



Clowes Developments (UK) Ltd

Outline Planning Application
for Development
at

Former Landfill site
Brockhampton West
Harts Farm Way

External Lighting

Planning Submission



Client Name Clowes Developments (UK) Ltd

Client Address Ednaston Park
Painter's Ln
Ednaston
Ashbourne
DE6 3FA

Property: Former Landfill site
Brockhampton West
Harts Farm Way

Project Reference: 4856

Issue: Planning Submission – PL1

Date: February 2021

Prepared by: PDJ

Checked by: MDC

Validated by: MDC



C O N T E N T S

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APPENDIX

Drawing No. 4856/E/100 – External Lighting Design Criteria

Drawing No. 4856/E/101 –External Lighting Layout



1.00 INTRODUCTION

The purpose of this document is to summarise the intended external lighting scheme to be provided to the industrial units development site known as Brockhampton West, Harts Farm Way, Havant on behalf of Clowes Developments (UK) Ltd.

As the planning application is submitted in outline and reserves all matters with the exception of the primary means of access, the final form of development is not yet known.

This strategy therefore seeks to demonstrate that a suitable lighting design can be provided for the site to meet operational requirements and to minimise light spill to the surrounding area.

Once the final form of development is known a detailed lighting will be designed, based upon the lighting design principles set out in this report.



2.00 EXTERNAL LIGHTING

The proposed external lighting scheme and the luminaires should comply with the recommendation of:

- BS5489 Code of practice for the design of road lighting, Part 1 Lighting of roads and public amenity areas
- BS EN 13201 Road Lighting, Part 2 Performance Requirements
- Institution of Lighting Professions (ILP) Guidance Notes for the Reduction of Obtrusive Light GN01: 2011
- Institution of Lighting Professions (ILP) Guidance Note 08/18 "Bats and artificial lighting in the UK"

Considering the above documents, the acceptable level of luminous intensity of the proposed luminaires should comply with Class G4, G5 or G6 requirements which is shown in the table below.

Angle from the downward vertical	Maximum Luminous Intensity (cd/klm)		
	Class G4	Class G5	Class G6
70°	500	350	350
80°	100	100	100
90°	10	10	0
>95°	0	0	0

While compliance with any class listed above is acceptable to minimise light pollution it is particularly desirable to comply with Class G6 due to its zero luminous intensity above 90° angle.

Applying the above recommendations i.e. using luminaires without any upward light component (zero light output at a maximum of 90° from the downward vertical), to an initial external lighting scheme for the proposed development layout indicates that a reasonable external lighting scheme can be produced with the use of class G4 luminaires and the use of some class G6 luminaires.

In accordance with the ILP Guidance Notes the site has been assessed as Environmental Zone Category E3 (a small town centre or suburban location with a medium district brightness lighting environment).

The following aspects were considered and incorporated on the design to minimise the impact of the external lighting scheme into the landscape areas:

- All proposed luminaires lack UV elements.
- All luminaires have an LED light source.
- All luminaires have 0% upward light ration with good optical control.
- All luminaires are to be installed without upward tilt.
- The colour temperature of all lamps will be 3000 K.
- Where allowed by the development layout the lighting columns have been positioned away from the site boundary.



- Each luminaire is to be provided with the ability for the lighting control equipment to dim/turn off when not in use.

The lux levels are shown on drawing number 4856/E/101 in the appendix.

To suit the operational requirements of the recommendations of the British Standards noted above, the external lighting scheme for the industrial element of the development has been sub-divided into the following usage areas:

1. Car park
2. Circulation
3. Service yard
4. Handling zone

The separate usage areas are indicated on drawing number 4856/E/100 contained in the appendix and have the following external lighting design criteria, the lux levels quoted are at roadway surface level.

Car park	10 lux average 5 lux minimum
Roadways	10 lux average 5 lux minimum
Service yard	25 lux average 0.4 uniformity
Footpath	7.5 lux average 1.5 minimum
Handling zone	50 lux average

The proposed external lighting scheme, based on the above criteria, is indicated on drawing number 4856/E/101 contained in the appendix. The drawing indicates lux level isolines to show areas of equal lighting levels. The scheme consists of building and column mounted floodlights and wall mounted luminaires.

