

External Lighting Site Masterplan

Installation : Grand Union Village SEND

Project number :

Customer : Antham

Processed by : Tim Crosby

Date : 28.02.2022

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

1 Luminaire data

1.1 Whitecroft Lighting, SPECTRE WX (SPXAH14K)

1.1.1 Data sheet

Manufacturer: Whitecroft Lighting



SPXAH14K wall-mounted luminaire SPECTRE WX
SPECTRE WX

IP65 wall mounted LED semi-conical luminaire with forward throw. Die cast aluminium body with thermal shock resistant clear tempered glass. Includes first fix wall mounting bracket.

Emergency Lumens:- 704lm

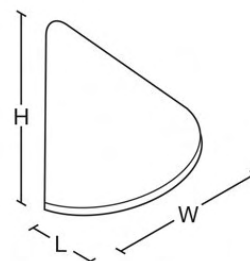
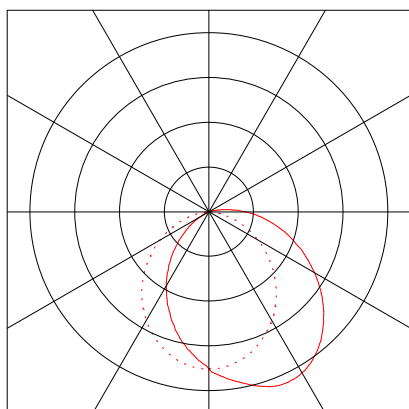
Luminaire data

Absolute Photometry
 Luminaire efficacy : 124.31 lm/W
 Classification : A40 ↓98.1% ↑1.9%
 CIE Flux Codes : 47 77 93 98 100
 UGR 4H 8H : 30.7 / 24.0
 Control gear : electronic ballast
 Power : 9 W
 Luminous flux : 1118.8 lm

Equipped with

Quantity : 1
 Designation : LED
 Colour : 4000K
 Colour reproduction : 80

Dimensions : 375 mm x 224 mm x 329 mm



Emergency Lighting

Light source from normal operation with reduced flux
 Luminous flux : 704 lm

1 Luminaire data

1.2 Whitecroft Lighting, SELISE (SEL1H14KW)

1.2.1 Data sheet

Manufacturer: Whitecroft Lighting



SEL1H14KW EXTERIOR SELISE
SELISE SMALL

IP66 LED floodlight with small cast aluminium body and integrated cooling fins.

With wide distribution and zero upward light when mounted horizontally.

Electronic control gear with temperature regulator to operate 4000K LED light engines.

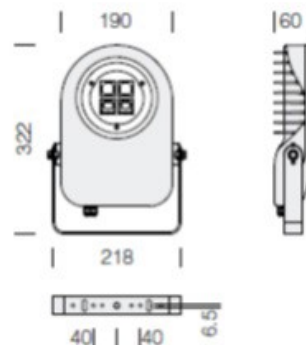
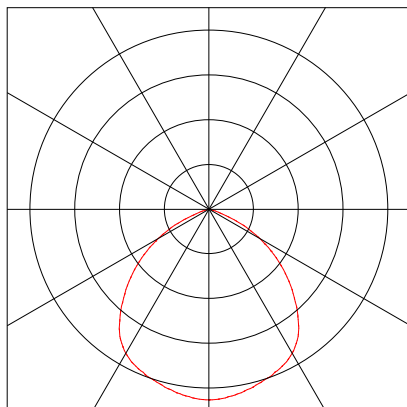
Luminaire data

Luminaire efficiency : 100%
 Luminaire efficacy : 91.52 lm/W
 Classification : A50 ↓100.0% ↑0.0%
 CIE Flux Codes : 58 91 100 100 100
 UGR 4H 8H : 23.1 / 23.1
 Control gear : electronic ballast
 Power : 29 W
 Luminous flux : 2654 lm

Equipped with

Quantity : 1
 Designation : LED
 Power : 29 W
 Colour : 4000K
 Luminous flux : 2654 lm
 Colour reproduction : 1B

Dimensions : 218 mm x 322 mm x 60 mm



1 Luminaire data

1.3 Whitecroft Lighting, Sirocco Midi Road Optic 4M column ()

1.3.1 Data sheet

Sirocco Midi Road Optic 4M column

Luminaire arrangement for:

	Position			Rotation		
	x[m]	y[m]	z[m]	Z[°]	C0[°]	C90[°]
SIROCCO MIDI - ROAD OPTIC (SIMDH... :	0.000	0.500	4.000	0	5	0

Position is the LDC position of the luminaire.

SIMDH14KG Wall / pole mounted luminaire SIROCCO MIDI - ROAD OPTIC

IP66 LED post top luminaire with lightweight die cast aluminium body. High efficacy performance with a choice of road and area lighting distribution patterns and zero upward light when mounted horizontally. Electronic control gear with voltage surge protection and isolating safety switch – as Whitecroft Lighting SIROCCO MIDI.

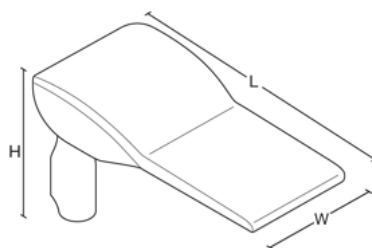
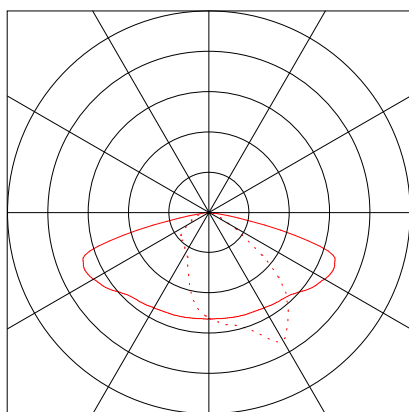
Luminaire data

Absolute Photometry	:	
Luminaire efficacy	:	149.97 lm/W
Classification	:	A30 ↓ 100.0% ↑ 0.0%
CIE Flux Codes	:	39 73 97 100 100
Glare	:	G*4 / D6
Control gear	:	electronic ballast
Power	:	34 W
Luminous flux	:	5099 lm

Equipped with

Quantity	:	1
Designation	:	LED
Colour	:	4000K
Colour reproduction	:	80

Dimensions : 558 mm x 293 mm x 115 mm



Object : External Lighting Site Masterplan
Installation : Grand Union Village SEND
Project number :
Date : 28.02.2022

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1 Luminaire data

1.4 Whitecroft Lighting, KOLO IP65 (K6H4204KS)

1.4.1 Data sheet

Manufacturer: Whitecroft Lighting



K6H4204KS ceiling mounted luminaire **KOLO IP65**
KOLO IP65

Surface mounted circular IP65 LED vandal resitant luminaire in 400mm diameter. Polycarbonate opal diffuser with optional 3 hour emergency.

Emergency Output - 500lm

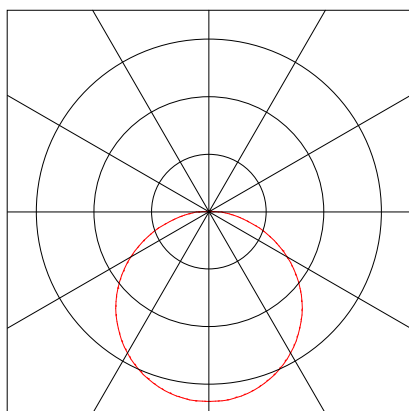
Luminaire data

Absolute Photometry
Luminaire efficacy : 131.05 lm/W
Classification : A40 ↓98.9% ↑1.1%
CIE Flux Codes : 45 76 94 99 100
UGR 4H 8H : 22.5 / 22.5
Control gear : electronic ballast
Power : 18 W
Luminous flux : 2359 lm

