



Hull

City Council

STREET LIGHTING

STRATEGY and POLICIES

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1. INTRODUCTION

1. Introduction

Purpose:

The purpose of this document is to outline the basic requirements for the provision, installation and maintenance of all types of external public lighting to

1. Meet legal and operational duties and obligations
2. Confirm that code of practice for management of street lighting.
3. Identify standards of service; expected means of measurement to meet standards through the application of policies outlined in the following pages.

To ensure this document is current it will be subject to a 4 yearly review or as/when legislation is amended or introduced, whichever is the sooner.

Public Lighting is part of national, corporate and local policy helping roads and paths to be used more safely and securely after dark.

Definition / Scope:

This document covers the street lighting and all other items of lit (illuminated) street furniture provided on the public highway within Hull except traffic signals and variable message signs and lighting on the A63 and A1033 which are the responsibility of the Highway Agency.

The provision of lighting is dependent on factors such as location, need, environment, traffic, crime and cost.

N.B. Some measures outlined in this strategy are aspirational, are not currently undertaken, and can only be achieved and/or delivered with adequate additional funding, over and above existing budgetary provision.

Our Strategy

Our strategy is to provide a street lighting service that delivers and maintains a safe highway network for all to use, reducing accidents and the fear of crime through polices that are efficient, innovative and protect the environment.

To deliver that strategy we will work within the highway spending programmes set out in the Local Transport Plan and based on the needs based assessments included within the Transport Asset Management Plan

2. LEGISLATIVE POWERS AND LEGAL OBLIGATIONS

2.1 Under the provisions of the Local Government Act 1966, the City Council gained responsibility for the maintenance and operation of highway lighting throughout the City, including the provision of new installations.

2.2 Kingston upon Hull City Council is not required in law to provide street lighting but where it is provided there is a duty to maintain.

Under the Highways Act 1980, S.97 and 98

1.) "... 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;

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

2.3 The City Council will also contract with any person to test, both structurally and electrically, such assets as to meet legal requirements and obligations.

2.4 The Public Health Act 1985, S161 and Crime and Disorder Act 1998, S17 granted extra powers for the provision of street lighting.

The 1998 Crime and Disorder Act places a statutory duty on the local police authority and local authorities to work together to implement a strategy for reducing crime and anti-social behaviour, with particular emphasis on: -

- promoting safer communities and reducing the fear of crime
- reducing crime against businesses

2.5 The Local Transport Plan (LTP) sets out our strategies, targets and spending programmes for transport for the fifteen years from 2011 to 2026. It is a means of helping to deliver wider aims like strengthening the economy or tackling social deprivation.

Street Lighting is an integral part of the LTP with appropriate, well maintained lighting impacting on many of the aims and objectives of the LTP – e.g.

".....reducing night time personal injury accidents, the severity of accidents, crime, the fear of crime and in particular crime against the person and expand the night time economy"

"...to maintain and improve road safety on the City's road network"

"...helping local people to build strong communities and a city which is a safe place to live."

2.6 Where other City Council Service Areas wish to provide lighting on a highway the consent of the Traffic Manager, as Highway Authority, is required.

3. GUIDING PRINCIPLES

- 3.1 The City Council's aim is to "improve lives in Hull" by having ambitions to make people "feel safe wherever they are in Hull" and "live in a sustainable city".

Our vision statement is "Hull is a family friendly city, where everyone matters. So, we are working to improve the lives of everyone who lives and works in the city".

We aim to achieve our vision by

- "delivering a well-run Council and listening to people's views"
- "ensuring our communities are safe"
- "supporting the vulnerable and those most in need, to live independently"
- "maintaining a green and sustainable environment"

- 3.2 Our street lighting policies have been developed to realise this vision and support the aims and objectives of other City Council strategies and initiatives:

- 3.3 It is intended to align the Council's street lighting service with the UK Lighting Board's document 'Well Lit Highways: Code of Practice for Highway Lighting Management' (November 2004). **Following receipt of Member approval, an initial action plan will be drawn up for the period 2012-2014, to implement those elements of the new strategy that are deliverable within available resources.**

- 3.4 The main purpose of street lighting is to improve night-time safety. There is also significant benefits to be made by the enhancement of the natural and built night-time environment. This promotes commercial and leisure activity as well as the community in general, contributes to the reduction of crime and the fear of crime, reduction of vandalism, improvement to safety and security and promotes a general feeling of well-being.

