

From: lee@oha-architecture.co.uk [<mailto:lee@oha-architecture.co.uk>]
Sent: 07 August 2018 10:05
To: Close, Roland <Roland.Close@herefordshire.gov.uk>
Subject: 180120 - Hazelhurst Nursing Home - Discharge of Planning Conditions

Dear Roland,

Please see further information below from the Service Engineer regarding the external lighting.

Following the below email I have since obtained the lighting calculations for the currently proposed scheme, and these are attached for your information.

Taking into account my email yesterday and the information provided below and attached, would you consider it acceptable to use the existing external lighting scheme / specification with the 4000k lamps?

If you have any queries or require any further information please let me know.

Kind regards,

Lee
OWEN HICKS ARCHITECTURE
Second Floor Offices
46 Bridge Street
Hereford | HR4 9DG

t: 01432 261 152
m: 07342 889 801

www.oha-architecture.co.uk

RIBA Chartered Practice. Registered in England and Wales. Company Registration Number 8563854

Begin forwarded message:

From: Carl Brady <CarlB@bsd.co.uk>
Subject: RE: Hazelhurst Nursing Home - Discharge of Planning Conditions
Date: 6 August 2018 at 15:02:27 BST
To: "lee@oha-architecture.co.uk" <lee@oha-architecture.co.uk>
Cc: Sean Langton <SeanL@bsd.co.uk>, Martin Fishwick <Martin.Fishwick@whitecroftlight.com>

Lee,

Could you please ask the planning officer what their concerns are with 4000K as it is the common temperature for exterior lighting from the manufacturers we use on majority of our projects.

The light isn't a really white light if that is concerns, the naked eye could hardly tell the difference between 3000/4000 unless luminaires were next to each other and also the lighting levels will not be affected. 15 lux in 3000k is 15 lux in 4000k.

We could also prove with lighting calculations that there will be minimal light spill from the luminaires to surrounding properties.

Whitecroft have informed us they would have to make significant changes to the product if 3000k was required, which obviously results in cost or a new selection.

Regards, Carl.



Building Services Design
Consulting Engineers

Carl Brady
Intermediate Electrical Engineer

E: CarlB@bsd.co.uk

T: 0161 8728383

W: BSD.co.uk



Building Services Design • Magnetic House • Media Village • Water Front Quay • Salford Quays • M50 3XW

This e-mail including any attachments, is confidential to the intended addressee, may be subject to copyright and may also be privileged. If you're not the intended addressee, please do not read, print, re-transmit, copy, store, alter or otherwise disclose it or any of its attachments to anyone; nor should you act in reliance on it or any of its attachments. Instead, please notify the error to the sender by email and immediately permanently delete this email and any of its attachments from your system.

BSD is the trading name of Building Services Design (Cambridge) Limited registered in England and Wales No. 3038935 (registered office 1 Weekley Wood Close, Kettering NN14 1UQ). Emails sent to and from BSD may be monitored and read for legitimate business purposes, notably to ensure compliance with the law and our regulatory obligations. Emails cannot be guaranteed to be secure or error-free, and you should protect your systems. BSD does not accept any liability arising from interception, corruption, loss or destruction of this e-mail, or if it arrives late or incomplete or with viruses.

Please see the Privacy Notice published on our website for information about what we do with your personal data, and your rights in relation to the same



Building Services Design
Consulting Engineers

Hazelhurst Care Home

Installation : External Lighting (Site)

Project number : 171335

Customer :

Processed by : Carl Brady

Date : 28.11.2017

The following values are based on exact calculations on calibrated lamps, luminaires and their arrangement. In practice, gradual divergences can occur.

Guarantee claims for luminaire data are excluded.

Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.

