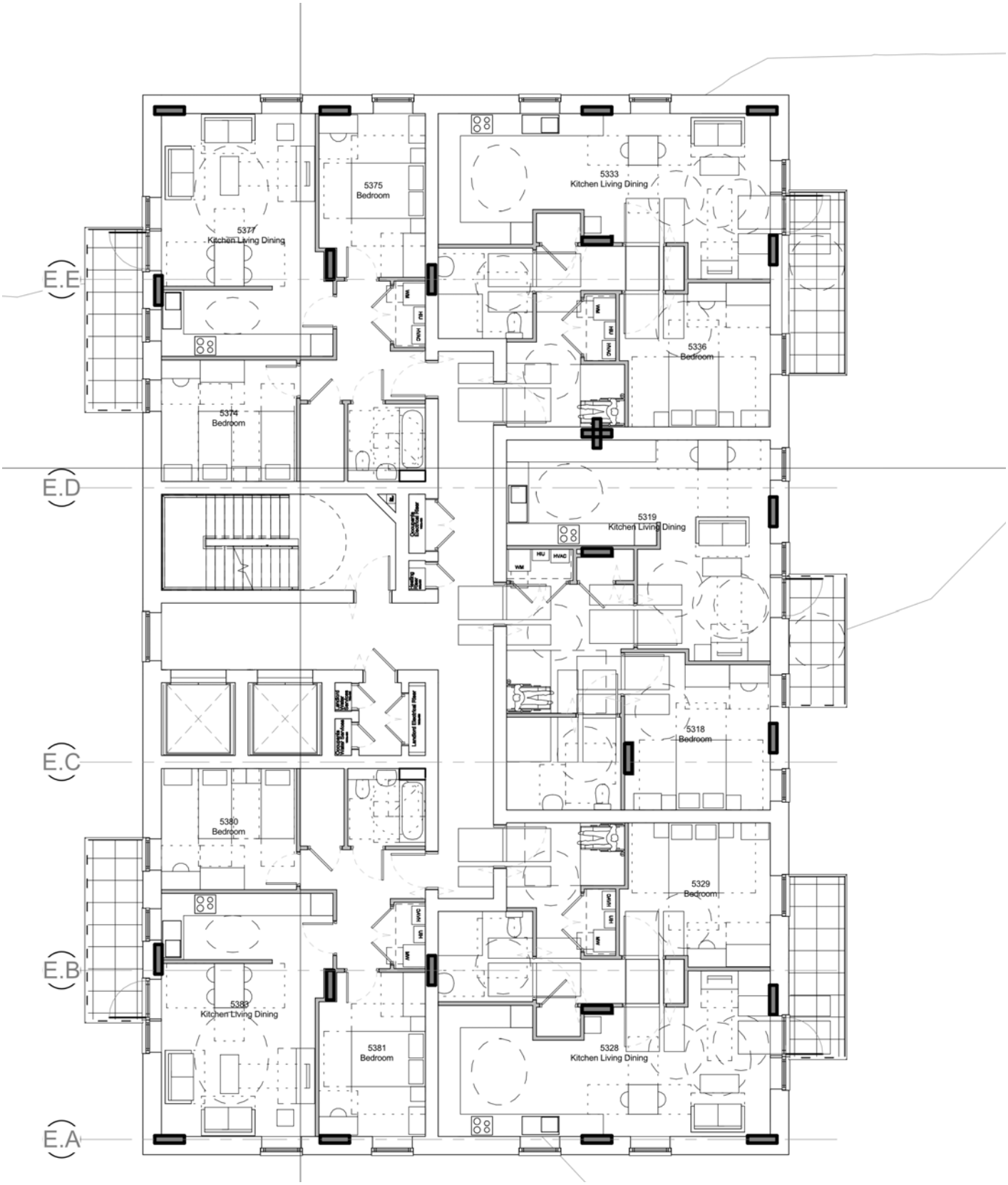

Figure 48. Block D - First Floor

Table 72. Daylight Assessment: Average Daylight Factor -Block D - 1F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block D	First	5318	Bedroom	1.10	1	YES	1	YES
Block D	First	5319	Kitchen Living Dining	0.86	2	NO	1.5	NO
Block D	First	5328	Kitchen Living Dining	2.10	2	YES	1.5	YES
Block D	First	5329	Bedroom	0.53	1	NO	1	NO
Block D	First	5333	Kitchen Living Dining	1.73	2	NO	1.5	YES
Block D	First	5336	Bedroom	0.67	1	NO	1	NO
Block D	First	5374	Bedroom	1.04	1	YES	1	YES
Block D	First	5375	Bedroom	1.13	1	YES	1	YES
Block D	First	5377	Kitchen Living Dining	2.38	2	YES	1.5	YES
Block D	First	5380	Bedroom	1.03	1	YES	1	YES
Block D	First	5381	Bedroom	1.26	1	YES	1	YES
Block D	First	5383	Kitchen Living Dining	2.40	2	YES	1.5	YES

Table 71. Daylight Assessment: No-Sky Line -Block D - 1F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block D	First	5318	Bedroom	61.31%	NO	YES
Block D	First	5319	Kitchen Living Dining	65.98%	NO	YES
Block D	First	5328	Kitchen Living Dining	81.54%	YES	YES
Block D	First	5329	Bedroom	39.73%	NO	YES
Block D	First	5333	Kitchen Living Dining	86.60%	YES	YES
Block D	First	5336	Bedroom	56.11%	NO	YES
Block D	First	5374	Bedroom	90.69%	YES	YES
Block D	First	5375	Bedroom	86.57%	YES	YES
Block D	First	5377	Kitchen Living Dining	87.66%	YES	YES
Block D	First	5380	Bedroom	89.13%	YES	YES
Block D	First	5381	Bedroom	92.68%	YES	YES
Block D	First	5383	Kitchen Living Dining	91.30%	YES	YES

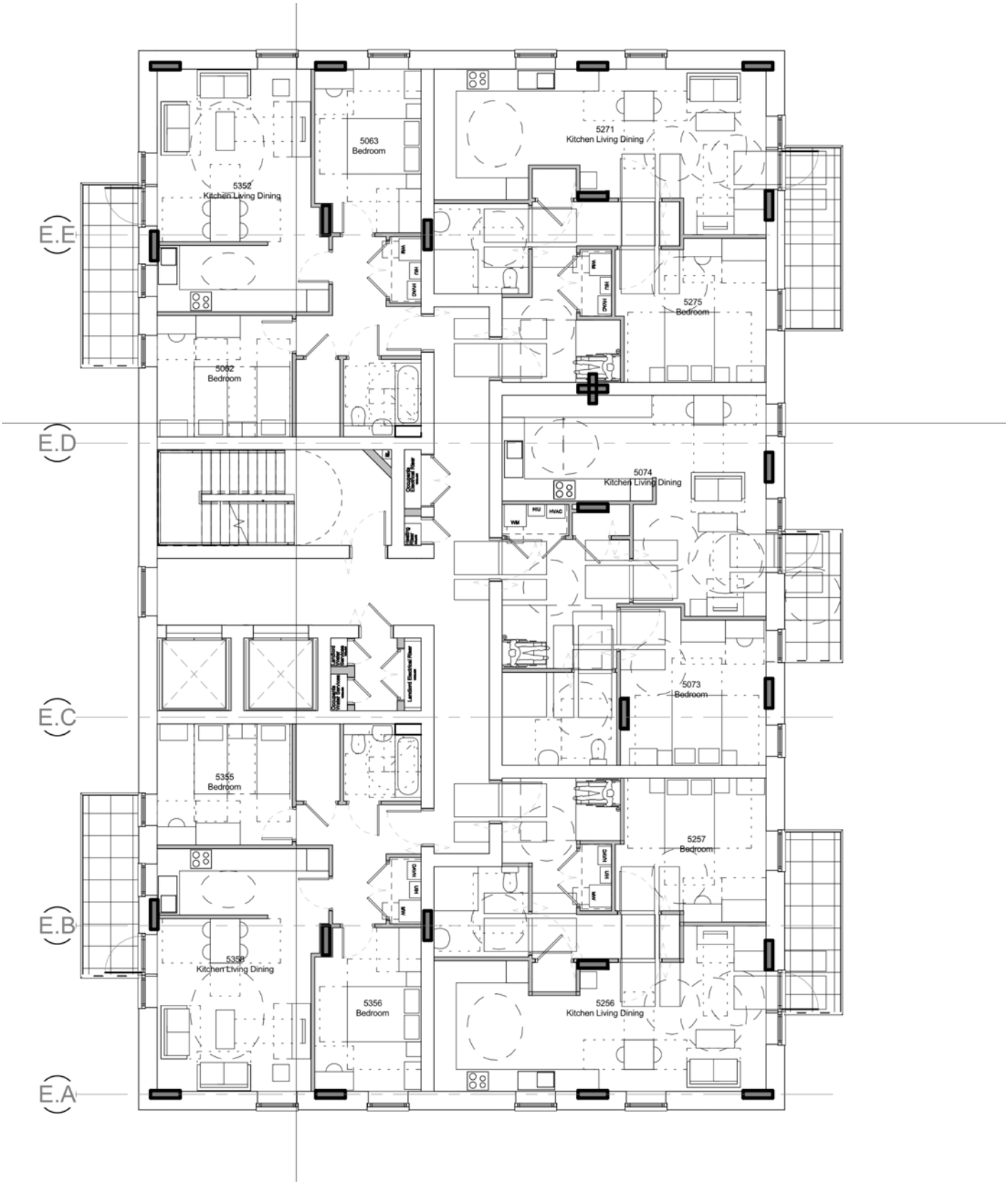

Figure 49. Block D - Second Floor

Table 74. Daylight Assessment: Average Daylight Factor -Block D - 2F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block D	Second	5062	Bedroom	1.10	1	YES	1	YES
Block D	Second	5063	Bedroom	1.17	1	YES	1	YES
Block D	Second	5073	Bedroom	1.21	1	YES	1	YES
Block D	Second	5074	Kitchen Living Dining	0.95	2	NO	1.5	NO
Block D	Second	5256	Kitchen Living Dining	2.26	2	YES	1.5	YES
Block D	Second	5257	Bedroom	0.62	1	NO	1	NO
Block D	Second	5271	Kitchen Living Dining	2	2	YES	1.5	YES
Block D	Second	5275	Bedroom	0.76	1	NO	1	NO
Block D	Second	5352	Kitchen Living Dining	2.53	2	YES	1.5	YES
Block D	Second	5355	Bedroom	1.11	1	YES	1	YES
Block D	Second	5356	Bedroom	1.33	1	YES	1	YES
Block D	Second	5358	Kitchen Living Dining	2.65	2	YES	1.5	YES

Table 73. Daylight Assessment: No-Sky Line -Block D - 2F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block D	Second	5062	Bedroom	90.72%	YES	YES
Block D	Second	5063	Bedroom	87.77%	YES	YES
Block D	Second	5073	Bedroom	74.68%	NO	YES
Block D	Second	5074	Kitchen Living Dining	69.27%	NO	YES
Block D	Second	5256	Kitchen Living Dining	82.21%	YES	YES
Block D	Second	5257	Bedroom	58.05%	NO	YES
Block D	Second	5271	Kitchen Living Dining	87.31%	YES	YES
Block D	Second	5275	Bedroom	56.71%	NO	YES
Block D	Second	5352	Kitchen Living Dining	89.32%	YES	YES
Block D	Second	5355	Bedroom	90.56%	YES	YES
Block D	Second	5356	Bedroom	96.26%	YES	YES
Block D	Second	5358	Kitchen Living Dining	92.19%	YES	YES

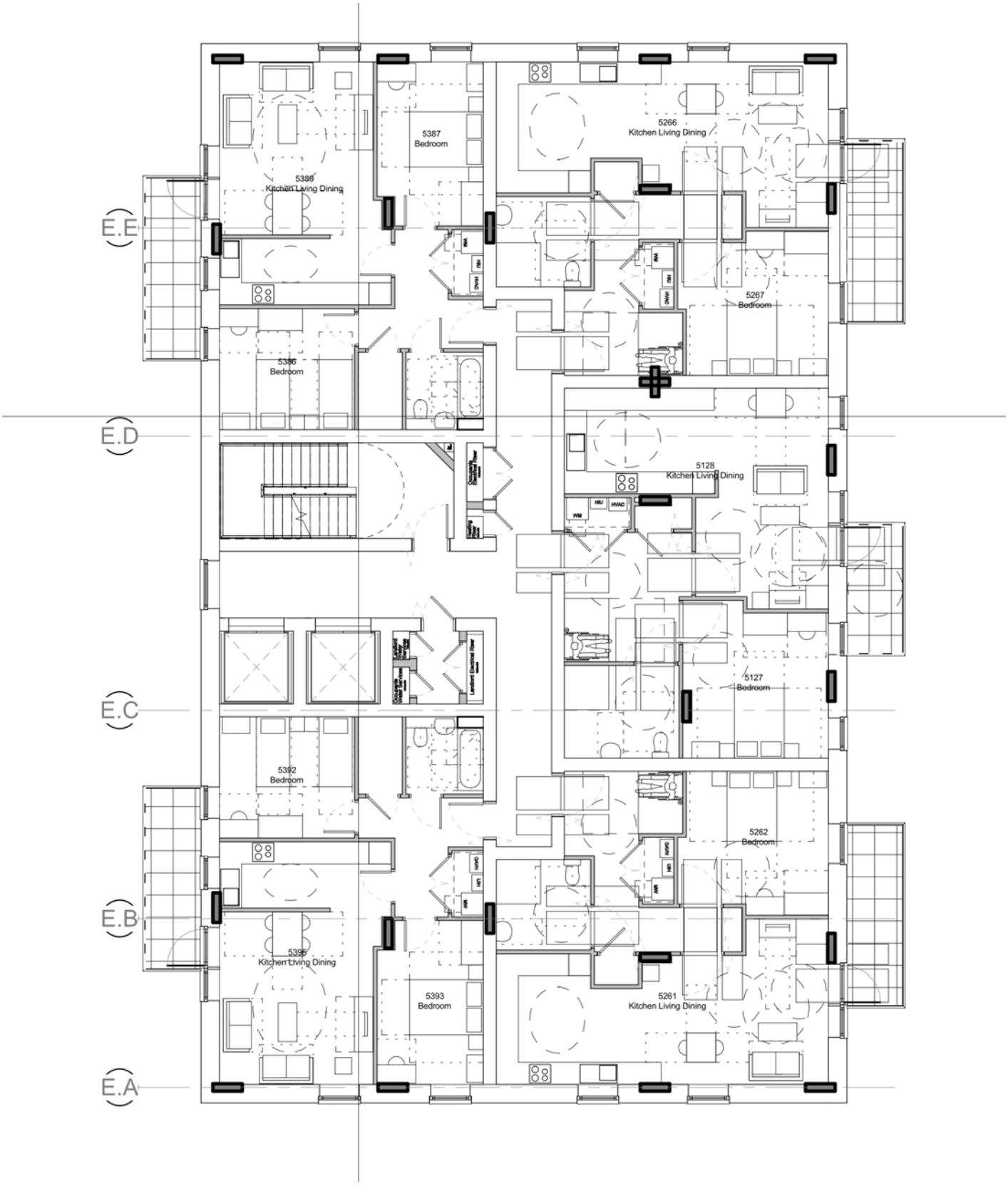

Figure 50. Block D - Third Floor

Table 76. Daylight Assessment: Average Daylight Factor -Block D - 3F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block D	Third	5127	Bedroom	1.33	1	YES	1	YES
Block D	Third	5128	Kitchen Living Dining	1.50	2	NO	1.5	YES
Block D	Third	5261	Kitchen Living Dining	2.66	2	YES	1.5	YES
Block D	Third	5262	Bedroom	1.16	1	YES	1	YES
Block D	Third	5266	Kitchen Living Dining	2	2	YES	1.5	YES
Block D	Third	5267	Bedroom	0.76	1	NO	1	NO
Block D	Third	5386	Bedroom	1.14	1	YES	1	YES
Block D	Third	5387	Bedroom	1.21	1	YES	1	YES
Block D	Third	5389	Kitchen Living Dining	2.63	2	YES	1.5	YES
Block D	Third	5392	Bedroom	1.53	1	YES	1	YES
Block D	Third	5393	Bedroom	1.39	1	YES	1	YES
Block D	Third	5395	Kitchen Living Dining	3.39	2	YES	1.5	YES

Table 75. Daylight Assessment: No-Sky Line -Block D - 3F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block D	Third	5127	Bedroom	78.93%	NO	YES
Block D	Third	5128	Kitchen Living Dining	74.13%	NO	YES
Block D	Third	5261	Kitchen Living Dining	84.65%	YES	YES
Block D	Third	5262	Bedroom	60.14%	NO	YES
Block D	Third	5266	Kitchen Living Dining	87.72%	YES	YES
Block D	Third	5267	Bedroom	57.44%	NO	YES
Block D	Third	5386	Bedroom	90.74%	YES	YES
Block D	Third	5387	Bedroom	89.58%	YES	YES
Block D	Third	5389	Kitchen Living Dining	91.87%	YES	YES
Block D	Third	5392	Bedroom	90.74%	YES	YES
Block D	Third	5393	Bedroom	96.26%	YES	YES
Block D	Third	5395	Kitchen Living Dining	93.39%	YES	YES

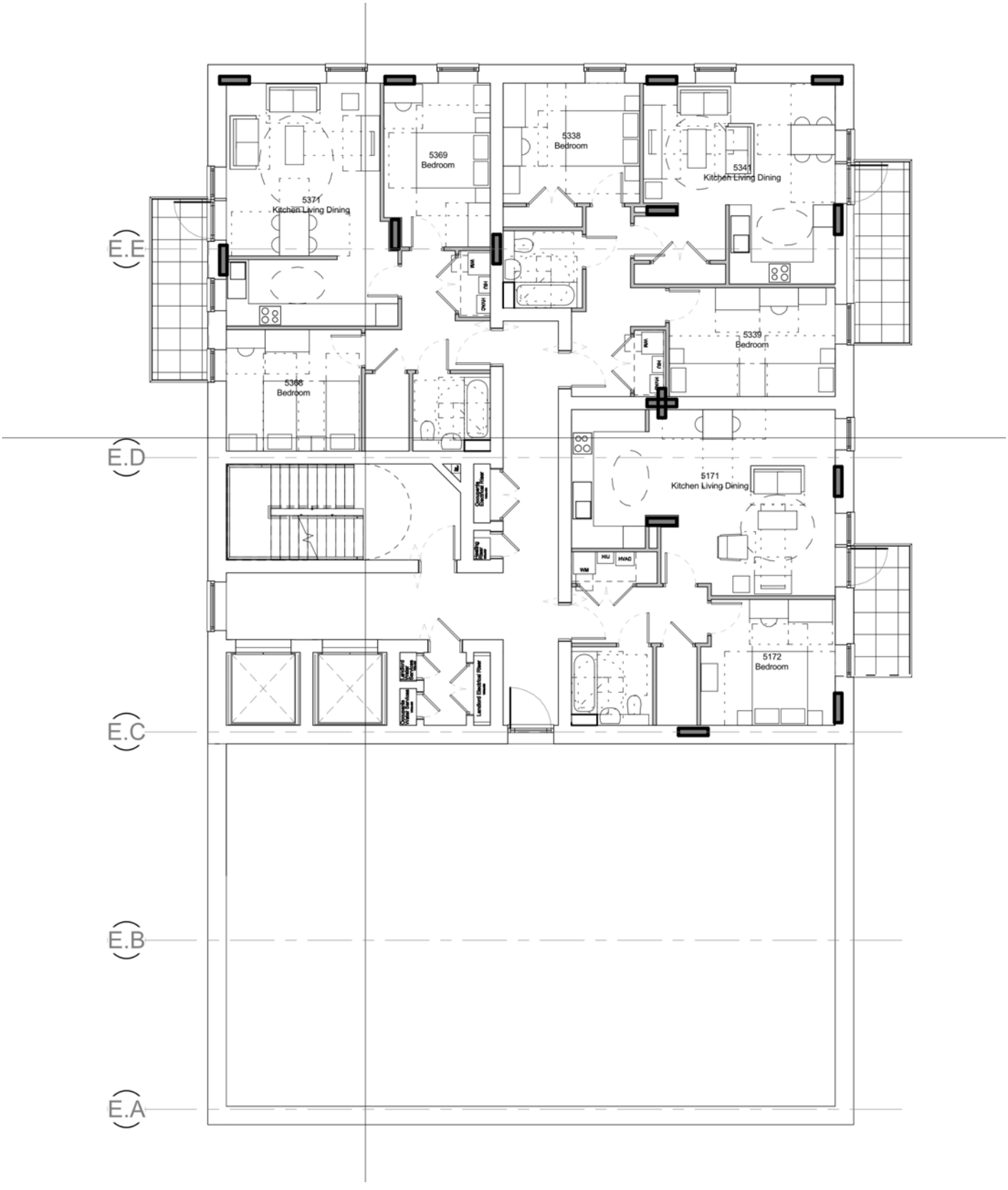

Figure 51. Block D - Fourth Floor

Table 78. Daylight Assessment: Average Daylight Factor -Block D - 4F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block D	Fourth	5171	Kitchen Living Dining	1.50	2	NO	1.5	YES
Block D	Fourth	5172	Bedroom	0.73	1	NO	1	NO
Block D	Fourth	5338	Bedroom	1.25	1	YES	1	YES
Block D	Fourth	5339	Bedroom	0.89	1	NO	1	NO
Block D	Fourth	5341	Kitchen Living Dining	1.59	2	NO	1.5	YES
Block D	Fourth	5368	Bedroom	1.15	1	YES	1	YES
Block D	Fourth	5369	Bedroom	1.23	1	YES	1	YES
Block D	Fourth	5371	Kitchen Living Dining	2.67	2	YES	1.5	YES

Table 77. Daylight Assessment: No-Sky Line -Block D - 4F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block D	Fourth	5171	Kitchen Living Dining	78.11%	NO	YES
Block D	Fourth	5172	Bedroom	50.46%	NO	YES
Block D	Fourth	5338	Bedroom	66.44%	NO	YES
Block D	Fourth	5339	Bedroom	68.19%	NO	YES
Block D	Fourth	5341	Kitchen Living Dining	87.13%	YES	YES
Block D	Fourth	5368	Bedroom	90.74%	YES	YES
Block D	Fourth	5369	Bedroom	90.37%	YES	YES
Block D	Fourth	5371	Kitchen Living Dining	92.29%	YES	YES

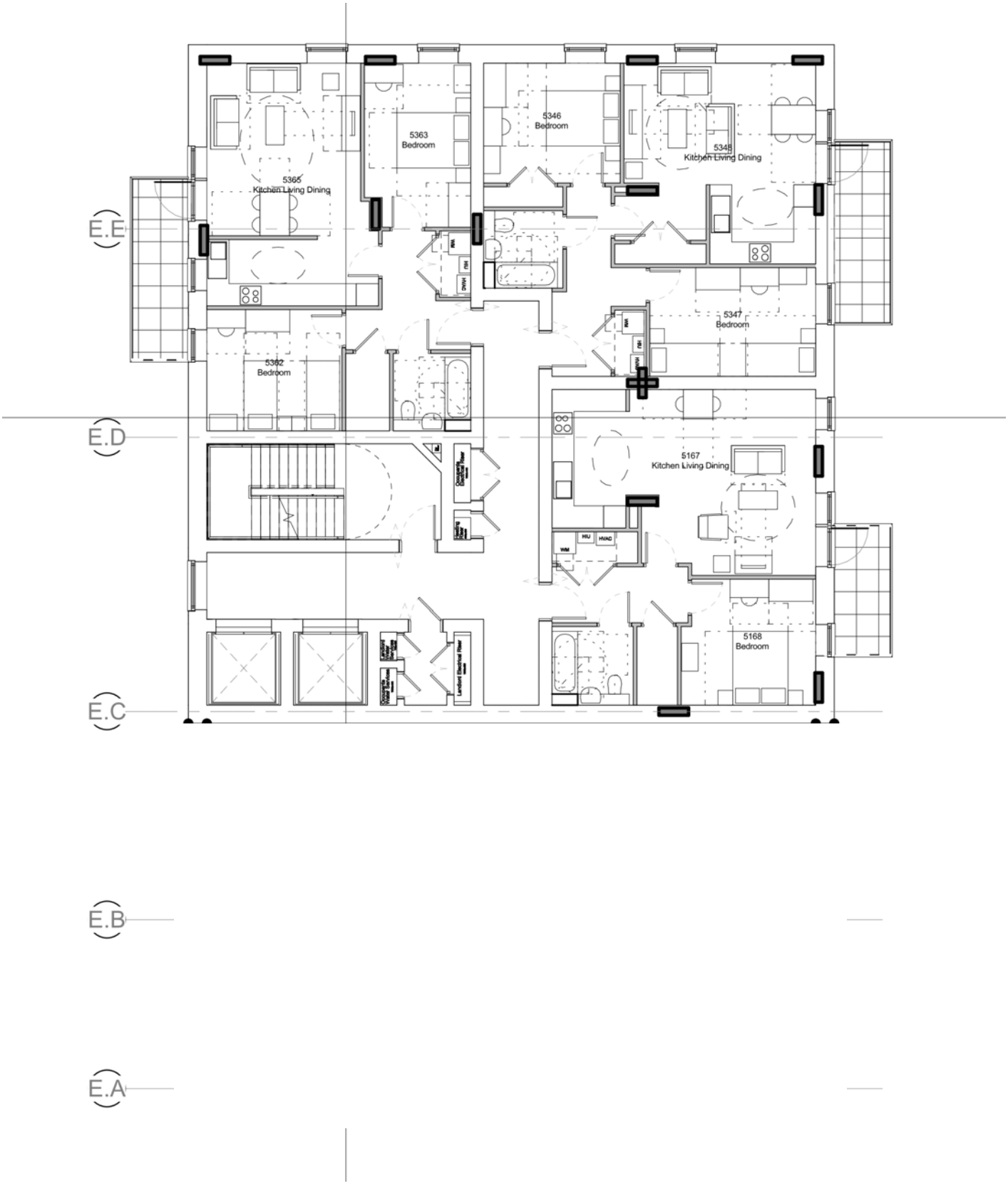

Figure 52. Block D - Fifth Floor

Table 80. Daylight Assessment: Average Daylight Factor -Block D - 5F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block D	Fifth	5167	Kitchen Living Dining	1.50	2	NO	1.5	YES
Block D	Fifth	5168	Bedroom	0.81	1	NO	1	NO
Block D	Fifth	5346	Bedroom	1.26	1	YES	1	YES
Block D	Fifth	5347	Bedroom	1.00	1	YES	1	YES
Block D	Fifth	5348	Kitchen Living Dining	1.68	2	NO	1.5	YES
Block D	Fifth	5362	Bedroom	1.15	1	YES	1	YES
Block D	Fifth	5363	Bedroom	1.25	1	YES	1	YES
Block D	Fifth	5365	Kitchen Living Dining	2.68	2	YES	1.5	YES

Table 79. Daylight Assessment: No-Sky Line -Block D - 5F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block D	Fifth	5167	Kitchen Living Dining	78.85%	NO	YES
Block D	Fifth	5168	Bedroom	60.01%	NO	YES
Block D	Fifth	5346	Bedroom	69.90%	NO	YES
Block D	Fifth	5347	Bedroom	71.20%	NO	YES
Block D	Fifth	5348	Kitchen Living Dining	87.44%	YES	YES
Block D	Fifth	5362	Bedroom	90.74%	YES	YES
Block D	Fifth	5363	Bedroom	90.70%	YES	YES
Block D	Fifth	5365	Kitchen Living Dining	92.33%	YES	YES

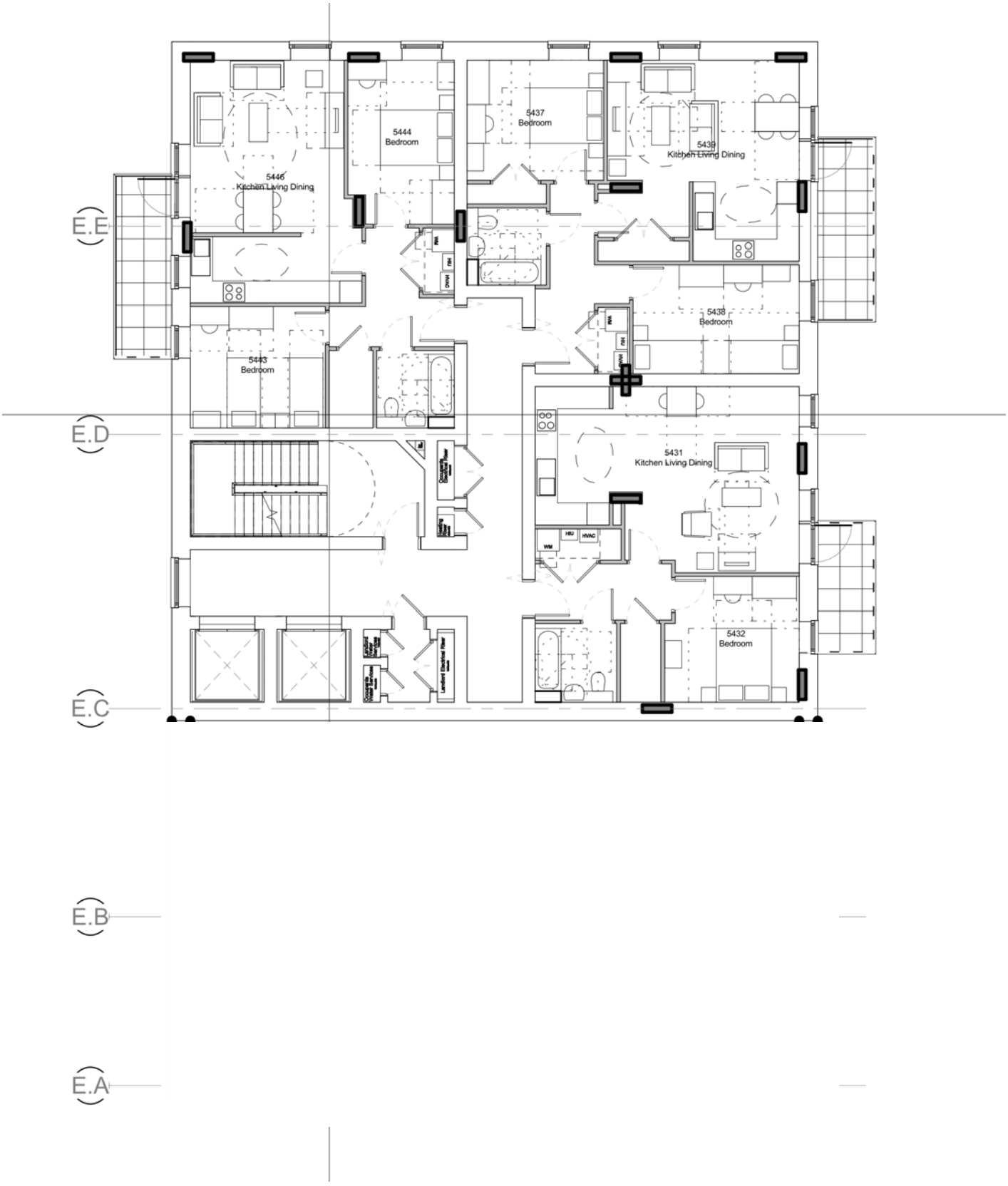

Figure 53. Block D - Sixth Floor

Table 82. Daylight Assessment: Average Daylight Factor -Block D - 6F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block D	Sixth	5431	Kitchen Living Dining	1.50	2	NO	1.5	YES
Block D	Sixth	5432	Bedroom	0.90	1	NO	1	NO
Block D	Sixth	5437	Bedroom	1.28	1	YES	1	YES
Block D	Sixth	5438	Bedroom	1.04	1	YES	1	YES
Block D	Sixth	5439	Kitchen Living Dining	1.78	2	NO	1.5	YES
Block D	Sixth	5443	Bedroom	1.15	1	YES	1	YES
Block D	Sixth	5444	Bedroom	1.26	1	YES	1	YES
Block D	Sixth	5446	Kitchen Living Dining	2.69	2	YES	1.5	YES

Table 81. Daylight Assessment: No-Sky Line -Block D - 6F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block D	Sixth	5431	Kitchen Living Dining	84.93%	YES	YES
Block D	Sixth	5432	Bedroom	85.12%	YES	YES
Block D	Sixth	5437	Bedroom	71.01%	NO	YES
Block D	Sixth	5438	Bedroom	77.00%	NO	YES
Block D	Sixth	5439	Kitchen Living Dining	88.90%	YES	YES
Block D	Sixth	5443	Bedroom	90.74%	YES	YES
Block D	Sixth	5444	Bedroom	91.02%	YES	YES
Block D	Sixth	5446	Kitchen Living Dining	92.39%	YES	YES

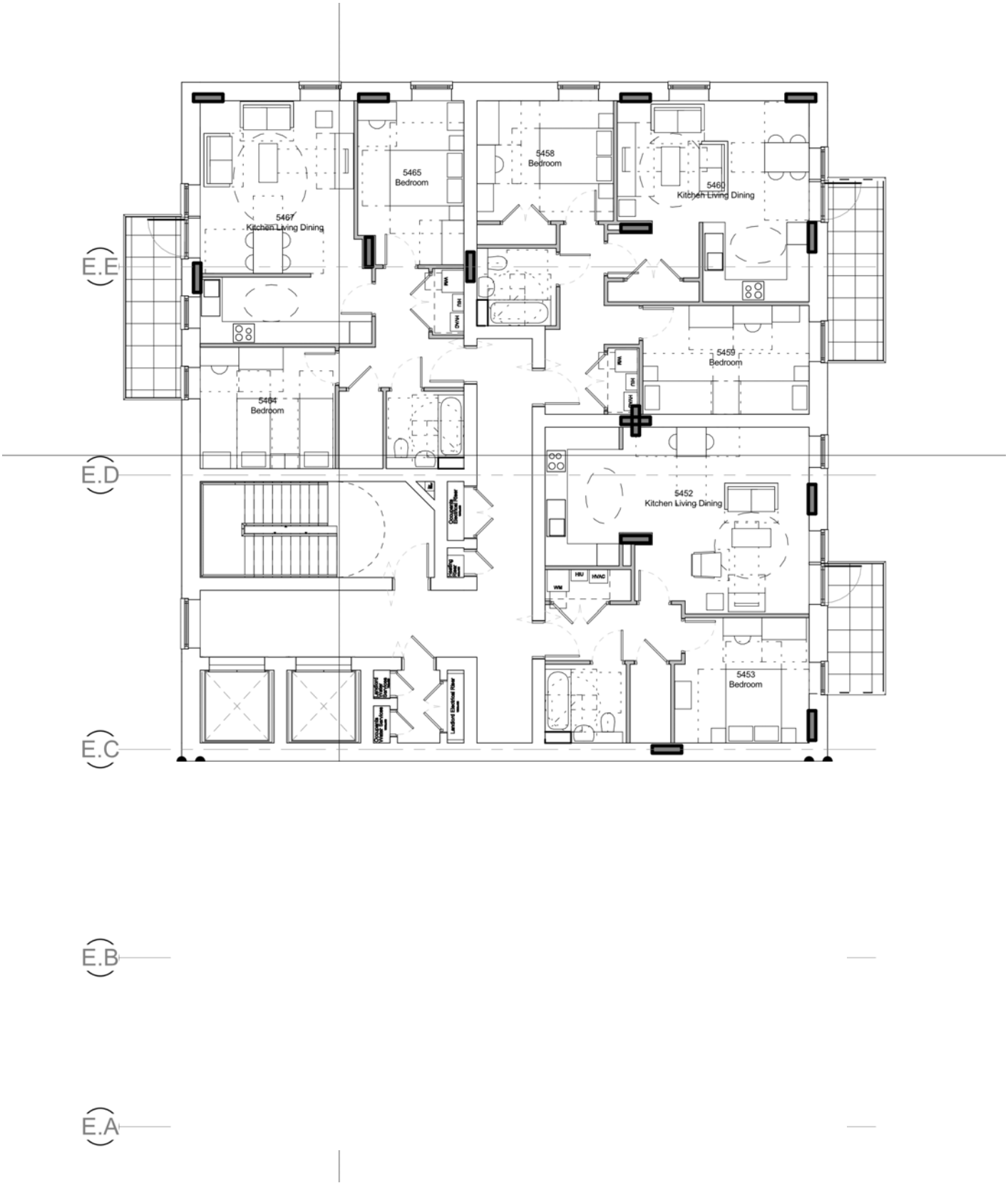

Figure 54. Block D - Seventh Floor

Table 84. Daylight Assessment: Average Daylight Factor -Block D - 7F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block D	Seventh	5452	Kitchen Living Dining	2	2	YES	1.5	YES
Block D	Seventh	5453	Bedroom	1.29	1	YES	1	YES
Block D	Seventh	5458	Bedroom	1.29	1	YES	1	YES
Block D	Seventh	5459	Bedroom	1.47	1	YES	1	YES
Block D	Seventh	5460	Kitchen Living Dining	2.25	2	YES	1.5	YES
Block D	Seventh	5464	Bedroom	1.53	1	YES	1	YES
Block D	Seventh	5465	Bedroom	1.28	1	YES	1	YES
Block D	Seventh	5467	Kitchen Living Dining	3.34	2	YES	1.5	YES

Table 83. Daylight Assessment: No-Sky Line -Block D - 7F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block D	Seventh	5452	Kitchen Living Dining	91.75%	YES	YES
Block D	Seventh	5453	Bedroom	87.51%	YES	YES
Block D	Seventh	5458	Bedroom	71.84%	NO	YES
Block D	Seventh	5459	Bedroom	80.54%	YES	YES
Block D	Seventh	5460	Kitchen Living Dining	90.59%	YES	YES
Block D	Seventh	5464	Bedroom	90.92%	YES	YES
Block D	Seventh	5465	Bedroom	91.36%	YES	YES
Block D	Seventh	5467	Kitchen Living Dining	92.50%	YES	YES

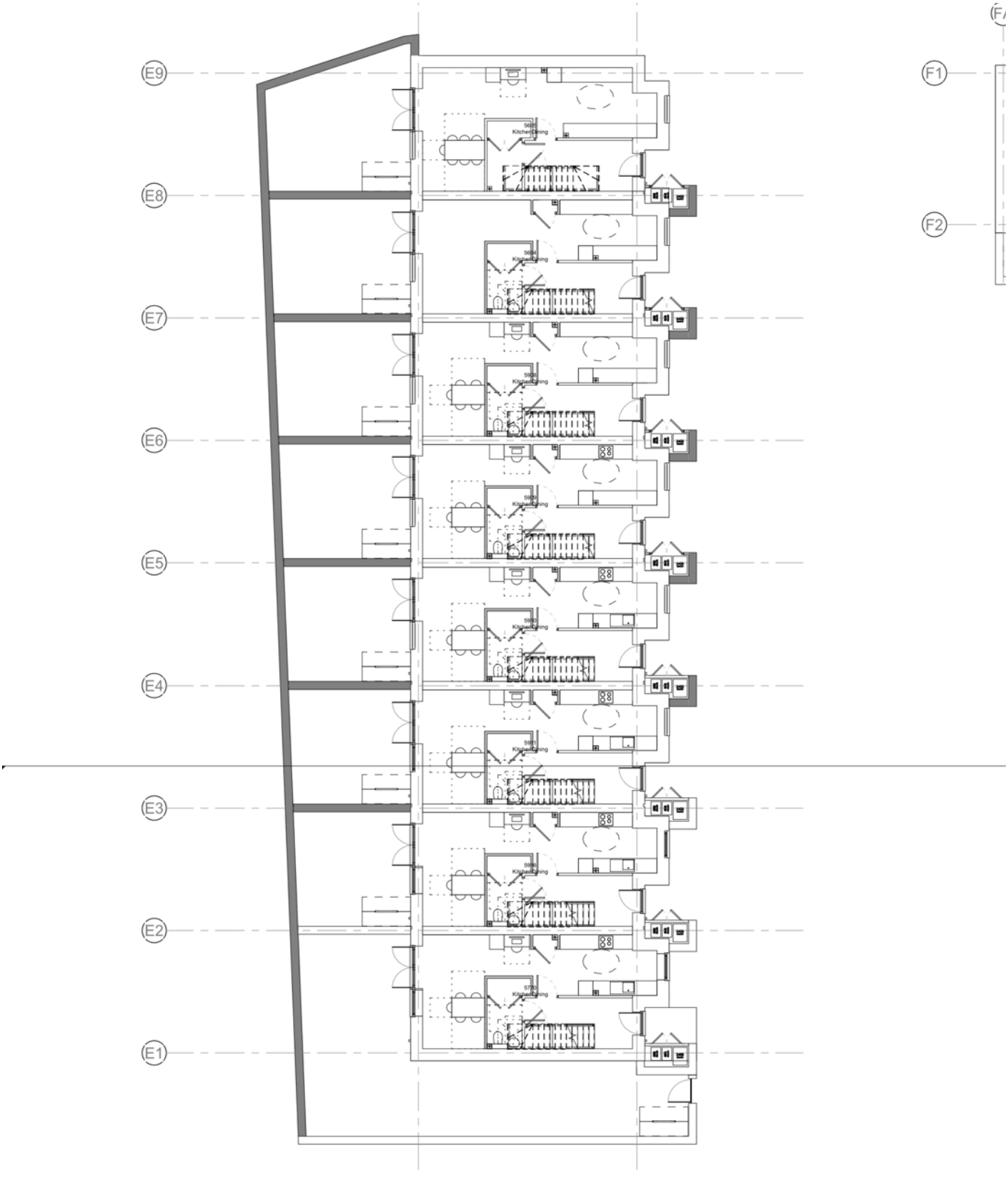

Figure 55. Block E - Ground Floor

Table 86. Daylight Assessment: Average Daylight Factor -Block E - GF

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block E	Ground	5908	Kitchen Dining	2.42	2	YES	1.5	YES
Block E	Ground	5909	Kitchen Dining	2.07	2	YES	1.5	YES
Block E	Ground	5910	Kitchen Dining	1.72	2	NO	1.5	YES
Block E	Ground	5911	Kitchen Dining	1.50	2	NO	1.5	YES
Block E	Ground	5916	Kitchen Dining	1.02	2	NO	1.5	NO
Block E	Ground	5664	Kitchen Dining	2.78	2	YES	1.5	YES
Block E	Ground	5665	Kitchen Dining	2.78	2	YES	1.5	YES
Block E	Ground	5770	Kitchen Dining	1.00	2	NO	1.5	NO

Table 85. Daylight Assessment: No-Sky Line -Block E - GF

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block E	Ground	5908	Kitchen Dining	80.00%	YES	NO
Block E	Ground	5909	Kitchen Dining	80.00%	YES	NO
Block E	Ground	5910	Kitchen Dining	80.00%	YES	NO
Block E	Ground	5911	Kitchen Dining	80.00%	YES	NO
Block E	Ground	5916	Kitchen Dining	80.00%	YES	NO
Block E	Ground	5664	Kitchen Dining	91.51%	YES	YES
Block E	Ground	5665	Kitchen Dining	96.64%	YES	YES
Block E	Ground	5770	Kitchen Dining	80.00%	YES	YES

Figure 56. Block E - First Floor

Table 87. Daylight Assessment: Average Daylight Factor -Block E - 1F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block E	First	5698	Bedroom	1.37	1	YES	1	YES
Block E	First	5700	Bedroom	1.72	1	YES	1	YES
Block E	First	5702	Bedroom	2.07	1	YES	1	YES
Block E	First	5703	Living Room	0.73	1.5	NO	1.5	NO
Block E	First	5704	Living Room	1.00	1.5	NO	1.5	NO
Block E	First	5705	Living Room	1.08	1.5	NO	1.5	NO
Block E	First	5707	Bedroom	2.42	1	YES	1	YES
Block E	First	5708	Living Room	1.50	1.5	YES	1.5	YES
Block E	First	5711	Living Room	2.95	1.5	YES	1.5	YES
Block E	First	5712	Living Room	2.91	1.5	YES	1.5	YES
Block E	First	5713	Bedroom	2.62	1	YES	1	YES
Block E	First	5714	Bedroom	1.86	1	YES	1	YES
Block E	First	5777	Bedroom	1.02	1	YES	1	YES
Block E	First	5778	Living Room	0.57	1.5	NO	1.5	NO
Block E	First	5780	Bedroom	0.46	1	NO	1	NO
Block E	First	5781	Living Room	0.41	1.5	NO	1.5	NO

Table 88. Daylight Assessment: No-Sky Line -Block E - 1F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block E	First	5698	Bedroom	80.00%	YES	YES
Block E	First	5700	Bedroom	80.00%	YES	YES
Block E	First	5702	Bedroom	80.00%	YES	YES
Block E	First	5703	Living Room	98.25%	YES	YES
Block E	First	5704	Living Room	98.30%	YES	YES
Block E	First	5705	Living Room	98.32%	YES	YES
Block E	First	5707	Bedroom	80.00%	YES	YES
Block E	First	5708	Living Room	98.31%	YES	YES
Block E	First	5711	Living Room	98.03%	YES	YES
Block E	First	5712	Living Room	97.35%	YES	YES
Block E	First	5713	Bedroom	93.40%	YES	YES
Block E	First	5714	Bedroom	94.25%	YES	YES
Block E	First	5777	Bedroom	80.00%	YES	YES
Block E	First	5778	Living Room	98.15%	YES	YES

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block E	First	5780	Bedroom	80.00%	YES	YES
Block E	First	5781	Living Room	97.78%	YES	YES

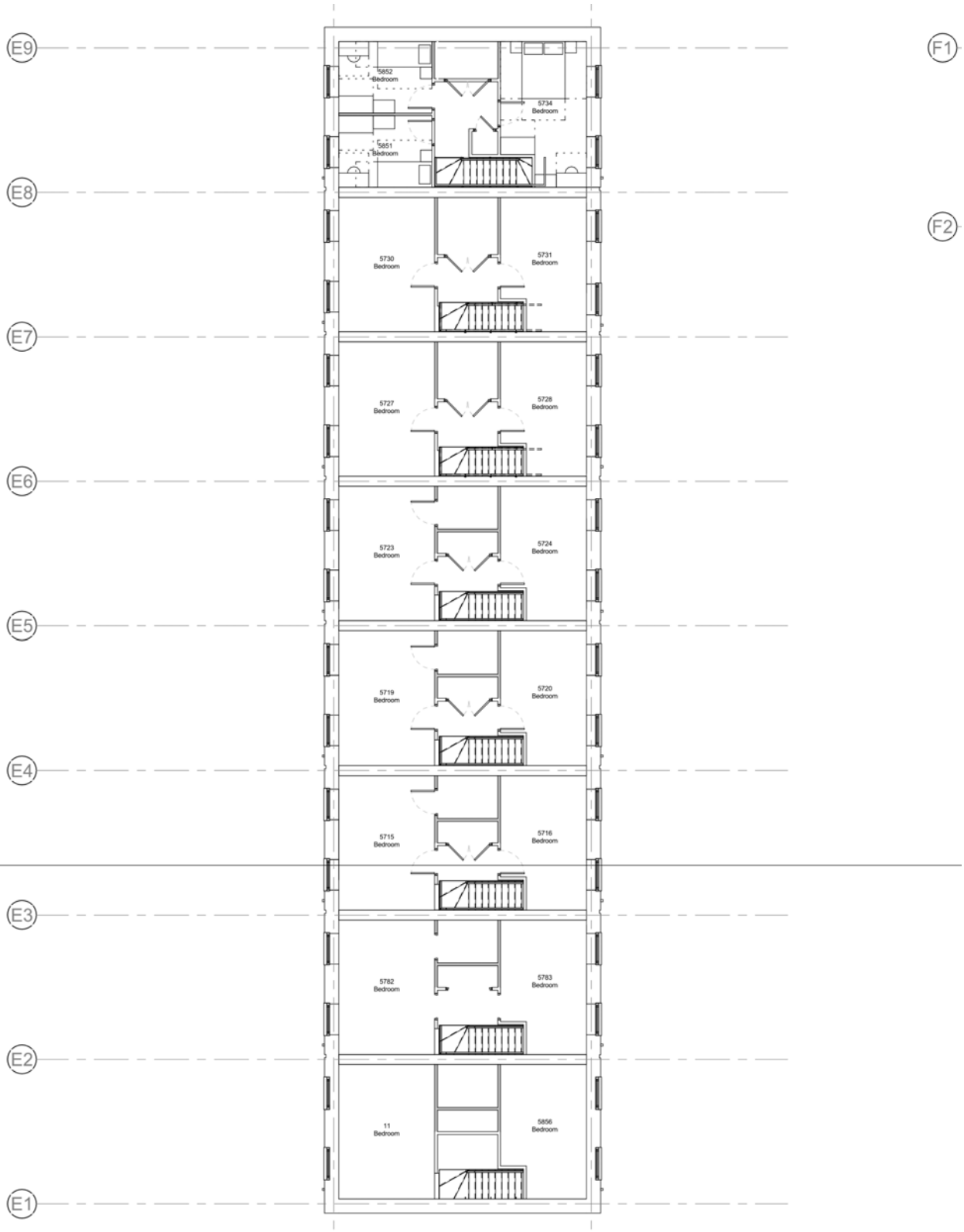

Figure 57. Block E - Second Floor

Table 89. Daylight Assessment: Average Daylight Factor -Block E - 2F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block E	Second	5715	Bedroom	1.49	1	YES	1	YES
Block E	Second	5716	Bedroom	1.30	1	YES	1	YES
Block E	Second	5719	Bedroom	1.85	1	YES	1	YES
Block E	Second	5720	Bedroom	1.64	1	YES	1	YES
Block E	Second	5723	Bedroom	2.20	1	YES	1	YES
Block E	Second	5724	Bedroom	1.99	1	YES	1	YES
Block E	Second	5727	Bedroom	2.56	1	YES	1	YES
Block E	Second	5728	Bedroom	2.34	1	YES	1	YES
Block E	Second	5730	Bedroom	2.86	1	YES	1	YES
Block E	Second	5731	Bedroom	2.66	1	YES	1	YES
Block E	Second	5734	Bedroom	2.55	1	YES	1	YES
Block E	Second	5782	Bedroom	1.15	1	YES	1	YES
Block E	Second	5783	Bedroom	1.00	1	YES	1	YES
Block E	Second	5851	Bedroom	2.28	1	YES	1	YES
Block E	Second	5852	Bedroom	2.27	1	YES	1	YES
Block E	Second	11	Bedroom	1.10	1	YES	1	YES
Block E	Second	5856	Bedroom	1.00	1	YES	1	YES

Table 90. Daylight Assessment: No-Sky Line -Block E - 2F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block E	Second	5715	Bedroom	97.91%	YES	YES
Block E	Second	5716	Bedroom	93.69%	YES	YES
Block E	Second	5719	Bedroom	97.97%	YES	YES
Block E	Second	5720	Bedroom	94.69%	YES	YES
Block E	Second	5723	Bedroom	97.96%	YES	YES
Block E	Second	5724	Bedroom	94.49%	YES	YES
Block E	Second	5727	Bedroom	97.93%	YES	YES
Block E	Second	5728	Bedroom	95.64%	YES	YES
Block E	Second	5730	Bedroom	98.02%	YES	YES
Block E	Second	5731	Bedroom	97.17%	YES	YES
Block E	Second	5734	Bedroom	95.11%	YES	YES
Block E	Second	5782	Bedroom	97.83%	YES	YES

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block E	Second	5783	Bedroom	89.90%	YES	YES
Block E	Second	5851	Bedroom	97.45%	YES	YES
Block E	Second	5852	Bedroom	97.23%	YES	YES
Block E	Second	11	Bedroom	97.59%	YES	YES
Block E	Second	5856	Bedroom	80.00%	YES	YES

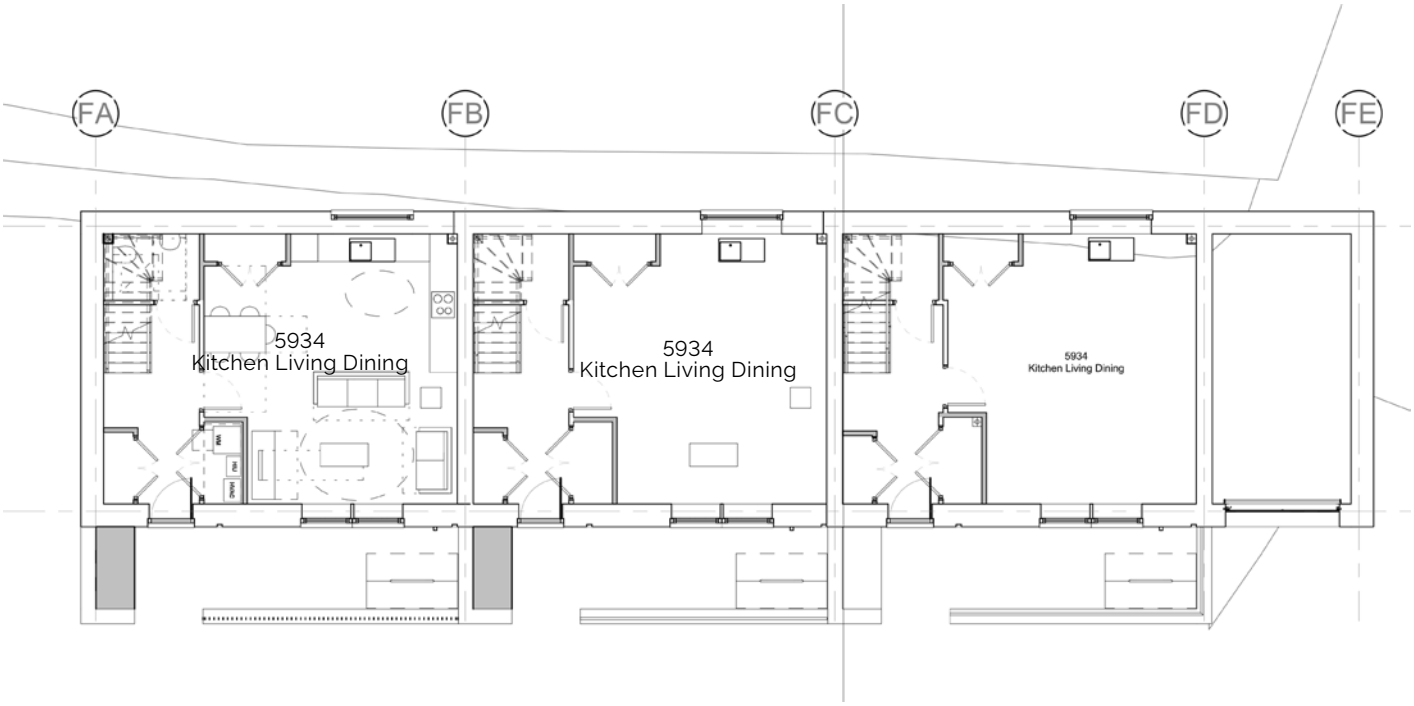

Figure 58. Block F - Ground Floor

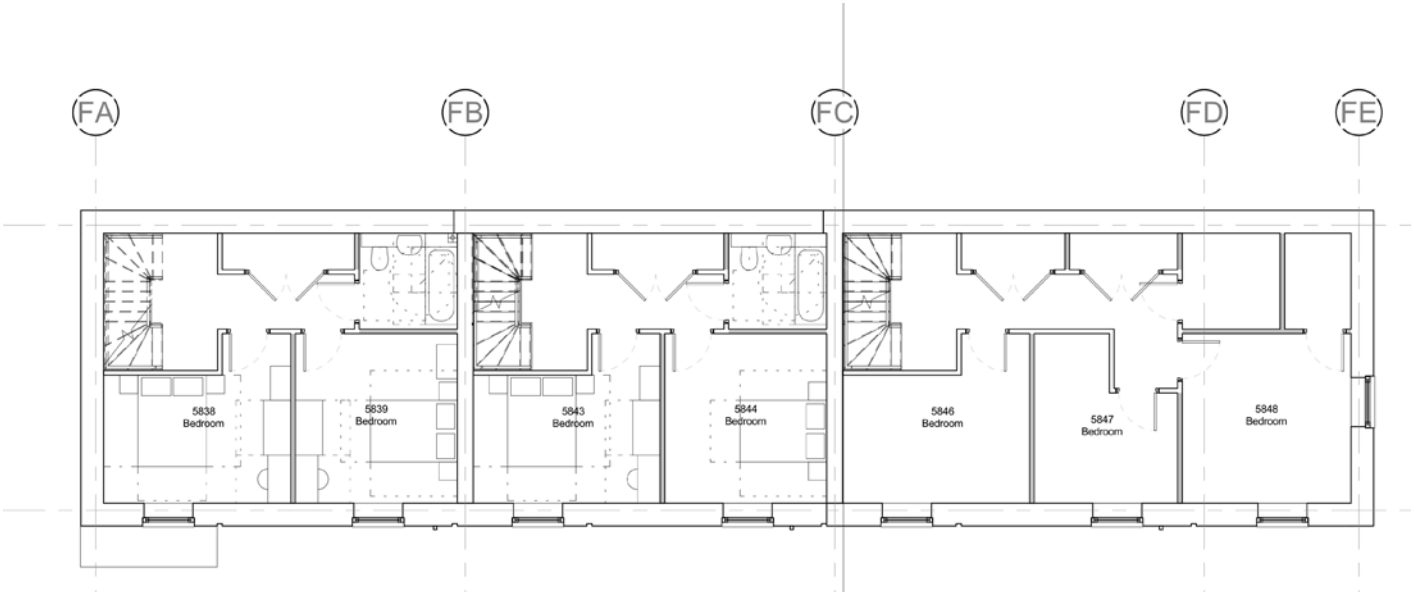

Figure 59. Block F - First Floor

Table 91. Daylight Assessment: Average Daylight Factor -Block F - GF

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block F	Ground	5934	Kitchen Living Dining	1.50	2	NO	1.5	YES
Block F	Ground	5934	Kitchen Living Dining	1.50	2	NO	1.5	YES
Block F	Ground	5934	Kitchen Living Dining	1.50	2	NO	1.5	YES

Table 93. Daylight Assessment: No-Sky Line -Block E - GF

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block F	Ground	5934	Kitchen Living Dining	84.64%	YES	YES
Block F	Ground	5934	Kitchen Living Dining	84.64%	YES	YES
Block F	Ground	5934	Kitchen Living Dining	84.64%	YES	YES

Table 92. Daylight Assessment: Average Daylight Factor -Block F - 1F

Block number	Floor	Room ID	Room Use	ADF value (%)	Target value (%)	Meets BRE criteria	Target value (%)	Meets criteria
Block F	First	5846	Bedroom	1.20	1	YES	1	YES
Block F	First	5847	Bedroom	1.39	1	YES	1	YES
Block F	First	5848	Bedroom	1.93	1	YES	1	YES
Block F	First	5838	Bedroom	1.29	1	YES	1	YES
Block F	First	5839	Bedroom	1.32	1	YES	1	YES
Block F	First	5843	Bedroom	1.33	1	YES	1	YES
Block F	First	5844	Bedroom	1.34	1	YES	1	YES

Table 94. Daylight Assessment: No-Sky Line -Block E - 1F

Unit number	Floor	Room ID	Room Use	NSL value	Meets BRE criteria	Meets Room Depth criterion
Block F	First	5846	Bedroom	86.59%	YES	YES
Block F	First	5847	Bedroom	81.85%	YES	YES
Block F	First	5848	Bedroom	80.00%	YES	YES
Block F	First	5838	Bedroom	88.79%	YES	YES
Block F	First	5839	Bedroom	86.88%	YES	YES
Block F	First	5843	Bedroom	87.23%	YES	YES
Block F	First	5844	Bedroom	85.11%	YES	YES

Appendix C - Sunlight Assessment: Proposed development

Table 95. Detailed results of the Sunlight Assessment - Proposed Development - Block A

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
1244	W1754	25	14	NO	5	6	YES				
1244	W1962	25	7	NO	5	2	NO				
1244	W1981	25	18	NO	5	2	NO				
		25			5			31	YES	6	YES
1246	W1891	25	28	YES	5	4	NO				
1246	W1892	25	28	YES	5	4	NO				
1246	W1961	25	6	NO	5	2	NO				
		25			5			34	YES	6	YES
1258	W1773	25	14	NO	5	6	YES				
1258	W1871	25	32	YES	5	7	YES				
1258	W1872	25	35	YES	5	11	YES				
1258	W1873	25	23	NO	5	7	YES				
		25			5			46	YES	13	YES
1270	W1775	25	19	NO	5	6	YES				
1270	W1843	25	16	NO	5	0	NO				
1270	W1845	25	24	NO	5	3	NO				
1270	W1924	25	13	NO	5	5	YES				
		25			5			33	YES	6	YES
1274	W1936	25	14	NO	5	6	YES				
1274	W1947	25	32	YES	5	7	YES				
1274	W1948	25	36	YES	5	12	YES				
1274	W1949	25	23	NO	5	7	YES				
		25			5			47	YES	14	YES
1283	W1937	25	19	NO	5	6	YES				

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
1283	W1943	25	24	NO	5	3	NO				
1283	W1955	25	13	NO	5	5	YES				
1283	W1957	25	16	NO	5	0	NO				
		25			5			33	YES	6	YES
1286	W1783	25	15	NO	5	7	YES				
1286	W1877	25	32	YES	5	7	YES				
1286	W1878	25	36	YES	5	12	YES				
1286	W1879	25	23	NO	5	7	YES				
		25			5			47	YES	14	YES
1295	W1781	25	13	NO	5	5	YES				
1295	W1785	25	19	NO	5	6	YES				
1295	W1825	25	16	NO	5	0	NO				
1295	W1827	25	24	NO	5	3	NO				
		25			5			33	YES	6	YES
1298	W1788	25	15	NO	5	7	YES				
1298	W1880	25	32	YES	5	7	YES				
1298	W1881	25	36	YES	5	12	YES				
1298	W1882	25	23	NO	5	7	YES				
		25			5			47	YES	14	YES
1307	W1786	25	13	NO	5	5	YES				
1307	W1790	25	19	NO	5	6	YES				
1307	W1816	25	16	NO	5	0	NO				
1307	W1818	25	24	NO	5	3	NO				
		25			5			33	YES	6	YES
1310	W1793	25	16	NO	5	7	YES				
1310	W1883	25	32	YES	5	7	YES				
1310	W1884	25	36	YES	5	12	YES				
1310	W1885	25	23	NO	5	7	YES				
		25			5			48	YES	14	YES
1319	W1791	25	13	NO	5	5	YES				
1319	W1795	25	21	NO	5	6	YES				
1319	W1810	25	16	NO	5	0	NO				
1319	W1812	25	24	NO	5	3	NO				
		25			5			35	YES	6	YES
1322	W1798	25	18	NO	5	7	YES				

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
1322	W1886	25	32	YES	5	7	YES				
1322	W1887	25	36	YES	5	12	YES				
1322	W1888	25	23	NO	5	7	YES				
		25			5			50	YES	14	YES
1331	W1796	25	13	NO	5	5	YES				
1331	W1800	25	23	NO	5	6	YES				
1331	W1804	25	16	NO	5	0	NO				
1331	W1806	25	24	NO	5	3	NO				
		25			5			37	YES	6	YES

Figure 60. Sunlight analysis - APSH/WPSH - Proposed Building view - Block A

Table 96. Detailed results of the Sunlight Assessment - Proposed Development - Block B

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
3787	W3661	25	9	NO	5	5	YES				
3787	W3662	25	11	NO	5	2	NO				
3787	W3672	25	16	NO	5	7	YES				
3787	W3677	25	25	YES	5	4	NO				
		25			5			32	YES	8	YES
4382	W3657	25	3	NO	5	2	NO				
4382	W3658	25	5	NO	5	5	YES				
4382	W3669	25	13	NO	5	9	YES				
4382	W3673	25	26	YES	5	2	NO				
		25			5			41	YES	13	YES
4388	W3449	25	3	NO	5	2	NO				
4388	W3450	25	5	NO	5	5	YES				
4388	W3461	25	14	NO	5	9	YES				
4388	W3465	25	28	YES	5	2	NO				
		25			5			44	YES	13	YES
4571	W3443	25	25	YES	5	4	NO				
4571	W3453	25	9	NO	5	5	YES				
4571	W3454	25	11	NO	5	2	NO				
4571	W3464	25	16	NO	5	7	YES				
		25			5			32	YES	8	YES
4394	W3475	25	3	NO	5	2	NO				
4394	W3476	25	5	NO	5	5	YES				
4394	W3487	25	16	NO	5	10	YES				
4394	W3491	25	29	YES	5	2	NO				
		25			5			47	YES	14	YES
4576	W3469	25	25	YES	5	4	NO				
4576	W3479	25	9	NO	5	5	YES				
4576	W3480	25	11	NO	5	2	NO				
4576	W3490	25	17	NO	5	7	YES				
		25			5			33	YES	8	YES
4400	W3501	25	5	NO	5	4	NO				
4400	W3502	25	6	NO	5	6	YES				
4400	W3513	25	24	NO	5	12	YES				
4400	W3517	25	32	YES	5	3	NO				

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
		25			5			56	YES	16	YES
4581	W3495	25	25	YES	5	4	NO				
4581	W3505	25	9	NO	5	5	YES				
4581	W3506	25	11	NO	5	2	NO				
4581	W3516	25	21	NO	5	7	YES				
		25			5			37	YES	8	YES
4406	W3527	25	5	NO	5	4	NO				
4406	W3528	25	9	NO	5	9	YES				
4406	W3539	25	31	YES	5	14	YES				
4406	W3543	25	36	YES	5	7	YES				
		25			5			65	YES	20	YES
4563	W3521	25	25	YES	5	4	NO				
4563	W3531	25	10	NO	5	6	YES				
		25			5			28	YES	7	YES
4412	W3553	25	7	NO	5	6	YES				
4412	W3554	25	11	NO	5	11	YES				
4412	W3565	25	35	YES	5	18	YES				
4412	W3569	25	39	YES	5	10	YES				
		25			5			70	YES	25	YES
4555	W3547	25	25	YES	5	4	NO				
4555	W3557	25	12	NO	5	8	YES				
		25			5			30	YES	9	YES
4418	W3579	25	9	NO	5	8	YES				
4418	W3580	25	12	NO	5	12	YES				
4418	W3591	25	39	YES	5	22	YES				
4418	W3595	25	41	YES	5	12	YES				
		25			5			74	YES	29	YES
4547	W3573	25	25	YES	5	4	NO				
4547	W3583	25	14	NO	5	10	YES				
		25			5			32	YES	11	YES
4424	W3605	25	10	NO	5	9	YES				
4424	W3606	25	12	NO	5	12	YES				
4424	W3617	25	40	YES	5	23	YES				
4424	W3621	25	41	YES	5	12	YES				
		25			5			75	YES	30	YES

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
4539	W3599	25	25	YES	5	4	NO				
4539	W3609	25	14	NO	5	10	YES				
		25			5			32	YES	11	YES
4430	W3631	25	10	NO	5	9	YES				
4430	W3632	25	12	NO	5	12	YES				
4430	W3643	25	40	YES	5	23	YES				
4430	W3647	25	41	YES	5	12	YES				
		25			5			75	YES	30	YES
4531	W3625	25	25	YES	5	4	NO				
4531	W3635	25	14	NO	5	10	YES				
		25			5			32	YES	11	YES
4436	W3423	25	10	NO	5	9	YES				
4436	W3424	25	12	NO	5	12	YES				
4436	W3435	25	40	YES	5	23	YES				
4436	W3439	25	41	YES	5	12	YES				
		25			5			75	YES	30	YES
4523	W3417	25	25	YES	5	4	NO				
4523	W3427	25	14	NO	5	10	YES				
		25			5			32	YES	11	YES
4442	W3397	25	10	NO	5	9	YES				
4442	W3398	25	12	NO	5	12	YES				
4442	W3409	25	40	YES	5	23	YES				
4442	W3413	25	41	YES	5	12	YES				
		25			5			75	YES	30	YES
4515	W3391	25	25	YES	5	4	NO				
4515	W3401	25	14	NO	5	10	YES				
		25			5			32	YES	11	YES
4448	W3371	25	10	NO	5	9	YES				
4448	W3372	25	12	NO	5	12	YES				
4448	W3383	25	40	YES	5	23	YES				
4448	W3387	25	41	YES	5	12	YES				
		25			5			75	YES	30	YES
4507	W3365	25	25	YES	5	4	NO				
4507	W3375	25	14	NO	5	10	YES				
		25			5			32	YES	11	YES

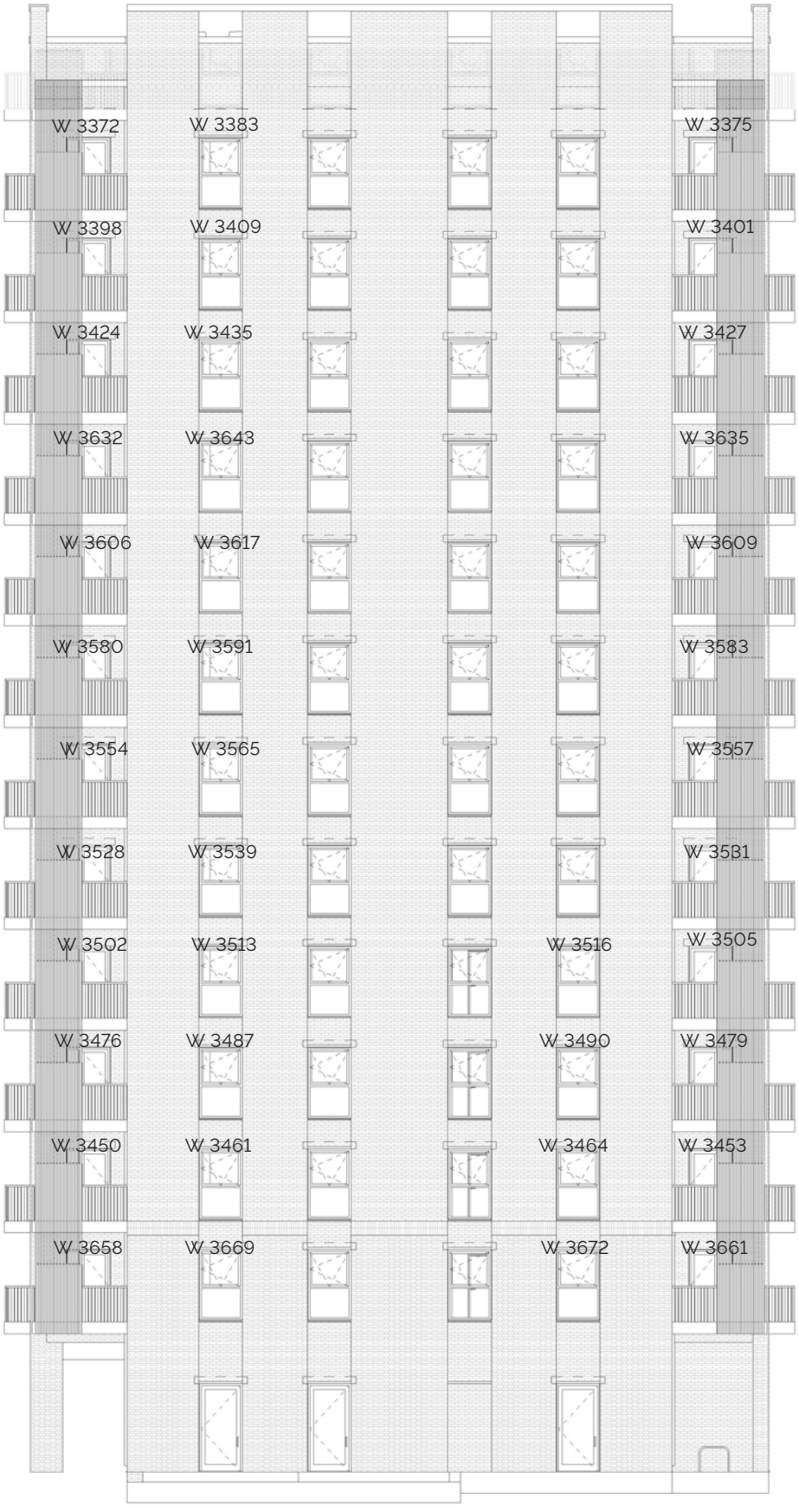

Figure 61. Sunlight analysis - APSH/WPSH - Proposed Building view - Block B

Table 97. Detailed results of the Sunlight Assessment - Proposed Development - Block C

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
4623	W1101	25	46	YES	5	15	YES				
4623	W1239	25	15	NO	5	0	NO				
4623	W1241	25	23	NO	5	3	NO				
		25			5			60	YES	16	YES
4653	123	25	23	NO	5	5	YES				
4653	124	25	21	NO	5	7	YES				
4653	115	25	44	YES	5	14	YES				
		25			5			67	YES	19	YES
4694	W1093	25	53	YES	5	22	YES				
4694	W1213	25	24	NO	5	3	NO				
4694	W1216	25	16	NO	5	0	NO				
		25			5			67	YES	22	YES
4814	W1096	25	50	YES	5	19	YES				
4814	W1249	25	29	YES	5	12	YES				
4814	W1252	25	25	YES	5	7	YES				
		25			5			76	YES	27	YES
4842	W1209	25	24	NO	5	3	NO				
4842	W1212	25	16	NO	5	0	NO				
4842	W1311	25	54	YES	5	23	YES				
		25			5			68	YES	23	YES
4852	W1276	25	26	YES	5	7	YES				
4852	W1277	25	35	YES	5	12	YES				
4852	W1314	25	54	YES	5	23	YES				
		25			5			80	YES	30	YES

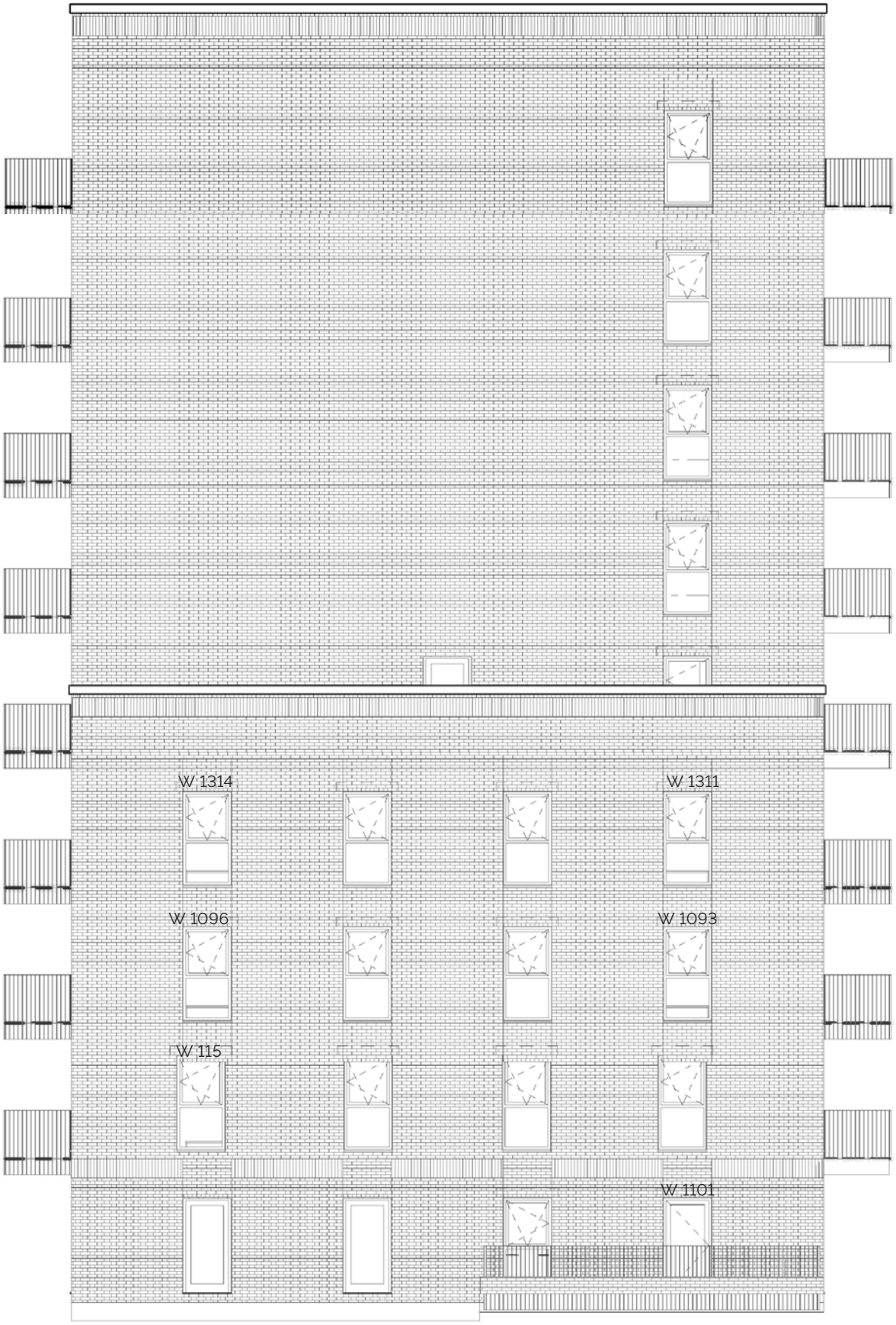

Figure 62. Sunlight analysis - APSH/WPSH - Proposed Building view - Block C

Table 98. Detailed results of the Sunlight Assessment - Proposed Development - Block D

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
5293	75	25	23	NO	5	2	NO				
5293	78	25	22	NO	5	2	NO				
5293	W1106	25	49	YES	5	18	YES				
		25			5			73	YES	20	YES
5328	5	25	34	YES	5	18	YES				
5328	7	25	49	YES	5	18	YES				
5328	39	25	11	NO	5	0	NO				
5328	40	25	18	NO	5	2	NO				
		25			5			59	YES	19	YES
5383	8	25	52	YES	5	21	YES				
5383	73	25	28	YES	5	3	NO				
5383	W1246	25	19	NO	5	4	NO				
5383	W1247	25	31	YES	5	7	YES				
		25			5			81	YES	25	YES
5256	3	25	53	YES	5	22	YES				
5256	36	25	12	NO	5	0	NO				
5256	37	25	19	NO	5	2	NO				
5256	W1091	25	38	YES	5	22	YES				
		25			5			63	YES	22	YES
5358	4	25	52	YES	5	21	YES				
5358	70	25	32	YES	5	7	YES				
5358	72	25	22	NO	5	7	YES				
5358	W1243	25	36	YES	5	12	YES				
		25			5			84	YES	28	YES
5261	9	25	39	YES	5	23	YES				
5261	11	25	54	YES	5	23	YES				
5261	13	25	15	NO	5	0	NO				
5261	14	25	23	NO	5	3	NO				
		25			5			67	YES	23	YES
5395	12	25	54	YES	5	23	YES				
5395	68	25	32	YES	5	7	YES				
5395	69	25	41	YES	5	12	YES				
5395	W1238	25	31	YES	5	7	YES				
		25			5			86	YES	30	YES

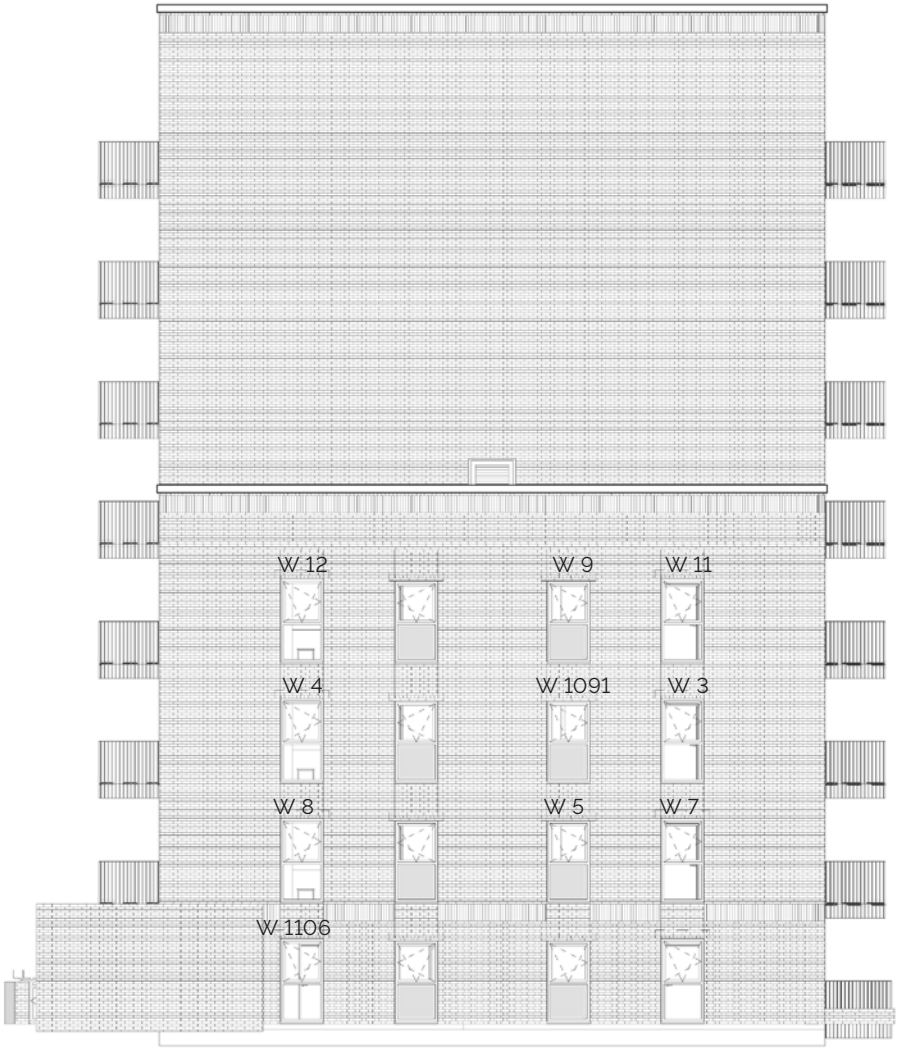

Figure 63. Sunlight analysis - APSH/WPSH - Proposed Building view - Block D

Table 99. Detailed results of the Sunlight Assessment - Proposed Development - Block D

Room Ref	Window Ref	APSH Target (%)	APSH pp (Target 25%)	Meets BRE Criteria	WPSH Target (%)	WPSH pp (Target 5%)	Meets BRE Criteria	Room Ann Pr	Meets BRE Criteria	Room Win Pr	Meets BRE Criteria
6038	127	25	27	YES	5	15	YES				
6038	128	25	28	YES	5	16	YES				
6038	129	25	3	NO	5	0	NO				
								31	YES	16	YES
6039	130	25	27	YES	5	15	YES				
6039	131	25	28	YES	5	16	YES				
6039	132	25	3	NO	5	0	NO				
								31	YES	16	YES
6040	133	25	27	YES	5	15	YES				
6040	134	25	28	YES	5	16	YES				
6040	135	25	3	NO	5	0	NO				
								31	YES	16	YES

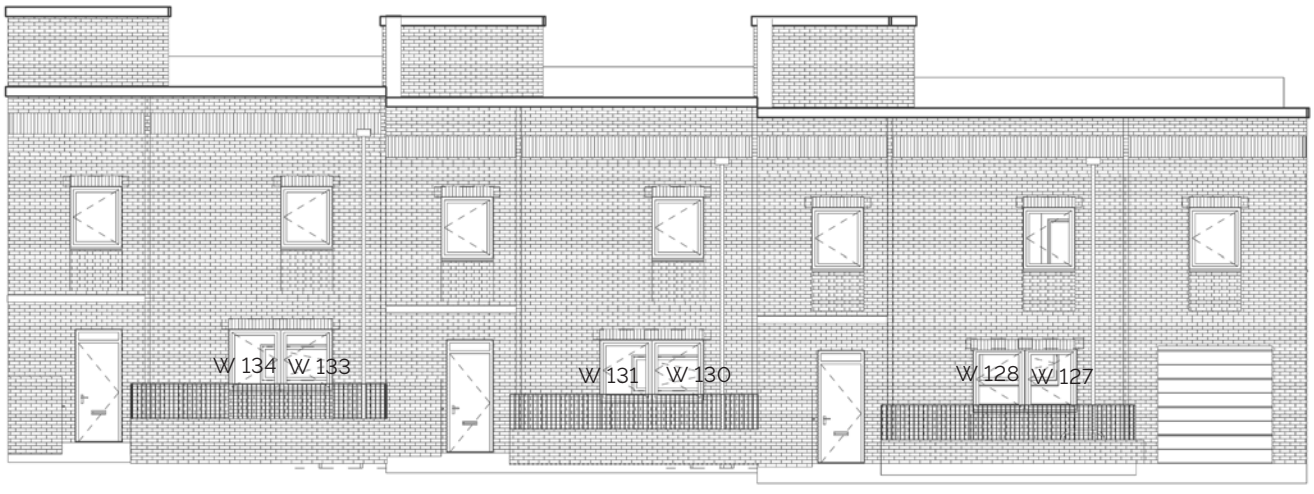

Figure 64. Sunlight analysis - APSH/WPSH - Proposed Building view - Block F

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APPENDIX A.13 ABERFELDY ESTATE PROPOSED SCHEME DSO REPORT

Internal Daylight, Sunlight and Overshadowing Report
November 2023

ABERFELDY VILLAGE MASTERPLAN

DAYLIGHT & SUNLIGHT

INTERNAL DAYLIGHT, SUNLIGHT AND OVERSHADOWING REPORT

Aberfeldy Village Masterplan

06 November 2023

GIA No: **15382**

PROJECT DATA:

Client	**Ecoworld**
Architect	**Morris and Co. & Levitt Bernstein**
Project Title	**Aberfeldy Village Masterplan**
Project Number	**15382**

REPORT DATA:

Report Title	**Internal Daylight, Sunlight and Overshadowing Report**
GIA Department	**Daylight & Sunlight**
Dated	**06 November 2023**

Prepared by	**FC/PDA**
Checked by	**PCA**
Type	**Planning**

Revisions	No:	Date:	Notes:	Signed:
Rev. A	1	06-04-2022	Assessment of Jolly's Green and the strip of land to the north of it. Correction of one typo in the stats for Block J in section 5.2	PCA
Rev. B	2	19-10-2022	Removal of Block A3 and re-assessment of the daylight, sunlight and overshadowing based on the new version of the BRE guidelines released in June 2022	PCA
Rev. C	3	30-01-2023	Re-assessment of daylight and sunlight within Phase A Blocks F and I following the introduction of additional staircases to improve fire safety	PCA
Rev. D	4	06-11-2023	Re-assessment of daylight and sunlight within Phase A Block H1-H2 and within all Outline Proposals following the introduction of additional staircases in all buildings over 18m in height. Update of floor plans on pages 69, 81, 83 and 97-103 to reflect primarily labelling changes, and some minor internal adjustments not impacting daylight and sunlight results.	PCA

SOURCES OF INFORMATION:

Information Received	**IR-67-15382**
Release Number	**Rel_26_15382_DSD**
Issue Number	**29**
Site Photos	**GIA**
3D models	**VERTEX**
OS Data	**FIND Maps**

CONTENTS

1 EXECUTIVE SUMMARY

This report supersedes the Internal Daylight, Sunlight and Overshadowing Report dated January 2023 previously submitted in support of the Hybrid Application (LBTH Ref: PA/21/02377/A1 and GLA Ref: 2023/0300/S3) and should therefore be read on a standalone basis.