- 3.5 These benefits can be achieved by a lighting service that –

- is part of a safe highway network for all users
- minimises detrimental environmental effects
- integrates sympathetically with the local environment
- helps to reduce crime and fear of crime
- is cost-effective
- seeks on-going improvements in all areas
- provides lighting that is of good quality, energy efficient, reliable and durable
- ensures all new lighting is of the correct design and specification
- making sure there is a high level of reliability and equipment is of a structurally sound condition

- works in partnership with local authorities and other groups, through the sharing of technical advice and expertise; and where possible joint funding

These benefits are delivered by a service based on: -

- realistic funding levels
- an appropriate strategy for day to day maintenance
- professional and experienced staff to administer, plan and deliver maintenance and improvement programmes

3.6 Provision of lighting takes account of –

- Highway safety and reduction of night-time accidents for all, particularly children, the elderly, the disabled, cyclists and pedestrians.
- Protection of Conservation Areas, Listed Buildings, Ancient Monuments and Historic Sites.
- Enhancement of the night-time environment in areas of high night-time activity, urban leisure and commercial areas and recreational centres.
- Personal security and feeling of general well being, reduction of vandalism and crime against property and vehicles and the requirements for CCTV use.
- Visual/environmental intrusion in respect of daytime appearance, night-time appearance with regard to poor optical control and wasted upward light. With particular regard to sustainable development the following strategies will be used:-
 - > purchase energy produced by renewable technology
 - > trial new low energy or alternative energy equipment
 - > use good quality equipment with a long serviceable lifespan in order to reduce wastage
 - > employ appropriate recycling strategies for waste products
- Cost effectiveness of equipment used in terms of reliability, maintenance requirements, energy usage and anticipated working life.
- Position of columns, equipment specifications, disposal and recycling of materials, electrical and structural testing.

3.7 The provision of new lighting and the maintenance, replacement or improvement of existing lighting has a major impact on maintenance budgets. While the developer or promoter of a scheme will fund the initial installation, the long-term maintenance and energy liabilities still have to be considered.

3.8 Each proposal will be assessed to ensure that Best Value criteria are being met, namely: -

- Challenge the need for existing or new lighting
- Compare alternative light sources/scheme designs
- Consult with the local community and their representatives

3.9 In order to effectively use limited budgets, assessments will be required for all requests for new or additional lighting, whether from the Elected Members, members of the public or private developers.

Each scheme will be evaluated in respect of: -

- reduction of night-time accidents
- crime prevention
- effect on the environment
- cost and maintenance liability
- commercial and leisure amenity value
- any other significant local factors
- standardisation of equipment/materials to minimise stores/stock where possible.

4. THE POLICIES

4.1 GENERAL POLICY

G1 – Street lighting will be “all-night”

This is because: -

The primary consideration is to secure the safety of the travelling public whether that be in terms of safe utilisation of the road layout or safe from criminal activity.

We will achieve this by:-

- Employing photo-electric control units (PECUs) that accurately switch lighting on and off
- Replacing defective PECUs expeditiously to prevent lamps operating during daylight hours.

G2 – Light sources will be white light in areas of high amenity value.

This is because: -

The light source used has a dramatic effect on the night-time environment. Low pressure sodium (SOX) lighting gives an overall monochromatic appearance, while high pressure sodium (SON) gives a golden yellow colour providing average colour rendering. White light can be provided by PL fluorescent lamps or CDM-T metal halide lighting, both give good colour rendering which is particularly important where buildings, landmarks or other features are to be highlighted, but is also very valuable in safety and crime-prevention terms, whereby vehicle colours can be recalled with confidence, as well as identification of people and their clothing at scenes of accidents or crimes.

We will achieve white light by: -

Adopting the mechanisms included in the specific policies which follow.

G3 - The visual impact of lighting systems will be minimised and where possible the local environment enhanced.

This is because: -

Lighting systems are installed to provide appropriate levels of illumination during hours of darkness. However this should not be at the expense of obtrusive or inappropriate equipment that detracts from the streetscape during daylight hours.

We will minimise visual impact and enhance the environment by: -

- Providing the minimum level of lighting commensurate with the identified illumination need.
- Positioning columns and equipment such that they blend in with the surroundings or employ a design with features to complement or enhance the surroundings.
- Considering the use of wall mounted fittings.
- Considering alternative light sources.

G4 – Lighting systems shall minimise pollution to the night sky.

This is because: -

Visual intrusion, “Sky Glow”, in the built environment caused by the spread of stray light into the night sky is a major concern. Additionally, glare causes discomfort and affects drivers’ vision and light trespass back towards adjacent property can be unwelcome. Stray light is obtrusive, and wasteful of light and energy

Historically, lantern bowls have been curved or semi-circular in order to allow light to spread over as large an area as possible. This has the benefit of light shining backwards to illuminate footways and also minimises the number of lamps required. Unfortunately these lantern bowls also allow light to be shed above the horizontal, thus causing pollution.

Light pollution can be virtually eliminated or at least greatly reduced by a number of means. Flat glass lanterns shine light only downwards. However, there is no benefit of backlight and the number of lights required increases. Shallow or semi-elliptical bowls are a compromise between the traditional deep bowl and flat glass lanterns in that they greatly reduce light pollution, but do not eliminate it. Internal lantern reflectors are also available that direct more light downwards.