Object : Hazelhurst Care Home
 Installation : External Lighting (Site)
 Project number : 171335
 Date : 28.11.2017



Building Services Design
 Consulting Engineers

1 Luminaire data

1.1 Whitecroft Lighting, BROADWALK L180 (BLF1824KG)

1.1.1 Data sheet

Manufacturer: Whitecroft Lighting



BLF1824KG bollard / pole mounted luminaires BROADWALK L180

BROADWALK L180 flange plate mounted IP66 bollard with single direction distribution. 1100mm high finished in Graphite Grey.

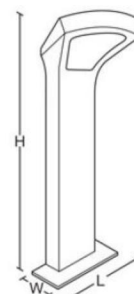
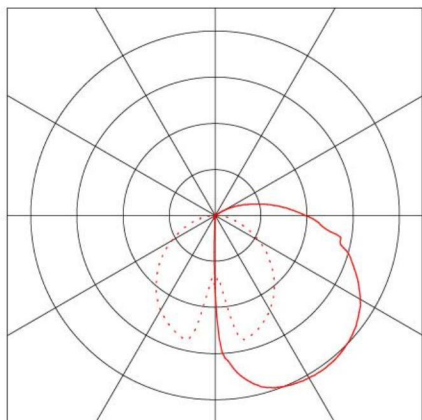
Luminaire data

Luminaire efficiency : 99.99%
 Luminaire efficacy : 47.73 lm/W
 Classification : A31 ↓91.5% ↑8.5%
 CIE Flux Codes : 37 66 87 91 100
 UGR 4H 8H : 30.0 / 20.6
 Control gear : electronic ballast
 Power : 11.5 W
 Luminous flux : 548.9 lm

Equipped with

Quantity : 1
 Designation : LED
 Power : 11.5 W
 Colour : 4000K
 Luminous flux : 549 lm
 Colour reproduction : 1B

Dimensions : 413 mm x 323 mm x 310 mm



Object : Hazelhurst Care Home
 Installation : External Lighting (Site)
 Project number : 171335
 Date : 28.11.2017



Building Services Design
 Consulting Engineers

1 Luminaire data

1.2 Whitecroft Lighting, SIROCCO PARK (SIPSH14K)

1.2.1 Data sheet

Manufacturer: Whitecroft Lighting



SIPSH14K Wall / pole mounted luminaire SIROCCO PARK
 SIROCCO PARK IP66 LED SYMMETRIC WIDE

ultra slim post top lantern with symmetrical distribution and zero upward light. Die cast aluminium body with integrated cooling fins and thermal shock resistant clear tempered glass. Electronic control gear with voltage surge protection and insulated safety switch. With 60mm diameter spigot for post top or side entry column mounting. Optional wall mounting bracket (order separately).

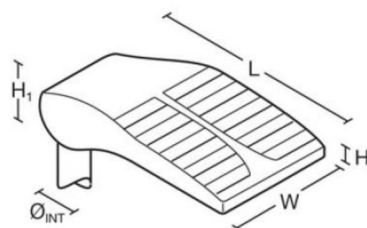
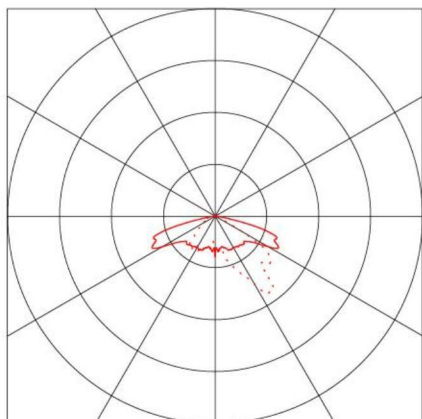
Luminaire data

Luminaire efficiency : 100%
 Luminaire efficacy : 95.69 lm/W
 Classification : A30 ↓100.0% ↑0.0%
 CIE Flux Codes : 31 72 98 100 100
 UGR 4H 8H : 36.9 / 26.2
 Control gear : electronic ballast
 Power : 52 W
 Luminous flux : 4976 lm

