chord consult

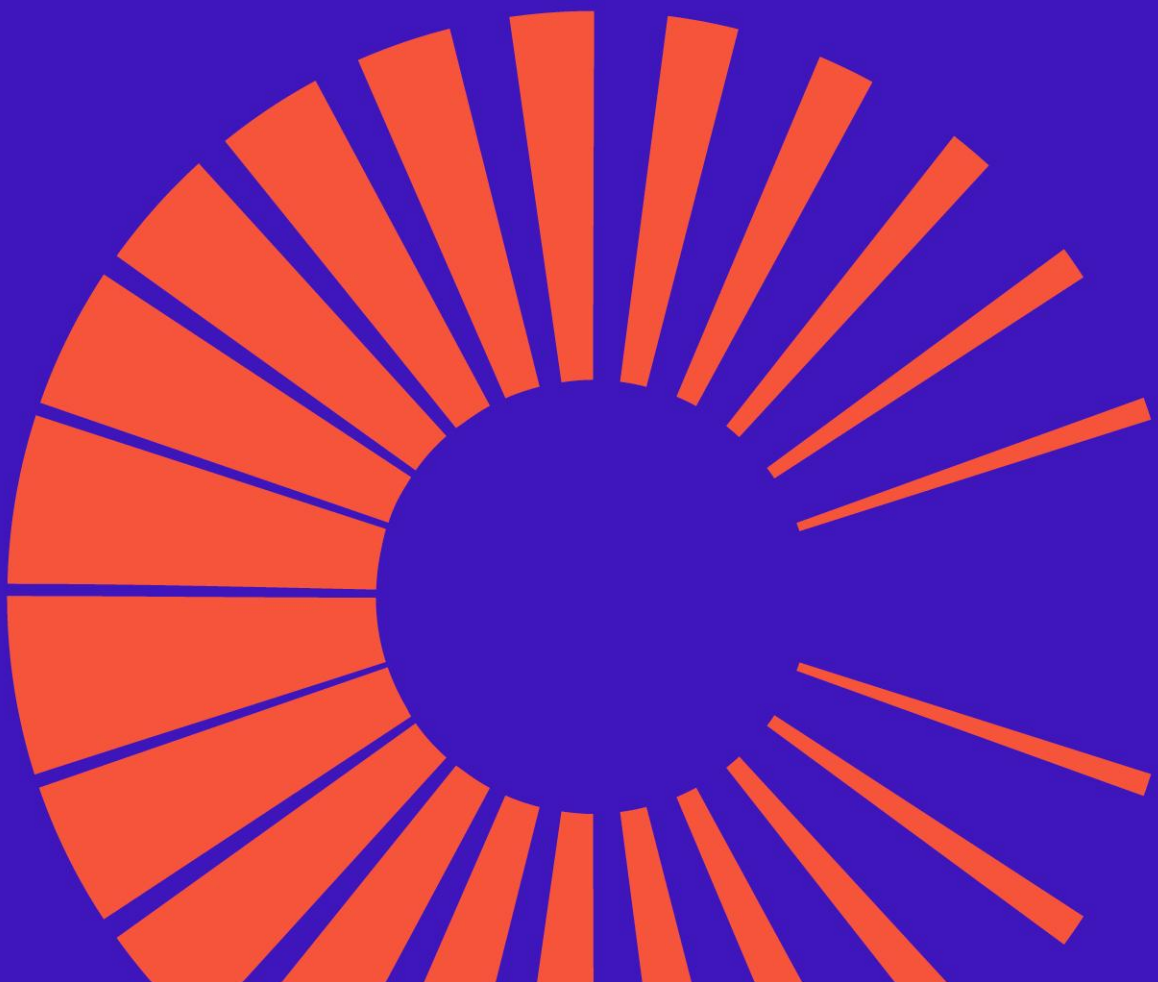
Engineering harmony

NOTTINGHAM | MILTON KEYNES

Revision	Date	Description	By / QA
A	04/09/26	1st Issue	TC / JF
B	27/10/26	Addressed Comments	TC / JF

EXTERNAL LIGHTING REPORT

Royal UK Property Holdings Ltd. – Stockley Park



chordconsult.co.uk

Contents

Ref.	Title	Page
1.0	**INTRODUCTION**	**1**
2.0	**DESIGN CRITERIA**	**1**
2.1	Energy Reduction	2
2.2	Lighting Controls	2
2.3	Dark Sky Criteria	2
2.4	ILP Guidance for Obtrusive Light	2
2.5	Wildlife Considerations	3
2.5.1	Biodiversity Amenity Spaces	4
2.6	Lighting Impact Assessment (A408 Motorway)	4
APPENDIX A – External Lighting Philosophy		**5**
APPENDIX B – External Lighting Quote		**6**
APPENDIX C – External Lighting Layout		**7**

1.0 INTRODUCTION

This lighting statement is to support the planning application associated with the proposed redevelopment of the land at Stockley Park, Uxbridge, UB11 1BA and provide the principles associated with the proposed external lighting design for the on-plot services associated with both units.
Full lighting calculations have been undertaken by Kingfisher Lighting and are presented within this report along with their recommendations for makes/models of luminaires. Any changes to the proposed site will follow the same principles.
The light source shall be Light Emitting Diodes which provides an energy efficient solution, reduces the future maintenance due to their long service life of approximately 50,000 hours and allows a high degree of accuracy in terms of control of the lighting (lighting spill).
The lighting design is subject to final development by the contractor as is the selection of lighting fittings, planners will be informed of any significant changes to this external lighting scheme.

