

Introduction

dpa lighting consultants have prepared a calculation model for the Station Hill Phase 2 Pocket Park Lighting. A specific request was made to provide lighting illuminance results including both the dpa specified lighting within the area and the existing RBC lighting both inside and outside of the area. Calculations have been undertaken for the area, as bound by the black out-line in figure 1 below.

Figure 1. Extent of calculation area identified by black line



Existing Lighting Equipment

Three existing RBC lighting columns exist in the area and were to be included within the calculations. The lighting columns were identified as RBC column numbers: LC5181, LC5188, and LC5189. RBC advised the following details in relation to these lighting columns:

Equipment

- LC5181 and LC5188 – has been reported at being an 8m column with a lantern 6m up the column and the other one post top at 8m, both the lanterns are the same SENSO 2 84W LED LANTERNS.
- LC5189 – has been reported at being a 6m double bracket column with the lanterns being SENSO 2 84W LED LANTERNS.

Maintenance

- All columns are on a 36 month lamp change and clean regime.

Positions

- We do not hold a plan identifying the exact locations of the columns

Luminaire Specifications / Photometric Data LDT or IES files

- We don't have this information on the system for these units.

It is noted that the above identified luminaires are manufactured by a company named Schreder.

Assumptions

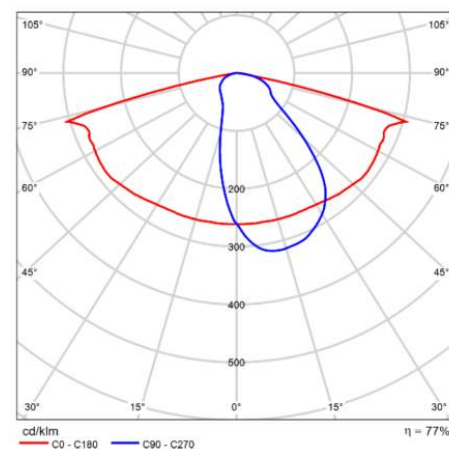
Whilst details of each luminaire have been identified, the exact specification is unknown. The Schréder Senso 2 84W LED Lantern has multiple product options with differing light distributions and photometrics. From previous site visits it is believed the Correlated Colour Temperature (CCT) of the lanterns are 4000 K. The exact light distribution is unknown, so for the purposes of this calculation a suitable luminaire was selected, the photometric distribution and properties of the selected luminaire can be seen in figure 2 below.

Figure 2. Details of RBC luminaire utilized in calculations

Schröder - SENSO 2 5102 Deep bowl, Glass Extra Clear, Smooth - Back Light 56 XP-G3@500mA NW
 740 230V 00-53-404 345862



Article No.	345862
P	85.0 W
Φ _{Lamp}	13629 lm
Φ _{Luminaire}	10487 lm
η	76.95 %
Luminous efficacy	123.4 lm/W
CCT	4000 K
CRI	70



Polar LDC

In addition RBC luminaires located in the Taxi drop off, to the west of the area, and station square. To the east have also been included and are also based upon the above specification, with a mounting height of 6m estimated from site photographs.

Maintenance Factor

From the cleaning/maintenance cycle advised by RBC, the following maintenance factor was calculated and utilized within the lighting calculation model.

Maintenance Factor (MF) = Lamp Survival Factor (LSF) x Lamp Lumen Maintenance Factor (LLMF) x Luminaire Maintenance Factor (LMF)

$$MF = LSF \times LLMF \times LMF$$

$$MF = 1 \times 0.98 \times 0.83$$

$$MF = 0.81$$

Calculation Results

Calculations were made in the Dialux Evo Version 5.12.1.7360 software. Lighting specified by dpa for the purpose of functional illumination along with the existing RBC columns as noted above were include. Calculation planes were inserted into the model to cover all areas within the area of study noted in figure 1 above.

Two sets of lighting calculations have been performed:

Calculation Results Set 1: Inclusive of step handrail integral lighting

Calculation Results Set 2: Excluding step handrail integral lighting

A summary of illuminance results can be seen in Table 1 below:

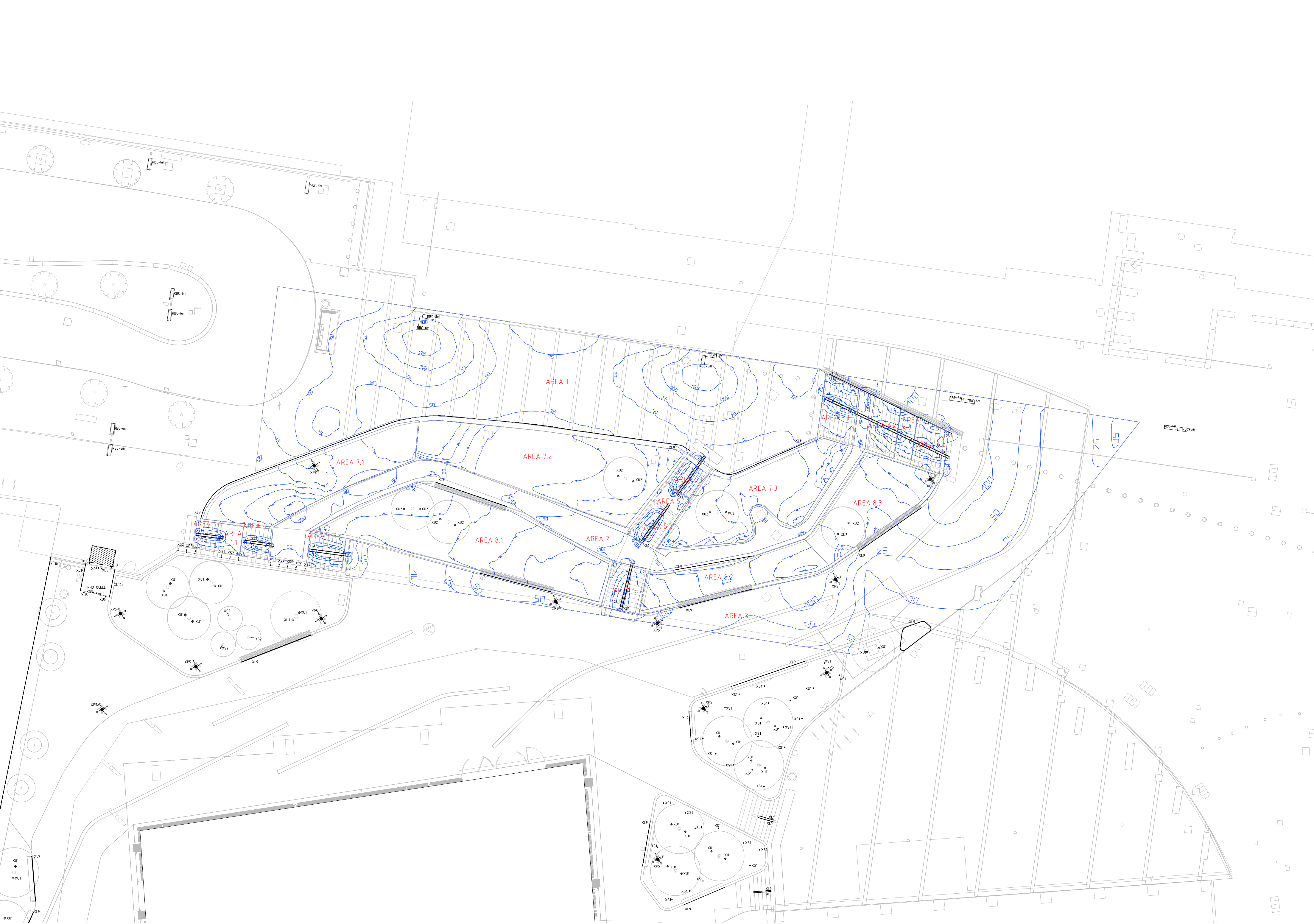
Table 1. Illuminance Calculation Results

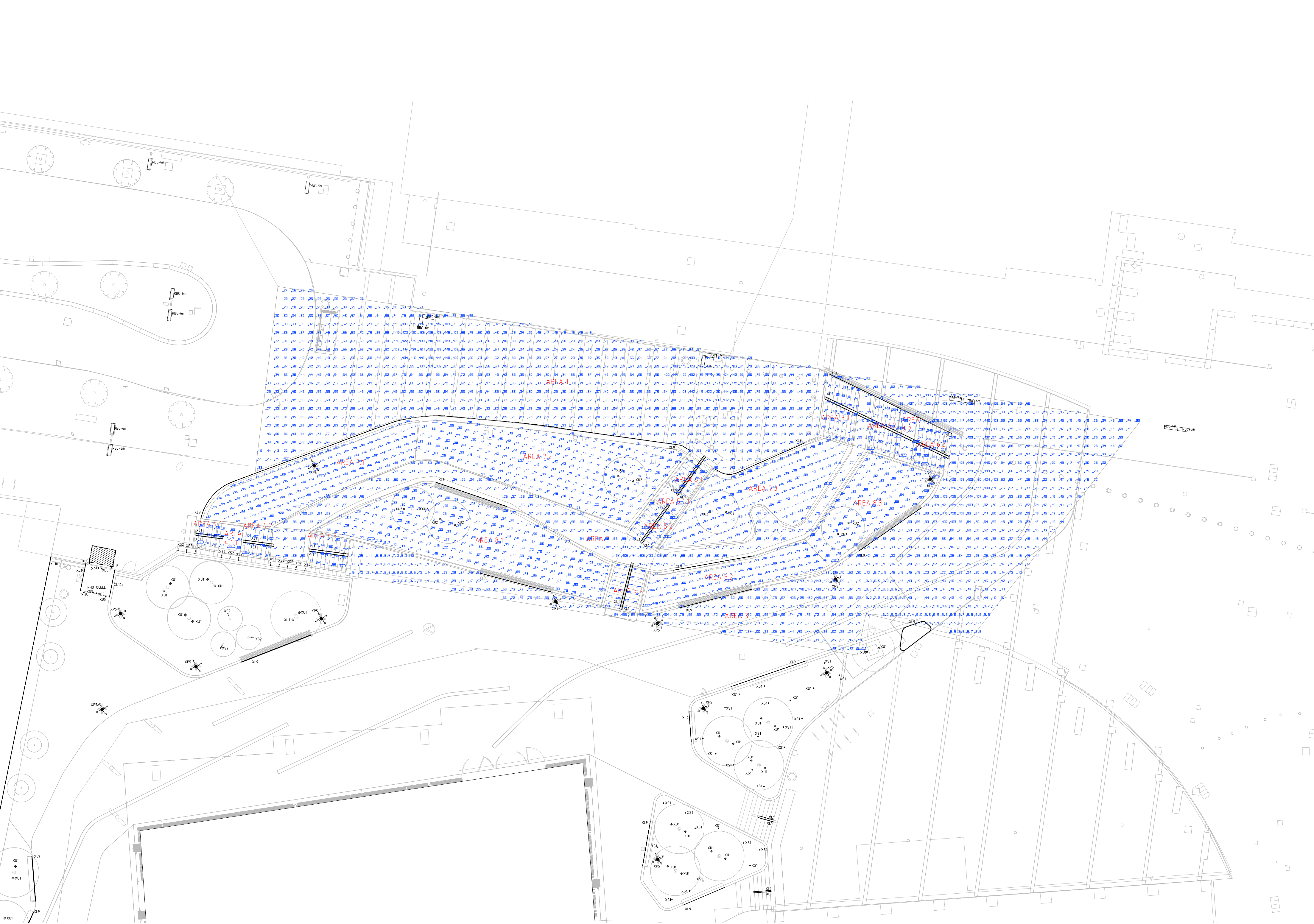
Area	Calculation Set 1. Inclusive of Step Handrail Integral Lighting		Calculation Set 2. Excluding Step Handrail Integral Lighting	
	Average Maintained Illuminance (lux)	Uniformity	Average Maintained Illuminance (lux)	Uniformity
1. Between Pocket Park and Underpass	56.0	0.21	55.2	0.20
2. Pocket Park Path	68.6	0.28	63.1	0.30
3. Upper Circulation	51.7	0.10	49.6	0.09
4.1 Stair, Taxi Side - Lower	109	0.23	18.1	0.69
4.1.1 Stair, Taxi Side – Landing Lower	74.9	0.40	31.2	0.67
4.2 Stair, Taxi Side – Mid	105	0.43	26.1	0.61
4.3 Stair, Taxi Side – Upper	98.6	0.39	27.8	0.38
5.1 Stair, Central - Lower	123	0.53	34.3	0.79
5.1.1 Stair, Central – Landing Lower	71	0.69	36.5	0.84
5.2 Stair, Central – Mid	116	0.40	35.0	0.12
5.3 Stair, Central - Upper	190	0.64	126	0.74
6.1 Stair, Station Side - Lower	114	0.26	36.1	0.40
6.2 Stair, Station Side – Mid	182	0.58	91.6	0.61

Area	Calculation Set 1. Inclusive of Step Handrail Integral Lighting		Calculation Set 2. Excluding Step Handrail Integral Lighting	
	Average Maintained Illuminance (lux)	Uniformity	Average Maintained Illuminance (lux)	Uniformity
6.2.1 Stair, Station Side – Landing Upper	215	0.75	136	0.76
6.3 Stair, Station Side - Upper	219	0.60	116	0.85
7.1 Landscape Lower Part 1	56.9	0.19	56.9	0.19
7.2 Landscape Lower Part 2	18.6	0.56	18.1	0.57
7.3 Landscape Lower Part 3	39.5	0.12	36.8	0.01
8.1 Landscape Upper Part 1	45.5	0.17	45.0	0.15
8.2 Landscape Upper Part 2	65.2	0.48	63.8	0.49
8.3 Landscape Upper Part 3	77.1	0.29	74.3	0.30

In addition, detailed illumination results can be found on the following pages including isolux (lighting contours) and point illuminance lux calculation results, overlaid on an excerpt from the lighting layout drawings to show all these results in context (area numbers refer to the numbers in Table 1 above). Detailed outputs from the Dialux Evo calculation model are also included.

Calculation Results Set 1: Inclusive of step handrail integral lighting





Site 1 (Columns and handrails)

Calculation objects



Site 1 (Columns and handrails)

Calculation objects

Calculation surfaces

Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_o (g_1)$	g_2	Index
2. Pocket Park Path Perpendicular illuminance Height: 2.600 m	68.6 lx	18.9 lx	245 lx	0.28	0.077	CG1
1. Area Between Pocket Park and Mural/Underpass Perpendicular illuminance Height: 0.021 m	56.0 lx	11.6 lx	137 lx	0.21	0.085	CG2
3. Upper Circulation Perpendicular illuminance Height: 4.200 m	51.2 lx	5.11 lx	276 lx	0.100	0.019	CG3
5.3. Stair Central Upper Perpendicular illuminance Height: 3.400 m	190 lx	122 lx	266 lx	0.64	0.46	CG4
5.2. Stair Central Mid Perpendicular illuminance Height: 1.950 m	116 lx	46.3 lx	211 lx	0.40	0.22	CG5
5.1. Stair Central Low Perpendicular illuminance Height: 0.481 m	123 lx	64.7 lx	193 lx	0.53	0.34	CG6
6.3. Stair Station Side Upper Perpendicular illuminance Height: 3.434 m	219 lx	132 lx	285 lx	0.60	0.46	CG7
6.2. Stair Station Side Mid Perpendicular illuminance Height: 2.528 m	182 lx	105 lx	274 lx	0.58	0.38	CG8
6.1. Stair Station Side Low Perpendicular illuminance Height: 1.212 m	114 lx	30.2 lx	277 lx	0.26	0.11	CG9
4.3. Stair Taxi Side Upper Perpendicular illuminance Height: 3.361 m	101 lx	49.7 lx	155 lx	0.49	0.32	CG10
4.2. Stair Taxi Side Mid Perpendicular illuminance Height: 1.943 m	105 lx	45.4 lx	191 lx	0.43	0.24	CG11

Site 1 (Columns and handrails)

Calculation objects

4.1. Stair Taxi Side Low Perpendicular illuminance Height: 0.605 m	109 lx	24.7 lx	237 lx	0.23	0.10	CG12
4.1.1 Stair Taxi Side Landing Lower Perpendicular illuminance Height: 1.300 m	74.9 lx	30.2 lx	260 lx	0.40	0.12	CG13
7.1 Landscape Lower Part 1 Perpendicular illuminance Height: 1.413 m	56.9 lx	10.6 lx	149 lx	0.19	0.071	CG14
7.2 Landscape Lower Part 2 Perpendicular illuminance Height: 1.901 m	18.6 lx	10.5 lx	41.8 lx	0.56	0.25	CG15
7.3 Landscape Lower Part 3 Perpendicular illuminance Height: 1.537 m	39.5 lx	4.55 lx	61.8 lx	0.12	0.074	CG16
8.1 Landscape Upper Part 1 Perpendicular illuminance Height: 3.432 m	45.5 lx	7.92 lx	119 lx	0.17	0.067	CG17
8.2 Landscape Upper Part 2 Perpendicular illuminance Height: 3.188 m	65.2 lx	31.4 lx	134 lx	0.48	0.23	CG18
8.3 Landscape Upper Part 3 Perpendicular illuminance Height: 3.307 m	77.1 lx	22.7 lx	142 lx	0.29	0.16	CG19
5.1.1 Stair Central Landing Lower Perpendicular illuminance Height: 1.300 m	71.0 lx	48.7 lx	176 lx	0.69	0.28	CG20
6.2.1 Stair Station Side Landing upper Perpendicular illuminance Height: 3.000 m	215 lx	161 lx	294 lx	0.75	0.55	CG21

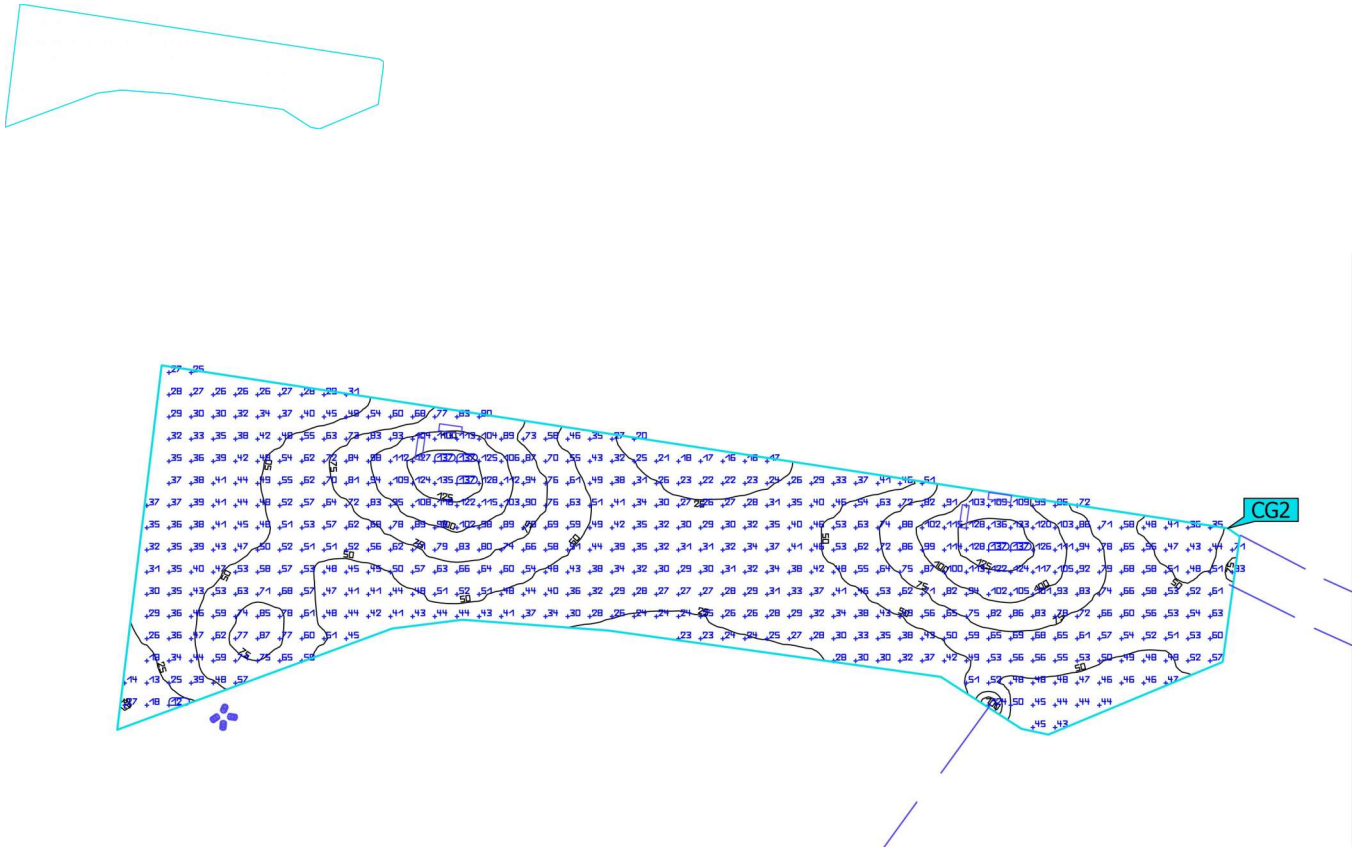
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