Equipped with

Quantity : 1
 Designation : LED
 Power : 52 W
 Colour : 4000K
 Luminous flux : 4976 lm
 Colour reproduction : 1B

Dimensions : 530 mm x 280 mm x 156 mm



Object : Hazelhurst Care Home
 Installation : External Lighting (Site)
 Project number : 171335
 Date : 28.11.2017



Building Services Design
 Consulting Engineers

1 Luminaire data

1.3 Whitecroft Lighting, SIROCCO PARK (SIPAH24KF)

1.3.1 Data sheet

Manufacturer: Whitecroft Lighting



SIPAH24KF Wall / pole mounted luminaire SIROCCO PARK
SIROCCO PARK IP66 LED ASYMMETRIC FORWARD

ultra slim post top lantern with asymmetric forward throw distribution and zero upward light. Die cast aluminium body with integrated cooling fins and thermal shock resistant clear tempered glass. Electronic control gear with voltage surge protection and insulated safety switch. With 60mm diameter spigot for post top or side entry column mounting. Optional wall mounting bracket (order separately).

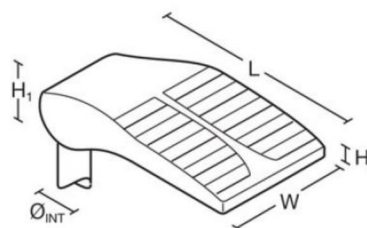
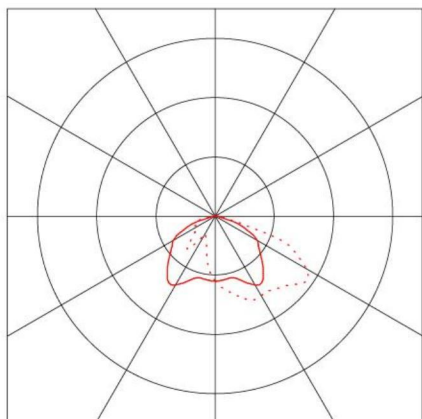
Luminaire data

Luminaire efficiency : 100%
 Luminaire efficacy : 94.53 lm/W
 Classification : A30 ↓100.0% ↑0.0%
 CIE Flux Codes : 34 67 95 100 100
 UGR 4H 8H : 30.3 / 25.9
 Control gear : electronic ballast
 Power : 68 W
 Luminous flux : 6428 lm

Equipped with

Quantity : 1
 Designation : LED
 Power : 68 W
 Colour : 4000K
 Luminous flux : 6428 lm
 Colour reproduction : 1B

Dimensions : 530 mm x 280 mm x 60 mm



Object : Hazelhurst Care Home
 Installation : External Lighting (Site)
 Project number : 171335
 Date : 28.11.2017

