



Heuston South Quarter

SHD Residential
St John's Road West
Dublin 8



Site Lighting Report
IN2 Project No. D2026
17/09/2021
REV00

Revision History

Date	Revision	Description
09/07/2021	00	Initial issue for client review
17/09/2021	01	Issued for planning

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1.0 Development Description

The proposed development will consist of a residential development of 399 no. 'Build To Rent' residential units and all ancillary and associated uses, development and works, and a retail unit of 120 sq m, on a site of 1.08 ha. The proposed development consists of:

- Site clearance and localised demolitions to remove part of the podium and Basement Level -1 reinforced concrete slabs at the interface of the proposed Blocks A and B, together with the incorporation of part of the existing double basement level structure extending to approximately 7,613 sq.m over two levels (excluding an area of 3,318 sq.m that will be backfilled at Basement Level -1) within the proposed development.
- The construction of 5 no. buildings (Blocks A to E) ranging in height between 3- to 18-storeys over double basement level / podium level to provide a residential / mixed use development to provide 399 Specific BTR (Build to Rent) units with a total gross floor area of 29,391 sq.m, comprising 46 no. studios, 250 no. one bedroom units, 90 no. 2 bedroom / 4 person units and 13 no. 2 bedroom / 3 person units; internal communal ancillary residential services / amenities to include a shared co-working area / lounge (178 sq.m) and gym (102 sq.m) at lower ground floor level, and lounges on either side of a residential foyer at ground floor / podium level within Block A (196 sq.m), and a TV Room / lounge (57 sq.m) at ground floor / podium level within Block C.
- An independent retail unit (120 sq.m) is proposed at ground floor / podium level within Block B.
- A double basement is provided that will be integrated within the existing basement levels serving the wider HSQ development and will be accessed from the existing vehicular ramped accesses/egresses onto/off St. John's Road West and Military Road to the north and east, respectively. Basement level -1 provides: a refuse store; 80 no. car parking spaces (including 4 no. disabled spaces and 8 car club spaces); 4 no. motorcycle parking spaces; and, secure bicycle parking / storage in the form of 251 no. double stacked cycle parking spaces providing capacity for 502 no. secure bicycle storage spaces for residents. An additional 49 no. Sheffield type bicycle stands are provided at basement level -1 to provide 98 no. visitor cycle spaces (inclusive of 8 no. designated cargo bike spaces, that will also be available for the shared use with residents of the scheme) and a further 55 no. Sheffield type bicycle stands are provided at podium level to provide 110 no. cycle parking spaces (108 no. visitor cycle parking spaces (inclusive of 6 no. designated cargo bike spaces) and 2 no. cycle parking spaces in connection with the retail unit). All bicycle parking at basement level is accessed via a dedicated cycle lift from podium to basement level -1 that is situated to the south of Block B.
- Works proposed along the St John's Road West frontage include the omission of the existing left-turn filter lane to the vehicular ramped access to the HSQ development and re-configuration of the pedestrian crossings at the existing junction together with the re-configuration of the existing pedestrian crossing over the westbound lanes of St. John's Road West leading to an existing pedestrian refuge island. Re-alignment of the existing footpath along the site frontage onto St John's Road West to tie into the reconfigured junction arrangement and provision of a link to a new lift to provide wheelchair access from St John's Road West to the HSQ podium.

- Communal Outdoor Amenity space is provided for residents in the form of rooftop terraces (totalling 1,179sqm), and lower-level communal courtyards between blocks (totalling 960sqm).
- Hard and soft landscaping works are proposed at podium level which includes the extension and completion of the public plaza to the east of Block A; the provision of footpaths; a MUGA (Multi Use Games Area) and informal play areas for children (totalling 1,670sqm).
- A double ESB substation/switch room at ground / podium level within Block A, and a single substation/switch room at ground / podium level within Block B together with associated site development works, which includes the realignment / reprofiling of an existing vehicular access ramp at the southern end of the site between basement levels -1 and -2 and the closure / removal of a second vehicular access ramp between the subject site at basement level -1 and the raised basement level -1 under the Telford building.

2.0 Executive Summary

The following report contains the design layout and accompanying calculations for the proposed site lighting scheme for the proposed new development.

The external lighting for this development has been designed to achieve the performance requirements as set out in the following standards:

- BS 8300:2018 Design of an accessible and inclusive built environment
- Institution of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01:2011
- BS EN 13201-2:2015 – Road Lighting Part 2: Performance Requirements
- BS 5489-1:2013 Code of Practice for the Design of Road Lighting
- Chartered Institution of Building Services Engineers – Lighting Guide 6: The Exterior Environment
- ETCI National Rules for Electrical Installations ET 101
- Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland, 2010);
- Bats and Lighting in the UK – Bats and the Built Environment Series (Institute of Lighting Professionals, September 2018).

For the purposes of this report, the development has been classed as an Environmental Zone E3 – Suburban with Medium District Brightness, in Accordance with ILP GN01:2011. The design criteria set out for this development, based on the lighting requirements for the stated environmental zone of E3, are as specified in the table overleaf.

Area	Lighting Levels (Lux)	Uniformity (Uo)
Walkways/Footpaths	5	0.2
Access Routes	5	0.2
Pedestrian Access Routes Adjacent to Entrances / Exits of Buildings. Level and Gently Sloped	100	0.4
Stairways and ramps in the open Environment	30	0.2
Light Spill (Obtrusive Light)	10	N/A
Entrance Road (Main Traffic Routes)	10	0.2

Table 2.1: Lighting Design Criteria

3.0 Proposed Installation

The proposed site lighting for the new development has been designed to ensure that the lighting criteria set out in each of the relevant standards listed previously are met or exceeded and that sufficient illumination is provided to ensure that key requirements such as access/egress, enhanced site security and the safe use of paths is provided. The design has been assessed to establish minimal environmental impact through glare, sky glow and obtrusive light (light spill).

It is proposed to illuminate the walkways and footpaths on the ground floor using 'Type X3' 4-meter pole mounted luminaire and 'Type X5' 1 metre bollard luminaire. The pole mounted luminaires have an asymmetric and wide light distribution to give the walkway an even light distribution.

Lighting shall be also provided to the inner gardens and roof terraces across the development using 'Type 'X10' Led strip mounted luminaire underneath the benches. The luminaire will provide feature lighting to the area.

To light the open Plaza external area, it is proposed to use 'Type X4' 4 metre column mounted luminaires on the pathways to achieve the required lux levels and maintain a low impact in the existing environment.

To complete the design, 'Type 'X6' decorative wall mounted LED shall also be used to light the entrances and exits to the buildings.

To light the stair to the adjacent park area Type 'X11' handrail Lights shall be used throughout the length of the stair core to achieve the required lux on each step.

4.0 Design Analysis and Calculation Results

4.1 Pedestrian Circulation Areas

The lighting performance at the Pedestrian Circulation Areas has been assessed with fitting Type 'X3' 4-metre (H) lighting columns and 'Type X4' 4 metre lighting columns as per luminaire schedule, Appendix A.

4.1.1 Amenity Walkway for Block B , C , D

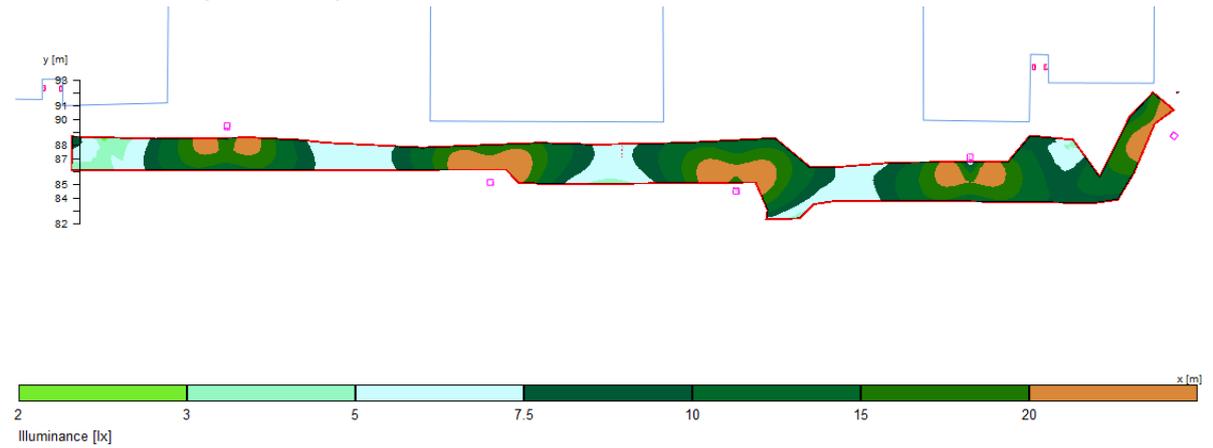


Figure 4.1.1 – Illumination Levels at Amenity Walkway

Evaluation	Target	Results	
EAVERAGE (maintained)	<i>5 lux</i>	12.3 lux	PASS
UO (Uniformity)	<i>0.20</i>	0.21	PASS

4.1.2 Amenity Walkway for Block B

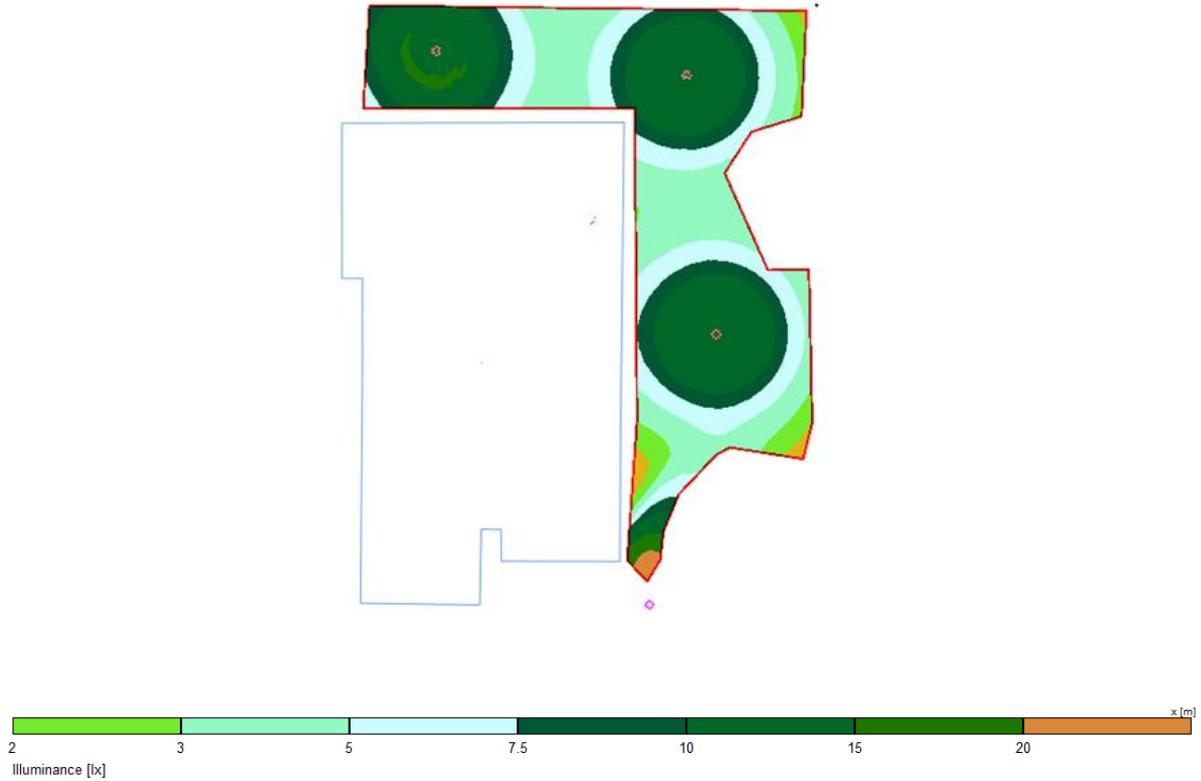


Figure 4.1.2 – Illumination Levels at Amenity Walkway

Evaluation	Target	Results	
EVERAGE (maintained)	5 lux	7.91 lux	PASS
UO (Uniformity)	0.20	0.20	PASS

