

REPORT FOR: **CABINET**

Date of Meeting:	7 April 2011
Subject:	Review of Street Lighting Policy
Key Decision:	Yes [Affects all Wards in the borough]
Responsible Officer:	Brendon Hills, Corporate Director Community and Environment
Portfolio Holder:	Councillor Phillip O'Dell, Portfolio Holder for Environment and Community Safety
Exempt:	No
Decision subject to Call-in:	Yes
Enclosures:	Appendix A – Draft Street Lighting Policy

Section 1 – Summary and Recommendations

This report sets out the case for a policy revision in the street lighting of highways and residential roads, and proposes a draft new policy for consultation.

Recommendations:

Cabinet is requested to:

- 1) note and comment on the draft Street Lighting Policy.
- 2) approve the draft Street Lighting Policy for the purposes of public consultation.

Reason: (For recommendation)

Street lighting is provided to ensure the safety of users of the highway, but accounts for 25% of the council's electricity consumption and 12% of its carbon emissions. The continued application of the existing policy on lighting levels and technology would lead to a significant increase in this consumption as old lighting stock is replaced. It is proposed to introduce a new policy reflecting commitments to reduce the impact of climate change by new approaches to lighting levels, embracing the new technology available.

Section 2 – Report

2.1 Introduction

Street lighting is provided as a safety measure on highways to enable users of the highway to see better during hours of darkness. The quality of street lighting will also impact on crime and the fear of crime.

Street lighting accounts for 25% of the council's overall electricity consumption and 12% of its carbon emissions. Implementation of the council's existing policy on lighting levels and technology would lead to a significant increase in these figures through old lighting stock replacement. The council's climate change strategy seeks an annual decrease of carbon emissions of 4%, and measures to reduce the energy consumption through street lighting will be an important aspect of meeting this target.

The energy used for street lighting is procured through a joint procurement arrangement.

The proposed policy would aim to reduce energy consumption year on year through a number of options including reduction in light levels and use of new technology.

2.2 Proposals and Options Considered

A new Street Lighting policy will seek to:

- Meet the Corporate Priority, 'keeping neighbourhoods clean, green and safe'
- Meet the objectives of the Council's Climate Change Strategy
- Address the objectives of the Local Transport Implementation Plan (LIP)

- Ensure that where possible new and existing light sources and lighting levels, address and reduce energy consumption through new technology and remote monitoring
- Include the consideration of trimming the number of lights and variable lighting where appropriate.
- Establish the future investment need in the lighting infrastructure to meet the policy requirements.

The council's existing street lighting policy was last reviewed in the late 1980s.

There have been a number of technological advances in lighting in recent years, of which the most significant is the introduction of LED (light emitting diode) lighting. These offer longer life and lower levels of energy consumption but are currently more expensive to install.

Street lighting consumes 7,544,870 kWh of electricity, equivalent to the emission of 3900 tonnes of carbon annually. Much of the current stock does not meet modern lighting standards, is old and requires replacement. Some of the lamp standards are a priority for replacement because they have a concrete construction that is becoming unstable.

The current policy option would be to continue with the present replacement practice on lighting levels and type of technology used, in which case electricity consumption would increase to approximately 10,000,000 kWh and CO2 emissions would rise to 5200 tonnes annually. The timescale for this increase would depend on the council's future investment strategy.

The proposed policy would be published on the Council's website with the opportunity to provide comments through the consultation portal. In addition views on the proposals will be sought through the Council's Traffic and Road Safety Advisory Panel, Greener Harrow, emergency services including the Metropolitan Police, motorist organisations, Harrow Cyclists, Living Streets and Greener Harrow. Submissions and comments provided during the consultation will be used to formulate the final policy to be presented to Cabinet for approval. It is anticipated that the final policy will be available for approval in September.

The proposed policy set out in Appendix A would involve a general review of the type of technology used and the lighting levels and timing when the street lights are on to ensure that the safety objectives and associated risk are balanced by energy consumption and the cost of purchasing the electricity.

In the short term the Council will continue to use the agreed Capital Investment Program to carry out the replacement of the depleted concrete columns stock. Current Investment levels will just about allow the replacement of the existing 1300 columns.

