Public Lighting Report

Rosemount

Malahide Road,

Northern Cross,

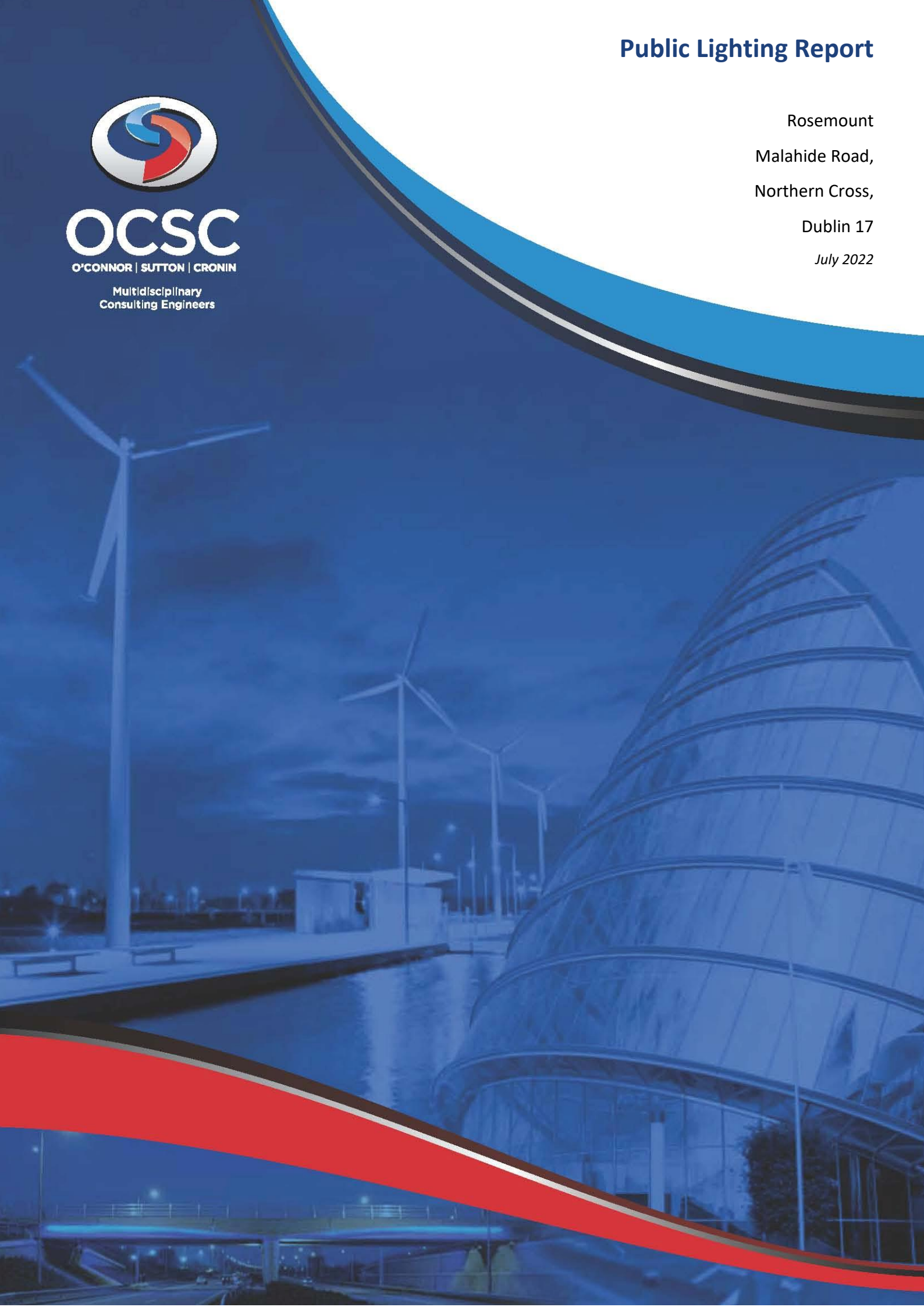
Dublin 17

July 2022

OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary
Consulting Engineers



NOTICE

DOCUMENT CONTROL & HISTORY

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P02	For Planning	BOB	EO	EO	29.07.22
P01	For Planning	BOB	EO	EO	15.12.21

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INTRODUCTION

This report outlines the design criteria and considerations taken into account with regard to the lighting scheme within the proposed mixed use development at Rosemount.

