

Clitheroe Care Home

Installation : External Lighting Calculations

Project number : PA1674
Customer : Eric Wright
Processed by : Samuel Mathieson
Date : 02.02.2023

Project description:

The external lighting has been carefully selected to compliment the natural landscaping proposed. It will comply fully with Part L and the following guides:

- BS5489-1 Lighting of Roads and Public Amenity Areas
- LG6 The Exterior Environment
- GN01 ILP guidance Note 01/21 on The Reduction of Obtrusive Light

The average external illumination levels will be as defined by CfSH, BREEAM and CIBSE/SLL and ILE Lighting Guides:

- Walkways Exclusively for Pedestrians - 5 Lux
- Traffic Areas for Slowly Moving Vehicles - 10 lux
- Parking Areas - 10 Lux

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.

Table of contents

First Page	1
Table of contents	2
1 Luminaire data	
1.1 Dextra Group PLC, OPUS COLUMN SMALL (OPUCSL L44 OA)	
1.1.1 Data sheet	3
1.2 Dextra Group PLC, OPUS WALLPACK (OPUWP L15 AS)	
1.2.1 Data sheet	4
1.3 Dextra Group PLC, OPUS WALLPACK (OPUWP L25 AS)	
1.3.1 Data sheet	6
1.4 ANSELL, AMENITY - Avio LED Bolla... (AAVIO/900/BL/WW)	
1.4.1 Data sheet	8
2 Exterior 1	
2.1 Summary, Exterior 1	
2.1.1 Result overview, Perimeter Footway	9
2.1.2 Result overview, Perimeter Footway	11
2.1.3 Result overview, Perimeter Footway	13
2.1.4 Result overview, Perimeter Footway	15
2.1.5 Result overview, Perimeter Footway	17
2.1.6 Result overview, Perimeter Footway	19
2.1.7 Result overview, Perimeter Footway	21
2.1.8 Result overview, Perimeter Footway	23
2.1.9 Result overview, Perimeter Footway	25
2.1.10 Result overview, Perimeter Footway	27
2.1.11 Result overview, Perimeter Footway	29
2.1.12 Result overview, Perimeter Footway	31
2.1.13 Result overview, Perimeter Footway	33
2.1.14 Result overview, Perimeter Footway	35
2.1.15 Result overview, Central Footway	37
2.1.16 Result overview, Perimeter Footway	39
2.1.17 Result overview, Perimeter Footway	41
2.1.18 Result overview, Central Footway	43
2.1.19 Result overview, Perimeter Footway	45
2.1.20 Result overview, Perimeter Footway	47
2.1.21 Result overview, Staff Parking	49
2.1.22 Result overview, Parking	51
2.1.23 Result overview, Parking	53
2.1.24 Result overview, Main Footway	55
2.1.25 Result overview, Car Park Footway	57
2.1.26 Result overview, Car Park Footway	59
2.1.27 Result overview, Car Park	61
2.1.28 Result overview, Access Road	63
2.1.29 Result overview, Staff Car Park Access	65
2.1.30 Result overview, Staff Car Park	67
2.1.31 Result overview, Footway	69
2.2 Calculation results, Exterior 1	
2.2.3 3D luminance, View 1	71
2.2.4 3D pseudo colours, View 1 (E)	72

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Date : 02.02.2023

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1 Luminaire data

1.1 Dextra Group PLC, OPUS COLUMN SMALL (OPUCSL L44 OA)

1.1.1 Data sheet

Manufacturer: Dextra Group PLC



OPUCSL L44 OA lanterns with posts OPUS COLUMN SMALL

Opus Column Small - IP65

Column top mounted open area luminaire, matt grey weather resistant and salt spray tested paint finish. Aluminium housing and polycarbonate front cover. Integral column spigot fixing mechanism included and supplied with 10m prewired flex to facilitate installation.

Options:

PH - Photocell

NEM - NEMA Socket

S40 - 40-50mm Spigot

S50 - 50-60mm Spigot

S60 - 60-76mm Spigot

OPUC WB - Opus Column Wall Mount Bracket

C73 - CRI 70 3000K

Luminaire data

Absolute Photometry

Luminaire efficacy : 143.01 lm/W

Classification : A30 ↓100.0% ↑0.0%

CIE Flux Codes : 37 78 99 100 100

UGR 4H 8H : 30.2 / 20.3

Control gear : electronic ballast

Power : 25.6 W

Luminous flux : 3661 lm

Equipped with

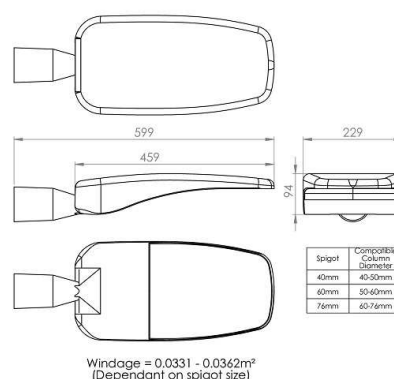
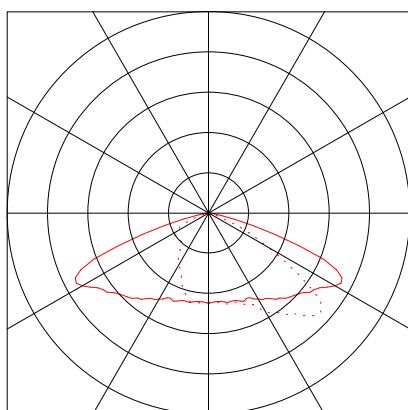
Quantity : 1

Designation : Dextra

Colour : 4000K

Colour reproduction : 2

Dimensions : 460 mm x 225 mm x 90 mm



1 Luminaire data

1.2 Dextra Group PLC, OPUS WALLPACK (OPUWP L15 AS)

1.2.1 Data sheet

Manufacturer: Dextra Group PLC



OPUWP L15 AS wall-mounted luminaire OPUS WALLPACK

OPUS Wallpack - IP65, IK10

Wall mounted exterior luminaire, diecast aluminium body with grey paint, salt spray tested finish and polycarbonate diffuser.

Options:

E3 - Emergency control gear (647 lumens output)

ST3 - Emergency Selftest

AT3 - Emergency Autotest

R25E - Reacta 25, On / Off High Frequency

R25C - Reacta 25, Corridor Mode*

R25W - Reacta-Wave Wireless sensor DALI

R25WE - Reacta-Wave Wireless sensor On/Off

*Bi-Level Dimming. Will only dim the luminaire to 10% during absence and brightout, it will not turn the luminaire off.

PH - Photocell (Dawn to Dusk switching photocell) - must be used for bright out functionality

BL - Black housing

Luminaire data

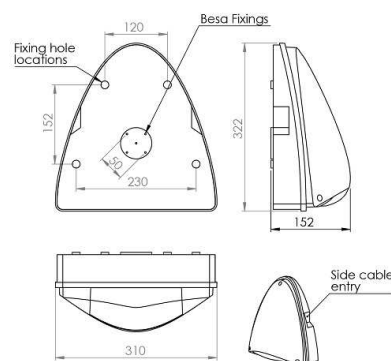
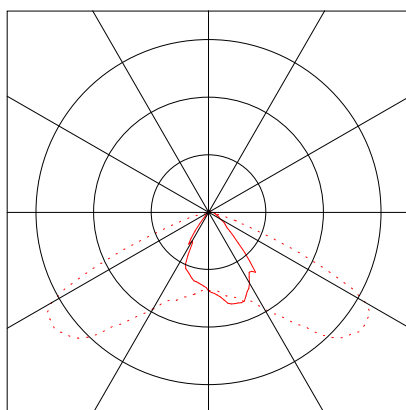
Absolute Photometry

Luminaire efficacy	: 112.31 lm/W
Classification	: A50 ↓98.3% ↑1.7%
CIE Flux Codes	: 47 87 99 98 100
UGR 4H 8H	: 22.8 / 31.3
Control gear	: electronic ballast
Power	: 10.8 W
Luminous flux	: 1213 lm

Equipped with

Quantity	: 1
Designation	: Dextra
Colour	: 4000K
Colour reproduction	: 2

Dimensions : 310 mm x 65 mm x 325 mm



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1 Luminaire data

1.2 Dextra Group PLC, OPUS WALLPACK (OPUWP L15 AS)

1.2.1 Data sheet

Emergency Lighting

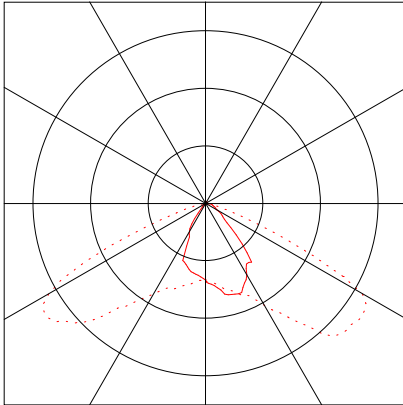
Emergency lighting with own light source

Absolute Photometry

Luminaire efficacy : 215.67 lm/W

Power : 3 W

Luminous flux : 647 lm



1 Luminaire data

1.3 Dextra Group PLC, OPUS WALLPACK (OPUWP L25 AS)

1.3.1 Data sheet

Manufacturer: Dextra Group PLC



OPUWP L25 AS wall-mounted luminaire OPUS WALLPACK

OPUS Wallpack - IP65, IK10

Wall mounted exterior luminaire, diecast aluminium body with grey paint, salt spray tested finish and polycarbonate diffuser.

Options:

E3 - Emergency control gear (647 lumens output)

ST3 - Emergency Selftest

AT3 - Emergency Autotest

R25E - Reacta 25, On / Off High Frequency

R25C - Reacta 25, Corridor Mode*

R25W - Reacta-Wave Wireless sensor DALI

R25WE - Reacta-Wave Wireless sensor On/Off

*Bi-Level Dimming. Will only dim the luminaire to 10% during absence and brightout, it will not turn the luminaire off.

PH - Photocell (Dawn to Dusk switching photocell) - must be used for bright out functionality

BL - Black housing

Luminaire data

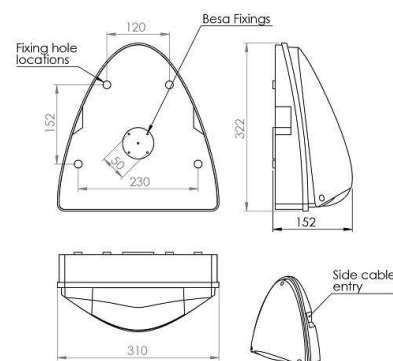
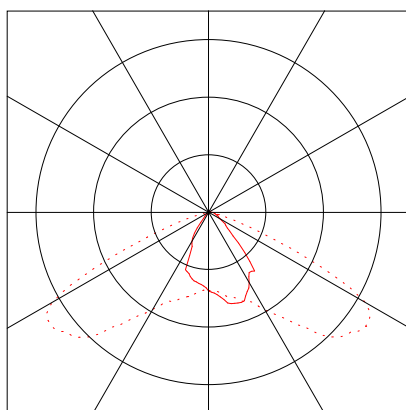
Absolute Photometry

Luminaire efficacy	: 106.65 lm/W
Classification	: A50 ↓98.4% ↑1.6%
CIE Flux Codes	: 47 87 99 98 100
UGR 4H 8H	: 24.5 / 33.0
Control gear	: electronic ballast
Power	: 18.8 W
Luminous flux	: 2005 lm

Equipped with

Quantity	: 1
Designation	: Dextra
Colour	: 4000K
Colour reproduction	: 2

Dimensions : 310 mm x 65 mm x 325 mm



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1 Luminaire data

1.3 Dextra Group PLC, OPUS WALLPACK (OPUWP L25 AS)

1.3.1 Data sheet

Emergency Lighting

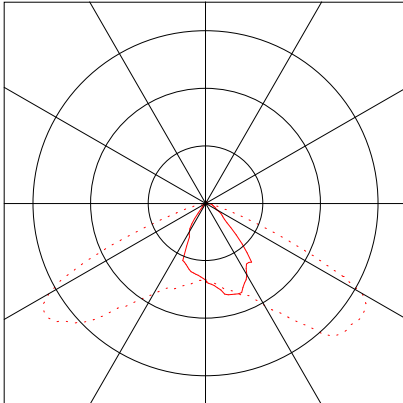
Emergency lighting with own light source

