

**MARKET DRAYTON TOWN COUNCIL**  
**SPECIFICATION**  
**STREET LIGHTING UPGRADE**

Market Drayton Town Council currently has a mixture of different street lights. We are upgrading all Town Council owned street lights to LED Lanterns

A copy of the Audit Inventory is attached (Schedule 2) clearly indicating the current lantern type, column type and location of the street lights.

**The objectives of the scheme are to:**

1. Improve lighting levels
2. Reduce Street Lighting Energy used
3. Reduce Street Lighting maintenance cost.

**Scope of the project**

- Remove and dispose of the 247 existing non LED lanterns
- Supply and installation of 247 new LED lanterns to meet out specification as set out below.

**LIGHTING SPECIFICATION**

Bidders are required to complete details of the Luminaire and Driver together with the model and reference number, circuit wattages, percentage of initial luminous flux at 100,000 hours,

Luminaires (including all components) shall be guaranteed for 14 years.

**LED Lantern Specification**

Overview

- Luminaire manufactures should have valid ISO 9001:2008 accreditation demonstrating systems for quality management, documentation to be supplied.
- Luminaire manufactures should have valid ISO 14001:2004 environmental management accreditation, documentation to be supplied.
- Luminaire manufactures should have valid BS OHSAS 18001:2007 demonstrating commitment to health and safety at work and provide assurance that legal compliance is effectively managed, documentation to be supplied.
- All parts of the luminaire shall be 'CE Product Marked' confirming conformity with relevant EU directives regarding health and safety or environmental protection.
- All luminaires should be ENEC certified.

- All equipment, including but not limited to, LED, Luminaires and Drivers shall be compatible with all common control systems.
- In order to maximise opportunities to benefit from advances in LED technology and product developments, the proposed equipment must be flexible and allow for easy installation of upgrades and replacements.
- Any costs and/or resources required to facilitate an upgrade to equipment must be favourable to the Authority and will be implemented at the Authority's discretion.
- If requested a working sample meeting the exact requirements of the specification must be made available for assessment.

#### Luminaire Housing and Finish

- The housing shall be in 2 parts, composed of corrosion free high-pressure die-cast aluminium.
- The complete luminaire shall be at least 98% recyclable at end of life
- For optimal heat dissipation and ensuring optimal performance and life time the driver and LED engine shall housed in separate compartments.
- Given the rural nature of some of the authority's asset locations the body shall be designed without ribs or air gaps to reduce dirt and debris accumulation.
- Luminaire shall be powder coated to RAL9006
- To ensure compliance with existing columns and bracketry the maximum weight of luminaires shall be:           Weight:                           Maximum 5Kg on P Class roads
- Luminaire shall be supplied with a 7 Pin NEMA type socket

#### Mounting of Luminaire

- The Luminaire shall be mounted via a die-cast aluminium spigot.
- Suitable for side-entry fitting 28mm-42mm outside diameter bracket arm
- Post-Top installation 60-76mm diameter column
- Spigot to be supplied fitted to body and allow tightened to column/bracket with 2 stainless steel screws.
- Luminaires shall be supplied pre-wired.
- To provide effective installation and minimise the time on site the luminaire must be capable of being converted from side entry to post top or vice versa without disconnecting the pre-wired flex.

#### Tightness of Luminaire

- Separate optical compartment tightness shall be IP 66 according to IEC-EN 60598
- Control gear compartment tightness shall IP 66 according to IEC-EN 60598
- LED should be covered by an optical lens made of PMMA
- The LEDs and lenses shall be enclosed in an aluminium frame, protected against the environment by a totally sealed to IP66, by a vandal resistant polycarbonate cover.

- Impact resistance of the optical compartment to be IK 10 according to IEC-EN 62262
- To ensure longevity of the units and allow for safe and quick on-site maintenance operations access to the gear compartment shall be completely tool free.

## **LED SPECIFICATION**

### LED Specification

- The lumen depreciation at 100,000 hours, shall be no more than 10% (L90, 100,000 hours) including allowance for LED mortality.
- The Colour Temperature tolerance shall be no less than 4-step ellipse in accordance with the MacAdam Ellipse
- The colour temperature (CCT) of the LEDs must be 4000K. Manufacturers must be able to provide the CCT for every individual luminaire supplied as proof of compliance to the specification.
- Manufacturer must be able to supply documentation to prove the applied SP ratio – where used on subsidiary roads LED's must provide a light output ratio in excess of 90%, with an upward light output ratio of no more than 0.5%.
- Elexon (UMSUG) codes for each luminaire must be available prior to the date of the installation.
- The LED and LED module shall be tested in accordance with NEN-EN-IEC62471 (2006-07) for Photo-biological Safety and shall comply with Group 1 or Group 0 classification.
- The LED shall be tested in accordance with the standards within LM-80 or equivalent.

### Driver

- All luminaires shall require a Dali driver with Near Field Communication to enable flexibility and future proofing.
 

Drivers shall comply with the following requirements: - EN61000-3-2:2000, EN61347-2-13:2006, EN61000-3-3:2001, BS EN 61347-1, BS EN 61347-2-1, BS EN 61347-2-8, BS EN 61347-2-9 and BS EN 60921 or BS EN 60923 or equivalent and as appropriate and be tap selected to the specified operating voltage of the network.
- All LED drivers and dimming modules shall be contained within the lanterns housing and shall have voltage range of 180 – 250 volts and conform to BS EN 61347-2-9:2001, BS EN 60921:2004 and BS EN 60923:1996 and subsequent amendments.
- The LED driver, operating at constant current, shall be housed in a separate gear compartment to LED modules. The driver shall have a minimum operating efficiency of 90%.

- Drivers shall be compatible with all other components including LED and PECU;
- All terminals which are shrouded and indelibly marked to indicate all wiring connections;
- Drivers must have surge protection of 10KV single strike, 8KV multi strike.

### **OVERVIEW**

- Upon award of contract the delivery of the work must be achieved within the tender timeframe.
- The tenderer be responsible for removal of all packaging

### **DISPOSAL OF NON LED LANTERNS**

- The tenderer should demonstrate their tender has taken into account the environmental context of disposing of the existing lighting stock.