Following a resolution to refuse planning permission by the London Borough of Tower Hamlets (LBTH) Strategic Development Committee (SDC) in February 2023, and the subsequent direction that the Mayor of London will act as the local planning authority for the purposes of determining the Hybrid Application, the design of the scheme has been amended to accommodate second staircases in all buildings over 18m in height.

For the sake of completeness only it should be noted that the above referenced amendments follow previous amendments to the Hybrid Application, made prior to its consideration by the LBTH SDC, the assessments of which were set out within previous revisions of this Internal Daylight, Sunlight and Overshadowing Report. In summary the previously assessed charges were: the incorporation of Jolly's Green within the red line boundary, the removal of the previously proposed Block A3 and associated increase in open space and play space, an increase in the number of affordable rented family homes, and the inclusion of second staircases in Plots F & I.

Further information is set out within the accompanying Covering Letter (as prepared by DP9 Ltd, dated November 2023) and the updated Planning Statement (as prepared by DP9 Ltd, dated November 2023).

This report presents the final assessments for all the proposed habitable rooms within the Detailed Proposals according to the methodology and criteria set out in the BRE guidance 'Site Layout Planning for Daylight and Sunlight a Guide to Good Practice (2022)' and the BS EN 17037:2018 and relative UK National Annex.

In addition, this report includes a daylight and sunlight assessment for the Outline Proposals, and the assessment of the overshadowing on all proposed open spaces. Both the overshadowing and the internal daylight and sunlight analyses have been carried out in the cumulative scenario to portray the worst-case conditions of all neighbouring consented schemes considered as built.

GIA have worked alongside the design team throughout the design process in order to maximise the daylight and sunlight amenity within the Proposed Development. To this end, a number of preliminary assessments have been undertaken and design strategies incorporated to enhance the quality of light within the proposed accommodation and sunlight amenity in the proposed open spaces. Further details can be found in section 5.1 of this report.

For daylight, overall 681 (78.9%) out of all 863 habitable rooms meet or exceed the recommended levels of spatial Daylight Autonomy (sDA) within the UK National Annex. This figure considers the higher recommendation of 200 lux for combined Living/Kitchen/Dining spaces and studios.

In addition, a further 67 (7.7%) rooms would only fall slightly short of recommendation and so a total of 748 (86.7%) rooms are considered to offer good daylight levels in the context of this urban regeneration. More details can be found in section 5.2.

As is to be expected of any urban environment, lower levels of daylight are seen typically on the lowest floors and where rooms are located beneath a balcony. The design has incorporated strategies to make the best use of the available daylight within these areas of the scheme.

For sunlight, 223 (80.5%) out of all 277 proposed dwellings meet the criterion of at least one habitable room receiving at least 1.5 hours of sunlight on 21st March.

As is to be expected in any urban environment, especially in areas of large scale regeneration such as Aberfeldy, lower levels of daylight and sunlight are seen typically on the lowest floors and where rooms are located beneath a balcony.

A VSC façade study has been undertaken for the Outline Proposals to gauge the daylight potential of these blocks. Overall, with 66% of all facades seeing VSC levels in excess of 27% and a further 23% (a total of 89%) seeing VSC levels above 15%, it is considered that the Outline Proposals have very good daylight potential. In the remaining few areas (11% of all facades) where lower levels of VSC are seen, as it is typical of any masterplan, acceptable levels of light can still be achieved in future RMAs adopting a few mitigating design solutions such as larger windows, shallow layouts, lighter internal finishes and an optimised balcony strategy.

Similarly, 82% of all facades would see at least 90 minutes of sunlight on 21st March and so the units that will be designed at RMA stage have potential to exceed the recommendation of at least 1.5 hours of sunlight in one habitable room at the equinox.

With regard to overshadowing within Phase A, all but one of the proposed communal spaces exceed the recommendation by BRE, providing excellent sunlight amenity outdoors. The only area falling short of recommendation is the northern rooftop terrace of Block H3 which, however, sees good levels of sunlit throughout all summer months and can still be considered adequately sunlit overall.

In addition, Jolly's Green, the strip of land to the north of Jolly's Green, Braithwaite Park and Leven Road Green too exceed BRE's recommendation and will be well sunlit throughout the year.

All outdoor spaces within the Outline Proposals have also been tested. The ground floor public realm including the Allotments, Highland Place, Nairn Square, the Square and Culloden Green would see very good levels of sunlight, exceeding BRE's recommendation and being well sunlit throughout the year. The four proposed courtyards would fall short of recommendation on 21st March. This is a typical occurrence in courtyard shaped blocks which are enclosed from all sides. The vast majority of these areas would see in excess of three hours of sunlight in June. Three of the four courtyard blocks are provided with rooftop amenity spaces, all of which far exceed recommendation and will be excellently sunlit throughout the year. Further details can be found in section 5.3.

Millennium Green is located outside the Site's boundary and so it is not included in this report, but it is assessed in Chapter 14 of the Environmental Statement "Daylight, Sunlight, Overshadowing, Light Pollution and Solar Glare" and relative Annex 5. Within this document, this area is identified as Overshadowing Sensitive Receptor n. 44 and sees no impacts by the Masterplan, with 100% of its space retaining in excess of two hours of sunlight on 21st March, far in excess of BRE's recommendation.

In conclusion, the Proposed Development has been optimised to provide future residents with good daylight and sunlight amenity.

The vast majority of units and open spaces will have access to good levels of natural light, with only a relative small number of spaces seeing levels marginally below recommendation or less. This is a typical occurrence in areas of large-scale regeneration. Overall it is considered that good daylight and sunlight amenity is provided across the masterplan.

The conclusions within this report do not materially alter those in the superseded January 2023 report.

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2 INTRODUCTION

GIA has been instructed to provide a report upon the potential availability of Daylight and Sunlight to the residential accommodation within the Detailed Proposals prepared by Morris and Co. Architects, and to the overshadowing within the Outline Proposals designed by Levitt Bernstein. GIA was specifically instructed to carry out the following:

- To create a 3D computer model of the proposal based upon drawings prepared by Morris and Co Architects and Levitt Bernstein of Blocks: F, H, I and J.
- Carry out a daylight assessment for the above blocks using the methodologies set out in the BRE guidance for Spatial Daylight Autonomy (sDA),
- Carry out a sunlight assessment for the above blocks using the methodologies set out in the BRE guidance for Sunlight Exposure,
- Carry out a daylight and sunlight potential assessment on the Outline Proposals of the Masterplan,
- Carry out an overshadowing assessment using the methodology set out in the BRE guidance for Sun Hours On Ground (SHOG) for all relevant amenity areas.
- Prepare a report setting out the analysis and our findings.

3 RELEVANT GUIDANCE

The Building Research Establishment (BRE) have set out in their handbook 'Site Layout Planning for Daylight and Sunlight a Guide to Good Practice (BR 209 2022)', guidelines and methodology for the measurement and assessment of daylight and sunlight within proposed buildings.

BRE's guidance BR209 (2022 edition) 'Site layout planning for daylight and sunlight: a guide to good practice' is to be read in conjunction with BS EN 17037:2018 "Daylight in buildings", the UK National Annex of the British Standard and the CIBSE publication LG 10 'Daylighting – a guide for designers'.

BR 209 aims to *"to help rather than constrain the designer"* as stated in Paragraph 1.6 of the new guidance. The document provides advice, but also clearly states that it *"is not mandatory and the guide should not be seen as an instrument of planning policy."* The guidance also acknowledges in its introduction that *"Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design (see Section 5). In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings."* (Paragraph 1.6)

3.1 BS EN 17037:2018 AND THE UK ANNEX

Following a review of the European Standard BS EN 17037:2018 "Daylight in buildings" by a dedicated commission of UK experts, the British Standard Institution concluded that the targets suggested *"may not be achievable for some buildings, particularly dwellings"*. In particular, the UK committee believed this could be the case for *"dwellings with basement rooms or those with significant external obstructions (for example, dwellings situated in a dense urban area or with tall trees outside), or for existing buildings being refurbished or converted into dwellings"*

As a consequence, a UK National Annex was appended to BS EN 17037:2018 which suggested alternative targets, in line with those of the former BS8206-2:2008 and the previous BR209 (2011 edition). These lower targets were then incorporated into the 2022 publication of BR209.

With this site being set for large scale regeneration and delivering a high-density environment, the relevant targets are considered to be those contained within the UK National Annex as outlined and discussed further in Section 3.2 adjacent. It is important here to re-emphasise though that these UK targets were designed to be in line with those from the previous British Standard and BR209 publications and so utilising them does not represent a weakening of standards, rather it enables continuity in the understanding of daylight levels within residential developments.

The BS EN 17037 includes four criteria: daylighting, views, sunlight access and glare. However, daylighting and sunlight access are the only criteria considered relevant for residential buildings and therefore discussed within this report.

View out and Glare are mostly relevant in offices and schools, where occupants are more fixed to a certain location within a room. In residential habitable rooms, occupants tend to move more freely and therefore view out and glare are not assessed within residential buildings.

3.2 DAYLIGHT

The BRE set out the methods for assessing daylight within a proposed building within section 2.1 and Appendix C of the handbook. This is based on the methods detailed in the BS EN 17037.

BS EN 17037 suggests two possible methodologies for appraising daylight:

- Illuminance Method
- Daylight Factor Method

These methodologies are discussed in more detail below.

Whilst Vertical Sky Component (VSC) is no longer directly used to calculate the levels of daylight indoors, this is still referenced within the BRE guidance as a metric to appraise the level of obstruction faced by a building and the potential for good daylight indoors.

This method of assessment may also be used to appraise the daylight quality in the early stages of the design, when room layouts or window locations are still undecided.

Vertical Sky Component (VSC)

This method of assessment can be undertaken using a skylight indicator or a Waldram diagram. It measures from a single point, at the centre of the window (if known at the early design stage), the quantum of sky visible taking into account all external obstructions. Whilst these obstructions can be either other buildings or the general landscape, trees are usually ignored unless they form a continuous or dense belt of obstruction.

The VSC method is a useful 'rule of thumb' but has some significant limitations in determining the true quality of daylight within a proposed building. It does not take into account the size of the window, any reflected light off external obstructions, any reflected light within the room, or the use to which that room is put.

Illuminance method

Climate Based Daylight Modelling (CBDM) is used to predict daylight illuminance using sun and sky conditions derived from standard meteorological data (often referred to as climate or weather data). This analytical method allows the prediction of absolute daylight illuminance based on the location and building orientation, in addition to the building's daylight systems (shading systems, for example). Annex A within the BS EN 17037 proposes values of target illuminances and minimum target illuminances to exceed 50 % of daylight hours.

This is considered to be the most accurate approach when using climate data, however, it provides a very large amount of data for each assessed room, which then needs to be interrogated. One of the methodologies that can be used to interrogate this data is Spatial Daylight Autonomy (sDA).

Spatial Daylight Autonomy (sDA)

The sDA assessment is designed to understand how often each point of the room's task area sees illuminance levels at or above a specific threshold.

BS EN 17037 sets out minimum illuminance levels (300lx) that should be exceeded over 50% of the space for more than half of the daylight hours in the year. It also includes recommendations for medium and high daylighting levels within a space (500lx and 700lx respectively). It should be noted here, however, that these targets are specified irrespective of a space's use or design.

As discussed within Section 4.1, the National Annex suggests that these targets can be challenging to achieve within residential settings, particularly in areas of higher density and so suggests lower targets can be considered in this situation. It should be noted here that the reduced targets suggested within the BS EN 17037:2018 National Annex are provided so as to be comparable with the previous BR209's recommendations for ADF. These targets, considered relevant for this application, are:

- 100 lux for bedrooms
- 150 lux for living rooms
- 200 lux for living/kitchen/diners, kitchens, and studios.

It is however stated in paragraph C17 of the BRE that: *"Where a room has a shared use, the highest target should apply. For example in a bed sitting room in student accommodation, the value for a living room should be used if students would often spend time in their rooms during the day. Local authorities*

could use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design".

Daylight Factor method

This method involves calculating the median daylight factor on a reference plane (assessment grid).

"The daylight factor is the illuminance at a point on the reference plane in a space, divided by the illuminance on an unobstructed horizontal surface outdoors. The CIE standard overcast sky is used, and the ratio is usually expressed as a percentage."

This method of assessments considers an overcast sky, and therefore the orientation and location of buildings is not relevant. In order to account for different climatic conditions, Annex A within the BS EN 17037 sets equivalent daylight factor targets (D) for various locations in Europe.

The median daylight factor (MDF) should meet or exceed the target daylight factor relative to a given illuminance for more than half of daylight hours, over 50% of the reference plane.

3.3 SUNLIGHT

The BRE provide guidance in respect of sunlight quality for new developments within section 3.1 of the handbook. It is generally acknowledged that the presence of sunlight is more significant in residential accommodation than it is in commercial properties, and this is reflected in the BRE document.

It states, *"in housing, the main requirement for sunlight is in living rooms, where it is valued at any time of the day, but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and in kitchens where people prefer it in the morning rather than the afternoon."*

The BRE guide considers the critical aspects of orientation and overshadowing in determining the availability of sunlight at a proposed development site.

The guide proposes minimising the number of dwellings whose living room face solely north unless there is some compensating factor such as an appealing view to the north, and it suggests a number of techniques to do so. Furthermore, it discusses massing solutions with a sensitive approach to overshadowing, so as to maximize access to sunlight.

At the same time, it acknowledges that the site's existing urban environment may impose orientation or overshadowing constraints which may not be possible to overcome.

To quantify sunlight access for interiors where sunlight is expected, it refers to the BS EN 17037 criterion that the minimum duration of sunlight exposure in at least one habitable room of a dwelling should be 1.5 h on March 21st. Table A.5 also establishes medium and high sunlight targets (3 and 4 hours).

This is to be checked at a reference point located centrally to the window's width and at the inner surface of the aperture (façade and/or roof). For multiple apertures in different facades it is possible to cumulate the time of sunlight availability if not occurring at the same time. The reference point is minimum 1.2 m above the floor and 0.3 m above the window sill if present.

The summary of section 3.1 of the guide states as follows:

"In general, a dwelling or non-domestic building which has a particular requirement for sunlight, will appear reasonably sunlit provided that:

- *At least one main window faces within 90 degrees of due south, and*

- *a habitable room, preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March. This is assessed at the inside centre of the window(s); sunlight received by different windows can be added provided they occur at different times and sunlight hours are not double counted.. "*

3.4 OVERSHADOWING

The BRE guidance in respect of overshadowing of amenity spaces is set out in section 3.3 of the handbook. Here it states as follows:

"Sunlight in the spaces between and around buildings has an important impact on the overall appearance and ambience of a development. It is valuable for a number of reasons, to:

- *provide attractive sunlit views (all year)*
- *make outdoor activities like sitting out and children's play more pleasant (mainly warmer months)*
- *encourage plant growth (mainly spring and summer)*
- *dry out the ground, reducing moss and slime (mainly in colder months)*
- *melt frost, ice and snow (in winter)*
- *dry clothes (all year).*

Again, it must be acknowledged that in urban areas the availability of sunlight on the ground is a factor which is significantly controlled by the existing urban fabric around the site in question and so may have very little to do with the form of the development itself. Likewise, there may be many other urban design, planning and site constraints which determine and run contrary to the best form, siting and location of a proposed development in terms of availability of sun on the ground.

The summary of section 3.3 of the guide states as follows:

"3. 3 .17 It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area that can receive two hours of sun on 21 March is less than 0.80 times its former value, then the loss of sunlight is likely to be noticeable. If a detailed calculation cannot be carried out, it is recommended that the centre of the area should receive at least two hours of sunlight on 21 March.."

3.5 FURTHER RELEVANT INFORMATION

CIBSE LG 10 'Daylighting – a guide for designers'.

This guide details the process of designing for daylighting. It outlines considerations of form, orientation, and other aspects involved in designing the building envelope to optimise natural light.

The guidance in this document is written primarily for buildings located within the UK, and will be most applicable to projects in northern hemisphere. However, the principles are universal, and can be applied to other locations if the appropriate weather data is used and local standards and regulations are respected

4 SIMULATION ASSUMPTIONS

In order to undertake the daylight and sunlight assessments set out in the previous pages, we have prepared a three dimensional computer model and used specialist lighting simulation software.

Calculation model

The three dimensional representation of the proposed development has been modelled using the scheme drawings provided to us by Morris and Co. & Levitt Bernstein in August 2023. This has been placed in the context of its surrounding buildings which have been modelled from survey information, photogrammetry, OS and site photographs. This allows for a precise model, which in turn ensures that analysis accurately represents the amount of daylight and sunlight available to the building façades, internal and external spaces, considering all of the surrounding obstructions and orientation.

The weather file recorded at Gatwick Airport was considered the most relevant for this assessment.

Surfaces reflectance

In general, reflectance value to be applied to surfaces in the computational modelling follows the BR 209 Annex C, unless specified by the design team. Assumptions applied are:

- Interior walls - 0.7
- Ceilings - 0.8
- Floors - 0.4
- Exterior ground and external obstructions - 0.2

Assessment Grids

For the daylight assessments, an analysis 'grid' is located within each room at working plane height (850 mm from FFL) and offset by 0.3m from the walls as recommended by BR 209.

Grid points are spaced by 0.2m .

Assessment Resolution

The climate-based daylight assessments have been undertaken on an hourly basis whilst the sunlight exposure assessment has been undertaken for every minute on the relevant days.

Glazing transmittance

A glazing visible light transmittance (VLT) of 75% has been used as in agreement with the wider design team. A framing factor has been taken from the elevations supplied. Maintenance factors have been applied as per BR209 with 0.92 for windows not beneath an overhang and 0.76 for windows beneath an overhang.

The final transmittance values are shown in the table below.

GLAZING TYPE AND MAINTENANCE FACTORS		TV (Normal)	FRAMING FACTOR	MAINTENANCE FACTOR	TV (Total)
TYPE 1	NOT SHELTERED	0.75	0.75	0.92	0.52
TYPE 2	NOT SHELTERED	0.75	0.80	0.92	0.55
TYPE 3	SHELTERED	0.75	0.80	0.76	0.46
TYPE 4	NOT SHELTERED	0.75	0.85	0.92	0.59
TYPE 5	SHELTERED	0.75	0.85	0.76	0.48
TYPE 6	NOT SHELTERED	0.75	0.90	0.92	0.62
TYPE 7	SHELTERED	0.75	0.90	0.76	0.51

Table 01: Transmittance and maintenance factors

4.1 GLASS TRANSMITTANCE - WINDOW MAPS

Fig. 01: North-west view - Block_F

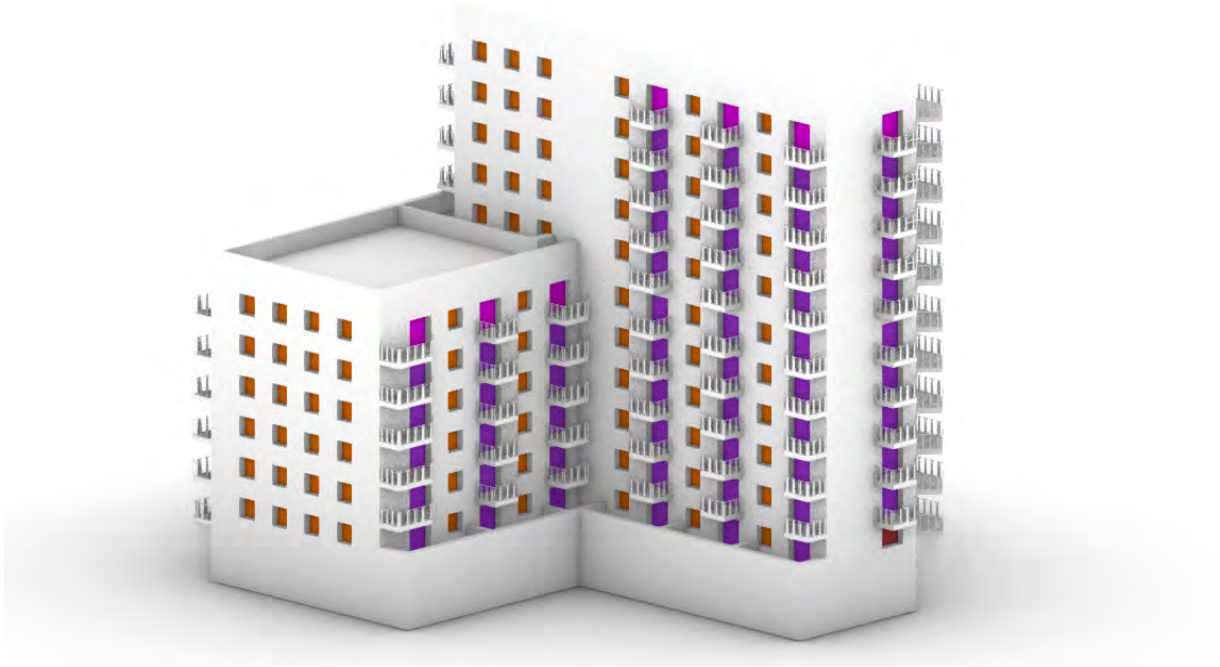


Fig. 02: South-east view - Block_F

4.2 GLASS TRANSMITTANCE - WINDOW MAPS

Fig. 04: North-east view - Block_H1-H2

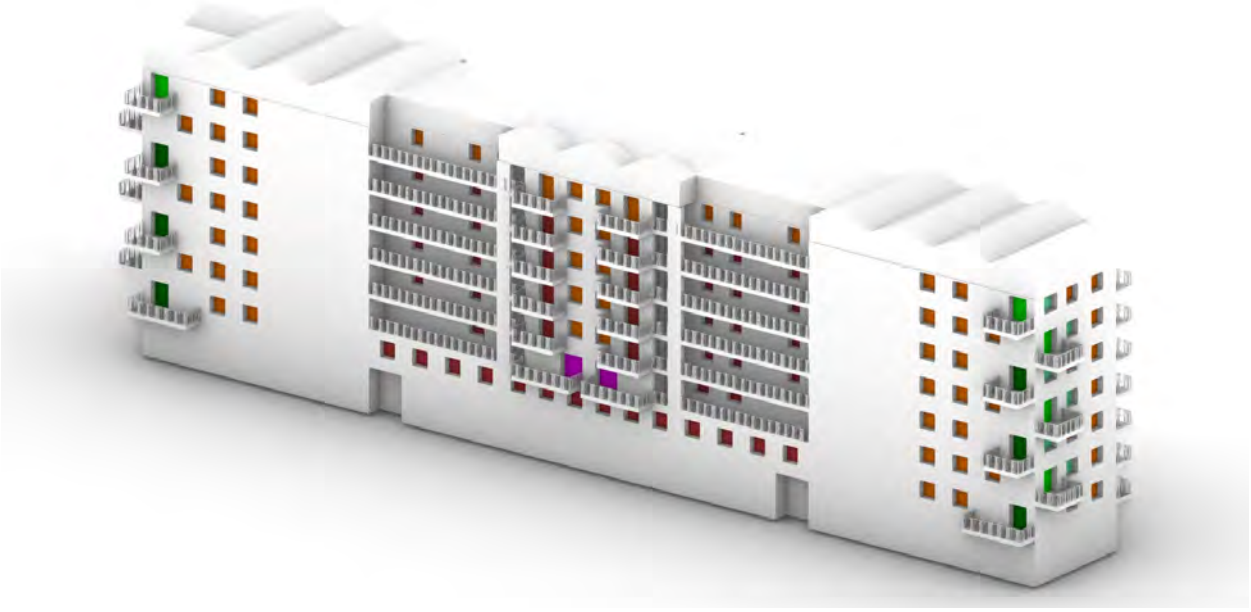


Fig. 03: South-west view - Block_H1-H2

4.3 GLASS TRANSMITTANCE - WINDOW MAPS

Fig. 05: North-east view - Block_H

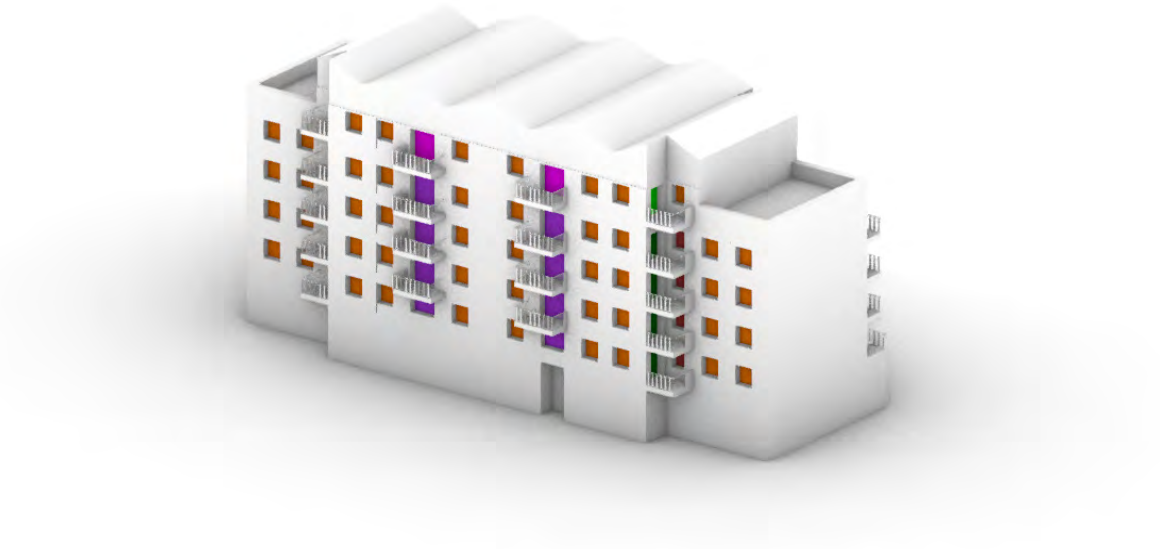


Fig. 06: South-west view - Block_H

4.4 GLASS TRANSMITTANCE - WINDOW MAPS

Fig. 08: North-west view - Block_I

Fig. 07: South-east view - Block_I

4.5 GLASS TRANSMITTANCE - WINDOW MAPS

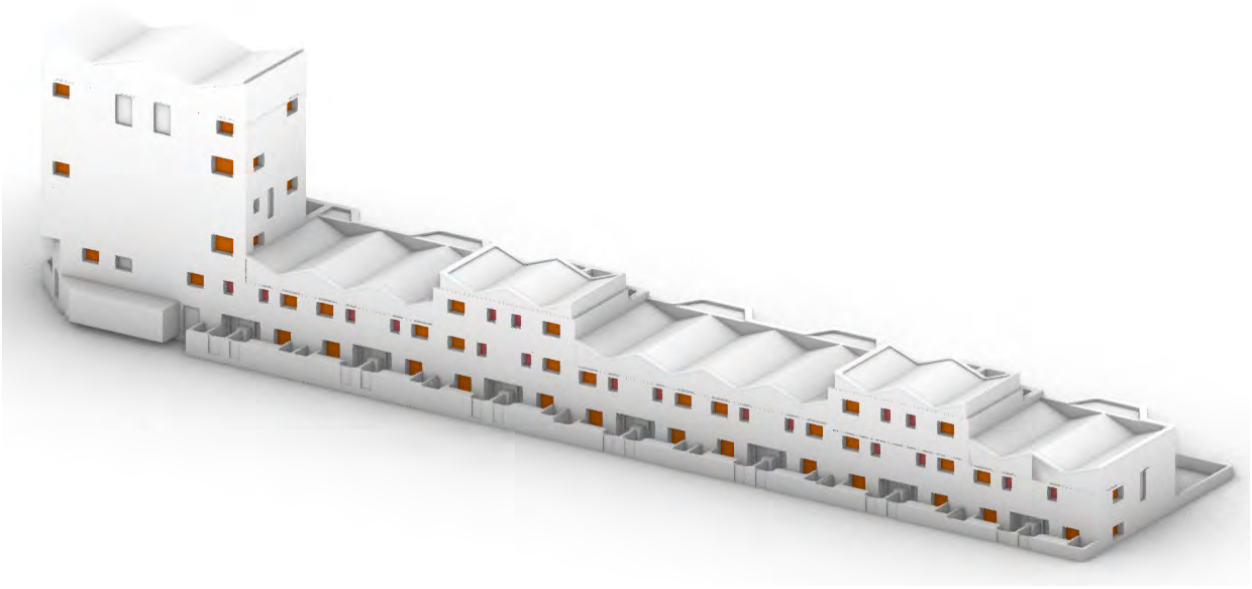


Fig. 10: North-west view - Block_J

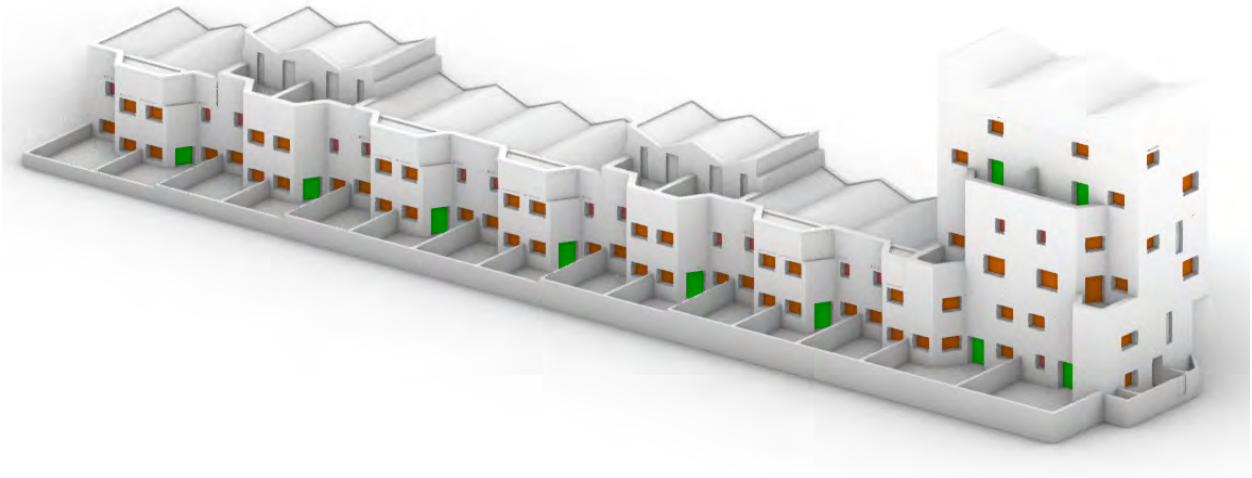


Fig. 09: South-east view - Block_J

5 CONCLUSIONS

5.1 DESIGN EVOLUTION

GIA has worked alongside Levitt Bernstein Architects and Morris and Co. Architects to deliver a scheme that makes the most of the available daylight and sunlight. This was achieved through an iterative review of the massing, internal layouts and façade details throughout the design process.

Preliminary assessments have been undertaken at the early stages of design to understand the daylight potential within the proposed massing and the sunlight availability in the proposed open spaces. Further detailed internal assessments have been carried out once the interim internal arrangements were set out, and advice on a room-by-room basis has been provided to optimise daylight and sunlight across all the proposed habitable rooms.

Strategies that have been implemented include:

- Reducing the massing in some areas to increase daylight and sunlight availability in the proposed accommodation and open spaces, whilst contextually preserving acceptable levels of light to the neighbouring properties;
- Reconfiguring some of the internal layouts to enhance the daylit appearance of spaces according to room use;
- Prioritising daylight in living areas where it is typically most valued by occupants, for example by providing dual aspect where possible, or by locating them in the most daylit areas of the façades;
- Resizing the fenestration for all units in response to the interim technical tests' results;
- Balancing the provision of private amenity, in the form of balconies, with the internal daylight and sunlight levels. The balcony strategy was a key consideration throughout the development of the scheme. Whilst providing a valuable form of amenity, these also introduce additional obstructions for the windows directly below, therefore reducing the light ingress within rooms further; and
- adopting a lighter floor finish to improve the diffusion of light within all rooms.

As a result of the above, it is considered that the Proposed Development makes the most of the daylight and sunlight available and will provide future residents with acceptable daylight and sunlight amenity overall. More detail on each of the Detailed Proposals and their daylight and sunlight performance is provided in the next section.

5.2 CONCLUSIONS ON DAYLIGHT AND SUNLIGHT

In order to ascertain the levels of daylight and sunlight within the Detailed Proposals of Phase A, technical assessments have been undertaken within all habitable rooms (i.e. living rooms, L/K/Ds, kitchens, studio-flats and bedrooms). This exercise has been undertaken in the cumulative scenario to portray a worst-case condition where all neighbouring consents have been considered as built.

All proposed habitable rooms have been assessed for spatial Daylight Autonomy (sDA) according to the targets set out in the UK National Annex of the BS EN 17037, which sets illuminance targets (measured in lux) to be achieved for over 50% of the space for more than half of the daylight hours in the year. For sunlight, all rooms have been assessed for solar exposure, for which the recommendation is for each dwelling to have at least one habitable room (preferably a living room) receiving a total of at least 1.5 hours of sunlight on 21st March. The internal daylight and sunlight assessments can be found on pages 22 to 103 of this report.

For daylight, overall 681 (78.9%) out of all 863 habitable rooms meet or exceed the recommended levels of spatial Daylight Autonomy (sDA) within the UK National Annex. This figure considers the higher recommendation of 200 lux for combined Living/Kitchen/Dining spaces and studios.

In addition to the above, 27 (3.1%) LKDs or studios achieve the recommendation of 150 lux for living rooms. A further two (0.2%) kitchens, 12 (1.4%) living spaces (LKDs, living rooms or studios) and 26 (3.0%) bedrooms fall slightly below guidelines (i.e. seeing 200 lux, 150 lux and 100 lux respectively on more than 40% of their space for half the daylight hours in the year. Therefore, a total of 748 rooms (86.7% of the total) are considered to offer adequate daylight levels in the context of this urban regeneration.

Of the rooms seeing lower levels of light, 9 (1.0%) LKDs, three (3.4%) studios and three (3.4%) living spaces would achieve 150 lux on more than 30% of their space for half the daylight hours in the year. 18 (2.1%) bedrooms would achieve 100 lux on more than 30% of their space for half the daylight hours in the year. The remaining rooms seeing lower levels of light are 35 (4.1%) living spaces (LKDs, Living rooms or studios) and 47 (5.4%) bedrooms or kitchens.

A breakdown per plot is provided in Table 02 below.

As it is typical of an urban environment, the rooms falling short of recommendation are located on the lowest floors, and the majority of them are located beneath or behind a balcony, which inherently reduces access to daylight whilst providing valuable private outdoor amenity spaces. This is a typical trade-off of amenities in the urban environment. In addition, these rooms are generously sized and, whilst the rear sees lower levels of light (which reduces sDA for the entire room), their front portions will see higher levels of daylight.

Plot	Total rooms tested	Compliance for sDA (LKDs Living Rooms Kitchens Bedrooms Studies)	LKDs or Studios achieving target for Living Rooms (sDA/150)	LKDs, Studios or Living rooms slightly below target for Living Rooms (sDA/150>40%)	Kitchens slightly below target (sDA/200>40%)	Bedrooms slightly below target (sDA/100>40%)
F	247	191 (77.3%)	12 (4.9%)	7 (2.8%)	- (-)	7 (2.8%)
H	366	292 (79.8%)	9 (2.5%)	5 (1.4%)	2 (0.5%)	8 (2.2%)
I	134	125 (93.3%)	6 (4.5%)	0 (0.0%)	- (-)	2 (1.5%)
J	116	73 (62.9%)	- (-)	0 (0.0%)	0 (0.0%)	9 (7.8%)
All blocks	863	681 (78.9%)	27 (3.1%)	12 (1.4%)	2 (0.2%)	26 (3.0%)

Plot	LKDs, Studios or Living rooms moderately below target for Living Rooms (sDA/150>30%)	Kitchens moderately below target for Living Rooms (sDA/200>30%)	Bedrooms moderately below target (sDA/100>30%)	Other LKDs, Studios or living rooms	Other Bedrooms or Kitchens
F	9 (3.6%)	- (-)	5 (2.0%)	13 (5.3%)	3 (1.2%)
H	6 (1.6%)	0 (0.0%)	7 (1.9%)	10 (2.7%)	27 (7.4%)
I	0 (0.0%)	- (-)	1 (0.7%)	0 (0.0%)	0 (0.0%)
J	0 (0.0%)	0 (0.0%)	5 (4.3%)	12 (10.3%)	17 (14.7%)
All blocks	15 (1.7%)	0 (0.0%)	18 (2.1%)	35 (4.1%)	47 (5.4%)

Table 02: Daylight results

For sunlight, 223 (80.5%) out of all 277 proposed dwellings meet the criterion of at least one habitable room receiving at least 1.5 hours of sunlight on 21st March. The occurrence of sunlight levels lower than recommendation in a small number of units is typical of an urban environment, especially for rooms on the lowest floors, which are provided with balconies. Whilst providing a valuable form of amenity, balconies also intercept sun rays acting as shading devices, therefore reducing sunlight ingress within the rooms. In addition, the main facades of block H effectively face due west or east and can only naturally see a limited portion of the sunpath, resulting in lower exposure levels.

Overall, as a result of the design optimisation carried out throughout the design process and the design solutions adopted, the Detailed Proposals will provide good or acceptable levels of daylight and sunlight to future residents.

A further breakdown of the results is provided in Table 03 below.

Plot	Total dwellings tested	Dwellings with the living space meeting recommendation	Dwellings with a secondary room meeting recommendation	Dwellings with at least one habitable room meeting recommendation
F	102	69 (67.6%)	4 (3.9%)	73 (71.6%)
H	104	74 (71.2%)	14 (13.5%)	88 (84.6%)
I	52	36 (69.2%)	7 (13.5%)	43 (82.7%)
J	19	7 (36.8%)	12 (63.2%)	19 (100.0%)
All blocks	277	186 (67.1%)	37 (13.4%)	223 (80.5%)

Table 03: Sunlight results

Outline Proposals

A Vertical Sky Component (VSC) façade study has been undertaken for the Outline Proposals to gauge the daylight potential of these blocks. Overall, the results show that 66 % of all facades would see VSC levels in excess of 27%, which is considered excellent and would allow for typical façade design to deliver good internal levels of light for future RMAs. A further 23% of all facades (89% in total) would see levels of VSC in excess of 15%, which would allow for good internal levels of light with wider windows and consideration of balcony locations. The remaining 11% of the facades would see levels of VSC below 15%, 1% of which is below 5% VSC. In these areas acceptable levels of light can still be achieved adopting mitigating design strategies such as larger windows, shallow layouts, lighter internal finishes and an optimised balcony strategy.

Overall, with 89% of all facades seeing levels of VSC above 15%, the scheme sees very good daylight potential. In the few areas where lower levels of VSC are seen, as is typical of any masterplan, acceptable levels of light can still be achieved in future RMAs adopting a few mitigating design solutions.

82% of all facades would also see at least 90 minutes of sunlight on 21st March and so the units that will be designed at RMA stage have potential to exceed the recommendation of at least 1.5 hours of sunlight in one habitable room at the equinox.

We can therefore conclude that these blocks will provide future resident with good daylight and sunlight amenity overall.

5.3 CONCLUSIONS ON OVERSHADOWING

As suggested by BRE, all proposed public and communal outdoor areas have been assessed for Sun Hours on Ground (SHOG).

The assessments on pages 108-113 illustrate the overshadowing for the communal spaces proposed within the Detailed Proposals, whilst those on pages 116-128 present the results for the wider masterplan.

With the exception of the northern terrace in Block H3, all proposed open spaces within the Detailed Proposals far exceed BRE's recommendation and will be well sunlit throughout the year.

Jolly's Green, the strip of land to the north of Jolly's Green, Braithwaite Park and Leven Road Green exceed BRE's recommendation and will be excellently sunlit throughout the year.

The northern terrace falls short of recommendation on 21st March, however, as demonstrated by the diagram on page 101 and the sun exposure assessment on page 104, this area will be well sunlit from the beginning of April to the end of August, seeing far in excess of six hours of sunlight in June. As such, despite falling short of recommendation at the equinox, this area is also considered to be adequately sunlit throughout the summer months, when it is most likely to be used.

The image on pages 108-109 provides an overview of the overshadowing on all outdoor spaces within the Illustrative massing of the Outline Proposals, which shows that overall the vast majority of the proposed spaces would meet BRE's recommendation. The following pages present a detailed breakdown of the public realm, the proposed podiums and rooftop terraces.

The proposed ground floor public realm would see very good levels of sunlight, with all areas including the Allotments, Highland Place, Nairn Square, the Square and Culloden Green far exceeding BRE's recommendation and being well sunlit throughout the year.

The four proposed courtyards would fall short of recommendation on 21st March. This is a typical occurrence in courtyard shaped blocks which are enclosed from all sides. The vast majority of these areas would see in excess of three hours of sunlight in June. Three of the four courtyard blocks are provided with rooftop amenity spaces, all of which far exceed recommendation and will be excellently sunlit throughout the year.

Overall, the design has carefully considered access to sunlight across the masterplan and, as a result, excellent sunlight amenity can be enjoyed in most of the proposed open spaces. The only areas seeing lower levels of sunlight are the four proposed courtyards which would see in excess of three hours of sunlight in summer. On balance, the masterplan is considered to provide good sunlight amenity.

The conclusions within this report do not materially alter those in the superseded January 2023 report.

6 SITE OVERVIEW

Fig. 11: Top view - cumulative scenario with the Illustrative scheme - Phase A highlighted in orange

Fig. 12: Perspective view - cumulative scenario with the Illustrative scheme - Phase A highlighted in orange

7 INTERNAL DAYLIGHT AND SUNLIGHT ASSESSMENTS

Block F - First Floor

		DAYLIGHT					SUNLIGHT
ROOM REF.	ROOM USE	EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 01							
2	L/K/D	49.8	24.1	8.5	200	8.5	00:00
3	BEDROOM	21.0	7.7	4.8	100	21.0	00:00
4	BEDROOM	27.4	12.2	6.5	100	27.4	00:00
5	BEDROOM	41.7	20.3	11.5	100	41.7	00:00
6	L/K/D	100.0	81.3	41.6	200	41.6	00:00
7	L/K/D	100.0	94.4	73.6	200	73.6	01:34
8	BEDROOM	100.0	100.0	97.5	100	100.0	04:22
9	BEDROOM	100.0	95.3	78.1	100	100.0	05:59
10	L/K/D	57.7	38.9	26.5	200	26.5	02:19
11	BEDROOM	96.8	63.6	43.5	100	96.8	04:35
12	L/K/D	46.8	27.5	17.8	200	17.8	02:19
13	BEDROOM	68.8	38.7	27.3	100	68.8	03:36
14	STUDIO	32.5	17.9	9.7	200	9.7	03:17
15	BEDROOM	94.1	55.1	37.5	100	94.1	02:14
16	L/K/D	50.0	28.9	17.2	200	17.2	02:27
17	BEDROOM	100.0	90.8	57.1	100	100.0	02:14
18	L/K/D	100.0	98.7	85.9	200	85.9	05:52
19	BEDROOM	100.0	100.0	100.0	100	100.0	04:39
20	BEDROOM	100.0	100.0	99.4	100	100.0	04:52
21	L/K/D	100.0	99.1	91.1	200	91.1	05:46
22	BEDROOM	80.6	52.0	37.2	100	80.6	01:50
23	L/K/D	36.3	20.4	9.3	200	9.3	00:29
24	BEDROOM	40.6	23.8	16.8	100	40.6	00:38
25	L/K/D	63.6	36.9	23.3	200	23.3	00:00
26	BEDROOM	31.3	20.5	15.3	100	31.3	00:00
27	L/K/D	13.9	6.4	2.3	200	2.3	00:00
28	BEDROOM	48.1	30.0	20.5	100	48.1	00:00

Table 04: Assessment Data

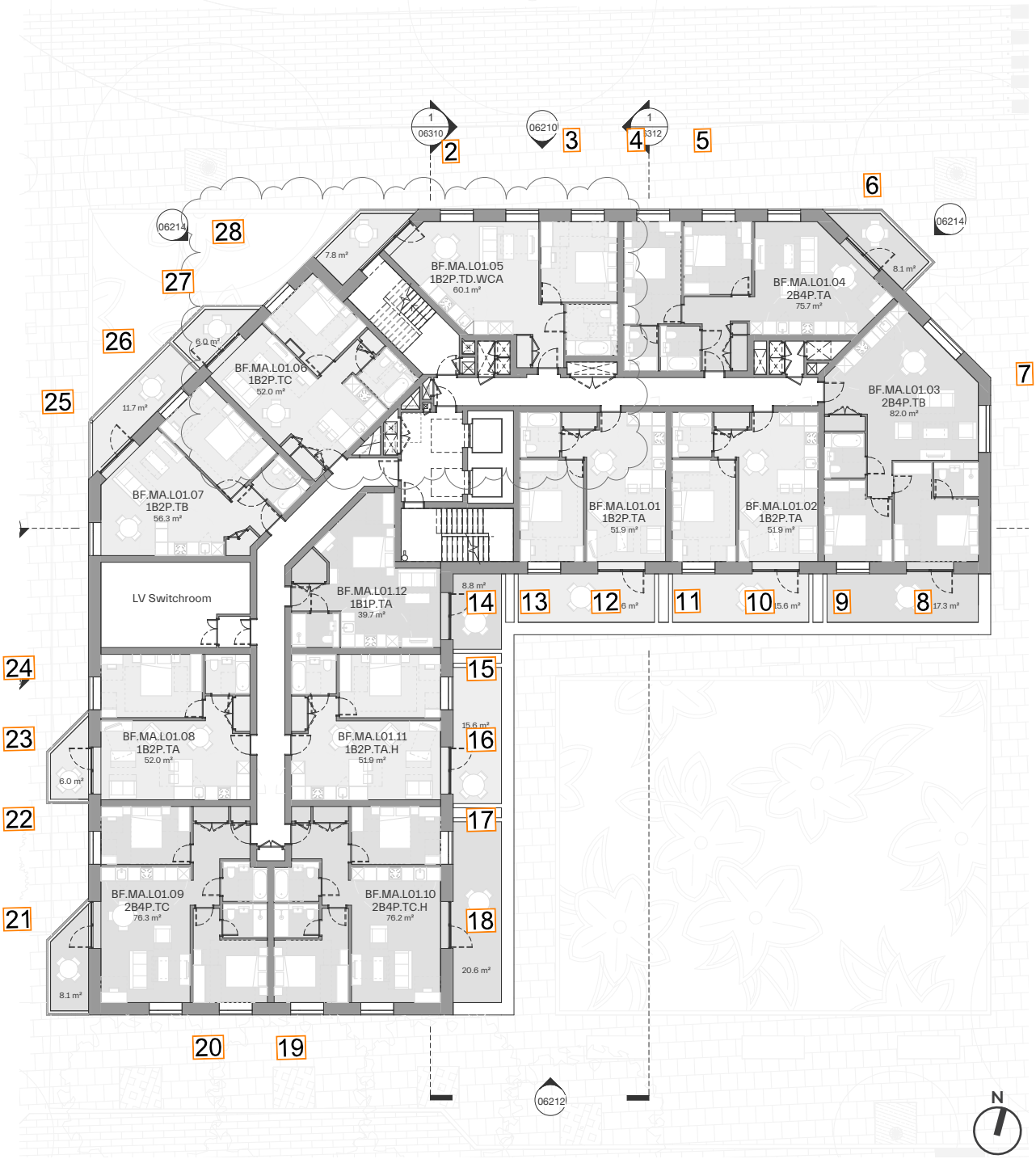
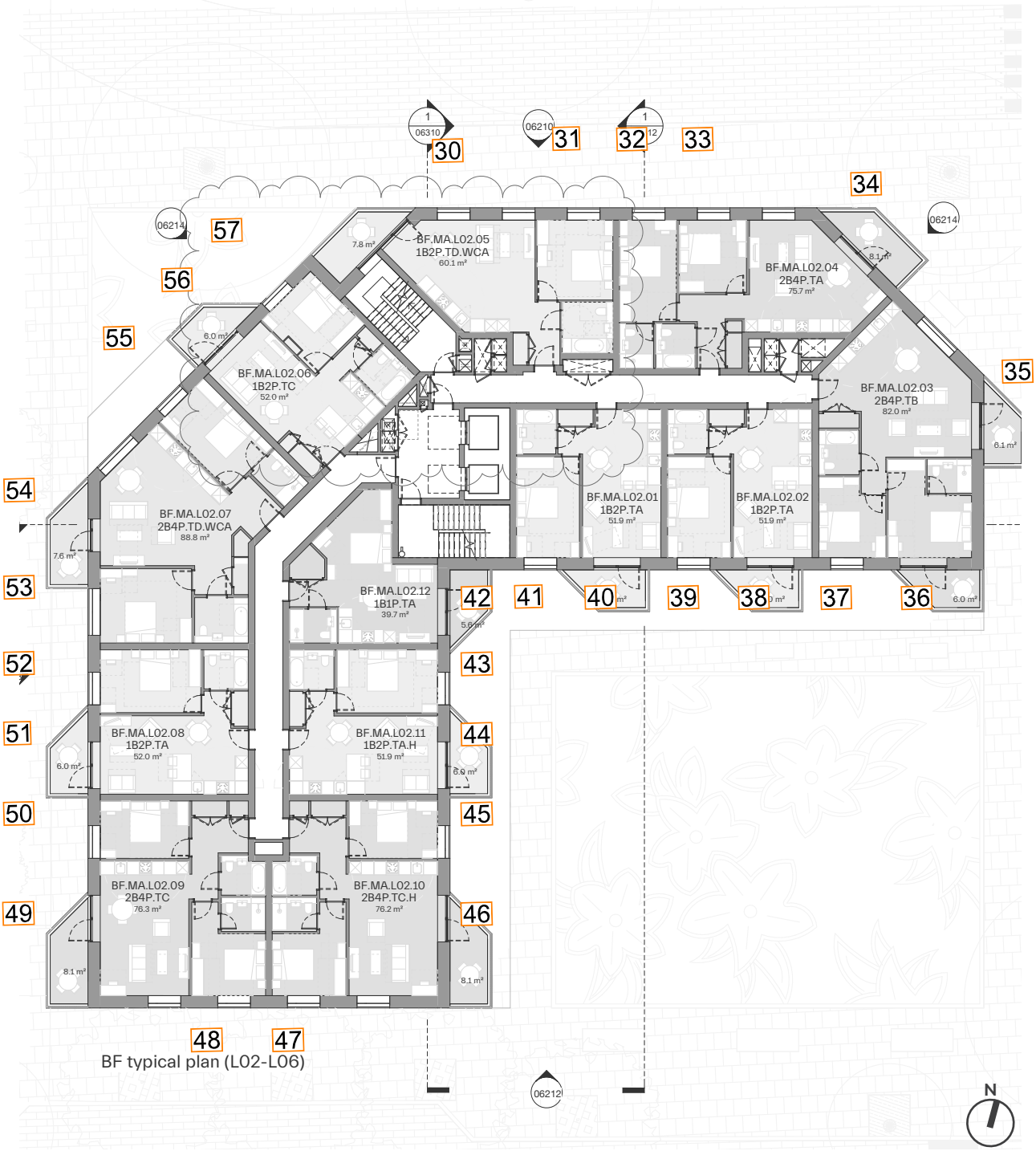


Fig. 13: Floor Plan

Block F - Second Floor

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 02							
30	L/K/D	56.4	30.8	13.8	200	13.8	00:00
31	BEDROOM	25.4	11.3	6.9	100	25.4	00:00
32	BEDROOM	30.4	15.2	10.4	100	30.4	00:00
33	BEDROOM	49.0	24.5	15.6	100	49.0	00:00
34	L/K/D	100.0	85.9	51.3	200	51.3	00:00
35	L/K/D	100.0	100.0	90.4	200	90.4	02:28
36	BEDROOM	100.0	100.0	100.0	100	100.0	04:49
37	BEDROOM	100.0	100.0	88.5	100	100.0	06:21
38	L/K/D	75.5	53.6	39.7	200	39.7	02:19
39	BEDROOM	100.0	82.2	54.9	100	100.0	04:53
40	L/K/D	68.4	43.3	28.5	200	28.5	02:19
41	BEDROOM	95.3	48.2	34.4	100	95.3	03:42
42	STUDIO	58.1	32.5	20.5	200	20.5	03:22
43	BEDROOM	100.0	69.9	48.8	100	100.0	02:19
44	L/K/D	72.3	46.9	29.7	200	29.7	02:38
45	BEDROOM	100.0	100.0	71.9	100	100.0	02:19
46	L/K/D	100.0	100.0	97.5	200	97.5	06:37
47	BEDROOM	100.0	100.0	100.0	100	100.0	04:54
48	BEDROOM	100.0	100.0	100.0	100	100.0	05:03
49	L/K/D	100.0	99.3	93.3	200	93.3	05:55
50	BEDROOM	85.7	55.6	40.8	100	85.7	01:50
51	L/K/D	39.4	23.7	11.7	200	11.7	00:29
52	BEDROOM	45.3	29.7	22.3	100	45.3	00:42
53	BEDROOM	71.9	42.7	32.7	100	71.9	00:57
54	L/K/D	47.2	28.0	15.6	200	15.6	00:00
55	BEDROOM	51.5	34.0	26.8	100	51.5	00:00
56	L/K/D	17.1	8.5	4.5	200	4.5	00:00
57	BEDROOM	56.2	35.2	26.7	100	56.2	00:00

Table 05: Assessment Data



BF typical plan (L02-L06)

Fig. 14: Floor Plan

Block F - Third Floor

ROOM REF.	ROOM USE	DAYLIGHT EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					SUNLIGHT HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 03							
59	L/K/D	65.2	38.1	22.9	200	22.9	00:00
60	BEDROOM	33.1	16.5	11.3	100	33.1	00:00
61	BEDROOM	34.8	20.0	13.9	100	34.8	00:00
62	BEDROOM	57.8	31.8	20.8	100	57.8	00:00
63	L/K/D	100.0	89.7	59.5	200	59.5	00:00
64	L/K/D	100.0	100.0	96.5	200	96.5	02:41
65	BEDROOM	100.0	100.0	100.0	100	100.0	04:58
66	BEDROOM	100.0	100.0	94.8	100	100.0	06:21
67	L/K/D	81.2	55.7	42.7	200	42.7	02:19
68	BEDROOM	100.0	89.3	61.7	100	100.0	05:18
69	L/K/D	75.7	48.6	32.2	200	32.2	02:19
70	BEDROOM	97.2	57.7	38.3	100	97.2	03:48
71	STUDIO	62.5	36.0	23.4	200	23.4	03:26
72	BEDROOM	100.0	78.1	52.3	100	100.0	02:22
73	L/K/D	80.6	51.4	34.3	200	34.3	03:26
74	BEDROOM	100.0	100.0	82.7	100	100.0	02:25
75	L/K/D	100.0	100.0	98.4	200	98.4	06:52
76	BEDROOM	100.0	100.0	100.0	100	100.0	05:04
77	BEDROOM	100.0	100.0	100.0	100	100.0	05:19
78	L/K/D	100.0	99.8	96.7	200	96.7	06:13
79	BEDROOM	97.4	62.2	44.9	100	97.4	01:50
80	L/K/D	43.9	28.0	16.3	200	16.3	00:29
81	BEDROOM	52.7	37.9	29.7	100	52.7	01:11
82	BEDROOM	90.0	53.0	43.4	100	90.0	01:26
83	L/K/D	55.5	36.7	24.0	200	24.0	00:15
84	BEDROOM	63.9	45.4	32.5	100	63.9	00:00
85	L/K/D	22.8	12.4	7.7	200	7.7	00:26
86	BEDROOM	68.1	43.8	31.9	100	68.1	00:00

Table 06: Assessment Data

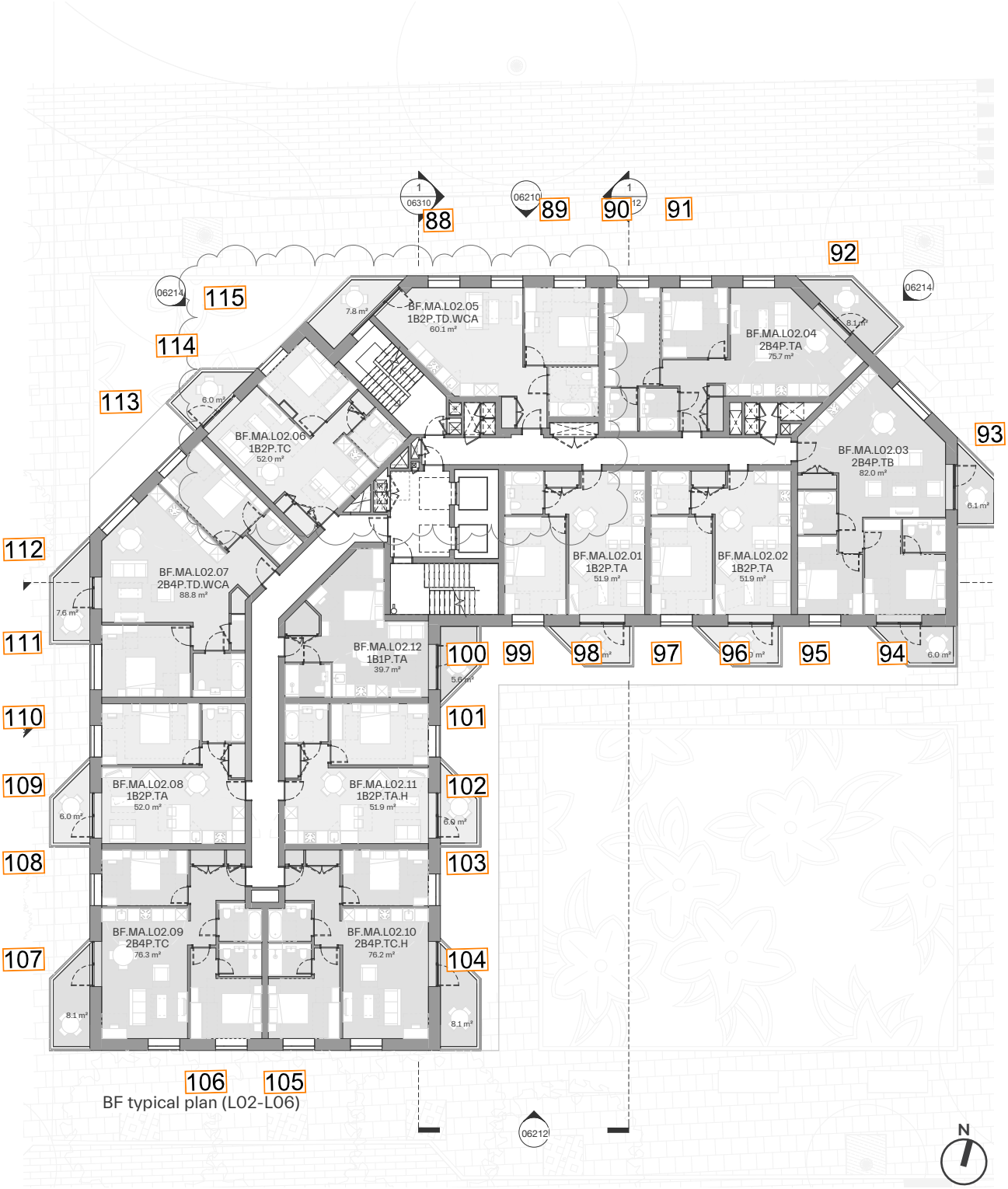
BF typical plan (L02-L06)

Fig. 15: Floor Plan

Block F - Fourth Floor

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 04							
88	L/K/D	74.2	47.3	32.7	200	32.7	00:00
89	BEDROOM	39.9	23.0	17.3	100	39.9	00:00
90	BEDROOM	41.3	25.2	19.6	100	41.3	00:00
91	BEDROOM	70.3	40.1	29.2	100	70.3	00:00
92	L/K/D	100.0	93.4	70.3	200	70.3	00:00
93	L/K/D	100.0	100.0	99.9	200	99.9	03:10
94	BEDROOM	100.0	100.0	100.0	100	100.0	04:58
95	BEDROOM	100.0	100.0	99.5	100	100.0	06:21
96	L/K/D	91.1	60.5	45.8	200	45.8	02:19
97	BEDROOM	100.0	95.3	68.0	100	100.0	05:52
98	L/K/D	84.6	53.8	35.4	200	35.4	02:19
99	BEDROOM	100.0	71.5	45.5	100	100.0	04:09
100	STUDIO	65.3	39.3	26.1	200	26.1	03:26
101	BEDROOM	100.0	92.6	56.3	100	100.0	02:22
102	L/K/D	94.8	54.7	38.0	200	38.0	03:26
103	BEDROOM	100.0	100.0	91.3	100	100.0	02:49
104	L/K/D	100.0	100.0	99.1	200	99.1	07:17
105	BEDROOM	100.0	100.0	100.0	100	100.0	05:30
106	BEDROOM	100.0	100.0	100.0	100	100.0	05:43
107	L/K/D	100.0	100.0	98.4	200	98.4	06:33
108	BEDROOM	100.0	69.4	52.0	100	100.0	02:01
109	L/K/D	49.9	33.4	23.1	200	23.1	00:35
110	BEDROOM	66.0	47.7	39.1	100	66.0	01:48
111	BEDROOM	100.0	70.5	56.6	100	100.0	02:51
112	L/K/D	66.2	47.5	35.8	200	35.8	01:01
113	BEDROOM	74.7	53.6	39.7	100	74.7	00:02
114	L/K/D	30.1	16.8	10.9	200	10.9	00:43
115	BEDROOM	82.9	53.8	38.1	100	82.9	00:00

Table 07: Assessment Data



BF typical plan (L02-L06)

Fig. 16: Floor Plan

Block F - Fifth Floor

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 05							
117	L/K/D	85.9	58.5	45.1	200	45.1	00:00
118	BEDROOM	55.6	34.3	24.6	100	55.6	00:00
119	BEDROOM	48.7	35.2	26.5	100	48.7	00:00
120	BEDROOM	85.4	51.0	39.1	100	85.4	00:00
121	L/K/D	100.0	97.8	78.2	200	78.2	00:00
122	L/K/D	100.0	100.0	100.0	200	100.0	03:26
123	BEDROOM	100.0	100.0	100.0	100	100.0	04:58
124	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
125	L/K/D	97.8	65.2	50.8	200	50.8	02:19
126	BEDROOM	100.0	99.6	73.9	100	100.0	05:52
127	L/K/D	95.8	58.5	41.9	200	41.9	02:19
128	BEDROOM	100.0	85.8	54.2	100	100.0	04:41
129	STUDIO	69.1	43.0	29.4	200	29.4	03:26
130	BEDROOM	100.0	97.7	59.8	100	100.0	02:22
131	L/K/D	100.0	58.5	41.1	200	41.1	03:26
132	BEDROOM	100.0	100.0	98.0	100	100.0	02:49
133	L/K/D	100.0	100.0	99.5	200	99.5	07:54
134	BEDROOM	100.0	100.0	100.0	100	100.0	05:55
135	BEDROOM	100.0	100.0	100.0	100	100.0	06:06
136	L/K/D	100.0	100.0	99.5	200	99.5	07:06
137	BEDROOM	100.0	83.7	64.8	100	100.0	02:46
138	L/K/D	56.3	40.4	29.9	200	29.9	01:20
139	BEDROOM	75.0	57.4	45.7	100	75.0	02:43
140	BEDROOM	100.0	85.8	67.3	100	100.0	02:58
141	L/K/D	76.0	58.7	45.3	200	45.3	01:08
142	BEDROOM	89.2	64.4	47.9	100	89.2	00:09
143	L/K/D	36.9	23.2	15.3	200	15.3	00:49
144	BEDROOM	97.1	63.8	44.3	100	97.1	00:00

Table 08: Assessment Data

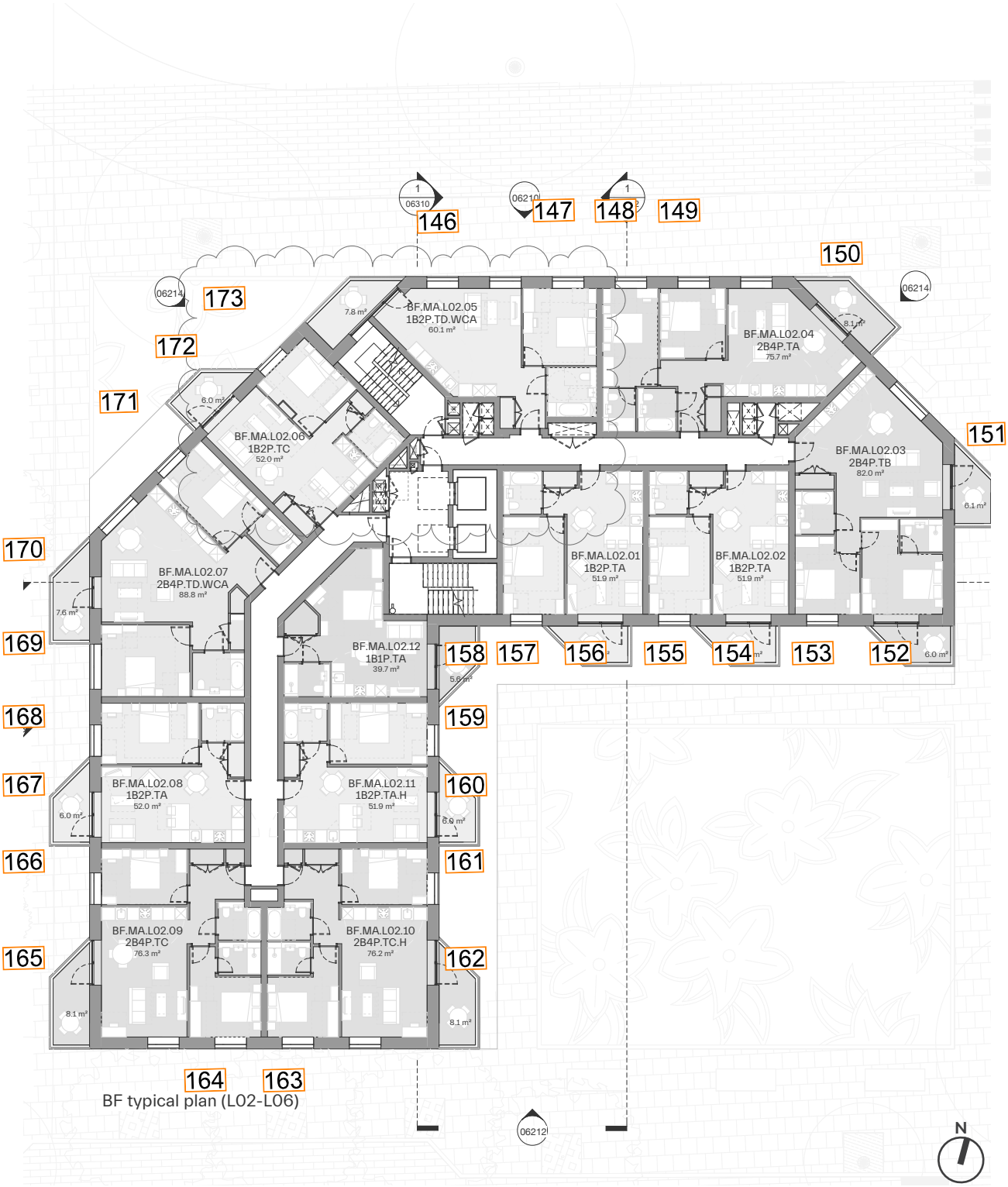
BF typical plan (L02-L06)

Fig. 17: Floor Plan

Block F - Sixth Floor

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 06							
146	L/K/D	97.1	77.5	62.4	200	62.4	00:10
147	BEDROOM	77.8	50.4	34.7	100	77.8	00:00
148	BEDROOM	60.9	45.2	35.7	100	60.9	00:00
149	BEDROOM	100.0	68.8	53.1	100	100.0	00:00
150	L/K/D	100.0	100.0	91.2	200	91.2	00:00
151	L/K/D	100.0	100.0	100.0	200	100.0	03:26
152	BEDROOM	100.0	100.0	100.0	100	100.0	07:40
153	BEDROOM	100.0	100.0	100.0	100	100.0	06:09
154	L/K/D	100.0	78.9	62.6	200	62.6	05:37
155	BEDROOM	100.0	100.0	85.0	100	100.0	06:09
156	L/K/D	100.0	75.5	58.1	200	58.1	05:37
157	BEDROOM	100.0	98.8	68.8	100	100.0	06:21
158	STUDIO	83.5	71.3	57.4	200	57.4	03:26
159	BEDROOM	100.0	100.0	65.6	100	100.0	02:49
160	L/K/D	100.0	99.4	68.6	200	68.6	03:26
161	BEDROOM	100.0	100.0	100.0	100	100.0	02:49
162	L/K/D	100.0	100.0	100.0	200	100.0	07:54
163	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
164	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
165	L/K/D	100.0	100.0	100.0	200	100.0	08:19
166	BEDROOM	100.0	96.9	77.0	100	100.0	03:02
167	L/K/D	97.9	68.7	56.5	200	56.5	03:30
168	BEDROOM	98.0	68.4	55.5	100	98.0	03:02
169	BEDROOM	100.0	100.0	86.5	100	100.0	03:04
170	L/K/D	96.6	80.1	68.6	200	68.6	03:03
171	BEDROOM	100.0	74.7	57.2	100	100.0	00:15
172	L/K/D	60.6	50.3	41.2	200	41.2	00:56
173	BEDROOM	100.0	80.0	56.7	100	100.0	00:22