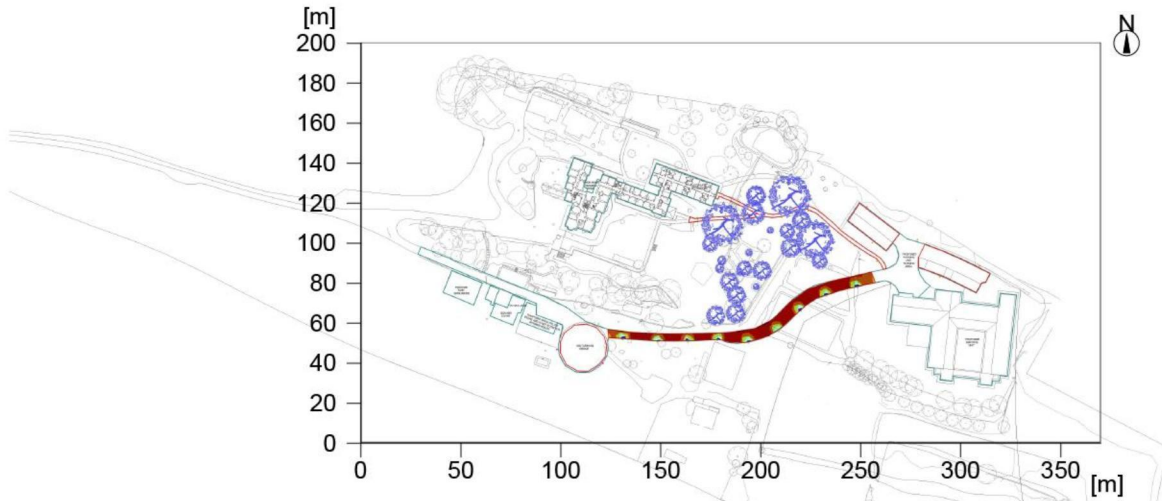


Building Services Design
 Consulting Engineers

2 Exterior 1

2.1 Summary, Exterior 1

2.1.1 Result overview, Access road



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.02 m
Maintenance factor	0.80
Total luminous flux of all lamps	52594 lm
Total power	655 W
Total power per area (74000.00 m ²)	0.01 W/m ²

Illuminance

Average illuminance	Eav	2.8 lx
Minimum illuminance	Emin	0.1 lx
Maximum illuminance	Emax	63.8 lx
Uniformity U ₀	Emin/Em	1:47.5 (0.02)
Diversity U _d	Emin/Emax	1:1090 (0)

Type No.\Make

Whitecroft Lighting

1	18	Order No.	: BLF1824KG
		Luminaire name	: BROADWALK L180
		Equipment	: 1 x LED 11.5 W / 549 lm

2	6	Order No.	: SIPSH14K
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 52 W / 4976 lm

Object : Hazelhurst Care Home
Installation : External Lighting (Site)
Project number : 171335
Date : 28.11.2017



Building Services Design
Consulting Engineers

2 Exterior 1

2.1 Summary, Exterior 1

2.1.1 Result overview, Access road

3	2	Order No.	: SIPAH24KF
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 68 W / 6428 lm

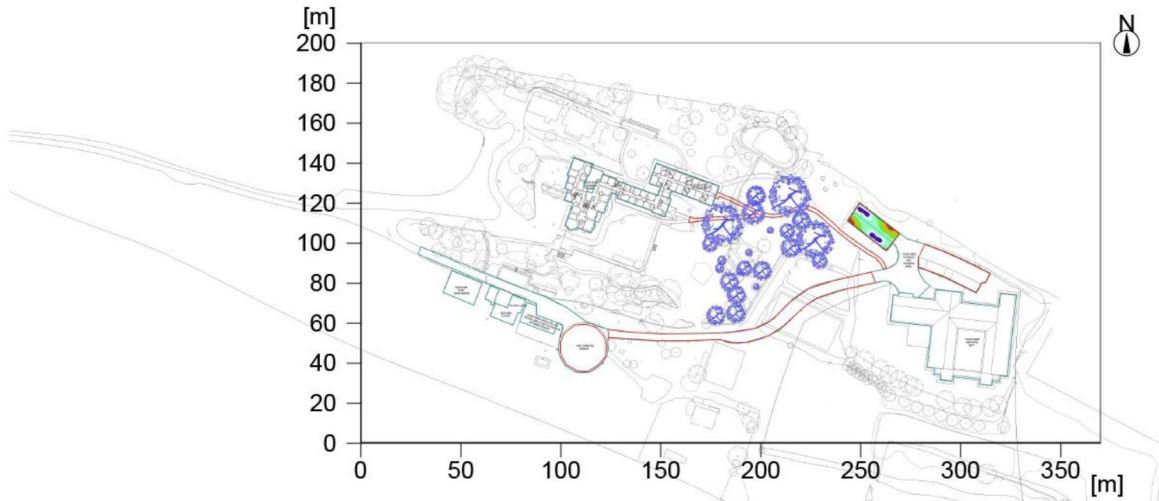
Object : Hazelhurst Care Home
 Installation : External Lighting (Site)
 Project number : 171335
 Date : 28.11.2017



