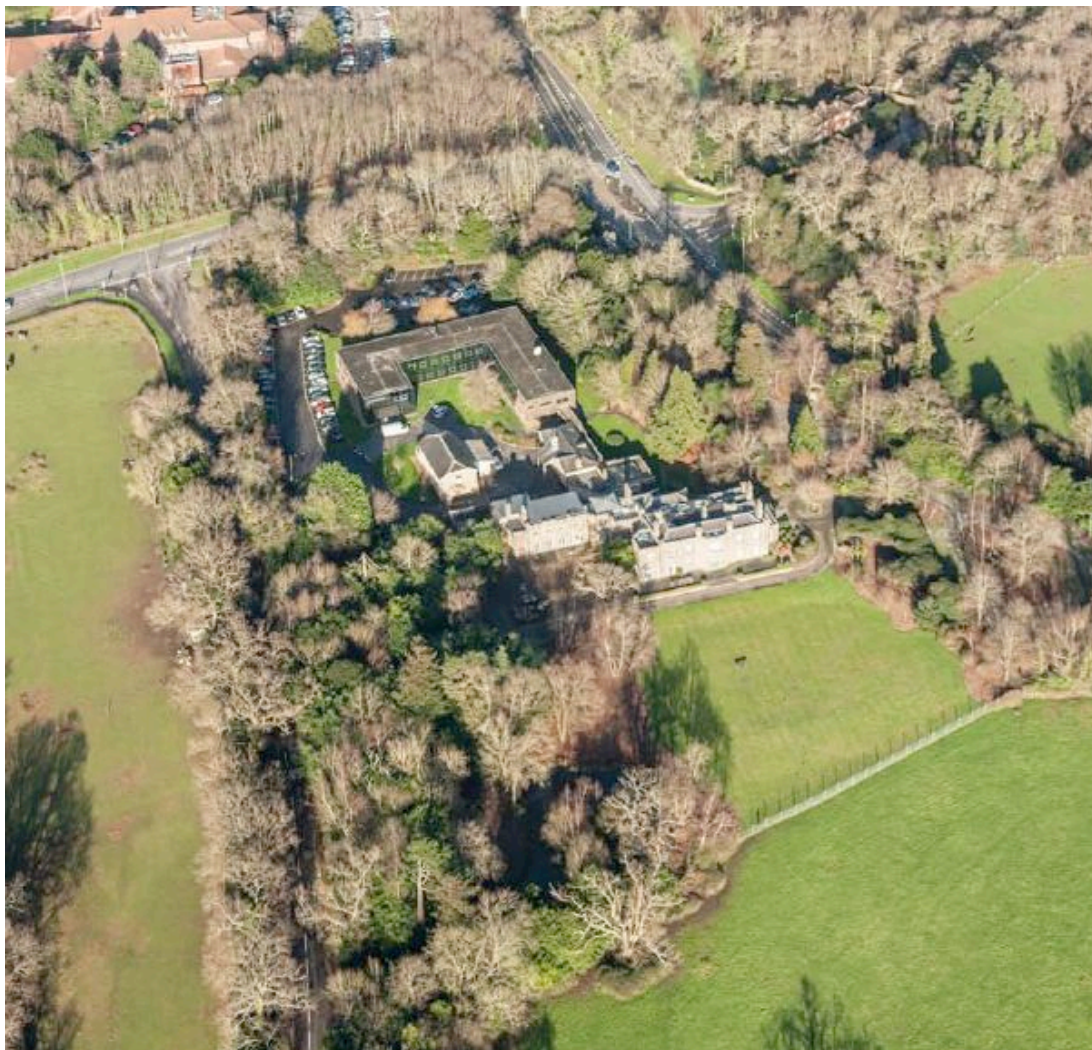


EXTERNAL LIGHTING REPORT

SOUTHLEIGH PARK HOUSE
EASTLEIGH ROAD
HAVANT



Southleigh Park House

Lighting design that cares for the environment.

THE GRAHAM WHITE CONSULTANCY

Ivy Cottage, 4 Rosemary Lane, Rowledge, Farnham, Surrey. GU10 4DB

07778 523667 | www.gwlc.co.uk | design@gwlc.co.uk

Introduction

A site survey was carried out in calm, clear conditions at dusk and night time. Illuminance values (in Lux) were taken of the existing lighting installation using a certified luxmeter and the illuminance levels at each point recorded. Similarly for the proposed lighting installation, illuminance values were reproduced within Dialux light modelling software by the input of certified lighting product photometric data.

Site Location and Environs

The Southleigh Park House Site is bounded by the B2148 Horndean Road to the east, Barton Road to the north and Eastleigh Road to the west.

The original house is a grade 2 listed building, with ancillary coach house, stable bloc, lodge, woodstore and dairy which are also listed, and have been refurbished for commercial use. A more recent purpose built office building is adjacent.

The buildings are located within the original landscaped grounds. Car parking is provided to the north and part of the east and south of the site. The main access is from Eastleigh Road.

The B2148 Horndean Road is a reasonably busy rural road with two junctions along the length bounding the Southleigh Park House site and a further junction between Barton Road and Eastleigh Road to the northwest corner of the site. Horndean Road and Barton Road are illuminated to the required standard for this status of road. Eastleigh Road is not illuminated. The three junctions constitute conflict areas and are additionally illuminated for compliance with the current standard.

Existing Lighting

The existing lighting is generally old technology with poor efficacy compared with current standards. Beam control and direction is average and poor in some locations.

The lighting stock consists of small area floodlights mounted in groups of 3 on columns to the southern car park, affording poor beam control with some back spill of light into the woodland area. Small area floodlights are wall mounted at low level and large area floodlights at high level to various locations around the office buildings resulting in some glare conditions and poor beam control. There is no lighting around or attached to the original house.

