

Sir Roger Manwood

Hockey Pitch + Pathway Lighting

Date: 21-12-2023

Customer: Smith Construction

Designer: Ben Leslie - Christy Lighting Masts

Description: Hockey Pitch 101.4m / 63m
Playing Lines 91.44m/55m

Maintained Illuminance: 350lux
Uniformity 0.7

Luminaire Source: 16no. 1150W GigaTera MAF1.1 LED
Lamp Source: LED

Pathway Lighting
10no. 20W Nelson LED Bollard Lights

The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

Christy Lighting Masts Ltd

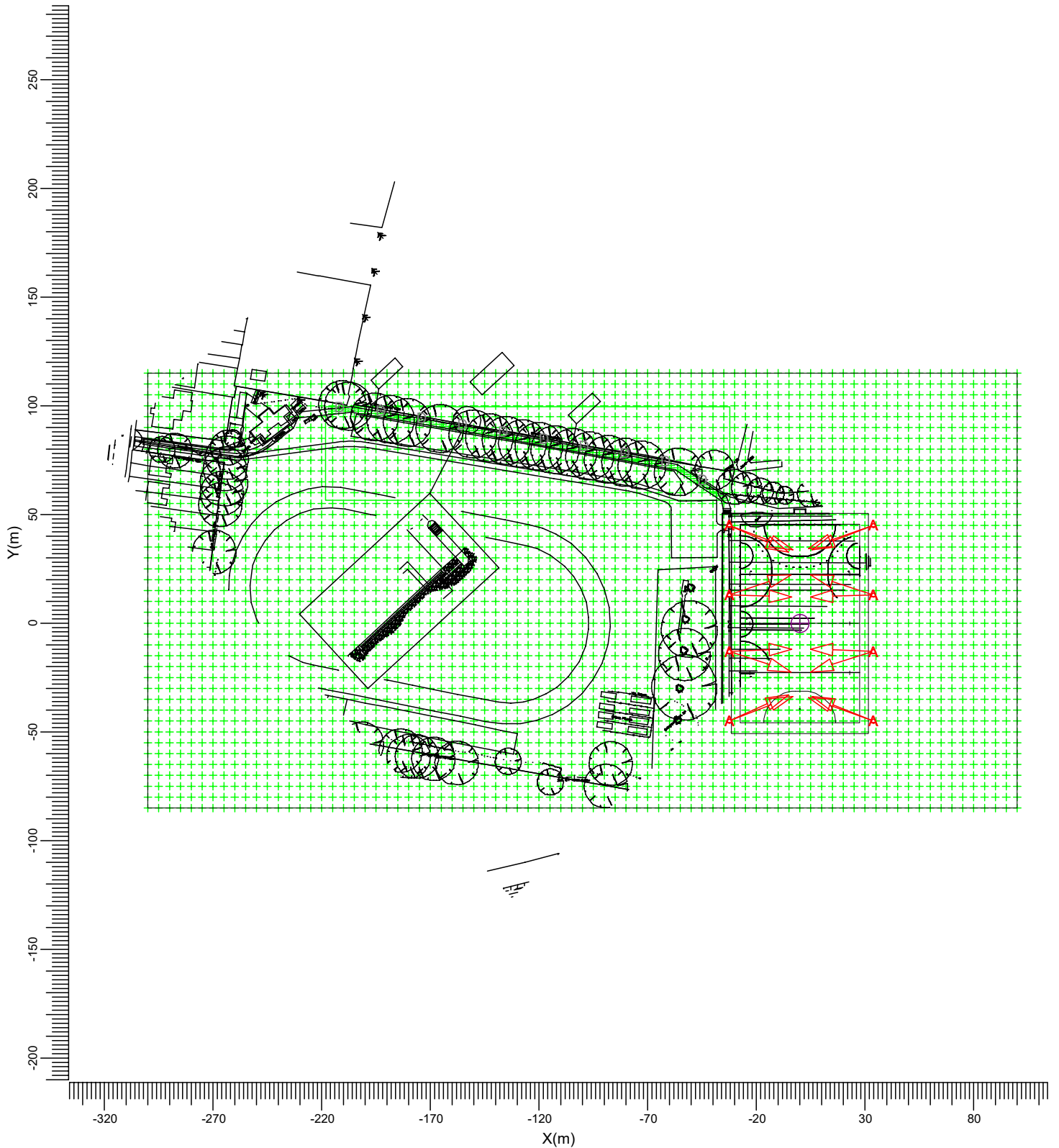
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1. Project Description

