

Public Lighting Report

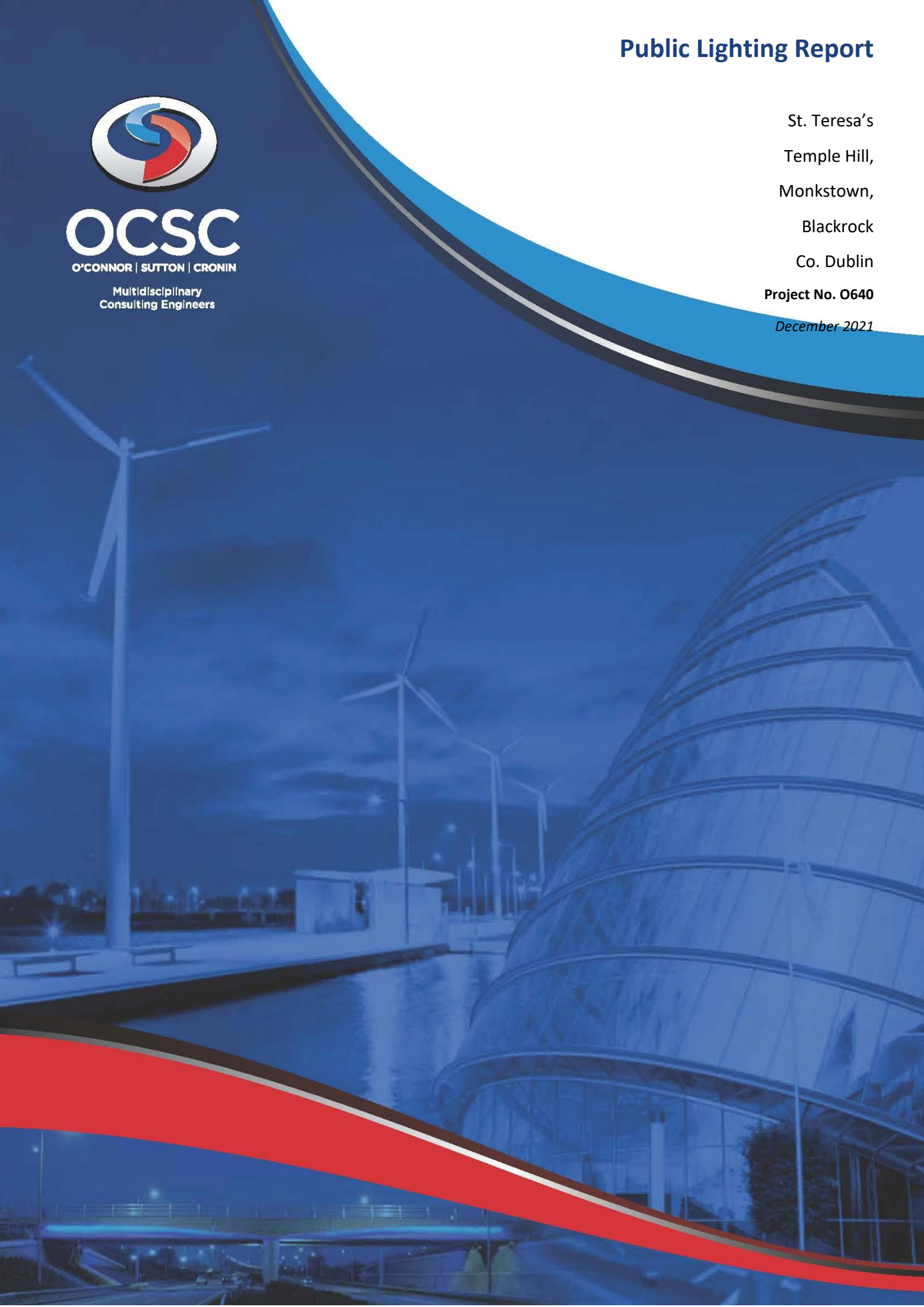


OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary
Consulting Engineers

St. Teresa's
Temple Hill,
Monkstown,
Blackrock
Co. Dublin
Project No. O640
December 2021