1.1. Development Description

We, Walls Construction Ltd. intend to apply to An Bord Pleanála for permission for a strategic housing development on lands at Rosemount House, Northern Cross, Malahide Road, Dublin 17, on a site of c. 0.6462 ha. The subject site is bound by Mayne River Avenue to the west and south, a site to the north in use as a building compound for the construction of the permitted development to the east (ABP Ref.: 307887-20).

The proposal comprises the demolition of an existing 3 storey office building and the construction of a mixed-use development in a single block (up to 9 storeys over basement) including 176 no. apartments, office and café use.

The proposed development shall consist of:

· Demolition of existing c. 3,315 sq.m, 3 storey office building on site and existing ancillary facilities and the construction of a single mixed-use block (Block A) of up to 9 storeys (over basement), consisting of a 4-sided structure based around a central courtyard area.

· c. 1,060 sq.m. of office space at ground floor level with own door access and associated infrastructure including staff kitchen, meeting rooms and designated car parking (7 spaces) at basement level.

· A café unit of c. 143.7 sq.m at ground floor level with own door access to the south and east, accessed via proposed public open space.

· 176 no. residential units from 1st to 8th floor level comprising 72 no. 1 bed units (41%), 57 no. 2 bed units (32%) and 47 no. 3 bed units (27%) [each with private amenity space in the form of balcony or terrace], with separate access to the proposed commercial uses at ground floor level.

· c. 1,846 sq. m. of communal open space at ground floor, first floor podium, 4th floor and 7th floor level, and public open space of c. 1,577 sq.m. at ground floor level, including a public courtyard area located to the southeast of the proposed block.

· Resident amenity and support services are proposed at ground floor level to include a cinema room, post room, games room, co-working spaces, gym and concierge services.

· 134 no. car parking spaces, 7 of which are accessible, and 6 no. motorcycle parking spaces, located at basement level and accessed by a vehicular ramp via Mayne River Avenue to the west (with a vehicular set down areas fronting Mayne River Avenue), in addition to 2 no. car club spaces at the southern boundary.

· 424 no. bicycle parking spaces, 416 of which at ground floor and at surface level and 8 no. spaces at basement level.

· All associated vehicular and pedestrian access routes (including links to the adjoining site to the north), external communal play facilities, E.S.B substation, Meter rooms, foul and surface water drainage, hard and soft landscaping, lighting, plant at basement level, bin stores, PV panels and green roof, all associated and ancillary site works.

The application contains a statement setting out how the proposal will be consistent with the objectives of the relevant development plan and local area plan. The application contains a statement indicating why permission should be granted for the proposed development, having regard to a consideration specified in section 37(2)(b) of the Planning and Development Act, 2000, as amended, notwithstanding that the proposed development materially contravenes a relevant development plan or local area plan other than in relation to the zoning of the land

1.2. Design Criteria

The report considers the lighting design as developed by O'Connor Sutton Cronin (OCSC).

Details of the luminaires proposed are contained in the appendices to this document.

Standards and guidelines in relation to the lighting report are:

- BS 5489-1-2013
- I.S. EN 13201-2-2015
- Dublin City Council Public Lighting General Specification 2016.

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

THE DESIGN

General Lighting.

The lighting design will be 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 the required illumination with minimum energy use.
- To control the lighting to prevent energy wastage.
- To enhance security.

All lighting within the development is 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 on-site LV switch rooms via number of minipillars.

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 7.5 lux average, 1.5 lux minimum. This complies with class P3 of IS EN 13201/BS5489.

Switching of road lighting shall be by individual electronic solid state photocell per luminaire, with test switch in column base, to Local Public Lighting Specification.

All wiring to be to ETCI regulations and Local Public Lighting Specification standard.

The following luminaires have been selected in this design:

- Type X1 – Axia 2.1 5187 3000K 16 NVSL219CT NW 740

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

Schréder
Experts in lightability™

ROAD

AXIA 2

PRO FLEX™

The most comprehensive and economical LED lighting solution

AXIA 2 provides the most comprehensive and best value LED solution for lighting any road, street or pedestrian area. It offers all the advantages of LED lighting, without the high cost associated with LEDs.

