

WATERFOLD PARK, BURY

TPIF (Portfolio No.1) LLP

EXTERNAL IMPACT LIGHTING ASSESSMENT

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RECORD OF REVISIONS.

Date.	Revision.	Description of change.
06-10-23	P01	First Issue
19-10-23	P02	Second Issue – Background update to drawing.

1 INTRODUCTION

This report has been prepared by Cudd Bentley Consulting on behalf of TPIF (Portfolio No.1) LLP to provide supporting information for a Full Planning Application for the proposed redevelopment of existing premises, comprising full demolition; erection of new building for Class B8 purposes with ancillary offices; installation of external plant and gatehouse; hardstanding for servicing and parking; attenuation pond; and boundary enclosure.

the intent of this report is to provide an External Lighting Assessment of the potential obtrusive light impact to surrounding buildings and the environment within the vicinity.

Where applicable, this document will outline the requirements of mitigation measures to be implemented at design and operational stages to reduce or remove any potential impact.

The potential impact of obtrusive lighting is categorised below:

- Light Spill: The spilling of light beyond the boundary of a property which may cause nuisance to others.
- Glare: The uncomfortable brightness of the light source against a dark background which results in dazzling the observer and may cause a hazard to road users.
- Sky Glow: The upwards spill of light onto the sky which can cause a glowing effect and is often seen above cities when viewed from a dark area.
- Wild Life: Artificial lighting significantly disrupts natural patterns of wild life including bats, disturbing invertebrate feeding, breeding and movement, which may reduce and fragment populations.

The existing luminaires shall be removed to make way for a new lighting layout which is in keeping with the proposed development and current British, European, and BREEAM standards.

The site has been classified as an E3 Environmental zone according to BS EN 12464-2:2014, Lighting of Work Places, Part 2. The table below is taken from BS 12464-2:2014, Table 2 and summarises the classifications of Environmental Zones.

The luminaires selected will be a combination of column and wall mounted LED fittings, which are to comply with BREEAM requirements; Pol 04 (Reduction of night time light pollution), ENE 03 (External lighting) & Part L2A of the building regulations.

Table 2 — Maximum obtrusive light permitted for exterior lighting installations

Environmental zone	Light on properties		Luminaire intensity		Upward light ratio	Luminance	
	E_v lx		I cd		R_{UL} %	L_b cd·m ⁻²	L_s cd·m ⁻²
	Pre-curfew ^a	Post-curfew	Pre-curfew	Post-curfew		Building facade	Signs
E1	2	0	2 500	0	0	0	50
E2	5	1	7 500	500	5	5	400
E3	10	2	10 000	1 000	15	10	800
E4	25	5	25 000	2 500	25	25	1 000

where

E1 represents intrinsically dark areas, such as national parks or protected sites;

E2 represents low district brightness areas, such as industrial or residential rural areas;

E3 represents medium district brightness areas, such as industrial or residential suburbs;

E4 represents high district brightness areas, such as town centres and commercial areas;

E_v is the maximum value of vertical illuminance on properties in lx;

I is the light intensity of each source in the potentially obtrusive direction in cd;

R_{UL} is the proportion of the flux of the luminaire(s) that is emitted above the horizontal, when the luminaire(s) is (are) mounted in its (their) installed position and attitude, and given in %;

L_b is the maximum average luminance of the facade of a building in cd·m⁻²;

L_s is the maximum average luminance of signs in cd·m⁻².

^a In case no curfew regulations are available, the higher values shall not be exceeded and the lower values should be taken as preferable limits.

2 TERMINOLOGY

Luminaire

Electrical device used to create artificial light, also known as a light or light fitting.

Luminous intensity

Power emitted by a light source in a particular direction, measured in candelas [cd].

Luminous flux

Measure of the amount of visible light from a source, measured in lumens [lm].

Note: one lumen is defined as the luminous flux produced by a light source that emits one candela of luminous intensity over a solid angle of one steradian [$\text{lm} = \text{cd} \cdot \text{sr}$]

Illuminance

The total luminous flux incident on a surface, per unit area, measured in lux [lx] or lumens per square metre [$\text{lm} \cdot \text{m}^{-2}$] or [$\text{cd} \cdot \text{sr} \cdot \text{m}^{-2}$].

Luminance

The luminous flux emitted per unit area, also measured in lux [lx] or [$\text{lm} \cdot \text{m}^{-2}$] or [$\text{cd} \cdot \text{sr} \cdot \text{m}^{-2}$].

Photometric diagrams

The diagrams display luminous intensity of the luminaire as a function of direction. An example of a photometric diagram is given in the figure below. The distance from the centre of the diagram to the line corresponds to a luminous intensity value, in this case, measured in candelas per kilo-lumen [$\text{cd} \cdot \text{klm}^{-1}$]. The angles on the diagram are the elevation angle, usually denoted as gamma (γ). This angle is shown graphically in figure 2. The red and blue lines on the photometric diagram refer to the luminous intensity of the luminaire in the $C = 0^\circ$ & 180° planes and the $C = 90^\circ$ & 270° planes respectively. These C planes are also shown graphically in figure 2.