Absolute Photometry

Luminaire efficacy : 215.67 lm/W

Power : 3 W

Luminous flux : 647 lm



1 Luminaire data

1.4 ANSELL, AMENITY - Avio LED Bolla... (AAVIO/900/BL/WW)

1.4.1 Data sheet

Manufacturer: ANSELL



AAVIO/900/BL/WW **Freestanding uplighter** **AMENITY - Avio LED Bollard 3000K**
 AAVIO/900/BL/WW
 AMENITY
 Avio LED Bollard
 LED

- Robust die-cast aluminium bollard with a choice of textured finishes suitable for commercial applications
- Half-shield lens option to offer single direction output
- Supplied c/w root mounting kit
- Non-dimmable
- Suitable for external use only
- 5 Year Product Warranty
- IP65

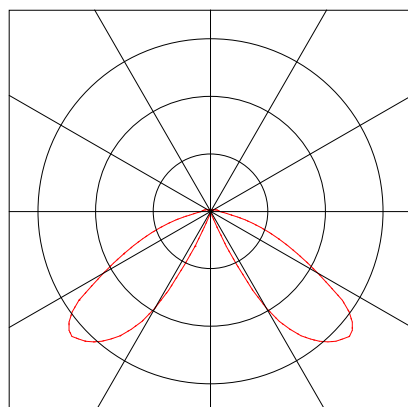
Luminaire data

Absolute Photometry
 Luminaire efficacy : 35.82 lm/W
 Classification : A31 ↓95.6% ↑4.4%
 CIE Flux Codes : 25 73 95 96 100
 UGR 4H 8H : 27.5 / 27.5
 Control gear : Electronic ballast
 Power : 21.58 W
 Luminous flux : 773 lm

Equipped with

Quantity : 1
 Designation : LED single 830
 Colour : 3000K
 Socket : --
 Colour reproduction : --

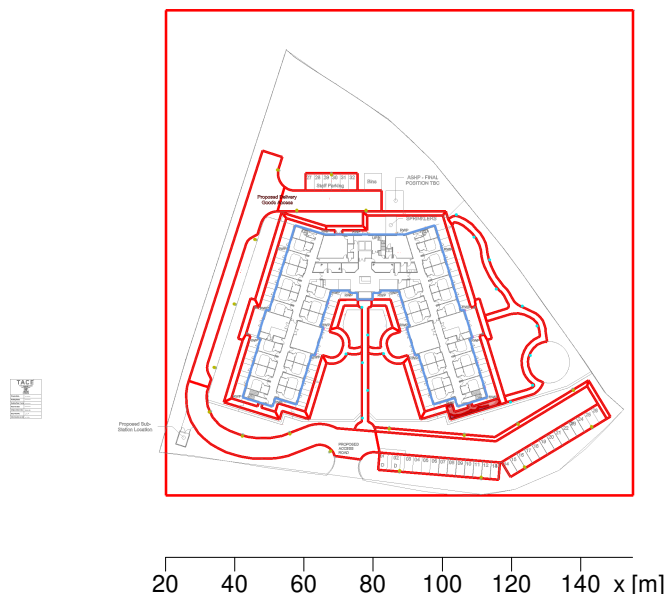
Dimensions : Ø160 mm x 60 mm



2 Exterior 1

2.1 Summary, Exterior 1

2.1.1 Result overview, Perimeter Footway



General

Calculation algorithm used
 Height of evaluation surface
 Maintenance factor

Average indirect fraction
 0.00 m
 0.80

Total luminous flux
 Total power
 Total power per area (18900.00 m²)

135941 lm
 1322.1 W
 0.07 W/m²

Illuminance

Average illuminance	Em	21.9 lx
Minimum illuminance	Emin	11.8 lx
Maximum illuminance	Emax	47.6 lx
Uniformity Uo	Emin/Em	1:1.85 (0.54)
Diversity Ud	Emin/Emax	1:4.02 (0.25)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

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2 Exterior 1

2.1 Summary, Exterior 1

2.1.1 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

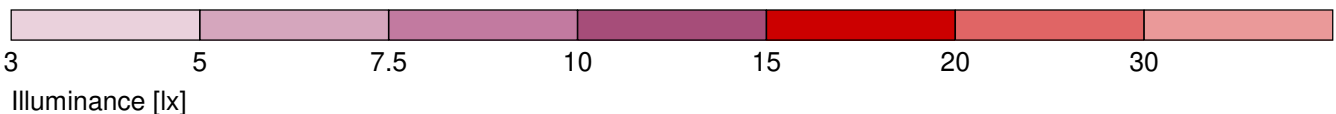
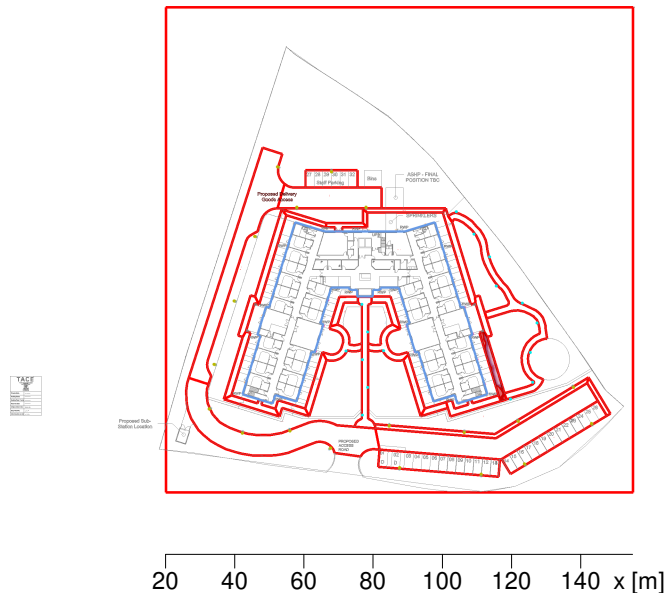
ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm



2.1 Summary, Exterior 1

2.1.2 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	13.4 lx
Minimum illuminance	Emin	3.4 lx
Maximum illuminance	Emax	37.6 lx
Uniformity Uo	Emin/Em	1:3.88 (0.26)
Diversity Ud	Emin/Emax	1:10.9 (0.09)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

2.1 Summary, Exterior 1

2.1.2 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

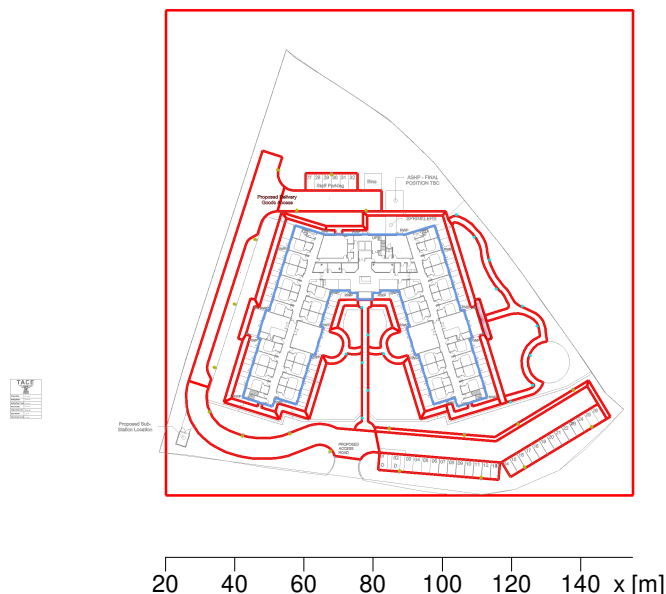
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.3 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	5.5 lx
Minimum illuminance	Emin	2.3 lx
Maximum illuminance	Emax	13.9 lx
Uniformity Uo	Emin/Em	1:2.38 (0.42)
Diversity Ud	Emin/Emax	1:5.98 (0.17)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

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2.1 Summary, Exterior 1

2.1.3 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

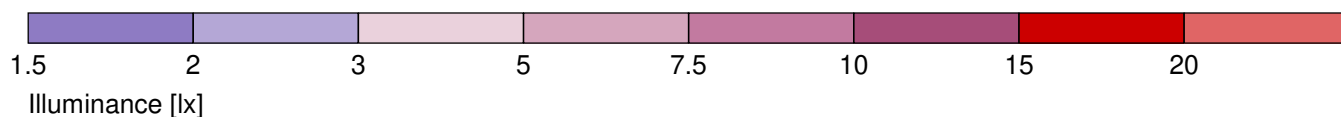
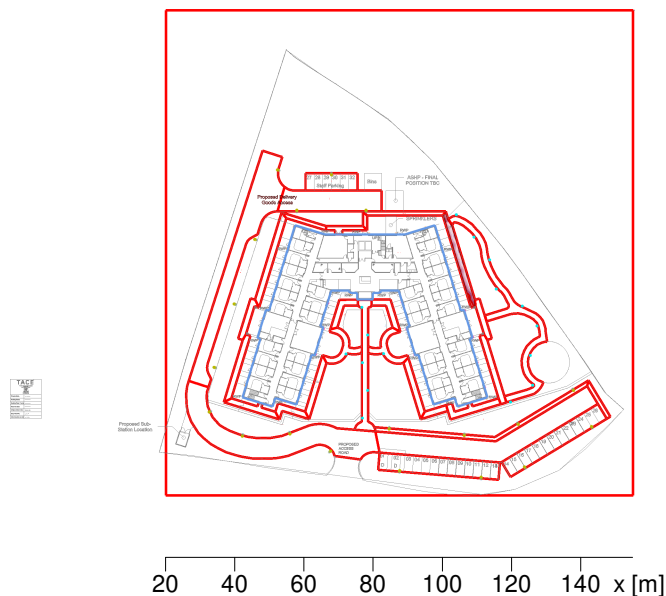
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.4 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	7.6 lx
Minimum illuminance	Emin	1.9 lx
Maximum illuminance	Emax	25.9 lx
Uniformity Uo	Emin/Em	1:3.94 (0.25)
Diversity Ud	Emin/Emax	1:13.5 (0.07)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
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2.1 Summary, Exterior 1

2.1.4 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

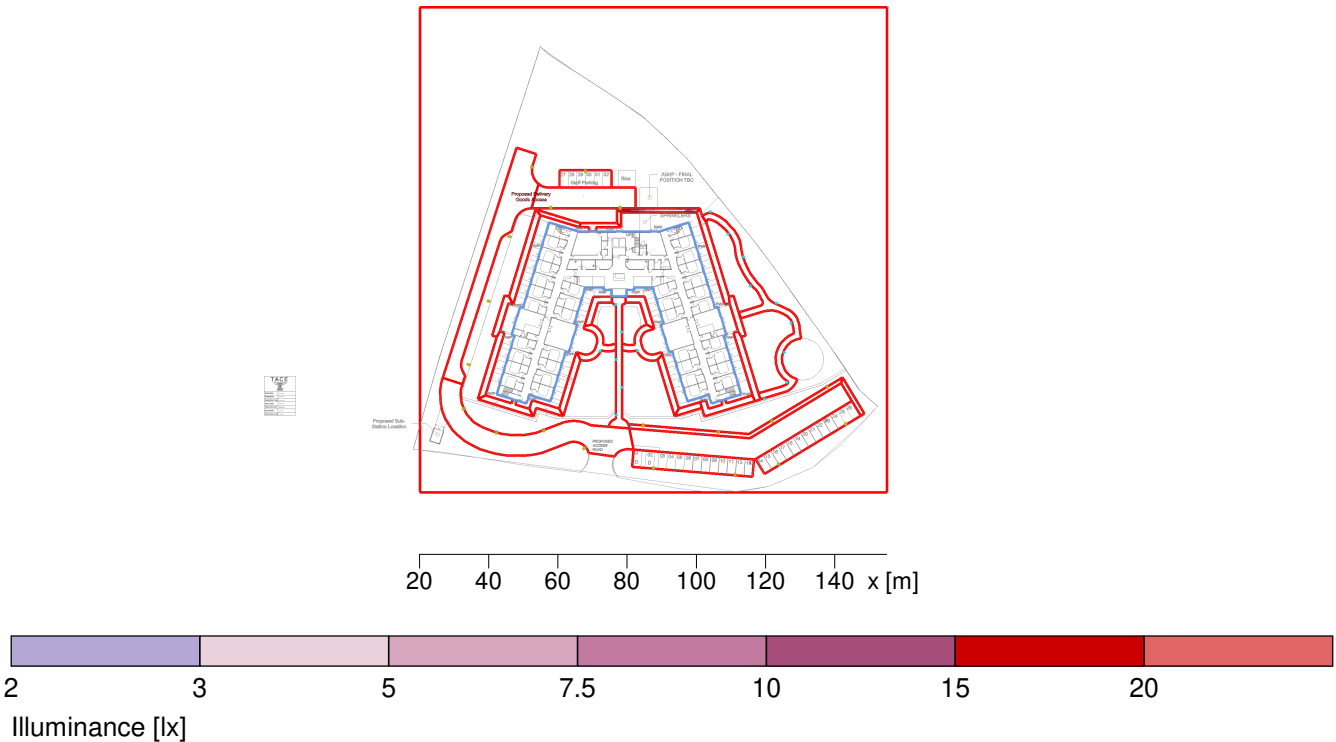
ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm