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DOCUMENT CONTROL & HISTORY

OCSC Job No.: O640	Project Code	Originator Code	Zone Code	Level Code	File Type	Role Type	Number Series	Status/ Suitability Code	Revision
	O640	OCSC	XX	XX	RP	E	0001	S3	P04
Rev.	Status	Authors	Checked	Authorised	Issue Date				
P04	For Planning	BOB	EO	EO	14.12.2021				
P03	For Planning	BOB	EO	EO	24.09.2021				
P02	For Planning	BOB	EO	EO	19.02.2021				
P01	For Planning	BOB	EO	RB	29.01.2019				

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PROPOSED DEVELOPMENT

Oval Target Limited intend to apply to An Bord Pleanála for planning permission for a Strategic Housing

Development on a site of c. 3.9 ha at 'St. Teresa's House' (A Protected Structure) and 'St. Teresa's Lodge' (A

Protected Structure) Temple Hill, Monkstown, Blackrock, Co. Dublin.

The development will consist of a new residential and mixed use scheme of 493 residential units and associated residential amenities, a childcare facility and café in the form of (a) a combination of new apartment buildings (A1-C2 and D1 – E2); (b) the subdivision, conversion and re-use of 'St. Teresa's House' (Block H); and (c) the dismantling, relocation and change of use from residential to café of 'St. Teresa's Lodge' (Block G) within the site development area. A detailed development description is now set out as follows:

The proposal provides for the demolition (total c. 207 sq m GFA) of (a) a single storey return (approx. 20 sqm) along the boundary with The Alzheimer's Society of Ireland; (b) the ground floor switch room (approx. 24.9sq.m.), (c) ground floor structures northwest of St. Teresa's House (26.8sq.m), (d) basement boiler room northwest of St. Teresa's House (17.0 sq.m), (e) ground floor structures northeast of St. Teresa's house (22.0sq.m.) (f) basement stores northeast of St. Teresa's house (67.8 sq.m.) and (g) a non - original ground floor rear extension (approx. 28.5 sq m) associated with the Gate Lodge.

The new development will provide for the construction of a new mixed use scheme of 487 no. apartment units in the form of 11 no. new residential development blocks (Blocks A1-C2 and D1 – E2) as follows:

- Block A1 (5 storeys) comprising 37 no. apartments (33 no. 1 bed units and 4 no. 2 bed units)
- Block B1 (10 storeys) comprising 55 no. apartments (37 no. 1 bed units, 10 no. 2 bed units, 8 no. 3 bed units)
- Block B2 (8 storeys) comprising 42 no. apartments (28 no. 1 bed units, 9 no. 2 bed units and 5 no. 3 bed units)

- Block B3 (8 storeys) comprising 42 no. apartments (28 no. 1 bed units, 9 no. 2 bed units and 5 no. 3 bed units)
- Block B4 (5 storeys) comprising 41 no. apartments (4 no. studio units, 4 no. 1 bed units, 27 no. 2 bed units and 6 no. 3 bed units)
- Block C1 (3 storeys) comprising 10 no. apartments (1 no. studio units, 3 no. 1 bed units and 6 no. 2 beds)
- Block C2 (3 storeys) comprising 6 no. apartments (2 no. 1 bed units and 4 no. 2 bed units) together with a creche facility of 392 sq m at ground floor level and outdoor play area space of 302 sq m.
- Block C3 (1 storey over basement level) comprising residential amenity space of 451 sq m.
- Block D1 (6 storeys) comprising 134 no. apartments (12 no. studio units, 22 no. 1 bed units, 90 no. 2 bed units and 10 no. 3 bed units).
- Block E1 (6 storeys) comprising 70 no. apartment units (34 no. 1 bed units, 26 no. 2 bed units and 10 no. 3 bed units).
- Block E2 (6 storeys) comprising 50 units (1 no. studio units, 29 no. 1 bed units, 18 no. 2 bed units and 2 no. 3 bed units).

Each new residential unit has associated private open space in the form of a terrace / balcony.

The development also provides for Block H, which relates to the subdivision and conversion of 'St. Teresa's House' (3 storeys) into 6 no. apartments (5 no. 2 bed units and 1 no. 3 bed unit) including the demolition of non-original additions and partitions, removal and relocation of existing doors, re-instatement of blocked up windows, replacement of windows, repair and refurbishment of joinery throughout and the upgrade of roof finishes and rainwater goods where appropriate.

It is also proposed to dismantle and relocate 'St. Teresa's Lodge' (1 storey) from its current location to a new location, 180 m south west within the development adjacent to Rockfield Park. St. Teresa's Lodge (Block G) will be deconstructed in its original location and reconstructed in a new location using original roof timbers, decorative elements and rubble stonework, with original brickwork cleaned and re-used where appropriate.

