KEY TO ISOLUX CONTOURS

- 0.1 lux
- 0.2 lux
- 0.5 lux
- 1.0 lux
- 5.0 lux
- 10 lux



HORIZONTAL ILLUMINANCE AT GROUND LEVEL

VERTICAL PLANE AT SITE BOUNDARY

VERTICAL PLANE 15m FROM THE SITE BOUNDARY

KEY TO LIGHTING SYMBOLS

5m adoptable street lighting column with Wiltshire standard LED luminaire B1.0-27K , mounted post top at 0° inclination.
Lantern has 1.0klm output, 2700K LEDs, type B optic . Columns sited at rear of footpath or 0.8m setback from kerb.

FL — 5m adoptable street lighting column with Wiltshire standard LED luminaire B1.0-27K FL, mounted post top at 0° inclination.
Lantern has 1.0klm output, 2700K LEDs, type B optic and is fitted with a front light shield. Columns sited at rear of footpath or 0.8m setback from kerb.

RS — 5m adoptable street lighting column with Wiltshire standard LED luminaire C2.0-27K RS, mounted post top at 0° inclination.
Lantern has 2.0klm output, 2700K LEDs and type C optic with Side Light shield fitted on right side. Columns sited at rear of footpath or 0.8m setback from kerb.

LS — 5m adoptable street lighting column with Wiltshire standard LED luminaire C2.0-27K LS, mounted post top at 0° inclination.
Lantern has 2.0klm output, 2700K LEDs and type C optic with Side Light shield fitted on left side. Columns sited at rear of footpath or 0.8m setback from kerb.

5m adoptable street lighting column with Wiltshire standard LED luminaire B2.0-27K , mounted post top at 0° inclination.
Lantern has 2.0klm output, 2700K LEDs, type B optic . Columns sited at rear of footpath or 0.8m setback from kerb.

RL — 5m adoptable street lighting column with Wiltshire standard LED luminaire B2.0-27K BL, mounted post top at 0° inclination.



ASD Half Lantern - used for porch lighting , fitted with a 4.5W LED lamp and wall mounted at 1.8m height at each property entrance



DW Windsor Kirium Wall bulkhead Lantern - used for rear gardenlighting , fitted with an 8 LED lamp and wall mounted at 2.5m height at each property rear access

Notes

1. This drawing shows calculated illuminance values with no maintenance factor applied and lanterns operated at full output. it is therefore represntative of the worst case for spill light.
2. Spill light from the roads and properties close to the ecologically sensitive boundaries is considered.
3. The street lighting layout shown is indicative of a scheme required to meet Wiltshire Council 's adoptable standards.
   i. Luminaires are from their standard range
   ii. Warm White LEDs with a CCT of 2700K are proposed. These have no UV content and very low levels of blue light in the emiited light
   iii. Columns are 5m height, this being the lowest Wiltshire will ordinarilly consider
   iv. All lanterns are installed at 0° inclination and have a ULR and ULOR of 0. (there is no direct upwards light)
   v. The lighting class proposed is BS5489-1:2020 / EN13201-2:2015 class P5. (Eav = 3 -4.5 lux with Emin = 0.6 lux) this is the lowest lighting class generally suggested in the standard.
   vi. Lanterns are fitted with back light shields to minimise unwanted light spill.
   v. Columns close to the site boundary are on the development side of the road, a) as if on the other sidedf they would b i in the 30m buffer zone, and b) light intrusion into the buffer zone is less in this arrangement than if the columns were on the boundary side, even allowing for backlight shields.
   v. The design proposed just achieves te minimum illuminance requirements for the lighting class, therefore avoiding over lighting.
   vii. All street lighting will be dimmed to Wiltshire Council's residential dimming profile
      dusk to 8:00pm - Lanterns operated at full output
      8:00pm to 11:00pm - Dimmed by 25% to 75% output
      11:00pm to 6:00am - Dimmed to 50% output
      6:00am to dawn - Lanterns operated at full output
4. Residential lighting - Front entrance porch lighting. Lighting is proposed at each properties front entrance, to allow residents to identify visitors etc. Therefore facial recognition is important and luminaires must produce vertical illuminace at head height to be effective. Calculations are based on a typical luminaire, the ASD half lantern used which has:
   i. Luminaires will be fitted with a 4.5W LED candle bulb (equivalent output of a 40W tungsten filament bulb), with a CCT of 2700K (very warm white) and 470lm output
   ii. Luminaires will be specified with integral Passive Infrared sensors, so should only be switched on when actually needed.
5. Residential lighting - Rear garden lighting. To discourage residents from installing their own lighting in this area, it is proposed that at each property, a well controlled, asymmetrical distribution, bulk head type luminaire is installed near the patio entrance. e Calculations are based on the Ansell Lighting Wolf Mini. This has:
   i. 4W LED light engine with a CCT of 3000K (warm white) and an output 500lm
   ii. Dark skies compliant distribution with a ULOR of 0.
   iii. Luminaires will be specified with integral Microwave sensors, so should only be switched on when actually needed.

Important note: The calculated illuminance levels shown on this drawing are with all luminaires at full power and the calculation does not model blocking effects of buildings, fences etc. It is highly unlikely that all porch lights and rear garden lights would be on at the same time, so the values shown can be considered an extreme worst case amd the actual light intrusion to the dark corridors will be significantly lower.

Rev	DESCRIPTION	DRWN	CHK	DATE
P02	Revised site layout	DPL	SDL	15-8-24

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PROJECT: MAXCROFT FARM HILPERTON

TITLE: EXTERIOR LIGHTING AT SITE BOUNDARIES

DRAWN	SCALE	DATE
DPL	1:500 @ A0	1-8-2023

DRAWING NUMBER: P23685-PL-01 | ISSUE: P02

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