1. Area Between Pocket Park and Mural/Underpass



Properties	$\bar{E}$	E_{min}	E_{max}	$U_0 (g_1)$	g_2	Index
1. Area Between Pocket Park and Mural/Underpass	56.0 lx	11.6 lx	137 lx	0.21	0.085	CG2
Perpendicular illuminance						
Height: 0.021 m						

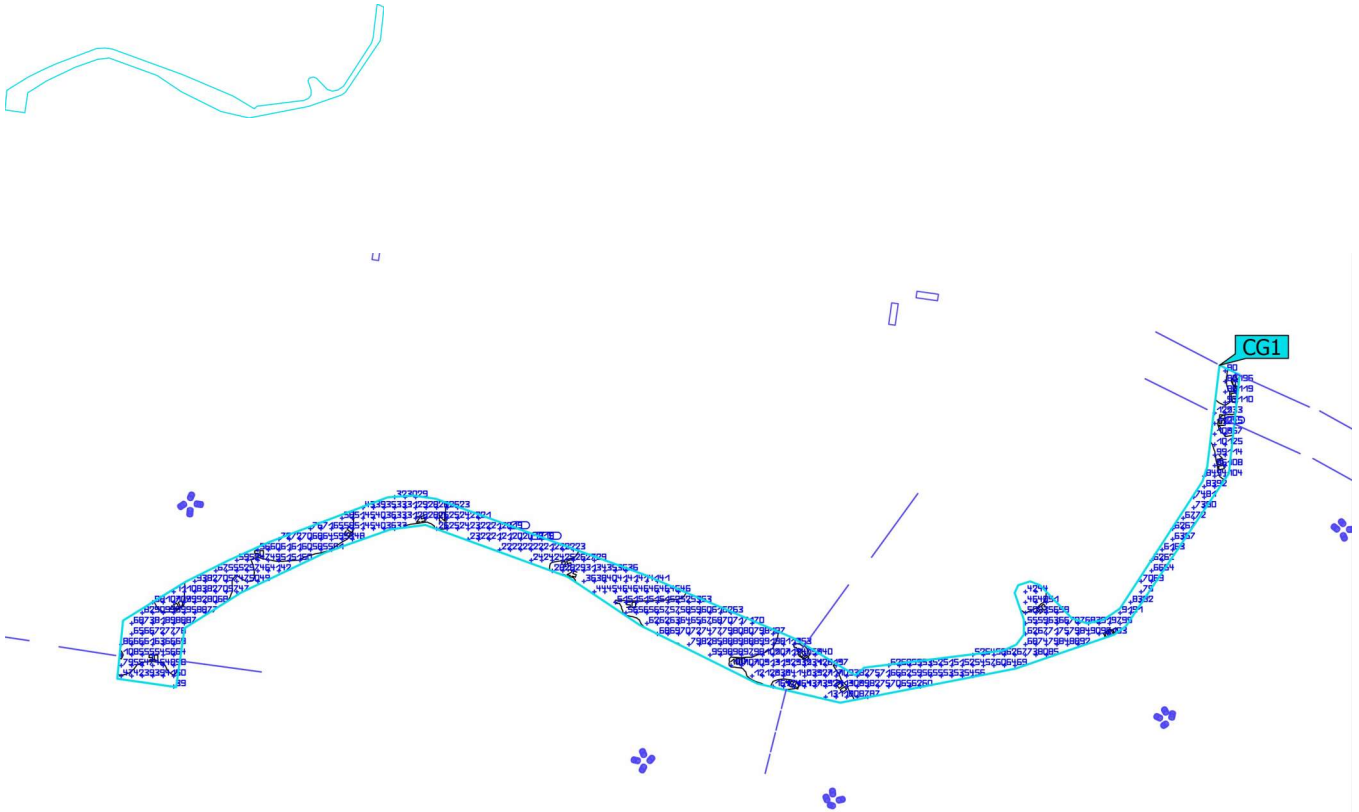
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

2. Pocket Park Path



Properties	$\bar{E}$	E_{min}	E_{max}	$U_0 (g_1)$	g_2	Index
2. Pocket Park Path Perpendicular illuminance Height: 2.600 m	68.6 lx	18.9 lx	245 lx	0.28	0.077	CG1

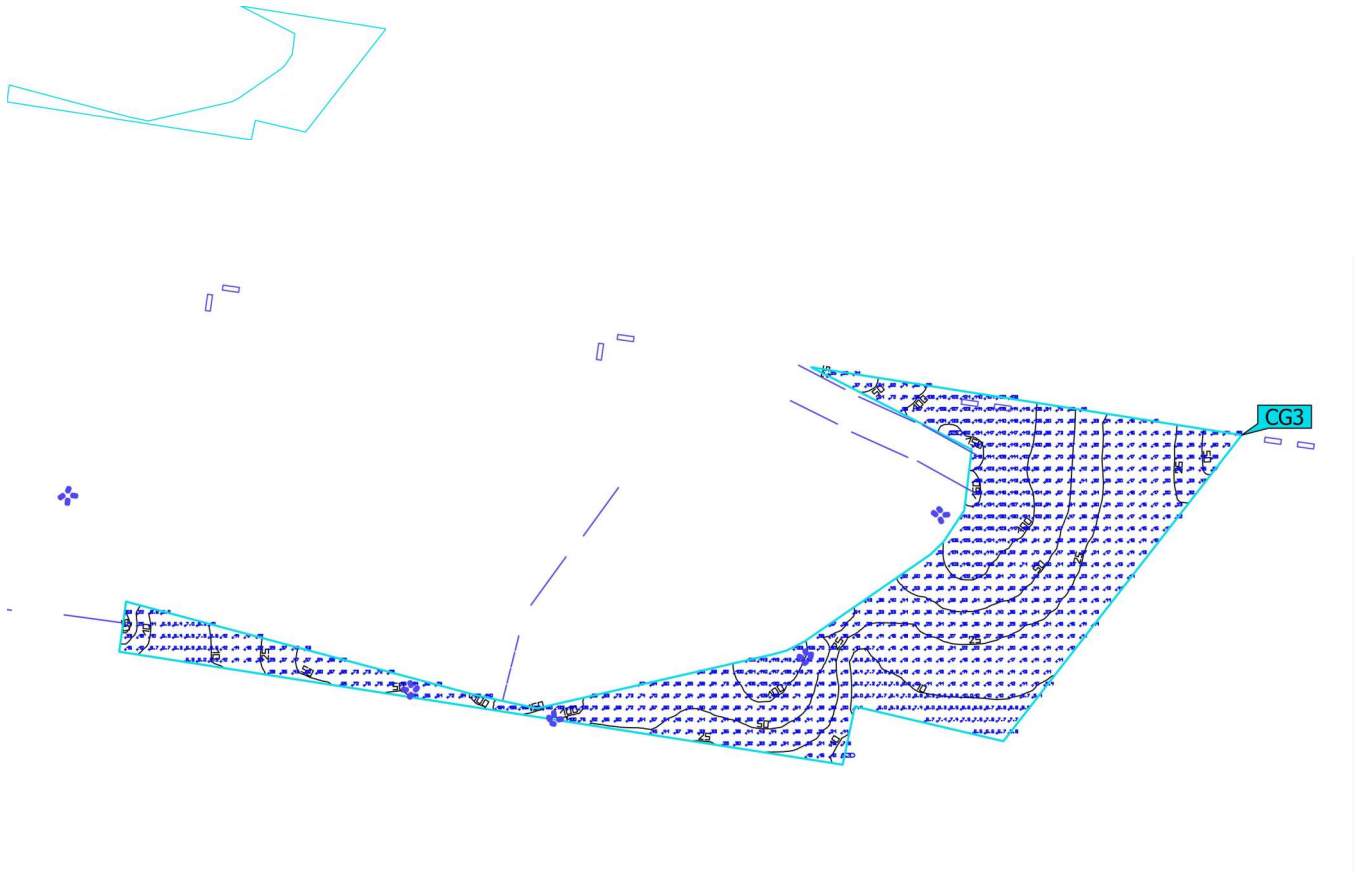
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

3. Upper Circulation



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
3. Upper Circulation Perpendicular illuminance Height: 4.200 m	51.2 lx	5.11 lx	276 lx	0.100	0.019	CG3

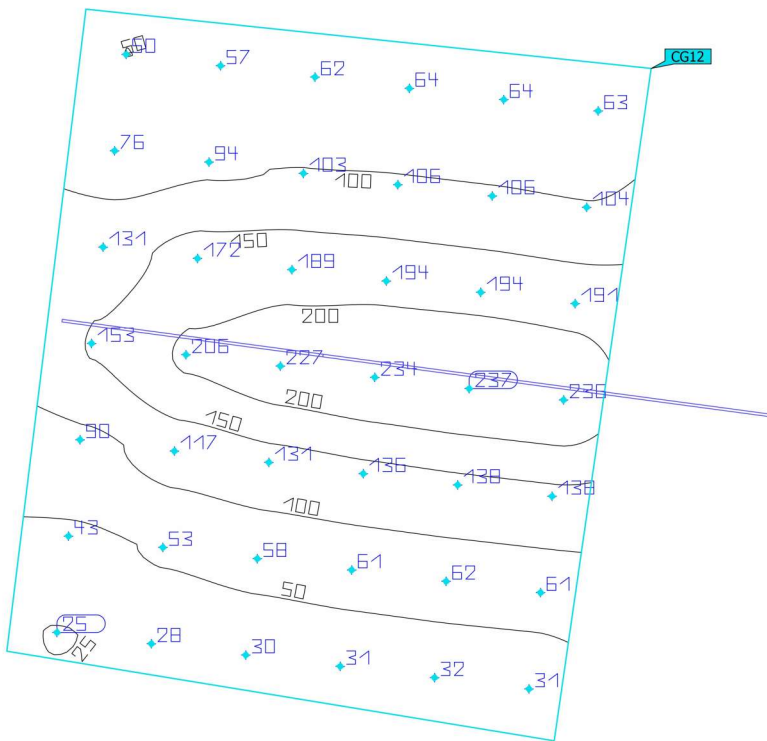
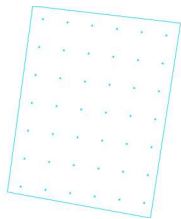
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

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Site 1 (Columns and handrails)

4.1. Stair Taxi Side Low



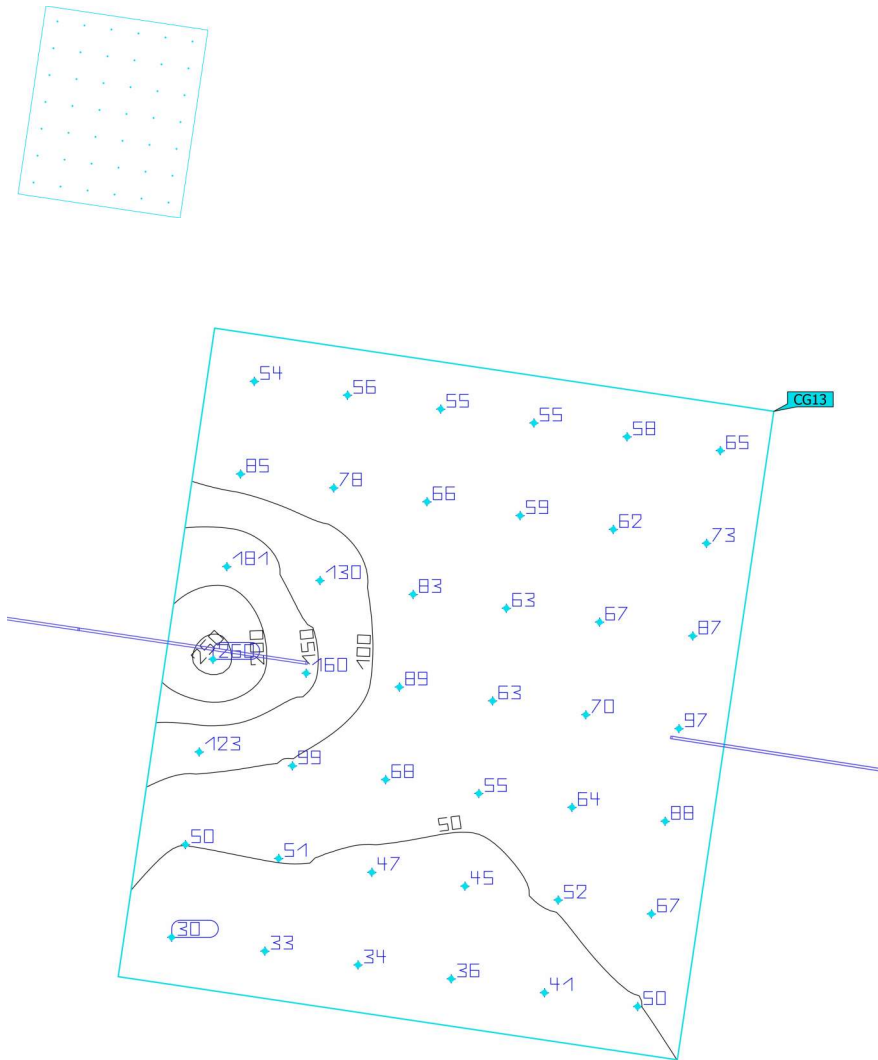
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
4.1. Stair Taxi Side Low Perpendicular illuminance Height: 0.605 m	109 lx	24.7 lx	237 lx	0.23	0.10	CG12

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

4.1.1 Stair Taxi Side Landing Lower



Properties	$\bar{E}$	E_{min}	E_{max}	$U_0 (g_1)$	g_2	Index
4.1.1 Stair Taxi Side Landing Lower Perpendicular illuminance Height: 1.300 m	74.9 lx	30.2 lx	260 lx	0.40	0.12	CG13

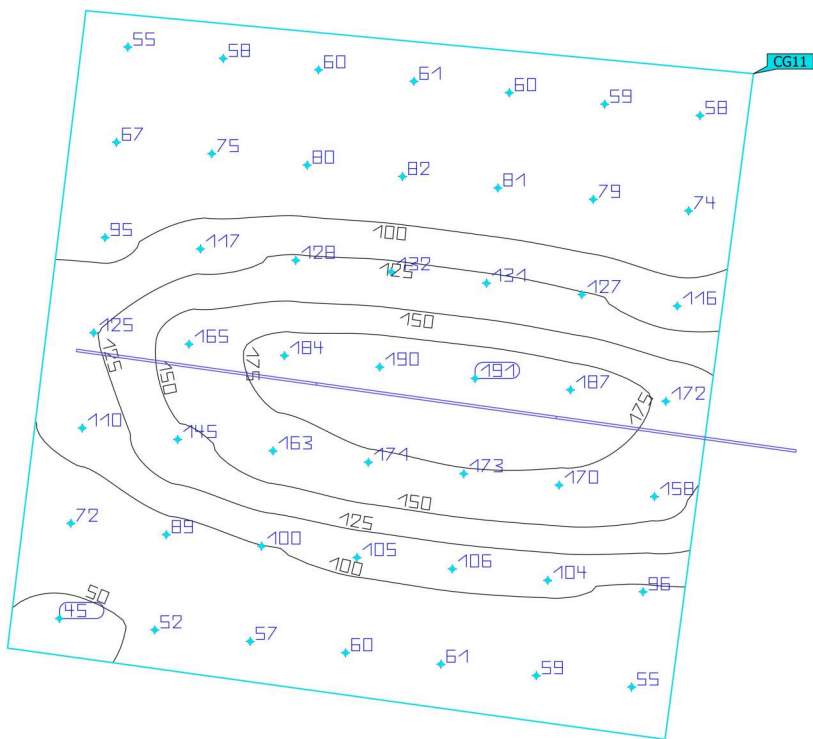
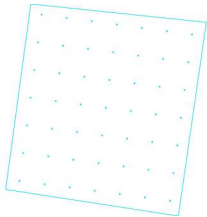
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

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Site 1 (Columns and handrails)

4.2. Stair Taxi Side Mid



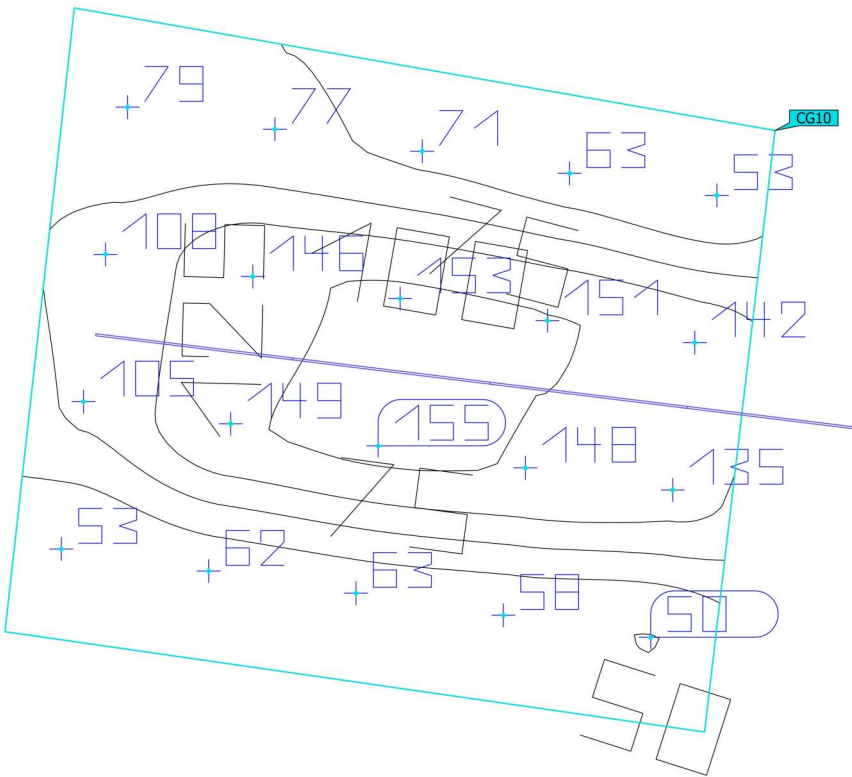
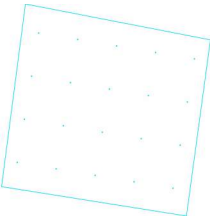
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
4.2. Stair Taxi Side Mid Perpendicular illuminance Height: 1.943 m	105 lx	45.4 lx	191 lx	0.43	0.24	CG11

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
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Site 1 (Columns and handrails)

4.3. Stair Taxi Side Upper

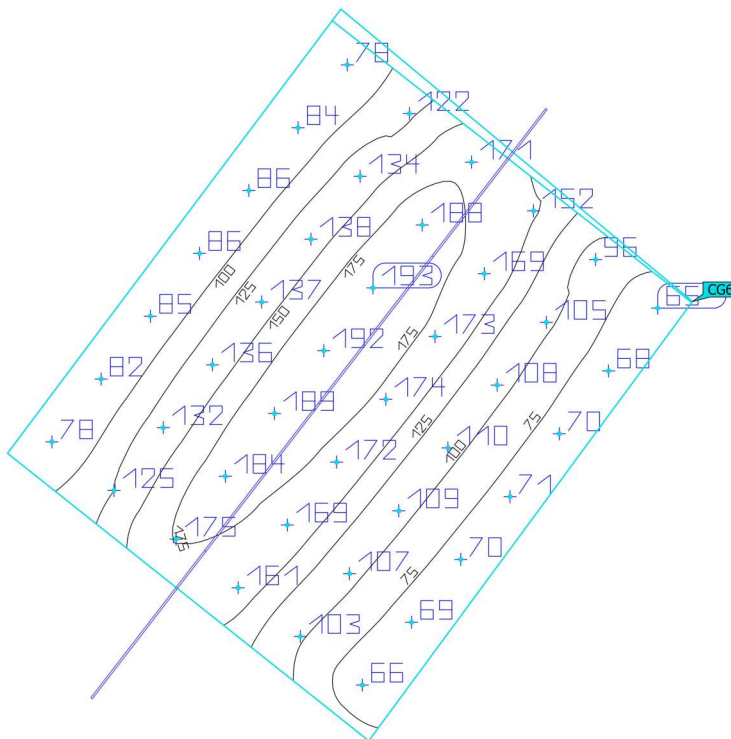
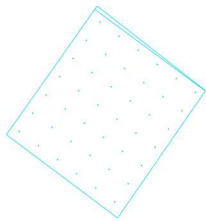


Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
4.3. Stair Taxi Side Upper Perpendicular illuminance Height: 3.361 m	101 lx	49.7 lx	155 lx	0.49	0.32	CG10

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

5.1. Stair Central Low

Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
5.1. Stair Central Low Perpendicular illuminance Height: 0.481 m	123 lx	64.7 lx	193 lx	0.53	0.34	CG6

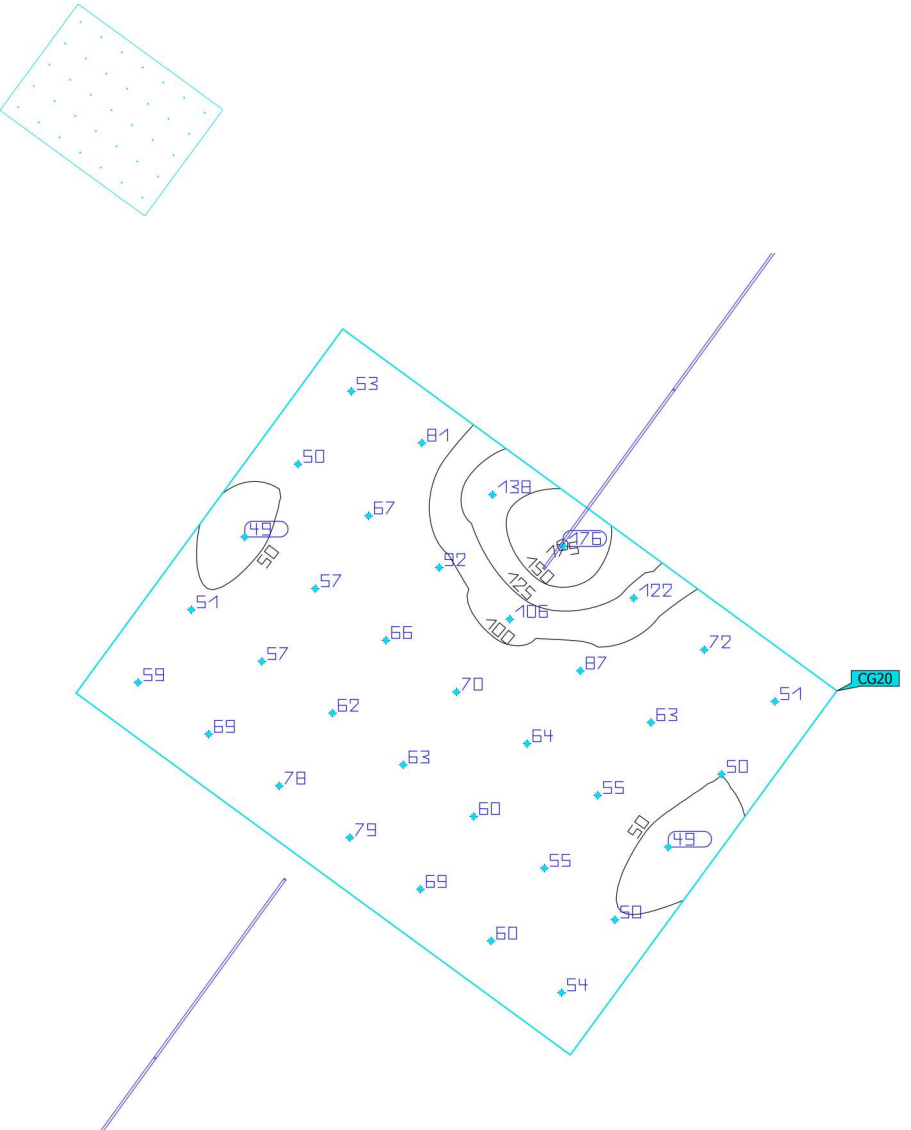
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

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Site 1 (Columns and handrails)

5.1.1 Stair Central Landing Lower



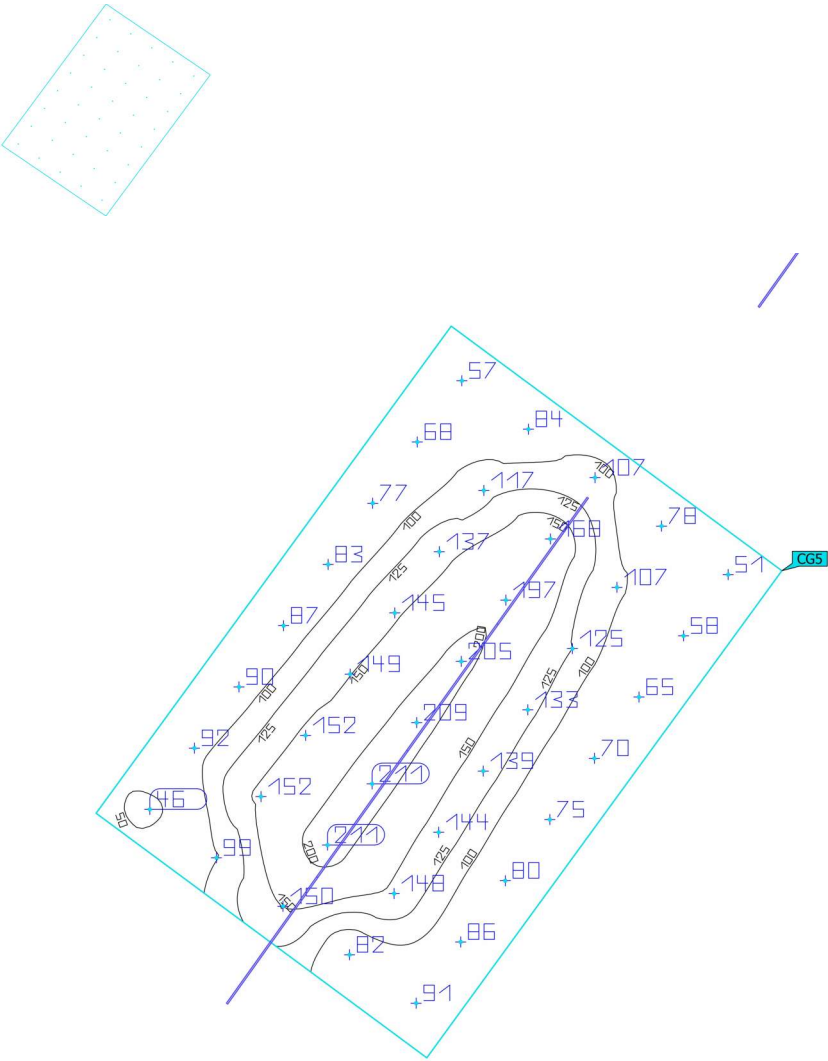
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
5.1.1 Stair Central Landing Lower Perpendicular illuminance Height: 1.300 m	71.0 lx	48.7 lx	176 lx	0.69	0.28	CG20

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
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Site 1 (Columns and handrails)

5.2. Stair Central Mid

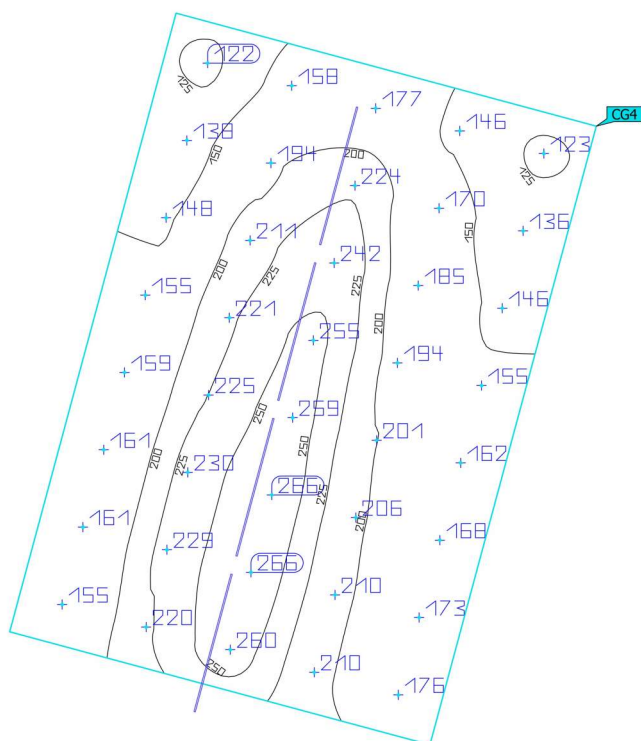


Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
5.2. Stair Central Mid Perpendicular illuminance Height: 1.950 m	116 lx	46.3 lx	211 lx	0.40	0.22	CG5

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

5.3. Stair Central Upper

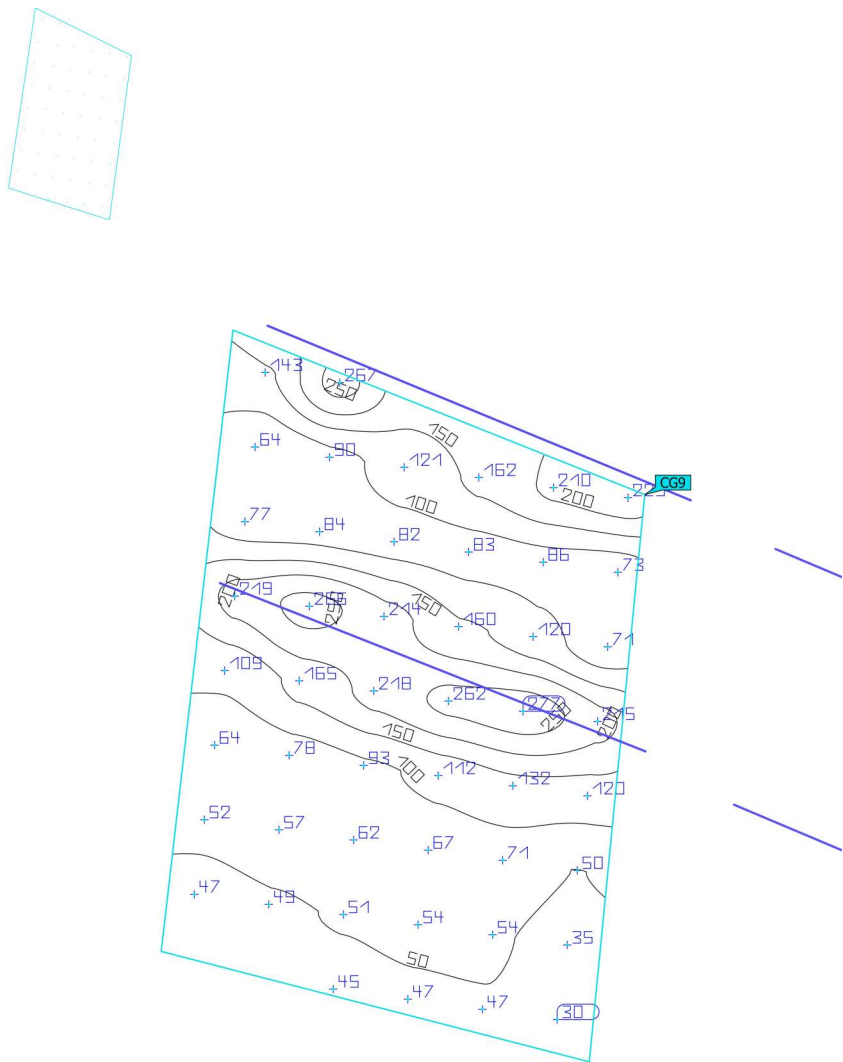


Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
5.3. Stair Central Upper Perpendicular illuminance Height: 3.400 m	190 lx	122 lx	266 lx	0.64	0.46	CG4

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

6.1. Stair Station Side Low



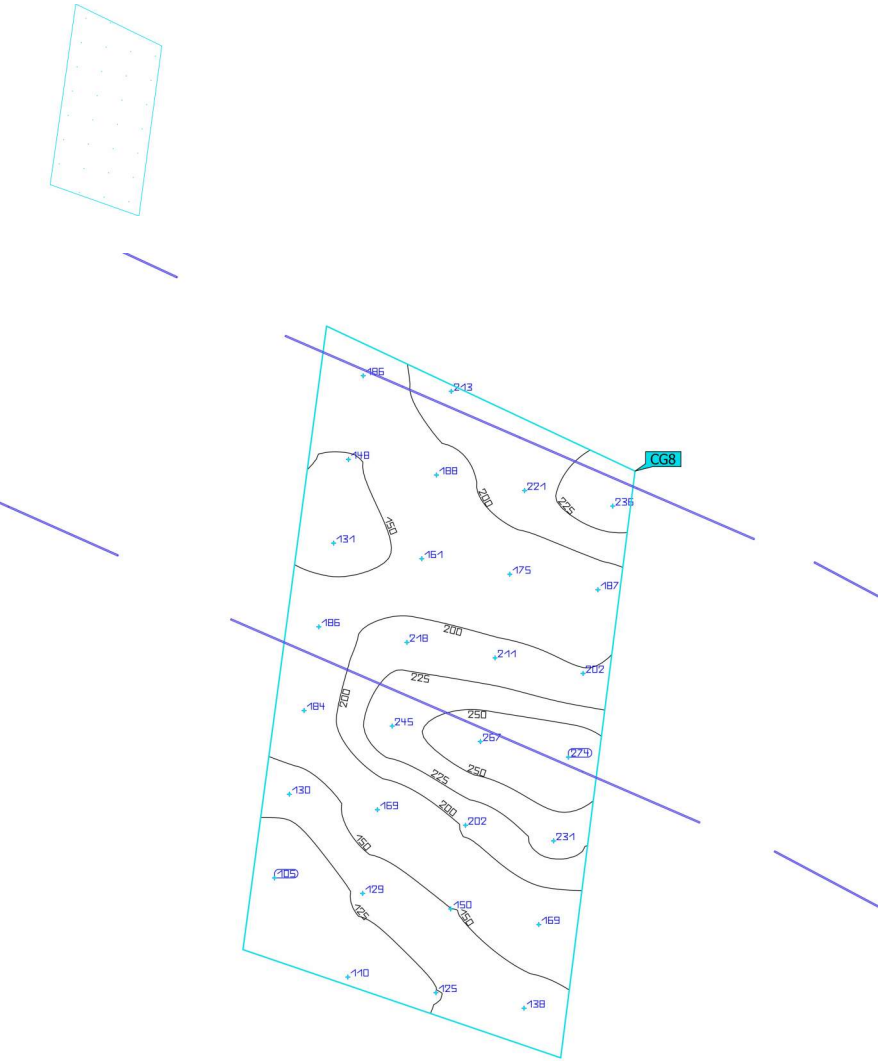
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
6.1. Stair Station Side Low Perpendicular illuminance Height: 1.212 m	114 lx	30.2 lx	277 lx	0.26	0.11	CG9

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

6.2. Stair Station Side Mid



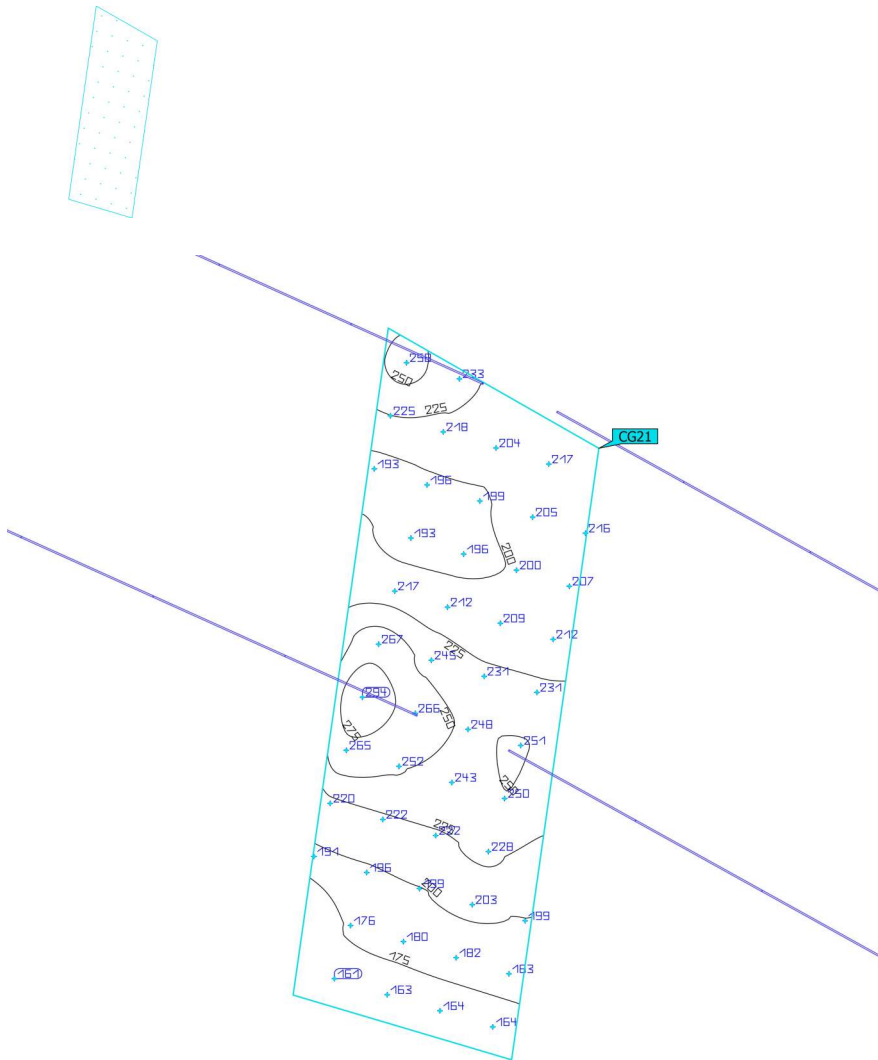
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
6.2. Stair Station Side Mid Perpendicular illuminance Height: 2.528 m	182 lx	105 lx	274 lx	0.58	0.38	CG8

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

6.2.1 Stair Station Side Landing upper



Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_0 (g_1)$	g_2	Index
6.2.1 Stair Station Side Landing upper Perpendicular illuminance Height: 3.000 m	215 lx	161 lx	294 lx	0.75	0.55	CG21

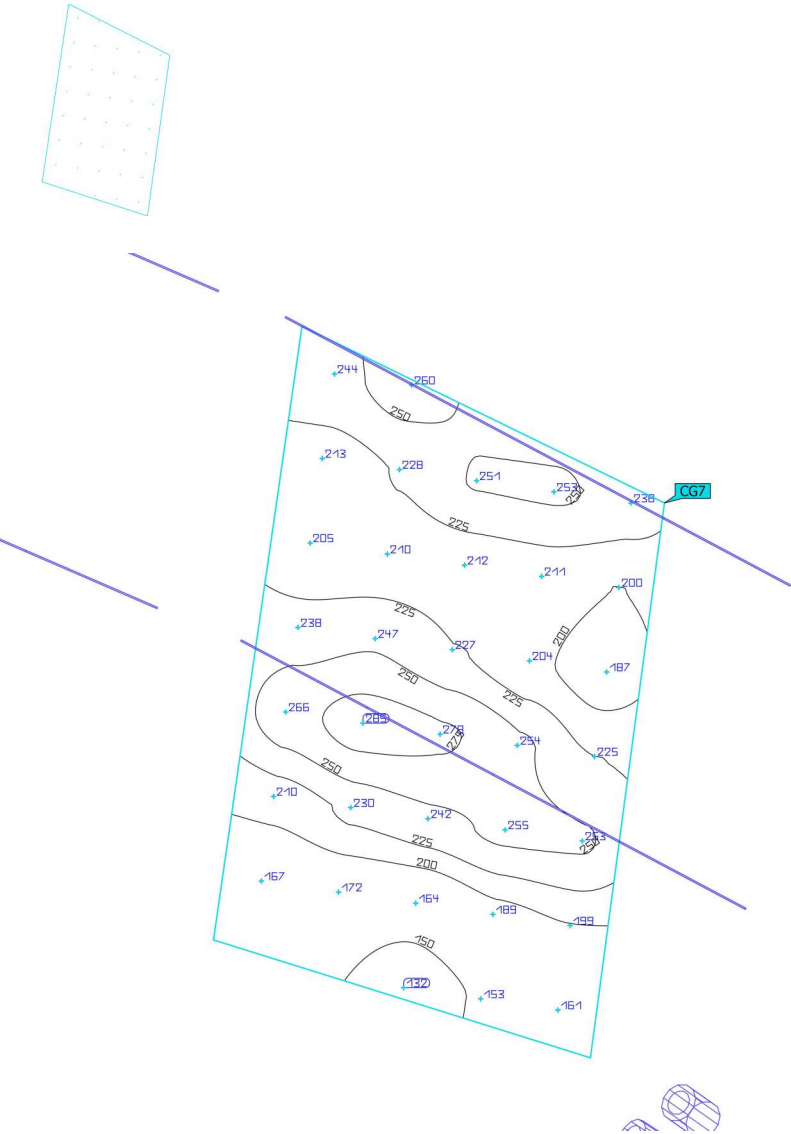
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

