



Fig. 1: Bird's Eye View

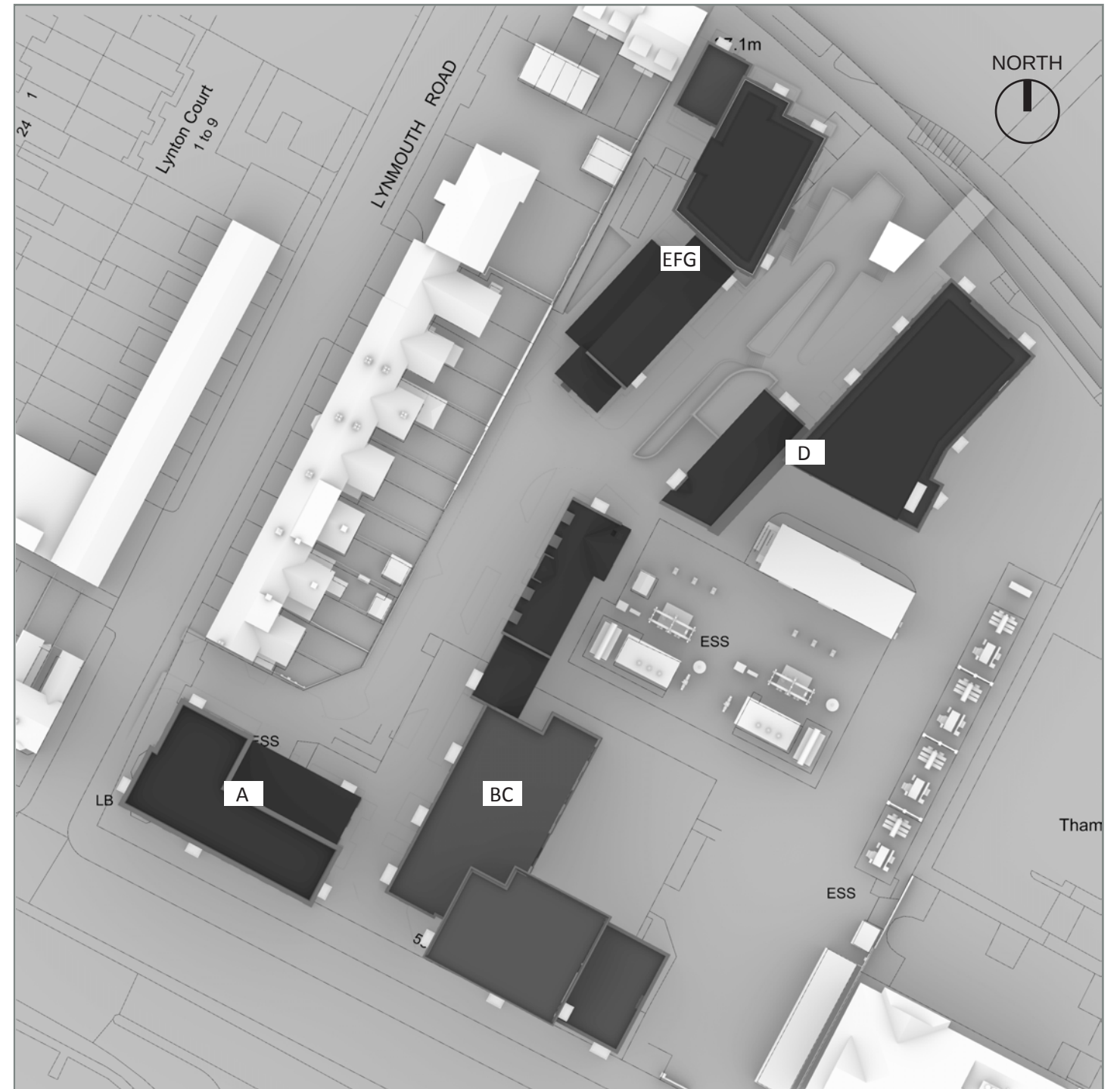


Fig. 2: Top View



Fig. 3: Ground Floor Plan



Fig. 4: First Floor Plan

		Daylight Quantum	Sunlight Probability	
Room ID	Room use		ADF	APSH Total
A - Floor GF				
A-01	LKD	3.0	24	12
A-02	Bedroom	3.5		
A-03	Bedroom	2.9		
A-04	LKD	4.0	72	26
A-05	LKD	3.7		
A-06	Bedroom	5.7		
A-07	Bedroom	3.6	39	24
A-08	LKD	1.5		
A-09	Bedroom	5.4		
A-10	Bedroom	3.7	73	28
A-11	Bedroom	3.8		
A-12	Bedroom	5.7		
A-13	LKD	2.8		

Room ID	Room use	Daylight Quantum	Sunlight Probability	
		ADF	APSH Total	APSH Winter
A - Floor 1F				
A-14	LKD	3.6	25	12
A-15	Bedroom	3.4		
A-16	LKD	1.6		
A-17	Bedroom	3.9		
A-18	Bedroom	2.0		
A-19	Bedroom	3.4		
A-20	LKD	4.7		
A-21	LKD	3.9	72	26
A-22	Bedroom	5.7		
A-23	Bedroom	3.6		
A-24	LKD	1.4	52	26
A-25	Bedroom	5.5		
A-26	Bedroom	3.8		
A-27	Bedroom	3.8		
A-28	Bedroom	5.7		
A-29	LKD	2.9	74	28

Table 1: Results

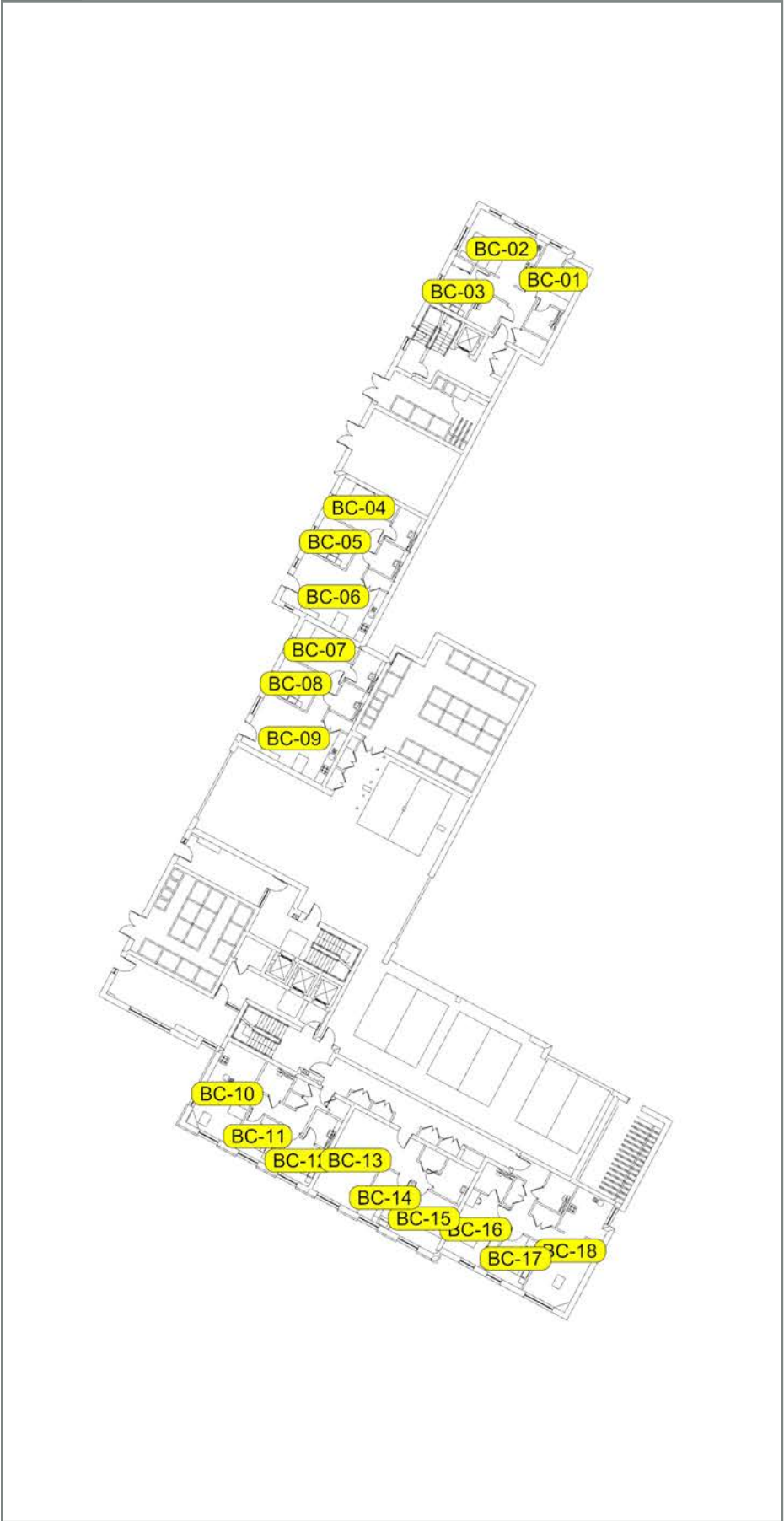


Fig. 5: Ground Floor Plan

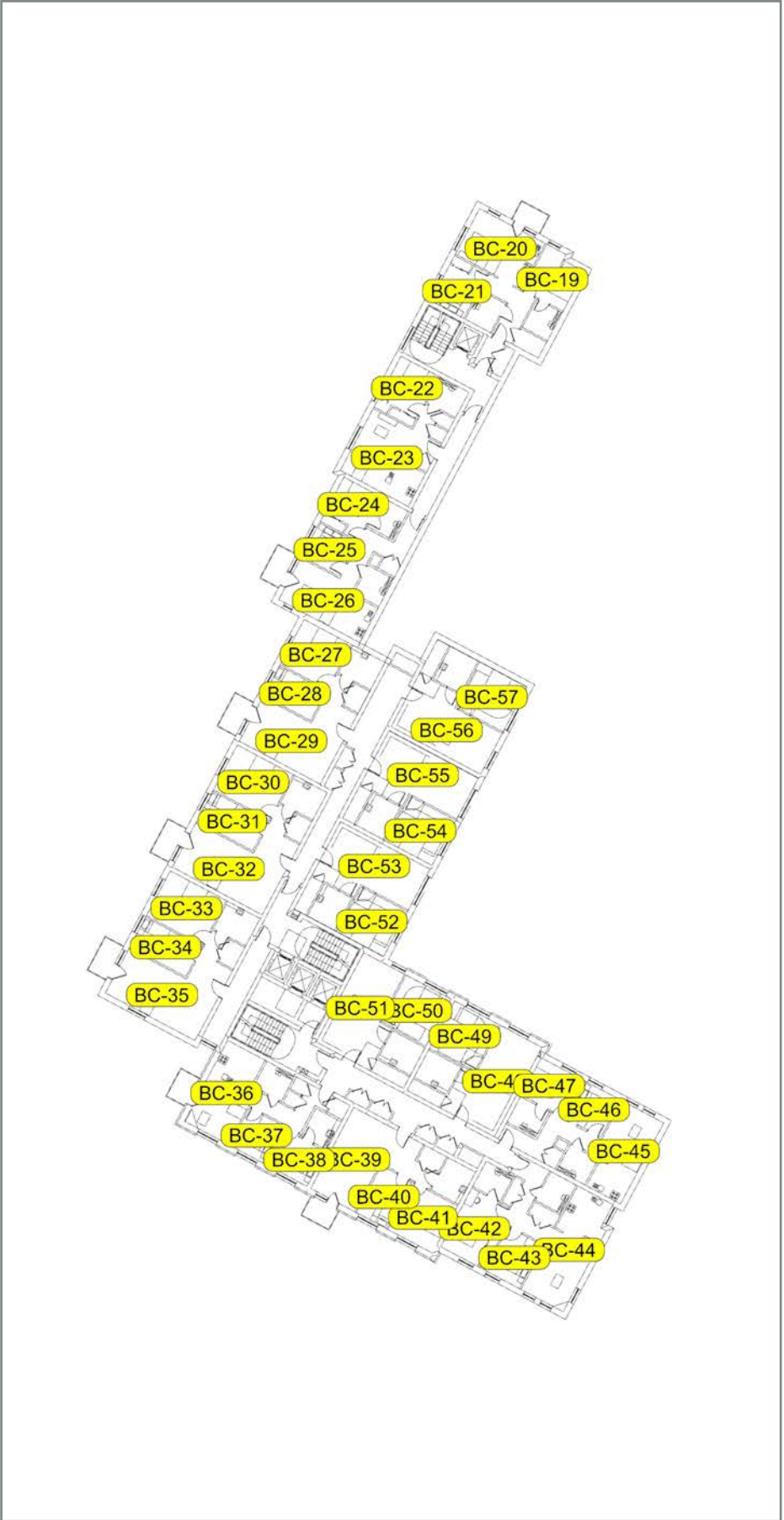


Fig. 6: First Floor Plan

			Daylight Quantum	Sunlight Probability	
	Room ID	Room use	ADF	APSH Total	APSH Winter
BC - Floor GF					
	BC-01	Bedroom	1.0		
	BC-02	LKD	3.4		
	BC-03	Bedroom	3.8		
	BC-04	Bedroom	2.2		
	BC-05	Bedroom	2.5		
	BC-06	LKD	0.3		
	BC-07	Bedroom	2.0		
	BC-08	Bedroom	2.6		
	BC-09	LKD	0.9		
	BC-10	LKD	2.3	68	26
	BC-11	Bedroom	4.1		
	BC-12	Bedroom	4.1		
	BC-13	LKD	1.4	41	25
	BC-14	Bedroom	3.5		
	BC-15	Bedroom	2.7		
	BC-16	Bedroom	1.8		
	BC-17	Bedroom	2.5		
	BC-18	LKD	3.9	93	27
			Daylight Quantum	Sunlight Probability	
	Room ID	Room use	ADF	APSH Total	APSH Winter
BC - Floor 1F					
	BC-19	Bedroom	1.0		
	BC-20	LKD	3.5		
	BC-21	Bedroom	4.1		
	BC-22	Bedroom	3.0		
	BC-23	LKD	1.6		
	BC-24	Bedroom	2.8		
	BC-25	Bedroom	2.7		
	BC-26	LKD	1.0		
	BC-27	Bedroom	1.8		
	BC-28	Bedroom	2.6		
	BC-29	LKD	2.0		
	BC-30	Bedroom	1.6		
	BC-31	Bedroom	2.1		
	BC-32	LKD	1.6		
	BC-33	Bedroom	1.4		
	BC-34	Bedroom	1.8		
	BC-35	LKD	1.8	50	20
	BC-36	LKD	2.3	67	26
	BC-37	Bedroom	4.0		
	BC-38	Bedroom	4.1		
	BC-39	LKD	0.8	54	26
	BC-40	Bedroom	3.5		
	BC-41	Bedroom	2.7		
	BC-42	Bedroom	1.8		
	BC-43	Bedroom	2.5		
	BC-44	LKD	3.1	83	28
	BC-45	LKD	2.0		
	BC-46	Bedroom	2.5		
	BC-47	Bedroom	2.4		
	BC-48	LKD	1.4		
	BC-49	Bedroom	2.3		
	BC-50	Bedroom	2.1		
	BC-51	LKD	0.6		
	BC-52	Bedroom	1.5		
	BC-53	LKD	1.6	27	3
	BC-54	Bedroom	1.7		
	BC-55	LKD	1.8	36	5
	BC-56	LKD	1.2	40	7
	BC-57	Bedroom	3.2		