2.0 DESIGN CRITERIA

The whole of the external lighting installation shall be installed to comply with the recommendations of CIBSE Lighting Guide LG6, BS EN 13201, **BS 5489** and BS 7671 18th Edition of the IEE Wiring Regulations.

The entire external lighting scheme shall provide a uniform and visually attractive environment to emphasise the architectural features of the building and external landscape but in keeping with the development's needs. It has been decided that all external columns and light fittings shall have a white powder coated finish.

The external lighting system will be designed to achieve the following average lighting levels (as a minimum): -

- Building Perimeter — 5 Ave lux with 0.25 uniformity.
- Walkways for Pedestrians — 5 Ave lux with 0.20 uniformity. Light spill off lit areas, reduced to 0.5 lux
- Car parking — 10 Ave lux with 0.25 uniformity.
- Bins Stores — 10 Ave lux with 0.25 uniformity.
- Vehicle Turning and Loading — 50 Ave lux with 0.40 uniformity.
- Reception Entrance — 50 Ave lux with 0.40 uniformity
- Biodiverse Amenity Spaces — not to be illuminated. Light spill from surrounding areas to minimised.
- Bicycle Stores — 15 Ave lux with 0.40 uniformity.
- Regular Vehicle Traffic — 20 Ave lux with 0.20 uniformity.
- Plant Spaces — 50 Ave lux with 0.25 uniformity

While they are not to be illuminated, in order to provide the necessary illumination to the surrounding areas and minimise light spill, the Biodiverse Amenity Spaces may still contain luminaires. This should be avoided where possible, but the priority should be keeping any illumination in these areas as low as possible and any luminaires should be positioned/angled so as to direct as much of the light as possible into the area intended to be illuminated.

Control of external lighting shall be via time clock and photocells. A manual override facility shall also be provided. The following design principles shall be adopted: -

- Light what is necessary only
- Light the areas we need to only.
- External lights and their light distribution shall be positioned so as to avoid light spill into the sky and onto neighbouring properties.

In line with the proposed BREEAM the lighting scheme will achieve compliances with the below targeted credits;

- Pol 04 criterion 2: The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the Institution of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2021.
- Pol 04 criterion 3: All external lighting (except for safety and security lighting) can be automatically switched of between 23:00 and 07:00.
- Ene 03 criterion 2: External light fittings within the construction zone with:

2.a: Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt

2.b: Automatic control to prevent operation during daylight hours

2.c: Presence detection in areas of intermittent pedestrian traffic.

2.1 Energy Reduction

Good quality outdoor lighting has been shown to reduce energy use by to 70% (IDA research), this includes the use of effective automatic lighting controls as detailed later within this report. The fittings proposed shall use efficient lighting sources and have shields/reflectors to all good control of the light.

The light source shall be Light Emitting Diodes (LED's) which provides an energy efficient solution. The efficiency of the external luminaires shall be in excess of the criteria detailed in the Energy Technology List (ETL), which is currently (Energy technology Criteria list 2021) 105 lumens per watt. The proposed luminaires range from 74 – 178 Lm/W, giving an average of 112 lumens per circuit watt.

LED luminaires have a long service life of approximately 50,000 hours but can be much higher for commercial grade luminaires, which provides a sustainable solution in terms of whole life carbon measures.

2.2 Lighting Controls

The external lighting shall be zoned and have automatic lighting controls provided to allow lighting to be automatically turned off to avoid nuisance lighting and benefiting human health & safety as well as wildlife needs.

The general external lighting shall be controlled in zones as detailed below;

AREA / ZONE	CONTROLS DESCRIPTION	CONTROL ZONE
Industrial Units	Each to have its own Photocell and time switch associated with the unit c/w manual override (on/off/auto)	Control zone 1

Each control zone shall have a dedicated timeclock and override key. Where the photocell is stated as common, this refers to a single photocell for the entire building/site.

2.3 Dark Sky Criteria

The scheme shall consider the International Dark-Sky Association (IDA) recommendations, who are the recognized authority on light pollution and the leading organization combating light pollution worldwide.

The design mitigates lighting pollution to ensure no adverse effect or impact attributable to artificial light at night.

Compliance with dark sky criteria is to be achieved using precise light control from luminaire head/optic. Luminaires installed shall have no upward light component in accordance with dark sky compliance. The local authority's dark sky policy shall be consulted prior to installation of external lighting.

IDA advice to minimize the harmful effects of light pollution, lighting includes;

- Only be on when needed.
- Only light the area that needs it.
- Be no brighter than necessary.
- Minimize blue light emissions.
- Eliminate upward-directed light

The target upward light ration would generally be 5%, the calculations carried out by Kingfisher Lighting indicate 0.4%.

2.4 ILP Guidance for Obtrusive Light

The external lighting will be designed in compliance with the ILP guidance to reduce obtrusive lighting. The following design principles shall be adopted: -

- "Think before you light – the right amount of light, where wanted, when wanted."
- Table 2, E3 (Medium district brightness, lighting environment) has been complied with.