Building Services Design
 Consulting Engineers

2.1 Summary, Exterior 1

2.1.2 Result overview, Car Park 1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.02 m
Maintenance factor	0.80
Total luminous flux of all lamps	52594 lm
Total power	655 W
Total power per area (74000.00 m²)	0.01 W/m²

Illuminance

Average illuminance	Eav	15.9 lx
Minimum illuminance	Emin	1.6 lx
Maximum illuminance	Emax	37.9 lx
Uniformity Uo	Emin/Em	1:9.7 (0.1)
Diversity Ud	Emin/Emax	1:23.1 (0.04)

Type No.\Make

Whitecroft Lighting

1	18	Order No.	: BLF1824KG
		Luminaire name	: BROADWALK L180
		Equipment	: 1 x LED 11.5 W / 549 lm
2	6	Order No.	: SIPSH14K
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 52 W / 4976 lm

Object : Hazelhurst Care Home
Installation : External Lighting (Site)
Project number : 171335
Date : 28.11.2017



Building Services Design
Consulting Engineers

2.1 Summary, Exterior 1

2.1.2 Result overview, Car Park 1

3	2	Order No.	: SIPAH24KF
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 68 W / 6428 lm

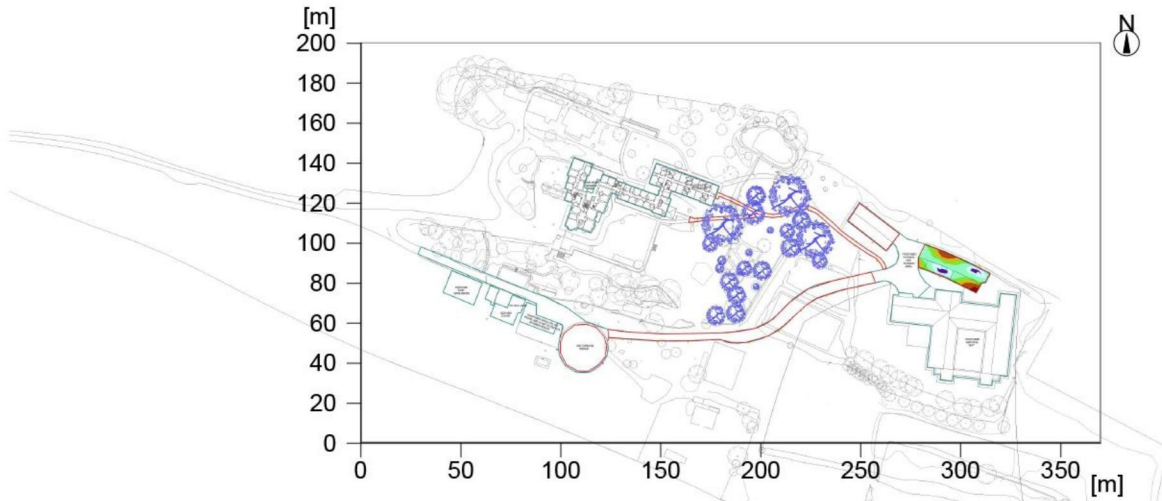
Object : Hazelhurst Care Home
 Installation : External Lighting (Site)
 Project number : 171335
 Date : 28.11.2017



Building Services Design
 Consulting Engineers

2.1 Summary, Exterior 1

2.1.3 Result overview, Car Park 2



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.02 m
Maintenance factor	0.80
Total luminous flux of all lamps	52594 lm
Total power	655 W
Total power per area (74000.00 m²)	0.01 W/m²

Illuminance

Average illuminance	Eav	13 lx
Minimum illuminance	Emin	0.7 lx
Maximum illuminance	Emax	37.1 lx
Uniformity Uo	Emin/Em	1:19.7 (0.05)
Diversity Ud	Emin/Emax	1:56.2 (0.02)

