

Land West of Gatesmead, Haywards Heath

Baseline Lighting Survey
For Planning

14th May 2026

LAND WEST OF GATESMEAD, HAYWARDS HEATH - BASELINE LIGHTING SURVEY

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2. INTRODUCTION

Ridge and Partners LLP have been appointed to assess the baseline condition of the development area with respect to light pollution suitable for the planning application for the development.

Sections 3.0 to 5.0 of this report present the background information relative to the project such as national planning policies, local planning policies, standards, guidelines and site survey weather data.

Sections 6.0 and 7.0 of this report presents the baseline lighting survey information collected during the afternoon, evening and night of the 20th January 2026. The survey information includes:

- Photographs of the existing external light fittings.
- Photographs of the sky glow on and around the site.
- Horizontal lux measurements at 13 locations around the site.
- Vertical lux measurements at 13 locations around the site.
- Explanation on where the light spill is emanating from or where light spill is being directed towards sensitive areas.

The proposed lighting design for the new development, lighting calculation results and assessment of the lighting against industry standards and guides has also been completed and forms a standalone document 5029426-RDG-ZZ-ST-D-SP-630001



Image 02 : Google map view of Haywards Heath with the site highlighted in red.

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3. PLANNING POLICIES, STANDARDS AND GUIDANCE

3.1. National Legislation and Planning Policy

The relevant document at this level is the Environmental Protection Act 1990 / Clean Neighbourhoods and Environment Act (2005)

Section 102 ‘Statutory nuisance: lighting’ of The Clean Neighbourhoods and Environment Act (2005) amended Section 79 of the Environmental Protection Act 1990 by extending the statutory nuisance regime to include light nuisance, by stating the following:

“S102 Statutory nuisance: lighting

*(1) Section 79 of the Environmental Protection Act 1990 (c. 43) is amended as follows.
(2) In subsection (1) (matters constituting statutory nuisances) after paragraph (fa) (as inserted by section 101 (2)) insert— “(fb)artificial light emitted from premises so as to be prejudicial to health or a nuisance;”*

3.2. National Planning Policy Framework (NPPF)

At the national level, the need to consider the potential effects of artificial lighting is embodied in the wording of the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government (MHCLG), 2025) and should be considered during the application process to reduce the potential for unnecessary delays owing to unacceptable (unknown) potential effects on local amenity and nature conservation.

Section 15 Conserving and enhancing the natural environment, paragraph 198 states:

“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.”

3.3. National Planning Practice Guidance (NPPG)

The UK Government’s National Planning Practice Guidance (NPPG) for England presents specific guidance on light pollution that advises on how to consider light within the planning system (MHCLG, 2024). The light pollution category was updated in 2019.

Paragraph 002 asks ‘What factors can be considered when assessing whether a development proposal might have implications for light pollution?’.

- Will a new development, or a proposed change to an existing site, be likely to materially alter light levels in the environment around the site and/or have the potential to adversely affect the use or enjoyment of nearby buildings or open spaces?
- Will the impact of new lighting conflict with the needs of specialist facilities requiring low levels of surrounding light (such as observatories, airports and general aviation facilities)? Impacts on other activities that rely on low levels of light such as astronomy may also be a consideration, but will need to be considered in terms of both their severity and alongside the wider benefits of the development.
- Is the development in or near a protected area of dark sky or an intrinsically dark landscape where new lighting would be conspicuously out of keeping with local nocturnal light levels, making it desirable to minimise or avoid new lighting?
- Would new lighting have any safety impacts, for example in creating a hazard for road users?
- Is a proposal likely to have a significant impact on a protected site or species? This could be a particular concern where forms of artificial light with a potentially high impact on wildlife and ecosystems (e.g. white or ultraviolet light) are being proposed close to protected sites, sensitive wildlife receptors or areas, including where the light is likely to shine on water where bats feed.
- Does the proposed development include smooth, reflective building materials, including large horizontal expanses of glass, particularly near water bodies? (As it may change natural light, creating polarised light pollution that can affect wildlife behaviour.)

Whilst there is no specific mention of construction lighting in the guidance, there are relevant comments including the use of security lights, floodlights, turning lights off, glare, dark sky areas, intrinsically dark areas, sensitive areas, white light with more blue content, safety and ecology. (See paragraphs 003 to 006).