SEE DRAWING FILE REFERENCE: DM59/EN

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During the survey visit illuminance levels were recorded and reproduced to provide values measured in Lux.

These results indicate very poor uniformity and that direction of certain floodlights was not to an acceptable standard.

Poor beam control has resulted in some glare conditions and spill light into non task areas such as tree and shrub concentrations.

SEE DRAWING FILE REFERENCE: DM59/EV

It can be determined from this values chart drawing that whilst tree and shrub areas are generally not illuminated, the lighting within the site and the road lighting around the perimeter of the site has created relatively narrow dark corridors.

Proposed Lighting:

SEE DRAWING FILE REFERENCE: DM/PNV

The scheme design is indicative and seeks to increase the amount of unlit areas to provide an improved habitat for wildlife and widen the existing unlit vegetation corridors.

All proposed lighting equipment will use integrated LED lamp sources, LED lamps are also recognised as less invasive for nocturnal wildlife.

The proposed scheme for the new development recognises two main task areas. The access roads and the courtyard areas (located within the immediate vicinity of the properties).

The residential road lighting is achieved with low output column mounted lanterns at maximum 5m mounting height providing very concentrated illuminance over the road surface only. The courtyard areas are illuminated with 910mm height illuminated bollards - specially designed louvres within the illumination housing control the light to reduce side emission of light. There is no upward light component with either of these light sources.

All external lighting will be controlled by a daylight sensor time switch. The time switch will be configured so as to prevent operation during daylight hours and the maximum hours of permitted usage during the hours of darkness.

Lighting design that cares for the environment.

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Conclusion

Desk top and site inspection assessments on the existing site and proposed development scheme indicate that overall light pollution and nuisance can be significantly reduced within the new lighting scheme.

Any lighting impact from the new scheme is minimised by providing minimum illumination for safety. Accepted methods of lighting control (to include occupancy detection if required) will be used in addition to the latest LED lighting technology to maximise beam control onto subject areas only.

In summary, it is our considered opinion that the new illumination scheme for the proposed development will provide an improved result for the surrounding landscaped environment and woodland habitats.

Lighting design that cares for the environment.

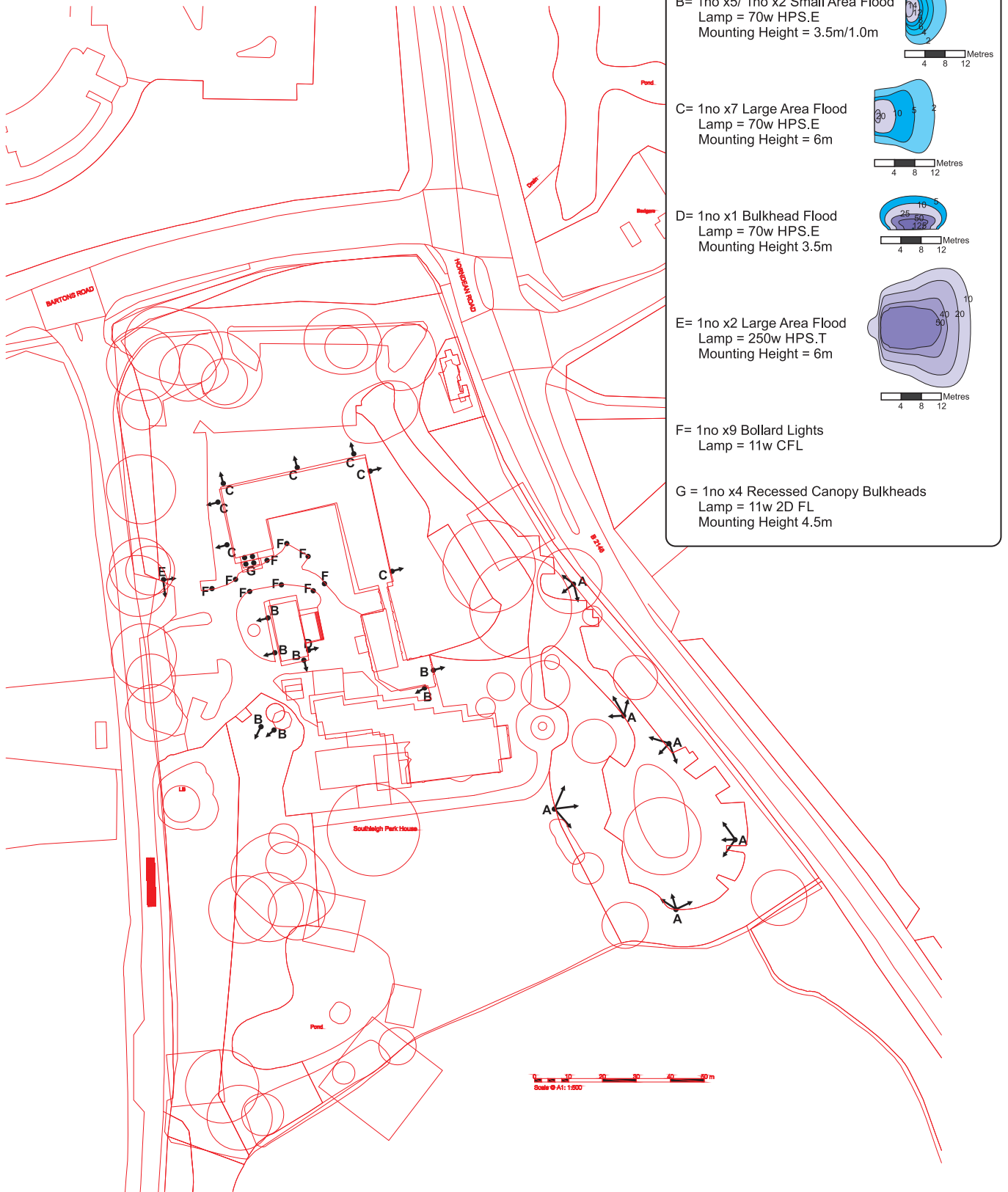
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EXISTING

