

DATE: 19 October 2023
DESIGNER: Alex Naper
PROJECT No: SES 07323 Rev C
PROJECT NAME: LDA Cherry Orchard - Waterman Moylan



Residential areas (Non TIC) designed in accordance with EN13201-2:2015 Category P4.

TIC residential areas designed in accordance with EN13201-2:2015 Category P3.

Minor access junctions meet recommendations of EN13201-2:2015 Category C3.

Main access junction designed in accordance with EN13201-2:2015 Category C2.

Road section meets recommendations of EN13201-2:2015 Category P1.

Segregated cycle path section designed in accordance with EN13201-2:2015 Category P4.

Rev B: Updated as per Comments

Rev C: Cherry Orchard Green updated.

Outdoor Lighting Report

PREPARED BY: Sabre Electrical Services Ltd.
Unit 11,
Bellview Industrial Estate,
Tolka Valley Road,
Dublin 11
Phone Number: 01 8110875
Contact: Graham Sheehan
eMail: graham@sabrelighting.ie

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	1624.94	2029.04	310.43	285.82	1.50	1.50
2	Grid 2	2037.20	1904.91	36.00	78.00	1.50	1.50
3	Grid 3	1966.32	1835.23	102.00	45.00	1.50	1.50
4	Grid 4	1949.23	1651.72	255.92	375.30	1.50	1.50
5	Grid 5	2100.99	1820.66	60.00	108.00	1.50	1.50
6	Grid 6	1968.32	1990.32	36.00	45.00	1.50	1.50
7	Grid 7	1907.47	2068.45	36.00	45.00	1.50	1.50
8	Grid 8	1854.69	1786.14	208.00	215.64	1.50	1.50
9	Grid 9	1786.89	1995.77	87.00	81.00	1.50	1.50
10	Grid 10	1957.06	1749.26	85.45	69.00	1.50	1.50
11	Grid 11	2043.91	1782.53	68.87	105.00	1.50	1.50
12	Grid 12	2018.81	1981.22	81.00	129.00	1.50	1.50
13	Grid 13	1994.73	1792.18	33.00	42.00	1.50	1.50
14	Grid 14	2017.66	1850.65	17.16	6.13	0.69	1.02
15	Grid 15	2005.92	1977.95	81.00	129.00	1.50	1.50

Luminaires

Luminaire A Data

Supplier	
Type	P862-256-R2E-730-W3-350-88W
Lamp(s)	730SS
Lamp Flux (klm)	12.35
File Name	P862-256-R2E-730-W3-350-88W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	458.4, 47.0, 0.0
No. in Project	17



Luminaire B Data

Supplier	C U Phosco
Type	P863-128-R2E-730-W3-250-34W
Lamp(s)	730SS
Lamp Flux (klm)	4.71
File Name	P863-128-R2E-730-W3-250-34W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	463.7, 84.3, 0.0
No. in Project	26



Luminaire C Data

Supplier	C U Phosco
Type	E950-28-F2A-730-C600-16W
Lamp(s)	730N
Lamp Flux (klm)	2.28
File Name	E950-28-F2A-730-C0600-16W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	623.6, 113.9, 0.3
No. in Project	15

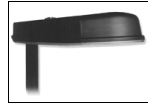


Luminaire D Data

Supplier	C U Phosco
Type	E950-28-P4A-730-C600-16W
Lamp(s)	730N
Lamp Flux (klm)	2.25
File Name	E950-28-P4A-730-C0600-16W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	11



Luminaires



Luminaire E Data

Supplier	_Historic Lanterns
Type	ZX3_FG_1289_120_-43x_881421*
Lamp(s)	150W-SONT+
Lamp Flux (klm)	18.00
File Name	ZX3_Flat Glass_1289_SON-T+_150_120#-43x_881421TX.Idt
Maintenance Factor	0.75
Imax70,80,90(cd/klm)	414.0, 42.0, 0.0
No. in Project	5



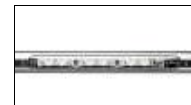
Luminaire F Data

Supplier	C U Phosco
Type	E950-28-P4A-730-C350-10W
Lamp(s)	730N
Lamp Flux (klm)	1.37
File Name	E950-28-P4A-730-C0350-10W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	38



Luminaire G Data

Supplier	Cree Lighting
Type	CFL Asymmetric Input C 4000K Ra70
Lamp(s)	4000K Ra70
LampFlux(klm)/Colour	13.50 4000/70
File Name	CFL-ASM-C-40K-+-24-BK-FX-01.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	236.4, 37.4, 0.5
No. in Project	4



Luminaire H Data

Supplier	Urbis Schreder
Type	ALINEA Handrail 5121 - 6 LED 350mA WW Profiled Poly Clear, Sm
Lamp(s)	6 LEDs WW
Lamp Flux (klm)	0.73
File Name	ALINEA Handrail 5121 6 LED 350mA WW Profiled Poly Clear Smooth WO7314.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	230.6, 22.2, 4.1
No. in Project	15



Luminaire I Data

Supplier	C U Phosco
Type	P863-128-R2E-730-W3-375-49W
Lamp(s)	730SS
Lamp Flux (klm)	6.92
File Name	P863-128-R2E-730-W3-375-49W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	463.7, 84.3, 0.0
No. in Project	4

