



LAND EAST AND WEST OF HYDE END ROAD, SHINFIELD

STREET LIGHTING STRATEGY

BLOOR HOMES LIMITED AND UNIVERSITY OF READING

04 FEBRUARY 2026





Abley Letchford
3 Tealgate
Charnham Park
Hungerford
RG17 0YT

T: 01488 684390
E: contact@ableyletchford.co.uk
W: www.ableyletchford.co.uk

Quality Management:

Prepared by:	C Blundy
Authorised by:	L Abley
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Contents

1.0 Introduction 1

2.0 Policy and Sources of Information..... 2

3.0 Site Setting 6

4.0 Sensitivity Receptors 7

5.0 Lighting Strategy 8

6.0 Conclusion 10

Appendices

- Appendix A – Detailed Site Layout
- Appendix B - Street Lighting Lux Layout



1.0 Introduction

Content

- 1.1. This Street Lighting Strategy has been prepared by Abley Letchford, on behalf of Bloor Homes Limited and the University of Reading, in relation to the proposed residential development at Land to the east and west of Hyde End Road at Shinfield located to the south of Reading.

Development Proposals

- 1.2. The proposals are for 184 no. dwellings together with hard and soft landscaping, drainage infrastructure, parking, access and associated works at Hyde End Road.
- 1.3. A copy of the proposed Detailed Site Layout for the development is included at **Appendix A** of this report.



2.0 Policy and Sources of Information

Introduction

- 2.1. This chapter provides a review of policy and best practice guidance to street lighting for residential development.

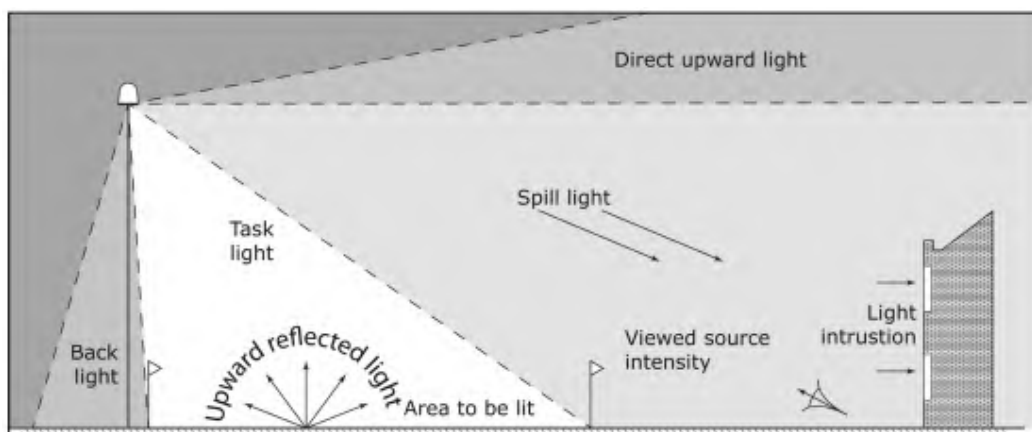
National Policies

- Clean Neighbourhoods and Environment Act 2005 gives local authorities and the Environment Agency additional powers to deal with a wide range of issues by classifying artificial light emitted from defined premises as a statutory nuisance.
- The CNEA 2005 amended paragraph 79(1)(fb) of the Environmental Protection Act 1990 to extend the statutory nuisance regime to include light nuisance stating the following: ‘artificial light emitted from premises so as to be prejudicial to health or a nuisance’.
- Guidance produced on Sections 101 to 103 of the CNEA 2005 by DEFRA (DEFRA, April 2006) extends the duty on local authorities to ensure their areas are checked periodically for existing and potential sources of statutory nuisances including nuisances arising from artificial lighting. Local authorities must take reasonable steps to investigate complaints of such nuisances from artificial light. Once satisfied that a statutory nuisance exists or may occur or recur, local authorities must issue an abatement notice (in accordance with section 80(2) of the Environmental Protection Act 1990), requiring that the nuisance cease or be abated within a set timescale.
- National Planning Policy Framework 2024 encourages good design with planning policies and decisions limiting the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation; and
- Planning Practice Guidance 2019 – Light Pollution, gives advice on how to consider light within the planning system it questions:
 - 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 factors 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?

Local Policies

- 2.2. The most relevant Local Authority policies that should be considered in relation to the Proposed Development are outlined within Wokingham Borough Council's Street Lighting Design, Adoption Process and Specification Guide.

