



## Footpaths Lighting Strategy

### Operational Performance Requirements

- Respond to dangerous faults (i.e. missing face plates) within 2 hours of notification.
- To repair key footpath lights, at crossing points busy junctions within 5 days (subject to availability of supply)
- Detection of lamps not working by nighttime inspection within 28 working days.
- Repairs to faulty highway electrical equipment within 7 working days following identification (subject to availability of supply)
- Replacement of all lamps through cyclic maintenance at least every 5 years.
- Undertake electrical inspections every 3 years.
- Undertake electrical testing every 6 years.
- Undertake visual structural inspections (10% of assets) every 3 years.

### Asset Management

- In order to meet our obligations the Parish Council operates an Ordnance Survey based plans on which are recorded the locations of all footpath lights.
- The system records four types of data:
  1. Geographical data – a record of the road or area on which the equipment is located.
  2. Apparatus data – a record of the equipment type and location.
  3. Risk assessment data – a record of the structural and electrical condition of the equipment.
  4. Operational data – a historical record of the actions carried out to the equipment, including cyclic and reactive maintenance.
- The majority of footpath lights in Headcorn Parish are provided with an un-metered supply connection by the local DNO (EDF). In order to obtain this un-metered supply the Parish Council has entered into an Un-metered Connection Agreement with EON. A requirement of this agreement is that the Parish Council have to maintain an accurate detailed inventory of all our un-metered equipment. Consequently the Asset Management data is an integral part of ensuring that the Parish Council is charged fairly and accurately.
- Ultimately it is intended that the system will provide a record of all available system and operational data in digital format within the context of a geographic background.

### Maintenance Obligations

- Headcorn Parish Council has a duty of care to ensure that all footpath lighting is maintained in a safe condition. All systems of public lighting should be maintained to a standard that ensures their safe, effective and reliable operation.
- It is a requirement of the Electricity at Work Regulations that full details of all electrical equipment including that on the highway be recorded and made available to those operating and maintaining the equipment. The New Roads and Street Works Act further requires that all electrical equipment be geographically recorded and that information be made available to any statutory undertaker wishing to excavate the Highway or Footpath.
- Other Legal obligations include HASAWA.



## Reactive Maintenance

- The policy for reactive maintenance is to respond to all known defects at the required performance level. It is an essential element of the policy that responses made should wherever possible be permanent solutions to the problem identified. Where this is not possible then the fault is rendered safe and dealt with as circumstances permit.

## Cyclic Maintenance

- The Purpose: Cyclic maintenance is a means of ensuring that the footpath lighting asset operates at optimum performance. The cyclic maintenance programme helps to prevent the performance of the installation falling below the designed level; identifies any mechanical, structural, electrical or optical work necessary to maintain or increase the life of the installation; reduce the incidence of faults by preventive maintenance, and check that the installation is safe.
- Lamp and Luminaire: The design of the modern public lighting takes account of the depreciation in lumen output of the lamp and accumulation of dirt in the luminaire. To maintain the satisfactory operation of the luminaire as its designed output it is necessary to replace the lamp and clean the luminaire at regular intervals. A **maximum five years (20000 hour)** lamp replacement policy is in place taking into account, the hours of operation, type, wattage and cost of the lamp, cost of maintenance and failure rate of each lamp type. Lamp replacement policies have been developed from the Institution of Lighting Engineers Technical Report No 17. Titled A Study of Lamp Replacement for Discharge Sources.

## Planned Replacement & Renewal

- In Headcorn Parish the provision of new street lighting typically falls into three categories:
  1. New lighting - where non-currently exists e.g. new housing developments such as Grigg Lane.
  2. Replacement footpath lighting - where existing lighting equipment has reached the end of its operational life and can no longer be maintained in a safe condition. Where current standards do not require additional street lights existing service connections are utilised to minimise costs.
  3. General Improvement Schemes – where the existing footpath lighting levels are sub-standard but the equipment is structurally and electrically safe, it will be extended or used as a base for a new column and fitted with new lanterns and light sources. The policy of the service is to maximise the use of the existing equipment wherever possible to minimise costs.