4.1.3 Central Walkway

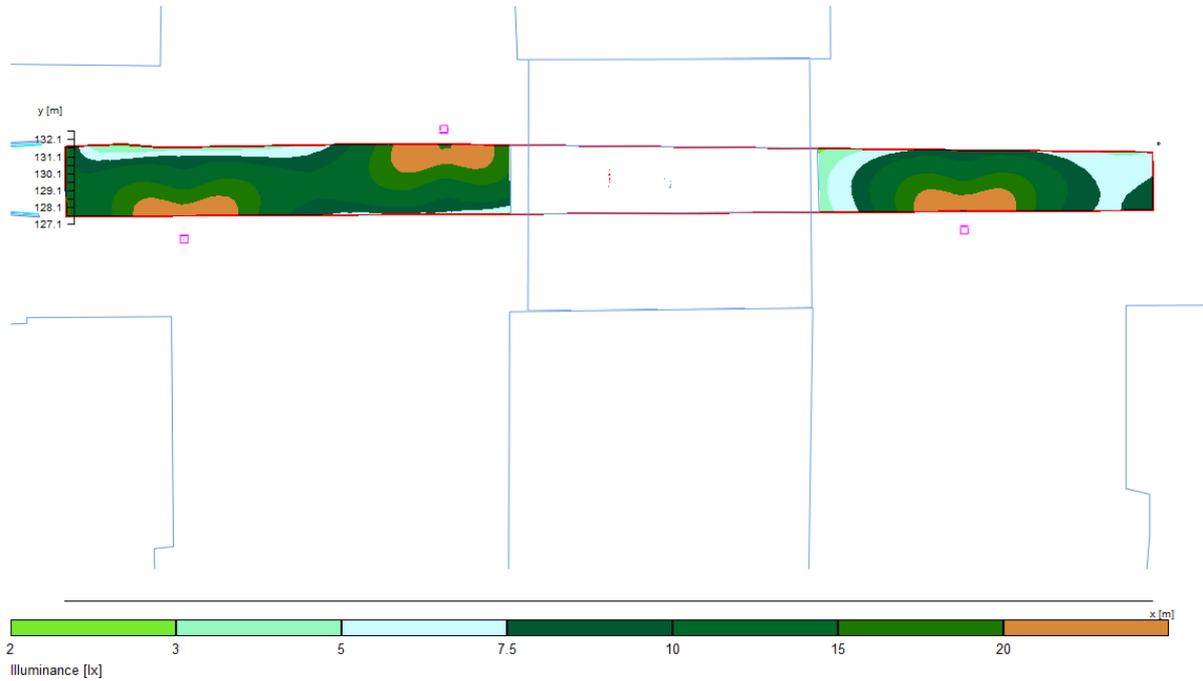


Figure 4.1.3 – Illumination Levels at Central Walkway

Evaluation	Target	Results	
EVERAGE (maintained)	5 lux	11.8 lux	PASS
UO (Uniformity)	0.20	0.24	PASS

4.1.4 Front Access Route

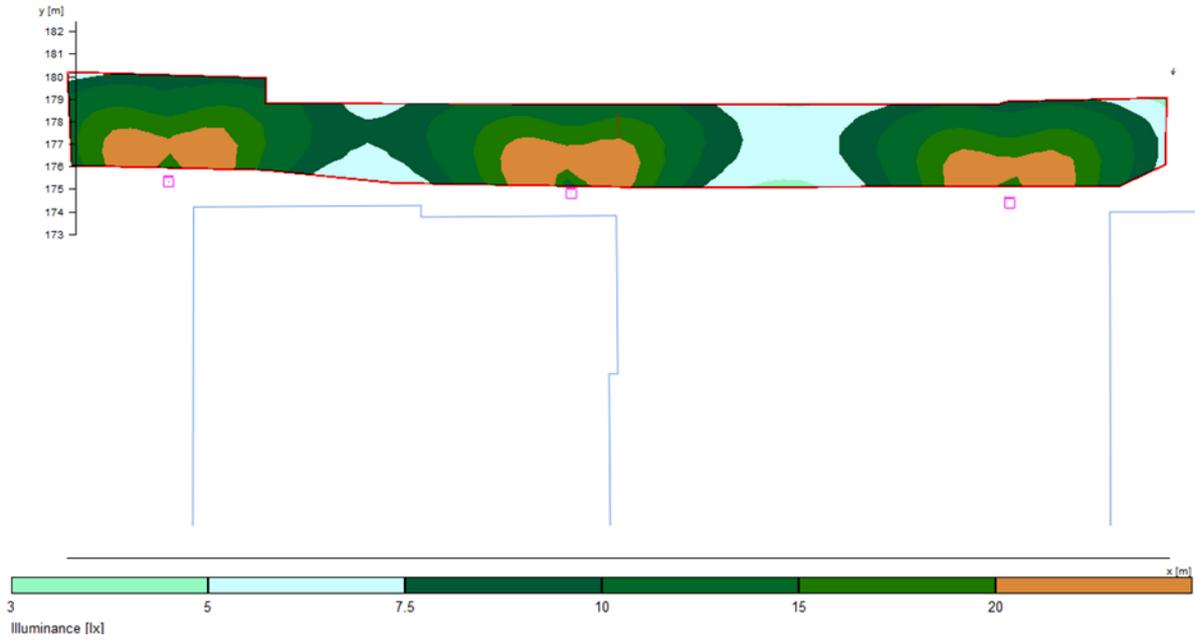


Figure 4.1.4 – Illumination Levels at Front Access Route

Evaluation	Target	Results	
EVERAGE (maintained)	5 lux	12.8 lux	PASS
UO (Uniformity)	0.20	0.38	PASS

4.2 Plaza

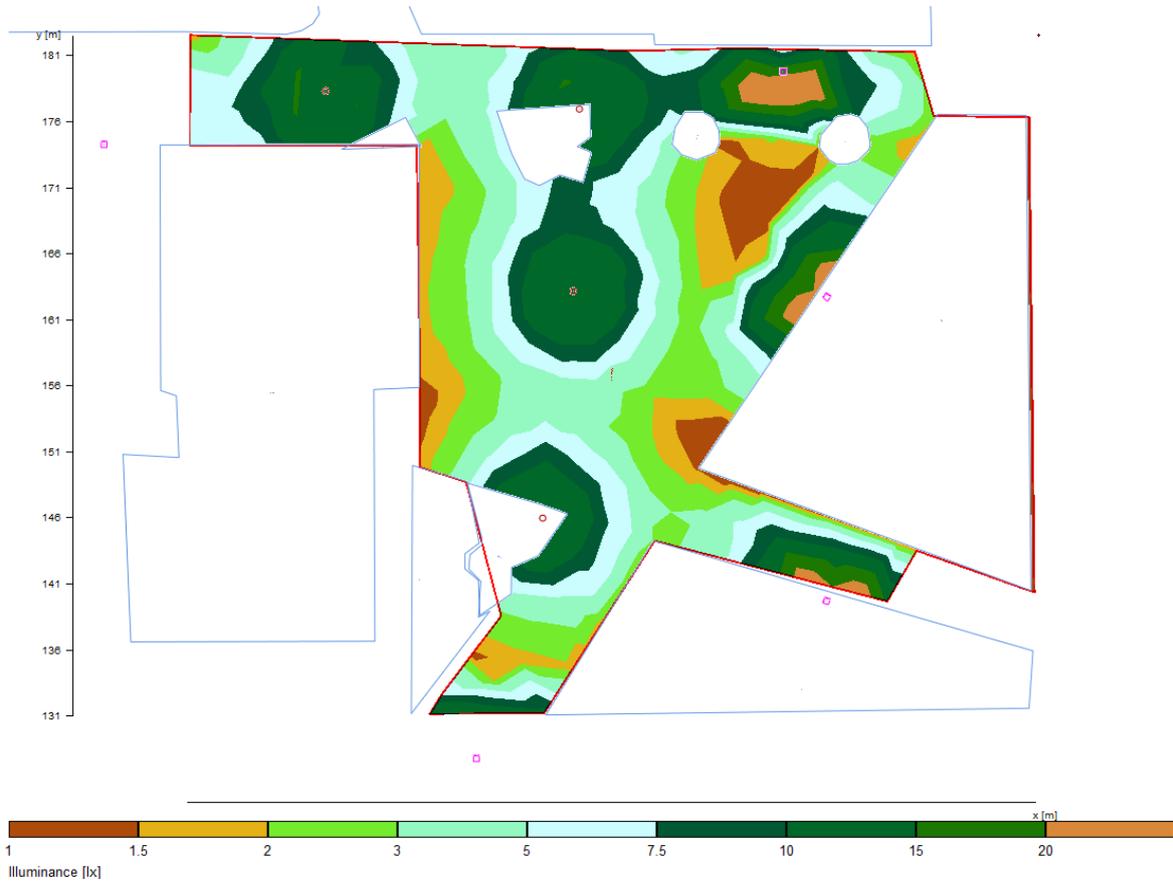


Figure 4.2 – Illumination Levels at Central Walkway

Evaluation	Target	Results	
EAVERAGE (maintained)	<i>5 lux</i>	<i>6.2 lux</i>	<i>PASS</i>
UO (Uniformity)	<i>0.20</i>	<i>0.20</i>	<i>PASS</i>

4.3 External area Stairs and Ramp

The lighting performance on the Stairs has been assessed with fitting Type 'X11' Handrail Lighting fixture as per luminaire schedule, Appendix A.

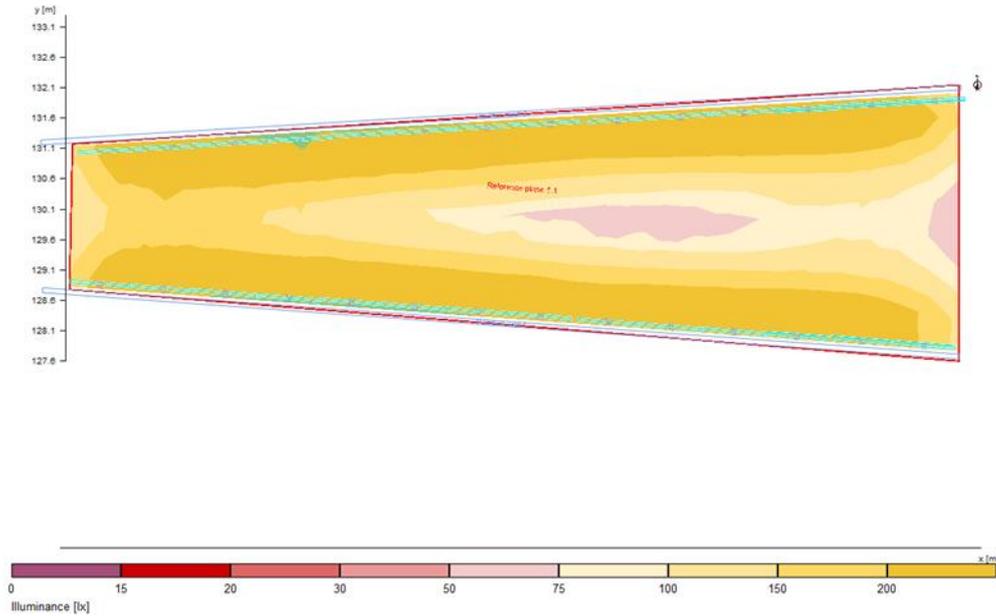


Figure 4.3 – Illumination Levels to external steps

Evaluation	Target	Results	
EAVERAGE (maintained)	100 lux	179 lux	PASS

4.4 Raised Terrace.

The lighting performance in the Raised Terrace Areas have been assessed with fitting Type 'X5' 1 metre (H) bollard luminaire and Type 'X10' Led Strip light as per luminaire schedule, Appendix A.