1.1 Top Project Overview



A  7110-MAHAPLUS-MAF 1.1kw D  Nelson 20W + Spill/Shield

Scale
1:2500

2. Summary

2.1 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	16	7110-MAHAPLUS- MAF 1.1kw Gig	1 * LED	1150.0	1 * 182323
D	10	Nelson 20W + Spill/Shield	1 * NB20-A3C-00B + Spill/Shield	20.0	1 * 1448

The total installed power: 18.60 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code		Power (kWatt)
	A	D	
350Lux Switching	16	0	18.40
off	12	0	13.80
200Lux	12	0	13.80
Pathway Lighting	0	10	0.20
All On	16	10	18.60

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	A	D	
Centre Columns3	4	0	4.60
Centre Columns4	4	0	4.60
Corner Columns3	4	0	4.60
Corner Columns4	4	0	4.60
Individuals	0	10	0.20

2.2 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	350Lux Switching	0.95
2	off	0.95
3	200Lux	0.95
4	Pathway Lighting	0.95
5	All On	0.95

(II)luminance Calculations:

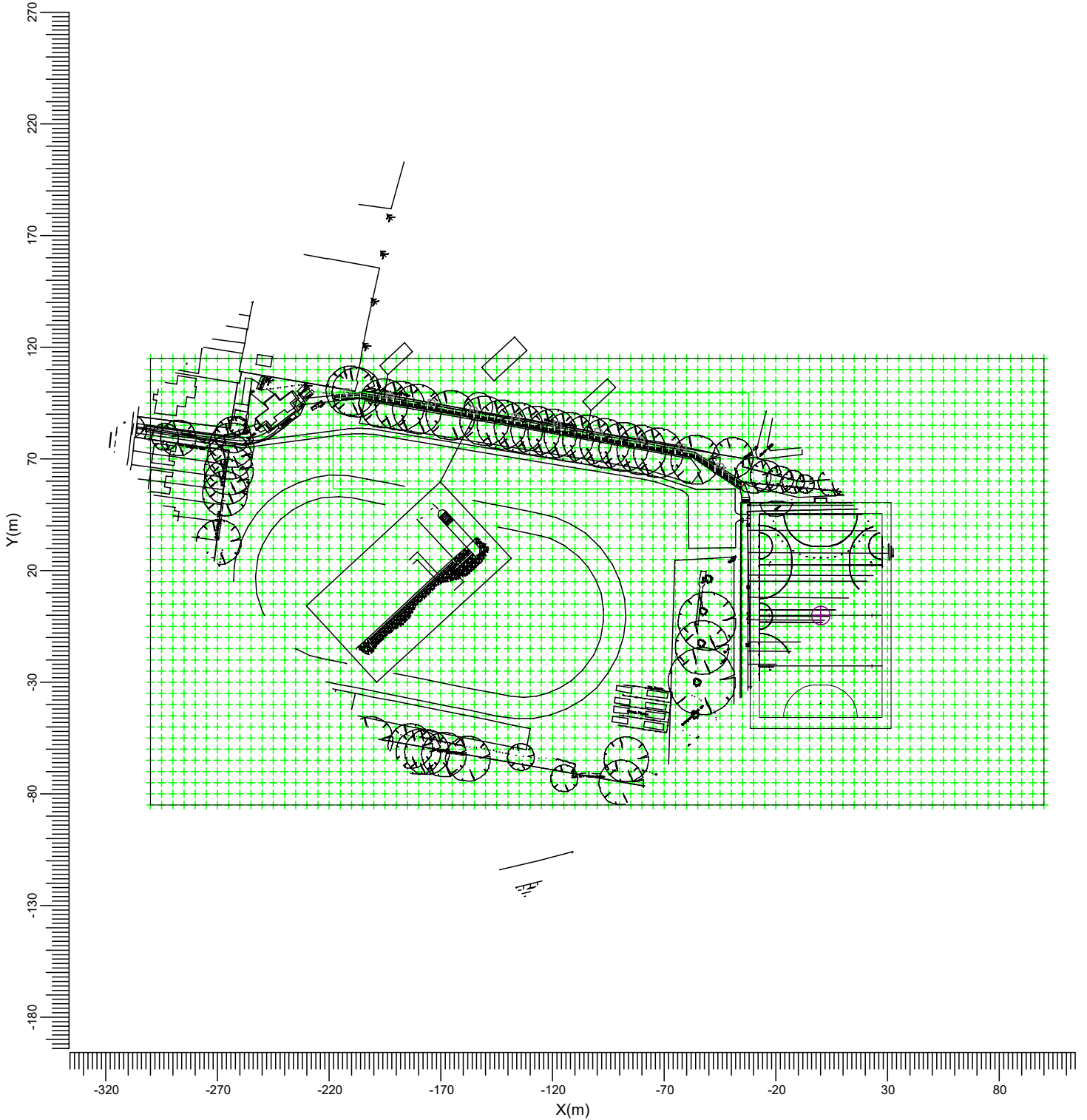
Calculation	Switching Mode	Type	Unit	Ave	Min/Ave	Min/Max
Path Grid	4	Surface Illuminance	lux	10.2	0.01	0.00
Spill Calculations	4	Horizontal Illuminance	lux	0.21	0.00	0.00