Table 2: Results

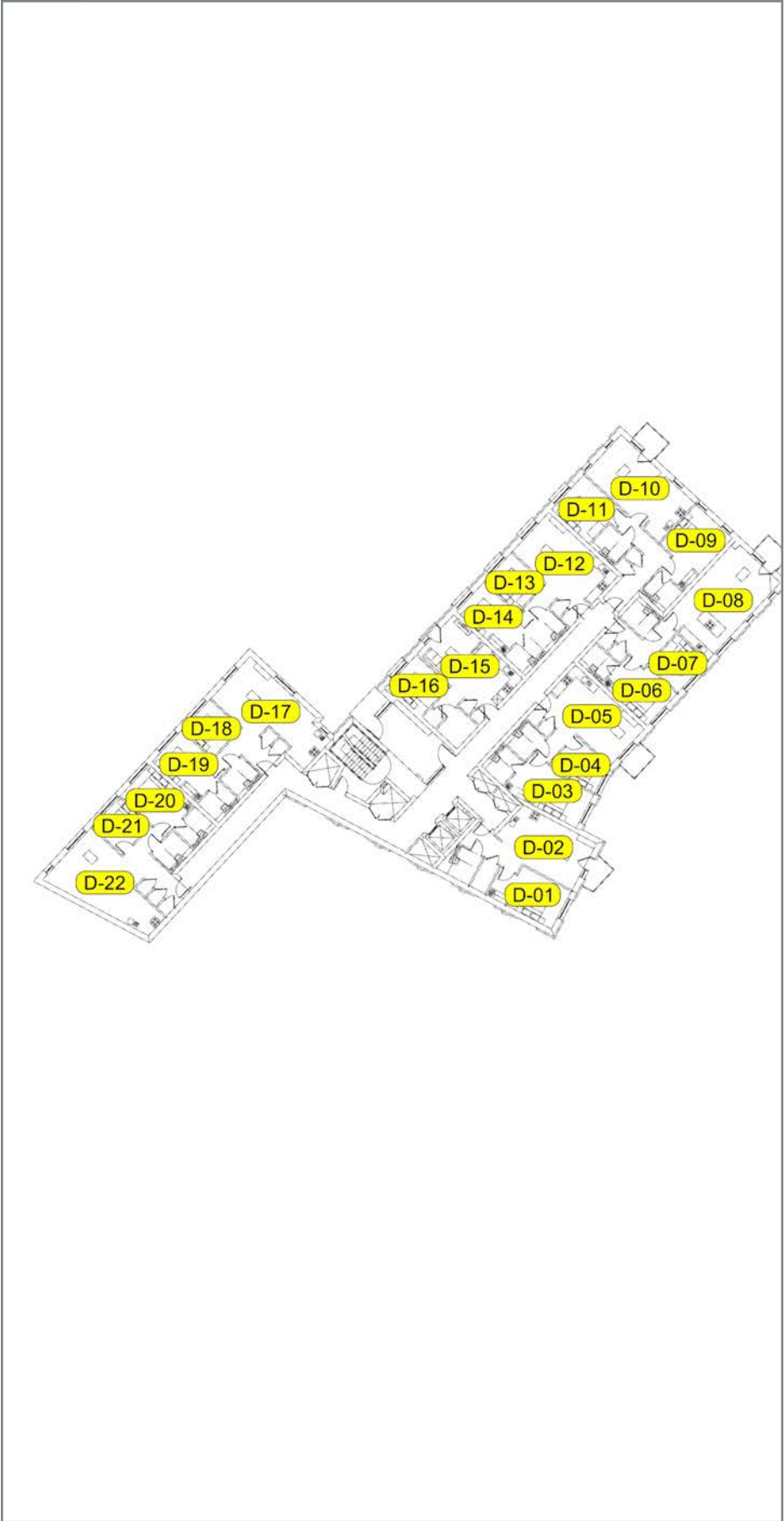


Fig. 7: First Floor Plan

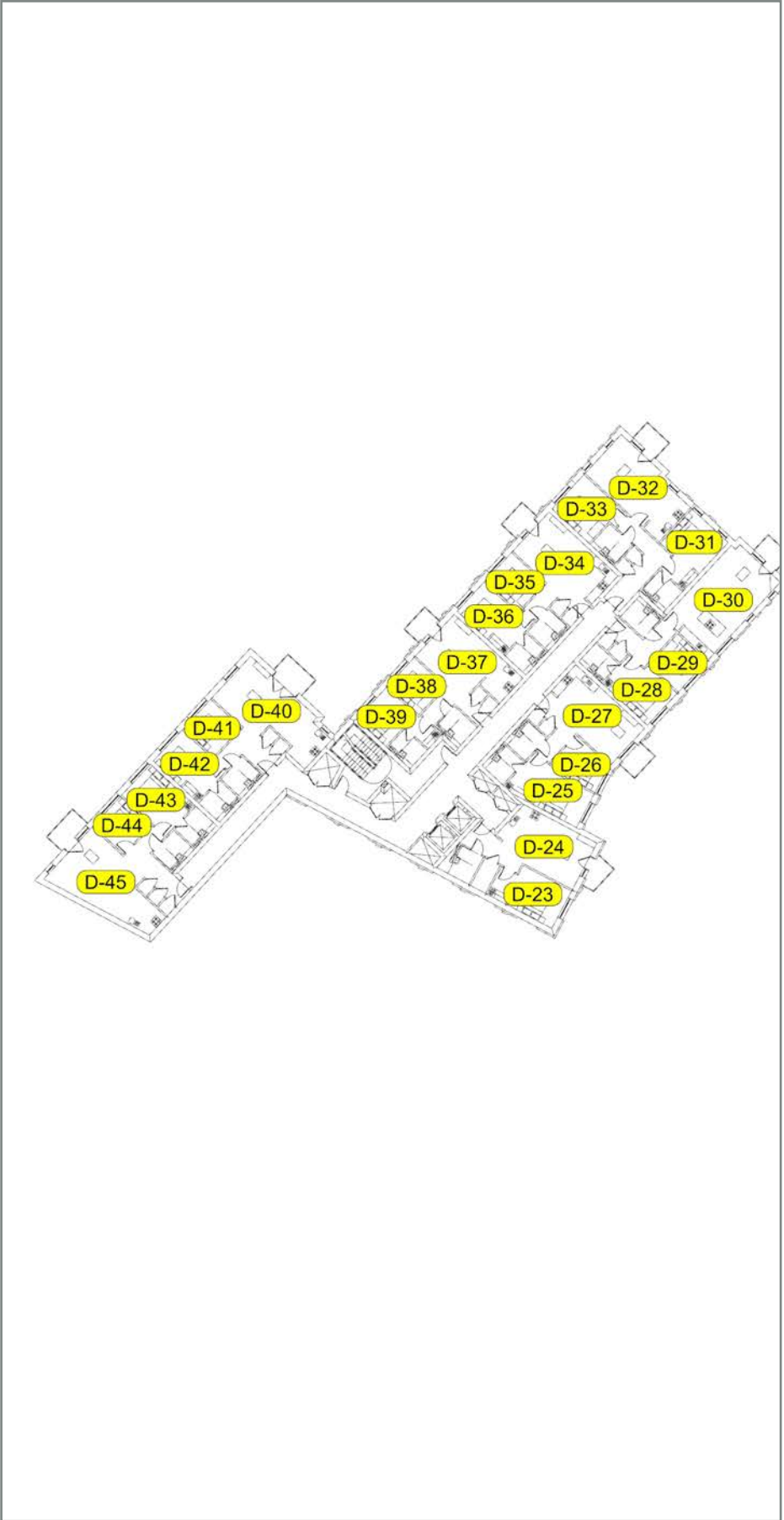


Fig. 8: Second Floor Plan

			Daylight Quantum		Sunlight Probability	
	Room ID	Room use	ADF	APSH Total	APSH Winter	
D - Floor 1F	D-01	Bedroom	4.2			
	D-02	LKD	2.1	47	17	
	D-03	Bedroom	3.3			
	D-04	Bedroom	5.5			
	D-05	LKD	2.1	39	15	
	D-06	Bedroom	5.0			
	D-07	Bedroom	6.9			
	D-08	LKD	5.5	61	21	
	D-09	Bedroom	3.8			
	D-10	LKD	4.1			
	D-11	Bedroom	3.9			
	D-12	LKD	1.5			
	D-13	Bedroom	4.9			
	D-14	Bedroom	3.9			
	D-15	LKD	2.1			
	D-16	Bedroom	4.8			
	D-17	LKD	1.8			
	D-18	Bedroom	3.6			
	D-19	Bedroom	2.8			
	D-20	Bedroom	2.9			
	D-21	Bedroom	3.8			
	D-22	LKD	1.6			

			Daylight Quantum		Sunlight Probability	
	Room ID	Room use	ADF	APSH Total	APSH Winter	
D - Floor 2F	D-23	Bedroom	5.0			
	D-24	LKD	2.3	38	14	
	D-25	Bedroom	3.9			
	D-26	Bedroom	6.6			
	D-27	LKD	2.1	35	15	
	D-28	Bedroom	5.6			
	D-29	Bedroom	7.8			
	D-30	LKD	6.2	62	21	
	D-31	Bedroom	4.8			
	D-32	LKD	5.0			
	D-33	Bedroom	4.8			
	D-34	LKD	1.6			
	D-35	Bedroom	5.9			
	D-36	Bedroom	4.6			
	D-37	LKD	1.6			
	D-38	Bedroom	5.5			
	D-39	Bedroom	4.5			
	D-40	LKD	2.2			
	D-41	Bedroom	4.1			
	D-42	Bedroom	3.1			
	D-43	Bedroom	3.2			
	D-44	Bedroom	4.2			
	D-45	LKD	1.8			

Table 3: Results

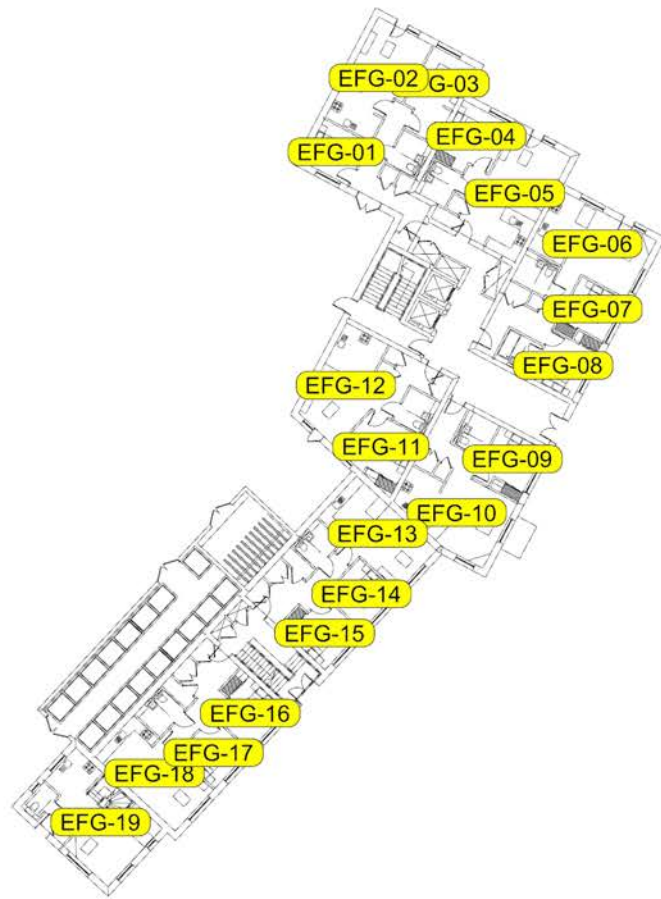


Fig. 9: Ground Floor Plan

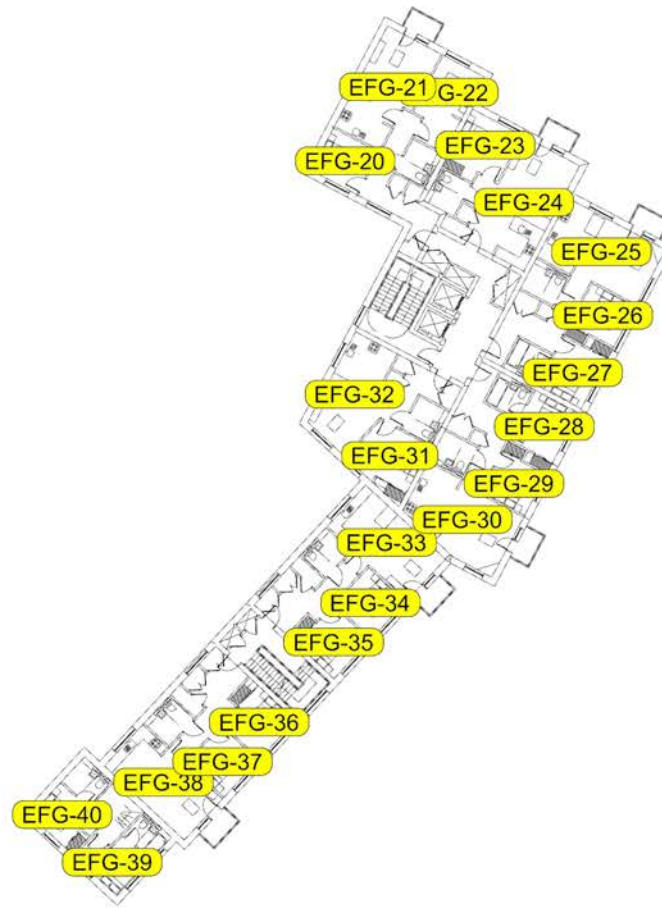


Fig. 10: First Floor Plan

		Daylight Quantum	Sunlight Probability	
Room ID	Room use		ADF	APSH Total
EFG - Floor GF				
EFG-01	Bedroom	3.2		
EFG-02	LKD	1.9		
EFG-03	Bedroom	4.0		
EFG-04	Bedroom	3.6		
EFG-05	LKD	1.8		
EFG-06	LKD	5.1	41	6
EFG-07	Bedroom	3.6		
EFG-08	Bedroom	3.1		
EFG-09	Bedroom	2.8		
EFG-10	LKD	1.4	27	4
EFG-11	Bedroom	1.5		
EFG-12	LKD	1.5	34	5
EFG-13	LKD	0.3	3	2
EFG-14	Bedroom	2.2		
EFG-15	Bedroom	2.2		
EFG-16	Bedroom	2.2		
EFG-17	Bedroom	2.3		
EFG-18	LKD	0.6	5	4
EFG-19	LKD	4.2	61	16