2.1 Summary, Exterior 1

2.1.5 Result overview, Perimeter Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em 8.4 lx
 Minimum illuminance : Emin 2.1 lx
 Maximum illuminance : Emax 20.4 lx
 Uniformity Uo : Emin/Em 1:3.92 (0.26)
 Diversity Ud : Emin/Emax 1:9.55 (0.1)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

2.1 Summary, Exterior 1

2.1.5 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x  Order No. : OPUWP L15 AS
 Luminaire name : OPUS WALLPACK
 Equipment : 1 x Dextra 10.8 W / 1213 lm
 Emergency : 647 lm

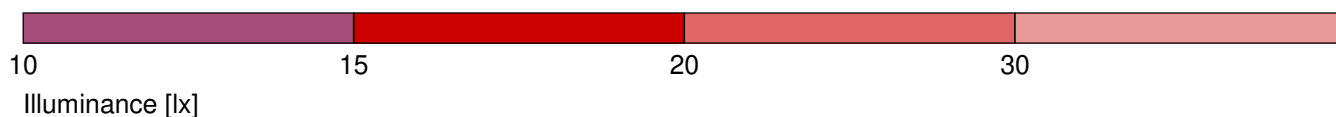
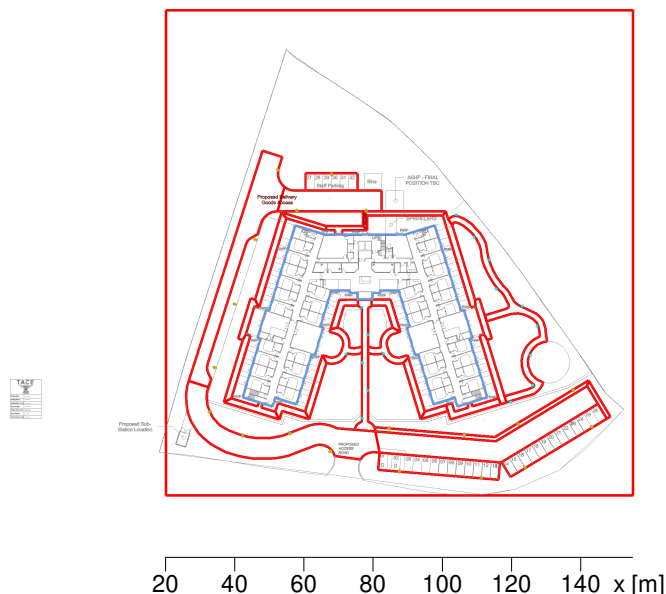
5 10 x  Order No. : OPUWP L25 AS
 Luminaire name : OPUS WALLPACK
 Equipment : 1 x Dextra 18.8 W / 2005 lm
 Emergency : 647 lm

ANSELL

6 16 x  Order No. : AAVIO/900/BL/WW
 Luminaire name : AMENITY - Avio LED Bollard 3000K
 Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.6 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	18.4 lx
Minimum illuminance	Emin	14 lx
Maximum illuminance	Emax	30.7 lx
Uniformity Uo	Emin/Em	1:1.32 (0.76)
Diversity Ud	Emin/Emax	1:2.2 (0.45)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

2.1 Summary, Exterior 1

2.1.6 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x  Order No. : OPUWP L15 AS
 Luminaire name : OPUS WALLPACK
 Equipment : 1 x Dextra 10.8 W / 1213 lm
 Emergency : 647 lm

5 10 x  Order No. : OPUWP L25 AS
 Luminaire name : OPUS WALLPACK
 Equipment : 1 x Dextra 18.8 W / 2005 lm
 Emergency : 647 lm

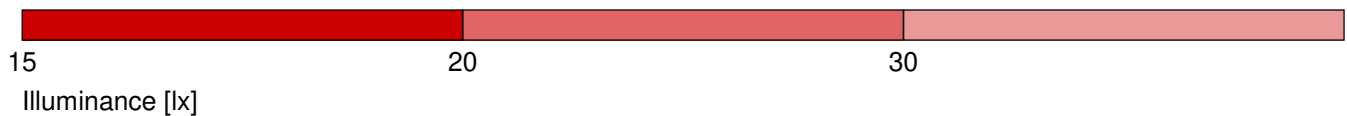
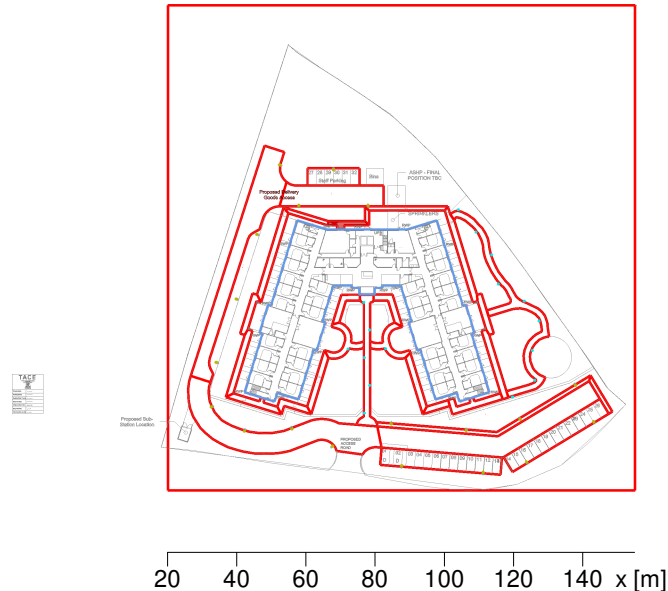
ANSELL

6 16 x  Order No. : AAVIO/900/BL/WW
 Luminaire name : AMENITY - Avio LED Bollard 3000K
 Equipment : 1 x LED single 830 21.58 W / 773 lm



2.1 Summary, Exterior 1

2.1.7 Result overview, Perimeter Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance	Em	24.5 lx
Minimum illuminance	Emin	16.1 lx
Maximum illuminance	Emax	32.5 lx
Uniformity Uo	Emin/Em	1:1.52 (0.66)
Diversity Ud	Emin/Emax	1:2.02 (0.5)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

2.1 Summary, Exterior 1

2.1.7 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

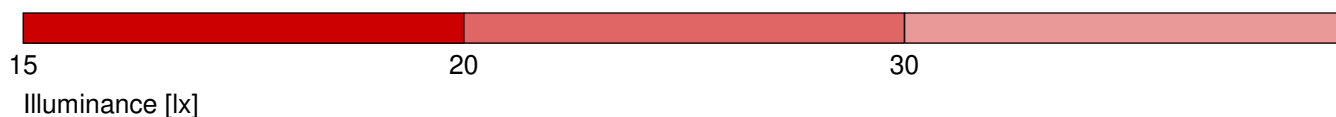
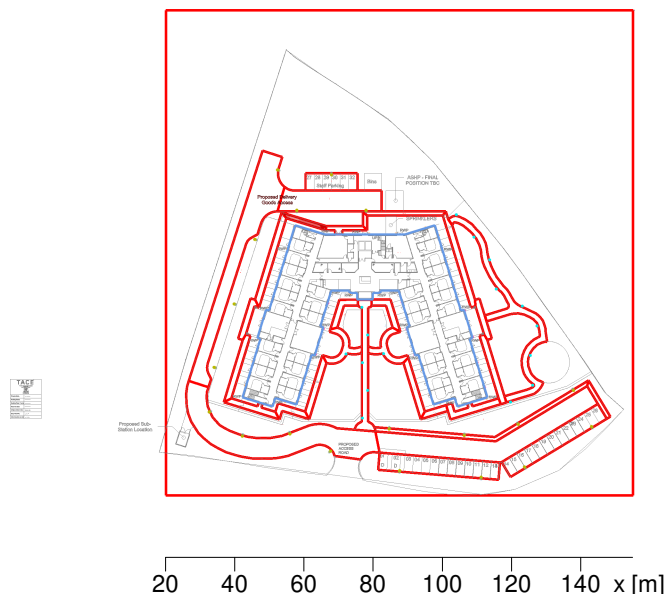
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.8 Result overview, Perimeter Footway



General

Calculation algorithm used
 Height of evaluation surface
 Maintenance factor

Average indirect fraction
 0.00 m
 0.80

Total luminous flux
 Total power
 Total power per area (18900.00 m²)

135941 lm
 1322.1 W
 0.07 W/m²

Illuminance

Average illuminance	Em	26.4 lx
Minimum illuminance	Emin	16.2 lx
Maximum illuminance	Emax	42.3 lx
Uniformity Uo	Emin/Em	1:1.63 (0.61)
Diversity Ud	Emin/Emax	1:2.61 (0.38)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.8 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

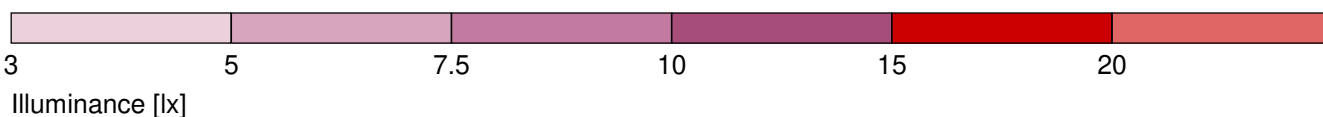
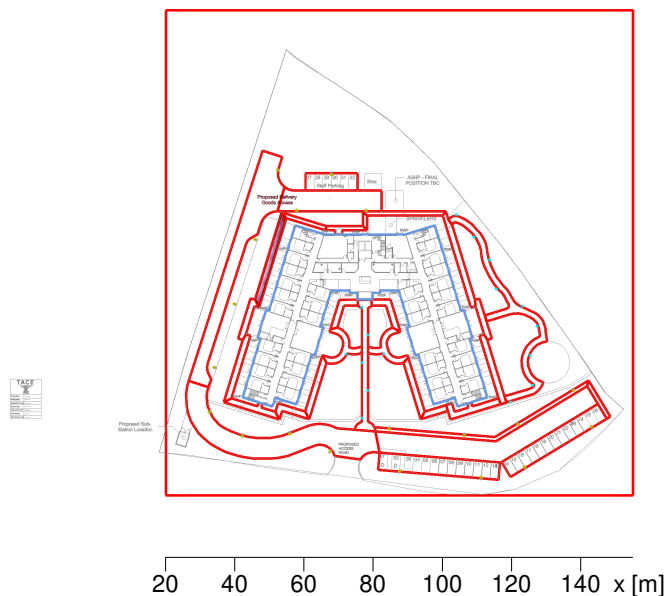
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.9 Result overview, Perimeter Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em 9.9 lx
 Minimum illuminance : Emin 4.7 lx
 Maximum illuminance : Emax 22.3 lx
 Uniformity Uo : Emin/Em 1:2.1 (0.48)
 Diversity Ud : Emin/Emax 1:4.73 (0.21)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

