

Philips Lighting case study: Bayfair Shopping Centre

Client: AMP Capital Investors & Fisher Funds

Project: Bayfair Shopping Centre

Location: Mt Maunganui, New Zealand

Philips Project Manager: Michael Kain, Philips Lighting New Zealand

Philips Solution: Lighting design and supply: LuxSpace LED, CoreLine LEDs, GreenPerform LED Battens, Mini 500 LED, ConTempo LED.

Background

Bayfair Shopping Centre is the largest shopping centre in the Tauranga area. It is managed by AMP Capital Shopping Centres and jointly owned by Fisher Funds and AMP Capital Investors. In partnership with Philips, it recently completed a landmark project that could change the way many New Zealand shopping centres use lighting.

Bayfair had embarked on a LED retro-fit strategy as part of its environmental focus starting in 2012 with over 500 fittings replaced using Phillips products – an example was the use of Philips Color Kinetics exterior LED lighting solution. Having received positive feedback about the improved lighting levels, Philips approached AMP Capital Investors and Fisher Funds to discuss a much larger, pioneering project.

Bayfair Shopping Centre's requirements were for a lighting solution that would deliver significant cost savings to them, both in energy efficiency and reduced maintenance costs, and also environmental benefits through reduced carbon emissions. AMP Capital Shopping Centres also wanted an option for Bayfair to become the first shopping mall in New Zealand to switch entirely to energy efficient LED lighting.

As well as breaking new ground, the major re-fit presented some specific challenges. To make the switch viable, any new light fittings had to generate at least as much light output as the current fittings, and there had to be minimal disruption to the centre shops and customers during the installation.

The Solution

For the first part of the project, Philips Lighting consultants completed an audit of all Bayfair's lighting. They presented their findings to Bayfair's joint owners, and proposed retro-fitting the shopping centre with a complete LED lighting solution.

"A key factor for the project was Philips' ability to provide a fully integrated solution – from manufacturing the fittings to managing the installation of the entire system. This meant our client didn't have to manage all the individual parts of a lighting project, which minimised disruption to their business and maximised cost efficiency," says Philips Lighting Project Manager Michael Kain.

Philips LuxSpace LED fittings were a key feature of the interior lighting system plan, included in all the centre's common area spaces. With Philips LuxSpace's low power consumption, they were calculated to create energy efficient savings of approximately 50% compared with the various light fittings installed previously. They reach the same or higher light levels compared to the previous fittings – but with excellent glare control, very good colour rendering, and a compact, stylish design. The Philips LuxSpace LED fittings also decrease maintenance costs from lamp changes with their average long life of up to 50,000 hours.

In the office areas, Philips CoreLine LED luminaires, which distribute a clean light conducive to worker comfort, were installed. In back-of-house areas, Philips GreenPerform LED Battens were fitted, while high performance Philips CoreLine Waterproof LEDs and Philips Mini 500 LEDs were used for the large, four-story car park. These are versatile luminaires that have precision-optics, distributing light where it's most needed. Both fittings provide high quality light in the car park's dark spaces.

To complement the previously installed Philips Color Kinetics LED solution on the facade of the shopping centre, Philips ConTempo LEDs were installed. As well as the energy efficient savings and long lifetime common to all Philips LEDs, these floodlights blend appealing aesthetics and practical functionality with a protected housing, to reduce damage from weather and external elements.

To ensure all the new Philips LED lighting in the Bayfair Shopping Centre would perform to its peak potential in terms of quality of light and efficiency, Philips integrated it into the centre's building management system. This means all the lighting can be controlled and monitored from one hub, and enables the system to automatically adjust itself to make maximum use of natural light.

The Result

Centre Manager Steve Ellingford says, "The project has exceeded our expectations. We knew the LEDs' long life and the resulting reduction in maintenance costs – which makes a big difference when you consider how many light fittings there are in the shopping centre – would be a major benefit, but there have been some other very welcome outcomes too.

"Not only are we seeing 64% energy savings in our lighting, which is even more than forecasted, but the new LEDs have more than matched the lighting output of their predecessors. In fact, they far surpass them. For example, the car park, which was previously a bit dark and gloomy, is now lit-up and far exceeds the prior light levels.

"Another major bonus is the enhanced aesthetics the LEDs deliver. The Philips LuxSpace LEDs in particular have changed the visual dynamic in the interior of the shopping centre and helped create a more attractive aesthetic environment for consumers."

By managing the project from concept to completion, Philips not only ensured minimal disruption to the shopping centre, but it also worked with the owners to secure an Energy Efficiency Conservation Authority (EECA) subsidy for part of the cost of installation because of the significant energy efficiency benefits of the project.

"The Philips team were amazing to work with. They completed all the work entirely after hours so there was no disruption to business, which is remarkable considering the scope of the project. We're also delighted to have substantially reduced our energy emissions and to have had this recognised by EECA," says Mr Ellingford.

Over 1,450 individual light fittings were replaced. In keeping with the environmental aims of the project, all redundant fittings were broken down and recycled – a total of 2,476 kg of materials.

Bayfair Shopping Centre is proud of its environmental initiatives – such as the LED re-fit -project with Philips – and has since been put forward for environmental awards including the Fairfax Sustainable 60 Awards and the Sustainable Business Network Awards.

The Bayfair Shopping Centre is the first shopping centre in New Zealand to switch the general, office, and outdoor areas entirely to energy efficient LED lighting. Given all the benefits the Bayfair Shopping Centre and its owners are realising after the LED re-fit, it is understandable that many shopping malls around the country are beginning to make enquiries on retro-fitting LED lighting.