ILP Guidance Notes for the Reduction of Obtrusive Light – GN01/21



- 2.3. The lighting strategy shall be prepared utilising the above guidance note which aims to limit the potential for obtrusive light to arise. The extract below, illustrates the types of obtrusive light to be considered.
- 2.4. It is recommended local planning authorities specify the environmental zones given in the table below for exterior lighting control within their development plan.

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

- 2.5. In relation to the installation of luminaires, to keep glare to a minimum, it is recommended that the main beam angle of all luminaires directed towards any potential observer is no greater than 70 degrees.



ILP Guidance Notes for the Bats and Artificial Lighting at Night – GN08/23

- 2.6. The lighting strategy shall be prepared utilising the above guidance notes which is intended to raise awareness of the impacts of artificial lighting on bats, and mitigation is suggested for various scenarios.
- 2.7. The guidance notes suggest when selecting luminaires, that the following should be considered:
- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
 - LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
 - A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
 - Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
 - The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.
 - Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
 - Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered (Refer to Guidance for the Reduction of Obtrusive Light GN01/21).
 - Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
 - Any external security lighting should be set on motion-sensors and short (1 minute) timers.
 - As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

British Standards

- 2.8. BS 5489-1:2020 – Code of Practice for the Design of Road Lighting – Lighting of Roads and Public Amenity Areas, gives recommendations for the design of lighting for all types of highway and public thoroughfare, including those specifically for pedestrians and cyclists.
- 2.9. This standard provides a solid point of reference for lighting designs but is often supplemented by local highway authority criteria.



Wokingham Borough Council

- 2.10. The standard street lighting specification (including column height) for this development project is contained within Wokingham Borough Council's Street Lighting Design, Adoption Process and Specification Guide.

3.0 Site Setting

Site Location

- 3.1. The site is located at land to the east and west of Hyde End Road in Shinfield, Berkshire. The nearest postcode is RG2 9EP. The site centre grid reference is 473,180E, 167,225N. The site location is shown in **Figure 3.1**.

Figure 3.1: Site Location



- 3.2. Residential developments are located to the north and west of the site. Fields are located to the south and east of the site.
- 3.3. The site consists predominantly of agricultural fields with localised farm buildings. Hyde End Road lies between the east and west parcels.
- 3.4. The site covers an area of approximately 10.7 hectares.



4.0 Sensitivity Receptors

- 4.1. The area to the North and West of the proposed development is built up consisting of residential dwellings. To the South and East lie agricultural fields. All the primary, secondary and tertiary roads are currently lit by systems of street lighting which are owned and maintained by the local council. Sensitive receptors to light are surrounding residential properties and local wildlife.
- 4.2. The principal of the lighting design shall be sympathetic to the sensitive receptors identified; the lighting design will accord with the criteria set out below as well as other relevant guidance. Therefore, the existing illumination levels will not be affected.
- 4.3. The Environmental Zone for the site and immediate surrounding is considered to be E2: Rural, sparsely inhabited rural areas, village or relatively dark outer suburban locations (ILP Guidance Notes for the Reduction of Obtrusive Light - GN01:2021)



5.0 Lighting Strategy

- 5.1. This section defines the requirements for a lighting design to ensure it is fit for purpose and adheres to the sensitivity receptors attributed to the site.
- 5.2. The Lighting Strategy has been prepared to ensure the lighting design associated with the development site is compliant with relevant British Standards, Local Authority Specification and ILP Lighting guidance.
- 5.3. To minimise environmental impacts, hedgerows and watercourses (both small and large) should not be lit unless necessary. Where lighting is unavoidable, it should be designed according to the following key prescriptions: -
- Identify key points in the landscape where artificial light at night disrupts spatial connectivity of dark areas and reduce or remove lighting in these areas if possible.
 - Maintain and create unlit 'dark corridors' between habitat patches where possible.
 - Avoid use of, and remove where possible, luminaires that waste light by emitting vertically or horizontally – ensure that lighting is designed with minimum spill and is downward facing and directional and that retained hedges and watercourses are not lit.
 - Reduce as much as possible the intensities of light emitted from luminaires.
 - Avoid use of white and blue light wherever possible. The broader the spectrum of light that a lamp produces the wider the range of organisms it is likely to affect.
 - LEDs should generate a colour temperature between 2700K (kelvin) and 3000K. In coordination with the Highway Authority.
 - Avoid use of lamps that emit in the ultraviolet (UV) range. UV light is not seen by human`s but many animals see UV and it may disrupt their natural behaviour.
 - The following criteria seeks to ensure that the lighting is not outside of the obtrusive light limits for the Environmental Zone in which the Application Site is located, is sensitive to the area, and provides a recognised standard level of lighting for all adoptable areas requiring illumination. Luminaires will distribute light downwards only to reduce the potential for light spill onto the boundaries surrounding the buildings and upwards towards the sky.
- 5.4. Proposed primary road and estate roads are to be built to an adoptable standard and are likely to be offered to Wokingham Borough Council for adoption under a S38 Agreement. These roads shall be lit to Wokingham Borough Council's adoptable specification, subject to further technical review under a future Section 38 Application.