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3. PLANNING POLICIES, STANDARDS AND GUIDANCE

3.4. West Sussex County Council, Mid Sussex Bourough Council and High Weald National Landscape

The Borough Council in which Haywards Heath sits references the following documents:

- Sussex Bat SAC Protocols (2015)
- High Weald National Landscape an Area of Outstanding Natural Beauty- Planning Technical Advice Note: Dark Skies in the High Weald (2024)
- West Sussex County Council Highways and Transport- Street Lighting Specifiaction v9 - July 2025

All of the above documents should be referenced in developing the lighting strategy and the lighting design, however, more recent and more onerous documents must be utilised where available.

3.5. Professional Guidance

3.5.1. Institution of Lighting Professionals (ILP)

3.5.1.1 GN01:2021 Guidance on the Reduction of Obtrusive Light

This document outlines what is obtrusive light and limits of source glare, sky glow and facade luminance which are suitable for different types of spaces (environmental zones). The document is widely used in the UK.

Within GN01 there is a table with target sky glow, light spill, source and other lighting levels targets. These target levels change depending on the environmental zone a location is considered to exist. The environmental zone will be agreed with the local authority but we would expect it to be E3 (Suburban).

Table 2: 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, village 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

Table 01 : Copied from the ILP GN01:2021 Guidance

3.5.1.2 GN08:2023 Bats and Artificial Lighting in the UK

This document outlines how light impacts bats and the principles of how to mitigate against external lighting impacting bats. The document is widely used in the UK.

3.5.1.3 PLG04 Guidance on the Undertaking of Environmental LIA's

This document provides advice on undertaking LIAs.

3.5.1.4 PLG05 The Brightness of Illuminated Advertisements

This document provides maximum brightness levels for signage of different scales in different light and dark environments.

3.5.2. Society of Light and Lighting (SLL)

3.5.2.1 Applicable Documents

The SLL produce a number of applicable documents, all of which shall form part of the lighting design process for the student hub. However, there is no mention of construction or temporary lighting.

- SLL LG0 Code for Lighting : 2022
- SLL LG6 The Exterior Environment : 2016
- SLL LG21 Protecting the Night-time environment : 2021
- LF07 Design and assessment of exterior lighting schemes : 2019

3.5.3. Other Documents

In addition to the above there are British Standards, Independent Dark Sky Design Guides, Secured by Design and Countryside Protection Guides. They have not been specifically included in this report as the information is either identical to other listed documents, or, their date of publication is older than more recent up to date documents, e.g. Lighting in the Countryside: Towards good practice (1997).

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4. ABBREVIATIONS

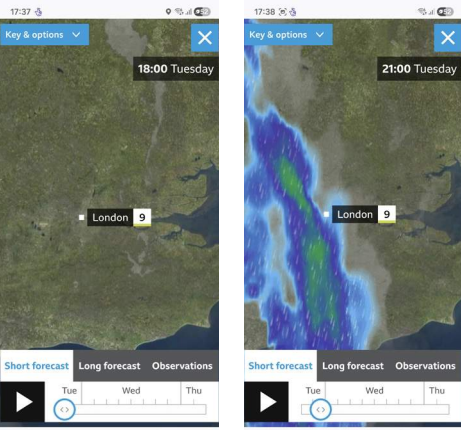
Term	Definition
CCT	Correlated Colour Temperature in Kelvins
Kelvin (K)	This is the black body temperature colour of the light. 2700K is considered very warm white, 3000K is considered warm white; 4000K is considered white, 6500K is considered daylight,
Glare	Excessive and uncontrolled brightness which can cause visual impairment.
Lux	The unit of illuminance, or luminous flux per unit area (H) Horizontal light meter reading, typically at floor level. (V) Vertical light meter reading, typically at eye level.
Sky Glow	Brightness of the night sky as a result of light pollution in or around a built-up area
Source Luminance	Brightness of the light source of a light fitting. This is always considered from a persons viewing position.
Flat Glass Lens	A luminaire which has a flat glass or flat surface and the fitting is aimed parallel to the ground. This ensures there is no upward light.
Fully Shielded	The light source is fully recessed into the solid body of the light fitting. This ensure there will be no upward light spill and that the light source will be less visible from a distance.