Zone	Surrounding	Lighting environment	Examples
E0	Protected	Dark (SQM 20.5+)	Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places
E1	Natural	Dark (SQM 20 to 20.5)	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc.
E2	Rural	Low district brightness (SQM ~15 to 20)	Sparsely inhabited rural areas, village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well inhabited rural and urban settlements, small town centres of suburban locations
E4	Urban	High district brightness	Town / City centres with high levels of night-time activity

2.5 Wildlife Considerations

In August 2025, MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal and Preliminary Roost Assessment of the site. While it noted that various important species lived in the area, none were confirmed to be nesting on the site and the existing green spaces were not deemed to be a suitable habitat.

No evidence of bats roosting was reported or any evidence of other protected species nesting in the existing buildings which were identified as having low or very low suitability for a bat roost.

Their recommendations for the external lighting include:

- Developing a sensitive lighting scheme to allow for suitable roosting and foraging sites within the site.
- Provisions should be made for roosting bats including wall or tee mounted bat boxes. At the time of writing the potential locations of these bat boxes has not been provided.

Given that the proposals include provisions aimed at encouraging bats to inhabit the area, the external lighting should be designed to accommodate their presence and not discourage them from accessing the site.

The external lighting shall be designed in accordance with the recommendations of the Bat Conservation Trust (BCT) interim guidance, principle design considerations as listed below:

Do not

- Provide excessive lighting. Use only the minimum amount of light needed for the task.
- Directly illuminate bat roosts or important areas for nesting birds

Avoid

- Using reflective surfaces under lights.
- Using luminaires with UV elements, metal halide or compact fluorescent sources.

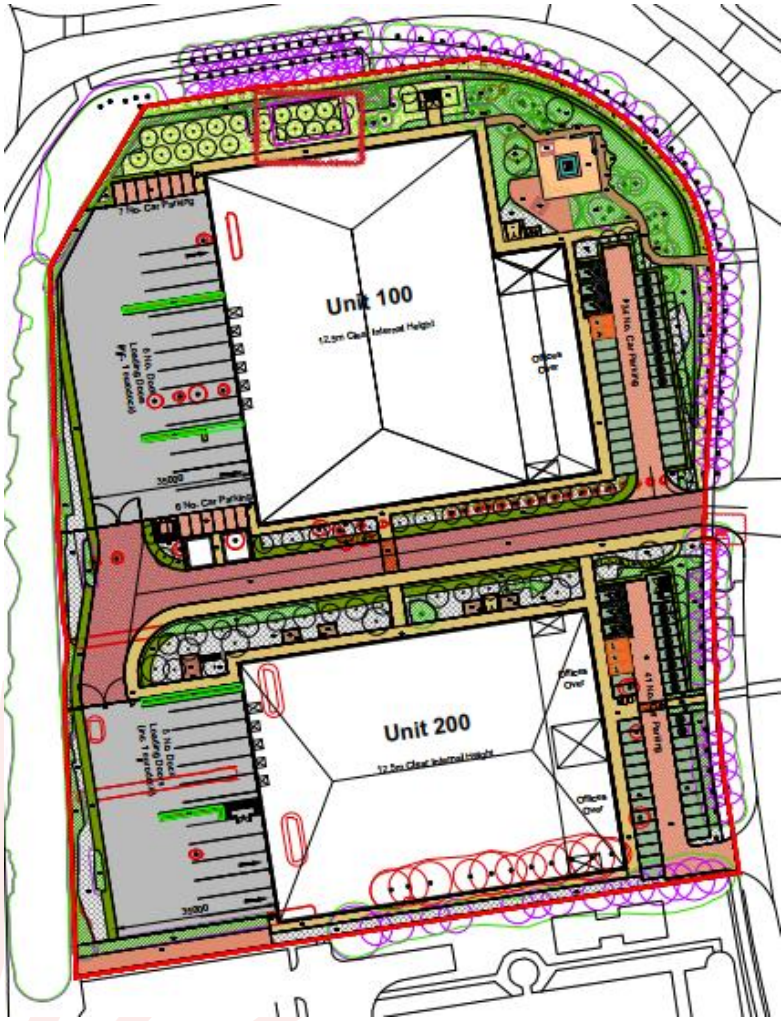
Do

- Consider employing a competent lighting designer who will apply the principals of providing the right light, in the right place, at the right time and controlled by the right system.
- Use luminaires featuring warm white light sources (2700K or lower) and feature peak wavelengths higher than 550nm to reduce the components most disturbing to bats.
- Consider using waymarking inground markers to delineate path edges (low output with cowls or similar to minimise upward light spill).
- Minimise the spread of light to at or near horizontal and ensure that only the task area is lit. Flat cut-of lanterns or accessories should be used to shield or direct light to where it is required.
- Consider the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create light spill or require more columns. Column height should be carefully considered to balance task and mitigation measures.