ALL VALUES ARE IN LUX (LUMENS/m²)



TITLE: Southleigh Park House - EXISTING

FILE REF: DM59/EN

CLIENT: SNELL & WILCOX SAPF

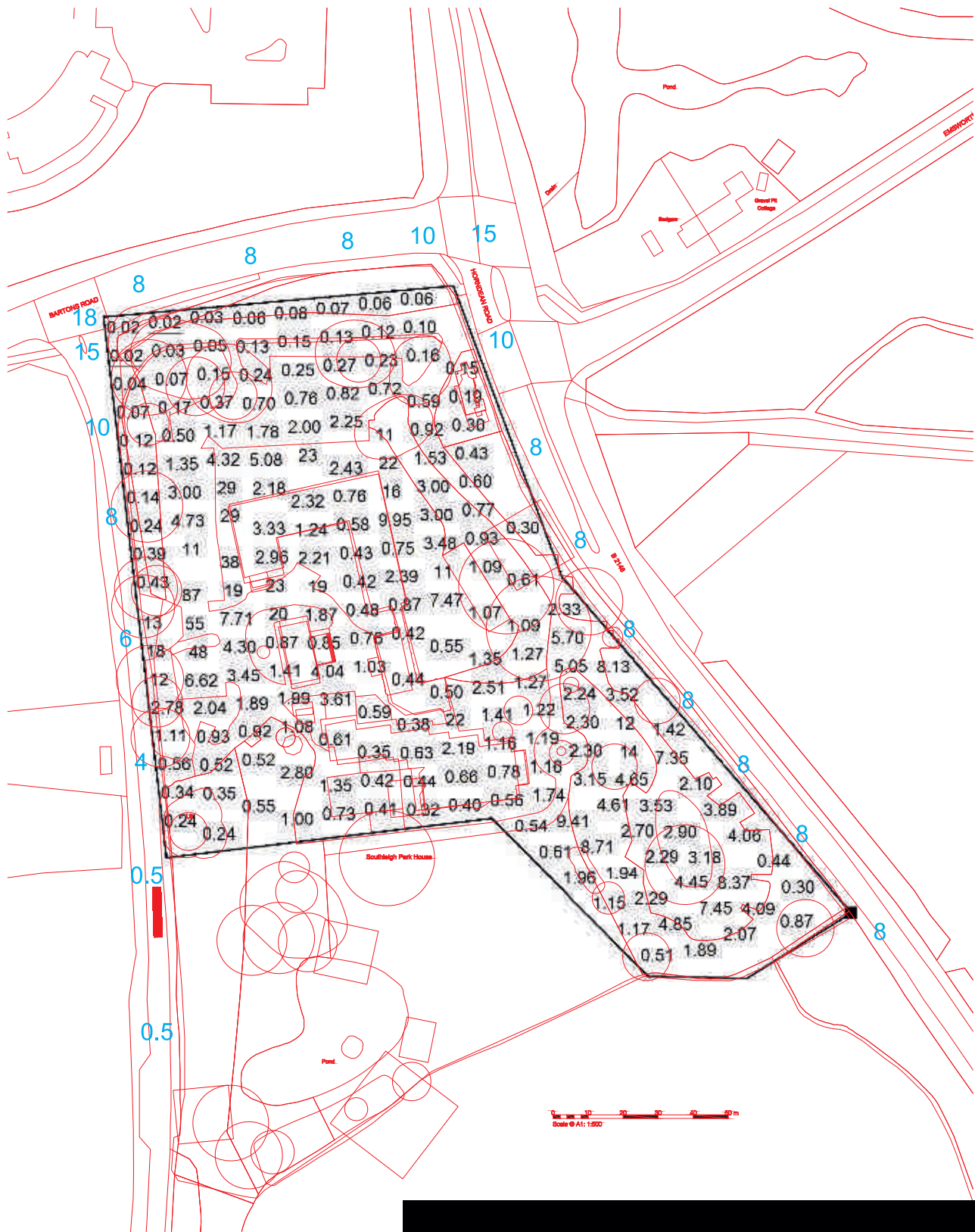
Lighting design and specification - Construction
measurement and management

THE GRAHAM WHITE CONSULTANCY
Ivy Cottage, 4 Rosemary Lane, Farnham, Surrey, GU10 4DB
Telephone/Facsimile: 01252 266559 Mobile: 07778 523667
e-mail: enquiries@gwlc.co.uk www.gwlc.co.uk

GW
LIGHTING CONSULTANCY

EXISTING

ALL VALUES ARE IN LUX (LUMENS/m²)