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	2003.96	1948.01	10.00	46.00	0.00	0.00	0.50			
2	A	2003.09	1978.64	10.00	214.00	0.00	0.00	0.50			
3	A	1979.09	1978.50	10.00	42.00	0.00	0.00	0.50			
4	A	1980.55	2009.11	10.00	204.00	0.00	0.00	0.50			
5	A	2021.76	1956.66	10.00	216.00	0.00	0.00	0.50			
6	A	2026.96	1915.22	10.00	42.00	0.00	0.00	0.50			
7	A	2047.98	1929.99	10.00	225.00	0.00	0.00	0.50			
8	I	2030.32	1954.01	8.00	303.00	0.00	0.00	0.50			
9	B	2000.25	1924.24	8.00	318.00	0.00	0.00	0.50			
10	B	1975.34	1899.70	8.00	318.00	0.00	0.00	0.50			
11	B	1994.53	1885.89	8.00	136.00	0.00	0.00	0.50			
12	B	2008.42	1899.93	8.00	136.00	0.00	0.00	0.50			
13	B	1967.35	1858.70	8.00	133.00	0.00	0.00	0.50			
14	B	1951.38	1872.15	8.00	320.00	0.00	0.00	0.50			
15	C	1947.93	1838.90	6.00	127.00	0.00	0.00	0.40			
16	A	1847.81	2146.45	10.00	40.00	0.00	0.00	0.50			
17	D	1911.91	1846.64	6.00	47.00	0.00	0.00	0.50			
18	D	1900.39	1838.52	6.00	142.00	0.00	0.00	0.50			
19	D	1885.68	1844.38	6.00	301.00	0.00	0.00	0.50			
20	D	1887.06	1824.55	6.00	128.00	0.00	0.00	0.50			
21	B	1948.79	1984.94	8.00	135.00	0.00	0.00	0.50			
22	B	1932.77	1993.47	8.00	308.00	0.00	0.00	0.50			
23	B	1931.09	1967.74	8.00	135.00	0.00	0.00	0.50			
24	B	1905.63	1964.83	8.00	312.00	0.00	0.00	0.50			
25	A	1941.87	2026.24	10.00	44.00	0.00	0.00	0.50			
26	A	1914.79	2061.23	10.00	42.00	0.00	0.00	0.50			
27	E	1949.03	2047.66	10.00	221.00	0.00	0.00	0.50			
28	E	1917.85	2086.83	10.00	231.00	0.00	0.00	0.50			
29	E	1887.71	2126.74	10.00	223.00	0.00	0.00	0.50			
30	E	1856.66	2165.90	10.00	218.00	0.00	0.00	0.50			
31	A	1882.24	2102.88	10.00	40.00	0.00	0.00	0.50			
32	B	1889.64	2065.75	8.00	138.00	0.00	0.00	0.50			
33	B	1863.23	2062.96	8.00	322.00	0.00	0.00	0.50			
34	B	1859.42	2035.28	8.00	130.00	0.00	0.00	0.50			
35	B	1838.31	2041.25	8.00	307.00	0.00	0.00	0.50			
36	A	2081.00	1898.35	10.00	228.00	0.00	0.00	0.50			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
37	A	2047.71	1895.52	10.00	43.00	0.00	0.00	0.50			
38	A	2080.99	1862.73	10.00	51.00	0.00	0.00	0.50			
39	A	2111.29	1867.61	10.00	239.00	0.00	0.00	0.50			
40	A	2108.32	1840.44	10.00	51.00	0.00	0.00	0.50			
41	D	2091.55	1840.14	6.00	10.00	0.00	0.00	0.40			
42	D	1923.98	1847.49	6.00	319.00	0.00	0.00	0.40			
43	D	1928.25	1831.26	6.00	49.00	0.00	0.00	0.40			
44	B	1913.44	1950.40	8.00	134.00	0.00	0.00	0.50			
45	B	1810.73	1988.62	8.00	136.00	0.00	0.00	0.50			
46	B	1797.67	1998.69	8.00	321.00	0.00	0.00	0.50			
47	B	1774.63	1974.89	8.00	306.00	0.00	0.00	0.50			
48	B	1776.84	1952.44	8.00	134.00	0.00	0.00	0.50			
49	C	1793.01	1952.80	6.00	218.00	0.00	0.00	0.50			
50	C	1794.25	1927.72	6.00	54.00	0.00	0.00	0.50			
51	C	1809.79	1937.62	6.00	219.00	0.00	0.00	0.50			
52	C	1805.60	1915.88	6.00	44.00	0.00	0.00	0.50			
53	C	1822.38	1898.95	6.00	307.00	0.00	0.00	0.50			
54	C	1832.50	1875.26	6.00	37.00	0.00	0.00	0.50			
55	C	1824.43	1923.06	6.00	227.00	0.00	0.00	0.50			
56	C	1855.73	1877.16	6.00	215.00	0.00	0.00	0.50			
57	C	1861.92	1855.07	6.00	134.00	0.00	0.00	0.50			
58	C	1880.87	1975.25	6.00	222.00	0.00	0.00	0.50			
59	C	1866.06	1989.85	6.00	222.00	0.00	0.00	0.50			
60	C	1887.52	1952.33	6.00	46.00	0.00	0.00	0.50			
61	F	1951.99	1967.42	6.00	231.00	0.00	0.00	0.50			
62	F	1949.36	1946.95	6.00	325.00	0.00	0.00	0.50			
63	F	1967.82	1927.58	6.00	114.00	0.00	0.00	0.50			
64	F	1969.03	1946.85	6.00	216.00	0.00	0.00	0.50			
65	F	1948.05	1933.93	6.00	228.00	0.00	0.00	0.50			
66	F	1956.21	1909.94	6.00	35.00	0.00	0.00	0.50			
67	F	1972.26	1913.41	6.00	237.00	0.00	0.00	0.50			
68	F	1892.08	2047.25	6.00	220.00	0.00	0.00	0.50			
69	F	1905.97	2024.57	6.00	246.00	0.00	0.00	0.50			
70	F	1902.89	2008.50	6.00	354.00	0.00	0.00	0.50			
71	F	1876.98	1934.39	6.00	137.00	0.00	0.00	0.50			
72	B	1943.21	1813.58	8.00	187.00	0.00	0.00	0.40			