Table 09: Assessment Data



BF typical plan (L02-L06)

Fig. 18: Floor Plan

Block F - Seventh Floor

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 07							
175	L/K/D	99.5	83.6	65.5	200	65.5	01:42
176	BEDROOM	100.0	77.8	49.2	100	100.0	00:00
177	BEDROOM	86.1	60.4	47.0	100	86.1	00:00
178	BEDROOM	100.0	98.4	74.0	100	100.0	00:00
179	L/K/D	100.0	100.0	93.4	200	93.4	00:00
180	L/K/D	100.0	100.0	100.0	200	100.0	03:26
181	BEDROOM	100.0	100.0	100.0	100	100.0	04:58
182	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
183	L/K/D	100.0	79.8	61.5	200	61.5	02:19
184	BEDROOM	100.0	100.0	98.0	100	100.0	05:52
185	L/K/D	100.0	82.6	61.1	200	61.1	02:19
186	BEDROOM	100.0	100.0	100.0	100	100.0	05:52
187	BEDROOM	100.0	100.0	97.5	100	100.0	06:21
188	L/K/D	100.0	100.0	100.0	200	100.0	07:57
189	BEDROOM	100.0	100.0	95.2	100	100.0	01:25
190	BEDROOM	98.2	81.4	52.1	100	98.2	00:58

Table 10: Assessment Data

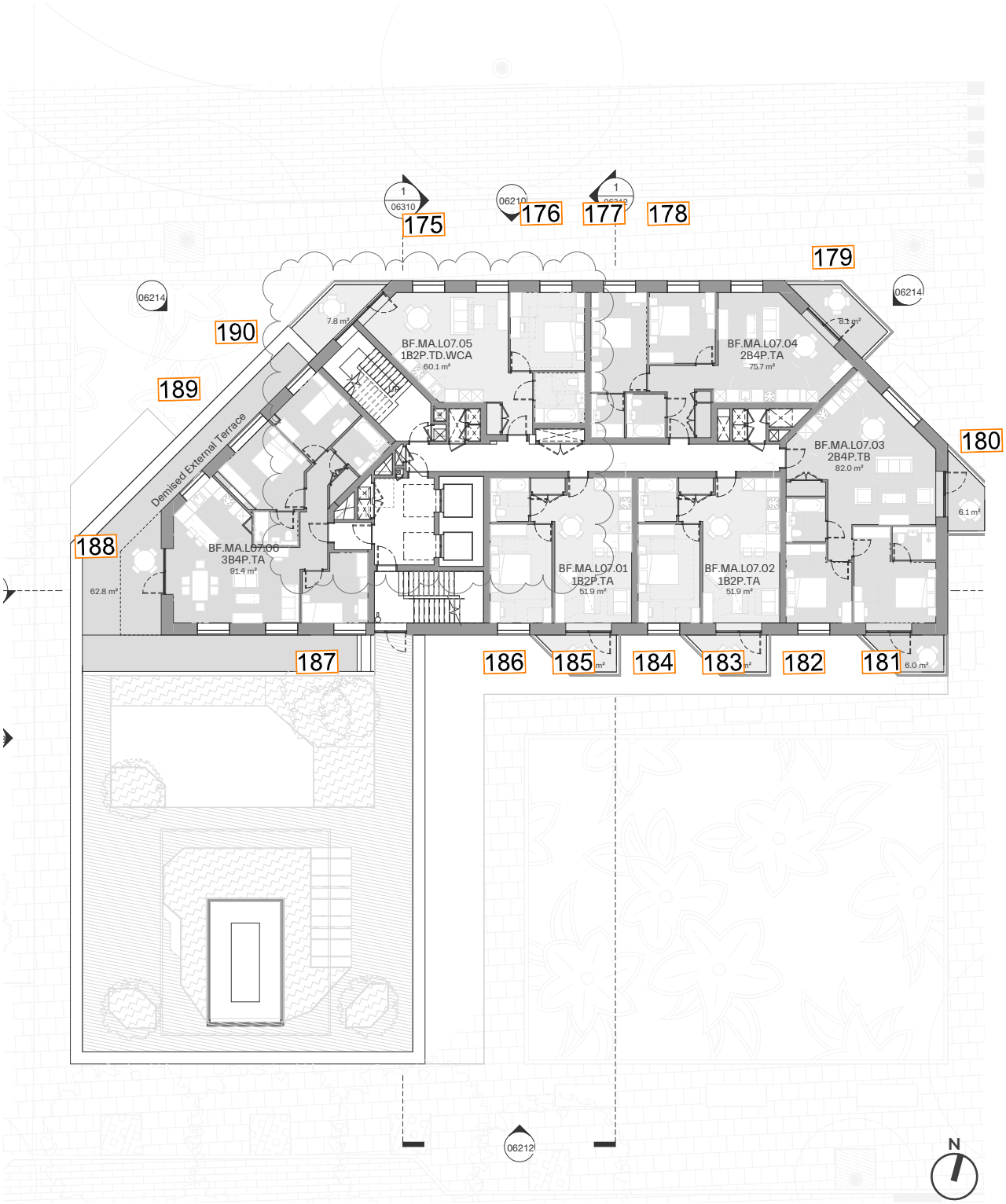
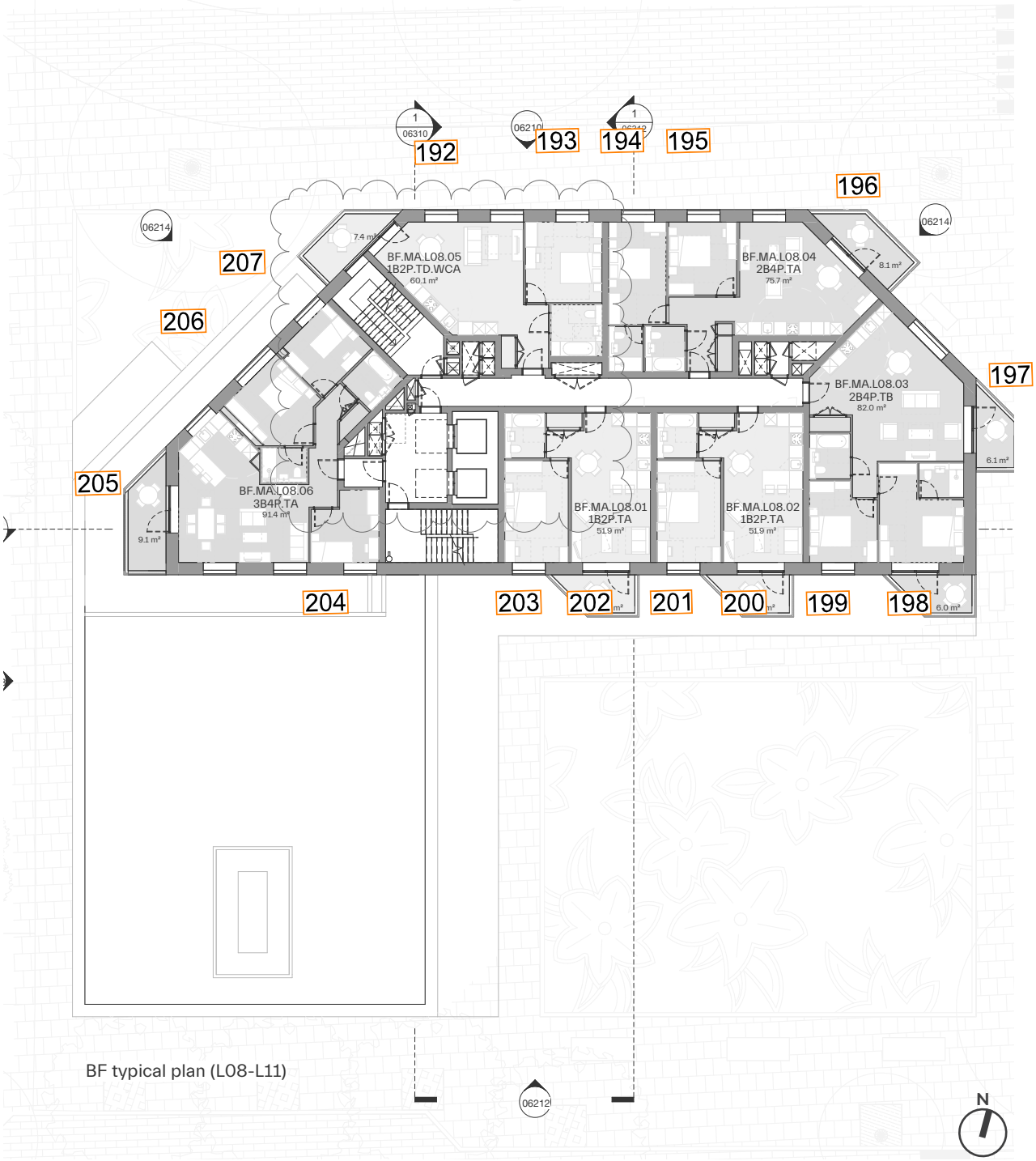


Fig. 19: Floor Plan

Block F - Eighth Floor

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 08							
192	L/K/D	100.0	98.2	80.9	200	80.9	02:00
193	BEDROOM	100.0	97.6	69.8	100	100.0	00:00
194	BEDROOM	100.0	77.0	57.8	100	100.0	00:00
195	BEDROOM	100.0	100.0	98.4	100	100.0	00:00
196	L/K/D	100.0	100.0	99.1	200	99.1	00:00
197	L/K/D	100.0	100.0	100.0	200	100.0	03:26
198	BEDROOM	100.0	100.0	100.0	100	100.0	04:58
199	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
200	L/K/D	100.0	88.9	64.0	200	64.0	02:19
201	BEDROOM	100.0	100.0	100.0	100	100.0	05:52
202	L/K/D	100.0	93.9	65.6	200	65.6	02:19
203	BEDROOM	100.0	100.0	100.0	100	100.0	05:52
204	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
205	L/K/D	100.0	100.0	100.0	200	100.0	08:28
206	BEDROOM	100.0	100.0	100.0	100	100.0	01:53
207	BEDROOM	100.0	95.8	82.0	100	100.0	01:17

Table 11: Assessment Data



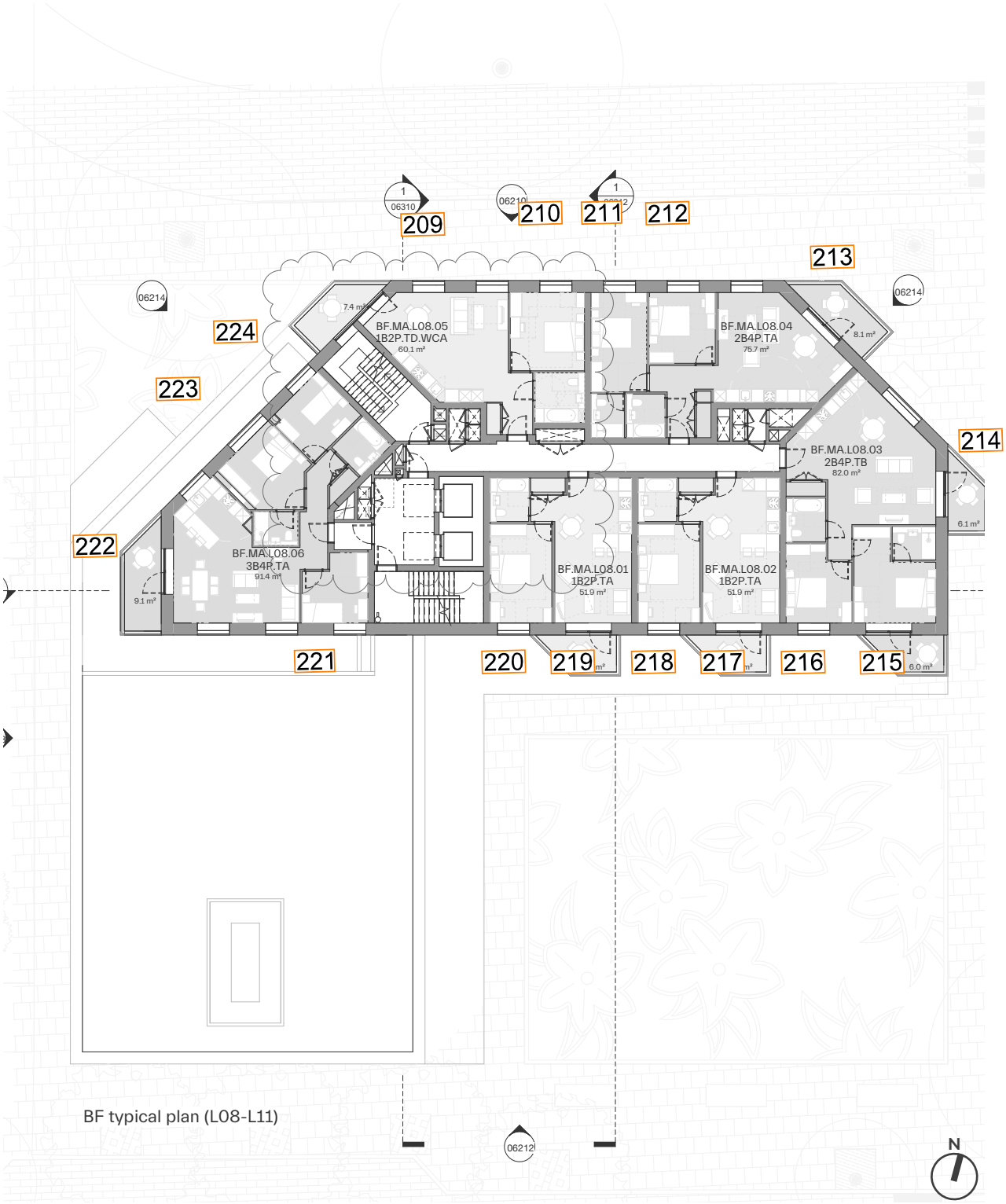
BF typical plan (L08-L11)

Fig. 20: Floor Plan

Block F - Ninth Floor

		DAYLIGHT					SUNLIGHT
ROOM REF.	ROOM USE	EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 09							
209	L/K/D	100.0	99.7	92.1	200	92.1	02:22
210	BEDROOM	100.0	99.2	87.9	100	100.0	00:00
211	BEDROOM	100.0	99.1	66.1	100	100.0	00:00
212	BEDROOM	100.0	100.0	100.0	100	100.0	00:00
213	L/K/D	100.0	100.0	100.0	200	100.0	00:00
214	L/K/D	100.0	100.0	100.0	200	100.0	03:26
215	BEDROOM	100.0	100.0	100.0	100	100.0	04:58
216	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
217	L/K/D	100.0	94.1	65.8	200	65.8	02:19
218	BEDROOM	100.0	100.0	100.0	100	100.0	05:52
219	L/K/D	100.0	97.6	67.4	200	67.4	02:19
220	BEDROOM	100.0	100.0	100.0	100	100.0	05:52
221	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
222	L/K/D	100.0	100.0	100.0	200	100.0	08:56
223	BEDROOM	100.0	100.0	100.0	100	100.0	02:12
224	BEDROOM	100.0	97.6	88.0	100	100.0	01:34

Table 12: Assessment Data



BF typical plan (L08-L11)

Fig. 21: Floor Plan

Block F - Tenth Floor

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick					HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA	21 MAR
BLOCK F - LEVEL 10							
226	L/K/D	100.0	100.0	95.9	200	95.9	02:31
227	BEDROOM	100.0	99.2	96.4	100	100.0	00:00
228	BEDROOM	100.0	100.0	70.9	100	100.0	00:00
229	BEDROOM	100.0	100.0	100.0	100	100.0	00:00
230	L/K/D	100.0	100.0	100.0	200	100.0	00:00
231	L/K/D	100.0	100.0	100.0	200	100.0	03:26
232	BEDROOM	100.0	100.0	100.0	100	100.0	04:58
233	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
234	L/K/D	100.0	98.4	66.2	200	66.2	02:19
235	BEDROOM	100.0	100.0	100.0	100	100.0	05:52
236	L/K/D	100.0	99.2	68.6	200	68.6	02:19
237	BEDROOM	100.0	100.0	100.0	100	100.0	05:52
238	BEDROOM	100.0	100.0	100.0	100	100.0	06:21
239	L/K/D	100.0	100.0	100.0	200	100.0	09:18
240	BEDROOM	100.0	100.0	100.0	100	100.0	02:28
241	BEDROOM	100.0	98.8	91.6	100	100.0	01:52

Table 13: Assessment Data

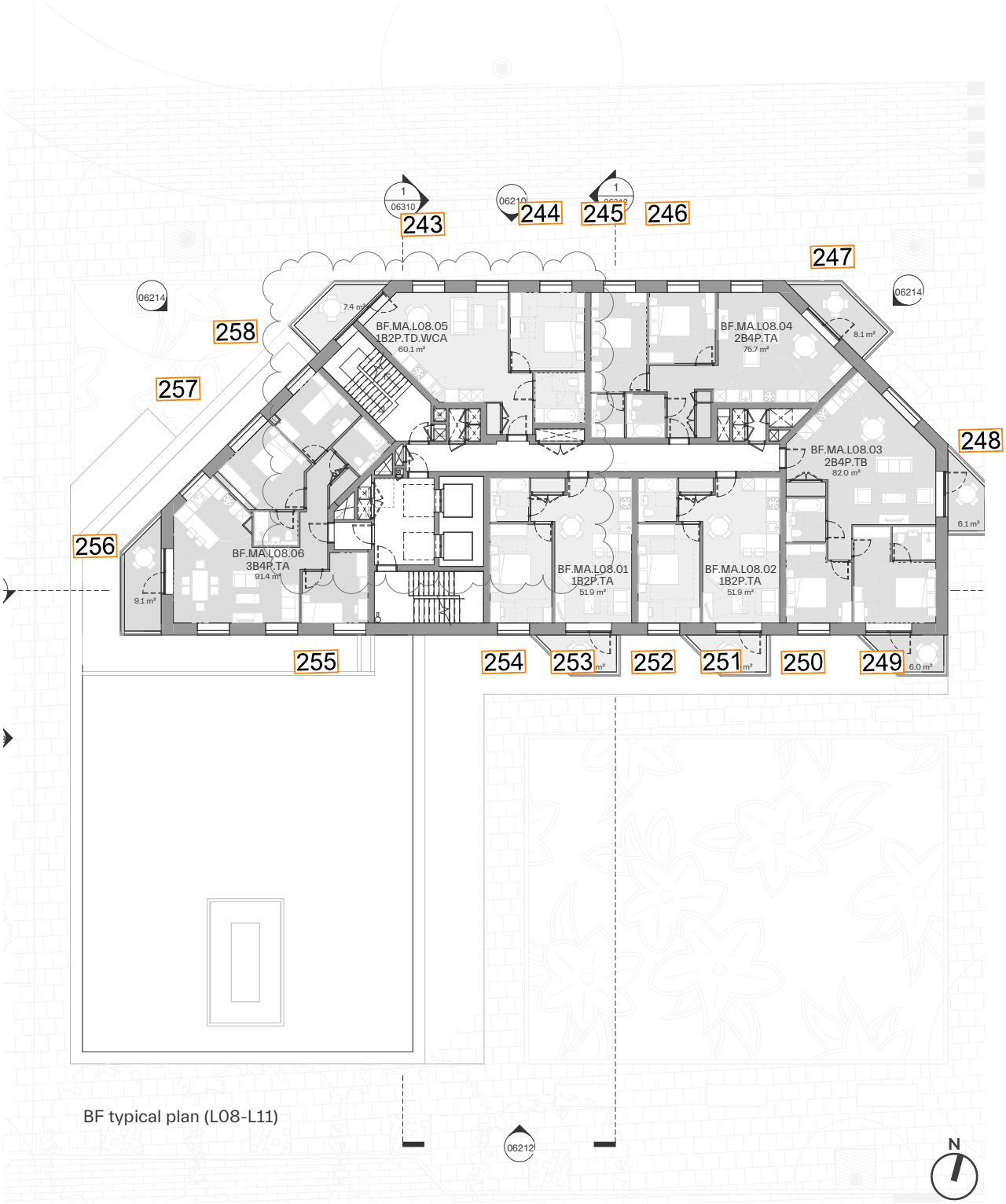
BF typical plan (L08-L11)

Fig. 22: Floor Plan

Block F - Eleventh Floor

ROOM REF.	ROOM USE	DAYLIGHT						SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY percentage of room achieving target illuminance for 2190 hrs (50% of daylit hours) - Weather File: GBR_Gatwick						HOURS:MIN
		100	150	200	TARGET	RELEVANT ENSDA		21 MAR
BLOCK F - LEVEL 11								
243	L/K/D	100.0	100.0	98.9	200	98.9		02:38
244	BEDROOM	100.0	99.6	98.0	100	100.0		00:00
245	BEDROOM	100.0	100.0	76.1	100	100.0		00:00
246	BEDROOM	100.0	100.0	100.0	100	100.0		00:00
247	L/K/D	100.0	100.0	100.0	200	100.0		00:00
248	L/K/D	100.0	100.0	100.0	200	100.0		03:26
249	BEDROOM	100.0	100.0	100.0	100	100.0		07:40
250	BEDROOM	100.0	100.0	100.0	100	100.0		06:21
251	L/K/D	100.0	100.0	100.0	200	100.0		07:40
252	BEDROOM	100.0	100.0	100.0	100	100.0		06:21
253	L/K/D	100.0	100.0	100.0	200	100.0		07:40
254	BEDROOM	100.0	100.0	100.0	100	100.0		06:21
255	BEDROOM	100.0	100.0	100.0	100	100.0		06:21
256	L/K/D	100.0	100.0	100.0	200	100.0		10:17
257	BEDROOM	100.0	100.0	100.0	100	100.0		02:36
258	BEDROOM	100.0	100.0	97.0	100	100.0		01:57

Table 14: Assessment Data



BF typical plan (L08-L11)

Fig. 23: Floor Plan

APPENDIX A.14 KEELEY ROAD PROPOSED SCHEME DSO REPORT

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CHARTERED SURVEYORS

DAYLIGHT & SUNLIGHT

INTERNAL DAYLIGHT, SUNLIGHT AND OVERSHADOWING ASSESSMENT

32-44 Keeley Road And 31-57 Drummond Road

31 August 2022

GIA No: **18002**

PROJECT DATA:

Client	**BDW Trading Limited**
Architect	**Pollard Thomas Edwards**
Project Title	**32-44 Keeley Road And 31-57 Drummond Road**
Project Number	**18002**

REPORT DATA:

Report Title	**Internal Daylight, Sunlight and Overshadowing Assessments**
GIA Department	**Daylight & Sunlight**
Dated	**31 August 2022**

Prepared by	**CN**
Checked by	**JF**
Type	**Planning**

Revisions	No:	Date:	Notes:	Signed:

SOURCES OF INFORMATION:

Information Received	**IR-16-18002**
Release Number	**Rel_07_18002_DSD**
Issue Number	**04**
Site Photos	**GIA**
3D models	**VERTEX**
OS Data	**FIND Maps**

Map data

CONTENTS

1 EXECUTIVE SUMMARY

The purpose of this report is to ascertain whether the proposed 32-44 Keeley Road and 31-57 Drummond Road development will provide residential accommodation considered acceptable in terms of daylight and sunlight amenity.

To this end, all habitable rooms within the scheme have been technically assessed for Spatial Daylight Autonomy (sDA) and the assessment results show that 90% of the rooms meet or exceed the levels recommended for dwellings within the UK National Annex of BS EN 17037.

Where shortfalls are seen, these are generally minor and often seen as a result of shading effect of balconies, which are however an important planning requirement and provide valuable private amenity space for enjoyment of future occupants.

In addition, sunlight exposure assessments have been undertaken for all dwellings and 96% would exceed BRE's recommendation of at least one and a half hours of sunlight on the equinox.

Finally, the sunlight access of the communal amenity areas provided at ground floor and at roof terrace level has been assessed by means of Sun Hours on Ground (SHOG), and very good results are achieved.

The results above are discussed in further detail in Section 5.

Overall, the scheme offers excellent daylight and sunlight amenity for the enjoyment of future occupants.

2 INTRODUCTION

GIA has been instructed to provide a report upon the potential availability of Daylight and Sunlight to the proposed accommodation within the residential scheme prepared by Pollard Thomas Edwards. GIA was specifically instructed to carry out the following:

- To create a 3D computer model of the proposal based upon drawings prepared by Pollard Thomas Edwards.
- Carry out a daylight assessment using the methodologies set out in the BRE guidance for Spatial Daylight Autonomy (sDA),
- Carry out a sunlight assessment using the methodologies set out in the BRE guidance for Sunlight Exposure,
- Carry out an overshadowing assessment using the methodology set out in the BRE guidance for Sun Hours On Ground (SHOG) for all relevant amenity areas.
- Prepare a report setting out the analysis and our findings.

3 BRE GUIDELINES

The Building Research Establishment (BRE) have set out in their handbook 'Site Layout Planning for Daylight and Sunlight a Guide to Good Practice (BR 209 2022)', guidelines and methodology for the measurement and assessment of daylight and sunlight within proposed buildings.

The BRE published the new edition of 'Site layout planning for daylight and sunlight: a guide to good practice' in June 2022 (BR 209), This is to be read in conjunction with BS EN 17037:2018 "Daylight in buildings", the UK National Annex of the British Standard and the CIBSE publication LG 10 'Daylighting – a guide for designers'.

The BR 209 new edition contains amended methodologies for appraising the daylight and sunlight quality within new developments. Nonetheless, the main aim of the guidance is maintained: *"to help rather than constrain the designer"* as stated in Paragraph 1.6 of the new guidance.

The report provides advice, but also clearly states that it *"is not mandatory and the guide should not be seen as an instrument of planning policy."* The guidance also acknowledges in its introduction that *"Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design (see Section 5). In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings."* (Paragraph 1.6)

2.1 BS EN 17037:2018 AND THE UK ANNEX

The British Standard BS8206-2:2008 was superseded by the new European Standard on daylight BS EN 17037:2018 "Daylight in buildings".

Following a review of the European Standard by a dedicated commission of UK experts, the British Standard Institution concluded that the targets suggested *"may not be achievable for some buildings, particularly dwellings"*. In particular, the UK committee believed this could be the case for *"dwellings with basement rooms or those with significant external obstructions (for example, dwellings situated in a dense urban area or with tall trees outside), or for existing buildings being refurbished or converted into dwellings"*

As a consequence, a UK National Annex was appended to BS EN 17037:2018 which suggested alternative targets, in line with those of the former BS8206-2:2008 and the previous (2011) BR209. These lower targets were then incorporated into the 2022 publication of BR209.

With this site being located within central London, a dense urban environment, the relevant targets are considered to be those contained within the UK National Annex as outlined and discussed further in Section 3.2 adjacent. It is important here to re-emphasise though that these UK targets were designed to be in line with those from the previous British Standard and BR209 publications and so utilising them does not represent a weakening of standards, rather it enables continuity in the understanding of daylight levels within residential developments.

The BS EN 17037 includes four criteria: daylighting, views, sunlight access and glare. However, daylighting and sunlight access are the only criteria considered relevant for residential buildings and therefore discussed within this report.

View out and Glare are mostly relevant in offices and schools, where occupants are more fixed to a certain location within a room. In residential habitable rooms, occupants tend to move more freely and therefore view out and glare are not assessed within residential buildings.

2.2 DAYLIGHT

The BRE set out the methods for assessing daylight within a proposed building within section 2.1 and Appendix C of the handbook. This is based on the methods detailed in the BS EN 17037.

BS EN 17037 suggests two possible methodologies for appraising daylight:

- Illuminance Method
- Daylight Factor Method

These methodologies are discussed in more detail below.

Whilst Vertical Sky Component (VSC) is no longer directly used to calculate the levels of daylight indoors, this is still referenced within the BRE guidance as a metric to appraise the level of obstruction faced by a building and the potential for good daylight indoors.

This method of assessment may also be used to appraise the daylight quality in the early stages of the design, when room layouts or window locations are still undecided.

Vertical Sky Component (VSC)

This method of assessment can be undertaken using a skylight indicator or a Waldram diagram. It measures from a single point, at the centre of the window (if known at the early design stage), the quantum of sky visible taking into account all external obstructions. Whilst these obstructions can be either other buildings or the general landscape, trees are usually ignored unless they form a continuous or dense belt of obstruction.

The VSC method is a useful 'rule of thumb' but has some significant limitations in determining the true quality of daylight within a proposed building. It does not take into account the size of the window, any reflected light off external obstructions, any reflected light within the room, or the use to which that room is put.

Illuminance method

Climate Based Daylight Modelling (CBDM) is used to predict daylight illuminance using sun and sky conditions derived from standard meteorological data (often referred to as climate or weather data). This analytical method allows the prediction of absolute daylight illuminance based on the location and building orientation, in addition to the building's daylight systems (shading systems, for example). Annex A within the BS EN 17037 proposes values of target illuminances and minimum target illuminances to exceed 50 % of daylight hours.

This is considered to be the most accurate approach when using climate data, however, it provides a very large amount of data for each assessed room, which then needs to be interrogated. One of the methodologies that can be used to interrogate this data is Spatial Daylight Autonomy (sDA).

<u>Spatial Daylight Autonomy (sDA)</u>

The sDA assessment is designed to understand how often each point of the room's task area sees illuminance levels at or above a specific threshold.

BS EN 17037 sets out minimum illuminance levels (300lx) that should be exceeded over 50% of the space for more than half of the daylight hours in the year. It also includes recommendations for medium and high daylighting levels within a space (500lx and 700lx respectively). It should be noted here, however, that these targets are specified irrespective of a space's use or design.

As discussed within Section 3.1, the National Annex suggests that these targets can be challenging to achieve within residential settings, particularly in areas of higher density and so suggests lower targets can be considered in this situation. It should be noted here that the reduced targets suggested within the BS EN 17037:2018 National Annex are provided so as to be comparable with the previous BR209's recommendations for ADF. These targets, considered relevant for this application, are:

- 100 lux for bedrooms
- 150 lux for living rooms
- 200 lux for living/kitchen/diners, kitchens, and studios.

It is however stated in paragraph C17 of the BRE that: "*Where a room has a shared use, the highest target should apply. For example in a bed sitting room in student accommodation, the value for a living room should be used if students would often spend time in their rooms during the day. Local authorities*

could use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design".

Daylight Factor method

This method involves calculating the median daylight factor on a reference plane (assessment grid).

"The daylight factor is the illuminance at a point on the reference plane in a space, divided by the illuminance on an unobstructed horizontal surface outdoors. The CIE standard overcast sky is used, and the ratio is usually expressed as a percentage."

This method of assessments considers an overcast sky, and therefore the orientation and location of buildings is not relevant. In order to account for different climatic conditions, Annex A within the BS EN 17037 sets equivalent daylight factor targets (D) for various locations in Europe.

The median daylight factor (MDF) should meet or exceed the target daylight factor relative to a given illuminance for more than half of daylight hours, over 50% of the reference plane.

2.3 SUNLIGHT

The BRE provide guidance in respect of sunlight quality for new developments within section 3.1 of the handbook. It is generally acknowledged that the presence of sunlight is more significant in residential accommodation than it is in commercial properties, and this is reflected in the BRE document.

It states, *"in housing, the main requirement for sunlight is in living rooms, where it is valued at any time of the day, but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and in kitchens where people prefer it in the morning rather than the afternoon."*

The BRE guide considers the critical aspects of orientation and overshadowing in determining the availability of sunlight at a proposed development site.

The guide proposes minimising the number of dwellings whose living room face solely north unless there is some compensating factor such as an appealing view to the north, and it suggests a number of techniques to do so. Furthermore, it discusses massing solutions with a sensitive approach to overshadowing, so as to maximize access to sunlight.

At the same time, it acknowledges that the site's existing urban environment may impose orientation or overshadowing constraints which may not be possible to overcome.

To quantify sunlight access for interiors where sunlight is expected, it refers to the BS EN 17037 criterion that the minimum duration of sunlight exposure in at least one habitable room of a dwelling should be 1.5 h on March 21st. Table A.5 also establishes medium and high sunlight targets (3 and 4 hours).

This is to be checked at a reference point located centrally to the window's width and at the inner surface of the aperture (façade and/or roof). For multiple apertures in different facades it is possible to cumulate the time of sunlight availability if not occurring at the same time. The reference point is minimum 1.2 m above the floor and 0.3 m above the window sill if present.

The summary of section 3.1 of the guide states as follows:

"In general, a dwelling or non-domestic building which has a particular requirement for sunlight, will appear reasonably sunlit provided that:

- *At least one main window faces within 90 degrees of due south, and*

- *a habitable room, preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March. This is assessed at the inside centre of the window(s); sunlight received by different windows can be added provided they occur at different times and sunlight hours are not double counted.. "*

2.4 OVERSHADOWING

The BRE guidance in respect of overshadowing of amenity spaces is set out in section 3.3 of the handbook. Here it states as follows:

"Sunlight in the spaces between and around buildings has an important impact on the overall appearance and ambience of a development. It is valuable for a number of reasons, to:

- *provide attractive sunlit views (all year)*
- *make outdoor activities like sitting out and children's play more pleasant (mainly warmer months)*
- *encourage plant growth (mainly spring and summer)*
- *dry out the ground, reducing moss and slime (mainly in colder months)*
- *melt frost, ice and snow (in winter)*
- *dry clothes (all year).*

Again, it must be acknowledged that in urban areas the availability of sunlight on the ground is a factor which is significantly controlled by the existing urban fabric around the site in question and so may have very little to do with the form of the development itself. Likewise, there may be many other urban design, planning and site constraints which determine and run contrary to the best form, siting and location of a proposed development in terms of availability of sun on the ground.

The summary of section 3.3 of the guide states as follows:

"3. 3 .17 It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area that can receive two hours of sun on 21 March is less than 0.80 times its former value, then the loss of sunlight is likely to be noticeable. If a detailed calculation cannot be carried out, it is recommended that the centre of the area should receive at least two hours of sunlight on 21 March.."

2.5 FURTHER RELEVANT INFORMATION

CIBSE LG 10 'Daylighting – a guide for designers'.

This guide details the process of designing for daylighting. It outlines considerations of form, orientation, and other aspects involved in designing the building envelope to optimise natural light.

The guidance in this document is written primarily for buildings located within the UK, and will be most applicable to projects in northern hemisphere. However, the principles are universal, and can be applied to other locations if the appropriate weather data is used and local standards and regulations are respected

4 METHODOLOGY

In order to undertake the daylight and sunlight assessments set out in the later pages, we have prepared a three dimensional computer model and used specialist lighting simulation software.

The three dimensional representation of the proposed development has been modelled using the scheme drawings provided to us by Pollard Thomas Edwards. This has been placed in the context of its surrounding buildings which have been modelled from survey information, photogrammetry and OS. This allows for a precise model, which in turn ensures that analysis accurately represents the amount of daylight and sunlight available to the building facades, internal and external spaces, considering all of the surrounding obstructions and orientation.

4.1 SIMULATION ASSUMPTIONS

The weather file recorded at Gatwick Airport was considered the most relevant for this assessment.

Surfaces reflectance

Reflectance values applied to surfaces in the computational modelling follow the BR 209 Annex C, unless specified by the design team.

Pollard Thomas Edwards specified a medium-coloured floor finish and light finishes for walls and ceilings:

- Interior walls - 0.70
- Ceilings - 0.80
- Exterior ceilings - 0.60
- Floors - 0.30
- Exterior walls - 0.70
- Exterior ground and external obstructions - 0.20

Glazing transmittance

A Visible Light Trasmittance (VLT) of 0.70 has been assumed. Glazing transmission and maintenance factors have been calculated and are detailed in Table 01.

Assessments grid

For the daylight assessments, an analysis 'grid' is located within each room at working plane height (850 mm from FFL) and offset by 0.30m from the walls as recommended by BR 209.

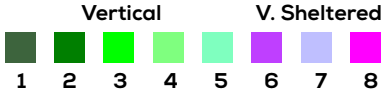
Grid points are spaced by 0.20m.

Table 01: Typical reflectance, transmittance and maintenance factors

GLAZING TYPE AND MAINTENANCE FACTORS:	TV (Normal)	DIRT FACTOR	POSITION	SHELTERED	FRAMING FACTOR	TV (Total)
TYPE 01	0.70	8	1	1	0.70	0.45
TYPE 02	0.70	8	1	1	0.75	0.48
TYPE 03	0.70	8	1	1	0.80	0.52
TYPE 04	0.70	8	1	1	0.85	0.55
TYPE 05	0.70	8	1	1	0.90	0.58
TYPE 06	0.70	8	1	3	0.75	0.40
TYPE 07	0.70	8	1	3	0.85	0.45
TYPE 08	0.70	8	1	3	0.95	0.51

Fig. 01: SE and NW View

Table 02: Window Key



5 CONCLUSIONS

The purpose of this report is to ascertain whether the proposed development will offer adequate daylight and sunlight amenity for the enjoyment of future occupants.

GIA has worked alongside the design team to optimise the daylight performance of the proposed development. As a result, the following strategies have been implemented:

- Living areas have been located, where possible, in the areas of greatest daylight availability, as occupants tend to appreciate daylight most in such rooms;
- Fenestration has been enlarged or additional windows have been provided in the areas where the daylight availability is most restricted; and
- Internal layouts have been amended, where possible, to reduce room depths and facilitate a more uniform distribution of light.

The above amendments have resulted in an optimised development which performs excellently from a daylight and sunlight perspective.

Further details are provided in the following sections.

5.1 CONCLUSIONS ON DAYLIGHT

In order to ascertain the levels of daylight within the proposed development, all habitable rooms have been assessed for Spatial Daylight Autonomy (sDA).

The assessment results are provided in Section 7 of this report and they show that, of the 363 tested rooms, 90% (326) meet or exceed the sDA levels recommended for dwellings within the UK National Annex of the BS EN 17037.

In addition, 16 open plan Living/Kitchen/Dining rooms (LKDs), whilst falling slightly short of the 200 lux recommended for rooms including a kitchen, achieve the 150 lux recommended for living areas and so can be considered acceptably daylit living rooms. When holding the LKDs to a target of 150 lux therefore, the overall proportion of rooms achieving the targets would increase to 94% (342) which is again an excellent result.

Further five LKDs and four bedrooms fall short only marginally, with the sDA_{150} (for LKDs) and sDA_{100} (for bedrooms) achieved over 40% or more of their area, instead of 50%.

The remaining rooms are eight LKDs and four bedrooms.

The LKDs are located on the lowest storeys of the scheme, up to Level 03. In addition to their location, which offers a more restricted view of the sky, these rooms are generous in size and provided with a balcony, which further reduces the daylight ingress.

These levels are not uncommon in high-density schemes such as this one and with the provision of private amenity spaces being an important planning requirement, a balance has been sought between these two types of amenity (private amenity space v daylight and sunlight amenity). This trade-off is generally accepted throughout London.

It should also be noted that greater levels of light would be available in the front part of the room, closer to the fenestration.

The four bedrooms are all to be found at Level 01. Two are located behind the rear elevation of Block A, directly opposite Block B and the other two are located within Block B, facing the car park of Centrale

Shopping Centre.

In consideration of the very high proportion of rooms seeing levels in line with or above guidance and the nature and magnitude of the shortfalls seen, the scheme is considered to have an excellent performance from a daylight perspective, overall.

5.2 CONCLUSIONS ON SUNLIGHT

The 144 proposed dwellings have also been assessed for sunlight and 96% of them (138) would meet or exceed BRE's recommendation, seeing at least one and a half hours of sunlight on the equinox. The vast majority of these units (119) actually achieve the recommended sunlight exposure within the main living space, which is considered preferable by the BRE. Given the urban nature of this development, this should be considered an excellent result.

The six units falling short of guidance do so owing to being located on the lowest storeys of the scheme, where sunlight levels are typically lower, and having a northerly aspect, where lower levels of sunlight are to be expected in any building.

The only unit falling short of recommendation for sunlight within Block A is located on Level 01, behind the rear elevation. This falls short by only two minutes and so it is still considered to provide adequate levels of sunlight throughout the year.

The remaining five units are located at the north corner of Block B, on Levels 01 to 05. Having a northerly aspect, these units have an inherently lower expectation for sunlight, however sunlight levels in line with those recommended are achieved from Level 06 upwards.

Overall, the sunlight levels are considered very good and the building will provide excellent levels of sunlight amenity.

5.3 CONCLUSIONS ON OVERSHADOWING

The BRE state that, in order to be well sunlit throughout the year, an outdoor amenity area should receive direct sunlight for at least two hours on the equinox. In order to ascertain compliance with this criterion, an assessment of Sun Hours on Ground has been undertaken on the amenity areas provided at ground and roof level. Results are provided in Section 8 of this report.

The results show that all areas exceeded BRE's minimum recommendation, with 63% of the amenity area provided at ground level and over 90% of the roof terraces receiving direct sunlight for two or more hours on 21st March.

In order to provide a more comprehensive illustration of the sunlight availability throughout the year, sun exposure assessments have also been carried out for the equinox and summer solstice.

These show that a significantly greater amount of sunlight is seen on the roof terraces in mid-season and so these are excellently sunlit. Summer levels are also very good for all areas, when occupants are more likely to spend time outdoors.

Overall, the open spaces proposed within the scheme will provide excellent sunlight levels for the enjoyment of future occupants.

6 SITE OVERVIEW

Fig. 02: Top view

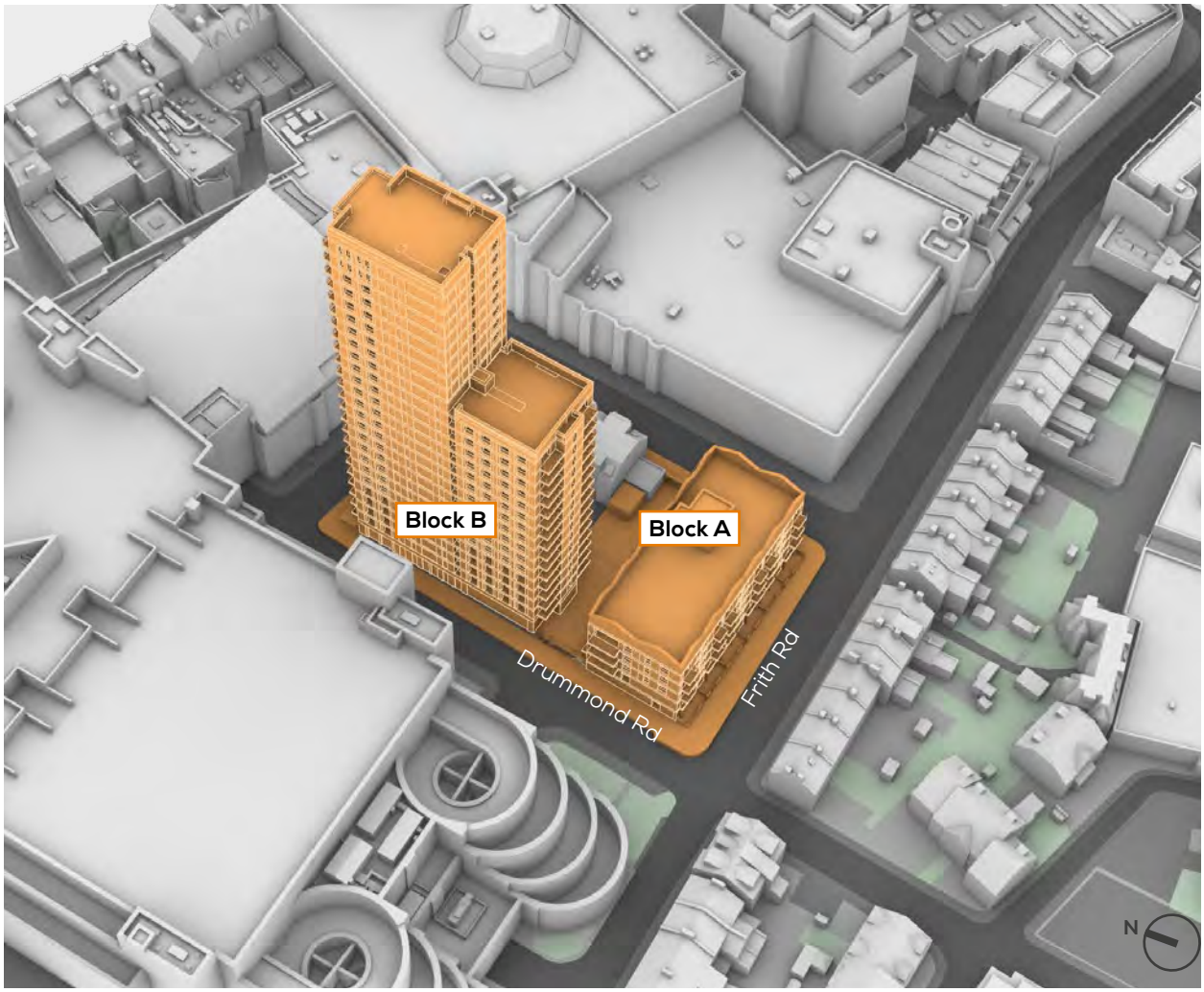


Fig. 03: Perspective view

7 INTERNAL DAYLIGHT AND SUNLIGHT ASSESSMENTS

Block A - Level 0

		DAYLIGHT					SUNLIGHT
ROOM REF.	ROOM USE	EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKA - LEVEL 00							
1	L/K/D	82.4	78.2	73.3	200		05:21
2	L/K/D	77.8	63.4	52.3	200		04:41
3	L/K/D	77.5	62.4	51.7	200		04:40
4	L/K/D	77.5	61.6	50.9	200		04:26
5	L/K/D	77.0	61.5	51.0	200		04:23
6	L/K/D	82.6	77.8	72.7	200		05:51

Table 03: Assessment Data

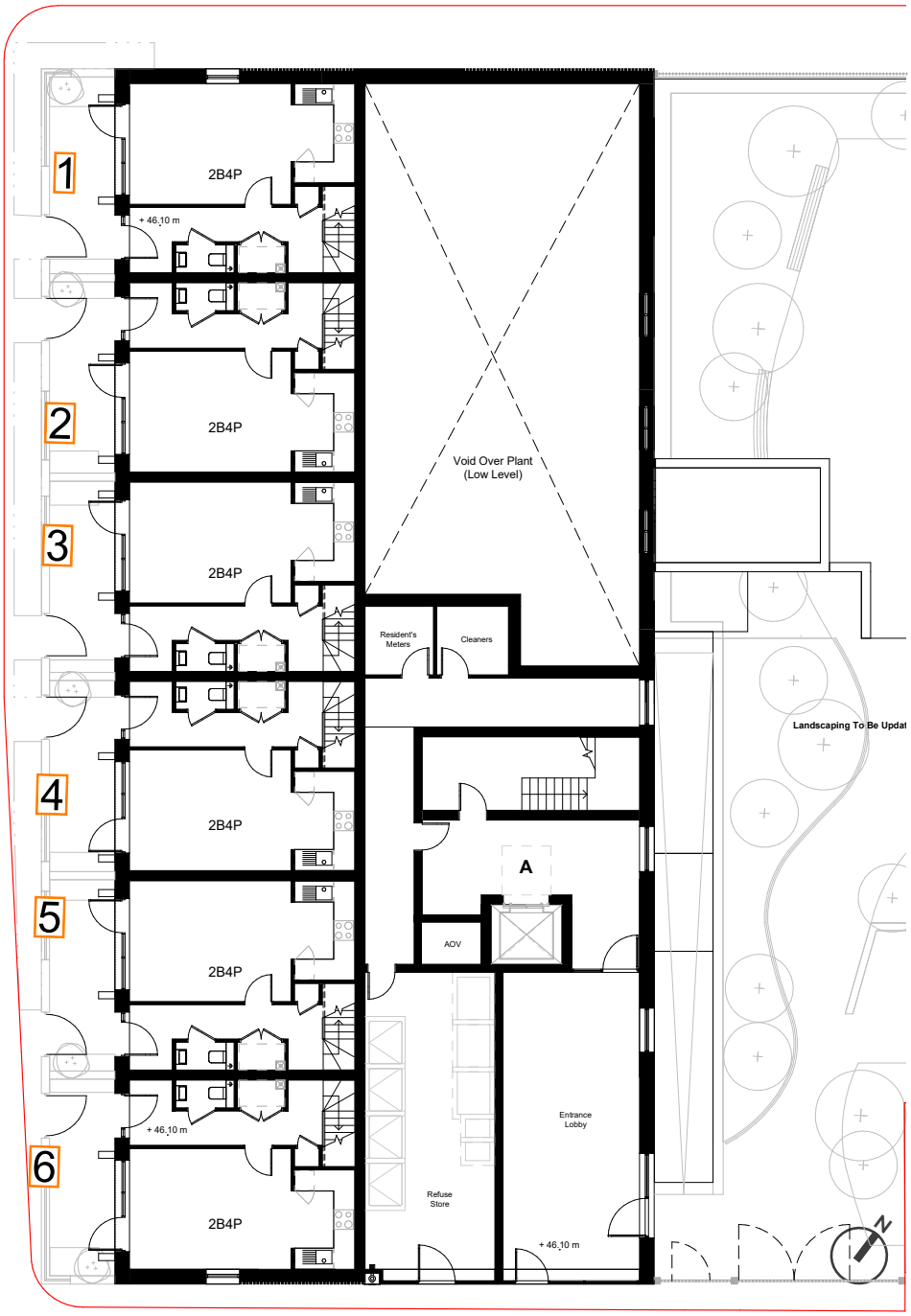


Fig. 04: Floor Plan

Block A - Level 1

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKA - LEVEL 01							
7	L/K/D	45.2	26.7	17.7	200		01:28
8	BEDROOM	62.4	35.3	24.8	100		00:10
9	BEDROOM	30.5	19.1	12.3	100		00:11
10	BEDROOM	33.3	19.5	10.9	100		00:12
11	L/K/D	65.8	38.1	24.5	200		01:41
12	BEDROOM	99.4	79.8	54.3	100		00:00
13	BEDROOM	100.0	100.0	100.0	100		05:28
14	BEDROOM	93.7	69.3	45.5	100		05:27
15	BEDROOM	93.7	68.3	46.0	100		05:37
16	BEDROOM	100.0	100.0	73.0	100		04:58
17	BEDROOM	100.0	100.0	72.1	100		05:28
18	BEDROOM	92.6	66.7	42.9	100		05:04
19	BEDROOM	91.5	67.2	45.0	100		05:12
20	BEDROOM	100.0	100.0	71.2	100		04:41
21	BEDROOM	100.0	100.0	71.7	100		05:24
22	BEDROOM	90.5	66.1	43.4	100		05:04
23	BEDROOM	91.5	67.2	45.5	100		04:56
24	BEDROOM	100.0	100.0	100.0	100		07:03
25	BEDROOM	94.7	54.7	39.4	100		03:31
26	L/K/D	92.5	58.5	44.5	200		03:38
27	BEDROOM	70.3	44.1	31.2	100		00:00

Table 04: Assessment Data

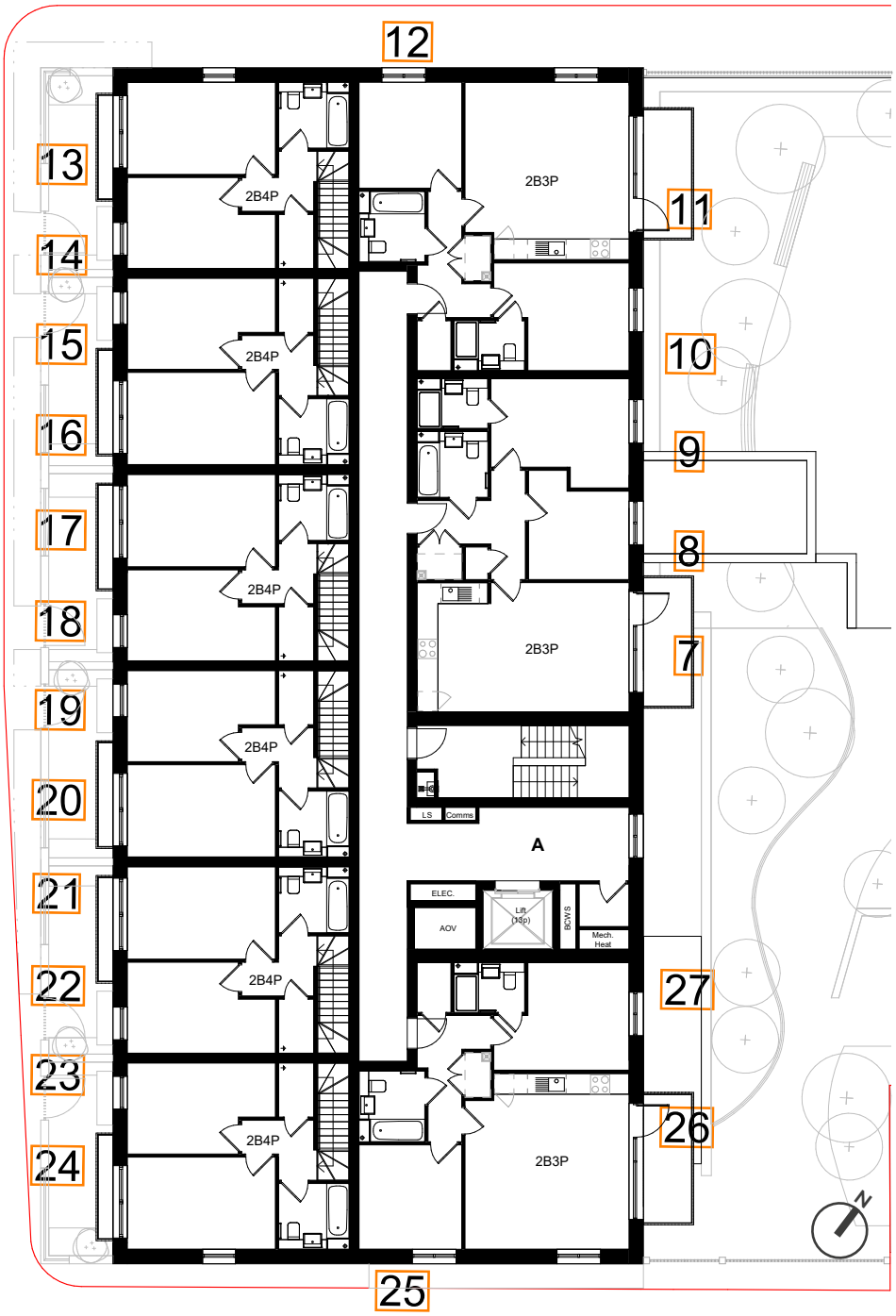


Fig. 05: Floor Plan

Block A - Level 2

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKA - LEVEL 02							
28	L/K/D	54.3	33.7	22.8	200		01:40
29	BEDROOM	82.7	45.9	30.8	100		00:23
30	BEDROOM	41.9	25.3	18.0	100		00:24
31	BEDROOM	42.1	23.8	14.9	100		00:22
32	L/K/D	100.0	72.3	50.8	200		02:18
33	BEDROOM	88.8	58.2	38.8	100		00:00
34	L/K/D	100.0	100.0	100.0	200		04:53
35	BEDROOM	100.0	100.0	94.5	100		05:45
36	BEDROOM	100.0	100.0	69.0	100		05:50
37	BEDROOM	100.0	100.0	93.4	100		04:37
38	BEDROOM	100.0	100.0	92.5	100		04:53
39	BEDROOM	100.0	100.0	70.4	100		05:49
40	BEDROOM	100.0	100.0	93.0	100		05:52
41	L/K/D	78.2	53.2	34.6	200		04:38
42	BEDROOM	100.0	100.0	98.5	100		04:41
43	BEDROOM	100.0	100.0	72.0	100		05:50
44	BEDROOM	100.0	100.0	92.2	100		05:44
45	L/K/D	100.0	100.0	100.0	200		09:06
46	BEDROOM	99.4	72.4	50.6	100		04:25
47	L/K/D	100.0	99.2	80.8	200		05:26
48	BEDROOM	80.2	58.9	40.6	100		00:17

Table 05: Assessment Data

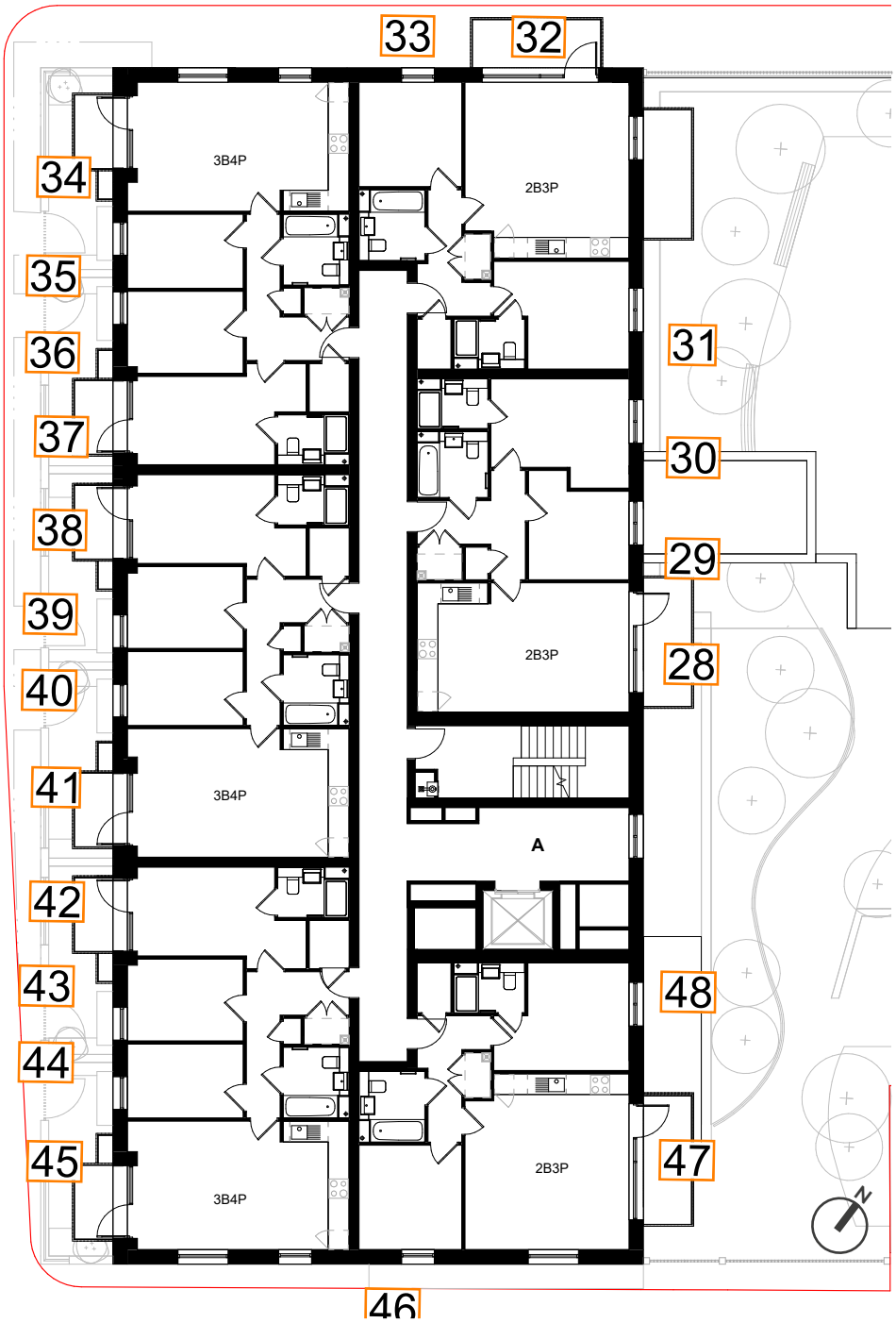


Fig. 06: Floor Plan

Block A - Level 3

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKA - LEVEL 03							
49	L/K/D	62.9	43.3	28.9	200		01:53
50	BEDROOM	98.5	66.2	40.6	100		00:36
51	BEDROOM	61.3	34.6	24.9	100		00:33
52	BEDROOM	65.8	35.1	22.3	100		00:34
53	L/K/D	100.0	95.8	66.8	200		02:28
54	BEDROOM	98.8	75.9	47.6	100		00:00
55	L/K/D	100.0	100.0	100.0	200		04:59
56	BEDROOM	100.0	100.0	100.0	100		05:52
57	BEDROOM	100.0	100.0	84.1	100		05:52
58	BEDROOM	100.0	100.0	97.0	100		04:39
59	BEDROOM	100.0	100.0	96.5	100		05:00
60	BEDROOM	100.0	100.0	85.2	100		05:52
61	BEDROOM	100.0	100.0	100.0	100		05:52
62	L/K/D	94.4	59.8	38.4	200		04:42
63	BEDROOM	100.0	100.0	100.0	100		04:47
64	BEDROOM	100.0	100.0	85.3	100		05:52
65	BEDROOM	100.0	100.0	99.2	100		05:52
66	L/K/D	100.0	100.0	100.0	200		10:04
67	BEDROOM	100.0	94.7	70.6	100		05:22
68	L/K/D	100.0	100.0	98.5	200		06:08
69	BEDROOM	89.1	63.4	47.5	100		00:31

Table 06: Assessment Data

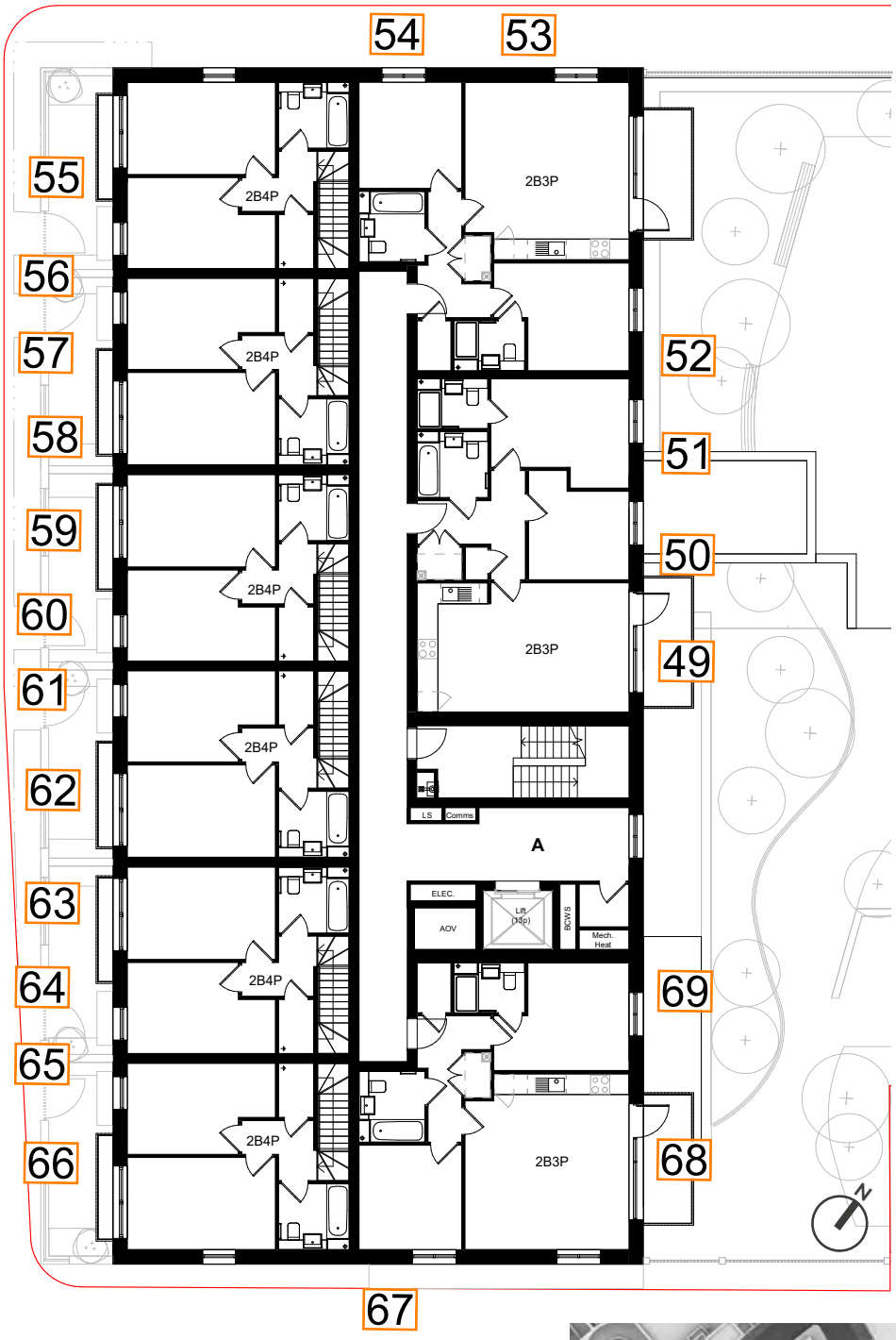


Fig. 07: Floor Plan

Block A - Level 4

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKA - LEVEL 04							
70	L/K/D	99.0	72.1	60.5	200		02:07
71	BEDROOM	100.0	93.2	60.2	100		00:46
72	BEDROOM	78.3	48.8	32.7	100		00:47
73	BEDROOM	89.1	54.0	33.2	100		00:47
74	L/K/D	100.0	100.0	100.0	200		02:28
75	BEDROOM	100.0	90.6	58.8	100		00:00
76	L/K/D	100.0	100.0	100.0	200		06:15
77	BEDROOM	100.0	100.0	100.0	100		05:52
78	BEDROOM	100.0	100.0	93.8	100		05:52
79	BEDROOM	100.0	100.0	100.0	100		06:15
80	BEDROOM	100.0	100.0	100.0	100		06:14
81	BEDROOM	100.0	100.0	94.4	100		05:52
82	BEDROOM	100.0	100.0	100.0	100		05:52
83	L/K/D	99.8	93.0	66.6	200		06:18
84	BEDROOM	100.0	100.0	100.0	100		06:24
85	BEDROOM	100.0	100.0	93.0	100		05:52
86	BEDROOM	100.0	100.0	100.0	100		05:52
87	L/K/D	100.0	100.0	100.0	200		11:19
88	BEDROOM	100.0	97.6	86.5	100		05:49
89	L/K/D	100.0	100.0	100.0	200		06:23
90	BEDROOM	98.5	70.8	55.9	100		00:46

Table 07: Assessment Data

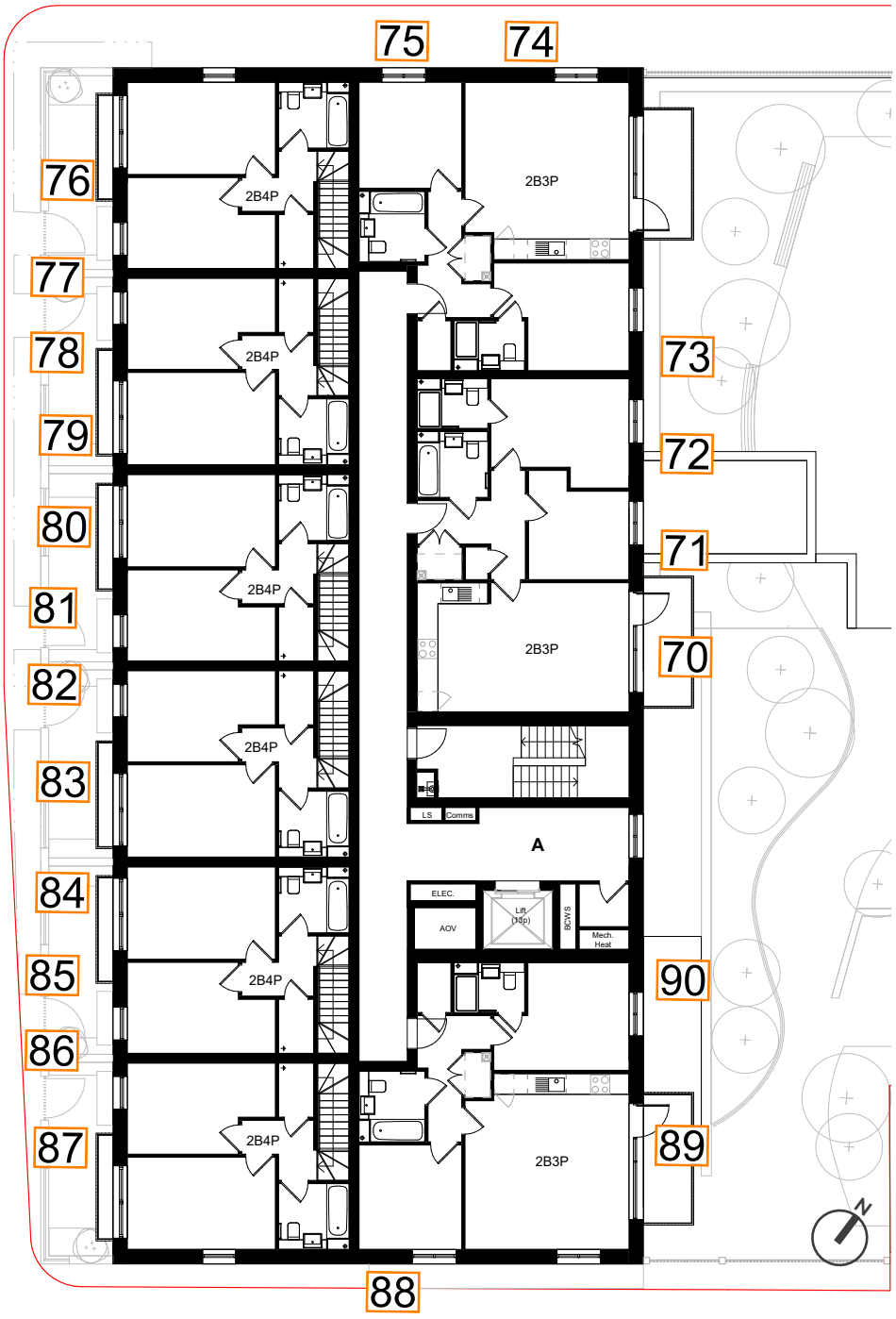


Fig. 08: Floor Plan

Block B - Level 1

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 01							
91	BEDROOM	39.9	21.8	11.9	100		00:29
92	BEDROOM	49.7	26.2	18.1	100		00:29
93	L/K/D	100.0	94.9	68.5	200		01:52
94	BEDROOM	32.8	11.9	6.8	100		00:10
95	L/K/D	99.8	69.0	48.6	200		05:33
96	L/K/D	39.1	23.7	16.4	200		02:19
97	BEDROOM	72.5	43.0	30.2	100		05:18
98	BEDROOM	84.4	61.6	43.3	100		05:01
99	L/K/D	46.5	29.6	20.0	200		02:28
100	BEDROOM	69.6	49.1	36.6	100		04:10
101	BEDROOM	73.2	55.7	43.6	100		03:06
102	L/K/D	60.2	41.9	29.9	200		01:38
103	BEDROOM	45.5	28.7	19.1	100		00:00
104	L/K/D	65.4	34.2	20.7	200		00:00

Table 08: Assessment Data

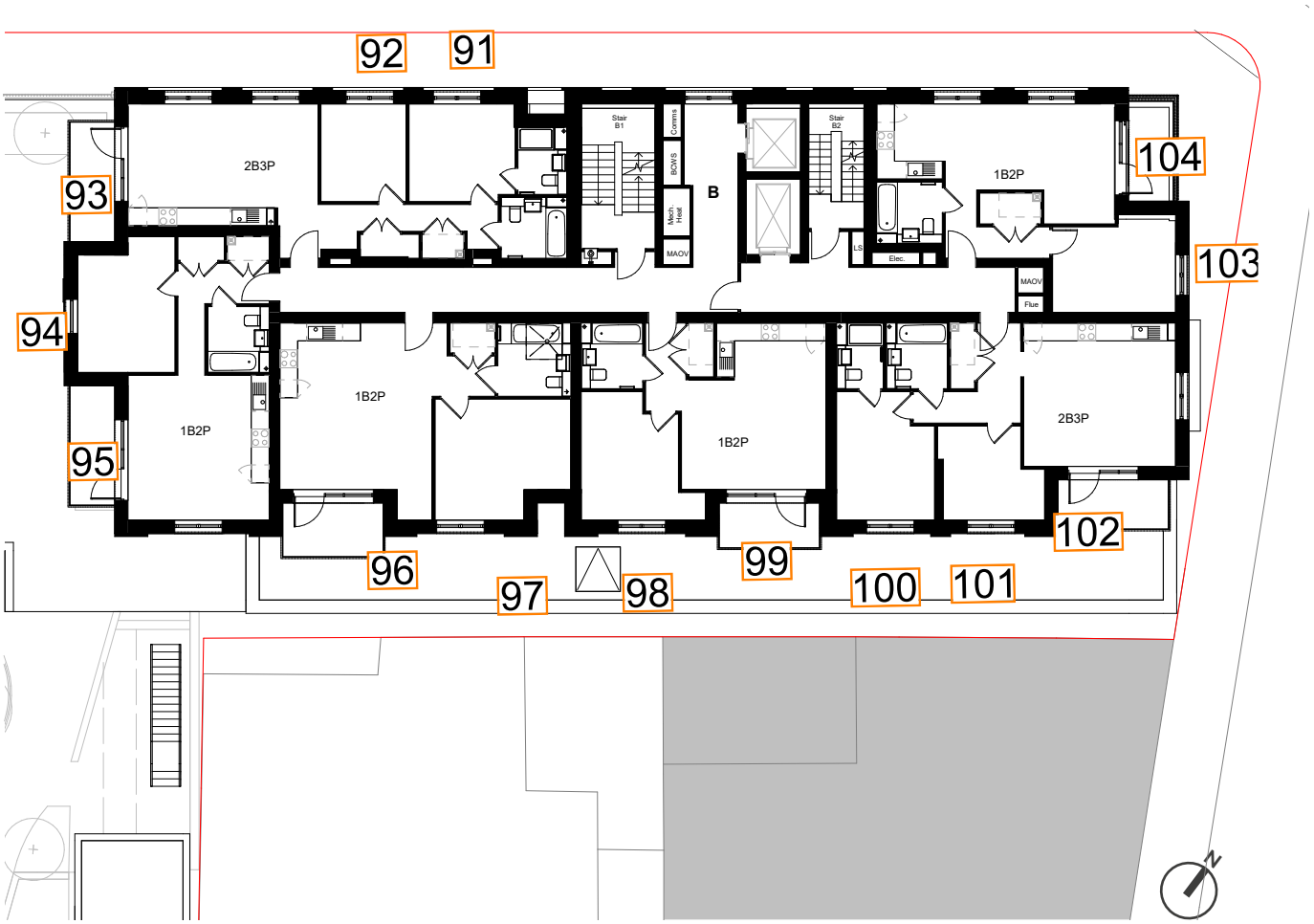


Fig. 09: Floor Plan

Block B - Level 2

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 02							
105	BEDROOM	50.8	30.1	16.6	100		00:32
106	BEDROOM	65.1	34.9	23.5	100		00:46
107	L/K/D	100.0	99.4	88.1	200		02:17
108	BEDROOM	52.8	23.8	15.3	100		01:17
109	L/K/D	100.0	92.2	61.2	200		05:52
110	L/K/D	50.4	29.4	19.9	200		02:33
111	BEDROOM	83.9	52.3	34.2	100		05:34
112	BEDROOM	99.6	77.2	55.4	100		05:23
113	L/K/D	71.9	43.4	29.4	200		02:35
114	BEDROOM	99.1	74.1	58.0	100		04:55
115	BEDROOM	100.0	98.7	83.2	100		05:04
116	L/K/D	94.8	72.3	53.1	200		02:40
117	BEDROOM	66.0	40.7	28.7	100		00:03
118	L/K/D	82.7	54.2	38.0	200		00:00