- Consider no lighting solutions where possible such as white lining, good signage and LED cats eyes. These options can also be effective. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times.
- Use temporary close-boarded fencing until vegetation matures, to shield sensitive areas from lighting.
- Limit the times that lights are on to provide some dark periods. The task being lit often varies, for example roads are less used after 23.00hrs and car parks are empty. A lighting designer can vary the lighting levels as the use of the area changes reducing lighting levels or perhaps even switching installations of after certain times. This use of adaptive lighting can tailor the installation to suit human health and safety as well as wildlife needs.

2.5.1 Biodiversity Amenity Spaces

The current plan for the site includes biodiverse planting areas (shown in light green below) that could provide suitable habitats for the creatures mentioned in the report and therefore the lighting in these areas should be dim enough to not interfere with any nocturnal species.



2.6 Lighting Impact Assessment from the A408

We recognise the proximity of the proposed site in relation to the A408 and appreciate this is an area of sensitivity; consequently, careful consideration shall be given to the proposed external lighting scheme and any impact on the users of this road. As part of the detailed design process, if required a Lighting Impact Assessment could be undertaken, which will fully detail the proposed lighting on and around the site including horizontal illuminance, vertical illuminance, light pollution, intensities and any overspill associated with same. This lighting impact assessment could include relevant check points; in this case likely it would include points along A408 (5-meter-high vertical calculation grid running along the perimeter of the A408 running parallel to the proposed site). This would illustrate to all relevant parties (particularly highways) the impact of the proposed development on the roadway and road users.

APPENDIX A – External Lighting Philosophy

THIS DRAWING IS AN INDICATIVE LAYOUT ONLY, DEMONSTRATING THE CONCEPTUAL REQUIREMENTS CORRELATING WITH THE AGREED SCHEMATIC SOLUTIONS. THE PURPOSE OF THIS DRAWING IS TO DEMONSTRATE DESIGN INTENT, FOR FURTHER DEVELOPMENT BY THE RELEVANT SERVICES DESIGNER ONLY.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ELECTRICAL PERFORMANCE SPECIFICATION & ALL RELEVANT ARCHITECTURAL & ENGINEERING DRAWINGS, DETAILED & FULLY COORDINATED INSTALLATION DRAWINGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATION.

LEGEND

A ITALO 1 - IT1 (5P5) S07 1 MODULE 180mA

B ITALO 1 - IT1 (5P5) S07 3 MODULE 140mA

C ITALO 1 - IT1 (5P5) STE-M 3 MODULE 140mA

DW QUARTO 2.0 - QTO 7.5W LED OC

EW VASTA3 - VAS3 125W LED FT70 (VAS3-FT70-740-125D)

F VASTA3 - VAS3 125W LED AL50 (VAS3-AL50-740-125D)

G TULA PERFORMANCE (UP/DOWN) - 9W LED MEDIUM 20 + MEDIUM 25

H VAILO - VAI-AY-7XX-59-D (5.4W)



DESIGN CRITERIA

APPLICATION	MINIMUM MAINTAINED MEAN ILLUMINANCE (lx)	ILLUMINANCE UNIFORMITY (minimum/average)	NOTES
WALKWAYS FOR PEDESTRIANS	5	0.20	THE ILLUMINANCE IS MEASURED ON THE GROUND
CAR PARK, MEDIUM TRAFFIC	10	0.25	THE ILLUMINANCE IS MEASURED ON THE GROUND
BICYCLE STORE	15	0.40	THE ILLUMINANCE IS MEASURED ON THE GROUND
REGULAR VEHICLE TRAFFIC	20	0.20	THE ILLUMINANCE IS MEASURED ON THE GROUND
PLANT SPACES	50	0.25	THE ILLUMINANCE IS MEASURED ON THE GROUND
VEHICLE TURNING AND LOADING POINTS	50	0.40	THE ILLUMINANCE IS MEASURED ON THE GROUND
RECEPTION ENTRANCE	50	0.40	THE ILLUMINANCE IS MEASURED ON THE GROUND
BIN STORE	10	0.25	THE ILLUMINANCE IS MEASURED ON THE GROUND
BIODIVERSE AMENITY PLANTING	NOT TO BE ILLUMINATED. LIGHTING IN SURROUNDING AREAS TO BE DESIGN TO MINIMISE LIGHT OVERSPILL AND KEEP ILLUMINATION BELOW 1lx AT A MAXIMUM IF POSSIBLE.		
BUILDING PERIMETER	5	0.25	THE ILLUMINANCE IS MEASURED ON THE GROUND
PROPOSED NEW BUILDING FOOTPRINT			
PROPOSED NEW DEVELOPMENT FOOTPRINT			

DRAWING NOTES:

1. REFER TO SPECIFICATION LIGHTING SCHEDULE FOR LUMINARIES TYPES.
2. THE LAYOUTS ARE INDICATIVE ONLY & SHOULD BE MINIMUM ALLOWANCE THE CONTRACTOR IS RESPONSIBLE FOR FINAL SELECTION OF LUMINARIES AND ASSOCIATED DESIGN
3. EMERGENCY FITTINGS ARE GENERALLY NOT INDICATED & SHOULD BE QUANTIFIED BY THE CONTRACTOR IN ACCORDANCE WITH THE BUILDINGS FIRE STRATEGY & CONTRACTOR LIGHTING DESIGN
4. SWITCHES TO PROVIDE LOCAL CONTROL INLINE WITH BRE498 GUIDANCE
5. WALKWAY LIGHTING TO BE ACTIVE & REMAIN ACTIVE WHEN ANY ZONE IS ACTIVE

ALL EXTERNAL COLUMNS AND LIGHT FITTINGS TO HAVE A WHITE POWDER COATED FINISH

REV	DATE	DESCRIPTION	BY
P01	28/10/2026	FOR INFORMATION	TC

CLIENT

ROYAL UK PROPERTY HOLDINGS LTD.