		Daylight Quantum	Sunlight Probability	
Room ID	Room use		ADF	APSH Total
EFG - Floor 1F				
EFG-20	Bedroom	3.3		
EFG-21	LKD	1.9		
EFG-22	Bedroom	4.1		
EFG-23	Bedroom	3.6		
EFG-24	LKD	1.8		
EFG-25	LKD	5.2	42	6
EFG-26	Bedroom	3.8		
EFG-27	Bedroom	3.1		
EFG-28	Bedroom	2.9		
EFG-29	Bedroom	3.1		
EFG-30	LKD	1.8	36	8
EFG-31	Bedroom	1.8		
EFG-32	LKD	3.0	43	9
EFG-33	LKD	2.5	38	9
EFG-34	Bedroom	2.5		
EFG-35	Bedroom	2.5		
EFG-36	Bedroom	2.5		
EFG-37	Bedroom	2.6		
EFG-38	LKD	3.4	36	7
EFG-39	Bedroom	4.6		
EFG-40	Bedroom	3.6		

Table 4: Results



Appendix 4

Sunlight amenity (overshadowing)

Title

Sunlight Amenity Assessments
Neighbouring Areas
21st march
Existing



Fig. 1: BRE's Sun on Ground

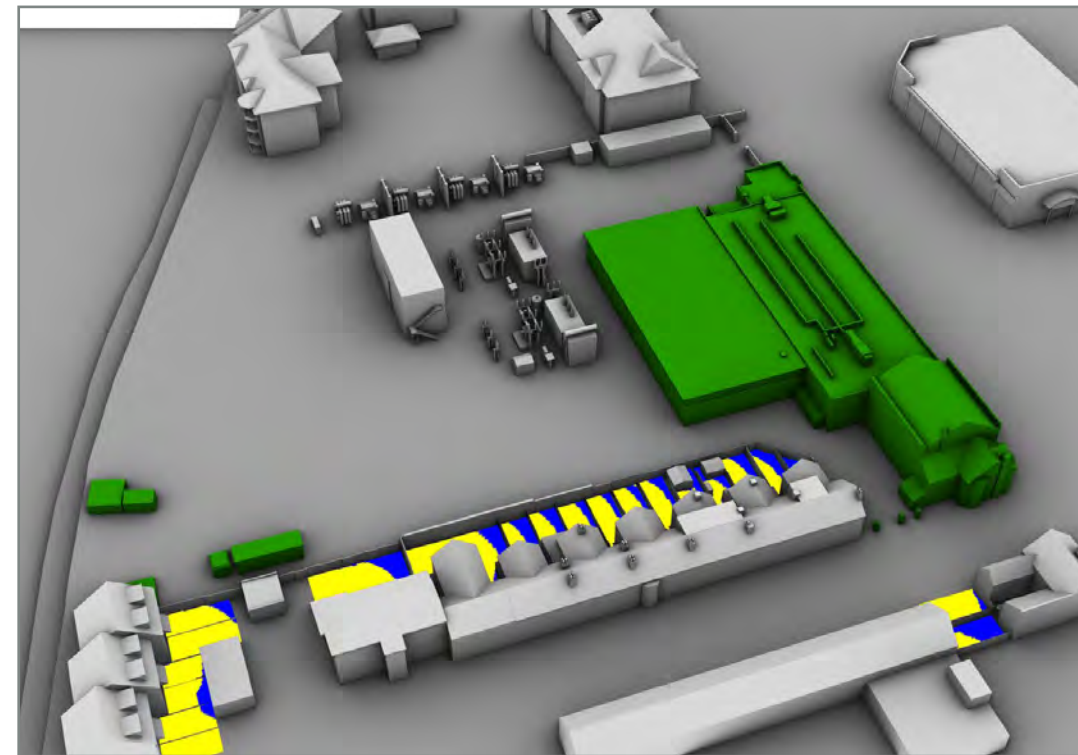
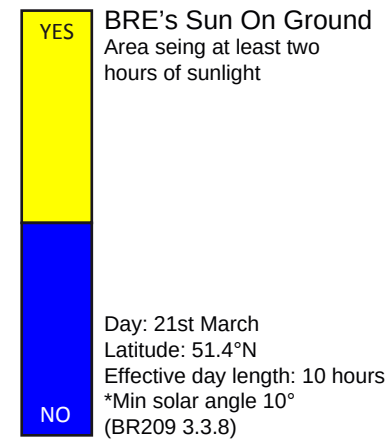
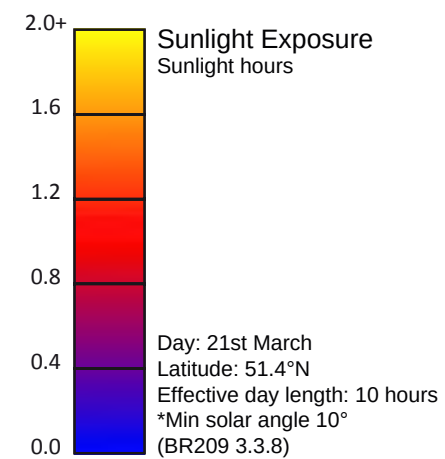


Fig. 2: Bird's Eye View



Fig. 3: Sunlight Exposure



NORTH



Report Overshadowing Assessments
Ref. 3591_R05_SA01

Project River Gate, Vastern Road
Reading RG1 8BU

Drawn VL Rel no. 01

Date 13/12/2019 Page Page 2

Title
SunlightAmenityAssessments
Neighbouring Areas
21st march
Proposed

YES
BRE's Sun On Ground
Area seing at least two
hours of sunlight
NO
Day: 21st March
Latitude: 51.4°N
Effective day length: 10 hours
*Min solar angle 10°
(BR209 3.3.8)

Zone Name	Area (m2)	Sunlit Area*		
		Existing [%]	Proposed [%]	Loss [%]
1	27.0	35.1	0.0	100.0
2	44.5	52.7	33.9	35.6
3	46.4	67.0	55.3	17.5
4	28.4	49.8	39.2	21.3
5	39.3	60.3	48.9	18.9
6	49.0	69.3	60.0	13.5
7	44.7	75.8	70.8	6.7
8	47.6	75.7	68.2	9.9
9	52.2	76.5	69.7	8.9
10	30.2	63.4	61.9	2.2
11	49.8	53.6	53.1	1.0
12	135.7	75.7	71.4	5.6
13	161.6	82.6	75.1	9.1
14	37.8	82.9	81.8	1.4
15	44.8	98.8	95.6	3.2
16	23.6	95.6	59.7	37.6
17	25.8	77.0	43.5	43.5
18	32.9	88.8	81.1	8.7
19	32.6	100.0	100.0	0.0
20	45.1	92.2	60.8	34.1
21	41.0	41.3	33.6	18.6

*Sunlit Area = Area receiving at least 2hrs. of sunlight on 21st March

Table 1: Results

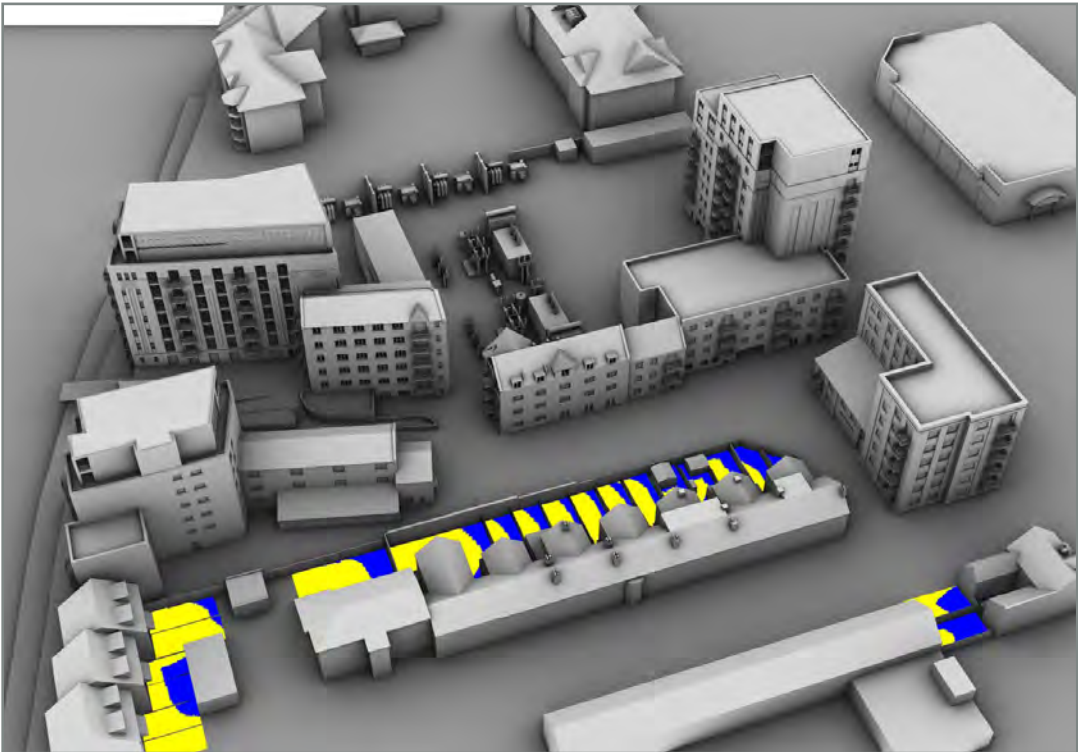
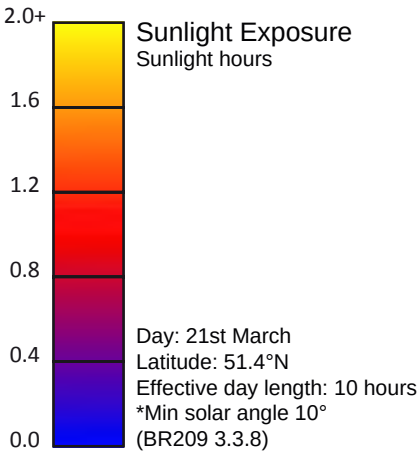


