

Seven Sisters Community Centre - Revision 1

Installation : Proposed Lighting Design

Project number : LD4755

Customer :

Processed by : Kat Ellerington

Date : 06.10.2025

Project description:

Revision 1 - 06/10/2025 - KE

Design based on the information provided and aiming show resulting illuminance with lighting upgrade for multi-use sports pitch with exiting 6m columns with 2 floodlights per column.

Revision 1 – floodlights switched to 150W output.

We have utilised 8no of Skyline Virtus 150W Asymmetric Floodlights (type EX4 light blue arrow) mounted on exiting 6m columns with 0° tilt (flat glass) resulted an average horizontal illuminance of 153 lux 0.60 Uo.

Upward light ratio (ULR) is 0%.

We have also shown Obstructive Light Report figures on day 1 for your consideration and approval, which complies with requirements of environmental zone E2.

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

Luminaire data

BELL Lighting Limited, Virtus 150W 3000K Asymmetric ... (!EX4 70293)

Data sheet

Manufacturer: BELL Lighting Limited

!EX4 70293 **Virtus 150W 3000K Asymmetric Floodlight**

Luminaire data

Luminaire efficiency

Luminaire efficacy

Classification

CIE Flux Codes

UGR 4H 8H

Power

Luminous flux

: 100%

: 144.81 lm/W

: A40 ↓100.0% ↑0.0%

: 41 82 99 100 100