We will minimise pollution by: -

- Installing lighting sufficient for location and circumstances without over provision.
- Aligning lighting equipment correctly, such that light is directed downwards using flat glass, shallow bowls, shields and baffles.
- Using shallow bowl lanterns on all new and replacement works as far as possible

G5 – Waste from lighting systems shall be eliminated, reduced or recycled.

This is because: -

A large number of lamps are changed and disposed of in the City each year, together with varying quantities of failed gear components, damaged columns, cabling and other equipment.

The Waste Electrical and Electronic Equipment (WEEE) Directive and the Hazardous Waste Regulations will be followed to ensure as full recycling of waste materials as legally required and economically viable is achieved. Disposal to tip must be the last resort.

We will eliminate or reduce waste by: -

- Using lamps with longer life thereby extending lamp change frequency.
- Using the minimum number of lighting units.
- Considering the whole life costs of components used, including the cost of disposal.

We will recycle waste by: -

- Using components designed to be recycled or refurbished.
- Breaking down lamps such that separated toxic substances can be disposed of safely allowing other parts to be recycled.

G6 - Lighting systems shall minimise the use of energy.

This is because: -

Power for lighting is mainly provided by electricity that is generated at off-peak times, when power production is at 'tick-over'. Technology is available and is being further developed to deliver solar-power and power generation by hydroelectric means and wind turbines.

However, our aim is to ensure that the amount of energy used in total is no more than is needed, taking into account the aims and objectives of an appropriate lighting system for each location, and to source as much energy as possible from sustainable sources.

We will minimise the use of energy by: -

- The use of appropriate lamps, photocells and control gear.
- Ensuring replacement schemes are correctly designed with optimum spacing.
- The use of alternative technology.
- Monitoring the operating hours of equipment to ensure they are optimised, i.e. ensure daytime burning is minimised/rectified.
- Ensuring a Carbon Impact Assessment is produced for all new installations and that the lowest possible emissions are achieved.

G7 – Energy will be procured by the most advantageous means

This is because:-

We need to ensure best value for Kingston upon Hull City Council

We will procure energy by:-

- Ensuring that we have an accurate inventory of apparatus in accordance with BSCP520
- Meeting the requirements of our Unmetered Connection Agreement with the Electricity Company
- Exploring the tender options open to use at the time of tendering.
- Seeking to gain further advantages of scale by letting joint tenders with other electricity users within the Authority or other Authorities.
- Or, seek to negotiate extensions to existing contracts if this is believed to be financially advantageous.

G8 - We will continue to work with the Electricity Company (Distribution Network Operator, DNO) to ensure good provision of electrical services to our apparatus.

This is because:-

The Electricity Companies currently have a monopoly for the provision of new supplies connected directly to the Electricity Company Network, and for any repairs needed to

that network. The performance of the Electricity Company therefore has a direct impact on the performance of our street lighting service.

We will:-

- Work with OFGEM to progress the current Draft National Service Level Agreement (SLA) Document. The SLA will be introduced between Kingston upon Hull City Council and the Electricity Company once the national framework has been agreed
- Ensure that all instructions for works sent to the Electricity Company are accurate and include all plans and documentation they require.
- Work to the SLA and ensure that the Electricity Company also works to this document by monitoring their performance on faults and new connections.
- Whilst connections to street lighting apparatus are outside the provisions of the New Roads and Street Works Act (NRSWA) we will continue with our agreement with the Electricity Company that they will continue to work within the spirit of the NRSWA for the purposes of notification of works and quality of works.

G9 - All staff shall be competent to carry out the duties of their role

This is because:-

Regulation 16 of the Electricity at Work Regulations states that "No person shall be engaged in any work activity where technical knowledge or experience is necessary to prevent danger or where appropriate, injury, unless he/she possesses such knowledge or experience, or is under such degree of supervision as may be appropriate having regard to the nature of the work"

The City Council needs to ensure that the staff engaged in street lighting scheme design or giving advice on lighting matters to internal departments, Developers, and other persons or bodies who contact the City Council have an understanding of the legal issues, national applied standards and documents, and policies/practices of the City Council.

We will achieve this by:-

- Ensuring that all operatives employed by Kingston upon Hull City Council, its contractors and sub-contractors, are trained – or will be trained – and competent to the appropriate sector scheme for their area of work.
- Ensuring that staff are up to date with the latest developments within the industry and promoting the membership of professional bodies

4.2 NEW DEVELOPMENT POLICY

N1 – New developments will be lit appropriately.

This is because: -

The primary consideration is to secure the safety of the public, whether that be in terms of safe utilisation of the road layout or safe from criminal activity. Where there is little or no existing lighting and minimal potential for night time accidents because of low traffic volume, this policy may be relaxed at the specific request of the Areas or internal City Council departments, and either footway lighting or no lighting maybe installed, in taking this decision the future needs of residents will be considered.