3. Calculation Results

3.1 Path Grid: Graphical Table

Pathway Lighting

Grid : Path Grid at Z = 0.00 m
Calculation : Surface Illuminance (lux)



D Nelson 20W + Spill/Shield

Average
10.2

Min/Ave
0.01

Min/Max
0.00

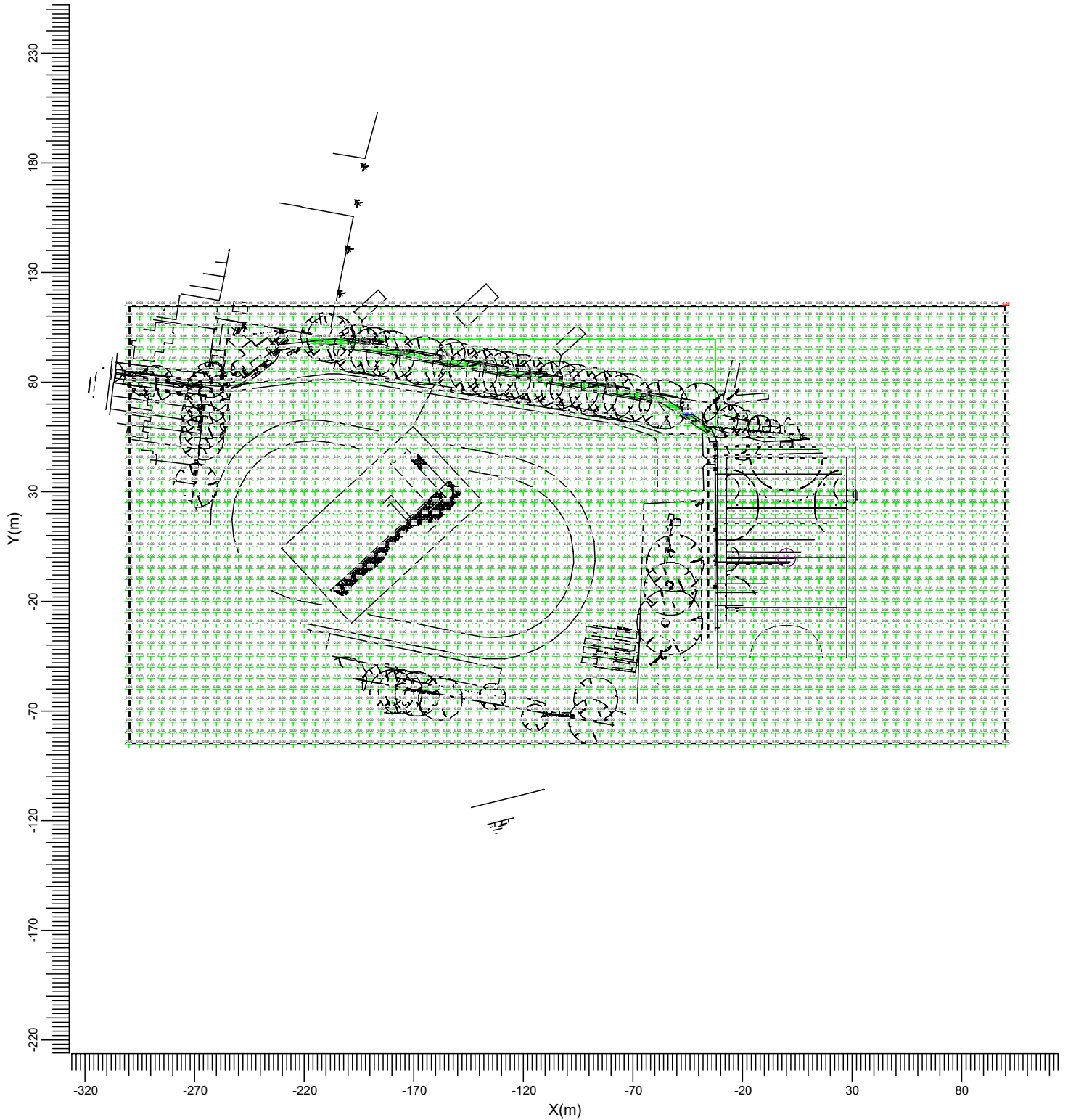
Project maintenance factor
0.95

Scale
1:2500

3.2 Spill Calculations: Graphical Table

Pathway Lighting

Grid : Spill Grid at Z = -0.00 m
Calculation : Horizontal Illuminance (lux)