4.4.1 Roof Terrace Block A

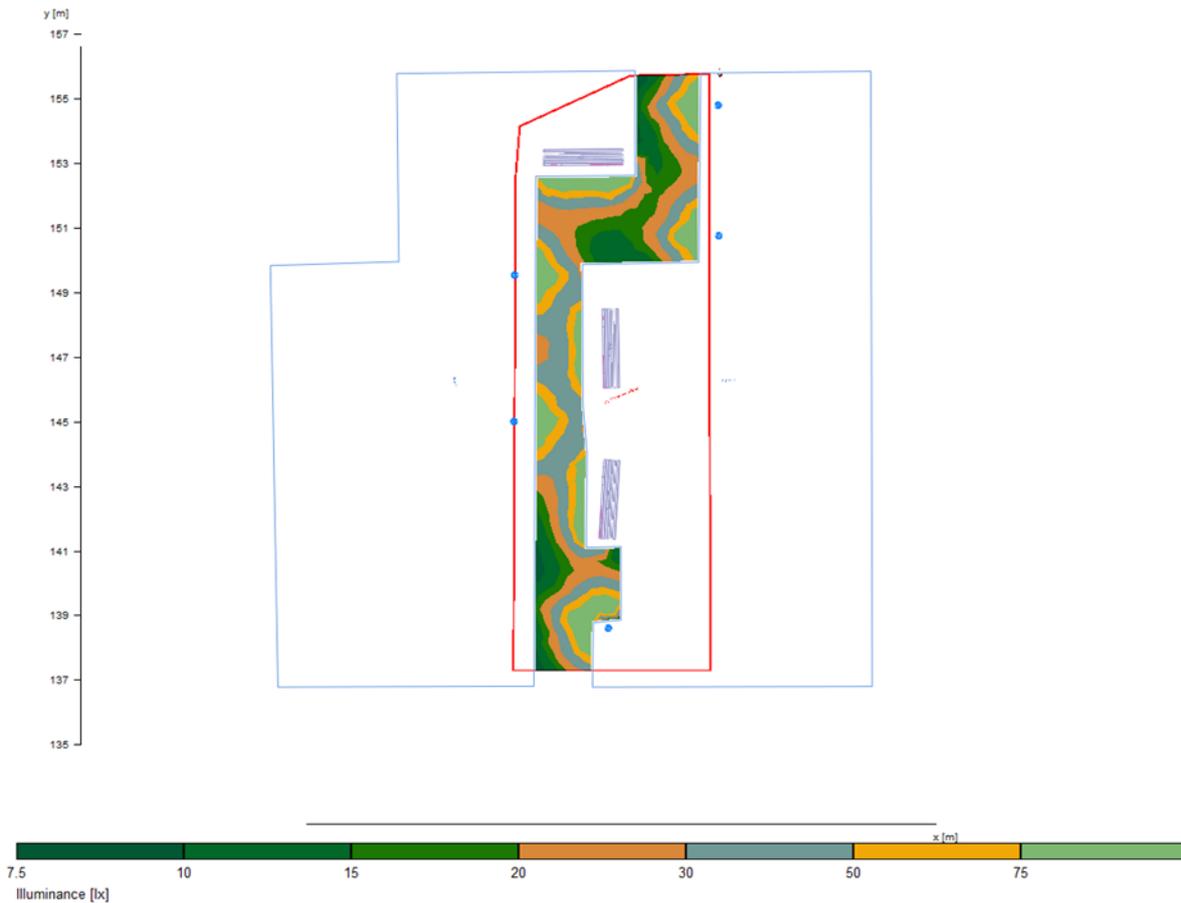


Figure 4.4.1 – Illumination Levels to Roof Terrace

Evaluation	Target	Results	
EVERAGE (maintained)	5 lux	42.7 lux	PASS
UO (Uniformity)	0.2	0.20	PASS

4.4.2 Roof Terrace Block B

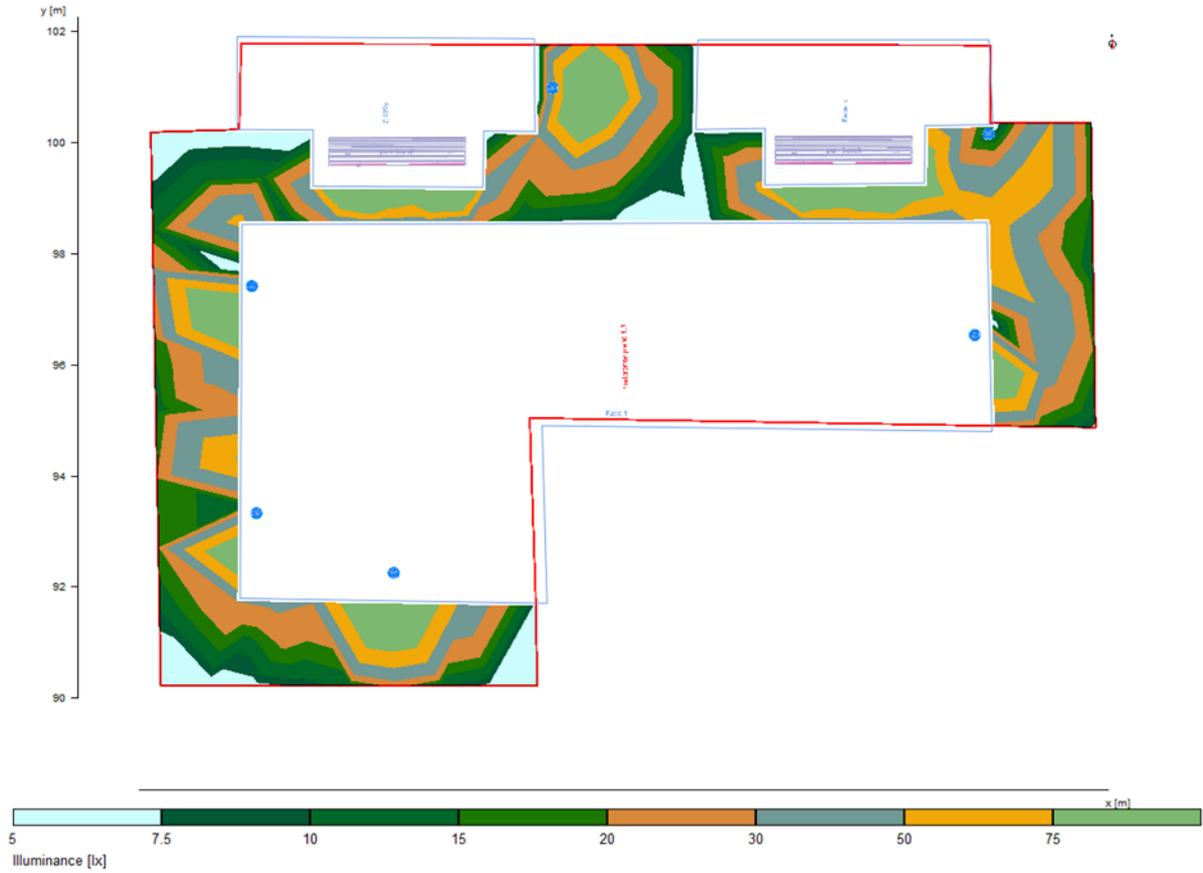


Figure 4.4.2 – Illumination Levels to Roof Terrace

Evaluation	Target	Results	
EAVERAGE (maintained)	<i>5 lux</i>	<i>28.9 lux</i>	<i>PASS</i>
UO (Uniformity)	<i>0.2</i>	<i>0.20</i>	<i>PASS</i>

4.4.3 Roof Terrace Block C1

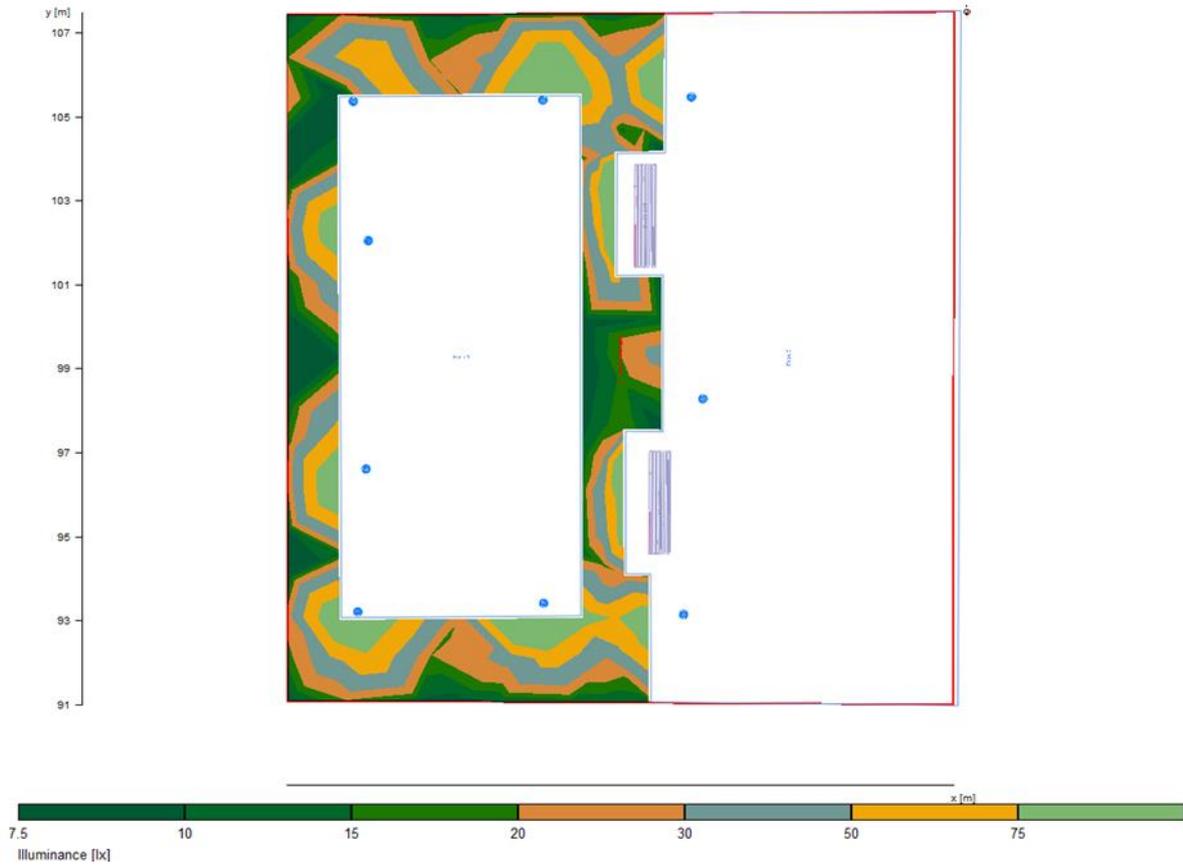


Figure 4.4.3 – Illumination Levels to Roof Terrace

Evaluation	Target	Results	
EVERAGE (maintained)	5 lux	39 lux	PASS
UO (Uniformity)	0.2	0.24	PASS