TITLE: Southleigh Park House - EXISTING

FILE REF: DM59/EV

CLIENT: SNELL & WILCOX SAPF

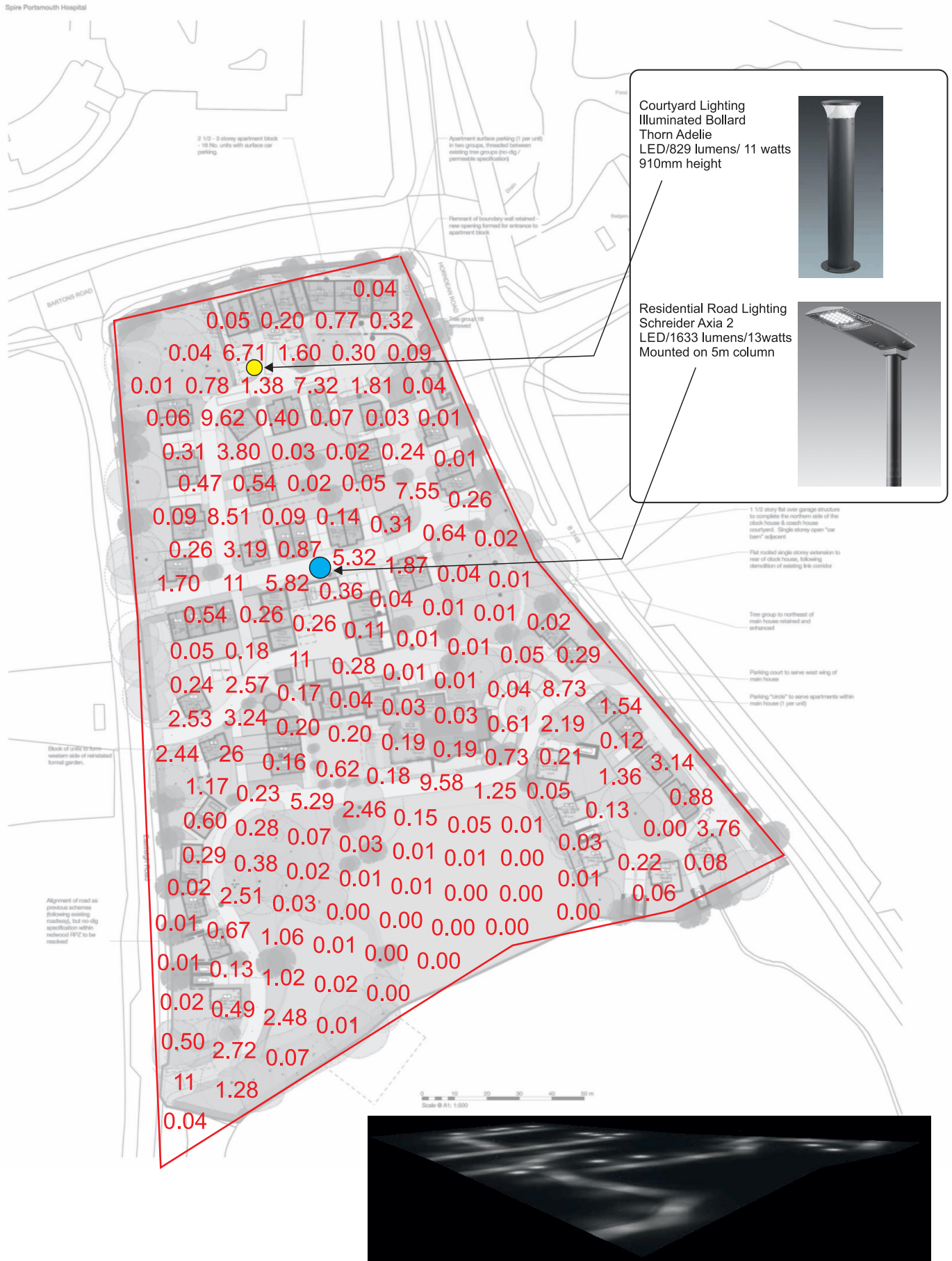
Lighting design and specification - Construction
measurement and management

THE GRAHAM WHITE CONSULTANCY
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e-mail: enquiries@gwlc.co.uk www.gwlc.co.uk



PROPOSED

ALL VALUES ARE IN LUX (LUMENS/m²)



TITLE: Southleigh Park House - PROPOSED

FILE REF: DM59/PNV

CLIENT: SNELL & WILCOX SAPF

Lighting design and specification - Construction
measurement and management

THE GRAHAM WHITE CONSULTANCY
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e-mail: enquiries@gwlc.co.uk www.gwlc.co.uk



AXIA 2



COMPREHENSIVE LED LIGHTING
FOR ROAD + URBAN ENVIRONMENTS

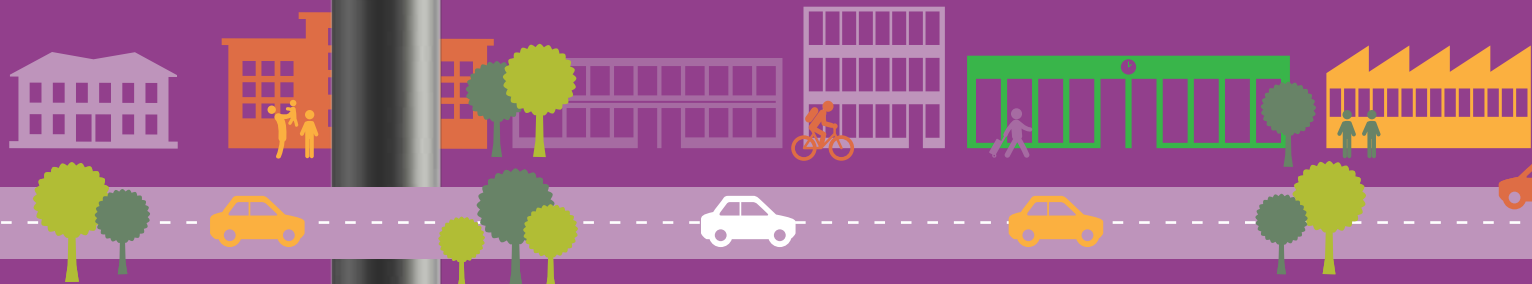


SMART CITY
CONNECTIVITY

FAST RETURN
ON INVESTMENT

SUPERIOR
PERFORMANCE

UNIVERSAL
MOUNTING SYSTEM



Schröder



AXIA 2

AXIA 2

THE MOST COMPREHENSIVE & ECONOMICAL LED LIGHTING SOLUTION

The AXIA 2 is the most comprehensive and best value LED solution for any road, street or pedestrian area. Built from high-pressure die-cast aluminium with a polycarbonate protector, and a photometric engine with photometry adapted to various applications, the AXIA 2 offers a fast return on investment as one of the highest performing luminaires available.