ORIGINATOR REF:

chord consult
Info@chordconsult.co.uk
www.chordconsult.co.uk

☐ Bridlesmith House, Bridlesmith Gate, Nottingham NG1 2GQ
0115 865 4415

☒ Luminous House, 300 South Row, Milton Keynes MK9 2FR
01908 014590

PROJECT

ZINC - STOCKLEY PARK

DRAWING TITLE

EXTERNAL LIGHTING PHILOSOPHY

DRAWING STATUS

FOR INFORMATION

DRAWN BY	DATE	CHK'D BY	SCALE	MEDIA
TC	JULY 2026	JF	1:500	A1

PROJECT - ORIGINATOR - ZONE - LEVEL - TYPE - ROLE - NUMBER - SUITABILITY: 25047-CHD-XX-XX-DR-E-6300 S1

REVISION: P01

© Chord Consult Limited 2025

APPENDIX B – External Lighting Quote

QUOTATION

Luceco UK Ltd T/A Kingfisher Lighting
Kingfisher House, Crown Farm Way, Forest Town, Mansfield NG19 0FT
Tel: 44 (0)1623 415 900
www.kingfisherlighting.com

Created Date	26/08/2026	**Project ID**	98807
Prepared By	David Hughes	**Quote Number**	00249721
Email	dhughes@kingfisherlighting.com	**Quote Name**	ZINC - STOCKLEY PARK
Quote To Name	Chord Consult	**Quote Revision**	1.0
Quote To	The Pinnacle, 170 Midsummer Boulevard Milton Keynes Buckinghamshire MK9 1BP	**For The Attention Of**	Tristan Cockerill
		Valid For	90 days

Line Index	Product	Line Description	Sales Price	Quantity	Total Price
	A	Comprises of:	GBP 730.40	9	GBP 6,573.60
		ITALO 1 Pentha, 1 mod, 4,380lum.lm, 34.8W, LED 180mA, Driver 900mA, 125lm/W, 2700K, SO7 Optic, DALI Driver, Class 1, Graphite Grey , Post Top 60-76mm, 76mm recmd Side Entry Fixing, IP66, IK09, 7kg max, Fixed with no dim profile.	*Package*	*1*	
		6m Tubular Steel Rooted Column 76mm diameter Shaft, Hot Dip Galvanised Finish.	*Package*	*1*	
		*Fused Cut Out Unit comprising Cut Out with 6 Amp Fuse & Termination for Loop in Loop Out Cables. *to accept up to 25mm2 2 core circ/10mm2 3 core*. Double pole, single LST fuse, single phase fuse.*	*Package*	*1*	
	B	Comprises of:	GBP 952.80	1	GBP 952.80
		ITALO 1 Pentha, 3 mod, 11,600lum.lm, 76.7W, LED 140mA, Driver 700mA, 152lm/W, 4000K, SO7 Optic, DALI Driver, Class 1, Graphite Grey , Post Top 60-76mm, IP66, IK09, 7kg max, Fixed with no dim profile.	*Package*	*1*	
		ITALO TO BE 2700K VERSION	*Package*	*1*	
		8m Light Duty Tubular Steel Rooted Column 89mm diameter Shaft c/w 76mm Welded in Spigot, Hot Dip Galvanised Finish.	*Package*	*1*	
		*Fused Cut Out Unit comprising Cut Out with 6 Amp Fuse & Termination for Loop in Loop Out Cables. *to accept up to 25mm2 2 core circ/10mm2 3 core*. Double pole, single LST fuse, single phase fuse.*	*Package*	*1*	

Kingfisher Lighting
Part of Luceco plc group

Luceco UK Ltd T/A Kingfisher Lighting
Kingfisher House, Crown Farm Way, Forest Town, Mansfield NG19 0FT
Tel: 44 (0)1623 415 900
www.kingfisherlighting.com