The following observations can be drawn from the lighting output illuminance levels indicated on drawing number 4856/E/101:

1. Based on the lux levels plotted on the attached drawing the average illuminance values meet the design criteria. Due to limited space where luminaires can be located the illuminance values in certain areas of the service yards and car parks exceed minimum requirements in order to achieve overall required average illuminance level.
2. The column mounted floodlights are located at the perimeter of the yards to minimise light spill to the surrounding areas.
3. As the operational requirements of the service yard dictate the location of the lighting columns and the applicant's requirement to reduce lighting energy consumption by using LED luminaires the lighting levels in the adjacent areas have been minimised.
4. The 10 lux illuminance level isoline is within the boundary of the site
5. The 5 lux illuminance level isoline is within the site boundary.



6. The 1 lux isoline crosses the site boundary in the south corner of the site where the access roads are located. It also crosses the site boundary to the north, adjacent to the service yard of Unit 2
7. The scheme complies with the obtrusive light limitations for exterior lighting installations recommendations of the ILP Guidance Notes for Environmental Zone E3.

The proposed luminaire's details are stated on drawing number 4856/E/101.

2.01 Conclusion

The following conclusions can be drawn from this assessment.

1. The operational external lighting design criteria is met in each separate functional area of the site.
2. The proposed luminaires have no upward light output.
3. The scheme complies with the ILP Guidance for Environmental Zone E3.
4. The scheme minimises the impact of the external lighting in the landscaped areas to the site boundaries in line with the recommendations of the ILP Guidance Note 08/18
5. The light spill across the site boundary has been minimised.

This report therefore demonstrates that a suitable lighting design can be provided at the site that minimises light spill.



APPENDICES

Drawing No. 4856/E/100 – External Lighting Design Criteria

Drawing No. 4856/E/101 – External Lighting Layout



- NOTES:
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND LEGEND DRAWING.
 - DO NOT SCALE FROM THIS DRAWING.

- LEGEND:-
- ACCESS ROAD
10 LUX AVERAGE
0.4 UNIFORMITY
 - CAR PARK
10 LUX AVERAGE
0.4 UNIFORMITY
 - SERVICE YARD
25 LUX AVERAGE
AT 0.4 UNIFORMITY
 - LOADING ZONE (8 METERS FROM BUILDING)
50 LUX AVERAGE
 - PEDESTRIAN ACCESS
5 LUX AVERAGE