Primary Road - Lighting Principles

	Description
Light Source	LED
Luminaire Type	Philips Signify Luma Gen2
CCT of Light Source (Kelvin)	2700K (Warm White)
Luminaire Tilt	0 degree
Mounting Arrangement	Post top at 5m.



Lighting Standard	BS 5489-1:2020 – Code of practice for the design of road lighting
Lighting Class	P4
Upward Light Ratio	0%
Constraints/Restrictions	The lighting design to be in accordance with the guidance within the Wokingham Borough Council Street Lighting Design, Adoption Process and Specification Guide, unless otherwise agreed.

Secondary/Tertiary Roads - Lighting Principles

	Description
Light Source	LED
Luminaire Type	Philips Signify Luma Gen2
CCT of Light Source (Kelvin)	2700K (Warm White)
Luminaire Tilt	0 degree
Mounting Arrangement	Post top at 5m.
Lighting Standard	BS 5489-1:2020 – Code of practice for the design of road lighting
Lighting Class	P5
Upward Light Ratio	0%
Constraints/Restrictions	The lighting design to be in accordance with the guidance within the Wokingham Borough Council Street Lighting Design, Adoption Process and Specification Guide, unless otherwise agreed.



6.0 Conclusion

- 6.1. The Lighting Strategy outlines the criteria for the lighting design of the Proposed Development to ensure that the lighting is fit for purpose, whilst maintaining sensitivity towards the environment through compliance with relevant British Standards and Guidance.
- 6.2. To ensure that the potential for obtrusive light is minimised, it is necessary to restrict the mounting heights of the luminaires, tilt angle, colour temperature and lumen output of exterior light sources to those specified in Section 5.
- 6.3. The exterior lighting outlined in the lighting strategy shall comply with the requirements for an E2 Environmental Zone as per BS 5489-1:2020 unless otherwise agreed with the Highway Authority.
- 6.4. Compliance with the lighting strategy will allow a safe and sensitive level of light for way finding and guidance at night, whilst limiting obtrusive light to a negligible level and in compliance with ILP GN01:2021 and GN08:2023, which seeks to reduce light spill onto sensitive boundaries.
- 6.5. It is anticipated that monitoring of the modelled light levels would be completed post installation to verify that the light levels and technical parameters are compliant with the lighting strategy, British Standards and Guidance.
- 6.6. Through careful design and mitigation, this Lighting Strategy ensures the lighting installation at the proposed development will be in accordance with British Standards, Guidance and Local Policy.



Appendices



Appendix A – Detailed Site Layout

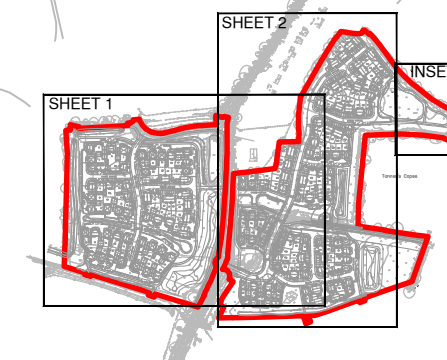


Appendix B - Street Lighting Lux Layout



KEY PLAN

SCALE 1:10,000



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GENERAL NOTES:
1. Do not scale.
2. Refer to all other Project Drawings and supporting notes.

