Medworth Energy from Waste
Combined Heat and Power Facility

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Environmental Statement Chapter 3 Description of the Proposed Development Appendix 3B Outline Lighting Strategy

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Contents

1. External Lighting

1.1.1 The external lighting for the Proposed Development will be designed to ensure a safe working environment in all relevant areas of the EfW CHP Facility during night-time whilst avoiding unnecessary light pollution and minimising the visual impact on nearby and distant Receptors. The lighting shall be designed and controlled so that sky glow and light pollution are avoided. The design will follow the principles of the Bat Conservation Trust/Institute of Lighting Professionals Guidance Note 08/18[1]. Dark corridors will be identified in the detailed Lighting Strategy to avoid or minimise disturbance of sensitive ecological features.

1.1.2 There are two night-time scenarios that have to be considered for the design of the external lighting.

1.1.3 **Scenario 1** – Low light periods when the EfW CHP Facility is in normal operation receiving waste and other relevant deliveries together with removal of residues and full staff occupation. In this scenario, all external lights around the EfW CHP Facility need to be on to provide a safe lighting level for vehicle and personnel movements and other outdoor activities (e.g., regular maintenance).

1.1.4 This will occur in certain months during the normal operating hours of the EfW CHP Facility which are between the hours of 07:00 to 20:00.

1.1.5 Scenario 2 – Low light periods when the EfW CHP Facility is in normal operation but there are no waste deliveries or other operational traffic movements and the minimum staff occupation. In this scenario, the external lighting levels can be reduced to that necessary for only essential activities.

1.1.6 During this time, no traffic or pedestrian movements are expected. Escape routes are still sufficiently illuminated and the full lighting can be reinstated at any time from the control room if operationally necessary.

1.1.7 This will occur outside of the normal opening hours of the EfW CHP Facility.

1.1.8 All necessary external lighting will be provided by means of column and building mounted LED light units designed with appropriate deflectors and hoods and positioned to achieve the necessary illumination levels whilst minimising light spill and glare. The lighting levels and the type, quantity and arrangement of the external lights will be designed generally in accordance with HSG 38, BS EN 12464-2, and the Society of Light and Lighting (SLL) guidance. The Lighting would be shielded to avoid light spill on habitats within and surrounding the site (notably linear features such as scrub along the CHP corridor, water courses, tree lines etc.), which can be used by commuting animals at night and to decrease the potential displacement effects on light sensitive fauna such as bats.

1.1.9 The lighting will be controlled by photocells for automatic switching depending on ambient light levels with programmable time controls. In order to reduce light pollution at night-time, essential external lights which stay on all night will be arranged on a separate electrical circuit and the remaining non-essential external

[1] Bat Conservation Trust and Institute of Lighting Professionals (2018). Guidance Note 08/18: Bats and artificial lighting in the UK. ILP, Rugby.

lights will be on a circuit which is switched off automatically outside of normal operational opening hours.

1.1.10 The photocells will ensure that the lights only switch on when it is getting dark outside, the timer will ensure the switching of circuits for the required time periods. The photocell and time switches can be overridden from the control room so that all lights can be switched manually as required for operational purposes, e.g., any late deliveries when agreed with the Planning Authority in advance.

1.1.11 Minimum measured illuminance levels for external areas are given in **Table 3B.1 Minimum external measured illuminance levels.**

Table 3B.1 Minimum external measured illuminance levels

Area	Minimum measured illuminance (lux)
Exterior roads	20
Vehicle turning points and pedestrian crossings	50
Pedestrian walkways	5
Car parks	10
Weighbridges, and all reagent, chemical, fuel and FGT residue loading and unloading areas	100

2. Internal lighting

2.1.1 Suitable lighting levels are maintained at all times in internal process areas for operational and health and safety reasons to permit necessary inspection and maintenance activities. However, this lighting will not be visible externally in normal operation because these buildings will use solid cladding materials. In addition, external doors are kept closed in normal operation and provided with automatic closers so that there is no light spill from the process areas.

2.1.2 The visible internal lighting at the EfW CHP Facility will come from the administration building, weighbridge office and workshop and stores building. These areas are normally occupied only during the Scenario 1 period described above. The internal lighting is controlled by movement sensors so that outside of this period unoccupied areas will not be lit.

2.1.3 The central control room is lit 24-hours a day for operational reasons however, the extent of the window area is small and unobtrusive.

2.1.4 The design of the internal lighting will be generally in accordance with HSG38, BS EN 12464-1, and the Society of Light and Lighting (SLL) guidance.

2.1.5 Minimum measured illuminance levels for internal areas are given in **Table 3B.2 Minimum internal measured illuminance levels**.

Table 3B.2 Minimum internal measured illuminance levels

Area	Maintained measured illuminance (lux)
Administration building, central control room, workshop and stores office, weighbridge office.	500