With its photometric engine providing light distributions adapted to various applications, AXIA 2 is one of the highest performing luminaires available on the market to offer a fast return on investment.

Building on the strengths of the 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.

IP 66 | IK 10 | IK 09 | IK 08

URBAN & RESIDENTIAL STREETS | BIKE & PEDESTRIAN PATHS | RAILWAY STATIONS & METROS | CAR PARKS | LARGE AREAS | SQUARES & PEDESTRIAN AREAS | ROADS & MOTORWAYS

GENERAL INFORMATION

Recommended installation height	5m to 10m | 16' to 33'
Driver included	Yes
CE mark	Yes
ENEC+ certified	Yes
ROHS compliant	Yes
Zhaga-D4i certified	Yes
French law of December 27th 2018 - Compliant with application type(s)	a, b, c, d, e, f, g
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)
RCM mark	Yes

HOUSING AND FINISH

Housing	Aluminium
Optic	Polycarbonate
Protector	Polycarbonate (with integrated lenses)
Housing finish	Polyester powder coating
Standard colour(s)	RAL 7040 window grey
Tightness level	IP 66
Impact resistance	IK 08, IK 09, IK 10
Vibration test	Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	By loosening screws on the bottom cover

- Any other RAL or AKZO colour upon request

- IK may be different according to the size/configurations. Please consult us.

OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +50°C / -22°F up to 122°F

- Depending on the luminaire configuration. For more details, please contact us.

ELECTRICAL INFORMATION

Electrical class	Class I EU, Class II EU
Nominal voltage	220-240V – 50-60Hz
Power factor (at full load)	0.9
Surge protection options (kV)	10
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-4-5 / EN 61547
Control protocol(s)	Bluetooth, 1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Photocell, Remote management
Socket	Zhaga (optional) NEMA 3-pin (optional) NEMA 6-pin (optional) NEMA 7-pin (optional)
Associated control system(s)	Sirius BLE Schréder EXEDRA
Sensor	PIR (optional)

OPTICAL INFORMATION

LED colour temperature	2700K (Warm White 727) 3000K (Warm White 730) 3000K (Warm White 830) 4000K (Neutral White 740)
Colour rendering index (CRI)	>70 (Warm White 727) >70 (Warm White 730) >80 (Warm White 830) >70 (Neutral White 740)
Upward Light Output Ratio (ULOR)	0%

LIFETIME OF THE LEDS @ TQ 25°C

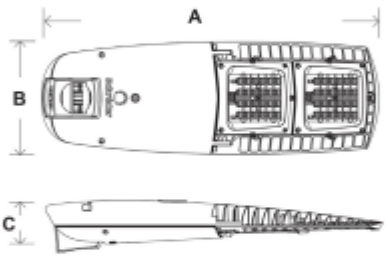
All configurations	100,000h - L90

AXIA 2 | CHARACTERISTICS

Schréder

DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	AXIA 2.1 - 650x132x250 | 25.6x5.2x9.8 AXIA 2.2 - 895x132x300 | 35.2x5.2x11.8
Weight (kg | lbs)	AXIA 2.1 - 6.7 | 14.7 AXIA 2.2 - 9.5 | 20.9
Aerodynamic resistance (CxS)	AXIA 2.1 - 0.05 AXIA 2.2 - 0.07
Mounting possibilities	Side-entry slip-over – Ø32mm Side-entry slip-over – Ø42mm Side-entry slip-over – Ø48mm Side-entry slip-over – Ø60mm Post-top slip-over – Ø60mm Post-top slip-over – Ø76mm



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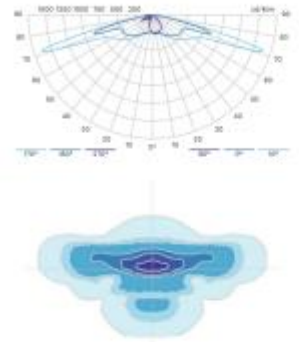
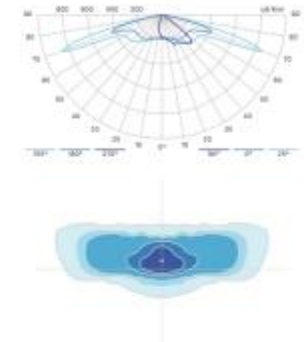