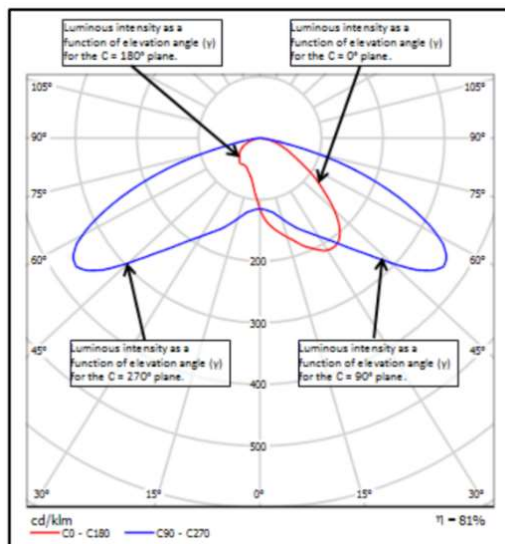


Figure 2

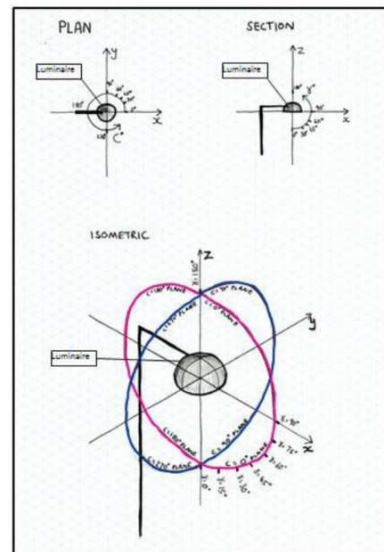


Figure 3

3 RELEVANT POLICY AND GUIDANCE

Legislations

Clean Neighbourhoods and Environment Act (CNEA) 2005

The Clean Neighbourhoods and Environment Act (CNEA) 2005 gives Local Authorities additional powers to deal with artificial lighting by classifying artificial light emitted from defined premises as a statutory nuisance (from April 2006). Guidance produced on Sections 101 to 103 of the CNEA extends the duty on local authorities to ensure their areas are checked periodically for existing and potential sources of statutory nuisances including nuisances arising from artificial lighting. Local authorities must take reasonable steps to investigate complaints of such nuisances from artificial light.

Empowerment to Light Roads - The Highways Act 1980

Section 97 empowers a Highway Authority to provide lighting for any highway or proposed highway for which they are or will be the Highway Authority. District Councils and many Parish or Town Councils also have the power to provide lighting as local lighting authorities.

National Planning Policy

The National Planning Policy Framework 2021

The National Planning Policy Framework (NPPF) encourages good design with planning policies and decisions limiting the effect of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

Artificial lighting needs to be considered when a development may increase levels of lighting or would be sensitive to prevailing levels of artificial lighting. Artificial light provides a valuable benefits to society, including opportunities for sport and recreation grounds, and can be essential to a new development. However, for maximum benefit, it is important to get the right light, in the right place and for it to be used at the right time.

Artificial light is not always necessary. It has the potential to produce 'light pollution' or 'obtrusive light', and not all modern lighting is suitable in all locations. It can be a source of annoyance to people, harmful to wildlife and undermine enjoyment of the countryside or the night sky, especially in areas with intrinsically dark landscapes. Intrinsically dark landscapes are those entirely, or largely, uninterrupted by artificial light. National parks and nature reserves can serve as good examples, particularly where they support habitats for native nocturnal animals. The following National Planning Practice Guidance (NPPG) further details the factors relevant to the control of obtrusive light.

Light pollution – (<https://www.gov.uk/guidance/light-pollution>)

The National Planning Guidance (NPPG) advise on how to consider light within the planning systems, focusing mainly on the following:

- When light pollution is relevant to planning
- What factors should be considered when assessing whether a development proposal might have implication for light pollution
- What factor are relevant when considering where, when and how much light shines
- What factors are relevant when considering possible ecological effects.

Obtrusive Light and Design Guidance

Institute of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01:2020

This guidance provides measurable design guidance limits and recommendations to ascertain acceptability of obtrusive light levels at night time.

CIE – 150:2017 – Guidance on the Limitation of the effects of Obtrusive Light from Outdoor Lighting Installations

The purpose of this guide is to help formulate guidelines for assessing the environmental effects of outdoor lighting. This guide will also recommend limits for relevant lighting parameters to contain the obtrusive effects of outdoor lighting within tolerable levels. Obtrusive effects of outdoor lighting are best controlled initially by appropriate design, the guidance given is primarily applicable to new installations; however, some advice is also provided on remedial measures which may be taken for existing installations. This guide refers to the potential adverse effects of outdoor lighting on both natural and man-made environments for people in most aspects of daily life, from residence, sightseers, transport users to environmentalists and astronomers.

BS5489-1: 2020 – Code of practice for the design of road lighting – Part 1: Lighting of roads and public amenity area

This part of BS 5489 gives recommendations on the general principles of road lighting, and its aesthetic and technical aspects, and advises on operation and maintenance.

BS EN 13201-2: 2015 – Road lighting – Part 2: Performance requirements

This part of this European Standard defines, according to photometric requirements, lighting classes for road lighting aiming at the visual needs of road users, and it considers environmental aspects of road lighting.

