



# 313 @ Somerset

– luxury shopping centre one of the most sustainable in Asia

313@Somerset, the latest luxury shopping centre on Singapore's Orchard Road, was designed and built to be a flagship retail destination with environmentally sustainable credentials.

Owned by Lend Lease Australia, the centre incorporates a range of sustainability initiatives including rainwater harvesting and on-site energy generation that has earned it a Platinum award under Singapore's BCA Green Mark Scheme.

With over three million visitors a month, illuminating the landmark shopping centre demanded a sophisticated lighting control system that would help to minimise energy usage while enhancing the shopping experience.

Control Tech Asia, a long-term partner of Philips Dynalite, installed the lighting and energy management system.

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dynalite 

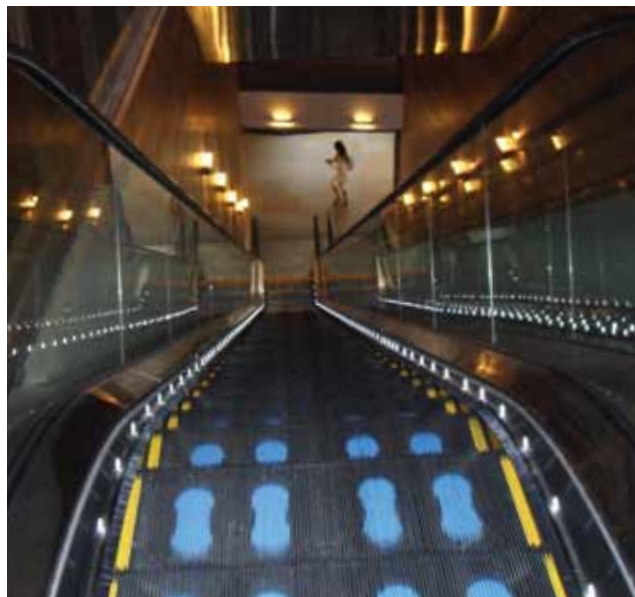
# Client requirements

To help minimise energy consumption, the lighting designers chose energy-efficient lighting fixtures such as dimmable T5 lamps and gear and incorporated light sensors to save energy in areas with natural day lighting such as the top-level car park, atrium corridors and stairs.

## The right ambience

Obviously lighting such a large space is a challenge in itself and creating ambient lighting within different shopping, dining and entertainment areas was also a key requirement of the project.

With approximately 60% of the energy footprint of a retail shopping centre being directly attributable to the activities and impacts of the tenancy fit-out and operation, it was important that the lighting and energy management system could help change behaviours.



# The Philips Dynalite solution

In keeping with the centre's commitment to sustainability, Philips Dynalite specified an intelligent lighting control and energy management system that would deliver significant energy savings.

## An intelligent control system

So intelligent is the installed system that it can measure the actual current an individual light is drawing and display it on a monitor or graphical interface.

The energy information is readily available to the owner to assess energy consumption in all parts of the building and easily determine where it can be improved.

The owners can also identify where one or two circuits might be drawing more current than others and then investigate whether alternative lighting sources might be more efficient. They can also confirm that the time scheduling of the system is set appropriately.

The lighting control system also had to offer mixed control signal capability from a single network for today's needs and to future proof the system. It currently controls switched, 1-10V dimmed, DALI broadcast dimmed and DMX512 controlled loads seamlessly.

## Smart energy measurement

Instead of just measuring the energy coming into a building, the Philips Dynalite technology can read energy usage down to the channel level or lighting circuit.

It was important that the lighting control system could incorporate multiple light sources in one space.

Other lighting initiatives include installing sensors in the atrium top-level car park to save energy during the day as well as motion sensors in the staircases to switch lighting on and off.

“ The extensive use of energy sub-metering for the base building and tenants closely monitors energy use and allows the building owner to make real changes that save money. ”

## Products and technology used

With energy minimisation a key component of the brief, it was critical that the installed energy management system was intelligent and could identify where power was being used inefficiently and make the necessary adjustments.

Philips Dyalite was one of the only companies that could provide energy management current sensing to accurately monitor the energy being drawn right down to an individual electrical circuit.

### Achieving energy savings

While the building may be equipped with 'green' features, it's still up to the user to make full use of that technology.

Tenants are required to sign green leases and commit to achieve environmental targets such as using energy-efficient lighting and power.

To maximise energy efficiency, the system uses Philips Dyalite current measuring relay controllers allowing the building's owners to accurately monitor and understand the building's lighting loads at any time during the day and make changes to improve its efficiency.

There's no doubt that seeing the dollars and cents they can save is a great incentive to reduce energy consumption.



The versatile open protocol controller DDBC I200 allows for 1-10V, DSI and DALI broadcast to be set individually for each of the 12 channels.

“ The Philips Dyalite energy management system has helped 313@Somerset to become one of Singapore's most sustainable developments. ”

## Key client benefits

Importantly, being able to successfully monitor the actual energy consumed by individual retail tenants on a granular basis has allowed the owners to maximise the impact of energy saving initiatives and offer tenant incentives to those reducing energy consumption.

### Reducing operating costs

Besides reducing the building's carbon footprint, going green has reduced the centre's operating costs and safeguarded it against future energy price increases.

By striving for efficient building operations, 313@Somerset contributes to a sustainable living environment.

Other benefits include the opportunity to lead sustainability education for the centre's retailers and customers.



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