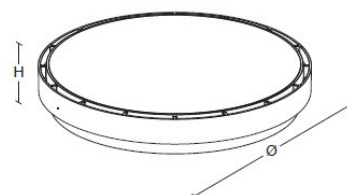
Equipped with

Quantity : 1
Designation : LED
Colour : 4000K
Colour reproduction : 80

Dimensions : Ø400 mm x 95 mm



Dimensions



Version	Ø	H	KG	KG
300mm surface	300	95	2.1	2.5
400mm surface	400	95	3.5	3.9

Emergency Lighting

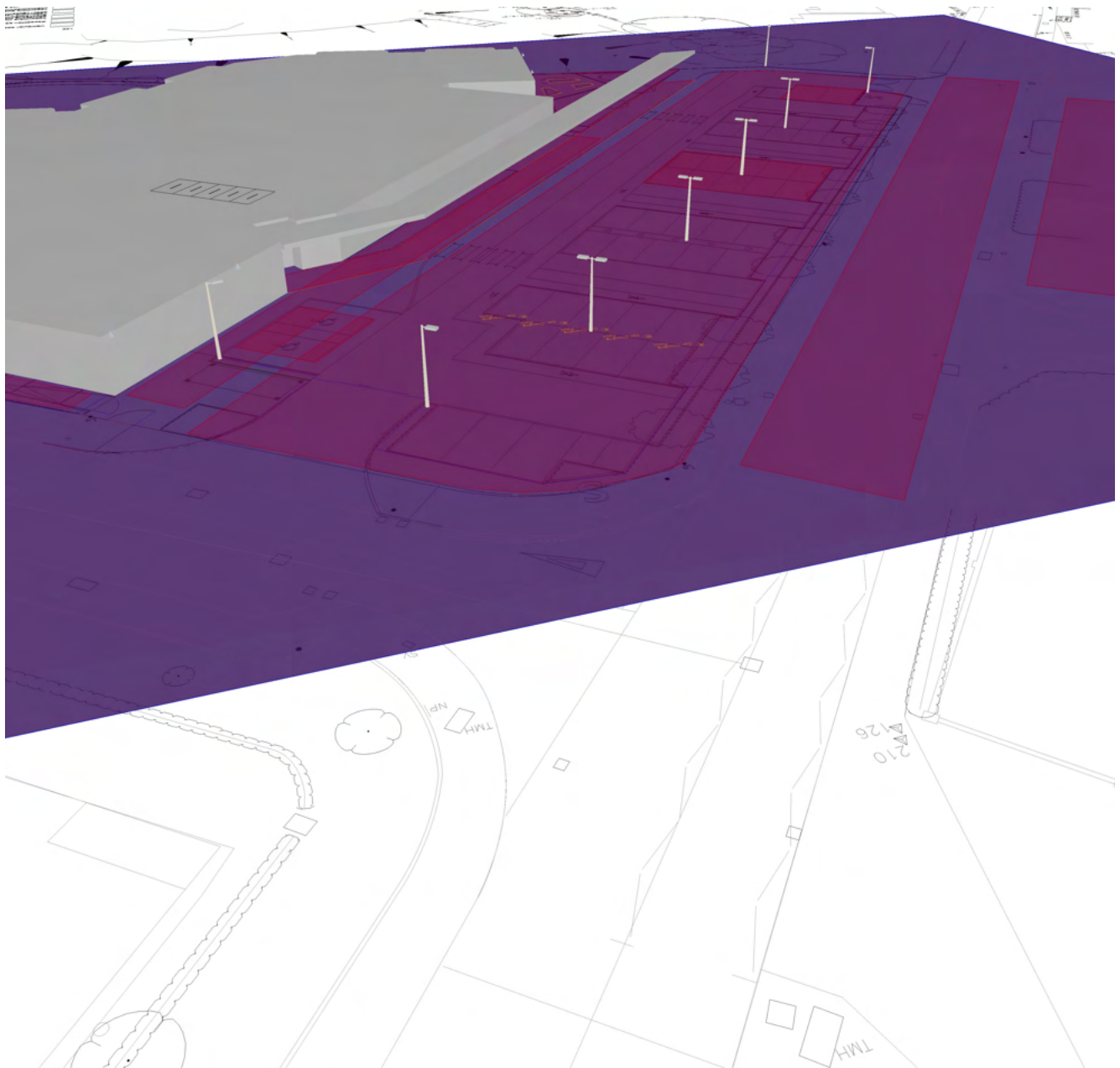
Light source from normal operation with reduced flux
Luminous flux : 500 lm