2.1 Summary, Exterior 1

2.1.9 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

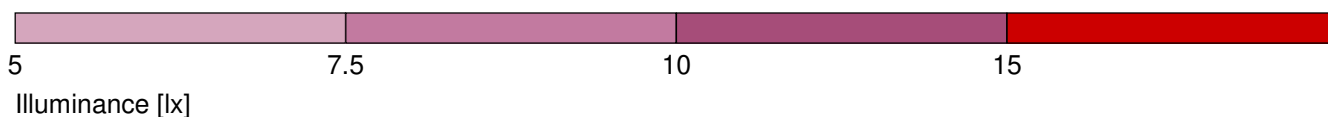
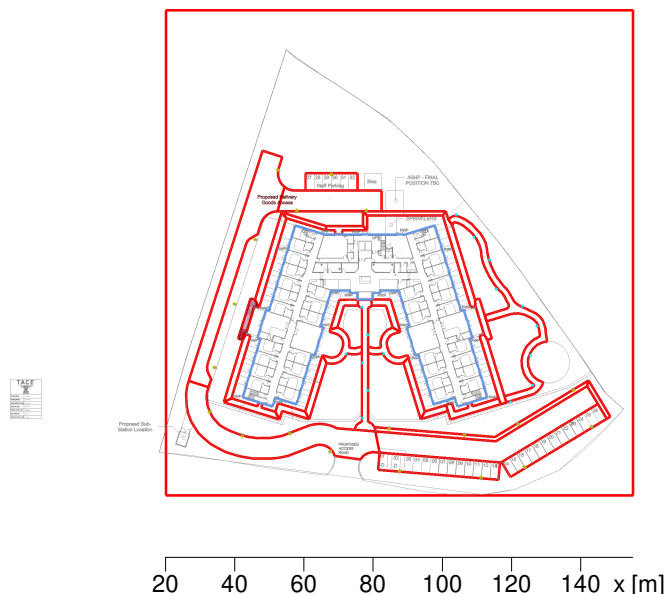
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.10 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	9.3 lx
Minimum illuminance	Emin	5.8 lx
Maximum illuminance	Emax	19.3 lx
Uniformity Uo	Emin/Em	1:1.59 (0.63)
Diversity Ud	Emin/Emax	1:3.3 (0.3)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.10 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

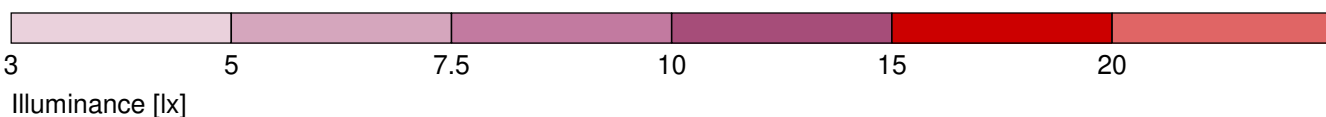
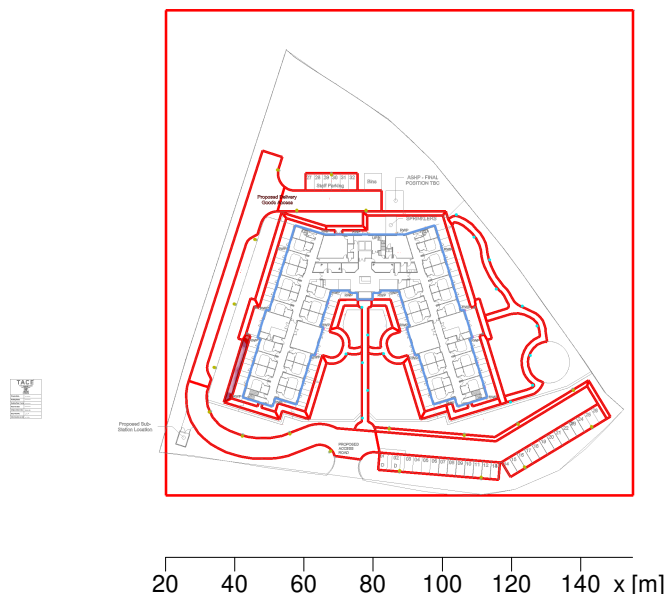
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.11 Result overview, Perimeter Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em : 10.3 lx
 Minimum illuminance : Emin : 4.8 lx
 Maximum illuminance : Emax : 27 lx
 Uniformity Uo : Emin/Em : 1:2.17 (0.46)
 Diversity Ud : Emin/Emax : 1:5.68 (0.18)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.11 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

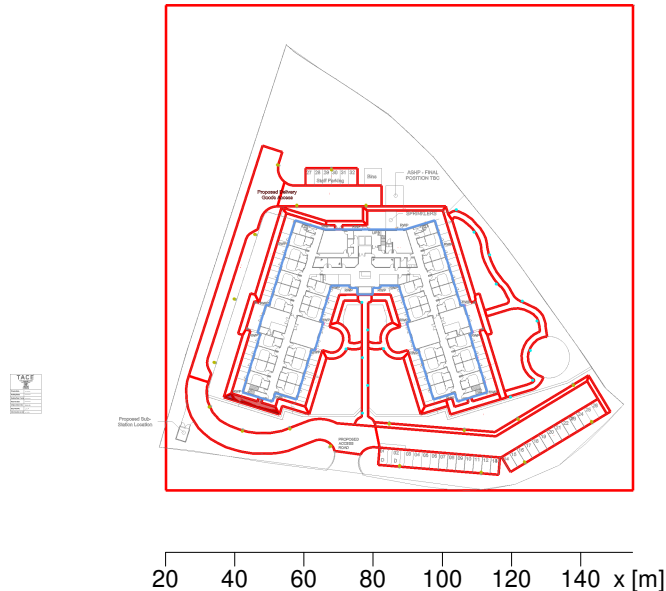
ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm



2.1 Summary, Exterior 1

2.1.12 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	20.9 lx
Minimum illuminance	Emin	8.1 lx
Maximum illuminance	Emax	37.2 lx
Uniformity Uo	Emin/Em	1:2.58 (0.39)
Diversity Ud	Emin/Emax	1:4.59 (0.22)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.12 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

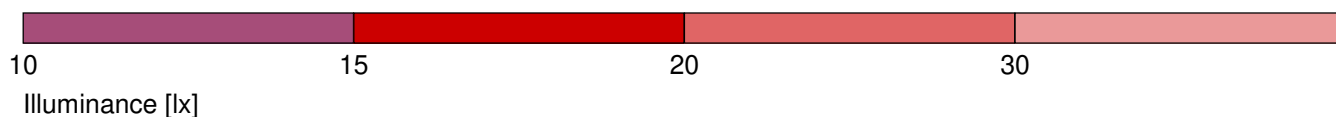
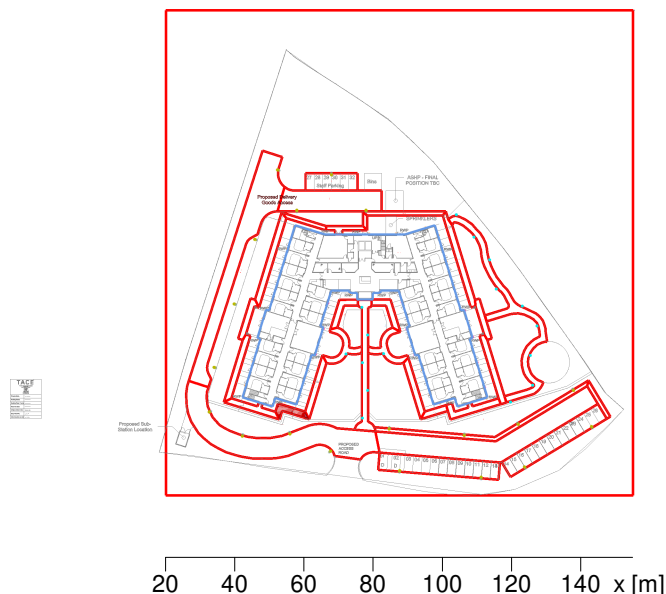
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.13 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	25.9 lx
Minimum illuminance	Emin	11.1 lx
Maximum illuminance	Emax	39.1 lx
Uniformity Uo	Emin/Em	1:2.34 (0.43)
Diversity Ud	Emin/Emax	1:3.53 (0.28)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.13 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

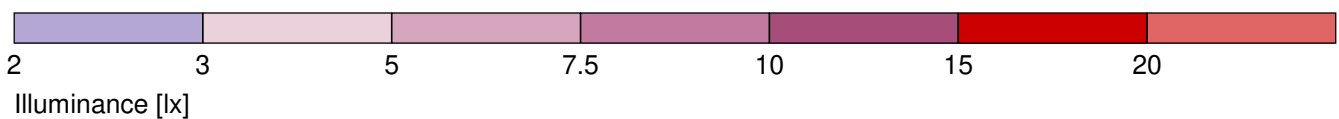
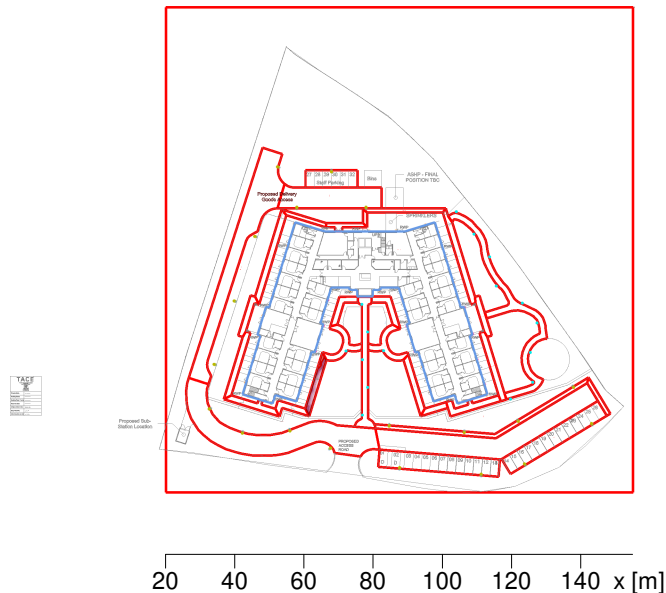
ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm



2.1 Summary, Exterior 1

2.1.14 Result overview, Perimeter Footway



General

Calculation algorithm used
 Height of evaluation surface
 Maintenance factor

Average indirect fraction
 0.00 m
 0.80

Total luminous flux
 Total power
 Total power per area (18900.00 m²)

135941 lm
 1322.1 W
 0.07 W/m²

Illuminance

Average illuminance	Em	10.2 lx
Minimum illuminance	Emin	2.9 lx
Maximum illuminance	Emax	27.8 lx
Uniformity Uo	Emin/Em	1:3.49 (0.29)
Diversity Ud	Emin/Emax	1:9.53 (0.1)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.14 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

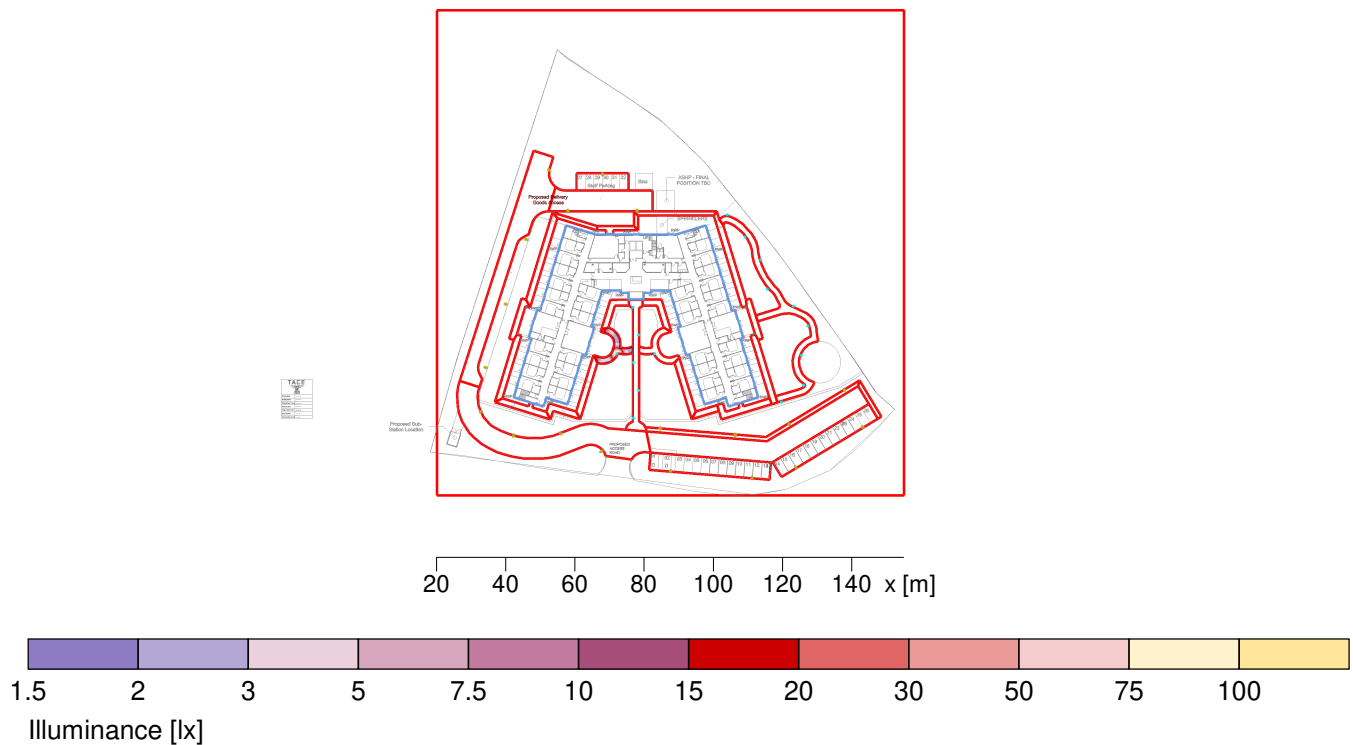
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.15 Result overview, Central Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	14 lx
Minimum illuminance	Emin	2 lx
Maximum illuminance	Emax	105 lx
Uniformity Uo	Emin/Em	1:8.35 (0.12)
Diversity Ud	Emin/Emax	1:63 (0.02)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.15 Result overview, Central Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