Layout Continued

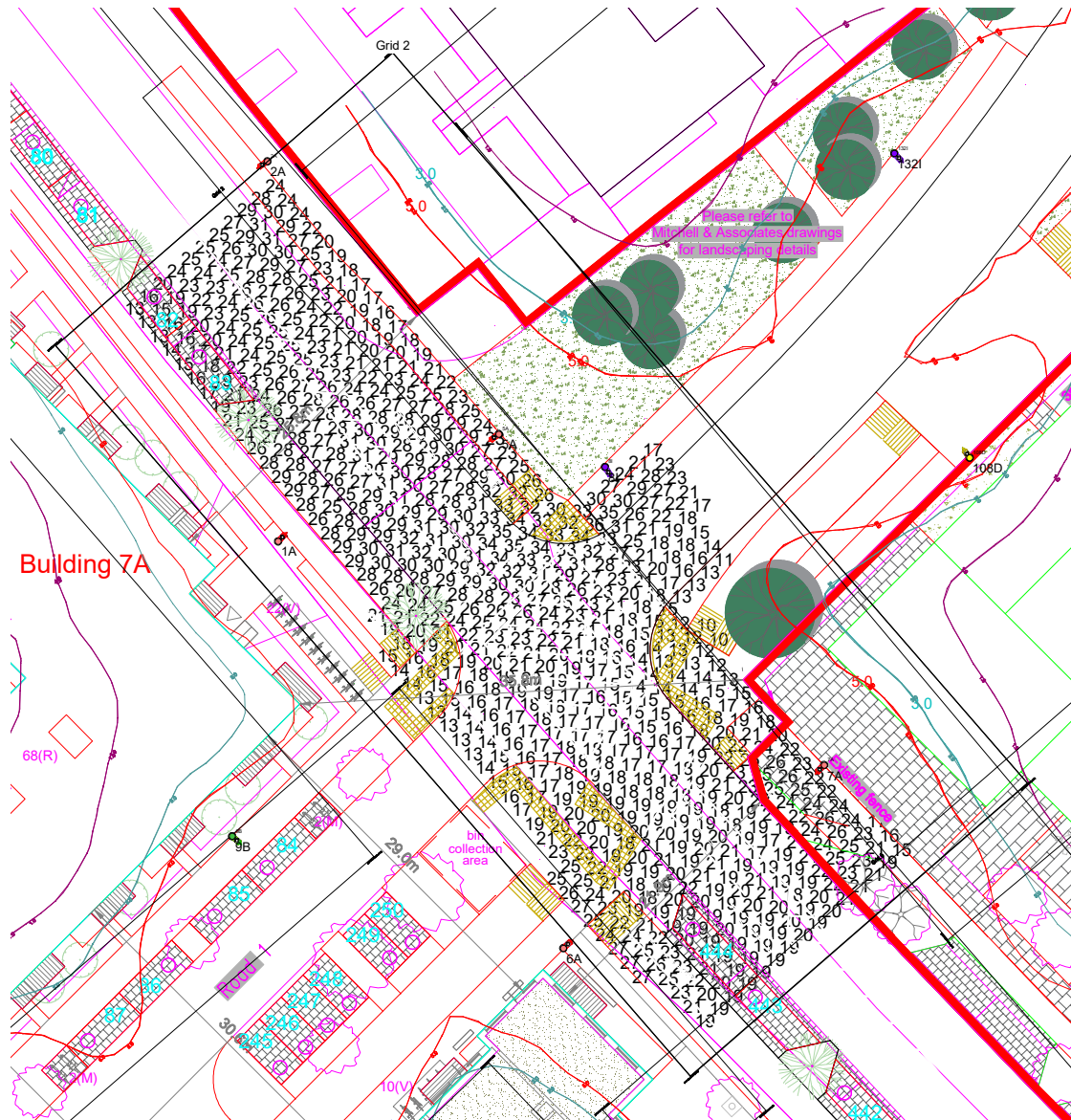
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
73	F	1889.98	2001.73	6.00	36.00	0.00	0.00	0.50			
74	F	1910.60	1991.12	6.00	229.00	0.00	0.00	0.50			
75	B	1943.14	1794.02	8.00	100.00	0.00	0.00	0.40			
76	F	1887.25	2019.71	6.00	311.00	0.00	0.00	0.50			
77	F	1817.56	1952.90	6.00	323.00	0.00	0.00	0.50			
78	B	1972.94	1799.17	8.00	98.00	0.00	0.00	0.40			
79	C	1835.21	1934.21	6.00	311.00	0.00	0.00	0.50			
80	C	1847.70	1916.93	6.00	141.00	0.00	0.00	0.50			
81	B	1989.70	1820.37	8.00	187.00	0.00	0.00	0.40			
82	F	1870.91	1919.26	6.00	221.00	0.00	0.00	0.50			
83	F	1886.18	1903.99	6.00	230.00	0.00	0.00	0.50			
84	F	1895.97	1883.41	6.00	45.00	0.00	0.00	0.50			
85	F	1915.89	1868.14	6.00	228.00	0.00	0.00	0.50			
86	F	1925.61	1902.98	6.00	45.00	0.00	0.00	0.50			
87	F	1944.86	1883.82	6.00	54.00	0.00	0.00	0.50			
88	F	1918.18	1889.56	6.00	174.00	0.00	0.00	0.50			
89	F	1912.70	1931.35	6.00	216.00	0.00	0.00	0.50			
90	F	1875.70	1947.92	6.00	228.00	0.00	0.00	0.50			
91	F	1852.43	1970.74	6.00	223.00	0.00	0.00	0.50			
92	F	1853.51	1994.58	6.00	173.00	0.00	0.00	0.50			
93	F	1850.88	2023.51	6.00	228.00	0.00	0.00	0.50			
94	F	1821.49	2034.27	6.00	87.00	0.00	0.00	0.50			
95	F	1791.56	2038.41	6.00	78.00	0.00	0.00	0.50			
96	F	1773.92	2051.36	6.00	16.00	0.00	0.00	0.50			
97	A	1963.65	1998.51	10.00	30.00	0.00	0.00	0.50			
98	B	1974.34	1838.79	8.00	317.00	0.00	0.00	0.40			
99	B	1954.98	1812.68	8.00	5.00	0.00	0.00	0.40			
100	F	2018.63	1856.24	6.00	193.00	0.00	0.00	0.40			
101	F	2018.17	1881.81	6.00	187.00	0.00	0.00	0.40			
102	F	2010.21	1865.31	6.00	290.00	0.00	0.00	0.40			
103	F	2038.54	1851.40	6.00	308.00	0.00	0.00	0.40			
104	F	2041.20	1842.53	6.00	95.00	0.00	0.00	0.40			
105	F	2066.72	1846.00	6.00	97.00	0.00	0.00	0.40			
106	F	2068.54	1830.81	6.00	191.00	0.00	0.00	0.40			
107	D	2098.29	1826.49	6.00	142.00	0.00	0.00	0.40			
108	D	2059.72	1954.76	6.00	126.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
109	D	2084.51	1979.21	6.00	127.00	0.00	0.00	0.40			
110	D	2110.24	2006.16	6.00	127.00	0.00	0.00	0.40			
111	B	2127.74	2011.02	8.00	81.00	0.00	0.00	0.40			
112	G	2002.13	1820.52	8.00	10.00	10.00	0.00	0.40			
113	G	2001.86	1820.58	8.00	195.00	0.00	0.00	0.40			
114	G	2018.38	1815.40	8.00	188.00	10.00	0.00	0.40			
115	G	1994.40	1832.59	8.00	279.00	10.00	0.00	0.40			
116	H	2020.96	1850.21	1.00	37.00	0.00	0.00	0.01			
117	H	2023.72	1847.29	1.00	37.00	0.00	0.00	0.01			
118	H	2023.91	1852.49	1.00	222.00	0.00	0.00	0.01			
119	H	2027.70	1848.75	1.00	228.00	0.00	0.00	0.01			
120	H	2020.37	1852.27	1.00	306.00	0.00	0.00	0.01			
121	H	2030.01	1841.92	1.00	315.00	0.00	0.00	0.01			
122	H	2030.52	1842.37	1.00	314.00	0.00	0.00	0.01			
123	H	2022.57	1848.11	1.00	223.00	0.00	0.00	0.01			
124	H	2024.64	1845.99	1.00	223.00	0.00	0.00	0.01			
125	H	2025.48	1845.45	1.00	37.00	0.00	0.00	0.01			
126	H	2025.78	1850.65	1.00	224.00	0.00	0.00	0.01			
127	H	2029.73	1846.64	1.00	229.00	0.00	0.00	0.01			
128	H	2027.16	1843.82	1.00	43.00	0.00	0.00	0.01			
129	H	2021.64	1853.46	1.00	321.00	0.00	0.00	0.01			
130	H	2022.34	1848.70	1.00	37.00	0.00	0.00	0.01			
131	F	1834.88	1987.71	6.00	223.00	0.00	0.00	0.50			
132	I	2053.65	1979.28	8.00	314.00	0.00	0.00	0.50			
133	I	2076.63	2005.54	8.00	314.00	0.00	0.00	0.50			
134	I	2107.09	2020.48	8.00	127.00	0.00	0.00	0.50			
135	E	2099.63	2042.61	8.00	344.00	0.00	0.00	0.50			