: 38.3 / 32.0

: 150 W

: 21721 lm

Equipped with

Quantity

Designation

Colour

Luminous flux

Colour reproduction

: 1

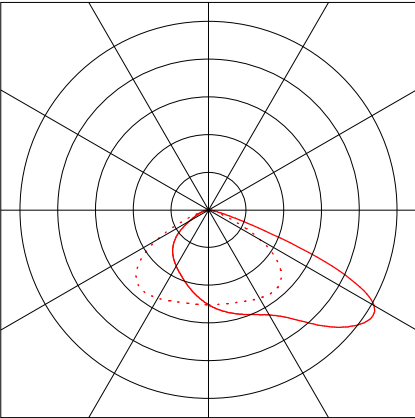
: LED 830

: 3000K

: 21721 lm

: 80

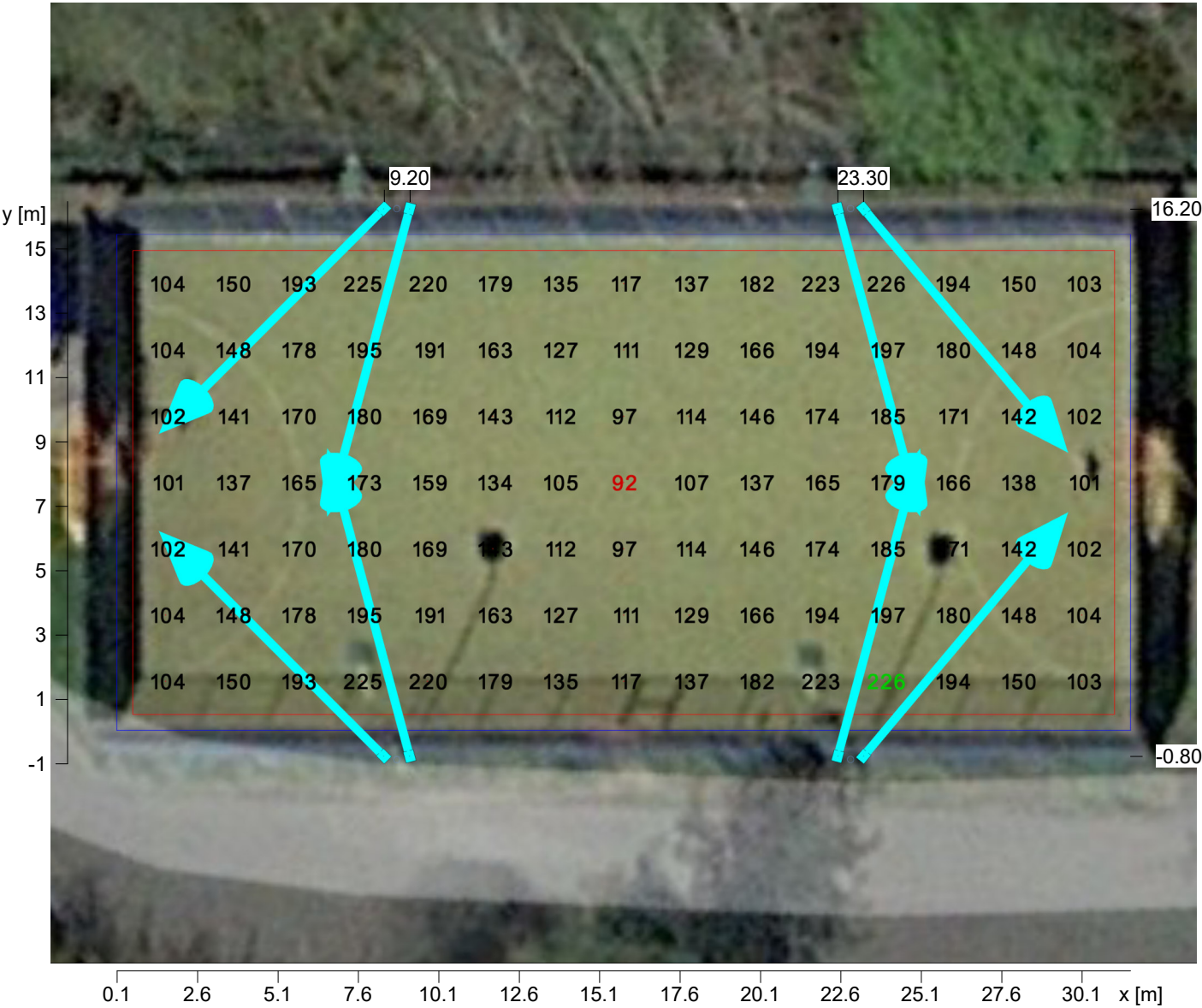
Dimensions : 320 mm x 350 mm x 75 mm



Revision 1

Description, Revision 1

Floor plan



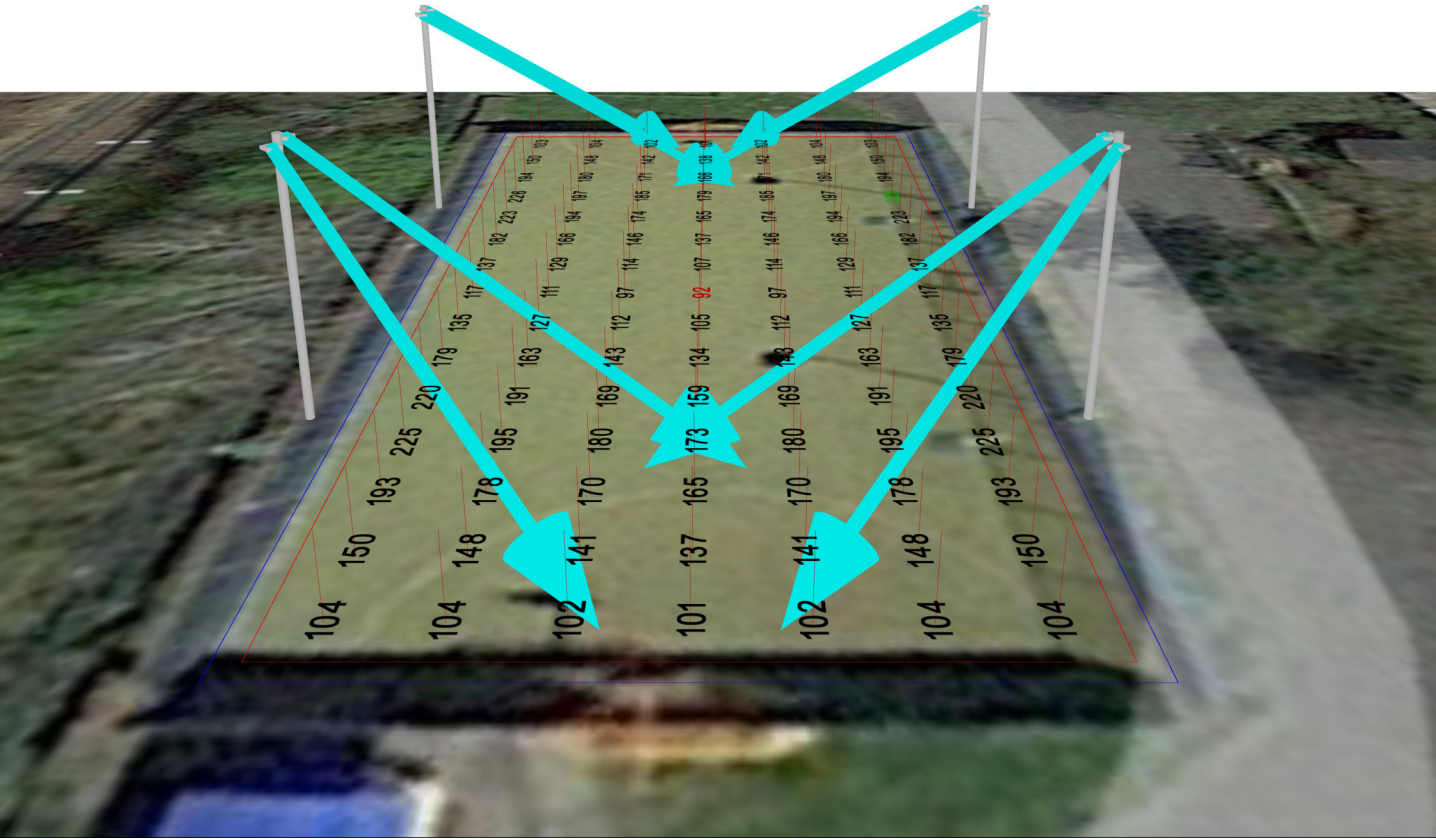
Description, Revision 1

3D view, Visualisation 1

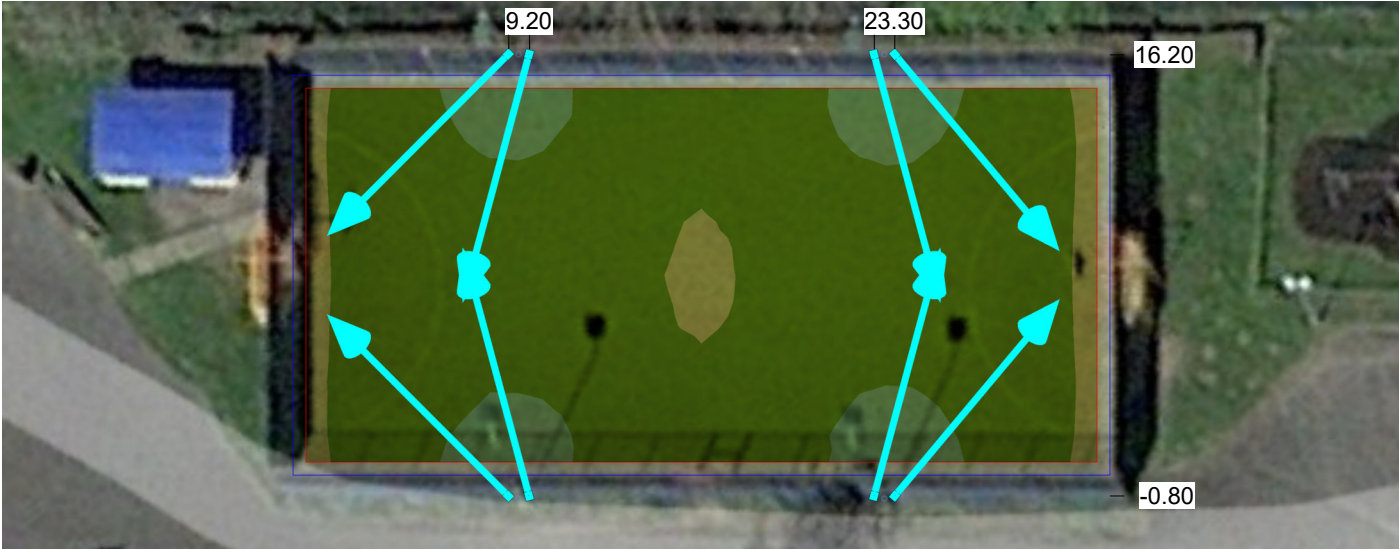


Description, Revision 1

3D view, Visualisation 2



Revision 1
Summary, Revision 1
Result overview, Evaluation area 1



0.1 2.6 5.1 7.6 10.1 12.6 15.1 17.6 20.1 22.6 25.1 27.6 30.1 x [m]