6.3. Stair Station Side Upper

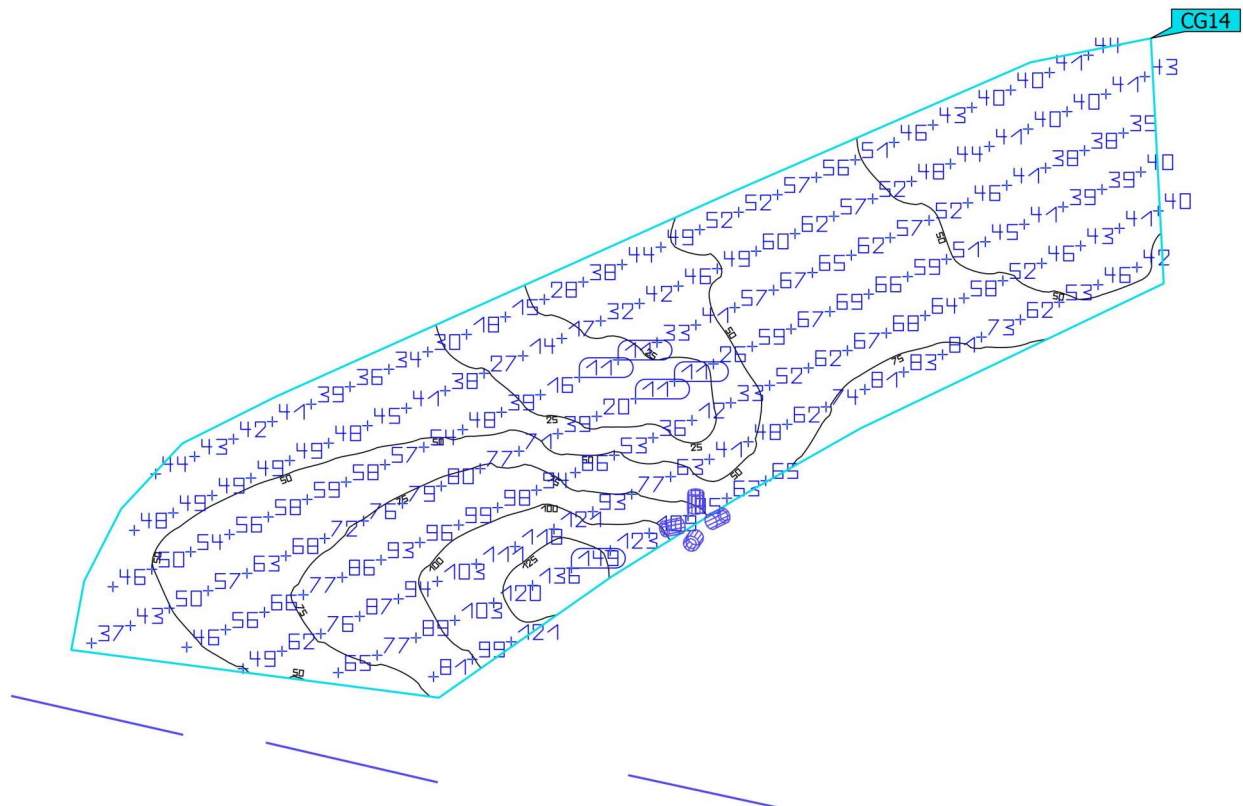
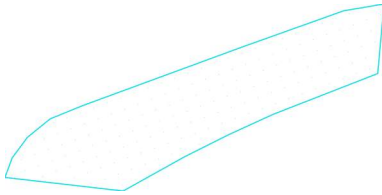


Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
6.3. Stair Station Side Upper Perpendicular illuminance Height: 3.434 m	219 lx	132 lx	285 lx	0.60	0.46	CG7

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

7.1 Landscape Lower Part 1

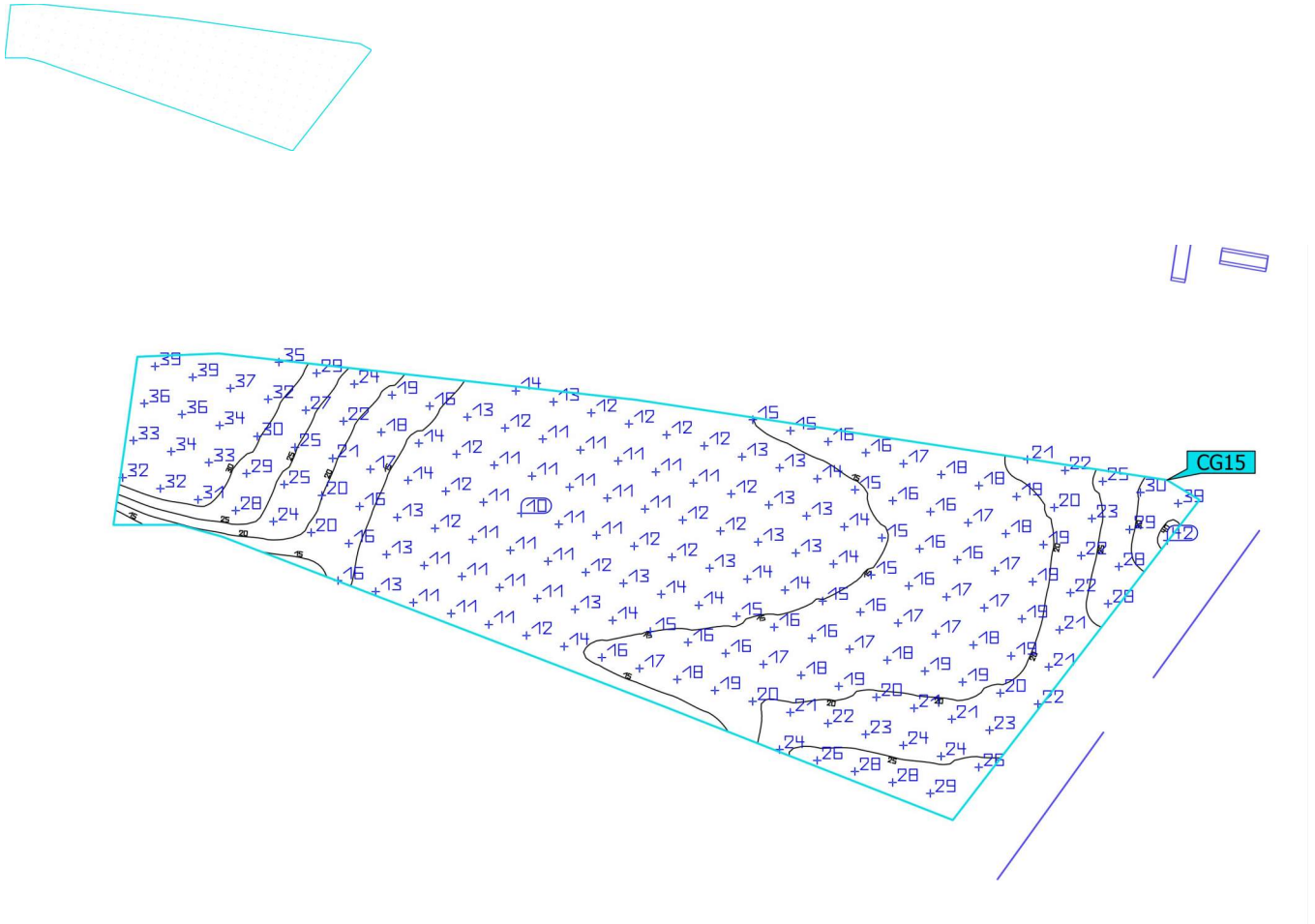
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
7.1 Landscape Lower Part 1 Perpendicular illuminance Height: 1.413 m	56.9 lx	10.6 lx	149 lx	0.19	0.071	CG14

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

7.2 Landscape Lower Part 2

Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
7.2 Landscape Lower Part 2 Perpendicular illuminance Height: 1.901 m	18.6 lx	10.5 lx	41.8 lx	0.56	0.25	CG15

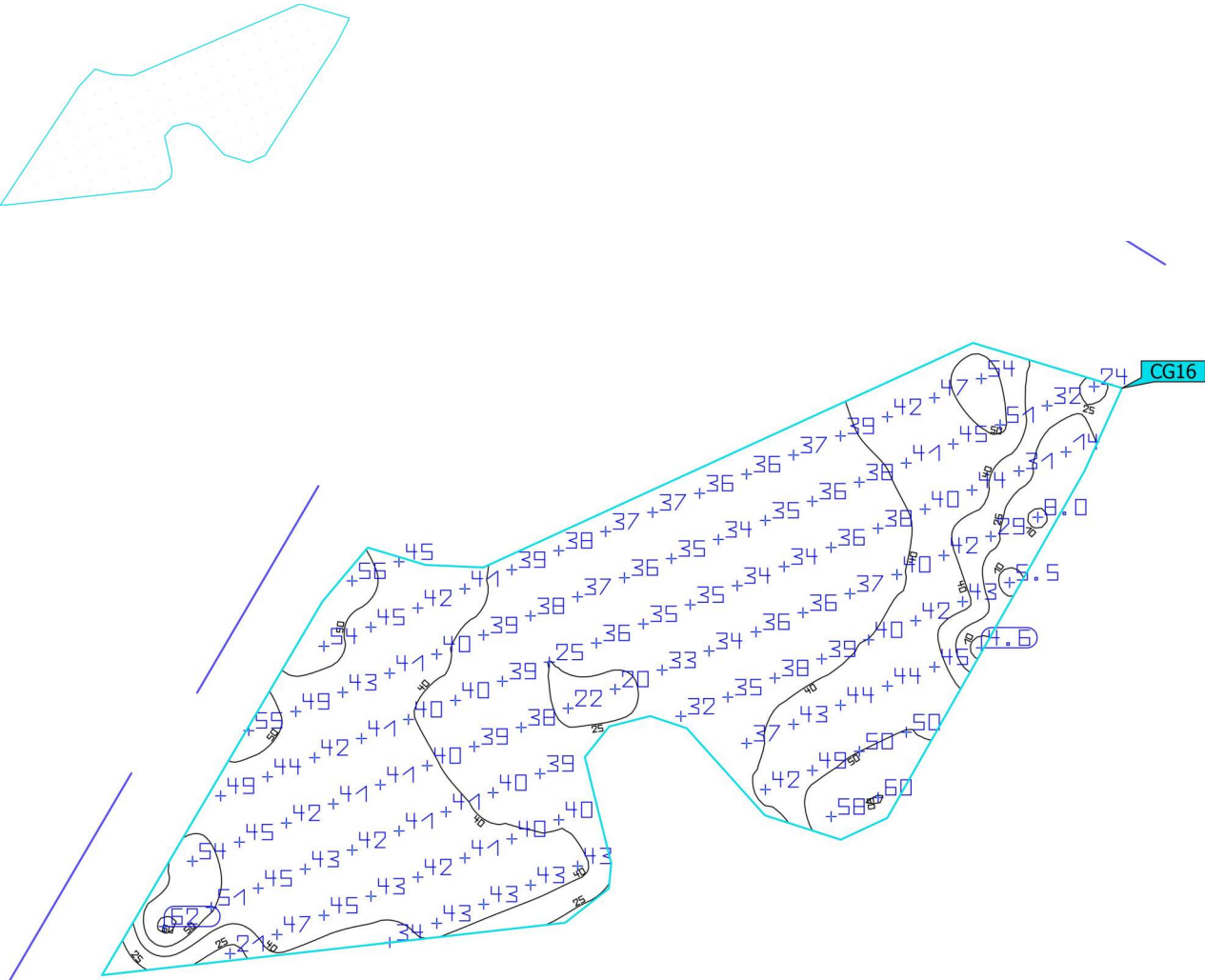
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

7.3 Landscape Lower Part 3



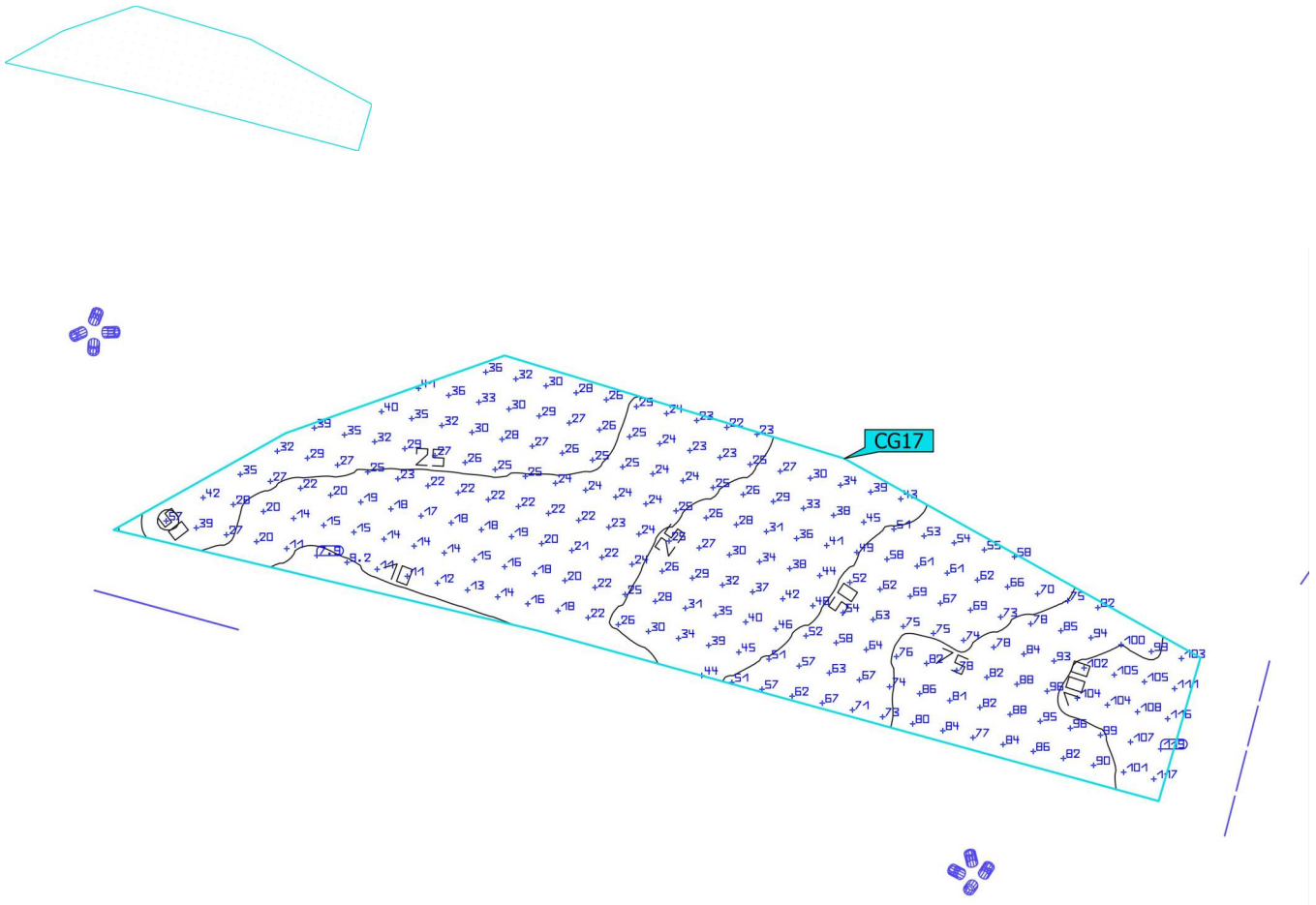
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
7.3 Landscape Lower Part 3 Perpendicular illuminance Height: 1.537 m	39.5 lx	4.55 lx	61.8 lx	0.12	0.074	CG16

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

8.1 Landscape Upper Part 1



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
8.1 Landscape Upper Part 1 Perpendicular illuminance Height: 3.432 m	45.5 lx	7.92 lx	119 lx	0.17	0.067	CG17

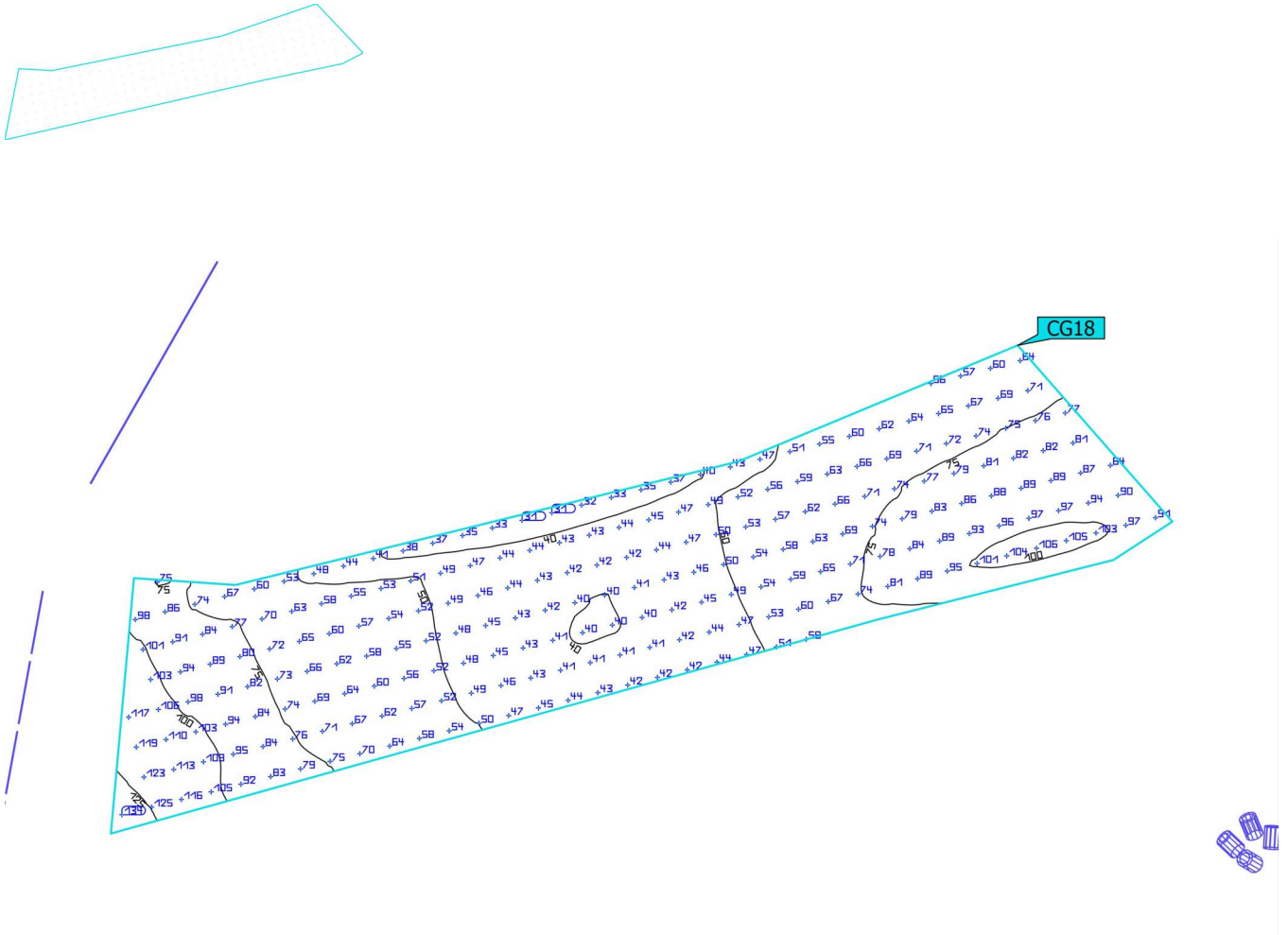
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

