



ARIALED

Peterborough City Council

OrangeTek - ARIALED with Telensa CMS



November 2014



“This was a great opportunity to show case the benefits of LED Lighting – Improving lighting levels, Reducing Energy Cost and Emissions, whilst improving the city Landscape for Residents. OrangeTek LED Luminaires perform exceptionally well, meeting Lighting design needs and offer personalised solutions and services that they truly deliver on their commitments.”

Steve Biggs IEng MILP

Senior Engineer/Technical Lead at Skanska UK

ARIALED

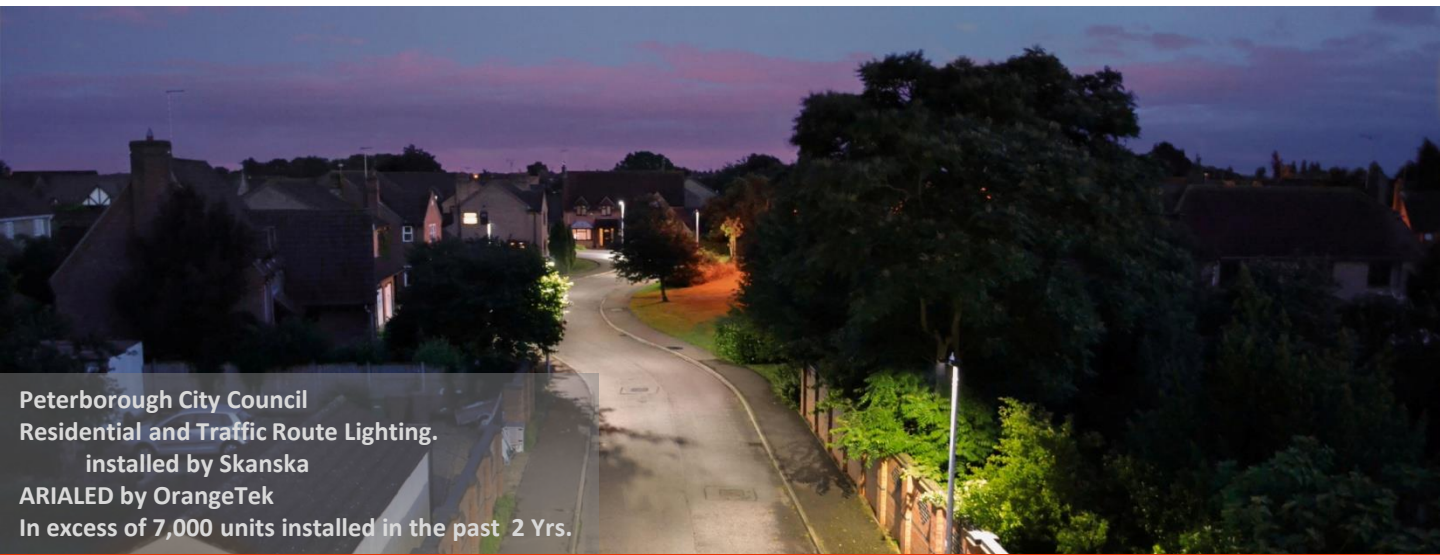
Technical Specifications

Model	Number	Module Quantity	Initial Luminaire Flux (lumens)	Power Consumption (including power supply losses)	Weight (Kg)	Windage Area (m ²)
Arialed	10	1	1380	12	6.5	0.055
Arialed	20	1	2530	22	6.5	0.055
Arialed	30	2	3680	32	7	0.06
Arialed	40	2	5060	44	7	0.06
Arialed	50	3	6210	54	7.5	0.065
Arialed	60	3	7475	65	7.5	0.065
Arialed	70	4	8970	78	8	0.07
Arialed	80	4	10235	89	8	0.07
Arialed	90	5	11500	100	8.5	0.075
Arialed	100	5	12535	109	8.5	0.075
Arialed	110	6	13800	120	9	0.08
Arialed	120	6	14835	129	9	0.08
Arialed	130	7	15985	139	9.5	0.085
Arialed	140	7	17135	149	9.5	0.085
Arialed	150	8	19320	168	10	0.09
Arialed	160	8	20700	180	10	0.09



Peterborough City Council

Anticipate Savings of more than £1.2 million per Annum



Peterborough City Council
Residential and Traffic Route Lighting.
installed by Skanska
ARIALED by OrangeTek
In excess of 7,000 units installed in the past 2 Yrs.

Project Details

Peterborough, have installed just over 7,000 Orangetek LED luminaires in the last two years of a total inventory of street lights being 33,000 units.

Nearly 85% of Orangetek LED luminaires installed are on residential roads, initially the older **TERRALED** model containing 24 & 36 LEDs. In March 2013 the **TERRALED** installation ceased and replaced on the contract with the more efficient **ARIALED**, containing 20 or 30 LEDs, replacing the 35W SOX, 50W SON luminaires.

Average savings are close to 50% without the utilisation of their CMS system (Telensa CMS).

Peterborough are looking to introduce a two stage dimming regime in the near future; 100% output until 8pm, 65% output from 8pm to midnight and then 50% midnight to dawn, this would bring the average energy saving up to around 60-70%.

Peterborough have now taken the decision that only LED luminaires will be installed on new schemes within the City. Even when considering an increase in main road lighting levels required to meet the latest British Standards, Peterborough are still forecasting around 10 - 20% energy saving per luminaire compared with the current SOX units. This energy reduction would not be available with other light sources.

With a SONT scheme achieving the same lighting levels would result in an energy increase of around 30%-50%. On the main road schemes Peterborough anticipate dimming their new LED units outside peak traffic periods which will have a projected energy saving of around 20%-35%.

Projected Savings

The programme is due to be completed by February 2016.

Once complete, the new lamps will help the council cut the city's street lighting bill by at least 57 per cent and help reduce carbon emissions by more than 5,300 tons per Annum.

Street lighting costs the city council £2 million each year. Based on estimated savings of about £1.2 million per year, the street lamp replacement is expected to pay for itself in just over 10 years (total cost of new lanterns).

This is actually an even quicker payback period if you offset the fact that the lanterns would have to be replaced in any case, where the payback should really evaluate the difference between replacing with HID or LED...

Headlines

57% Saving in Energy

£ 1.2 million (GBP) saving per annum.

Reduce Carbon Emissions by more than 5,300 tons



BEFORE

AFTER

Note:

- Better uniformity
- Better Colour Rendering
- Increased perception of Safety and Clean Environments
- Less Sky Glow

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