D —▶ Nelson 20W + Spill/Shield

Average
0.21

Min/Ave
0.00

Min/Max
0.00

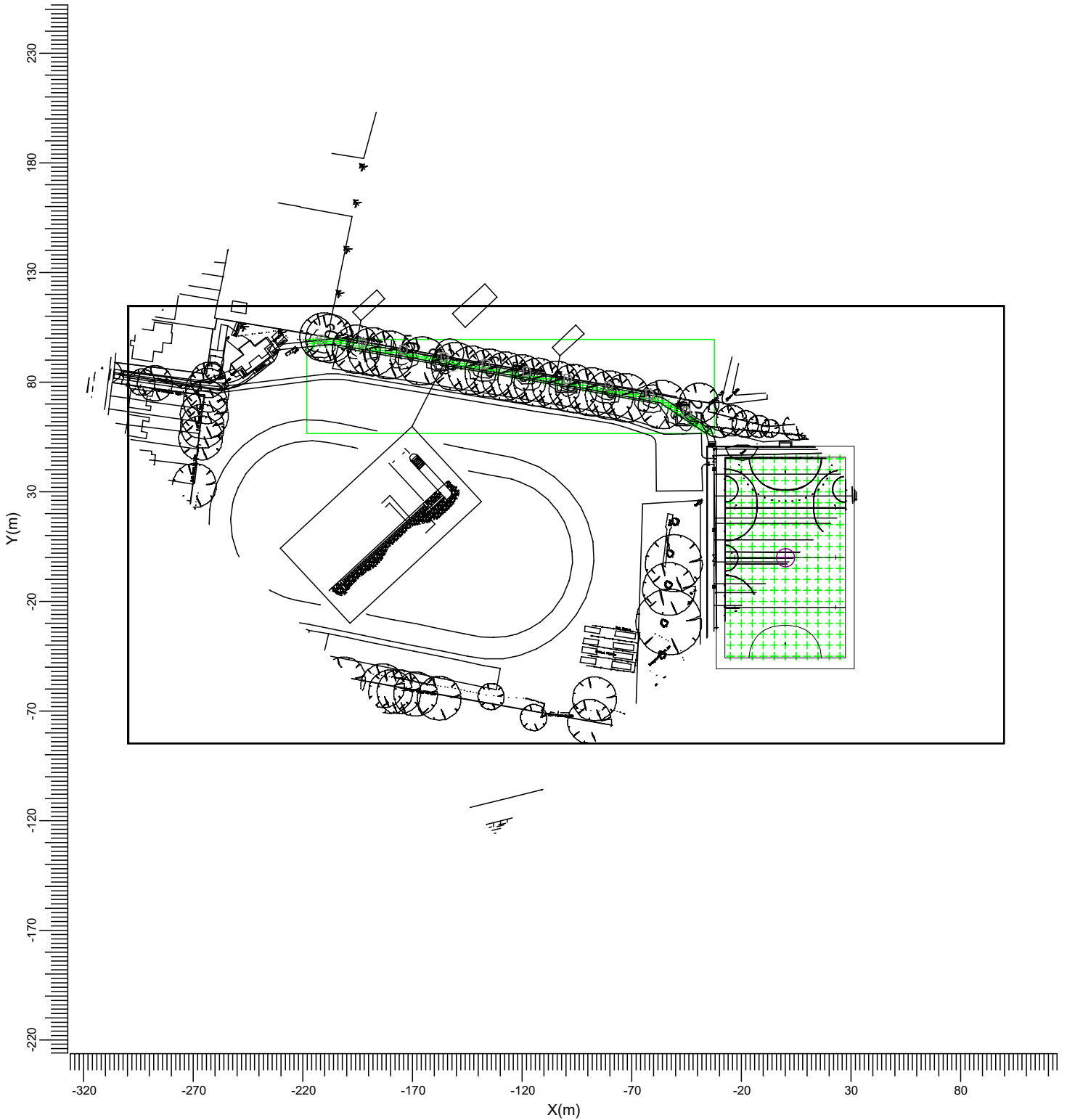
Project maintenance factor
0.95

Scale
1:2500

3.3 Spill Calculations: Iso Contour

Pathway Lighting

Grid : Spill Grid at Z = -0.00 m
Calculation : Horizontal Illuminance (lux)