Table 02 : Typical Lighting Abbreviations

5. SITE ENVIRONMENTAL DATA

5.1. Weather

The site was surveyed on the 20th of January 2026. On the evening of the 20th January the weather was intially dry with light cloud, developing in denser cloud with multiple layers as the survery progressed. Rain was forecast for 21:00 in the evening.



Images 03 & 04 : BBC Weather Screen Shots, Cloud Cover

5.2. Astronomical

All light meter measurements were taken after astronomical night had started at 18:28 hours. The moon was below the horizon throughout the measurements. The site survey was completed at 19:30 hours.

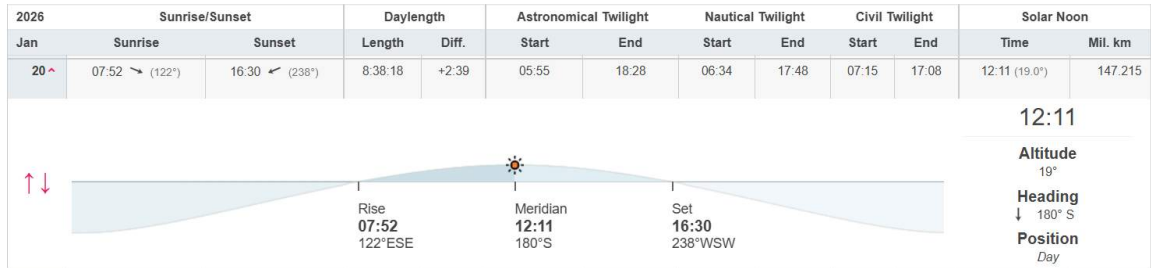


Image 05 : Sunset Time and Astronomical Time, Haywards Heath, 20th January 2026



Image 06 : Moonset Time, Haywards Heath, 20th January 2026

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6. SITE SURVEY DATA COLLECTION PROCESS

6.1. Measurement Positions

Horizontal and Vertical lux measurements were taken at positions 01 to 13. Due to the cloud cover SQM readings were not taken.

The light meter used for the lux readings was a Minolta T10A. The serial numbers and calibration dates are below:

Lux Meter: Minolta T10A 30022825 + 20021332
Lux Meter: Calibrated on 27th August 2025

All vertical and horizontal lux readings were recorded in the same way. The diagram below shows how the light meter was orientated at each position. All vertical measurements were taken at eye level. All horizontal measurements were taken at 1200mm aiming upwards.

- V1 = Aimed facing the Northern site boudary
- V2 = 90 degree clockwise from V1
- V3 = 180 degree clockwise from V1
- V4 = 270 degree clockwise from V1
- H1 = Horizontal at 1650mm aiming up

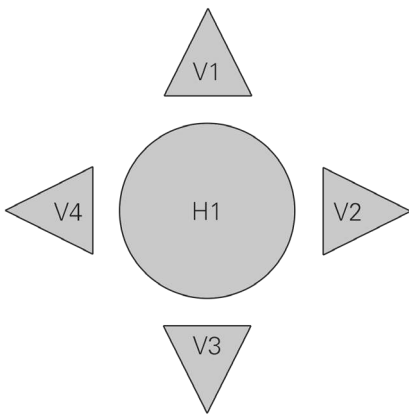


Image 07 : Measurement Diagram

6.2. Lighting Conditions

Due to the time of day the measurements were taken, the street lighting was on; the residential properties around the development site had their internal and in some cases external lighting on. The residential lighting changed during the period of taking measurements as the residents used different rooms.

The London to Brighton trianline runs to the immediate West of the site. During the survey a number of trains, with their internal lights on, passed by the site. A lux level was taken at this time to measure this impact but all of the vertical lux and horizontal lux were taken when this there was no train present.

Readings were taken at Survey point 11 to record the impact of the existing street lights on Wickham Way.



Image 08 : Vertical Lux, Horizontal Lux and SQM Measurement Positions

6. SITE SURVEY DATA COLLECTION PROCESS

6.3. Photographs

It was only possible to photograph the development site from locations withi the red line boundary. The topography, the proximity of the trainline to the West the development land and restricted access to the South prevented any other photographs.

- Red Line = Existing Site
- Yellow Dash = Existing Residents Windows
- Purple Dash = Trainline
- Blue Triangle = Camera Positions
- Orange Dot = Existing street light on Wickham Way



Image 09 : Camera positions for photographs of the development site.