Table 09: Assessment Data

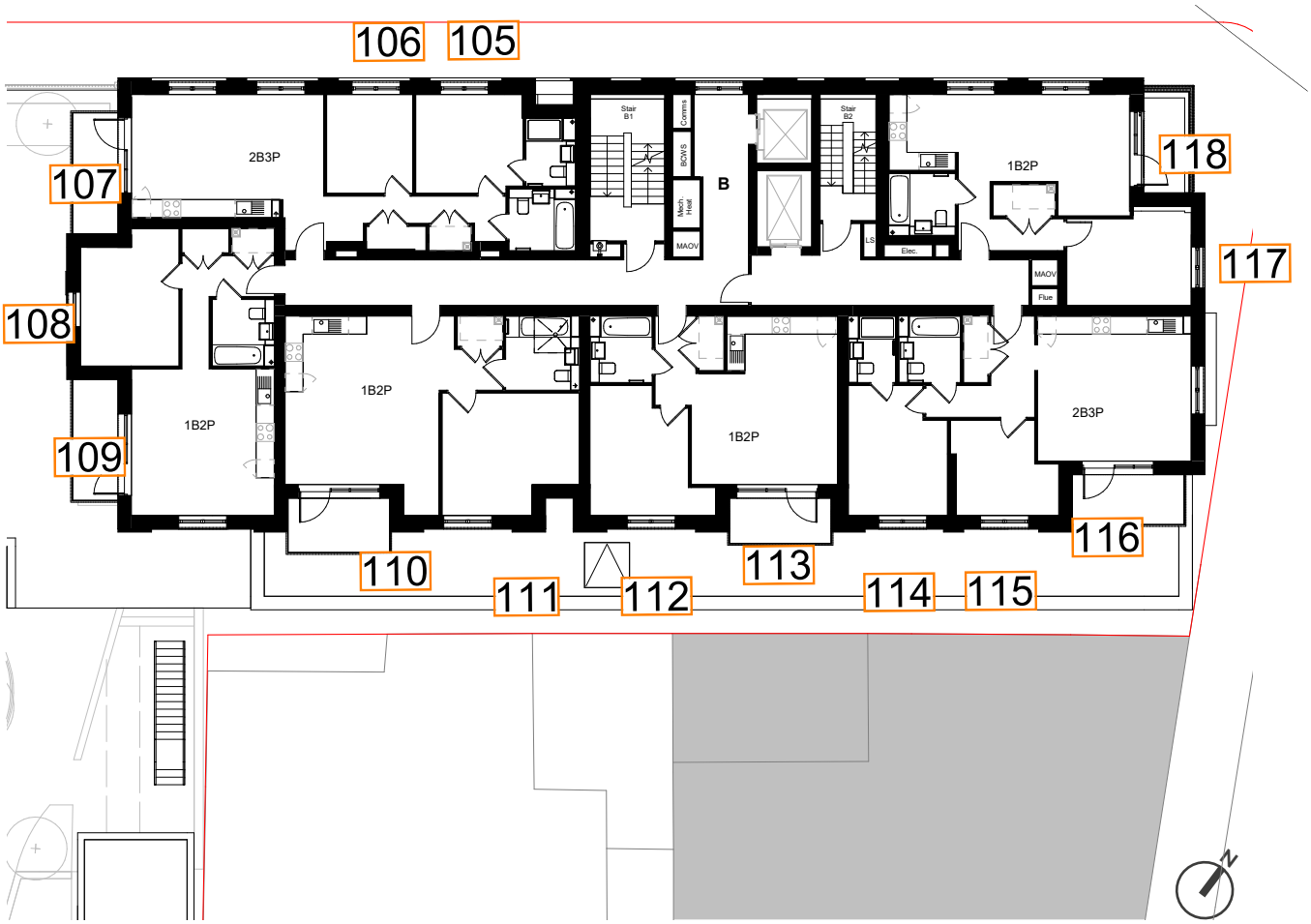


Fig. 10: Floor Plan

Block B - Level 3

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 03							
119	BEDROOM	67.9	42.0	25.4	100		00:48
120	BEDROOM	87.2	48.3	34.9	100		00:48
121	L/K/D	100.0	100.0	98.3	200		03:28
122	BEDROOM	94.0	55.7	34.9	100		02:15
123	L/K/D	100.0	100.0	88.5	200		07:51
124	L/K/D	69.1	36.6	24.2	200		02:56
125	BEDROOM	96.6	66.4	40.6	100		05:52
126	BEDROOM	100.0	86.6	69.2	100		05:34
127	L/K/D	90.6	55.7	37.5	200		03:11
128	BEDROOM	100.0	89.7	71.0	100		05:55
129	BEDROOM	100.0	100.0	99.3	100		06:08
130	L/K/D	100.0	92.5	72.0	200		03:18
131	BEDROOM	91.9	56.5	36.8	100		00:39
132	L/K/D	93.2	78.8	58.1	200		00:17

Table 10: Assessment Data

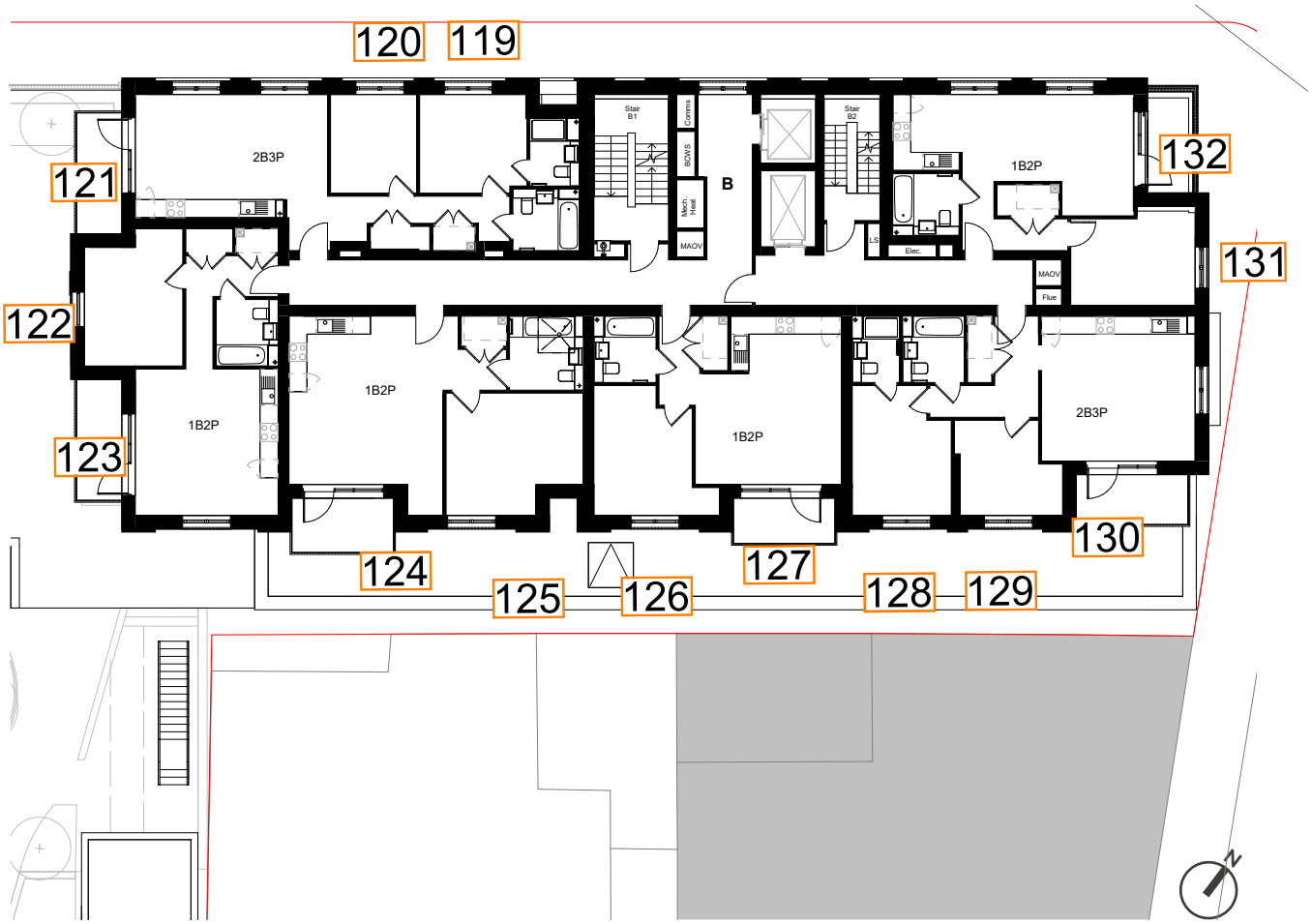


Fig. 11: Floor Plan

Block B - Level 4

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 04							
133	BEDROOM	89.6	59.1	39.9	100		00:48
134	BEDROOM	100.0	71.1	49.7	100		00:48
135	L/K/D	100.0	100.0	100.0	200		04:23
136	BEDROOM	100.0	96.6	85.1	100		04:38
137	L/K/D	100.0	100.0	100.0	200		10:11
138	L/K/D	88.0	41.9	27.4	200		02:58
139	BEDROOM	98.3	76.2	46.3	100		06:03
140	BEDROOM	100.0	98.7	79.9	100		06:09
141	L/K/D	97.1	67.8	44.5	200		04:01
142	BEDROOM	100.0	99.1	79.0	100		06:34
143	BEDROOM	100.0	100.0	100.0	100		06:35
144	L/K/D	100.0	100.0	88.4	200		03:54
145	BEDROOM	100.0	67.5	44.0	100		01:01
146	L/K/D	99.3	91.1	83.1	200		00:22

Table 11: Assessment Data

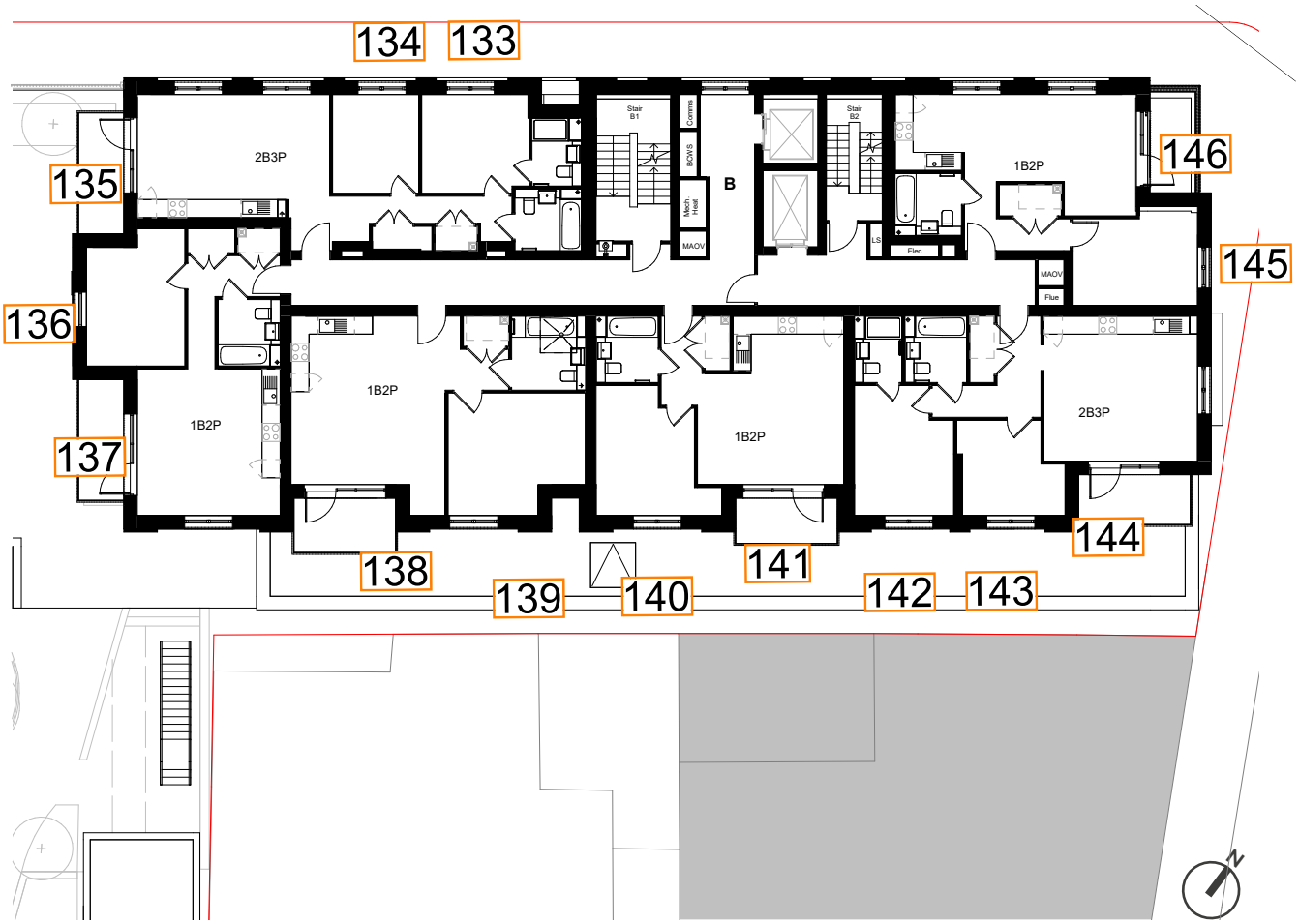


Fig. 12: Floor Plan

Block B - Level 5

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 05							
147	BEDROOM	100.0	91.7	74.1	100		00:48
148	BEDROOM	100.0	100.0	88.6	100		00:48
149	L/K/D	100.0	100.0	100.0	200		04:23
150	BEDROOM	100.0	100.0	95.3	100		06:02
151	L/K/D	100.0	100.0	100.0	200		10:55
152	L/K/D	91.5	48.9	31.6	200		03:17
153	BEDROOM	100.0	94.6	70.1	100		06:30
154	BEDROOM	100.0	100.0	95.1	100		06:47
155	L/K/D	99.3	74.6	49.1	200		04:17
156	BEDROOM	100.0	100.0	99.6	100		07:00
157	BEDROOM	100.0	100.0	100.0	100		07:01
158	L/K/D	100.0	100.0	95.9	200		04:10
159	BEDROOM	100.0	88.0	54.1	100		01:19
160	L/K/D	100.0	99.1	94.1	200		00:22

Table 12: Assessment Data

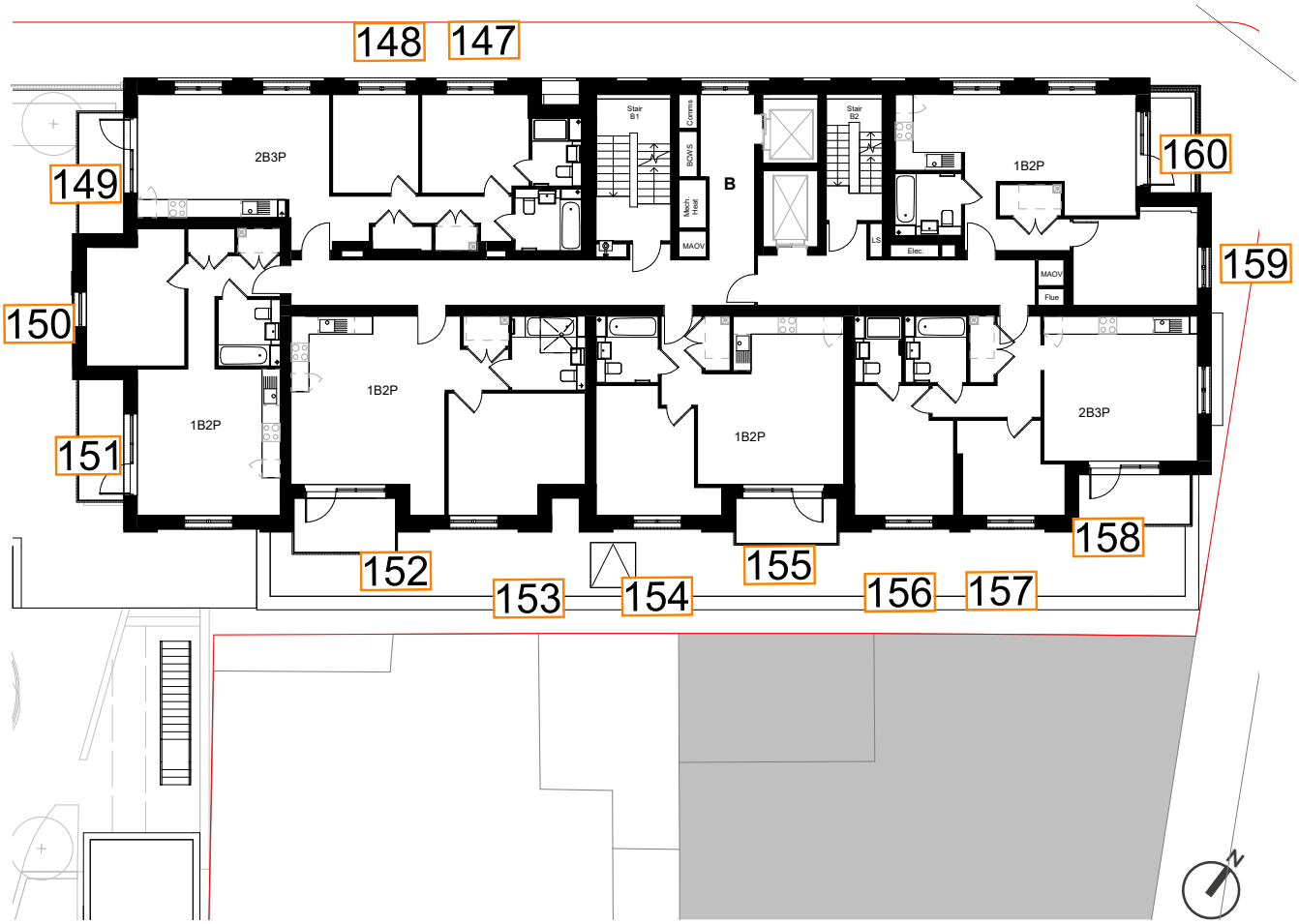


Fig. 13: Floor Plan

Block B - Level 6

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 06							
161	BEDROOM	100.0	100.0	94.3	100		00:48
162	BEDROOM	100.0	100.0	100.0	100		00:48
163	L/K/D	100.0	100.0	100.0	200		04:23
164	BEDROOM	100.0	100.0	98.7	100		06:02
165	L/K/D	100.0	100.0	100.0	200		11:15
166	L/K/D	93.7	54.3	33.7	200		03:33
167	BEDROOM	100.0	97.0	74.8	100		06:58
168	BEDROOM	100.0	100.0	99.6	100		07:08
169	L/K/D	99.3	80.9	54.2	200		04:22
170	BEDROOM	100.0	100.0	100.0	100		07:10
171	BEDROOM	100.0	100.0	100.0	100		07:10
172	L/K/D	100.0	100.0	99.6	200		04:18
173	BEDROOM	100.0	99.5	63.6	100		01:32
174	L/K/D	100.0	100.0	97.9	200		00:31

Table 13: Assessment Data

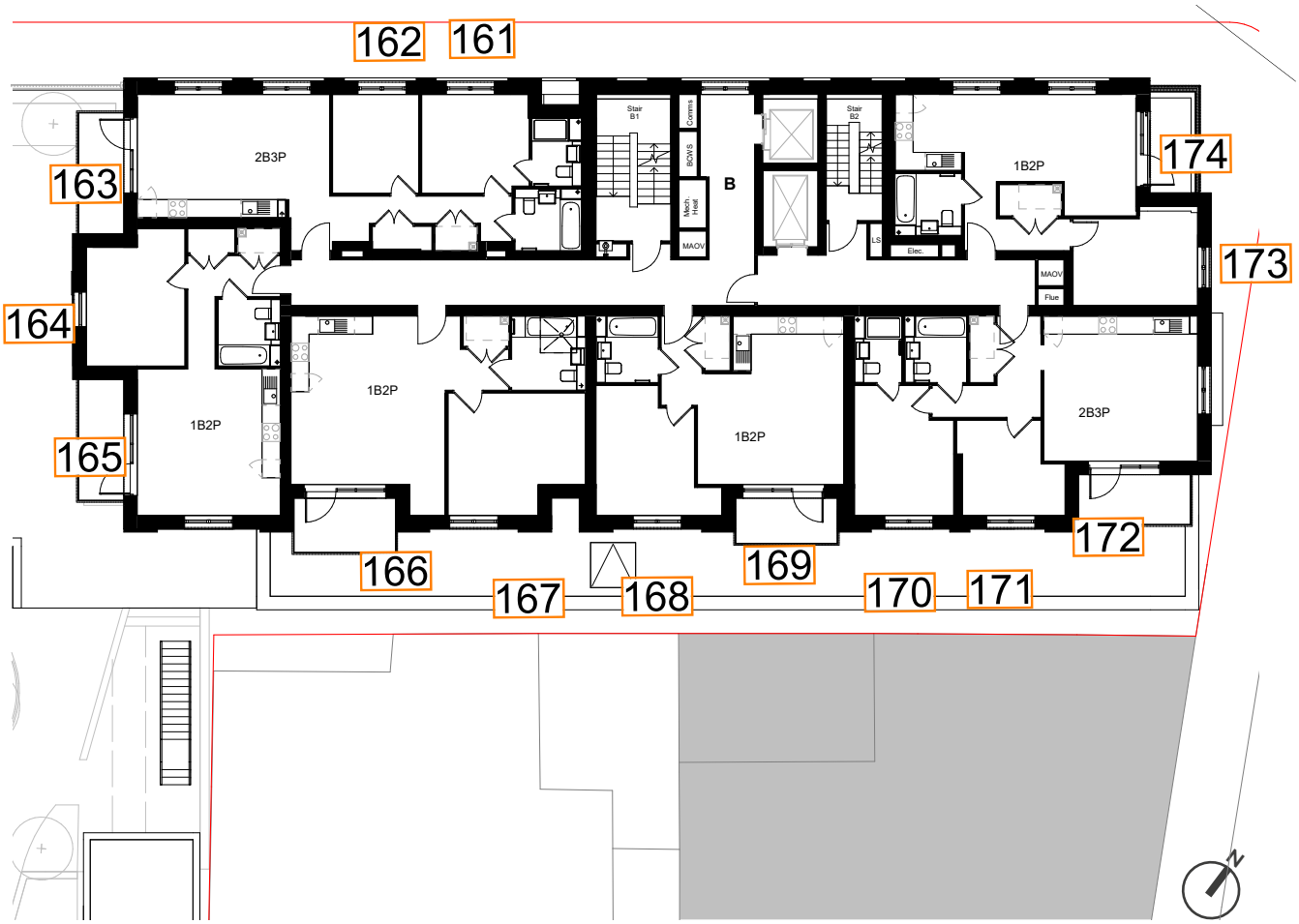


Fig. 14: Floor Plan

Block B - Level 7

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 07							
175	BEDROOM	100.0	100.0	100.0	100		00:48
176	BEDROOM	100.0	100.0	100.0	100		00:48
177	L/K/D	100.0	100.0	100.0	200		04:23
178	BEDROOM	100.0	100.0	99.1	100		06:02
179	L/K/D	100.0	100.0	100.0	200		11:29
180	L/K/D	95.2	62.8	35.7	200		03:36
181	BEDROOM	100.0	97.7	76.2	100		07:08
182	BEDROOM	100.0	100.0	100.0	100		07:10
183	L/K/D	100.0	89.7	59.0	200		04:22
184	BEDROOM	100.0	100.0	100.0	100		07:10
185	BEDROOM	100.0	100.0	100.0	100		07:10
186	L/K/D	100.0	100.0	100.0	200		04:18
187	BEDROOM	100.0	100.0	71.3	100		01:32
188	L/K/D	100.0	100.0	99.1	200		00:48

Table 14: Assessment Data

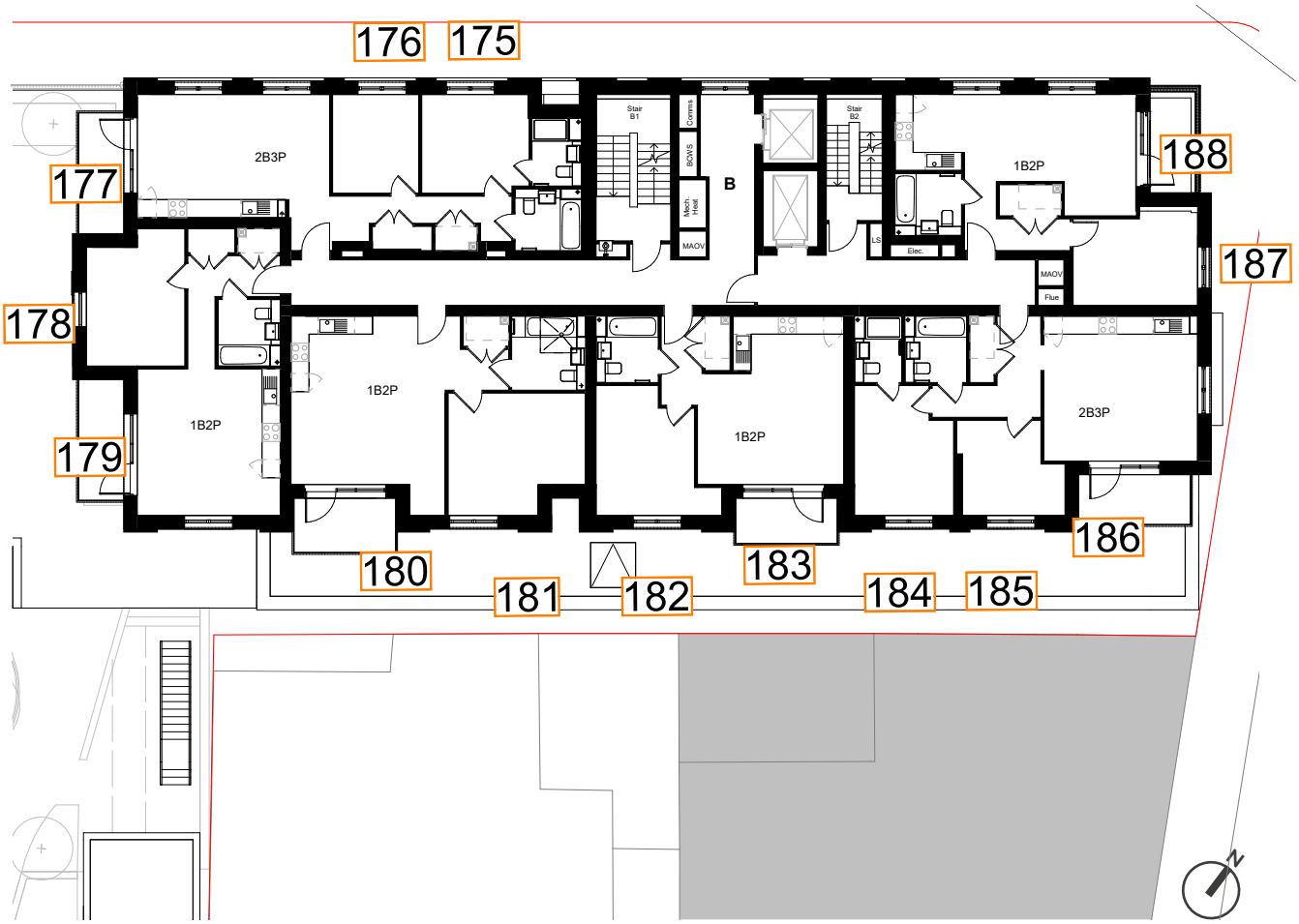


Fig. 15: Floor Plan

Block B - Level 8

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 08							
189	BEDROOM	100.0	100.0	100.0	100		00:48
190	BEDROOM	100.0	100.0	100.0	100		00:48
191	L/K/D	100.0	100.0	100.0	200		04:23
192	BEDROOM	100.0	100.0	99.1	100		06:02
193	L/K/D	100.0	100.0	100.0	200		11:33
194	L/K/D	95.0	72.0	37.4	200		03:36
195	BEDROOM	100.0	98.0	79.2	100		07:10
196	BEDROOM	100.0	100.0	100.0	100		07:10
197	L/K/D	100.0	94.5	62.3	200		04:22
198	BEDROOM	100.0	100.0	100.0	100		07:10
199	BEDROOM	100.0	100.0	100.0	100		07:10
200	L/K/D	100.0	100.0	100.0	200		04:18
201	BEDROOM	100.0	100.0	84.7	100		01:32
202	L/K/D	100.0	100.0	99.5	200		00:48

Table 15: Assessment Data

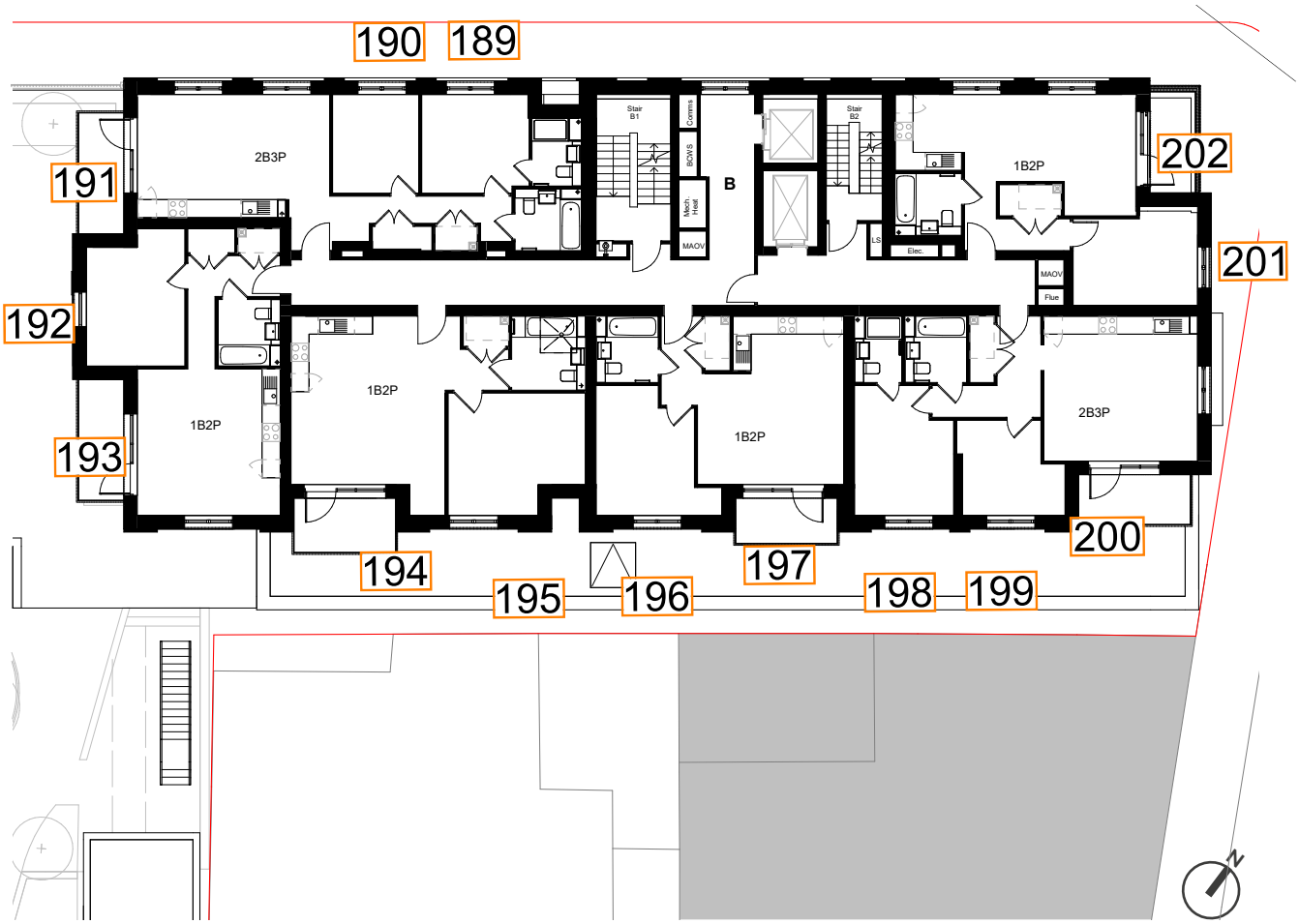


Fig. 16: Floor Plan

Block B - Level 9

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 09							
203	BEDROOM	100.0	100.0	100.0	100		00:48
204	BEDROOM	100.0	100.0	100.0	100		00:48
205	L/K/D	100.0	100.0	100.0	200		04:23
206	BEDROOM	100.0	100.0	99.6	100		06:02
207	L/K/D	100.0	100.0	100.0	200		11:33
208	L/K/D	95.8	78.3	39.4	200		03:36
209	BEDROOM	100.0	98.0	80.2	100		07:10
210	BEDROOM	100.0	100.0	100.0	100		07:10
211	L/K/D	100.0	96.1	65.6	200		04:22
212	BEDROOM	100.0	100.0	100.0	100		07:10
213	BEDROOM	100.0	100.0	100.0	100		07:10
214	L/K/D	100.0	100.0	100.0	200		04:18
215	BEDROOM	100.0	100.0	91.4	100		01:32
216	L/K/D	100.0	100.0	100.0	200		00:48

Table 16: Assessment Data

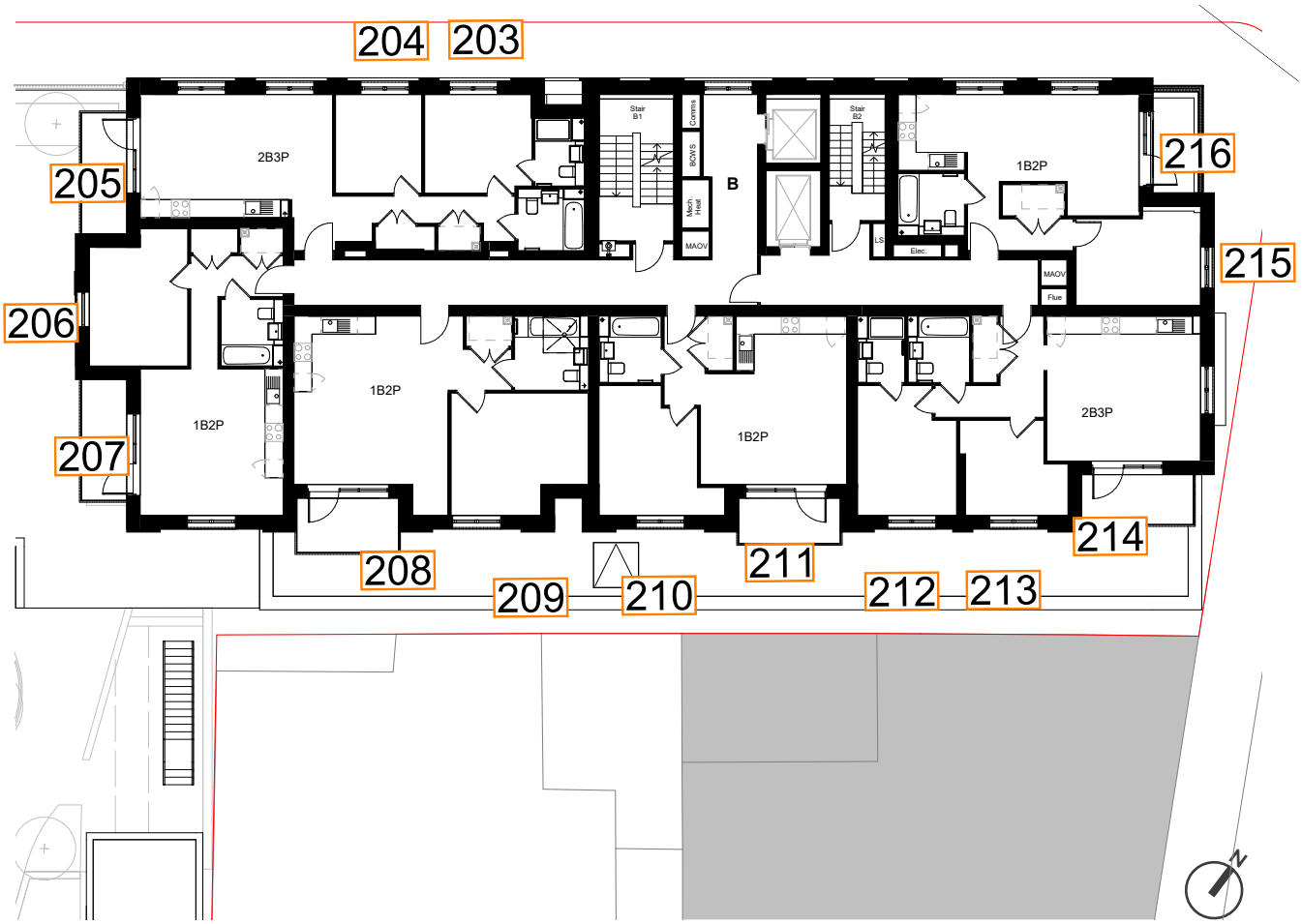


Fig. 17: Floor Plan

Block B - Level 10

		DAYLIGHT					SUNLIGHT
ROOM REF.	ROOM USE	EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 10							
217	BEDROOM	100.0	100.0	100.0	100		00:48
218	BEDROOM	100.0	100.0	100.0	100		00:48
219	L/K/D	100.0	100.0	100.0	200		04:23
220	BEDROOM	100.0	100.0	99.6	100		06:02
221	L/K/D	100.0	100.0	100.0	200		11:33
222	L/K/D	96.3	80.5	41.2	200		03:36
223	BEDROOM	100.0	98.3	84.6	100		07:10
224	BEDROOM	100.0	100.0	100.0	100		07:10
225	L/K/D	100.0	97.1	69.5	200		04:22
226	BEDROOM	100.0	100.0	100.0	100		07:10
227	BEDROOM	100.0	100.0	100.0	100		07:10
228	L/K/D	100.0	100.0	100.0	200		04:18
229	BEDROOM	100.0	100.0	97.6	100		01:32
230	L/K/D	100.0	100.0	100.0	200		00:48

Table 17: Assessment Data

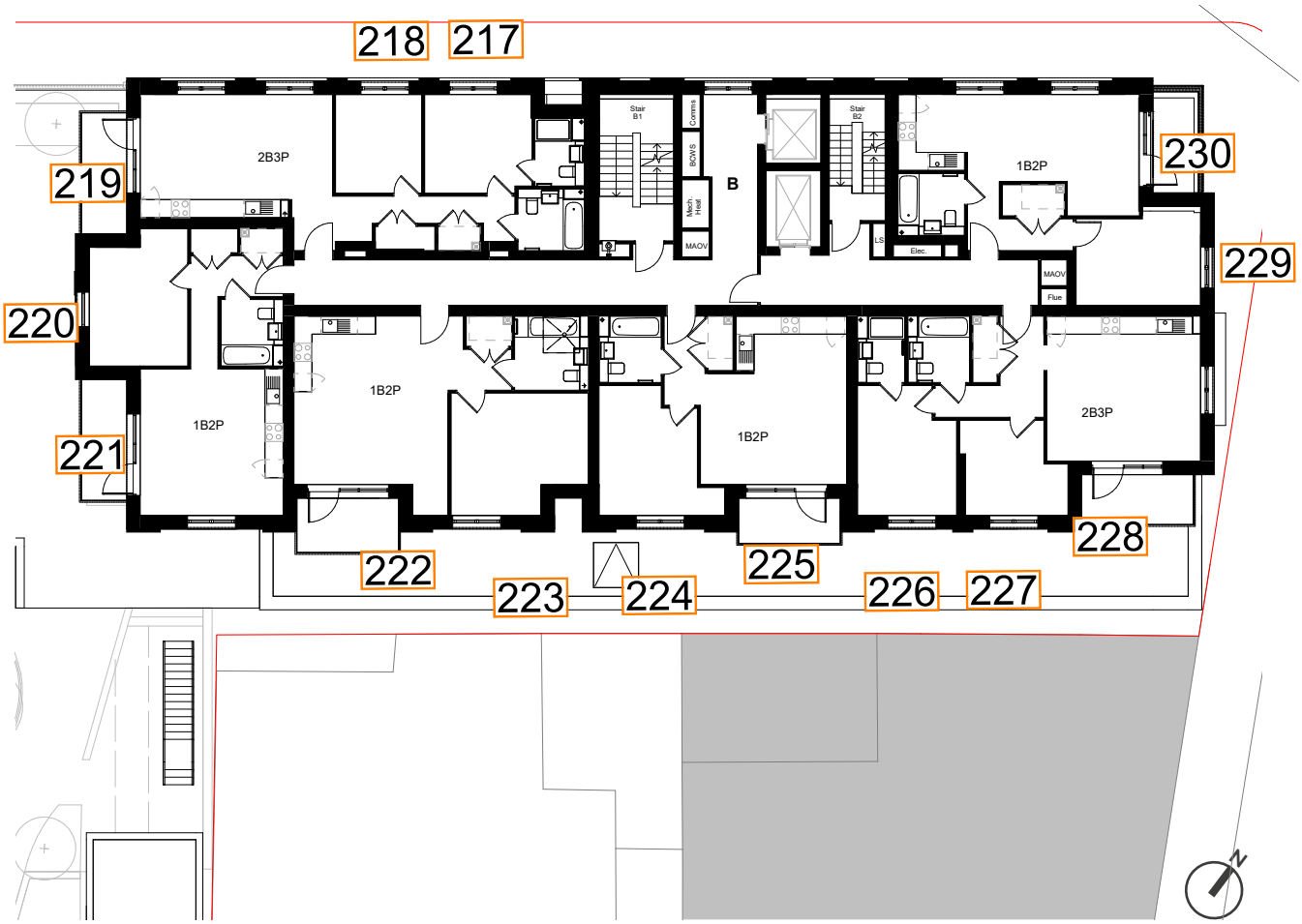


Fig. 18: Floor Plan

Block B - Level 11

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 11							
231	BEDROOM	100.0	100.0	100.0	100		00:48
232	BEDROOM	100.0	100.0	100.0	100		00:48
233	L/K/D	100.0	100.0	100.0	200		04:23
234	BEDROOM	100.0	100.0	100.0	100		06:02
235	L/K/D	100.0	100.0	100.0	200		11:33
236	L/K/D	96.2	82.8	43.7	200		03:36
237	BEDROOM	100.0	98.7	83.9	100		07:10
238	BEDROOM	100.0	100.0	100.0	100		07:10
239	L/K/D	100.0	97.8	73.5	200		04:22
240	BEDROOM	100.0	100.0	100.0	100		07:10
241	BEDROOM	100.0	100.0	100.0	100		07:10
242	L/K/D	100.0	100.0	100.0	200		04:18
243	BEDROOM	100.0	100.0	99.0	100		01:32
244	L/K/D	100.0	100.0	100.0	200		00:48

Table 18: Assessment Data

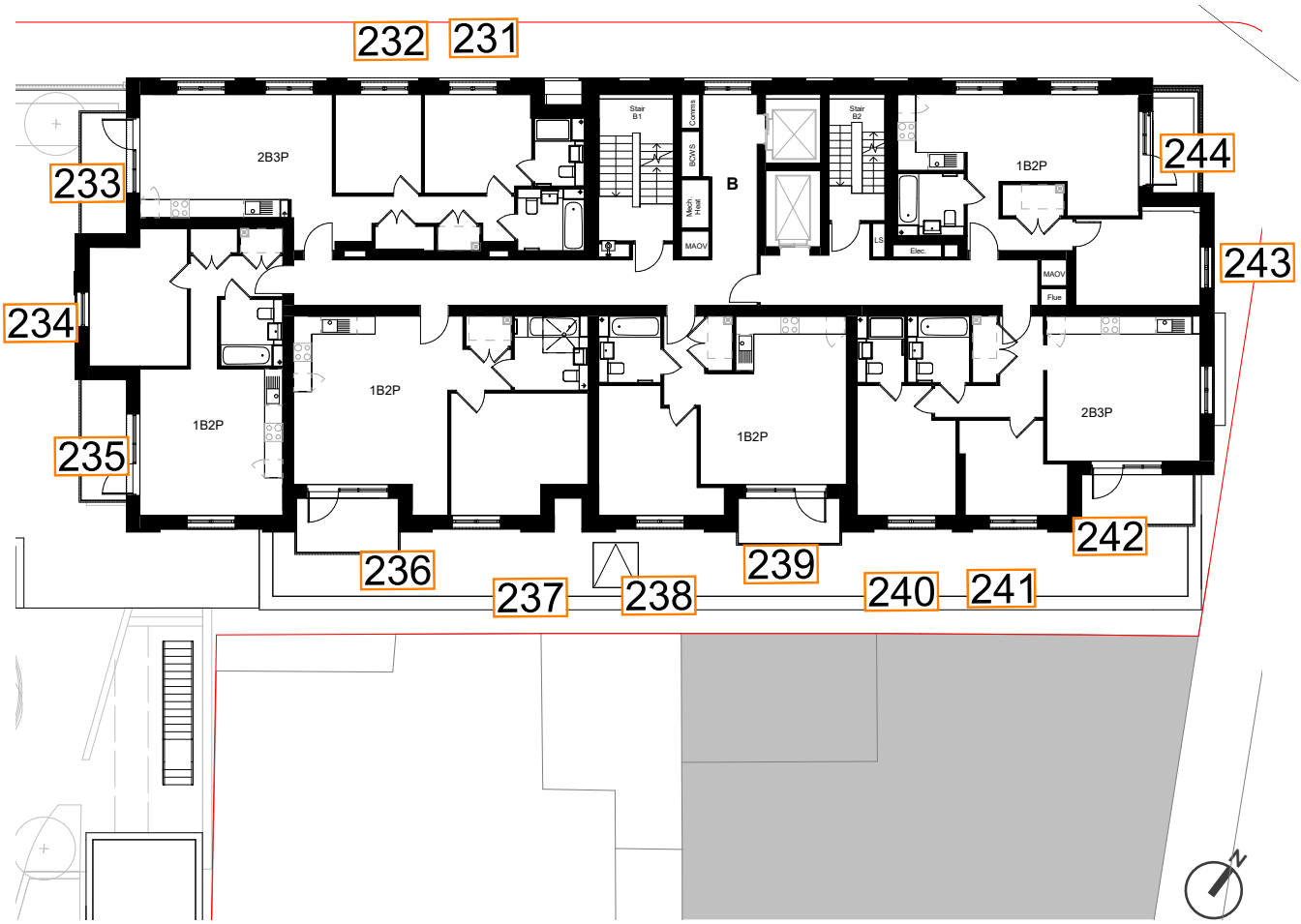


Fig. 19: Floor Plan

Block B - Level 12

		DAYLIGHT					SUNLIGHT
ROOM REF.	ROOM USE	EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 12							
245	BEDROOM	100.0	100.0	100.0	100		00:48
246	BEDROOM	100.0	100.0	100.0	100		00:48
247	L/K/D	100.0	100.0	100.0	200		04:23
248	BEDROOM	100.0	100.0	99.6	100		06:02
249	L/K/D	100.0	100.0	100.0	200		11:33
250	L/K/D	96.7	84.6	44.6	200		03:36
251	BEDROOM	100.0	98.7	86.9	100		07:10
252	BEDROOM	100.0	100.0	100.0	100		07:10
253	L/K/D	100.0	98.0	76.8	200		04:22
254	BEDROOM	100.0	100.0	100.0	100		07:10
255	BEDROOM	100.0	100.0	100.0	100		07:10
256	L/K/D	100.0	100.0	100.0	200		04:18
257	BEDROOM	100.0	100.0	99.0	100		01:32
258	L/K/D	100.0	100.0	100.0	200		00:48

Table 19: Assessment Data

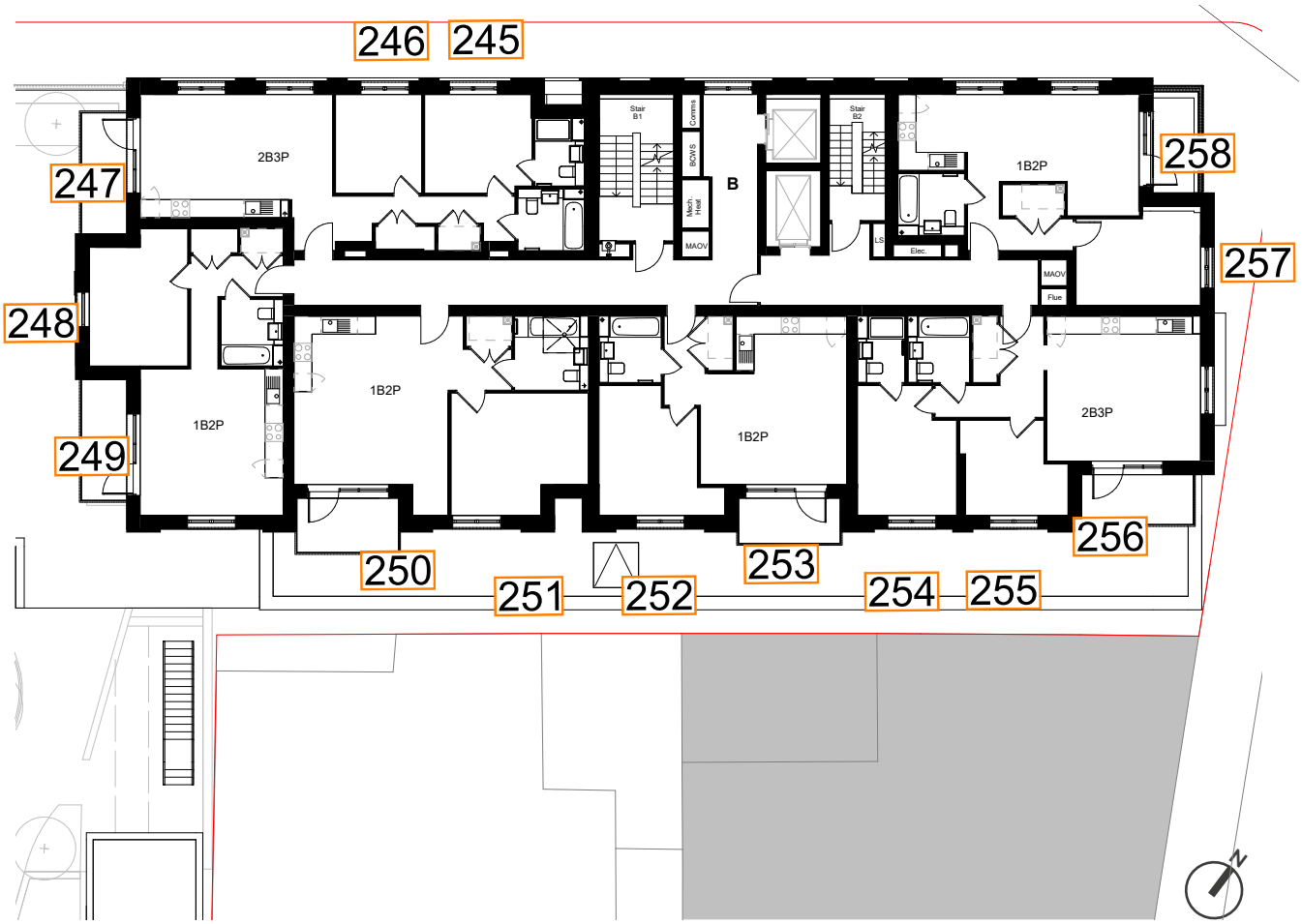


Fig. 20: Floor Plan

Block B - Level 13

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 13							
259	BEDROOM	100.0	100.0	100.0	100		00:48
260	BEDROOM	100.0	100.0	100.0	100		00:48
261	L/K/D	100.0	100.0	100.0	200		04:23
262	BEDROOM	100.0	100.0	100.0	100		06:02
263	L/K/D	100.0	100.0	100.0	200		11:33
264	L/K/D	96.5	85.6	46.2	200		03:36
265	BEDROOM	100.0	99.0	89.9	100		07:10
266	BEDROOM	100.0	100.0	100.0	100		07:10
267	L/K/D	100.0	98.7	78.3	200		04:22
268	BEDROOM	100.0	100.0	100.0	100		07:10
269	BEDROOM	100.0	100.0	100.0	100		07:10
270	L/K/D	100.0	100.0	100.0	200		04:18
271	BEDROOM	100.0	100.0	99.5	100		01:32
272	L/K/D	100.0	100.0	100.0	200		00:48

Table 20: Assessment Data

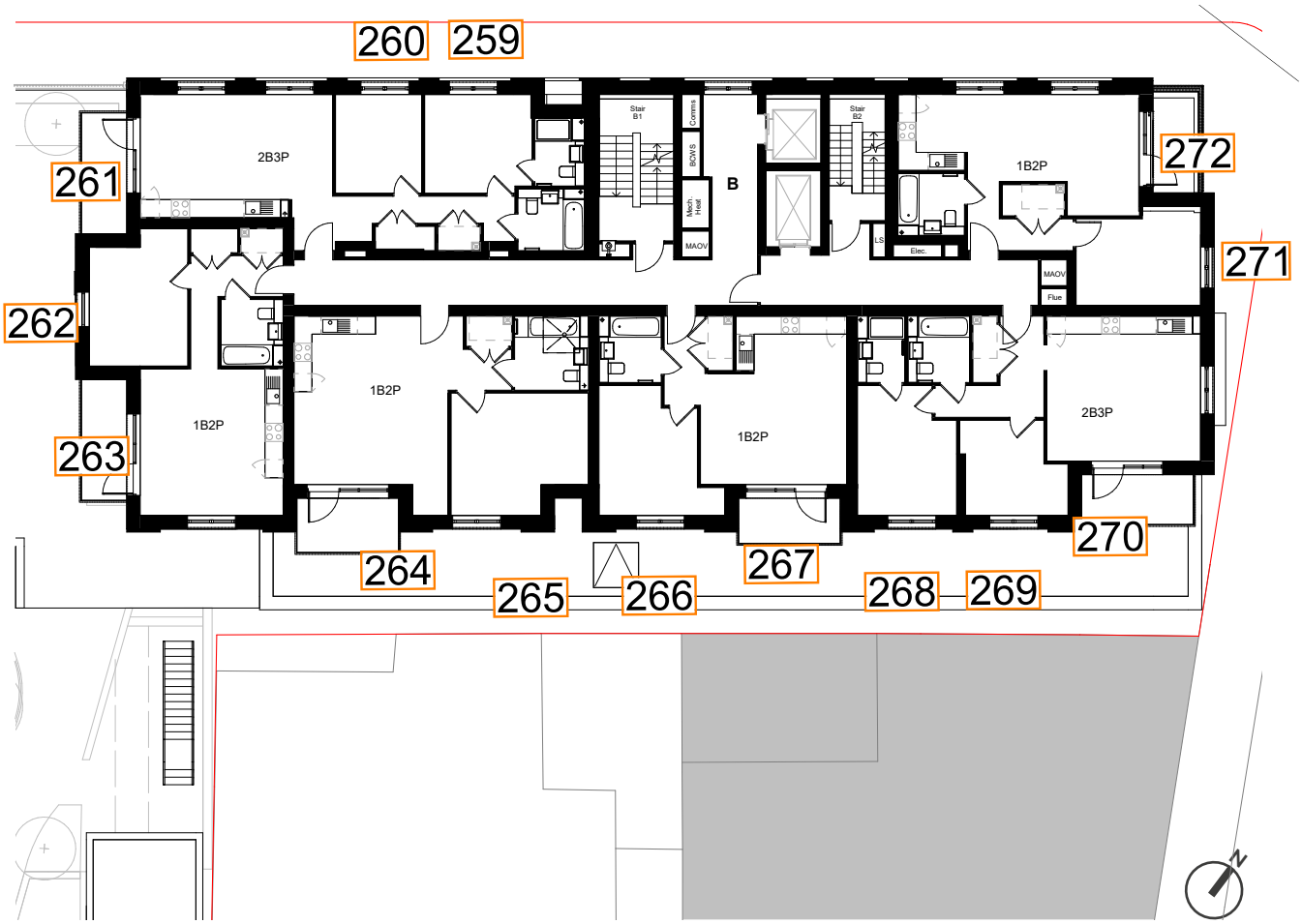


Fig. 21: Floor Plan

Block B - Level 14

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 14							
273	BEDROOM	100.0	100.0	100.0	100		00:48
274	BEDROOM	100.0	100.0	100.0	100		00:48
275	L/K/D	100.0	100.0	100.0	200		04:23
276	BEDROOM	100.0	100.0	100.0	100		06:02
277	L/K/D	100.0	100.0	100.0	200		11:33
278	L/K/D	96.8	87.0	51.1	200		03:36
279	BEDROOM	100.0	98.7	91.9	100		07:10
280	BEDROOM	100.0	100.0	100.0	100		07:10
281	L/K/D	100.0	99.1	82.7	200		04:22
282	BEDROOM	100.0	100.0	100.0	100		07:10
283	BEDROOM	100.0	100.0	100.0	100		07:10
284	L/K/D	100.0	100.0	100.0	200		04:18
285	BEDROOM	100.0	100.0	99.5	100		01:32
286	L/K/D	100.0	100.0	100.0	200		00:48

Table 21: Assessment Data

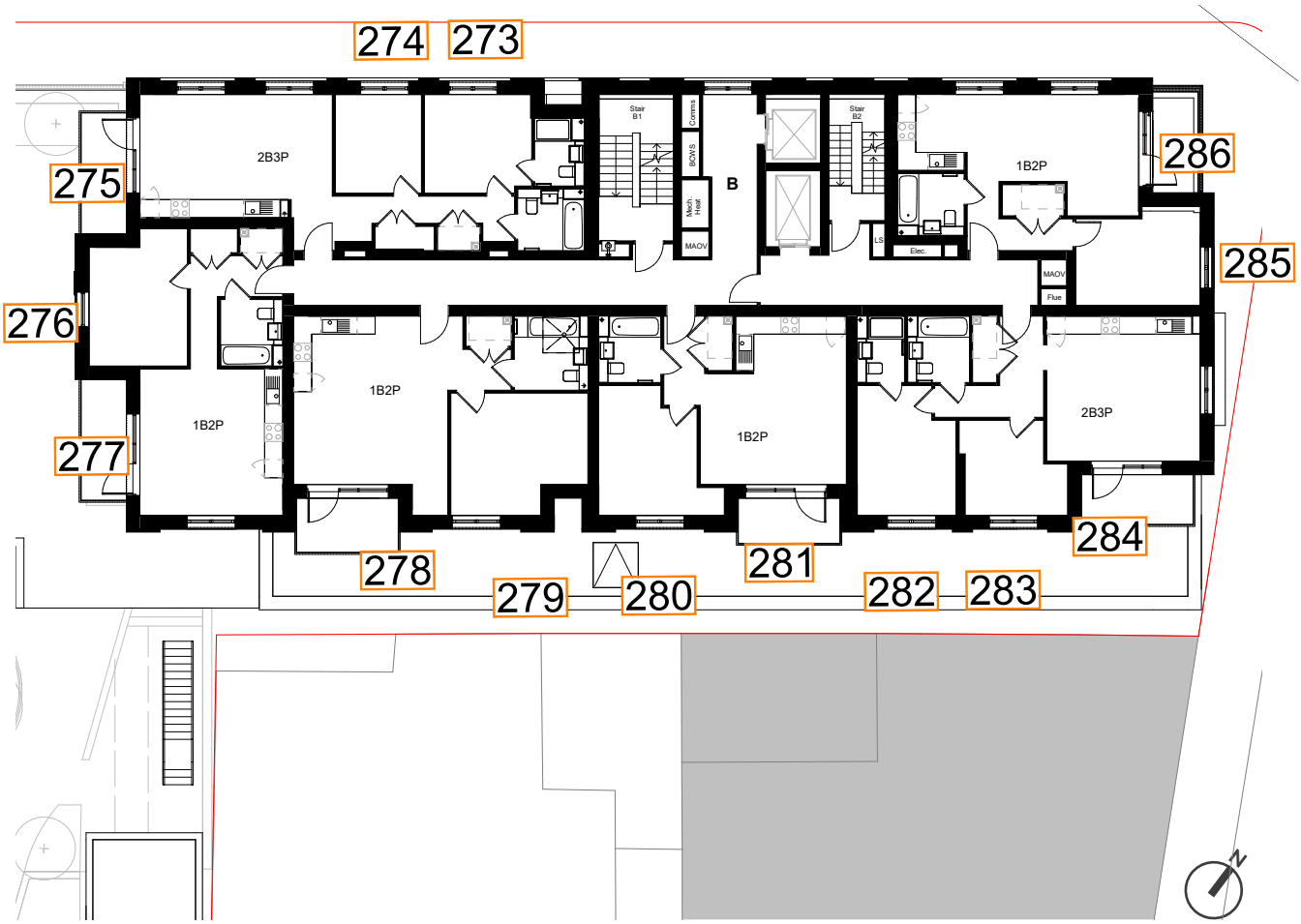


Fig. 22: Floor Plan

Block B - Level 15

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 15							
287	BEDROOM	100.0	100.0	100.0	100		00:48
288	BEDROOM	100.0	100.0	100.0	100		00:48
289	L/K/D	100.0	100.0	100.0	200		05:58
290	BEDROOM	100.0	100.0	100.0	100		06:02
291	L/K/D	100.0	100.0	100.0	200		12:02
292	L/K/D	97.5	89.1	63.8	200		04:55
293	BEDROOM	100.0	99.0	94.0	100		07:10
294	BEDROOM	100.0	100.0	100.0	100		07:10
295	L/K/D	100.0	99.1	89.3	200		04:22
296	BEDROOM	100.0	100.0	100.0	100		07:10
297	BEDROOM	100.0	100.0	100.0	100		07:10
298	L/K/D	100.0	100.0	100.0	200		04:19
299	BEDROOM	100.0	100.0	99.5	100		01:32
300	L/K/D	100.0	100.0	100.0	200		00:48

Table 22: Assessment Data

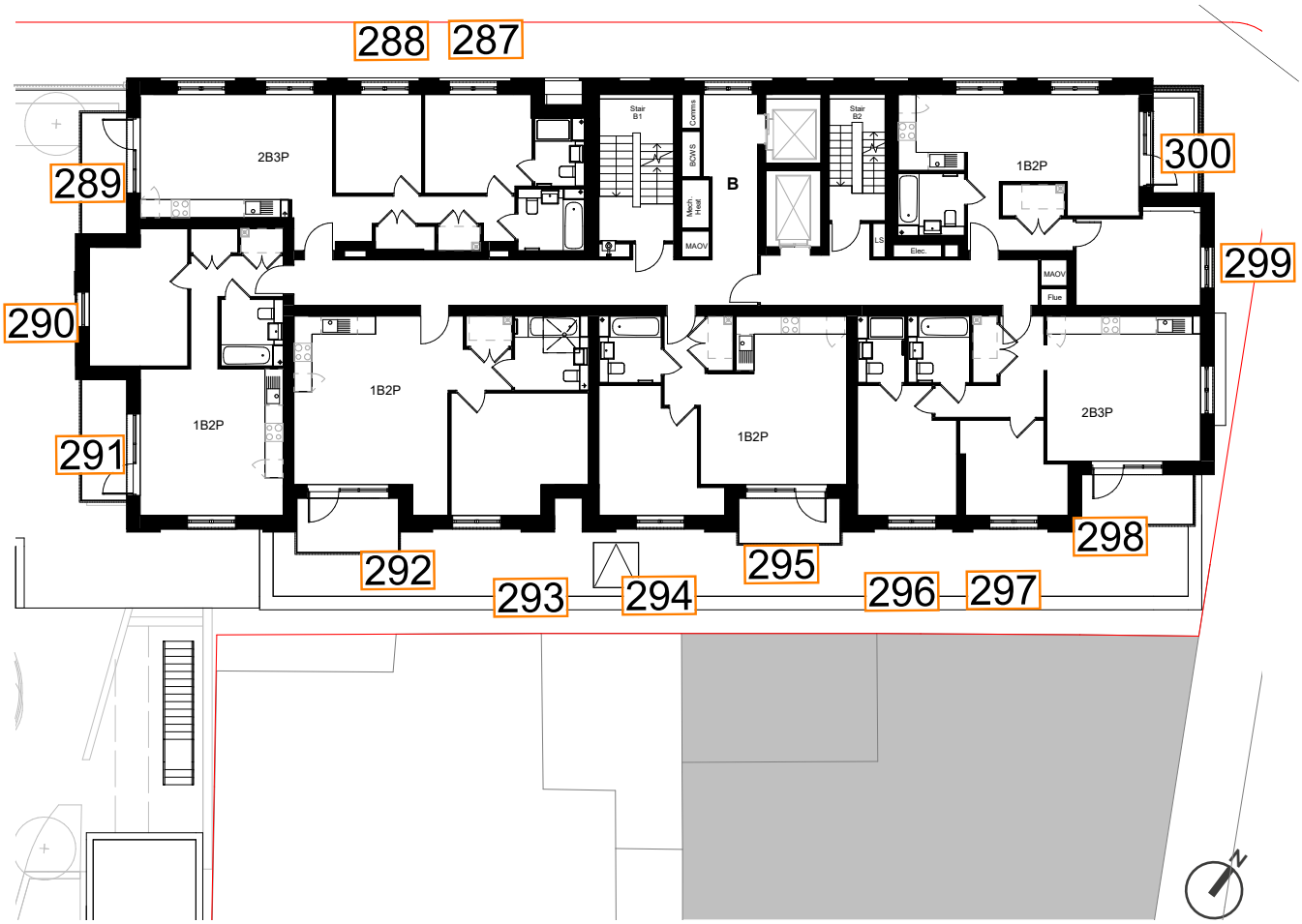


Fig. 23: Floor Plan

Block B - Level 16

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 16							
301	BEDROOM	100.0	100.0	100.0	100		07:10
302	L/K/D	100.0	99.6	92.5	200		04:22
303	BEDROOM	100.0	100.0	100.0	100		07:10
304	BEDROOM	100.0	100.0	100.0	100		07:10
305	L/K/D	100.0	100.0	100.0	200		04:18
306	BEDROOM	100.0	100.0	100.0	100		01:32
307	L/K/D	100.0	100.0	100.0	200		00:48

Table 23: Assessment Data

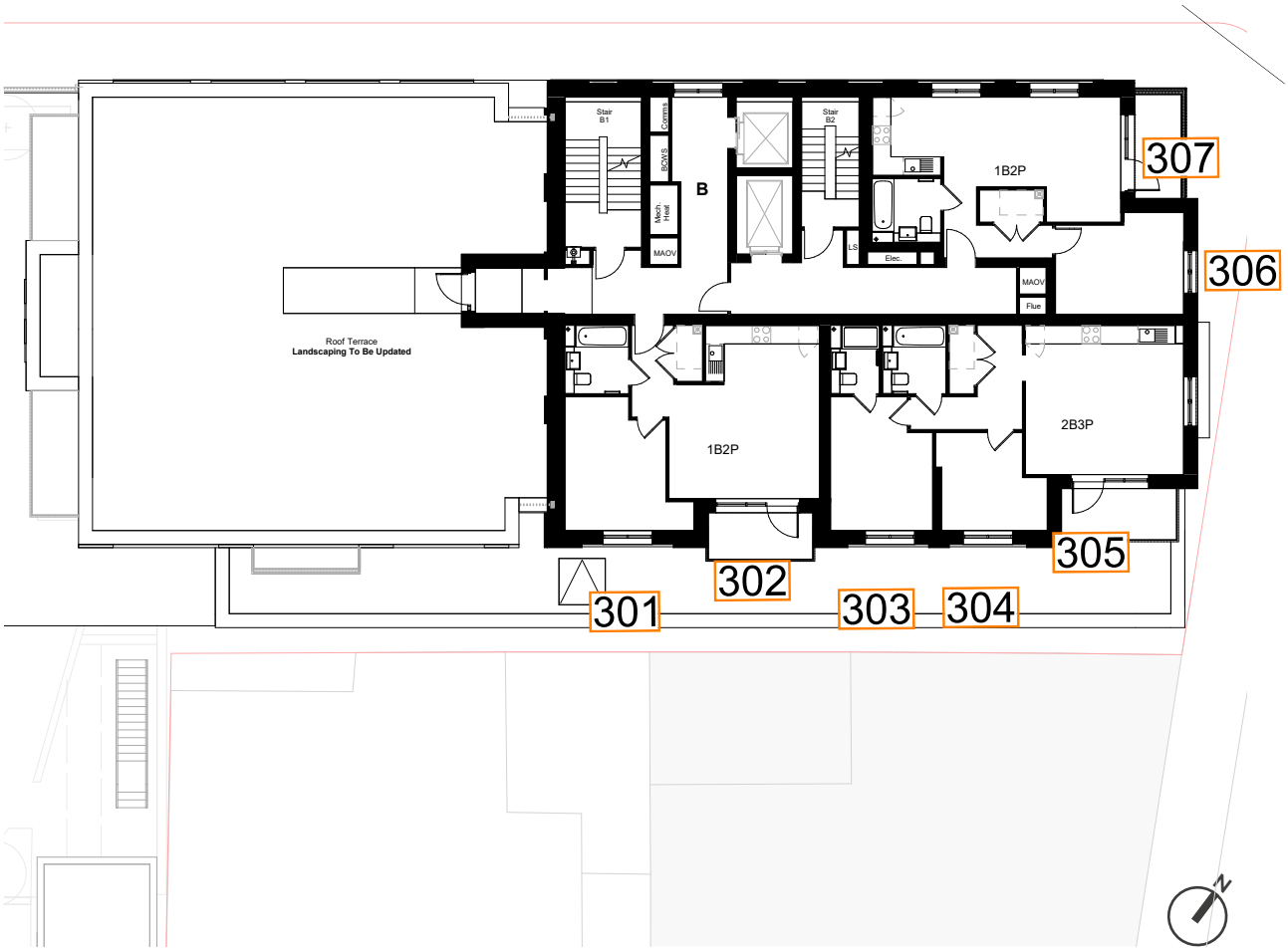


Fig. 24: Floor Plan

Block B - Level 17

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 17							
308	BEDROOM	100.0	100.0	100.0	100		12:02
309	L/K/D	100.0	98.5	91.4	200		04:03
310	BEDROOM	100.0	100.0	100.0	100		07:10
311	BEDROOM	100.0	100.0	100.0	100		07:10
312	L/K/D	100.0	100.0	100.0	200		04:18
313	BEDROOM	100.0	100.0	100.0	100		01:32
314	L/K/D	100.0	100.0	100.0	200		00:48

Table 24: Assessment Data

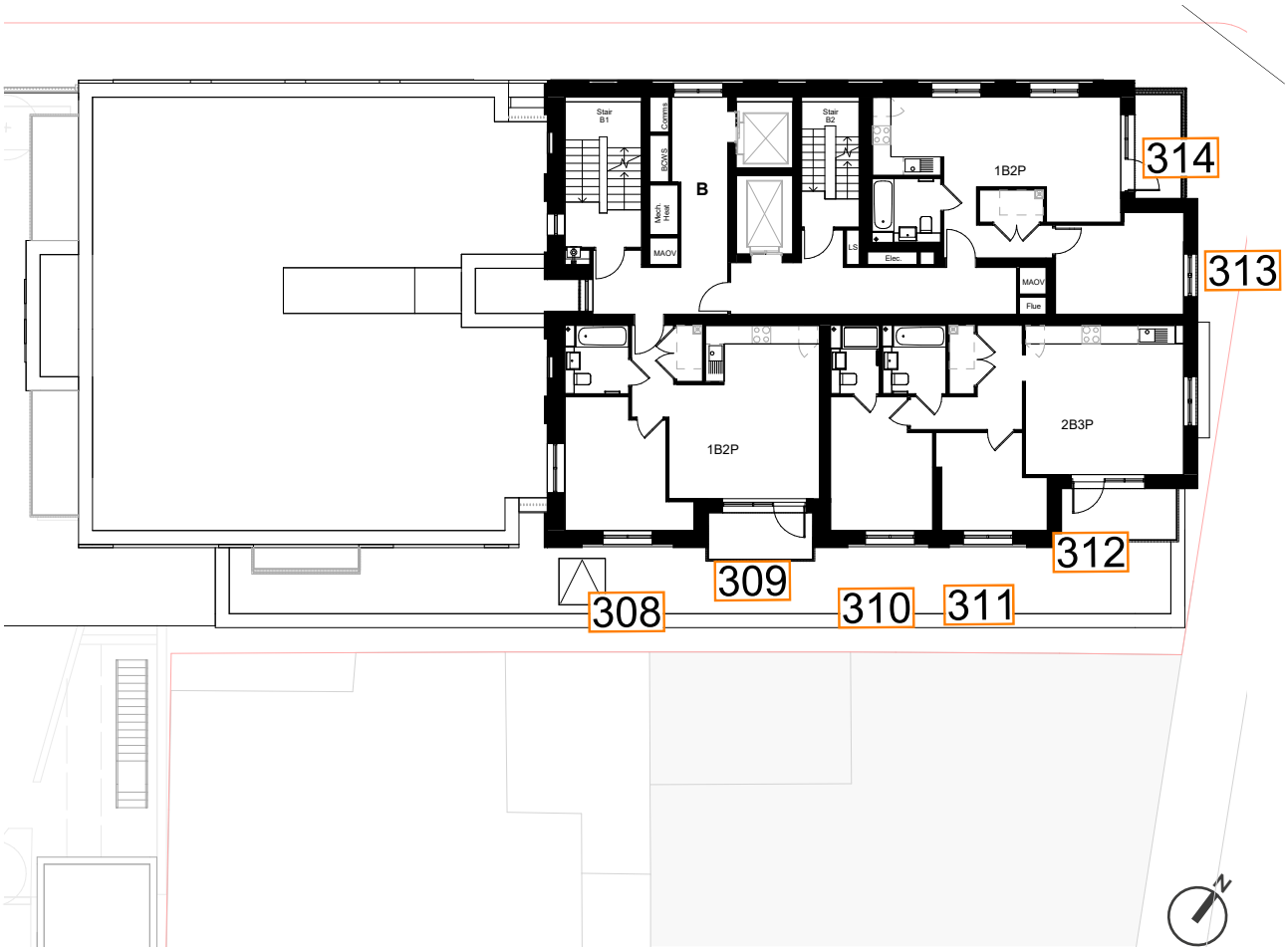


Fig. 25: Floor Plan

Block B - Level 18

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 18							
315	BEDROOM	100.0	100.0	100.0	100		12:02
316	L/K/D	100.0	99.3	91.7	200		04:03
317	BEDROOM	100.0	100.0	100.0	100		07:10
318	BEDROOM	100.0	100.0	100.0	100		07:10
319	L/K/D	100.0	100.0	100.0	200		04:18
320	BEDROOM	100.0	100.0	100.0	100		01:32
321	L/K/D	100.0	100.0	100.0	200		00:48

Table 25: Assessment Data

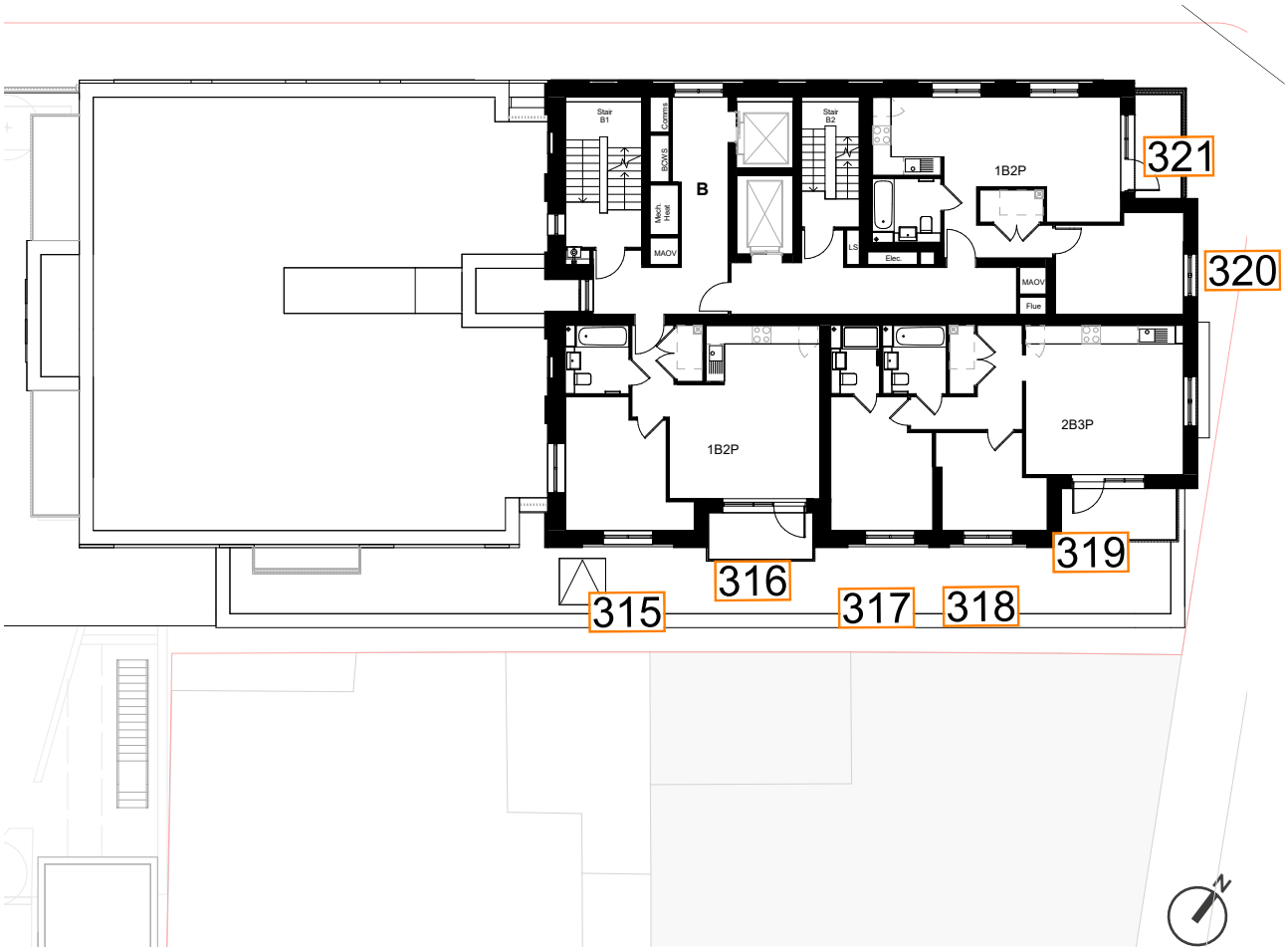


Fig. 26: Floor Plan

Block B - Level 19

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 19							
322	BEDROOM	100.0	100.0	100.0	100		12:02
323	L/K/D	100.0	99.6	93.0	200		04:03
324	BEDROOM	100.0	100.0	100.0	100		07:10
325	BEDROOM	100.0	100.0	100.0	100		07:10
326	L/K/D	100.0	100.0	100.0	200		04:18
327	BEDROOM	100.0	100.0	100.0	100		01:32
328	L/K/D	100.0	100.0	100.0	200		00:48