Horizontal Illuminance (lux)

Grid 2

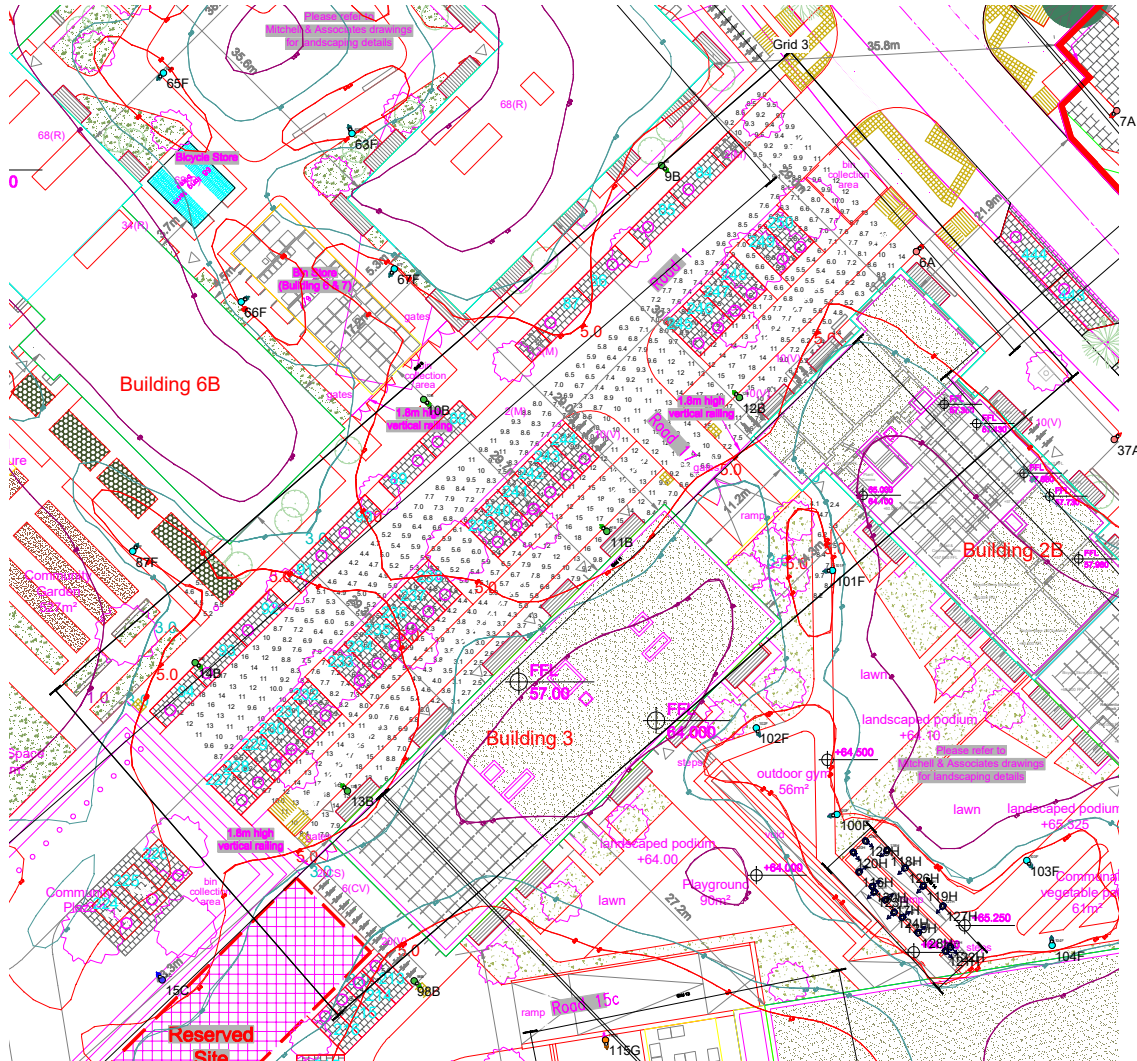


Results

Eav	22.22
Emin	10.22
Emax	35.81
Emin/Emax	0.29
Emin/Eav	0.46

Horizontal Illuminance (lux)