STREET LIGHTING KEY:

ADOPTABLE LIGHTING:

- 5m Philips Luma Gen2 Micro 10 LED
Luma Gen2 Micro_BGP702_DW50_2400_10
LED 5.25 CLO 190 740 ies
Lamp(s): LED-HB 5.25 740
Lamp(s) per luminaire, 2400 initial lumens per lamp.
Maintenance Factor = 0.9.
Outreach (from mounting axis to photometric center)= 300 mm.
tilt angle= 0 deg.
Mounting height= 5 m.
Number luminaires= 40.
- 10m radius from column

LIGHTING LUX KEY:

- 0.4 Lux Contour
- 0.6 Lux Contour (Min. for P5)
- 1.0 Lux Contour (Min. for P4)

- Adoptable areas lit to Lighting Class P5 in accordance with BS EN 13201:2015
- Private lighting NOT controlled by WBC Telensa CMS System.
 - Control / Dimmer Unit - to be Telensa 5-pin NEMA Telescan with integral Telensa Dimming Module (DALI standard) and GPS positioning
 - Cut-Out Type - Lucy MC0405LF with 6 amp H.R.C. fuse as standard (fuse size may be increased as appropriate where feeds to other units are required - fuse size to conform to IEE regulations).
 - Isolator - Charles Manufacturing LSI-02/SF or Lucy Trojan Mini isolation unit with 6 amp fuse (fuse size may be increased as appropriate where feeds to other units are required - fuse size to conform to IEE regulations).
 - Constant Light Output (CLO) to be disabled on the LED drivers to avoid clash with Telensa CMS System.

Proposed tree locations to be reviewed and coordinated where required

Scale 1:500

B	02.26	Updated to suit latest site layout	CB	DS
A	04.25	First Issue	CB	DS
Rev	Date	Description	Drawn	Checked



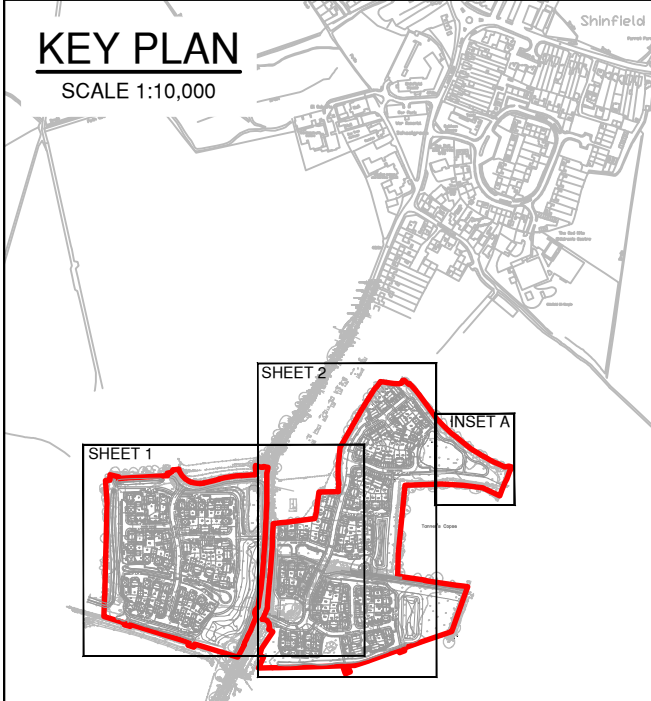
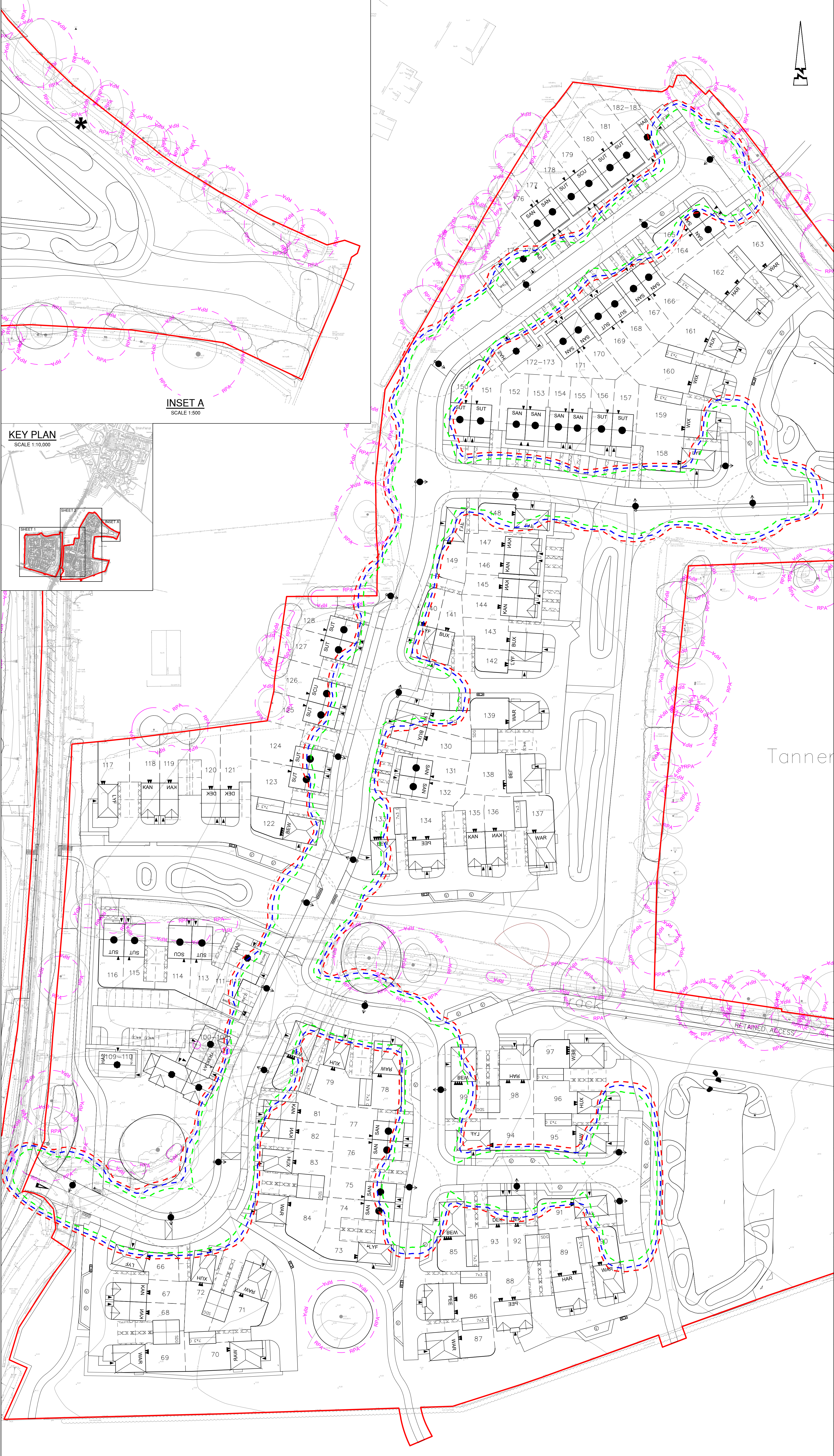
Client