5166 Rear louvers



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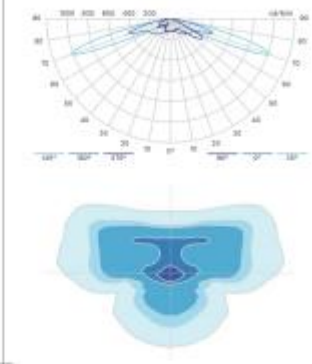
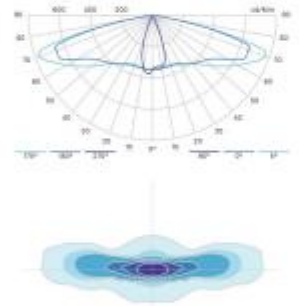
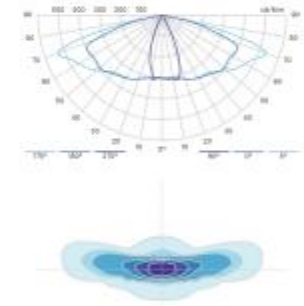


5177 Front-Rear louvres



5178 Front-Rear louvres



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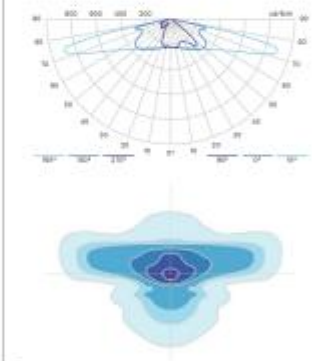

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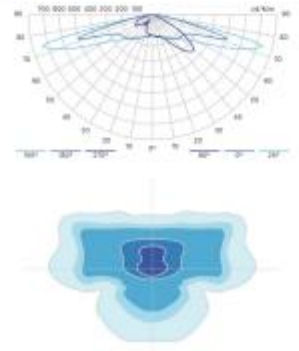