Grid 3

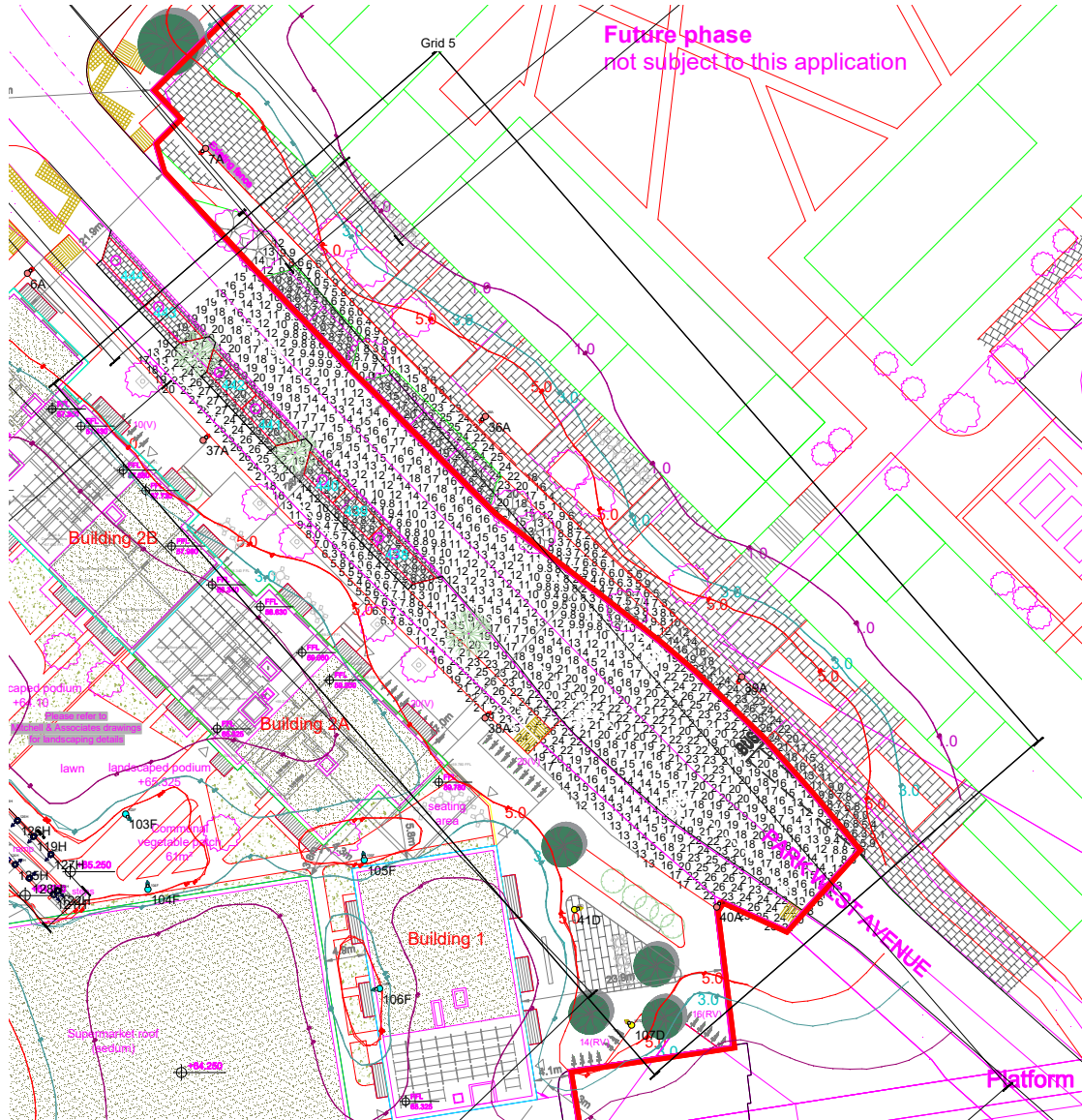


Results

Eav	8.56
Emin	2.29
Emax	19.59
Emin/Emax	0.12
Emin/Eav	0.27

Horizontal Illuminance (lux)