Table 26: Assessment Data

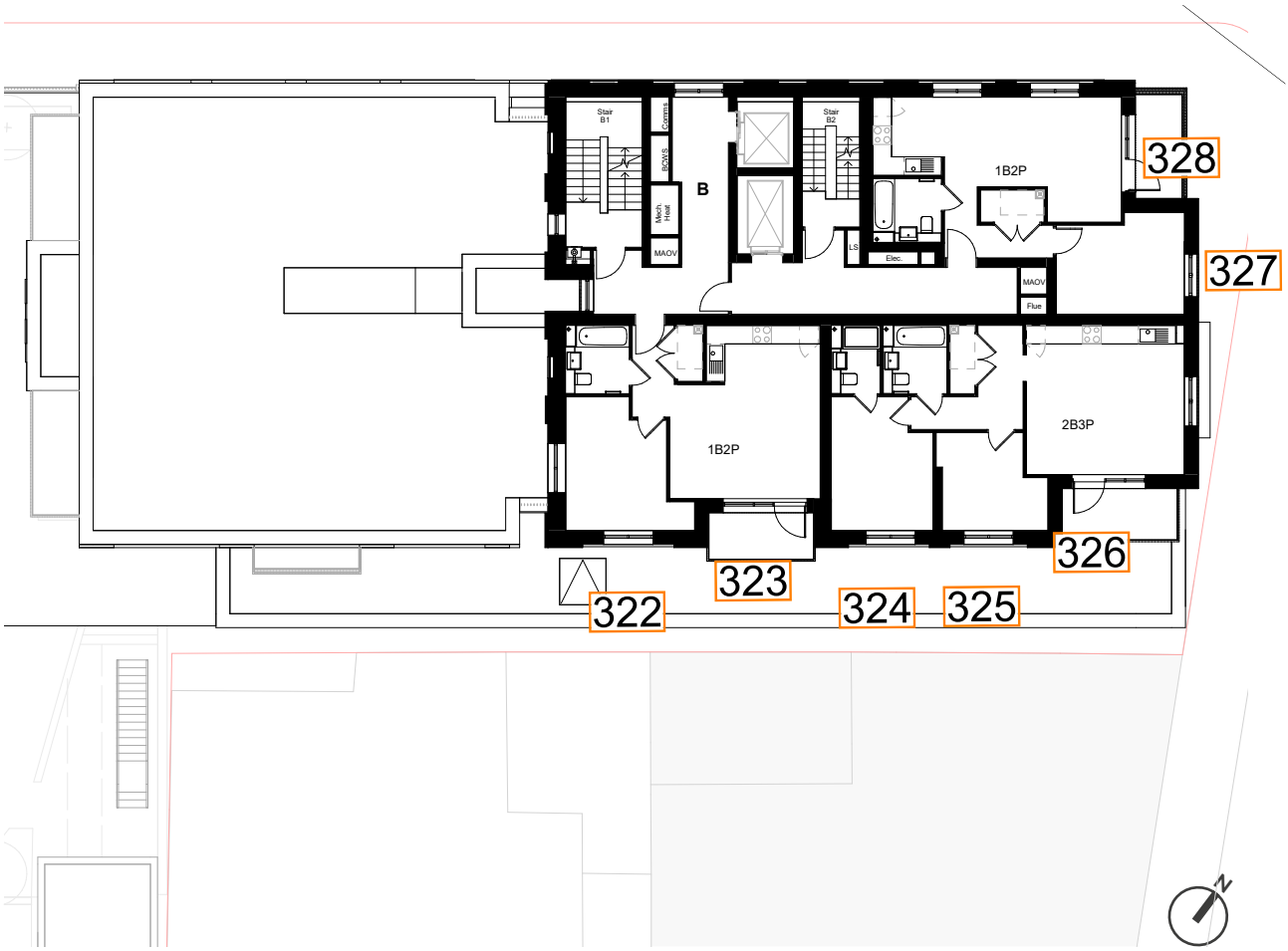


Fig. 27: Floor Plan

Block B - Level 20

		DAYLIGHT					SUNLIGHT
ROOM REF.	ROOM USE	EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 20							
329	BEDROOM	100.0	100.0	100.0	100		12:02
330	L/K/D	100.0	99.6	93.2	200		04:03
331	BEDROOM	100.0	100.0	100.0	100		07:10
332	BEDROOM	100.0	100.0	100.0	100		07:10
333	L/K/D	100.0	100.0	100.0	200		04:18
334	BEDROOM	100.0	100.0	100.0	100		01:32
335	L/K/D	100.0	100.0	100.0	200		00:48

Table 27: Assessment Data

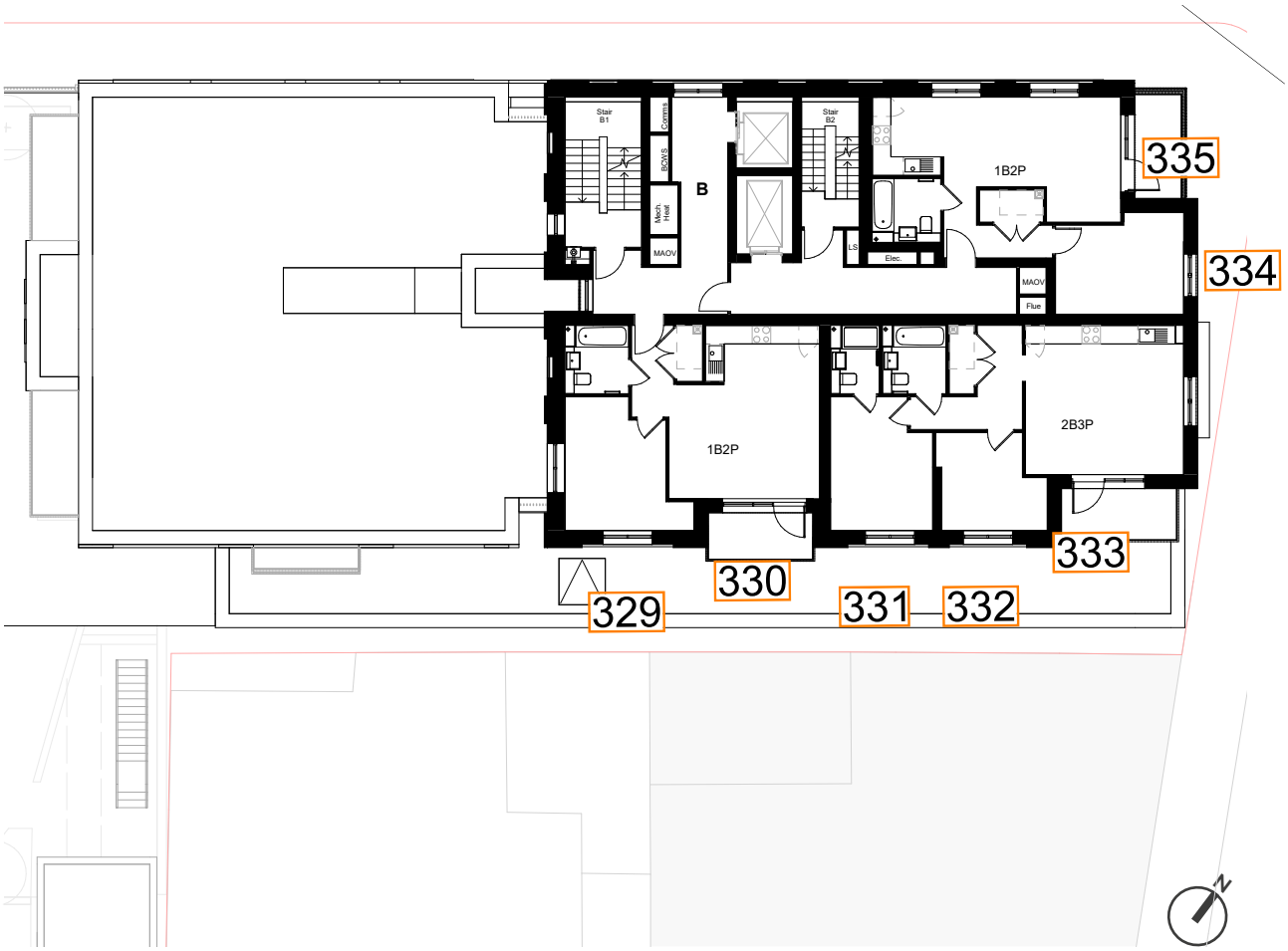


Fig. 28: Floor Plan

Block B - Level 21

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 21							
336	BEDROOM	100.0	100.0	100.0	100		12:02
337	L/K/D	100.0	99.6	94.1	200		04:03
338	BEDROOM	100.0	100.0	100.0	100		07:10
339	BEDROOM	100.0	100.0	100.0	100		07:10
340	L/K/D	100.0	100.0	100.0	200		04:18
341	BEDROOM	100.0	100.0	100.0	100		01:32
342	L/K/D	100.0	100.0	100.0	200		00:48

Table 28: Assessment Data

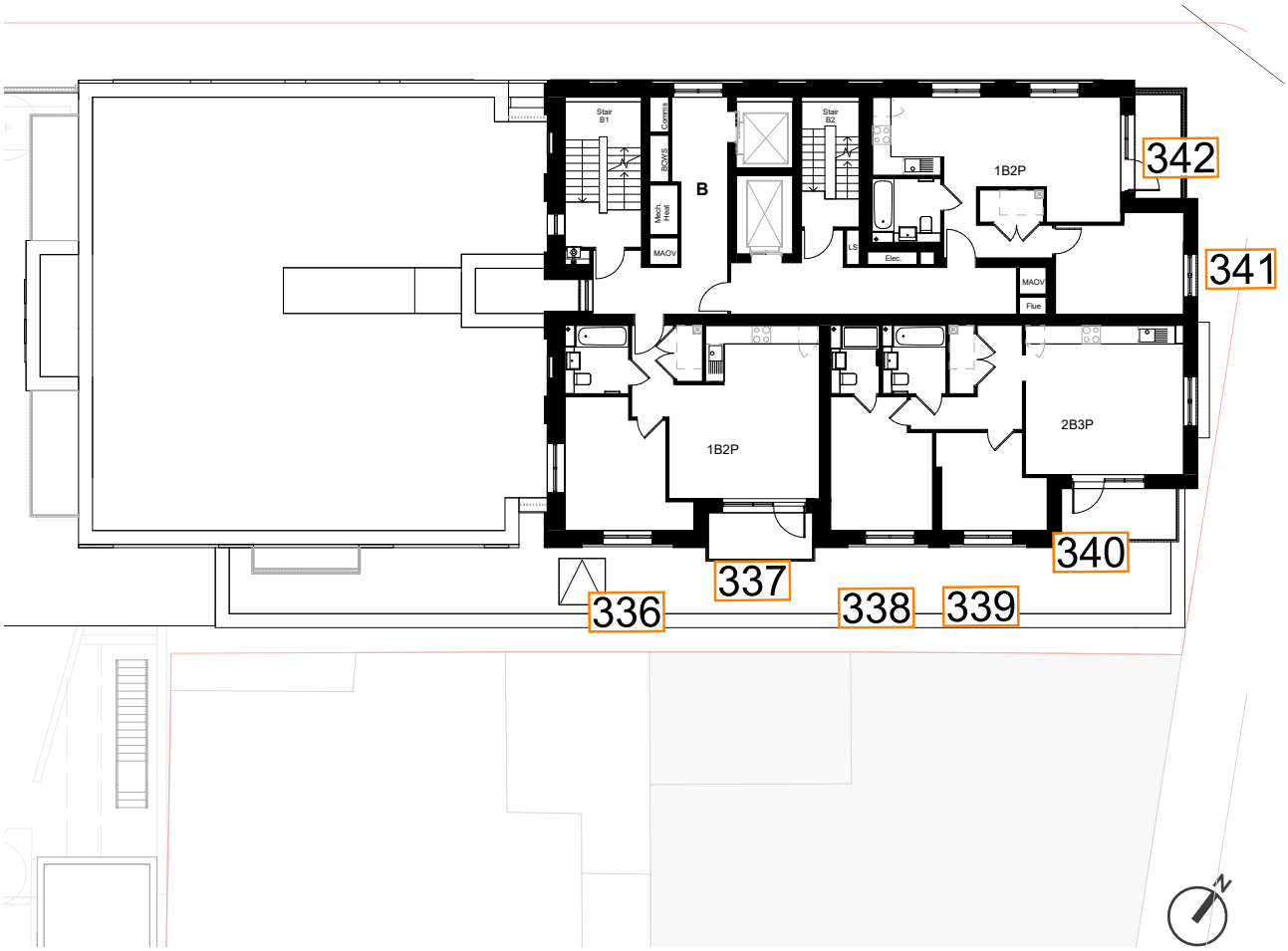


Fig. 29: Floor Plan

Block B - Level 22

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 22							
343	BEDROOM	100.0	100.0	100.0	100		12:02
344	L/K/D	100.0	99.8	95.4	200		04:03
345	BEDROOM	100.0	100.0	100.0	100		07:10
346	BEDROOM	100.0	100.0	100.0	100		07:10
347	L/K/D	100.0	100.0	100.0	200		04:18
348	BEDROOM	100.0	100.0	100.0	100		01:32
349	L/K/D	100.0	100.0	100.0	200		00:48

Table 29: Assessment Data

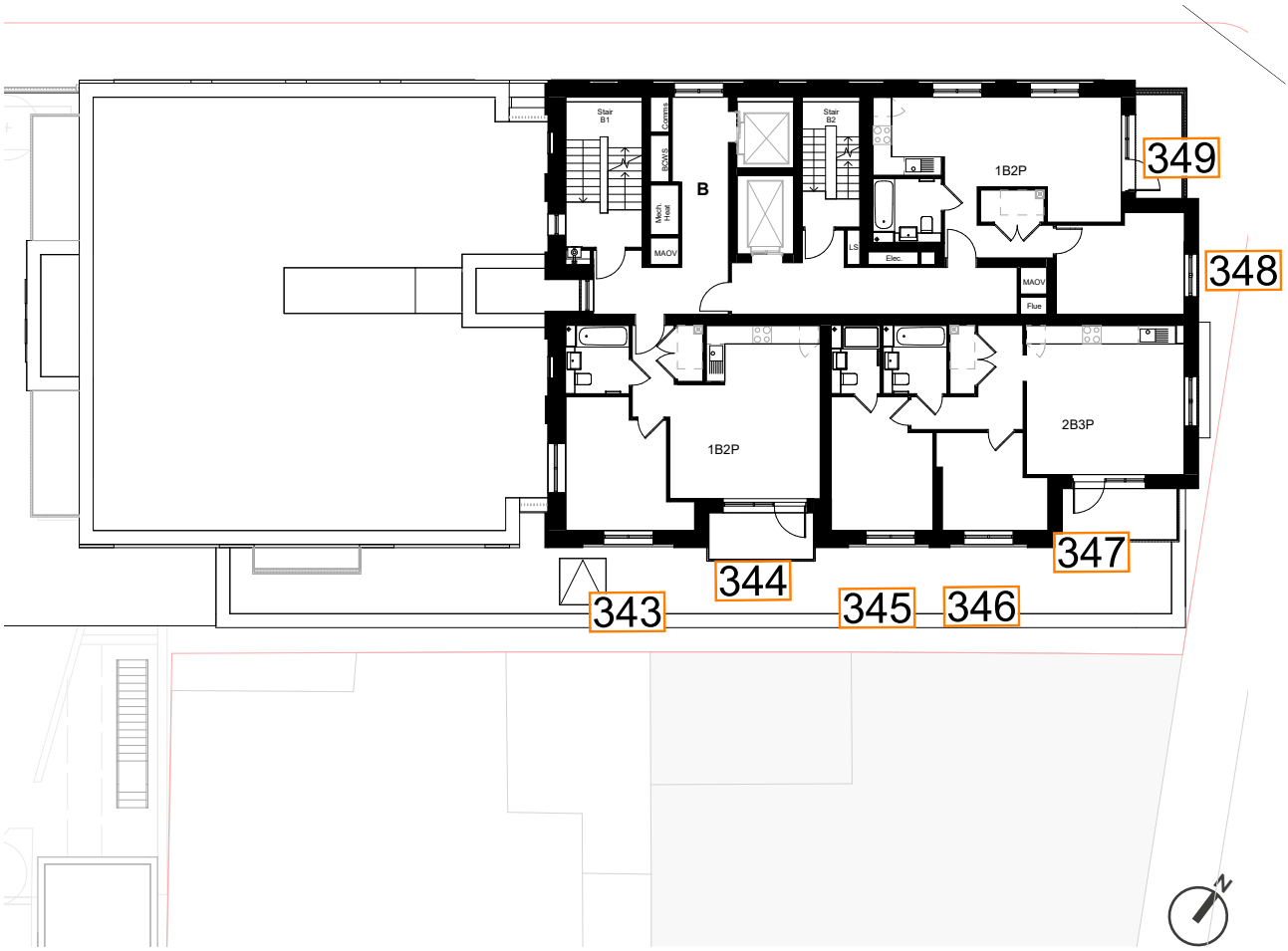


Fig. 30: Floor Plan

Block B - Level 23

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 23							
350	BEDROOM	100.0	100.0	100.0	100		09:03
351	L/K/D	100.0	100.0	94.7	200		04:03
352	BEDROOM	100.0	100.0	100.0	100		04:43
353	BEDROOM	100.0	100.0	100.0	100		04:43
354	L/K/D	100.0	100.0	100.0	200		04:18
355	BEDROOM	100.0	100.0	100.0	100		01:32
356	L/K/D	100.0	100.0	100.0	200		00:00

Table 30: Assessment Data

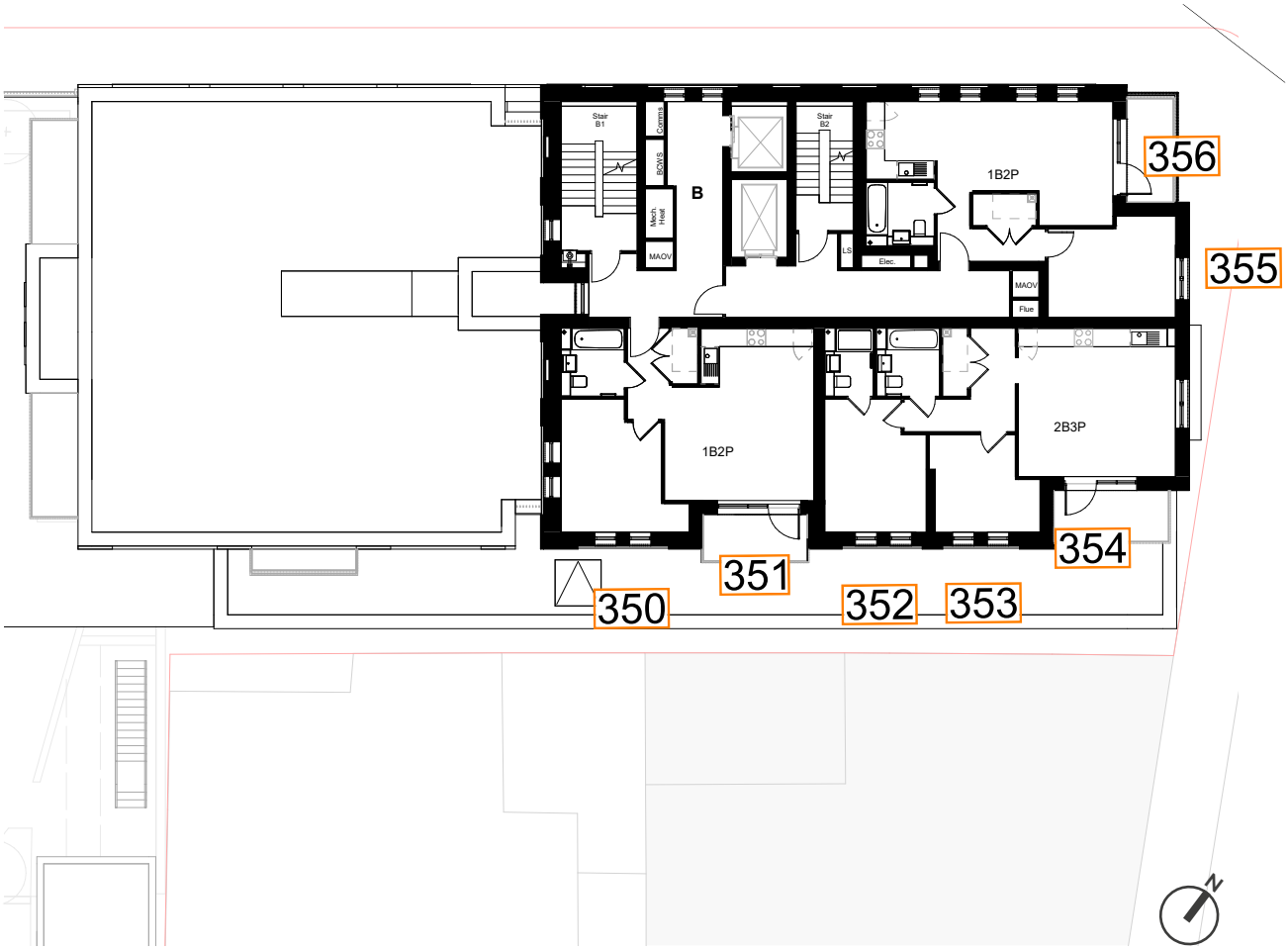


Fig. 31: Floor Plan

Block B - Level 24

ROOM REF.	ROOM USE	DAYLIGHT					SUNLIGHT
		EN SPATIAL DAYLIGHT AUTONOMY % of room achieving target illuminance for 50% of daylit hours					HOURS:MIN
		100	150	200	TARGET [lux]		21 MAR
BLOCKB - LEVEL 24							
357	BEDROOM	100.0	100.0	100.0	100		09:03
358	L/K/D	100.0	100.0	95.8	200		04:43
359	BEDROOM	100.0	100.0	100.0	100		04:43
360	BEDROOM	100.0	100.0	100.0	100		04:43
361	L/K/D	100.0	100.0	100.0	200		05:42
362	BEDROOM	100.0	100.0	100.0	100		01:32
363	L/K/D	100.0	100.0	100.0	200		00:00

Table 31: Assessment Data

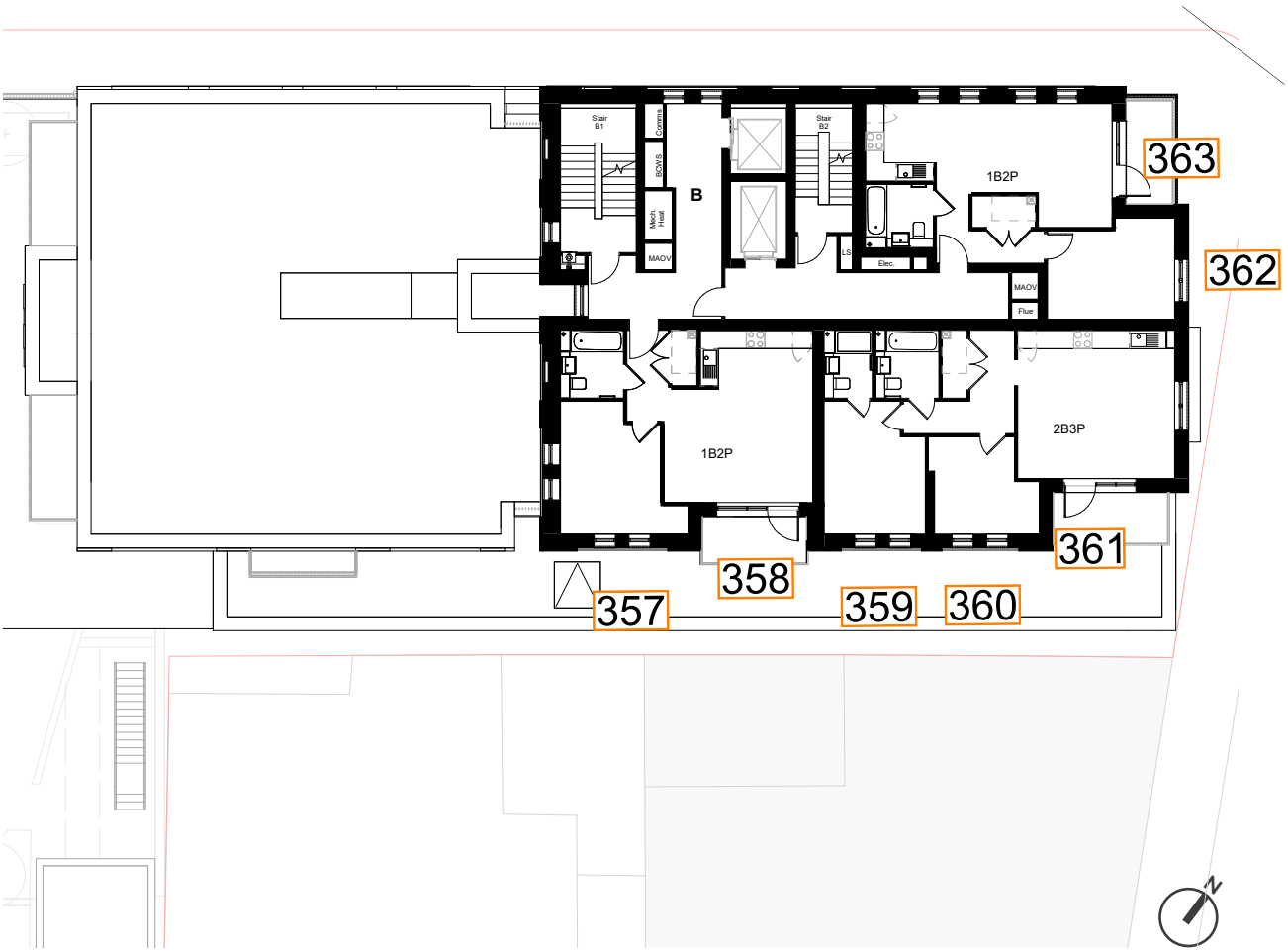
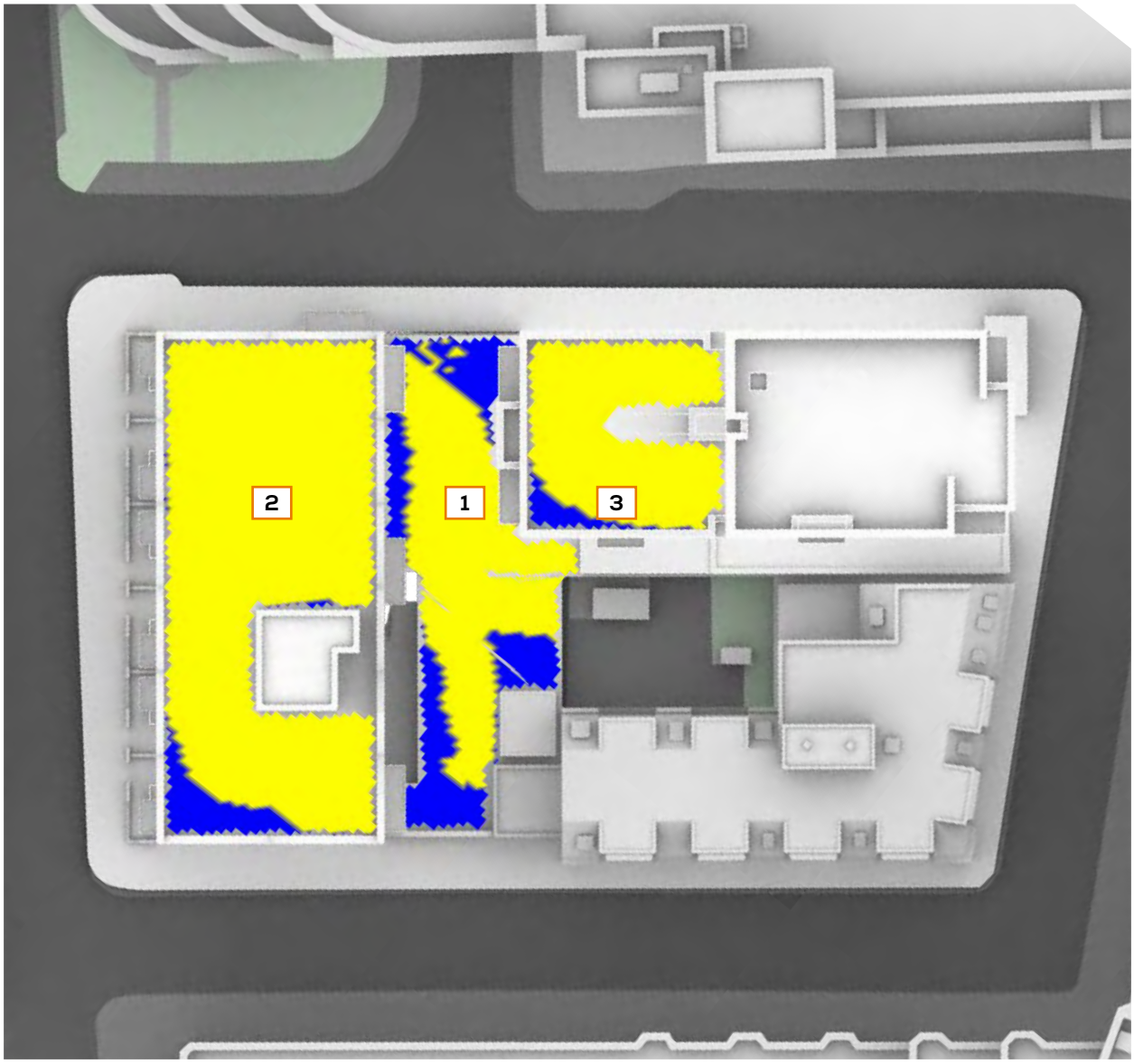


Fig. 32: Floor Plan

8 OVERSHADOWING ASSESSMENTS

OVERSHADOWING ASSESSMENT
SUN HOURS ON GROUND - BRE TEST

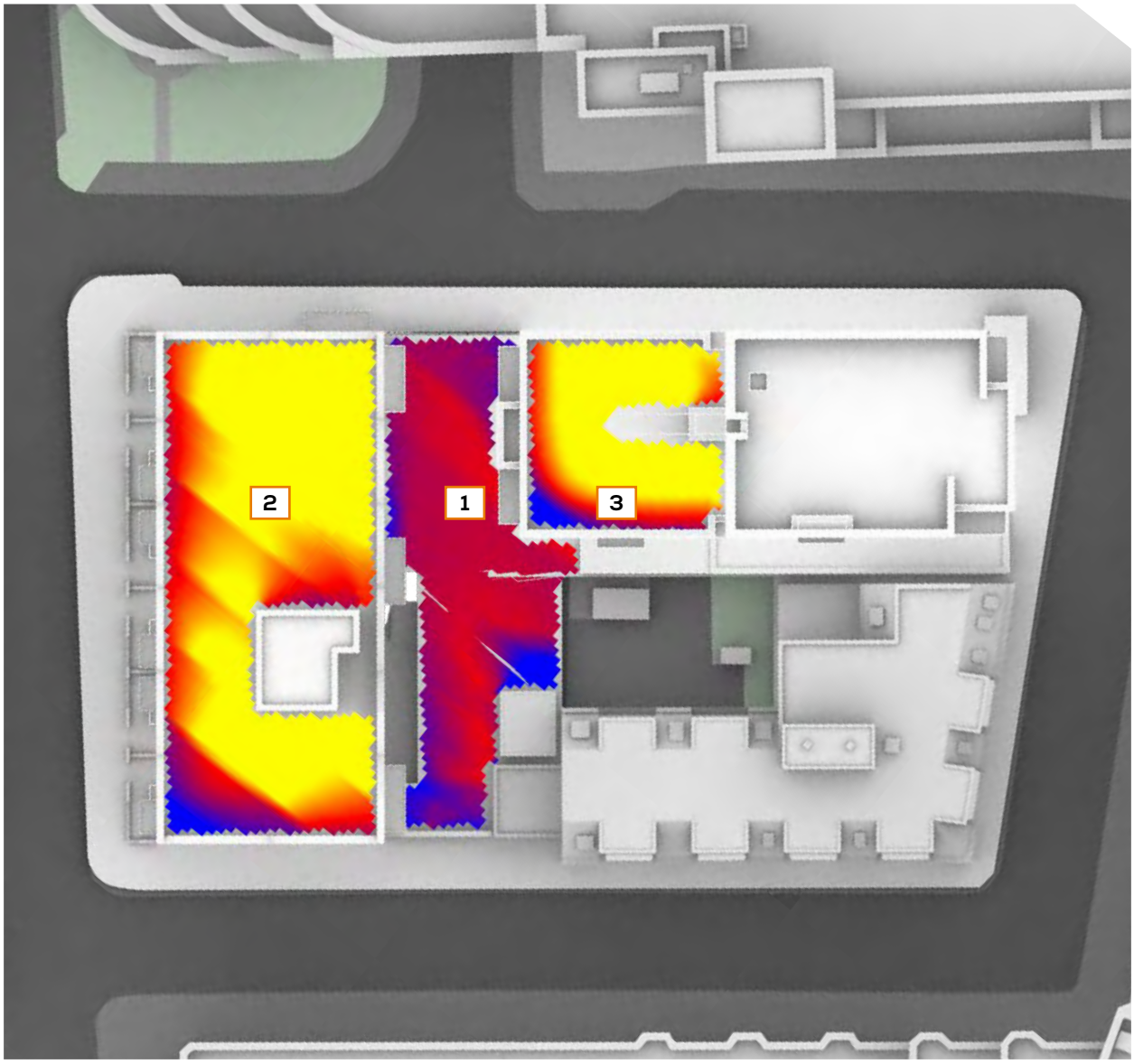


(BRE RECOMMENDS 2+ HOURS OF SUNLIGHT ON 21ST MARCH FOR AT LEAST 50% OF THE OPEN SPACE)

AREA 1: 63%
AREA 2: 93%
AREA 3: 91%

SUN HOURS ON GROUND
BRE TEST - 21ST MARCH

OVERSHADOWING ASSESSMENT
SUN EXPOSURE ON GROUND - 21ST MARCH (SPRING EQUINOX)



SUN EXPOSURE
TOTAL HOURS

0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5 5.5 6.0+

21st MARCH
(SPRING EQUINOX)

LONDON

Latitude:	51.4
Longitude:	0.0
Sunrise:	06:02 GMT
Sunset:	18:14 GMT

Total Available Sunlight:
12hrs 12mins

OVERSHADOWING ASSESSMENT
SUN EXPOSURE ON GROUND - 21ST JUNE (SUMMER SOLSTICE)

SUN EXPOSURE
TOTAL HOURS

0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5 5.5 6.0+

21st JUNE
(SUMMER SOLSTICE)

LONDON

Latitude:	51.4
Longitude:	0.0
Sunrise:	04:43 BST
Sunset:	21:21 BST

Total Available Sunlight:
16hrs 38mins

APPENDIX A.15 DETAILED DAYLIGHT RESULTS FOR 2-4 RINGERS ROAD COVERING ALL ROOMS

Ringers Road Proposed Scheme Daylight Results - All Rooms
9.604
Report Title: SDA BS En17037 Analysis - Proposed Scheme
Date of Analysis: 13/06/2024

								Criteria				
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
Block B												
First	R1	LKD	28.34	22.22	271	19.80	89%	200	50%	50%	4380	YES
	R2	LKD	23.82	17.01	195	8.42	49%	200	50%	50%	4380	NO
	R3	Bedroom	14.52	10.26	79	4.15	40%	100	50%	50%	4380	NO
	R4	Bedroom	12.82	8.88	290	8.88	100%	100	50%	50%	4380	YES
	R5	Bedroom	11.26	7.20	199	7.11	99%	100	50%	50%	4380	YES
	R6	LKD	25.81	19.85	483	19.85	100%	200	50%	50%	4380	YES
	R7	Bedroom	13.07	9.07	59	3.45	38%	100	50%	50%	4380	NO
	R8	Bedroom	12.71	8.75	151	7.31	84%	100	50%	50%	4380	YES
Second	R1	LKD	28.35	22.24	371	22.24	100%	200	50%	50%	4380	YES
	R2	LKD	23.82	17.01	238	10.91	64%	200	50%	50%	4380	YES
	R3	Bedroom	12.07	8.24	114	4.73	57%	100	50%	50%	4380	YES
	R4	LKD	33.34	25.30	57	1.53	6%	200	50%	50%	4380	NO
	R5	Bedroom	12.96	8.93	45	2.60	29%	100	50%	50%	4380	NO
	R6	LKD	24.62	18.66	396	18.66	100%	200	50%	50%	4380	YES
	R7	Bedroom	7.95	4.62	274	4.62	100%	100	50%	50%	4380	YES
	R8	Bedroom	10.39	6.87	342	6.87	100%	100	50%	50%	4380	YES
	R9	Bedroom	12.83	8.89	312	8.89	100%	100	50%	50%	4380	YES
	R10	Bedroom	11.25	7.20	215	7.20	100%	100	50%	50%	4380	YES
	R11	LKD	25.83	19.87	471	19.87	100%	200	50%	50%	4380	YES
	R12	Bedroom	14.16	9.93	140	7.27	73%	100	50%	50%	4380	YES
	R13	Bedroom	13.04	9.02	159	8.03	89%	100	50%	50%	4380	YES
Third	R1	LKD	28.35	22.24	430	22.24	100%	200	50%	50%	4380	YES
	R2	LKD	23.82	17.01	283	12.23	72%	200	50%	50%	4380	YES
	R3	Bedroom	12.07	8.24	139	5.91	72%	100	50%	50%	4380	YES
	R4	LKD	33.34	25.30	102	4.56	18%	200	50%	50%	4380	NO
	R5	Bedroom	12.96	8.93	114	5.90	66%	100	50%	50%	4380	YES
	R6	LKD	24.62	18.66	454	18.66	100%	200	50%	50%	4380	YES
	R7	Bedroom	7.95	4.62	303	4.62	100%	100	50%	50%	4380	YES
	R8	Bedroom	10.39	6.87	362	6.87	100%	100	50%	50%	4380	YES
	R9	Bedroom	12.83	8.89	337	8.89	100%	100	50%	50%	4380	YES
	R10	Bedroom	11.25	7.20	229	7.20	100%	100	50%	50%	4380	YES
	R11	LKD	25.83	19.87	497	19.87	100%	200	50%	50%	4380	YES
	R12	Bedroom	14.16	9.93	161	8.51	86%	100	50%	50%	4380	YES
	R13	Bedroom	13.04	9.02	161	8.23	91%	100	50%	50%	4380	YES
Fourth	R1	LKD	28.35	22.24	482	22.24	100%	200	50%	50%	4380	YES
	R2	LKD	23.82	17.01	253	12.03	71%	200	50%	50%	4380	YES
	R3	Bedroom	12.07	8.24	169	7.45	90%	100	50%	50%	4380	YES
	R4	LKD	33.34	25.30	140	8.11	32%	200	50%	50%	4380	NO

Ringers Road Proposed Scheme Daylight Results - All Rooms
9.604
Report Title: SDA BS En17037 Analysis - Proposed Scheme
Date of Analysis: 13/06/2024

								Criteria				
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
	R5	Bedroom	12.96	8.93	151	8.08	90%	100	50%	50%	4380	YES
	R6	LKD	24.62	18.66	532	18.66	100%	200	50%	50%	4380	YES
	R7	Bedroom	7.95	4.62	881	4.62	100%	100	50%	50%	4380	YES
	R8	Bedroom	10.39	6.87	376	6.87	100%	100	50%	50%	4380	YES
	R9	Bedroom	12.83	8.89	340	8.89	100%	100	50%	50%	4380	YES
	R10	Bedroom	11.25	7.20	244	7.20	100%	100	50%	50%	4380	YES
	R11	LKD	25.83	19.87	509	19.87	100%	200	50%	50%	4380	YES
	R12	Bedroom	14.16	9.93	161	8.43	85%	100	50%	50%	4380	YES
	R13	Bedroom	13.04	9.02	169	8.25	91%	100	50%	50%	4380	YES
Fifth	R1	LKD	28.32	22.22	582	22.22	100%	200	50%	50%	4380	YES
	R2	LKD	23.34	16.53	230	10.03	61%	200	50%	50%	4380	YES
	R3	Bedroom	12.08	8.24	111	4.78	58%	100	50%	50%	4380	YES
	R4	LKD	24.16	17.93	134	3.78	21%	200	50%	50%	4380	NO
	R5	Bedroom	8.05	4.90	246	4.90	100%	100	50%	50%	4380	YES
	R6	Bedroom	12.57	8.66	185	8.66	100%	100	50%	50%	4380	YES
	R7	LKD	24.62	18.66	449	18.66	100%	200	50%	50%	4380	YES
	R8	Bedroom	7.95	4.62	298	4.62	100%	100	50%	50%	4380	YES
	R9	Bedroom	10.39	6.87	331	6.87	100%	100	50%	50%	4380	YES
	R10	Bedroom	12.82	8.88	278	8.88	100%	100	50%	50%	4380	YES
	R11	Bedroom	12.90	8.49	222	8.49	100%	100	50%	50%	4380	YES
	R12	LKD	25.87	19.89	422	19.89	100%	200	50%	50%	4380	YES
	R13	Bedroom	13.52	9.34	244	9.34	100%	100	50%	50%	4380	YES
	R14	Bedroom	13.50	9.18	232	9.18	100%	100	50%	50%	4380	YES
Sixth	R1	LKD	28.32	22.22	621	22.22	100%	200	50%	50%	4380	YES
	R2	LKD	23.34	16.53	248	11.76	71%	200	50%	50%	4380	YES
	R3	Bedroom	12.08	8.24	126	5.77	70%	100	50%	50%	4380	YES
	R4	LKD	24.16	17.93	109	2.93	16%	200	50%	50%	4380	NO
	R5	Bedroom	8.05	4.90	274	4.90	100%	100	50%	50%	4380	YES
	R6	Bedroom	12.57	8.66	211	8.66	100%	100	50%	50%	4380	YES
	R7	LKD	24.62	18.66	459	18.66	100%	200	50%	50%	4380	YES
	R8	Bedroom	7.95	4.62	302	4.62	100%	100	50%	50%	4380	YES
	R9	Bedroom	10.39	6.87	332	6.87	100%	100	50%	50%	4380	YES
	R10	Bedroom	12.82	8.88	284	8.88	100%	100	50%	50%	4380	YES
	R11	Bedroom	12.90	8.49	227	8.49	100%	100	50%	50%	4380	YES
	R12	LKD	25.87	19.89	435	19.89	100%	200	50%	50%	4380	YES
	R13	Bedroom	13.52	9.34	249	9.34	100%	100	50%	50%	4380	YES
	R14	Bedroom	13.50	9.18	237	9.11	99%	100	50%	50%	4380	YES
Seventh	R1	LKD	28.32	22.22	646	22.22	100%	200	50%	50%	4380	YES
	R2	LKD	23.34	16.53	268	13.72	83%	200	50%	50%	4380	YES
	R3	Bedroom	12.08	8.24	141	6.44	78%	100	50%	50%	4380	YES
	R4	LKD	24.16	17.93	117	3.03	17%	200	50%	50%	4380	NO

Ringers Road Proposed Scheme Daylight Results - All Rooms
9.604
Report Title: SDA BS En17037 Analysis - Proposed Scheme
Date of Analysis: 13/06/2024

								Criteria				
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
	R5	Bedroom	8.05	4.90	296	4.90	100%	100	50%	50%	4380	YES
	R6	Bedroom	12.57	8.66	227	8.66	100%	100	50%	50%	4380	YES
	R7	LKD	24.62	18.66	461	18.66	100%	200	50%	50%	4380	YES
	R8	Bedroom	7.95	4.62	300	4.62	100%	100	50%	50%	4380	YES
	R9	Bedroom	10.39	6.87	344	6.87	100%	100	50%	50%	4380	YES
	R10	Bedroom	12.82	8.88	288	8.88	100%	100	50%	50%	4380	YES
	R11	Bedroom	12.90	8.49	235	8.49	100%	100	50%	50%	4380	YES
	R12	LKD	25.87	19.89	436	19.89	100%	200	50%	50%	4380	YES
	R13	Bedroom	13.52	9.34	249	9.34	100%	100	50%	50%	4380	YES
	R14	Bedroom	13.50	9.18	245	9.18	100%	100	50%	50%	4380	YES
Eighth	R1	LKD	28.32	22.22	658	22.22	100%	200	50%	50%	4380	YES
	R2	LKD	23.34	16.53	271	14.50	88%	200	50%	50%	4380	YES
	R3	Bedroom	12.08	8.24	149	6.89	84%	100	50%	50%	4380	YES
	R4	LKD	24.16	17.93	129	3.73	21%	200	50%	50%	4380	NO
	R5	Bedroom	8.05	4.90	304	4.90	100%	100	50%	50%	4380	YES
	R6	Bedroom	12.57	8.66	233	8.66	100%	100	50%	50%	4380	YES
	R7	LKD	24.62	18.66	463	18.66	100%	200	50%	50%	4380	YES
	R8	Bedroom	7.95	4.62	304	4.62	100%	100	50%	50%	4380	YES
	R9	Bedroom	10.39	6.87	350	6.87	100%	100	50%	50%	4380	YES
	R10	Bedroom	12.82	8.88	290	8.88	100%	100	50%	50%	4380	YES
	R11	Bedroom	12.90	8.49	233	8.49	100%	100	50%	50%	4380	YES
	R12	LKD	25.87	19.89	435	19.89	100%	200	50%	50%	4380	YES
	R13	Bedroom	13.52	9.34	254	9.34	100%	100	50%	50%	4380	YES
	R14	Bedroom	13.50	9.18	241	9.18	100%	100	50%	50%	4380	YES
Ninth	R1	LKD	28.32	22.22	668	22.22	100%	200	50%	50%	4380	YES
	R2	LKD	23.34	16.53	275	15.39	93%	200	50%	50%	4380	YES
	R3	Bedroom	12.08	8.24	160	7.73	94%	100	50%	50%	4380	YES
	R4	LKD	24.16	17.93	144	4.69	26%	200	50%	50%	4380	NO
	R5	Bedroom	8.05	4.90	313	4.90	100%	100	50%	50%	4380	YES
	R6	Bedroom	12.57	8.66	244	8.66	100%	100	50%	50%	4380	YES
	R7	LKD	24.62	18.66	470	18.66	100%	200	50%	50%	4380	YES
	R8	Bedroom	7.95	4.62	312	4.62	100%	100	50%	50%	4380	YES
	R9	Bedroom	10.39	6.87	350	6.87	100%	100	50%	50%	4380	YES
	R10	Bedroom	12.82	8.88	300	8.88	100%	100	50%	50%	4380	YES
	R11	Bedroom	12.90	8.49	235	8.49	100%	100	50%	50%	4380	YES
	R12	LKD	25.87	19.89	441	19.89	100%	200	50%	50%	4380	YES
	R13	Bedroom	13.52	9.34	255	9.34	100%	100	50%	50%	4380	YES
	R14	Bedroom	13.50	9.18	248	9.18	100%	100	50%	50%	4380	YES
Tenth	R1	LKD	31.96	25.20	987	25.20	100%	200	50%	50%	4380	YES
	R2	Bedroom	12.49	8.58	120	6.43	75%	100	50%	50%	4380	YES
	R3	LKD	29.65	22.25	72	4.42	20%	200	50%	50%	4380	NO

Ringers Road Proposed Scheme Daylight Results - All Rooms
9.604
Report Title: SDA BS En17037 Analysis - Proposed Scheme
Date of Analysis: 13/06/2024

								Criteria				
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
	R4	Bedroom	12.40	8.29	248	8.29	100%	100	50%	50%	4380	YES
	R5	Bedroom	13.93	9.52	91	4.41	46%	100	50%	50%	4380	NO
	R6	Bedroom	12.99	9.02	1601	9.02	100%	100	50%	50%	4380	YES
	R7	LKD	31.10	24.42	1366	24.42	100%	200	50%	50%	4380	YES
Eleventh	R1	LKD	31.98	25.23	1219	25.23	100%	200	50%	50%	4380	YES
	R2	Bedroom	12.49	8.58	131	7.63	89%	100	50%	50%	4380	YES
	R3	LKD	29.65	22.25	265	18.15	82%	200	50%	50%	4380	YES
	R4	Bedroom	12.34	8.23	259	8.23	100%	100	50%	50%	4380	YES
	R5	Bedroom	13.97	9.56	95	4.45	47%	100	50%	50%	4380	NO
	R6	Bedroom	14.69	9.88	1471	9.88	100%	100	50%	50%	4380	YES
	R7	LKD	31.10	24.42	1261	24.42	100%	200	50%	50%	4380	YES
Block A												
First	R1	Bedroom	6.83	4.04	63	0.00	0%	100	50%	50%	4380	NO
	R2	LKD	31.51	24.48	125	7.14	29%	200	50%	50%	4380	NO
	R3	LKD	27.10	20.87	168	8.36	40%	200	50%	50%	4380	NO
	R4	Bedroom	18.20	13.19	109	7.96	60%	100	50%	50%	4380	YES
	R5	Bedroom	10.06	6.48	1	0.00	0%	100	50%	50%	4380	NO
	R6	Bedroom	11.99	8.09	56	2.49	31%	100	50%	50%	4380	NO
	R7	LKD	24.41	17.97	194	9.44	53%	200	50%	50%	4380	YES
	R8	Bedroom	12.53	8.62	85	3.03	35%	100	50%	50%	4380	NO
Second	R1	Bedroom	6.83	4.04	71	1.34	33%	100	50%	50%	4380	NO
	R2	LKD	31.52	24.48	123	6.71	27%	200	50%	50%	4380	NO
	R3	LKD	27.10	20.87	167	8.44	40%	200	50%	50%	4380	NO
	R4	Bedroom	18.20	13.19	118	8.76	66%	100	50%	50%	4380	YES
	R5	Bedroom	10.06	6.48	3	0.00	0%	100	50%	50%	4380	NO
	R6	Bedroom	11.99	8.09	83	3.27	40%	100	50%	50%	4380	NO
	R7	LKD	24.41	17.97	227	10.09	56%	200	50%	50%	4380	YES
	R8	Bedroom	12.53	8.62	95	3.75	44%	100	50%	50%	4380	NO
Third	R1	Bedroom	6.83	4.04	151	2.69	67%	100	50%	50%	4380	YES
	R2	LKD	31.52	24.49	167	11.02	45%	200	50%	50%	4380	NO
	R3	LKD	27.10	20.87	235	12.49	60%	200	50%	50%	4380	YES
	R4	Bedroom	18.20	13.19	150	11.18	85%	100	50%	50%	4380	YES
	R5	Bedroom	10.06	6.48	42	2.24	35%	100	50%	50%	4380	NO
	R6	Bedroom	11.99	8.09	116	5.65	70%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	297	16.51	92%	200	50%	50%	4380	YES
	R8	Bedroom	12.53	8.62	145	7.82	91%	100	50%	50%	4380	YES
Fourth	R1	Bedroom	11.64	7.58	83	2.30	30%	100	50%	50%	4380	NO
	R2	Bedroom	13.92	9.47	146	6.55	69%	100	50%	50%	4380	YES
	R3	LKD	25.81	19.33	200	9.98	52%	200	50%	50%	4380	YES

Ringers Road Proposed Scheme Daylight Results - All Rooms
9.604
Report Title: SDA BS En17037 Analysis - Proposed Scheme
Date of Analysis: 13/06/2024

								Criteria				
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
	R4	LKD	22.84	16.91	144	4.23	25%	200	50%	50%	4380	NO
	R5	Bedroom	10.39	6.85	145	5.22	76%	100	50%	50%	4380	YES
	R6	Bedroom	11.99	8.09	311	7.61	94%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	247	10.09	56%	200	50%	50%	4380	YES
	R8	LKD	25.79	19.93	463	19.58	98%	200	50%	50%	4380	YES
Fifth	R1	Bedroom	11.64	7.58	68	1.50	20%	100	50%	50%	4380	NO
	R2	Bedroom	13.92	9.47	196	9.18	97%	100	50%	50%	4380	YES
	R3	LKD	25.81	19.33	257	13.79	71%	200	50%	50%	4380	YES
	R4	LKD	22.84	16.91	161	5.25	31%	200	50%	50%	4380	NO
	R5	Bedroom	10.39	6.85	183	6.62	97%	100	50%	50%	4380	YES
	R6	Bedroom	11.99	8.09	393	8.01	99%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	253	10.26	57%	200	50%	50%	4380	YES
	R8	LKD	25.79	19.93	552	19.67	99%	200	50%	50%	4380	YES
Sixth	R1	Bedroom	11.64	7.58	72	1.84	24%	100	50%	50%	4380	NO
	R2	Bedroom	13.92	9.47	241	9.47	100%	100	50%	50%	4380	YES
	R3	LKD	25.81	19.33	314	16.92	88%	200	50%	50%	4380	YES
	R4	LKD	22.84	16.91	206	9.11	54%	200	50%	50%	4380	YES
	R5	Bedroom	10.39	6.85	346	6.85	100%	100	50%	50%	4380	YES
	R6	Bedroom	11.99	8.09	463	8.09	100%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	260	10.35	58%	200	50%	50%	4380	YES
	R8	LKD	25.79	19.93	663	19.93	100%	200	50%	50%	4380	YES
Seventh	R1	Bedroom	11.64	7.58	75	1.93	25%	100	50%	50%	4380	NO
	R2	Bedroom	13.92	7.58	75	1.93	25%	100	50%	50%	4380	NO
	R3	LKD	25.81	19.33	217	10.73	55%	200	50%	50%	4380	YES
	R4	LKD	22.84	16.91	383	16.91	100%	200	50%	50%	4380	YES
	R5	Bedroom	10.39	6.85	548	6.85	100%	100	50%	50%	4380	YES
	R6	Bedroom	11.99	8.09	486	8.09	100%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	270	10.53	59%	200	50%	50%	4380	YES
	R8	LKD	25.79	19.93	657	19.93	100%	200	50%	50%	4380	YES
Eighth	R1	Bedroom	11.64	7.58	75	1.88	25%	100	50%	50%	4380	NO
	R2	Bedroom	13.92	7.58	75	1.88	25%	100	50%	50%	4380	NO
	R3	LKD	25.81	19.33	234	12.50	65%	200	50%	50%	4380	YES
	R4	LKD	22.84	16.91	426	16.91	100%	200	50%	50%	4380	YES
	R5	Bedroom	10.39	6.85	589	6.85	100%	100	50%	50%	4380	YES
	R6	Bedroom	11.99	8.09	517	8.09	100%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	289	11.05	61%	200	50%	50%	4380	YES
	R8	LKD	25.79	19.93	689	19.93	100%	200	50%	50%	4380	YES
Ninth	R1	Bedroom	11.64	7.58	75	2.05	27%	100	50%	50%	4380	NO
	R2	Bedroom	13.92	7.58	75	2.05	27%	100	50%	50%	4380	NO
	R3	LKD	25.81	19.33	245	14.33	74%	200	50%	50%	4380	YES
	R4	LKD	22.84	16.91	479	16.91	100%	200	50%	50%	4380	YES

Ringers Road Proposed Scheme Daylight Results - All Rooms
9.604
Report Title: SDA BS En17037 Analysis - Proposed Scheme
Date of Analysis: 13/06/2024

								Criteria				
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
	R5	Bedroom	10.39	6.85	618	6.85	100%	100	50%	50%	4380	YES
	R6	Bedroom	11.99	8.09	531	8.09	100%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	326	11.91	66%	200	50%	50%	4380	YES
	R8	LKD	25.79	19.93	701	19.93	100%	200	50%	50%	4380	YES
Tenth	R1	Bedroom	11.64	7.58	80	2.39	32%	100	50%	50%	4380	NO
	R2	Bedroom	13.92	9.47	237	9.47	100%	100	50%	50%	4380	YES
	R3	LKD	25.81	19.33	259	15.40	80%	200	50%	50%	4380	YES
	R4	LKD	22.84	16.91	522	16.91	100%	200	50%	50%	4380	YES
	R5	Bedroom	10.39	6.85	644	6.85	100%	100	50%	50%	4380	YES
	R6	Bedroom	11.99	8.09	1002	8.09	100%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	351	12.51	70%	200	50%	50%	4380	YES
	R8	LKD	25.79	19.93	412	19.93	100%	200	50%	50%	4380	YES
Eleventh	R1	Bedroom	11.64	7.58	100	3.83	51%	100	50%	50%	4380	YES
	R2	Bedroom	13.92	9.47	248	9.47	100%	100	50%	50%	4380	YES
	R3	LKD	25.81	19.33	275	17.44	90%	200	50%	50%	4380	YES
	R4	LKD	22.84	16.91	522	16.91	100%	200	50%	50%	4380	YES
	R5	Bedroom	10.39	6.85	669	6.85	100%	100	50%	50%	4380	YES
	R6	Bedroom	11.99	8.09	1076	8.09	100%	100	50%	50%	4380	YES
	R7	LKD	24.41	17.97	425	15.53	86%	200	50%	50%	4380	YES
	R8	LKD	25.79	19.93	460	19.93	100%	200	50%	50%	4380	YES
Twelfth	R1	LKD	29.74	23.51	569	23.51	100%	200	50%	50%	4380	YES
	R2	Bedroom	12.37	8.45	934	8.45	100%	100	50%	50%	4380	YES
	R3	Bedroom	13.52	9.47	285	9.47	100%	100	50%	50%	4380	YES
	R4	Bedroom	11.99	8.09	1107	8.09	100%	100	50%	50%	4380	YES
	R5	LKD	24.41	17.97	475	17.97	100%	200	50%	50%	4380	YES
Thirteenth	R1	LKD	29.74	23.51	571	23.51	100%	200	50%	50%	4380	YES
	R2	Bedroom	12.37	8.45	936	8.45	100%	100	50%	50%	4380	YES
	R3	Bedroom	13.52	9.47	392	9.47	100%	100	50%	50%	4380	YES
	R4	Bedroom	11.99	8.09	1117	8.09	100%	100	50%	50%	4380	YES
	R5	LKD	24.41	17.97	481	17.97	100%	200	50%	50%	4380	YES

APPENDIX A.16 WHITECHAPEL ESTATE ENVIRONMENTAL STATEMENT DSO CHAPTER

7 Daylight, Sunlight and Overshadowing

7.1 Introduction

7.1.1 This Chapter reports the likely significant effects of the Proposed Development in terms of daylight, sunlight and overshadowing in the context of the Site and surrounding area. In particular it considers the likely significant effects of daylight, sunlight and overshadowing on potential receptors ensuring they are consistent with those identified during the Scoping process.

7.1.2 This Chapter (and its associated figures and appendices), prepared by Delva Patman Redler, is not intended to be read as a standalone assessment and reference should be made to the Front End of this Environmental Statement (ES) (**Chapters 1 – 4**), as well as **Chapter 17 'Cumulative Effects'**.

7.2 Legislation, Policy and Guidance

7.2.1 Details of the relevant legislation, policy and guidance are summarised in in **Appendix 7.1**.

Legislative Framework Planning Policy

7.2.2 Planning policy at the national, regional and local level and its relevance to environmental design and assessment is discussed in **Chapter 4 'Planning Policy Context'**. Again **Appendix 7.1** includes policies of particular relevant to daylight, sunlight and overshadowing effects are discussed below.

National Planning Policy

- *Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice* (the *BRE Guide*) (Ref. 7.1)
- *The London Plan: Spatial Development Strategy for Greater London (Adopted March 2015) (Further Alterations to the London Plan)* (the *London Plan*) (Ref. 7.2);
- *Core Strategy: Development Plan Document (Adopted September 2010)* (the *Core Strategy)* (Ref. 7.3); and
- *Managing Development Document: Development Plan Document (Adopted April 2013)* (Ref. 7.4).

Guidance

7.2.3 The applicable guidance is summarised as follows:

- *Planning Practice Guidance* (Ref. 7.5); and
- *Whitechapel Vision Masterplan Supplementary Planning Document (SPD)* (Ref. 7.6).
- *BS 8206-02 Lighting for Buildings: Code of Practice for Daylighting* (Ref. 7.7); and
- *CIBSE: Code for Interior Lighting 1994* (Ref. 7.8).

7.3 Relevant Elements of the Proposed Development

7.3.1 The following components of the Proposed Development are relevant to the daylight, sunlight and overshadowing assessments:

- The height, bulk and massing of the Proposed Development;

- The internal configuration of the habitable rooms within the Proposed Development including, the size and location of windows in relation to the orientation of the rest of the Proposed Development and their proximity to neighbouring buildings; and
- The size, location, layout and orientation of public / private amenity areas both within the Site and those neighbouring amenity areas adjacent to the Site.

7.4 Assessment Methodology and Significance Criteria

Scope of the Assessment

7.4.1 An Environmental Scoping Report was submitted to London Borough of Tower Hamlets on the 20th August 2014 (**Appendix 2.1**); their formal Scoping Opinion was received on the 1st October 2014 (**Appendix 2.2**). This section provides an update on the scope of the assessment and re-iterates the evidence base for insignificant effects.

7.4.2 The purpose of this study is to:

- Identify and quantify the effects of the Proposed Development on the daylight to the surrounding properties and compare to recommended guidelines;
- Identify and quantify the effect of the Proposed Development on the sunlight to the surrounding properties and compare to recommended guidelines; and
- Identify and quantify the level of overshadowing caused by the Proposed Development and compare to recommended guidelines.

7.4.3 New developments are expected to follow daylight and sunlight design guidelines as set out in the *BRE Guide*. This assessment will determine the internal daylight of the proposed new spaces focusing on areas where natural light is reasonably expected.

Insignificant Effects

7.4.4 All temporary structures necessary during the construction phase ie, cranes, site huts and other temporary buildings have been completely discounted from these studies.

Likely Significant Effects

7.4.5 The studies are a direct comparison between the existing Site conditions pre-demolition as against the Proposed Development post completion.

Construction Phase

- No account has been made of the potential impact on daylight, sunlight and overshadowing during the construction phase of this Site.

Operational Phase

- The studies are a direct comparison between the existing Site conditions pre-demolition as against the Proposed Development post completion.

Extent of the Study Area

7.4.6 All assessments within this chapter are measurements of the effects within the immediate vicinity of the Site. All effects measured in daylight, sunlight and shadow terms will be permanent.

Consultation Undertaken to Date

7.4.7 No consultations have been undertaken for the assessment of daylight, sunlight and overshadowing.

Assessment Methodology for the Effect on Surrounding Properties

7.4.8 Daylight, sunlight and overshadowing assessments have been undertaken by reference to the *BRE Guide*. This is the standard identified in the Core Strategy by which daylight and sunlight should be assessed.

7.4.9 The *BRE Guide* gives numerical guidelines to calculate levels of daylight and sunlight but advises that in some cases the assessment of these levels should be interpreted flexibly. This is particularly relevant in a city environment where it would be unrealistic to expect strict compliance with the recommendations due to the presence of densely built up areas.

7.4.10 The *BRE Guide* advises that daylight and sunlight levels should be assessed at the main habitable rooms of neighbouring residential properties. Habitable rooms in residential properties are defined as kitchens, living rooms and dining rooms. Bedrooms are less important as they are mainly occupied at night-time.

7.4.11 The *BRE Guide* states that:

> *"If, for any part of the new development, the angle from the centre of the lowest affected window to the head of the new development is more than 25^{o}, then a more detailed check is needed to find the loss of skylight to the existing buildings."*

Daylight and Sunlight Calculations

7.4.12 In order to carry out these more detailed checks the *BRE Guide* proposes several methods for calculating daylight. The two main methods predominantly used are those involving the measurement of the total amount of skylight available (the Vertical Sky Component (VSC)) and its distribution within the building (the No-Sky Line).

7.4.13 The VSC calculation is a general test of potential for daylight to a building, measuring the light available on the outside plane of windows using the Waldram method of analysis.

7.4.14 The No-Sky Line divides those areas of the working plane (i.e. 850mm above floor level) which can receive direct skylight, from those which cannot. It provides an indication of how good the daylight distribution is within a room.

7.4.15 The third recognised method of assessment for daylight is the Average Daylight Factor (ADF) calculation which assesses the quality and distribution of light within a room served by a window and takes into account the VSC value, the size and number of the windows and room and the use to which the room is put. ADF assesses actual light distribution within a defined room area whereas the VSC considers potential light. *BS 8206-2:2008* recommends ADF values of 1% in bedrooms, 1.5% in living rooms and 2% in kitchens. For other uses, where it is expected that supplementary electric lighting will be used throughout the daytime, such as in offices, the ADF value should be 2%. There is no general requirement within the *BRE Guide* to assess ADF values, other than for neighbouring residential buildings.

7.4.16 Whilst a valuable assessment tool, ADF assessments are secondary to that of the VSC and No-Sky Line assessments when considering daylight adequacy to existing neighbouring properties.

7.4.17 For the daylight study all windows in neighbouring residential properties known to serve habitable rooms which are likely to be affected by the Proposed Development have been assessed using the VSC, 'No Sky' Line and ADF methods of analysis.

7.4.18 It is recognised by the BRE that the most suitable method to assess internal daylight adequacy to new habitable rooms within new developments is the ADF method of assessment.

7.4.19 The BRE have produced sunlight templates for London, Manchester and Edinburgh indicating the Annual Probable Sunlight Hours (APSH) for these regions. The London template has been selected for this assessment.

7.4.20 Sunlight analysis is undertaken by measuring APSH for the main windows of rooms, which face within 90° of due south. The maximum number of annual probable sunlight hours for the London orientation is 1,486 hours. The *BRE Guide* proposes that the appropriate date for undertaking a sunlight assessment is on 21st March, being the spring equinox. Calculations of both summer and winter availability are made with the winter analysis covering the period from the 21st September to 21st March. For residential accommodation, the main requirement for sunlight is in living rooms and it is regarded as less important in bedrooms and kitchens. There is a general requirement for sunlight in non-domestic buildings. The *BRE Guide* suggests that in non-domestic buildings any spaces that are deemed to have a special requirement for sunlight should be checked.

7.4.21 The studies have been undertaken by calculating the daylight and sunlight based on the template drawings provided within the *BRE Guide*. The study was undertaken with plan drawings derived from:

- Existing and surrounding buildings: Met Geo Environmental: Dwg No's: 12709-104_3DT (RevA), 2DT (RevA), LG, G, 1< 2, R, E, S, WF;
- ZMapping 3D model provided; and
- Proposed Development: PLP Architects: Dwg No's: 3D model received 22nd July 2015

7.4.22 At this stage no access has been obtained into any of the neighbouring properties included in these assessments; some plans have been obtained from the online planning records which give an indication of the use on the accommodation in question to give an understanding of the type of accommodation being affected.

7.4.23 The neighbouring daylight assessments have been undertaken using the VSC, No Sky Line and ADF calculation methods. All relevant neighbouring residential properties and associated sensitive receptors that may possibly be affected have been included in the assessment, as shown on our drawings LOC/815-827 in **Appendix 7.2**. A detailed breakdown of results of the daylight analysis is contained in **Appendix 7.3**.

7.4.24 For the sunlight study the sunlight availability indicator for London has been overlaid onto the tested windows in question and orientated correctly in accordance with the orientation of the Site. A detailed breakdown of results of the sunlight analysis is contained in **Appendix 7.3**.

Overshadowing

7.4.25 The BRE advises that for gardens and open spaces to appear to be adequately sunlit throughout the year, at least half of the garden or amenity area should receive at least 2 hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21st March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable.

7.4.26 It follows that if some sun is received on 21st of March, there will be sun over the summer months, however this may be reduced by the Proposed Development.

7.4.27 There are a number of amenity areas adjacent to the site that have been considered for the baseline assessment particularly those gardens associated with the residential accommodation to the north and west of the Site.

7.4.28 The proposed open public and private courtyard amenity spaces within the Site have also been taken into account when considering the impact of the Proposed Development on shadowing.

7.4.29 The transient shadowing images produced by 3D modelling, as shown on our drawings SHD/514-518 in **Appendix 7.5** show how the transient shadow will pass across the Site and surrounding areas.

Site Visit

7.4.30 A Site visit was undertaken in April 2012 to get a feel and understanding of the specific site conditions in context to the surrounding properties. A photographic study has been undertaken for reference with the Met Geo topographical and survey elevations of the existing and surrounding buildings.

Assessment Modelling

7.4.31 These assessments have been undertaken using a detailed AutoCAD 3D computer model of the Site and surrounding buildings using survey drawings provided by *Met Geo Environmental* and the 3D model provided by ZMapping to assess the baseline / existing daylight, sunlight and shadowing conditions in comparison to the proposed levels.

Significance Criteria

Determining Magnitude of Change

7.4.32 The *BRE Guide* provides criteria and methods for calculating daylight and sunlight levels. These criteria have been used to assess the likely levels of light to habitable rooms both within the Proposed Development and the surrounding properties.

7.4.33 Compliance with the BRE Guide is achieved if the levels of daylight / sunlight within the habitable spaces of the Proposed Development and the surrounding properties are equal to or over the values established by the Guide.

7.4.34 Compliance with the *BRE Guide* is also achieved for the habitable spaces of the surrounding properties if the ratio of impact between the baseline and the Proposed Development is 0.80 or higher, i.e. the reduction in daylight or sunlight hours is 20% or less. An additional criterion of overall annual loss for APSH values also needs to be satisfied to comply with the recommended BRE guidelines.

7.4.35 A negligible magnitude of change is established if compliance with the BRE criteria is met.

7.4.36 For the affected receptors that lie below the recommended BRE guidelines, the magnitude of change has been classified using professional judgement depending on the ratio of impact between the 'Baseline Scenario' and the 'Proposed Scenario'. The criteria used for determining the magnitude of change for the VSC, APSH and WPSH results has been detailed below (**Tables 7.1 – 7.3**).

Table 7.1: Magnitude of Change for Vertical Sky Component (VSC) Results

VSC Values	Ratio of Impact	Magnitude of Change
VSC ≥ 27%	≥ 0.8	Negligible
VSC ≥ 27%	< 0.8	Negligible
VSC < 27%	> 0.8	Negligible
VSC < 27%	0.7 – 0.8	Low
VSC < 27%	0.6 – 0.7	Medium
VSC < 27%	< 0.6	High

Table 7.2: Magnitude of Change for Annual Probable Sunlight Hours (APSH) Results

APSH Values	Ratio of Impact	Absolute reduction in APSH	Magnitude of Change
APSH ≥ 25%	>0.8	≤ 4%	Negligible
APSH ≥ 25%	>0.8	> 4%	Negligible
APSH ≥ 25%	<0.8	> 4%	Negligible

APSH Values	Ratio of Impact	Absolute reduction in APSH	Magnitude of Change
APSH < 25%	>0.8	≤ 4%	Negligible
APSH < 25%	>0.7	>4%	Low
APSH < 25%	0.6 – 0.7	>4%	Medium
APSH < 25%	< 0.6	>4%	High

Table 7.3: Magnitude of Change for Winter Probable Sunlight Hours (WPSH) Results

WPSH Values	Ratio of Impact	Magnitude of Change
WPSH ≥ 5%	>0.8	Negligible
WPSH ≥ 5%	<0.8	Negligible
WPSH < 5%	>0.8	Negligible
WPSH < 5%	0.7 – 0.8	Low
WPSH < 5%	0.6 – 0.7	Medium
WPSH < 5%	< 0.6	High

Significance of Effects

7.4.37 The purpose of the daylight, sunlight and overshadowing assessment is to determine the likely loss of light to adjacent buildings and open spaces resulting from the construction of the Proposed Development. Therefore, in these cases, the Proposed Development is identified as the potential source of effect.

7.4.38 The BRE includes the following suggested guidance for significance of effects:

"Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space.

The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied.

Where the loss of skylight or sunlight fully meets the guidelines, the impact is assessed as negligible or minor adverse. Where the loss of light is well within the guidelines, or only a small number of windows or limited area of open space lose light (within the guidelines), a classification of negligible impact is more appropriate. Where the loss of light is only just within the guidelines, and a larger number of windows or open space area are affected, a minor adverse impact would be more appropriate, especially if there is a particularly strong requirement for daylight and sunlight in the affected building or open space.

Where the loss of skylight or sunlight does not meet the guidelines, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- *only a small number of windows or limited area of open space are affected;*
- *the loss of light is only marginally outside the guidelines;*
- *an affected room has other sources of skylight or sunlight;*
- *the affected building or open space only has a low level requirement for skylight or sunlight; and*
- *there are particular reasons why an alternative, less stringent, guideline should be applied.*

Factors tending towards a major adverse impact include:

- *a large number of windows or large area of open space are affected;*
- *the loss of light is substantially outside the guidelines;*
- *all the windows in a particular property are affected; and*

- *the affected indoor or outdoor spaces have a particularly strong requirement for skylight or sunlight, e.g. a living room in a dwelling or a children's playground.*

Beneficial impacts occur when there is a significant increase in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space.

An adverse impact on one property cannot be balanced against negligible or beneficial impacts on other properties. In these situations it is more appropriate to quote a range of impacts.

The provision of new dwellings, or commercial or industrial buildings, or private gardens that meet the skylight or sunlight guidance in this book should not be classified as a beneficial daylight or sunlight impact on the local environment. However, the provision of community buildings or public open spaces with good skylight and/or sunlight could be classed as a beneficial impact."

7.4.39 Taking the above guidance into account and also the sensitivity of the receptor and the magnitude of change, a matrix for determining the significance of effects has been developed in **Table 7.4**.

Table 7.4: Matrix for Determining the Significance of Effects

Magnitude of Change	Sensitivity of Receptor	
	High	Medium
High	Major effect	Moderate effect
Medium	Moderate to Major effect	Moderate to Minor effect
Low	Minor to Moderate effect	Minor effect
Negligible	Negligible effect	Negligible effect

Daylight, Sunlight and Overshadowing

7.4.40 The guidance given by BRE has been used as a basis for the criteria to assess the Proposed Development's likely significant effects in terms of Daylight, Sunlight and Overshadowing. The *BRE Guide* specifies:

"…In special circumstances the developer or planning authority may wish to use different target values. For example, in an historic city centre a higher degree of obstruction may be unavoidable…"

7.4.41 The *BRE Guide* adds:

"…Different criteria may be used, based on the requirements for daylighting in an area viewed against other site layout constraints."

7.4.42 In consideration of the above, it is important to note that the Site is located in a City centre that, in parts, currently experiences adverse daylight and sunlight levels. This is discussed within the 'Baseline Conditions' section of this report. Thus, in these instances the *BRE Guide* states that the:

"…guidelines should be applied sensibly and flexibly."

7.4.43 Under these circumstances, the less stringent, higher BRE target percentage loss values and significance criteria may be justifiable.

7.4.44 The BRE Guide is summarised in **Table 7.5** and this has been used as the basis for the criteria used in the assessment of daylight, sunlight and shadow impacts.

Table 7.5: BRE Daylight, Sunlight and Overshadowing Guidance used in the Assessment

Issue	Criteria
Daylight	A window may be adversely affected if the Vertical Sky Component (VSC) measured at the centre of the window is less than 27% and less than 0.8 times its former value.
	A room may be adversely affected if the Average Daylight Factor (ADF) is less than 1% for a bedroom, 1.5% for a living room or 2% for a kitchen.
	A room may be adversely affected if the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value.
Sunlight	A window may be adversely affected if a point at the centre of the window receives in the year less than 25% of the annual probable sunlight hours including at least 5% of the Annual Probable Sunlight Hours (APSH) during the winter months (21st September to 21st March) and less than 0.8 times its former sunlight hours during either period.
Shadowing	The BRE advises that for gardens and open spaces to appear to be adequately sunlit throughout the year, at least half of the garden or amenity area should receive at least 2 hours of sunlight on 21st March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21st March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable.

7.4.45 This *BRE Guide* has been used to generate significance criteria that have been used to assess the impact of the Proposed Development. For VSC and APSH criteria, they are:

- Windows experiencing less than 20% reduction represent **negligible** effects;
- Windows experiencing between 20 and 29.9% reduction represent **minor negative** effects;
- Windows experiencing between 30 and 39.9% reduction represent **moderate negative** effects; and
- Windows experiencing greater than 40% reduction represents **major negative** effects.

7.4.46 It is of note that for both sunlight and daylight calculations, total reliance upon numerical values and particularly percentage changes may be misleading particularly where baseline values are already comparatively small, as is often the case in city centres. A percentage change of more than 20% may well represent only a very small difference in actual light value.

7.4.47 Additionally, it should be borne in mind that Page 1 of the *BRE Guide* suggests that circumstances will exist where an alternative criteria value may be used, for example, in a city centre:

> *"…where a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings."*

7.4.48 In such instances, the *BRE Guide* advises that the numerical guidelines should be interpreted flexibly, and alternative numerical values may be used. The Site's historic City centre location justifies this flexible interpretation of the *BRE Guide*.

7.5 Sensitive Receptors

7.5.1 For the purpose of daylight and sunlight assessment sensitive receptors are described as windows to habitable rooms facing the site where the occupants have a reasonable expectation of daylight. As the *BRE Guide* states:

> *"The guidelines given here are intended for use in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops and some offices."*

7.5.2 Other sensitive receptors include gardens and open spaces on adjacent properties, excluding public footpaths, front gardens and car parks.

7.5.3 In accordance with the *BRE Guide*, windows are selected as sensitive receptors on the basis of being a habitable room facing the Proposed Development. Similarly, amenities and open spaces are selected on the basis of being in the immediate vicinity of the Proposed Development.

7.5.4 Residential, offices, schools and hospital ward spaces generally require good levels of daylight and sunlight to render them more enjoyable and adequate to their function. Windows to such spaces are classified as high sensitivity to daylight and sunlight, while hotels and retail buildings may be considered to be of low sensitivity.

7.5.5 The receptors for the assessment were selected based on their location relative to the Proposed Development and also depending on their sensitivity to natural light. The daylight, sunlight and overshadowing assessments focus on the surrounding residential properties adjacent to the Site where these are likely to have an expectation of natural light. The receptors selected for the daylight assessment are illustrated on Drawing LOC/815 in **Appendix 7.2**. The receptors selected for the purpose of the shadowing studies are illustrated on Drawings SHD/517-518 in **Appendix 7.5**.

7.5.6 All relevant habitable rooms to include, kitchens, living/dining rooms and bedrooms have been identified within each of the four blocks for the internal daylight adequacy studies.