D —▶ Nelson 20W + Spill/Shield

Average
0.21

Min/Ave
0.00

Min/Max
0.00

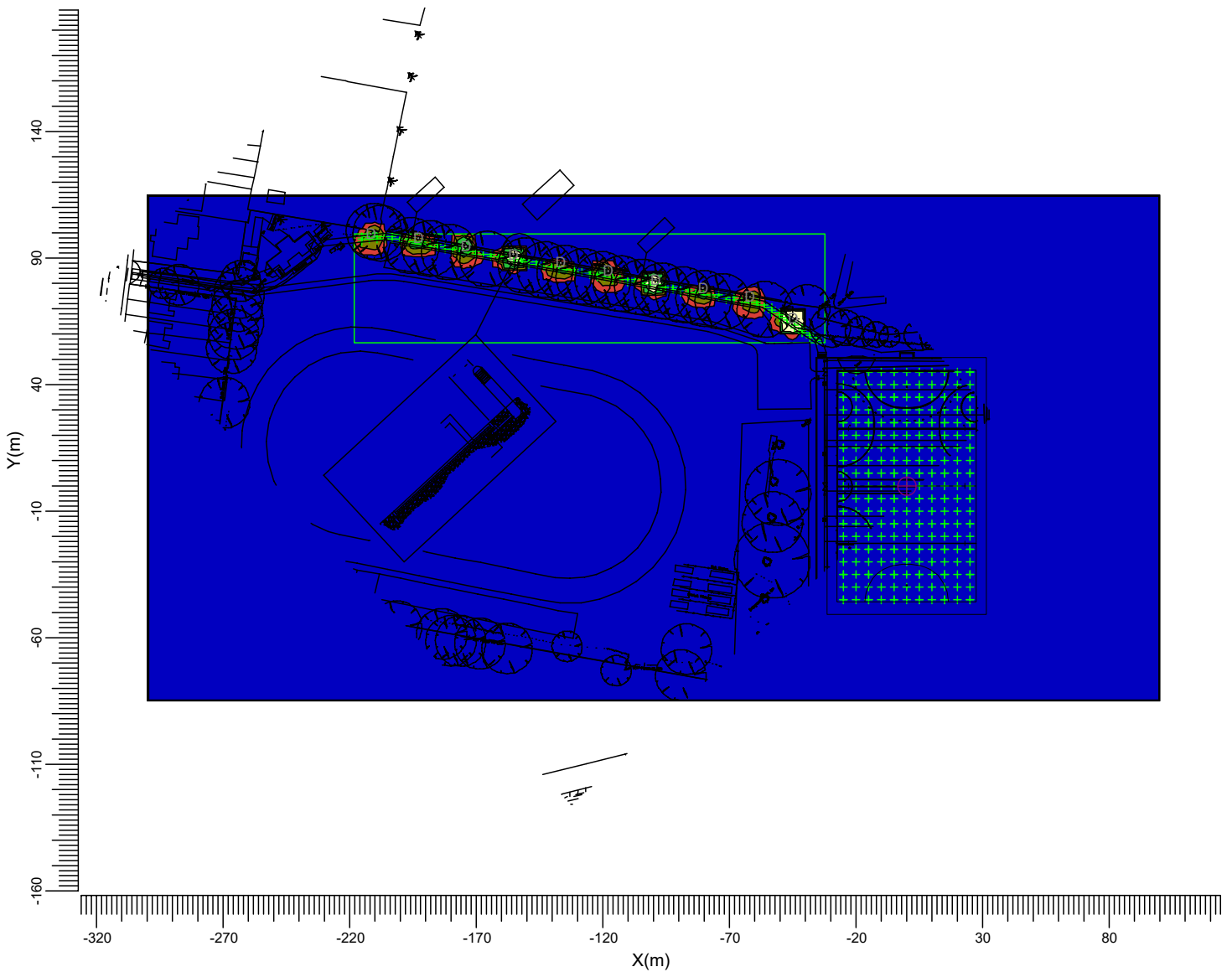
Project maintenance factor
0.95

Scale
1:2500

3.4 Spill Calculations: Filled Iso Contour

Pathway Lighting

Grid : Spill Grid at Z = -0.00 m
Calculation : Horizontal Illuminance (lux)



D Nelson 20W + Spill/Shield

Average
0.21

Min/Ave
0.00

Min/Max
0.00

Project maintenance factor
0.95

Scale
1:2500

4. Installation Data

4.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
A	16	7110-MAHAPLUS- MAF 1.1kw Gig	1 * LED	1 * 182323
D	10	Nelson 20W + Spill/Shield	1 * NB20-A3C-00B + Spill/Shield	1 * 1448

Switching Modes:

Code	Switching Mode
1	350Lux Switching
2	off
3	200Lux
4	Pathway Lighting
5	All On

4.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Angles			Switching Modes				
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	1	2	3	4	5
1 * D	-211.87	99.58	1.00	-84.2	0.0	0.0	-	-	-	+	+
1 * D	-192.90	97.94	1.00	-102.6	0.0	0.0	-	-	-	+	+
1 * D	-174.20	94.68	1.00	-102.6	0.0	0.0	-	-	-	+	+
1 * D	-155.42	91.55	1.00	-102.6	0.0	0.0	-	-	-	+	+
