REPORT TO:	Environment and Urban Renewal Policy and Performance Board
DATE:	18 September 2019
REPORTING OFFICER:	Strategic Director, Enterprise, Community & Resources
PORTFOLIO:	Transportation
SUBJECT:	Highway LED Upgrade Programme
WARDS:	Boroughwide

1.0 PURPOSE OF THE REPORT

1.1 To provide an update on the project to upgrade highway electrical equipment to LED technology and provide energy savings.

2.0 RECOMMENDATION: That the report be noted.

3.0 SUPPORTING INFORMATION

3.1 Highway electrical equipment maintenance costs are constantly rising, as are energy costs which are increasing well above inflation. The cost of energy for all the Council's highway electrical assets (including street lighting, traffic signals, illuminated signs, etc.) is approximately £1,080,000 per annum and includes all the following equipment:

- 20,000 conventional lighting columns 96 high mast lighting columns
- 1,400 illuminated traffic signs
- 450 illuminated bollards
- 58 traffic signal controlled junctions
- 21 Puffin crossings
- 5 Toucan crossings
- 1 Pegasus crossing
- 18 Zebra crossings
- 14 Variable Message Signs (VMS)
- 67 CCTV cameras
- 10 Speed cameras

3.2 In addition, the highway electrical equipment that was temporarily transferred to Mersey Gateway (mainly around Ditton Junction), will be transferred back to the Council. This includes five traffic signal controlled junctions and all the street lights. This infrastructure will add to maintenance costs.

3.3 There are around 20,000 columns within in the Borough, with around 25% over 30 years old (expected design lifetime). These will need replacing within the next few years. The rest of the stock will continue to age and hence will need replacement in the coming years. There is therefore a rolling program of equipment replacement.

3.4 In order to reduce energy and maintenance costs, since 2010 all new street lights and traffic signals have had LED lanterns. Initially there was an increased cost of the equipment, but equipment costs have now reduced to equivalent levels of non-LED components. At the same time as lanterns are replaced, structural maintenance of columns is carried out, where required.

3.5 In 2015 the Council allocated capital funding to replace street lighting lanterns in residential areas with LED lanterns. At the present time around 14,000 street lights have been upgraded to LED, with circa 6,000 lights in need of upgrade.

3.6 At the start of the program the average cost of replacing a lantern with a standard LED lantern meeting was £236. During 2017 this cost reduced to £206. Currently this cost has reduced to around £170 per unit due to constantly reviewing of market prices to meet our specification.

3.7 During 2019/20 the program should see the majority of the remaining 2,000 street lights in residential areas upgraded to LED, leaving around 4,000 of the higher wattage street lights to be upgraded on the principal / main road network.

3.8 In parallel to the work to convert street lights to LED operation, similar work has been undertaken to convert traffic signals (including Puffin and Toucan crossings) to LED operation. This has been undertaken using capital allocations received from the LCR Combined Authority. Controlled crossings are now being converted and this work should be completed by the end of the current financial year 2019/20. There is an added benefit for the Authority in completing this work now, as from 2021 the current tungsten halogen lamps will no longer be manufactured, so the Authority is prepared for this change.

3.9 The original cost analysis calculations for street lighting conversions were based on energy prices at the time, however above inflation energy increases will show significantly better benefit/savings and reduced payback periods. The Council enters into contracts for energy supply. Previous energy contract prices have been as follows:

2015	11.2p / kWh
2016	11.9p / kWh
2017/18	12.4p / kWh

2019 15.1p / kWh

3.10 The energy reduction as a result of the changes to LED, equates to in excess of 2.75Million kWh **per annum** (equivalent to £415,000 **per annum** at current prices) and saving over 775 Tonnes of CO2 **per annum**

4.0 POLICY IMPLICATIONS

4.1 There is no statutory duty to provide street lighting. The power to provide street lighting is set out in Section 97 Highways Act 1980 (see below).

Highways Act 1980
97 Lighting of highways.

(1) The Minister and every local highway authority may provide lighting for the purposes of any highway or proposed highway for which they are or will be the highway authority, and may for that purpose—

(a) contract with any persons for the supply of gas, electricity or other means of lighting; and

(b) construct and maintain such lamps, posts and other works as they consider necessary.

(2) A highway authority may alter or remove any works constructed by them under this section or vested in them under Part III of the Local Government Act 1966 or section 270 below.

(3) A highway authority shall pay compensation to any person who sustains damage by reason of the execution of works under this section.

(4) Section 45 of the Public Health Act 1961 (attachment of street lamps to buildings) and section 81 of that Act (summary recovery of damages for negligence) apply to a highway authority who are not a council of a kind therein mentioned as they apply to such a council.

4.2 If street lighting is provided under this Act then it needs to be maintained in a serviceable condition. The original purpose of street lighting was purely for crime prevention and unrelated to highway safety. The relative rarity of street lighting being found outside of urban areas is a reflection of this fact.

5.0 FINANCIAL IMPLICATIONS

5.1 The Street Lighting Strategy and Policy was considered by this Board on 24th June 2015, and set out the policy for street lighting in order to maintain these assets and control rising costs.

5.2 Energy costs up until 31st March 2020 have now been agreed. The total annual cost of un-metered electricity for highway electrical equipment is estimated to be around £1,080,000.

5.3 In order to achieve further savings and ensure the Council's lighting stock is structurally sound and fit for purpose, it will be necessary to continue to invest in the asset. Funding opportunities to enable this investment are constantly being explored.

6.0 IMPLICATIONS FOR THE COUNCIL'S PRIORITIES

6.1 **Children and Young People in Halton**
Reductions in street lighting, especially on residential estates, could impact on: child pedestrian casualties; the desire to walk during the dark mornings and nights; young drivers and the incidence of anti-social behaviour.

6.2 **Employment, Learning and Skills in Halton**
There are no direct implications on the Council's 'Employment, Learning & Skills in Halton' priority.

6.3 **A Healthy Halton**
Reduced street lighting could discourage walking and cycling which are encouraged as part of healthy lifestyles.

6.4 **A Safer Halton**
Street lighting and traffic signals can contribute to road safety and a reduction in accidents. It can also help reduce crime and anti-social behaviour which affects how safe people feel during the hours of darkness.

6.5 **Halton's Urban Renewal**
Street lighting and traffic signals are often part of Urban Renewal schemes and do have a positive impact on improving the environment.

7.0 RISK ANALYSIS

Street lighting is not a statutory function and there is no legal requirement for roads to be lit. However, it is recognised that street lighting and traffic signals contribute strongly to road safety, community safety and the prevention of crime. Street lighting fits with the Council's strategic priorities. Since July 1998, the Council is required by statute to exercise all of its functions with a view to preventing crime and disorder. It continues to be accepted as a major contributor to the prevention of crime and disorder and the perception of crime. Whilst the Council may

not be challenged under the Highways Act about removing lighting, there may well be challenges under section 17 of the Crime and Disorder Act 1998, as happened in Essex when the Police intervened with the proposal to turn off lights.

8.0 EQUALITY AND DIVERSITY ISSUES

There is potential for any reduction in the provision of street lighting to unfairly disadvantage highway users who would not feel safe on the public highway during the hours of darkness

9.0 LIST OF BACKGROUND PAPERS UNDER SECTION 100D OF THE LOCAL GOVERNMENT ACT 1972

No background documents.