BS EN 12464-2: 2014 – Lighting of Work Places – Part 2: Outdoor Work Places

This European standard specifies lighting requirements for outdoor work places, which meet the needs for visual comfort and performance. All usual visual tasks are considered.

Campaign to Protect Rural England (CPRE) – Night Blight 2017

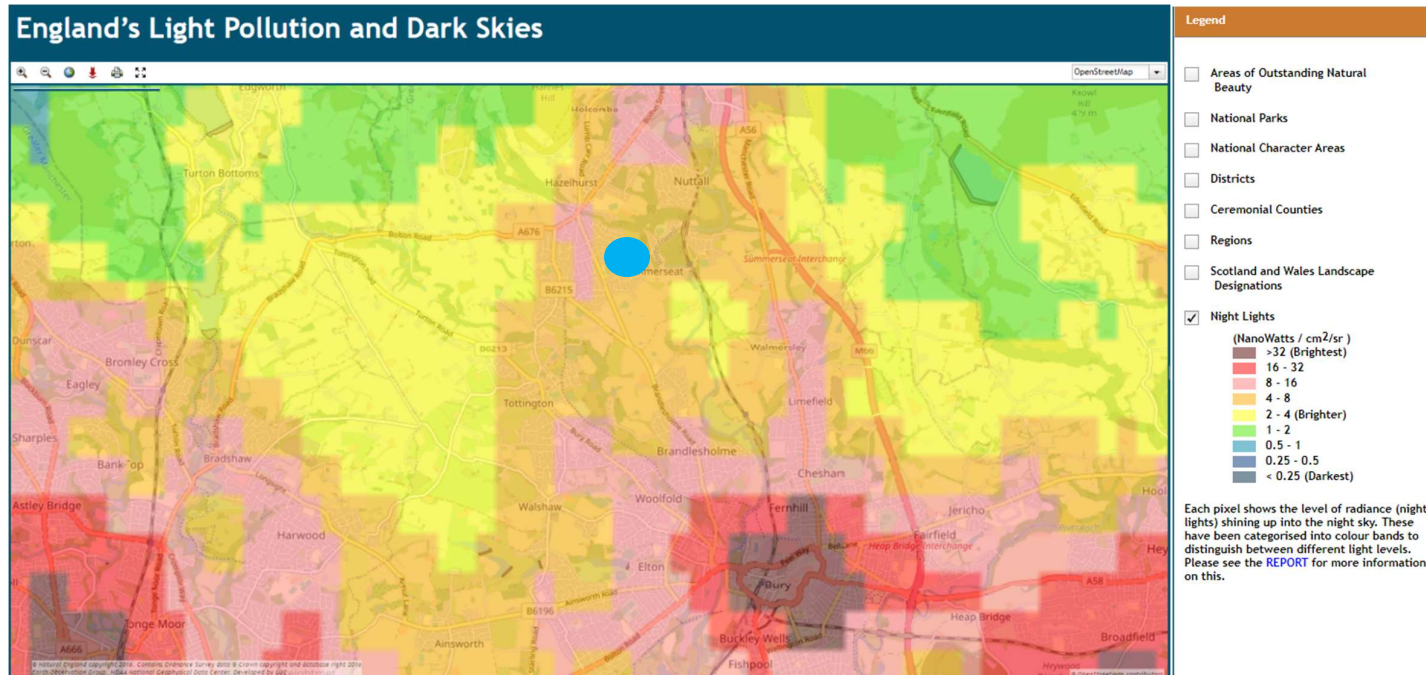
CPRE – Night Blight data (2017) gives a broad-brush indication of upwards light (sky glow) experienced within the UK. The interactive mapping tool allows specific areas and locations to be assessed with regards to a baseline condition.

4 DARK SKY

The image below shows the satellite Sky Glow overview of Bury (<http://www.nightblight.cpre.org.uk/maps/>). The blue circle on the image below is the approximate location of the existing site. As shown below the orange and red shading around the blue circle identifies the current level of Sky Glow within the development areas.

It can be seen that current levels are at the mid-range of the indicated Night Light levels. The external lighting strategy to be employed will ensure recommended Sky Glow limits are not exceeded.

Where existing local area Sky Glow levels already exceed recommended limits, then the proposed lighting solution will not produce an exacerbation or worsening of these levels.



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5 LUMINAIRE SELECTION AND TYPE

The following luminaires have been selected:

Qty	Range	Mounting Height (m)	Mounting Type	Lamp	Lm/W	LOR %	RA	L2A Compliant	BREEAM Compliant
4	Viva City Pro	8m	Column	80w	138	100%	70	Yes	Yes
7	Viva City Pro Flood	8m	Wall	120w	117	100%	70	Yes	Yes
1	Viva City Pro	8m	Column	120w	115	100%	70	Yes	Yes
10	Viva City Pro Flood	8m	Wall	60w	146	100%	70	Yes	Yes
5	Viva City Pro	8m	Column	80w	82	100%	70	Yes	Yes
12	Zactis	6m	Wall	250w	137	100%	70	Yes	Yes
4	Semita Urban	2.5m	Wall	11w	137	100%	70	Yes	Yes
10	Semita Urban	5.5m	Wall	24w	125	100%	70	Yes	Yes

6 LUMINAIRE CONTROL PHILOSOPHY

A combination of photocells & timeclocks shall be installed to control all external lighting. The time clocks will act as a master control and be set to switch off at times when the development is not in operation, times for operation to be imposed as per previous permission. Outside of these hours photocells will control the site external lighting according to day light levels. This will prevent night time lighting pollution and to comply with POL 04/L2A.