New developments will always be lit to a standard approved by the relevant City Council Department to ensure appropriate lighting provision on new developments. However, where there are existing accident issues, these will, as a matter of safety, take precedence over local concerns.

We will achieve appropriately lit developments by: -

- Designing new development lighting systems using the principles of lighting provision detailed below.
- Taking account of the need to achieve a balance between the safety and convenience for residents and visitors when using the network and preserving the naturally dark areas.
- Consulting the Areas on specific development proposals where there are particular local issues that need to be considered in addition to the routine developments adopted and maintained by the City Council.
- Ensuring a Carbon Impact Assessment is undertaken that ensures lowest possible emissions are achieved by all new development lighting systems.

N2 – All lighting systems will be designed to National and European Standards appropriate to the road type.

This is because: -

These standards are utilised by all lighting authorities, which ensures a consistent level of lighting appropriate to road type across the country.

We will achieve design to National and European standards by: -

- Designing lighting systems to the appropriate standard.
- Not adopting for maintenance lighting installed below this standard.

N3 – All lighting systems will meet the requirements of Kingston upon Hull City Council

This is because: -

Policy N2 will ensure that new installations are compliant with national standards for lighting levels and layout design. However the City Council wish to ensure that lighting systems within Kingston upon Hull are appropriate for the particular situation in which they are installed. To ensure that Kingston upon Hull City Council can maintain the new equipment to a standard not less than the Councils standards of maintenance elsewhere the new equipment installed will be in accordance with Kingston upon Hull

City Councils standard specifications, which may be amended from time to time. Heritage lighting may be installed on new Developments providing that the equipment installed is chosen from Kingston upon Hull City Councils approved list of Heritage Equipment and Commuted Sums are paid to the City Council by the Developer to meet the enhanced maintenance costs associated with this type of equipment.

We will achieve the Council's requirements by: -

- Requiring developers to comply with the requirements of the City Council Highway Design Guide for New Developments.
- Collecting Commuted Sums for Heritage or other scheme specific specialist lighting from Developers.
- Ensuring all installation costs incurred for new or enhanced street lighting proposed by bodies other than developers is met by the proposer.
- Collecting Commuted Sums equal to the maintenance and energy consumption costs to be incurred during the expected lifespan of all new or enhanced street lighting proposed by bodies other than developers.

PRINCIPLES OF LIGHTING PROVISION

Street lighting will be provided on all new residential, commercial and industrial developments with consideration taken in respect of existing lighting, conservation areas and general location.

In order to reduce light pollution, lighting will be specified according to the environmental zone in which it is located. These zones have been developed from recommendations put forward by the Institution of Lighting Engineers to reduce light pollution, i.e.

Zone E1 - Areas of Outstanding Natural Beauty, Conservation Areas, Sites of Special Scientific Interest, Environmentally Sensitive Areas, Special Areas of Conservation and Urban Conservation Areas.

Zone E2 - Areas of low district brightness (rural locations outside Zone E1)

Zone E3 - Areas of medium brightness (urban locations)

Zone E4 - Areas of high district brightness (urban centres with high night-time use)

Zone E1

The provision of lighting in E1 zones should clearly demonstrate benefits that would offset any perceived environmental detriment.

The provision of lighting generally has been shown to improve road safety, as well as enhancing personal safety and deterring crime, which in turn improves the socio-economic character of an area. However, such benefits must be measured against the impact on the living environment and affect aesthetically. Typically, roads in these areas will be secondary distributors and access roads, although there are many instances where development will have taken place either side of a route, which has since become a primary or main distributor.

Where lighting is required In E1 zones, but the level specified in national and/or European standards would be considered excessive, then the applicant concerned should be encouraged to adopt suitable footway lighting as necessary.

At locations where night-time safety issues give serious cause for concern, the level of illumination provided should be the minimum permissible within the available guidance. Equipment used should be placed in such a manner and consist of such optical components that glare and upward light-spill is minimised or eliminated.

The refurbishment or replacement of lighting in E1 zones should take account of the continued use and desire for lighting, as well as whether the standard of lighting could be downgraded or removed completely.

Zone E2

Lighting in E2 zones is not applicable to the environs found within the boundaries of Kingston upon Hull.

Zone E3

Areas in E3 zones will generally be in urban locations and would include primary roads, main and secondary distributors, access roads, shared access roads, secondary access roads, footways and cycle routes. Each category of road should be lit to the appropriate recommended light levels stipulated in BS5489 and BSEN 13201.

There may be in these locations areas of special interest or designated conservation areas where lighting requirements also include the need to enhance and improve the local environment for amenity value, in terms of trade and tourism, such as using white light for colour rendition or floodlights for shadowing and other effects. In such cases, a higher standard of light would be permitted, providing always that light control should be no less effective than the normal standard applicable.