Building on the strengths of the original ground-breaking AXIA, this second generation luminaire is designed to be the ultimate multi-purpose fixture, providing a cost effective solution for those looking to reduce their energy costs. The AXIA 2 offers all the advantages of LED lighting, without the high cost associated with LEDs.



AVAILABLE IN TWO
SIZES FOR DESIGN
CONSISTENCY



Smart City connectivity

Systems for autonomous and interoperable networks

Surge protection 10kV

IP 66 tightness level

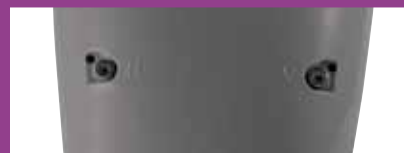
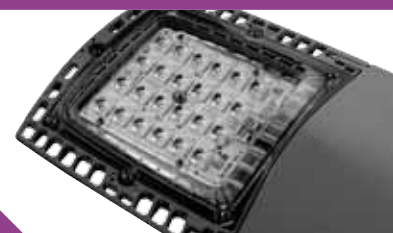
Cost-effective and efficient lighting solution for a fast return on investment

Optional control solutions: photocell and/or Owllet control

Universal fixation with adjustable inclination in steps of 2.5°
Range
Side-entry: -10° to +5°
Post-top: 0° to +10°

Photometric engine with photometry adapted to various applications

Post-top mounting: Ø60 and 76mm
Side-entry mounting: Ø32 to 60mm



KEY CHARACTERISTICS

	AXIA 2.1 5 - 8m	AXIA 2.2 6 - 10m
Installation height		
Typical luminaire output flux (range)*	1,000 to 7,900lm	6,400 to 17,800lm
Power consumption (W)	10W to 68W	47W to 151W
Lifetime residual flux @tj 25°C	@100,000 hr 90%	
Colour temperature	Neutral white	
Optical compartment tightness level	IP 66 (**)	
Control gear tightness level	IP 66 (**)	
Control options	DALI, 0-10V, CMS, Scheduled Dimming, Dusk-Dawn Dimming, PIR Presence detection (for both sizes)	
Impact resistance	IK 08 (***) minimum	
Nominal voltage	220-240V 50/60Hz	
Electrical class	EU Class I or II	
Weight	7kg	10kg
Materials		
Body	High-pressure die-cast aluminium	
Protector	Polycarbonate	
Colour	RAL7040 Any other RAL colour upon request	

(*) The typical flux is an indicative luminaire flux @ tj 25°C. The real flux output of the luminaire depends on environmental conditions (e.g. temperature and pollution). The flux depends on the type of LEDs used and is likely to change in accordance with the continuous and rapid developments in LED technology. To follow the progress of the luminous efficiency of the LEDs used, please visit our website.

(**) according to IEC - EN 60598.

(***) according to IEC - EN 62262. Some lens options are IK10.

UNIVERSAL FIXATION

POST-TOP



The unused entry position is automatically covered

SIDE-ENTRY

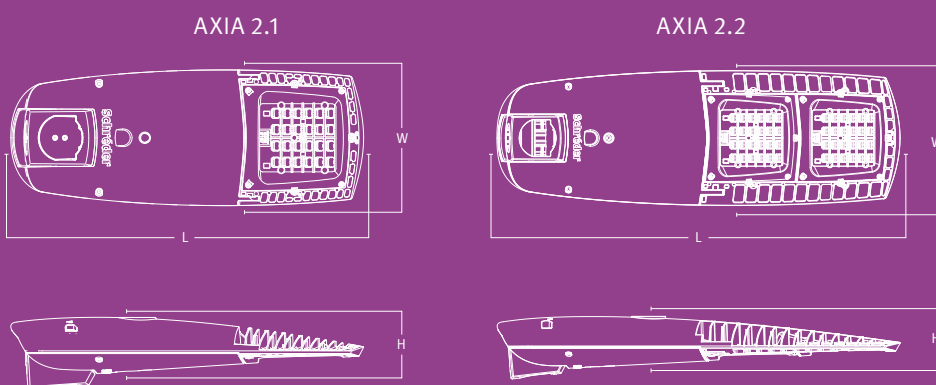


ADJUSTING INCLINATION ON-SITE

When supplied with a factory fitted power cable, the luminaire can be installed and adjusted on-site without being opened. This saves time and removes any risk of compromising the IP rating of the luminaire.