7 ASSESSMENT SUMMARY MATRIX

Effect/Description	Mitigation	Calculation Results	Actual Design Results (As in section 10 drawing)
Light Intrusion: Light intrusion from the site to surrounding residential areas.	All luminaires will be fitted with suitable optics to limit excessive emissions on the horizontal plane.	The Light Trespass at the site has not been calculated.*	
Sky Glow: Brightening of the night sky	All Luminaires will be fitted with horizontal cut off optics to minimise upward light spill.	The sky glow achieved at the site is 0.00%. This is below the maximum permitted level of sky glow for an Environmental Zone deemed to be E3.	0.00%
Luminaire Intensity: Glare, the uncomfortable brightness of light against a dark back ground	Lighting design will comply with the relevant limits on lighting intensity.	Luminaire Intensity (Pre and Post curfew) at the site has been assessed and calculated.* This is below the maximum permitted level of luminaire intensity for an Environmental Zone deemed to be E3.	(Pass) (Pass)

*Light Intrusion: Lights intrusion to residential buildings has not been calculated due to the remote proximity of any existing residential properties in the local area. Additionally it is highlighted that site perimeter lighting is not intended to be operational post curfew hours.

8 CONCLUSION

Relevant policies have highlighted that it is necessary to both ensure sufficient lighting is provided for security and working purposes, and also to ensure that light spillage from the site is minimised.

Guidance from relevant institutions has been used to set design lux levels at the levels for the scheme. As the site is classified as an E3 environmental zone, external lighting calculations have been carried out to achieve the correct lux levels for this site, taking into consideration, light pollution, surrounding the premises and other aspects.

The proposed lighting will be switched via a combinations of photocells & timeclocks. The time clocks will act as a master control and be set to set off at times when the development is not in operation. In addition, for security purposes, some lighting may be required to stay on throughout the night although this would be kept to a minimum.

The proposed luminaires used to carry out external lighting calculations are LED. Utilising LED luminaires helps reduce light pollution and can reduce the overall power consumption by 40-60%.

Criteria set by the Institute of Lighting Professionals regarding limiting obtrusive light will be met, these criteria are:

	ILP Guideline	Calculated Achieved
Sky Glow	< 15%	0.00%
Light Intrusion	< 3 Lux	Not Calculated
Luminaire Intensity	< 2,500 candelas.	Not Calculated

There are no local residential dwellings sitting adjacent to the site boundary, and lighting controls are to be designed for the installed system to only operate outside of curfew hours. Therefore compliance with light trespass limits are met.

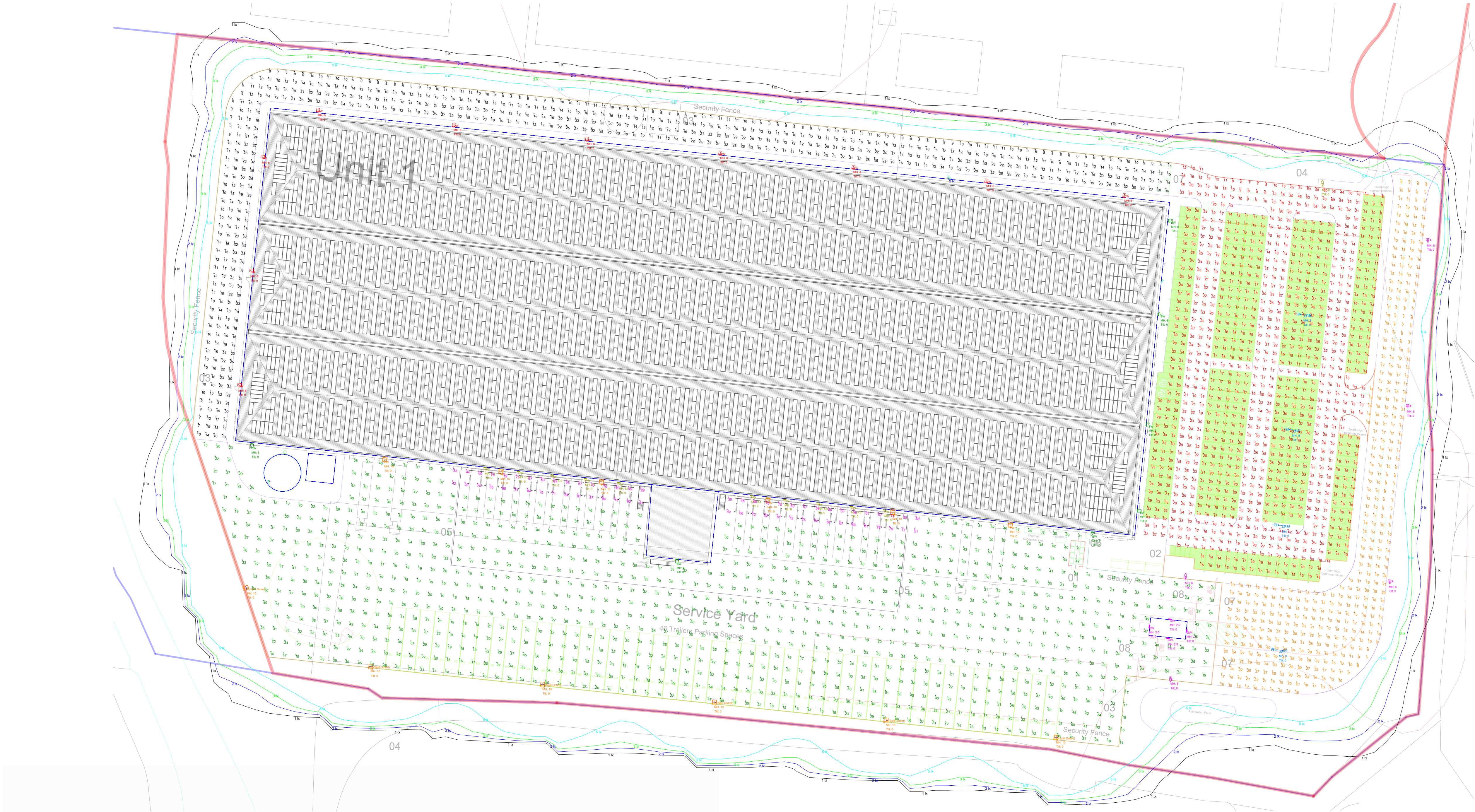
In summary, it has been ensured that the entire proposed lighting scheme meets the minimum levels for security, working and ecology purposes while also meeting the post curfew requirements for a relatively dark urban area.