2.1.1 Floor plan



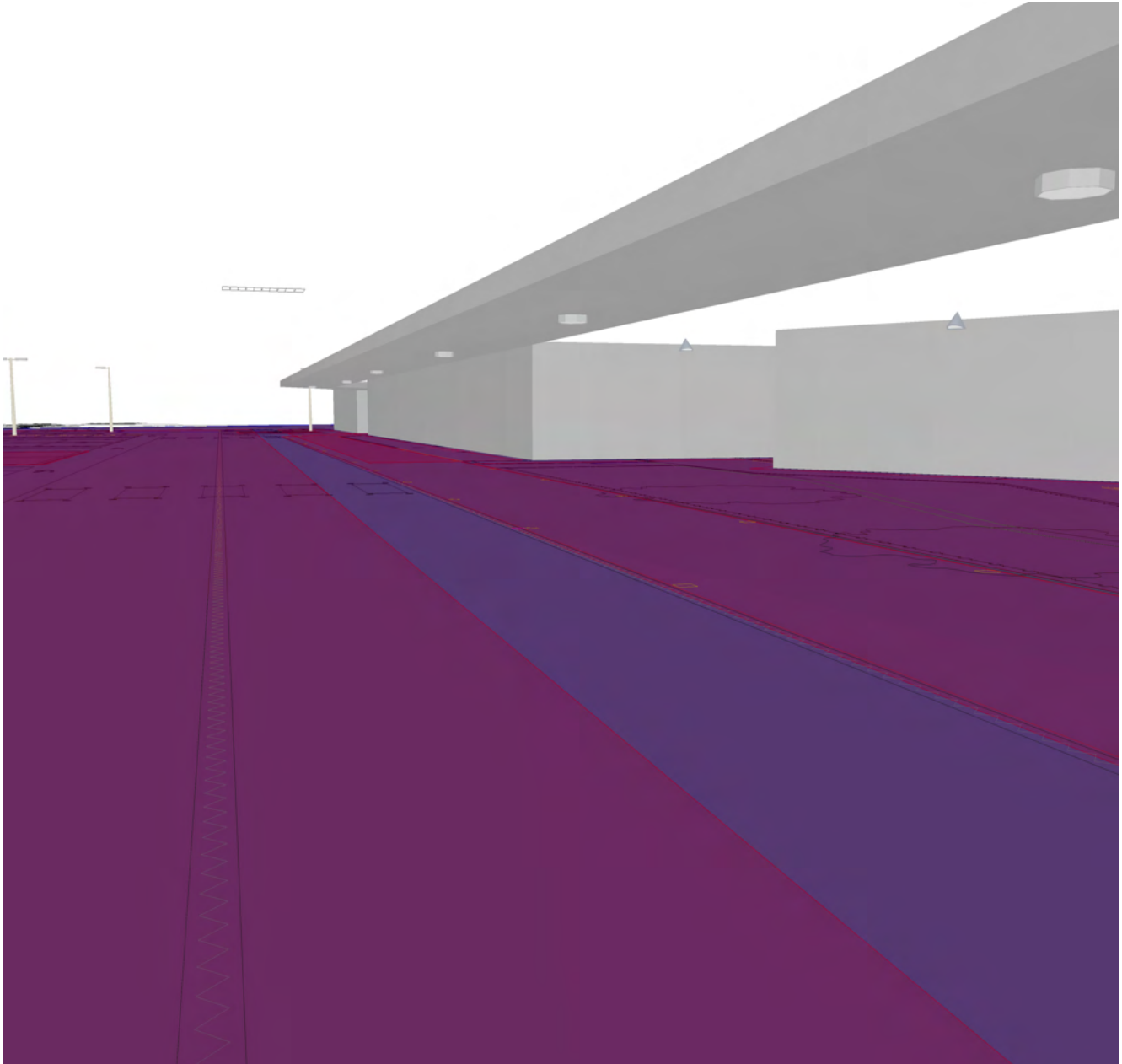
2.1 Description, Exterior Antham Design

2.1.2 3D view, View 1



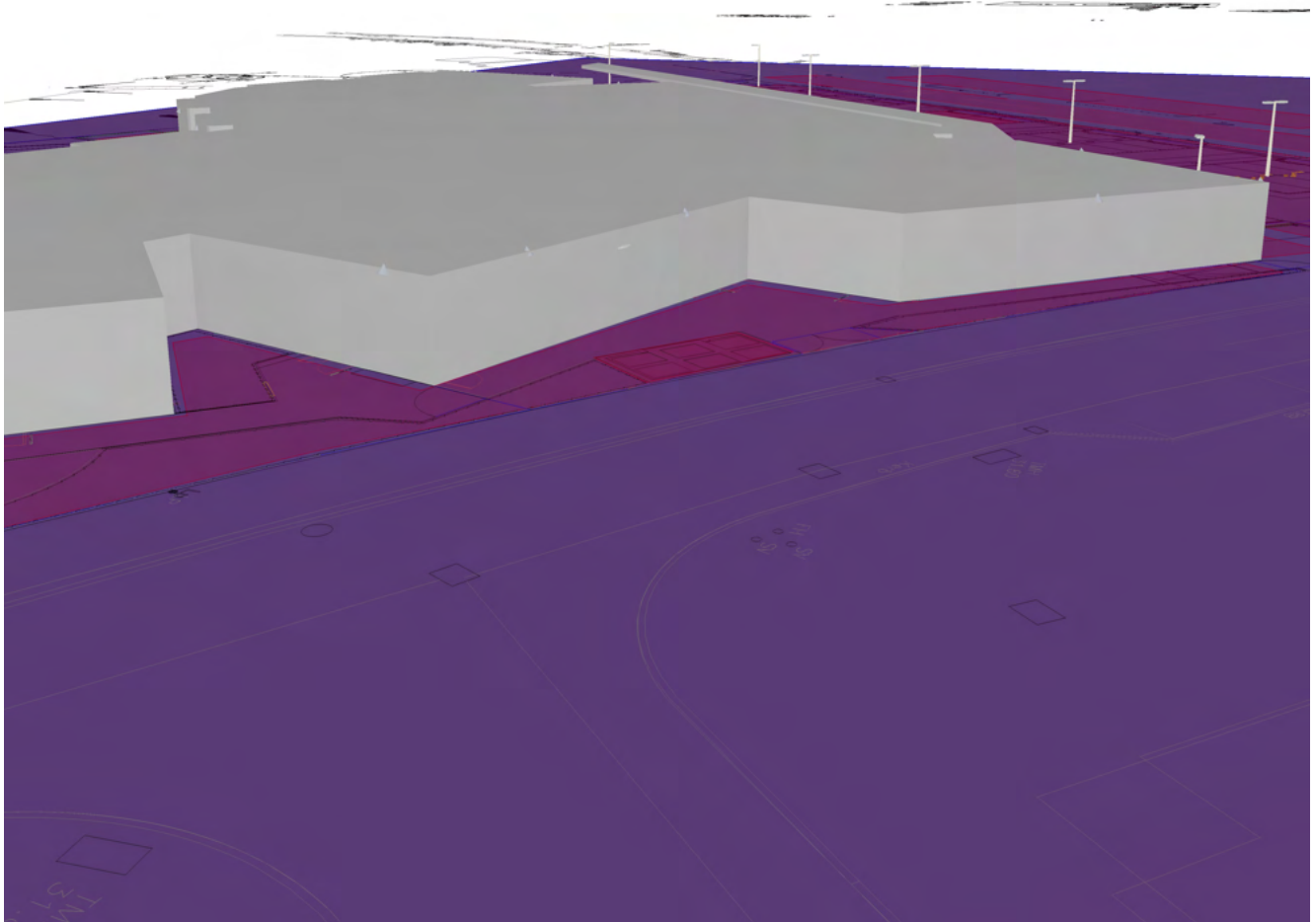
2.1 Description, Exterior Antham Design

2.1.3 3D view, View 2



2.1 Description, Exterior Antham Design

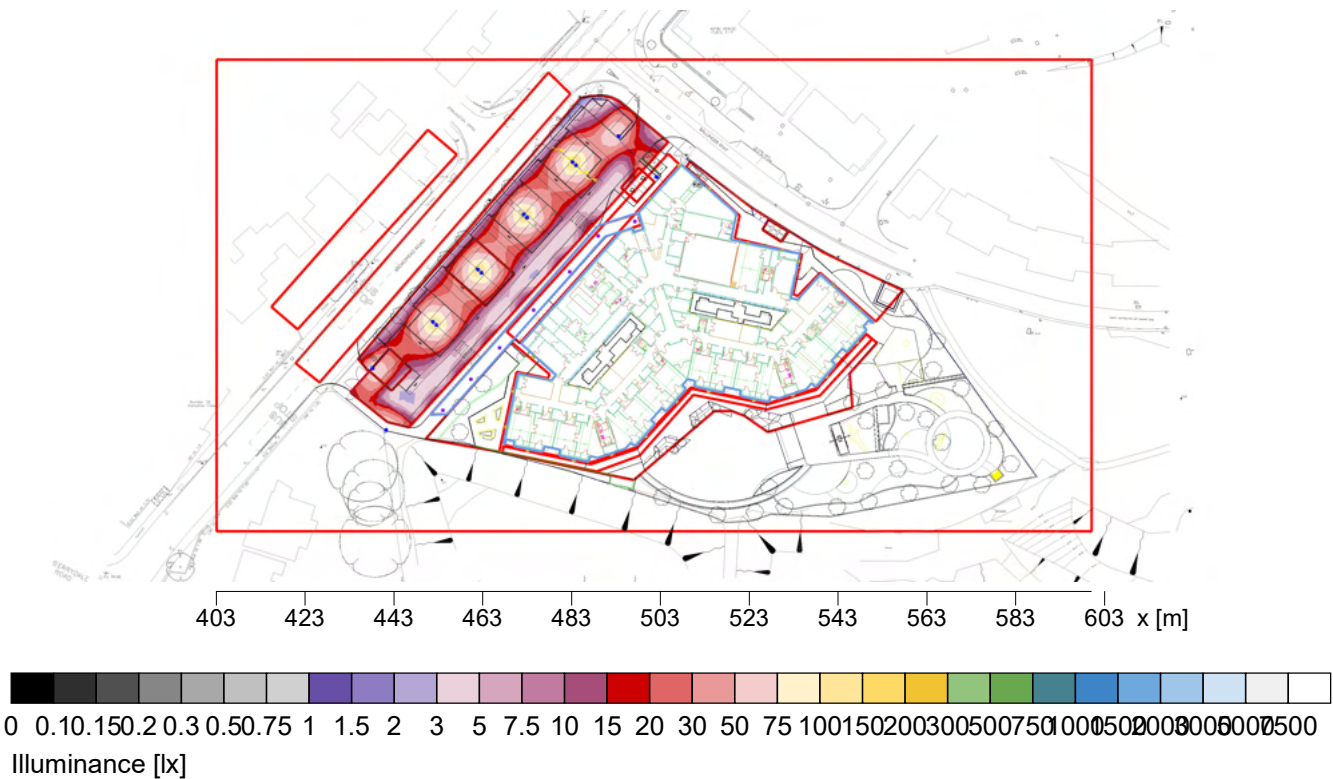
2.1.4 3D view, View 3



2 Exterior Antham Design

2.2 Summary, Exterior Antham Design

2.2.1 Result overview, Car Park



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	24 lx
Minimum illuminance	Emin	2 lx
Maximum illuminance	E _{max}	123 lx
Uniformity U _o	Emin/Em	1:13.4 (0.07)
Diversity U _d	Emin/E _{max}	1:69.4 (0.01)

Type No.\Make

Whitecroft Lighting

1 22 Order No. : SPXAH14K
 Luminaire name : SPECTRE WX
 Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm

Object : External Lighting Site Masterplan
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2 Exterior Antham Design

2.2 Summary, Exterior Antham Design

2.2.1 Result overview, Car Park

3 12



Order No. :
Luminaire name : Sirocco Midi Road Optic 4M column
with : 1 x SIMDH14KG
Equipment : 1 x LED 34 W / 5099 lm

4 7

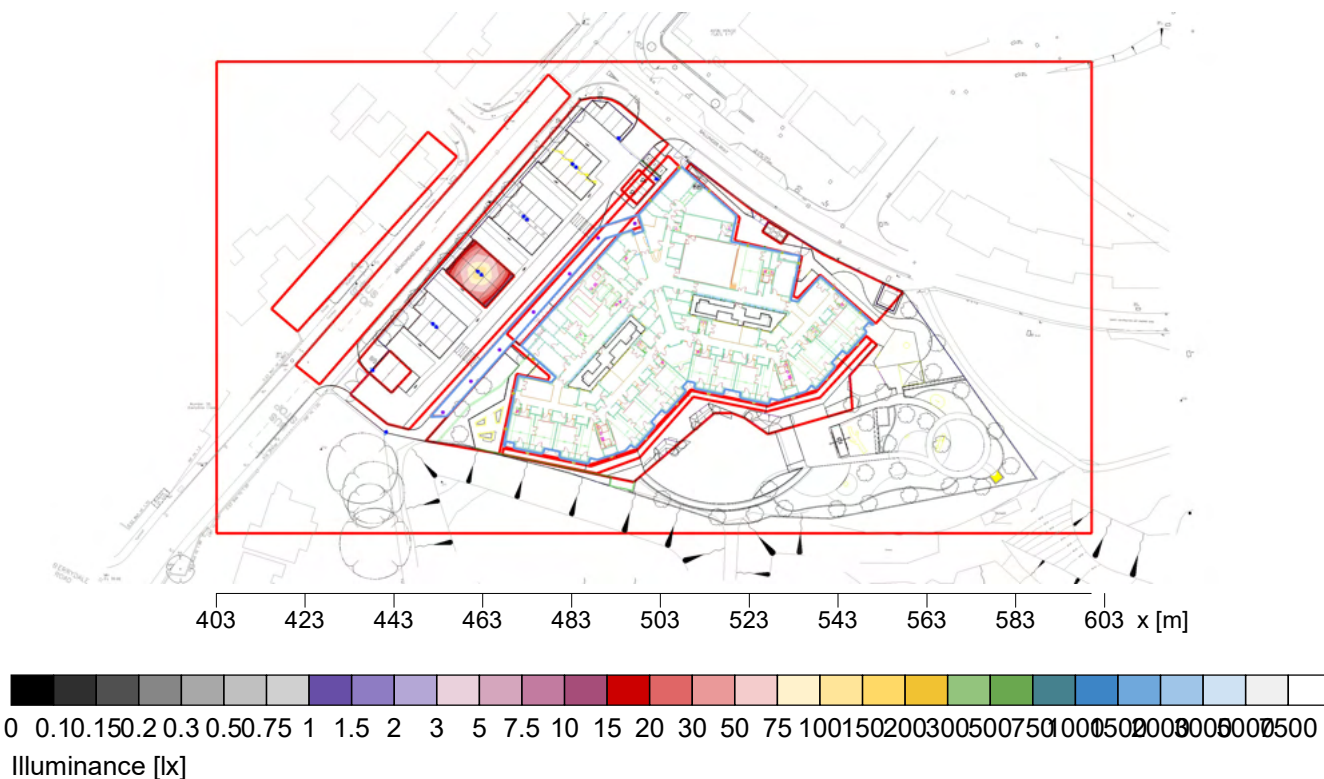


Whitecroft Lighting

Order No. : K6H4204KS
Luminaire name : KOLO IP65
Equipment : 1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.2 Result overview, Car Park Bays



General

Calculation algorithm used
 Height of evaluation surface
 Maintenance factor

Average indirect fraction
 0.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (20882.00 m²)

104973 lm
 761 W
 0.04 W/m²

Illuminance

Average illuminance
 Minimum illuminance
 Maximum illuminance
 Uniformity U₀
 Diversity U_d

Em
 Emin
 Emax
 Emin/Em
 Emin/Emax

48 lx
 11 lx
 117 lx
 1:4.21 (0.24)
 1:10.2 (0.1)

Type No. Make

Whitecroft Lighting			
1	22	Order No.	: SPXAH14K
		Luminaire name	: SPECTRE WX
		Equipment	: 1 x LED 9 W / 1119 lm
2	1	Order No.	: SEL1H14KW
		Luminaire name	: SELISE
		Equipment	: 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.2 Result overview, Car Park Bays

312



Order No.

:

Luminaire name

:

Sirocco Midi Road Optic 4M column

with

:

1 x SIMDH14KG

Equipment

:

1 x LED 34 W / 5099 lm

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Whitecroft Lighting

Order No.

