MEC
Development Technical Consultants

LIGHTING



Land west of Loose Lane, Sompting Phase 1
Bat Sensitive Lighting Strategy
May 2022

Report Ref: 27141-LIGH-0401

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Bat Sensitive Lighting Strategy
May 2022

REPORT REF: 27141-LIGH-0401

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REGISTRATION OF AMENDMENTS

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A. PROPOSED LIGHTING LAYOUT

B. SITE LAYOUT PLAN

1.0 INTRODUCTION

General

1.1 Mewies Engineering Consultants Ltd (M-EC) has been commissioned by Persimmon Homes to undertake a Bat Sensitive Lighting Strategy in order to support the discharge condition 15 for phase 1 residential development area relating to planning application AWDM/0323/19 at Land West of Loose Lane, Sompting. A site location plan is provided in Figure 2.1.

1.2 Condition15 states:

"Prior to development or any preparatory works, a bat sensitive lighting strategy shall be produced and assessed by a suitably qualified ecological consultant and the details submitted to the LPA for approval; all approved details shall then be implemented in full. All relevant future Reserved Matter applications will be supported by a bat sensitive lighting scheme."

1.3 This lighting strategy includes information on the surrounding sensitive receptors and mitigation measures considered within the design to comply with West Sussex County Council (WSCC) street lighting guidance, to reduce potential light spill into ecologically sensitive areas, to reduce upward light and fit in with the landscape proposals of the development. Illuminance calculations for exterior areas of the proposed development are included as an appendix.

1.4 M-EC accepts no responsibility or liability for:

- The consequence of this documentation being used for any purpose or project other than that for which it was commissioned;
- The issue of this document to any third party with whom approval for use has not been agreed.

2.0 SITE DESCRIPTION

Existing Site

2.1 The proposed site currently comprises of arable land. The site is bound by:

- West Street to the north, with the main sources of light from street lighting,
- Residential properties to the east, with the main sources of light from street lighting ….
- Arable land to the south and west with no main source of light.

2.2 A site layout is provided in Figure 2.1 below,

Figure 2.1: Site Layout Plan



3.0 POLICY AND GUIDANCE

Environmental Protection Act 1990 / Clean Neighbourhoods and Environment Act 2005

3.1 Light pollution was introduced within the Clean Neighbourhoods and Environment Act (2005) as a form of statutory nuisance under the Environmental Protection Act (the 'EPA', 1990), which states: "artificial light emitted from premises so as to be prejudicial to health or nuisance."

National Planning Policy Framework

3.2 The National Planning Policy Framework (NPPF), published in July 2021, sets out the governments planning policies for England and how they are expected to be applied and provides a framework for local plans. With regards to lighting, the following is stated;

185 Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

C) Limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

National Planning Practice Guidance November 2019 Lighting

3.3 This report also has taken into account the relevant questions the PPG advises on how to consider light within the planning system detailed below;

- What light pollution considerations does planning need to address?
- What factors can be considered when assessing whether a development proposal might have implications for light pollution?
- What factors are relevant when considering where light shines?
- What factors are relevant when considering when light shines?
- What factors are relevant when considering how much the light shines?
- What are relevant when considering possible ecological impacts of lighting?
- What other information is available that could inform approaches to lighting and help reduce light pollution?

Relevant British Standards and Design Mitigation

3.4 The most applicable British Standards for lighting that relates to the proposed development are:

- BS EN 12464-2 Lighting of Work Places – Outdoor Work Places, 2014
- BS 5489-1:2020 Code of practice for the design of road lighting Part 1: Lighting of roads and public amenity areas

Institute of Lighting Professional Documents

3.5 The following Institute of Lighting Professional (ILP) guidance documents have been consulted with regard to lighting from the proposed development;

- PLG 04- Guidance on Undertaking Environmental Lighting Impact Assessments, ILP, 2013;
- Guidance Note 08/18 Bats and artificial lighting in the UK ILP, 2018
- Guidance Notes for the Reduction of Obtrusive Light, ILP, 2020;

4.0 LIGHTING STRATEGY

4.1 This Lighting Strategy for the phase 1 development area considers the following elements within the design. These principles will also be implemented throughout the following phases of the proposed development;

- Lighting Classes and Design Standards,
- Trees and Landscape
- Ecology
- Mitigation included within Designs.