Grid 5

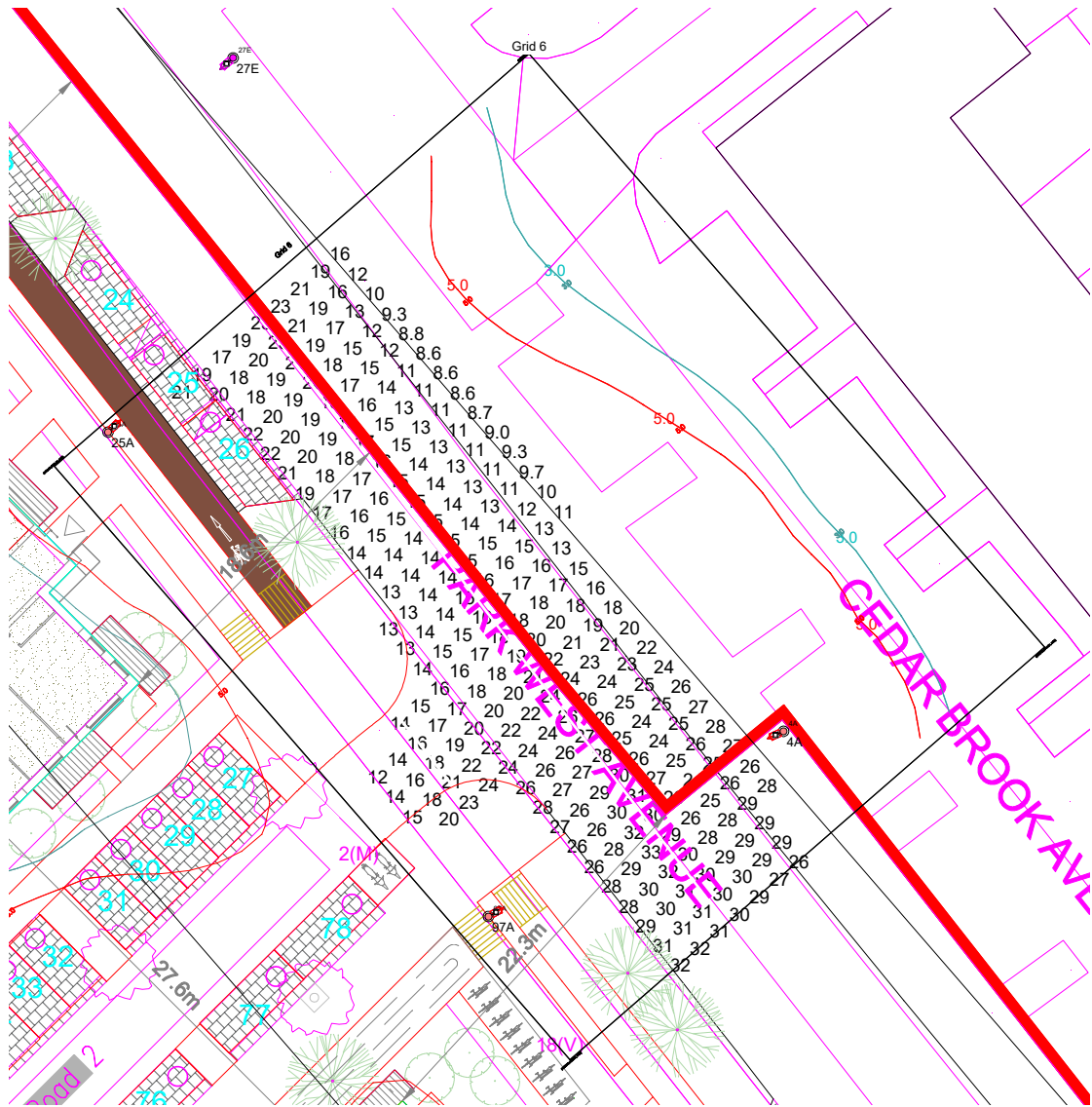


Results

Eav	15.82
Emin	5.10
Emax	27.53
Emin/Emax	0.19
Emin/Eav	0.32

Horizontal Illuminance (lux)

Grid 6

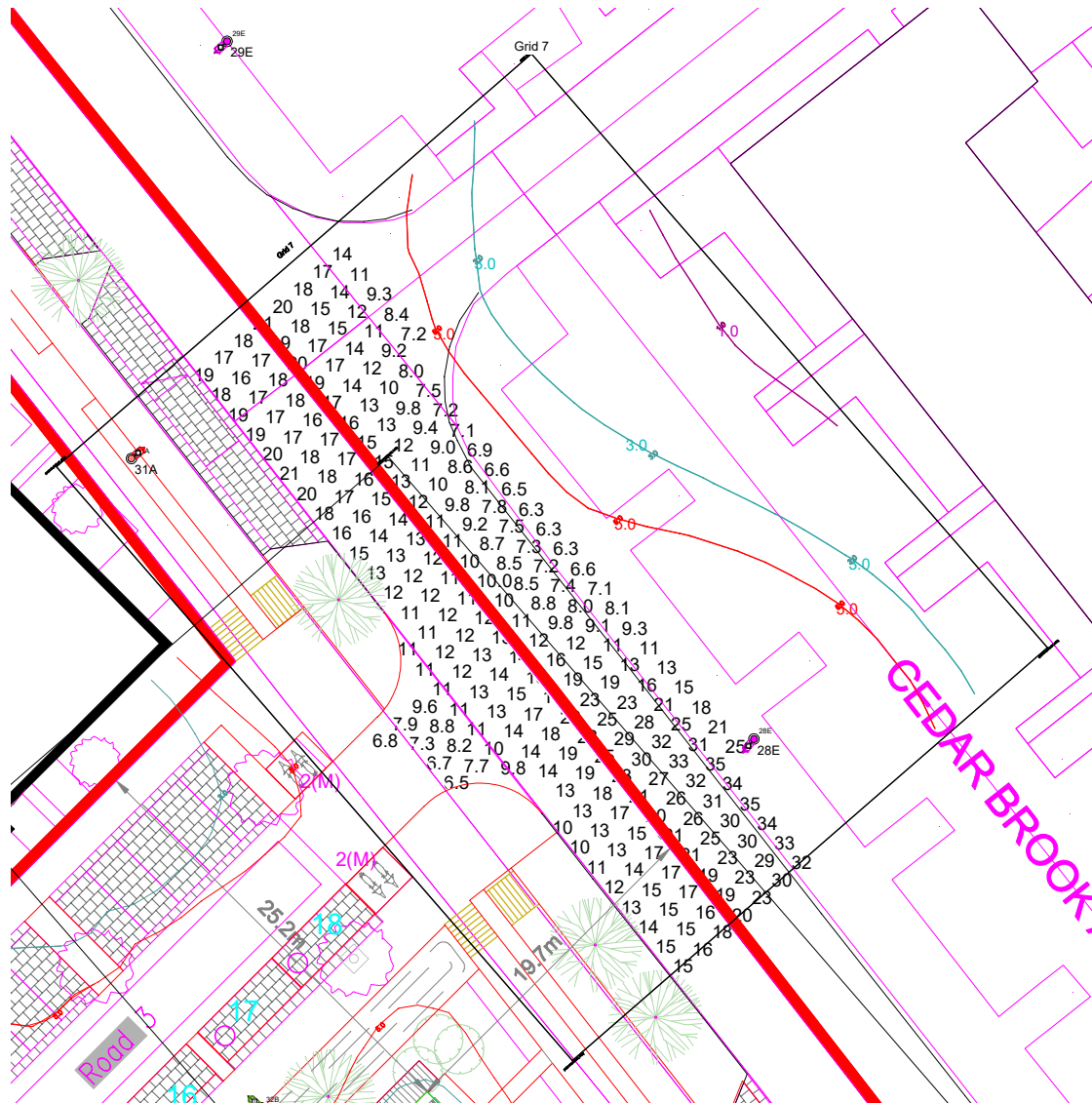


Results

Eav	20.03
Emin	8.56
Emax	32.80
Emin/Emax	0.26
Emin/Eav	0.43

Horizontal Illuminance (lux)

Grid 7



Results

Eav	15.51
Emin	6.28
Emax	35.24
Emin/Emax	0.18
Emin/Eav	0.40

Horizontal Illuminance (lux)