QUOTATION

Line Index	Product	Line Description	Sales Price	Quantity	Total Price
	C	Comprises of:	GBP 984.80	4	GBP 3,939.20
		ITALO 1 Pentha, 3 mod, 10,670lum.lm, 76.7W, LED 140mA, 700mA, 139lm/W, 2700K, STE-M Optic,DALI , Class 1, Graphite Grey , Post Top 60-76mm, 76mm recmd Side Entry Fixing, IP66, IK09, 7kg max, Fixed with no dim profile.	*Package*	*1*	
		8m Light Duty Tubular Steel Rooted Column 89mm diameter Shaft c/w 76mm Welded in Spigot, Hot Dip Galvanised Finish.	*Package*	*1*	
		*Fused Cut Out Unit comprising Cut Out with 6 Amp Fuse & Termination for Loop in Loop Out Cables. *to accept up to 25mm2 2 core circ/10mm2 3 core*. Double pole, single LST fuse, single phase fuse.*	*Package*	*1*	
	DW	Comprises of:	GBP 242.40	31	GBP 7,514.40
		QUARTO 2.0 Wallpack, 710lum.lm, 7.5W, 250mA, 95lm/W, 2700K, Path Optic OC , Basic DALI Driver, Class 1, RAL7016 Anthracite Grey , Wall Mount, IP66, IK10, 4kg, Dimmable.	*Package*	*1*	
	EW	Comprises of:	GBP 537.60	9	GBP 4,838.40
		VASTA Flood Light. 21,042lum.lm, 125W, 670mA 168lm/W, 2700K, Forward Throw Optic FT70, DALI Driver, Class 1, RAL7016 Anthracite Grey Marine Grade, Stirrup Mount, Die-cast Aluminium, IP66, IK08, 17.8kg, Dimmable.	*Package*	*1*	
	F	Comprises of:	GBP 1,050.40	7	GBP 7,352.80
		VASTA Flood Light. 22,250lum.lm, 125W, 670mA 178lm/W, 2700K, Flood Optic AL50, DALI Driver, Class 1, RAL7016 Anthracite Grey Marine Grade, Stirrup Mount, Die-cast Aluminium, IP66, IK08, 17.8kg, Dimmable.	*Package*	*1*	
		Single Bracket to suit either 76mm shaft or spigot and to take 1 x stirrup mounted heavy duty floodlight. Hot Dip Galvanised Finish.	*Package*	*1*	
		8m Light Duty Tubular Steel Rooted Column 89mm diameter Shaft c/w 76mm Welded in Spigot, Hot Dip Galvanised Finish.	*Package*	*1*	
		*Fused Cut Out Unit comprising Cut Out with 6 Amp Fuse & Termination for Loop in Loop Out Cables. *to accept up to 25mm2 2 core circ/10mm2 3 core*. Double pole, single LST fuse, single phase fuse.*	*Package*	*1*	
	G	Comprises of:	GBP 304.80	4	GBP 1,219.20
		TULA Performance Two Way Luminaire, 2 x 425lum.lm, 9W, 94lm/W, 3000K, Medium 25Â° Beam, Class 1, Die-cast Alum	*Package*	*1*	

QUOTATION

Luceco UK Ltd T/A Kingfisher Lighting
Kingfisher House, Crown Farm Way, Forest Town, Mansfield NG19 0FT
Tel: 44 (0)1623 415 900
www.kingfisherlighting.com

Line Index	Product	Line Description	Sales Price	Quantity	Total Price
		Body, Graphite Grey, IP66, IK07, 0.82kg. (0472009P-830-16)			
	H	Comprises of:	GBP 11,205.63	1	GBP 11,205.63
		VAILO Bollard 1004mm, 397/789lum.lm, 5.4/9.2W, 74/86lm/W, 2700K, Asym Adj Distribution, DALI Driver, GRP Non-Conductive Enclosure, RAL7016 Marine Finish, Class 1 & Double Insulated, Flange Mount, IP66, IK10, 6.8kg, 5 Core Cable	*Package*	*20*	
		VAILO Bollard Foundation Kit. Includes template, 5 x 150mm J Bolts, nuts and washers.	*Package*	*20*	
		VAILO Bollard Fixing Kit. Kit includes Special VAILO Pry Bar, Large and Small Opening Wrench.	*Package*	*2*	

Grand Total GBP 43,596.03 ex. VAT

DELIVERY - Delivery is to mainland UK unless stated otherwise. The delivery lead time advised is based upon supply of the complete order, if some items are required sooner then please contact our sales office. Split deliveries may incur extra carriage charges. Carriage charges apply for orders under £500 and may apply to certain orders over £500 dependant on the delivery postcode, see attached delivery map for lead times and additional charges. Additional delivery surcharge applies for feeder pillars.

PAYMENT - Subject to agreed credit. Payment to be within your individual agreed credit terms.

All prices are valid until the expiry date of this quote and subject to our standard terms and conditions. Prices do not include sales taxes

The UK Government has introduced the Waste Electrical and Electronic Equipment Regulations 2006 ('the WEEE Regulations'), which will, as from the 1st July 2007, require producers (or their agents) to finance the environmentally sound disposal of non-household Luminaires and the gas discharge lamps that are embodied within them. Luceco Plc will be paying its approved compliance scheme operator, Veolia, to manage its obligation under the WEEE Directive WEEE Registration No.: WEE/FD0234YV. Our luminaire and lamp prices are inclusive of the WEEE levy, therefore there is no risk to you now or in the future from this.

Returns Policy
Please note some items are non-returnable - please visit the downloads section of our website to view our Terms and Conditions.