1 * D	-136.68	88.15	1.00	-102.6	0.0	0.0	-	-	-	+	+
1 * D	-117.92	84.88	1.00	-102.6	0.0	0.0	-	-	-	+	+
1 * D	-99.35	81.55	1.00	-102.6	0.0	0.0	-	-	-	+	+
1 * D	-80.59	78.15	1.00	-102.6	0.0	0.0	-	-	-	+	+
1 * D	-61.96	74.68	1.00	-102.6	0.0	0.0	-	-	-	+	+
1 * D	-45.00	66.18	1.00	-123.1	0.0	0.0	-	-	-	+	+
1 * A	-32.50	-45.00	14.00	24.0	65.0	-0.0	+	+	+	-	+
1 * A	-32.50	-45.00	14.00	21.0	66.0	-0.0	+	-	+	-	+
1 * A	-32.50	-13.00	14.00	2.0	64.0	-0.0	+	+	+	-	+
1 * A	-32.50	-13.00	14.00	-18.0	65.0	-0.0	+	+	-	-	+
1 * A	-32.50	13.00	14.00	-2.0	64.0	0.0	+	+	+	-	+
1 * A	-32.50	13.00	14.00	18.0	65.0	0.0	+	+	-	-	+
1 * A	-32.50	45.00	14.00	-24.0	65.0	0.0	+	+	+	-	+
1 * A	-32.50	45.00	14.00	-21.0	66.0	0.0	+	-	+	-	+
1 * A	33.70	-45.00	14.00	158.0	65.0	-0.0	+	+	+	-	+
1 * A	33.70	-45.00	14.00	160.0	66.0	-0.0	+	-	+	-	+
1 * A	33.70	-13.00	14.00	178.0	64.0	0.0	+	+	+	-	+
1 * A	33.70	-13.00	14.00	-162.0	65.0	0.0	+	+	-	-	+
1 * A	33.70	13.00	14.00	-178.0	64.0	-0.0	+	+	+	-	+
1 * A	33.70	13.00	14.00	162.0	65.0	-0.0	+	+	-	-	+
1 * A	33.70	45.00	14.00	-158.0	65.0	0.0	+	+	+	-	+
1 * A	33.70	45.00	14.00	-160.0	66.0	0.0	+	-	+	-	+