Grid 8

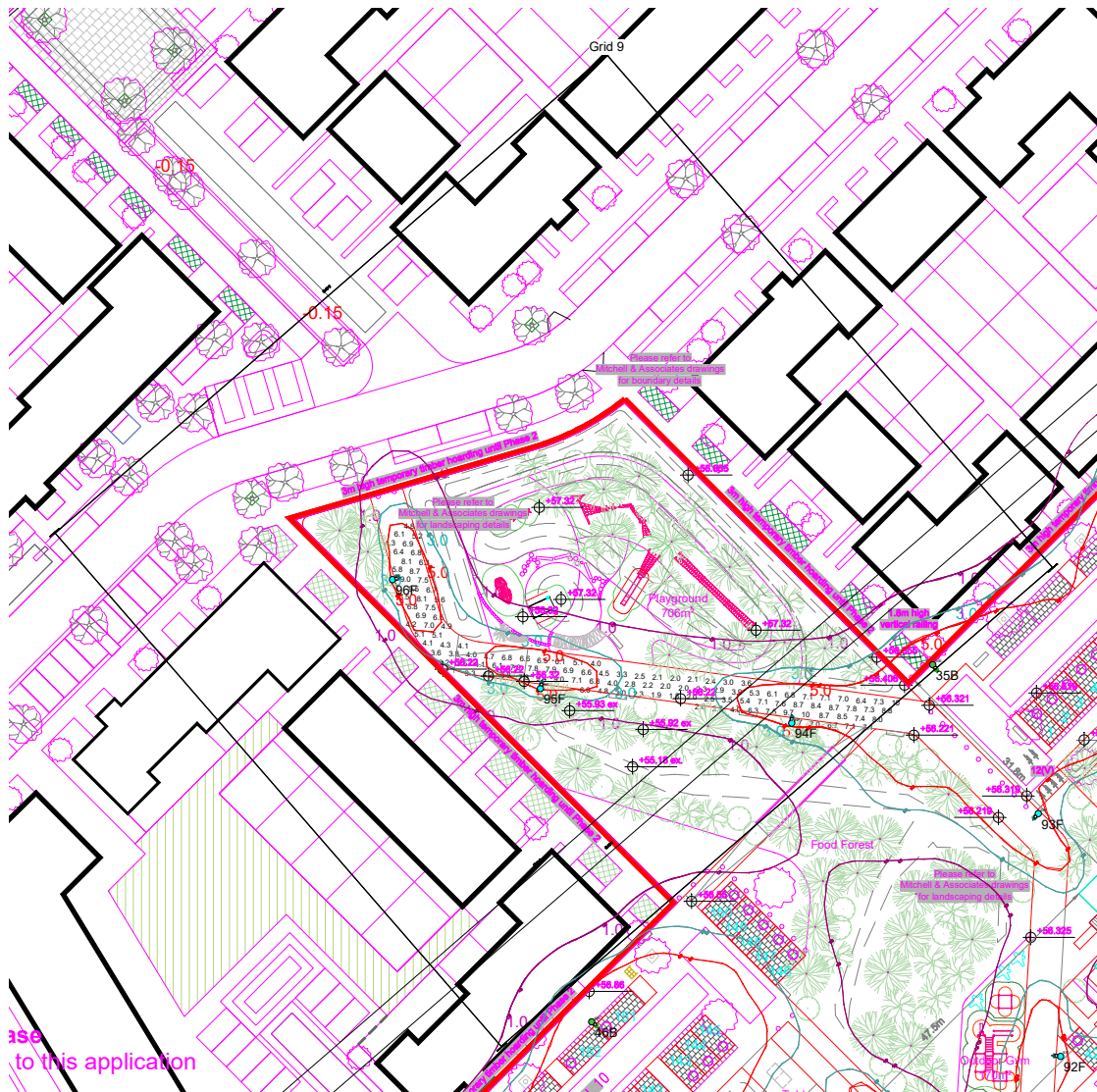


Results

Eav	5.26
Emin	1.06
Emax	15.55
Emin/Emax	0.07
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 9