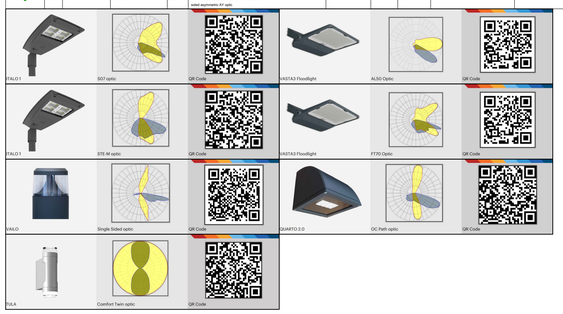
Luceco UK Limited, Stafford Park 1, Telford, Shropshire, TF3 3BD, Company Number: 0225527

APPENDIX C – External Lighting Layout

Dimensions are not to be scaled from this drawing

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Uniformity (Min/Avg)	Diversity (Min/Max)	Motor Type
Centre Roadway	Illuminance	Lux	21.40	36	6	0.28	0.17	Horizontal
Unit 100 Box Cycle Spaces	Illuminance	Lux	5.35	9	3	0.56	0.33	Horizontal
Unit 100 Box Parking Bays	Illuminance	Lux	20.42	33	14	0.69	0.42	Horizontal
Unit 100 Tra Parking Bays	Illuminance	Lux	18.21	29	12	0.66	0.41	Horizontal
Unit 100 Bin Store	Illuminance	Lux	14.10	16	12	0.85	0.75	Horizontal
Unit 100 Car Park	Illuminance	Lux	15.62	25	4	0.26	0.16	Horizontal
Unit 100 Perimeter	Illuminance	Lux	11.30	36	4	0.35	0.11	Horizontal
Unit 100 Reception	Illuminance	Lux	89.92	94	65	0.85	0.69	Horizontal
Unit 100 Service Yard	Illuminance	Lux	64.30	104	32	0.50	0.31	Horizontal
Unit 200 Amenity Space	Illuminance	Lux	17.25	22	14	0.81	0.64	Horizontal
Unit 200 Car Park	Illuminance	Lux	10.46	27	4	0.38	0.15	Horizontal
Unit 200 Cycles	Illuminance	Lux	4.50	8	4	0.81	0.50	Horizontal
Unit 200 Perimeter	Illuminance	Lux	11.30	30	4	0.35	0.13	Horizontal
Unit 200 Reception	Illuminance	Lux	76.50	104	58	0.83	0.48	Horizontal
Unit 200 Service Yard	Illuminance	Lux	52.90	108	22	0.42	0.20	Horizontal
Walkways	Illuminance	Lux	18.25	45	5	0.27	0.11	Horizontal

Luminaire Schedule										
Symbol	Qty	Label	Arrangement	LLF	Description	Luminaire LOR	UGR,R	Luminaire Watts	Light Engine	TM65 & TM66 Information
	9	A	Single	0.900	3# RW ITALO 1 Pentha 2700K 1 module (LED 140mA,Driver 900mA) SOT optic column mounted at 6m	126	0.00	34.8		
	1	B	Single	0.900	7# TW ITALO 1 Pentha 2700K 3 module (LED 140mA,Driver 700mA) SOT optic column mounted at 6m	136	0.00	78.7		
	4	C	Single	0.900	7# TW ITALO 1 Pentha 2700K 3 module (LED 140mA,Driver 700mA) STE-M optic column mounted at 6m	139	0.00	78.7		
	31	DW	Single	0.900	7 SW QUARTO 2.0 bulkhead 2700K 250mA OC path optic wall mounted at 3m	99	N.A.	7.5		
	9	EW	Single	0.900	120W UASTA Floodlight 2700K 870mA FITTO forward throw optic wall mounted at 6m	199	0.00	128.710		
	7	F	Single	0.900	120W UASTA Floodlight 2700K 870mA HLSS flood optic column mounted at 6m	178	0.00	129.840		
	4	G	Single	0.900	8W TULA Twin-Way Performance 3000K medium (BT)/medium (ET)2 optic wall mounted at 2m	94	0.00	8		
	20	H	Single	0.900	5 WW VALO bollard 2700K 1000mm 200mA single optic(approximate IP rate	74	0.07	5.4		





Project Number 98807C | Project Title - ZINC - STOCKLEY PARK | Date 26/08/2026 | Kingfisher Lighting

BREEAM® BREEAM New Construction UK| Version 7 (2025)

