



LED Street Lighting on the Residential Road Network

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Current position & future strategy

- Lighting stock of circa 39,000 units/lanterns
- 23,750 residential street lights currently dimmed between midnight and 6am.
- 13,600 LED lanterns have been installed on the strategic highway network (completed 2018).
- A Central Management System (CMS) has been introduced to control the lighting on the strategic network.
- Trials have taken place for LED on signs and bollards.
- LED traffic signals have been introduced on new and upgraded junctions.



Savings from LED Street Lighting on Residential Road Network

- Energy savings have been calculated at £423k per annum. The scheme will cost in the region of £6.5M.
- Interest free loan of £4.578M from SALIX applied for and accepted in principle.
- Scheme repayment through energy savings.
- Cost avoidance – safeguarding the authority against additional future costs arising from energy price increases. Energy prices have increased by an average 14% over the last two years and 16% for 2019/20.
- Estimated Carbon reduction of 836 Tonnes.



What is being delivered



- The Synchronisation with the Central Management System (CMS) will be delivered with the new LED street lighting. This allows the opportunity to have direct control and information from the street lights which will enable the further savings identified to be realised. The CMS will also enable integration of street lighting to other technology in any future ‘Smart-City’ project.



What Citizens Will See

- Following a trial of different LED lantern manufacturers, associated testing and stakeholder feedback a preference away from white / blue light (5000 Kelvin) to a warmer light (3000 Kelvin) was determined. Consequently, 3000 kelvin LED lights were installed throughout the strategic network.
- A pilot was also undertaken in the residential area of Radyr where the older style 'orange' lighting was replaced by LED. The lighting was well received with only 4 issues raised relating to installation and not the lighting itself.
- By utilising 3000 kelvin the LED light on the residential network will closely match the light from the streetwise lanterns that currently exist (white light). This will provide a unified colour & temperature across the City and a less dramatic change for residents.
- The Central Management System will allow light levels to be managed (turned up and down) depending on feedback and concerns.



Summary

- Pilot undertaken to ensure efficiency and acceptance.
- LED light to be 3000 kelvin which is the same level as the strategic and existing residential network.
- Synchronisation with the existing CMS to provide further energy saving potential and control of incident and fault finding.
- Further carbon reduction towards the Council target of 26% from key Council operations by 2020.



Next steps

- Formal Cabinet Report to be presented 16th May 2019.
- Recommendation to proceed and procure the contract to deliver LED street lighting on the strategic road network via open OJEU process.
- Recommendation to delegate authority to the Director of Planning, Transport and Environment, subject to consultation with the Cabinet Member for Finance, Modernisation and Performance and the Cabinet Member Strategic Planning and Transport, to deal with all aspects of the procurement process.