4.4.4 Roof Terrace Block C2

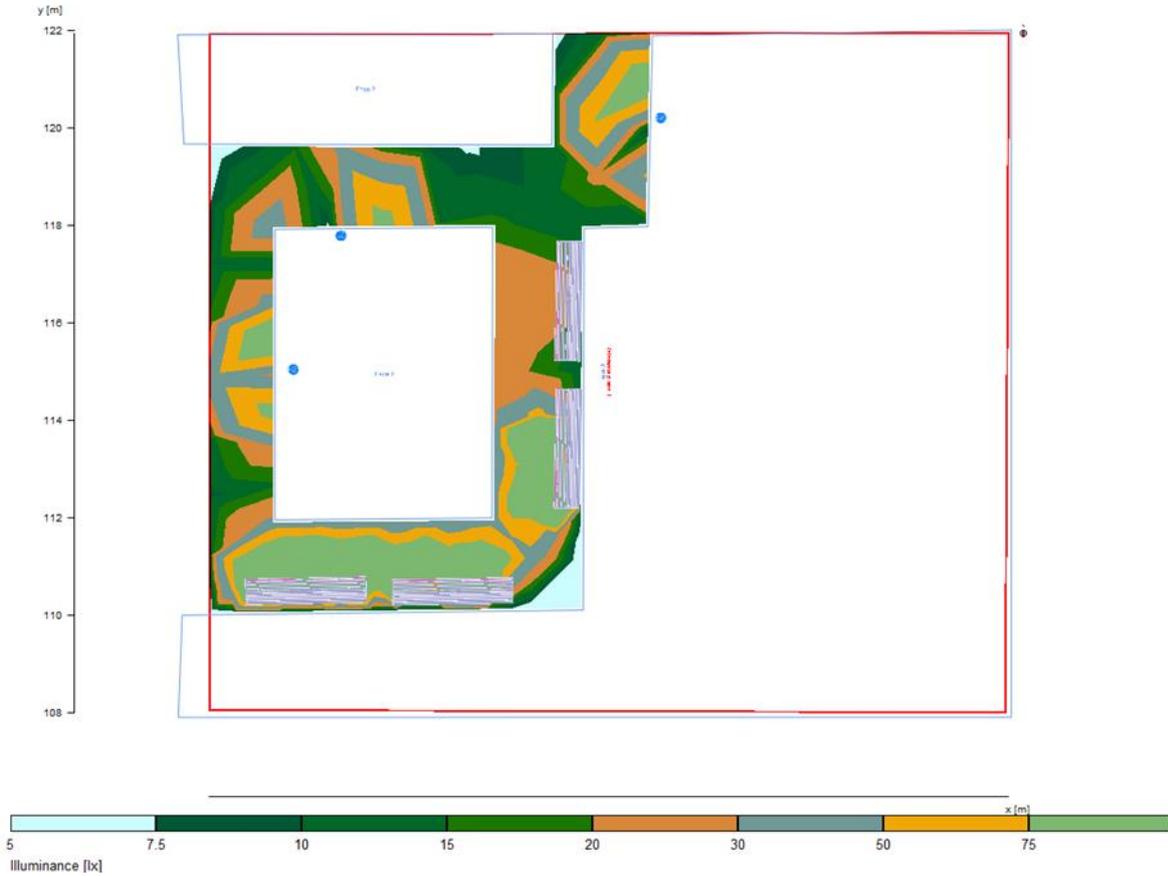


Figure 4.4.4 – Illumination Levels to Roof Terrace

Evaluation	Target	Results	
EAVEGAGE (maintained)	5 lux	39 lux	PASS
UO (Uniformity)	0.2	0.24	PASS

4.4.5 Roof Terrace Block D

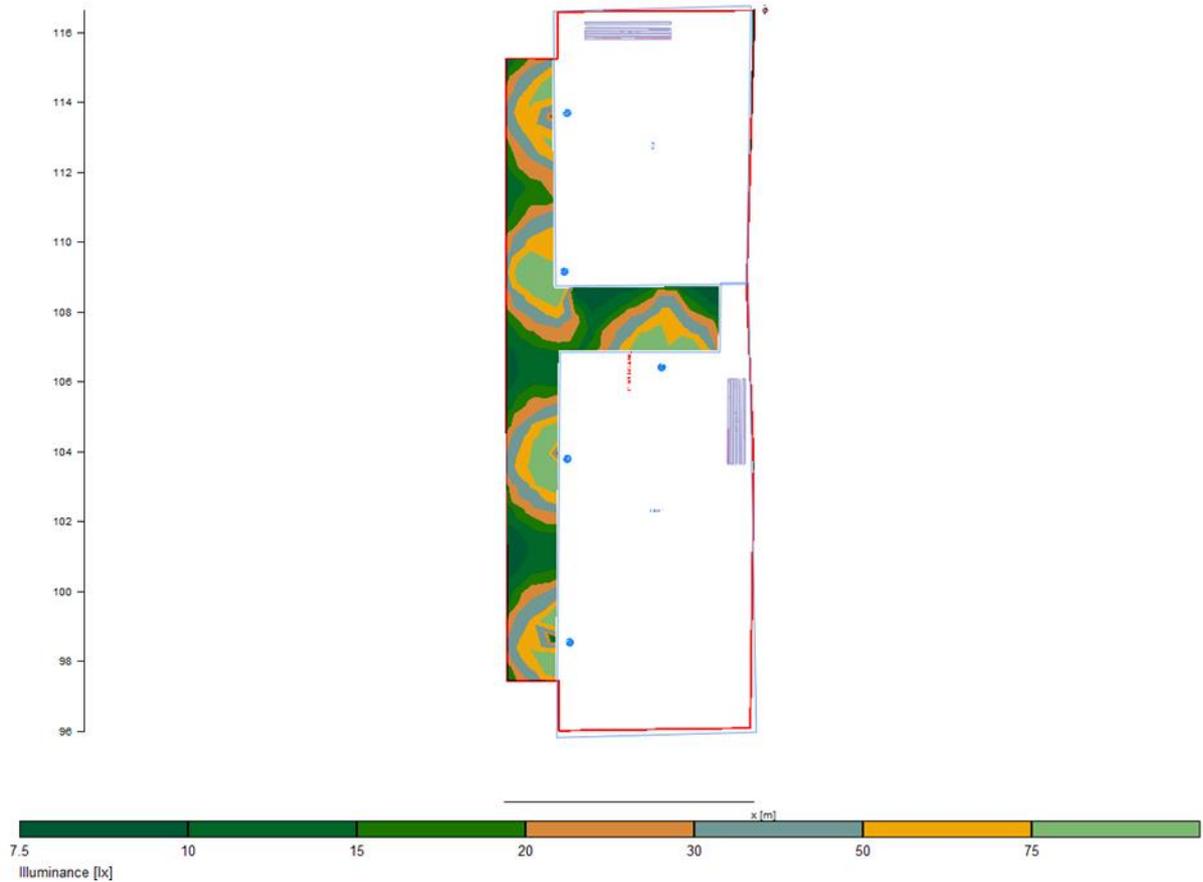


Figure 4.4.5 – Illumination Levels to Roof Terrace

Evaluation	Target	Results	
E.AVERAGE (maintained)	<i>5 lux</i>	<i>37 lux</i>	<i>PASS</i>
UO (Uniformity)	<i>0.2</i>	<i>0.22</i>	<i>PASS</i>

4.4.6 Roof Terrace Block E

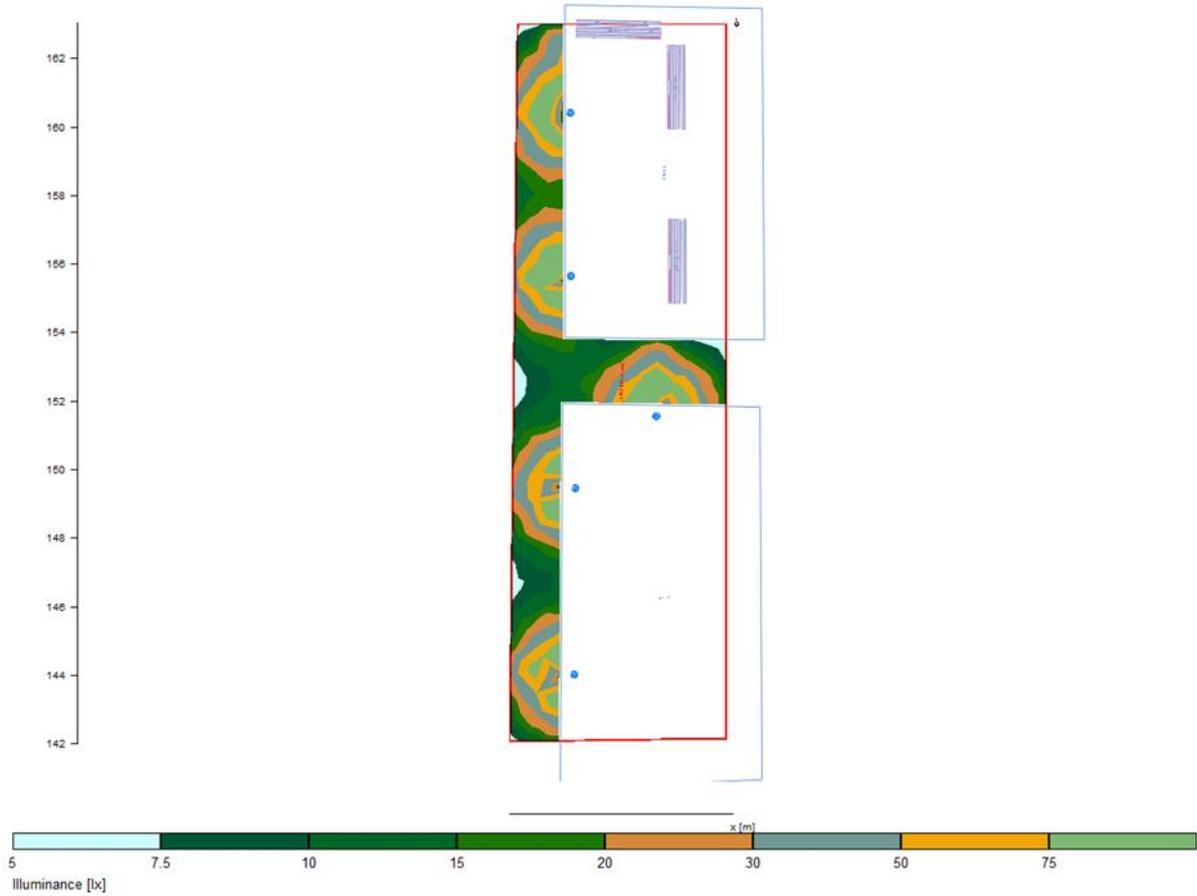


Figure 4.4.6 – Illumination Levels to Roof Terrace

Evaluation	Target	Results	
EAVERAGE (maintained)	<i>5 lux</i>	<i>35 lux</i>	<i>PASS</i>
UO (Uniformity)	<i>0.2</i>	<i>0.20</i>	<i>PASS</i>

4.4.7 Roof Terrace Bridge

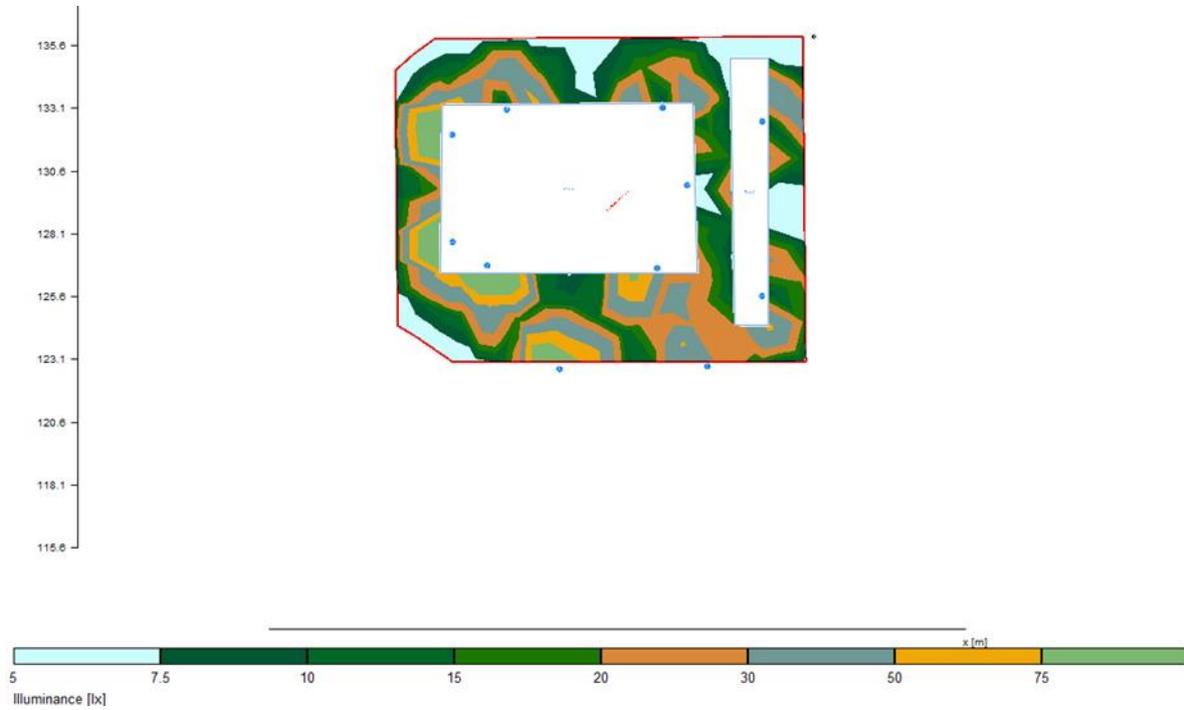


Figure 4.4.7 – Illumination Levels to Roof Terrace

Evaluation	Target	Results	
EAVERAGE (maintained)	<i>5 lux</i>	<i>25 lux</i>	<i>PASS</i>
UO (Uniformity)	<i>0.2</i>	<i>0.22</i>	<i>PASS</i>

4.5 Courtyard

The lighting performance in the Courtyard Areas have been assessed with fitting Type 'X5' 1 metre (H) bollard luminaire and Type 'X10' Led Strip light as per luminaire schedule, Appendix A.