7.6 Baseline Conditions

7.6.1 An analysis of the impact of the existing buildings (the baseline conditions) against which to compare any likely significant effects arising from the Proposed Development has been undertaken based on Drawing SPT/804 in **Appendix 7.2.**

7.6.2 It is noted that the Site is in close proximity to adjacent properties that surround the site to the north, south, east and west. The Site is bounded to the south by Varden Street, by Turner Street to the west, Ashfield Street to the north and Cavell Street to the east. The site is generally surrounding by a mixture of use types varying between 2 and 6 stories in height which generally receive adequate levels of light over and above the existing and surrounding buildings due to their relative height and proximity considering the site is set in an urban environment.

7.6.3 This can be seen from the technical results, both in graphical and tabular form in **Appendices 7.2 – 7.5.**

7.6.4 An analysis of the existing daylight, sunlight and shadow levels enjoyed by the neighbouring residential amenity has been undertaken in order to provide a baseline against which the impacts arising from the Proposed Development can be assessed.

Future Baseline

7.6.5 In the absence of the Proposed Development it is likely that similar applications would come forward on the Site in line with the aspirations of the *Whitechapel Vision Masterplan SDP*.

7.6.6 If no development were to take place the baseline conditions described above will only change if some of the neighbouring properties are redeveloped.

7.7 Assessment of Effects, Mitigation and Residual Effects

Construction Phase

7.7.1 The assessment during the site preparation, earthworks and construction phase has not been quantitatively assessed as the assessment of effects compares the completed Proposed Development against the 'Baseline Conditions'. A modelling assessment of the site preparation, earthworks and construction phase has not been conducted as the effects will be temporary. However, qualitatively it can be argued that as construction of the Proposed Development proceeds into its different phases, the availability and obstruction of natural light will vary, gradually adjusting to that of the completed development. During periods of demolition as the Site becomes relatively free of obstructions, there will be greater levels of daylight and sunlight to existing buildings. As construction develops the new structures are likely provide further obstruction gradually increasing until arriving to its completed condition. The effects of the completed conditions are described in the following section.

Operational Phase

Design Solutions and Assumptions

7.7.2 The overall height, bulk and massing of the plots have been worked so as to minimise an impact on neighbouring daylight, sunlight and overshadowing amenity where practicably possible.

7.7.3 Delva Patman Redler have worked with the design team on siting, orientation and massing of individual plots as well as the overall massing approach so as to minimise any impacts where possible.

7.7.4 Delva Patman Redler have also worked with PLP and Adjaye Architects to ensure that the internal layouts and configurations of the flats within the Proposed Development achieve as high a compliance level for internal daylight adequacy as practicably possible within the constraints of a dense urban site such as this.

7.7.5 The analyses are based on the height, bulk and massing and internal layouts of the planning submission scheme and so no assumptions from the scheme have been made in these assessments.

Daylight

Daylight – Vertical Sky Component Analysis

7.7.6 The results of the VSC daylight analysis on the relevant overlooking windows of the properties are presented in **Table 7.6**. The location of the windows is shown in **Appendix 7.2**. The full results of the daylight analysis are presented in **Appendix 7.3.**

Table 7.6: Result of the Development (VSC Method)

Address	Total Number of Rooms Tested	Rooms Meeting BRE Guidelines for VSC	Number of Rooms Experiencing Adverse Effects		
			20-29.9% reduction (minor adverse effect)	30-39.9% reduction (moderate adverse effect)	>40% reduction (substantial adverse effect)
57 – 69 Philpot Street	37	29	8	0	0
42 Newark Street	2	2	0	0	0
67 – 81 & 56 – 58 Cavell Street	47	18	6	12	11
Wilton Court	42	3	2	5	32
49 Cavell Street	8	8	0	0	0

70 Varden Street	6	4	2	0	0
Silvester House	44	3	4	10	27
Joscoyne House	40	20	0	20	0
Porchester House	32	5	13	0	14
Dickson House & Mellish House	36	6	7	13	10
20 – 30 Varden Street	24	12	8	4	0
12-16 & 19-45 Turner Street	66	61	4	1	0
46-48 Ashfield Street	8	1	4	3	0
43 – 55 Phillpot Street	54	26	16	11	1
33-49 Walden Street	57	31	6	6	14
Total	**503**	**229**	**80**	**85**	**109**

7.7.7 When considering the actual proposed VSC figures seen in the tables of **Appendix 7.3**, they are still generally considered to be good for this type of urban location with the majority of the resultant proposed VSC figures remaining above 15%.

Daylight – No Sky Line Analysis

7.7.8 The results of the No Sky Line daylight analysis on the relevant overlooking rooms of the properties are presented in **Table 7.7**. The full results of the daylight analysis are presented in **Appendix 7.3**.

Table 7.7: Number of Rooms Experiencing Negligible and Adverse Daylight Effects as a Result of the Development (No Sky Line Method)

Address	Total Number of Rooms Tested	Rooms Meeting BRE Guidelines for NSL	Number of Windows Experiencing Adverse Effects		
			20-29.9% reduction (minor adverse effect)	30-39.9% reduction (moderate adverse effect)	>40% reduction (substantial adverse effect)
57 – 69 Philpot Street	37	33	3	1	0
42 Newark Street	2	2	0	0	0
67 – 81 & 56 – 58 Cavell Street	47	17	9	8	13
Wilton Court	42	20	5	9	8
49 Cavell Street	8	8	0	0	0
70 Varden Street	6	5	1	0	0
Silvester House	44	16	5	4	19
Joscoyne House	40	40	0	0	0
Porchester House	32	17	4	1	10
Dickson House & Mellish House	36	15	1	1	19
20 – 30 Varden Street	24	12	2	3	7
12-16 & 19-45 Turner Street	66	65	1	0	0
46-48 Ashfield Street	8	8	0	0	0

43 – 55 Phillpot Street	54	53	1	0	0
33-49 Walden Street	57	25	7	6	19
Total	**503**	**336**	**39**	**33**	**95**

7.7.9 **Table 7.7** shows that 336 of the 503 (66.8%) rooms assessed would fully comply with the BRE Guidelines for VSC representing **negligible effects**.

7.7.10 A total of 39 (7.8%) will experience **minor effects**, 33 (6.6%) will experience **moderate effects** and the remaining 95 (18.87%) will experience **major effects** as a result of the Development.

7.7.11 When considering the actual proposed daylight distribution figures seen in the tables of **Appendix 7.3**, they are generally considered to be good for this type of urban location with the majority of the resultant proposed NSL figures remaining above 50% of the room areas.

Daylight – Average Daylight Factor Analysis

7.7.12 The results of the ADF daylight analysis on the relevant overlooking rooms of the properties are presented in **Table 7.8**. The full results of the daylight analysis are presented in **Appendix 7.3**.

Table 7.8: Number of Rooms Experiencing Negligible and Adverse Daylight Effects as a Result of the Development (ADF Method)

Address	Total Number of Rooms Tested	Rooms Meeting BRE Guidelines for ADF	Rooms Meeting BRE Guidelines for ADF Number of Windows Experiencing Adverse Effects		
			20-29.9% reduction (minor adverse effect)	30-39.9% reduction (moderate adverse effect)	>40% reduction (substantial adverse effect)
57 – 69 Philpot Street	37	37	0	0	0
42 Newark Street	2	2	0	0	0
67 – 81 & 56 – 58 Cavell Street	47	29	15	3	0
Wilton Court	42	32	2	8	0
49 Cavell Street	8	8	0	0	0
70 Varden Street	6	6	0	0	0
Silvester House	44	24	2	1	17
Joscoyne House	40	33	7	0	0
Porchester House	32	27	0	0	5
Dickson House & Mellish House	36	26	0	0	10
20 – 30 Varden Street	24	24	0	0	0
12-16 & 19-45 Turner Street	66	65	0	1	0
46-48 Ashfield Street	8	7	1	0	0
43 – 55 Phillpot Street	54	54	0	0	0
33-49 Walden Street	57	55	0	2	0
Total	**503**	**429**	**27**	**15**	**32**

7.7.13 **Table 7.8** shows that 429 (85.3%) of the 503 rooms assessed will fully comply with the BRE Guidelines in ADF terms.

7.7.14 A total of 27 (5.4%) will experience **minor effects**, 15 (3.0%) will experience **moderate effects** and the remaining 32 (6.3%) will experience **major effects** as a result of the Development.

7.7.15 When considering the actual proposed daylight distribution figures seen in the tables of **Appendix 7.3**, they are generally considered to be good for this type of urban location.

7.7.16 Furthermore it is understood that 34 of the rooms assessed which fail to achieve the ADF target values are kitchens which are less than 13m^2 which in accordance with housing design guidelines are generally considered to be too small to be regarded as habitable rooms. Therefore these figures could and possibly even should be stripped out of the analysis which would result in over 92% ADF compliance which is very good level of design compliance given the size and scale of the Site.

7.7.17 It is noted that the results for Silvester House and Mellish House are impacted by the presence of the external balconies and walkways that form access into the flats for those properties. The BRE Guide states that where these types of inherent design features are present it is accepted practice to consider the impact on this neighbour without the presence of the balconies to illustrate the true impact of the development proposals on this neighbour.

7.7.18 Adopting this approach illustrates that a further 30 rooms in these properties would comply with the ADF method of assessment leaving in total only 10 neighbouring rooms around the site which fall below the BRE target values generating a site wide design compliance in ADF terms of 98%.

7.7.19 Overall the daylight analysis, comprising the VSC, No Sky Line and ADF analysis, shows that the neighbouring residential properties would experience a **negligible** to **major** effect when measured against the BRE daylight recommendations.

Daylight – Internal Analysis

7.7.20 The results of the self-test (i.e. internal) daylight analysis on the affordable housing within Plots A, B1, B2, C, D1, D2, E, F, G, Ha & I of the Development are fully presented in graphical and tabular form in **Appendix 7.4**.

7.7.21 All habitable rooms on the lowest available level of residential within each block has been considered. If this is at lower ground or basement level we have also considered the ground floor assessed for ADF.

7.7.22 The ADF analysis indicates that all rooms assessed within D2, G, Ha & I would meet the BRE Guidelines target values.

7.7.23 The ADF analysis demonstrates that a total of 18 rooms in the remaining blocks will fall below the BRE Guidelines target values for ADF.

7.7.24 Overall this is a very small proportion of the total number of habitable rooms within development and generates a very high proportion of design compliance in terms of the scheme as a whole.

7.7.25 The potential effect on the new residential accommodation within the Development are therefore considered to be **negligible,** aside for eighteen habitable rooms on the over the basement, ground and first floors of the Site which are considered to have a highly **local, permanent, minor** to **moderate adverse** effect.

Sunlight

7.7.26 The results of the sunlight analysis on the relevant windows of neighbouring properties facing within 90^o of due south are presented in **Table 7.9**. The full results of the sunlight analysis are presented in **Appendix 7.3**.

Table 7.9: Number of Windows Experiencing Negligible and Adverse Sunlight Effects as a Result of the Development

Address	Total Number of Rooms Tested	Rooms Meeting BRE Guidelines for APSH	Number of Windows Experiencing Adverse Effects		
			20-29.9% reduction (minor adverse effect)	30-39.9% reduction (moderate adverse effect)	>40% reduction (substantial adverse effect)
67 – 81 & 56 – 58 Cavell Street	37	4	2	4	27
Wilton Court	18	3	1	4	10
33-49 Walden Street	16	7	1	1	7
Total	**71**	**14**	**4**	**9**	**44**

7.7.27 **Table 7.9** shows that 14 (19.7%) of the 71 rooms assessed will fully comply with the BRE Guidelines in ADF terms.

7.7.28 A total of 4 (5.6%) will experience **minor effects**, 9 (12.7%) will experience **moderate effects** and the remaining 44 (62%) will experience **major effects** as a result of the Development.

7.7.29 Overall, the Development is considered to have a **negligible to major effect** on all relevant neighbouring residential properties in relation to sunlight, when measured against the BRE Guidelines APSH assessment criteria.

7.7.30 The majority of the infringements are due to orientation and location of the neighbours in relation to the site where any degree of reduction is unavoidable given their proximity to the boundary of the Site.

Overshadowing

7.7.31 The overshadowing analysis has looked at the effect on amenity areas adjacent to the Site as well as those provided within the Site red line boundary.

7.7.32 The overshadowing analysis presented in graphical and tabular form in **Appendix 7.5** shows that 47.76% of the new public amenity area within the Development would receive at least 2 hours of direct sunlight on 21st March. This is a marginally below the BRE recommendation of at least 50% and as such represents a minor effect when measured against the significance criteria in overshadowing terms.

7.7.33 The analysis of the neighbouring amenity areas adjacent to the Site illustrate that the 6 neighbouring areas considered will all fully comply with the BRE Guidelines with only a very modest overall reduction of 3.04% in the area of amenity receiving at least two hours of direct sunlight on 21st March.

7.7.34 Overall, the Development is considered to have a **negligible** potential overshadowing effect on neighbouring amenity and only a very **minor local, permanent effect** to Amenity Area within the red line boundary of the Site.

Mitigation

7.7.35 Delva Patman Redler have worked with the architects on the siting, orientation and massing on the plots to minimise impact on neighbouring amenity where practicably possible whilst working within the constraints of this dense urban centre.

7.7.36 Some infringements of the daylight, sunlight and shadowing guidelines have been unavoidable due to the positioning, outlook and proximity of a small number of the neighbours adjacent to the site. By carrying out analysis in advance, the design has been formed and modified so as to reduce the effects to largely acceptable levels in respect of sunlight to the key adjoining residential properties. Therefore mitigation measures have been incorporated into the Development where possible and relevant to accommodate.

7.7.37 The shadow analyses for the amenity areas within the Site relate to the whole of the footprint of allocated amenity within the open areas. Given the findings of these studies careful consideration can be given to the more detailed design and location of key amenity areas and zoning so as to ensure the well-lit areas are utilised to their full extent.

Residual Effect

7.7.38 The likely residual effects remain as **negligible to local**, **short term** and of **minor adverse** significance.

7.8 Limitations and Assumptions

7.8.1 No access has been provided or obtained into the neighbouring properties to verify internal layouts.

7.9 Summary

7.9.1 The main methods of assessment included the Vertical Sky Component (VSC), No Sky Contour and Average Daylight Factor (ADF) for daylight analysis, the Annual Probable Sunlight Hours (APSH) for sunlight analysis, permanent shadow analysis for overshadowing of amenity areas, and the Sunlight Availability analysis for solar glare; all using a 3D computer software model.

7.9.2 The daylight analysis shows that when comparing against the current Site conditions the neighbouring properties would experience a **negligible** to **major** effect when measured against the BRE daylight recommendations.

7.9.3 The sunlight analysis shows that all of the windows of neighbouring properties assessed would experience a likely residual **negligible to local, permanent, major** effect.

7.9.4 The overshadowing assessment concluded that overall, the Development would have a **negligible** effect, on neighbouring amenity with only a very highly **local, permanent minor** effect to amenity areas created within the red line boundary of the Site.

7.9.5 The internal daylight analysis shows that all but a total of eighteen habitable rooms within the Site would satisfy the BRE target values for quality and and quantity of light received. As such, the likely residual effect on the new residential accommodation within the Development would be **negligible**, aside for these isolated infringements which would likely be subject to a highly **local, permanent, minor to moderate adverse** residual effect.

7.10.6 Overall, the analysis undertaken shows that given the approach recommended in the BRE Guidelines, the likely residual effect of the Development in daylight, sunlight, overshadowing, terms would be generally acceptable.

Table 7.10: Summary of Effects for Daylight, Sunlight and Overshadowing

Description of Significant Effects	Receptor	Significance of Effects					Summary of Mitigation / Enhancement Measures	Significance of Effects					Relevant Policy	Relevant Legislation
		Major, Moderate, Minor, Negligible	Positive / Negative	P / T	D / I	ST / MT / LT		Major, Moderate, Minor, Negligible	Positive / Negative	P / T	D / I	ST / MT / LT		
Site Preparation, Earthworks and Construction														
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Operation														
Daylight	Neighbouring residential properties	Negligible to Major	Negative	P	D	LT	■ Working with architects on the siting, orientation & massing to minimise impact on neighbouring amenity where practicably possible ■ Working with architects to ensure internal layouts of the flats achieve as high a compliance level as practicably possible	Major	Negative	P	D	LT	Core strategy: Development Plan Document, Managing Development Document: Development Plan Document	N/A
	Site	Negligible, with highly local minor to moderate	Negative	P	D	LT		Major	Negative	P	D	LT		
Sunlight	Neighbouring residential properties	Negligible to Major	Negative	P	D	LT		Major	Negative	P	D	LT		
Overshadowing	Neighbouring Amenity areas	Negligible	Negative	P	D	LT		Negligible	Negative	P	D	LT		
Overshadowing	Site	Minor	Negative	P	D	LT		Minor	Negative	P	D	LT		

Key to table:

P / T = Permanent or Temporary, D / I = Direct or Indirect, ST / MT / LT = Short Term, Medium Term or Long Term

N/A = Not Applicable

7.10 References

Ref. 7.1 Building Research Establishment (BRE), *Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice* (the *BRE Guide*)

Ref. 7.2 Greater London Authority (2011), *The London Plan: Spatial Development Strategy for Greater London (Adopted March 2015) (Further Alterations to the London Plan)* (the *London Plan*)

Ref. 7.3 London Borough of Tower Hamlets (2010), *Core Strategy: Development Plan Document (Adopted September 2010)*

Ref. 7.4 London Borough of Tower Hamlets (2013), *Managing Development Document: Development Plan Document* (Adopted April 2013)

Ref. 7.5 Department for Communities and Local Government (2014), *Planning Practice Guidance* - available at: http://planningguidance.planningportal.gov.uk/

Ref. 7.6 London Borough of Tower Hamlets (2013), *Whitechapel Vision Masterplan Supplementary Planning Document*

Ref. 7.7 British Standards Institute (2008), *BS 8206-02 Lighting for Buildings: Code of Practice for Daylighting*

Ref. 7.8 Chartered Institution of Building Services Engineers (1994), *CIBSE: Code for Interior Lighting*

APPENDIX A.17 TAVISTOCK WORKS APPEAL DECISION

The Planning Inspectorate

Appeal Decision

Hearing held on 2/3 August 2022

Site visits made on 1 and 3 August 2022

by Ben Plenty BSc (Hons) DipTP MRTPI

an Inspector appointed by the Secretary of State

Decision date: 21 September 2022

Appeal Ref: APP/R5510/W/21/3288333
Tavistock Works, Tavistock Road, Yiewsley, WEST DRAYTON UB7 7QX

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
- The appeal is made by Linea UB7 Ltd against the decision of London Borough of Hillingdon.
- The application Ref 35810/APP/2021/1234, dated 26 March 2021, was refused by notice dated 25 June 2021.
- The development proposed is the demolition of an existing building and its replacement with an up to 8-storey building comprising residential units and associated car parking, landscaping and amenity space.

Decision

1. The appeal is allowed, and planning permission is granted for the demolition of existing building and replacement with an up to 8-storey building comprising residential units and associated car parking, landscaping and amenity space at Tavistock Works, WEST DRAYTON UB7 7QX in accordance with the terms of the application, Ref 35810/APP/2021/1234, dated 26 March 2021, and the plans submitted with it, subject to the schedule of attached conditions and the s106 Legal Agreement.

Preliminary Matters

2. The Hearing sat for two days on 2 and 3 August. I made an accompanied site visit on 3 August and saw the site from several flats within Fitzroy Court as part of my visit.

3. A s106 Legal Agreement[1], in the form of a Unilateral Undertaking (UU), has been submitted in support of the appeal. This makes provision for highway works, precludes future occupiers from gaining access to a resident parking permit, an off-site affordable housing contribution, employment and construction training, air quality and carbon funds, an open space contribution, and the provision of a parking space on Tavistock Road for a car club. I shall return to this later in my decision.

4. Policy D6 of the London Plan and DMHB12 of the Local Plan Part Two – Development Management Policies (DMP), referenced in the Council's Reason for Refusal One refer to tall buildings. However, the Council stated at the Hearing that upon further consideration these policies were not engaged as the proposal would not be tall in comparison to adjacent buildings. I see no reason

[1] S106 Legal Agreement, by Linea UB7 Ltd and Oaknorth Bank Plc, dated 6 August 2022

to disagree with this assertion and thus these policies weigh neither for nor against the proposal.

5. The Padcroft Works site, adjacent to the site, gained planning permission[2] for the development of 308 flats and offices in 2015. This was also subject to two approved Section 73 applications that made alterations to the internal configuration of the approved building, other minor changes and to add 7 further flats. This building has now been completed with Fitzroy Court being the southern-most block of Padcroft Works, adjacent to the appeal site.

6. The Comag site, also adjacent to the appeal site, was subject to recent planning permission[3] for the erection of 104 flats and community space. This demonstrates the scale of development the Council has previously found to be acceptable, within the same allocated site. Although approved in 2018 and now expired, I see no reason in evidence why the policies associated with that decision do not still carry significant weight in relation to the revised National Planning Policy Framework (the Framework). Therefore, the Comag scheme remains a material consideration albeit of limited weight.

7. New Guidance[4] from the British Research Establishment (BRE) with respect to daylight and sunlight was recently published. This is a comprehensive revision of the 2011 edition, which it replaces. The Guidance was recently revised and the Average Daylight Factor (ADF) test for proposed accommodation was deleted and replaced by calculating target illuminances and daylight factors. Main parties were given an opportunity at the Hearing to update their evidence to reflect any changes caused by the new guidance. I have paid regard to the further comments that I received on this matter.

8. At the start of the Hearing, I accepted the submission of several pieces of late evidence. These consist of speaking notes prepared by the Appellant's consultants, relating to the main issues and included photographs to assist with the site visit. The speaking notes expand on points raised in the Appellant's Statement of Case and the new BRE Guidance. I am satisfied that no parties would be prejudiced by my taking these into account.

9. Amended Plans and a Landscape Strategy were submitted by the Appellant in support of the appeal. These show the relocation of part of the cycle store, all of the bin store and other minor elevational changes to the configuration of some fenestration at ground floor level. The Landscape Strategy shows how the areas of external amenity space could be landscaped. Having heard the views of both main parties I decided to accept these amendments on the basis that they would not be materially different to that which was before the Council and would not prejudice any party.

Main Issues

10. The main issues are:

- The effect of the proposed development on the character and appearance of the area;

[2] Planning Application Reference: 45200/APP/2014/3637
[3] Planning Application Reference: 24843/APP/2018/269
[4] Site layout planning for daylight and sunlight (BRE 209 2022)

- The effect of the proposal on the living conditions of future occupiers with respect to the provision of external amenity space;
- The effect of the proposal on the living conditions of occupiers of Fitzroy Court, with particular respect to sunlight, daylight and outlook; and
- Whether the proposed development would deliver all necessary planning obligations to satisfy the requirements of local and national policies.

Reasons

Character and appearance

11. The site is within an area of mixed use. Areas to the north-west of the site consist of traditional housing of diverse styles consisting of terraced and low-rise flatted development. To the south and east of the site are commercial areas, with local retail concentrated along High Street and Station Road. The local pattern of development consists of buildings that are either adjacent to or slightly recessed from the footway, creating a strong urban character. The appeal site is opposite a wooded embankment. The site consists of a two-storey building with a small parking area to its rear. The building is functional in design. As a result, the site makes neither a positive nor negative contribution to the character and appearance of the area.

12. The site is within an area of land that is transitional. It is adjacent to the residential development of Padcroft Works and the Comag site. The site is within the Yiewsley/West Drayton Town Centre, with traditional two and three storey housing within the wider surrounding area. The proposed development would be a combination of six and eight stories. It would address the street, largely on the back of the footway, forming a hard urban edge to the street. This would replicate the form of built form evident on several recently completed local developments including Padcroft Works, on Bentinck Road and more historical development on High Street and Station Road. Furthermore, the proposal would be similar in height to many elements of Padcroft Works and the expired Comag Scheme. Consequently, the proposed height and siting of the building, would complement the character of the area, in respect of both the existing and emerging new streetscene.

13. The width and depth of the building have been determined by a number of factors. The proposed building stands within an urban area where buildings are close together and many form continuous frontages. In replicating this approach, the proposal correctly occupies the site's frontages with comprehensive built form. The depth of the ground floor of the building responds to the blank rear wall shared with Padcroft Works with a podium deck that would create amenity space at first-floor. The depth of the building above ground floor, onto Tavistock Road, would be informed by its floorplate in creating a uniform 'front-to-back' dimension. This would arrange flats in a logical stacked manner with space behind being retained for the amenity deck. Furthermore, the building includes a window arrangement that is stacked in vertical groups within traditional brick elevations. This would create a coherent design that replicates the established rhythm of local contemporary development.

14. The mass of the proposal would occupy a greater area of the site in comparison to Padcroft Works, with fewer open spaces around the building. Nevertheless,

its scale would be partly informed by clear design objectives to both complement the height of Padcroft Works and make a strong contribution to the street.

15. The rear elevation of the proposed building would, in places, be close to Fitzroy Court. The ground floor plan would cover the majority of the site. It would incorporate a small enclosed car park and two flats. The building would be adjacent to the boundary wall of Padcroft Works, screening a blank feature of the neighbouring building at its lower level. Above this, the proposed building would narrow at its rear to create a landscaped garden. This configuration would make efficient use of this constrained site and to successfully address Tavistock Road.

16. The side of the proposal would visually adjoin Fitzroy Court retaining a limited separation gap. This would enable the front elevation of development to visually extend the curved frontage of Block's 4, 5 and 6 Padcroft Works. This approach would continue the curvature of the existing frontage in an integrated and complementary manner. Furthermore, the side elevation of Fitzroy Court, makes a limited contribution to the street due to its recessed location and having a mostly blank elevation. Whilst the proposal would obscure this view this would not remove an important view of Fitzroy Court. As a result, the proximity of the proposal to Fitzroy Court would reinforce the street edge and the pattern of development initiated by blocks 4, 5 and 6 of Padcroft Works.

17. The Tavistock Road frontage of the proposal includes a number of functional components such as the access points to the car park, cycle store and bins store. These are essential elements to enable the building to function correctly. Being utilitarian in character these convey limited interest. However, the proposed ground floor flats, and their associated internal and external spaces, would add interest and activity that would enliven the corner. The proposed building would create an angled floorplan that, when seen in combination with the enclosed balconies, would create a strong corner feature adding interest to the building from this important view without harming views of the Padcroft Works site beyond. Consequently, the proposal would convey strong visual interest and activity both on the corner and along Tavistock Road.

18. As a result, the proposed development would complement the character and appearance of the area. Accordingly, the proposal would comply with policy BE1 of the Local Plan (Part 1) (2012) (LP), policies DMHB 10 and DMHB 11 of the DMP, policies D1, D2, D3, D8 and D9 of the London Plan (2021) and the Framework with respect to issues concerning the character and appearance of an area. These seek, among other matters, for development to harmonise with the local context taking into account the surrounding scale and height of adjacent structures and a design- led approach that optimises the capacity of a site.

Living conditions – proposed

19. Policy DMHB 18 of the DMP requires residential development to provide good quality outdoor amenity space in accordance with table 5.3 of the Plan. This table identifies that around 750sq.m would be required. I accept the Appellant's calculations showing that the scheme would provide around 294sqm of communal space and 177sq.m of private space, with a consequent under-provision of about 279sq.m. The external amenity space within the scheme would be provided in three main areas. These would be at first, sixth

and seventh floors. At ground floor the scheme would also provide small areas of both common and private space to the rear and side of the building. Furthermore, private balconies would be provided for most flats.

20. Although recognising the numerical shortfall, the consideration of the quantity of space provided should take into account the site's context and constraints and the quality of the external space proposed. The Appellant's sunlight assessment[5] of the external amenity space finds that more than half of the area receives 2hrs of more of direct sunlight on March 21st and 80% on June 21st, thus meeting BRE Guidance. Although the first-floor external area would be in shade for large parts of the day, being north-facing, this would be readily offset by the space provided at the seventh floor level and would provide users with a choice of amenity space. The first-floor amenity space would not be susceptible to anti-social behaviour as it would be a private communal area with access reserved to residents only.

21. The Appellant's Landscape Strategy shows how the communal and private spaces could be arranged. This shows a design that would create pleasant spaces and prevent overlooking towards neighbouring windows. The first-floor area includes low level planting and multi-stem subcanopy trees in raised planting around the northern boundary, with seating and hardstanding arranged between these. Although, this space would be largely in shade it would offer a pleasant semi-private space that would be sheltered from the sounds of the nearby railway line.

22. The sixth-floor space would offer a sunny and open space with a combination of shrubs, dwarf fruit trees and seating areas and planters to the north boundary to afford screening to and from neighbouring flats. The seventh-floor space would provide a children's play area with artificial grass and would be surrounded by planters to provide a pleasant space within a partially shaded location. These three areas have the capability to provide good quality external space as illustrated by the Landscape Strategy. These could be further detailed through a hard and soft landscaping plan, secured by planning condition.

23. The proposed ground floor amenity areas are relatively small. Nevertheless, the common area provides a useful meeting point for visitors or occupiers to gather. The private terrace areas assigned to the ground floor flats would be limited but would be a benefit to occupiers of these flats and make a contribution to the occupier's living conditions. All proposed flats above ground floor would have access to generous areas of private external space within enclosed balconies on the Tavistock Road frontage.

24. The Appellant has indicated the proximity of several areas of public open space to the site. Whilst these would not offset the on-site shortfall in quantitative terms, it illustrates that future occupiers would have access to public space that would complement the on-site provision within a short walking distance. It is recognised that the ward of Yiewsley suffers an under provision of open space and recreational space. However, the proposed scheme is relatively small and would put limited further pressure on local open space.

25. Therefore, taking the above points together, whilst the quantity of amenity space proposed is lower than the numerical requirements of table 5.3, the proposed external areas would be good quality, offering a variety of communal

[5] AD3 speaking notes

and private spaces that would be high quality and useful. As such, taking into account the design requirements and constrained nature of the site, the external amenity space would be appropriate and adequate for the needs of future occupiers. As a result, the proposal would comply with policy DMHB 18 of the DMP in seeking development that would provide good quality and useable private outdoor amenity space.

Living conditions – existing

26. Fitzroy Court includes side windows that serve a number of bedrooms. The windows are clustered into three vertical stacked groups. The majority of windows are stacked in two groups with two flats on each of the floors 1-5 taking in direct views of the proposal with separation distances of around 10 metres and 19 metres. Floors 6 and 7 have a slightly different window configuration with separation distances of 10 metres and 7 metres.

27. DMHB 11 of the DMP requires development to not adversely impact on the amenity, daylight and sunlight of adjacent properties. A Court judgment[6] in 2018 clarified that assessment of these matters should be a two-stage process. Firstly, to determine whether there would be a material deterioration in conditions based on technical assessment and secondly, based on judgement, whether that deterioration would be acceptable in the particular circumstances of the case. If the BRE guidelines are exceeded the deterioration would be material. To answer the second question wider considerations are engaged where the effect of a material deterioration of living conditions must be judged on an individual proposal in its local context.

28. Although not a policy document, the BRE Guide (the Guidance) provides a useful tool to assess the effect of development on neighbouring occupiers in terms of sunlight and daylight. The windows most affected by the proposed scheme serve existing bedrooms within Fitzroy Court. The Guidance states that daylight distribution should consider each of the main rooms, including living rooms, dining rooms and kitchens. It states that bedrooms should also be analysed but are less important. It also states that the main requirement for sunlight is in living rooms, where it is valued at any time of the day especially in the afternoon. This is viewed as being less important in bedrooms and kitchens where people prefer it in the morning rather than afternoon[7] and that normally a loss of sunlight need not normally be analysed for these rooms[8]. As all main living rooms of Fitzroy Court have a window orientated within 90 degrees due south, these would continue to receive adequate sunlight.

29. Daylight considerations relate to light levels obtained from the sky. This is an assessment of daylight for existing buildings and represents how bright a particular window feels. This can be measured using Vertical Sky Component (VSC), expressed as a percentage. This considers the effect of an obstruction and is therefore a measure of daylight as a whole. The obstruction angle is the angle the obstruction makes from the centre of the subject window measured from the horizontal i.e. 90 − θ = obstruction angle. A VSC value of at least 27%, or no less than 0.80 times its former value and an obstruction angle of less than 25°, would generally give reasonable results with a limited perceived reduction of daylight.

[6] Rainbird v The Council of the London Borough of Tower Hamlets [2018] EWHC 657 (Admin). 83-84
[7] BRE Guideline para 3.1.2
[8] BRE Guidance para 3.2.3

30. The Appellant's Daylight and Sunlight Report[9] assigns reference points for all windows within the effected blocks of Padcroft Works. Drawing P2646/W03 03, appendix 5, relates to the southern elevation of Fitzroy Court. The most affected bedroom windows have been assigned references W5 to W8 on levels 41-47. The VSC measure demonstrates that 25 of 65 windows would experience reductions of between 27% and 91%. With 12 windows experiencing a greater than 50% reduction of daylight, although 3 of these are secondary windows for living rooms. The remaining 9 windows most affected by a greater than 50% loss, serve bedrooms.

31. Consequently, the effect on the daylight levels received by occupiers of Fitzroy Court would result in a material deterioration in their living conditions due to the obstruction caused by the proposed building. However, as stated above, the *Rainbird* judgement identifies that if a material deterioration is found then consideration is required as to whether the local context and wider issues should be taken into account.

32. The guidance emphasises that existing buildings should be good neighbours, stand within a reasonable distance from the boundary and take no more than their fair share of light. Fitzroy Court includes bedroom windows that are extremely close to the shared boundary of the site. These access daylight from over the appeal site and as such take more than their fair share of light. In such circumstances, Appendix F of the Guidance advocates that other approaches to daylight and sunlight assessment may be appropriate. This is concerned with setting alternative values for skylight and sunlight access based on a site's context.

33. It appears that it was the intention of the allocation for all three sites A, B and C to come forward in a comprehensive manner. As such, the expected height and scale of development on site C should be generally consistent with other sites within the allocation. The scheme would be a similar height as Padcroft Works and the expired Comag site. Due to the proximity of Fitzroy Court to the shared boundary and the link of both sites through the allocation, the scheme presents a situation where alternative daylight measures should be considered.

34. Appendix F of the Guidance refers to a mirror image assessment. This alternative measure considers the effect of a building that accesses daylight over a neighbouring site. Given the site's context, the application of the mirror image assessment is an appropriate alternative measure to consider the effect of the scheme. The Appellant's Daylight and Sunlight Report, at Appendix 4, illustrates the effect on daylight levels to the windows of Fitzroy Court if it's mirror image was placed on the appeal site. The Appellant's assessment demonstrates that a mirror image of Fitzroy Court would result in a building that would be significantly closer to the shared boundary than the proposed scheme above it's ground floor podium. The analysis shows that such proximity would result in a substantially greater loss of daylight to the affected windows than is proposed by the current scheme.

35. The mirror-image assessment describes a more equitable arrangement where such an impact would be considered acceptable, in terms of a fair share of light. I therefore do not concur with the Council that to apply the mirror image assessment would be unfair to occupiers of Fitzroy Court. Rather, the mirror image measure appears to be more appropriate in this situation rather than the

[9] Daylight and Sunlight Report, dated March 2021, by Point2

application of the VSC measure. Consequently, this alternative measure provides a reasonable justification for a greater reduction in daylight to Fitzroy Court than by strictly applying the BRE Guidelines. To do so would unfairly prejudice the development of the appeal site and hamper the delivery of a building of suitable scale that would be commensurate with the aspirations of the allocation to provide comprehensive development across the three sites.

36. Furthermore, the Framework states that authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight where they would otherwise inhibit making efficient use of a site provided it would provide acceptable living standards. This is also identified by DMP policy DMHB11 that design safeguards for new development should be satisfactory to protect the re-development of any adjoining sites that have development potential.

37. In term of outlook, views from the bedroom windows and corner balconies on the south elevation of Fitzroy Court, look towards the rear elevation of the proposed scheme. I am cognisant that current views from higher levels of the neighbouring building currently include views of the tree lined railway embankment beyond the site. Instead, these views would overlook the proposal's landscaped amenity space at first floor and its fenestrated rear elevation. This would offer some architectural and green interest to observers. Consequently, whilst the outlook would change, most direct views would be from bedroom windows which are of secondary importance. As such, the proposed building would not be overbearing or domineering to occupiers of Fitzroy Court to result in material harm.

38. There would be a large number of flats within Fitzroy Court that would experience a substantial reduction of daylight within affected bedrooms. This change is understandably of concern to the residents affected. However, the identified reductions in daylight levels would not be excessive and within the context of the appeal site wider issues must be considered. The area is undergoing regeneration, in accordance with the Council's aspirations, and this has resulted in new higher density development being erected within this evolving area. The relationship proposed is appropriate taking the urban location of the site into account where expectations for a wide outlook and high levels of daylight and sunlight would be reduced. Access to reduced daylight would be offset by occupiers of all units within the allocated site having easy access to the town, its services and public transport connections.

39. Furthermore, the relationship between the side of Fitzroy Court and the rear elevation of the proposal would be similar to other locations within Padcroft Works and the wider area. Accordingly, the changes seen within the area, in comparison to existing relationships, is not substantially different or worse. Taking these matters into account I consider that the proposal would not result in an unjustifiable change. As such, the proposal would retain an acceptable living environment for existing occupiers of Fitzroy Court in terms of daylight and outlook.

40. Consequently, the proposed development would accord with policies BE1 of the LP, DMHB 11 of the DMP, policy D3 of the London Plan and the Framework with respect to the effect on living conditions. These policies seek, inter alia, for development to not adversely impact the amenity, daylight and sunlight of adjacent properties and to create a high standard of amenity for existing users.

Planning obligations

41. The submitted Unilateral Undertaking is a signed and executable document. It includes a range of measures that have been sought by the Council and are listed within the Statement of Common Ground.

42. Policy H5 of the London Plan and DMP policy DMH7 requires the provision of 35% affordable housing. Whilst the viability appraisal illustrates that no provision could be offered, discussions with officers concluded that a small off-site sum could be provided in this regard. This would be spent in accordance with paragraphs 4.30-4.34 of the Council's Planning Obligations SPD (2014).

43. Due to the site's town centre location the provision of nine parking spaces would be acceptable. The local area is subject to parking restrictions and a controlled parking zone. Therefore, the proposed development would be likely to put additional pressure on the limited availability of on-street parking. As such, it would be necessary for the Appellant to prevent future occupiers from seeking a resident parking permit. The proposed highway works, within the UU, include the provision of a suitable access for vehicles to gain access to the on-site car park and repair the existing crossover.

44. Due to the limited proposed car parking the Appellant's Transport Assessment[10] recommends that the scheme includes the provision of a car club. This would require a space to be allocated on street, which I am satisfied could be readily accommodated. The car club would deliver sustainable benefits of the scheme in support of the Council's Planning Obligations SPD (2014) and would therefore be a reasonable component of the UU.

45. The Council's Planning Obligations SPD also seeks development to contribute towards training and employment. This is applied to most planning applications for significant employment generating development. The sums collected would be put towards training and employment in the borough. An in-kind scheme delivered on-site would be preferred by the Council. The UU would include the payment of a sum towards construction training courses and workplace coordinator or the delivery of an on-site training programme of similar value. This is a reasonable requirement that would relate in kind to the scale of the development and allow flexibility for either option to be provided.

46. The site is within air quality focus and air quality management areas. DMP Policy DMEI 1 requires green roofs to be provided on site where possible and for an off-site contribution to offset any on-site shortfall to create an Air Quality Neutral development and reduce pollution. The mitigation required has been calculated using the Defra's Damage Cost Approach. The sum required would be spent in accordance with the Council's Air Quality Local Action Plan.

47. Where it is demonstrated that development cannot fully achieve a zero-carbon target any shortfall should be provided as an off-site contribution as sought by DMP DMEI 2. In this case, a sum has been calculated using a pro rata sum of £60/tCO2, to determine the required amount.

48. An open space contribution is necessary to satisfy the requirements of DMP policy DMCI 4. This states that where an on-site provision of public open space cannot be provided, and off-site sum should be secured to enable the Council to provide/upgrade existing open space. The calculation for the sum derives

[10] Transport Assessment, by i-Transport, dated 26 March 2021

from the Council's Planning Obligation SPD. The Council has confirmed the sum that would be required as stated within the UU.

49. As a consequence, the above detailed planning obligations are reasonable and necessary in satisfaction of the requirements of DMP policy DMC1 7, policy DF1 of the London Plan and the Framework.

Other considerations

50. DMP Policy SA38 allocates sites of A, B and C for redevelopment. It requires these to be developed in a comprehensive manner. However, whether these were brought forward as one single planning application or as three separate schemes, should not materially alter the objective of all parties to ensure that development comes forward in a comprehensive manner. These sites remain conjoined in policy terms by virtue of the allocation. I do not find that this policy means 'to cover the entire site in built form' but equally I see no reason why the proposal, in this case, should not result in the development of the whole site, such an approach suits the site and its design requirements.

51. Padcroft Works was approved in 2015, and consequently residential occupiers of the development should have been aware that they were moving into a regeneration area. It also seems reasonable to assume that site C would also come forward for redevelopment, at some point, as evidenced by its inclusion within the allocation and its planning history.

52. Furthermore, the Section 73 applications included the addition of new bedroom windows on the southern elevation. Within its Committee Report the Council stated that the changes proposed, including the addition of more windows overlooking the site, would not prejudice the development of Site C.

53. These considerations are of great importance as material considerations and establish a clear context for design principles on the appeal site. These matters weigh in favour of the delivery of a building of similar scale to that of Padcroft Works, and the expired scheme on Comag, despite the proximity of nearby neighbouring windows.

54. The scheme would deliver housing in accordance with an allocated site for such purposes. Accordingly, the proposal would contribute to the regeneration of this former industrial part of the town. The scale of the proposal accords with the general expectations of the allocation, as envisaged for sites A, B and C to come forward in a comprehensive manner. The proposal, whilst resulting in a reduction of daylight to some bedroom windows, would accord with BRE Guidance which states that a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings[11].

Other Matters

55. The effect of the proposal with respect to privacy has been raised by interested parties. The rear elevation would include windows that would serve circulation corridors and are proposed to be obscurely glazed. As such, there would not be a poor relationship between windows of habitable rooms of the proposal and neighbouring flats. The limited overlooking that would occur to some flats within Yardley Court could be adequately mitigated through the imposition of a

[11] BRE Guidance, para 1.6

condition. The first-floor external amenity space would be a similar height as the amenity space to the rear of Padcroft Works and would provide only oblique views towards nearest neighbouring windows. Also, views from the proposed external spaces at sixth and seventh floors would overlook neighbouring windows and balconies to a limited extent. These relationships could be further obscured by landscaping measures as proposed within the Landscape Strategy. As such, the proposal would not result in a material loss of privacy to adjacent neighbouring occupiers.

56. Concerns have been raised that the density of the proposal is excessive at 457dph (dwellings per hectare). DMP Policy DMHB 17 states that the Council will apply density standards as set out in table 5.2. This table explains that in urban areas, including West Drayton a density of 150-250dph would be appropriate. Nevertheless, the companion text to the policy explains that the table will be applied in a flexible manner and represents a starting point for discussions which should be ultimately determined by a design. Moreover, Policy D2 of the London Plan states that densities should be proportionate to a site's connectivity and accessibility and numerical density standards are excluded to prevent an arbitrary application of thresholds.

57. Furthermore, allocation DMP policy SA38 defines densities for Sites A and B but states that Site C should have a density that is to be determined by design. As identified earlier, the proposed scheme would be an appropriate scale and would represent good design. The site is constrained leading to an under provision of external amenity space. However, the accessibility benefits of the site and in meeting scale objectives of the plot in comparison to neighbouring development, indicates that the proposed density would be appropriate for the site.

58. I have taken into account representations made with respect to the impact on infrastructure, especially education places, airflow and loss of value, but these matters do not affect my findings on the main issues.

59. The moderately constrained location could result in some temporary disturbance from construction vehicles and activity. Nevertheless, the effect of construction on adjacent neighbouring occupiers, in terms of noise and disturbance, could be adequately mitigated through the imposition of a Construction Management condition.

60. Concerns have been raised by interested parties that the proposed development would represent a fire risk to adjacent occupiers due to its proximity. Policy D12 of the London Plan states that development proposals must achieve the highest standards of fire safety to ensure the safety of all building users. The Appellant's submitted fire strategy includes details of how fire safety measures would be included in the construction of the development and the means of fire detection and suppression. I am satisfied that the initial fire safety issues have been properly addressed and this could be suitably concluded through the submission of a Fire Statement by planning condition.

Conditions

61. I have considered the use of conditions in line with the guidance set out in the Government's Planning Practice Guidance (PPG). I have taken into consideration the list of suggested conditions appended to the Statement of Common Ground, which was discussed during the Hearing.

62. It is necessary for details relating to a dust management strategy and a construction management plan to be submitted prior to the commencement of development. I consider these pre-commencement conditions to be so fundamental to the development that it would have been otherwise necessary to refuse permission. These are required prior to construction commencing because they relate to the initial setting out of the site. These measures ensure the construction process would have an acceptable and limited impact on the living conditions of adjacent residential occupiers and on highway safety.

63. I have imposed the standard conditions with respect to timeframe, approved plans and approved documents as advised by the PPG for clarity and certainty. Conditions are necessary with respect to the provision of planting and materials/hardstanding in the interests of the character and appearance of the area. Details of levels are required to be determined by condition to ensure that the building would properly align with levels within Padcroft Works.

64. It is necessary to require obscure glazing and privacy measures on windows within the proposed development to ensure that the privacy of neighbouring occupiers would be maintained. I am cognisant that the Council would prefer to see reference in this condition to obscure glazing. However, the proposed form of words would achieve the same objective and allow for greater flexibility. This would enable main parties to find the ideal glazing/design solution, as fully obscured glazing may be unnecessary.

65. It is also necessary for the details of a low emission strategy, an overheating strategy and details of low/zero carbon technology to be provided to meet the requirements of policies SI 1, SI 2, SI 4 and T4 of the London Plan, LP policy EM8 and DMP policy DMEI 14. Also, a condition is required to ensure that accessibility requirements of policy D7 of the London Plan are delivered by the proposal. It is also necessary for the scheme to obtain Secure by Design accreditation to accord with policy D11 of the London Plan.

66. Furthermore, conditions are necessary to require a contamination assessment, noise survey and parking allocation plan to ensure the proposed development functions well in the interests of the living conditions of future occupiers. A condition is also necessary for the submission of a detailed Fire Statement to satisfy policy D12 of the London Plan.

Planning Balance and conclusion

67. The proposal would underprovide on-site external space and result in a reduction in daylight to neighbouring flats, resulting in a material deterioration in their living conditions using BRE Guidelines and the VSC measure. However, the consideration of the mirror image effect as an alternative measure, has shown that an alternative scheme, mirroring Fitzroy Court, would result in a substantially greater reduction in daylight levels to the affected bedroom windows.

68. In contrast, the proposal would accord with allocation policy SA38 and would deliver a scheme that is well designed and responds positively to the site and its surroundings. The scheme would complement Padcroft Works and would align with the scale of both this and the expired consent of Comag. Therefore, the proposal would accord with the allocation's inherent expectation for development on site to complement adjacent plots and the site's urban context. Furthermore, the proposal would deliver housing on previously

developed land in a location with good accessibility and make a small contribution towards affordable housing.

69. The proposal would extend and continue the existing grain of development and contribute to the comprehensive redevelopment of this allocated site. On this basis, the proposed development would have an acceptable impact on neighbouring living conditions and its benefits would outweigh the under provision of external amenity space.

70. There are no material considerations that indicate the application should be determined other than in accordance with the development plan. For the reasons given, the appeal should be allowed, and the scheme approved subject to the attached conditions and s106 Legal Agreement.

Ben Plenty

INSPECTOR

APPEARANCES

For the Appellant;

Mr Kevin Leigh	Counsel
Mr Mark Westcott	Planning Consultant
Mr Liam Dunford	Daylight, sunlight and overshadowing surveyor
Mr Pierre Saunal	Architect
Ms Christine Hereward	Solicitor
Mr Stephen Lerant	Heritage and townscape
M Catherine Layton	Heritage and townscape
Ms Catherine Xavier	Landscape Architect

For the Council;

Mr Michael Brett	Counsel
Mr Chris Brady	Senior Planning Officer
Mr Mark Butler	Urban designer
Ms Roz Johnson	Planning Officer
Ms Sehar Arshad	Solicitor

Interested parties;

Councillor Sital Dunja
Councillor Jan Sweeting
Ms Amanda Davidson

Additional documents

AD1 speaking notes of Mark Westcott
AD2 speaking notes of Pierre Saunal
AD3 speaking notes of Liam Dunford
AD4 speaking notes of Stephen Levrant
AD5 speaking notes of Catherine Xavier
AD6 Site visit itinerary and photographs

Schedule of conditions

1) The development hereby permitted shall begin not later than three years from the date of this decision.

2) The development hereby permitted shall not be carried out except in complete accordance with the details shown on the submitted plans, numbers;

   0010-AD-XX-00-DR-A-0001 Rev 03, 0010-AD-XX-01-DR-A-0101 Rev 05 0010-AD-XX-02-DR-A-0102 Rev 08, 0010-AD-XX-03-DR-A-0103 Rev 05 0010-AD-XX-04-DR-A-0104 Rev 05, 0010-AD-XX-05-DR-A-0105 Rev 05 0010-AD-XX-06-DR-A-0106 Rev 06, 0010-AD-XX-07-DR-A-0107 Rev 06 0010-AD-XX-08-DR-A-0108 Rev 03, 0010-AD-XX-ZZ-DR-A-0225 Rev 03 0010-AD-XX-ZZ-DR-A-0275 Rev 05, 0010-AD-XX-ZZ-DR-A-0276 Rev 03 0010-AD-XX-ZZ-DR-A-0278 Rev 03, 0010-AD-XX-ZZ-DR-A-0277 Rev 04 and 0010-AD-XX-00-DR-A-0100 Rev 14.

   Thereafter the development shall be retained/maintained in accordance with these details for as long as the development remains in existence.

3) The development hereby permitted shall not be carried out except in complete accordance with the specified supporting plans and/or documents: Flood Risk Assessment and Surface Water Management Report dated February 2021, Transport Assessment dated March 2021 and Travel Plan dated March 2021. Thereafter the development shall be retained/maintained in accordance with these details for as long as the development remains in existence.

4) No development, save for demolition and site clearance, shall take place until details of all materials and external surfaces, including details of balconies have been submitted to and approved in writing by the Local Planning Authority. These shall include information relating to make, product/type, colour and photographs/images. Thereafter, the development shall be constructed in accordance with the approved details and be retained as such.

5) No development, save for demolition and site clearance, shall take place until a landscape scheme (in general conformality with the Landscape Strategy 21075-GUA-DOC-L-001), has been submitted to and approved in writing by the Local Planning Authority. The landscape scheme shall include details of Hard and Soft Landscaping, a Car Parking Layout that includes two disabled bays and for 20% of all parking spaces to be served by electrical charging points with the remaining spaces being served by passive electrical charging points, cycle stands for 58 bicycles, boundary treatments, details of landscape maintenance and a schedule for implementation of all works, an ecological enhancement plan and full specification and design of the Green Roof. Thereafter the development shall be carried out and maintained in full accordance with the approved details.

6) No development shall commence until a Dust Management Plan has been submitted to, and approved in writing by, the LPA. This must demonstrate compliance with the GLA Control of Dust and Emissions from Construction and Demolition SPG (or any successor document). The development shall be carried out in strict accordance with the approved plan.

7) No development, save for demolition and site clearance, shall commence until a low emission strategy (LES) has been submitted to and approved in writing by the Local Planning Authority. The LES shall address but be not restricted to: 1) secure compliance with the current London Plan (March 2021), and the London Sustainable Design and construction Supplementary Planning Guidance requirements 2) a clear and effective strategy to encourage users to a) use public transport; b) cycle / walk to work where practicable; c) enter car share schemes; d) purchase and drive to work zero emission vehicles. The measures in the agreed scheme shall be maintained throughout the life of the development.

8) The development, excluding demolition, site clearance and initial ground investigation works, hereby permitted shall not commence until a scheme to deal with contamination has been submitted and approved by the Local Planning Authority (LPA). The scheme shall include all of the following measures unless the LPA dispenses with any such requirement specifically and in writing: (a) A desk-top study carried out by a competent person to characterise the site and provide information on the history of the site/surrounding area and to identify and evaluate all potential sources of contamination and impacts on land and water and all other identified receptors relevant to the site; (b) A site investigation, including where relevant soil, soil gas, surface and groundwater sampling, together with the results of analysis and risk assessment shall be carried out by a suitably qualified and accredited consultant/contractor. The report should also clearly identify all risks, limitations and recommendations for remedial measures to make the site suitable for the proposed use. (c) A written method statement providing details of the remediation scheme and how the completion of the remedial works will be verified shall be agreed in writing with the LPA prior to commencement. If during development or works contamination not addressed in the submitted remediation scheme is identified, an addendum to the remediation scheme must be agreed with the LPA prior to implementation; and All works which form part of the remediation scheme shall be completed and a verification report submitted to the Council's Environmental Protection Unit before any part of the development is occupied or brought into use unless the LPA dispenses with any such requirement specifically and in writing.

9) No development, save for demolition and site clearance, shall take place until a revised noise survey is submitted which includes details relating to mechanical ventilation impact and appropriate sound insulation details. Thereafter the development shall be carried out in strict accordance with the approved details.

10) No development shall proceed beyond the steel/timber/concrete superstructure (including roof structure) of the building until the principles of a Fire Statement has been submitted to and approved in writing by the Local Planning Authority (in consultation with Building Control, the Health and Safety Executive and London Fire Brigade). The statement should detail how the development proposal will function in terms of: i) the building's construction: methods, products and materials used, including manufacturers' details ii) the means of escape for all users: suitably designed stair cores, escape for users who are disabled or require level access, and associated evacuation strategy approach iii)

features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans iv) access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these v) how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building vi) ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures. Prior to occupation of the development, the final comprehensive Fire Statement shall be submitted to and approved in writing by the Local Planning Authority and should be accompanied by the Building Control Decision Notice or equivalent. Thereafter the development shall be carried out and maintained in full accordance with the approved details.

11) Prior to commencement of superstructure works, the final Overheating Strategy shall be submitted to and approved in writing by the Local Planning Authority. The submission shall demonstrate how the development will reduce the potential for internal overheating and reliance on air conditioning systems in accordance with the following cooling hierarchy: 1) reduce the amount of heat entering a building through orientation, shading, high albedo materials, fenestration, insulation and the provision of green infrastructure; 2) minimise internal heat generation through energy efficient design; 3) manage the heat within the building through exposed internal thermal mass and high ceilings; 4) provide passive ventilation; 5) provide mechanical ventilation; and 6) provide active cooling systems. The approved details shall thereafter be implemented and retained in perpetuity.

12) Prior to the commencement of works on site, a Construction Management and Logistics Plan shall be submitted to and approved in writing by the Local Planning Authority This plan shall detail: (i) The phasing of the works; (ii) The hours of work; (iii) On-site plant and equipment; (iv) Measures to mitigate noise and vibration; (v) Measures to mitigate impact on air quality; (vi) Waste management; (vii) Site transportation and traffic management, including: Routing; Signage; Vehicle types and sizes; Hours of arrivals and departures of staff and deliveries (avoiding peaks times of day); Frequency of visits; Parking of site operative vehicles; On-site loading/unloading arrangements; and Use of an onsite banksman (if applicable); (viii) The arrangement for monitoring and responding to complaints relating to demolition and construction. This plan should accord with Transport for London's Construction Logistic Planning Guidance and the GLA's 'The Control of Dust and Emissions during Construction and Demolition' Supplementary Planning Guidance (July 2014) (or any successor document). The construction works shall be carried out in strict accordance with the approved plan.

13) Prior to above ground works, save for demolition and site clearance, full details of the low and zero carbon technology shall be submitted to and approved in writing by the Local Planning Authority. The details shall identify the specific "be clean and be green" (as set out in the London Plan energy assessment guidance) technology, where it is located in the

development, its efficacy (i.e. the reduction in CO2), maintenance details, and plans and specifications (including elevations and roof plans where appropriate). The details shall be accompanied by a reporting mechanism (Be Seen) to demonstrate that the development will continue to comply with the energy reduction targets set out in the energy strategy (XCO2, March 21). The development must proceed in accordance with the approved details.

14) The dwellings shall achieve 'Secured by Design' accreditation awarded by the Hillingdon Metropolitan Police Crime Prevention Design Adviser (CPDA) on behalf of the Association of Chief Police Officers (ACPO). No dwelling shall be occupied until accreditation has been achieved.

15) The development hereby approved shall ensure that 10% (4 units) of the residential units are constructed to meet the standards for M4(3)(2)(a) Wheelchair Adaptable Standard dwelling with a floor plan at no less than 1:100 submitted for each of the different M4(3) units and agreed in writing by the Local Planning Authority. All details, to include transfer zones, wheelchair storage area, and other spatial requirements within bedrooms, bathrooms, living and dining areas, should be shown on a separate plan for every different unit type. All remaining units designed to the standards for Category 2 M4(2) dwelling, as set out in Approved Document M to the Building Regulations (2010) 2015, and all such provisions shall remain in place for the life of the building.

16) All windows indicated on the approved plans as being obscure glazed shall be obscure with permanently obscured glass to at least scale 4 on the Pilkington scale and be non-opening below a height of 1.8 metres taken from internal finished floor level for so long as the development remains in existence. Notwithstanding the approved drawings and prior to commencement of development above ground level (excluding demolition, site clearance and initial ground investigation works), details of privacy measures to windows serving living rooms and facing Yardley Court shall be submitted to and approved in writing by the LPA. The measures shall be implemented in accordance with the agreed details prior to the occupation of the respective units and thereafter shall be permanently retained/maintained.

17) The residential units hereby approved shall not be occupied until a parking allocation scheme and maintenance plan for the car parking stacker has been submitted to, and approved in writing by, the Local Planning Authority. The parking allocation scheme shall, as a minimum, include a requirement that all on-site car parking shall be allocated and dedicated for the use of each of the residential units hereby approved and shall remain allocated and dedicated in such a manner for the life-time of the development.

18) No development, save for demolition and site clearance, shall take place until plans of the site showing the existing and proposed ground levels and the proposed finished floor levels of all proposed buildings have been submitted to and approved in writing by the Local Planning Authority. Such levels shall be shown in relation to a fixed and known datum point. Thereafter the development shall not be carried out other than in accordance with the approved details.

End of conditions

APPENDIX A.18 TAVISTOCK WORKS DAYLIGHT, SUNLIGHT AND OVERSHADOWING IMPACT ASSESSMENT

TAVISTOCK WORKS
LONDON BOROUGH OF HILLINGDON

DAYLIGHT AND SUNLIGHT REPORT

DIRECTOR: LIAM DUNFORD
CLIENT: LINEA UB7 LTD.
DATE: MARCH 2021
VERSION: VERSION 4
PROJECT: P2646

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POINT 2

Contents

Appendices

1 Introduction

1.1 This report relates to the airc.design designed scheme for the redevelopment of the Tavistock Works ("the Site" / "the Proposed Development") insofar as it affects the daylight and sunlight amenity to the surrounding residential properties.

1.2 The Local Authority will be informed of this by the BRE document entitled Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011 (the BRE guidelines). This document is the principal guidance in this area and sets out the methodology for measuring light and recommends what it considers to be permitted or unobtrusive levels of change.

1.3 In assessing the overall acceptability, we will give consideration to the urban context. The BRE Guidelines are not mandatory, though local planning authorities and planning inspectors will consider the suitability of a proposed scheme for a site within the context of BRE Guidance. Consideration will be given to the urban setting within which a scheme is located and similar relationships between other existing buildings and proposed developments where a comparison can be drawn, whether in the immediate context or not. The daylight and sunlight will be one of a number of planning considerations which the local authority will weigh in determining the planning balance of acceptability.

Sources of Information

1.4 In the process of compiling this report, the following sources of information have been used:

Point 2 Surveyors
Site Photography

airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

Rolfe Judd
Padcroft Works Tavistock Road
Planning Application 45200/APP/2014/3638
Approved 2D Drawings

Comag Tavistock Road
Planning Application 24843/APP/2018/269
Approved 2D Drawings

2 Methodology

2.1 It is usual to assess daylight and sunlight in relation to the guidelines set out in the 2011 Building Research Establishment (BRE) Report 'Site layout planning for daylight and sunlight - A guide to good practice' by Paul Littlefair. This document is most widely accepted by planning authorities as the means by which to judge the acceptability of a scheme. One of the primary sources for the BRE Report is the more detailed guidance contained within 'British Standard 8206 Part 2:2008'.

2.2 In relation to the properties surrounding a site, usually the local planning authority will only be concerned with the impact to main habitable accommodation (i.e. living rooms, bedrooms and kitchens) within residential properties.

2.3 To determine whether a neighbouring existing building may be adversely affected, the initial test provided by the BRE is to establish if any part of the proposal subtends an angle of more than 25˚ from the lowest window serving the existing building. If this is the case then there may be an adverse effect, and more detailed calculations are required to quantify the extent of any impact.

2.4 The BRE guidelines provide two principal measures of daylight for assessing the impact on properties neighbouring a site, namely Vertical Sky Component (VSC) and No-Sky Line (NSL). They also detail a third measure of daylight which is primarily used for assessing amenity within proposed accommodation, namely Average Daylight Factor (ADF).

2.5 In terms of sunlight we examine the BRE Annual Probable Sunlight Hours (APSH); and in relation to sunlight amenity to gardens and amenity spaces, we apply the quantitative BRE overshadowing guidance.

2.6 These measures of daylight and sunlight are discussed in the following paragraphs.

Diffuse Daylight

2.7 **Vertical Sky Component (VSC)** – VSC is a measure of the direct skylight reaching a point from an overcast sky. It is the ratio of the illuminance at a point on a given vertical plane to the illuminance at a point on a horizontal plane due to an unobstructed sky.

2.8 For existing buildings, the BRE guideline is based on the loss of VSC at a point at the centre of a window, on the outer plane of the wall.

2.9 The BRE guidelines state that if the VSC at the centre of a window is less than 27%, and it is less than 0.8 times its former value (i.e. the proportional reduction is greater than 20%), then the reduction in skylight will be noticeable, and the existing building may be adversely affected.

2.10 Paragraph F6 of the BRE Guidelines clearly states that: *"In assessing loss of light to an existing building, the VSC is generally the recommended parameter to use. This is*

because the VSC depends only on obstruction, and is therefore a measure of the daylit environment as a whole.[1]"

2.11 **No-Sky Line (NSL)** - NSL is a measure of the distribution of daylight within a room. It maps out the region within a room where light can penetrate directly from the sky, and therefore accounts for the size of and number of windows by simple geometry.

2.12 The BRE suggest that the area of the working plane within a room that can receive direct skylight should not be reduced to less than 0.8 times its former value (i.e. the proportional reduction in area should not be greater than 20%).

2.13 **Average Daylight Factor (ADF)** - ADF is a measure of the overall amount of diffuse daylight within a room. It is the average of the daylight factors across the working plane within a room. This equates to the ratio of the average illuminance across the working plane, to the illuminance due to an unobstructed sky.

2.14 In addition to accounting for external obstructions, the ADF accounts for the number of windows and their size in relation to the size of the room, the window transmittance and the reflectance of the internal walls, floor and ceiling.

2.15 While the ADF can be calculated from first principles using a lighting simulation software suite such as Radiance, in simple situations it can be approximated using the empirical formula detailed in both British Standard 8206 Part 2:2008 and Appendix C of the BRE Report.

2.16 Both the BRE Report and BS 8206 Part 2:2008 provide guidance for acceptable ADF values in the presence of supplementary electric lighting, depending on the room use. These are 1.0% for a bedroom, 1.5% for a living room and 2.0% for a kitchen.

2.17 Whilst the BRE Guidelines advises against the use of ADF to assess the effect of the Proposed Development on noticeability of daylight loss on surrounding buildings, there is no technical basis of why the ADF should not be used as a supplementary test to consider the quality of retained light within a room. In particular, if the Proposed Development is part of wider area of regeneration.

Sunlight

2.18 **Annual Probable Sunlight Hours (APSH)** - In relation to sunlight, the BRE recommends that the APSH received at a given window in the proposed case should be at least 25% of the total available, including at least 5% in winter.

2.19 Where the proposed values fall short of these, and the absolute loss is greater than 4%, then the proposed values should not be less than 0.8 times their previous value in each period (i.e. the proportional reductions should not be greater than 20%).

[1] BRE Guide 209, paragraph F6

2.20 The BRE guidelines state that '...all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90 degrees of due south. Kitchens and bedrooms are less important, although care should be taken not to block out too much sun'.

2.21 The APSH figures are calculated for each window, and where a room is served by more than one window the contribution of each is accounted for in the overall figures for the room. The acceptability criteria are applied to overall room based figures.

3 Policy SA 38: Padcroft Works and COMAG

New Homes

Padcroft Works, Tavistock Road, Yiewsley

Tavistock Road occupies a prominent position in Yiewsley Town Centre, in close proximity to West Drayton Railway Station. In 2013 planning permission was granted for a residential-led mixed use development on the site.

POLICY SA 38: Padcroft Works and COMAG

Site A: Padcroft Works

The site should be developed in accordance with the broad parameters of the approved scheme subject to site-specific constraints (Ref: 45200/APP/2014/3638).

Site B: COMAG I

The Council will support proposals for residential development on Site B, in accordance with London Plan density guidelines and subject to the agreement of design principles. Proposals should integrate with and complement development on adjacent sites.

Site C: COMAG II

The Council will support proposals for residential development on Site C, in accordance with London Plan density guidelines and subject to the agreement of design principles. Proposals should integrate with and complement development on adjacent sites.

Key principles for all three sites

As a preference, Sites A, B and C should form a comprehensive development scheme across the whole site.

4 Standard Survey Limitations

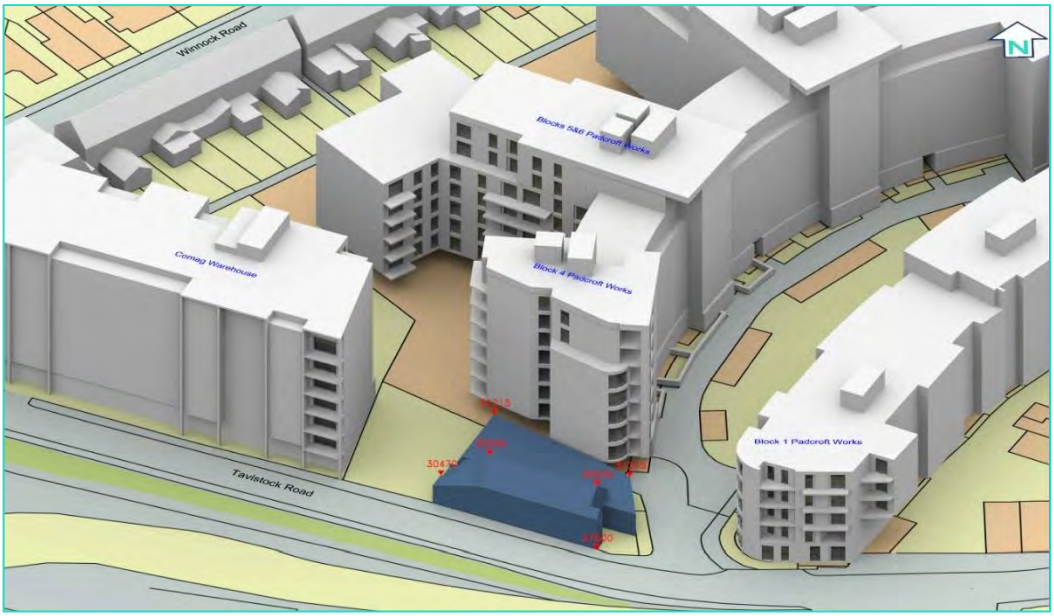
4.1 Although we have undertaken as detailed an inspection as possible, we are required by our professional indemnity insurers to notify you that our report is based upon the Standard Terms and Conditions provided along with our fee proposal. Our understanding of the existing massing, including the surrounding context was established from the sources of information details within Section 1.

4.2 In addition to our standard limitations the following limitations and assumptions also apply.

- Best estimates were made in establishing building use (residential or commercial) and room uses; generally, these were made from external observations and recourse to planning records where available.
- When floor plans of surrounding properties were not available, room depths have been assumed from external observations. Where no indicators of room depth were available a standard of 4m, 6m or 8m depths have been used.

5 The Site

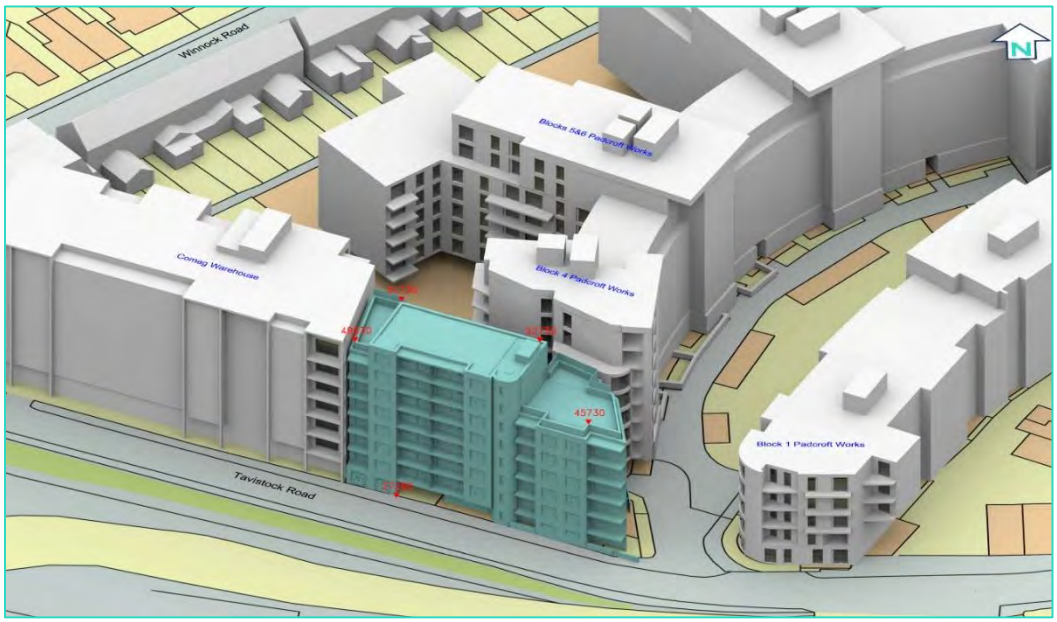
5.1 The site is located in the London Borough of Hillingdon.



Drawing Number: P2646/02 – 3D View – Existing Building

5.2 Our understanding of the Site location and existing building(s) that occupy the Site are illustrated in drawing numbers P2646/01-03 and located within Appendix 1.

6 The Proposed Development



Drawing Number: P2646/05 – 3D View – the Proposed Development

6.1 Our understanding of the Proposed Development is illustrated in drawings P2646/04-06 located within Appendix 1.

7 The Surrounding Properties

7.1 The following surrounding properties contain residential accommodation and, due to their proximity to the Proposed Development, have been assessed in terms of the effects of the proposed development upon their daylight and sunlight amenity:

1) COMAG I (planning drawings: 24843/APP/2018/269)

2) Blocks 5 & 6 Padcroft Works (planning drawings: 45200/APP/2017/327)

3) Block 1 Padcroft Works (planning drawings: 45200/APP/2017/327)

4) Block 4 Padcroft Works (planning drawings: 45200/APP/2017/327)

7.2 The location of these properties can be seen on the identification drawing below ("the Plan") and on drawings P2646/01-06 which can be found in Appendix 1 and 2.

Surrounding Property Identification Drawing ("the Plan")

7.3 Detailed results for each window/room assessed can be found in Appendix 2, 3 & 4 and are summarised below. Window location plans can be found in Appendix 5.

1) COMAG I

7.4 West of the Site and referenced '1' on the Plan, this property has been modelled using the planning consented drawings. Our analysis considers the closest 18 windows to the Site, which serve 18 rooms, comprising 12 bedrooms and 6 living rooms.

Daylight

7.5 All windows and rooms experience proportional changes in VSC and NSL less than 20% their former value which the BRE Guide concludes will be unnoticeable.

7.6 Furthermore, as we are in receipt of the correct layout plans for this property, we have considered the levels of Average Daylight Factor (ADF) received by the rooms against the BRE recommended daylight targets: Bedrooms 1% ADF; Living Rooms 1.5% ADF.

7.7 All rooms continue to receive above the recommended ADF targets for the rooms' observed use with the Proposed Development in place.

7.8 In conclusion, in accordance with BRE Guidance the occupants will not notice a change in daylight amenity as a result of the Proposed Development and will continue to enjoy BRE recommended levels of internal daylight once the Proposed Development is constructed.

Sunlight

7.9 There are no changes in the level of APSH received by rooms in this property as a result of the Proposed Development.

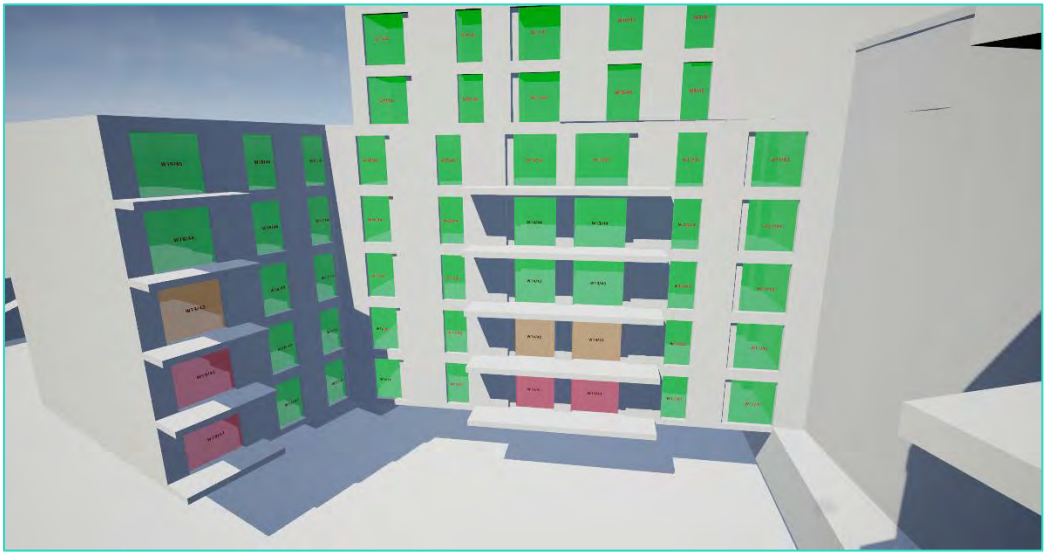
2) Blocks 5 and 6 Padcroft Works

7.10 North of the Site and referenced '2' on the Plan, this property has been modelled using the planning consented drawings. Our analysis considers the closest 55 windows to the Site, which serve 55 rooms, comprising 38 bedrooms and 17 living rooms. The Site facing elevations have a number of external balconies, which naturally inhibit the amount of direct skylight received from the top part of the sky. In these instances, the BRE Guide recommends running additional calculations on the VSC without the balcony in place, to understand whether the balcony is the main factor in the relative loss of light[2]. The 'no balcony' analysis can be found in Appendix 3.

Daylight

7.11 In terms of VSC, 48 of the 55 windows assessed experience proportional reductions of less than 20% their existing value, which BRE Guidance concludes will be unnoticeable. 7 windows experience proportional reductions in VSC between 25% and 51%. However, all these windows are positioned beneath balconies.

[2] BRE Guide 209, paragraph 2.2.11



Extract from Analysis Model – Block 5 & 6 Padcroft Works, VSC results (green <20%, orange 20-30%, red >30%)

7.12 In terms of NSL, 43 rooms experience proportional reductions less than 20% of their existing value which BRE Guidance concludes will be unnoticeable. 12 rooms experience proportional reductions in NSL between 29% and 80% of their existing value. BRE Guidance suggests these reductions may be noticeable to the occupant.

7.13 Once the balcony is removed from the assessment[3], all windows experience less than 20% proportional reduction in VSC, thus demonstrating the balcony was the main factor in the relative loss of light.

7.14 Finally, in terms of ADF, any rooms which achieved the target ADF value for their use in the existing situation will continue to achieve above the target ADF with the Proposed Development in place.

7.15 It is therefore considered that the effect on this property can be considered to conform with BRE Guidance and acceptable in planning terms.

Sunlight

7.16 All main living rooms which have a window orientated within 90 degrees due south retain above the BRE recommended levels of APSH, thus will continue to be adequately sunlit after implementation of the Proposed Development.