Equally, there will be unlit areas and areas of parks and woodland, all of which will have to be considered in respect of any new lighting proposals where the 'sky-glow' normally associated with urban lighting would be detrimental to the attraction of such areas and should be avoided.

Zone E4

Areas in E4 zones are typically town centres, where there is high night-time activity in terms of both traffic and pedestrians. These areas are busy by day with traffic and busy at night with people enjoying the various cultural and leisure amenities available. This level of activity requires a high level of lighting to cater for traffic, together with the need to enhance and improve the environment in order to draw people to the various attractions. However, although the level of lighting will be significant, the need for effective light control to prevent light pollution is even more important due to this greater concentration of lighting.

4.3 MAINTENANCE POLICY

M1 – Lighting will be maintained to secure, safe, effective, reliable and economic operation.

This is because: -

For a lighting system to fulfil its primary function, that system must be operational and electrically and structurally sound such that public safety is not endangered. As lighting systems age they deteriorate in general condition and effectiveness of light output, whilst components become increasingly unreliable.

We will achieve secure, safe, effective, reliable, economic operation by: -

- Following the principles laid down in Well-lit Highways - Code of Practice for Highway Lighting Management – briefly comprising:-
- Maintaining an up-to-date inventory of lighting stock to facilitate maintenance management and enable competitive purchase of energy.
- Repairing defects expeditiously.
- Electrical and structural testing of units
- Painting lighting columns in areas of high amenity value.
- Considering the cost/benefits of using equipment with longer service life.
- Adopting maintenance standards designed to maximise the serviceable life of components.

We shall aspire to:-

- Inspecting lighting systems on a regular basis such that defects are identified within a reasonable period.
- Bulk changing lamps on the principal highway network and areas of high night-time activity to maintain light output at satisfactory levels.

The full detail of the maintenance policies being detailed below:-

M2 - Inventory and Asset Management Systems

We will continue to develop the computerised inventory and management system SBS “Confirm”. We will continue to gather the information required by the Transport Asset Management Plan to convert this inventory from a traditional street lighting inventory into a risk assessment inventory. Briefly the inventory and management system will contain

- Geographical Data
- Apparatus Data
- Risk Assessment Data
- Operational Data

The inventory will be updated in accordance with the recommended maximum response times given in table 3.1 of Well-lit Highways. This information will be used to effectively and efficiently operate and report on all aspects of the service.

M3 - Cyclic Maintenance.

Cyclic maintenance is the main tool in the management of preventative maintenance, forestalling poor performance and failure of the installation.

We will carry out the following Cyclic Maintenance operations:-

- Clean/service the optical equipment/compartments of illuminated traffic signs and bollards on an annual basis. Whilst undertaking this work a visual inspection of the whole unit, including any attachments, will be carried out and its condition recorded. Any minor repairs to the electrical equipment, wiring and door security will be undertaken. The inventory verification will also be undertaken.
- Finances permitting bulk lamp changing be undertaken at a three yearly frequency for each lamp type on the principal highway network and areas of high night-time activity (see plan overleaf) presently we burn to destruction. This will be reviewed as new lamp construction or new lamp technologies extend lamp life. Currently SON and SOX lamps are recommended to be changed after 16,000 hrs (4 years), fluorescent tubes are changed after 8,000 hrs. Any new installation will also be included in the bulk lamp change for that area if it is more than 24 months old at the time the bulk change is due and is on the principal highway network or in an area of high night-time activity. Whilst undertaking bulk lamp changing the luminaire, photocell and base compartment will be cleaned and moving parts will be greased. A visual inspection of the whole unit, including any attachments, will be carried out and its condition recorded in accordance with the criteria specified in well-lit highways. Any minor repairs to the electrical equipment, wiring and door security will be undertaken. The inventory verification will also be undertaken.
- Electrical testing of all units will be undertaken on a 6 yearly cycle in accordance with the requirements of BS7671: Requirements of Electrical Installations. At the time of testing minor repairs to electrical equipment, wiring and door security will be undertaken. Capacitors will be replaced at the time of testing to ensure that the City Council is complying with its supply agreement with the Electricity Company. The inventory verification will also be undertaken. Records of tests will be kept.
- Structural Testing of all units will be undertaken. This shall be undertaken on a 6 yearly cycle with the Electrical Testing. All columns are subject to a visual check and steel columns also have ultra-sonic material thickness measurements taken and recorded. The condition of attachments is also checked and noted. The information collected by these tests will be used to formulate the column replacement programme, also taking into account the types of columns identified by Transport Research Laboratory as posing a significant risk. In extreme cases, where there is immediate danger to the public due to the structural condition of the apparatus the apparatus will be cut down and removed from service.

