

15 April 2015 · Annie Waddington-Feather (/author/annie-wf) · ·

## Wellington's street lighting boss: Dynamic LED lighting can make our streets feel safer



(/article/2015/04/how-leds-could-make-wellington-streets-safer)

Lux Review has previously reported that Wellington might be the next city to make the switch to 'smart' lighting. Having spoken to Wellington City Council's leader of strategic planning, Paul Glennie, we can now confirm that the council is testing an infrared system which lights up when vehicles or people approach.

Here's what Glennie, who is responsible for the passenger transport network, bus infrastructure and street furniture of Wellington City Council, can reveal.

### Wellington is going LED

We will roll out 500 LED lights with photocell units in the posts in Wellington City the next six months and have tried to create a system so lighting is consistent through the whole region. This ensures we have a good solution to build on, should other councils want to join us. All is going well and there will be a full roll out by July next year if not earlier.

We're currently working on a trial with Telematics, the Israeli CMS company, and we're trialling the Canadian made LED Roadway Luminaires and an infrared system from The Netherlands-based Twilight. This is a passive IR system so the LEDs are on constantly, lighting up when vehicles, cyclists and people are present but dropping to 20 per cent of power when not in use.

We believe it will be a first Australasian roll out for residential street lights and hope to have it on the ground in 8-10 weeks' time.

One area we are looking at closely is the 'Smart city' concept which I believe will offer more to rate payers through an interconnectivity. At the moment we're getting a free network with the lighting, but the lighting may become peripheral to the network usage – in the future we may be getting free lighting with our network.

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### **The residents are onboard**

Feedback on the concept from residents is very positive; the visual impact on residents' homes is less intrusive than HPS or metal halide, but it still maintains light where needed; and most residents see dynamic dimming as an additional security feature.



*Mariri Road in Wellington lit with 70W HPS lighting (left) and LED lighting (right)*

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## **The investment is worthwhile**

It's a radical and expensive system we're trialing, but it's a good quality of lighting. We expect it to pay for itself within 10 years.

On some streets, our modelling indicates over 90 per cent savings but generally we're expecting an average of 80 percent.

Energy efficiency is always a key benefit with a major roll out of new technology; although it's more expensive than replacing the lights with like for like, it's the best long-term option. But lighting technology is very variable and what looks good on paper doesn't necessarily look good on the road – you get the savings, but not the light coverage.

## **We're looking at other applications**

Many of Wellington's parkways and hilly bushy areas are too difficult to light because of the logistics of installing poles and powering the area, so we're looking at 40m LED strips securely fitted handrails. This is not only a very efficient way to light the pathways, it also doesn't upset the wildlife.

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In the future, we'd also like to look into lighting solutions for the harbour environment, and some of Wellington's heritage buildings.

### **We've chosen LED for a reason**

Lighting upgrades have to meet Wellington's hapless weather conditions and we've looked at a wide variety of systems. The topography doesn't lend itself to solar solutions; sunshine is inconsistent and we have a lot of wind. While we have looked at wind power, we have concerns

over moving parts, but that's not to say it won't happen further down the track.

LED is very solid and the way forward at this stage but we have to ensure we get the right lights - a cheaper solution won't necessarily solve the problem. The understanding I have is if you get the right luminaire and the right design, it will look after itself.

All lights have to pass the New Zealand Transport Agency specs, which means we don't have to do it ourselves and we have confidence in a good light.