perfect environment
to help athletes perform at their peak.





Quality lighting for high definition TV coverage

Client

The Home of Cycling Charitable Trust

Project

National Cycling Centre of Excellence Avantidrome

Architect and Consultant

LDP Consultants

Location

Cambridge, New Zealand

Project Manager

Geoff Lewthwaite, Project Manager, Philips New Zealand

Philips Solution

Lighting design, supply and certification
ArenaVision, GreenPerform LED, Coreline LED, StylID LED,
Greenspace LED, Powerbalance LED



The National Cycling Centre of Excellence Avantidrome in Cambridge, New Zealand, is a world-class cycling venue, including a fully enclosed indoor track cycling facility, with connecting facilities for BMX, road and mountain biking.

It is the new headquarters of BikeNZ, a not-for-profit organisation that not only helps to develop high performance athletes, but also to foster cycling at grassroots level by providing the community with access to this top quality facility.

High quality lighting is critical for the velodrome facility as track cyclists rely on it for safety and speed – the illumination must not create shadows on the track that can cause dangerous distractions. For a venue such as this that hosts national and international events, the highest standards of lighting quality and uniformity must also be met to enable high definition TV coverage and photography that is as good by night as by day.

In addition, given that the facility is expected to be well-utilised and is run by a not-for-profit organisation, the lighting solution needed to be one that is energy efficient to minimise operating costs.

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The Home of Cycling Charitable Trust that developed the Avantidrome knew they needed powerful floodlights for the racing track, but were also interested in incorporating LED lighting solutions in other areas to provide suitable, ambient light as well as being energy efficient for decades to come.

Philips Lighting offered a tailored solution to meet these specific requirements, by combining the use of adjustable ArenaVision HID floodlights for the cycling track, together with a range of LED luminaires throughout the rest of the facility.

As this project contained highly technical and complex elements, Philips Lighting New Zealand worked with Philips France who are the global experts in sports flood lighting. Philips France have advised on complex projects such as the Olympic Velodromes in Athens and London.

**“ We now have a first
rate velodrome
with energy efficient
lighting”**

**Geoff Balme
Chief Executive, The Home of
Cycling Charitable Trust**



Philips selected and managed the installation of its specialised ArenaVision floodlights, which have been used in over half of the world's major football stadiums such as Manchester United's Old Trafford and also used in many stadiums in New Zealand including Eden Park in Auckland. ArenaVision is an integrated system that brings together all relevant technologies from lamp to gear to floodlight, so that everything works in synergy.

Philips ArenaVision floodlights have been used in the Avantidrome feature 1000W axial lamps providing more light output, which are controlled by a world-class design optical system to

give greater efficiency. Consequently, fewer luminaires are required, delivering savings on capital, energy and maintenance.

Philips Lighting Project Manager Geoff Lewthwaite says, "The design and configuration of the installed lighting system allows for the floodlights to operate under four different settings, depending on the function of the course from training through to televised racing. This flexibility in the arena means the lighting can meet the appropriate requirements without compromise to the quality and uniformity, and without any superfluous energy lost."

Case study
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Sports & Area
lighting
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National
Cycling Centre
of Excellence
Avantirome,
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**Geoff Lewthwaite
Project Manager, Philips Lighting
New Zealand**



For the rest of the Avantidrome complex, Philips provided a complete LED solution that is designed to provide precision lighting where it is required and ambient lighting of the wider public spaces within the facility, as well as deliver significant energy savings and reduce maintenance requirements.

Solutions included:

- GreenPerform LED Highbays for instant, high-quality lighting in the large interior spaces.
- The Coreline LED range provides stylish lighting in the café and hospitality areas.
- GreenSpace LED Downlights are used in corridors, stairwells and bathrooms. This energy efficient solution provides savings of up to 60% compared to CFL downlights.
- SmartPanel luminaires create uniform, low glare lighting for office spaces and meeting rooms.
- Powerbalance LED luminaires have been used for athletes' lounges and rest areas, providing softer, more comfortable lighting in which to unwind.

Philips also provided a Philips Dynalite intelligent lighting control system. These smart networked controls can be set to switch lights on when motion is detected, dim or increase lighting based on the levels of natural light available, and use timers that can be set to turn off the lights when they are not in use. Philips and Feisst Electrical Ltd also provided and installed a Cylon building management system, which enables energy consumption in the complex to be monitored and managed in real time via an internet-enabled device. These systems help deliver additional energy efficiency gains over and above the superior energy efficiency of LED lighting (compared to conventional lighting) on its own.



Case study

Sports & Area lighting

National
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of Excellence
Avantirome,
Cambridge

The Home of Cycling Charitable Trust can now look forward to maximum energy savings while also providing a world-class cycling venue for high performance athletes.

Philips' ArenaVision floodlights use around 10 per cent less energy than traditional systems, while the commercial LED fittings in the rest of the venue use up to 50% less energy than older fluorescent fittings. In addition, because LED luminaires last an average of 50,000 hours, significantly less maintenance is required than for fluorescent light fittings, therefore delivering further savings.

"It's been fantastic to have Philips Lighting deliver a highly tailored lighting solution that takes into account both the needs of our cyclists and our wider need to be energy efficient and reduce operating costs," says Geoff Balme, Chief Executive of The Home of Cycling Charitable Trust.

"We now have a first rate velodrome in Cambridge with energy efficient lighting reducing our overhead costs, without having to compromise on high-quality lighting"

“It’s been fantastic to have a tailored lighting solution that takes into account the needs of our cyclists and our wider need to be energy efficient and reduce operating costs.”

Geoff Balme
Chief Executive, The Home of Cycling
Charitable Trust



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