All work tickets for cyclic maintenance operations are issued to the maintenance operatives to be carried out within the calendar month allocated. In line with Well-lit Highways all cyclic maintenance tasks are to be completed not later than 20 working days after the month allocated.



M4 - Reactive Maintenance

To maintain the service to the public there is a need to identify lighting units and illuminated traffic signs which have failed, or have mechanical defects, and then to repair them within predefined time scales.

We will :-

- Maintain an emergency service for attendance to incidents such as vehicle impact, cable damage, vandalism or storm damage 24hrs a day 365 days a year.
- **Subject to the availability of resources**, carry out inspections of all units at night to ensure that they are operational on a monthly basis. (except subway units which will be inspected during the day as these units operate 24 hrs – for health and safety reasons).
- Encourage the public to report defects – either by phoning the 300300 number. We will advertise these services through as wider means as possible.
- **Ensure that each lighting column is marked with a clear identifying number to facilitate the reporting of defects**
- Issue to the maintenance operatives all defects that immediately endanger life for attendance within 2 hrs.
- Issue to the maintenance operatives defects where a group of lights are inoperative for attendance “before lighting up time”.
- Issue non emergency defects involving the rectification of non-operating Belisha Beacons and School flashing signs to the operatives for attendance “before lighting up time”.
- Issue non emergency defects involving the rectification of non-operating mandatory traffic signs and bollards (other than those listed above) to the operatives for attendance within 1 working day.
- Issue non emergency defects requiring the replacement of components/removal of graffiti/removal of non approved attachments to the operatives for attendance within 3 working days.
- Where component repairs were unable to be completed, or the repair was unsuccessful, we will reissue the fault to the maintenance operatives for attendance within 3 working days.
- Issue non-emergency faults involving the removal of offensive and/or racist graffiti to the operatives for attendance within 1 working day.
- Issue installation of complete units of apparatus to the operatives. Attendance of 90% within 20 working days with 100% within 40 working days.

In line with Well-lit highways all work tickets for cyclic or reactive maintenance are to be returned within 5 working days of the task being completed to ensure that no undue delay occurs with any follow on works required by others, and to allow the inventory and history of that piece of apparatus to be updated.

M5 – Replacement Light units will utilise white light

In line with General Policy G2 above replacement lanterns will utilise SONT lanterns however we will use white light units when complete replacement installations or new schemes are proposed.

M6 - Recharging Costs to others

This is because:-

On occasion residents, developers, public utilities or other bodies require lighting columns to be relocated to facilitate their works. It is unreasonable for these costs to be borne by the taxpayer, as it is not Kingston upon Hull City Council who are promoting the works. In the event of accident damage or vandalism we will seek to recover our costs from the third party (unless the accident was a fatal accident)

We will:-

- Work with the third party to enable their works to progress whilst still maintaining the integrity of the lighting system by the installation of temporary lighting if required
- Ensure that the new location for the lighting column permits the lighting scheme to meet the requirements of BS5489.
- Work with Humberside Police to endeavour to identify the vehicle owner or culprit of damage or vandalism
- Recharge to the third party costs incurred by Kingston upon Hull City Council, its contractors, sub-contractors and agents for the works undertaken for the third party while making allowance for betterment if appropriate.

4.4 PLANNED LIGHTING COLUMN REPLACEMENT/IMPROVEMENT POLICY

L1 – Existing lighting systems will be upgraded to modern standards (within budgetary constraints).

This is because: -

Much of the present City Council lighting stock was inherited following the Local Government Act 1966. After local government reorganisation in 1996, the City Council took over direct responsibility. The lighting equipment inherited was not in strict accordance with any design standards and, since design recommendations have changed over recent years, the standard of street lighting is not consistent across the City.

The major problems associated with existing systems of street lighting are:

- old, deteriorated and cracked columns;
- corroded metal columns;
- excessive spacing of columns;
- inefficient light sources;
- sub-standard electrical systems;
- paint finishes applied to poorly prepared columns;
- poor scheme design;
- lamp type not suitable for location;
- column style and height not in keeping with surroundings;

We will achieve upgrading to modern standards by: -

- Undertaking any replacement/refurbishment of systems to appropriate standards.
- Using white light sources for replacement/refurbishment schemes
- Considering localised dark spots for infill/improved lighting through consultation with the Community Safety Partnerships and Police Community Safety Officers.

L2 – Footway lighting will be adopted if upgraded to modern highway standards.

This is because: -

In an effort to improve the overall quality of lighting in the City, there has been a long-standing understanding that Kingston upon Hull City Council will adopt any existing footway lighting systems that have been upgraded by others to roadway lighting systems, provided that the equipment installed meets Kingston upon Hull City Councils specification.

We will assist with this upgrading to BS5489 and BSEN 13201 standards by: -

- Advising The Areas of The City Councils current lighting standards.
- Providing technical expertise to assist The Areas with the procurement of roadway lighting schemes.