Lighting Classes and Design Standards

4.2 The most applicable British Standards for lighting that relates to the proposed development are:

- BS EN 12464-2 Lighting of Work Places – Outdoor Work Places, 2014
- BS 5489-1:2020 Code of practice for the design of road lighting Part 1: Lighting of roads and public amenity areas

4.3 The most relevant local policies that apply to the lighting of the proposed development are,

- Lighting of Developer Promoted Highway Schemes in West Sussex - Lighting Specification 2019

4.4 Lighting shall be designed in accordance with the guidance above and designed to ensure that external lighting is concentrated in the appropriate areas and that upward light is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties. Selected luminaires are to have a minimal upward light spill and a colour rendering index (Ra) greater than or equal to 60Ra. The colour rendering index relates to the accuracy of colours perceived, relative to daylight.

4.5 The proposed lighting levels for the new development (excluding the proposed MUGA) would be a residential “P class” in accordance with BS5489-1:2020 and Table 4,12 Environmental Zone & Table 4.13 ILP ‘Guidance Notes for the Reduction of Obtrusive Light’ GN01.

4.6 For the main link road, the initial lighting-class would be P4 (Eav 5.00lux to 7.50lux Emin 1.00lux) with smaller residential road and adoptable cul-de-sacs lit to P5 (Eav 3.00lux to 4.50lux Emin 0.60lux). Figure 4.1 indicatively shows the locations of these areas within the Phase 1 residential area.

Figure 4.1: Proposed Lighting Classification



Lighting for P4

4.7 For the main link/spine road, a luminaire with a colour temperature of 3000-kelvin neutral white LED post top mounted on 6m columns. In accordance with the WSCC lighting specifications, the columns should be hot-dipped galvanised tubular steel in construction with glass flake root protection and the lanterns should be Signify 'Micro Luma' Lanterns.

Lighting for P5

4.8 For the secondary roads and Cul-de-sacs, a luminaire with a colour temperature of 3000-kelvin neutral white LED post top mounted on 6m columns. In accordance with the WSCC lighting specifications, the columns should be hot-dipped galvanised tubular steel in construction with glass flake root protection and the lanterns should be Signify 'Micro Luma' Lanterns.

Trees and Landscaping

4.9 The relationship between the lighting design and hard and soft landscaping has been carefully considered having regard to national policy and guidance, and also the local requirements of the Highway Authority.

4.10 There should be a 5m clearance for lighting columns so any foliage from the trees does not interact and adversely shade the roadway from the light from the lantern.

4.11 The lighting should be designed with the above in mind, therefore, the locations of on-site lighting columns should be coordinated with the Landscape Designer to ensure that the appropriate clearance from proposed plantings is achieved whilst still providing space to ensure the objectives of the landscape strategy, including the creation of tree lined streets, are achieved.

Ecology and surrounding properties

4.12 As the site contains a large amount of green space and the boundaries of the site are currently relatively dark, all lighting columns have been located in a way as not to adversely impact surrounding dark spaces by keeping lighting levels, where possible to below 1 lux.

4.13 All lighting columns along the boundary of the site, where possible, have been orientated inwards towards the centre of the site, if this is not possible then they should be directed downwards with a minimal light spill from the road.

4.14 As some of the Cul-de-sacs will be located within the most sensitive ecology areas, due to a higher level of foliage and presence of commuting and foraging bats these columns will be no higher than 6m and not have a lighting colour of more than 3,000k warm white. This colour reduces the impact lighting can have on light-sensitive species such as bats.

4.15 Lighting adjacent to existing and proposed residential properties should achieve the criteria set out in table 2 of this report in order to not cause an adverse impact on existing and future residents. An assessment of this is shown in Section 7 of the report.

4.16 Lighting columns adjacent to ecological areas will be fitted with manufactures external back shields in order to reduce light spill further.

4.17 For the Phase 1 residential area the contours shown in drawings 27141_04_100_01 in Appendix A indicate that with the proposed development in place lighting from the site will not exceed the recommended ILP pre- and post-curfew criteria.