Fig. 6: Bird's Eye View



Report Overshadowing Assessments
Ref. 3591_R05_SA01

Project River Gate, Vastern Road
Reading RG1 8BU

Drawn VL Rel no. 01

Date 13/12/2019 Page Page 3

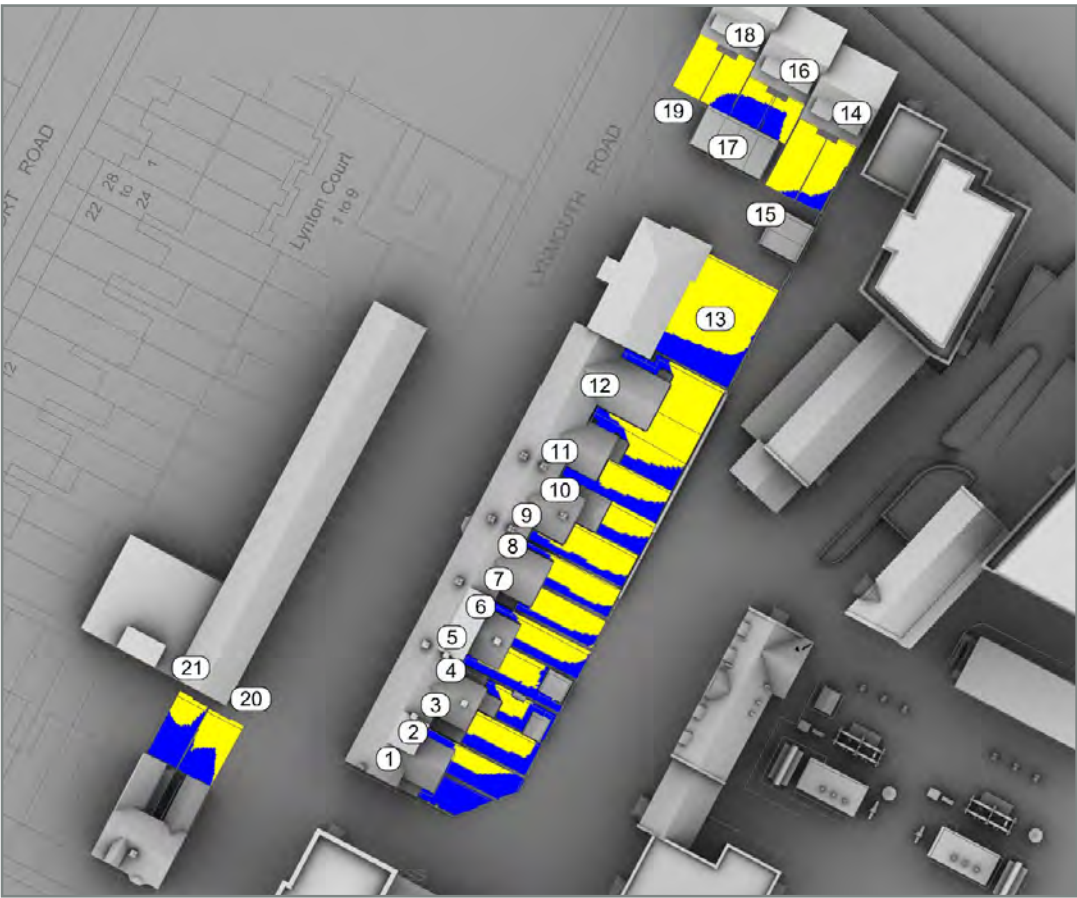


Fig. 4: BRE's Sun on Ground

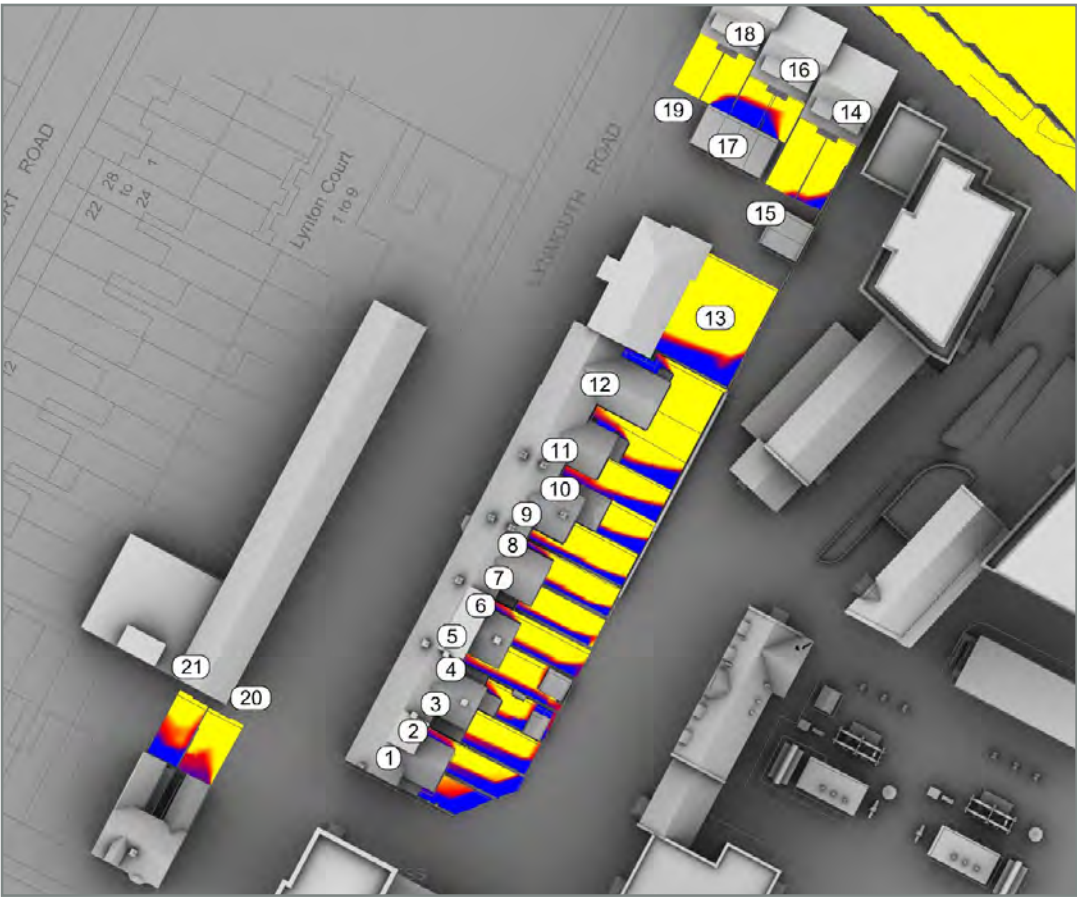


Fig. 5: Sunlight Exposure

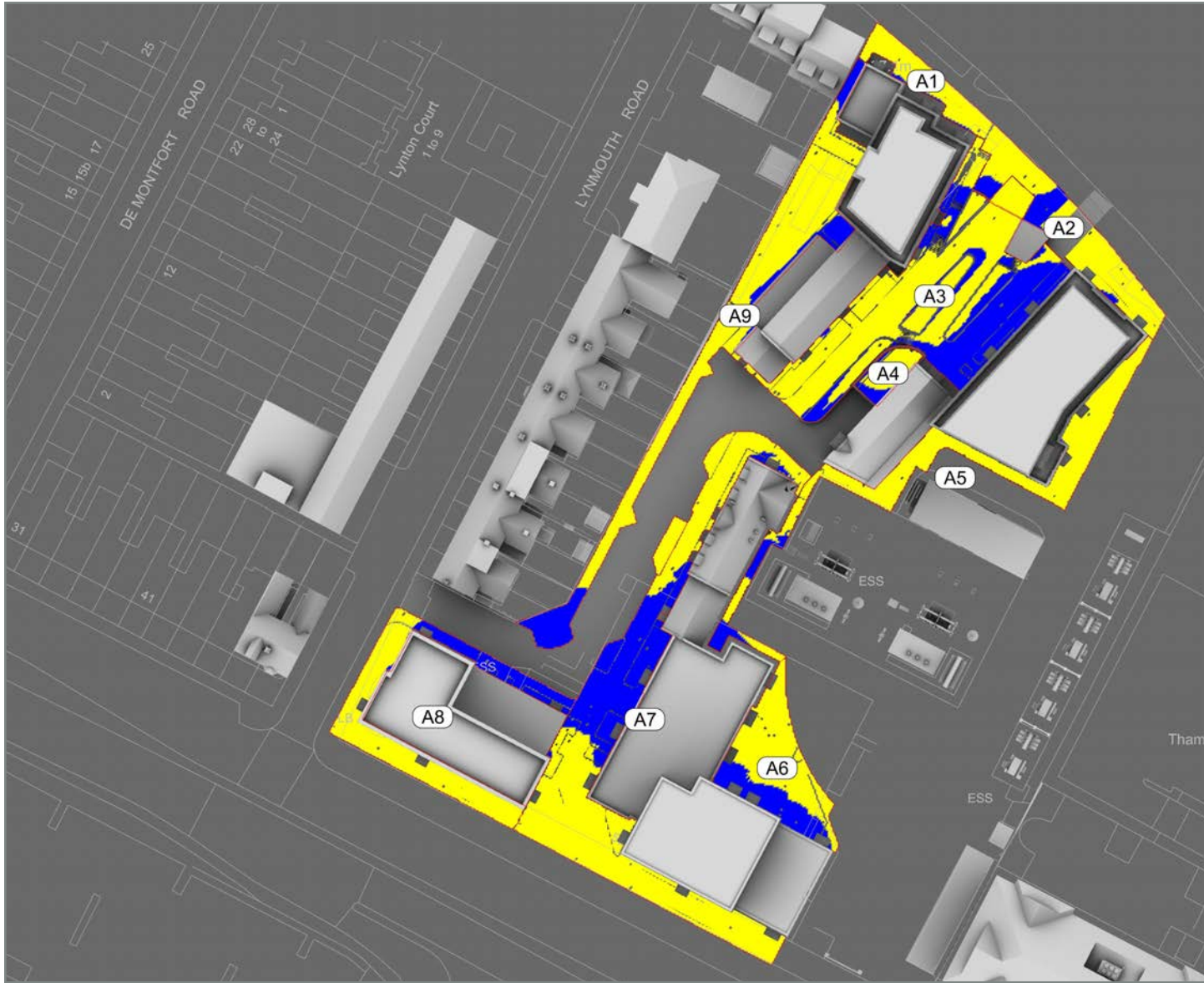


Fig. 1: BRE's Sun on Ground - 21st March

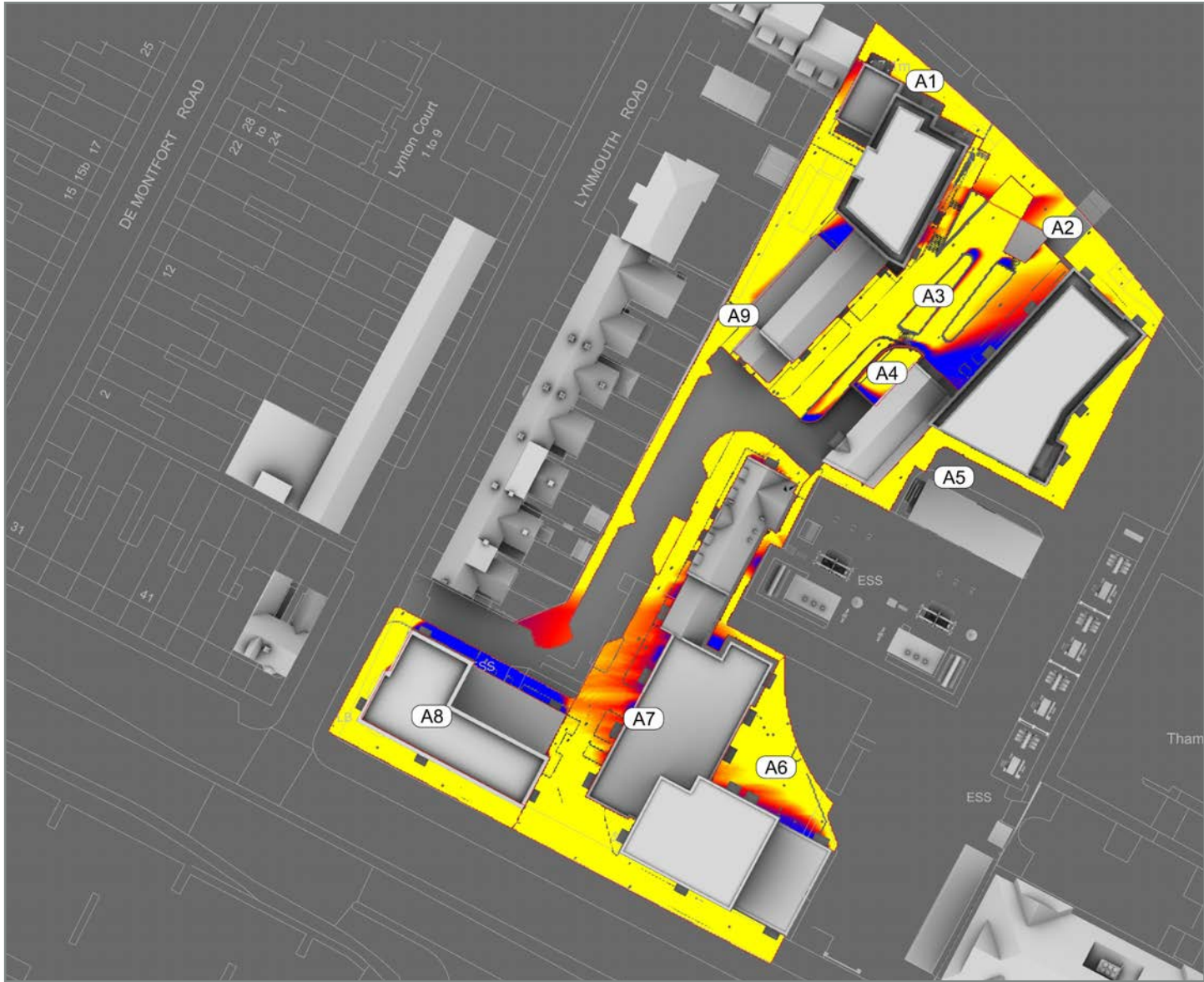


Fig. 2: Sunlight Exposure - 21st March

YES BRE's Sun On Ground
Area seeing at least two
hours of sunlight

NO Day: 21st March
Latitude: 51.4°N
Effective day length: 10 hours
*Min solar angle 10°
(BR209 3.3.8)



Zone Name	Area (m2)	Sunlit Area* (%)
A1	108.9	94.6
A2	295.5	76.3
A3	923.3	63.4
A4	53.6	71.9
A5	322.5	90.4
A6	275.3	68.8
A7	840.4	70.8
A8	311.1	75.4
A9	495.4	75.9

*Sunlit Area = Area receiving at least 2hrs. of sunlight on 21st March

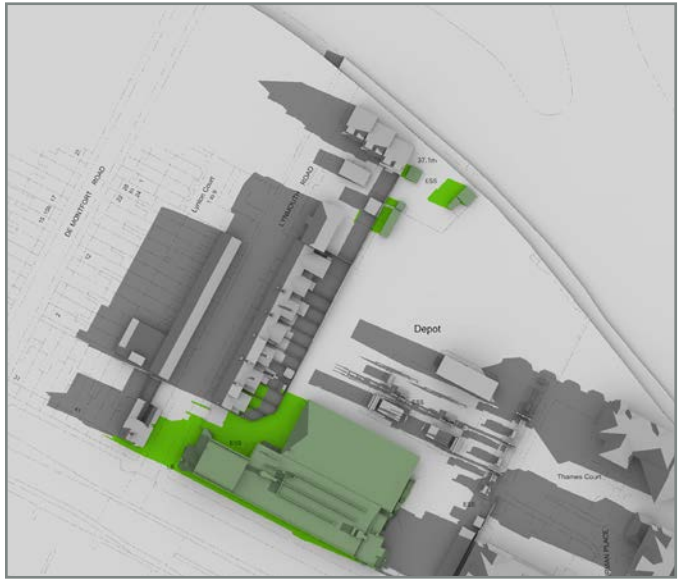
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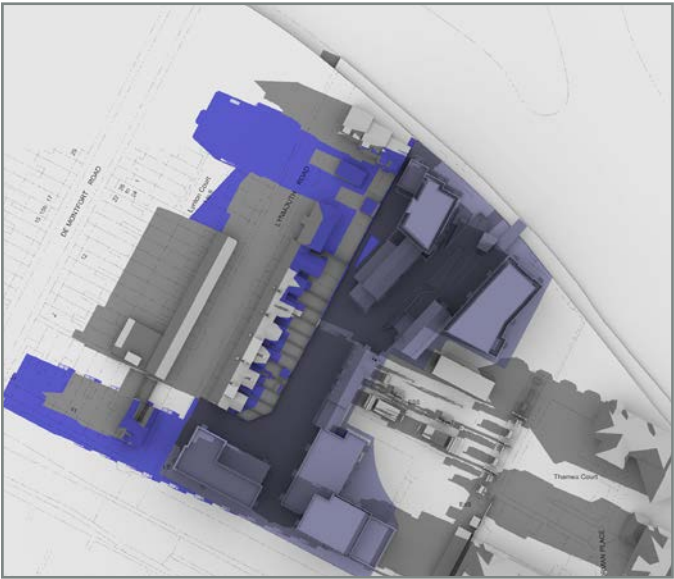
Appendix 5