It is also proposed to dismantle and relocate 'St. Teresa's Lodge' (1 storey - gross floor area 69.63sq m) from its current location to a new location, 180 m south west within the development adjacent to Rockfield Park. St. Teresa's Lodge (Block G) will be deconstructed in its original location and reconstructed in a new location using original roof timbers, decorative elements and rubble stonework, with original brickwork cleaned and re-used where appropriate. A non - original extension (approx. 28.5 sq m) is proposed for demolition. The current proposal seeks a new extension of this building (approx. 26.8 sq m) and a change of use from residential to café use to deliver a Part M compliant single storey building of approx. 67.4 sq m

Total Open space (approx. 15,099.7 sq m) is proposed as follows: (a) public open space (approx. 11,572.3 sqm) in the form of a central parkland, garden link, woodland parkland (incorporating an existing folly), a tree belt; and (b) residential communal open space (approx. 3,527.4 sq m) in the form of entrance gardens, plazas, terraces, gardens and roof terraces for Blocks B2 and B3. Provision is also made for new pedestrian connections to Rockfield Park on the southern site boundary and Temple Hill along the northern site boundary.

Basement areas are proposed below Blocks A1, B1 to B4 and D1 (c. 7,295 sq. m GFA). A total of 252 residential car parking spaces (161 at basement level and 91 at surface level); 1056 bicycle spaces (656 at basement level and 400 at surface level); and 20 motorcycle spaces at basement level are proposed. 8 no. car spaces for creche use are proposed at surface level.

The proposal also provides for further Bin Storage areas, Bike Storage areas, ESB substations and switch rooms with a combined floor area of 356.2 sq m at surface level.

The development also comprises works to the existing entrance to St. Teresa's; the adjoining property at 'Carmond'; and residential development at St. Vincent's Park from Temple Hill (N31/R113). Works include the realignment and upgrade of the existing signalised junction and associated footpaths to provide for improved and safer vehicular access/egress to the site and improved and safer access/egress for vehicular traffic to/from the property at 'Carmond' and the adjoining residential development at St Vincent's Park.

Emergency vehicular access and pedestrian/cyclist access is also proposed via a secondary long established existing access point along Temple Hill. There are no works proposed to the existing gates (Protected Structure) at this location.

The associated site and infrastructural works include provision for water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works including tree protection; green roofs; boundary treatment; internal roads and footpaths; and electrical services including solar panels at roof level above Blocks A1, B1 - B4, C1-C3, D1, E1, E2.

INTRODUCTION

This report outlines the design criteria and considerations taken into account with regard to the lighting scheme within the proposed development at St. Teresa's, Temple Road, Blackrock, Co. Dublin.

The report considers the lighting design as developed by O'Connor Sutton Cronin (OCSC) and should be read in conjunction with OCSC drawing no. O640-OCSC-XX-XX-DR-E-0001.

The drawing is provided to demonstrate compliance with DLR public lighting standards for areas within the development.

All proposed lighting has been designed and specified to comply fully with the council's standard specification document.

Details of the luminaires proposed, and on which the detailed design has been based, are contained in the appendices to this document.

The predicted performance of the external lighting installations has been assessed in detail using Lighting Simulation software. The Lighting Simulation software used was DIALux.

Standards and guidelines in relation to the lighting design are:

- BS 5489-1-2013
- I.S. EN 13201-2-2015
- DLR Council Public Lighting General Specification

The electrical services for the external lighting installation will be designed in accordance with ETCI National Rules for Electrical Installations ET101:2008.

THE DESIGN

The lighting design has been developed with the following principal considerations:

- Provide adequate illumination to contribute towards the safe use of the main access/feeder road and adjoining footpaths by both vehicles, cycles and pedestrians.
- Provide adequate illumination to the junction with Temple Road at the main vehicle entrance to the development.
- Provide the required illumination with minimum energy use.
- To control the lighting to prevent energy wastage.
- To enhance security.

All lighting within the development is not proposed to be taken in charge by the Council and will be privately operated by an appointed management company. The lighting will be powered from 2no. on site LV switch rooms via number of minipillars to meet DLR CoCo specification.