4.5 PERFORMANCE MONITORING POLICY

P1 – Monitoring of The City Council Street Lighting stock will be undertaken

This is because:-

Accurate street lighting data is essential in order to be able to efficiently manage the stock and to act as an intelligent basis for capital and revenue investment.

We will:-

- Undertake an appraisal of street lighting data held on the asset management system. Ensure risk, safety cost critical information together with efficiency information is accurate to establish a robust inventory.
- Implement and maintain such inventory and management systems as required to enable the information produced to be current and accurate.

P2 – Monitoring of Performance of maintenance operations will be undertaken.

This is because:-

In order to deliver improvements to the quality of service provided it is essential that we challenge our own working methods and practices and compare different working methods and practices.

We will: -

- Monitor that night patrols are being undertaken by use of the vehicle tracker.
- Monitor the actual response times for Reactive Maintenance works detailed in policy M1 above and log the number of Reactive Maintenance tasks completed within and outside the stated timescales. Investigate any reason for Reactive Maintenance works being completed outside the stated timescales and look for improvements to working methods and practices to reduce any non-conformances.
- Monitor the actual response time of the Electricity Company for faults and new connections as detailed in the National Service Level Agreement and log the number of tasks completed within and outside stated timescales
- Work with the Electricity Company to investigate any reason for works being completed outside the stated timescales and look for improvements to working methods and practices to reduce any non-conformances.
- Monitor the cyclic maintenance tasks to ensure that the cyclic works detailed in policy M1 above are completed within the stated timescales.
- Investigate any reason for cyclic works being completed outside the stated timescales and look for improvements to working methods and practices to reduce any non-conformances.
- Monitor the time taken from receiving a defect from a member of the public to processing that defect into a Reactive Maintenance task to ensure that undue delays do not occur in work processing.
- Where lights are knocked down, or taken out of commission for safety reasons we will monitor the length of time taken to process a work instruction for a new piece of apparatus.

- Monitor the number of return visits required to pieces of apparatus and investigate the reasons for these. Revise equipment specifications or equipment location accordingly and work with suppliers to improve the quality of products in use. Implement training of personnel if required.
- Monitor and report the number and cost of unrecovered damage and vandalism to our equipment. Work with the Police and other agencies to reduce the number of occurrences and cost incurred by the Authority. .
- Review working practices and systems to attain continuous improvement.
- Work with our contractors, subcontractors, agents and partners to ensure that their performance also shows a continuous improvement

4.6 ATTACHMENTS POLICY

A1 – Attachments to lighting columns will not normally be permitted.

This is because: -

The majority of lighting columns have not been designed to accommodate the additional load and stresses induced by such attachments as signs, floral decorations, banners, festive decorations and CCTV equipment.

We will achieve this by: -

- Not encouraging attachments. However, where they are considered to be of value to the community and are not for commercial purposes, attachments such as festival/festive lights, floral decorations, flags and banners may be permitted but only with the written approval of the City Council. Such attachments will be subject to the structural testing of the column(s) to ensure that the additional loading(s) can be safely supported. The costs of such tests will be met by the organisation wishing to attach signs. The Kingston upon Hull City Council Policy covering the “Installation, Operation and Removal of Festive Decorations on or above the Public Highway” will also need to be complied with.
- Ensuring that traffic signs, including bus stop plates, that are attached to lighting columns do not exceed the lighting column manufacturers recommended windage area. This is particularly important where multiple signs are attached to a lighting column. In these cases either a freestanding traffic signpost will be required or, if no other suitable site exists, a strengthened column may be installed at the cost of the organisation wishing to fit the sign.
- Removing signs and attachments that have not been approved by Kingston upon Hull City Council and recovering the costs of removal, storage and disposal from those responsible.

A2 - The supply of electricity from lighting columns for the purposes of powering temporary traffic control, festive illumination etc. will only be permitted with the express permission of the Electricity Company for each installation.

This is because:-

There are several potential financial, operational, legal and safety issues that may arise, were the City Council to permit a third party to make (or arrange to have made) temporary connections to lighting equipment without the permission of the Electricity Company. However, there is no reason why a third party cannot make its own arrangements with the Electricity Company for a temporary (or permanent) supply, subject to the usual highway and planning approvals.

We will achieve this by:-

- Not encouraging third-party connections. However, where they are considered to be of value to the community and are not for commercial purposes and an

alternative suitable supply is not available, such connections may be permitted but only with the written approval of the City Council.

- Supplying, fitting, maintaining and removing temporary supply units for the purposes of powering temporary traffic signals, once we have established that the third party has the agreement of the Electricity Company. The costs of this work will be recharged to the person or organisation requiring the temporary supply unit.
- Supplying, fitting, maintaining (and removing) permanent (or temporary) supply units for the purpose of festive decorations, once we have established that the third party has the agreement of the Electricity Company. The costs of this work will be recharged to the person or organisation requiring the supply unit. The Kingston upon Hull City Council Policy covering the "Installation, Operation and Removal of Festive Decorations on or above the Public Highway" will also need to be complied with.