8.2 Landscape Upper Part 2



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
8.2 Landscape Upper Part 2	65.2 lx	31.4 lx	134 lx	0.48	0.23	CG18
Perpendicular illuminance						
Height: 3.188 m						

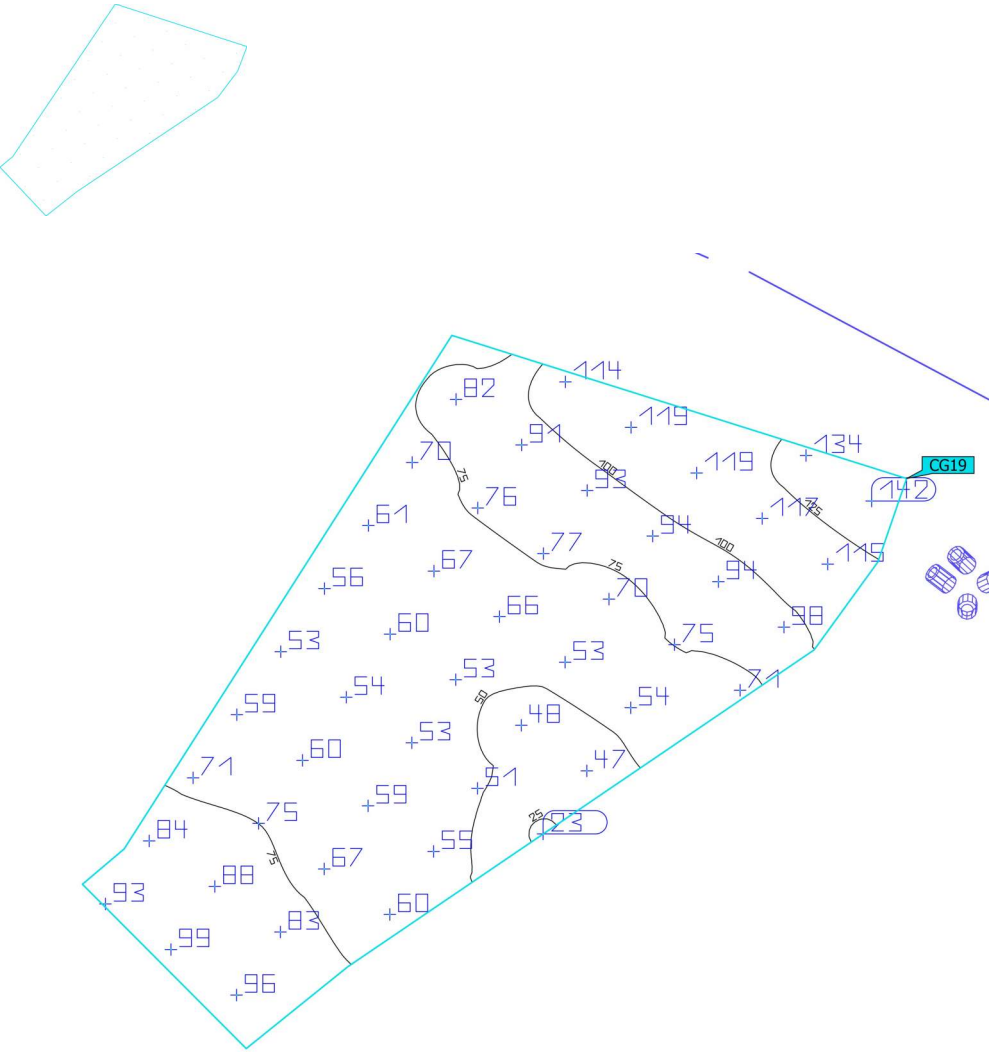
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns and handrails)

8.3 Landscape Upper Part 3

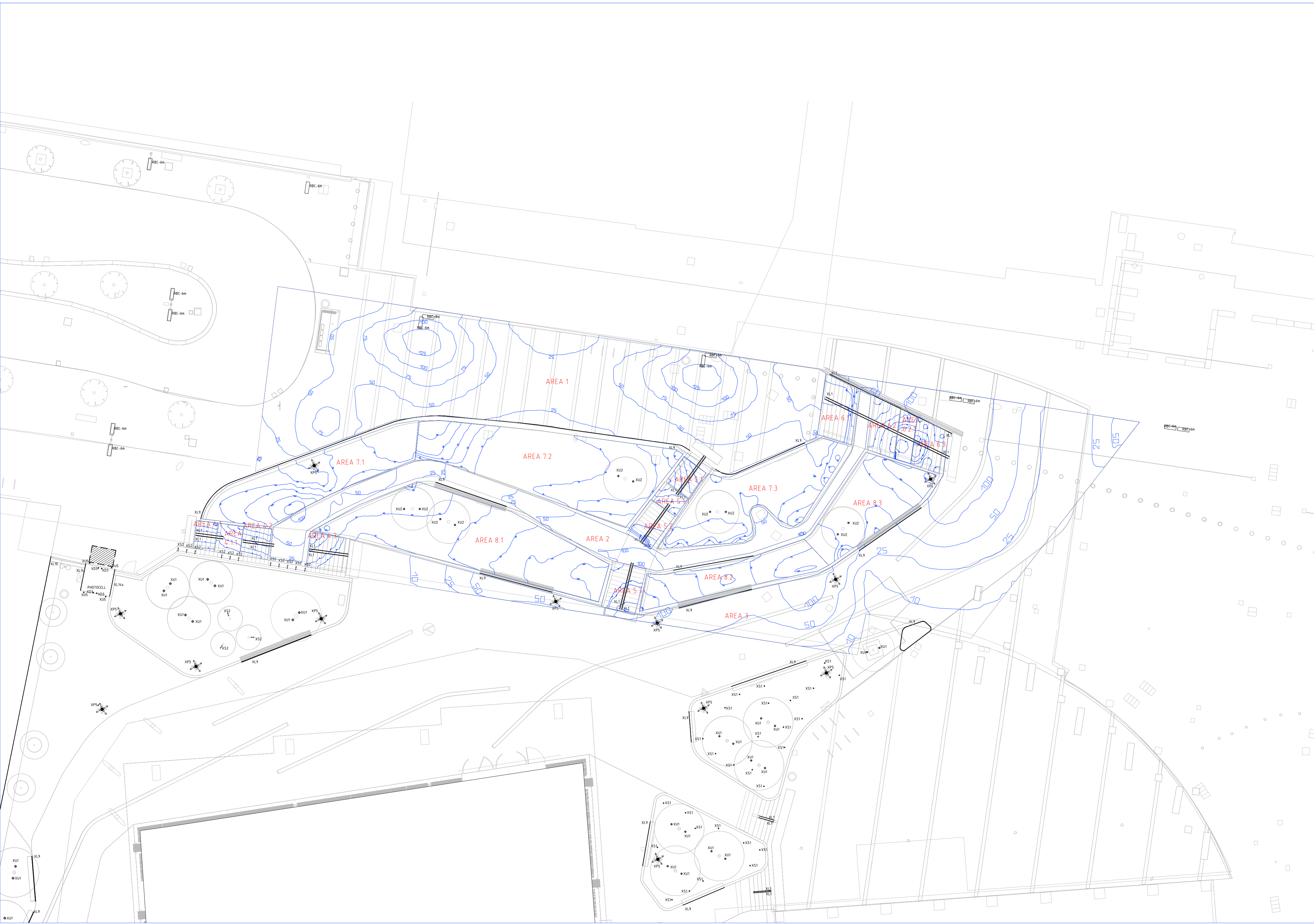


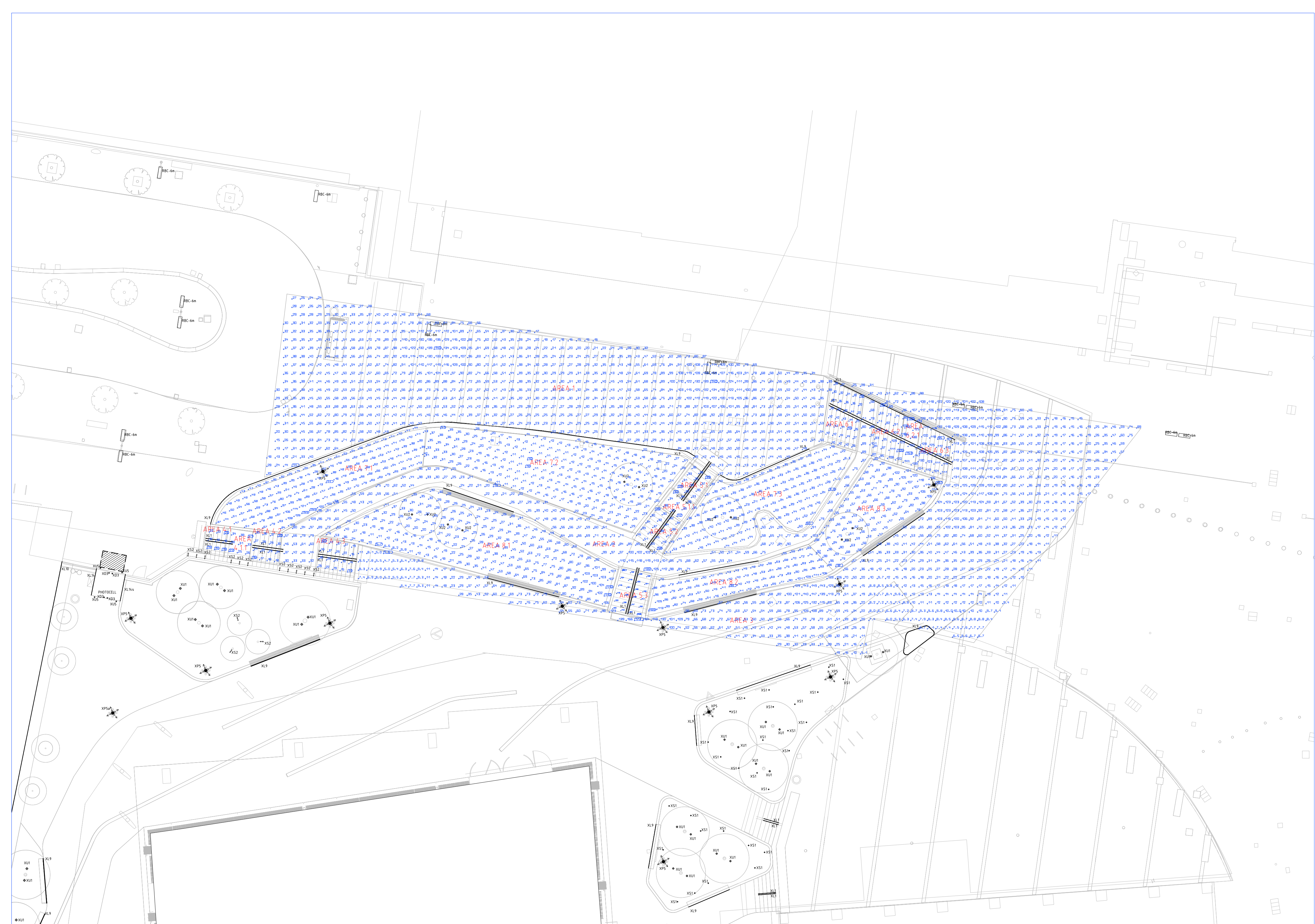
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
8.3 Landscape Upper Part 3 Perpendicular illuminance Height: 3.307 m	77.1 lx	22.7 lx	142 lx	0.29	0.16	CG19

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Calculation Results Set 2: Excluding step handrail integral lighting





Site 1 (Columns only (excluding handrail))

Calculation objects



Site 1 (Columns only (excluding handrail))

Calculation objects

Calculation surfaces

Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_0 (g_1)$	g_2	Index
2. Pocket Park Path Perpendicular illuminance Height: 2.600 m	63.1 lx	18.7 lx	129 lx	0.30	0.14	CG1
1. Area Between Pocket Park and Mural/Underpass Perpendicular illuminance Height: 0.021 m	55.2 lx	10.9 lx	137 lx	0.20	0.080	CG2
3. Upper Circulation Perpendicular illuminance Height: 4.200 m	49.5 lx	4.63 lx	173 lx	0.094	0.027	CG3
5.3. Stair Central Upper Perpendicular illuminance Height: 3.400 m	126 lx	93.6 lx	161 lx	0.74	0.58	CG4
5.2. Stair Central Mid Perpendicular illuminance Height: 1.950 m	35.0 lx	4.23 lx	61.5 lx	0.12	0.069	CG5
5.1. Stair Central Low Perpendicular illuminance Height: 0.481 m	34.3 lx	27.1 lx	39.9 lx	0.79	0.68	CG6
6.3. Stair Station Side Upper Perpendicular illuminance Height: 3.434 m	116 lx	98.2 lx	133 lx	0.85	0.74	CG7
6.2. Stair Station Side Mid Perpendicular illuminance Height: 2.528 m	91.6 lx	55.8 lx	124 lx	0.61	0.45	CG8
6.1. Stair Station Side Low Perpendicular illuminance Height: 1.212 m	36.1 lx	14.6 lx	44.8 lx	0.40	0.33	CG9
4.3. Stair Taxi Side Upper Perpendicular illuminance Height: 3.361 m	27.7 lx	11.4 lx	59.6 lx	0.41	0.19	CG10
4.2. Stair Taxi Side Mid Perpendicular illuminance Height: 1.943 m	26.1 lx	15.9 lx	39.9 lx	0.61	0.40	CG11

Site 1 (Columns only (excluding handrail))

Calculation objects

4.1. Stair Taxi Side Low Perpendicular illuminance Height: 0.605 m	18.1 lx	12.4 lx	25.3 lx	0.69	0.49	CG12
4.1.1 Stair Taxi Side Landing Lower Perpendicular illuminance Height: 1.300 m	31.2 lx	20.8 lx	46.1 lx	0.67	0.45	CG13
7.1 Landscape Lower Part 1 Perpendicular illuminance Height: 1.413 m	56.9 lx	10.6 lx	149 lx	0.19	0.071	CG14
7.2 Landscape Lower Part 2 Perpendicular illuminance Height: 1.901 m	18.1 lx	10.4 lx	39.3 lx	0.57	0.26	CG15
7.3 Landscape Lower Part 3 Perpendicular illuminance Height: 1.537 m	36.8 lx	3.60 lx	59.2 lx	0.098	0.061	CG16
8.1 Landscape Upper Part 1 Perpendicular illuminance Height: 3.432 m	45.0 lx	6.68 lx	110 lx	0.15	0.061	CG17
8.2 Landscape Upper Part 2 Perpendicular illuminance Height: 3.188 m	63.8 lx	31.4 lx	126 lx	0.49	0.25	CG18
8.3 Landscape Upper Part 3 Perpendicular illuminance Height: 3.307 m	74.3 lx	22.1 lx	130 lx	0.30	0.17	CG19
5.1.1 Stair Central Landing Lower Perpendicular illuminance Height: 1.300 m	36.5 lx	30.7 lx	42.6 lx	0.84	0.72	CG20
6.2.1 Stair Station Side Landing upper Perpendicular illuminance Height: 3.000 m	136 lx	104 lx	154 lx	0.76	0.68	CG21

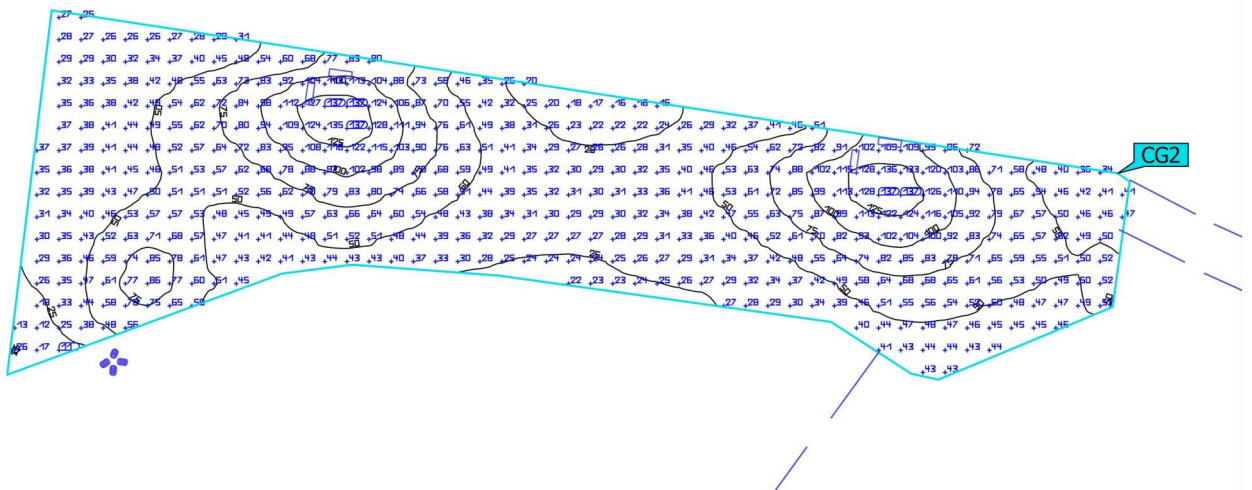
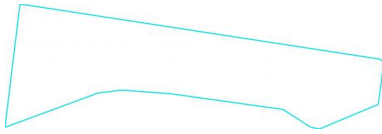
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

1. Area Between Pocket Park and Mural/Underpass



Properties	$\bar{E}$	E_{min}	E_{max}	$U_0 (g_1)$	g_2	Index
1. Area Between Pocket Park and Mural/Underpass	55.2 lx	10.9 lx	137 lx	0.20	0.080	CG2
Perpendicular illuminance						
Height: 0.021 m						

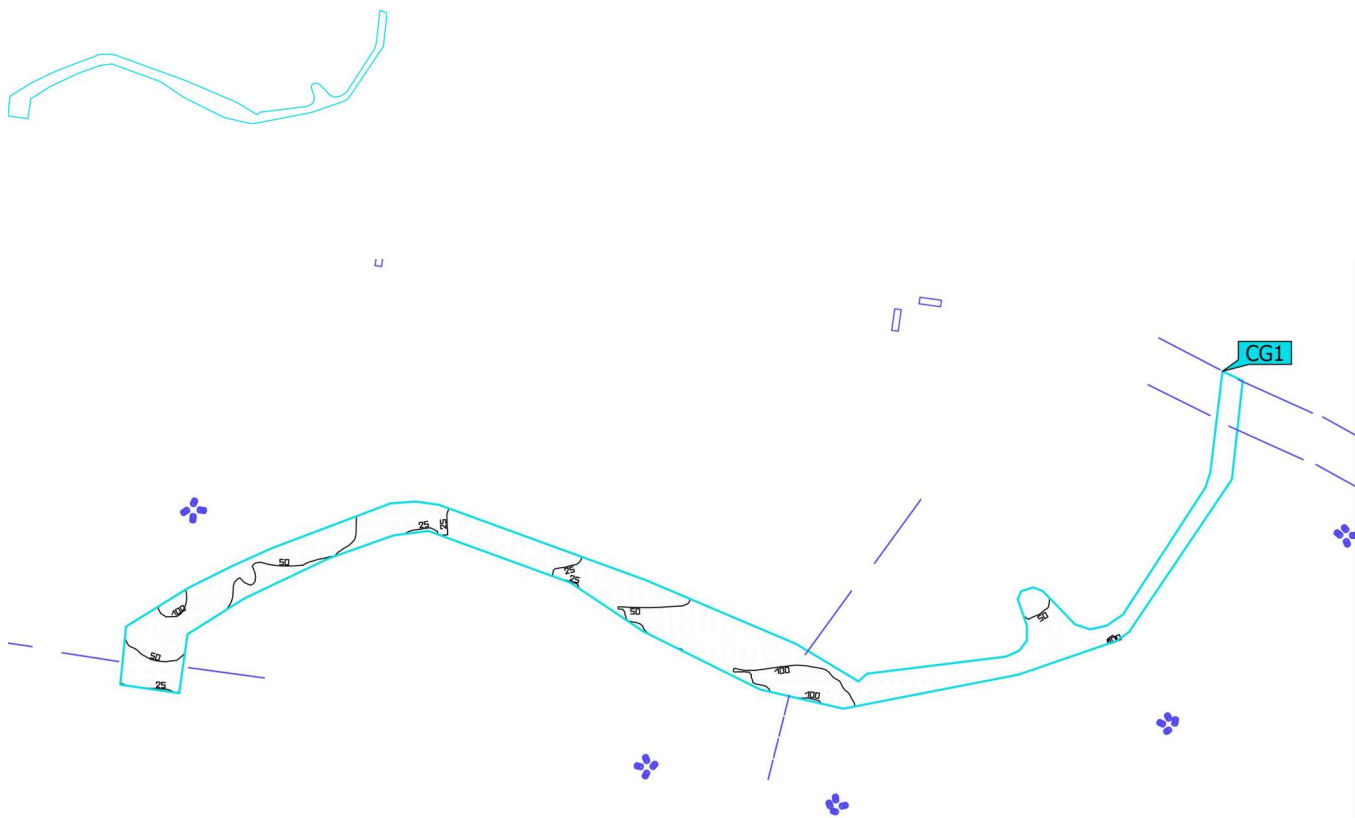
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