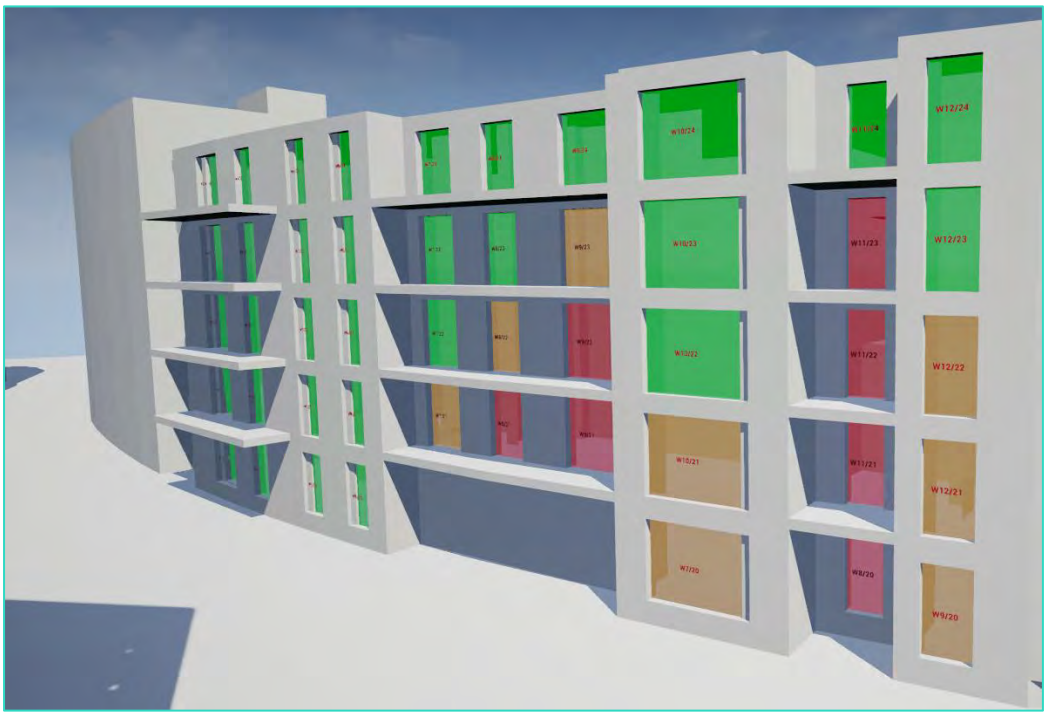
[3] BRE Guide 209, paragraph 2.2.11

3) Block 1 Padcroft Works

7.17 East of the Site and referenced '3' on the Plan, this property has been modelled using the planning consented drawings. Our analysis considers the closest 100 windows to the Site, which serve 74 rooms, comprising 46 bedrooms and 28 living rooms. The Site facing elevations has a number of external balconies, which naturally inhibit the amount of direct skylight received from the top part of the sky. In these instances, the BRE Guide recommends running additional calculations without the balcony in place, to understand whether the balcony is the main factor in the relative loss of light[4]. The 'no balcony' analysis can be found in Appendix 3. It should also be noted that the BRE Guidelines recognise at paragraph 2.2.12 that a larger relative reduction in light may also be unavoidable if the windows have projecting wings on one or either side[5], which is the case in relation to several windows in Block 1.

Daylight

7.18 In terms of VSC, 85 of the 100 windows assessed experience proportional reductions less than 20% of their existing value, which BRE Guidance concludes will be unnoticeable. Where the VSC reduction exceeds 20%, this is mostly due to the window being located beneath a balcony.



Extract from Analysis Model – Block 1 Padcroft Works, VSC results (green <20%, orange 20-30%, red >30%)

[4] BRE Guide 209, paragraph 2.2.11
[5] BRE Guide 209, paragraph 2.2.12

7.19 In terms of NSL, 66 rooms experience proportional reductions less than 20% of their existing value which BRE Guidance concludes will be unnoticeable. 8 rooms experience proportional reductions in NSL between 29% and 80% their existing value. BRE Guidance suggests these reductions may be noticeable to the occupant.

7.20 Where the VSC reduction exceeds 20%, this is mostly due to the window being located beneath a balcony. Once the balcony is removed from the assessment[6], 7 of the 10 windows now experience less than 20% proportional reduction in VSC, thus demonstrating the balcony was the main factor in the relative loss of light.

Extract from Analysis Model – Block 5 & 6 Padcroft Works, VSC results without balconies (green <20%, orange 20-30%, red >30%)

7.21 Of the residual 8 windows with reductions exceeding 20% (3 with a balcony and 5 without) as seen above in red and orange, a column of 3 (W8/20, W11/21 & W11/22) are positioned with projecting wings on both sides, where the BRE Guide recognises that larger relative reductions may be unavoidable[7].

7.22 The remaining 5 windows unencumbered by a balcony above and/or projecting wings either side (W7/20, W9/20, W10/21, W12/21 and W12/22) experience proportional VSC reductions between 20% and 30% of their existing value, which are considered minor derogations from default BRE Guidance and not unusual when the existing site

[6] BRE Guide 209, paragraph 2.2.11
[7] BRE Guide 209, paragraph 2.2.12

has no existing massing. And, furthermore, all the above rooms retain over the BRE recommended level of ADF for the observed room use.

7.23 In conclusion, with reference to VSC and NSL, while there may be some noticeable reductions in daylight to the Site facing rooms, this is largely due to the influence of balconies[8] or projecting wings either side of the windows[9]. But importantly, those rooms not encumbered by self-inflicting obstructions retain above-recommended levels of internal daylight (ADF).

Sunlight

7.24 All main living rooms which have a window orientated within 90 degrees due south retain above the BRE recommended levels of APSH, thus will continue to be adequately sunlit after implementation of the Proposed Development.

4) Block 4 Padcroft Works

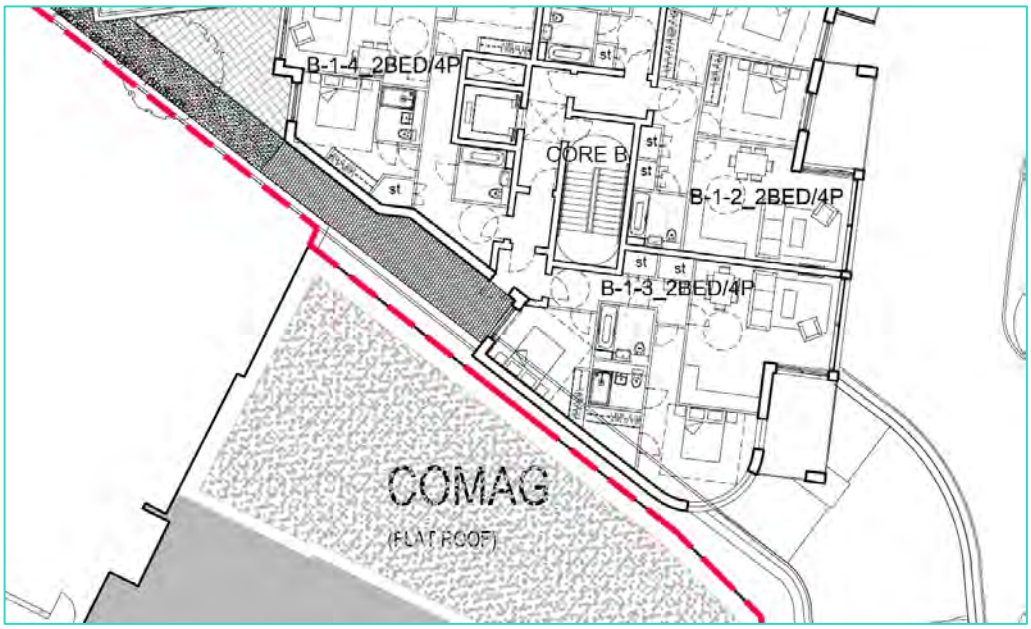
7.25 North of the Site and referenced '4' on the Plan, this property has been modelled using the planning consented drawings. Our analysis considers the closest 66 windows to the Site, which serve 35 rooms, comprising 21 bedrooms and 14 living rooms.

7.26 As detailed within Section 3 above the Proposed Development falls within the Site C Comag II Allocation. It was a preference of the Local Authority that all three sites should form a comprehensive redevelopment across the whole site.

7.27 Instead, Sites A and B have come forward and been constructed first. Sites A and B have established a level of prevailing massing for the area. Site C (the Proposed Development) seeks to match that level of prevailing massing already established. The BRE Guidelines recognises in its introduction that *"...a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings[10]."*

7.28 In the original application for Site B, the plans respected Site C insofar as ensuring no windows were built onto the boundary and taking all their light over Site C.

[8] BRE Guide 209, paragraph 2.2.11
[9] BRE Guide 209, paragraph 2.2.12
[10] BRE Guide 209, paragraph 1.6



Extract from Site B Planning Consented Drawings

7.29 In a later application, the local authority permitted several bedroom windows immediately on the boundary taking their light directly over Site C, in the knowledge of the Site C Comag II Allocation would be brought forward in the future.

Extract from As Built Plans for Site B, denoting bedrooms on boundary

7.30 In redeveloping Site C in a way that corresponds with the townscape and massing established by developments at Site A and Site B, it is unavoidable[11] that some

[11] BRE Guidelines 2011, paragraph 1.6

bedrooms at these properties may experience reductions in light levels that fall below BRE default recommendations. Notwithstanding this, proposals for Site C that reflect Site A and Site B schemes may still be BRE-compliant and the BRE Guide specifically address how VSC and APSH targets should be treated in cases where windows have been built close to property boundaries (please see paragraph 7.30 below). Accordingly, the Padcroft Works developer's decision to place 'bad neighbour' windows within Block 4 should not prejudice the Applicant's ability to redevelop Site C. This approach is endorsed within the BRE Guide at paragraph 2.3.1 which states: *"A well designed building will stand a reasonable distance from the boundaries so as to enable future nearby development to enjoy a similar access to daylight. By doing so it will also keep its own natural daylight when the adjoining land is developed"*[12]

7.31 In instances where windows have been built unusually close to the boundary, the BRE Guide recommends at Appendix F that: *"To ensure new development matches the height and proportions of existing buildings, the VSC and APSH targets for these windows could be set to those for a 'mirror-image' building of the same height and size, and equal distance away on the other side of the boundary."*[13]

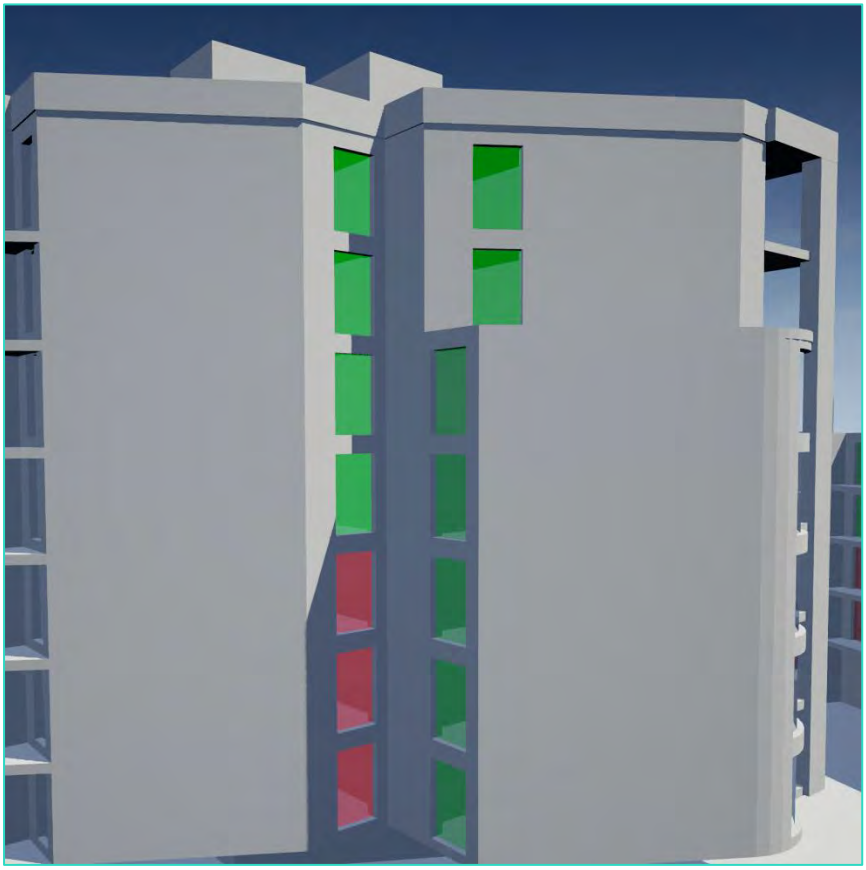
Daylight – Existing versus Proposed

7.32 In terms of VSC, 37 of the 66 windows assessed experience proportional reductions in less than 20% their existing value, which BRE Guidance concludes will be unnoticeable. The residual 29 windows experience proportional reductions in VSC between 29% and 91%.

7.33 In terms of NSL, 29 of the 35 rooms assessed experience proportional reductions less than 20% their existing value, which BRE Guidance concludes will be unnoticeable. The residual 6 rooms experience proportional reductions between 25% and 85%. These rooms are isolated to the rooms found immediately on the site boundary.

7.34 Finally, turning to ADF, of the rooms immediately on the Site boundary, only 3 bedrooms retain below the BRE recommended level of ADF for the observed room use once the Proposed Development has been implemented.

[12] BRE Guide 209, paragraph 2.3.1
[13] BRE Guide 209, paragraph F5

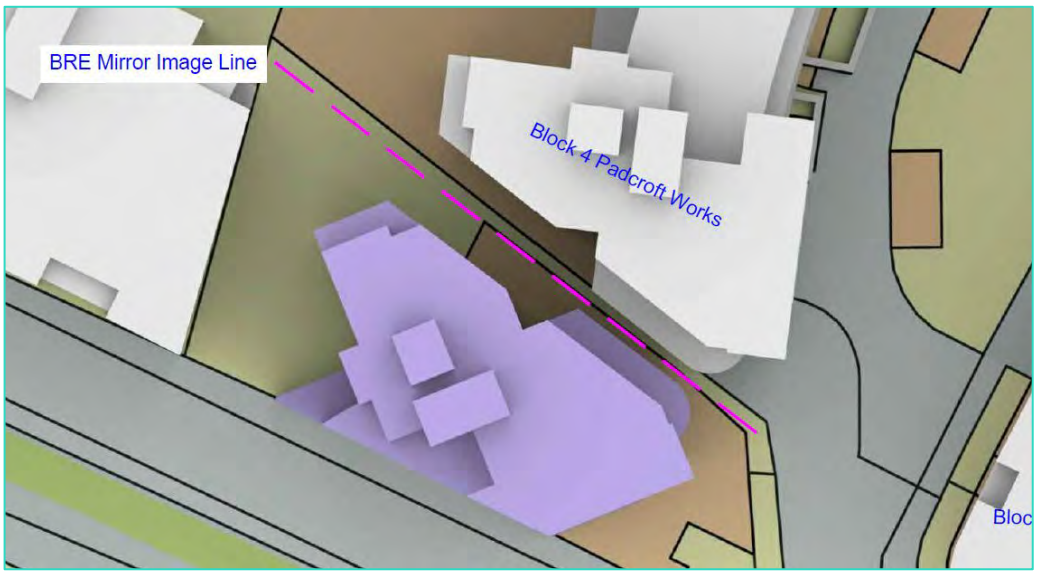


Extract from Analysis Model – Block 4 retained ADF levels (green = above ADF target; red = below ADF target)

7.35 In conclusion, while there will likely be some noticeable changes to the levels of daylight received to a number of the rooms within this block, only 3 bedrooms will retain below the BRE's recommended level of internal daylight amenity once the Proposed Development is implemented. These rooms, as can be seen above are, however, located on the site boundary thus should be considered against the BRE's 'mirror-image' assessment as described above[14].

[14] Paragraph 7.30

Daylight – Mirror versus Proposed



Extract from Analysis Model – BRE 'Mirror-Image' Analysis of Block 4

7.36 The results of the 'Mirror versus Proposed' analysis can be found in Appendix 4. When comparing a mirror of Block 4 in accordance with BRE Guidance, all windows on the boundary benefit from better levels of daylight from the Proposed Development compared to a mirror of itself, thus conforming with the BRE recommended methodology.

Sunlight

7.37 All main living rooms which have a window orientated within 90 degrees due south retain above the BRE recommended levels of APSH, thus will continue to be adequately sunlit after implementation of the Proposed Development.

8 Conclusion

8.1 Comag II Site C is the last Site in a three-phase development to be brought forward, as described by Hillingdon Policy SA 38: Padcroft Works and COMAG. The Site intends to develop a contemporaneous level of massing already established within the vicinity; something which will have been recognised by the LPA at the time of granting consent to Sites A and B. Decision makers should therefore also recognise the BRE's introductory statement at paragraph 1.6, that: *"...a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings*[15]*."*

8.2 The impact on surrounding properties in terms of daylight and sunlight against default BRE Guidance must, therefore, be interpreted flexibly, as daylight and sunlight are one of many planning considerations in the overall planning balance.

8.3 With reference to Section 7 above and the technical analyses appended hereto, the impacts on COMAG I, Block 1 and 5 & 6 are considered relatively minor in nature. The impacts on Block 4 are, naturally, higher due to Block 4 placing windows immediately on the boundary taking their light directly over Site C. This should not, however, prejudice the development of Site C. When applying a "Mirror versus Proposed" analysis (as recommend by the BRE Guide in situations where windows have been built close to property boundaries) the Proposed Development clearly demonstrates positive improvements against a mirror of Block 4 Padcroft Works. The Proposed Development therefore conforms with established BRE recommendations in this regard.

8.4 We fully support this planning application in terms of daylight and sunlight amenity.

[15] BRE Guide 209, paragraph 1.6

Appendix 1:
Drawings

Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

EPR Architects
Padcroft Works
Planning Application 45200/APP/2017/327
Approved 2D Drawings

Rolfe Judd
COMAG I
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key: Existing Buildings
Proposed Scheme

Project: Tavistock Works
London

Title: Plan View
Existing Buildings

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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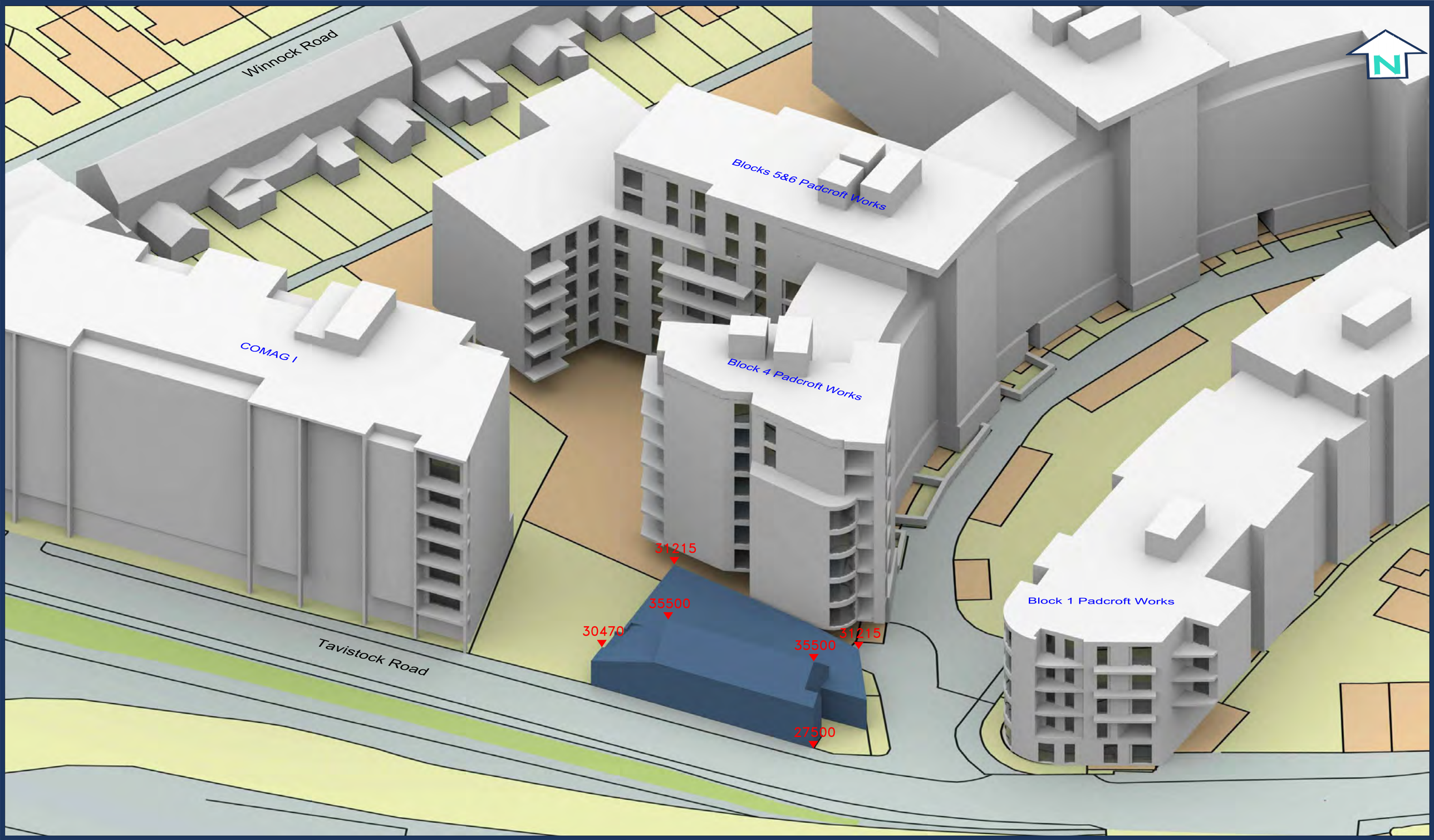

Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

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COMAG I
Planning Application 24843/APP/2018/269
Approved 2D Drawings

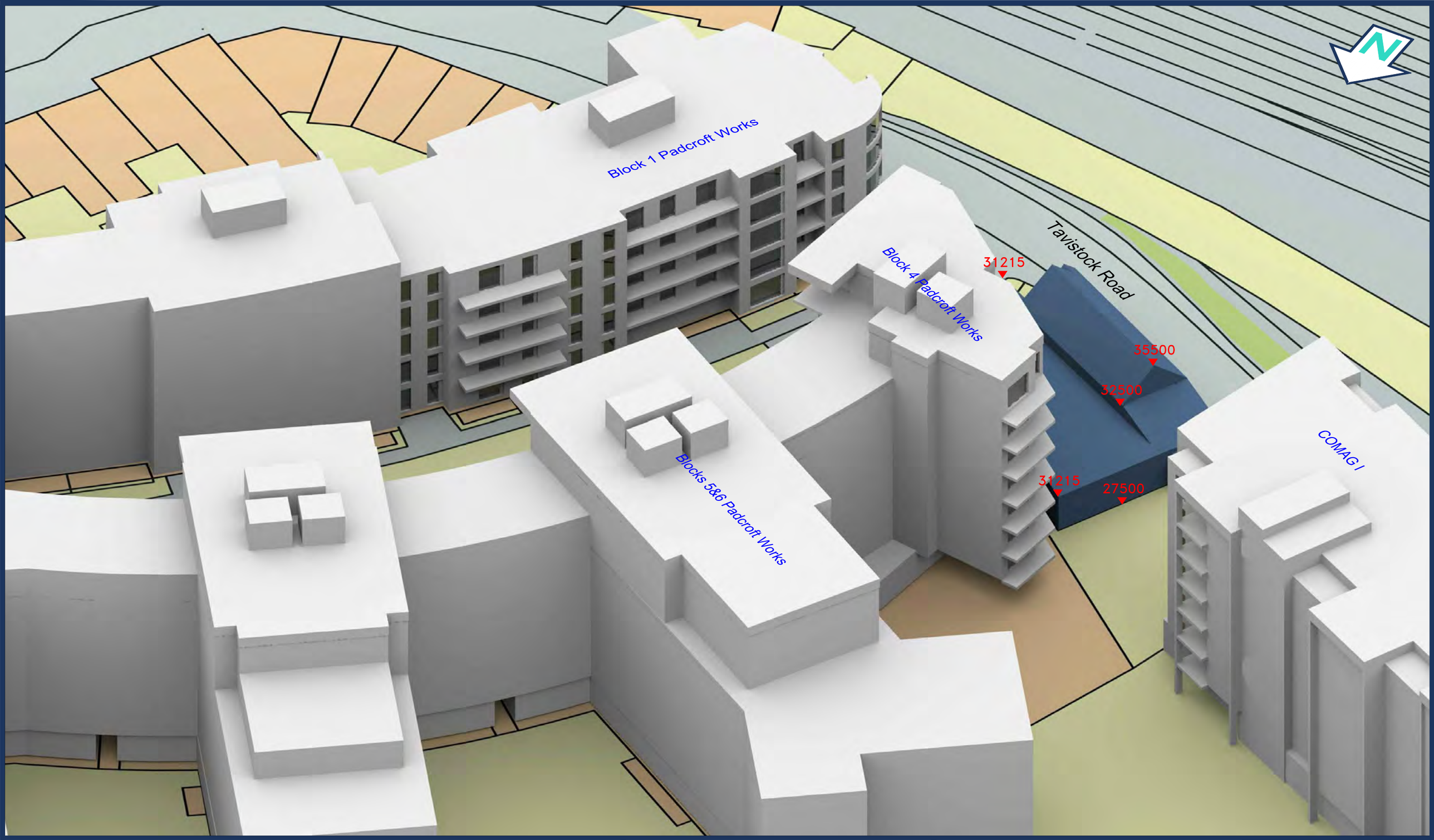
Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Tavistock Works
London

Title: 3D View
Existing Buildings

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	MC	NS@A3	Feb 21	P2646/02	02



Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

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Rolfe Judd
COMAG I
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Tavistock Works
London

Title: 3D View
Existing Buildings

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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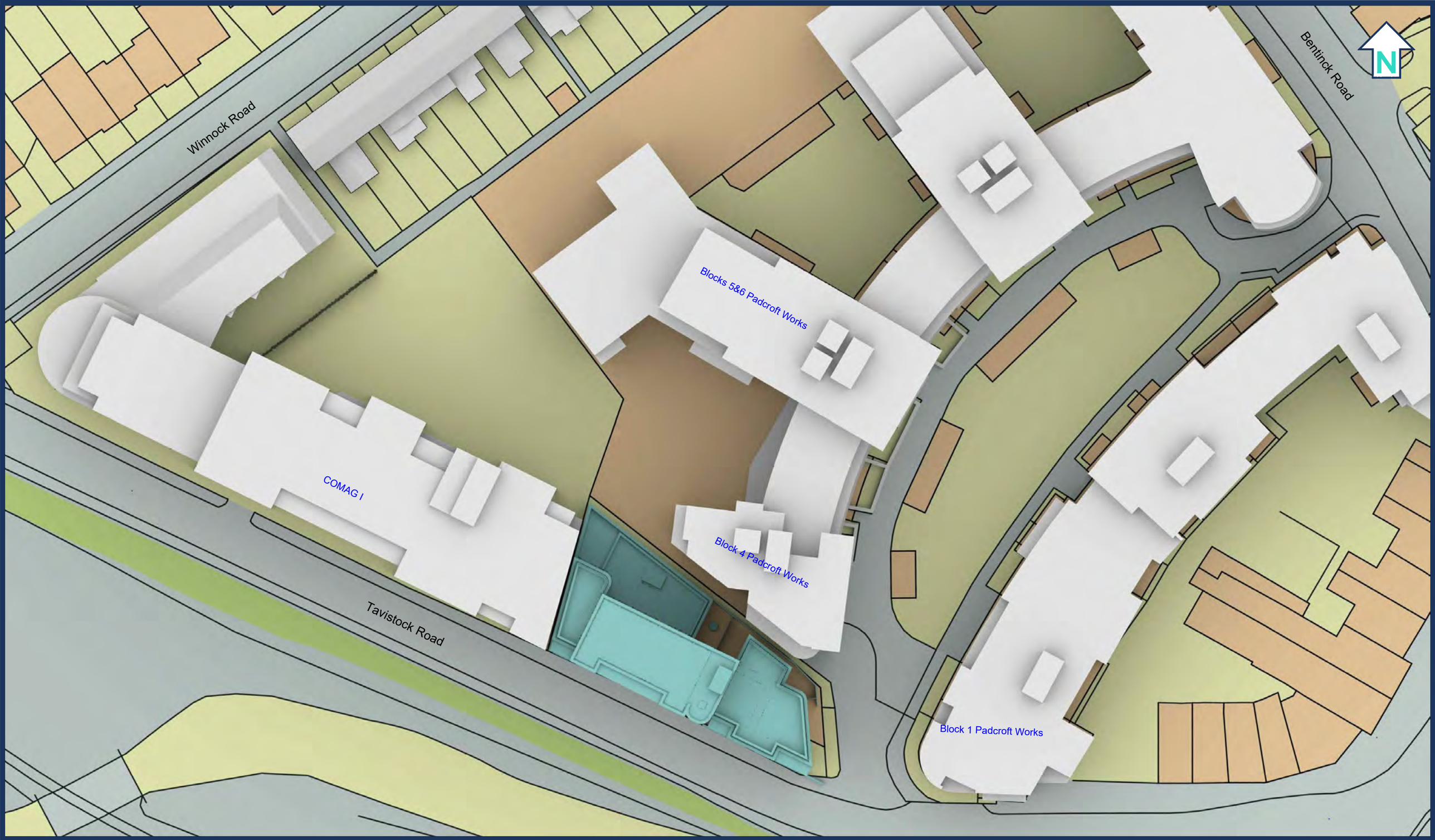

Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

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Key: Existing Buildings
Proposed Scheme

Project: Tavistock Works
London

Title: Plan View
Proposed Buildings

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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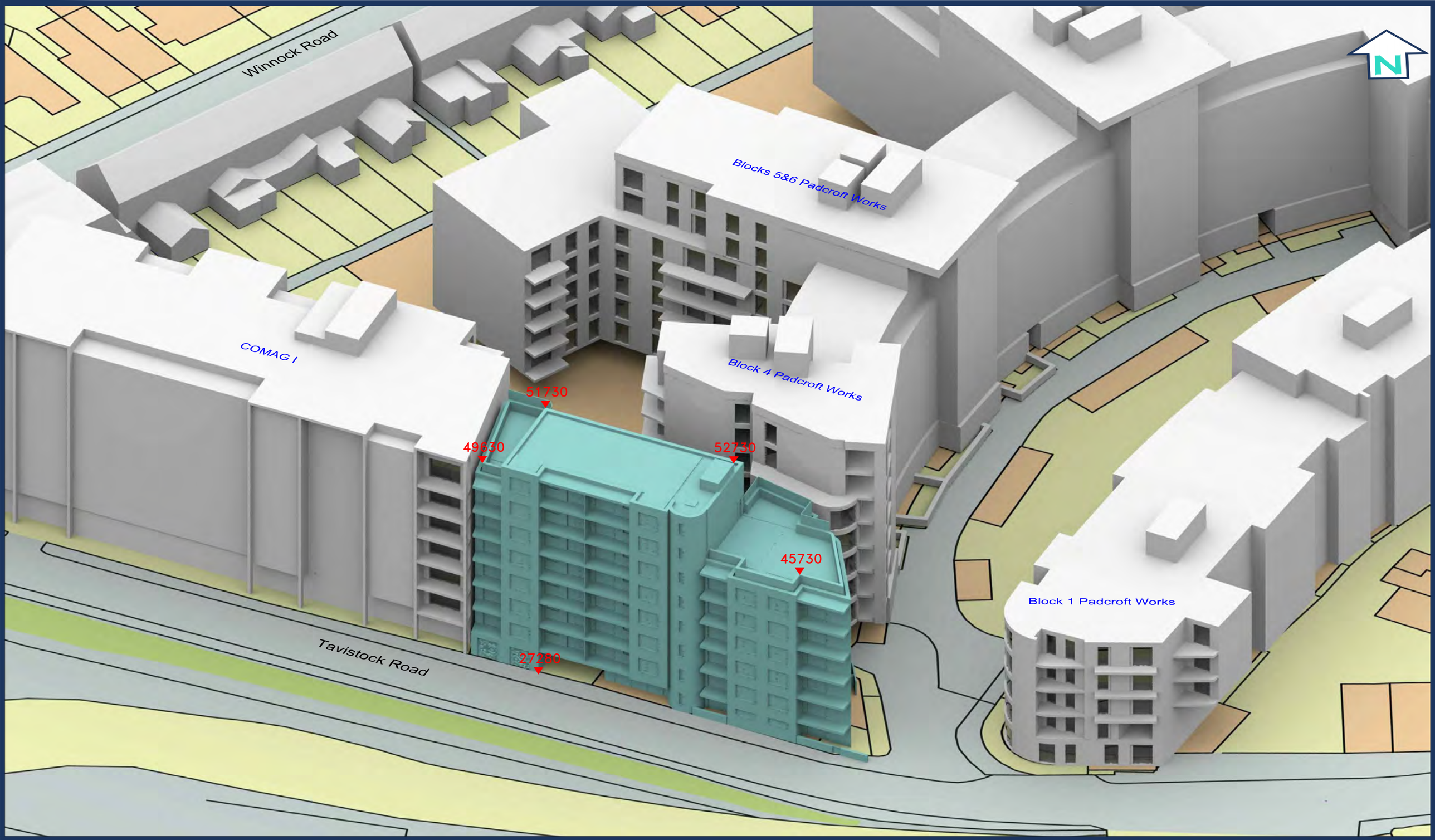

Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

EPR Architects
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Rolfe Judd
COMAG I
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Tavistock Works
London

Title: 3D View
Proposed Buildings

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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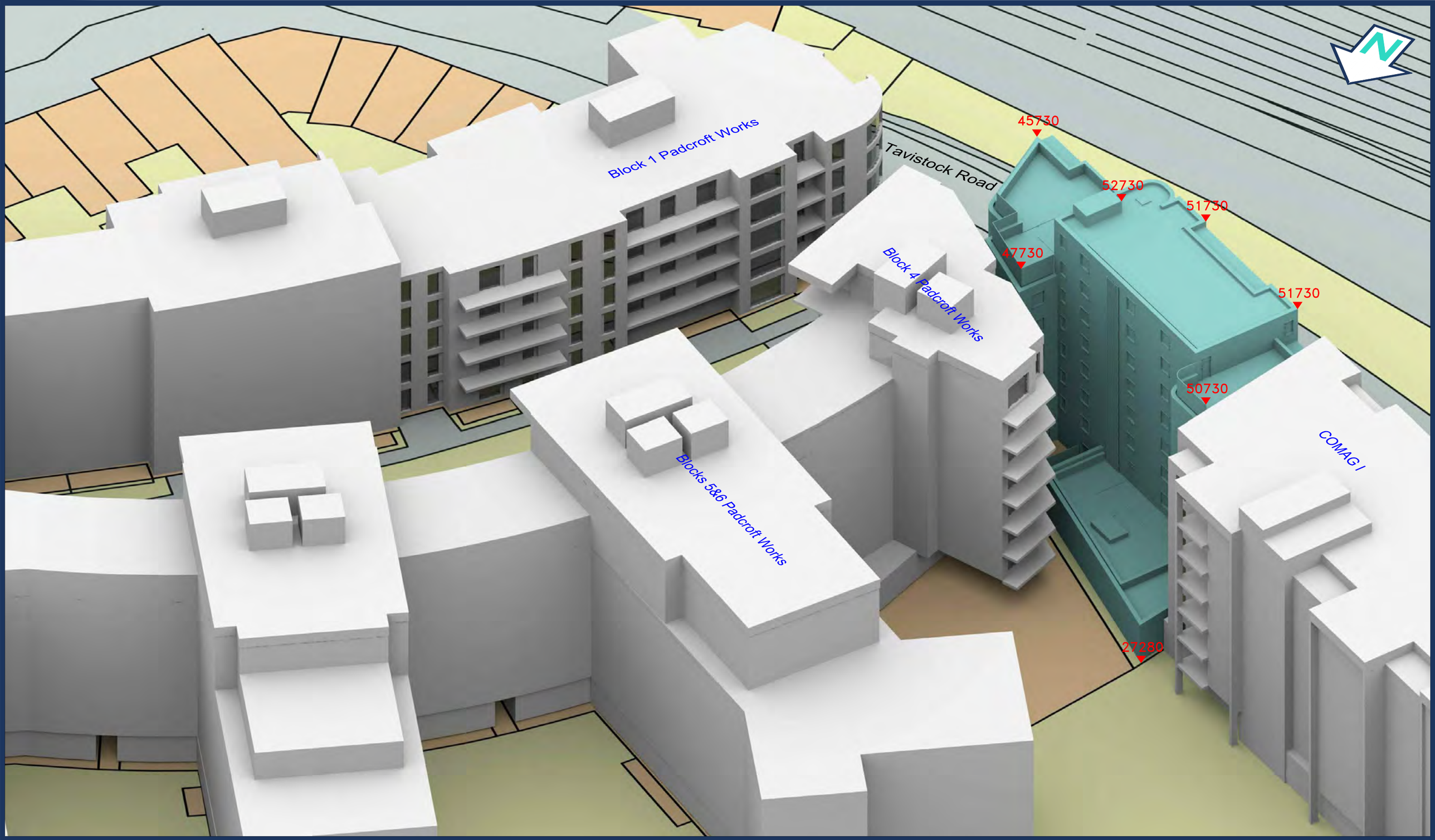

Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

EPR Architects
Padcroft Works
Planning Application 45200/APP/2017/327
Approved 2D Drawings

Rolfe Judd
COMAG I
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Tavistock Works
London

Title: 3D View
Proposed Buildings

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	MC	NS@A3	Feb 21	P2646/06	02

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Appendix 2:

Technical Analysis
Existing versus Proposed (with balconies)

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
Comag Warehouse						
R1/11	LKD	W1/11	22.85	22.55	0.30	1.31
R2/11	BEDROOM	W2/11	11.22	11.22	0.00	0.00
R3/11	BEDROOM	W3/11	18.47	18.47	0.00	0.00
R1/12	LKD	W1/12	22.85	22.56	0.29	1.27
R2/12	BEDROOM	W2/12	13.09	13.09	0.00	0.00
R3/12	BEDROOM	W3/12	21.26	21.26	0.00	0.00
R1/13	LKD	W1/13	22.85	22.56	0.29	1.27
R2/13	BEDROOM	W2/13	15.14	15.14	0.00	0.00
R3/13	BEDROOM	W3/13	24.17	24.17	0.00	0.00
R1/14	LKD	W1/14	22.85	22.57	0.28	1.23
R2/14	BEDROOM	W2/14	17.36	17.36	0.00	0.00
R3/14	BEDROOM	W3/14	27.17	27.17	0.00	0.00
R1/15	LKD	W1/15	22.85	22.58	0.27	1.18
R2/15	BEDROOM	W2/15	19.73	19.73	0.00	0.00
R3/15	BEDROOM	W3/15	30.23	30.23	0.00	0.00
R1/16	LKD	W1/16	30.00	29.73	0.27	0.90
R2/16	BEDROOM	W2/16	22.64	22.64	0.00	0.00
R3/16	BEDROOM	W3/16	32.98	32.98	0.00	0.00
Blocks 5&6 Padcroft Works						
R6/41	BEDROOM	W11/41	12.05	11.69	0.36	2.99
R7/41	BEDROOM	W12/41	11.78	10.43	1.35	11.46
R8/41	LKD	W13/41	5.78	3.60	2.18	37.72

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R10/41	BEDROOM	W15/41	17.13	14.02	3.11	18.16
R11/41	BEDROOM	W17/41	15.10	12.44	2.66	17.62
R12/41	BEDROOM	W16/41	16.89	13.77	3.12	18.47
R13/41	BEDROOM	W18/41	16.31	13.22	3.09	18.95
R14/41	LKD	W19/41	7.12	3.45	3.67	51.54
R6/42	BEDROOM	W11/42	13.93	13.60	0.33	2.37
R7/42	BEDROOM	W12/42	13.93	12.76	1.17	8.40
R8/42	LKD	W13/42	6.99	5.10	1.89	27.04
R9/42		W14/42	7.92	5.60	2.32	29.29
R10/42	BEDROOM	W15/42	18.99	16.33	2.66	14.01
R11/42	BEDROOM	W16/42	19.02	16.36	2.66	13.99
R12/42	BEDROOM	W17/42	17.07	14.77	2.30	13.47
R13/42	BEDROOM	W18/42	18.16	15.49	2.67	14.70
R14/42	LKD	W19/42	8.63	5.42	3.21	37.20
R6/43	BEDROOM	W11/43	16.26	16.01	0.25	1.54
R7/43	BEDROOM	W12/43	16.63	15.69	0.94	5.65
R8/43	LKD	W13/43	8.66	7.13	1.53	17.67
R9/43		W14/43	9.65	7.76	1.89	19.59
R10/43	BEDROOM	W15/43	21.49	19.33	2.16	10.05
R11/43	BEDROOM	W16/43	22.02	19.85	2.17	9.85
R12/43	BEDROOM	W17/43	19.55	17.67	1.88	9.62
R13/43	BEDROOM	W18/43	20.39	18.21	2.18	10.69
R14/43	LKD	W19/43	10.34	7.72	2.62	25.34

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R6/44	BEDROOM	W11/44	19.32	19.12	0.20	1.04
R7/44	BEDROOM	W12/44	20.52	19.78	0.74	3.61
R8/44	LKD	W13/44	10.94	9.75	1.19	10.88
R9/44		W14/44	12.08	10.61	1.47	12.17
R10/44	BEDROOM	W15/44	25.34	23.68	1.66	6.55
R11/44	BEDROOM	W16/44	26.10	24.46	1.64	6.28
R12/44	BEDROOM	W17/44	22.65	21.22	1.43	6.31
R13/44	BEDROOM	W18/44	23.59	21.93	1.66	7.04
R14/44	LKD	W19/44	12.59	10.58	2.01	15.97
R6/45	BEDROOM	W11/45	23.46	23.33	0.13	0.55
R7/45	BEDROOM	W12/45	28.45	27.96	0.49	1.72
R8/45	LKD	W13/45	30.88	30.07	0.81	2.62
R9/45		W14/45	31.98	30.98	1.00	3.13
R10/45	BEDROOM	W15/45	32.68	31.54	1.14	3.49
R11/45	BEDROOM	W16/45	31.50	30.37	1.13	3.59
R12/45	BEDROOM	W17/45	25.79	24.81	0.98	3.80
R13/45	BEDROOM	W18/45	28.48	27.34	1.14	4.00
R14/45	LKD	W19/45	30.48	29.10	1.38	4.53
R6/46	BEDROOM	W9/46	33.13	32.85	0.28	0.85
R7/46	BEDROOM	W10/46	34.09	33.68	0.41	1.20
R8/46	LKD	W11/46	28.51	27.99	0.52	1.82
R9/46	BEDROOM	W12/46	34.90	34.32	0.58	1.66
R10/46	BEDROOM	W13/46	36.09	35.47	0.62	1.72

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DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R7/47	BEDROOM	W10/47	37.13	37.00	0.13	0.35
R8/47	LKD	W11/47	30.67	30.51	0.16	0.52
R9/47	BEDROOM	W12/47	37.37	37.18	0.19	0.51
R10/47	BEDROOM	W13/47	38.12	37.92	0.20	0.52
Block 4 Padcroft Works						
R1/41	LKD	W1/41	25.94	25.94	0.00	0.00
R1/41	LKD	W2/41	5.27	3.84	1.43	27.13
R2/41	BEDROOM	W3/41	6.10	6.08	0.02	0.33
R2/41	BEDROOM	W4/41	24.95	21.79	3.16	12.67
R2/41	BEDROOM	W5/41	31.02	22.44	8.58	27.66
R2/41	BEDROOM	W6/41	32.97	17.05	15.92	48.29
R3/41	BEDROOM	W7/41	21.88	7.56	14.32	65.45
R4/41	BEDROOM	W8/41	22.45	1.93	20.52	91.40
R5/41	LKD	W9/41	8.98	2.63	6.35	70.71
R5/41	LKD	W10/41	6.60	5.02	1.58	23.94
R1/42	LKD	W1/42	29.59	29.59	0.00	0.00
R1/42	LKD	W2/42	6.37	4.74	1.63	25.59
R2/42	BEDROOM	W3/42	8.26	8.25	0.01	0.12
R2/42	BEDROOM	W4/42	27.45	24.21	3.24	11.80
R2/42	BEDROOM	W5/42	34.11	24.47	9.64	28.26
R2/42	BEDROOM	W6/42	37.11	18.14	18.97	51.12
R3/42	BEDROOM	W7/42	23.71	9.00	14.71	62.04
R4/42	BEDROOM	W8/42	24.45	2.86	21.59	88.30
R5/42	LKD	W9/42	9.85	2.98	6.87	69.75
R5/42	LKD	W10/42	7.24	5.66	1.58	21.82
R1/43	LKD	W1/43	33.19	33.19	0.00	0.00
R1/43	LKD	W2/43	7.32	5.68	1.64	22.40
R2/43	BEDROOM	W3/43	10.34	10.33	0.01	0.10
R2/43	BEDROOM	W4/43	29.71	26.84	2.87	9.66

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R2/43	BEDROOM	W6/43	38.38	19.65	18.73	48.80
R3/43	BEDROOM	W7/43	25.23	10.93	14.30	56.68
R4/43	BEDROOM	W8/43	24.94	4.41	20.53	82.32
R5/43	LKD	W9/43	11.03	4.32	6.71	60.83
R5/43	LKD	W10/43	8.08	6.49	1.59	19.68
R1/44	LKD	W1/44	36.53	36.53	0.00	0.00
R1/44	LKD	W2/44	8.20	6.72	1.48	18.05
R2/44	BEDROOM	W3/44	12.18	12.18	0.00	0.00
R2/44	BEDROOM	W4/44	31.74	29.60	2.14	6.74
R2/44	BEDROOM	W5/44	37.61	30.03	7.58	20.15
R2/44	BEDROOM	W6/44	39.16	22.24	16.92	43.21
R3/44	BEDROOM	W7/44	26.84	13.58	13.26	49.40
R4/44	BEDROOM	W8/44	25.49	7.24	18.25	71.60
R5/44	LKD	W9/44	12.81	6.76	6.05	47.23
R5/44	LKD	W10/44	10.12	8.18	1.94	19.17
R1/45	LKD	W1/45	38.66	38.66	0.00	0.00
R1/45	LKD	W2/45	8.67	7.96	0.71	8.19
R2/45	BEDROOM	W3/45	13.42	13.42	0.00	0.00
R2/45	BEDROOM	W4/45	32.97	31.91	1.06	3.22
R2/45	BEDROOM	W5/45	38.53	34.06	4.47	11.60
R2/45	BEDROOM	W6/45	39.59	27.63	11.96	30.21
R3/45	BEDROOM	W7/45	28.57	17.34	11.23	39.31
R4/45	BEDROOM	W8/45	27.66	13.20	14.46	52.28
R5/45	LKD	W9/45	15.49	10.68	4.81	31.05
R5/45	LKD	W10/45	13.21	11.07	2.14	16.20
R1/46	LKD	W1/46	39.27	39.27	0.00	0.00
R1/46	LKD	W2/46	10.63	10.43	0.20	1.88
R2/46	BEDROOM	W3/46	6.36	6.36	0.00	0.00
R2/46	BEDROOM	W4/46	11.76	11.76	0.00	0.00
R3/46	BEDROOM	W5/46	38.89	28.22	10.67	27.44

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R4/46	BEDROOM	W6/46	30.64	21.51	9.13	29.80
R5/46	LKD	W7/46	18.35	15.41	2.94	16.02
R5/46	LKD	W8/46	16.24	14.66	1.58	9.73
R1/47	LKD	W1/47	39.25	39.25	0.00	0.00
R1/47	LKD	W2/47	11.06	11.06	0.00	0.00
R2/47	BEDROOM	W3/47	7.05	7.05	0.00	0.00
R2/47	BEDROOM	W4/47	12.26	12.26	0.00	0.00
R3/47	BEDROOM	W5/47	39.37	35.90	3.47	8.81
R4/47	BEDROOM	W6/47	31.24	28.17	3.07	9.83
R5/47	LKD	W7/47	35.08	34.19	0.89	2.54
R5/47	LKD	W8/47	38.33	37.89	0.44	1.15
Block 1 Padcroft Works						
R1/20	BEDROOM	W1/20	12.41	12.40	0.01	0.08
R2/20	BEDROOM	W2/20	13.50	13.50	0.00	0.00
R3/20	LKD	W3/20	3.30	3.10	0.20	6.06
R4/20	BEDROOM	W4/20	3.36	2.94	0.42	12.50
R5/20	LKD	W5/20	14.95	14.21	0.74	4.95
R6/20	BEDROOM	W6/20	16.73	15.62	1.11	6.63
R7/20	LKD	W7/20	20.21	15.19	5.02	24.84
R8/20	BEDROOM	W8/20	4.77	0.44	4.33	90.78
R9/20	BEDROOM	W9/20	23.76	16.85	6.91	29.08
R10/20	BEDROOM	W10/20	28.62	21.58	7.04	24.60
R10/20	BEDROOM	W11/20	31.53	25.20	6.33	20.08
R10/20	BEDROOM	W12/20	34.05	28.66	5.39	15.83
R10/20	BEDROOM	W13/20	36.25	32.13	4.12	11.37
R11/20	LKD	W14/20	39.61	39.60	0.01	0.03
R11/20	LKD	W15/20	39.31	39.31	0.00	0.00

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R12/20	LKD	W17/20	38.79	38.79	0.00	0.00
R1/21	BEDROOM	W1/21	14.53	14.52	0.01	0.07
R2/21	BEDROOM	W2/21	15.54	15.54	0.00	0.00
R3/21	LKD	W3/21	4.54	4.30	0.24	5.29
R4/21	LKD	W4/21	4.53	4.13	0.40	8.83
R5/21	BEDROOM	W5/21	17.41	16.71	0.70	4.02
R6/21	BEDROOM	W6/21	19.26	18.20	1.06	5.50
R7/21	BEDROOM	W7/21	5.93	4.29	1.64	27.66
R8/21	LKD	W8/21	6.03	3.72	2.31	38.31
R8/21	LKD	W9/21	6.07	3.17	2.90	47.78
R9/21	LKD	W10/21	22.54	17.62	4.92	21.83
R10/21	BEDROOM	W11/21	5.49	0.95	4.54	82.70
R11/21	LKD	W12/21	26.04	19.18	6.86	26.34
R11/21	LKD	W13/21	30.55	23.46	7.09	23.21
R11/21	LKD	W14/21	33.15	26.73	6.42	19.37
R11/21	LKD	W15/21	35.31	29.87	5.44	15.41
R11/21	LKD	W16/21	37.16	33.01	4.15	11.17
R12/21	BEDROOM	W17/21	16.41	16.41	0.00	0.00
R12/21	BEDROOM	W18/21	27.46	27.46	0.00	0.00
R13/21	BEDROOM	W19/21	32.12	32.12	0.00	0.00
R14/21	BEDROOM	W20/21	6.15	6.15	0.00	0.00
R1/22	BEDROOM	W1/22	16.93	16.92	0.01	0.06
R2/22	BEDROOM	W2/22	17.73	17.73	0.00	0.00
R3/22	LKD	W3/22	7.03	6.78	0.25	3.56
R4/22	LKD	W4/22	6.89	6.53	0.36	5.22
R5/22	BEDROOM	W5/22	20.24	19.60	0.64	3.16

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Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R7/22	BEDROOM	W7/22	8.12	6.60	1.52	18.72
R8/22	LKD	W8/22	8.12	5.99	2.13	26.23
R8/22	LKD	W9/22	8.09	5.40	2.69	33.25
R9/22	LKD	W10/22	24.87	20.38	4.49	18.05
R10/22	BEDROOM	W11/22	6.49	2.25	4.24	65.33
R11/22	LKD	W12/22	28.22	21.95	6.27	22.22
R11/22	LKD	W13/22	32.23	25.76	6.47	20.07
R11/22	LKD	W14/22	34.47	28.63	5.84	16.94
R11/22	LKD	W15/22	36.31	31.38	4.93	13.58
R11/22	LKD	W16/22	37.82	34.10	3.72	9.84
R12/22	BEDROOM	W17/22	16.41	16.41	0.00	0.00
R13/22	BEDROOM	W18/22	27.46	27.46	0.00	0.00
R14/22	BEDROOM	W19/22	32.29	32.29	0.00	0.00
R15/22	LKD	W20/22	31.44	31.44	0.00	0.00
R16/22	BEDROOM	W21/22	17.84	17.84	0.00	0.00
R1/23	BEDROOM	W1/23	19.71	19.69	0.02	0.10
R2/23	BEDROOM	W2/23	20.33	20.33	0.00	0.00
R3/23	LKD	W3/23	9.91	9.71	0.20	2.02
R4/23	LKD	W4/23	9.71	9.44	0.27	2.78
R5/23	BEDROOM	W5/23	23.81	23.33	0.48	2.02
R6/23	BEDROOM	W6/23	25.19	24.44	0.75	2.98
R7/23	BEDROOM	W7/23	10.61	9.43	1.18	11.12
R8/23	LKD	W8/23	10.64	8.98	1.66	15.60
R8/23	LKD	W9/23	10.46	8.33	2.13	20.36
R9/23	LKD	W10/23	27.06	23.55	3.51	12.97
R10/23	BEDROOM	W11/23	7.53	4.24	3.29	43.69

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Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R11/23	LKD	W12/23	30.01	25.18	4.83	16.09
R11/23	LKD	W13/23	33.44	28.49	4.95	14.80
R11/23	LKD	W14/23	35.35	30.90	4.45	12.59
R11/23	LKD	W15/23	36.90	33.17	3.73	10.11
R11/23	LKD	W16/23	38.17	35.37	2.80	7.34
R12/23	BEDROOM	W17/23	16.41	16.41	0.00	0.00
R13/23	BEDROOM	W18/23	27.46	27.46	0.00	0.00
R14/23	BEDROOM	W19/23	32.29	32.29	0.00	0.00
R15/23	LKD	W20/23	31.44	31.44	0.00	0.00
R16/23	BEDROOM	W21/23	17.84	17.84	0.00	0.00
R1/24	BEDROOM	W1/24	22.72	22.71	0.01	0.04
R2/24	BEDROOM	W2/24	24.01	24.01	0.00	0.00
R3/24	LKD	W3/24	28.97	28.83	0.14	0.48
R4/24	LKD	W4/24	28.81	28.63	0.18	0.62
R5/24	BEDROOM	W5/24	28.56	28.24	0.32	1.12
R6/24	BEDROOM	W6/24	28.45	27.94	0.51	1.79
R7/24	BEDROOM	W7/24	26.39	25.57	0.82	3.11
R8/24	LKD	W8/24	28.90	27.73	1.17	4.05
R8/24	LKD	W9/24	27.79	26.24	1.55	5.58
R9/24	LKD	W10/24	29.51	26.99	2.52	8.54
R10/24	BEDROOM	W11/24	22.72	20.37	2.35	10.34
R11/24	LKD	W12/24	31.95	28.65	3.30	10.33
R11/24	LKD	W13/24	34.72	31.39	3.33	9.59
R11/24	LKD	W14/24	36.25	33.27	2.98	8.22
R11/24	LKD	W15/24	37.49	35.00	2.49	6.64
R11/24	LKD	W16/24	38.50	36.64	1.86	4.83
R12/24	BEDROOM	W17/24	29.71	29.71	0.00	0.00
R13/24	BEDROOM	W18/24	37.68	37.68	0.00	0.00

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DAYLIGHT ANALYSIS

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Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R14/24	BEDROOM	W19/24	39.62	39.62	0.00	0.00
R15/24	LKD	W20/24	39.62	39.62	0.00	0.00
R16/24	BEDROOM	W21/24	32.99	32.99	0.00	0.00

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
Comag Warehouse						
R1/11	LKD	W1/11	3.1	3.1	3.0	3.0
R2/11	BEDROOM	W2/11	1.2	1.2	1.2	1.2
R3/11	BEDROOM	W3/11	2.3	2.3	2.3	2.3
R1/12	LKD	W1/12	3.1	3.1	3.1	3.1
R2/12	BEDROOM	W2/12	1.3	1.3	1.3	1.3
R3/12	BEDROOM	W3/12	2.5	2.5	2.5	2.5
R1/13	LKD	W1/13	3.1	3.1	3.1	3.1
R2/13	BEDROOM	W2/13	1.4	1.4	1.4	1.4
R3/13	BEDROOM	W3/13	2.8	2.8	2.8	2.8
R1/14	LKD	W1/14	3.1	3.1	3.1	3.1
R2/14	BEDROOM	W2/14	1.5	1.5	1.5	1.5
R3/14	BEDROOM	W3/14	3.0	3.0	3.0	3.0
R1/15	LKD	W1/15	3.1	3.1	3.1	3.1
R2/15	BEDROOM	W2/15	1.6	1.6	1.6	1.6
R3/15	BEDROOM	W3/15	3.2	3.2	3.2	3.2
R1/16	LKD	W1/16	4.3	4.3	4.3	4.3
R2/16	BEDROOM	W2/16	1.8	1.8	1.8	1.8
R3/16	BEDROOM	W3/16	3.6	3.6	3.6	3.6
Blocks 5&6 Padcroft Works						
R6/41	BEDROOM	W11/41	2.5	2.5	2.4	2.4
R7/41	BEDROOM	W12/41	1.6	1.6	1.4	1.4
R8/41	LKD	W13/41	0.9	0.9	0.3	0.3

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Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R10/41	BEDROOM	W15/41	2.2	2.2	2.0	2.0
R11/41	BEDROOM	W17/41	1.6	1.6	1.4	1.4
R12/41	BEDROOM	W16/41	2.6	2.6	2.2	2.2
R13/41	BEDROOM	W18/41	2.9	2.9	2.6	2.6
R14/41	LKD	W19/41	1.1	1.1	0.3	0.3
R6/42	BEDROOM	W11/42	2.7	2.7	2.7	2.7
R7/42	BEDROOM	W12/42	1.7	1.7	1.6	1.6
R8/42	LKD	W13/42	1.0	1.0	0.6	0.6
R9/42		W14/42	0.8	0.8	0.5	0.5
R10/42	BEDROOM	W15/42	2.4	2.4	2.2	2.2
R11/42	BEDROOM	W16/42	2.7	2.7	2.5	2.5
R12/42	BEDROOM	W17/42	1.7	1.7	1.6	1.6
R13/42	BEDROOM	W18/42	3.1	3.1	2.8	2.8
R14/42	LKD	W19/42	1.1	1.1	0.5	0.5
R6/43	BEDROOM	W11/43	3.0	3.0	2.9	2.9
R7/43	BEDROOM	W12/43	1.9	1.9	1.8	1.8
R8/43	LKD	W13/43	1.2	1.2	0.9	0.9
R9/43		W14/43	1.0	1.0	0.7	0.7
R10/43	BEDROOM	W15/43	2.5	2.5	2.4	2.4
R11/43	BEDROOM	W16/43	3.0	3.0	2.8	2.8
R12/43	BEDROOM	W17/43	1.9	1.9	1.7	1.7
R13/43	BEDROOM	W18/43	3.4	3.4	3.1	3.1
R14/43	LKD	W19/43	1.3	1.3	0.9	0.9

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DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R6/44	BEDROOM	W11/44	3.3	3.3	3.3	3.3
R7/44	BEDROOM	W12/44	2.1	2.1	2.1	2.1
R8/44	LKD	W13/44	1.4	1.4	1.2	1.2
R9/44		W14/44	1.1	1.1	1.0	1.0
R10/44	BEDROOM	W15/44	2.7	2.7	2.6	2.6
R11/44	BEDROOM	W16/44	3.3	3.3	3.2	3.2
R12/44	BEDROOM	W17/44	2.0	2.0	1.9	1.9
R13/44	BEDROOM	W18/44	3.6	3.6	3.4	3.4
R14/44	LKD	W19/44	1.4	1.4	1.2	1.2
R6/45	BEDROOM	W11/45	3.7	3.7	3.7	3.7
R7/45	BEDROOM	W12/45	2.6	2.6	2.5	2.5
R8/45	LKD	W13/45	3.2	3.2	3.1	3.1
R9/45		W14/45	2.5	2.5	2.5	2.5
R10/45	BEDROOM	W15/45	3.1	3.1	3.0	3.0
R11/45	BEDROOM	W16/45	3.8	3.8	3.7	3.7
R12/45	BEDROOM	W17/45	2.2	2.2	2.1	2.1
R13/45	BEDROOM	W18/45	4.0	4.0	3.9	3.9
R14/45	LKD	W19/45	3.1	3.1	3.0	3.0
R6/46	BEDROOM	W9/46	3.6	3.6	3.6	3.6
R7/46	BEDROOM	W10/46	3.5	3.5	3.5	3.5
R8/46	LKD	W11/46	2.3	2.3	2.2	2.2
R9/46	BEDROOM	W12/46	3.4	3.4	3.3	3.3
R10/46	BEDROOM	W13/46	5.3	5.3	5.2	5.2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R7/47	BEDROOM	W10/47	3.9	3.9	3.9	3.9
R8/47	LKD	W11/47	2.5	2.5	2.4	2.4
R9/47	BEDROOM	W12/47	3.7	3.7	3.7	3.7
R10/47	BEDROOM	W13/47	5.8	5.8	5.7	5.7
Block 4 Padcroft Works						
R1/41	LKD	W1/41	3.0		3.0	
R1/41	LKD	W2/41	0.4	3.4	0.3	3.4
R2/41	BEDROOM	W3/41	0.2		0.2	
R2/41	BEDROOM	W4/41	1.3		1.2	
R2/41	BEDROOM	W5/41	1.6		1.3	
R2/41	BEDROOM	W6/41	1.6	4.6	1.1	3.8
R3/41	BEDROOM	W7/41	2.9	2.9	1.6	1.6
R4/41	BEDROOM	W8/41	2.9	2.9	0.2	0.2
R5/41	LKD	W9/41	0.3		0.2	
R5/41	LKD	W10/41	1.2	1.5	1.0	1.3
R1/42	LKD	W1/42	3.4		3.4	
R1/42	LKD	W2/42	0.4	3.8	0.4	3.7
R2/42	BEDROOM	W3/42	0.4		0.4	
R2/42	BEDROOM	W4/42	1.4		1.3	
R2/42	BEDROOM	W5/42	1.7		1.4	
R2/42	BEDROOM	W6/42	1.7	5.1	1.1	4.1
R3/42	BEDROOM	W7/42	3.0	3.0	1.7	1.7
R4/42	BEDROOM	W8/42	3.0	3.0	0.4	0.4
R5/42	LKD	W9/42	0.3		0.3	
R5/42	LKD	W10/42	1.3	1.6	1.1	1.4
R1/43	LKD	W1/43	3.7		3.7	
R1/43	LKD	W2/43	0.5	4.2	0.4	4.1
R2/43	BEDROOM	W3/43	0.5		0.5	
R2/43	BEDROOM	W4/43	1.5		1.4	

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			ADF	Total	ADF	Total
R2/43	BEDROOM	W6/43	1.7	5.5	1.1	4.5
R3/43	BEDROOM	W7/43	3.2	3.2	2.0	2.0
R4/43	BEDROOM	W8/43	3.0	3.0	0.8	0.8
R5/43	LKD	W9/43	0.4		0.3	
R5/43	LKD	W10/43	1.3	1.7	1.2	1.5
R1/44	LKD	W1/44	4.0		4.0	
R1/44	LKD	W2/44	0.5	4.5	0.5	4.5
R2/44	BEDROOM	W3/44	0.6		0.6	
R2/44	BEDROOM	W4/44	1.5		1.5	
R2/44	BEDROOM	W5/44	1.8		1.6	
R2/44	BEDROOM	W6/44	1.8	5.8	1.2	4.9
R3/44	BEDROOM	W7/44	3.3	3.3	2.2	2.2
R4/44	BEDROOM	W8/44	3.1	3.1	1.3	1.3
R5/44	LKD	W9/44	0.4		0.3	
R5/44	LKD	W10/44	1.5	1.9	1.3	1.6
R1/45	LKD	W1/45	4.2		4.2	
R1/45	LKD	W2/45	0.5	4.7	0.5	4.7
R2/45	BEDROOM	W3/45	0.7		0.7	
R2/45	BEDROOM	W4/45	1.6		1.6	
R2/45	BEDROOM	W5/45	1.9		1.7	
R2/45	BEDROOM	W6/45	1.8	5.9	1.4	5.4
R3/45	BEDROOM	W7/45	3.5	3.5	2.6	2.6
R4/45	BEDROOM	W8/45	3.3	3.3	2.0	2.0
R5/45	LKD	W9/45	0.5		0.4	
R5/45	LKD	W10/45	1.6	2.1	1.5	1.8
R1/46	LKD	W1/46	4.9		4.9	
R1/46	LKD	W2/46	0.7	5.6	0.7	5.6
R2/46	BEDROOM	W3/46	0.7		0.7	
R2/46	BEDROOM	W4/46	1.0	1.7	1.0	1.7
R3/46	BEDROOM	W5/46	3.5	3.5	2.7	2.7

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Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R4/46	BEDROOM	W6/46	3.4	3.4	2.7	2.7
R5/46	LKD	W7/46	0.6		0.6	
R5/46	LKD	W8/46	1.9	2.5	1.8	2.3
R1/47	LKD	W1/47	5.1		5.1	
R1/47	LKD	W2/47	0.7	5.8	0.7	5.8
R2/47	BEDROOM	W3/47	0.8		0.8	
R2/47	BEDROOM	W4/47	1.1	1.9	1.1	1.9
R3/47	BEDROOM	W5/47	3.7	3.7	3.4	3.4
R4/47	BEDROOM	W6/47	3.6	3.6	3.3	3.3
R5/47	LKD	W7/47	1.2		1.2	
R5/47	LKD	W8/47	4.4	5.6	4.3	5.5
Block 1 Padcroft Works						
R1/20	BEDROOM	W1/20	1.4	1.4	1.4	1.4
R2/20	BEDROOM	W2/20	1.4	1.4	1.4	1.4
R3/20	LKD	W3/20	0.2	0.2	0.2	0.2
R4/20	BEDROOM	W4/20	0.2	0.2	0.1	0.1
R5/20	LKD	W5/20	0.8	0.8	0.8	0.8
R6/20	BEDROOM	W6/20	1.2	1.2	1.2	1.2
R7/20	LKD	W7/20	2.8	2.8	2.2	2.2
R8/20	BEDROOM	W8/20	0.7	0.7	0.1	0.1
R9/20	BEDROOM	W9/20	2.4	2.4	1.8	1.8
R10/20	BEDROOM	W10/20	1.9		1.5	
R10/20	BEDROOM	W11/20	2.0		1.7	
R10/20	BEDROOM	W12/20	2.4		2.1	
R10/20	BEDROOM	W13/20	2.1	8.5	1.9	7.2
R11/20	LKD	W14/20	2.4		2.4	
R11/20	LKD	W15/20	1.4	3.8	1.4	3.8

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			ADF	Total	ADF	Total
R12/20	LKD	W17/20	2.5	4.1	2.5	4.1
R1/21	BEDROOM	W1/21	1.5	1.5	1.5	1.5
R2/21	BEDROOM	W2/21	1.5	1.5	1.5	1.5
R3/21	LKD	W3/21	0.3	0.3	0.2	0.2
R4/21	LKD	W4/21	0.1	0.1	0.1	0.1
R5/21	BEDROOM	W5/21	1.6	1.6	1.6	1.6
R6/21	BEDROOM	W6/21	1.3	1.3	1.3	1.3
R7/21	BEDROOM	W7/21	1.0	1.0	0.4	0.4
R8/21	LKD	W8/21	0.5		0.2	
R8/21	LKD	W9/21	0.7	1.2	0.2	0.3
R9/21	LKD	W10/21	3.6	3.6	3.0	3.0
R10/21	BEDROOM	W11/21	0.9	0.9	0.1	0.1
R11/21	LKD	W12/21	1.2		0.9	
R11/21	LKD	W13/21	1.0		0.8	
R11/21	LKD	W14/21	1.0		0.9	
R11/21	LKD	W15/21	1.2		1.1	
R11/21	LKD	W16/21	1.1	5.5	1.0	4.6
R12/21	BEDROOM	W17/21	1.4		1.4	
R12/21	BEDROOM	W18/21	1.9	3.3	1.9	3.3
R13/21	BEDROOM	W19/21	2.1	2.1	2.1	2.1
R14/21	BEDROOM	W20/21	1.4	1.4	1.4	1.4
R1/22	BEDROOM	W1/22	1.7	1.7	1.7	1.7
R2/22	BEDROOM	W2/22	1.7	1.7	1.7	1.7
R3/22	LKD	W3/22	0.5	0.5	0.5	0.5
R4/22	LKD	W4/22	0.3	0.3	0.3	0.3
R5/22	BEDROOM	W5/22	1.7	1.7	1.7	1.7

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R7/22	BEDROOM	W7/22	1.4	1.4	0.9	0.9
R8/22	LKD	W8/22	0.6		0.4	
R8/22	LKD	W9/22	0.8	1.5	0.5	0.8
R9/22	LKD	W10/22	3.9	3.9	3.3	3.3
R10/22	BEDROOM	W11/22	1.0	1.0	0.2	0.2
R11/22	LKD	W12/22	1.5		1.2	
R11/22	LKD	W13/22	1.2		1.0	
R11/22	LKD	W14/22	1.3		1.1	
R11/22	LKD	W15/22	1.5		1.3	
R11/22	LKD	W16/22	1.3	6.7	1.2	5.8
R12/22	BEDROOM	W17/22	1.6	1.6	1.6	1.6
R13/22	BEDROOM	W18/22	1.9	1.9	1.9	1.9
R14/22	BEDROOM	W19/22	2.1	2.1	2.1	2.1
R15/22	LKD	W20/22	2.3	2.3	2.3	2.3
R16/22	BEDROOM	W21/22	3.1	3.1	3.1	3.1
R1/23	BEDROOM	W1/23	1.8	1.8	1.8	1.8
R2/23	BEDROOM	W2/23	1.8	1.8	1.8	1.8
R3/23	LKD	W3/23	0.8	0.8	0.7	0.7
R4/23	LKD	W4/23	0.4	0.4	0.4	0.4
R5/23	BEDROOM	W5/23	1.9	1.9	1.9	1.9
R6/23	BEDROOM	W6/23	1.7	1.7	1.7	1.7
R7/23	BEDROOM	W7/23	1.6	1.6	1.4	1.4
R8/23	LKD	W8/23	0.7		0.6	
R8/23	LKD	W9/23	1.0	1.7	0.7	1.3
R9/23	LKD	W10/23	4.2	4.2	3.7	3.7
R10/23	BEDROOM	W11/23	1.1	1.1	0.5	0.5

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R11/23	LKD	W12/23	1.5		1.3	
R11/23	LKD	W13/23	1.3		1.1	
R11/23	LKD	W14/23	1.3		1.2	
R11/23	LKD	W15/23	1.5		1.4	
R11/23	LKD	W16/23	1.3	6.9	1.2	6.1
R12/23	BEDROOM	W17/23	1.6	1.6	1.6	1.6
R13/23	BEDROOM	W18/23	1.9	1.9	1.9	1.9
R14/23	BEDROOM	W19/23	2.1	2.1	2.1	2.1
R15/23	LKD	W20/23	2.3	2.3	2.3	2.3
R16/23	BEDROOM	W21/23	3.1	3.1	3.1	3.1
R1/24	BEDROOM	W1/24	2.0	2.0	2.0	2.0
R2/24	BEDROOM	W2/24	2.0	2.0	2.0	2.0
R3/24	LKD	W3/24	2.3	2.3	2.3	2.3
R4/24	LKD	W4/24	1.3	1.3	1.3	1.3
R5/24	BEDROOM	W5/24	2.2	2.2	2.2	2.2
R6/24	BEDROOM	W6/24	1.8	1.8	1.8	1.8
R7/24	BEDROOM	W7/24	4.0	4.0	3.9	3.9
R8/24	LKD	W8/24	1.8		1.8	
R8/24	LKD	W9/24	2.4	4.2	2.3	4.0
R9/24	LKD	W10/24	4.5	4.5	4.2	4.2
R10/24	BEDROOM	W11/24	2.4	2.4	2.2	2.2
R11/24	LKD	W12/24	1.6		1.5	
R11/24	LKD	W13/24	1.3		1.2	
R11/24	LKD	W14/24	1.3		1.2	
R11/24	LKD	W15/24	1.5		1.4	
R11/24	LKD	W16/24	1.3	7.0	1.2	6.5
R12/24	BEDROOM	W17/24	2.7	2.7	2.7	2.7
R13/24	BEDROOM	W18/24	2.7	2.7	2.7	2.7

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R14/24	BEDROOM	W19/24	2.8	2.8	2.8	2.8
R15/24	LKD	W20/24	3.1	3.1	3.1	3.1
R16/24	BEDROOM	W21/24	5.3	5.3	5.3	5.3

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NSL ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

NSL						
Room	**Room Use**	**Whole Room sq ft**	**Existing sq ft**	**Proposed sq ft**	**Loss sq ft**	**%Loss**
Comag Warehouse						
R1/11	LKD	275.5	274.4	274.0	0.4	0.1
R2/11	BEDROOM	139.4	62.3	62.3	0.0	0.0
R3/11	BEDROOM	122.7	83.3	83.3	0.0	0.0
R1/12	LKD	275.5	274.4	274.0	0.4	0.1
R2/12	BEDROOM	139.4	89.7	89.7	0.0	0.0
R3/12	BEDROOM	122.7	104.3	104.3	0.0	0.0
R1/13	LKD	275.5	274.4	274.0	0.4	0.1
R2/13	BEDROOM	139.4	104.8	104.8	0.0	0.0
R3/13	BEDROOM	122.7	113.1	113.1	0.0	0.0
R1/14	LKD	275.5	274.4	274.0	0.4	0.1
R2/14	BEDROOM	139.4	128.6	128.6	0.0	0.0
R3/14	BEDROOM	122.7	118.5	118.5	0.0	0.0
R1/15	LKD	275.5	274.4	274.0	0.4	0.1
R2/15	BEDROOM	139.4	133.9	133.9	0.0	0.0
R3/15	BEDROOM	122.7	120.4	120.4	0.0	0.0
R1/16	LKD	275.5	274.4	274.1	0.2	0.1
R2/16	BEDROOM	139.4	134.4	134.4	0.0	0.0
R3/16	BEDROOM	122.7	120.4	120.4	0.0	0.0
Blocks 5&6 Padcroft Works						
R6/41	BEDROOM	140.3	95.4	64.3	31.1	32.6
R7/41	BEDROOM	128.9	70.9	63.6	7.3	10.3
R8/41	LKD	273.7	256.1	51.5	204.6	79.9
R9/41		304.2	257.1	43.5	213.6	83.1
R10/41	BEDROOM	118.6	92.9	81.6	11.3	12.2
R11/41	BEDROOM	151.4	86.9	82.4	4.5	5.2
R12/41	BEDROOM	118.3	83.2	72.4	10.8	13.0
R13/41	BEDROOM	92.8	71.5	71.5	0.0	0.0
R14/41	LKD	285.7	186.5	61.1	125.4	67.2
R6/42	BEDROOM	140.3	97.8	78.9	18.9	19.3
R7/42	BEDROOM	128.9	73.8	69.8	4.0	5.4
R8/42	LKD	273.7	260.5	78.2	182.3	70.0
R9/42		304.2	259.0	67.8	191.2	73.8
R10/42	BEDROOM	118.6	101.3	101.1	0.2	0.2
R11/42	BEDROOM	118.3	92.8	92.5	0.3	0.3
R12/42	BEDROOM	151.4	107.0	107.0	0.0	0.0
R13/42	BEDROOM	92.8	82.7	82.7	0.0	0.0
R14/42	LKD	285.7	196.6	101.5	95.1	48.4
R6/43	BEDROOM	140.3	101.6	97.0	4.6	4.5
R7/43	BEDROOM	128.9	79.2	79.2	0.0	0.0
R8/43	LKD	273.7	267.0	120.9	146.1	54.7
R9/43		304.2	262.4	107.7	154.7	59.0
R10/43	BEDROOM	118.6	109.8	109.8	0.0	0.0

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NSL ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

NSL						
Room	**Room Use**	**Whole Room sq ft**	**Existing sq ft**	**Proposed sq ft**	**Loss sq ft**	**%Loss**
R12/43	BEDROOM	151.4	118.8	118.8	0.0	0.0
R13/43	BEDROOM	92.8	87.7	87.7	0.0	0.0
R14/43	LKD	285.7	212.4	148.9	63.5	29.9
R6/44	BEDROOM	140.3	109.9	109.8	0.1	0.1
R7/44	BEDROOM	128.9	89.9	89.9	0.0	0.0
R8/44	LKD	273.7	272.7	193.7	79.0	29.0
R9/44		304.2	271.2	188.3	82.9	30.6
R10/44	BEDROOM	118.6	111.2	111.2	0.0	0.0
R11/44	BEDROOM	118.3	115.1	115.1	0.0	0.0
R12/44	BEDROOM	151.4	122.0	122.0	0.0	0.0
R13/44	BEDROOM	92.8	89.3	89.3	0.0	0.0
R14/44	LKD	285.7	249.4	224.3	25.1	10.1
R6/45	BEDROOM	140.3	123.4	123.4	0.0	0.0
R7/45	BEDROOM	128.9	115.0	115.0	0.0	0.0
R8/45	LKD	273.7	273.5	273.5	0.0	0.0
R9/45		304.2	301.4	301.4	0.0	0.0
R10/45	BEDROOM	118.6	112.9	112.9	0.0	0.0
R11/45	BEDROOM	118.3	117.1	117.1	0.0	0.0
R12/45	BEDROOM	151.4	122.8	122.8	0.0	0.0
R13/45	BEDROOM	92.8	90.1	90.1	0.0	0.0
R14/45	LKD	285.7	283.0	283.0	0.0	0.0
R6/46	BEDROOM	86.8	74.8	74.8	0.0	0.0
R7/46	BEDROOM	130.1	123.2	123.2	0.0	0.0
R8/46	LKD	300.1	250.1	250.1	0.0	0.0
R9/46	BEDROOM	119.6	110.5	110.5	0.0	0.0
R10/46	BEDROOM	134.0	128.6	128.6	0.0	0.0
R6/47	BEDROOM	86.8	74.8	74.8	0.0	0.0
R7/47	BEDROOM	130.1	123.2	123.2	0.0	0.0
R8/47	LKD	300.1	250.7	250.7	0.0	0.0
R9/47	BEDROOM	119.6	110.5	110.5	0.0	0.0
R10/47	BEDROOM	134.0	128.6	128.6	0.0	0.0

Block 4 Padcroft Works

R1/41	LKD	321.5	148.1	148.1	0.0	0.0
R2/41	BEDROOM	210.2	198.1	196.9	1.2	0.6
R3/41	BEDROOM	116.2	103.7	72.5	31.2	30.1
R4/41	BEDROOM	127.5	73.8	10.8	63.0	85.4
R5/41	LKD	276.0	249.4	225.1	24.3	9.7
R1/42	LKD	321.5	203.2	203.2	0.0	0.0
R2/42	BEDROOM	210.2	205.7	204.5	1.2	0.6
R3/42	BEDROOM	116.2	106.2	79.6	26.7	25.1
R4/42	BEDROOM	127.5	73.8	17.2	56.7	76.8
R5/42	LKD	276.0	250.8	226.7	24.1	9.6
R1/43	LKD	321.5	304.9	304.9	0.0	0.0
R2/43	BEDROOM	210.2	209.6	208.8	0.8	0.4