Type No.\Make

Whitecroft Lighting

1	18	Order No.	: BLF1824KG
		Luminaire name	: BROADWALK L180
		Equipment	: 1 x LED 11.5 W / 549 lm

2	6	Order No.	: SIPSH14K
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 52 W / 4976 lm

Object : Hazelhurst Care Home
Installation : External Lighting (Site)
Project number : 171335
Date : 28.11.2017



Building Services Design
Consulting Engineers

2.1 Summary, Exterior 1

2.1.3 Result overview, Car Park 2

3	2	Order No.	: SIPAH24KF
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 68 W / 6428 lm

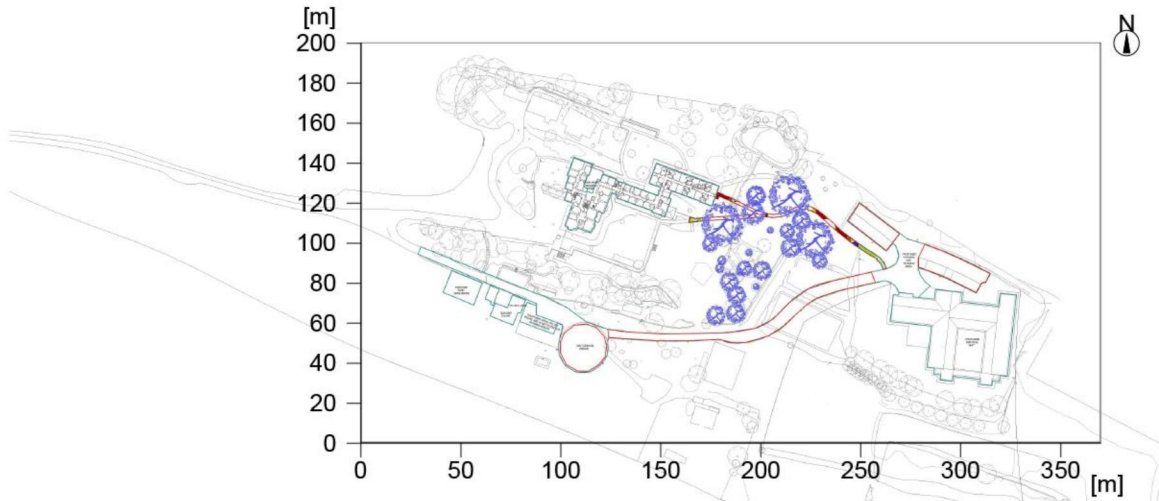
Object : Hazelhurst Care Home
 Installation : External Lighting (Site)
 Project number : 171335
 Date : 28.11.2017



Building Services Design
 Consulting Engineers

2.1 Summary, Exterior 1

2.1.4 Result overview, Link Path



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.02 m
Maintenance factor	0.80
Total luminous flux of all lamps	52594 lm
Total power	655 W
Total power per area (74000.00 m ²)	0.01 W/m ²

Illuminance

Average illuminance	Eav	11.9 lx
Minimum illuminance	Emin	0.4 lx
Maximum illuminance	Emax	84.8 lx
Uniformity U ₀	Emin/Em	1:29.3 (0.03)
Diversity U _d	Emin/Emax	1:209 (0)

Type No.\Make

Whitecroft Lighting

1	18	Order No.	: BLF1824KG
		Luminaire name	: BROADWALK L180
		Equipment	: 1 x LED 11.5 W / 549 lm

2	6	Order No.	: SIPSH14K
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 52 W / 4976 lm

Object : Hazelhurst Care Home
Installation : External Lighting (Site)
Project number : 171335
Date : 28.11.2017



Building Services Design
Consulting Engineers

2.1 Summary, Exterior 1

2.1.4 Result overview, Link Path

3	2	Order No.	: SIPAH24KF
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 68 W / 6428 lm

