

MSD - Schedule 17 Plans & Specifications queries

1 message

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To: Karl Dafe <kdafe@hillington.gov.uk>

9 September 2019 at 14:01

Good afternoon Karl,

When we last spoke you sought clarification on the extent of the fencing which was proposed via the Schedule 17 Plans & Specifications submission (ref. 72870/APP/2019/2597). I have annotated in yellow highlight the extent of proposed fencing on the attached plans (representing those already submitted for approval).

I am also pleased to provide further information on the proposed lighting ancillary to the new MSD access road which I hope will prove useful in the consideration of the Schedule 17 submission. This is summarised as follows.

General Lighting Approach and Selection of Lighting Class

For the lighting class, the harmonised British and European Standard (BS EN 12464-2:2014) provides guidance on the lighting of outdoor workplaces. This guidance points towards the applicability of an average lighting level of 10 lux and a 40% uniformity level (see table extract below).

5.4 Lighting requirements for areas, tasks and activities						
Table 5.1 — General requirements for areas and for cleaning at outdoor work places						
Ref. no.	Type of area, task or activity	$\bar{E}_m$ lx	U_0 —	R_{GL} —	R_0 —	Specific requirements
5.1.1	Walkways exclusively for pedestrians	5	0.25	50	20	
5.1.2	Traffic areas for slowly moving vehicles (max. 10 km/h), e.g. bicycles, trucks and excavators	10	0.40	50	20	
5.1.3	Regular vehicle traffic (max. 40 km/h)	20	0.40	45	20	At shipyards and in docks, R_{GL} may be 50
5.1.4	Pedestrian passages, vehicle turning, loading and unloading points	50	0.40	50	20	
5.1.5	Cleaning and servicing	50	0.25	50	20	All relevant surfaces

Table 5.1 Extracted from BS EN 12464-2:2014

Due to the narrow width of the proposed road and the potential for LGVs to pass one another, it was considered that no reduction in this lux level could be considered for safety reasons.

It has been determined that the proposed site is located within an E2 zone which is classed as a 'village or relatively dark outer suburban location' as described within the Institute of Lighting Professionals guidance (GN01 – Guidance Notes for the Reduction of Obtrusive Light). Whilst no luminous intensity rating is stipulated for an E2 zone, there are certain restrictions advised within the guidance note which limits light into nearby buildings.

Equipment Selection

Several luminaires were used to model the lighting including the DW Windsor Kirium, the Urbis Ampera and the Philips Luma. Due to the location of the proposed site (within a Green Belt) and the proximity of sensitive receptors,

a maximum mounting height of 6 metres for the column and a minimum of a G4 luminous rating for the luminaire are recommended. The Philips luminaire is the only luminaire capable of achieving G6 at a 5m mounting height which represents a very good solution from an environmental and ecological perspective whilst meeting the chosen lighting class.

For the access road lighting design, a Philips Mini-Luma 8.60klm luminaire has been selected at a 5m mounting height and a single-sided arrangement. The luminous intensity rating (glare rating) is G6 and the light source colour temperature is warm white having a colour rendering index of Ra>60. The selected luminaire carries an electrical circuit load of 64 watts and will be protected by a BS88 6amp fuse from within the column base compartment double pole fused isolator.

The Philips Luma technical specification is attached for your general perusal.

Maintenance Factor

Access Road – LED Luminaire Philips Luma 1 – 294mA
Column height: 5m
The maintenance factor for the luminaires has been derived as follows:
Cleaning frequency – 72 months Environmental Zone – E2 : 0.92
Percentage of initial light output (Lx) for 100.000 hours: 90.0%
LED rated life 100,000 hours (Fy): no catastrophic failures
Therefore, a maintenance factor of 0.83 is proposed.

Sensitive Receptors

It is observed that there are properties in the vicinity of the new access road. The G6 luminous intensity rating is the best rating achievable for low glare within the lighting standards and, combined with the low mounting height selected and the selection of a warm white colour temperature, will mitigate the impact on the surrounding area.

I hope the above is sufficient in providing you with further details in respect of fencing and lighting. If you have any further queries then please do not hesitate to get in touch.

(on behalf of CSjv)

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2 attachments



MSD Sch 17 extent of fencing.pdf
3431K



Philips Luma Specification.pdf
442K