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NSL ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

NSL

Room	Room Use	Whole Room sq ft	Existing sq ft	Proposed sq ft	Loss sq ft	%Loss
R4/43	BEDROOM	127.5	73.8	28.3	45.5	61.7
R5/43	LKD	276.0	255.2	234.3	20.8	8.2
R1/44	LKD	321.5	305.0	305.0	0.0	0.0
R2/44	BEDROOM	210.2	209.6	209.2	0.4	0.2
R3/44	BEDROOM	116.2	112.7	104.8	7.9	7.0
R4/44	BEDROOM	127.5	75.1	53.7	21.4	28.5
R5/44	LKD	276.0	255.7	243.7	12.0	4.7
R1/45	LKD	321.5	305.0	305.0	0.0	0.0
R2/45	BEDROOM	210.2	209.6	209.6	0.0	0.0
R3/45	BEDROOM	116.2	113.2	112.9	0.4	0.4
R4/45	BEDROOM	127.5	91.6	86.5	5.1	5.6
R5/45	LKD	276.0	259.1	257.8	1.3	0.5
R1/46	LKD	288.3	288.3	288.3	0.0	0.0
R2/46	BEDROOM	141.3	137.8	137.8	0.0	0.0
R3/46	BEDROOM	153.2	144.5	140.0	4.5	3.1
R4/46	BEDROOM	127.5	91.6	91.6	0.0	0.0
R5/46	LKD	276.0	270.9	270.9	0.0	0.0
R1/47	LKD	288.3	288.3	288.3	0.0	0.0
R2/47	BEDROOM	141.3	137.8	137.8	0.0	0.0
R3/47	BEDROOM	153.2	144.5	144.5	0.0	0.0
R4/47	BEDROOM	127.5	93.7	93.7	0.0	0.0
R5/47	LKD	276.0	270.9	270.9	0.0	0.0
Block 1 Padcroft Works						
R1/20	BEDROOM	124.6	66.4	66.4	0.0	0.0
R2/20	BEDROOM	119.5	61.5	61.5	0.0	0.0
R3/20	LKD	283.0	34.3	30.9	3.4	9.9
R4/20	BEDROOM	168.3	25.5	22.4	3.2	12.5
R5/20	LKD	237.9	55.6	55.4	0.2	0.4
R6/20	BEDROOM	131.4	55.2	55.0	0.2	0.4
R7/20	LKD	290.4	212.6	102.1	110.5	52.0
R8/20	BEDROOM	136.1	78.9	11.6	67.3	85.3
R9/20	BEDROOM	119.1	84.9	70.0	14.9	17.6
R10/20	BEDROOM	134.8	131.5	131.5	0.0	0.0
R11/20	LKD	265.2	250.3	250.3	0.0	0.0
R12/20	LKD	343.1	341.4	341.4	0.0	0.0
R1/21	BEDROOM	124.6	84.2	84.2	0.0	0.0
R2/21	BEDROOM	120.3	77.3	77.3	0.0	0.0
R3/21	LKD	284.4	46.9	44.7	2.2	4.7
R4/21	LKD	251.8	38.6	37.7	0.9	2.3
R5/21	BEDROOM	122.6	68.3	68.3	0.0	0.0
R6/21	BEDROOM	142.7	67.0	67.0	0.0	0.0
R7/21	BEDROOM	112.5	56.3	45.9	10.4	18.5
R8/21	LKD	261.4	200.6	86.3	114.3	57.0
R9/21	LKD	234.5	196.1	120.1	76.0	38.8

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NSL ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

NSL

Room	Room Use	Whole Room sq ft	Existing sq ft	Proposed sq ft	Loss sq ft	%Loss
R11/21	LKD	329.1	324.6	322.7	2.0	0.6
R12/21	BEDROOM	128.0	124.9	124.9	0.0	0.0
R13/21	BEDROOM	122.7	121.4	121.4	0.0	0.0
R14/21	BEDROOM	131.4	103.8	103.8	0.0	0.0
R1/22	BEDROOM	124.6	98.6	98.6	0.0	0.0
R2/22	BEDROOM	120.3	84.3	84.3	0.0	0.0
R3/22	LKD	284.4	75.1	74.5	0.6	0.8
R4/22	LKD	251.8	69.9	69.8	0.1	0.1
R5/22	BEDROOM	122.6	89.3	89.3	0.0	0.0
R6/22	BEDROOM	142.7	87.1	87.1	0.0	0.0
R7/22	BEDROOM	112.5	75.1	70.3	4.8	6.4
R8/22	LKD	261.4	225.7	153.8	71.9	31.9
R9/22	LKD	234.5	207.9	154.2	53.7	25.8
R10/22	BEDROOM	109.4	83.3	36.8	46.5	55.8
R11/22	LKD	259.2	257.4	257.4	0.0	0.0
R12/22	BEDROOM	99.7	94.6	94.6	0.0	0.0
R13/22	BEDROOM	117.6	106.2	106.2	0.0	0.0
R14/22	BEDROOM	123.8	119.7	119.7	0.0	0.0
R15/22	LKD	248.5	233.3	233.3	0.0	0.0
R16/22	BEDROOM	102.5	97.1	97.1	0.0	0.0
R1/23	BEDROOM	124.6	104.5	104.5	0.0	0.0
R2/23	BEDROOM	120.3	89.5	89.5	0.0	0.0
R3/23	LKD	284.4	120.5	120.5	0.0	0.0
R4/23	LKD	251.8	113.3	113.3	0.0	0.0
R5/23	BEDROOM	122.6	102.9	102.9	0.0	0.0
R6/23	BEDROOM	142.7	111.5	111.5	0.0	0.0
R7/23	BEDROOM	112.5	104.0	102.6	1.4	1.3
R8/23	LKD	261.4	251.7	227.9	23.8	9.5
R9/23	LKD	234.5	231.3	218.3	13.0	5.6
R10/23	BEDROOM	109.4	89.0	75.9	13.2	14.8
R11/23	LKD	259.2	257.8	257.8	0.0	0.0
R12/23	BEDROOM	99.7	94.6	94.6	0.0	0.0
R13/23	BEDROOM	117.6	106.2	106.2	0.0	0.0
R14/23	BEDROOM	123.8	119.7	119.7	0.0	0.0
R15/23	LKD	248.5	233.3	233.3	0.0	0.0
R16/23	BEDROOM	102.5	97.1	97.1	0.0	0.0
R1/24	BEDROOM	124.6	108.0	108.0	0.0	0.0
R2/24	BEDROOM	120.3	90.3	90.3	0.0	0.0
R3/24	LKD	284.4	215.0	215.0	0.0	0.0
R4/24	LKD	251.8	194.0	194.0	0.0	0.0
R5/24	BEDROOM	122.6	112.0	112.0	0.0	0.0
R6/24	BEDROOM	142.7	127.4	127.4	0.0	0.0
R7/24	BEDROOM	112.5	109.1	109.1	0.0	0.0
R8/24	LKD	261.4	256.2	256.2	0.0	0.0
R9/24	LKD	234.5	232.8	232.8	0.0	0.0
R10/24	BEDROOM	109.4	100.7	100.7	0.0	0.0

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NSL ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

NSL

Room	Room Use	Whole Room sq ft	Existing sq ft	Proposed sq ft	Loss sq ft	%Loss
R12/24	BEDROOM	99.7	97.1	97.1	0.0	0.0
R13/24	BEDROOM	117.6	109.2	109.2	0.0	0.0
R14/24	BEDROOM	123.8	119.7	119.7	0.0	0.0
R15/24	LKD	248.5	233.3	233.3	0.0	0.0
R16/24	BEDROOM	102.5	99.6	99.6	0.0	0.0

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SUNLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

APSH

Room	Window	Room Use	Window						Room					
			Existing		Proposed		Winter %Loss	Annual %Loss	Existing		Proposed		Winter %Loss	Annual %Loss
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH		
Comag Warehouse														
R1/11	W1/11	LKD	25	39	24	36	4.0	7.7	25	39	24	36	4.0	7.7
R1/12	W1/12	LKD	25	39	24	36	4.0	7.7	25	39	24	36	4.0	7.7
R1/13	W1/13	LKD	25	39	24	36	4.0	7.7	25	39	24	36	4.0	7.7
R1/14	W1/14	LKD	25	39	24	36	4.0	7.7	25	39	24	36	4.0	7.7
R1/15	W1/15	LKD	25	39	24	36	4.0	7.7	25	39	24	36	4.0	7.7
R1/16	W1/16	LKD	26	62	25	60	3.8	3.2	26	62	25	60	3.8	3.2
Blocks 5&6 Padcroft Works														
R8/41	W13/41	LKD	3	9	2	8	33.3	11.1	3	9	2	8	33.3	11.1
R9/41	W14/41		5	11	1	7	80.0	36.4	5	11	1	7	80.0	36.4

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SUNLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

APSH

Room	Window	Room Use	Window						Room					
			Existing		Proposed		Winter %Loss	Annual %Loss	Existing		Proposed		Winter %Loss	Annual %Loss
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH		
R14/41	W19/41	LKD	7	11	2	6	71.4	45.5	7	11	2	6	71.4	45.5
R8/42	W13/42	LKD	3	11	2	10	33.3	9.1	3	11	2	10	33.3	9.1
R9/42	W14/42		5	13	3	11	40.0	15.4	5	13	3	11	40.0	15.4
R14/42	W19/42	LKD	8	16	4	12	50.0	25.0	8	16	4	12	50.0	25.0
R8/43	W13/43	LKD	4	13	3	12	25.0	7.7	4	13	3	12	25.0	7.7
R9/43	W14/43		6	15	4	13	33.3	13.3	6	15	4	13	33.3	13.3

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SUNLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

APSH

Room	Window	Room Use	Window				Winter %Loss	Annual %Loss	Room				Winter %Loss	Annual %Loss
			Existing		Proposed				Existing		Proposed			
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH		
R14/43	W19/43	LKD	11	19	8	16	27.3	15.8	11	19	8	16	27.3	15.8
R8/44	W13/44	LKD	7	18	7	18	0.0	0.0	7	18	7	18	0.0	0.0
R9/44	W14/44		10	20	9	19	10.0	5.0	10	20	9	19	10.0	5.0
R14/44	W19/44	LKD	13	21	11	19	15.4	9.5	13	21	11	19	15.4	9.5
R8/45	W13/45	LKD	15	67	14	66	6.7	1.5	15	67	14	66	6.7	1.5
R9/45	W14/45		19	71	19	71	0.0	0.0	19	71	19	71	0.0	0.0

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SUNLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

APSH

Room	Window	Room Use	Window				Winter %Loss	Annual %Loss	Room				Winter %Loss	Annual %Loss
			Existing		Proposed				Existing		Proposed			
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH		
R14/45	W19/45	LKD	18	61	18	61	0.0	0.0	18	61	18	61	0.0	0.0
R8/46	W11/46	LKD	15	50	15	50	0.0	0.0	15	50	15	50	0.0	0.0
R8/47	W11/47	LKD	16	52	16	52	0.0	0.0	16	52	16	52	0.0	0.0
Block 4 Padcroft Works														
R1/41	W1/41	LKD	8	35	8	35	0.0	0.0						
R1/41	W2/41	LKD	3	12	2	11	33.3	8.3	11	39	10	38	9.1	2.6

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SUNLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

APSH

Room	Window	Room Use	Window				Winter %Loss	Annual %Loss	Room				Winter %Loss	Annual %Loss
			Existing		Proposed				Existing		Proposed			
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH		
R1/42	W1/42	LKD	10	41	10	41	0.0	0.0						
R1/42	W2/42	LKD	5	16	4	15	20.0	6.3	13	44	12	43	7.7	2.3
R1/43	W1/43	LKD	12	48	12	48	0.0	0.0						
R1/43	W2/43	LKD	7	20	6	19	14.3	5.0	15	51	14	50	6.7	2.0
R1/44	W1/44	LKD	14	50	14	50	0.0	0.0						
R1/44	W2/44	LKD	9	22	8	21	11.1	4.5	17	53	16	52	5.9	1.9
R1/45	W1/45	LKD	15	52	15	52	0.0	0.0						
R1/45	W2/45	LKD	9	22	9	22	0.0	0.0	17	54	17	54	0.0	0.0

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SUNLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

APSH

Room	Window	Room Use	Window				Winter %Loss	Annual %Loss	Room				Winter %Loss	Annual %Loss
			Existing		Proposed				Existing		Proposed			
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH		
R1/46	W1/46	LKD	15	52	15	52	0.0	0.0						
R1/46	W2/46	LKD	11	24	11	24	0.0	0.0	19	56	19	56	0.0	0.0
R1/47	W1/47	LKD	15	50	15	50	0.0	0.0						
R1/47	W2/47	LKD	11	24	11	24	0.0	0.0	19	54	19	54	0.0	0.0

Block 1 Padcroft Works

R11/20	W14/20	LKD	30	86	30	86	0.0	0.0						
R11/20	W15/20	LKD	30	85	30	85	0.0	0.0	30	88	30	88	0.0	0.0
R12/20	W16/20	LKD	30	88	30	88	0.0	0.0						
R12/20	W17/20	LKD	30	88	30	88	0.0	0.0	30	88	30	88	0.0	0.0
R11/21	W12/21	LKD	9	34	9	25	0.0	26.5						
R11/21	W13/21	LKD	14	43	14	37	0.0	14.0						

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SUNLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

APSH

Room	Window	Room Use	Window				Winter %Loss	Annual %Loss	Room				Winter %Loss	Annual %Loss
			Existing		Proposed				Existing		Proposed			
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH		
R11/21	W14/21	LKD	16	49	16	43	0.0	12.2						
R11/21	W15/21	LKD	20	55	20	49	0.0	10.9						
R11/21	W16/21	LKD	22	62	22	56	0.0	9.7	22	62	22	56	0.0	9.7
R11/22	W12/22	LKD	9	34	9	26	0.0	23.5						
R11/22	W13/22	LKD	14	44	14	37	0.0	15.9						
R11/22	W14/22	LKD	16	49	16	43	0.0	12.2						
R11/22	W15/22	LKD	20	55	20	49	0.0	10.9						
R11/22	W16/22	LKD	22	62	22	56	0.0	9.7	22	62	22	56	0.0	9.7
R15/22	W20/22	LKD	30	71	30	71	0.0	0.0	30	71	30	71	0.0	0.0
R11/23	W12/23	LKD	9	35	9	30	0.0	14.3						
R11/23	W13/23	LKD	14	45	14	39	0.0	13.3						
R11/23	W14/23	LKD	16	50	16	44	0.0	12.0						
R11/23	W15/23	LKD	20	56	20	50	0.0	10.7						

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SUNLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

APSH

Room	Window	Room Use	Window						Room					
			Existing		Proposed		Winter %Loss	Annual %Loss	Existing		Proposed		Winter %Loss	Annual %Loss
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH		
R11/23	W16/23	LKD	22	62	22	57	0.0	8.1	22	62	22	57	0.0	8.1
R15/23	W20/23	LKD	30	71	30	71	0.0	0.0	30	71	30	71	0.0	0.0
R11/24	W12/24	LKD	9	35	9	30	0.0	14.3						
R11/24	W13/24	LKD	14	45	14	41	0.0	8.9						
R11/24	W14/24	LKD	16	50	16	46	0.0	8.0						
R11/24	W15/24	LKD	20	56	20	52	0.0	7.1						
R11/24	W16/24	LKD	22	62	22	58	0.0	6.5	22	62	22	58	0.0	6.5
R15/24	W20/24	LKD	30	88	30	88	0.0	0.0	30	88	30	88	0.0	0.0

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Appendix 3:

Technical Analysis
Existing versus Proposed (without balconies)

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
Comag Warehouse						
R1/11	LKD	W1/11	34.12	33.38	0.74	2.17
R2/11	BEDROOM	W2/11	11.27	11.27	0.00	0.00
R3/11	BEDROOM	W3/11	19.96	19.96	0.00	0.00
R1/12	LKD	W1/12	34.10	33.37	0.73	2.14
R2/12	BEDROOM	W2/12	13.13	13.13	0.00	0.00
R3/12	BEDROOM	W3/12	22.72	22.72	0.00	0.00
R1/13	LKD	W1/13	34.05	33.33	0.72	2.11
R2/13	BEDROOM	W2/13	15.18	15.18	0.00	0.00
R3/13	BEDROOM	W3/13	25.58	25.58	0.00	0.00
R1/14	LKD	W1/14	33.91	33.24	0.67	1.98
R2/14	BEDROOM	W2/14	17.39	17.39	0.00	0.00
R3/14	BEDROOM	W3/14	28.44	28.44	0.00	0.00
R1/15	LKD	W1/15	33.40	32.88	0.52	1.56
R2/15	BEDROOM	W2/15	19.74	19.74	0.00	0.00
R3/15	BEDROOM	W3/15	31.12	31.12	0.00	0.00
R1/16	LKD	W1/16	30.00	29.73	0.27	0.90
R2/16	BEDROOM	W2/16	22.64	22.64	0.00	0.00
R3/16	BEDROOM	W3/16	32.98	32.98	0.00	0.00
Blocks 5&6 Padcroft Works						
R6/41	BEDROOM	W11/41	12.58	12.12	0.46	3.66
R7/41	BEDROOM	W12/41	16.06	14.53	1.53	9.53
R8/41	LKD	W13/41	18.77	16.32	2.45	13.05

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R10/41	BEDROOM	W15/41	20.31	16.97	3.34	16.45
R11/41	BEDROOM	W17/41	16.44	13.61	2.83	17.21
R12/41	BEDROOM	W16/41	18.52	15.23	3.29	17.76
R13/41	BEDROOM	W18/41	18.07	14.88	3.19	17.65
R14/41	LKD	W19/41	19.60	15.83	3.77	19.23
R6/42	BEDROOM	W11/42	14.40	14.02	0.38	2.64
R7/42	BEDROOM	W12/42	18.29	16.99	1.30	7.11
R8/42	LKD	W13/42	21.18	19.10	2.08	9.82
R9/42		W14/42	22.51	19.98	2.53	11.24
R10/42	BEDROOM	W15/42	22.69	19.86	2.83	12.47
R11/42	BEDROOM	W16/42	20.53	17.73	2.80	13.64
R12/42	BEDROOM	W17/42	18.26	15.83	2.43	13.31
R13/42	BEDROOM	W18/42	20.22	17.45	2.77	13.70
R14/42	LKD	W19/42	21.92	18.62	3.30	15.05
R6/43	BEDROOM	W11/43	16.64	16.34	0.30	1.80
R7/43	BEDROOM	W12/43	21.03	19.98	1.05	4.99
R8/43	LKD	W13/43	24.03	22.35	1.68	6.99
R9/43		W14/43	25.37	23.32	2.05	8.08
R10/43	BEDROOM	W15/43	25.54	23.26	2.28	8.93
R11/43	BEDROOM	W16/43	22.96	20.70	2.26	9.84
R12/43	BEDROOM	W17/43	20.30	18.34	1.96	9.66
R13/43	BEDROOM	W18/43	22.62	20.38	2.24	9.90
R14/43	LKD	W19/43	24.48	21.79	2.69	10.99

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R6/44	BEDROOM	W11/44	19.51	19.28	0.23	1.18
R7/44	BEDROOM	W12/44	24.39	23.59	0.80	3.28
R8/44	LKD	W13/44	27.32	26.05	1.27	4.65
R9/44		W14/44	28.62	27.07	1.55	5.42
R10/44	BEDROOM	W15/44	28.96	27.23	1.73	5.97
R11/44	BEDROOM	W16/44	26.24	24.53	1.71	6.52
R12/44	BEDROOM	W17/44	22.74	21.25	1.49	6.55
R13/44	BEDROOM	W18/44	25.35	23.65	1.70	6.71
R14/44	LKD	W19/44	27.33	25.28	2.05	7.50
R6/45	BEDROOM	W11/45	23.50	23.35	0.15	0.64
R7/45	BEDROOM	W12/45	28.51	27.97	0.54	1.89
R8/45	LKD	W13/45	30.95	30.08	0.87	2.81
R9/45		W14/45	32.06	30.99	1.07	3.34
R10/45	BEDROOM	W15/45	32.73	31.55	1.18	3.61
R11/45	BEDROOM	W16/45	31.55	30.37	1.18	3.74
R12/45	BEDROOM	W17/45	25.84	24.81	1.03	3.99
R13/45	BEDROOM	W18/45	28.50	27.34	1.16	4.07
R14/45	LKD	W19/45	30.51	29.10	1.41	4.62
R6/46	BEDROOM	W9/46	33.15	32.85	0.30	0.90
R7/46	BEDROOM	W10/46	34.11	33.68	0.43	1.26
R8/46	LKD	W11/46	28.53	27.99	0.54	1.89
R9/46	BEDROOM	W12/46	34.92	34.32	0.60	1.72
R10/46	BEDROOM	W13/46	36.10	35.47	0.63	1.75

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DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R7/47	BEDROOM	W10/47	37.13	37.00	0.13	0.35
R8/47	LKD	W11/47	30.67	30.51	0.16	0.52
R9/47	BEDROOM	W12/47	37.37	37.18	0.19	0.51
R10/47	BEDROOM	W13/47	38.12	37.92	0.20	0.52
Block 4 Padcroft Works						
R1/41	LKD	W1/41	25.94	25.94	0.00	0.00
R1/41	LKD	W2/41	15.41	11.80	3.61	23.43
R2/41	BEDROOM	W3/41	18.40	18.38	0.02	0.11
R2/41	BEDROOM	W4/41	26.81	23.65	3.16	11.79
R2/41	BEDROOM	W5/41	31.02	22.44	8.58	27.66
R2/41	BEDROOM	W6/41	32.97	17.05	15.92	48.29
R3/41	BEDROOM	W7/41	22.02	7.66	14.36	65.21
R4/41	BEDROOM	W8/41	22.48	1.93	20.55	91.41
R5/41	LKD	W9/41	20.68	13.54	7.14	34.53
R5/41	LKD	W10/41	22.35	17.45	4.90	21.92
R1/42	LKD	W1/42	29.59	29.59	0.00	0.00
R1/42	LKD	W2/42	16.47	13.20	3.27	19.85
R2/42	BEDROOM	W3/42	20.53	20.52	0.01	0.05
R2/42	BEDROOM	W4/42	29.30	26.05	3.25	11.09
R2/42	BEDROOM	W5/42	34.11	24.48	9.63	28.23
R2/42	BEDROOM	W6/42	37.11	18.14	18.97	51.12
R3/42	BEDROOM	W7/42	23.83	9.09	14.74	61.85
R4/42	BEDROOM	W8/42	24.47	2.86	21.61	88.31
R5/42	LKD	W9/42	22.38	15.34	7.04	31.46
R5/42	LKD	W10/42	24.47	19.77	4.70	19.21
R1/43	LKD	W1/43	33.19	33.19	0.00	0.00
R1/43	LKD	W2/43	17.36	14.82	2.54	14.63
R2/43	BEDROOM	W3/43	22.55	22.55	0.00	0.00
R2/43	BEDROOM	W4/43	31.54	28.67	2.87	9.10

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R2/43	BEDROOM	W6/43	38.38	19.65	18.73	48.80
R3/43	BEDROOM	W7/43	25.32	11.00	14.32	56.56
R4/43	BEDROOM	W8/43	24.96	4.41	20.55	82.33
R5/43	LKD	W9/43	24.41	17.68	6.73	27.57
R5/43	LKD	W10/43	26.92	22.59	4.33	16.08
R1/44	LKD	W1/44	36.53	36.53	0.00	0.00
R1/44	LKD	W2/44	18.19	16.54	1.65	9.07
R2/44	BEDROOM	W3/44	24.27	24.26	0.01	0.04
R2/44	BEDROOM	W4/44	33.53	31.39	2.14	6.38
R2/44	BEDROOM	W5/44	37.61	30.03	7.58	20.15
R2/44	BEDROOM	W6/44	39.16	22.24	16.92	43.21
R3/44	BEDROOM	W7/44	26.90	13.62	13.28	49.37
R4/44	BEDROOM	W8/44	25.50	7.24	18.26	71.61
R5/44	LKD	W9/44	26.84	20.79	6.05	22.54
R5/44	LKD	W10/44	29.75	26.04	3.71	12.47
R1/45	LKD	W1/45	38.66	38.66	0.00	0.00
R1/45	LKD	W2/45	19.55	18.85	0.70	3.58
R2/45	BEDROOM	W3/45	25.12	25.12	0.00	0.00
R2/45	BEDROOM	W4/45	34.66	33.60	1.06	3.06
R2/45	BEDROOM	W5/45	38.53	34.06	4.47	11.60
R2/45	BEDROOM	W6/45	39.59	27.63	11.96	30.21
R3/45	BEDROOM	W7/45	28.60	17.37	11.23	39.27
R4/45	BEDROOM	W8/45	27.66	13.20	14.46	52.28
R5/45	LKD	W9/45	29.60	24.79	4.81	16.25
R5/45	LKD	W10/45	32.83	30.04	2.79	8.50
R1/46	LKD	W1/46	39.27	39.27	0.00	0.00
R1/46	LKD	W2/46	20.35	20.15	0.20	0.98
R2/46	BEDROOM	W3/46	15.28	15.28	0.00	0.00
R2/46	BEDROOM	W4/46	21.83	21.83	0.00	0.00
R3/46	BEDROOM	W5/46	38.89	28.22	10.67	27.44

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

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DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R4/46	BEDROOM	W6/46	30.64	21.51	9.13	29.80
R5/46	LKD	W7/46	32.47	29.54	2.93	9.02
R5/46	LKD	W8/46	35.86	34.26	1.60	4.46
R1/47	LKD	W1/47	39.25	39.25	0.00	0.00
R1/47	LKD	W2/47	11.06	11.06	0.00	0.00
R2/47	BEDROOM	W3/47	7.05	7.05	0.00	0.00
R2/47	BEDROOM	W4/47	12.26	12.26	0.00	0.00
R3/47	BEDROOM	W5/47	39.37	35.90	3.47	8.81
R4/47	BEDROOM	W6/47	31.24	28.17	3.07	9.83
R5/47	LKD	W7/47	35.08	34.19	0.89	2.54
R5/47	LKD	W8/47	38.33	37.89	0.44	1.15
Block 1 Padcroft Works						
R1/20	BEDROOM	W1/20	12.97	12.94	0.03	0.23
R2/20	BEDROOM	W2/20	13.64	13.64	0.00	0.00
R3/20	LKD	W3/20	17.40	17.09	0.31	1.78
R4/20	BEDROOM	W4/20	17.22	16.79	0.43	2.50
R5/20	LKD	W5/20	17.12	16.37	0.75	4.38
R6/20	BEDROOM	W6/20	17.19	16.08	1.11	6.46
R7/20	LKD	W7/20	20.32	15.28	5.04	24.80
R8/20	BEDROOM	W8/20	12.24	7.53	4.71	38.48
R9/20	BEDROOM	W9/20	23.81	16.90	6.91	29.02
R10/20	BEDROOM	W10/20	28.64	21.60	7.04	24.58
R10/20	BEDROOM	W11/20	31.54	25.21	6.33	20.07
R10/20	BEDROOM	W12/20	34.05	28.67	5.38	15.80
R10/20	BEDROOM	W13/20	36.25	32.13	4.12	11.37
R11/20	LKD	W14/20	39.62	39.60	0.02	0.05
R11/20	LKD	W15/20	39.62	39.62	0.00	0.00

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

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DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R12/20	LKD	W17/20	39.62	39.62	0.00	0.00
R1/21	BEDROOM	W1/21	15.03	15.00	0.03	0.20
R2/21	BEDROOM	W2/21	15.74	15.74	0.00	0.00
R3/21	LKD	W3/21	20.00	19.71	0.29	1.45
R4/21	LKD	W4/21	19.81	19.41	0.40	2.02
R5/21	BEDROOM	W5/21	19.68	18.97	0.71	3.61
R6/21	BEDROOM	W6/21	19.72	18.66	1.06	5.38
R7/21	BEDROOM	W7/21	17.58	15.92	1.66	9.44
R8/21	LKD	W8/21	20.41	18.07	2.34	11.46
R8/21	LKD	W9/21	19.18	16.28	2.90	15.12
R9/21	LKD	W10/21	22.67	17.72	4.95	21.84
R10/21	BEDROOM	W11/21	14.01	9.38	4.63	33.05
R11/21	LKD	W12/21	26.09	19.23	6.86	26.29
R11/21	LKD	W13/21	30.56	23.48	7.08	23.17
R11/21	LKD	W14/21	33.15	26.74	6.41	19.34
R11/21	LKD	W15/21	35.32	29.88	5.44	15.40
R11/21	LKD	W16/21	37.16	33.01	4.15	11.17
R12/21	BEDROOM	W17/21	27.01	27.01	0.00	0.00
R12/21	BEDROOM	W18/21	35.73	35.73	0.00	0.00
R13/21	BEDROOM	W19/21	39.61	39.61	0.00	0.00
R14/21	BEDROOM	W20/21	10.16	10.16	0.00	0.00
R1/22	BEDROOM	W1/22	17.26	17.23	0.03	0.17
R2/22	BEDROOM	W2/22	18.02	18.02	0.00	0.00
R3/22	LKD	W3/22	22.80	22.53	0.27	1.18
R4/22	LKD	W4/22	22.61	22.24	0.37	1.64
R5/22	BEDROOM	W5/22	22.44	21.80	0.64	2.85

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R7/22	BEDROOM	W7/22	19.99	18.47	1.52	7.60
R8/22	LKD	W8/22	22.99	20.85	2.14	9.31
R8/22	LKD	W9/22	21.64	18.96	2.68	12.38
R9/22	LKD	W10/22	25.00	20.49	4.51	18.04
R10/22	BEDROOM	W11/22	15.83	11.58	4.25	26.85
R11/22	LKD	W12/22	28.27	22.00	6.27	22.18
R11/22	LKD	W13/22	32.25	25.77	6.48	20.09
R11/22	LKD	W14/22	34.48	28.64	5.84	16.94
R11/22	LKD	W15/22	36.31	31.38	4.93	13.58
R11/22	LKD	W16/22	37.82	34.10	3.72	9.84
R12/22	BEDROOM	W17/22	27.06	27.06	0.00	0.00
R13/22	BEDROOM	W18/22	35.82	35.82	0.00	0.00
R14/22	BEDROOM	W19/22	39.62	39.62	0.00	0.00
R15/22	LKD	W20/22	39.62	39.62	0.00	0.00
R16/22	BEDROOM	W21/22	27.81	27.81	0.00	0.00
R1/23	BEDROOM	W1/23	19.75	19.72	0.03	0.15
R2/23	BEDROOM	W2/23	20.53	20.53	0.00	0.00
R3/23	LKD	W3/23	25.81	25.60	0.21	0.81
R4/23	LKD	W4/23	25.63	25.35	0.28	1.09
R5/23	BEDROOM	W5/23	25.41	24.91	0.50	1.97
R6/23	BEDROOM	W6/23	25.35	24.60	0.75	2.96
R7/23	BEDROOM	W7/23	22.59	21.40	1.19	5.27
R8/23	LKD	W8/23	25.72	24.06	1.66	6.45
R8/23	LKD	W9/23	24.20	22.07	2.13	8.80
R9/23	LKD	W10/23	27.18	23.65	3.53	12.99
R10/23	BEDROOM	W11/23	17.67	14.36	3.31	18.73

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R11/23	LKD	W12/23	30.06	25.22	4.84	16.10
R11/23	LKD	W13/23	33.46	28.50	4.96	14.82
R11/23	LKD	W14/23	35.36	30.91	4.45	12.58
R11/23	LKD	W15/23	36.90	33.17	3.73	10.11
R11/23	LKD	W16/23	38.17	35.37	2.80	7.34
R12/23	BEDROOM	W17/23	27.28	27.28	0.00	0.00
R13/23	BEDROOM	W18/23	36.15	36.15	0.00	0.00
R14/23	BEDROOM	W19/23	39.62	39.62	0.00	0.00
R15/23	LKD	W20/23	39.62	39.62	0.00	0.00
R16/23	BEDROOM	W21/23	28.68	28.68	0.00	0.00
R1/24	BEDROOM	W1/24	22.73	22.71	0.02	0.09
R2/24	BEDROOM	W2/24	24.01	24.01	0.00	0.00
R3/24	LKD	W3/24	28.98	28.84	0.14	0.48
R4/24	LKD	W4/24	28.83	28.64	0.19	0.66
R5/24	BEDROOM	W5/24	28.59	28.24	0.35	1.22
R6/24	BEDROOM	W6/24	28.47	27.95	0.52	1.83
R7/24	BEDROOM	W7/24	26.42	25.59	0.83	3.14
R8/24	LKD	W8/24	28.96	27.79	1.17	4.04
R8/24	LKD	W9/24	27.87	26.32	1.55	5.56
R9/24	LKD	W10/24	29.60	27.07	2.53	8.55
R10/24	BEDROOM	W11/24	22.76	20.41	2.35	10.33
R11/24	LKD	W12/24	31.98	28.68	3.30	10.32
R11/24	LKD	W13/24	34.73	31.40	3.33	9.59
R11/24	LKD	W14/24	36.25	33.27	2.98	8.22
R11/24	LKD	W15/24	37.49	35.00	2.49	6.64
R11/24	LKD	W16/24	38.50	36.64	1.86	4.83
R12/24	BEDROOM	W17/24	29.71	29.71	0.00	0.00
R13/24	BEDROOM	W18/24	37.68	37.68	0.00	0.00

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R14/24	BEDROOM	W19/24	39.62	39.62	0.00	0.00
R15/24	LKD	W20/24	39.62	39.62	0.00	0.00
R16/24	BEDROOM	W21/24	32.99	32.99	0.00	0.00

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

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DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
Comag Warehouse						
R1/11	LKD	W1/11	4.47	4.47	4.44	4.44
R2/11	BEDROOM	W2/11	1.16	1.16	1.16	1.16
R3/11	BEDROOM	W3/11	2.33	2.33	2.33	2.33
R1/12	LKD	W1/12	4.47	4.47	4.44	4.44
R2/12	BEDROOM	W2/12	1.28	1.28	1.28	1.28
R3/12	BEDROOM	W3/12	2.56	2.56	2.56	2.56
R1/13	LKD	W1/13	4.47	4.47	4.44	4.44
R2/13	BEDROOM	W2/13	1.39	1.39	1.39	1.39
R3/13	BEDROOM	W3/13	2.80	2.80	2.80	2.80
R1/14	LKD	W1/14	4.47	4.47	4.44	4.44
R2/14	BEDROOM	W2/14	1.50	1.50	1.50	1.50
R3/14	BEDROOM	W3/14	3.03	3.03	3.03	3.03
R1/15	LKD	W1/15	4.46	4.46	4.43	4.43
R2/15	BEDROOM	W2/15	1.60	1.60	1.60	1.60
R3/15	BEDROOM	W3/15	3.25	3.25	3.25	3.25
R1/16	LKD	W1/16	4.32	4.32	4.31	4.31
R2/16	BEDROOM	W2/16	1.83	1.83	1.83	1.83
R3/16	BEDROOM	W3/16	3.60	3.60	3.60	3.60
Blocks 5&6 Padcroft Works						
R6/41	BEDROOM	W11/41	2.49	2.49	2.42	2.42
R7/41	BEDROOM	W12/41	1.77	1.77	1.63	1.63
R8/41	LKD	W13/41	2.25	2.25	2.02	2.02

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

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DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R10/41	BEDROOM	W15/41	2.36	2.36	2.06	2.06
R11/41	BEDROOM	W17/41	1.68	1.68	1.47	1.47
R12/41	BEDROOM	W16/41	2.69	2.69	2.33	2.33
R13/41	BEDROOM	W18/41	3.04	3.04	2.63	2.63
R14/41	LKD	W19/41	2.28	2.28	1.95	1.95
R6/42	BEDROOM	W11/42	2.73	2.73	2.67	2.67
R7/42	BEDROOM	W12/42	1.93	1.93	1.82	1.82
R8/42	LKD	W13/42	2.43	2.43	2.25	2.25
R9/42		W14/42	1.98	1.98	1.80	1.80
R10/42	BEDROOM	W15/42	2.52	2.52	2.27	2.27
R11/42	BEDROOM	W16/42	2.87	2.87	2.58	2.58
R12/42	BEDROOM	W17/42	1.79	1.79	1.62	1.62
R13/42	BEDROOM	W18/42	3.26	3.26	2.92	2.92
R14/42	LKD	W19/42	2.46	2.46	2.18	2.18
R6/43	BEDROOM	W11/43	3.00	3.00	2.96	2.96
R7/43	BEDROOM	W12/43	2.11	2.11	2.03	2.03
R8/43	LKD	W13/43	2.65	2.65	2.51	2.51
R9/43		W14/43	2.15	2.15	2.01	2.01
R10/43	BEDROOM	W15/43	2.70	2.70	2.51	2.51
R11/43	BEDROOM	W16/43	3.08	3.08	2.85	2.85
R12/43	BEDROOM	W17/43	1.91	1.91	1.77	1.77
R13/43	BEDROOM	W18/43	3.49	3.49	3.23	3.23
R14/43	LKD	W19/43	2.65	2.65	2.44	2.44

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

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DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R6/44	BEDROOM	W11/44	3.32	3.32	3.29	3.29
R7/44	BEDROOM	W12/44	2.33	2.33	2.27	2.27
R8/44	LKD	W13/44	2.90	2.90	2.80	2.80
R9/44		W14/44	2.34	2.34	2.24	2.24
R10/44	BEDROOM	W15/44	2.89	2.89	2.75	2.75
R11/44	BEDROOM	W16/44	3.35	3.35	3.18	3.18
R12/44	BEDROOM	W17/44	2.04	2.04	1.94	1.94
R13/44	BEDROOM	W18/44	3.75	3.75	3.56	3.56
R14/44	LKD	W19/44	2.87	2.87	2.71	2.71
R6/45	BEDROOM	W11/45	3.75	3.75	3.73	3.73
R7/45	BEDROOM	W12/45	2.58	2.58	2.54	2.54
R8/45	LKD	W13/45	3.19	3.19	3.12	3.12
R9/45		W14/45	2.54	2.54	2.47	2.47
R10/45	BEDROOM	W15/45	3.09	3.09	2.99	2.99
R11/45	BEDROOM	W16/45	3.78	3.78	3.66	3.66
R12/45	BEDROOM	W17/45	2.21	2.21	2.14	2.14
R13/45	BEDROOM	W18/45	4.05	4.05	3.92	3.92
R14/45	LKD	W19/45	3.11	3.11	3.00	3.00
R6/46	BEDROOM	W9/46	3.63	3.63	3.60	3.60
R7/46	BEDROOM	W10/46	3.53	3.53	3.50	3.50
R8/46	LKD	W11/46	2.28	2.28	2.24	2.24
R9/46	BEDROOM	W12/46	3.38	3.38	3.33	3.33
R10/46	BEDROOM	W13/46	5.28	5.28	5.20	5.20

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DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R7/47	BEDROOM	W10/47	3.93	3.93	3.92	3.92
R8/47	LKD	W11/47	2.45	2.45	2.44	2.44
R9/47	BEDROOM	W12/47	3.69	3.69	3.67	3.67
R10/47	BEDROOM	W13/47	5.75	5.75	5.73	5.73
Block 4 Padcroft Works						
R1/41	LKD	W1/41	3.02		3.02	
R1/41	LKD	W2/41	0.78	3.81	0.67	3.69
R2/41	BEDROOM	W3/41	0.92		0.92	
R2/41	BEDROOM	W4/41	1.32		1.24	
R2/41	BEDROOM	W5/41	1.58		1.28	
R2/41	BEDROOM	W6/41	1.57	5.39	1.07	4.52
R3/41	BEDROOM	W7/41	2.90	2.90	1.60	1.60
R4/41	BEDROOM	W8/41	2.87	2.87	0.22	0.22
R5/41	LKD	W9/41	0.73		0.63	
R5/41	LKD	W10/41	2.71	3.44	2.34	2.97
R1/42	LKD	W1/42	3.36		3.36	
R1/42	LKD	W2/42	0.81	4.17	0.71	4.07
R2/42	BEDROOM	W3/42	1.01		1.01	
R2/42	BEDROOM	W4/42	1.40		1.32	
R2/42	BEDROOM	W5/42	1.70		1.36	
R2/42	BEDROOM	W6/42	1.71	5.82	1.10	4.80
R3/42	BEDROOM	W7/42	3.03	3.03	1.76	1.76
R4/42	BEDROOM	W8/42	3.03	3.03	0.43	0.43
R5/42	LKD	W9/42	0.79		0.69	
R5/42	LKD	W10/42	2.91	3.70	2.55	3.24
R1/43	LKD	W1/43	3.69		3.69	
R1/43	LKD	W2/43	0.84	4.52	0.77	4.45
R2/43	BEDROOM	W3/43	1.10		1.10	
R2/43	BEDROOM	W4/43	1.48		1.41	

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R2/43	BEDROOM	W6/43	1.75	6.10	1.14	5.10
R3/43	BEDROOM	W7/43	3.17	3.17	1.97	1.97
R4/43	BEDROOM	W8/43	3.05	3.05	0.77	0.77
R5/43	LKD	W9/43	0.86		0.76	
R5/43	LKD	W10/43	3.15	4.00	2.80	3.57
R1/44	LKD	W1/44	4.01		4.01	
R1/44	LKD	W2/44	0.86	4.87	0.82	4.82
R2/44	BEDROOM	W3/44	1.18		1.18	
R2/44	BEDROOM	W4/44	1.56		1.51	
R2/44	BEDROOM	W5/44	1.84		1.55	
R2/44	BEDROOM	W6/44	1.78	6.35	1.24	5.47
R3/44	BEDROOM	W7/44	3.31	3.31	2.23	2.23
R4/44	BEDROOM	W8/44	3.08	3.08	1.26	1.26
R5/44	LKD	W9/44	0.93		0.85	
R5/44	LKD	W10/44	3.41	4.34	3.11	3.96
R1/45	LKD	W1/45	4.21		4.21	
R1/45	LKD	W2/45	0.93	5.13	0.91	5.12
R2/45	BEDROOM	W3/45	1.22		1.22	
R2/45	BEDROOM	W4/45	1.60		1.57	
R2/45	BEDROOM	W5/45	1.88		1.71	
R2/45	BEDROOM	W6/45	1.79	6.48	1.44	5.94
R3/45	BEDROOM	W7/45	3.46	3.46	2.58	2.58
R4/45	BEDROOM	W8/45	3.26	3.26	1.98	1.98
R5/45	LKD	W9/45	1.02		0.96	
R5/45	LKD	W10/45	3.70	4.72	3.47	4.43
R1/46	LKD	W1/46	4.92		4.92	
R1/46	LKD	W2/46	1.09	6.02	1.09	6.01
R2/46	BEDROOM	W3/46	1.27		1.27	
R2/46	BEDROOM	W4/46	1.67	2.93	1.67	2.93
R3/46	BEDROOM	W5/46	3.51	3.51	2.73	2.73

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DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R4/46	BEDROOM	W6/46	3.41	3.41	2.67	2.67
R5/46	LKD	W7/46	1.11		1.08	
R5/46	LKD	W8/46	3.99	5.10	3.85	4.93
R1/47	LKD	W1/47	5.08		5.08	
R1/47	LKD	W2/47	0.74	5.83	0.74	5.83
R2/47	BEDROOM	W3/47	0.79		0.79	
R2/47	BEDROOM	W4/47	1.10	1.88	1.10	1.88
R3/47	BEDROOM	W5/47	3.67	3.67	3.40	3.40
R4/47	BEDROOM	W6/47	3.56	3.56	3.32	3.32
R5/47	LKD	W7/47	1.22		1.21	
R5/47	LKD	W8/47	4.37	5.59	4.33	5.54
Block 1 Padcroft Works						
R1/20	BEDROOM	W1/20	1.36	1.36	1.36	1.36
R2/20	BEDROOM	W2/20	1.36	1.36	1.36	1.36
R3/20	LKD	W3/20	1.50	1.50	1.49	1.49
R4/20	BEDROOM	W4/20	1.10	1.10	1.09	1.09
R5/20	LKD	W5/20	0.80	0.80	0.80	0.80
R6/20	BEDROOM	W6/20	1.24	1.24	1.24	1.24
R7/20	LKD	W7/20	2.80	2.80	2.21	2.21
R8/20	BEDROOM	W8/20	1.34	1.34	0.97	0.97
R9/20	BEDROOM	W9/20	2.45	2.45	1.77	1.77
R10/20	BEDROOM	W10/20	1.95		1.54	
R10/20	BEDROOM	W11/20	2.02		1.68	
R10/20	BEDROOM	W12/20	2.39		2.07	
R10/20	BEDROOM	W13/20	2.13	8.48	1.89	7.17
R11/20	LKD	W14/20	2.42		2.42	
R11/20	LKD	W15/20	1.39	3.81	1.39	3.81

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R12/20	LKD	W17/20	2.49	4.12	2.49	4.12
R1/21	BEDROOM	W1/21	1.53	1.53	1.53	1.53
R2/21	BEDROOM	W2/21	1.53	1.53	1.53	1.53
R3/21	LKD	W3/21	1.70	1.70	1.69	1.69
R4/21	LKD	W4/21	0.97	0.97	0.97	0.97
R5/21	BEDROOM	W5/21	1.60	1.60	1.60	1.60
R6/21	BEDROOM	W6/21	1.33	1.33	1.33	1.33
R7/21	BEDROOM	W7/21	2.93	2.93	2.72	2.72
R8/21	LKD	W8/21	1.40		1.29	
R8/21	LKD	W9/21	1.80	3.21	1.62	2.91
R9/21	LKD	W10/21	3.61	3.61	2.97	2.97
R10/21	BEDROOM	W11/21	1.78	1.78	1.38	1.38
R11/21	LKD	W12/21	1.16		0.88	
R11/21	LKD	W13/21	1.02		0.82	
R11/21	LKD	W14/21	1.05		0.88	
R11/21	LKD	W15/21	1.23		1.07	
R11/21	LKD	W16/21	1.09	5.53	0.97	4.60
R12/21	BEDROOM	W17/21	2.06		2.06	
R12/21	BEDROOM	W18/21	2.61	4.67	2.61	4.67
R13/21	BEDROOM	W19/21	2.76	2.76	2.76	2.76
R14/21	BEDROOM	W20/21	1.81	1.81	1.81	1.81
R1/22	BEDROOM	W1/22	1.68	1.68	1.68	1.68
R2/22	BEDROOM	W2/22	1.68	1.68	1.68	1.68
R3/22	LKD	W3/22	1.88	1.88	1.88	1.88
R4/22	LKD	W4/22	1.09	1.09	1.08	1.08
R5/22	BEDROOM	W5/22	1.78	1.78	1.78	1.78

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R7/22	BEDROOM	W7/22	3.23	3.23	3.04	3.04
R8/22	LKD	W8/22	1.54		1.44	
R8/22	LKD	W9/22	1.97	3.52	1.81	3.25
R9/22	LKD	W10/22	3.90	3.90	3.34	3.34
R10/22	BEDROOM	W11/22	1.92	1.92	1.59	1.59
R11/22	LKD	W12/22	1.45		1.17	
R11/22	LKD	W13/22	1.24		1.03	
R11/22	LKD	W14/22	1.27		1.09	
R11/22	LKD	W15/22	1.47		1.30	
R11/22	LKD	W16/22	1.29	6.73	1.17	5.76
R12/22	BEDROOM	W17/22	2.46	2.46	2.46	2.46
R13/22	BEDROOM	W18/22	2.66	2.66	2.66	2.66
R14/22	BEDROOM	W19/22	2.77	2.77	2.77	2.77
R15/22	LKD	W20/22	3.07	3.07	3.07	3.07
R16/22	BEDROOM	W21/22	4.66	4.66	4.66	4.66
R1/23	BEDROOM	W1/23	1.83	1.83	1.83	1.83
R2/23	BEDROOM	W2/23	1.83	1.83	1.83	1.83
R3/23	LKD	W3/23	2.08	2.08	2.07	2.07
R4/23	LKD	W4/23	1.20	1.20	1.20	1.20
R5/23	BEDROOM	W5/23	1.98	1.98	1.98	1.98
R6/23	BEDROOM	W6/23	1.66	1.66	1.66	1.66
R7/23	BEDROOM	W7/23	3.53	3.53	3.39	3.39
R8/23	LKD	W8/23	1.68		1.60	
R8/23	LKD	W9/23	2.14	3.82	2.02	3.61
R9/23	LKD	W10/23	4.17	4.17	3.74	3.74
R10/23	BEDROOM	W11/23	2.05	2.05	1.80	1.80

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R11/23	LKD	W12/23	1.53		1.32	
R11/23	LKD	W13/23	1.27		1.10	
R11/23	LKD	W14/23	1.29		1.16	
R11/23	LKD	W15/23	1.49		1.36	
R11/23	LKD	W16/23	1.30	6.88	1.21	6.15
R12/23	BEDROOM	W17/23	2.46	2.46	2.46	2.46
R13/23	BEDROOM	W18/23	2.66	2.66	2.66	2.66
R14/23	BEDROOM	W19/23	2.77	2.77	2.77	2.77
R15/23	LKD	W20/23	3.07	3.07	3.07	3.07
R16/23	BEDROOM	W21/23	4.74	4.74	4.74	4.74
R1/24	BEDROOM	W1/24	1.98	1.98	1.98	1.98
R2/24	BEDROOM	W2/24	2.04	2.04	2.04	2.04
R3/24	LKD	W3/24	2.28	2.28	2.28	2.28
R4/24	LKD	W4/24	1.32	1.32	1.32	1.32
R5/24	BEDROOM	W5/24	2.18	2.18	2.18	2.18
R6/24	BEDROOM	W6/24	1.83	1.83	1.83	1.83
R7/24	BEDROOM	W7/24	3.97	3.97	3.88	3.88
R8/24	LKD	W8/24	1.82		1.77	
R8/24	LKD	W9/24	2.37	4.20	2.28	4.05
R9/24	LKD	W10/24	4.47	4.47	4.17	4.17
R10/24	BEDROOM	W11/24	2.41	2.41	2.24	2.24
R11/24	LKD	W12/24	1.61		1.47	
R11/24	LKD	W13/24	1.29		1.18	
R11/24	LKD	W14/24	1.32		1.23	
R11/24	LKD	W15/24	1.51		1.42	
R11/24	LKD	W16/24	1.31	7.04	1.25	6.55
R12/24	BEDROOM	W17/24	2.66	2.66	2.66	2.66
R13/24	BEDROOM	W18/24	2.66	2.66	2.66	2.66

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DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

EXISTING VS PROPOSED SCHEME 27/01/21 - NO BALCONIES

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing		Proposed	
			ADF	Total	ADF	Total
R14/24	BEDROOM	W19/24	2.77	2.77	2.77	2.77
R15/24	LKD	W20/24	3.07	3.07	3.07	3.07
R16/24	BEDROOM	W21/24	5.28	5.28	5.28	5.28

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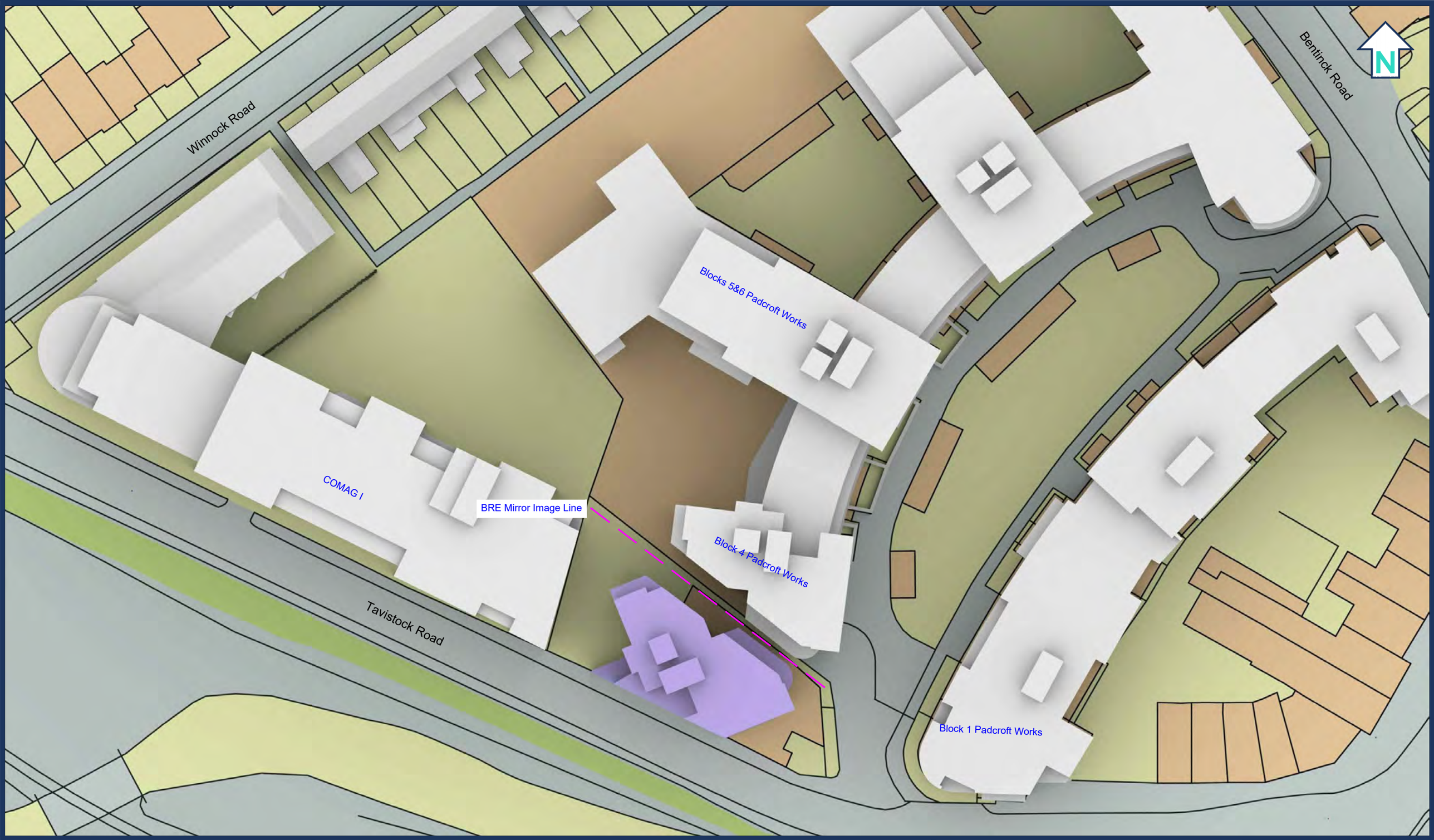
Appendix 4:

Technical Analysis

Mirror Block 4 versus Proposed



Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

EPR Architects
Padcroft Works
Planning Application 45200/APP/2017/327
Approved 2D Drawings

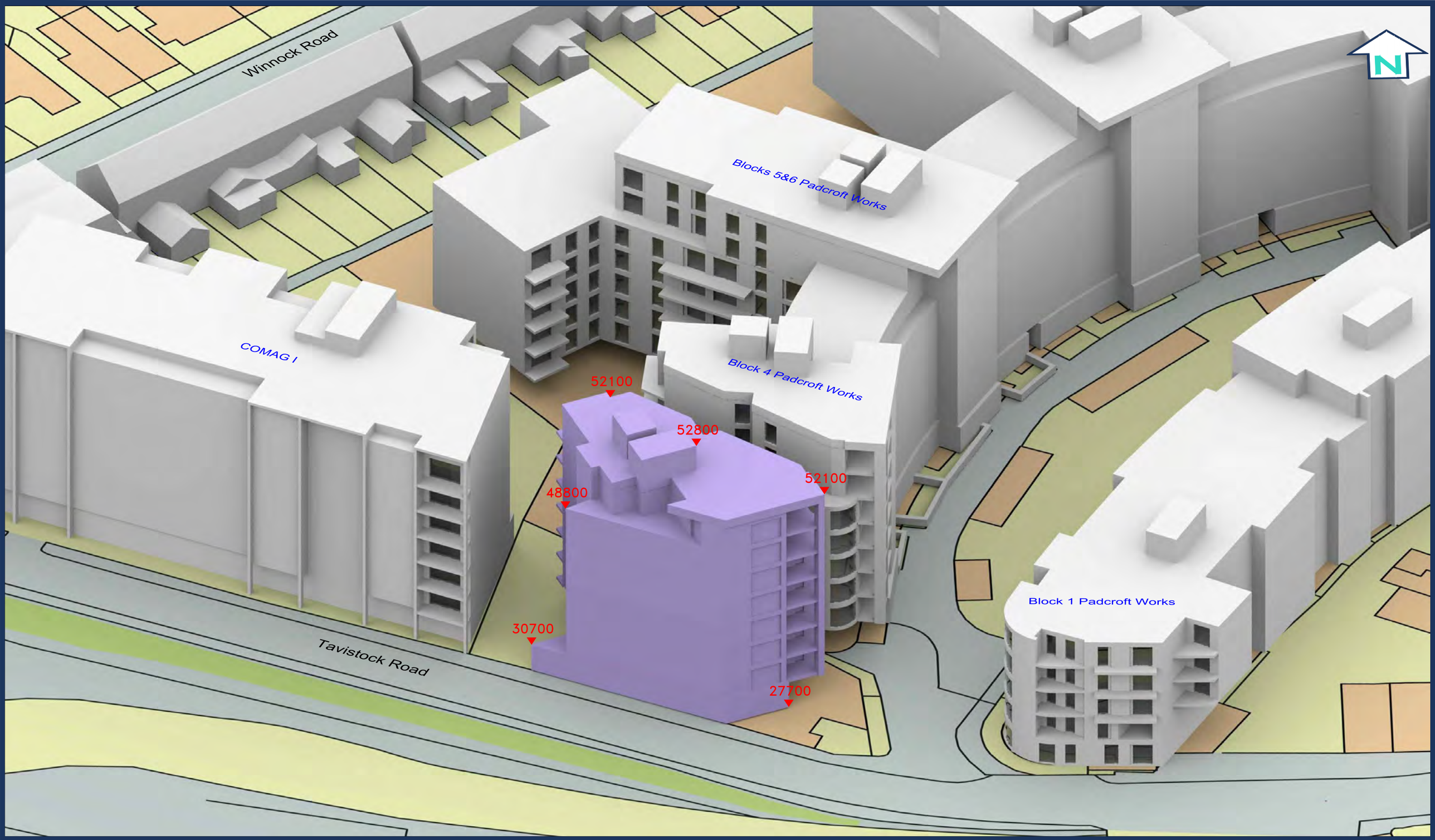
Rolfe Judd
COMAG I
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key: Existing Buildings
Proposed Scheme
Mirror Massing

Project: Tavistock Works
London

Title: Plan View
Block 4 Mirror Massing

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	MC	1:500@A3	Feb 21	P2646/07	02



Sources: airc.design
Proposed Scheme (received 27/01/21)
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EPR Architects
Padcroft Works
Planning Application 45200/APP/2017/327
Approved 2D Drawings

Rolfe Judd
COMAG I
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key: Existing Buildings
Proposed Scheme
Mirror Massing

All Heights in mm AOD

Project: Tavistock Works
London

Title: 3D View
Block 4 Mirror Massing

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	MC	NS@A3	Feb 21	P2646/08	02

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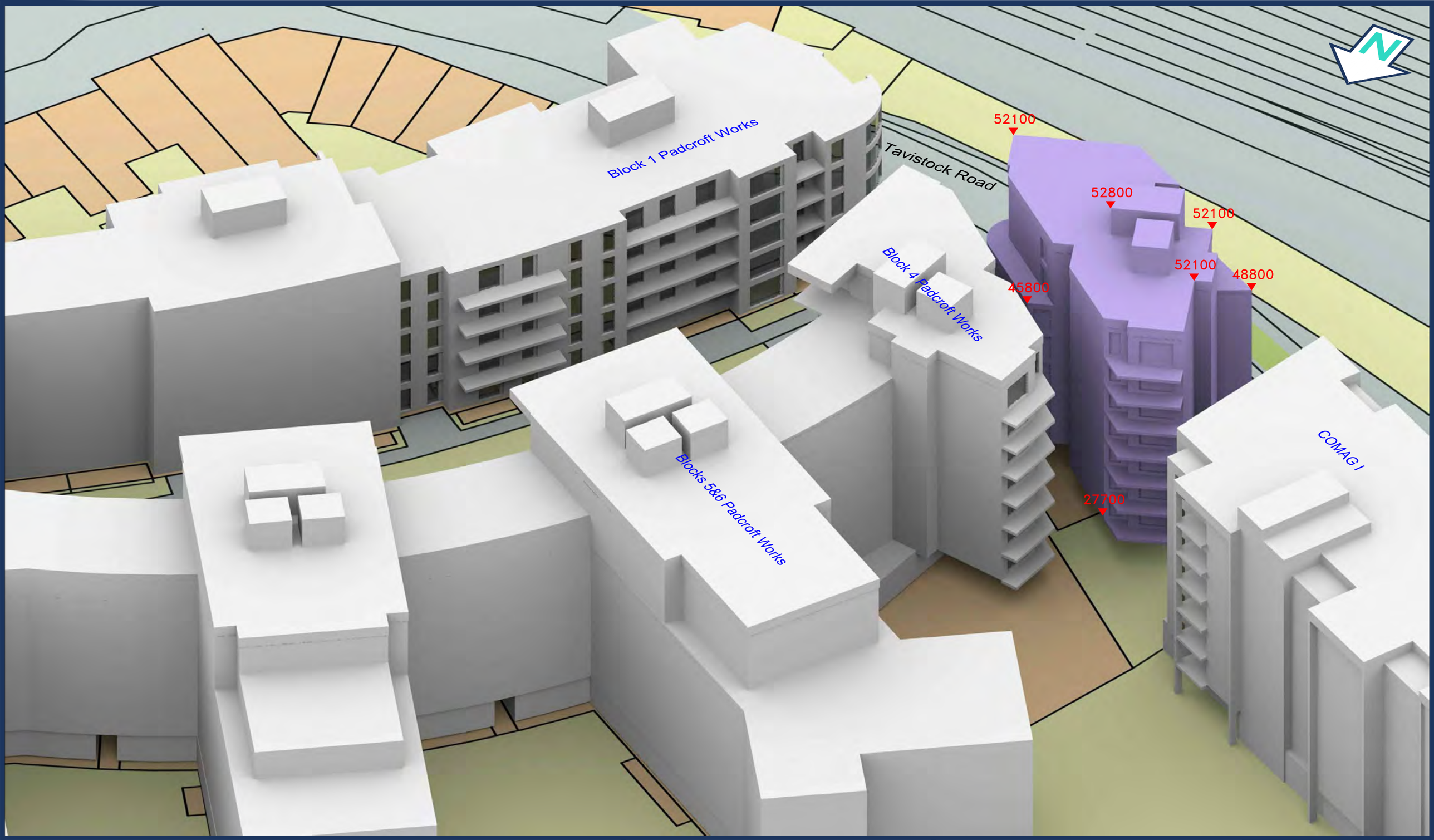

Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

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COMAG I
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key:
Existing Buildings
Proposed Scheme
Mirror Massing

All Heights in mm AOD

Project: Tavistock Works
London

Title: 3D View
Block 4 Mirror Massing

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	MC	NS@A3	Feb 21	P2646/09	02

DAYLIGHT ANALYSIS

TAVISTOCK WORKS, LONDON

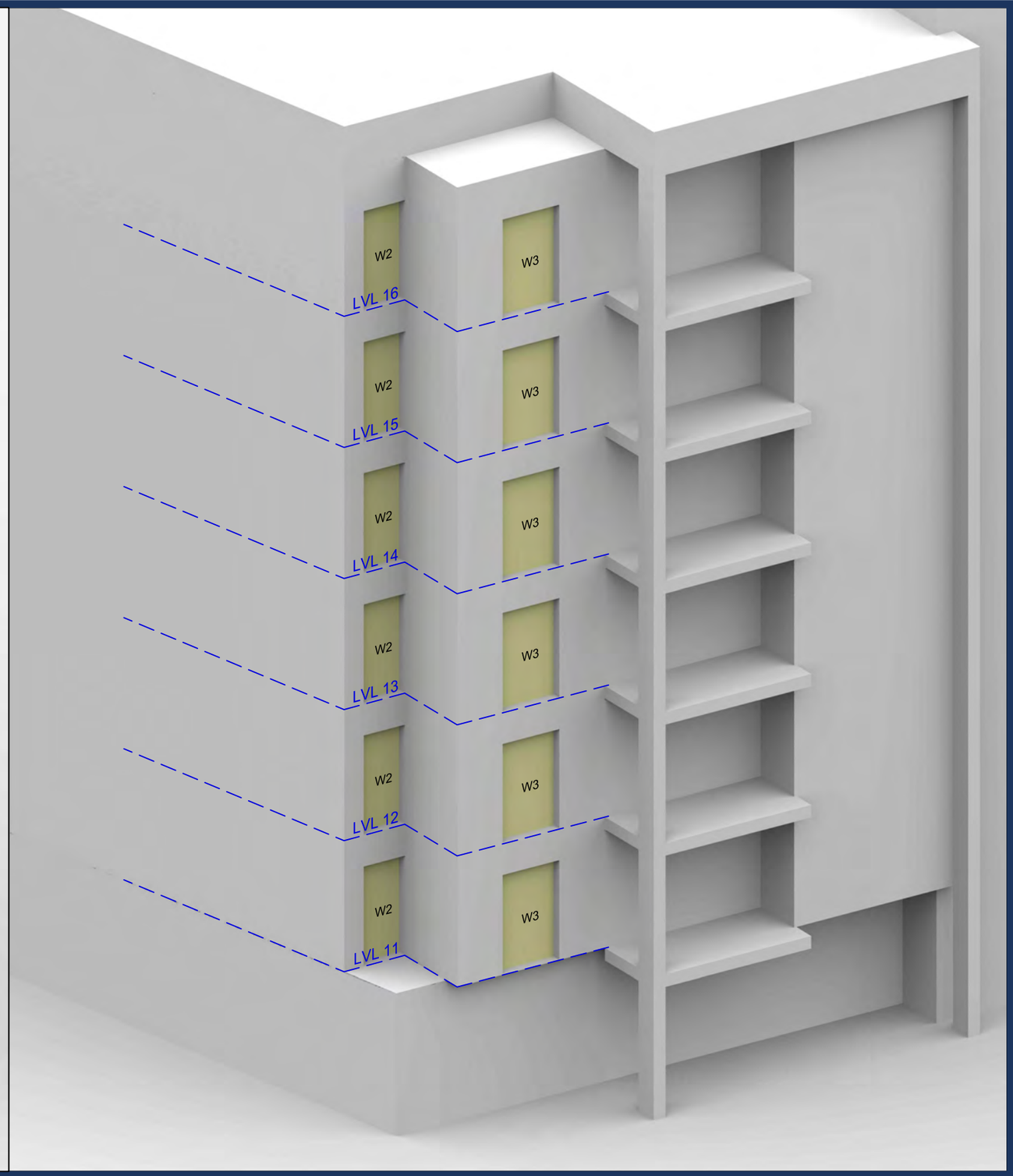
MIRROR MASSING VS PROPOSED SCHEME 27/01/21

P2646 - Rel2

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
Block 4 Padcroft Works						
R3/41	BEDROOM	W7/41	5.37	7.56	-2.19	-40.78
R4/41	BEDROOM	W8/41	0.83	1.93	-1.10	-132.53
R3/42	BEDROOM	W7/42	6.20	9.00	-2.80	-45.16
R4/42	BEDROOM	W8/42	1.27	2.86	-1.59	-125.20
R3/43	BEDROOM	W7/43	7.38	10.93	-3.55	-48.10
R4/43	BEDROOM	W8/43	2.05	4.41	-2.36	-115.12
R3/44	BEDROOM	W7/44	9.04	13.58	-4.54	-50.22
R4/44	BEDROOM	W8/44	3.68	7.24	-3.56	-96.74
R3/45	BEDROOM	W7/45	11.62	17.34	-5.72	-49.23
R4/45	BEDROOM	W8/45	7.53	13.20	-5.67	-75.30
R3/46	BEDROOM	W5/46	17.31	28.22	-10.91	-63.03
R4/46	BEDROOM	W6/46	13.78	21.51	-7.73	-56.10
R3/47	BEDROOM	W5/47	27.49	35.90	-8.41	-30.59
R4/47	BEDROOM	W6/47	22.10	28.17	-6.07	-27.47
R5/47	LKD	W7/47	32.85	34.19	-1.34	-4.08
R5/47	LKD	W8/47	37.52	37.89	-0.37	-0.99

Appendix 5:
Window Location Plans



Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

Rolfe Judd
Padcroft Works Tavistock Road
Planning Application 45200/APP/2014/3638
Approved 2D Drawings

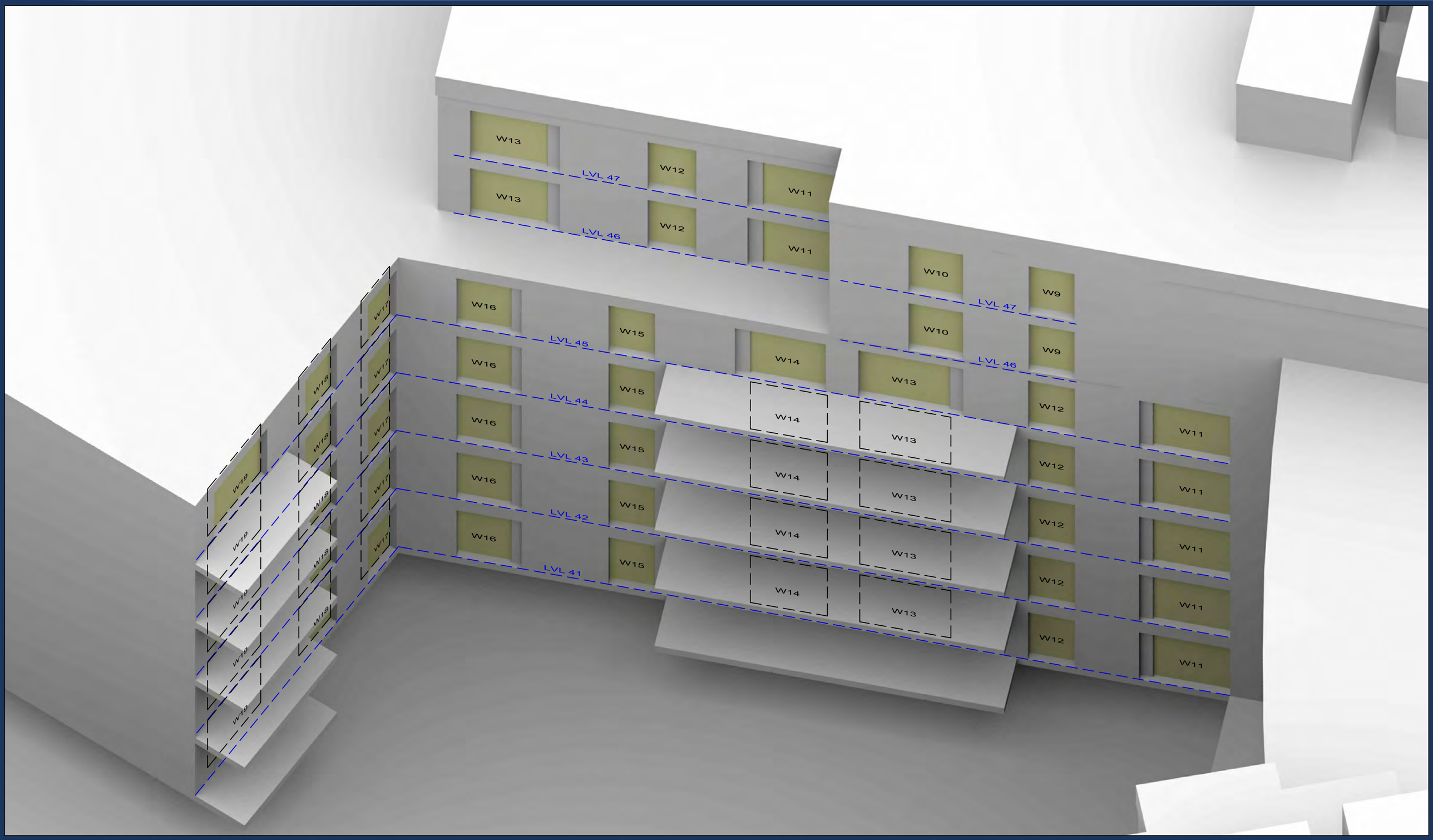
Comag Tavistock Road
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key:

Project: Tavistock Works
London

Title: Window Maps
Comag Warehouse

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	AG	NS@A3	Feb 21	P2646/W01	03



Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

Rolfe Judd
Padcroft Works Tavistock Road
Planning Application 45200/APP/2014/3638
Approved 2D Drawings

Comag Tavistock Road
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key:

Project: Tavistock Works
London

Title: Window Maps
Blocks 5&6 Padcroft Works

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	AG	NS@A3	Feb 21	P2646/W02	03

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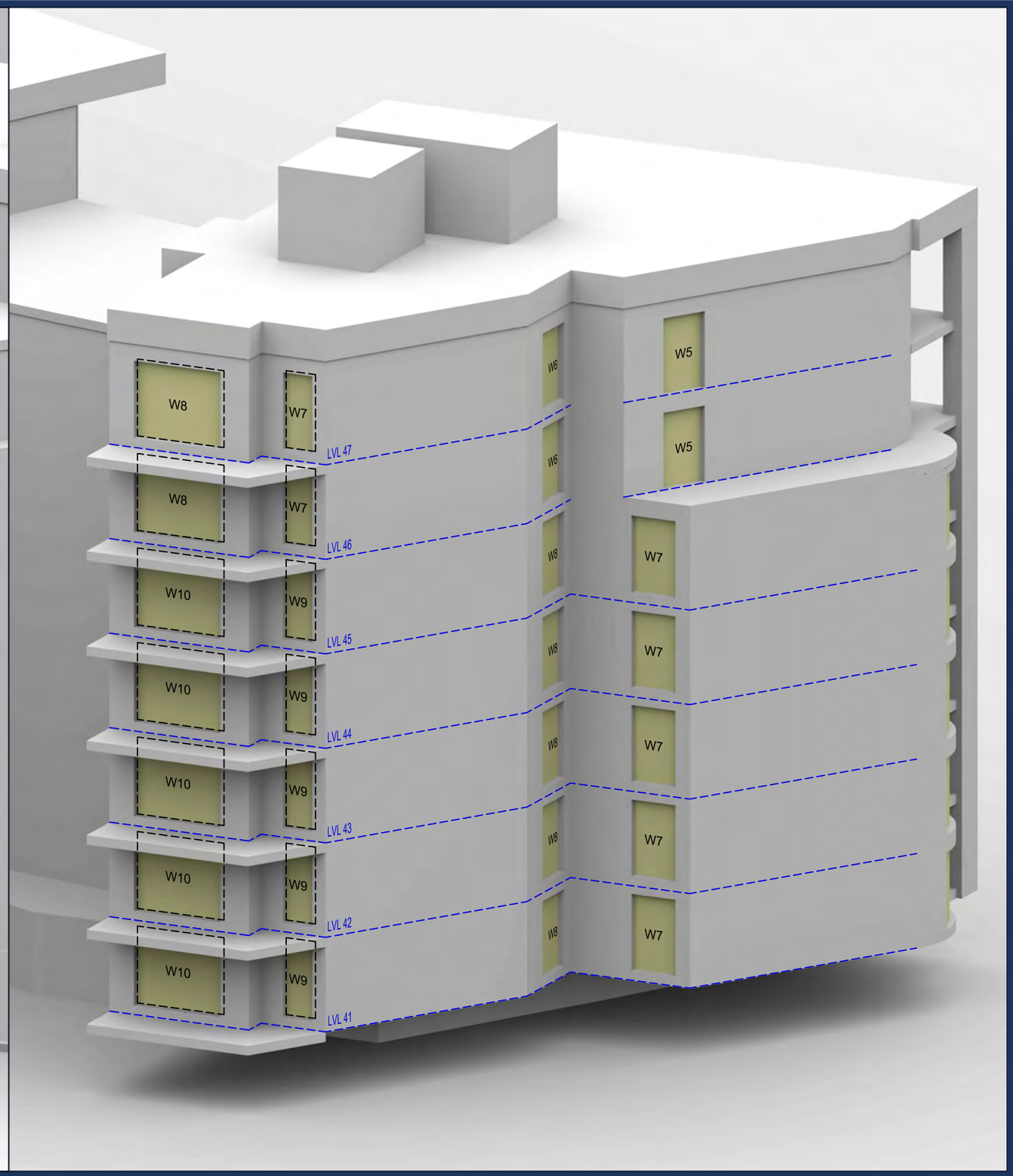

Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

Rolfe Judd
Padcroft Works Tavistock Road
Planning Application 45200/APP/2014/3638
Approved 2D Drawings

Comag Tavistock Road
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key:

Project: Tavistock Works
London

Title: Window Maps
Block 4 Padcroft Works

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	AG	NS@A3	Feb 21	P2646/W03	03

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Sources: airc.design
Proposed Scheme (received 27/01/21)
0010-AD-ZZ-ZZ-M3-A-2003-P04.skp

Rolfe Judd
Padcroft Works Tavistock Road
Planning Application 45200/APP/2014/3638
Approved 2D Drawings

Comag Tavistock Road
Planning Application 24843/APP/2018/269
Approved 2D Drawings

Key:

Project: Tavistock Works
London

Title: Window Maps
Block 1 Padcroft Works

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	AG	NS@A3	Feb 21	P2646/W04	03