:

K6H4204KS

Luminaire name

:

KOLO IP65

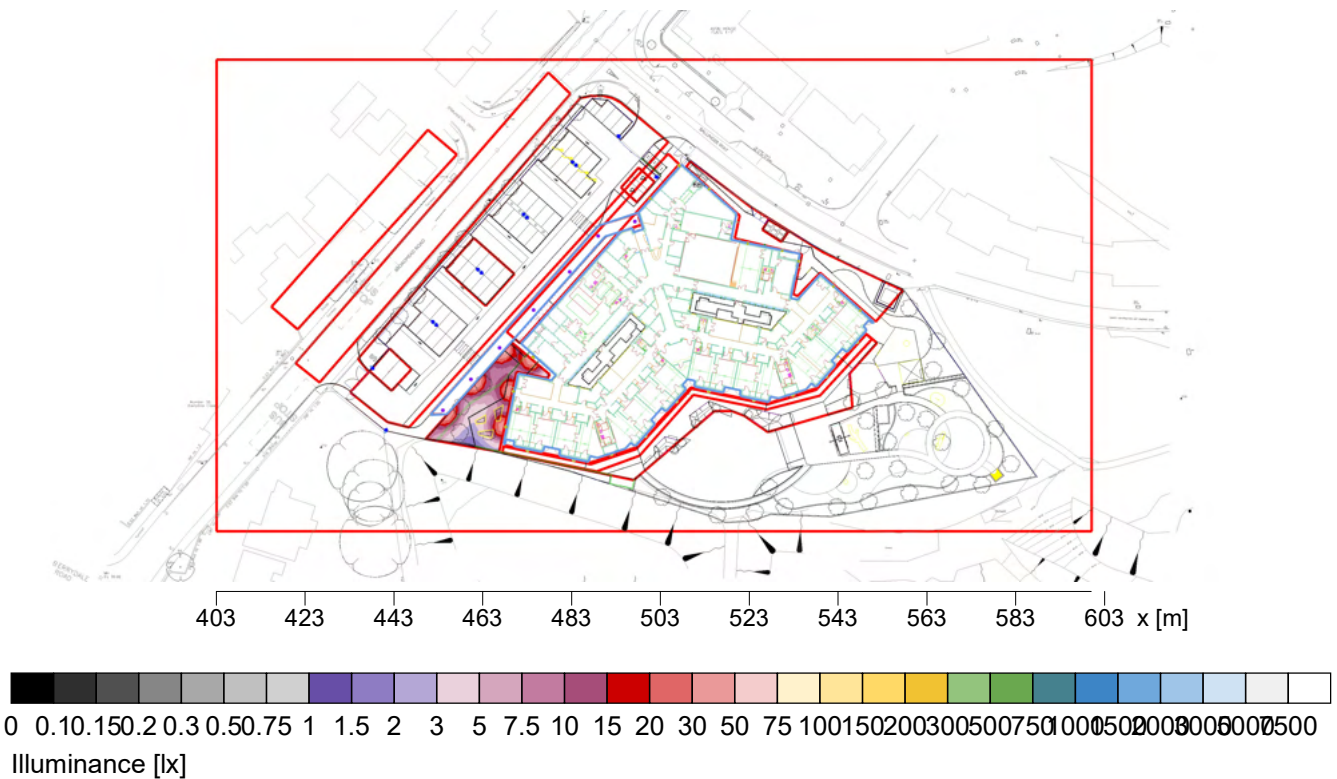
Equipment

:

1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.3 Result overview, Perimeter task area 1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	11.3 lx
Minimum illuminance	Emin	1.4 lx
Maximum illuminance	E _{max}	43.9 lx
Uniformity U _o	Emin/Em	1:8.1 (0.12)
Diversity U _d	Emin/E _{max}	1:31.6 (0.03)

Type No.\Make

Whitecroft Lighting

1 22 Order No. : SPXAH14K
 Luminaire name : SPECTRE WX
 Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.3 Result overview, Perimeter task area 1

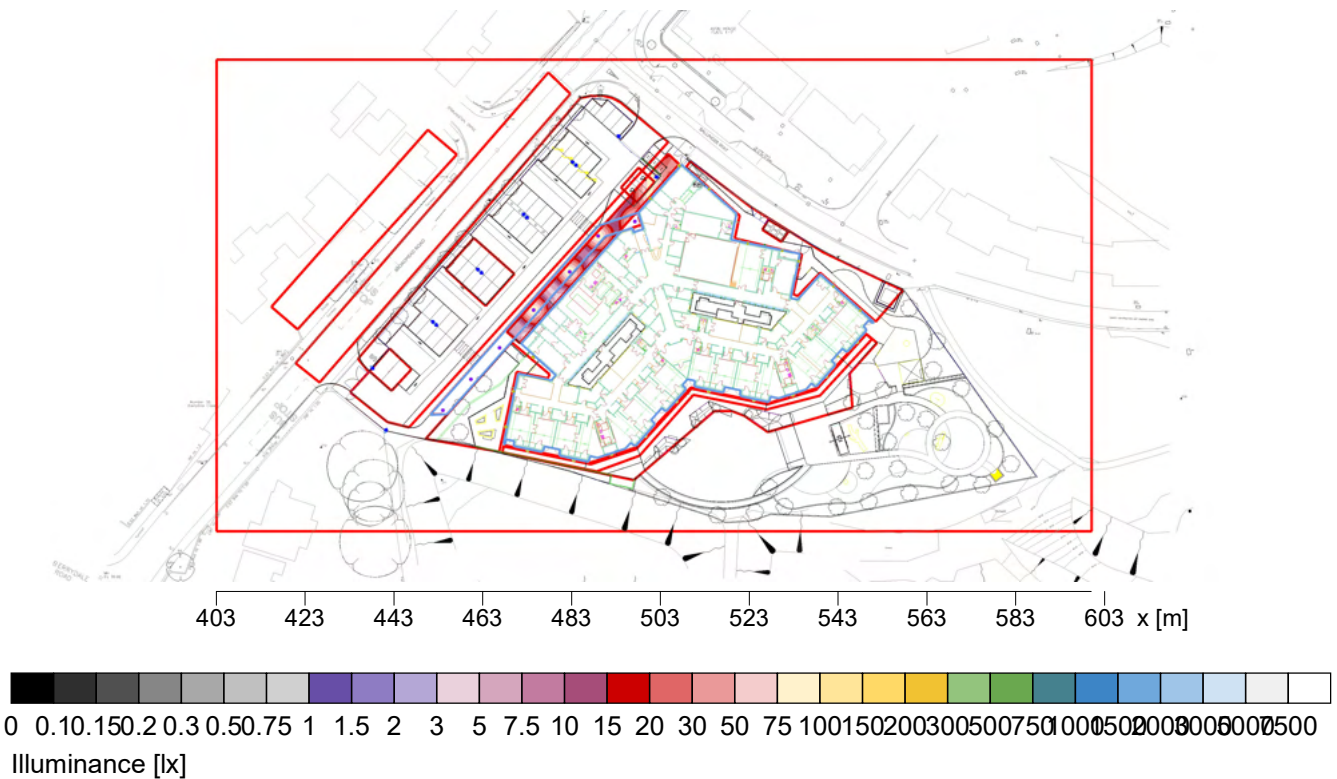
3	12	Order No.	:	
		Luminaire name	:	Sirocco Midi Road Optic 4M column
		with	:	1 x SIMDH14KG
		Equipment	:	1 x LED 34 W / 5099 lm

Whitecroft Lighting

4	7	Order No.	:	K6H4204KS
		Luminaire name	:	KOLO IP65
		Equipment	:	1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.4 Result overview, Perimeter task area 2



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	31 lx
Minimum illuminance	Emin	4 lx
Maximum illuminance	E _{max}	104 lx
Uniformity U _o	Emin/Em	1:7.75 (0.13)
Diversity U _d	Emin/E _{max}	1:26.1 (0.04)

Type No.\Make

Whitecroft Lighting

Order No. : SPXAH14K
 Luminaire name : SPECTRE WX
 Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.4 Result overview, Perimeter task area 2

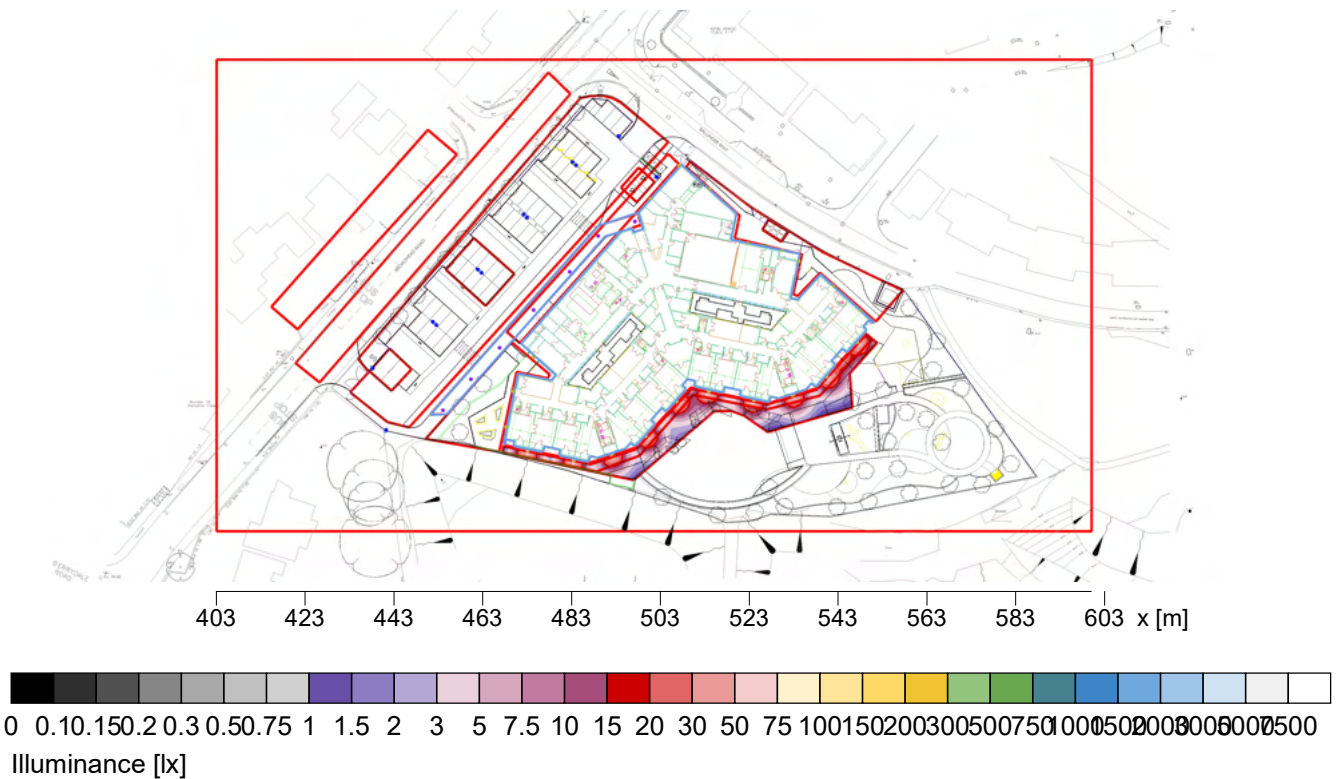
3	12	Order No.	:	
		Luminaire name	:	Sirocco Midi Road Optic 4M column
		with	:	1 x SIMDH14KG
		Equipment	:	1 x LED 34 W / 5099 lm