Mitigation

4.18 Along with complying with the guidance outlined above, any potential lighting design will include the following mitigation:

- Lighting solutions will be selected to reduce light pollution. Specifically, designed luminaires will be selected to minimise the upward spread of light. The optics in the lanterns will control the distribution of light to avoid overspill, sky glow and glare.
- Glare will be kept to a minimum by ensuring the main beam angle of all lights directed towards any potential observer is not more than 85°. Higher mounting heights allow lower main beam angles, which can assist in reducing glare.
- Lighting will be restricted to the task area using horizontal cut-off optics and zero tilts.
- A curfew will be operated and the duration of any lighting will be minimized.

5.0 ASSESSMENT METHODOLOGY

5.1 Guidance notes produced by the Institution of Lighting Professionals are among the most commonly referenced guidance notes for good practice within the lighting design industry.

5.2 The methodology of this report is as follows:

- Identify the environmental zone of the site and surrounding sensitive receptors in accordance with ILP N01/20 and PLG 04;
- Produce a detailed 3D model using industry-standard light modelling software and quantitatively assess the following parameters; light intrusion, source intensity and upward light spill/sky glow; and
- If required, consider possible mitigation measures to reduce potential light intrusion into neighbouring properties and ecological receptors, upward light (which can create sky glow) and visual source intensity (glare).

5.3 In accordance with Guidance Notes for the Reduction of Obtrusive Light, the following definitions are used to describe lighting effects in this assessment:

- Light intrusion – light intrusion into windows (the spilling of light beyond the boundary of a property which may cause a nuisance to others).

5.4 The ILP Guidance Notes for the Reduction of Obtrusive Light: GN01/20 define environmental zones appropriate to the location of the proposed development shown in Table 5.1:

Table 5.1: Environmental Zones

Zone	Surrounding	Lighting Environment	Examples
E0	Protected	Dark (SQM 20.5+)	Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places
E1	Natural	Dark (SQM 20 to 20.5)	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc.
E2	Rural	Low district brightness (SQM ~15 to 20)	Sparsely inhabited rural areas, villages or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well inhabited rural and urban settlements, small-town centres of suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night-time activity

5.5 The environmental zone appropriate for the proposed development is considered to be zone E2 as it is a relatively dark out suburban location.

5.6 Skyglow is the brightening of the night sky caused by artificial lighting resulting from the reflection of radiation (visible and non-visible); ULR (Upward Light Ratio) is the maximum permitted percentage of luminaire flux that goes directly into the sky. The ILP limits for UPR are shown in Table 5.2 below.

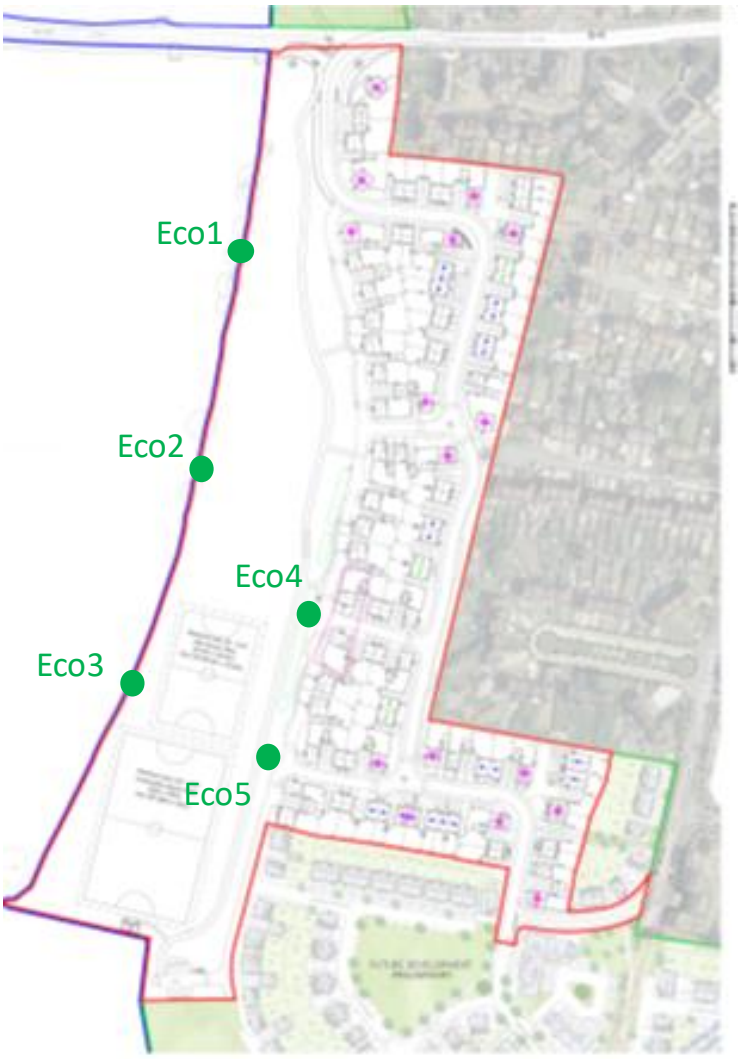
Table 5.2: Maximum values of upward light ratio (ULR) of luminaries