The lighting classes to I.S. EN 13201-2-2015 selected for the design are as follows:

- Main roads and foot paths is designed to achieve 6.2 lux average, 1.0 lux minimum. This complies with class P4 of IS EN 13201/BS5489.
- Entrance area is designed to achieve 13.1 lux average, 2.5 lux minimum. This complies with class P2 of IS EN 13201, so 2 classes above the residential road (P4).
- Paths 1 – 12.8 lux average, 1 lux minimum.

Switching of road lighting shall be by individual electronic solid state photocell per luminaire, with test switch in column base, to DLR specification.

Lighting columns shall be tubular type, galvanised steel, fully in accordance with DLR standard specification.

All wiring to be to ETCI regulations and DLR standard specification.

The following luminaires have been selected in this design:

- Type X1 - Public lighting luminaire on access / feeder roads - Vista 19w LED on 6 m pole, 400K colour temperature
- Type X3 - Open green area paths - Kassio Bollard 11w LED 1.2m tall

Manufacturer's data sheets for the selected luminaires are attached to this document as Appendix A.

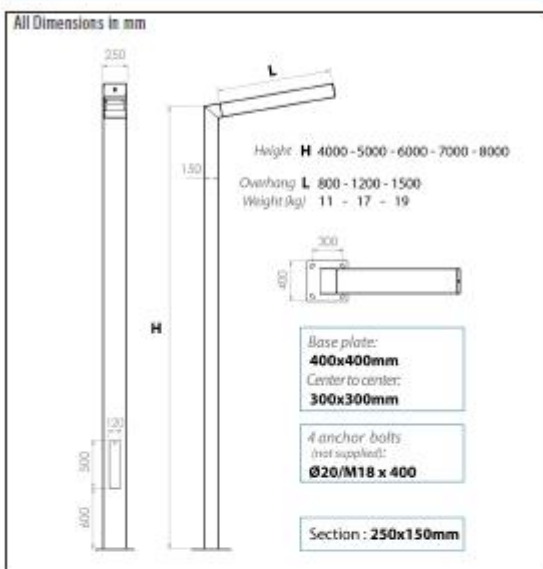
Calculation results are presented in the Appendix B.

The desired lighting design may also be achieved by other luminaires and the final lighting installation may use other luminaires, with modified positioning and aiming to achieve the same result. Manufacturers' stated performance characteristics are subject to change. Any changes to be agreed with DLR Road Lighting Department.

APPENDIX A – MANUFACTURER’S LUMINAIRE DATA SHEETS



DIMENSIONS



APPLICATION GUIDE

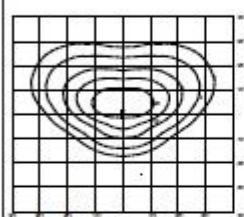
Vista 100w Asymmetric

Height 6m

2 x 50w LED, 4.5K - 10° tilt

Contours in Lux

M. Factor = 0.90



ORDERING CODE - Pole with 1 Luminaire on Top

Watt	Type	Code - 4m	Code - 5m	Code - 6m	Code - 7m	Code - 8m	Details	Lumens
38w	LED	5VST41040	5VST51040	5VST61040	5VST71040	5VST81040	1 Vista with Pole, No Tilt	4105 lm
52w	LED	5VST41050	5VST51050	5VST61050	5VST71050	5VST81050	1 Vista with Pole, No Tilt	6235 lm
73w	LED	5VST41070	5VST51070	5VST61070	5VST71070	5VST81070	1 Vista with Pole, No Tilt	8205 lm
2x36w	LED	5VST41240	5VST51240	5VST61240	5VST71240	5VST81240	1 Vista with Pole, No Tilt	8210 lm
2x52w	LED	5VST41250	5VST51250	5VST61250	5VST71250	5VST81250	1 Vista with Pole, No Tilt	12470 lm
2x73w	LED	5VST41270	5VST51270	5VST61270	5VST71270	5VST81270	1 Vista with Pole, No Tilt	16410 lm