Whitecroft Lighting

4	7	Order No.	:	K6H4204KS
		Luminaire name	:	KOLO IP65
		Equipment	:	1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.5 Result overview, Perimeter task area 3



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	11 lx
Minimum illuminance	Emin	1 lx
Maximum illuminance	E _{max}	58.2 lx
Uniformity U _o	Emin/Em	1:11.3 (0.09)
Diversity U _d	Emin/E _{max}	1:59.6 (0.02)

Type No.\Make

Whitecroft Lighting

Order No. : SPXAH14K
 Luminaire name : SPECTRE WX
 Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.5 Result overview, Perimeter task area 3

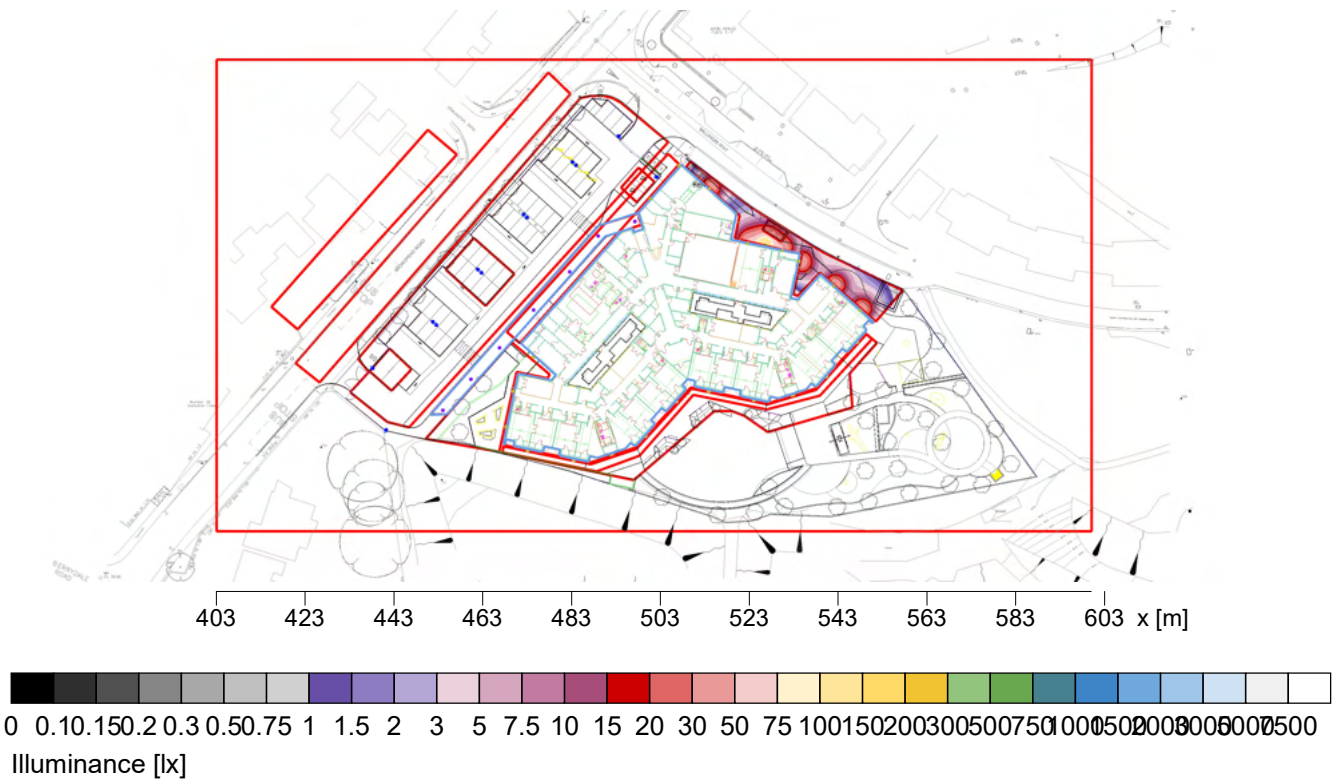
3	12	Order No.	:	
		Luminaire name	:	Sirocco Midi Road Optic 4M column
		with	:	1 x SIMDH14KG
		Equipment	:	1 x LED 34 W / 5099 lm

Whitecroft Lighting

4	7	Order No.	:	K6H4204KS
		Luminaire name	:	KOLO IP65
		Equipment	:	1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.6 Result overview, Perimeter task area 4



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	14 lx
Minimum illuminance	Emin	0 lx
Maximum illuminance	E _{max}	148 lx
Uniformity U _o	Emin/Em	1:32.3 (0.03)
Diversity U _d	Emin/E _{max}	1:331 (0)

Type No.\Make

Whitecroft Lighting

Order No. : SPXAH14K
 Luminaire name : SPECTRE WX
 Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.6 Result overview, Perimeter task area 4

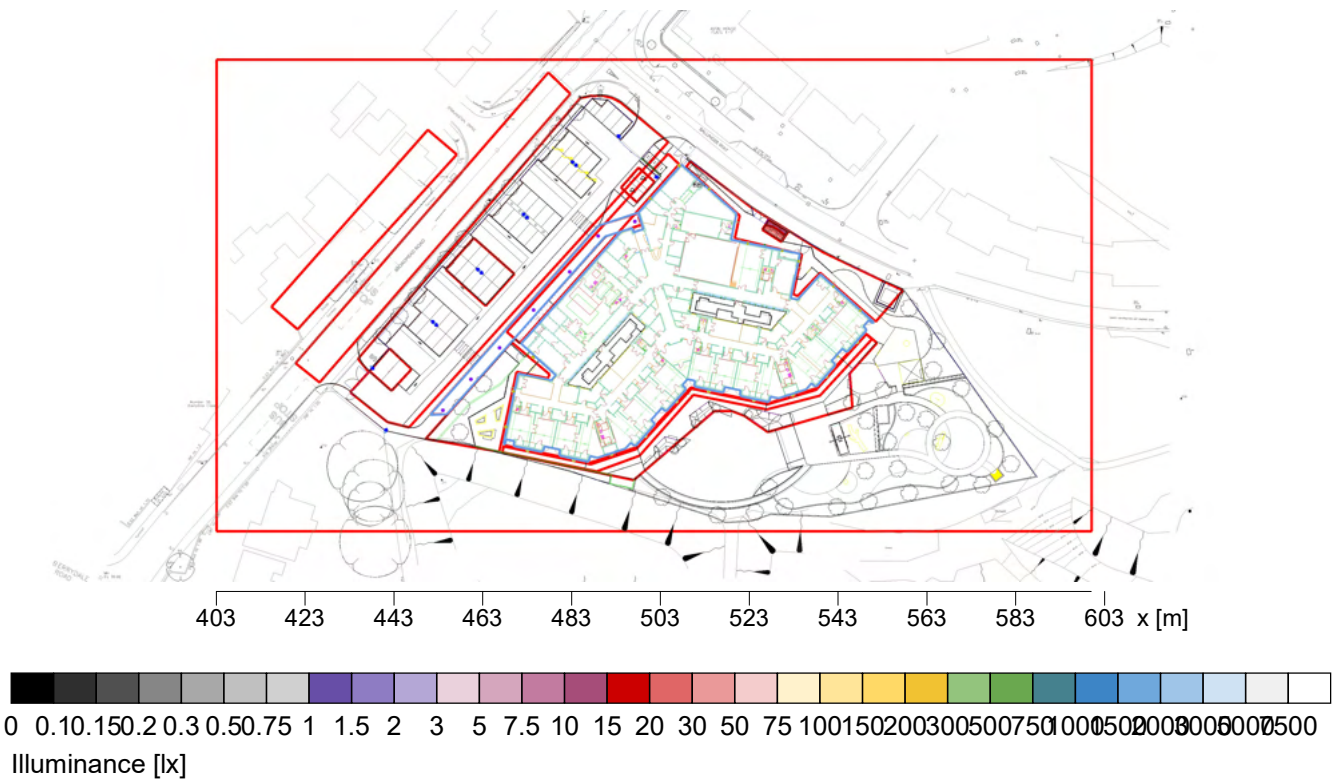
3	12	Order No.	:	
		Luminaire name	:	Sirocco Midi Road Optic 4M column
		with	:	1 x SIMDH14KG
		Equipment	:	1 x LED 34 W / 5099 lm

Whitecroft Lighting

4	7	Order No.	:	K6H4204KS
		Luminaire name	:	KOLO IP65
		Equipment	:	1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.7 Result overview, Bin Store



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	21.3 lx
Minimum illuminance	Emin	9.4 lx
Maximum illuminance	E _{max}	39.3 lx
Uniformity U _o	Emin/Em	1:2.27 (0.44)
Diversity U _d	Emin/E _{max}	1:4.2 (0.24)

Type No.\Make

Whitecroft Lighting

Order No. : SPXAH14K
 Luminaire name : SPECTRE WX
 Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.7 Result overview, Bin Store

312



Order No.

:

Luminaire name

:

Sirocco Midi Road Optic 4M column

with

:

1 x SIMDH14KG

Equipment

:

1 x LED 34 W / 5099 lm

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Whitecroft Lighting

Order No.