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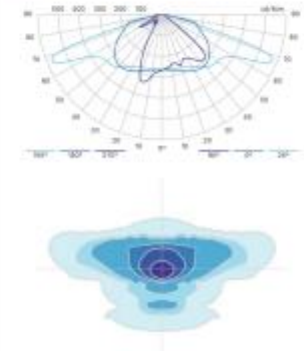
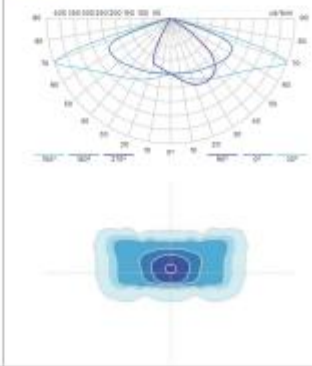
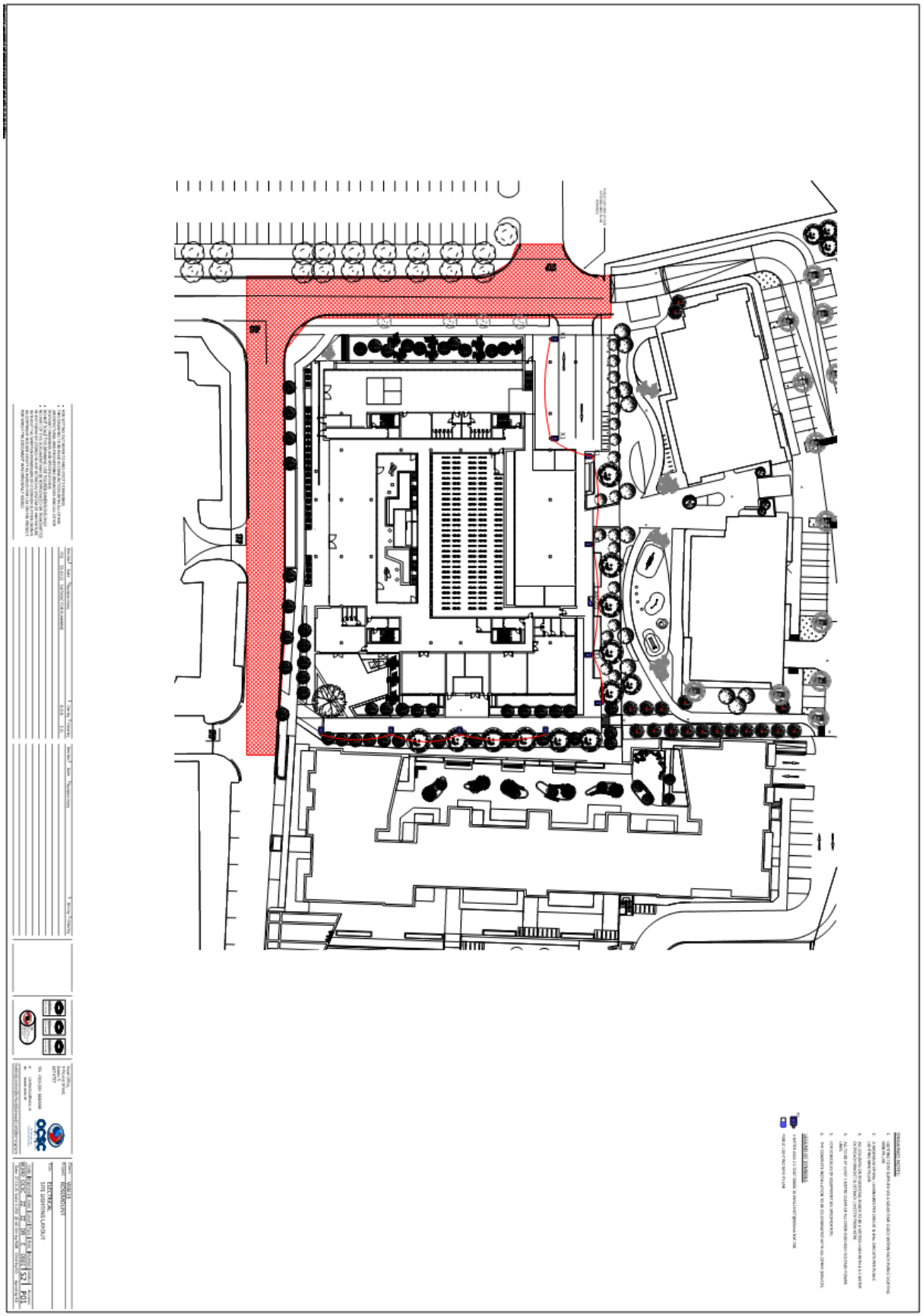
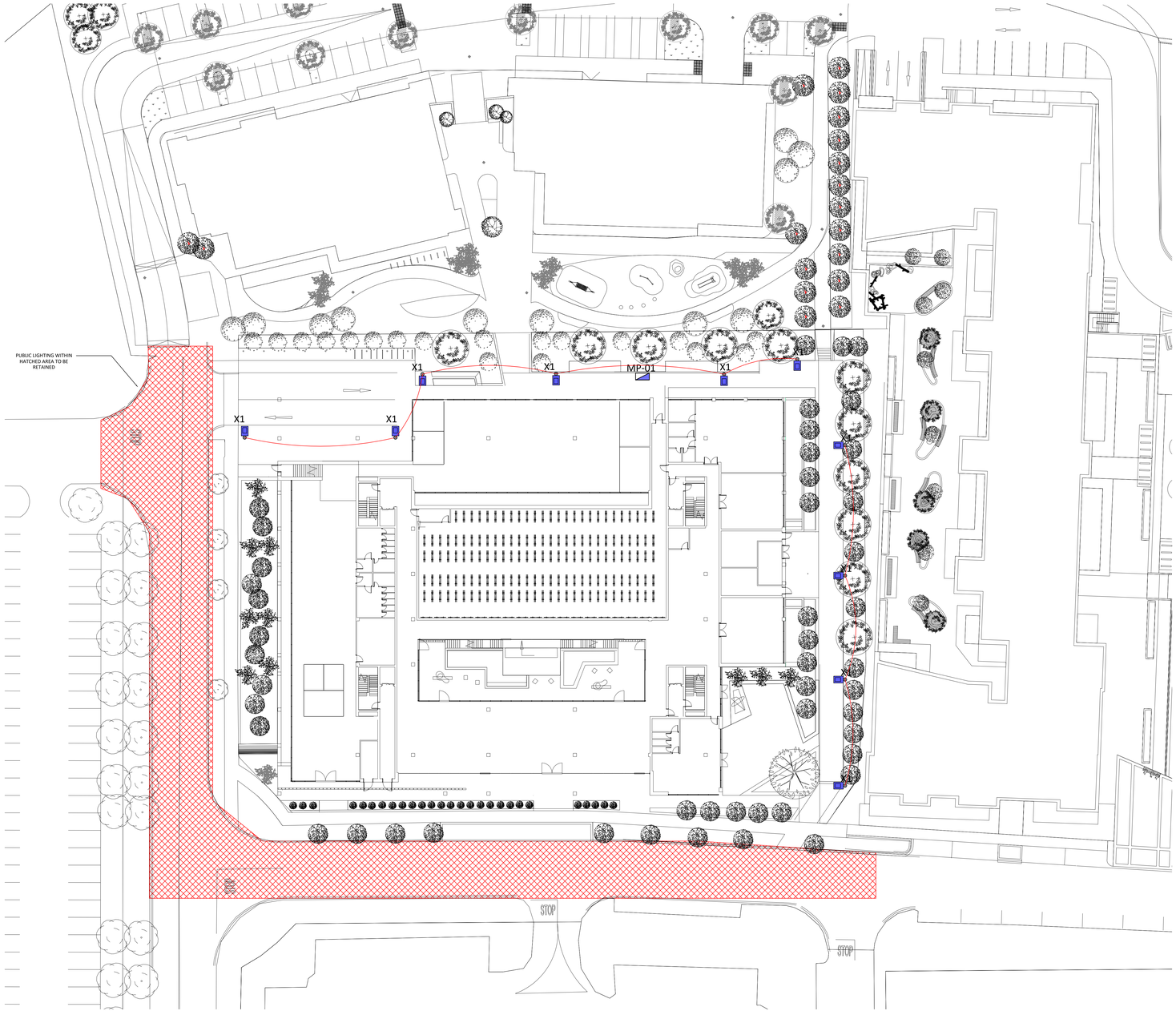