Transient overshadowing

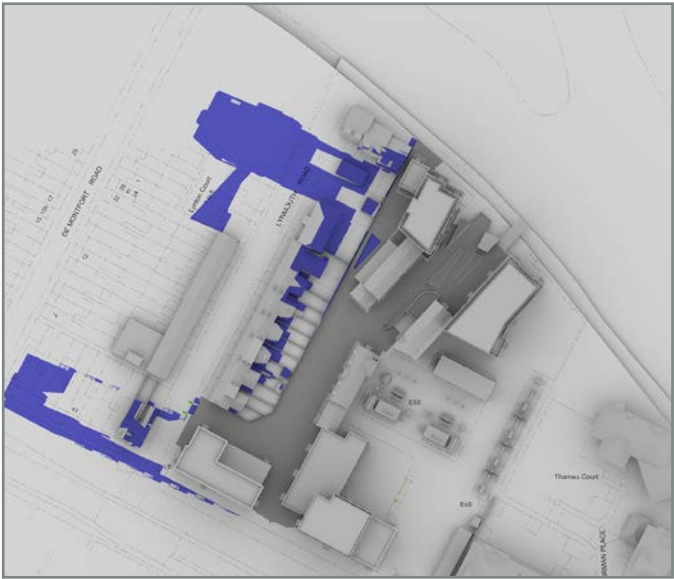
Existing Scenario



Proposed Scenario



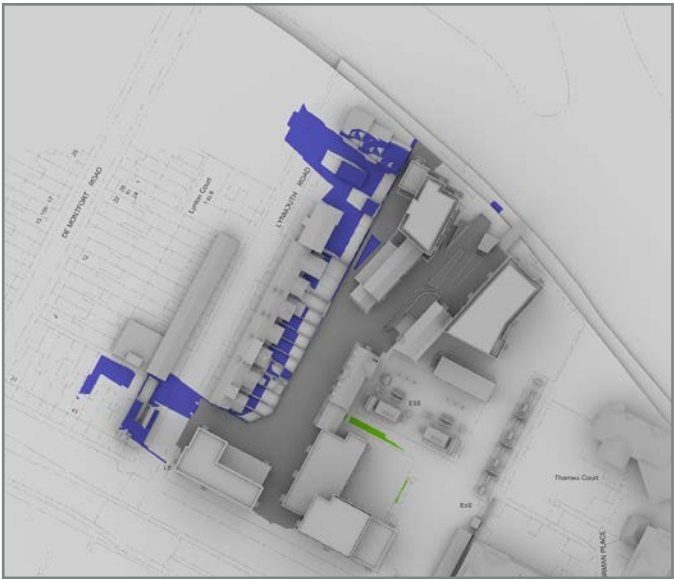
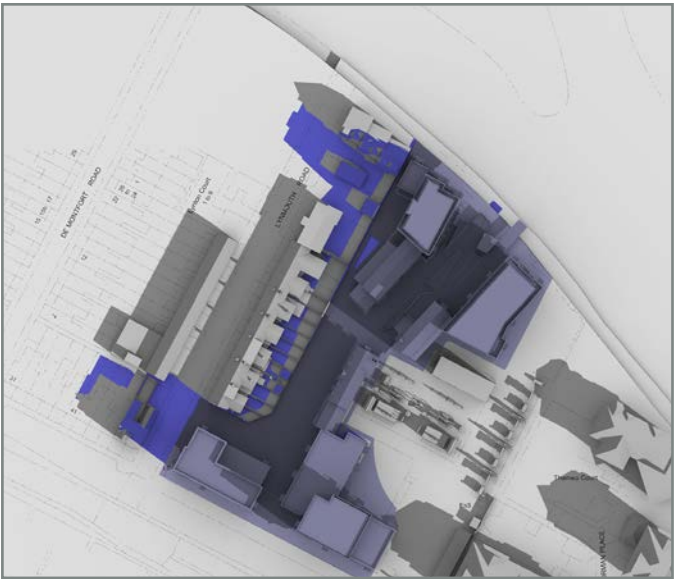
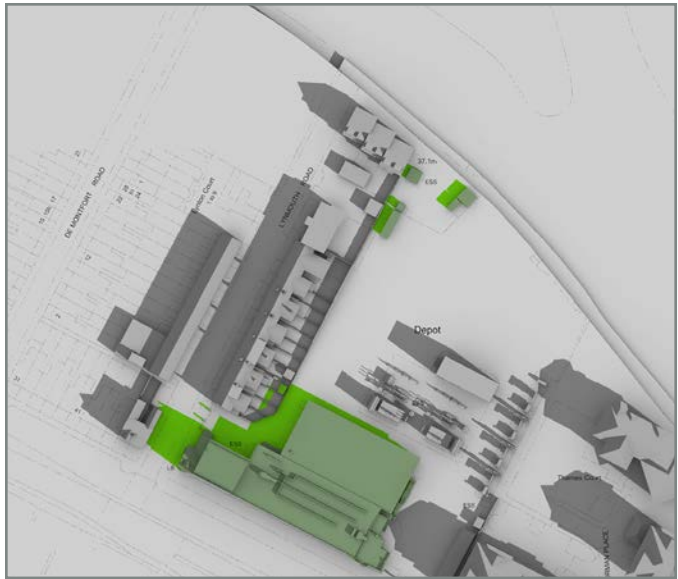
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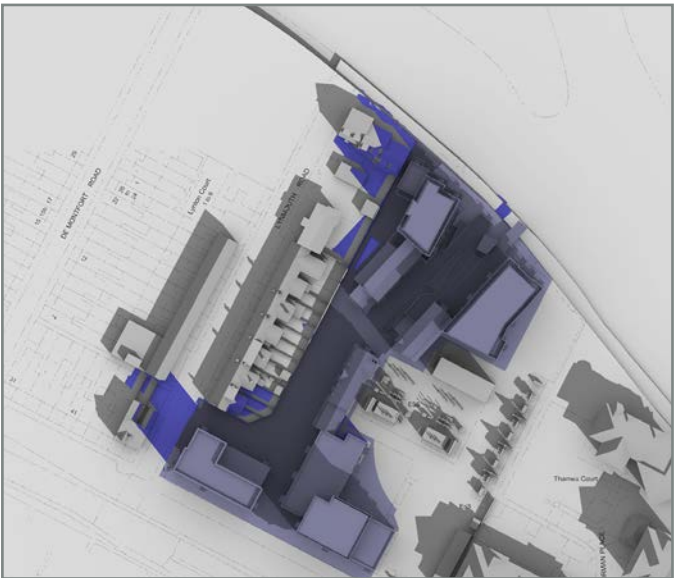
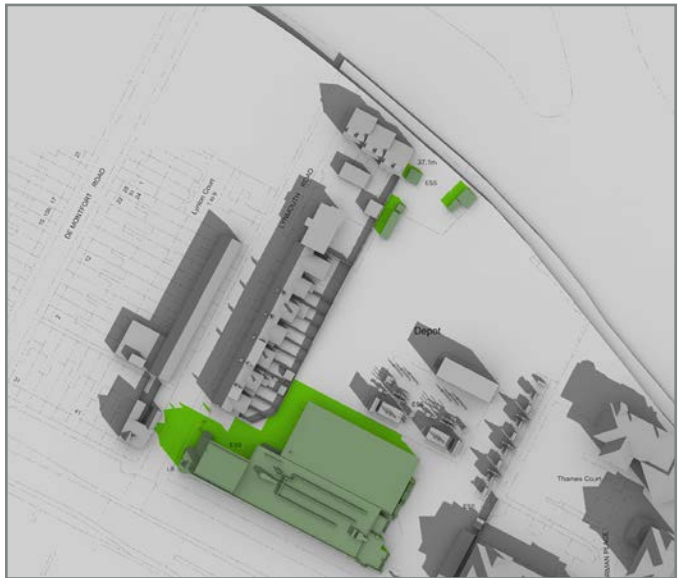
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Existing
Proposed

NORTH
Latitude: 51.4N
Min. solar altitude 10 degrees
(BR209 3.3.8)

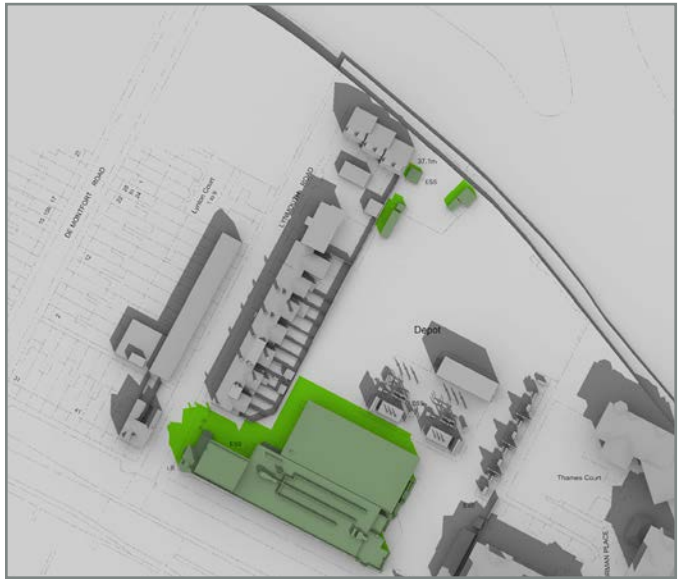


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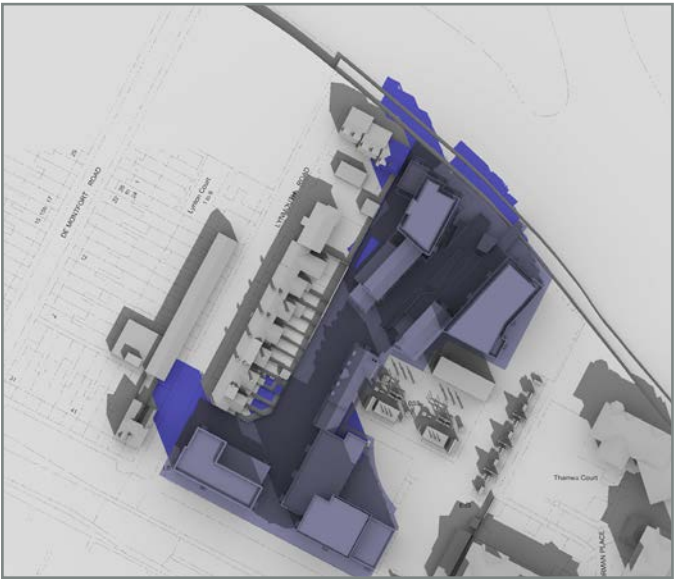


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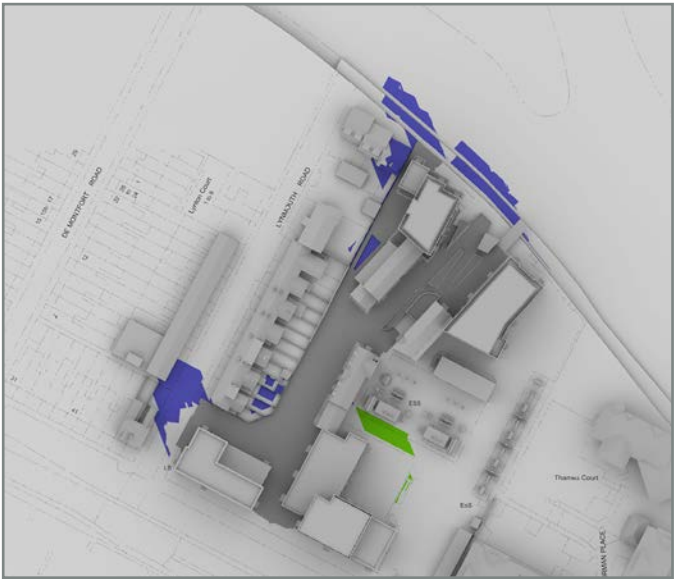
Existing Scenario



Proposed Scenario



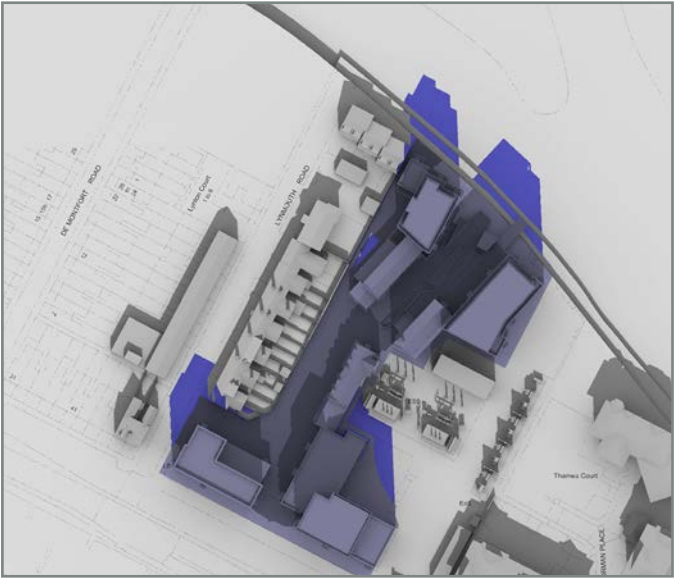
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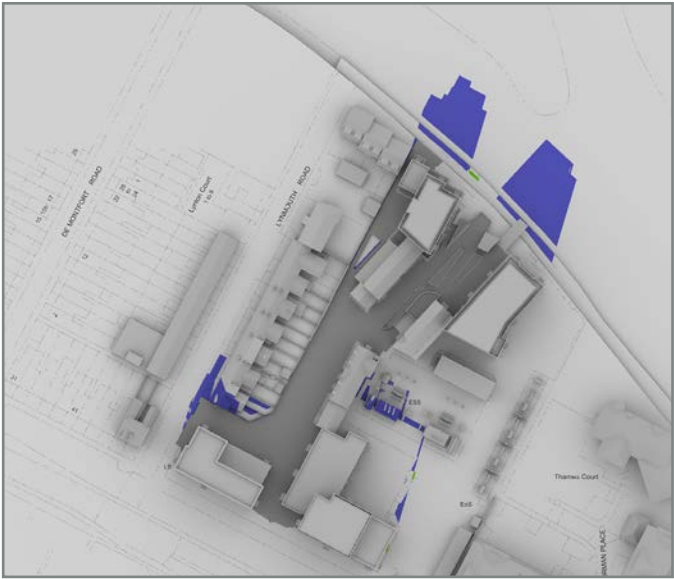
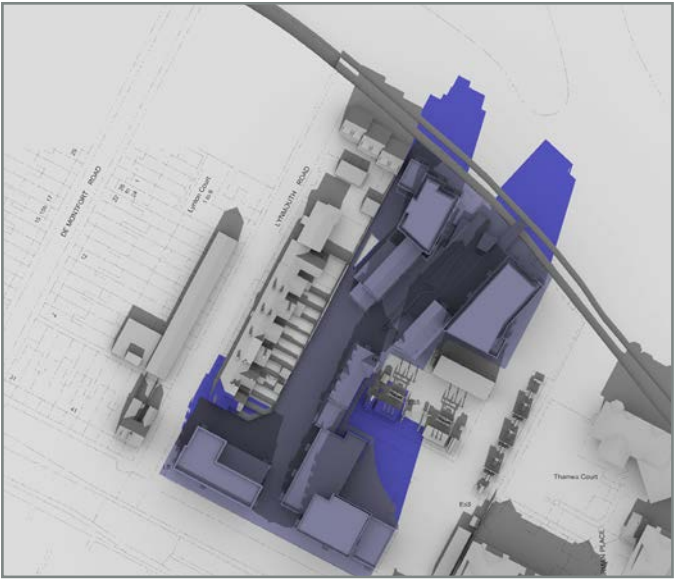
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Existing
Proposed

NORTH
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Min. solar altitude 10 degrees
(BR209 3.3.8)