:

K6H4204KS

Luminaire name

:

KOLO IP65

Equipment

:

1 x LED 18 W / 2359 lm

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2.2.8 Result overview, Grand Union Sign



2.2 Summary, Exterior Antham Design

2.2.8 Result overview, Grand Union Sign

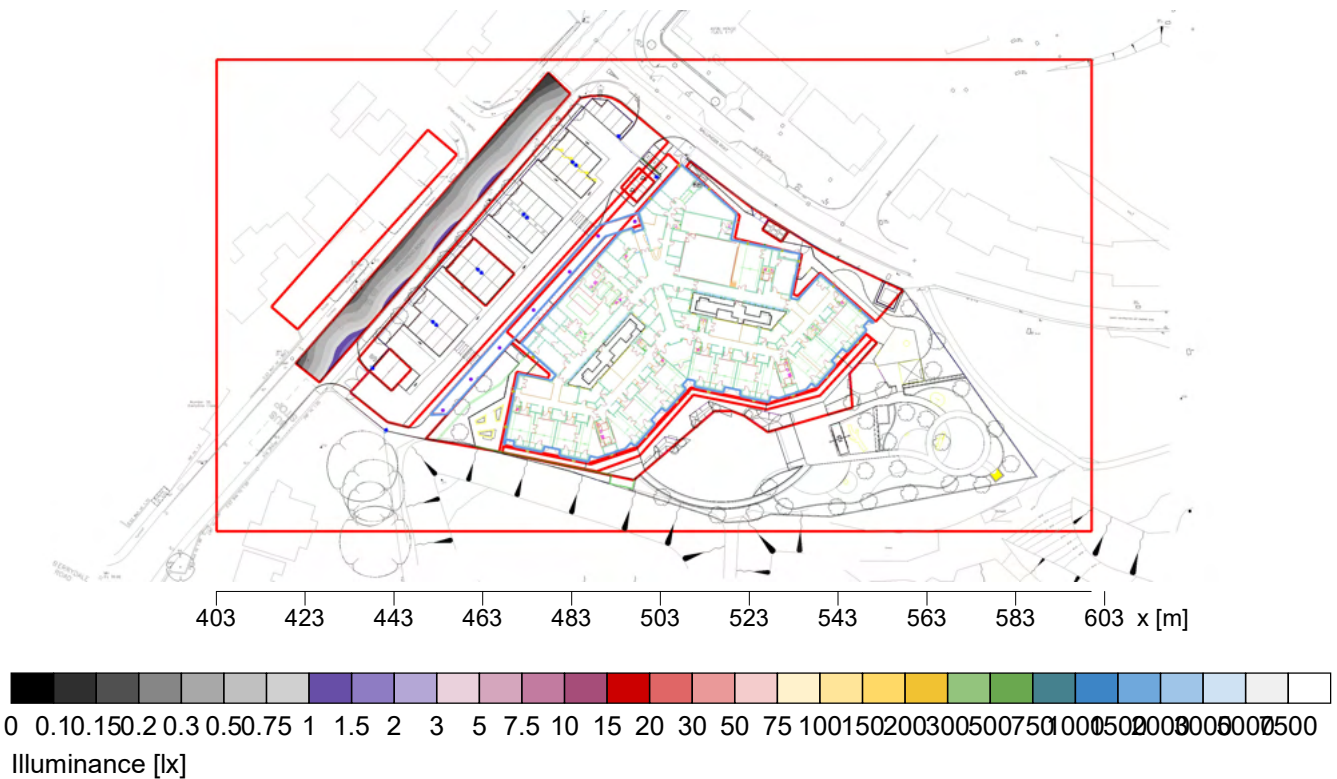
3	12	Order No.	:	
		Luminaire name	:	Sirocco Midi Road Optic 4M column
		with	:	1 x SIMDH14KG
		Equipment	:	1 x LED 34 W / 5099 lm

Whitecroft Lighting

4	7	Order No.	:	K6H4204KS
		Luminaire name	:	KOLO IP65
		Equipment	:	1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.9 Result overview, Broadmead Road Task Area



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	0.45 lx
Minimum illuminance	Emin	0.1 lx
Maximum illuminance	Emax	1.83 lx
Uniformity Uo	Emin/Em	1:4.7 (0.21)
Diversity Ud	Emin/Emax	1:19 (0.05)

Type No.\Make

Whitecroft Lighting

Order No. : SPXAH14K
 Luminaire name : SPECTRE WX
 Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.9 Result overview, Broadmead Road Task Area

312



Order No.

:

Luminaire name

:

Sirocco Midi Road Optic 4M column

with

:

1 x SIMDH14KG

Equipment

:

1 x LED 34 W / 5099 lm

Whitecroft Lighting

47



Order No.

:

K6H4204KS

Luminaire name

:

KOLO IP65

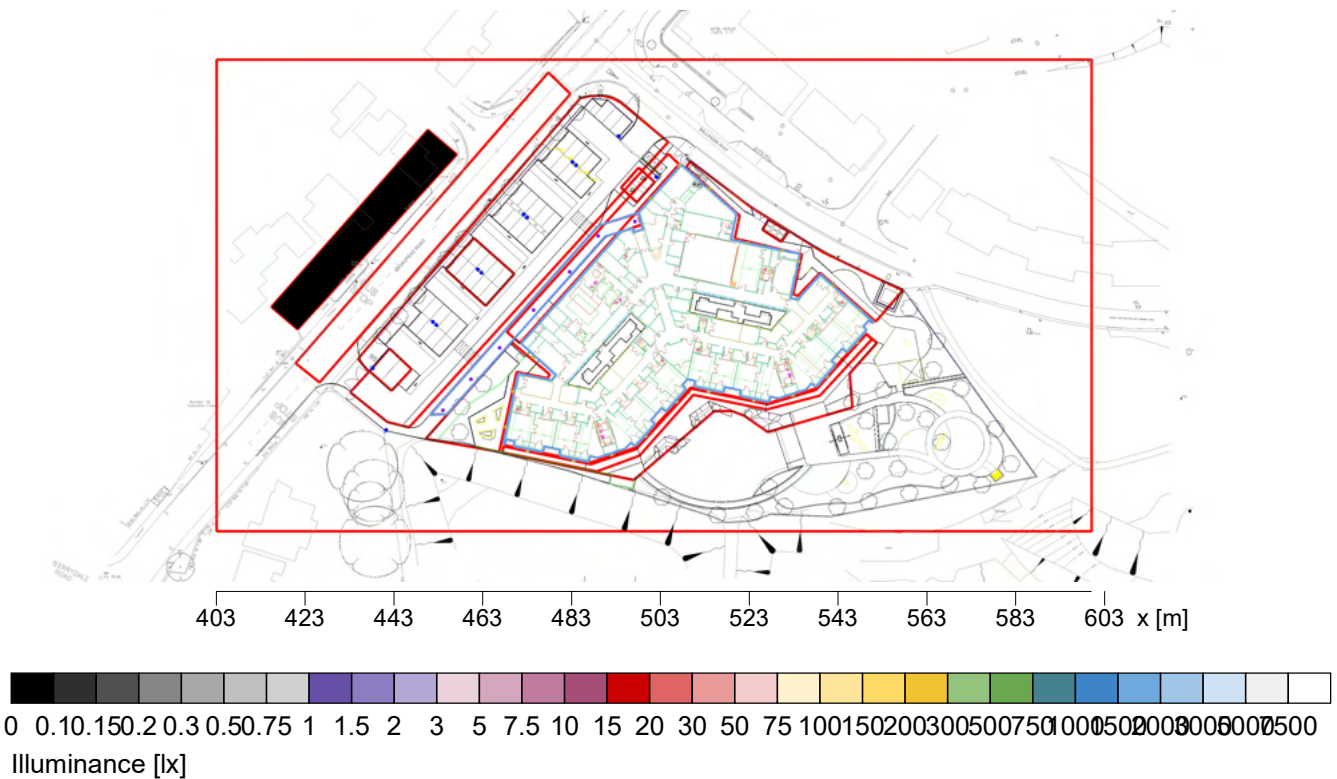
Equipment

:

1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.10 Result overview, Adjacent housing task area



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	0.04 lx
Minimum illuminance	Emin	0.02 lx
Maximum illuminance	E _{max}	0.07 lx
Uniformity U _o	Emin/Em	1:2.31 (0.43)
Diversity U _d	Emin/E _{max}	1:4.44 (0.23)

Type No.\Make

Whitecroft Lighting

1 22 Order No. : SPXAH14K
 Luminaire name : SPECTRE WX
 Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.10 Result overview, Adjacent housing task area

312



Order No.

:

Luminaire name

:

Sirocco Midi Road Optic 4M column

with

:

1 x SIMDH14KG

Equipment

:

1 x LED 34 W / 5099 lm

Whitecroft Lighting

47



Order No.