9 APPENDICES

9.1 LIGHTING DESIGN

NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER MECHANICAL AND ELECTRICAL SERVICES DRAWINGS AND DOCUMENTATION.
2. REFERENCE SHALL BE MADE TO THE ARCHITECTURAL & STRUCTURAL DRAWINGS AND DOCUMENTATION WHEN READING THIS DRAWING.
3. ALL ELECTRICAL SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH BS6717: 1981 EDITION OF THE WIRING REGULATIONS.
4. REFERENCE SHALL BE MADE TO THE ARCHITECTURAL AND LANDSCAPE DRAWINGS AND DETAILS FOR SETTING OUT.
5. REFERENCE SHALL BE MADE TO THE ELECTRICAL SITEWIDE SERVICES DRAWING WHEN READING THIS DRAWING.
6. EXTERNAL LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL AND TIMECLOCK ARRANGEMENT WITH A MANUAL OVERRIDE SWITCH.



LUMINAIRE PERFORMANCE SCHEDULE

	Colour Temperature (K)	Qty	Range	Light Source	Luminaire Lumens (lm)	Watts (W)	lm/W	LOR	Total Lumens	UOR	Upward Lumens	CRI	** ART Hour Per Day	CO ² (tonnes)	Kw/Hour
	4000	8	Viva City PRO	80w LED FW70	11040	80	138.00	100%	88320	0.0%	0	>70	12	0.59	2803.20
	4000	7	Viva City PRO Flood	120w LED FW70 (Flood)	14002	120	116.68	100%	98014	0.0%	0	>70	12	0.77	3679.20
	4000	1	Viva City PRO	120w LED FWB70	13780	120	114.83	100%	13780	0.0%	0	>70	12	0.11	525.60
	4000	10	Viva City PRO Flood	60w LED AY70 (Flood)	8780	60	146.00	100%	87600	0.0%	0	>70	12	0.55	2638.00
	4000	5	Viva City PRO	80w LED AYB70	6600	80	82.50	100%	33000	0.0%	0	>70	12	0.37	1752.00
	4000	12	ZACTIS	250w LED FW70	34250	250	137.00	100%	411000	0.0%	0	>70	12	2.76	13140.00
	4000	4	Semita Urban	11w LED ST	1496	11	136.00	100%	5984	0.0%	0	>70	12	0.04	152.72
	4000	10	Semita Urban	24w LED FL	8000	24	125.00	100%	80000	0.0%	0	>70	12	0.22	1051.20

ILP GUIDANCE NOTE 01 FOR THE REDUCTION OF OBTUSIVE LIGHT CALCULATION RESULTS

Table 1 Compliance			
Environmental Zone	E3		
Sky Glow	Target	Achieved	Status
	5.00%	0.00%	Pass
Source Intensity (candelas)			
Pre Curfew	10,000		Pass
Post Curfew	1,000		Pass
Light Trespass into Windows (lux)			
Pre Curfew	50		Pass
Post Curfew	5		Pass
Building Luminance (cd/m ²)	10		Pass

ENERGY AND EFFICACY CALCULATION RESULTS

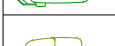
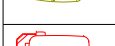
Total Installation Lumens	767698.00	Total Upward Light	0.00%
Total CO2 Per Year (Tonnes)		5.42	
Total Electric Consumption (kwh)		5.88	
Total Electric Consumption Per Year (kwh)		25771.92	
Average Luminaire Lumens Per Circuit Watt		136.47	

BREEAM COMPLIANCE STATUS

Pol 04	Reduction Of Night Time Light Pollution	Pass
Env 02	Energy Efficient External Lighting	Pass
Hea 01	Internal And External Lighting Levels	Pass