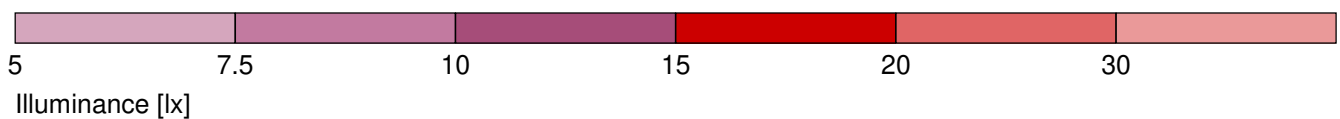
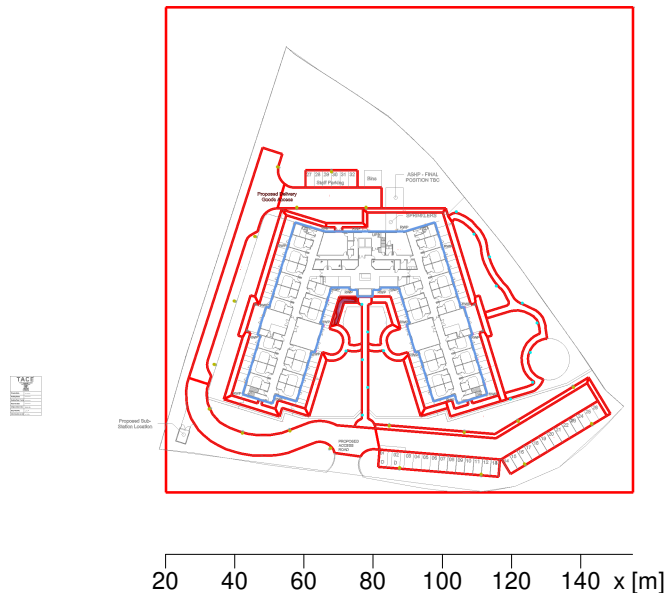
ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm



2.1 Summary, Exterior 1

2.1.16 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	15.4 lx
Minimum illuminance	Emin	5.3 lx
Maximum illuminance	Emax	35.9 lx
Uniformity Uo	Emin/Em	1:2.91 (0.34)
Diversity Ud	Emin/Emax	1:6.77 (0.15)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.16 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

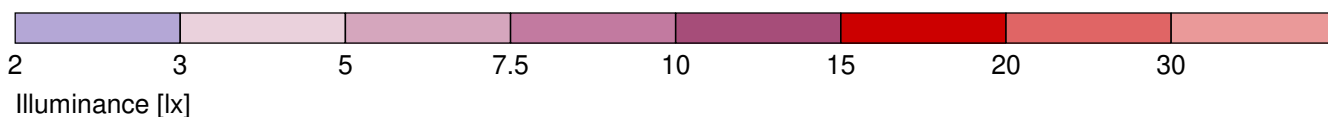
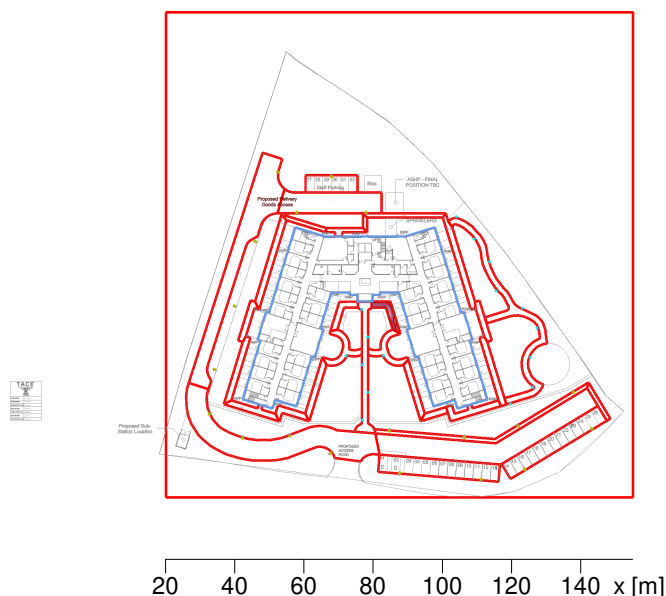
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.17 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	13.8 lx
Minimum illuminance	Emin	2.3 lx
Maximum illuminance	Emax	31.4 lx
Uniformity Uo	Emin/Em	1:5.93 (0.17)
Diversity Ud	Emin/Emax	1:13.5 (0.07)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.17 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

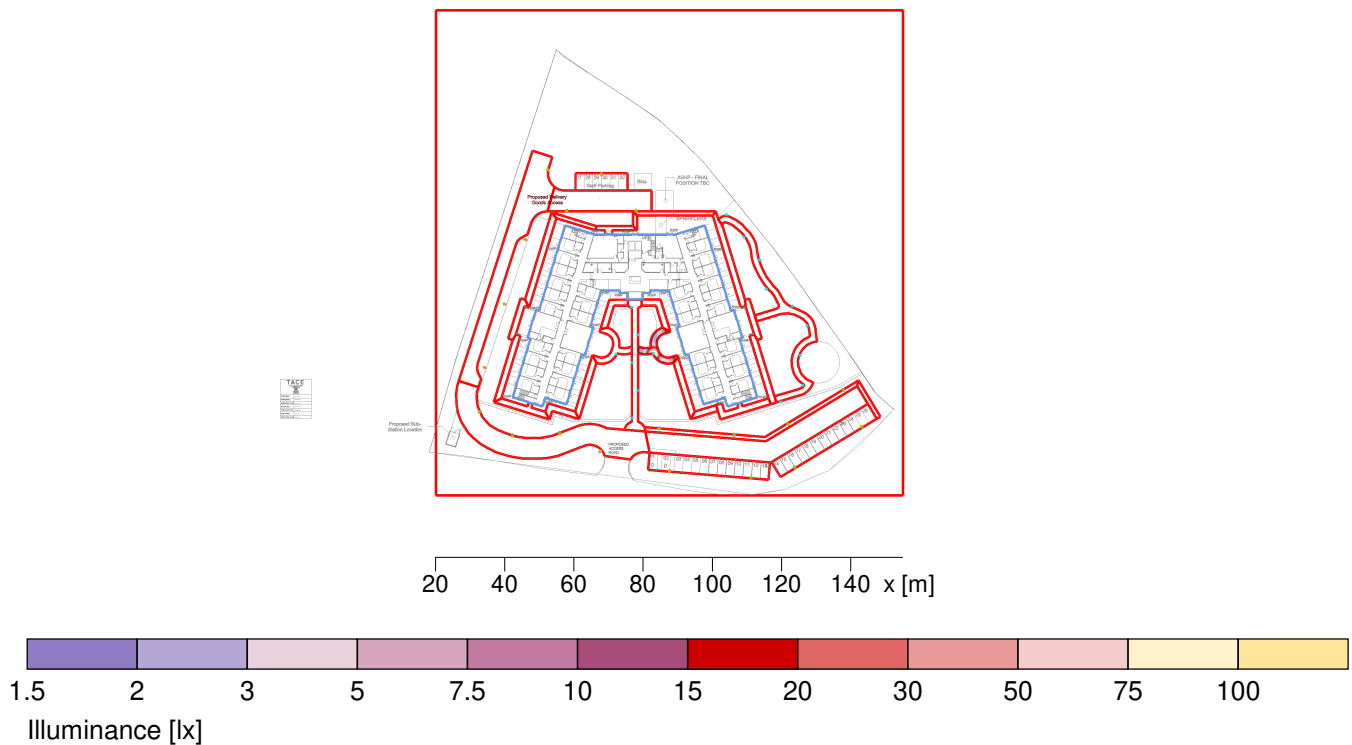
ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm



2.1 Summary, Exterior 1

2.1.18 Result overview, Central Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em : 15 lx
 Minimum illuminance : Emin : 2 lx
 Maximum illuminance : Emax : 104 lx
 Uniformity Uo : Emin/Em : 1:8.43 (0.12)
 Diversity Ud : Emin/Emax : 1:60.7 (0.02)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.18 Result overview, Central Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

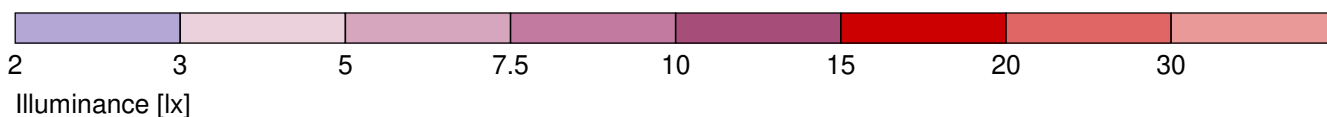
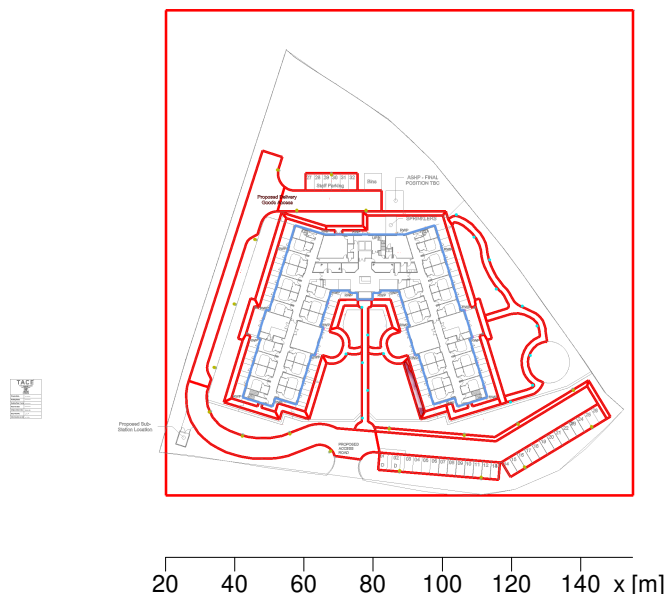
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.19 Result overview, Perimeter Footway



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	9.8 lx
Minimum illuminance	Emin	2.5 lx
Maximum illuminance	Emax	30.8 lx
Uniformity Uo	Emin/Em	1:3.87 (0.26)
Diversity Ud	Emin/Emax	1:12.2 (0.08)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.19 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