2. Pocket Park Path



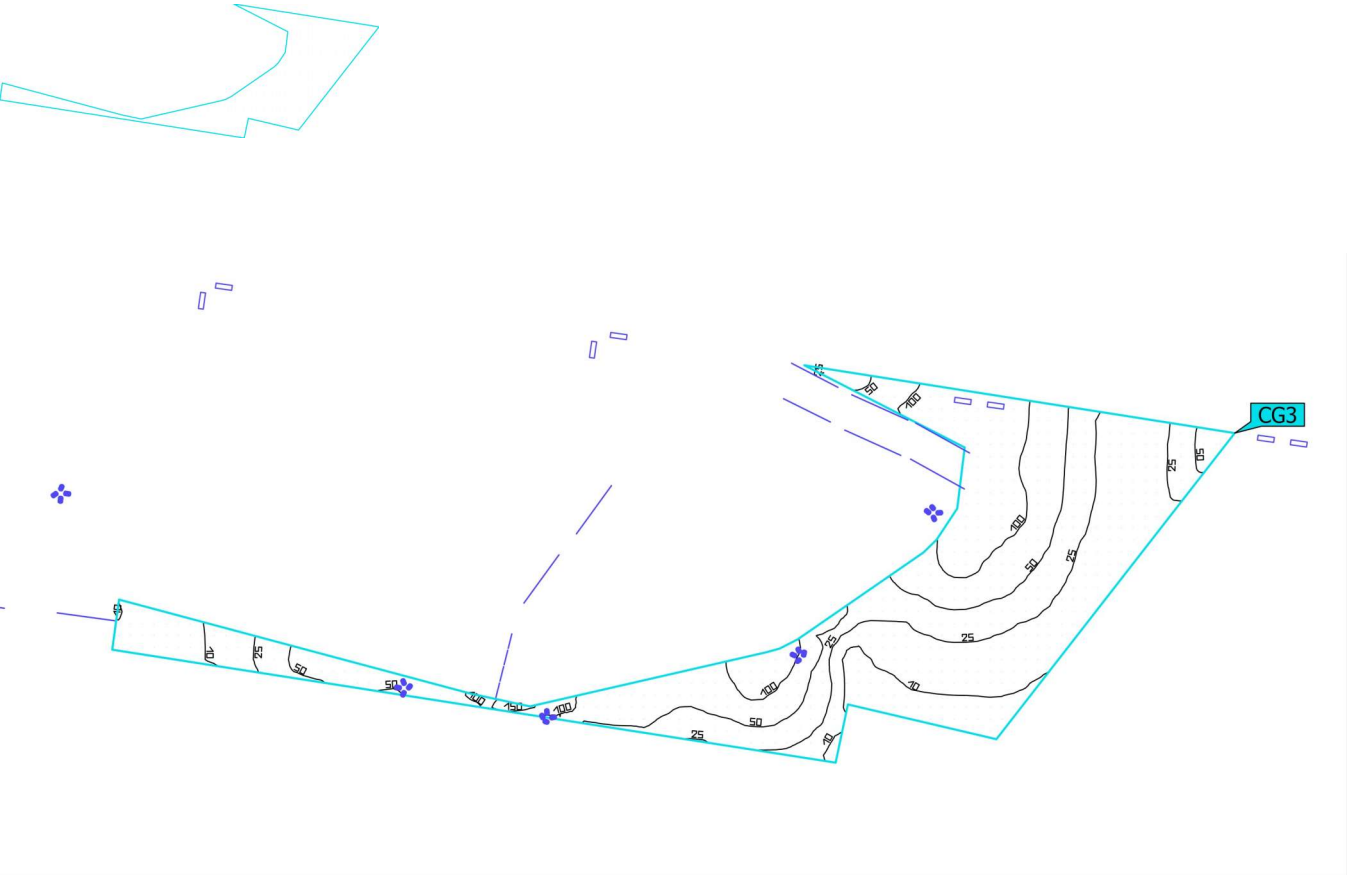
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
2. Pocket Park Path Perpendicular illuminance Height: 2.600 m	63.1 lx	18.7 lx	129 lx	0.30	0.14	CG1

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

3. Upper Circulation



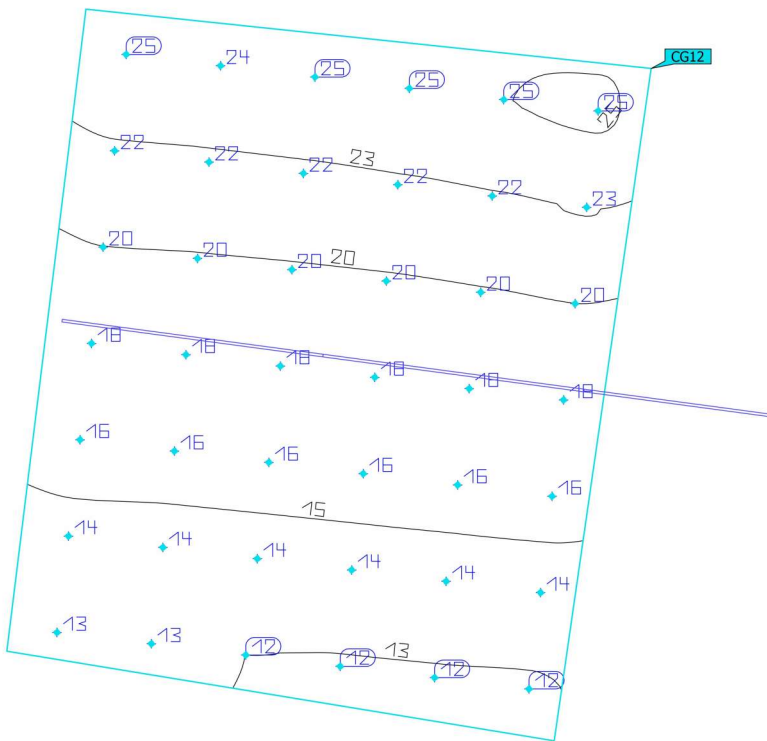
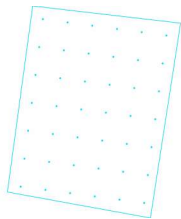
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
3. Upper Circulation Perpendicular illuminance Height: 4.200 m	49.5 lx	4.63 lx	173 lx	0.094	0.027	CG3

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

4.1. Stair Taxi Side Low



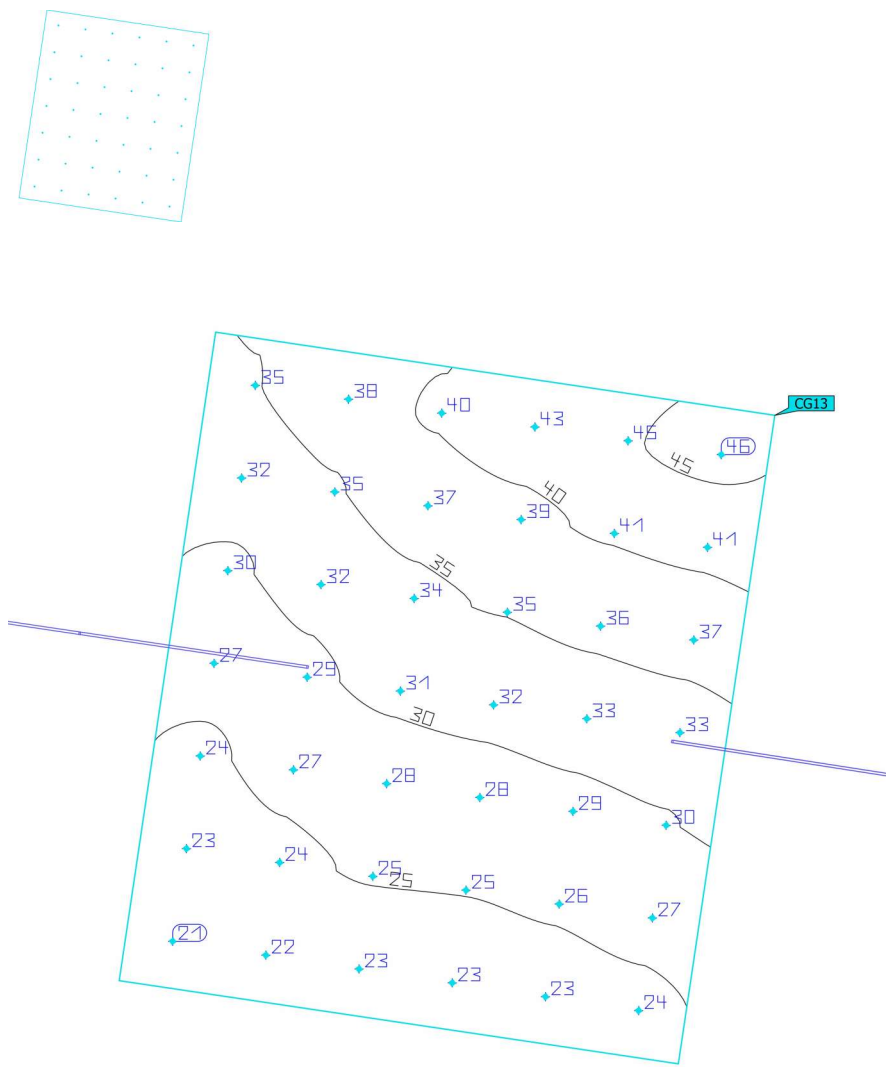
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
4.1. Stair Taxi Side Low Perpendicular illuminance Height: 0.605 m	18.1 lx	12.4 lx	25.3 lx	0.69	0.49	CG12

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

4.1.1 Stair Taxi Side Landing Lower



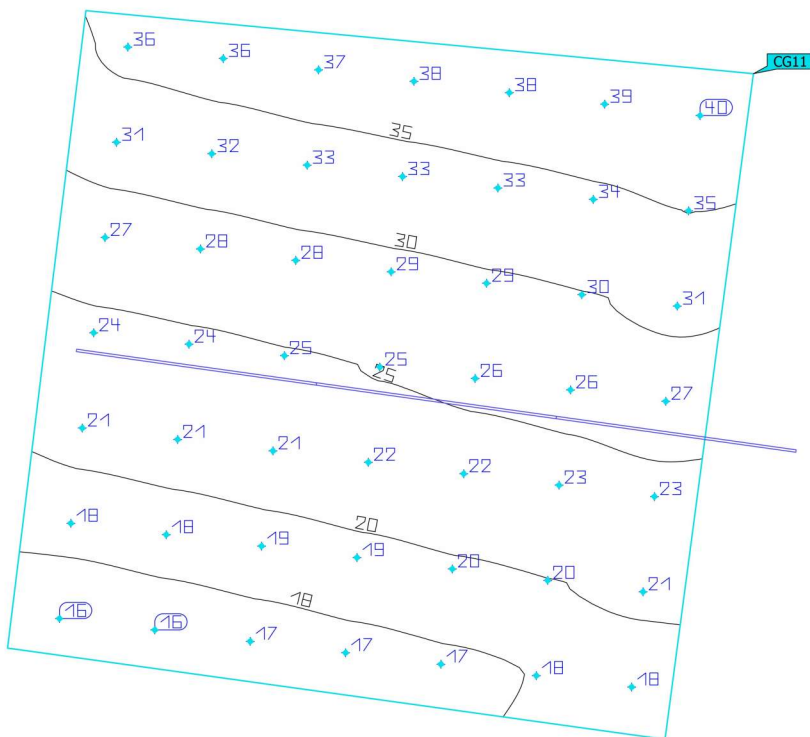
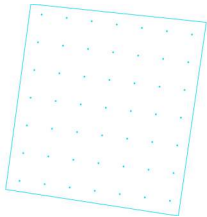
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
4.1.1 Stair Taxi Side Landing Lower Perpendicular illuminance Height: 1.300 m	31.2 lx	20.8 lx	46.1 lx	0.67	0.45	CG13

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

4.2. Stair Taxi Side Mid



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
4.2. Stair Taxi Side Mid Perpendicular illuminance Height: 1.943 m	26.1 lx	15.9 lx	39.9 lx	0.61	0.40	CG11

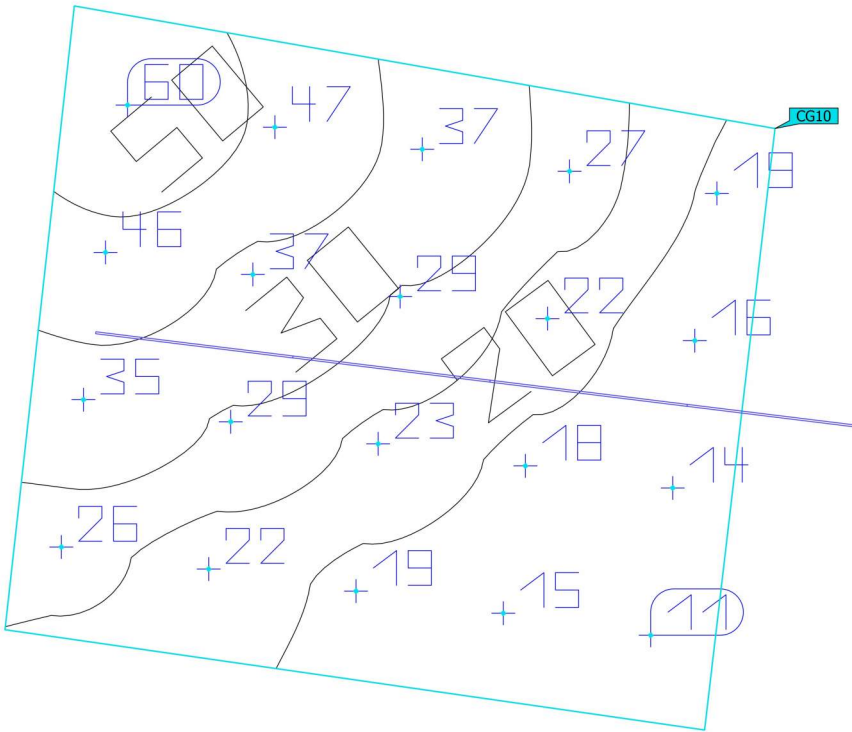
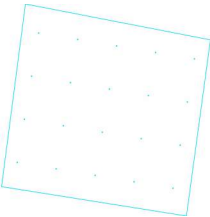
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

4.3. Stair Taxi Side Upper



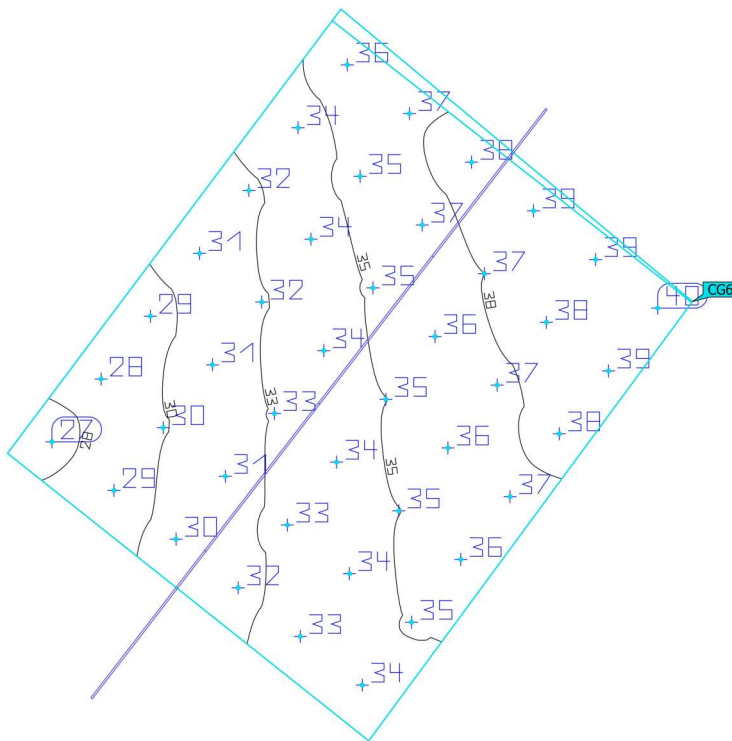
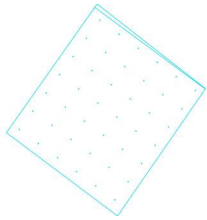
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
4.3. Stair Taxi Side Upper Perpendicular illuminance Height: 3.361 m	27.7 lx	11.4 lx	59.6 lx	0.41	0.19	CG10

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

5.1. Stair Central Low



Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_o (g_1)$	g_2	Index
5.1. Stair Central Low Perpendicular illuminance Height: 0.481 m	34.3 lx	27.1 lx	39.9 lx	0.79	0.68	CG6

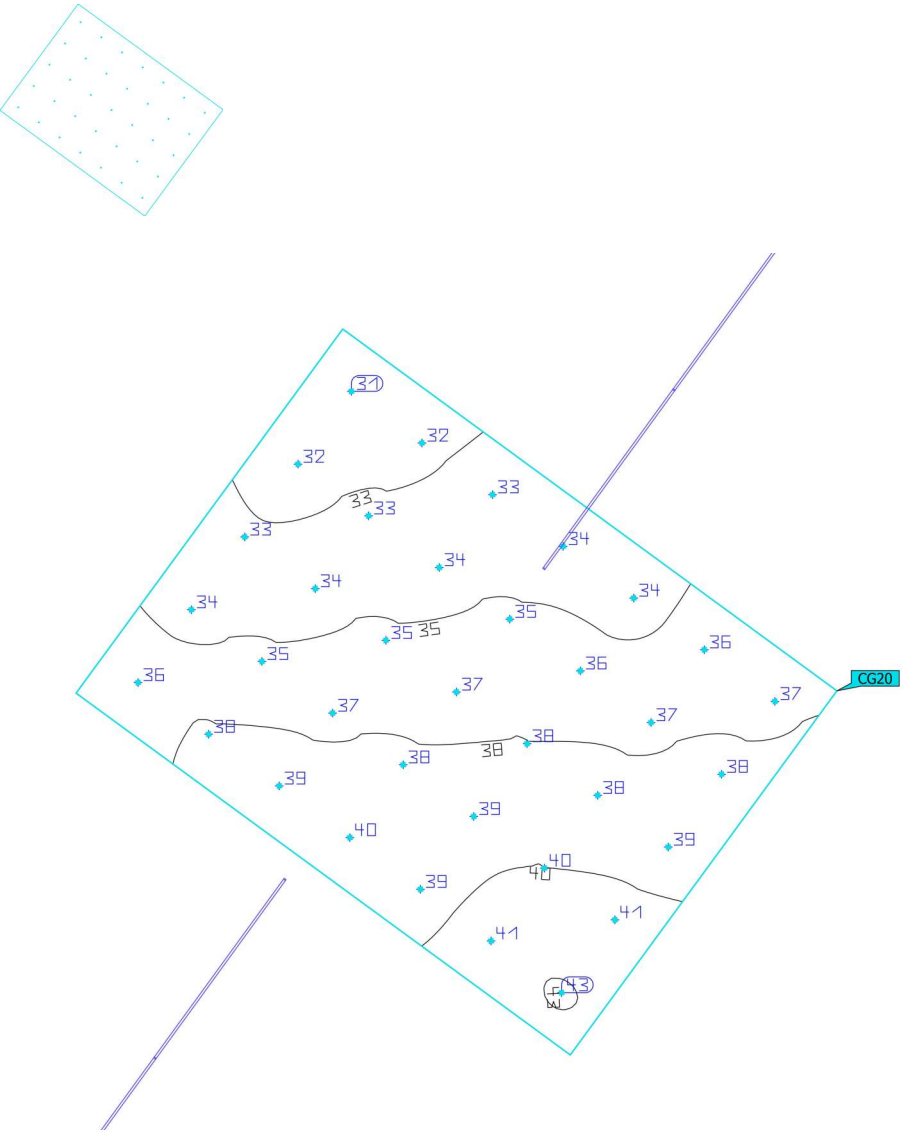
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