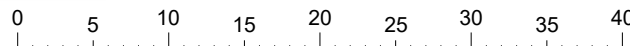
Note: HEAD1 in this report only applies to exterior lighting
** ART = (Average Run Time)

Luminaire Schedule

Symbol	Qty	Label	Arrangement	LLF	Description	Luminaire LW	UWLR	TM65 & TM66 Information
	4	A2	BACK-BACK	0.900	2 x 80W LED 4000K VIVA-CITY Pro 805mA with FW70 forward throw optic column mounted at 8m	138	0.00	TM65 Embodied Carbon = 123kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	7	BW	SINGLE	0.900	120W LED 4000K VIVA-CITY Flood 810mA with FW70 forward throw optic wall mounted at 8m	116	0.00	TM65 Embodied Carbon = 130kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	1	C	SINGLE	0.900	120W LED 4000K VIVA-CITY Pro 620mA with FWB70 forward throw optic column mounted at 8m	115	0.00	TM65 Embodied Carbon = 182kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	10	DW	SINGLE	0.900	60W LED 4000K VIVA-CITY Flood 610mA with AY70 street optic wall mounted at 8m	146	0.00	TM65 Embodied Carbon = 96kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	5	E	SINGLE	0.900	80W LED 4000K VIVA-CITY Pro 805mA with AYB70 street optic column mounted at 8m	82	0.00	TM65 Embodied Carbon = 123kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	6	FW	SINGLE	0.900	250W LED 4000K ZACTIS Flood 640mA with FW70 forward throw optic wall mounted at 10m	142	0.00	TM65 Embodied Carbon = 289kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	6	F (Split Guard)	SINGLE	0.900	250W LED 4000K ZACTIS Flood 640mA with FW70 forward throw optic column mounted at 10m	142	0.00	TM65 Embodied Carbon = 289kg CO ₂ e - TM66 Circular Economy Score = 2.9 (2.5-4.0 Excellent Circularity)
	4	GW	SINGLE	0.900	11W LED 4000K SEMITA Urban 410mA with ST street optic wall mounted at 2.5m	137	0.00	TM65 Embodied Carbon = 44kg CO ₂ e - TM66 Circular Economy Score = 2.8 (2.5-4.0 Excellent Circularity)
	10	HW	SINGLE	0.900	24W LED 4000K SEMITA Urban 920mA with FL flood optic wall mounted at 5.5m	125	0.00	TM65 Embodied Carbon = 44kg CO ₂ e - TM66 Circular Economy Score = 2.8 (2.5-4.0 Excellent Circularity)

ILLUMINATION AND UNIFORMITY CALCULATION SUMMARY

Label	CalcType	Units	Avg	Max	Min	Uniformity (Min/Avg)	Diversity (Min/Max)	Meter Type	Description
Car Park	Illuminance	Lux	21.10	76	7	0.33	0.09	Horizontal	
Fire Track Road	Illuminance	Lux	15.49	33	6	0.39	0.18	Horizontal	
Loading Bays	Illuminance	Lux	65.67	96	29	0.44	0.30	Horizontal	
Main Access Road	Illuminance	Lux	17.59	44	5	0.28	0.11	Horizontal	
Service Yard	Illuminance	Lux	30.01	82	13	0.43	0.16	Horizontal	



SCALE 1:500

m

P02	BACKGROUND UPDATE	HC	LW	MH	19-10-23
P01	PRELIMINARY ISSUE	ST	LW	MH	26-06-23
Revision	Description	Drawn By	Engineer	Approved	Date



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PRELIMINARY

Client

TRITAX

Project/Site Location

WATERFOLD BUSINESS PARK

Drawing Title

SITE WIDE PROPOSED EXTERNAL LIGHTING LAYOUT

Scale	Size	Drawn By	Engineer	Approved	Date
1:500	A1	ST	LW	MH	Sep'23
Drawing Reference					Revision

6473-CBC-00-XX-DR-E-63001

P02

9.2 LUMINAIRE TYPE 1 – VIVA-CITY PRO



Product Description

A modular, slimline, performance street lantern with improved efficacy and output. Viva-City Pro offers a choice of optics with asymmetrical distribution including an area optic.

Specification Text

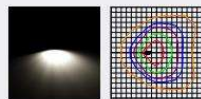
The luminaire shall be manufactured from high-pressure die-cast aluminium. It shall have an LED efficacy of up to 150.0 lm/W and will be capable of producing up to 24,660 luminaire lumens at 4000K with a CRI >70. It shall have an asymmetric forward throw optic and is rated at IP66 and IK08.

Specify 2700K for IDA compliance.

