

# Norfolk County Council - Saving Energy While Keeping the Lights On



## Saving Energy in Norfolk and Keeping the Lights ON!! EnLight saves 49% energy in Loddon streetlight retrofit upgrade

Loddon, in the County of Norfolk, was the first town to have the EnLight and EnTalk pioneering technology deployed. Working closely with Norfolk County Council (NCC) and Amey, the technology was installed in March 2012. Loddon is a typical small town comprising domestic and light industrial buildings arranged as a couple of clusters separated by a connecting road – a layout that would test the capability of the self healing mesh network that connects all the light posts together.

Like most towns, Loddon has a mixture of lighting technologies with gear from a number of different manufacturers. The lights that were upgraded with the EnLight platform included SON, SOX and Metal Halide (Cosmopolis) and ranged from 26W up to 150W. Before the upgrade, a sample of posts were monitored for their total power consumption – what the streetlight actually consumed from the mains supply and not what the ballast was rated for. This would enable an accurate calculation of the energy saving as the EnLight Entelli-Ballast calculates power consumption of the entire post in real time.

From day one of the deployment, real energy savings were demonstrated from the 97% efficient ballast replacing the legacy ballasts that are normally paired with their receptive lamp type. Once a dimming profile, agreed with Norfolk County Council, was applied, a 49% energy saving was measured across the entire deployment. A significant additional benefit was discovered in that a number of 150W SON lamps were downgraded to 100W.

This was made possible because the EnLight ballast runs at a much higher frequency than normal ballasts and produces more light output for a given power input. The light levels were measured before the upgrade and after and the post-upgrade measurements were still within regulation. Clearly, this makes a significant contribution to energy saving if adopted across the full estate.

In total, 100+ posts were upgraded by replacing the current gear tray with a single unit ballast and also by adding an EnLight DolFin which was mounted where a typical photocell would be placed. All the units were configured remotely using the CMS and data has been collected from each post multiple times a day now for nearly 3 years. There have been no lamp failures and recent lamp levels compared to the initial measurements taken just after the install have shown that there is NO appreciable degradation in light level over the period.



EnLight's DolFin Intelligent Light Sensors

### The objectives of the pilot were to:

- Demonstrate that HID lighting could be made significantly more efficient – inline with the claims made by LED luminaires
- Show how the EnLight platform can produce more lumens per watt than the ballast it replaces
- Prove that one universal ballast CAN drive lamp technology from any manufacturer for any wattage between 26 and 150W
- Demonstrate a scaleable mesh network that can adapt to its environment and recover from inadvertent post removal
- Illustrate a Return On Investment (ROI) of less than 4 years.
- Show a CMS that provides real world value to local authorities with the potential of bringing all highways asset management into the 21st century.
- Prove that REAL energy savings can be made without the need for costly LED rip-and-replace programs or the need to turn off lights at night that is being met with increasing dissatisfaction from residents.

For more information about enLight and our products and services please visit: [www.enlight.co.uk](http://www.enlight.co.uk), or contact EnLight via: [sales@enlight.co.uk](mailto:sales@enlight.co.uk) or telephone: **+44 (0) 1508 521227**



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