75
Illuminance [lx]

General	
Calculation algorithm used	Average indirect fraction
Height (phot centre)	6.30 m
Maintenance factor	0.80
Luminaire luminous flux	173768.00 lm
Total power	1200.0 W
Total power per area (485.10 m²)	2.47 W/m² (1.61 W/m²/100lx)
Upward light ratio (RUL)	0 %

Evaluation area 1	Reference plane 1.1
	Horizontal
$\bar{E}_m$	153 lx
E_{min}	92 lx
$E_{min}/\bar{E}_m (U_o)$	0.60
$E_{min}/E_{max} (U_d)$	0.41
Position	0.00 m

RG Table	
0.43 cd/m², 190 lx, $\rho = 0 \%$ (-2°)	
RG _{max}	42 (h=1.60m)

Object : Seven Sisters Community Centre - Revision 1
Installation : Proposed Lighting Design
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Revision 1

Summary, Revision 1

Result overview, Evaluation area 1

Type No.\Make

1	8 x	BELL Lighting Limited	
		Order No.	: !EX4 70293
		Luminaire name	: Virtus 150W 3000K Asymmetric Floodlight
		Equipment	: 1 x LED 830 150 W / 21721 lm



Revision 1

Calculation results, Revision 1

Table, Reference plane 1.1 (RG)

	39	39	35	25	(24)	32	33	31	33	32	25	27	35	39	39
12	40	41	40	37	36	36	34	31	34	36	36	37	40	41	40
10	40	[42]	[42]	41	39	38	34	29	34	38	40	41	[42]	[42]	40
8	38	40	41	40	39	36	32	26	32	37	39	41	[42]	41	37
6	40	[42]	[42]	41	39	38	34	29	34	38	40	41	[42]	[42]	40
4	40	41	40	37	36	36	34	31	34	36	36	37	40	41	40
2	39	39	35	25	(24)	32	33	31	33	32	25	27	35	39	39
	2.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0	22.5	25.0	27.5				



Observer Rg

Lve = 0.43 cd/m², Ei = 190 lx, ρ = 20 % (-2°)

Height reference plane : 1.60 m
Minimum : 24.4
Maximum : 42

BEI | lighting
lighting from the ground up



Floor plan





Revision 1 Ostructive Light Report

Calculation results, Revision 1 Ostructive Light Report

Summary obtrusive light

General	
Standard	EN 12193:2018 Sports lighting (Glare:I simple)
Time period	Pre-curfew
Intial values calculated	1.00
Calculation algorithm used	Average indirect fraction
Height (phot centre)	6.30 m
Total luminous flux	173768 lm
Total power	1200.0 W

Light pollution

Maximum vertical illuminance

Vertical Spillage Results Overview (2)E2				<= 5 lx
No.	Measuring surface	Grid		E _{i,max}
2.2	Vertical Light Spillage Police 1	8 x 4		4.02 lx ✓
2.3	Vertical Light Spillage Police 2	4 x 2		2.2 lx ✓
2.1	Vertical Light Spillage 1	13 x 4		1.66 lx ✓
2.4	Vertical Light Spillage 2	11 x 4		2.45 lx ✓
2.5	Vertical Light Spillage 3	6 x 4		0.16 lx ✓