Financial Implications

These will be set out in detail in the September report. There is currently provision for the maintenance of the street lights and the payment of the

energy costs through the revenue budget and for the replacement of columns through the capital programme.

The new policy would involve measures to mitigate the rising costs of energy.

Performance Issues

1. This policy will contribute directly to the Corporate priority of clean, safe and green neighbourhoods..
2. Old NI 185, which the Government is indicating that it would like Councils to continue to record – Percentage reduction of CO2 from council operations, Reductions in energy consumption from street and public lighting will contribute towards the council's target to reduce carbon emissions by 4% annually.
3. There are two former National Indicators associated with street lighting performance: -
 - the number of lights that are functioning (current performance 98.75%); and,
 - the average time taken to restore failed lamps. (2.75 days).This proposal does not envisage any significant change to these indicators..
4. If the proposal did **not** go ahead the council's energy bill for street lighting will continue to rise. Carbon emissions would also rise.

Environmental Impact

The development of a new Street Lighting Policy is a major element of the Climate Change Strategy (Section 9 – reducing the council's footprint).

Reducing carbon emissions from street lighting is also an important element in delivering the Carbon Reduction Commitment targets

Risk Management Implications

Risk included on Directorate risk register? No

Separate risk register in place? No

Equalities implications

Was an Equality Impact Assessment carried out? No

If no, state why an EqIA was not carried out below:

N/A at this stage and will be part of proposals following the policy consultation

Corporate Priorities

- Keeping neighbourhoods clean, green and safe

Section 3 - Statutory Officer Clearance

Name: Kanta Hirani

on behalf of the
Chief Financial Officer

Date: 28 March 2011

Name: Matthew Adams

on behalf of the
Monitoring Officer

Date: 28 March 2011

Section 4 – Performance Officer Clearance

Name: Martin Randall

on behalf of the
Divisional Director
Partnership, Development
and Performance

Date: 25 March 2011

Section 5 – Environmental Impact Officer Clearance

Name: Andrew Baker

on behalf of the
Divisional Director
(Environmental Services)

Date: 25 March 2011

Section 6 - Contact Details and Background Papers

Contact: Andrew Baker, Head of Climate Change,
Tel: 020 8424 1779 (Internal Ext. 2779)

Background Papers:

Cabinet report (28 Oct 2010): Annual Review - Climate Change Strategy.
Cabinet report (15 Dec 2010): Progress report - The Carbon Reduction
Commitment Scheme

**Call-In Waived by the
Chairman of Overview
and Scrutiny
Committee**

NOT APPLICABLE
[Call-In applies]

HARROW COUNCIL – DRAFT STREET LIGHTING POLICY
April 2011

1 Introduction

This Street Lighting Policy aims to:

- * meet the Corporate Priority, 'keeping neighbourhoods clean, green and safe'
- * meet the objectives of the Council's Climate Change Strategy
- * address the objectives of the Local Transport Implementation Plan (LIP)
- * review existing light sources and lighting levels to address energy consumption
- * reduce energy consumption through the use of new technology, including remote monitoring
- * consider trimming and variable lighting
- * establish the future investment need in the lighting infrastructure

Street lighting is an essential element of Harrow's highway infrastructure. Effective lighting plays a major part in the community strategy for reducing crime, fear of crime and anti-social behaviour, as well as providing a safer environment for both pedestrians and motorists in reducing night-time accidents.

2 Maintenance

2.1 Asset Management

Harrow has a lighting stock of 15,500 street lights and 3,500 illuminated items (bollards, road signs, etc.). Harrow utilises an asset management system, which provides an inventory of all street lights and illuminated street furniture.

The policy concentrates on street lights. Illuminated street furniture will be de-energised where possible and new technology used to reduce energy and maintenance costs.

2.2 Stock Condition

In general, a significant proportion of Harrow's street lighting is old and provides lighting levels that do not meet modern lighting standards.

The two main issues are:

- the structural integrity of existing units, with associated risks of collapse and the maintenance problems relating to deterioration, especially in concrete columns, and obsolescence.
- the standard and quality of lighting, approximately 72% of which does not currently meet current lighting standards and needs to be replaced.

Replacement of all concrete columns will be undertaken within a 4 year period to ensure compliance with current regulations and according to Harrow's lighting standards.