Project
HYDE END ROAD,
SHINFIELD

Title
FULL APPLICATION
STREET LIGHTING
LUX LAYOUT SHEET 1

Status

Scale	Date	Drawn	Checked
1:500 @ A1	APR 2025	CB	DS
Drawing No	Revision		
HD068-FA-011	B		



INSET A
SCALE 1:500

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LED 5.25 CLO 190, 740 ies
Lamp(s) LED-HB 5.25 740
Lamp(s) per luminaire, 2400 initial lumens per lamp.
Maintenance Factor = 0.9.
Outreach (from mounting axis to photometric center)= 300 mm.
tilt angle= 0 deg.
Mounting height= 5 m.
Number luminaires= 40.
--- 10m radius from column

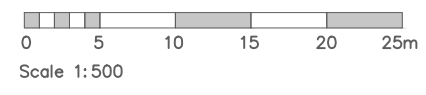
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B	02.20	Updated to suit latest site layout	CB	DS
A	04.25	First Issue	CB	DS
Rev	Date	Description	Drawn	Checked



Client
BLOOR HOMES

Project
HYDE END ROAD, SHINFIELD

Title
FULL APPLICATION STREET LIGHTING LUX LAYOUT SHEET 2

Status

Scale 1:500 @ A1	Date APR 2025	Drawn CB	Checked DS
Drawing No. HD068-FA-012	Revision B		



Transport Planning | Flood & Water Management | Civil Engineering

Hungerford Office

3 Tealgate, Charnham Park,
Hungerford RG17 0YT

01488 684 390

Reading Office

6th Floor, Reading Bridge House,
George Street, Reading, RG1 8LS

0118 237 1736

www.ableyletchford.co.uk