5.1.1 Stair Central Landing Lower



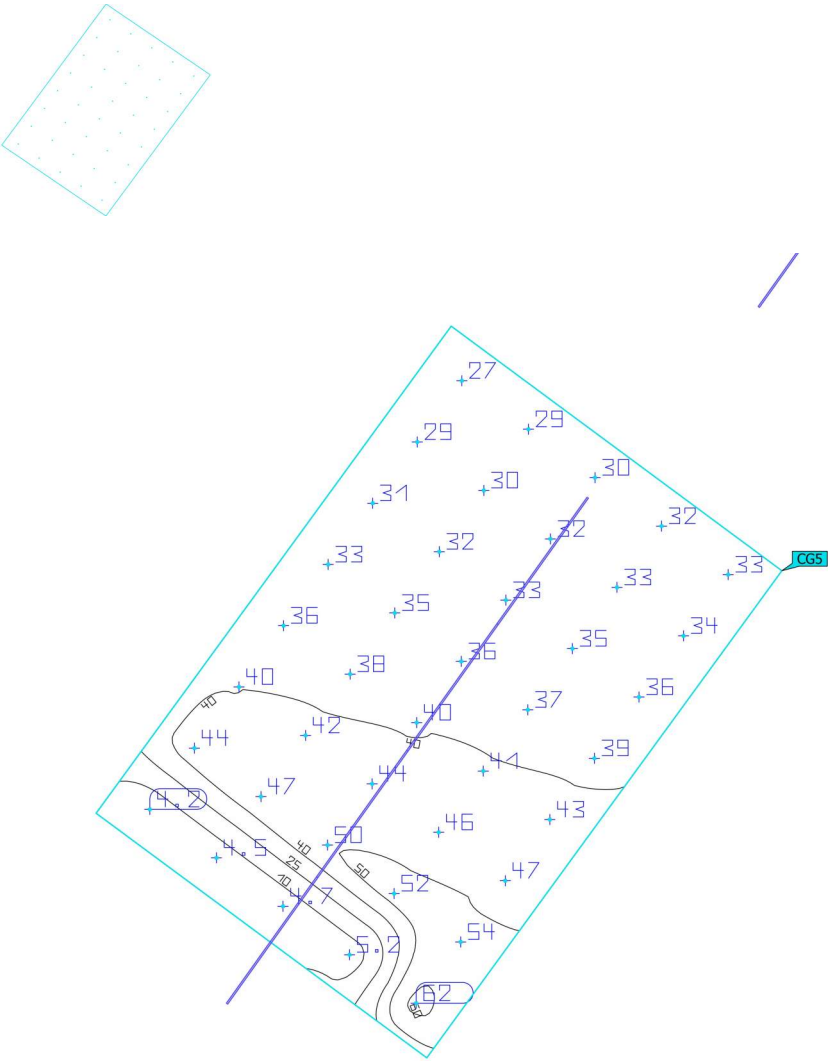
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
5.1.1 Stair Central Landing Lower Perpendicular illuminance Height: 1.300 m	36.5 lx	30.7 lx	42.6 lx	0.84	0.72	CG20

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

5.2. Stair Central Mid



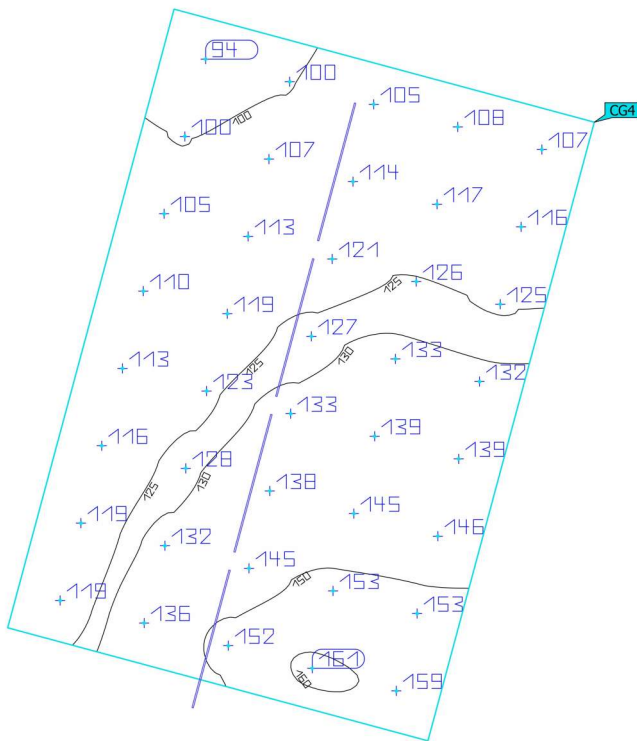
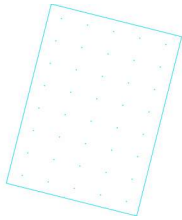
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
5.2. Stair Central Mid Perpendicular illuminance Height: 1.950 m	35.0 lx	4.23 lx	61.5 lx	0.12	0.069	CG5

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

5.3. Stair Central Upper



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
5.3. Stair Central Upper Perpendicular illuminance Height: 3.400 m	126 lx	93.6 lx	161 lx	0.74	0.58	CG4

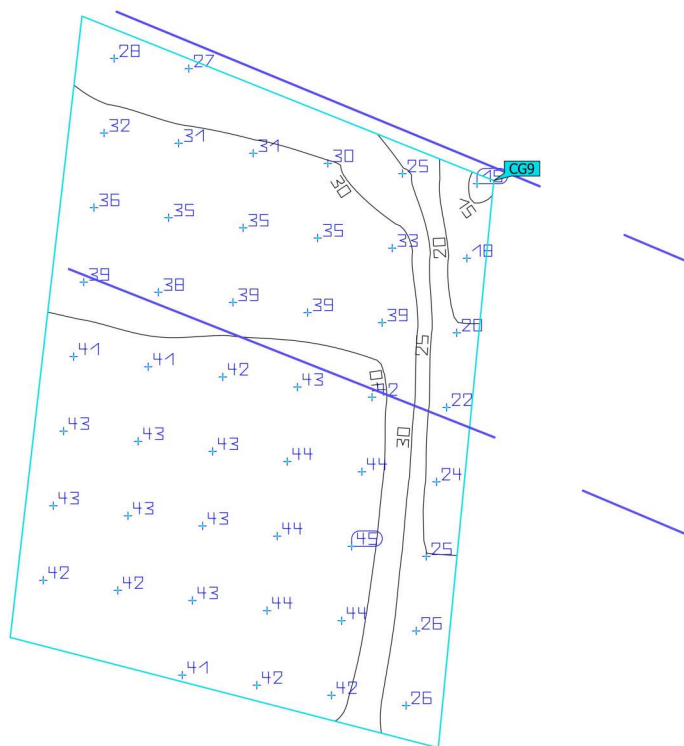
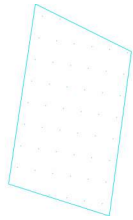
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

6.1. Stair Station Side Low



Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_0 (g_1)$	g_2	Index
6.1. Stair Station Side Low Perpendicular illuminance Height: 1.212 m	36.1 lx	14.6 lx	44.8 lx	0.40	0.33	CG9

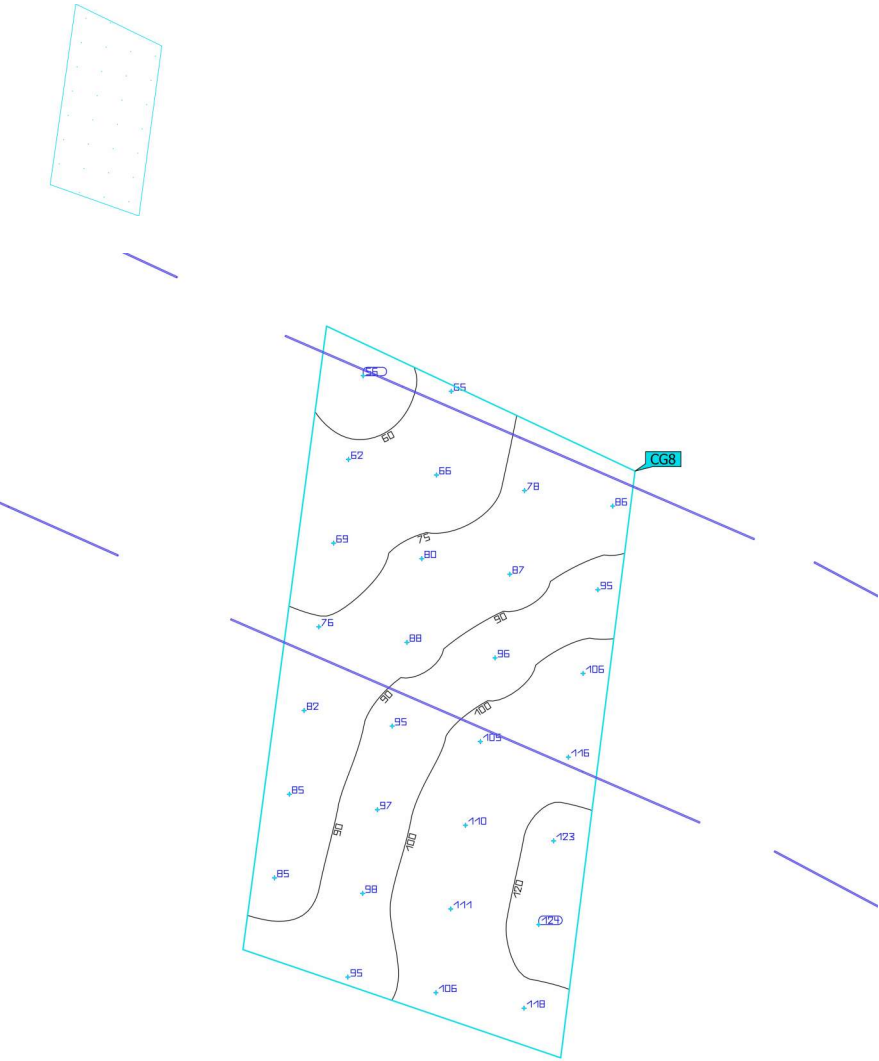
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

6.2. Stair Station Side Mid



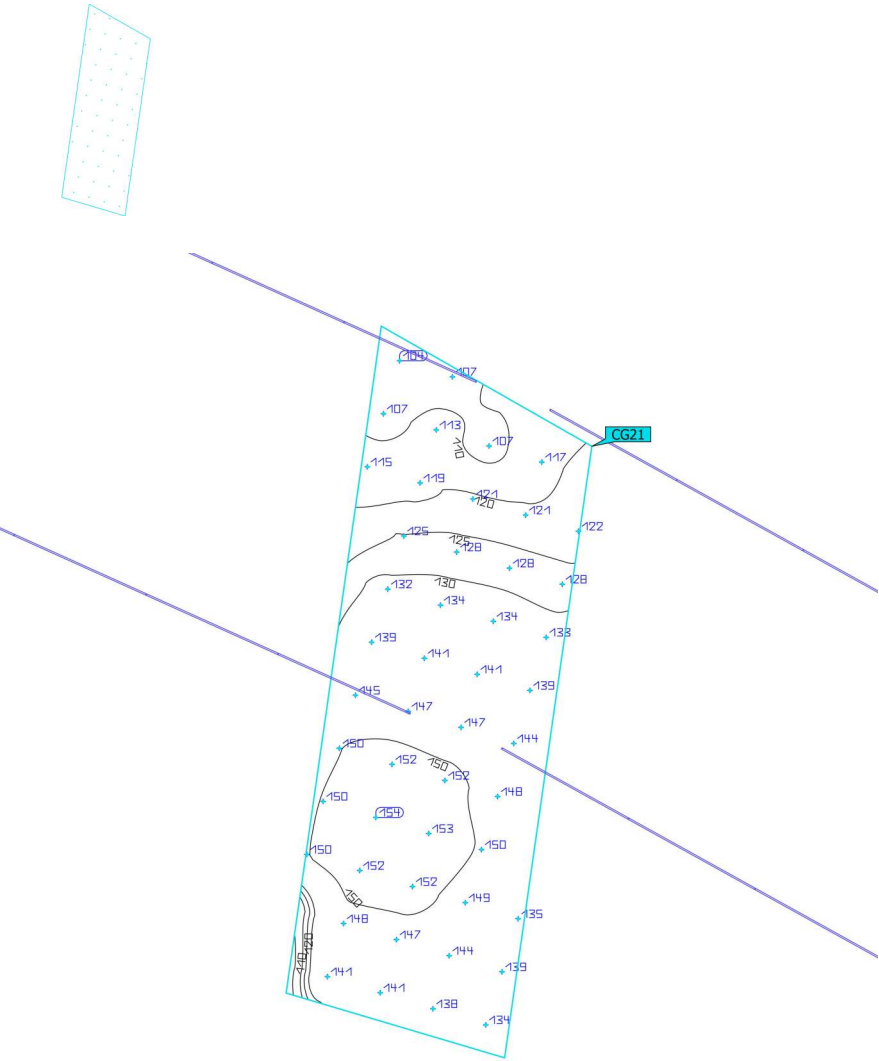
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
6.2. Stair Station Side Mid Perpendicular illuminance Height: 2.528 m	91.6 lx	55.8 lx	124 lx	0.61	0.45	CG8

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

6.2.1 Stair Station Side Landing upper



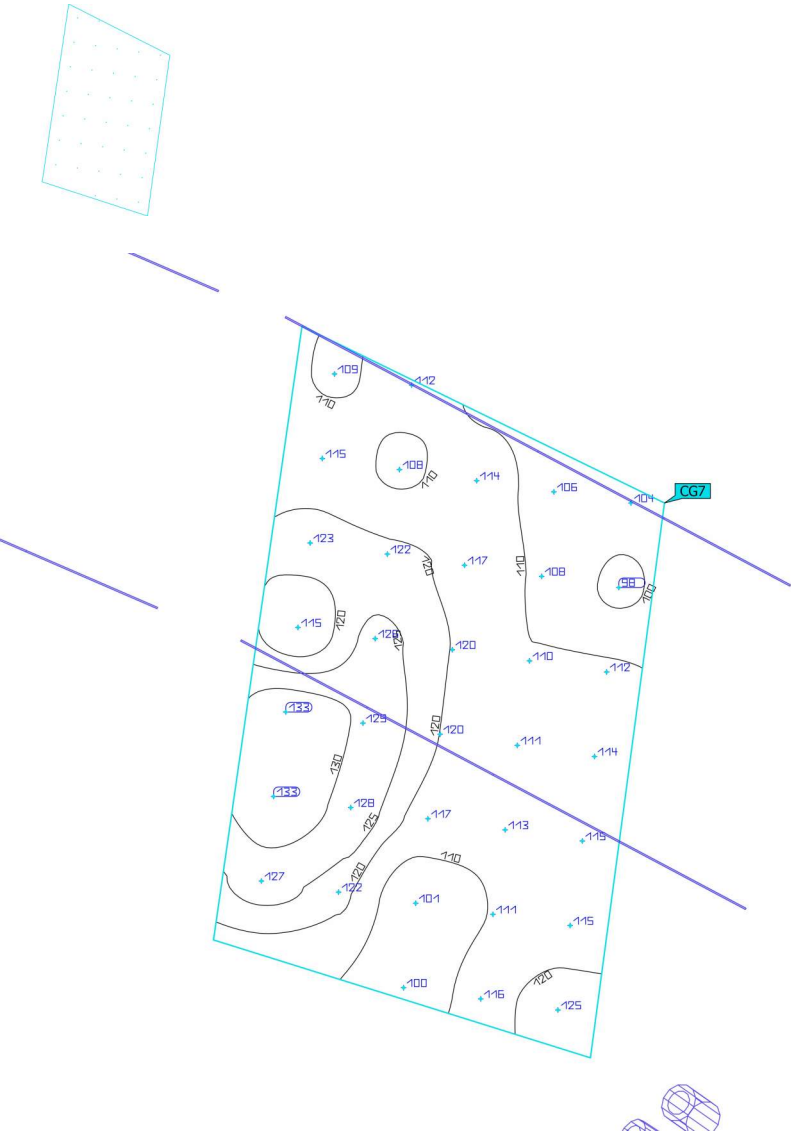
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
6.2.1 Stair Station Side Landing upper Perpendicular illuminance Height: 3.000 m	136 lx	104 lx	154 lx	0.76	0.68	CG21

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

6.3. Stair Station Side Upper



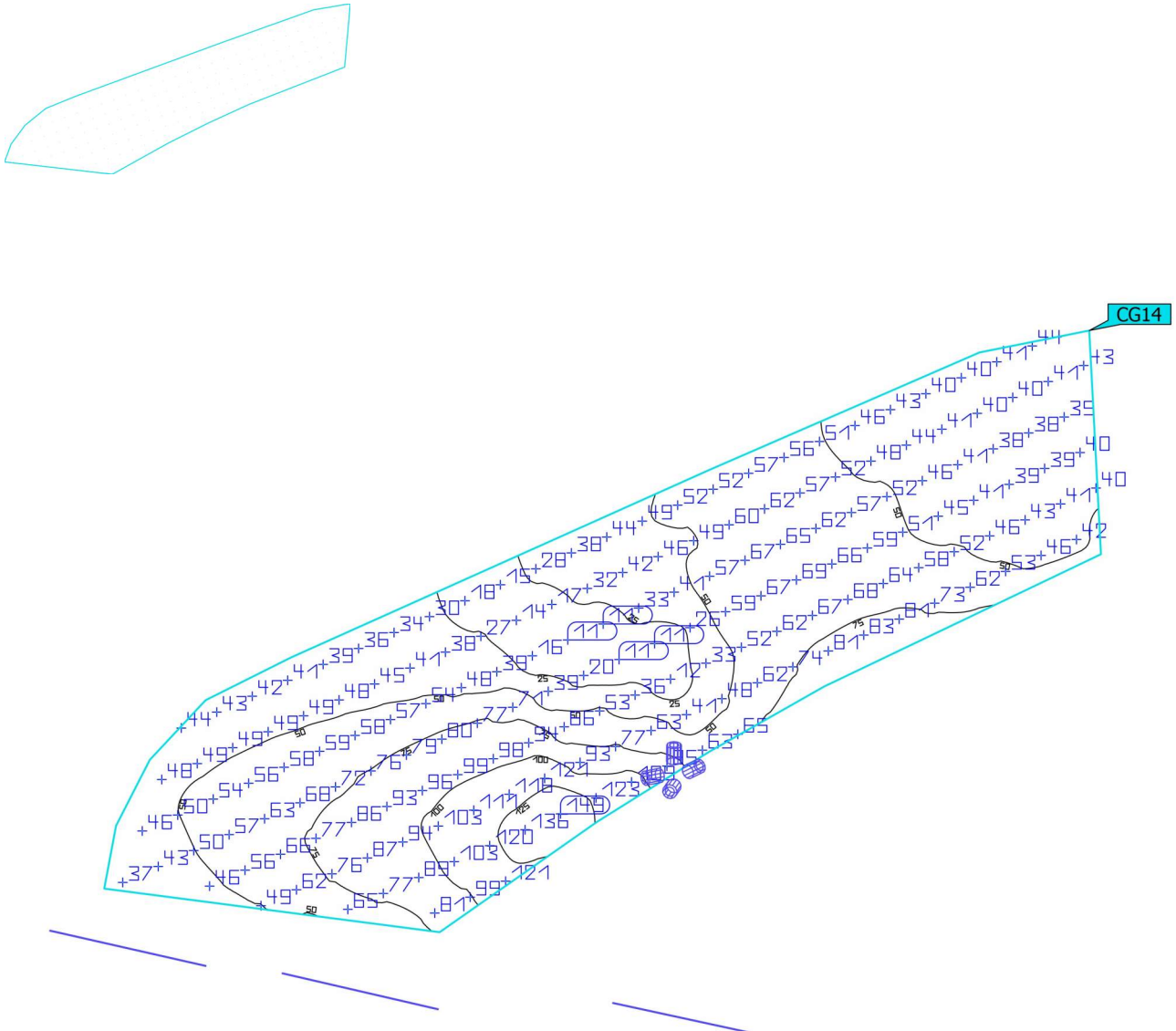
Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
6.3. Stair Station Side Upper Perpendicular illuminance Height: 3.434 m	116 lx	98.2 lx	133 lx	0.85	0.74	CG7