## General Equipment Requirements and Standards

- All new systems of street and footpath lighting provided on adopted or potentially adopted highways and footpaths within the Parish Boundary shall be designed in accordance with the European Standard EN 13201:2003, Parts 1 to 4 as appropriate for the road classification to be lit. The actual level of lighting shall be determined by the methods shown in the standard.
- All Electrical works shall fully comply with BS7671 Requirements for Electrical Installations IEE Wiring Regulations that are in effect at the time of the design.
- All new lighting shall be designed to minimise the effects of obtrusive light at night and to reduce its visual impact during daylight.
- In general SON High Pressure Sodium lamps are the preferred light source. However, the development of full spectrum light sources such as PL Compact Fluorescent and CDM-T metal Halide are used to provide a cost effective white light source for areas of high amenity value.



- All luminaires shall incorporate an optical system to direct light onto the highway or footpath within the limits set by BS EN 60598-2-3:2003 Specification for luminaires for road and street lighting. **to ensure minimum environmental pollution of the “ night sky”** the upward light from the lantern shall be constrained within these limits.
- All lanterns shall be manufactured from vandal resistant recyclable material and have a minimum protection rating of IP66 to the lamp and optical compartment in accordance with BS EN 60529:1992 Specification for Degrees of Protection Provided by Enclosures (IP Code). Lanterns shall provide a minimum life of **twenty years**.
- All street lighting columns installed on the highway shall comply with BS 5649 and DOT Memo BD26/86. Our current requirement is for columns to be manufactured from steel, hot dipped galvanised and factory coated including finish paint coat.
- Decorative cast iron or cast aluminium are required to have the general characteristics of longevity and environmental protection of non-decorative lighting.
- Columns shall, wherever possible be positioned at the **rear of the footpath** or in an adjacent grass strip and should be a minimum of **1.5m** from the face of the kerb edge.
- In conservation areas or other areas subject to high levels of pedestrian movements, the use of wall type brackets shall be considered.
- All new and refurbished installations will be switched by electronic photocells set to switch at 35/70 Lux “ON/OFF”

## Inspections

### Fault Detection and Repair

- To detect lamps that are not operating correctly our contractor carries out night time inspections every 60 days. Reliance on members of the Parish to report faults does not provide sufficiently reliable method to meet our duty of care obligations and to ensure that all lamps are non-operational for the minimum time possible.
- Repairs to faulty highway electrical equipment are carried out within 5 working days following notification, subject to the availability of an electrical supply.

### Electrical Inspections

- The Electricity at Work Regulations require that danger from electrical installations be prevented so far as it is reasonably practicable to do so.
- To ensure that we comply with this criteria and demonstrate that our installations meet the necessary safety standards, we carry out electrical inspections and testing comparable to any other fixed electrical installation at regular intervals. This is in accordance with the requirements of BS7671: Requirements For Electrical Installations. These intervals are every **three years** for the inspections (10% of assets) and every **six years** for testing and are programmed to coincide with a lamp and luminaire cyclic maintenance visit.

### Structural Inspections and Risk Assessment

- In order to address the possibility of corrosion affecting the stability of our lighting assets we have introduced the following measures to monitor the condition of the asset and enable the Parish Council to respond before a structural failure occurs.
- We carry out regular visual inspections of the structural condition of the lighting equipment where practicable. These inspections are carried out at each lamp and luminaire cyclic maintenance visit and serve to highlight the condition of the equipment on three levels.  
Level 1 – Minor deterioration giving rise to possible remedial measures (e.g. painting)  
Level 2 – Random spalling of concrete becoming apparent, requiring possible removal of small areas of loose concrete. The stability of the column is not in question.  
Level 3 – Major local deterioration, extensive falling away of concrete exposing concrete reinforcing bars such as to question the stability of the column. Similarly, major corrosion and



thinning of the parental metal. Appearance of holes in the structure of the column. Presence of cracks in the metal probably caused by vehicle impact.

- Whilst these visual inspections provide a cost effective means of assessing the general condition of the asset, such inspections cannot guarantee to identify the extent of any internal corrosion or foundation weakness. However the information that is gained is used to help develop further inspection and testing programmes.
- Any units found to be in poor condition and showing Level 3 defects may, depending on the severity of the defects, be replaced or programmed to be replaced.
- By utilising data we use the following order of priority for testing of steel columns
  1. Locations where the poor conditions of the columns has been established as a result of routine visual inspections or other reports.
  2. Columns of similar age, design and location to those in1.
  3. Other steel columns on roads, including residential streets.

Please note this is a living document and can be updated and modified by the Parish Council at any time to reflect changes in policy and modernisation of the Parish lighting system.

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