AXIA 2 DIMENSIONS



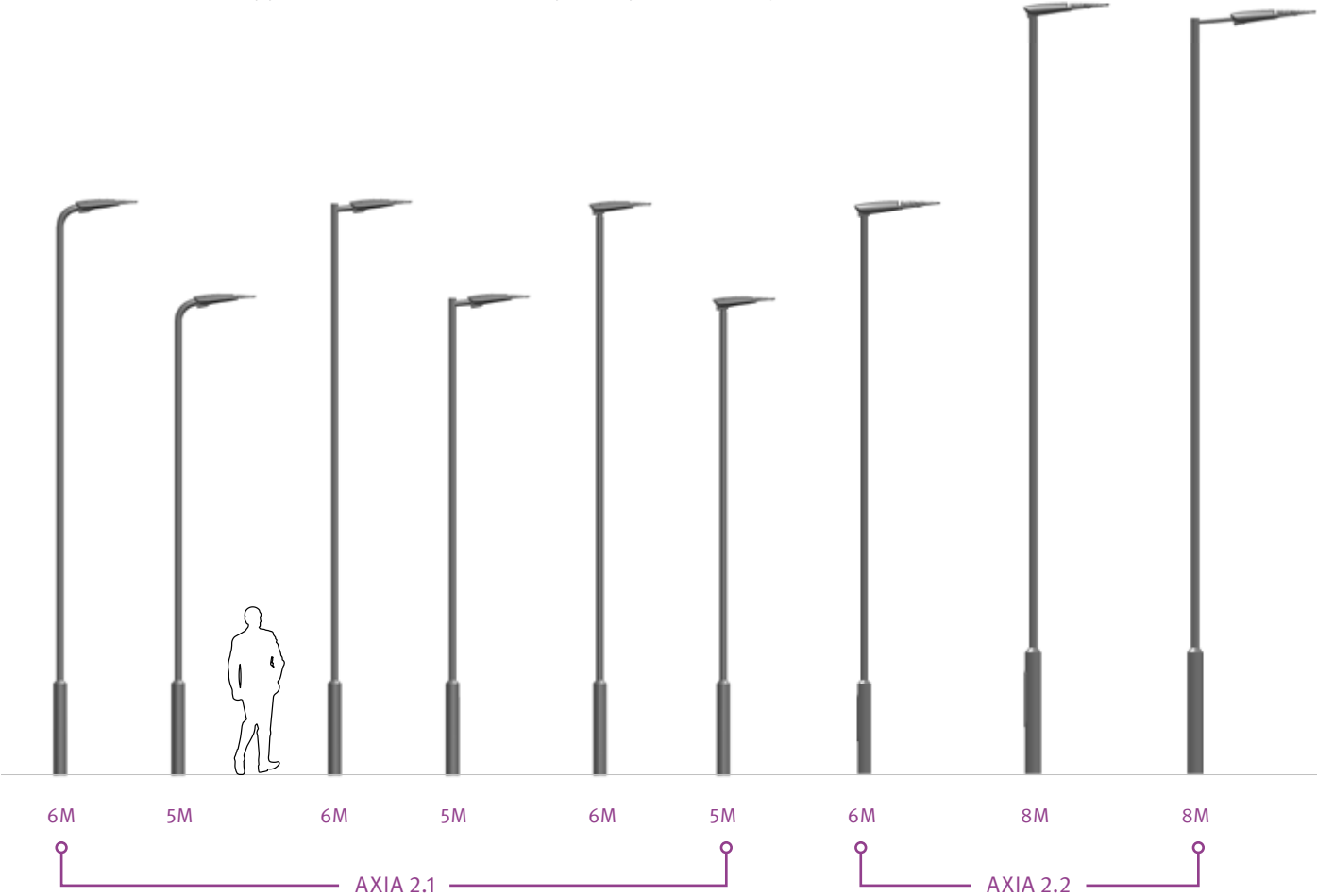
	AXIA 2.1	AXIA 2.2
L	650mm	895mm
W	250mm	300mm
H	103mm	116mm

ENVIRONMENTS WHERE AXIA 2 OFFERS KEY CUSTOMER BENEFITS

PEDESTRIAN AREAS	STREETS		ROADS
Streets, paths and bike paths	Residential streets	Shared zones, commercial streets in urban areas	Rural roads
			

COLUMNS AND BRACKETS

The AXIA 2 is the ultimate multi-purpose luminaire suited to a wide variety of road and urban applications and can be fitted post-top or side-entry.





OWLET SOLUTIONS TO MAXIMISE SAVINGS

With Schröder's wide range of Owlet control solutions, your lighting scheme becomes intelligent. Our system approach allows you to use light in the smartest way, with the right level, in the right place and at the right moment. You save energy, lengthen the life of your lighting installation, reduce maintenance costs, enhance comfort and increase safety. Our range of solutions encompasses small areas to complete city networks in order to perfectly suit your requests and your targets in terms of savings.

The AXIA 2 luminaires can operate with a photocell, a scheduled dimming system, a Constant Light Output (CLO) or a complete remote Owlet management system. It can also be equipped with a motion detection unit.

The AXIA 2 luminaires incorporate intelligent ballasts that work autonomously by taking switch-on and switch-off times as reference points. This means that the system will adapt itself all through the year according to the seasons and the sunset/sunrise.





SAFETY



WELL-BEING



SUSTAINABILITY



SAVINGS



SOLUTIONS



Schröder



www.schreder.com

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The information, descriptions and illustrations herein are of only an indicative nature. Due to advanced developments, we may be required to alter the characteristics of our products without notice. As these may present different characteristics according to the requirements of individual countries, we invite you to consult us.