Application conditions	Environmental Zone				
	E0	E1	E2	E3	E4
Upward Light ratio (ULR)/%	0	0	2.5	5	15

6.0 RECEPTORS

6.1 During the site visit and following a desktop survey of the site and liaising with the project team the following light-sensitive receptors were been identified these have been illustrated in Figure 6.1 below.

Figure 6.1: Ecological Receptor Locations



Ecological receptors

6.2 The ILP Guidance Note 08/18 specifies that when a planning application includes additional artificial lighting, developers should ensure that a lighting assessment is completed alongside an ecological assessment. Lighting can impact light-sensitive species such as bats by impacting roosting, commuting and foraging behaviour.

6.3 Following consultation with project ecologists, there is potential that a number of bat species are anticipated to use the treeline along the existing boundary line to the west of the site and the existing hedgerows in the centre of the site. Therefore, ecology receptors have been located along the woodland at a height of 3m. The locations of these receptors are visually presented in Figure 6.1, as well as in Table 6.2 below.

Table 6.1: Ecological Receptor Locations

Receptor	Location Description	Height (m)
Eco1	Woodland to the west of the site	3.0
Eco2	Woodland to the west of the site	3.0
Eco3	Woodland to the west of the site	3.0
Eco4	Hedgerow in the centre of the site	3.0
Eco5	Hedgerow in the centre of the site	3.0

7.0 LIGHTING ASSESSMENT

7.1 A site plan was provided by the project architect for this development and the lighting criteria were discussed with the project team. A 3D model was produced using a range of industry-standard light modelling software including Lighting Reality and Dialux, the model only considers the effect of solid structures so natural structures such as trees will be assessed qualitatively outside the model calculations.

Ecology Receptors

7.2 The ILP Guidance Note 08/18 specifies that acceptable lux limits should be used to assess the impact of lighting upon ecological species including bats. Therefore, following consultation with project ecologists and the LPA, impacts will be considered significant were predicted vertical illuminance levels exceed 1 lux. The results of this assessment can be found in Table 7.2 below.

Table 7.1: Ecology Receptor Results

Receptor	Predicted model vertical illuminance
Eco1	0.00
Eco2	0.00
Eco3	0.00
Eco4	0.63
Eco5	0.49

7.3 The results show that lux levels along the woodland to the north of the development will be below 1 lux therefore lighting is not anticipated to have a significant impact on any light-sensitive species using this space.

SkyGlow

7.4 The model has been used to calculate the predicted Upward Lighting Ratio (ULR) of the proposed external lighting scheme. Model outputs predict a sky glow figure (ULR) of 0.0%. As illustrated in Table 5.2, the ILP sky glow limitation for an area classified as Environmental Zone E2 is 2.5% ULR. As such the indicative lighting scheme meets the ILP sky glow limitations and is therefore not considered to result in detrimental impacts on the dark sky landscape.

8.0 CONCLUSIONS

8.1 Mewies Engineering Consultants Ltd (M-EC) has been commissioned by Persimmon Homes to undertake a Bat Sensitive Lighting Strategy in order to support the discharge condition 15 for phase 1 residential development area relating to planning application AWDM/0323/19 at Land West of Loose Lane, Sompting.

