

An aerial night view of a city street, likely in Hamilton, New Zealand. The street is illuminated by warm white streetlights, creating a bright path through the dark night. Several cars are visible on the road, their headlights and taillights glowing. The surrounding area is filled with residential buildings and trees, all under a dark sky. The overall scene is a well-lit urban environment at night.

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Professional Lighting

Roads & Streets



Success Story

Hamilton City and Waikato District councils Introduce New Zealand's First Warm White Street Lighting

Client

Infrastructure Alliance (Hamilton City Council, Waikato District Council and Downer)

Philips Project Manager

Allan Stephenson

Distributor

Corys Electrical

Philips Solution

Lighting design and supply: RoadGrace 711 and 712 3000K LEDs



Lighting a Fast Growing City

Hamilton city and the neighbouring Waikato district are growing fast with many of the region's major arterial roads surrounded by densely populated residential areas. Street lighting must create a safe environment for drivers, cyclists and pedestrians while not spilling over into people's homes.

In 2018 communities throughout Hamilton City and Waikato District became the first in New Zealand to enjoy Signify's 'warm white' LED lighting solution, custom designed to reduce spillover glare into houses while being less harsh on the eyes and more energy efficient.

While numerous towns and cities throughout New Zealand have replaced older HID lights with LEDs, Hamilton is the first to specify a 3000 Kelvin luminaire. This produces a more welcoming light compared to the more common 4000 Kelvin LEDs whose cooler blue-white light is similar to daylight.





Focus on Safety and Sustainability

The new LEDs fit into existing street light poles and infrastructure, create less light pollution, are more energy efficient and require less maintenance. As a result, Hamilton City expects to save over \$250,000 in reduced power and maintenance costs in the first year, and almost \$550,000 in 2019/20.

For this project Signify also developed a new form of streamlined, 100% recyclable cardboard packaging to ship the 16,000 units, which has saved the councils an estimated \$40,000 in disposal fees.

LED lighting provides a better quality of light and colour contrast resulting in increased road user visibility and road safety.

“The requirement for less frequent maintenance will also reduce the amount of time our staff are exposed to risks associated with working at height and around road traffic, while minimizing associated disruption to the public,” says Todd Mylchreest, Maintenance Contract Manager at Waikato District Alliance.





Going Beyond Financial Savings

High quality street lighting helps make Hamilton and its environs an attractive place to live and work. The decision to select a slightly higher wattage for residential streets and warm white LEDs was made after a series of community consultations and researching feedback on lighting upgrades in other cities. It was also driven by the desire to do more for residents than just replace like with like.

Strategic objectives included economic benefits but also community, safety and environmental goals. In practice this meant taking opportunities to improve the lighting where possible and consider the impact on footpaths and amenity areas as well as roads.

"My neighbours are very positive about improved lighting in our street, especially when reversing their cars out of driveways, and I feel safer when walking in the evening," says resident and Community Walking

Group Co-ordinator Gillian Bartram.

"The new lights make the Centre and surrounding streets appear fresher and more crisp. It feels good and is also safer for kids and families using the Centre in the evening, says Max Coyle, Western Community Centre.



“ Signify developed an adaptive custom luminaire which offers the best lighting performance for our increasingly high-density city where even the busier arterial roads have significant street front housing.”

Shaun Peterson
Infrastructure Alliance Operations Manager,
Hamilton City Council





For a project of this size and complexity, partnering with both the manufacturer and supplier to deliver a whole package was the best way to provide value to ratepayers.”

Richard Briggs
CEO, Hamilton City Council



Partnership Approach

Council criteria for a lighting solution included innovation, flexibility, uniformity and willingness to partner.

“For a project of this size and complexity, partnering with both the manufacturer and supplier to deliver a whole package was the best way to provide value to ratepayers,” says Richard Briggs, CEO, Hamilton City Council.

The Infrastructure and the Waikato Alliances, strategic partnerships between the two councils and Downer, and working with Cory’s Electrical, installed 16,000 Philips ‘Road Grace’ luminaires to upgrade residential and arterial roads.

“This project required a large volume of product to be supplied and installed to strict deadlines in order to qualify for NZ Transport Agency funding. Signify’s customer service, logistical and design support ensured the project ran efficiently and to schedule,” says Steve Donaldson, Branch Manager, Cory’s Electrical.



Low
maintenance



\$550,000
savings

*Hamilton City Council
expectations for 2019/2020



3000 Kelvin
luminaire



100%
recyclable
cardboard
packaging

Phillips Roadgrace





Protecting Night Skies

“Signify developed a highly innovative luminaire which offers the best lighting spread for our increasingly high-density city where even the busier arterial roads have significant street front housing,” says Shaun Peterson, Infrastructure Alliance Operations Manager, Hamilton City Council.

Several technical enhancements were introduced in the lighting solution to manage light pollution. The luminaire’s output can be adjusted manually on individual poles as per client requirements. A narrow band amber light is being developed for light sensitive zones like the Hamilton Observatory, which was once outside the city’s limits but is now much closer to lit residential areas. Customised walkway lighting minimises light spill into neighbouring houses from adjacent poles.

Chris Morris, Country Leader for Signify New Zealand, says “Hamilton City and Waikato District councils have proved to be test-beds for innovation, providing the catalyst to develop a new luminaire and a recyclable packaging solution which will now benefit other communities in New Zealand.”

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