4.5.1 Courtyard 1

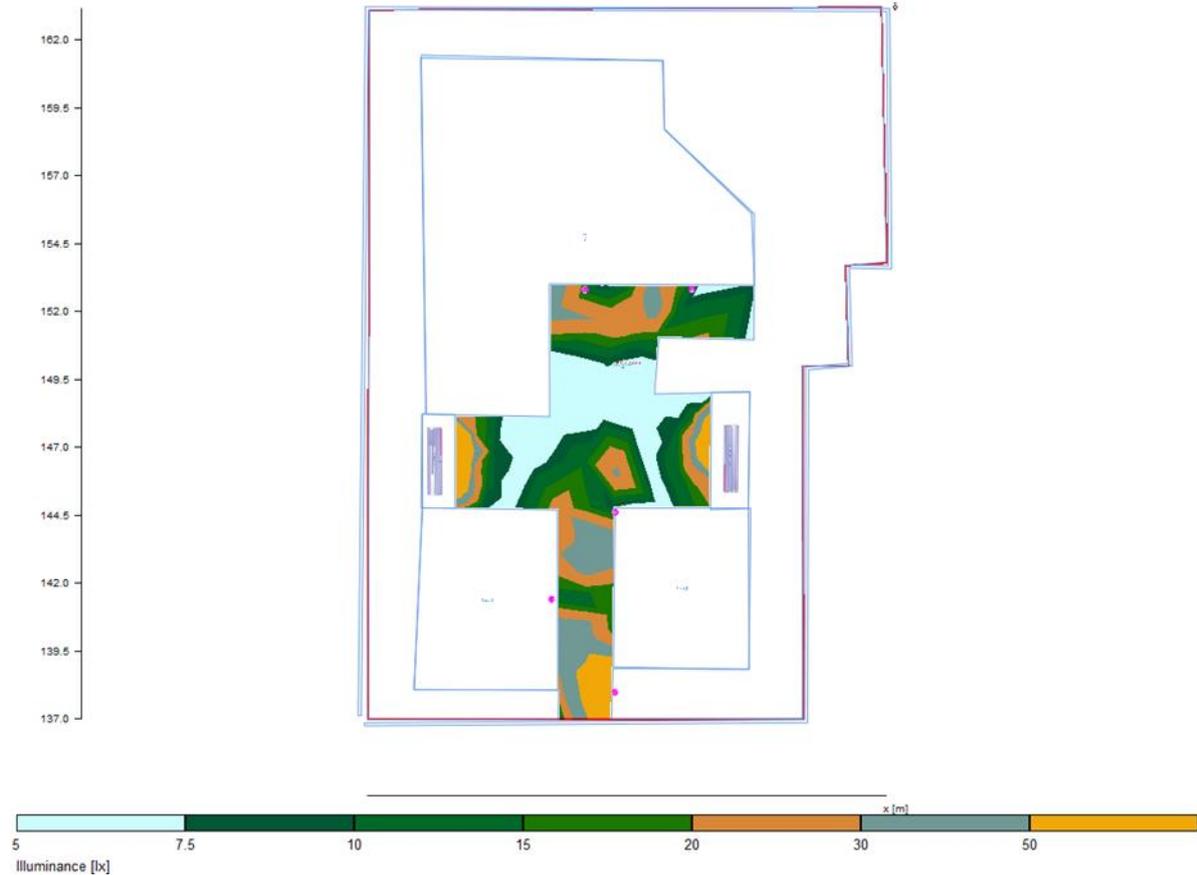


Figure 4.5.1 – Illumination Levels to Courtyard

Evaluation	Target	Results	
EVERAGE (maintained)	5 lux	20 lux	PASS
UO (Uniformity)	0.2	0.25	PASS

4.5.2 Courtyard 2

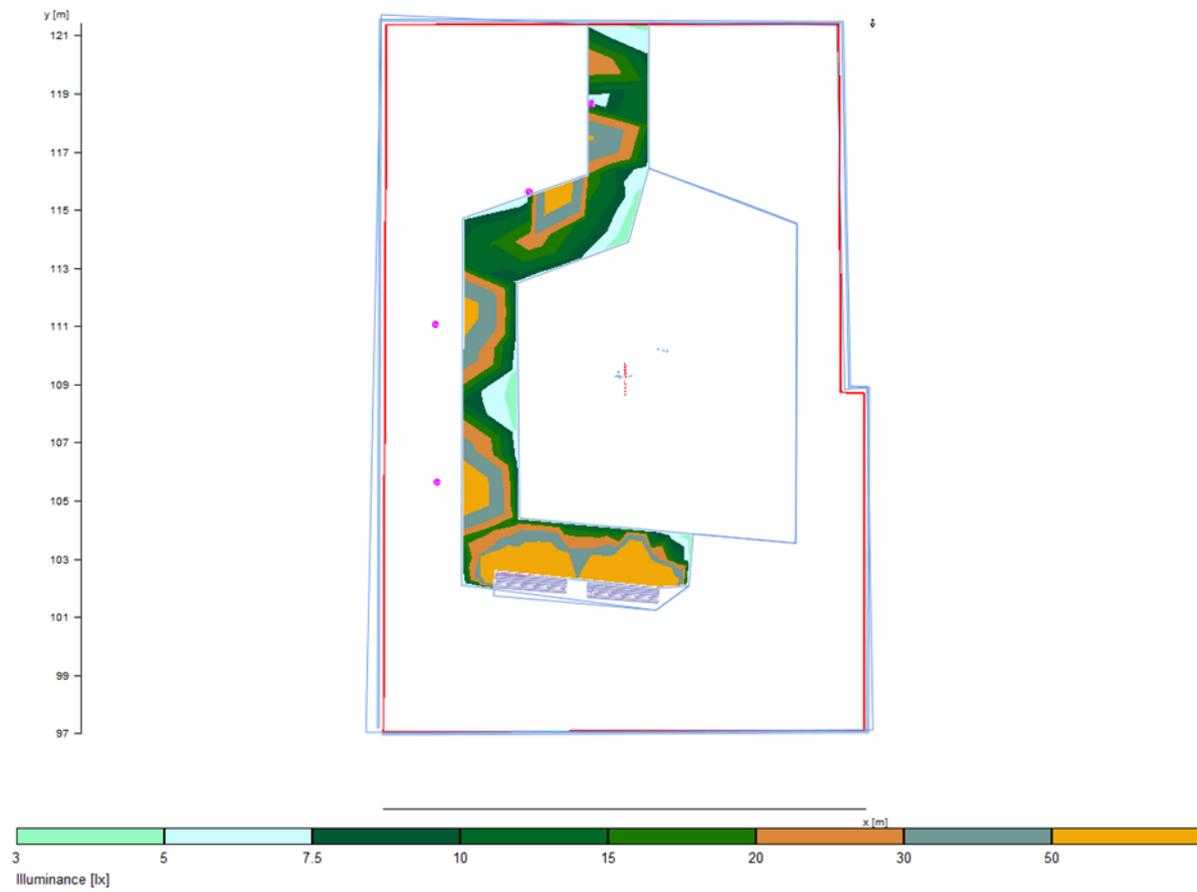


Figure 4.5.2 – Illumination Levels to Courtyard

Evaluation	Target	Results	
EVERAGE (maintained)	5 lux	24 lux	PASS
UO (Uniformity)	0.2	0.21	PASS

4.5.3 Courtyard 3

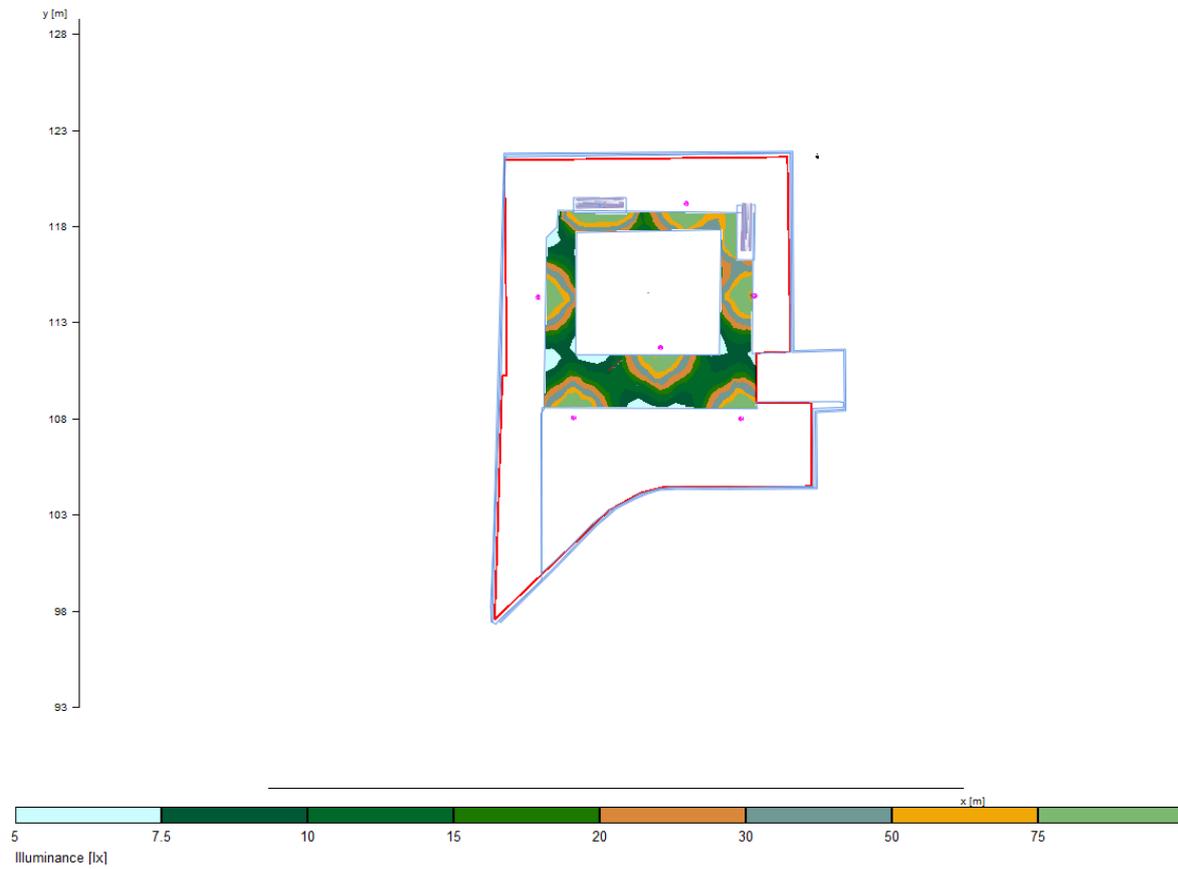


Figure 4.5.3 – Illumination Levels to Courtyard

Evaluation	Target	Results	
EAVERAGE (maintained)	<i>5 lux</i>	<i>34 lux</i>	<i>PASS</i>
UO (Uniformity)	<i>0.2</i>	<i>0.20</i>	<i>PASS</i>