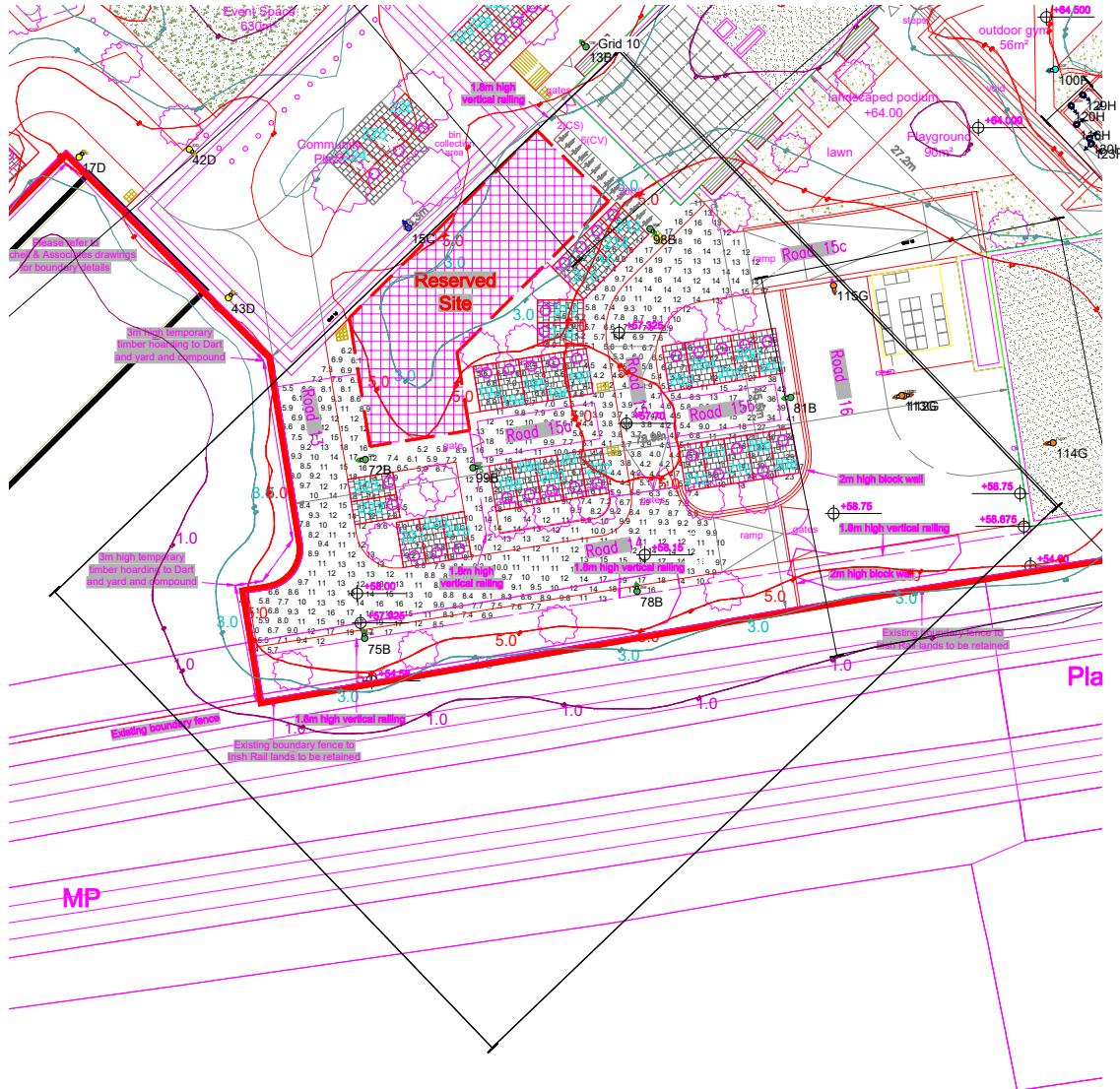


Results

Eav	5.67
Emin	1.82
Emax	10.07
Emin/Emax	0.18
Emin/Eav	0.32

Horizontal Illuminance (lux)

Grid 10

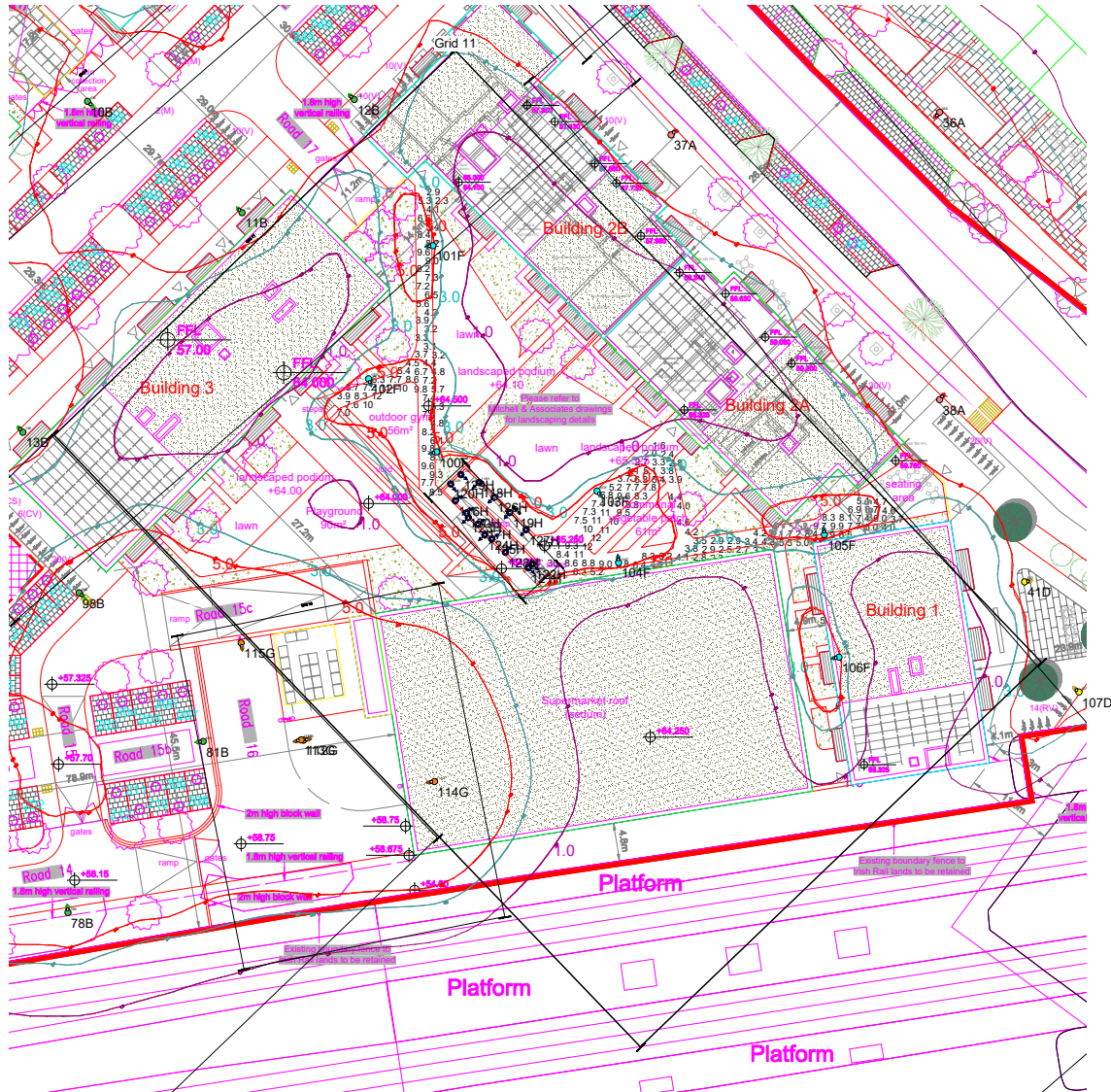


Results

Eav	11.01
Emin	2.87
Emax	42.47
Emin/Emax	0.07
Emin/Eav	0.26

Horizontal Illuminance (lux)

Grid 11



Results

Eav	6.35
Emin	1.57
Emax	29.94
Emin/Emax	0.05
Emin/Eav	0.25

Horizontal Illuminance (lux)

Grid 12



Results

Eav	6.44
Emin	1.34
Emax	17.49
Emin/Emax	0.08
Emin/Eav	0.21