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

7.1 Landscape Lower Part 1



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
7.1 Landscape Lower Part 1 Perpendicular illuminance Height: 1.413 m	56.9 lx	10.6 lx	149 lx	0.19	0.071	CG14

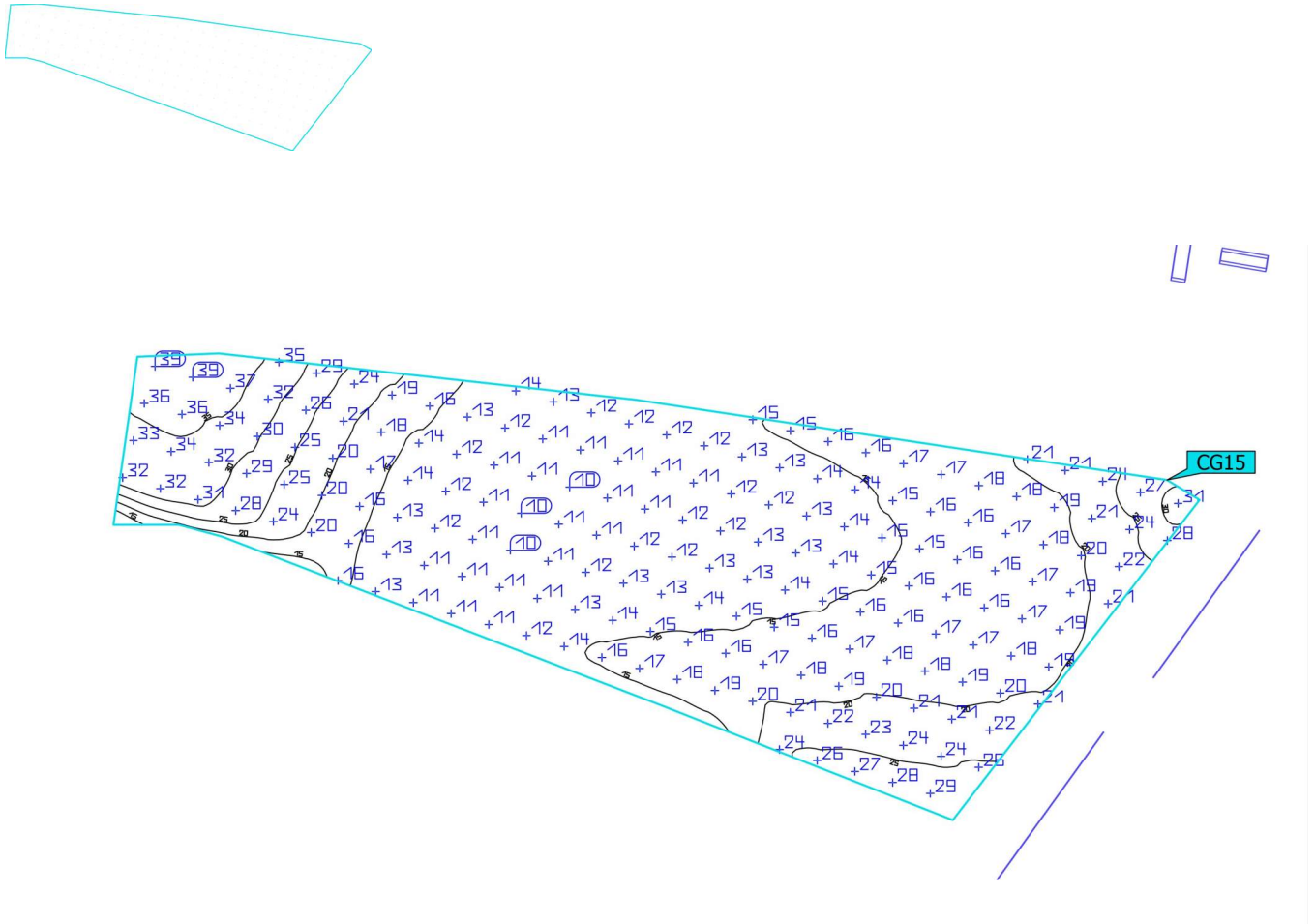
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

7.2 Landscape Lower Part 2



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
7.2 Landscape Lower Part 2 Perpendicular illuminance Height: 1.901 m	18.1 lx	10.4 lx	39.3 lx	0.57	0.26	CG15

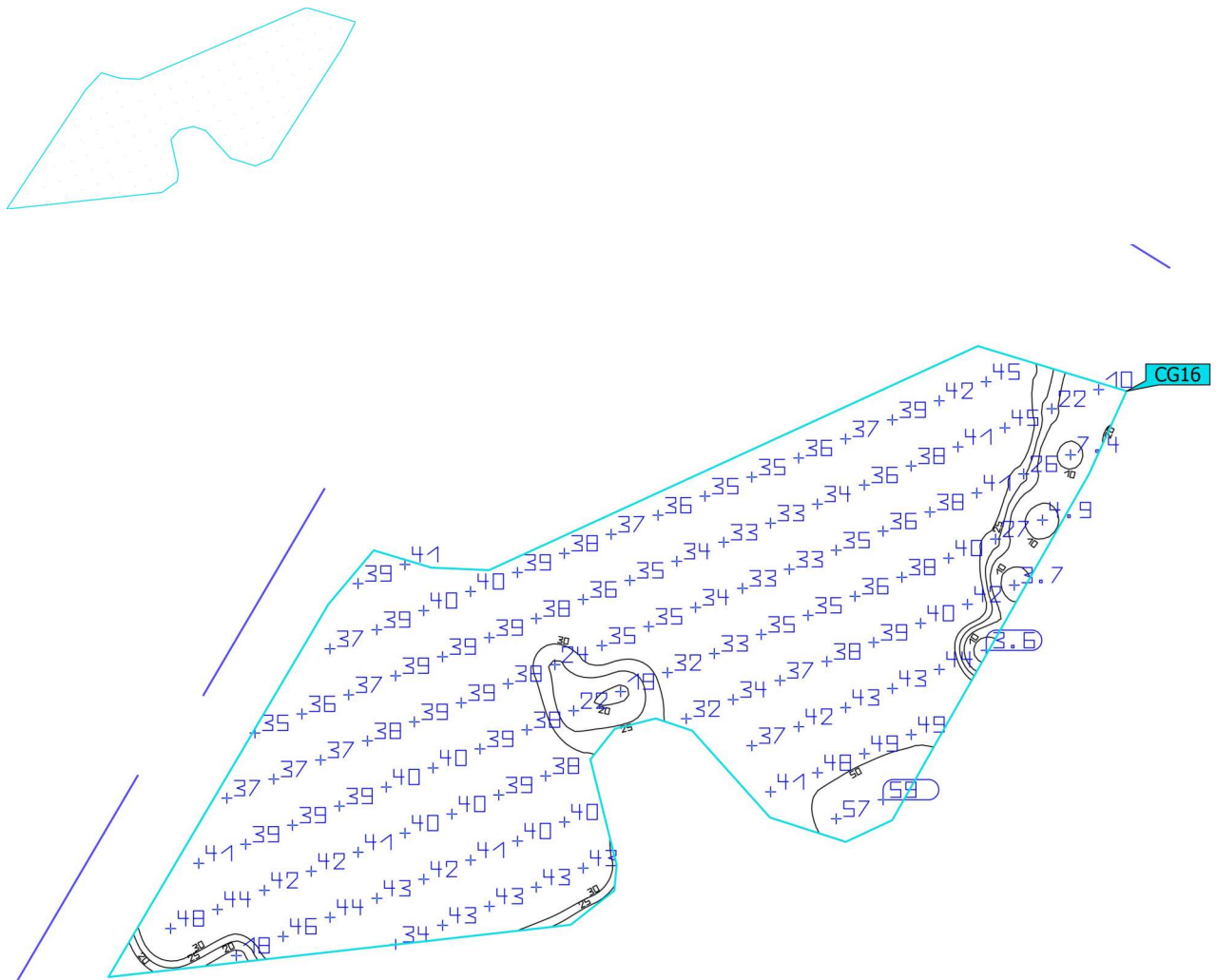
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

7.3 Landscape Lower Part 3



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
7.3 Landscape Lower Part 3 Perpendicular illuminance Height: 1.537 m	36.8 lx	3.60 lx	59.2 lx	0.098	0.061	CG16

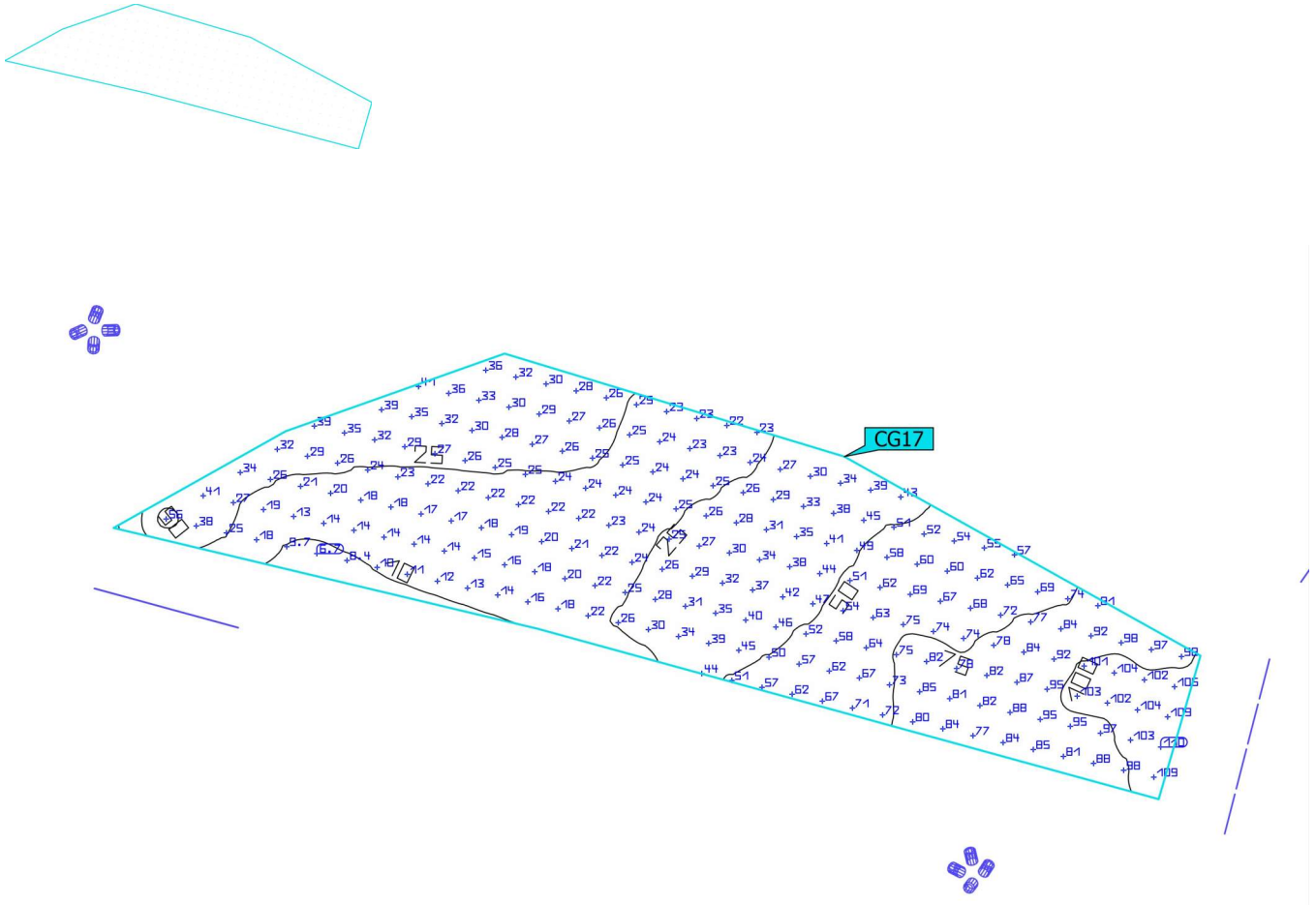
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

8.1 Landscape Upper Part 1



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
8.1 Landscape Upper Part 1 Perpendicular illuminance Height: 3.432 m	45.0 lx	6.68 lx	110 lx	0.15	0.061	CG17

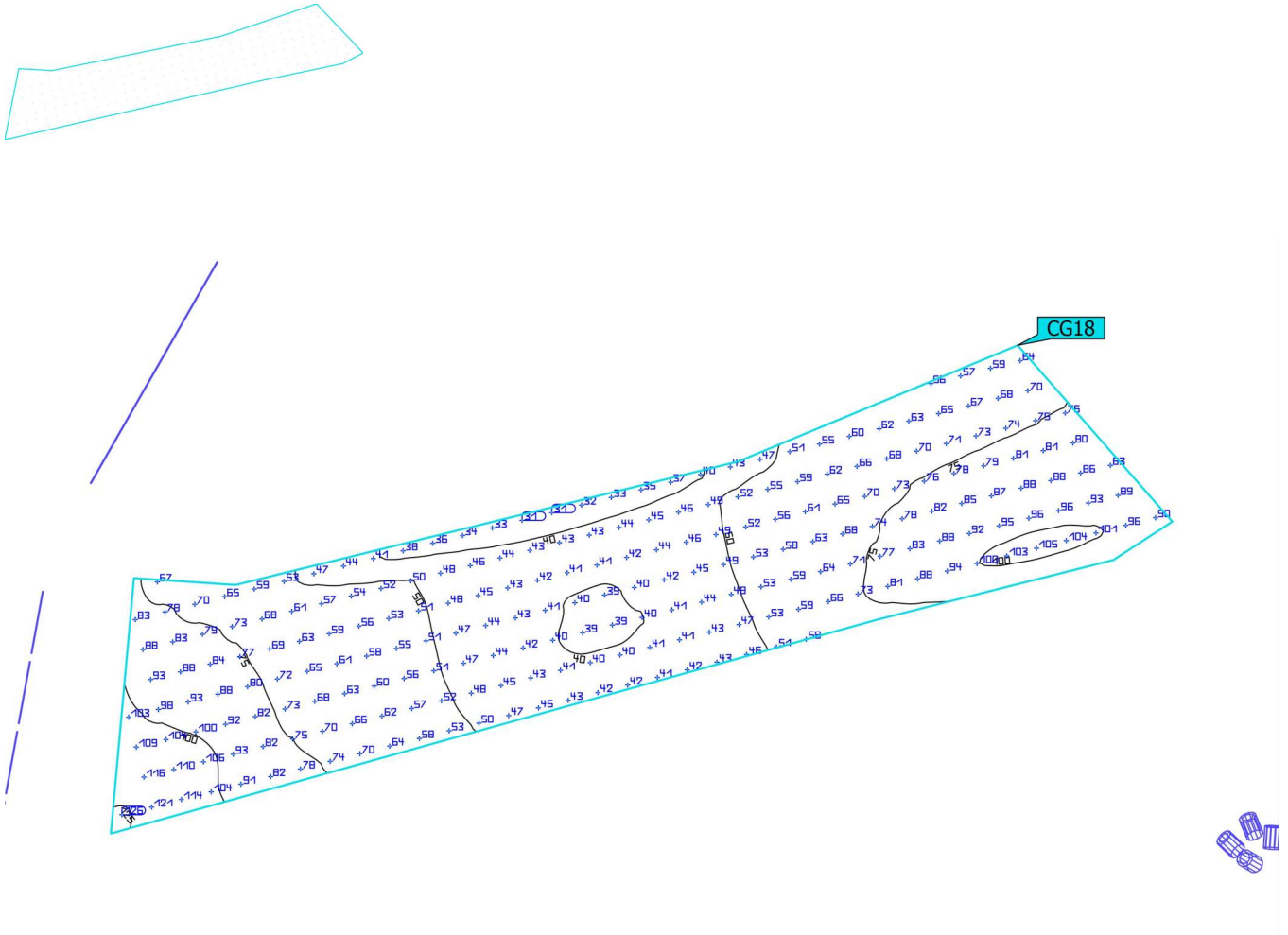
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

8.2 Landscape Upper Part 2



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
8.2 Landscape Upper Part 2 Perpendicular illuminance Height: 3.188 m	63.8 lx	31.4 lx	126 lx	0.49	0.25	CG18

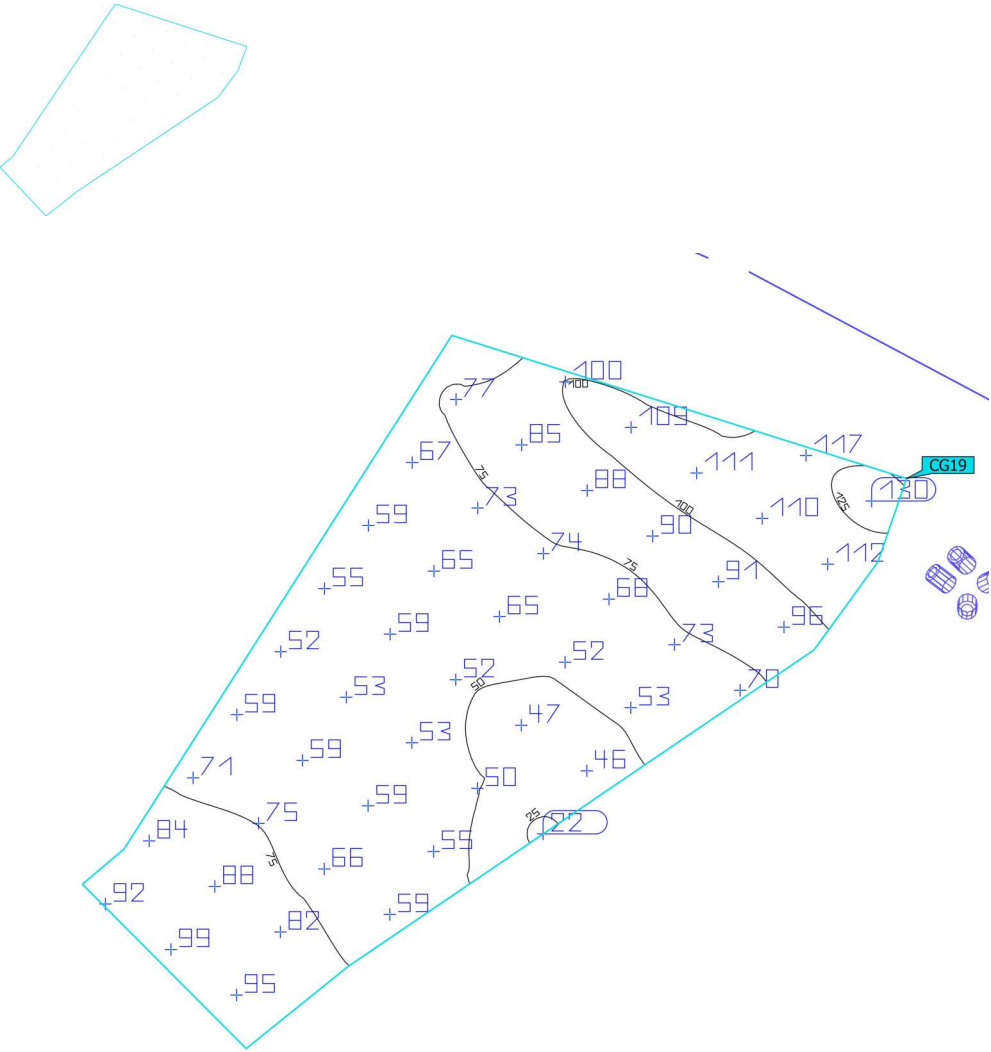
Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:

The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.

Site 1 (Columns only (excluding handrail))

8.3 Landscape Upper Part 3



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
8.3 Landscape Upper Part 3 Perpendicular illuminance Height: 3.307 m	74.3 lx	22.1 lx	130 lx	0.30	0.17	CG19

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Notes on planning:
The calculation of the results is based purely on the direct light component. The effect of reflected light has not been considered.