4.6 Site Lighting 3D Render

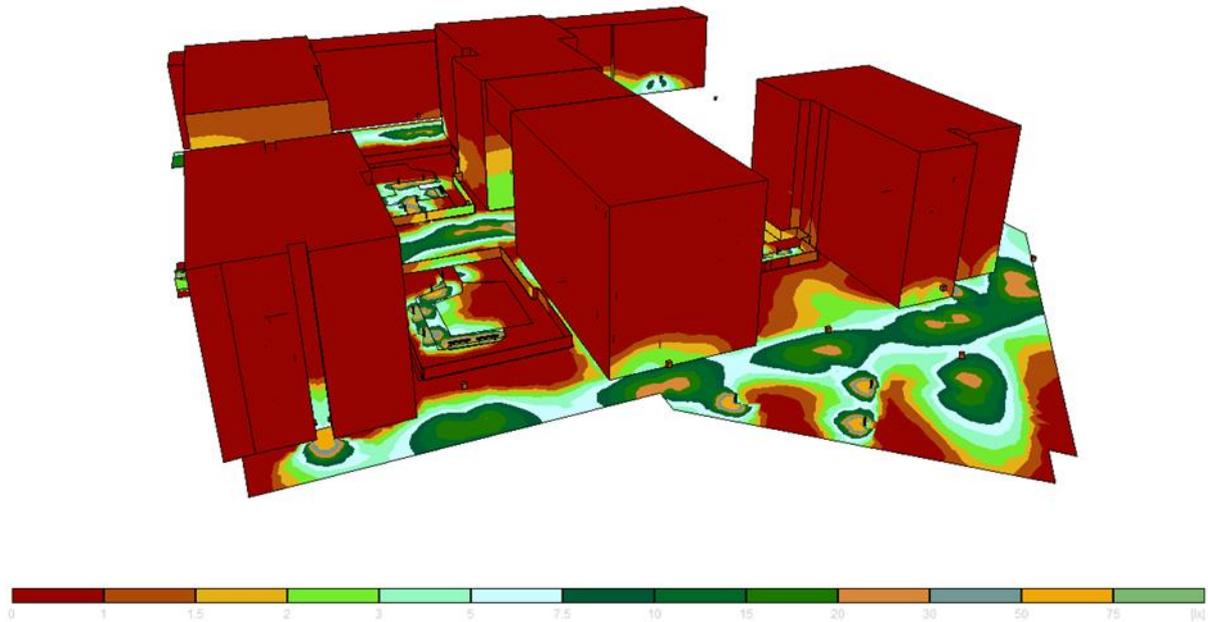


Figure 4.6.1 – 3D Model indicating Site Illumination Levels

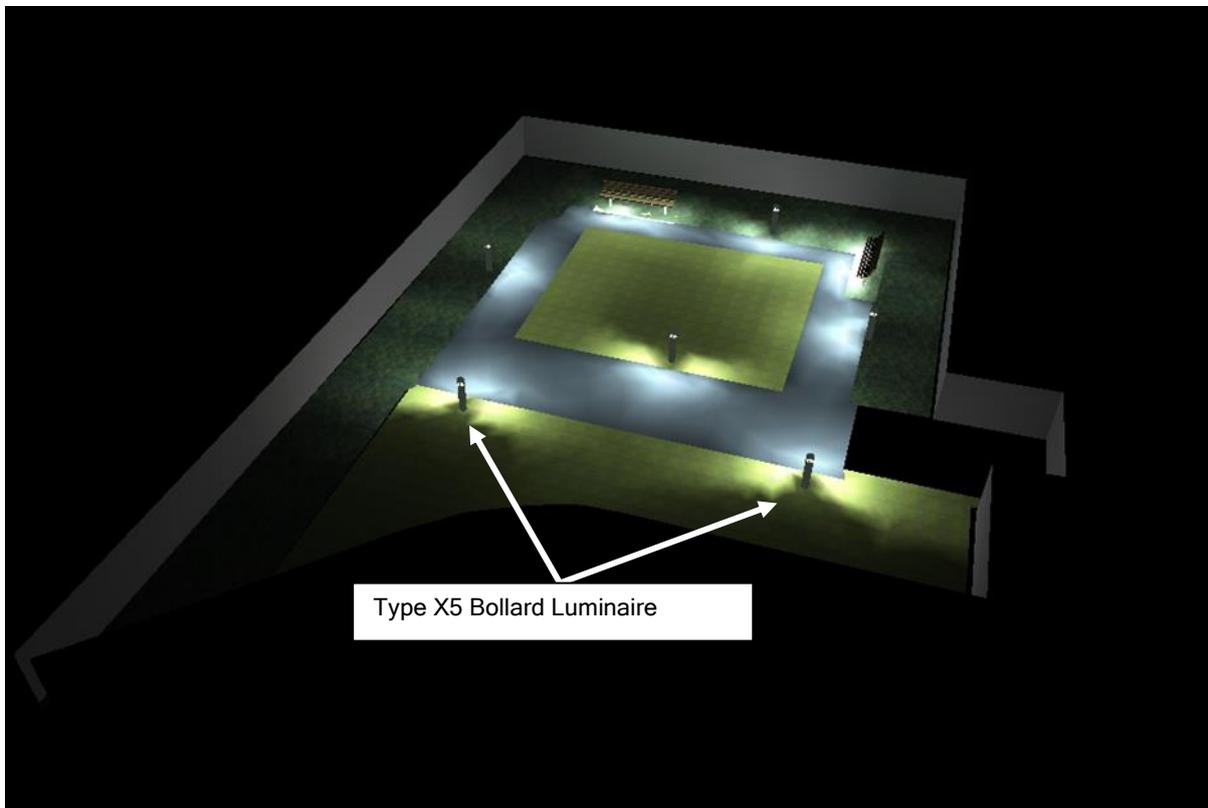


Figure 4.6.2 – 3D Model indicating Courtyard Illumination Levels

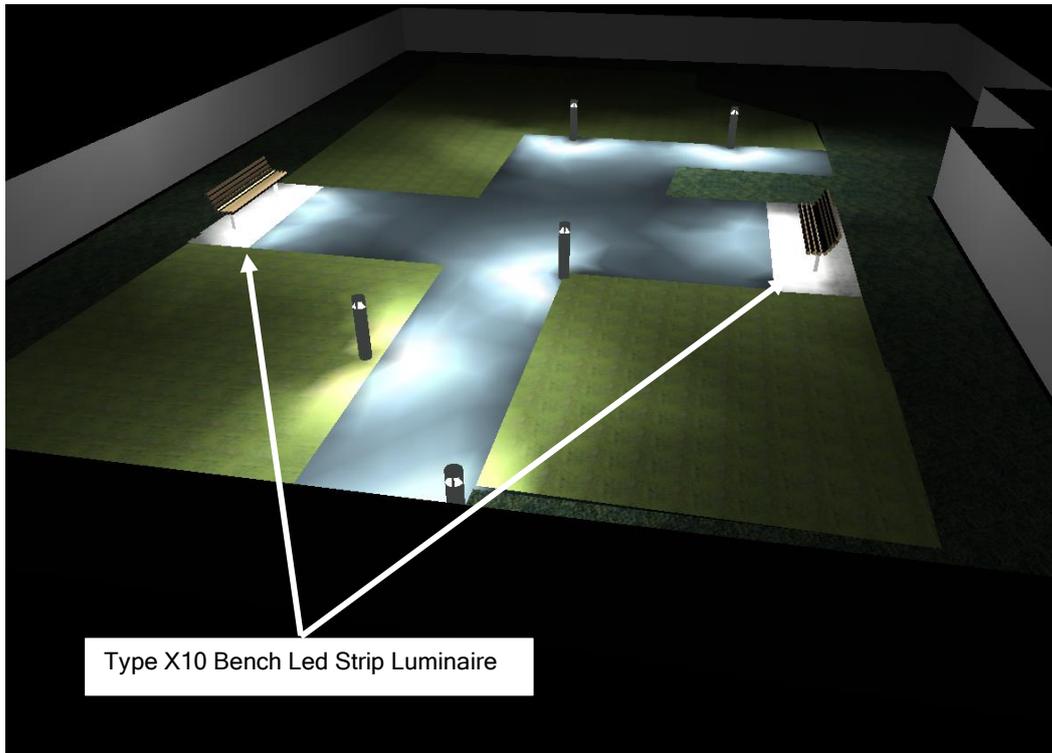


Figure 4.6.3 – 3D Model indicating Courtyard 2 Illumination Levels

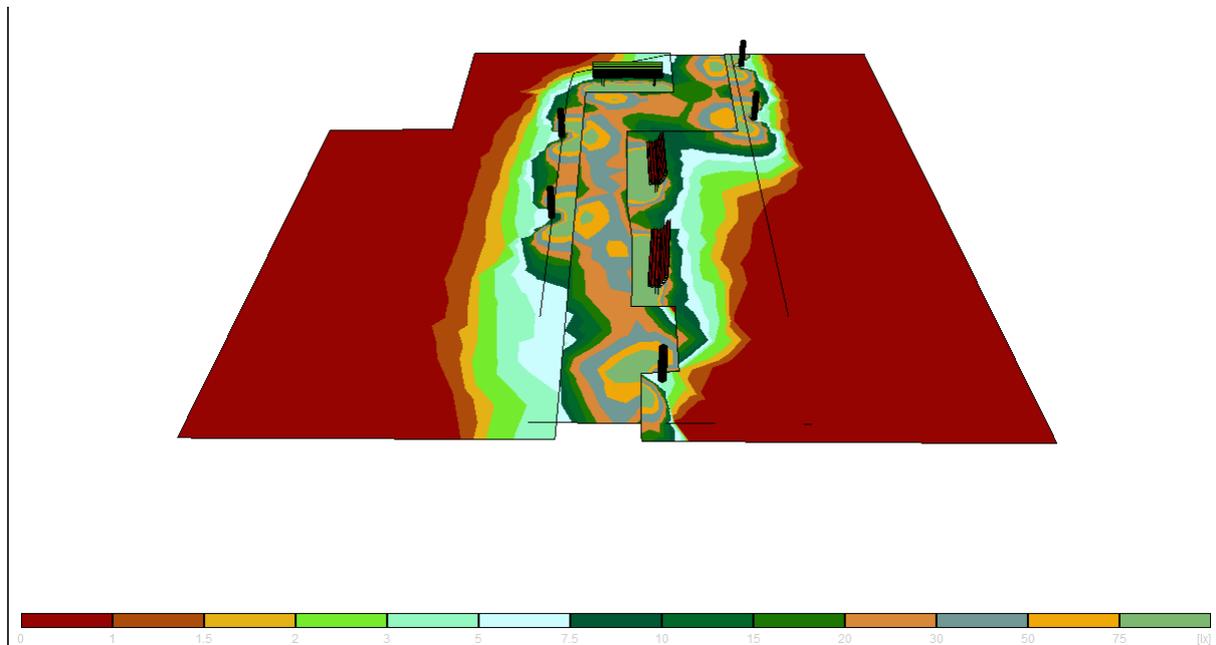


Figure 4.6.4 – 3D Model indicating Roof Terrace Illumination Levels

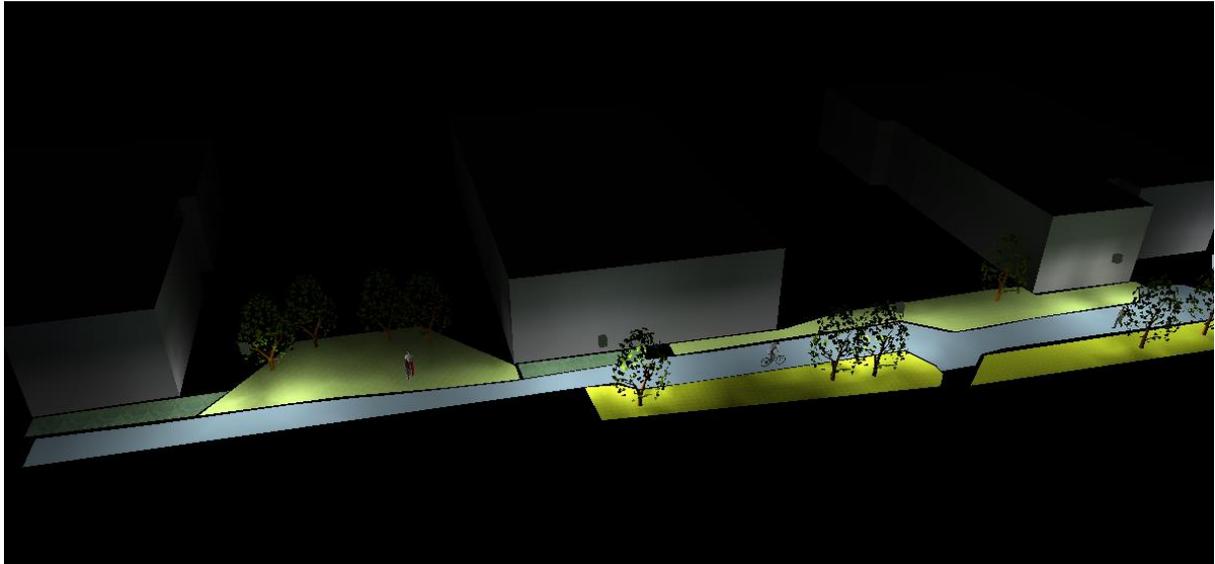


Figure 4.6.5 – 3D Model indicating Front Access Route Illumination Levels

5.0 Appendix A – Luminaire Schedule

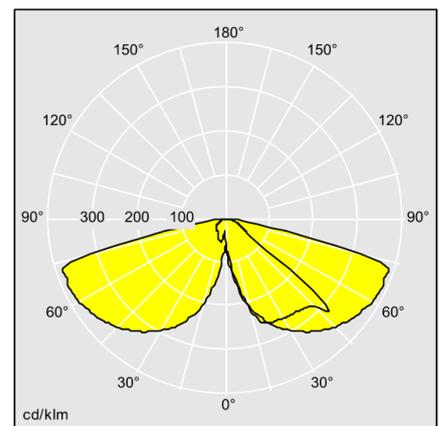
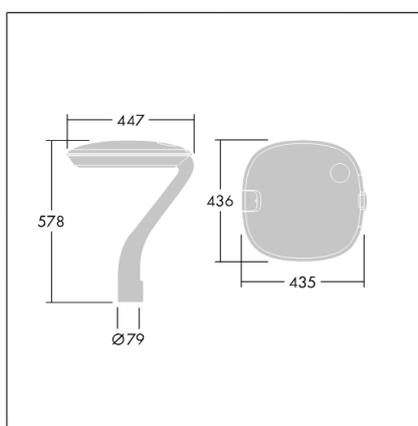
Refer to IN2 Document: D2026 HSQ SHD Residential Luminaire Schedule Rev01

Luminaire Reference	X3	Manufacturer	Thorn / Equal & Approved
Body Description	Die-Cast aluminium, powder coated anthracite, IP66, IK10	Recessed/Surface or Wall Mounted	Pole Mounted
Diffuser Type	Tempered Glass	Lamps	15W LED Lamp
Reflector	Narrow Road Optic	Lumen Output	1856 Lumens
Control Gear	230 V, 50 Hz. Individual Photocell Control	Colour of Lamps	4000K
Area of Application	Pathways and landscape	Lamp Life	100,000hours
Dimensions (mm)	435mm (L) x 436mm (W) x 578mm (H)	IEC Photometric Code	840/339
Initial Colour Variation	-	IESNA LM 80-80 tested	Yes

An extra small size LED road lighting lantern with 12 LEDs driven at 350mA with Narrow Road optic.

Lumen Depreciation	L90 B10	Power Factor	> 0.9
Colour rendering Index	<70	LED luminaire tested	To be in accordance with IESNA LM-79-08.
Manufacturing Standard	EN 60 598-1:2015, EN 60598-2-2:2012, IEC/TR 62778:2014	LED module tested	To be in accordance with IEC 61347-2-13 & IEC 62384.

Warranty Length
 Five-year manufacturer's warranty to include failure of all luminaire components, inclusive of driver, electronics & LED modules.
 Contractor to include for all fixtures and fixings necessary for correct mounting and operation.

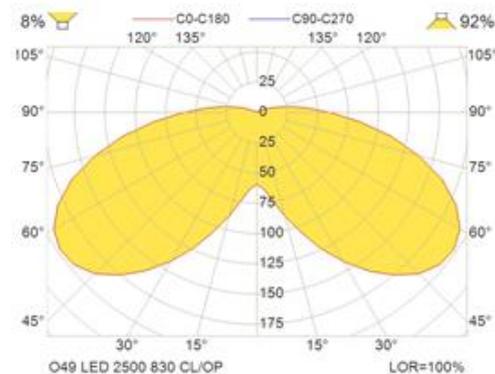


Contractor to ensure catalogue numbers are the latest and are correct prior to ordering.

Luminaire Reference	X4	Manufacturer	Glamox / Equal & Approved
Body Description	Die-Cast powder Coated aluminium, IP66, IK10	Recessed/Surface or Wall Mounted	Pole Mounted on 4M columns
Diffuser Type	Polycarbonate	Lamps	27.7W LED Lamp
Reflector	N/A	Lumen Output	2700 Lumens
Control Gear	230 V, 50 Hz.	Colour of Lamps	3000K
Area of Application	Pedestrian Routes	Lamp Life	60,000hours
Dimensions (mm)	Ø492mm x 640mm (H)	IEC Photometric Code	840/339
Wavelength	Peak > 550nm	IESNA LM 80-80 tested	Yes

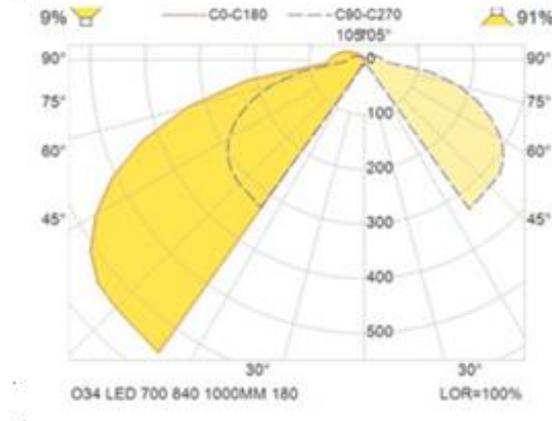
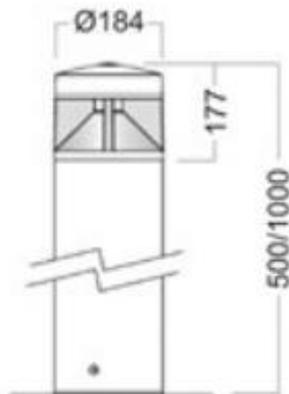
A decorative 4 m column LED luminaire. Suitable for parks, paths, and amenity lighting.

Lumen Depreciation	L80 B50	Power Factor	> 0.9
Colour rendering Index	CRI<80	LED luminaire tested	To be in accordance with IESNA LM-79-08.
Manufacturing Standard	EN 60 598-1:2015, EN 60598-2-2:2012, IEC/TR 62778:2014	LED module tested	To be in accordance with IEC 61347-2-13 & IEC 62384.