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6. SITE SURVEY DATA COLLECTION PROCESS

6.4. Daytime Photographs



Image 10 : Camera position 'A'- Southern boundary looking North



Image 11 : Camera position 'B'- Western boundary looking East



Image 12 : Camera position 'C' - Western boundary looking East



Image 13 : Camera position 'D' - North Western boundary looking South

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6. SITE SURVEY DATA COLLECTION PROCESS

6.4. Daytime Photographs



Image 14 : Camera position 'D' - North Western boundary looking East

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7. SITE SURVEY DATA COLLECTION RESULTS

7.1. Lux Levels

Lux level readings below 0.4 vertically are very good.

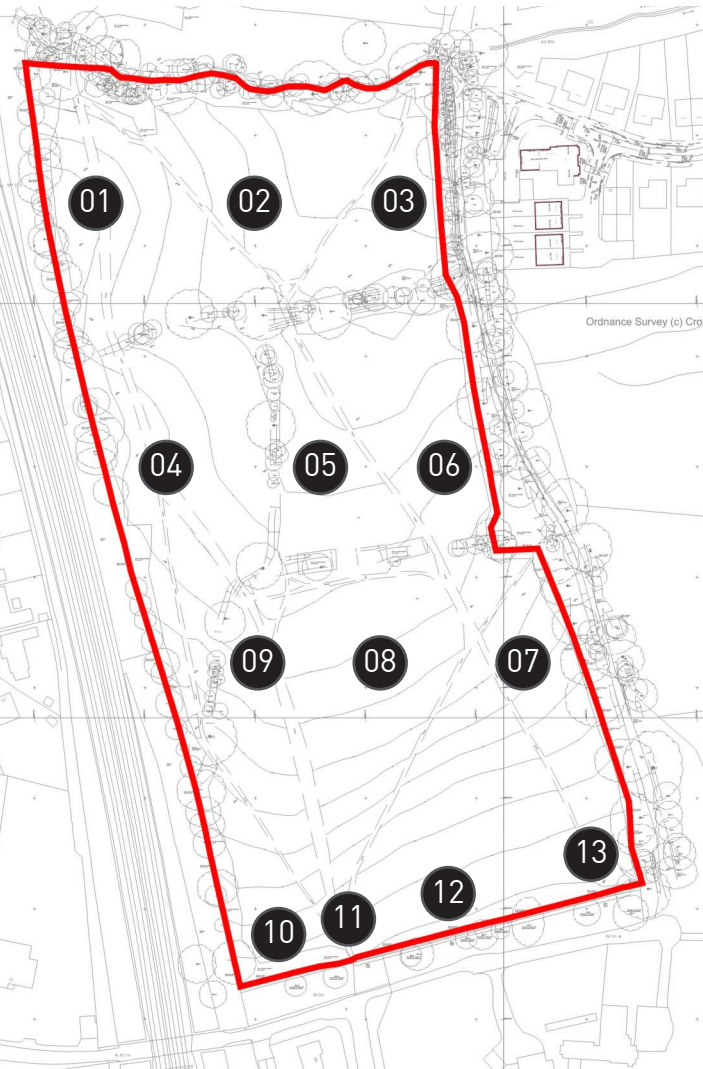


Image 15 : Vertical Lux, Horizontal Lux and SQM Measurement Positions

LOCATION	V1	V2	V3	V4	H1
01	0.00	0.00	0.01	0.00	0.03
02	0.00	0.01	0.02	0.02	0.03
03	0.00	0.01	0.02	0.02	0.04
04	0.02	0.00	0.00	0.00	0.04
05	0.02	0.01	0.02	0.03	0.04
06	0.02	0.01	0.00	0.03	0.04
07	0.02	0.00	0.00	0.02	0.04
08	0.03	0.01	0.02	0.02	0.04
09	0.02	0.01	0.03	0.02	0.04
10	0.02	0.02	0.02	0.02	0.05
11	N/A	N/A	0.06	N/A	N/A
12	0.03	0.02	0.01	0.02	0.05
13	0.03	0.01	0.02	0.02	0.05

Table 03 : Lux Levels

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7. SITE SURVEY DATA COLLECTION RESULTS

7.2. Nighttime Photographs

Skyglow from the North of site. It was not possible during the site visit to ascertain the exact source of the Sky glow. However given the sites proximity to the North to Crawley and London Gatwick Airport these can be deduced as to the scource.