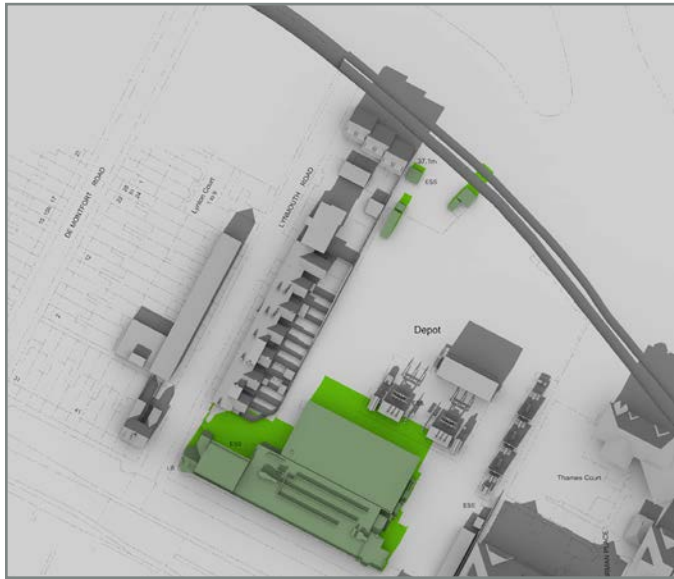


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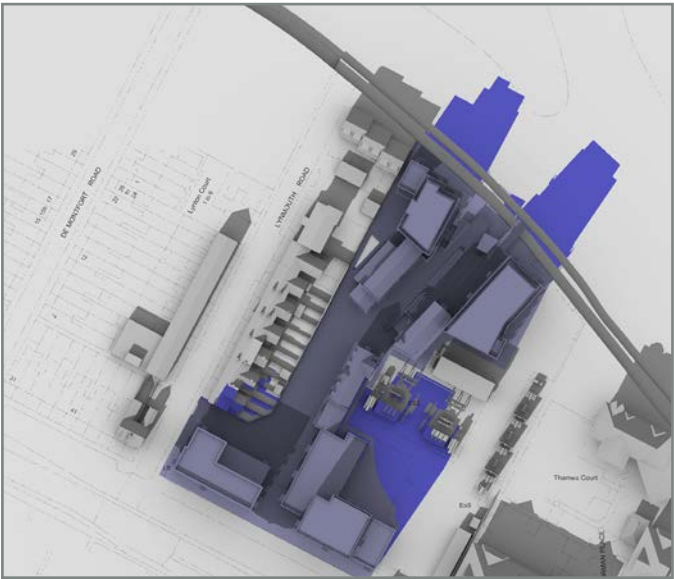


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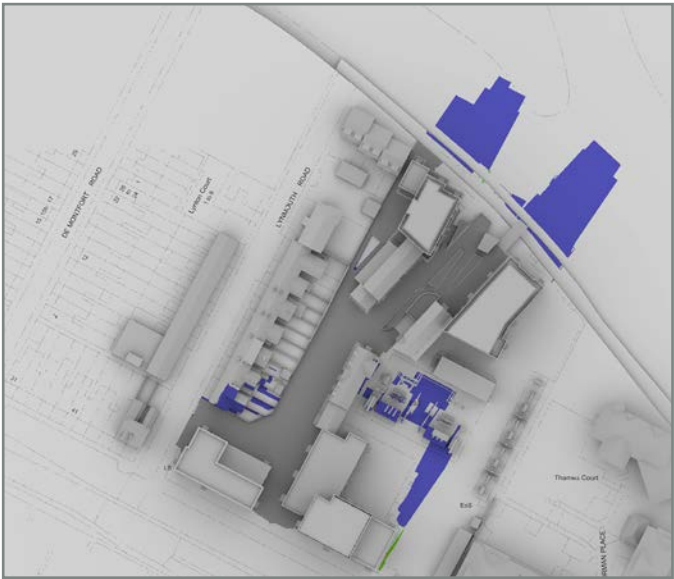
Existing Scenario



Proposed Scenario



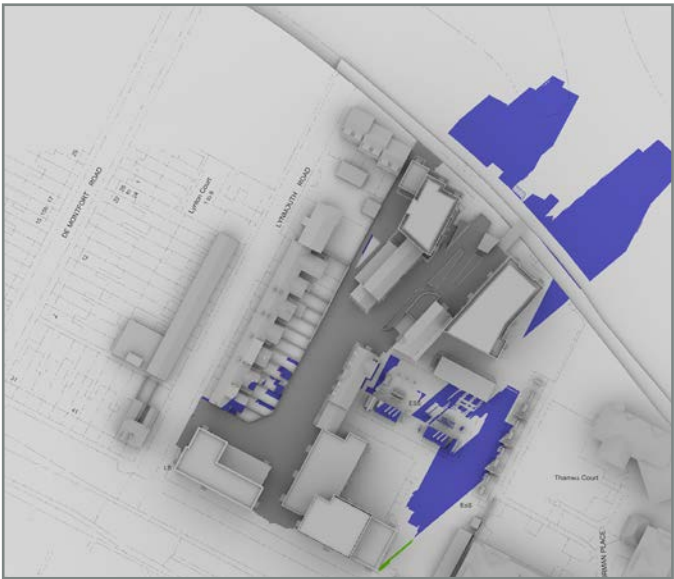
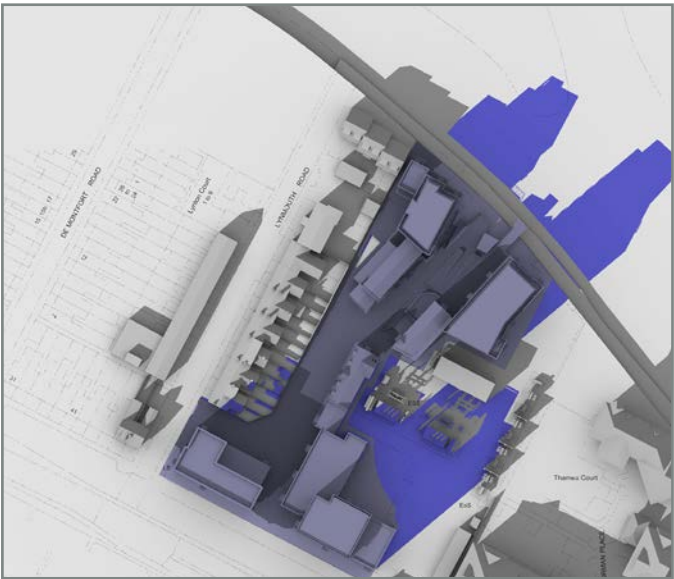
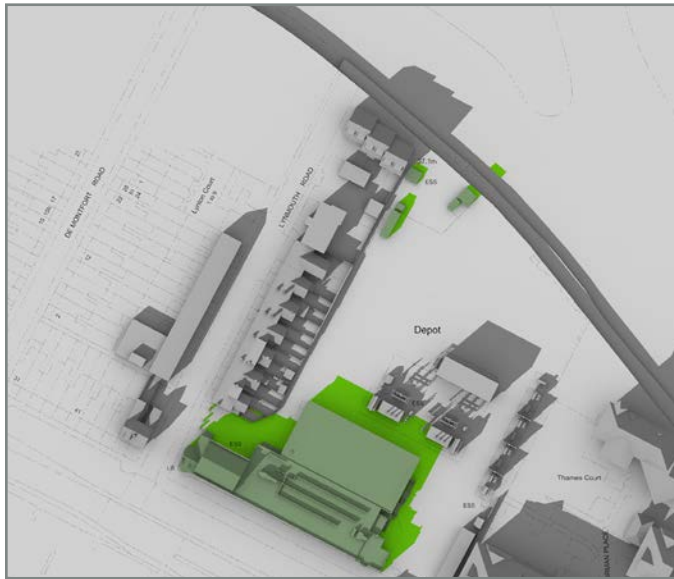
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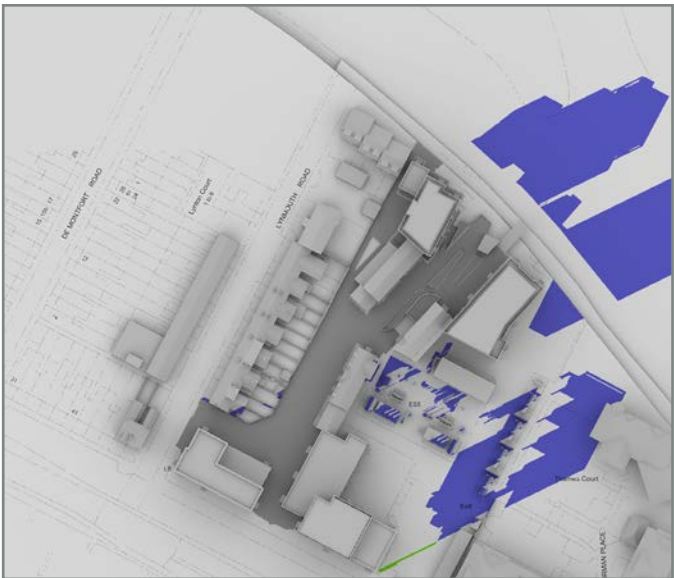
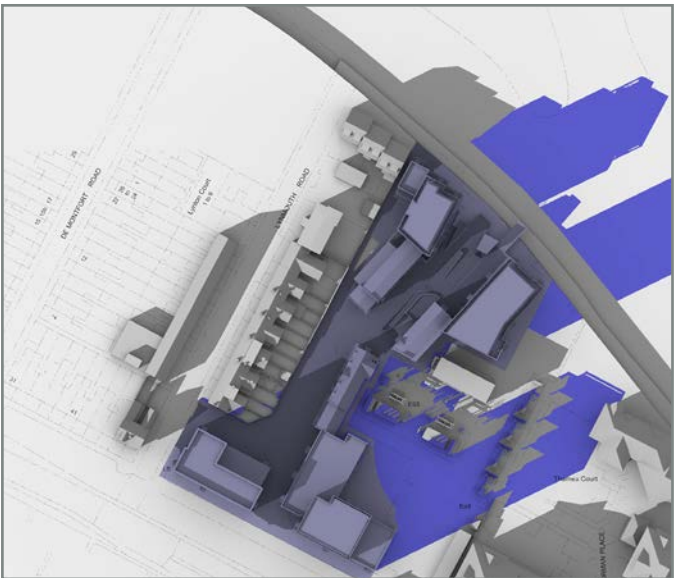
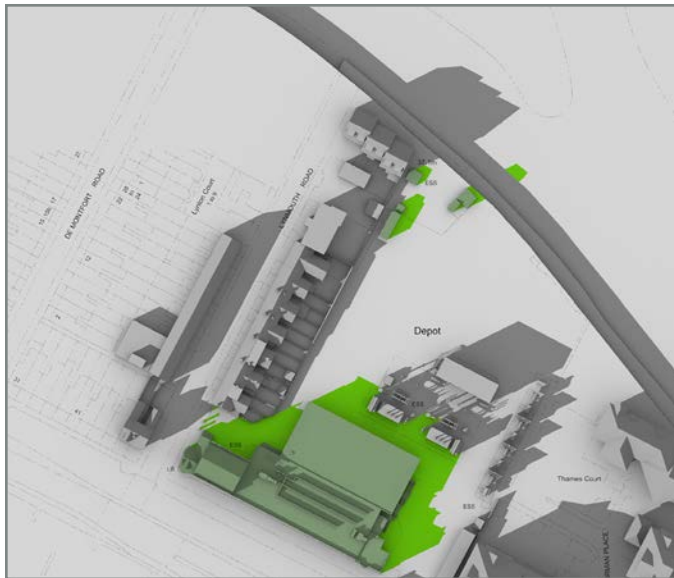
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Existing
Proposed

NORTH
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(BR209 3.3.8)

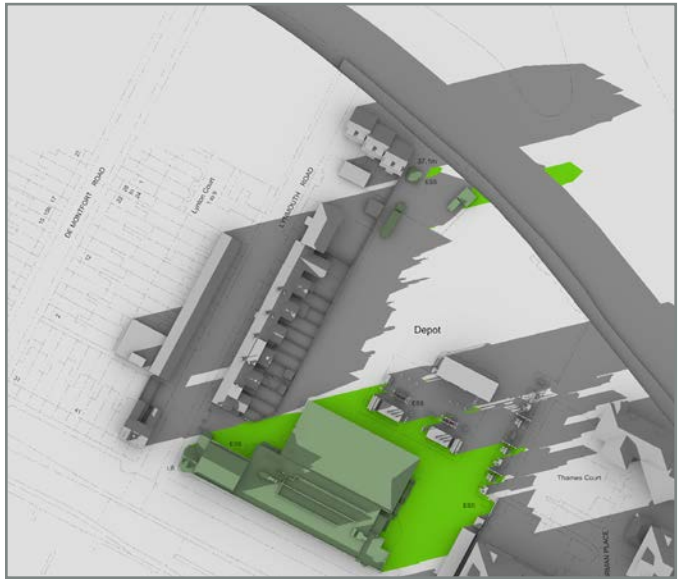


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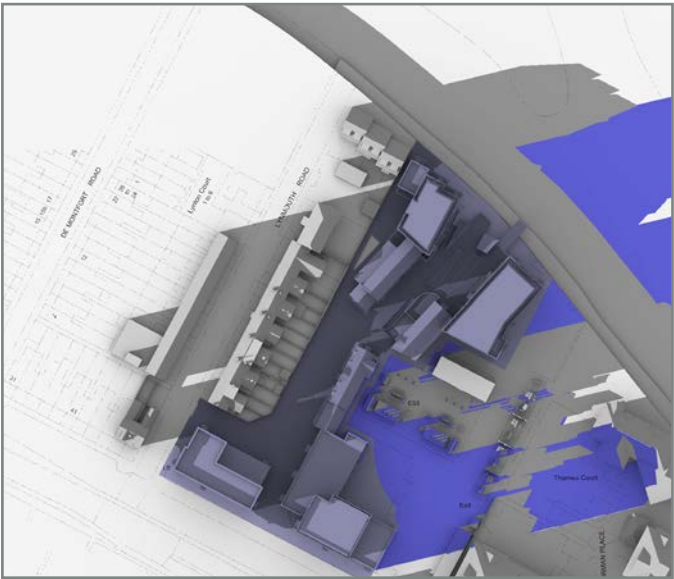


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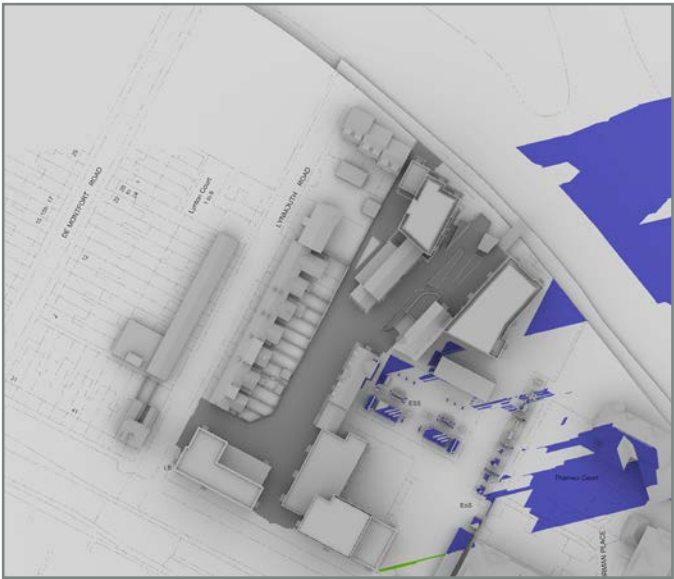
Existing Scenario