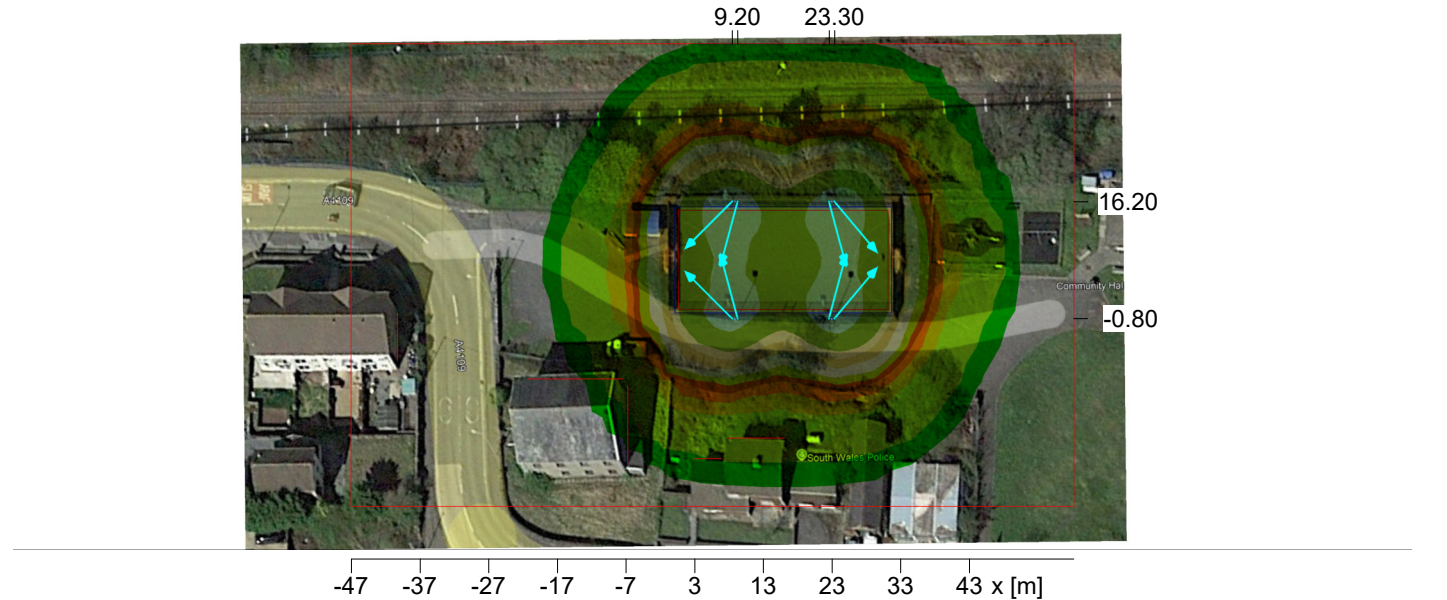
Maximum vertical luminance

Vertical Spillage Results Overview (2)E2					<= 5 cd/m²
No.	Measuring surface	Grid	Rho [%]		L _{i,max}
2.2	Vertical Light Spillage Police 1	8 x 4	20 %		0.26 cd/m² ✓
2.3	Vertical Light Spillage Police 2	4 x 2	20 %		0.14 cd/m² ✓
2.1	Vertical Light Spillage 1	13 x 4	20 %		0.11 cd/m² ✓
2.4	Vertical Light Spillage 2	11 x 4	20 %		0.16 cd/m² ✓
2.5	Vertical Light Spillage 3	6 x 4	20 %		0.01 cd/m² ✓

Glare rating obtrusive light

Summary, Revision 1 Ostructive Light Report

Result overview, Horizontal Light Spillage



General	
Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Height (phot. centre) [m]:	6.30 m
Maintenance factor	1.00
Total luminous flux	
173768 lm	
Total power	
1200 W	
Total power per area (485.10 m²)	
2.47 W/m²	
Upward light ratio (RUL)	
0 %	

Illuminance	
Average illuminance	$\bar{E}_m$ 25 lx
Minimum illuminance	E_{min} 0 lx
Maximum illuminance	E_{max} 298 lx
Uniformity U_o	$E_{min}/\bar{E}_m$ 1:4740 (0)
Diversity U_d	E_{min}/E_{max} 1:57300 (0)