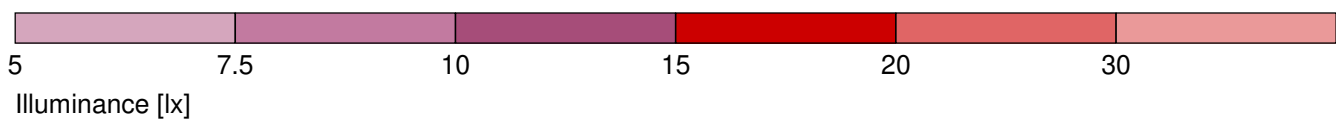
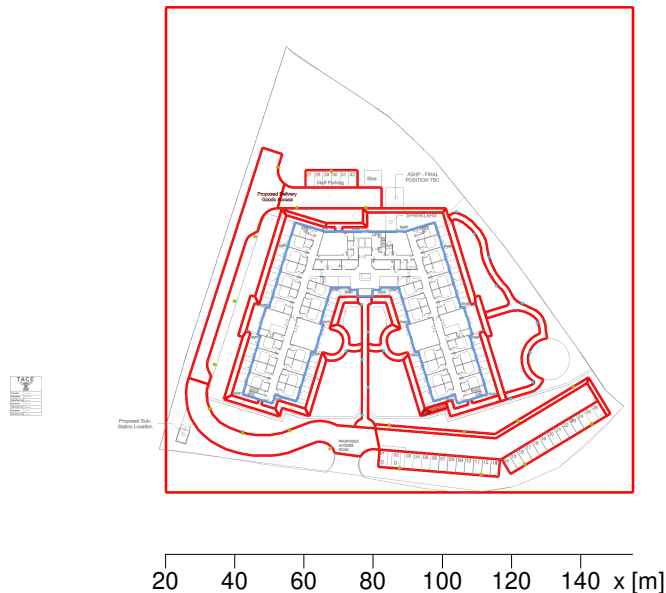
ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm



2.1 Summary, Exterior 1

2.1.20 Result overview, Perimeter Footway



General

Calculation algorithm used
 Height of evaluation surface
 Maintenance factor

Average indirect fraction
 0.00 m
 0.80

Total luminous flux
 Total power
 Total power per area (18900.00 m²)

135941 lm
 1322.1 W
 0.07 W/m²

Illuminance

Average illuminance	Em	21.4 lx
Minimum illuminance	Emin	6.1 lx
Maximum illuminance	Emax	37.5 lx
Uniformity Uo	Emin/Em	1:3.53 (0.28)
Diversity Ud	Emin/Emax	1:6.19 (0.16)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.20 Result overview, Perimeter Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

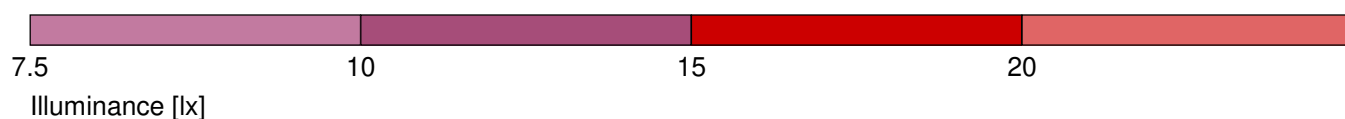
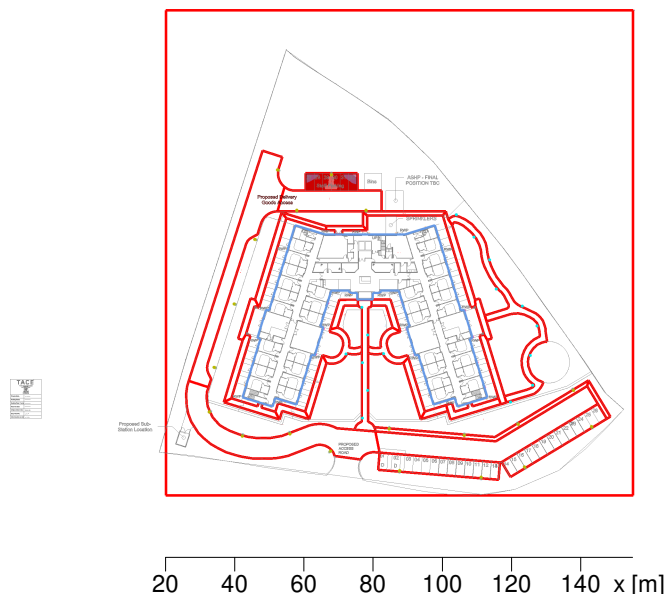
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.21 Result overview, Staff Parking



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance	Em	17.1 lx
Minimum illuminance	Emin	8.5 lx
Maximum illuminance	Emax	20.9 lx
Uniformity Uo	Emin/Em	1:2.01 (0.5)
Diversity Ud	Emin/Emax	1:2.46 (0.41)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.21 Result overview, Staff Parking

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

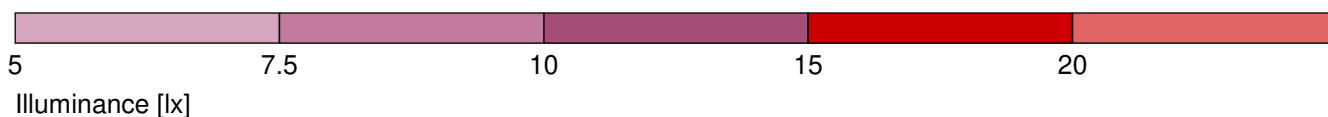
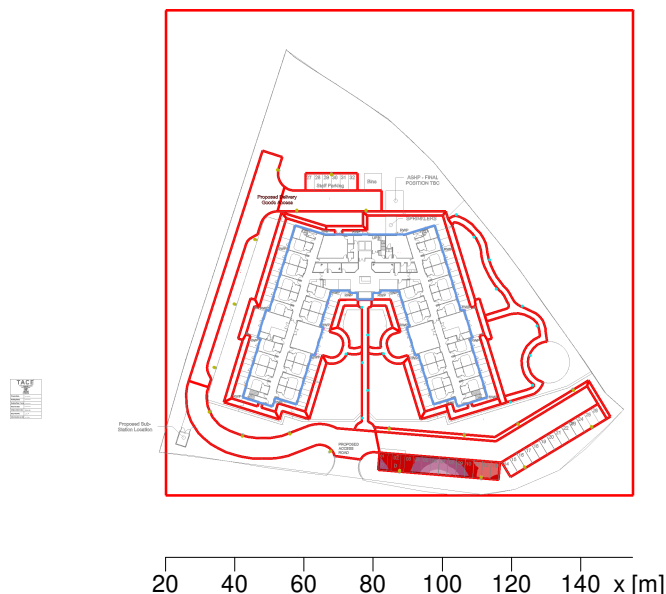
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.22 Result overview, Parking



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	15.3 lx
Minimum illuminance	Emin	6.7 lx
Maximum illuminance	Emax	23.4 lx
Uniformity Uo	Emin/Em	1:2.29 (0.44)
Diversity Ud	Emin/Emax	1:3.52 (0.28)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.22 Result overview, Parking

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

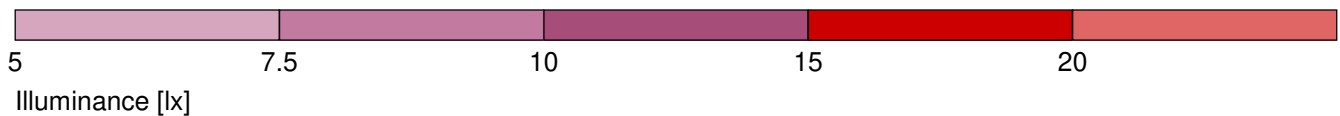
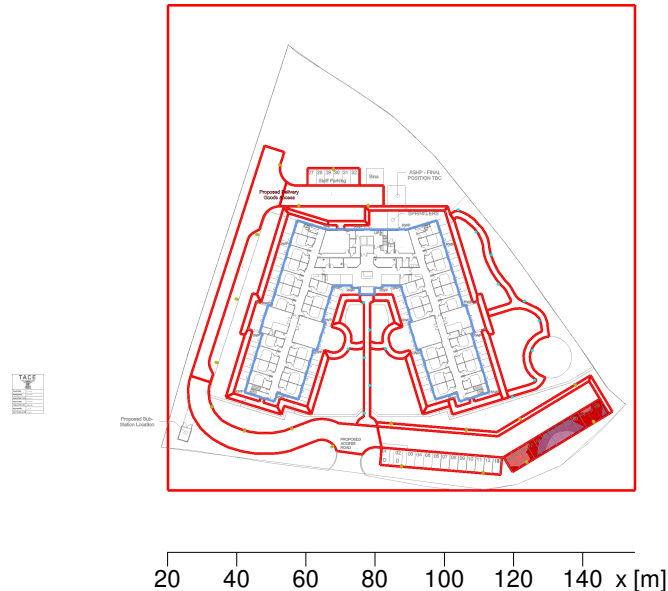
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.23 Result overview, Parking



General

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

Total luminous flux	135941 lm
Total power	1322.1 W
Total power per area (18900.00 m ²)	0.07 W/m ²

Illuminance

Average illuminance	Em	15.9 lx
Minimum illuminance	Emin	7.3 lx
Maximum illuminance	Emax	23.5 lx
Uniformity Uo	Emin/Em	1:2.17 (0.46)
Diversity Ud	Emin/Emax	1:3.2 (0.31)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.23 Result overview, Parking

Dextra Group PLC

4 28 x

Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x

Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

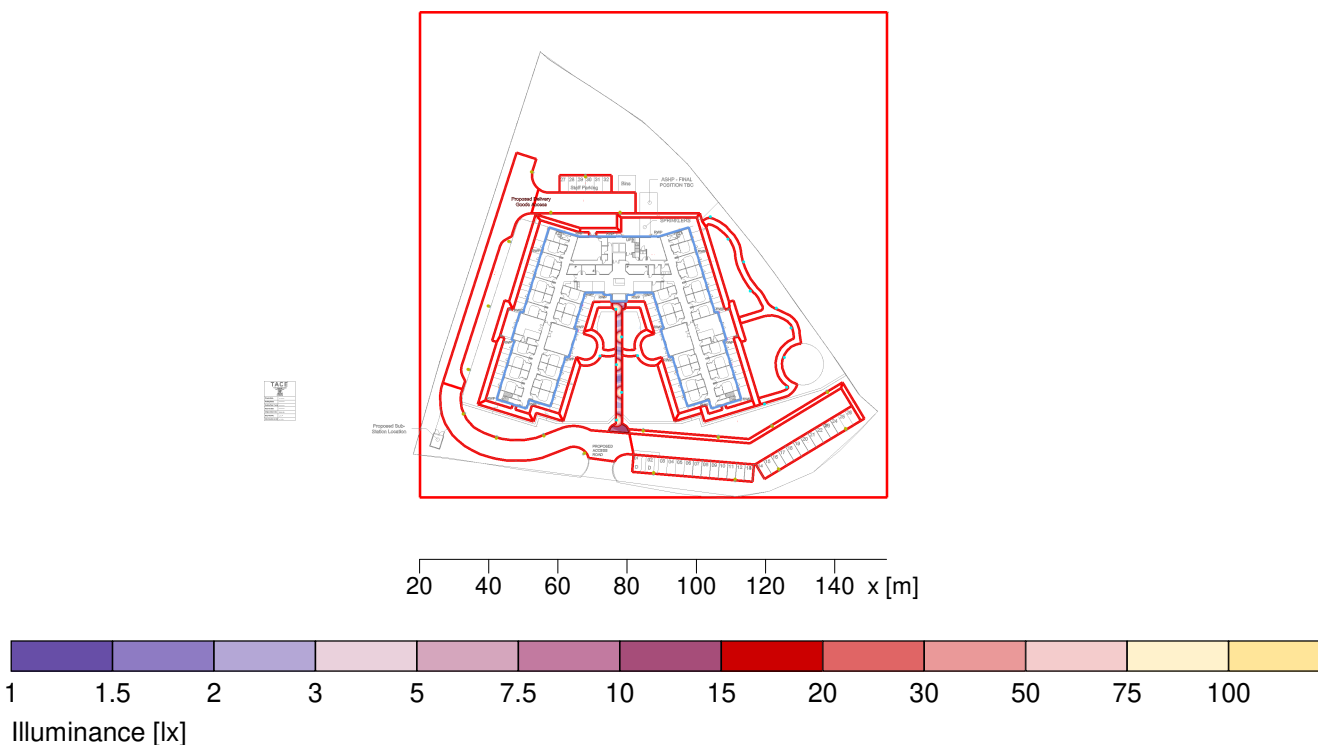
ANSELL

6 16 x

Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.24 Result overview, Main Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em : 22 lx
 Minimum illuminance : Emin : 1 lx
 Maximum illuminance : Emax : 109 lx
 Uniformity Uo : Emin/Em : 1:21.2 (0.05)
 Diversity Ud : Emin/Emax : 1:104 (0.01)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.24 Result overview, Main Footway