Proposed Scenario



Difference

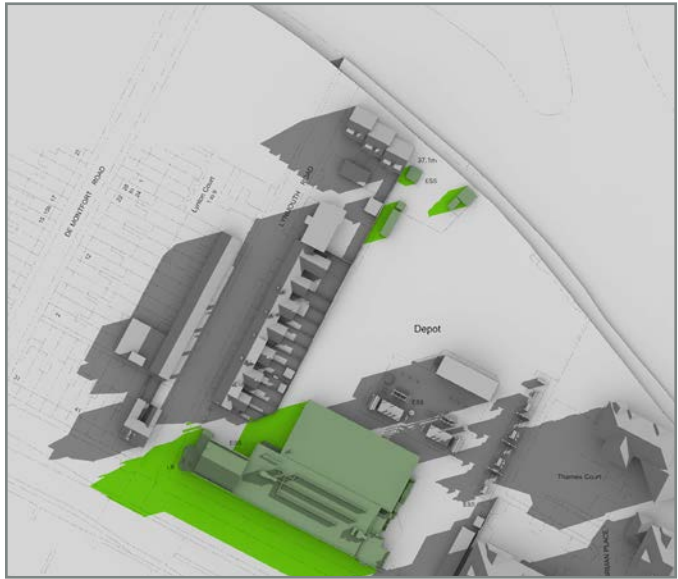


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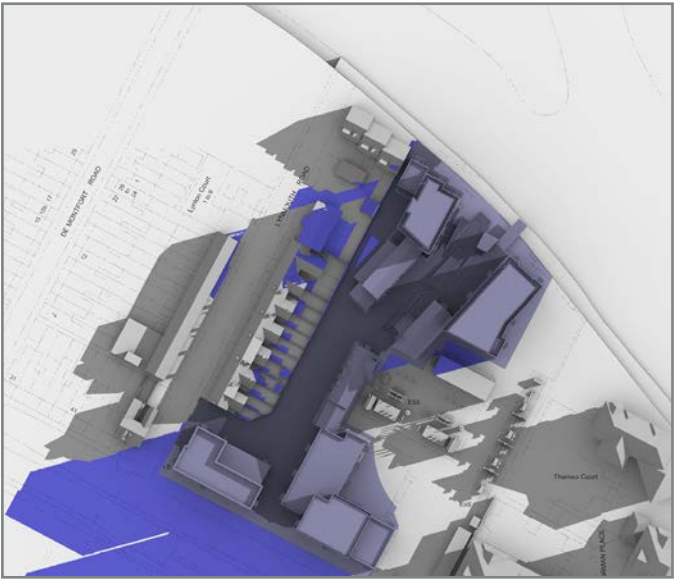
- Existing
- Proposed

NORTH
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Min. solar altitude 10 degrees
(BR209 3.3.8)

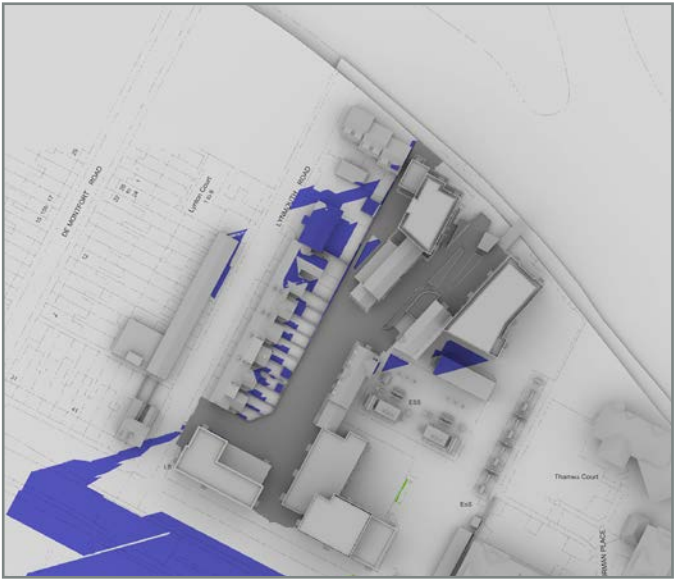
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Proposed Scenario



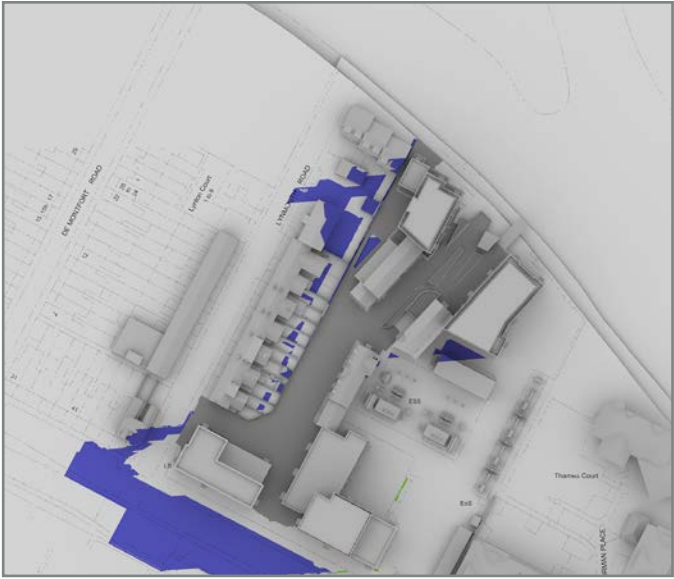
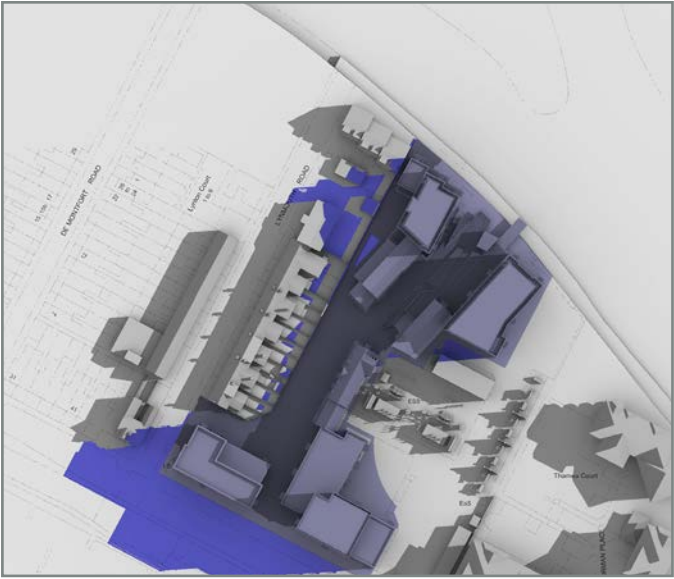
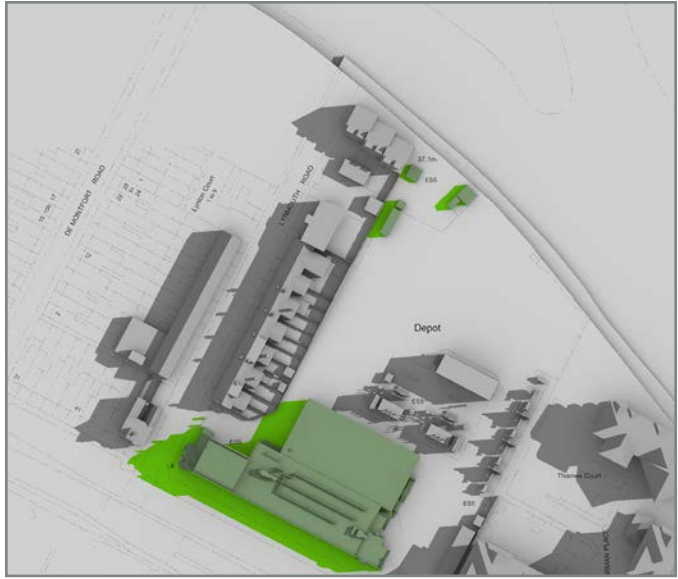
Difference



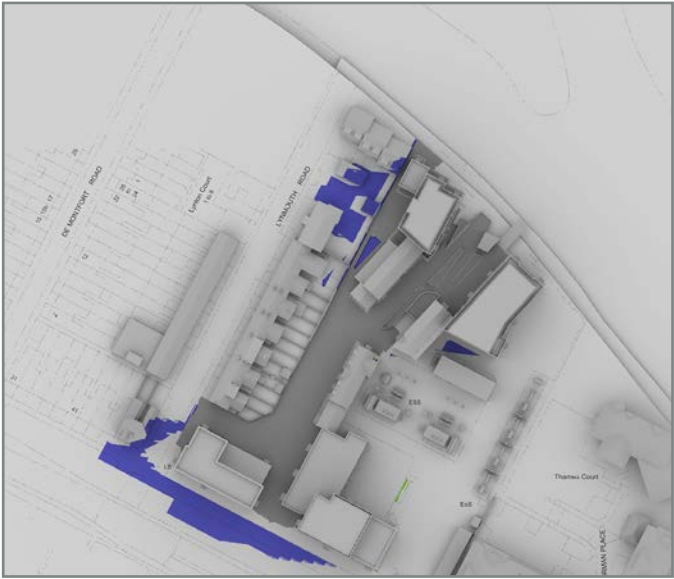
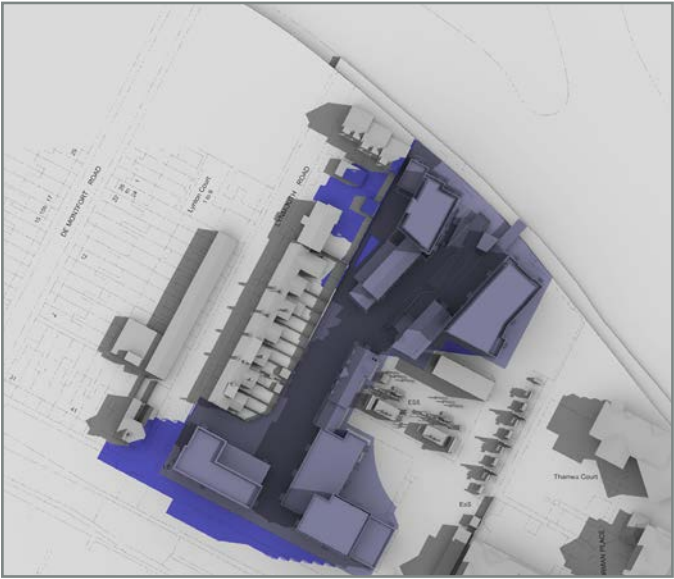
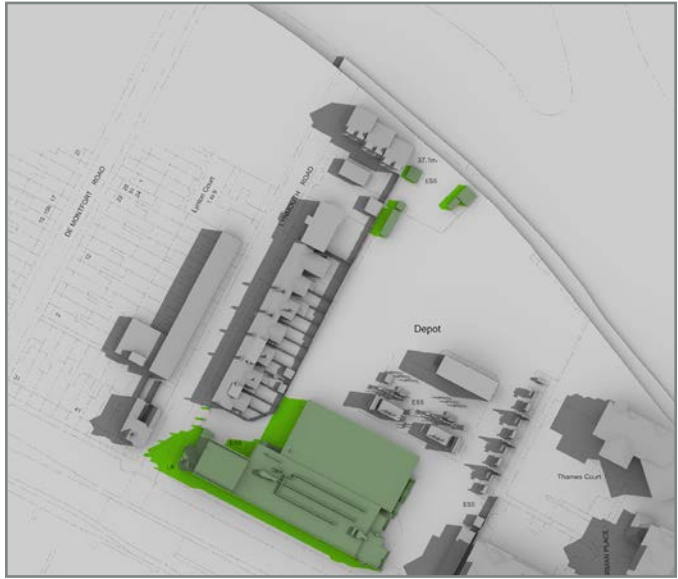
6:00

Existing
Proposed

NORTH
Latitude: 51.4N
Min. solar altitude 10 degrees
(BR209 3.3.8)

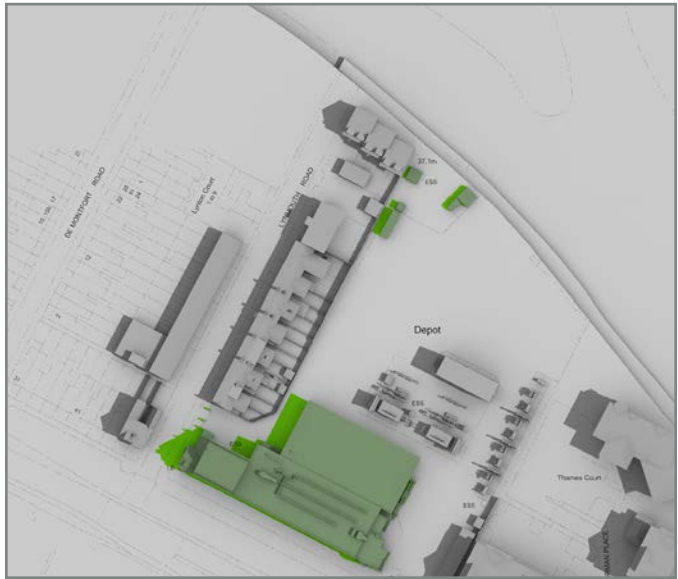


7:00

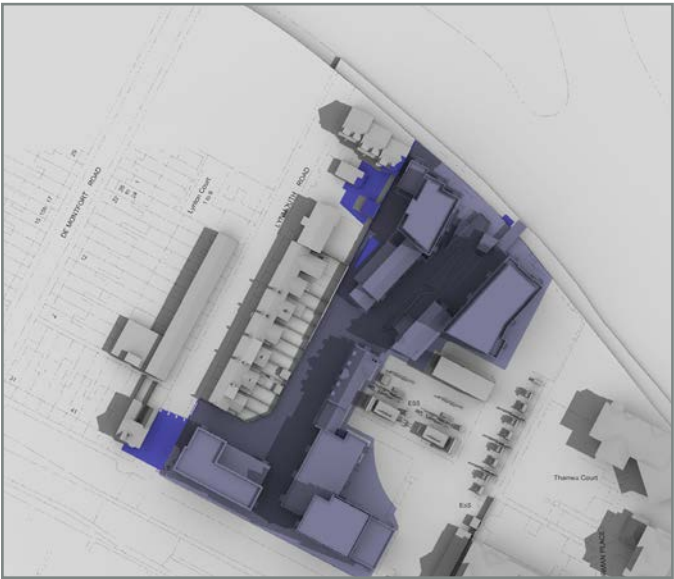


8:00

Existing Scenario



Proposed Scenario



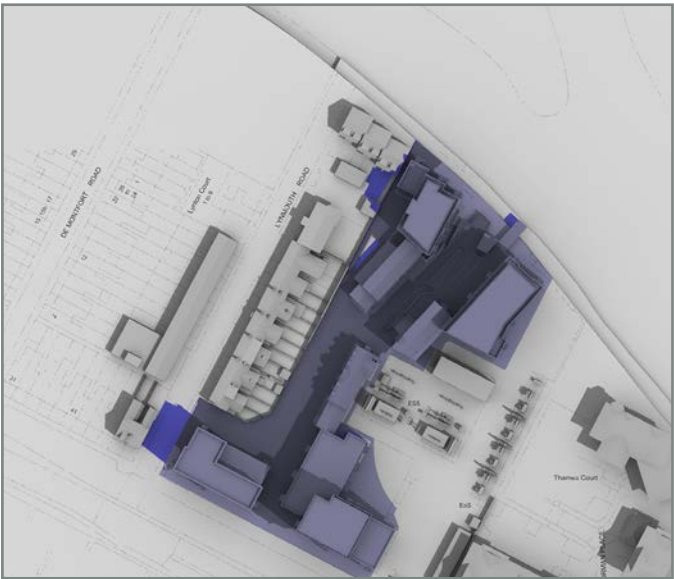
Difference



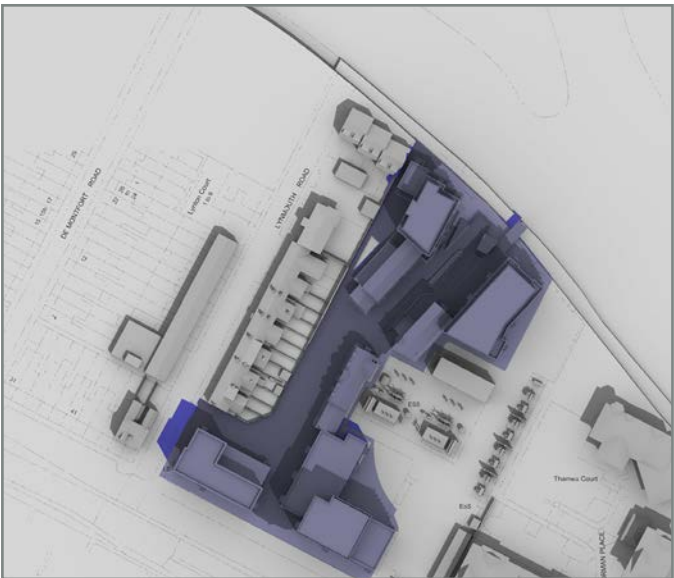
9:00

Existing
Proposed

NORTH
Latitude: 51.4N
Min. solar altitude 10 degrees
(BR209 3.3.8)