4.6 INNOVATION AND NEW TECHNOLOGY POLICY

N1 – Innovative ideas and new technology will be monitored and evaluated.

This is because: -

The street lighting industry is innovative and new products are constantly being developed many of which can result in improved whole life costs, energy efficiency, reliability, durability and aesthetics.

We will achieve this by: -

- Keeping abreast of innovation and new technology.
- Being receptive to new ideas and products promoted by manufacturers and accommodating trials where any risk to the authority is minimal or underwritten by the manufacturer.

Further Useful Information

DOCUMENT

Kingston upon Hull City Council Corporate Strategy

Kingston upon Hull City Council Specification for Highway Works

Kingston upon Hull City Council Highway Design Guide for New Developments

Highways Act, 1980

BS5489-1:2003 – Code of Practice for the Design of Road Lighting

BS EN 13201-2:2003 – Road Lighting : Part 2: Performance Requirements

BS EN 13201-3:2003 – Road Lighting : Part 3: Calculation of Performance

BS EN 13201-4:2003 – Road Lighting : Part 4: Methods of Measuring Lighting Performance

The Institution of Lighting Engineers Code of Practice for Electrical Safety in Public Lighting Operations

The Institution of Lighting Engineers Technical Report Number 22: Lighting Columns and Sign Posts: Planned Inspection Regime

The Institution of Lighting Engineers Guidance Notes for the Reduction of Light Pollution

CSS Well-lit Highways, Code of Good Practice for Highway Lighting Management

Kingston upon Hull City Council Policy for the "Installation, Operation and Removal of Festive Decorations on or above the Public Highway"

GLOSSARY OF TERMS

Colour rendering and colour rendering index (CRI)

The ability of a light source to render colours naturally, without distorting the hues seen under a black full spectrum radiator (like daylight or incandescent lamps). The colour rendering index ranges from 0 to 100 and is also referred to as Ra.

Column

A pole for mounting a luminaire commonly made from steel or concrete.

Compact fluorescent lamp (CFL)

A compact low pressure discharge lamp (see Fluorescent lamp) with a layer of fluorescent material, excited by ultraviolet radiation from the discharge, to produce mainly white light.

Dimming

A way of decreasing the luminous flux from lamps by means of an electrical or electronic system.

Fluorescent lamp

Discharge lamp of the low-pressure mercury type in which most of the light is emitted by a layer of fluorescent material excited by the ultraviolet radiation from the discharge. This term is most commonly applied to low pressure tubular fluorescent lamps.

Glare

Condition of vision in which there is discomfort or a reduction in the ability to see significant objects, or both, due to an unsuitable distribution or range of luminance.

Halogen lamp

A tungsten filament lamp which includes halogens in the gas filling and a high temperature quartz envelope. This produces a more efficient incandescent lamp with longer life and a higher lumen output than standard tungsten filament lamps.

High-pressure sodium (vapour) lamp (HPS)

High-intensity sodium discharge lamp with a yellowish colour appearance and a very high efficiency.

Reference examples: SON, SON-T, SON-E and SON-L.

Illuminance (E)

The luminous flux density at the surface being lit. The unit is the lux being one lumen per square metre (lm/m^2).

The orientation of the surface may be defined, e.g. horizontal, vertical, hence horizontal illuminance, vertical illuminance.

Lamp

Lamp is the generic term for a light source. Light bulbs, tubes, capsules and spots are all types of lamp.

Lantern

See Luminaire.

Light

The visible part of the electromagnetic radiation spectrum with a wavelength of between 380 to 760nm (nanometre). Ultraviolet radiation has a wavelength of less than 380nm, whilst infrared light is greater than 760nm and may be considered as the cooler and warmer end of the light spectrum.

Lighting level

See Illuminance

Low-pressure sodium (vapour) lamp

High-intensity sodium discharge lamp with monochromatic yellow light.

Reference examples: SOX and SOXE.

Luminaire

A lighting fitting which distributes light from a lamp or lamps. A luminaire will contain all the necessary components for fixing and protecting the lamp or lamps and may include control gear.

Metal halide lamp

High pressure discharge lamp in which the white light is produced by the radiation from a mixture of a metallic vapour (mercury) and products of the dissociation of halides (e.g. halides of thallium, indium or sodium).

Reference examples: MBI, MBI-T, MBI-L, HPI-T and HQI-T.

Photo cell

A daylight activated switching device for controlling the switching on and off of a lighting circuit or circuits.

Reflector -- Any polished or light colored object intended to aim (by "bouncing") light in a desired direction as opposed to just block or absorb it.

SON

See High-pressure sodium lamp.

SOX

See Low-pressure sodium lamp.

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