Dextra Group PLC

4 28 x

Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x

Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

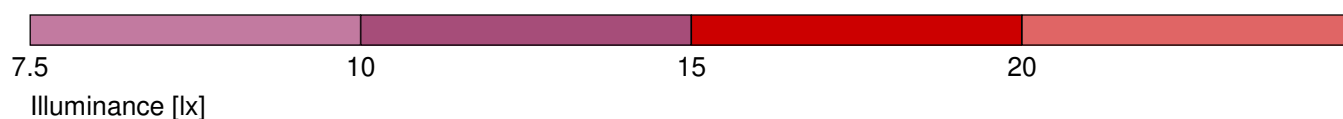
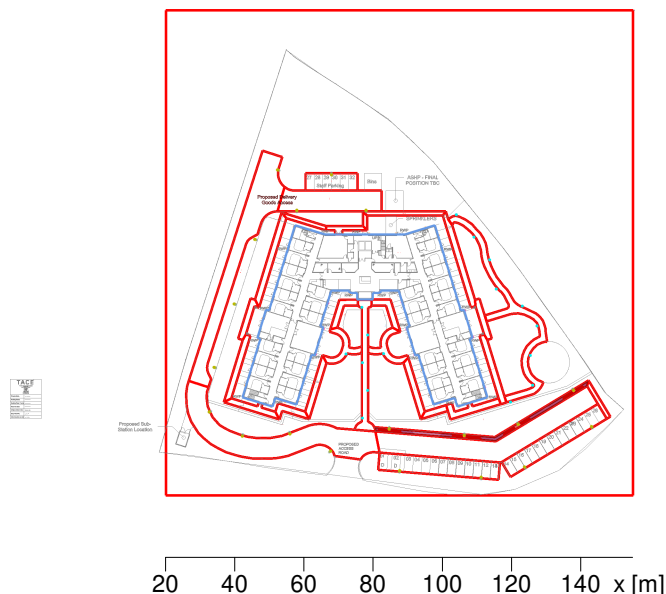
ANSELL

6 16 x

Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.25 Result overview, Car Park Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em : 14.8 lx
 Minimum illuminance : Emin : 8.3 lx
 Maximum illuminance : Emax : 20.6 lx
 Uniformity Uo : Emin/Em : 1:1.78 (0.56)
 Diversity Ud : Emin/Emax : 1:2.48 (0.4)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.25 Result overview, Car Park Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

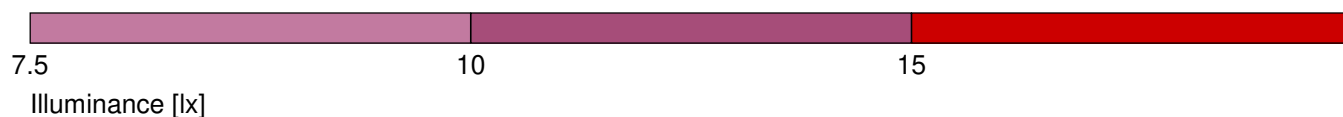
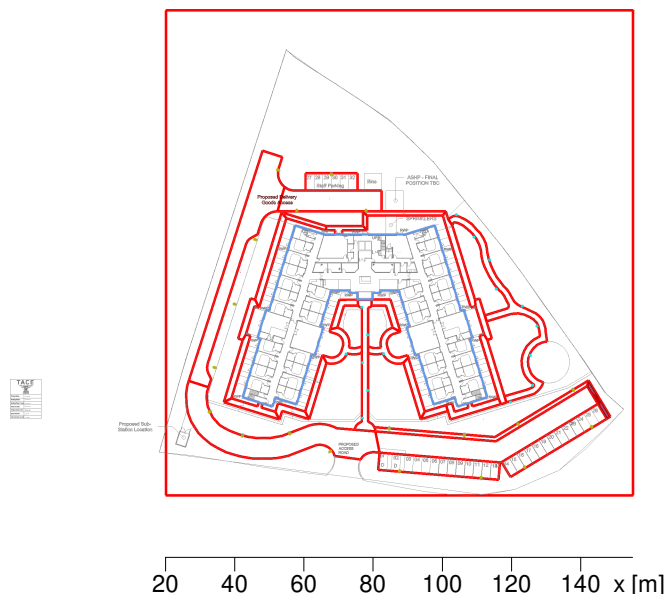
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.26 Result overview, Car Park Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance	Em	13.8 lx
Minimum illuminance	Emin	9 lx
Maximum illuminance	Emax	16.7 lx
Uniformity Uo	Emin/Em	1:1.52 (0.66)
Diversity Ud	Emin/Emax	1:1.85 (0.54)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.26 Result overview, Car Park Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

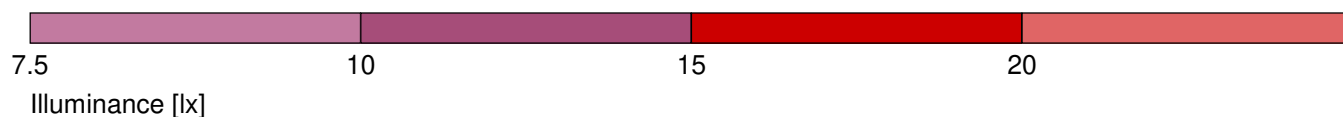
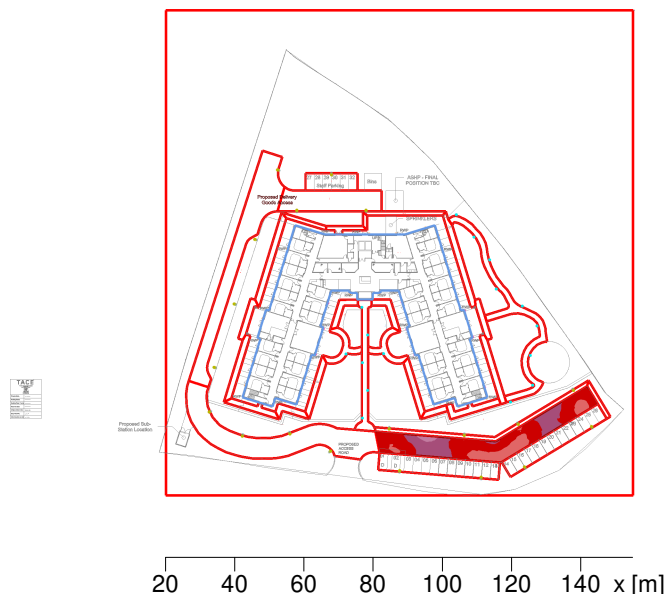
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.27 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 : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em : 17 lx
 Minimum illuminance : Emin : 8.8 lx
 Maximum illuminance : Emax : 23.5 lx
 Uniformity Uo : Emin/Em : 1:1.94 (0.52)
 Diversity Ud : Emin/Emax : 1:2.67 (0.37)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.27 Result overview, Car Park

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

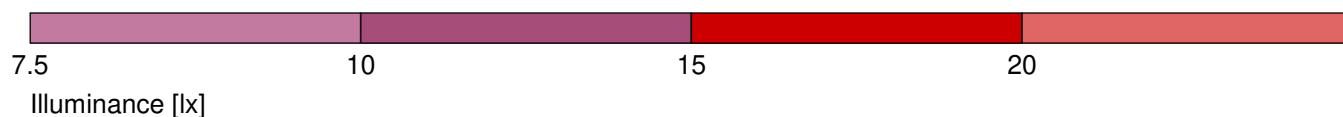
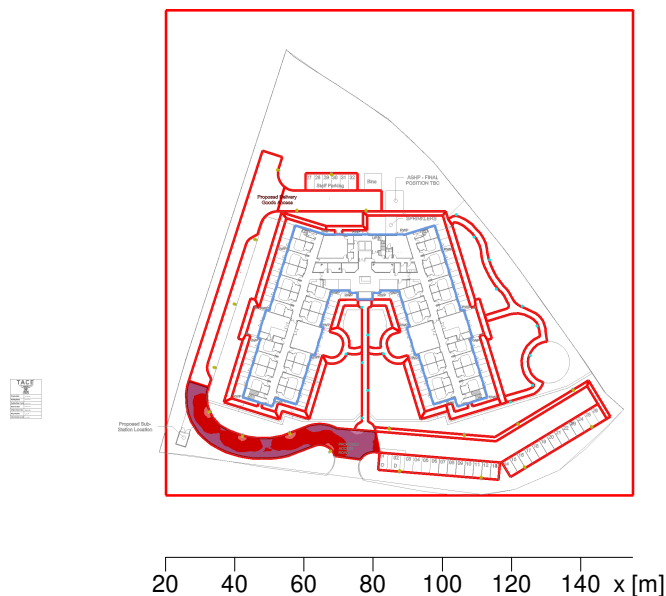
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.28 Result overview, Access Road



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em : 15.4 lx
 Minimum illuminance : Emin : 8.9 lx
 Maximum illuminance : Emax : 21.4 lx
 Uniformity Uo : Emin/Em : 1:1.74 (0.58)
 Diversity Ud : Emin/Emax : 1:2.41 (0.41)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

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2.1 Summary, Exterior 1

2.1.28 Result overview, Access Road

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

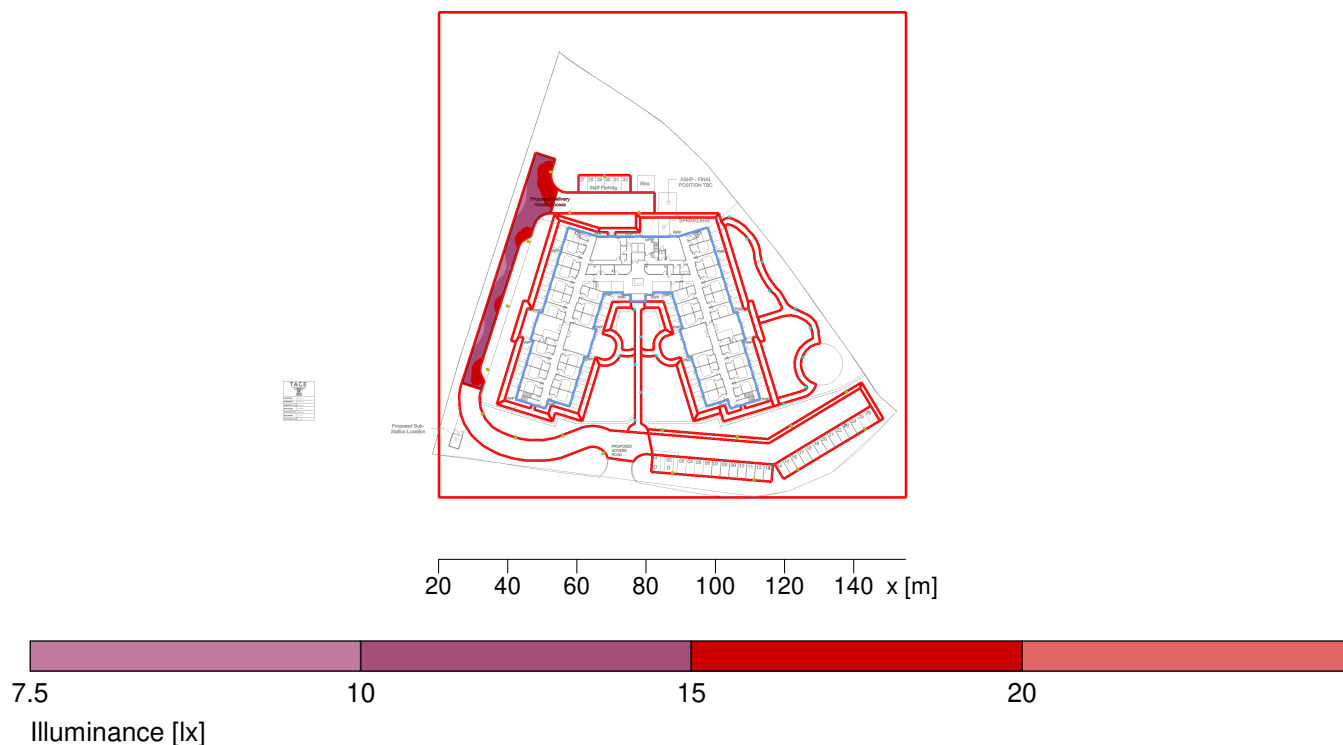
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.29 Result overview, Staff Car Park Access