8.2 This lighting strategy includes information on the surrounding sensitive receptors and mitigation measures considered within the design to comply with West Sussex County Council (WSCC) street lighting guidance, to reduce potential light spill into ecologically sensitive areas, to reduce upward light and fit in with the landscape proposals of the development.

8.3 The information and principles detailed within this strategy have been followed for the Phase 1 layout. Appendix A shows an indicative lighting proposal for phase 1 based on this strategy.

8.4 The proposed lighting scheme for Phase 1 will comply with all relevant British Standards and the Institution of Lighting Professionals lighting guidelines and will serve to ensure safety and security of all areas of the development can be effectively maintained.

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APPENDICES



APPENDIX A

ROAD LIGHTING SETTING OUT SCHEDULE

COLUMN REF:	X	Y	SETBACK	CONNECTION
LP01	516380.85	105135.24	2m	NEW DNO CONNECTION
LP02	516372.19	105105.16	2m	NEW DNO CONNECTION
LP03	516395.62	105089.57	2m	NEW DNO CONNECTION
LP04	516421.00	105078.01	2m	NEW DNO CONNECTION
LP05	516452.04	105076.47	2m	NEW DNO CONNECTION
LP06	516444.05	105056.10	2m	NEW DNO CONNECTION
LP07	516439.40	105036.59	2m	NEW DNO CONNECTION
LP08	516434.83	105019.13	2m	NEW DNO CONNECTION
LP09	516428.21	104998.07	2m	NEW DNO CONNECTION
LP10	516443.92	104979.32	2m	NEW DNO CONNECTION
LP11	516415.38	104983.58	1m	NEW DNO CONNECTION
LP12	516389.56	104979.91	1m	NEW DNO CONNECTION
LP13	516449.03	104957.13	2m	NEW DNO CONNECTION
LP14	516441.23	104933.70	2m	NEW DNO CONNECTION
LP15	516438.69	104911.36	2m	NEW DNO CONNECTION
LP16	516432.83	104889.10	2m	NEW DNO CONNECTION
LP17	516404.14	104886.30	1m	NEW DNO CONNECTION
LP18	516371.95	104890.88	1m	NEW DNO CONNECTION
LP19	516427.22	104869.61	2m	NEW DNO CONNECTION
LP20	516422.75	104850.08	2m	NEW DNO CONNECTION
LP21	516411.09	104831.33	2m	NEW DNO CONNECTION
LP22	516405.96	104814.69	2m	NEW DNO CONNECTION
LP23	516376.10	104810.27	1m	NEW DNO CONNECTION
LP24	516352.64	104820.59	1m	NEW DNO CONNECTION
LP25	516431.29	104812.82	2m	NEW DNO CONNECTION
LP26	516457.62	104810.03	2m	NEW DNO CONNECTION
LP27	516474.48	104794.46	2m	NEW DNO CONNECTION
LP28	516462.29	104768.83	2m	NEW DNO CONNECTION
LP29	516457.64	104744.00	2m	NEW DNO CONNECTION
LP30	516485.70	104748.72	2m	NEW DNO CONNECTION
LP31	516509.13	104751.14	2m	NEW DNO CONNECTION

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNTIL FULL TECHNICAL APPROVAL OF THE STREET LIGHTING HAS BEEN GRANTED BY THE ADOPTING AUTHORITY. IF CONSTRUCTION BEGINS BEFORE TECHNICAL APPROVAL THEN NO RESPONSIBILITY IS ACCEPTED FOR ANY ABORTIVE WORKS.