5233 Rear louvers



APPENDIX B – PROPOSED SITE LAYOUT





DRAWINGS NOTES:

1. LIGHTING TO BE SUPPLIED VIA A SOLAR TIME CLOCK WITHIN EACH PUBLIC LIGHTING MINI PILLAR.
2. A MAXIMUM OF 6No. LUMINAIRES PER CIRCUIT & 4No. CIRCUITS PER PUBLIC LIGHTING MINI PILLAR.
3. ALL COLUMNS ON RESIDENTIAL ROADS TO BE 6 METRES HIGH WITH A 0.5 METER OUTREACH BRACKET & SETBACK 1 METER FROM KERB.
4. ALL TO BE AT LEAST 1 METRE CLEAR OF ALL OVERHEAD HIGH VOLTAGE POWER LINES.
5. FOR SCHEDULES OF EQUIPMENT SEE SPECIFICATION.
6. THE COMPLETE INSTALLATION TO BE CO-ORDINATED WITH ALL OTHER SERVICES.

LEGEND OF SYMBOLS

X1 — 4 METER AXIA 2.1 S187 3000K 16 NVSL219CT@600mA NW 740

PUBLIC LIGHTING MINI PILLAR

- FOR SETTING OUT REFER TO ARCHITECT'S DRAWINGS.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND ENGINEERING DRAWINGS AND ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
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Client: WALLS
Project: ROSEMOUNT

Title: ELECTRICAL
SITE LIGHTING LAYOUT

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
W340	OCSC	ZZ	ZZ	DR	E	0001	S2	P01

Date: 27.10.21 Scale: 1:250 @ A0 Drn by:BOB Chkd by:EO Aprvd by:EO

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