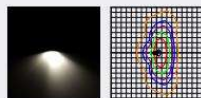
Specification

Weight: 4.5 - 9.0kg
Windage: 0.09m²
Material: Die-cast Aluminium
Paint finish: RAL7016 Anthracite

Optics



Asymmetric Forward Throw Optic 70°



Street Optic - Wide 70°

Key Features

- 15.0 - 180.0W
- 2,250 - 24,660 Luminaire Lumens
- Efficacy up to 150.0 lm/W
- 4000K, CRI >70
- Lifetime >100,000hr, L80



Mounting Options

- Post Top 60mm

Other Options

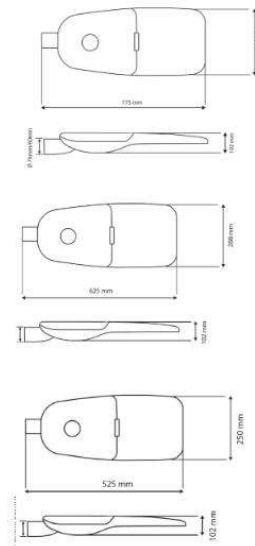
- Part Night Dimming
 - Colour Temperature Option
 - Photocell Option
 - Emergency Option
- [Contact for details](#)



Code	Power	Luminaire Lumens	Drive Current	Optic	CCT(K)	IP	IK	Weight kg	Paint Finish	Driver Included	Driver Type
VCYP-AY70-4.3-15D	15.0	2,260	640	Street Optic - Wide 70°	4000	IP66	IK08	4.5	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-AY70-4.8-40D	40.0	5,927	805		4000	IP66	IK08	6.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-AY70-4.6-60D	60.0	8,844	610		4000	IP66	IK08	6.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-AY70-4.8-80D	80.0	11,120	805		4000	IP66	IK08	6.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-AY70-4.6-120D	120.0	17,828	610		4000	IP66	IK08	9.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-AY70-4.8-180D	180.0	24,840	880		4000	IP66	IK08	9.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-FW70-4.3-15D	15.0	2,250	640	Asymmetrical Forward Throw Optic - 70°	4000	IP66	IK08	4.5	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-FW70-4.8-40D	40.0	5,880	805		4000	IP66	IK08	6.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-FW70-4.6-60D	60.0	8,760	610		4000	IP66	IK08	6.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-FW70-4.8-80D	80.0	11,040	805		4000	IP66	IK08	6.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-FW70-4.6-120D	120.0	17,760	620		4000	IP66	IK08	9.0	RAL7016 Anthracite Grey	Driver Inc	DALI
VCYP-FW70-4.8-180D	180.0	24,660	880		4000	IP66	IK08	9.0	RAL7016 Anthracite Grey	Driver Inc	DALI



Dimensions



9.3 LUMINAIRE TYPE 2 – SEMITA URBAN



Kingfisher Lighting
Part of the UUCESCO group of companies

Datasheet

Semita Urban



Product Description

Designed and engineered in the UK, Semita Urban is a contemporary, slimline wallpack. The newest addition to our popular wallpack family is available with street, path or flood optics and comes equipped with an optional 'click on' comfort diffuser for a softer output.

Specification Text

The luminaire shall be manufactured from high-pressure die-cast aluminium. It shall have an LED efficacy of up to 146.0 lm/W and will be capable of producing up to 3,000 luminaire lumens at 4000K with a CRI >70. It shall have an asymmetric forward throw optic and is rated at IP66 and IK10.

Specify 2700K for IDA compliance.

Specification

Weight: 2.4kg
Material: Die-cast Aluminium
Paint finish: RAL7016 Anthracite Grey Finish

Key Features

- 6.0 - 11.0W
- 812 - 3,000 Luminaire Lumens
- Efficacy up to 146.0lm/W
- 4000K, CRI >70
- Lifetime >100,000hr, L80

LED

IP66

IK10

DIM





Control Compatible

Mounting Options

- Wall Mount

Other Options

- Colour Temperature Option
- Photocell Option
- Emergency Option

[Contact for details](#)

Optics



Comfort Flood Light Optic Flood Light Optic



Comfort Path Optic Path Optic



Comfort Street Optic Street Optic

DESIGNED & ENGINEERED
UK



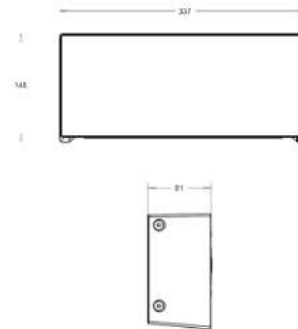
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KF SEMITA URBAN

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Code	Power	Luminaire Lumens	Drive Current	Optic	CCT(K)	IP	IK	Weight kg	Paint Finish	Driver Included
SEMUFLO8D	6.0	812	205	Asymmetrical Flood Light Optic FL	4000	IP66	IK10	2.4	RAL7016 Anthracite Grey	Driver Inc
SEMUF15D	11.0	1,611	410		4000	IP66	IK10	2.4	RAL7016 Anthracite Grey	Driver Inc
SEMUCOD8D	6.0	802	205	Asymmetrical Path Optic OC	4000	IP66	IK10	2.4	RAL7016 Anthracite Grey	Driver Inc
SEMUC15D	11.0	1,570	410		4000	IP66	IK10	2.4	RAL7016 Anthracite Grey	Driver Inc
SEMUST08D	6.0	783	205	Asymmetrical Street Optic ST	4000	IP66	IK10	2.4	RAL7016 Anthracite Grey	Driver Inc
SEMUST15D	11.0	1,496	410		4000	IP66	IK10	2.4	RAL7016 Anthracite Grey	Driver Inc
SEMUF30D	24.0	3000	900	Flood Light Optic	4000	IP66	IK10	2.4	RAL7016 Anthracite Grey	Driver Inc



Dimensions



9.4 LUMINAIRE TYPE 3 – VIVA-CITY FLOOD



**Kingfisher
Lighting**

Datasheet

Viva-City Flood



Specification Text

The luminaire shall be manufactured from high pressure die-cast aluminium. It shall have an LED efficacy of up to 153 luminaire lm/W and will be capable of producing up to 18360 luminaire lumens at 4000K with a CRI >70. It shall have a radial distribution and is IP66 and IK09.