OPTIONS

RAL:	Please specify
TWIN:	Twin Head
3K:	3000 K

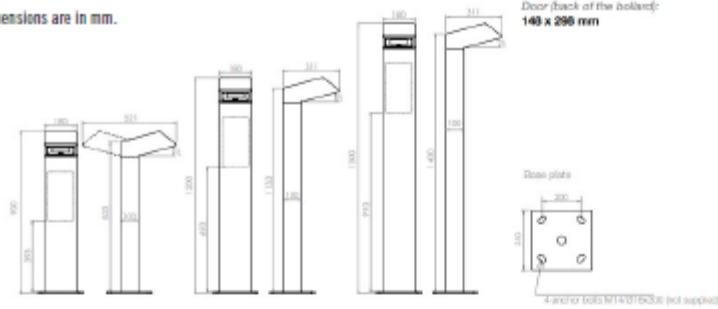


Further info on request - email: info@light.ie - www.light.ie
 Specifications may change without prior notification. Ref: 334

VeeLite

DIMENSIONS

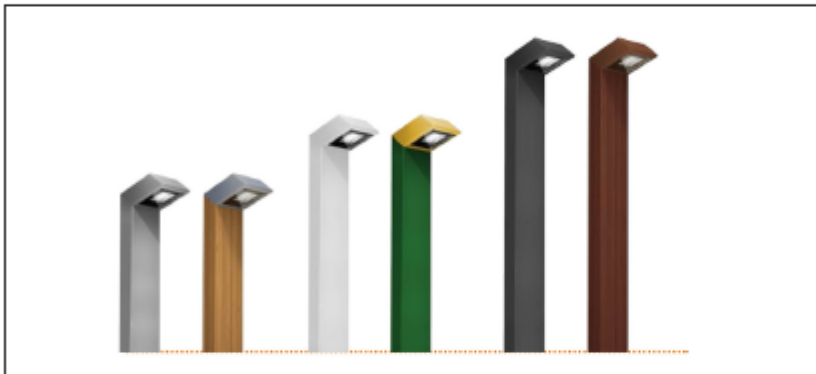
All Dimensions are in mm.



Weight: 20 / 25 / 30 Kgs. - One Head version

Weight: 23 / 28 / 33 Kgs. - Two Head version

SIZES & FINISH EXAMPLES



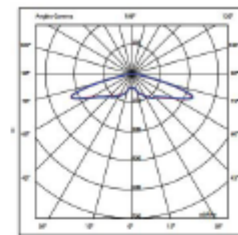
ORDERING CODE

Wattage*	Type	Code - Single	Code - Twin	Details	Optic	Option	Lumens*
11w	8LED	5KAS00010	5KAS00210	Flanged Bollard 900mm, 350mA Driver, 4K	C6	A13	1150
15w	8LED	5KAS00011	5KAS00211	Flanged Bollard 900mm, 500mA Driver, 4K	C6	A13	1560
20w	8LED	5KAS00012	5KAS00212	Flanged Bollard 900mm, 700mA Driver, 4K	C6	A13	2050
19w	16LED	5KAS00015	5KAS00215	Flanged Bollard 900mm, 350mA Driver, 4K	C6	A13	2300
27w	16LED	5KAS00016	5KAS00216	Flanged Bollard 900mm, 500mA Driver, 4K	C6	A13	3120

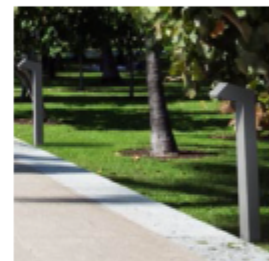
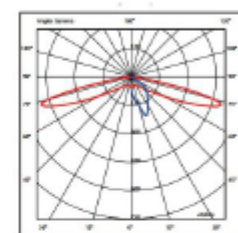
*Per Single Head version. (Twin Head version will be double).

OPTICS

Symmetric - C6

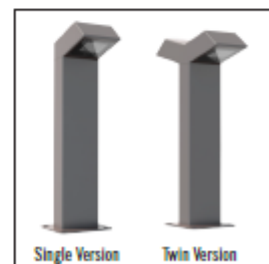


Asymmetric - A13



OPTIONS

RAL: Pls specify
1.2m: Height 1.2m
1.5m: Height 1.5m
DALI: DALI Dimmable
1-10V: 1-10V Dimmable
CLO: Constant Lumen Output
PRO: Programmed Dimming
STW: Street Optic Wide (A8)
3K: 3000K, Warm White
MIRN: Marine Finish



Further info on request - email: info@light.ie - www.light.ie
Specifications may change without prior notification. Ref: 327

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APPENDIX B – CALCULATION RESULTS

Please refer to supporting document *O640-OCSC-XX-XX-DR-E-0001* for calculation results.