PL2	BACKGROUND UPDATED TO LATEST LAYOUT	FEB 2021
Ref.	Revision	Date

PLANNING

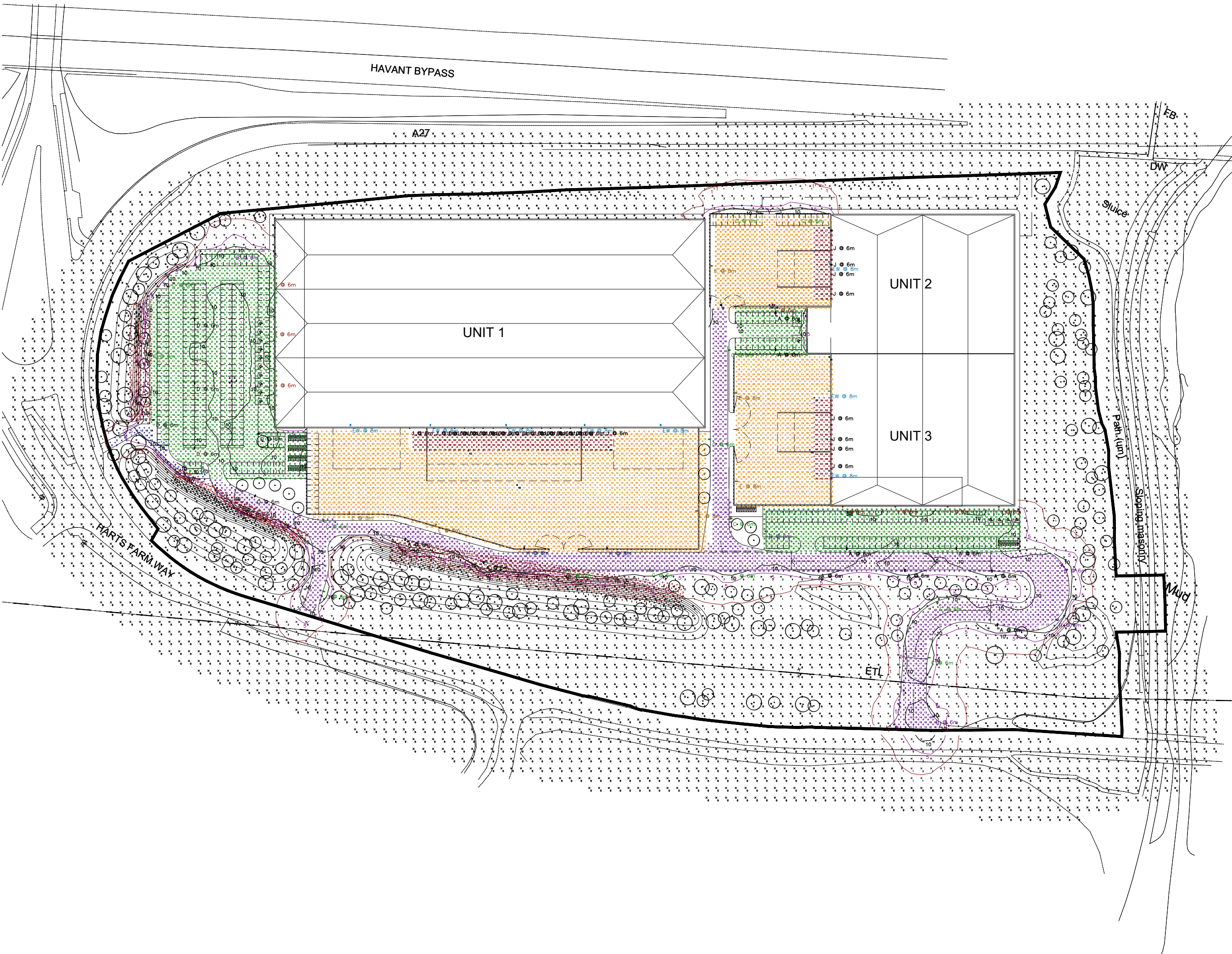


Client
CLOWES DEVELOPMENTS (UK) LIMITED

Project
FORMER LANDFILL SITE
BROCKHAMPTON WEST
HARTS FARM WAY

Title
EXTERNAL LIGHTING DESIGN
CRITERIA

Date	JANUARY 2021	Scale at AO	1:500
Drawn By	PDJ	Validated	
Checked			
Drawing Number	4856/E/100	Revision	PL2



- NOTES:
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND LEGEND DRAWING.
 - DO NOT SCALE FROM THIS DRAWING.

Symbol	Level	Quantity	Code	Description	Quantity	Value
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
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16	16	16	16	16	16	16
17	17	17	17	17	17	17
18	18	18	18	18	18	18
19	19	19	19	19	19	19
20	20	20	20	20	20	20

Statistics				
Description	Symbol	Avg	Min	Min/Avg
5m Cor Park bund sample area	+	7 lux	0 lux	0.00
5m bund Cor Park Area	+	7 lux	0 lux	0.00
5m bund delivery area	+	10 lux	1 lux	0.10
All other site areas	+	1 lux	0 lux	0.00
Footpath Access	+	9 lux	1 lux	0.11
Roadway	+	16 lux	5 lux	0.31
Split Light Outside Boundary	+	0 lux	0 lux	N/A
Unit 1 Loading Zone	+	79 lux	44 lux	0.56
Unit 1 Parking	+	12 lux	5 lux	0.42
Unit 1 Service Yard	+	25 lux	10 lux	0.40
Unit 2 Loading Zone	+	60 lux	25 lux	0.42
Unit 2 Parking	+	23 lux	8 lux	0.35
Unit 2 Service Yard	+	28 lux	12 lux	0.43
Unit 3 Loading Zone	+	56 lux	37 lux	0.66
Unit 3 Parking	+	15 lux	6 lux	0.40
Unit 3 Service Yard	+	26 lux	11 lux	0.42

PL2	BACKGROUND UPDATED TO LATEST LAYOUT	FEB 2021
Ref.	Revision	Date

PLANNING

 **watkins payne**
designed • engineered • focused

Watkins Payne Partnership
758 Canalside Street, London, W15 3DF
10 Station Road, London, W15 3DF
T: 0207 6788333 F: 0207 6788334
E: wpp@watkinspayne.co.uk W: watkinspayne.co.uk

Client
CLOWES DEVELOPMENTS (UK) LIMITED

Project
FORMER LANDFILL SITE
BROCKHAMPTON WEST
HART'S FARM WAY

Title
EXTERNAL LIGHTING LAYOUT

Date	JANUARY 2021	Scale at A0	1:500
Drawn By	PDJ	Validated	
Checked			
Drawing Number	4856/E/101	Revision	PL2