Image 16 : Photograph from within the development site along the Southern boundar looking North showing the skyglow.

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7. SITE SURVEY DATA COLLECTION RESULT

7.2. Nighttime Photographs

Street lighting on what appears to be a recently completed development to the Northeast most point of the site. The lighting never went off for any length of time during the site visit.



Image 17 : Photograph from within the development site of street lighting at the recently completed development to the Northeast of the site.

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7. SITE SURVEY DATA COLLECTION RESULTS

7.2. Nighttime Photographs

Street lighting on what appears to be an established development to the Northwest of the site, beyond the adjacent trainline. The lighting never went off for any length of time during the site visit.



Image 18 : Photograph from within the development site of street lighting at the development to the West of the site.

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7. SITE SURVEY DATA COLLECTION RESULTS

7.2. Nighttime Photographs

Street lighting to the Private road to the South. The lighting never went off for any length of time during the site visit.



Image 19 : Photograph from within the development site of street lighting on Wickham Way to the South of site

8. ECOLOGY

8.1. Ecology Report

EcoSupport produced an ecological appraisal for the site 9th April 2026. With respect to light impacting wildlife on and around the site the report made the key statements below:

5.3.1 Impacts to Nocturnal Wildlife

The works will result in an increase in lighting within the general area from external lighting on the new dwellings / street lighting. This can affect the behaviour, particularly foraging, of nocturnal wildlife (i.e. bats, Badgers, Hazel Dormice). Therefore, in the absence of mitigation an adverse impact is likely on nocturnal species.

6.3.2 Sensitive Lighting

A detailed sensitive lighting strategy will be provided as part of the scheme and will follow the general guidelines as set out below.

6.3.2.1 Lighting During the Construction Phase

In order to avoid any disturbance to bats (and other potential nocturnal wildlife) construction works should be limited to daylight hours and should not be undertaken 30 minutes prior to dusk through to dawn. All lighting should be sensitive to the use of the site by nocturnal wildlife, for example by including low-level downward-facing / hooded lights that are sensor-operated where possible.

6.3.2.2 Lighting Post Construction Phase

It is recommended that any lighting complies with the following the newly published Guidance Note 08/23 Bats and Artificial Lighting at night (ILP / BCT, 2023) produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats.

6.3.2.2 Lighting Post Construction Phase

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Sensitive lighting will also be adopted around retained veteran trees (TN71, TN73 and TN74) situated centrally within the site (Fig 21) to ensure that bats potentially utilizing these trees as roosting features are not adversely impacted, with commuting and foraging corridors to these features and the wider enviro maintained.

6.6.1.4 Habitat Compensation/Connectivity

... A road is proposed to cut through a section of woodland within the north-eastern corner of the site. This road will be single-track and has been designed to minimise ecological impacts and ensure retention of mature trees were possible. Notwithstanding this, removal of woodland in this area is required due to the proposed location representing the only feasible location due to a number of limiting constraints. Sensitive lighting measures will also be adopted at the proposed access route to further facilitate dispersal movements.

8.2. Lighting Design Response to Ecology comments

The statements above do not generally cause any concern with regards to providing a lighting scheme for the roads, paths and buildings other than the specific requirement, within ILP GN08/23 for the use of 2700K correlated colour temperature (CCT) lighting to be used. "... A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light." The West Sussex County Council Highways and Transport: Street Lighting Specification prefers the use of 4000K. There will need to be agreement during the planning process that the CCT(K) of the lighting on the site can be 2700K.



Image 20 : EcoSupport Ecological Impact Assessment Feb 26 - Figure 21 Overview of site design indicating those features of particular benefit to roosting, foraging and commuting bats.

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9. SITE SURVEY CONCLUSIONS

The existing site currently has no lighting installed on it. To maintain the ‘darkness’ of the site, the lighting design for the new development will need to follow the most stringiest standards to avoid introducing obtrusive light. Whilst the area is classed as environmental zone E3 with reference to the ILP GN01 (Guidance on the reduction of obtrusive light), a positive approach would be to design the lighting to meet the criteria of E2. E2 sets stricter limits for obtrusive light.

The ecology report has identified a need for 2700K light sources and the reduction of the blue component of light. This is possible with the products available on the market but needs to be accepted by the local authority during the planning process.