STREET LIGHTING SPECIFICATION

1. STREET LIGHTING TO BS 5489-1:2020 & BS EN 13201-2:2015 P4 (EAV 5.00 TO 7.50 LUX, EMIN 1.0) FOR MAIN ROAD & P5 (EAV 3.00 TO 4.50 LUX, EMIN 0.60) FOR SUBSIDIARY ROADS. ENVIRONMENTAL ZONE E2 AND NORMAL/QUIET TRAFFIC FLOW WITH SPEED LIMITS <30MPH EXACT POSITIONS ARE TO BE AGREED ON SITE BY THE ENGINEER BEFORE ERECTION WORK COMMENCES. COLUMNS AND EQUIPMENT ARE ONLY TO BE INSTALLED ON LAND ADOPTED OR TO BE ADOPTED BY THE LOCAL AUTHORITY.
2. AFTER ERECTION COLUMNS SHALL BE NUMBERED CLEARLY IN ACCORDANCE WITH WEST SUSSEX COUNTY COUNCIL (WSCC) REQUIREMENTS.
3. SUPPLIES TO NEW LIGHTING COLUMNS SHALL BE TAKEN DIRECTLY FROM THE REGIONAL ELECTRICITY COMPANY UNDERGROUND SERVICE FOR THE NEW DEVELOPMENT. AN APPLICATION FOR SUPPLY FORM MUST BE COMPLETED AND ISSUED TO ENSURE A SUPPLY IS MADE TO EACH COLUMN.
4. ONLY RECOGNISED LIGHTING CONTRACTORS SHALL BE USED FOR STREET LIGHTING AND ILLUMINATED SIGN AND BOLLARDS INSTALLATION WORKS. THEY SHALL BE APPROVED BY THE OVERSEEING ORGANISATION. THEY MUST ALSO BE MEMBERS OF THE ASLEC AND HERS. CURRENT MEMBERSHIP NUMBERS FOR THESE BODIES MUST BE PROVIDED TO THE SUPERVISING AUTHORITY PRIOR TO APPROVAL OF THE PROPOSED LIGHTING CONTRACTOR. THE APPROVED LIGHTING CONTRACTOR SHALL NOT SUB-CONTRACT ANY PART OF THE WORKS.
5. ALL MATERIALS SHALL BE TO THE RELEVANT BRITISH STANDARD. SITE WORKS SHALL COMPLY IN GENERAL WITH DEPARTMENT OF TRANSPORT SPECIFICATION FOR HIGHWAY WORKS, AND SHALL ALSO CONFORM TO:
   - THE ELECTRICITY AT WORK REGULATIONS (1989)
   - THE HEALTH AND SAFETY AT WORK ACT
   - CHAPTER 8 OF THE TRAFFIC SIGNS MANUAL
   - THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 2002
   - THE CONSTRUCTION (DESIGN MANAGEMENT) (CDM) REGULATIONS 2015
6. ERECTION AND INSTALLATION WORKS SHALL COMPLY WITH THE CURRENT ISSUE AND AMENDMENTS OF BS7671: 18TH EDITION IET WIRING REGULATIONS 2008 REQUIREMENTS FOR ELECTRICAL INSTALLATIONS, THE CURRENT EDITION OF THE ILP CODE OF PRACTICE FOR ELECTRICAL SAFETY IN PUBLIC LIGHTING OPERATION AND THE CODE OF PRACTICE FOR THE ERECTION OF STREET LIGHTING PUBLISHED BY THE ASSOCIATION OF STREET LIGHTING ELECTRICAL CONTRACTORS.
7. ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH WSCC LIGHTING OF DEVELOPER-PROMOTED HIGHWAY SCHEMES IN WEST SUSSEX GUIDANCE NOTE VERSION A SEP 2019.
8. COLUMNS TO BE INSTALLED AT THE REAR OF THE FOOTWAY, WHERE WITHIN VERGES TO BE SET BACK TO A MINIMUM OF 0.8m FROM KERBLINE.
9. COLUMNS 6m TUBULAR STEEL GALVANISED COATING AMERCOAT 71P/PSX 700 POLYSILOXANE AND AMERCOAT 4560 GF EPOXY GLASS FLAKE ROOT PROTECTION. ALL COLUMNS TO HAVE SHERWOOD GREEN FINISH BS12C39
10. LANTERN PHILIPS LUMA MICRO DW10 3000k WARM WHITE WITH INTEGRAL 0 DEGREE TILIT 2.4KLM AND LUMA MICRO DM50 3000k WARM WHITE WITH INTEGRAL 0 DEGREE TILIT 1.8KLM.
11. CONTROL CSM MAYFLOWER COMPLETE LIGHTING CONTROL DALI NODE TO PLUG INTO SIX-PIN NEMA SOCKET.
12. PART NIGHT LIT - COLUMNS TO BE LIT FROM DUSK TO 24:00 - 05:30 TO DAWN (GMT) & DUSK TO 01:00 - 06:30 TO DAWN (BST)
13. (PROJECT MAINTENANCE FACTOR 0.83).