Type No. Make

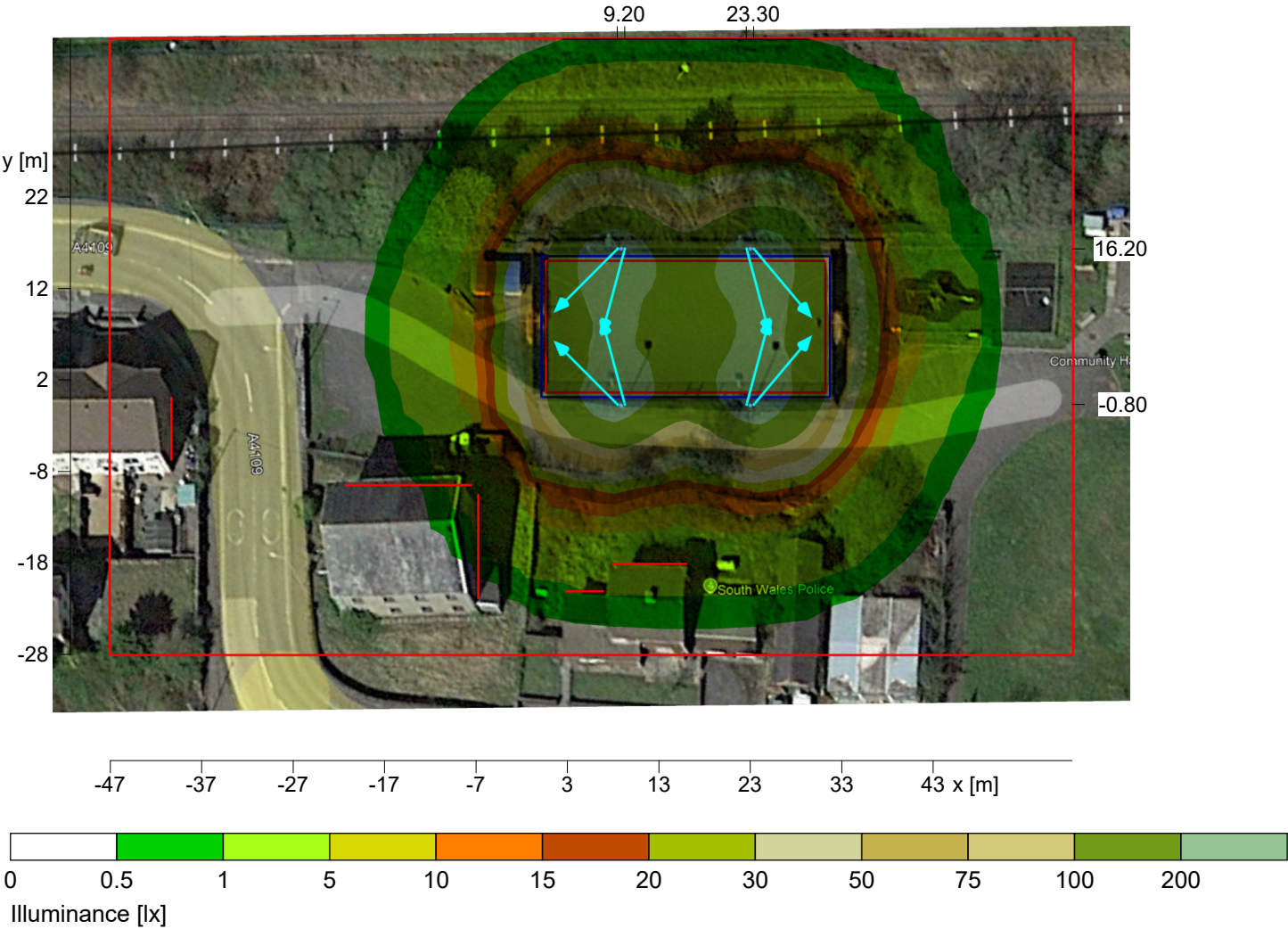
BELL Lighting Limited	
1	8 x
	
Order No. : !EX4 70293	
Luminaire name : Virtus 150W 3000K Asymmetric Floodlight	
Equipment : 1 x LED 830 150 W / 21721 lm	

The ULR value has been calculated without obstruction by other objects.

Revision 1 Ostructive Light Report

Calculation results, Revision 1 Ostructive Light Report

Pseudo colours, Horizontal Light Spillage (E)



Height reference plane		: 0.00 m
Average illuminance	$\bar{E}_m$	: 25 lx
Minimum illuminance	E_{min}	: 0 lx
Maximum illuminance	E_{max}	: 298 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 4736.12 (0.00)
Diversity U_d	E_{min}/E_{max}	: 1 : 57314.95 (0.00)