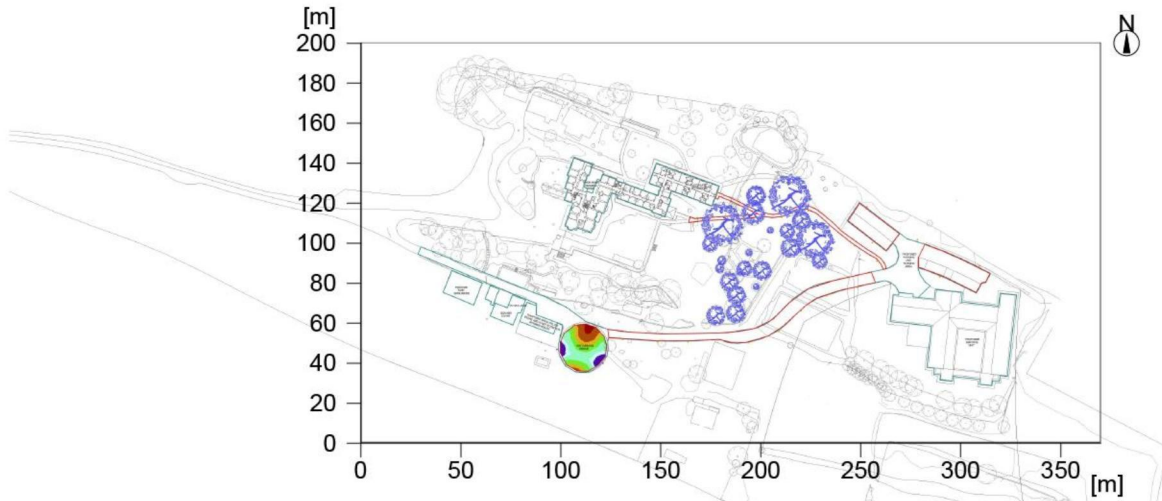
Object : Hazelhurst Care Home
 Installation : External Lighting (Site)
 Project number : 171335
 Date : 28.11.2017



Building Services Design
 Consulting Engineers

2.1 Summary, Exterior 1

2.1.5 Result overview, HGV Turning Circle



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.02 m
Maintenance factor	0.80
Total luminous flux of all lamps	52594 lm
Total power	655 W
Total power per area (74000.00 m²)	0.01 W/m²

Illuminance

Average illuminance	Eav	12.1 lx
Minimum illuminance	Emin	0.6 lx
Maximum illuminance	Emax	53.9 lx
Uniformity Uo	Emin/Em	1:20.6 (0.05)
Diversity Ud	Emin/Emax	1:91.4 (0.01)

Type No.\Make

Whitecroft Lighting

1	18	Order No.	: BLF1824KG
		Luminaire name	: BROADWALK L180
		Equipment	: 1 x LED 11.5 W / 549 lm

2	6	Order No.	: SIPSH14K
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 52 W / 4976 lm

Object : Hazelhurst Care Home
Installation : External Lighting (Site)
Project number : 171335
Date : 28.11.2017



Building Services Design
Consulting Engineers

2.1 Summary, Exterior 1

2.1.5 Result overview, HGV Turning Circle

3	2	Order No.	: SIPAH24KF
		Luminaire name	: SIROCCO PARK
		Equipment	: 1 x LED 68 W / 6428 lm

Object : Hazelhurst Care Home
Installation : External Lighting (Site)
Project number : 171335
Date : 28.11.2017

