## APPENDIX 3 : STREET LIGHTING PROGRAMME

### Street Lighting Column Replacements

### When do we decide to replace street lighting columns?

1.1. We use the capital street lighting replacement budget to systematically replace light columns that have reached the end of their life expectancy — normally 25-30 years, or have failed structural tests. Where all columns on a road have a residual life of less than 3 years, all of the columns on the road are replaced as this is more cost effective and efficient. The forward Capital Street Lighting Replacement Programme is attached in Appendix 1.

1.2. Replacement of columns is prioritised based on column condition, which is determined from structural testing and inspections. Each year's replacement programme will be confirmed following results from structural testing.

1.3. If a road being relit has any columns that are in good condition we will just replace the lantern on those columns.

### Choice of New Lighting

1.4. New lighting adheres with to our Streetsmart guidance to ensure that the lighting installed across the borough is consistent.

1.5. When replacing lighting, we use new technologies that reduce ongoing maintenance costs, carbon emissions and energy costs.

1.6. All new lighting is white light, in line with Council policy. White light has been the Council's preferred light source since 2007. White light lamps use less energy than the High Pressure Sodium lamps (orange/yellow light) historically used in the borough. A newer white light source, LED (Lighting Emitting Diode), has been introduced in the borough this year on selected Highway roads and in Housing sites.

1.7. The most appropriate light source is chosen for each location based on the design characteristics of the road, the capital cost, energy efficiency, carbon reduction; and maintenance requirements of the light.

### The Maintenance work programme

1.8. Maintenance of the network consists of planned cyclical work and reactive work. Reactive work is generated in response to faults and damage to assets

1.9. We programme cyclical maintenance works to maintain the assets in good condition and fulfil our duty of care. Such activities include:

- Group lamp replacement on a four to six year programme depending on lamp type

- Electrical inspections and testing on a six year rolling programme

- Structural inspections and testing. We test columns after ten years in place, then every six years and rate them as Red, Amber, and Green. Columns rated amber require retesting in three years. Columns rated Red need to be replaced immediately for public safety.

- Cleaning of asset as part of a programme or on an individual basis for signs and illuminated bollards.

1.10. Officers identify faults through a night time inspection regime. All assets are inspected every 10 working days during winter, reducing to 20 days on residential roads during summer, due to the shorter night time hours. Customers also raise queries via the council's web site and by phone. Faults are also identified during general maintenance / inspections by our term contractor and street lighting team.

1.11. Repair of faults is prioritised on the type and the nature of the fault. Each defect is raised individually with the contractor, who receives a fixed price to inspect and repair the defect, within a set period of time.

1.12. Electricity supply faults are the responsibility of the Distribution Network Operator (DNO). The Street Lighting Team identifies faults and then issues an order to the DNO or approved supplier. This can take six to eight weeks to resolve depending on the type of fault and the repair or connection required.

**Public Lighting Energy**

1.13. Energy supply rates are set by an external body. This means that we have limited ability to influence energy costs. The reduction in the energy budget for 2014/15 is due to energy costs being lower than budgeted for in recent years.

1.14. To help fulfil the Council's commitment to reduce carbon emissions (40% from 2009 levels by 2016), we are working to reduce carbon emissions from street lighting. At current investment levels we have reduced our street lighting carbon emissions by 10% below 2009 levels. This has been achieved through the use of new technologies including white light, photocells that reduce the length of time the lights are on for each night, and removing redundant illuminated assets as part of de-cluttering. Other programmes such as changing bollards to solar powered has also assisted in reducing our emissions.

1.15. Continuing lantern and technological improvements including LED lanterns, along with changes to the national standards and guidance is assisting in the Council reducing its emissions. Currently we are forecasting 15% carbon reductions by 2016 with existing budgets. Invest to save options may be required to increase this reduction and we are working with the Carbon Management Team to look at the options available.