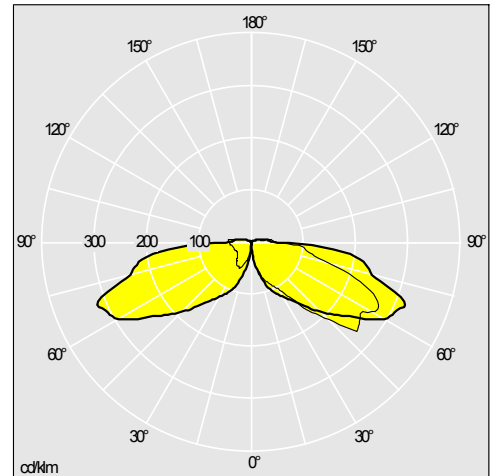
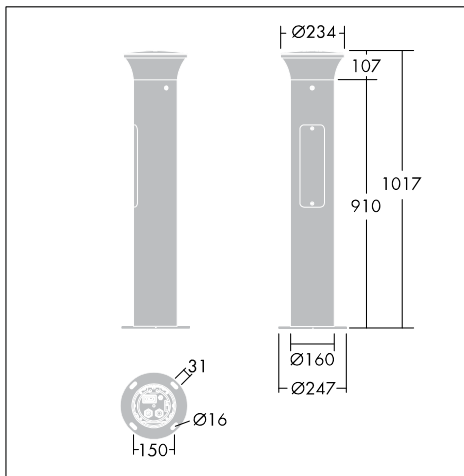
Adelie Bollard

Elegant vandal resistant bollard with high performance optic offering a comfortable light and energy saving solution

- Best in class LED optic provides a comfortable, low glare direct and indirect light with asymmetric or symmetric distribution, sympathetic to users with a lower viewing angle
- Durable and vandal resistant (IK10 40 joules for the slim version)
- Bi power dimming and presence detection options reduce energy consumption
- Available in two sizes – slim and wide – with the wide version also suitable for use as street furniture



Photographs, line drawings and photometric data are representative only. For specific product detail please select an individual product.



96264210

Material/Finish

Column and base: aluminium (EN AW 6060)
 Canopy: die-cast aluminium (EN AC 47100)
 Diffuser: clear anti UV Polycarbonate
 Reflector: white Polycarbonate
 Gear Box: Polypropylene
 Canopy and Column colour: powder coated dark grey (close to 7043)

Installation/Mounting

Slim version: suitable for Root and Flange mounting: 4 x anchor bolts M14 (to be ordered separately), spacing: 150mm.
 Wide version: suitable for Flange mounting: 4 x anchor bolts M14 (to be ordered separately), spacing: 200mm.
 Ready to install: prewired fittings to be connected with a connection box (to be ordered separately) through the anti vandal access door (via Torx hollow T30)
 For RGB and Bi power versions choose the colour of the decorative led band or deactivate the Bi Power function at installation through the access door.
 Gear box (including the driver) and head (including the LEDs) are easily replaceable as spares.

Specification

To specify state: Elegant and vandal resistant bollard offering asymmetric and symmetric distributions, combining both direct and indirect comfortable light, with decorative colour and dimming/presence detection.
 As Thorn Adelie Bollard.

Adelie Bollard

Ordering Guide Supplied complete with LEDs.

Description	ILCOS Code	Socket	Wt (kg)	SAP Code
Adelie Bollard Slim 250mA, Lit band, flange mounted				
ADELIEBS 10L25 740 RGB R/S CL1 MPL	LED		7,664	96264229
ADELIEBS 10L25 740 RGB ASY CL1 MPL	LED		7,664	96264230
ADELIEBS 10L25 730 RGB R/S CL1 MPL	LED		7,664	96264231
ADELIEBS 10L25 730 RGB ASY CL1 MPL	LED		7,664	96264232
Adelie Bollard Slim 250mA, No lit band, flange mounted				
ADELIEBS 10L25 740 R/S CL1 MPL	LED		7,664	96264225
ADELIEBS 10L25 740 ASY CL1 MPL	LED		7,664	96264226
ADELIEBS 10L25 730 R/S CL1 MPL	LED		7,664	96264227
ADELIEBS 10L25 730 ASY CL1 MPL	LED		7,664	96264228
Adelie Bollard Slim 250mA, Lit band, root mounted				
ADELIEBS 10L25 740 RGB R/S CL1 MGR	LED		9,3	96264245
ADELIEBS 10L25 740 RGB ASY CL1 MGR	LED		9,3	96264246
ADELIEBS 10L25 730 RGB R/S CL1 MGR	LED		9,3	96264247
ADELIEBS 10L25 730 RGB ASY CL1 MGR	LED		9,3	96264248
Adelie Bollard Slim 250mA, No lit band, root mounted				
ADELIEBS 10L25 740 R/S CL1 MGR	LED		9,3	96264241
ADELIEBS 10L25 740 ASY CL1 MGR	LED		9,3	96264242
ADELIEBS 10L25 730 R/S CL1 MGR	LED		9,3	96264243
ADELIEBS 10L25 730 ASY CL1 MGR	LED		9,3	96264244
Adelie Bollard Slim 350mA, Lit band, flange mounted				
ADELIEBS 10L35 BPSW 740 RGB R/S CL1 MPL	LED		7,7	96273274
ADELIEBS 10L35 BPSW 740 RGB ASY CL1 MPL	LED		7,7	96273275
ADELIEBS 10L35 BPSW 730 RGB R/S CL1 MPL	LED		7,7	96273276
ADELIEBS 10L35 BPSW 730 RGB ASY CL1 MPL	LED		7,7	96273277
Adelie Bollard Slim 350mA, No lit band, flange mounted				
ADELIEBS 10L35 BPSW 730 R/S CL1 MPL	LED		7,7	96273272
ADELIEBS 10L35 BPSW 730 ASY CL1 MPL	LED		7,7	96273273
ADELIEBS 10L35 BPSW 740 R/S CL1 MPL	LED		7,7	96273301
ADELIEBS 10L35 BPSW 740 ASY CL1 MPL	LED		7,7	96273302
Adelie Bollard Slim 350mA, Lit band, root mounted				
ADELIEBS 10L35 BPSW 740 RGB R/S CL1 MGR	LED		9,3	96273290
ADELIEBS 10L35 BPSW 740 RGB ASY CL1 MGR	LED		9,3	96273291
ADELIEBS 10L35 BPSW 730 RGB R/S CL1 MGR	LED		9,3	96273292
ADELIEBS 10L35 BPSW 730 RGB ASY CL1 MGR	LED		9,3	96273293
Adelie Bollard Slim 350mA, No lit band, root mounted				
ADELIEBS 10L35 BPSW 740 R/S CL1 MGR	LED		9,3	96273286
ADELIEBS 10L35 BPSW 740 ASY CL1 MGR	LED		9,3	96273287