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em 13.1 lx
 Minimum illuminance : Emin 8.2 lx
 Maximum illuminance : Emax 20 lx
 Uniformity U₀ : Emin/Em 1:1.59 (0.63)
 Diversity U_d : Emin/Emax 1:2.43 (0.41)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

2.1 Summary, Exterior 1

2.1.29 Result overview, Staff Car Park Access

Dextra Group PLC

4 28 x 
 Order No. : OPUWP L15 AS
 Luminaire name : OPUS WALLPACK
 Equipment : 1 x Dextra 10.8 W / 1213 lm
 Emergency : 647 lm

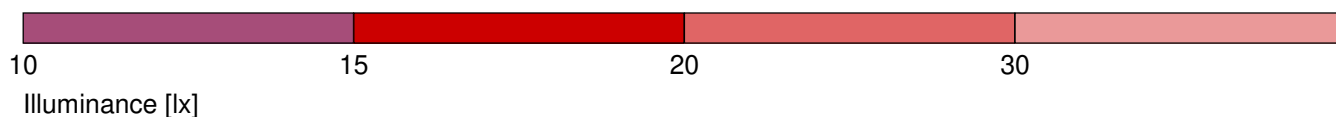
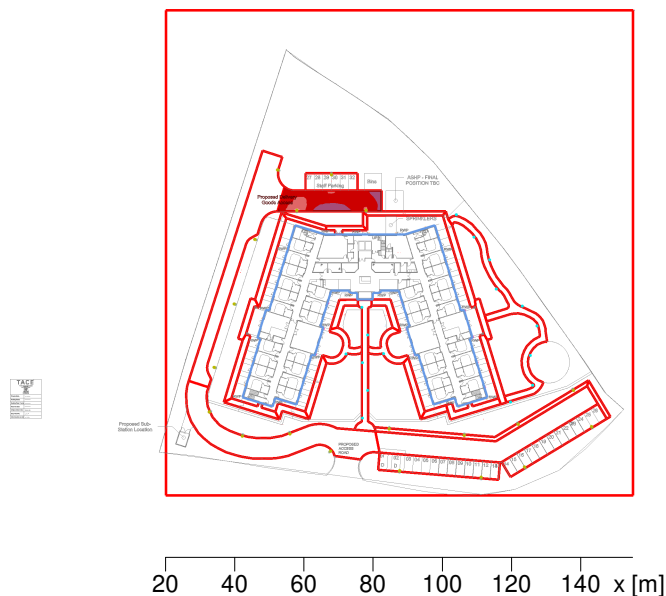
5 10 x 
 Order No. : OPUWP L25 AS
 Luminaire name : OPUS WALLPACK
 Equipment : 1 x Dextra 18.8 W / 2005 lm
 Emergency : 647 lm

ANSELL

6 16 x 
 Order No. : AAVIO/900/BL/WW
 Luminaire name : AMENITY - Avio LED Bollard 3000K
 Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.30 Result overview, Staff Car Park



General

Calculation algorithm used
 Height of evaluation surface
 Maintenance factor

Average indirect fraction
 0.00 m
 0.80

Total luminous flux
 Total power
 Total power per area (18900.00 m²)

135941 lm
 1322.1 W
 0.07 W/m²

Illuminance

Average illuminance	Em	17.7 lx
Minimum illuminance	Emin	10.5 lx
Maximum illuminance	Emax	31.8 lx
Uniformity Uo	Emin/Em	1:1.69 (0.59)
Diversity Ud	Emin/Emax	1:3.04 (0.33)

Type No. Make

2	1 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

3	18 x	Order No.	:
		Luminaire name	: Opus Column Small 25.6W x 3661lm
		with	: 1 x OPUCSL L44 OA
		Equipment	: 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

TACE®

2.1 Summary, Exterior 1

2.1.30 Result overview, Staff Car Park

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

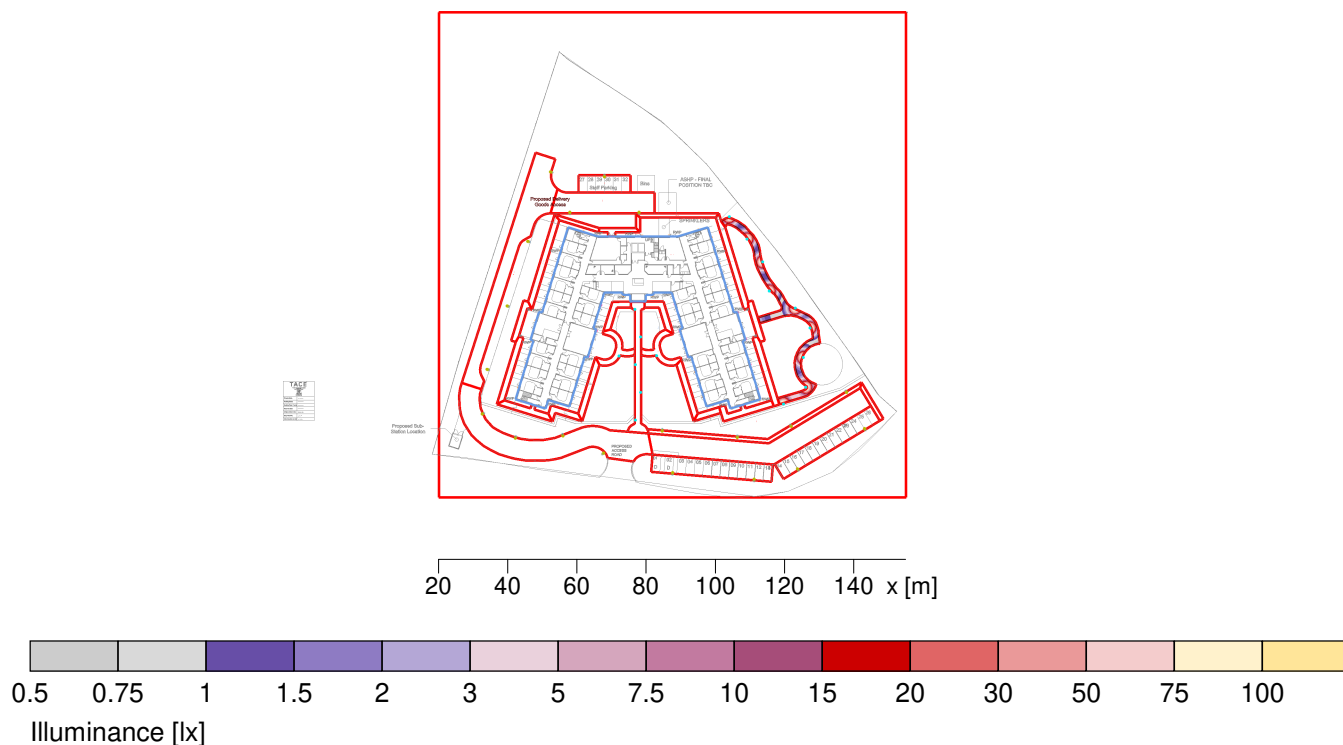
5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2.1 Summary, Exterior 1

2.1.31 Result overview, Footway



General

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

Total luminous flux : 135941 lm
 Total power : 1322.1 W
 Total power per area (18900.00 m²) : 0.07 W/m²

Illuminance

Average illuminance : Em : 15 lx
 Minimum illuminance : Emin : 1 lx
 Maximum illuminance : Emax : 108 lx
 Uniformity Uo : Emin/Em : 1:28.7 (0.03)
 Diversity Ud : Emin/Emax : 1:208 (0)

Type No. Make

2 1 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

3 18 x Order No. :
 Luminaire name : Opus Column Small 25.6W x 3661lm
 with : 1 x OPUCSL L44 OA
 Equipment : 1 x Dextra 25.6 W / 3661 lm

Object : Clitheroe Care Home
Installation : External Lighting Calculations
Project number : PA1674
Date : 02.02.2023

TACE®

2.1 Summary, Exterior 1

2.1.31 Result overview, Footway

Dextra Group PLC

4 28 x
 Order No. : OPUWP L15 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 10.8 W / 1213 lm
Emergency : 647 lm

5 10 x
 Order No. : OPUWP L25 AS
Luminaire name : OPUS WALLPACK
Equipment : 1 x Dextra 18.8 W / 2005 lm
Emergency : 647 lm

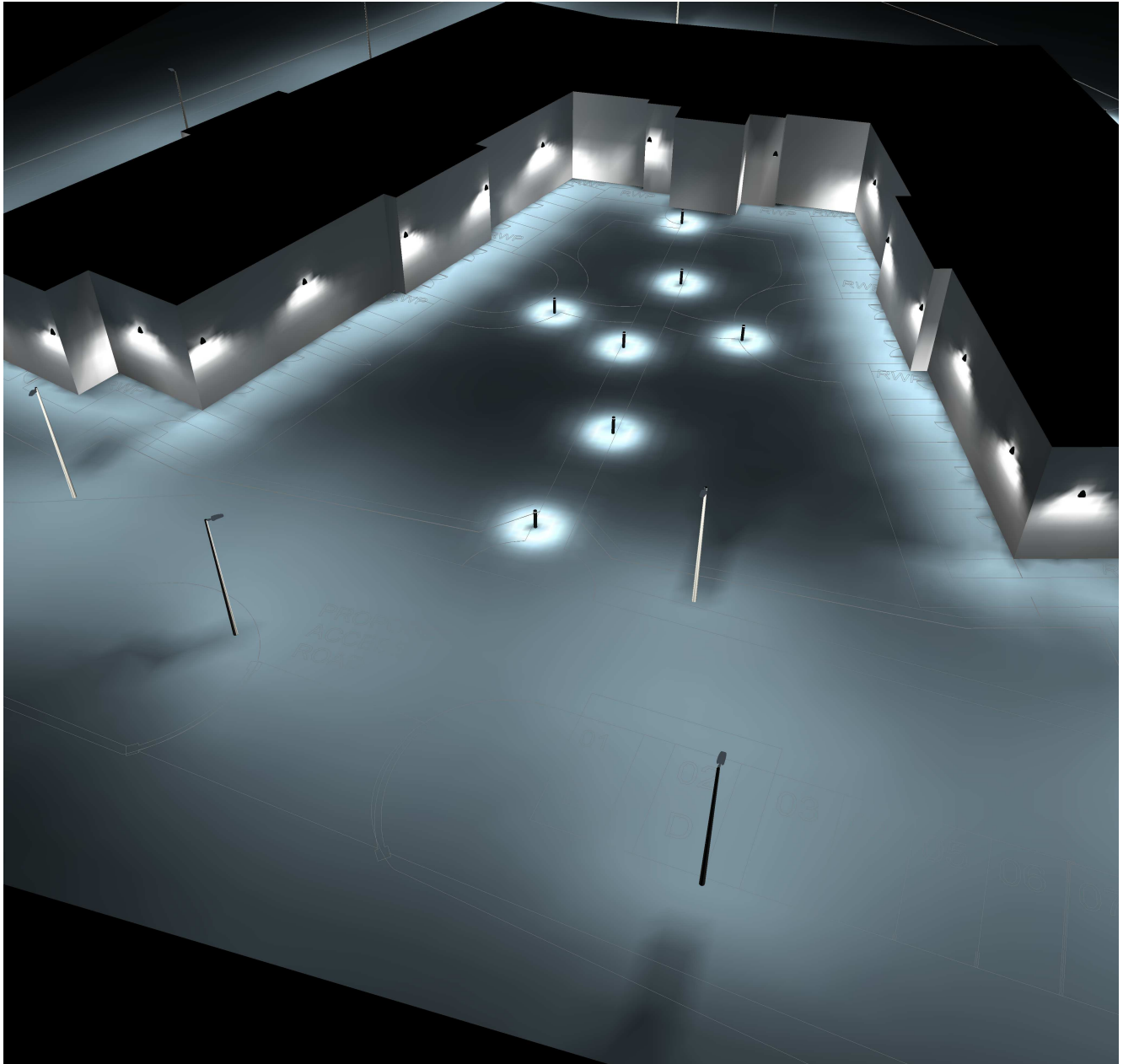
ANSELL

6 16 x
 Order No. : AAVIO/900/BL/WW
Luminaire name : AMENITY - Avio LED Bollard 3000K
Equipment : 1 x LED single 830 21.58 W / 773 lm

2 Exterior 1

2.2 Calculation results, Exterior 1

2.2.3 3D luminance, View 1



2.2 Calculation results, Exterior 1

2.2.4 3D pseudo colours, View 1 (E)