NOTES.

1. DO NOT SCALE THIS DRAWING.
2. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNTIL FULL TECHNICAL APPROVAL OF THE STREET LIGHTING HAS BEEN GRANTED BY THE ADOPTING AUTHORITY. IF CONSTRUCTION BEGINS BEFORE TECHNICAL APPROVAL THEN NO RESPONSIBILITY IS ACCEPTED FOR ANY ABORTIVE WORKS.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS, ARCHITECTS AND SPECIALIST DESIGN DRAWINGS AND DETAILS.
4. ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY SERVICE APPARATUS IN THE VICINITY OF THE WORKS. THE CLIENT WILL ACCEPT NO CLAIMS WHATSOEVER IN RESPECT OF ANY LOSSES OR DAMAGE CAUSED IN RESPECT OF SUCH APPARATUS, HOWEVER CAUSED.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXECUTE THE WORKS AT ALL TIMES IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE HEALTH AND SAFETY AT WORK ACT 1974, AND THE C.D.M. REGULATIONS 2015. THE CONTRACTOR WILL BE DEEMED TO HAVE ALLOWED FOR FULL COMPLIANCE, WITHIN THEIR RATES.
7. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORKS ARE TO THE SATISFACTION OF THE ENGINEER, AND SHALL BE DEEMED TO HAVE INCLUDED WITHIN THEIR RATES FOR ANY NECESSARY TESTING.
8. MOST RECENT UTILITY DRAWINGS MUST BE VIEWED BEFORE WORKS COMMENCE.
9. DRAWING TO BE PRINTED IN COLOUR.

STREET LIGHTING KEY

LP** — PROPOSED STREET LIGHTING COLUMN
COLUMN HEIGHT: 6m
PROJECTION: 0.3M POST TOP
LANTERN MANUFACTURER: PHILLIPS
QUANTITY 25 — LANTERN NAME: LUMA GEN2 MICRO
INCLINATION: 0°
LAMP TYPE: 10LED 3000K WARM WHITE
OPTIC: BGP702 DW10 2.4KLM

LP** — PROPOSED STREET LIGHTING COLUMN
COLUMN HEIGHT: 6m
PROJECTION: 0.3M POST TOP
LANTERN MANUFACTURER: PHILLIPS
QUANTITY 6 — LANTERN NAME: LUMA GEN2 MICRO
INCLINATION: 0°
LAMP TYPE: 10LED 3000K WARM WHITE
OPTIC: BGP702 DM50 1.8KLM

7.5 LUX ISO CONTOUR
5.0 LUX ISO CONTOUR
1.0 LUX ISO CONTOUR
SITE BOUNDARY

PHOTOMETRIC AND MANUFACTURERS BACKSHIELDS TO BE INSTALLED TO MINIMISE LIGHT SPILL.

Maximum size U9 - U10 Mini Soccer Pitch (54.9m x 36.6m) Run Off (60.9m x 42.6m)

Maximum size U13 - U14 Community Soccer Pitch (82m x 50m) Run Off (88m x 56m)

FUTURE DEVELOPMENT
-PRELIMINARY-

REV:	AMENDMENTS:	DRN:	CHK:	APP:	DATE:
-	FIRST ISSUE	NA	DMH	EM	23.05.22

PROJECT: LAND SOUTH OF WEST STREET & WEST OF LOOSE LANE, SOMPTING PHASE 1

DRAWING TITLE: S38 LIGHTING LAYOUT PHASE 1

CLIENT: PERSIMMION HOMES LTD

DRAWING NUMBER: 601_27141_02_100_01

REVISION:	SHEET SIZE:	SCALE:
-	A0	1:500

STATUS: FOR INFORMATION / APPROVAL

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