:

K6H4204KS

Luminaire name

:

KOLO IP65

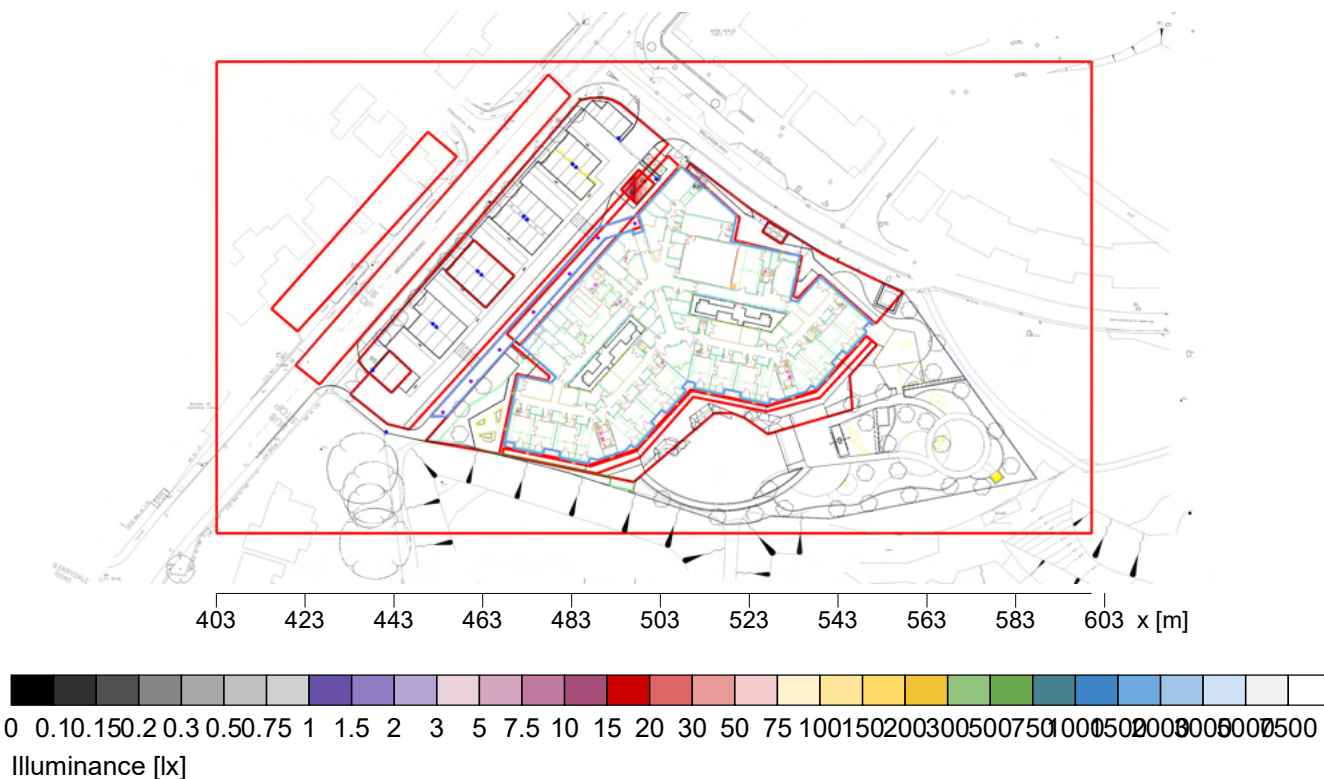
Equipment

:

1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.11 Result overview, Disabled Parking Spaces



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m²)	0.04 W/m²

Illuminance

Average illuminance	Em	32.6 lx
Minimum illuminance	Emin	4.9 lx
Maximum illuminance	Emax	75.9 lx
Uniformity Uo	Emin/Em	1:6.66 (0.15)
Diversity Ud	Emin/Emax	1:15.5 (0.06)

Type No. Make

Whitecroft Lighting

1	22	Order No.	: SPXAH14K
		Luminaire name	: SPECTRE WX
		Equipment	: 1 x LED 9 W / 1119 lm

2	1	Order No.	: SEL1H14KW
		Luminaire name	: SELISE
		Equipment	: 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.11 Result overview, Disabled Parking Spaces

312



Order No.

:

Luminaire name

:

Sirocco Midi Road Optic 4M column

with

:

1 x SIMDH14KG

Equipment

:

1 x LED 34 W / 5099 lm

47



Whitecroft Lighting

Order No.

:

K6H4204KS

Luminaire name

:

KOLO IP65

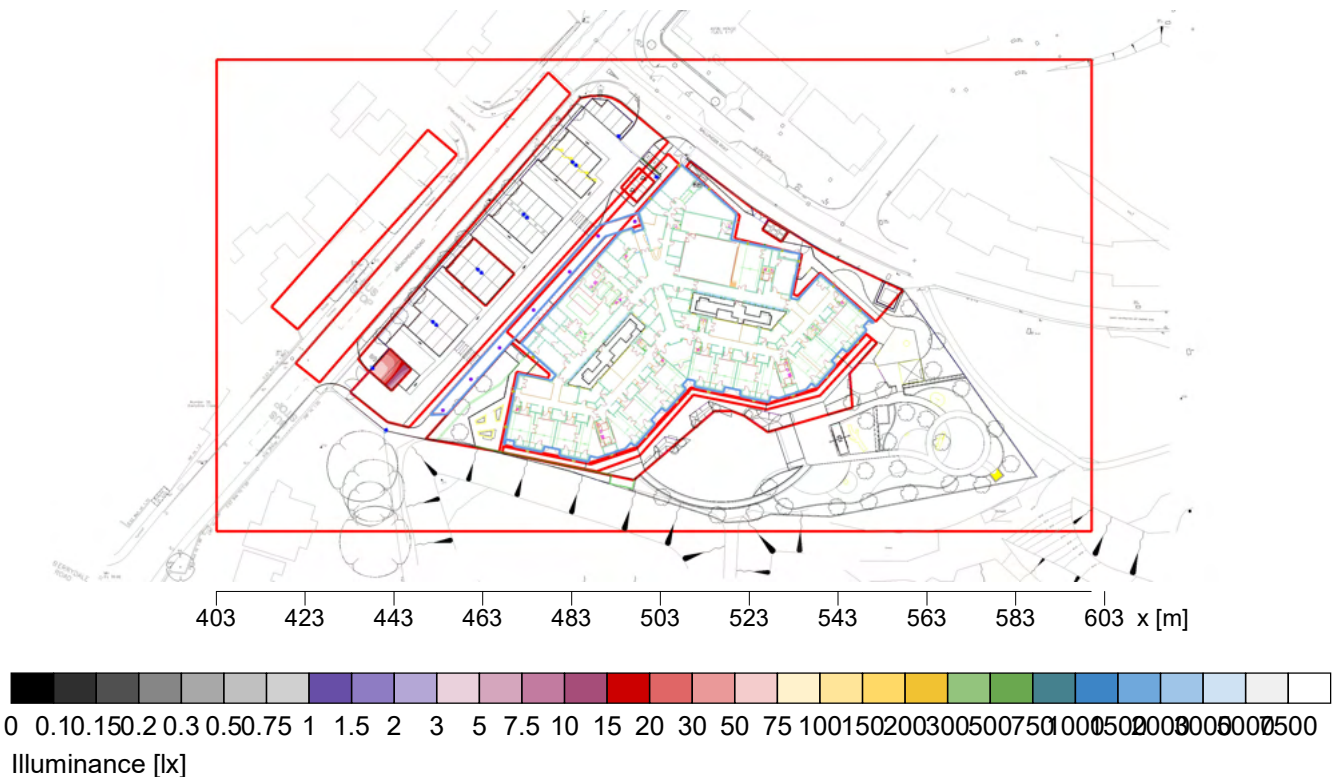
Equipment

:

1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.12 Result overview, Car spaces at Exit gates



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m ²)	0.04 W/m ²

Illuminance

Average illuminance	Em	30.4 lx
Minimum illuminance	Emin	5 lx
Maximum illuminance	E _{max}	69.6 lx
Uniformity U _o	Emin/Em	1:6.08 (0.16)
Diversity U _d	Emin/E _{max}	1:13.9 (0.07)

Type No.\Make

Whitecroft Lighting

Order No. : SPXAH14K
Luminaire name : SPECTRE WX
Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
 Luminaire name : SELISE
 Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.12 Result overview, Car spaces at Exit gates

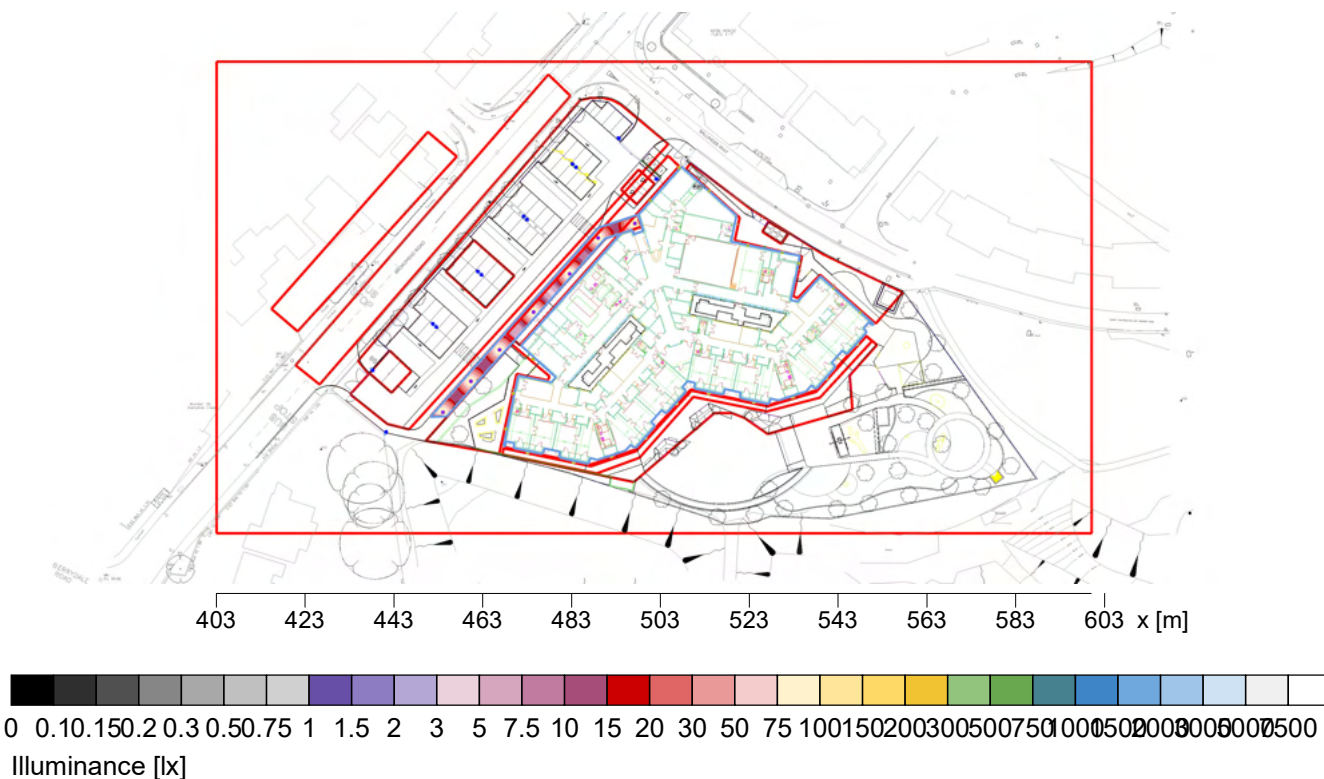
3	12	Order No.	:	
		Luminaire name	:	Sirocco Midi Road Optic 4M column
		with	:	1 x SIMDH14KG
		Equipment	:	1 x LED 34 W / 5099 lm

Whitecroft Lighting

4	7	Order No.	:	K6H4204KS
		Luminaire name	:	KOLO IP65
		Equipment	:	1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.13 Result overview, Covered Walkway task area



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	104973 lm
Total power	761 W
Total power per area (20882.00 m²)	0.04 W/m²

Illuminance

Average illuminance	Em	35 lx
Minimum illuminance	Emin	4 lx
Maximum illuminance	Emax	110 lx
Uniformity Uo	Emin/Em	1:8.32 (0.12)
Diversity Ud	Emin/Emax	1:26 (0.04)

Type No. Make

Whitecroft Lighting	
1	22
	Order No. : SPXAH14K Luminaire name : SPECTRE WX Equipment : 1 x LED 9 W / 1119 lm
2	1
	Order No. : SEL1H14KW Luminaire name : SELISE Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.13 Result overview, Covered Walkway task area

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Order No.