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The tables below provide an indication of the lighting stock in Harrow.

Table: Age Profile of columns

Age	Concrete	Steel	Total	% of Total	Estimated new column Total	Replacement Costs (m)
0-10 years	0	4,175	4,175	27.14%	4,175	Nil
11-20 years	0	1,885	1,885	12.25%	2,467	5.4
21-30 years	0	7,948	7,948	51.65%	10,720	22.7
30+ years	1,340	38	1,378	8.96%	1,984	3.9
Total	1,340	14,046	15,386	100%	19,346	32.0

Table: Lamp Profile

Light Source	%
SOX	22.9%
SON	75.5%
COSMOPOLIS	0.21%
MERCURY VAPOUR	1.0%
FLUORESCENT	0.44%
Total	100.0%

2.3 Current Lighting Levels

All Harrow's new lighting schemes conform to the British Standard BS EN5489.

Location of Units	Lighting Level
Principal Traffic Routes (46km)	Class ME3
Shopping Areas, Road Junctions (158 km)	Class CE1
Residential Roads (235km)	Class S2

2.4 Scouting / Reported Faults & Repairs

The existing street lighting/illuminated street furniture stock requires inspection (night scouting) on a cyclic basis; currently fortnightly in the winter and monthly in the summer to identify defective lamps and other types of failures.

Standard street lighting faults are repaired within 3 working days. More complicated repairs requiring specialist parts or due to electricity supply faults, take longer.

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Any identified electricity supply faults are reported to the Regional Electricity Supply Company, UK Power Networks for investigation and repair.

All lighting emergencies (accident damage) will be attended to within 2 hours or 24 hours, depending on the severity of the situation.

2.5 Planned Maintenance

Using current technology all lamps are replaced on a three-year cycle (a process known as bulk-changing). This is the most effective way to ensure that the maximum serviceable life of each lamp type is achieved and that the lighting design level is maintained, whilst reducing the incidence of random failures of the installation.

Luminaires are also cleaned on a cyclical basis in conjunction with the lamp replacement.

An electrical inspection and test regime is undertaken to current recommendations, every 6 years.

2.6 Reactive Maintenance

Ad-hoc replacements/repairs following failures, vandalism or road traffic accidents. Emergency service - make safe/remove damaged street furniture within defined timescales.

2.7 Energy prices

Energy prices are expected to continue to rise over the next decade as the UK takes actions to meet its international climate change obligations. Thus, reducing our energy consumption is an important financial, in addition to an environmental objective

2.8 Carbon Reduction

In September 2009, Harrow adopted a Climate Change Strategy, which set out targets to reduce CO2 emissions by 4% a year. As a major consumer of electricity, the street lighting service is committed to the reduction of energy consumption and CO2 emissions to make significant contributions to the Carbon Reduction Commitment (CRC). Street lighting is also a major source of carbon emissions in the borough producing 3900 tonnes of CO2 a year.

2.9 Variable Lighting / part-night lighting

The current policy of having all lights, fully operational for the whole of the night is unnecessarily wasteful in terms of energy use. Three options are available to reduce energy use: -

- Variable Lighting - between 12.00 midnight and 5:00 am is not considered to be appropriate for Harrow's Main roads. However, it may be appropriate for our residential streets. This would ensure that streets remain lit, but that the level of lighting is appropriate to the actual level of use of the streets at the time.
- Part Night Lighting - lighting is switched off completely between 12.00 midnight and 5:00 am, is not considered to be an option that could be widely applied within Harrow. However, it may be appropriate in some sparsely populated non - residential/rural areas/roads.

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- Trimming – switching on & off at lower lighting levels, by means of photocells with different settings

2.10 New Technology – light emitting diodes (LEDs)

Major technological changes are taking place in the lighting industry. LED lighting is being introduced, which offer the following advantages; -

- Lower energy consumption
- Extended lamp life (12 years plus)
- Reduced maintenance and cleaning costs

As with all new technologies the initial capital cost has been very high compared to conventional lighting methods, but the difference is being reduced as the technology is improved and production capacity grows.

2.11 New Technology – Central Management Systems

To incorporate the use of a remote monitoring system will in turn reduce the need for scouting and may in future be used for switching and varying lighting levels.

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