

Our Ref: EVO20010723-SL-101-D

Your Ref: 5015560

Peter Drury
Horton Heath
Technical Manager
Strategy One Horton Heath
Eastleigh Borough Council
Eastleigh House
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13/06/2024

Dear Peter Drury,

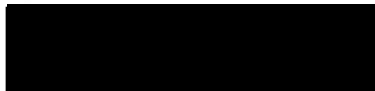
Lower Acre – Parcel 1.1 (Private Roads) – One Horton Heath

Thank you for your scheme enquiry for the Lower Acre, Parcel 1.1 private roads at One Horton Heath.

We have undertaken a lighting design for the area using Urbis Axia 3.1 lanterns on 6 metre post top columns. Lighting has been designed in accordance with BS5489-01:2020, and a lighting class of P4 applied.

Following the completed design work if there are changes to the road layouts which require design revisions these may incur further charges.

Yours sincerely,



James Duffin BA (Hons) IEng MILP
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Enerveo

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Design Commentary

Lower Acre – Parcel 1.1 (Private Roads) – One Horton Heath

1. Introduction

- 1.1. Enerveo has been commissioned by Eastleigh Borough Council to develop a detailed lighting design for the private roads as part of Lower Acre Parcel 1.1, at One Horton Heath.
- 1.2. The purpose of this document is to provide commentary on the lighting design methodology adopted for the proposed works including decisions for design constraints and deviations from design standards.

2. Drawings

- 2.1. Drawing at 1:500 scale.

3. Standards

- 3.1. The proposed lighting design has been carried out using the following non-exhaustive list of standards and documents:
 - BS 5489-1:2020, *Code of practice for the design of road lighting - Part 1: Lighting of roads and public amenity areas*.
 - BS EN 13201-2:2015, *Road lighting — Part 2: Performance requirements*
 - ILP Professional Lighting Guide 02, PLG02, *The Application of Conflict Areas on the Highway*.
 - ILP Guidance Note, GN01:2021, *Guidance Notes for the Reduction of Obtrusive Light*.

4. General Layout

- 4.1. The location of the proposed works is Horton Heath northwest of Burnetts Lane.
- 4.2. The works consist of private non-adoptable residential roads accessed via adoptable roads, that have been designed separately.

5. Street Lighting Class

- 5.1. The lighting design has been carried out in accordance with the requirements of BS5489-01:2020, Table A.5.

All Private Road	
Reference Table	A.5
Environmental Zone	E3, moderate ambient brightness
Traffic flow	Normal
Traffic composition	Mixed
Road Speed	30 mph
Other Considerations	Unrestricted parking road geometry dictates slow speeds
Lighting Class	P4

Lighting Class	Average Illuminance, Eave (Lux)	Average Illuminance Maximum, Eave (Lux)	Minimum Illuminance, Eave (Lux)
P4	5.00	7.50	1.00

6. Lighting Design Notes

- 6.1. Lighting equipment has been designed with same specification lanterns and columns as adoptable areas; however, they are to be finished in black to look visually different from the green colour of adoptable columns.
- 6.2. All private columns are to be fitted with identification numbers prefixed with "P" to make them different from adoptable columns.
- 6.3. Most columns within private areas are proposed to be installed with 1 metre setback, however, most of these locations are not in line with HCC adoptable standards set out in TG13.
- 6.4. Light intrusion has been kept below HCCs desired level of 2 lux for most plots. This has been achieved using rear louvres on most columns and careful positioning of columns. Whilst the lighting is not adoptable HCCs more stringent light intrusion limit was targeted to minimise the risk of residents' complaints.
- 6.5. All light intrusion levels are below the maximum 10 lux (pre-curfew) level for an E3 zone set out in TG13. Post curfew levels were not deemed appropriate as the private lighting is to have conventional photocells with no dimming or part night operation.
- 6.6. Plots 24 (grid 19), 43 (grid17), 61 (grid 61), 85 (grid 14), 186 Grid10, exceed 2 lux, but remain below 10 lux.

7. Environmental

- 7.1. The designer has been notified by the client about site-specific Environmental Impact Assessments.
- 7.2. Bats are present on the site, therefore 3000K Warm White LEDs have been used in line with HCC TG13 v3.0 3.29.1, and all the adoptable lighting proposed as part of this site.

8. Maintenance factor

- 8.1. Environmental maintenance factor assuming a 48-month clean is 0.94.
- 8.2. Luminaire maintenance is 0.9 (this considers lumen depreciation and LED failures, L90B10).
- 8.3. Giving overall maintenance factors of 0.85 (as per HCC TG13).

9. Column Locations

- 9.1. Columns are to be installed either rear of footway or with 1 metre setback from kerb edge.
- 9.2. Any deviations are noted on the lighting layout drawing.

10. Column Type

- 10.1. Columns to be 6 metre galvanized tubular steel straight shaft (no outreach bracket), painted (factory finished), colour 00E53 black.
- 10.2. Raise and lower columns are to be installed on footpaths and are to be of the mid hinge type.

11. Lantern Type

- 11.1. Urbis Axia 3 with DALI dimming ballast fitted with Mayflower six pin NEMA socket, post-top mounted, tilt 0 degree.
- 11.2. Lanterns to be finished in 00E53 black.
- 11.3. Lanterns to be fitted with Zodion SS6 20:20 lux photocells.



12. Rev B Changes

- 12.1. Revised following comments from Axis Mason.
- 12.2. Road 1 P7 and Road 4 P4 relocated.

13. Rev C Changes

- 13.1. Revised following layout update.
- 13.2. Road 9 P1 and Road 4 P3 relocated.

14. Rev D Changes

- 14.1. Isolux contours shown on layout drawing in line with GN08/23.
- 14.2. Column positions from separate designs for Lower Acre shown for information only.