Adelie Bollard

Description	ILCOS Code	Socket	Wt (kg)	SAP Code
ADELIEBS 10L35 BPSW 730 R/S CL1 MGR	LED		9,3	96273288
ADELIEBS 10L35 BPSW 730 ASY CL1 MGR	LED		9,3	96273289
Adelie Bollard Slim, Presence detection master, flange mounted				
ADELIEBS 10L25 MAS 740 RGB ASY CL1 MPL	LED		7,9	96265400
ADELIEBS 10L25 MAS 730 RGB R/S CL1 MPL	LED		7,9	96265401
ADELIEBS 10L25 MAS 730 RGB ASY CL1 MPL	LED		7,9	96265402
ADELIEBS 10L25 MAS 740 RGB R/S CL1 MPL	LED		7,9	96265399
ADELIEBS 10L35 MAS 740 RGB R/S CL1 MPL	LED		7,7	96273306
ADELIEBS 10L35 MAS 740 RGB ASY CL1 MPL	LED		7,7	96273307
ADELIEBS 10L35 MAS 730 RGB R/S CL1 MPL	LED		7,7	96273308
ADELIEBS 10L35 MAS 730 RGB ASY CL1 MPL	LED		7,7	96273309
Adelie Bollard Slim, Presence detection master, root mounted				
ADELIEBS 10L25 MAS 740 RGB R/S CL1 MGR	LED		9,5	96265407
ADELIEBS 10L25 MAS 740 RGB ASY CL1 MGR	LED		9,5	96265408
ADELIEBS 10L25 MAS 730 RGB R/S CL1 MGR	LED		9,5	96265409
ADELIEBS 10L25 MAS 730 RGB ASY CL1 MGR	LED		9,5	96265410
ADELIEBS 10L35 MAS 740 RGB R/S CL1 MGR	LED		9,3	96273312
ADELIEBS 10L35 MAS 740 RGB ASY CL1 MGR	LED		9,3	96273313
ADELIEBS 10L35 MAS 730 RGB R/S CL1 MGR	LED		9,3	96273314
ADELIEBS 10L35 MAS 730 RGB ASY CL1 MGR	LED		9,3	96273315
Adelie Bollard Slim, Presence detection slave, flange mounted				
ADELIEBS 10L25 SLA 740 RGB R/S CL1 MPL	LED		7,7	96265415
ADELIEBS 10L25 SLA 740 RGB ASY CL1 MPL	LED		7,7	96265416
ADELIEBS 10L25 SLA 730 RGB R/S CL1 MPL	LED		7,7	96265417
ADELIEBS 10L25 SLA 730 RGB ASY CL1 MPL	LED		7,7	96265418
ADELIEBS 10L35 SLA 740 RGB R/S CL1 MPL	LED		7,7	96273324
ADELIEBS 10L35 SLA 740 RGB ASY CL1 MPL	LED		7,7	96273325
ADELIEBS 10L35 SLA 730 RGB R/S CL1 MPL	LED		7,7	96273326
ADELIEBS 10L35 SLA 730 RGB ASY CL1 MPL	LED		7,7	96273327
Adelie Bollard Slim, Presence detection slave, root mounted				
ADELIEBS 10L25 SLA 740 RGB R/S CL1 MGR	LED		9,3	96265423
ADELIEBS 10L25 SLA 740 RGB ASY CL1 MGR	LED		9,3	96265424
ADELIEBS 10L25 SLA 730 RGB R/S CL1 MGR	LED		9,3	96265425
ADELIEBS 10L25 SLA 730 RGB ASY CL1 MGR	LED		9,3	96265426
ADELIEBS 10L35 SLA 740 RGB R/S CL1 MGR	LED		9,3	96273329
ADELIEBS 10L35 SLA 740 RGB ASY CL1 MGR	LED		9,3	96273330
ADELIEBS 10L35 SLA 730 RGB R/S CL1 MGR	LED		9,3	96273331
ADELIEBS 10L35 SLA 730 RGB ASY CL1 MGR	LED		9,3	96273332
Adelie Bollard Wide, Lit band, flange mounted				
ADELIEBW 10L25 740 RGB R/S CL1 MPL	LED		9	96264261
ADELIEBW 10L25 740 RGB ASY CL1 MPL	LED		9	96264262
ADELIEBW 10L25 730 RGB R/S CL1 MPL	LED		9	96264263

Adelie Bollard

Description	ILCOS Code	Socket	Wt (kg)	SAP Code
ADELIEBW 10L25 730 RGB ASY CL1 MPL	LED		9	96264264
Adelie Bollard Wide, No lit band, flange mounted				
ADELIEBW 10L25 740 R/S CL1 MPL	LED		9	96264257
ADELIEBW 10L25 740 ASY CL1 MPL	LED		9	96264258
ADELIEBW 10L25 730 R/S CL1 MPL	LED		9	96264259
ADELIEBW 10L25 730 ASY CL1 MPL	LED		9	96264260
Anchor bolts, Flange mounting				
FA M14X200/50			0,28	96009822
Connection box, Slim version				
TEMPO16 CL2 4X16 1C/C			0,46	96012372
Connection box, Wide version				
CONNECT CABLE BOX 3/4x2,5 ² IP67			0,4	96257908