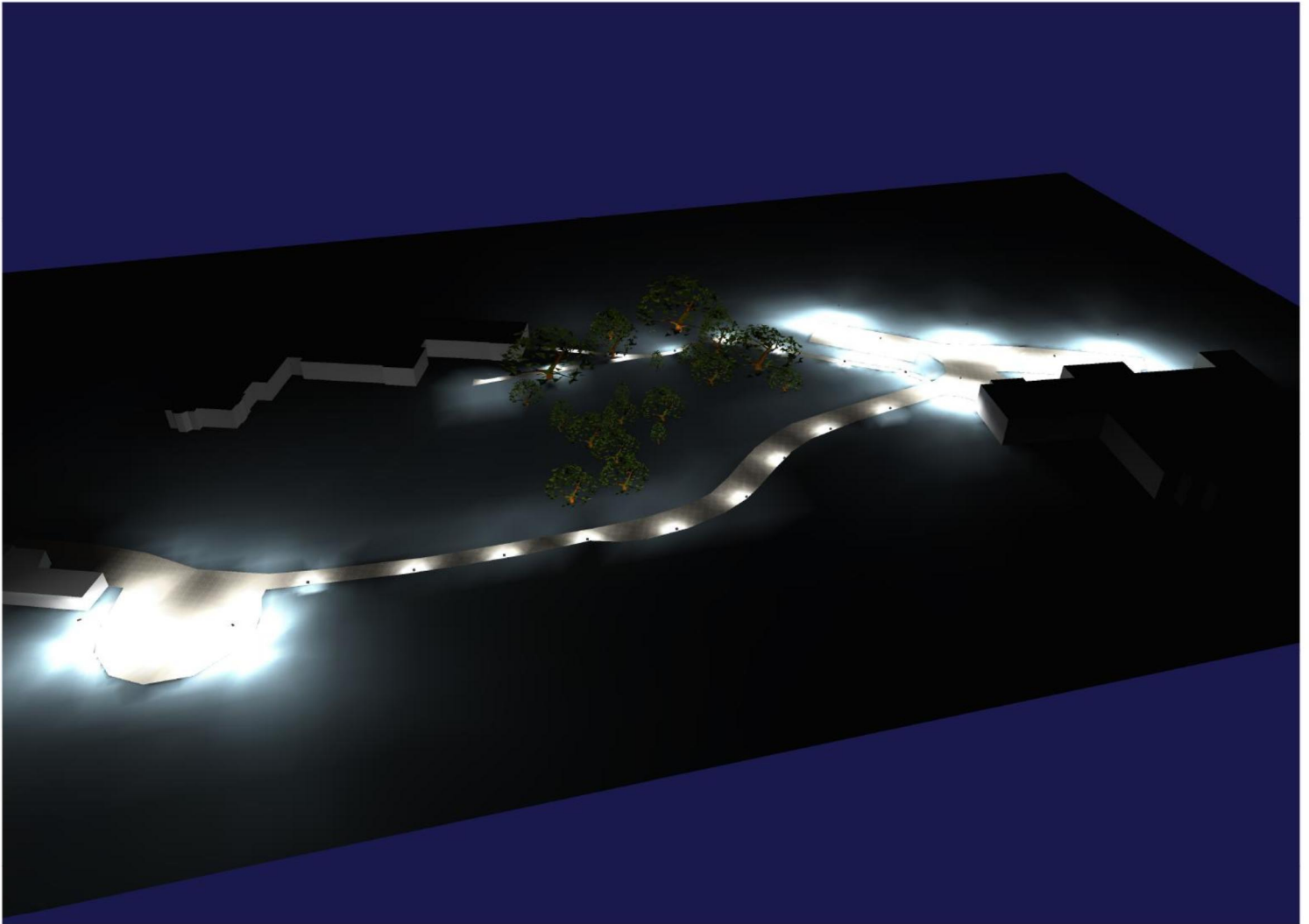


Building Services Design
Consulting Engineers

2 Exterior 1

2.2 Calculation results, Exterior 1

2.2.1 3D luminance, View 1



Luminance in the scene

Minimum: : 0 cd/m²

Maximum: : 5.76 cd/m²

Object : Hazelhurst Care Home
Installation : External Lighting (Site)
Project number : 171335
Date : 28.11.2017



Building Services Design
Consulting Engineers

2.2 Calculation results, Exterior 1

2.2.2 3D pseudo colours, View 1 (E)