:

Luminaire name

:

Sirocco Midi Road Optic 4M column

with

:

1 x SIMDH14KG

Equipment

:

1 x LED 34 W / 5099 lm

Whitecroft Lighting

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Order No.

:

K6H4204KS

Luminaire name

:

KOLO IP65

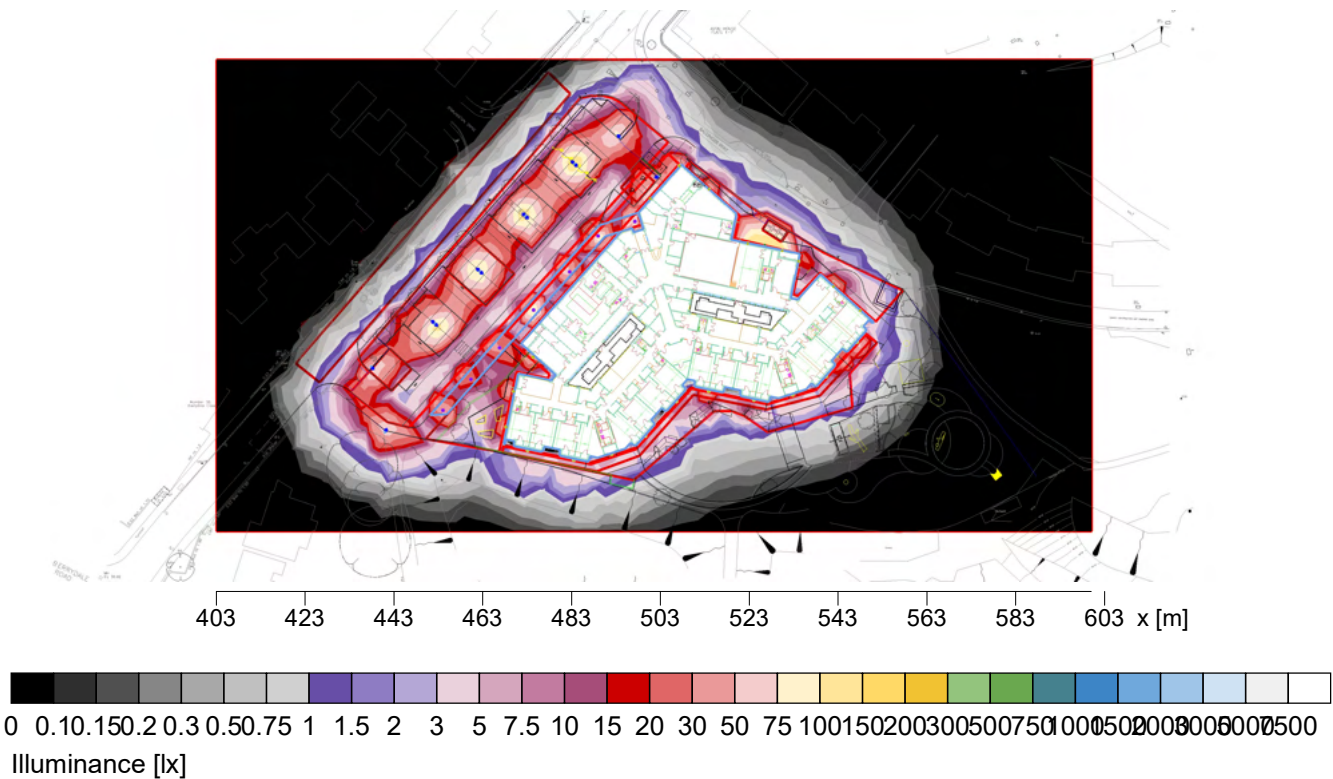
Equipment

:

1 x LED 18 W / 2359 lm

2.2 Summary, Exterior Antham Design

2.2.14 Result overview, Evaluation area 1



General

Calculation algorithm used
Maintenance factor

Average indirect fraction
0.80

Total luminous flux of all lamps
Total power
Total power per area (20882.00 m²)

104973.00 lm
761.0 W
0.04 W/m² (0.95 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Em	Horizon
Emin	3.82 lx
Emin/Em (Uo)	0 lx
Emin/Emax (Ud)	0.00
Position	0.00 m

Type No.\Make

Whitecroft Lighting

Order No. : SPXAH14K
Luminaire name : SPECTRE WX
Equipment : 1 x LED 9 W / 1119 lm

2 1 Order No. : SEL1H14KW
Luminaire name : SELISE
Equipment : 1 x LED 29 W / 2654 lm



2.2 Summary, Exterior Antham Design

2.2.14 Result overview, Evaluation area 1

3	12	Order No.	:	
		Luminaire name	:	Sirocco Midi Road Optic 4M column
		with	:	1 x SIMDH14KG
		Equipment	:	1 x LED 34 W / 5099 lm

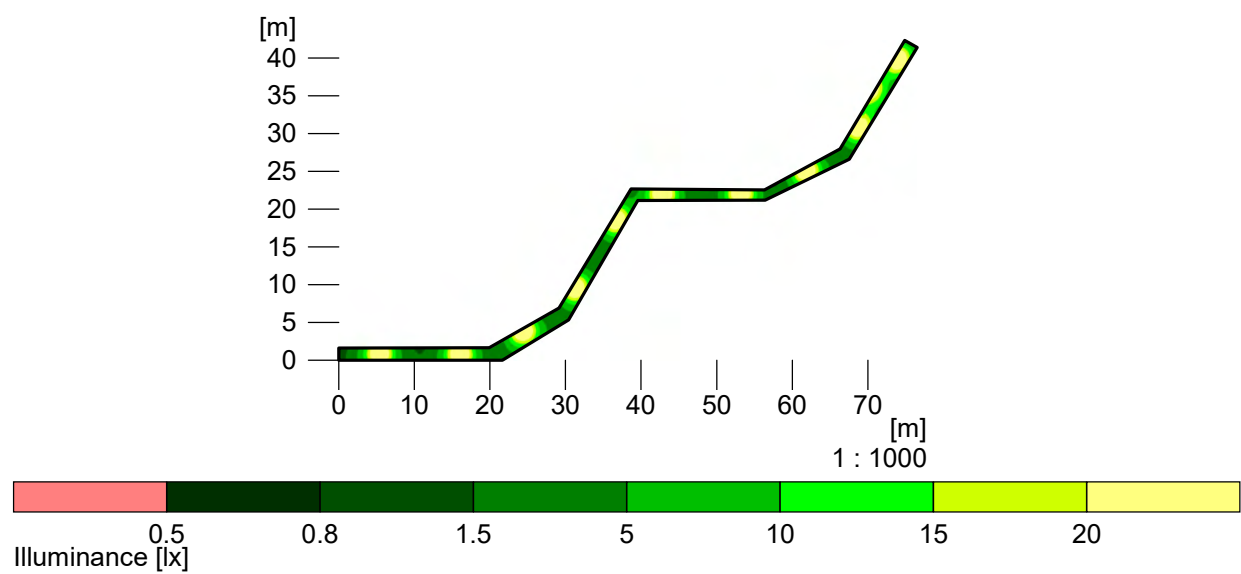
Whitecroft Lighting

4	7	Order No.	:	K6H4204KS
		Luminaire name	:	KOLO IP65
		Equipment	:	1 x LED 18 W / 2359 lm

2 Exterior Antham Design

2.4 Calculation results, Exterior Antham Design

2.4.1 Boundary line, Emergency area 1 (E)



Required minimum illuminance		: 0.5 lx
Minimum illuminance	Emin	: 0.6 lx
Maximum illuminance	Emax	: 36 lx
Diversity	Emin/Emax	: 1 : 58.30 (0.02) (Threshold value 1:40)
Height		: 0 m
Calculation algorithm used		: Direct component
Maintenance factor		: 0.8

Object : External Lighting Site Masterplan
 Installation : Grand Union Village SEND
 Project number :
 Date : 28.02.2022



2.4 Summary, Exterior Antham Design

2.4.2 Result overview (emergency lighting)

Type No.\Make

		Whitecroft Lighting	
1	22	Order No.	: SPXAH14K
		Luminaire name	: SPECTRE WX
		Equipment	: 1 x LED 9 W / 704 lm
4	7	Order No.	: K6H4204KS
		Luminaire name	: KOLO IP65
		Equipment	: 1 x LED 18 W / 500 lm

Result evaluation area

Calculation algorithm used: Direct component

Maintenance factor: 0.8

Emergency area:

No.	Default[lx]	Emin[lx]	Surface Emax[lx]	Diversity	Height
Emergency area 1					
1	0.5	0.6	35.6	1: 58.33	0.00