Warranty Length	Five-year manufacturer's warranty to include failure of all luminaire components, inclusive of driver, electronics & LED modules. Contractor to include for all fixtures and fixings necessary for correct mounting and operation.		



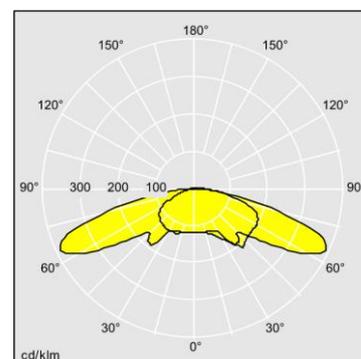
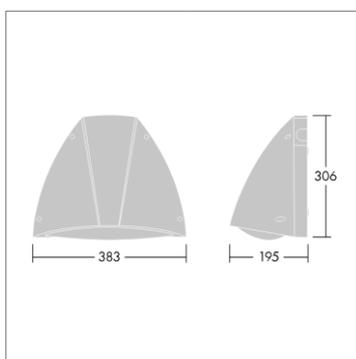
Contractor to ensure catalogue numbers are the latest and are correct prior to ordering. Contractor to include for all fixtures and fixings necessary for correct mounting and operation.

Luminaire Reference	X5	Manufacturer	Glamox / Equal & Approved
Body Description	IP66 rated, Aluminium powder coated body - IK10	Recessed/Surface or Wall Mounted	Floor mounted - Bollard
Diffuser Type	180 Degree, Tempered Glass	Lamps	12W LED
Reflector	N/A	Lumen Output	665 lumens
Control Gear	230V, 50-60Hz	Colour of Lamps	4000K
Area of Application	Pedestrian Routes	Lamp Life	50,000hours
Dimensions (mm)	184mm Ø x 1000mm(H)	IEC Photometric Code	840/339
Wavelength	Peak > 550nm	IESNA LM 80-80 tested	Yes
Robust and decorative LED bollard suitable for lighting pathways and amenity areas. The bollard is delivered with 180° radial light distribution.			
Lumen Depreciation	L80 B50	Power Factor	> 0.9
Colour rendering Index	CRI>80	LED luminaire tested	To be in accordance with IESNA LM-79-08.
Manufacturing Standard	EN 60 598-1:2015, EN 60598-2-2:2012, IEC/TR 62778:2014	LED drivers shall conform to	To be in accordance with IEC 61347-2-13 & IEC 62384.
Warranty Length	Five-year on-site warranty to include failure of all luminaire components, inclusive of driver, electronics & LED modules. Contractor to include for all fixtures and fixings necessary for correct mounting and operation.		



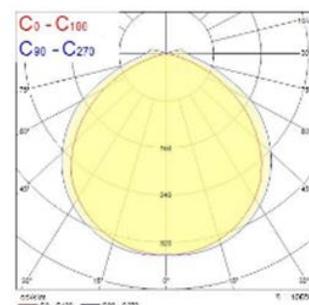
Contractor to ensure catalogue numbers are the latest and are correct prior to ordering.

Luminaire Reference	X6	Manufacturer	Thorn / Equal & Approved
Body Description	IP66, IK10 rated, back plate: Die-cast aluminium painted anthracite, Body: anthracite Polycarbonate,	Recessed/Surface or Wall Mounted	Wall Mounted
Diffuser Type	N/A	Lamps	15.1 W LED
Reflector	N/A	Lumen Output	1815 lumens
Control Gear	230V, 50-60Hz	Colour of Lamps	3000K
Area of Application	Entrance / Exits	Lamp Life	60,000hours
Dimensions (mm)	381mm x 196mm x 305mm	IEC Photometric Code	840/339
Initial Colour Variation	N/A	IESNA LM 80-80 tested	Yes
Robust and decorative wall mounted luminaire suitable for lighting entrance, exits and amenity areas.			
Lumen Depreciation	L70	Power Factor	> 0.9
Colour rendering Index	<80	LED luminaire tested	To be in accordance with IESNA LM-79-08.
Manufacturing Standard	EN 60 598-1:2015, EN 60598-2-2:2012, IEC/TR 62778:2014	LED drivers shall conform to	To be in accordance with IEC 61347-2-13 & IEC 62384.
Warranty Length	Five-year on-site warranty to include failure of all luminaire components, inclusive of driver, electronics & LED modules. Contractor to include for all fixtures and fixings necessary for correct mounting and operation.		