Specification

Weight: 7.9 - 8.2 kg
Windage: 0.04m²
Material: Die-cast Aluminium
Paint Finish: Anthracite Grey

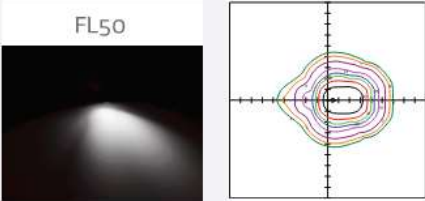
Key Features

- 60W - 120W
- 9,060 - 18,360 Luminaire Lumens
- Efficacy up to 153 lm/W 4000K, CRI >70
- Lifetime >100,000hr, L80
- Flood Optic - 50°
- Asymmetrical
- Part of the Viva-City family

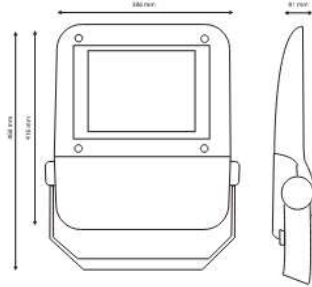


Optics

FL50



Dimensions



All measurements in mm

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Code	Power	Light Source	Luminaire Lumens	Optic	CCT(K)	IP	IK	Weight (kg)	Paint Finish
VCYF-FL50-4.6-60D	60	LED	9060	Asymmetrical AY Optic - 70°	4000	IP66	IK09	7.9	Anthracite Grey
VCYF-FL50-4.6-60DPEC	60	LED	9060		4000	IP66	IK09	7.91	Anthracite Grey
VCYF-AY70-4.8-120D	120	LED	18360		2700	IP66	IK09	8.2	Anthracite Grey
VCYF-FL50-4.8-120DPEC	120	LED	18360		4000	IP66	IK09	8.21	Anthracite Grey



Accessories / Options

- Photocell option
- Dimming option

Mounting Options

- Surface mount bracket



9.5 LUMINAIRE TYPE 4 – ZACTIS

**Kingfisher
Lighting**

Datasheet

Zactis



Specification Text

The luminaire shall be manufactured from high pressure die-cast aluminium. It shall have an LED efficacy of up to 146.2 luminaire lm/W and will be capable of producing up to 46,768 luminaire lumens at 4000K with a CRI >70. It shall have an asymmetric forward throw optic and is rated at IP65 and IK08.

With a peak intensity of 70°, Zactis achieves excellent performance while still complying with BREEAM & the ILP guidance notes on obtrusive light.

Key Features

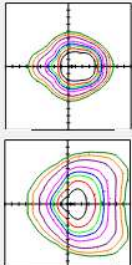
- 125W - 320W
- 17,125 - 46,768 Luminaire Lumens
- Efficacy up to 146.2 lm/W
- 4000K, CRI >70
- Lifetime >100,000hr
- Asymmetrical
- Marine grade paint as standard
- DALI dimmable as standard
- Plug and socket connection
- Photocell and NEMA options

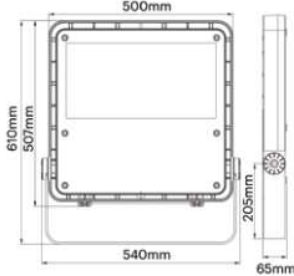
Specification

Weight: 14.5 - 16.4 kg
Windage: 0.04m²
Material: Die-cast Aluminium
Paint Finish: Anthracite Grey

Optics

FL50
FW70



Dimensions

500mm
610mm
507mm
540mm
205mm
65mm

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Code	Power	Light Source	Luminaire Lumens	Optic	CCT(K)	IP	IK	Weight (kg)	Paint Finish
ZAC-FW70-4.5-125D	125W	LED	17125	Asymmetrical Forward Throw Optic 70°	4000	IP65	IK08	14.5	Anthracite Grey
ZAC-FW70-4.7-160D	160W	LED	21920		4000	IP65	IK08	14.5	Anthracite Grey
ZAC-FW70-4.5-250D	250W	LED	34250		4000	IP65	IK08	16.3	Anthracite Grey
ZAC-FW70-4.7-320D	320W	LED	44155		4000	IP65	IK08	16.3	Anthracite Grey
ZAC-FL50-4.5-125D	125W	LED	18250	Asymmetrical Flood Optic - 50°	4000	IP65	IK08	14.5	Anthracite Grey
ZAC-FL50-4.7-160D	160W	LED	23360		4000	IP65	IK08	14.5	Anthracite Grey
ZAC-FL50-4.5-250D	250W	LED	36500		4000	IP65	IK08	16.3	Anthracite Grey
ZAC-FL50-4.7-320D	320W	LED	46768		4000	IP65	IK08	16.3	Anthracite Grey



Accessories / Options

- Control options available
- Dimming options
- Photocell options

Mounting Options

- Stirrup Mounted