Darksky Approved (2700K)	Luminaire Image	Qty	Luminaire	Light Source	Watts (W)	Luminaire Lumens (lm)	Lm/W	LOR	Total Lumens	UGR	Upward Lumens	Light Engine: Colour Temperature (K)	Light Engine: Ra	Light Engine: Rated Life (Hrs)	Light Engine: CRI	SLP GN01 - Table 1 & Table 7: Beam Angle	SLP GN01 - Table 1 & Table 7: Sky Glow Effect	SLP GN01 - Table 1 & Table 7: Obtrusive Effect	SLP GN01 - Table 1 & Table 7: Bollards Only & Max Intensity cd/1000 lm (BC 3a/2a/1a)	SLP GN01 - Table 1 & Table 7: % of luminaires lumens (BC 1,2,3)	** ANT Hour Per Day	CO2* (Tonnes)	Kw/Hour
		9	Italo 1	#1 - (SPS) SOT - 1 Module 140mA	34.8	4182	120.06	100%	39420	0.0%	0	2700	(90	810	100,000	≤70	69°	Minimum	Some	270	n/a	12	0.28	1371.83
		1	Italo 1	#1 - (SPS) SOT - 3 Module 140mA	78.7	10440	132.11	100%	106640	0.0%	0	2700	(90	810	100,000	≤70	65°	Minimum	Some	643	n/a	12	0.67	315.95
		4	Italo 1	#3 - (SPS) STE-M - 3 Module 140mA	78.7	10670	135.51	100%	42680	0.0%	0	2700	(90	810	100,000	≤70	64°	Minimum	Some	764	n/a	12	0.26	1343.78
		31	QUARTO 2.0	Q50 - 7.5W LED OC	7.5	740	98.67	100%	22940	0.0%	0	2700	180	810	100,000	≤70	92.3°	Minimum	Some	100	n/a	12	0.21	1818.33
		9	VAST43	vast3 - 125W LED FITTO - (VAS3-FTTO-740-LDO)	123.0	21042	168.34	100%	189378	0.0%	0	2700	(90	810	100,000	≤70	70°	Minimum	Some	2988	n/a	12	1.01	4967.10
		7	VAST43	vast3 - 125W LED ALSO - (VAS3-ALSO-740-LDO)	123.0	22250	178.05	100%	155750	0.0%	0	2700	(90	810	100,000	≤70	11°	Minimum	Some	409	n/a	12	0.79	3832.20
		4	Tula Performance (Up / Down)	5w LED Medium 20° + Medium 20°	9.0	855	95.00	100%	3420	16.8%	1710	2700	0	0	100,000	>70	0.00	0.00	0.00	0	0.0%	12	0.03	157.68
		20	VALO	VAL- AT- 7W-59 0 (5.4w)	5.4	384	71.11	100%	7680	0.0%	84	2700	(80	820	100,000	≤70	74°	Minimum	Some	383	0.4%	12	0.10	473.04

GN01 - 2021

BREEAM Summary

** Environmental Zone to be confirmed by assessor **

Environmental Zone	E3

Upward Light Ratio (ULR) - Table 6	Target	Achieved	Status
	5.0%	0.4%	Pass

Note - Just a BREEAM requirement for Cut-Off Lanterns (See POL4 Assessment Criteria above).

Table 5 - Sidelong Intensity (I candelas)

Pre Cutoff - A_{cp}=0.2	10,000	Pass
Pre Cutoff - A_{cp}=0.5	1,000	Pass

Table 5 - Light Trespass into Windows (Lux)

Pre Cutoff	20	Pass
Post Cutoff	2	Pass

Table 7 - Maximum values of upward flux ratio of installation (of four or more luminaires)

Light technical parameter:	Type of installation	Environmental zones				
		E0	E1	E2	E3	E4
Upward flux ratio (UFR) / %	Road	n/a	2	5	8	12
	Amenity	n/a	n/a	6	12	20
	Sports	n/a	n/a	2	5	15

Table 6 - Maximum values of upward light ratio (ULR) of luminaires

Light technical parameter:	Environmental zones				
	E0	E1	E2	E3	E4
Upward light ratio (ULR) / %	0	0	2.5	5	15

Note 1 - This is the primary approach to limit skyglow and is suitable to comply in different single luminaires and design the overall layout should luminaire centres as a maximum.

Note 2 - This does not take into account the effect of light reflected upwards from ground that also contributes to skyglow.

Note 3 - Some lighting schemes will require the full benefit and overall cost of ground light, e.g. ground-mounted uplighters, ground-mounted floodlights and bollard lighting, in which these limits cannot apply. However, care should always be taken to minimise upward waste light by the proper application of suitably downwarded luminaires and light controlling optical accessories.

Table 1 - The effect on the ability to view the night sky at various levels

Sky Glow	Light Emitted (Proposed)	Sky Glow Effect	Obtrusive Effect
E0	100-LRO	Local	Little
E1	E0-LEO	Light Event	Some
E2	90/95	High	High
E3-4	Light Event	High	
	0-4/5	Minimum	Some

Total Installation Lumens	473,708
Total Upward Light	0.4%
Total CO2 Per Year (Tonnes)	2.76
Total Electric Consumption (Kw)	3.07
Total Electric Consumption Per Year (Kwh)	13460.6
Average Luminaire Lumens Per Circuit Watt	153.5

Compliance Status Summary

POL 04	Reduction Of Night Time Light Pollution — Pass
ENE 06	Energy Efficient External Lighting — Pass
HEA 02	Internal And External Lighting Levels — Pass

Note - HEA02 is this report only applies to exterior lighting

* ANT = Average Sun Time

Date 26/08/2026

ZINC - STOCKLEY PARK

A1

Scale	Project Number
1: 500 at A1	D98807C
Date	Drawing No.
26 August 2026	D98807/JB/C
Designed By : J Buck MSLL	

For this lighting design a 0.9mf has been used. If it differs from the maintenance plan for this project then you must advise us accordingly

Kingfisher Lighting — A division of the LUCECO group

A lighting applications design service is provided by us in good faith and without charge, relating to Kingfisher products only. As such, whilst every endeavor is made for accuracy from information provided by yourselves, the final responsibility for the suitability of the design lies with the client. The company cannot, therefore, accept any liability or consequential loss incurred. *If the drawing supplied to Kingfisher is a PDF then an AutoCAD drawing is to be provided prior to order. When converting a PDF, the scale is not precise.*

Rev.	Description	Initials



For more information on EV charging for your installation please visit www.sync.energy or click the image