Contractor to ensure catalogue numbers are the latest and are correct prior to ordering.

Luminaire Reference	X10	Manufacturer	Sylvania / Equal & Approved
Body Description	IP65 LED strip light	Recessed/Surface or Wall Mounted	Under Benches.
Diffuser Type	N/A	Lamps	4.8 W per metre
Control Gear	24V, dimmable	Lumen Output	530 lumens per metre
Area of Application	External Site Locations	Colour of Lamps	3000K
Dimensions (mm) Aluminium Profile	5000mm (L) x 10mm (W) x 4mm (H)	Lamp Life	54000 Hrs
Dimensions (mm) LED Strip	5000mm (L)	IEC Photometric Code	840/339
Initial Colour Variation	N/A	IESNA LM 80-80 tested	Yes
5 metre flexible strip kit with self-adhesive back, Mounted to the underside of benches. Flexible quick-fit joint included. Fast and easy-fit plug and play connection from driver to LED strip.			
Lumen Depreciation	L70 B50	Power Factor	> 0.9
Colour rendering Index	<80	LED luminaire tested	In accordance with IESNA LM-79-08
Manufacturing Standard	EN 60 598-1:2015, EN 60598-2-2:2012, IEC/TR 62778:2014	LED module tested	To be in accordance with IESNA LM-80-08, IEC 61347-2-13 & IEC 62384.
Warranty Length	Five-year on-site warranty to include failure of all luminaire components, inclusive of driver, electronics & LED modules. Contractor to include for all fixtures and fixings necessary for correct mounting and operation.		

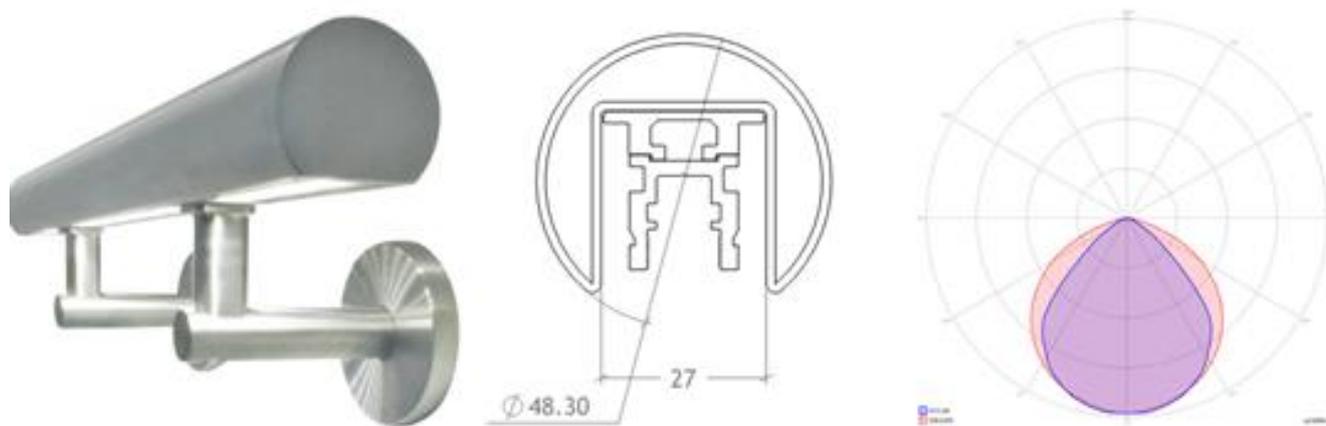


Contractor to ensure catalogue numbers are the latest and are correct prior to ordering.

Luminaire Reference	X11	Manufacturer	Liniled / Equal & Approved
Body Description	Aluminium Handrail, IP65, IK10	Recessed/Surface or Wall Mounted	Handrail Recessed.
Diffuser Type	Clear Polycarbonate	Lamps	9W Per Metre
Reflector	N/A	Lumen Output	609 Lumens per Metre
Control Gear	24V DC	Colour of Lamps	4000K
Area of Application	Steps / External Stairs	Lamp Life	50,000hours
Dimensions (mm)	48mm Ø	IEC Photometric Code	840/339
Initial Colour Variation	-	IESNA LM 80-80 tested	Yes

Handrail with integrated Led strip recessed in the underside.

Lumen Depreciation	N/A	Power Factor	> 0.9
Colour rendering Index	<70	LED luminaire tested	To be in accordance with IESNA LM-79-08.
Manufacturing Standard	EN 60 598-1:2015, EN 60598-2-2:2012, IEC/TR 62778:2014	LED module tested	To be in accordance with IEC 61347-2-13 & IEC 62384.
Warranty Length	Five-year manufacturer's warranty to include failure of all luminaire components, inclusive of driver, electronics & LED modules. Contractor to include for all fixtures and fixings necessary for correct mounting and operation.		



Contractor to ensure catalogue numbers are the latest and are correct prior to ordering.

6.0 Appendix B – Lighting Drawings

Refer to IN2 Drawing: HSQ2-IN2-ZZ-RF-DR-E-0101

REF: 'X3' LUMINAIRES

20W, 662mm, 3000K, LED, IP65, IK10
DIE-CAST ALUMINIUM POLE MOUNTED LUMINAIRE. PHOTOCELL CONTROLLED.

DIMS: 722 (L) x 222 (W) x 65mm (H)

AS PER LUMINAIRE SCHEDULE

REF: 'X4' LUMINAIRES

10W, LED, 2680lm, IP65, IK10
POLE MOUNTED LUMINAIRE

DIM: 620mm(D) x 566mm(H)
3m POLE

AS PER LUMINAIRE SCHEDULE

REF: 'X5' LUMINAIRES

14W, 563lm, IP65, IK10
ROOF MOUNTED BOLLARD. ALUMINIUM POWDER COATED BODY.

DIM: 150mm x 1000mm

AS PER LUMINAIRE SCHEDULE

REF: 'X6' LUMINAIRES

25W, 2730lm, 3000K, LED, IP65, IK10
WALL MOUNTED LUMINAIRE WITH DIE-CAST ALUMINIUM BODY PAINTED ANTHRACITE.

DIMS: 195 (L) x 383 (W) x 306mm (H)

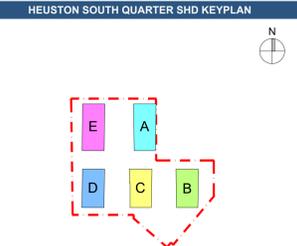
AS PER LUMINAIRE SCHEDULE

REF: 'X10' LUMINAIRES

IP67, IK09, 3000K, LED STRIP LIGHT, 234 lm, 4.8W PER METER

DIMS: 10mm(W) x 10mm(H) x 5000mm(L)

AS PER LUMINAIRE SCHEDULE



SITE LIGHTING INSTALLATION NOTES

- 1.00 LIGHTING POLES TO BE ALUMINIUM, ROOF MOUNTED, CONE SHAPED WITH TOP TAIL OF 400mm c/w CLASS II 4x16mm² SHUNT TERMINAL CONNECTION BLOCK.
- 2.00 ALL CABLEING TO EXTERNAL LIGHTING LOCATIONS TO BE WIRED IN 3 Core 6mm² CABLE PERMANENTLY CONFINED IN HDPE DUCTS.
- 3.00 ALL IN GROUND HDPE DUCTS TO BE INSTALLED BY THE MAIN CONTRACTOR UNDER THE COORDINATION OF THE ELECTRICAL CONTRACTOR.
- 4.00 THE ELECTRICAL CONTRACTOR SHALL PRIOR TO THE INSTALLATION, VERIFY THE CAPACITY OF THE IN-GROUND DUCT NETWORK TO THE MAIN CONTRACTOR.
- 5.00 EACH EXTERNAL LIGHTING LUMINAIRE SHALL BE SWITCHED BY MINIATURE PHOTO-ELECTRONIC SWITCH INTEGRATED INTO THE LED LUMINAIRE SUCH AS THE SELC BARZ OR APPROVED EQUAL AND EACH LUMINAIRE SHALL BE INDIVIDUALLY CONTROLLED BY THIS PHOTOCELL.
- 6.00 THE PHOTOCELL USED SHALL COMPLY WITH THE LATEST VERSION OF BS5872. THE PHOTOCELL CONTROL SHALL SWITCH ON/OFF THE LUMINAIRE AT 35 / 18 LUX RESPECTIVELY.
- 7.00 ALL OUTGOING CIRCUITS SHALL BE INDIVIDUALLY FUSED BY MEANS OF A 16A OR 20A HRC CUT-OUT TYPE AND CAPABLE OF ACCOMMODATING CABLE SIZES UP TO 25mm². THESE FUSES SHALL BE RATED 20A MINIMUM RUPPTURING CAPACITY AND SHALL COMPLY WITH BS88.
- 8.00 ALL COLUMNS ARE SUPPLIED FROM A LIGHTING MINI-SECTION PILLAR, LOCATED ADJACENT TO THE ESB NETWORKS MINI-SECTION PILLAR. NOT MORE THAN 6 COLUMNS SHALL BE SUPPLIED FROM ANY ONE CIRCUIT AND NOT MORE THAN 4 CIRCUITS SHALL BE TAKEN FROM ANY ONE AUXILIARY MINI-SECTION PILLAR.
- 9.00 THE CONTRACTOR SHALL MAKE A FULL TECHNICAL SUBMITTAL TO THE DESIGN TEAM FOR ALL EXTERNAL LIGHTING FOR APPROVAL PRIOR TO ORDERING.
- 10.00 THE DEVELOPER SHALL NOTE THAT NO EXISTING PUBLIC LIGHTS CAN BE REMOVED WITHOUT THE PERMISSION AND APPROVAL OF PUBLIC LIGHTING SERVICES.
- 11.00 THE DEVELOPER SHALL CONTACT PUBLIC LIGHTING SERVICES AT LEAST 6 WEEKS IN ADVANCE OF WORKS STARTING ON SITE, TO FIND OUT WHAT IS REQUIRED TO BE DONE TO EXISTING PUBLIC LIGHTING THAT IS WITHIN THE SITE BOUNDARY.
- 12.00 ANY COSTS ASSOCIATED WITH THE RE-ARRANGEMENT OR ALTERATION OF EXISTING PUBLIC LIGHTING SHALL BE ENTIRELY AT THE DEVELOPER'S EXPENSE, INCLUDING ESB NETWORK COSTS.
- 13.00 WHERE PUBLIC ROADS ARE TO REMAIN IN USE, THEN THE PUBLIC LIGHTING MUST BE MAINTAINED BY THE DEVELOPER IN AN OPERATING CONDITION THROUGHOUT THE DEVELOPMENT PERIOD.

SITE LIGHTING REFERENCE KEY

- LIGHTING CIRCUIT**
- X3 LED LANTERN LUMINAIRE (ROAD LIGHTING)
 - X4 DECORATIVE POST-TOP LANTERN LUMINAIRE
 - X5 LED BOLLARD LUMINAIRE
 - X6 WALL MOUNTED BULK-HEAD LUMINAIRE
 - X7 WALL RECESSED STEP LUMINAIRE
 - X8 EXTERNAL LUMINAIRE
 - X10 LED STRIP LIGHT
 - X11 HANDRAIL LIGHT
 - LC LIGHTING COLUMN
 - MCP LIGHTING MID-COLUMN



STATUS	DATE	DESCRIPTION	DRN	ENG	APP	REV

PROJECT	Heuston South Quarter SHD St. John's Rd W, Kilmainham, Dublin 8
CLIENT	CHARTERED LAND
PROJECT REF.	D2026

DRAWING TITLE	ELECTRICAL SERVICES INSTALLATION ROOF & PODIUM SITE LIGHTING INSTALLATIONS	STATUS	S2
SCALE	1:200	REVISION	P02
SIZE	A0		
DRAWING NO.	HSQ2-IN2-ZF-DR-E-0101		





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