10:00



11:00

Existing Scenario



Proposed Scenario



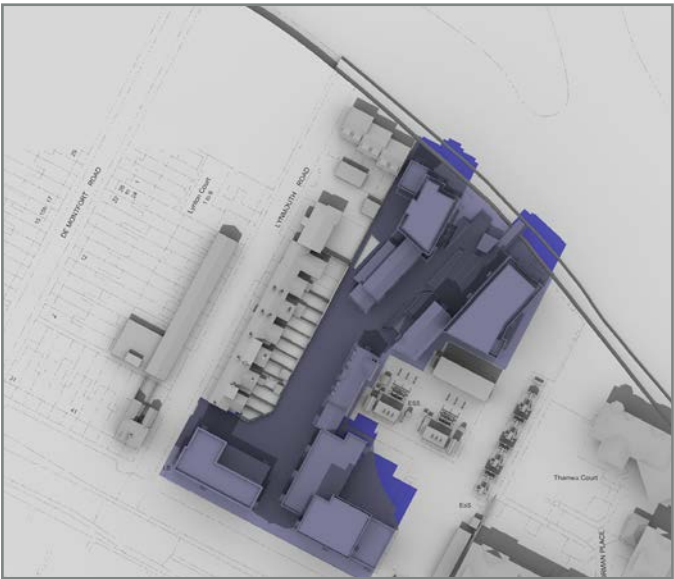
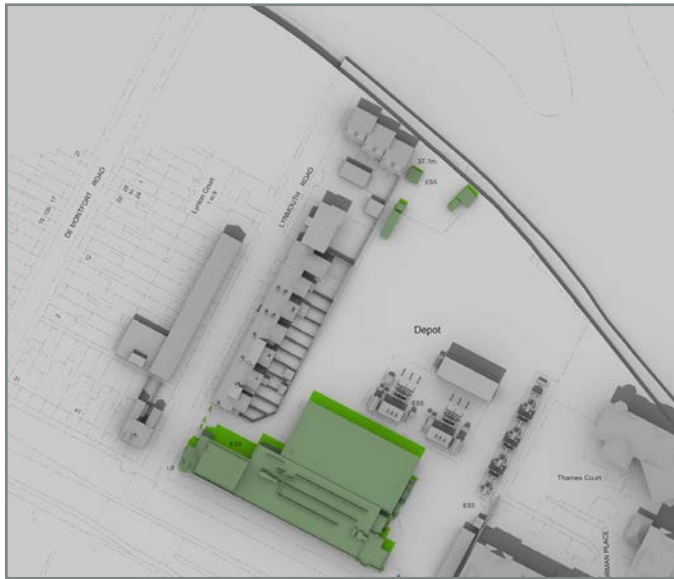
Difference



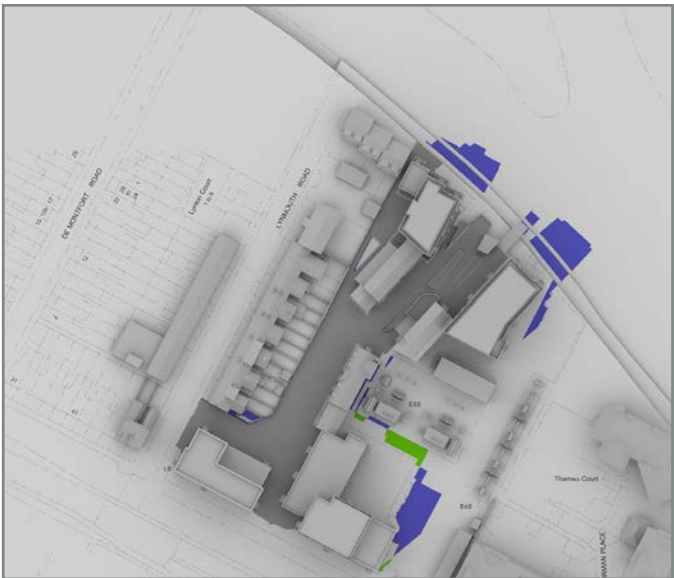
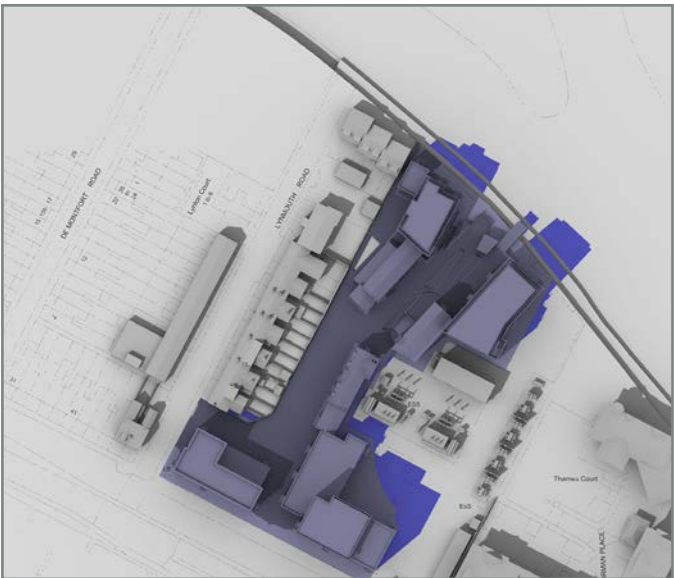
12:00

Existing
Proposed

NORTH
Latitude: 51.4N
Min. solar altitude 10 degrees
(BR209 3.3.8)

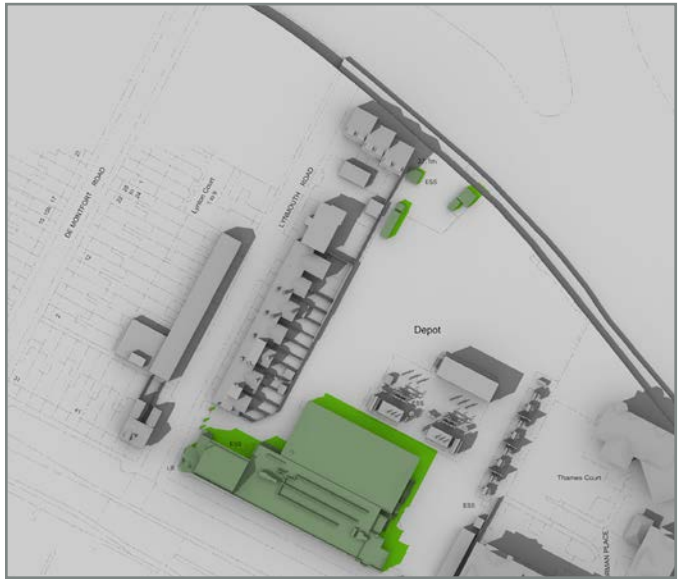


13:00

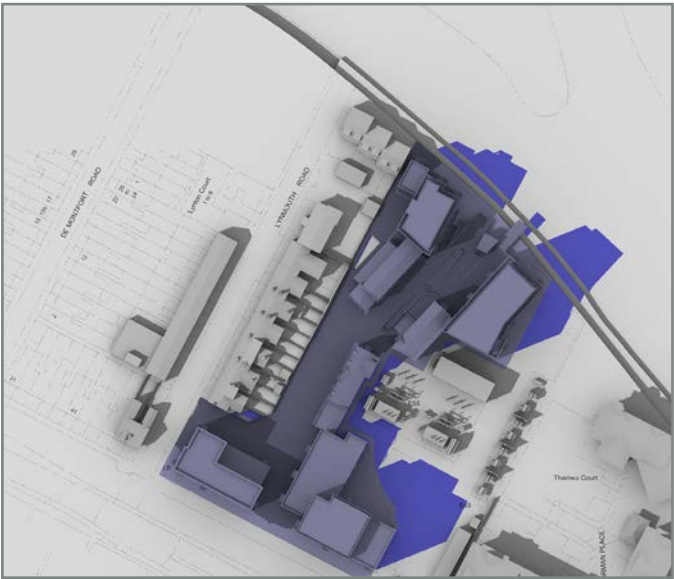


14:00

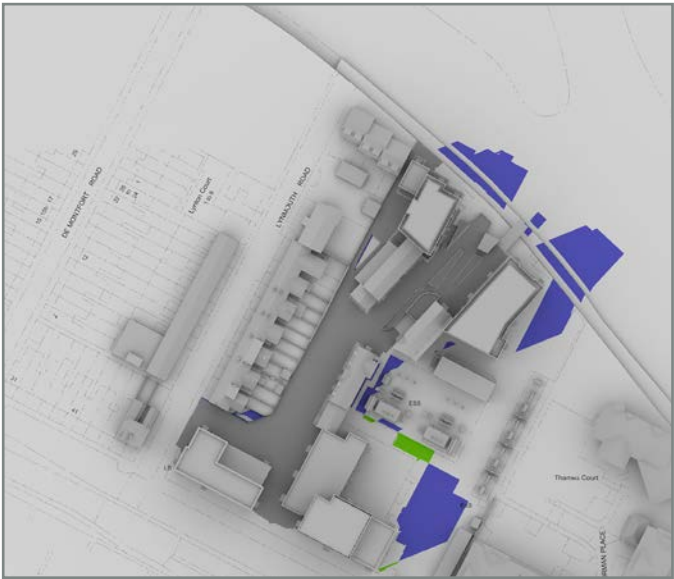
Existing Scenario



Proposed Scenario



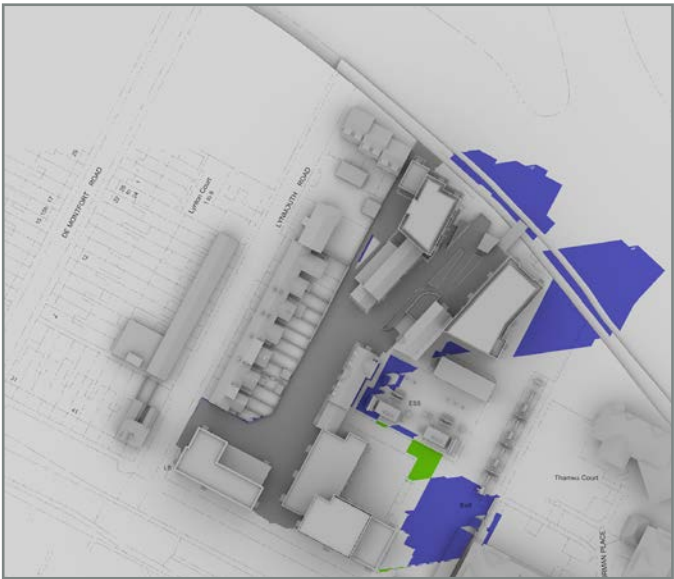
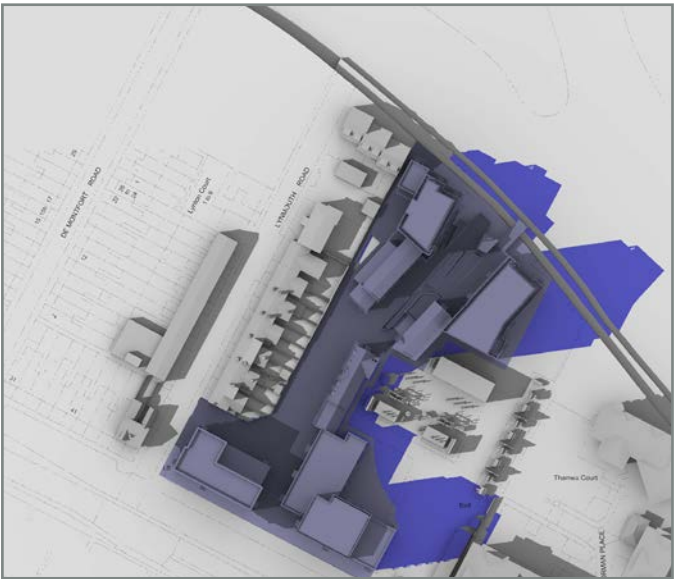
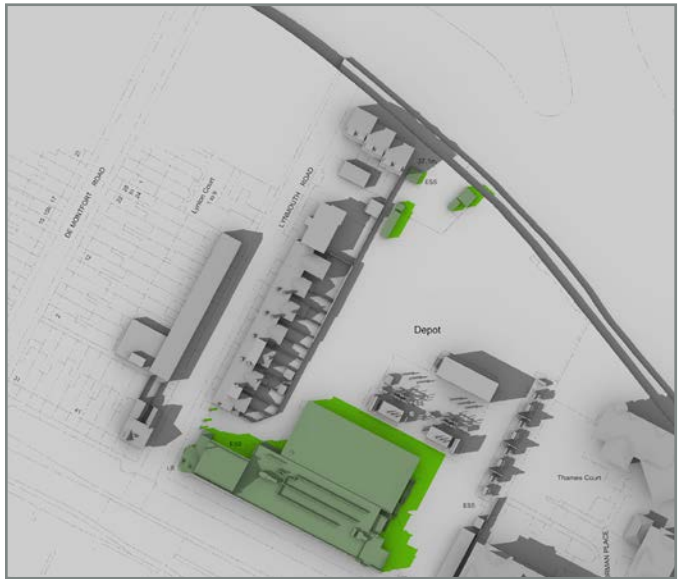
Difference



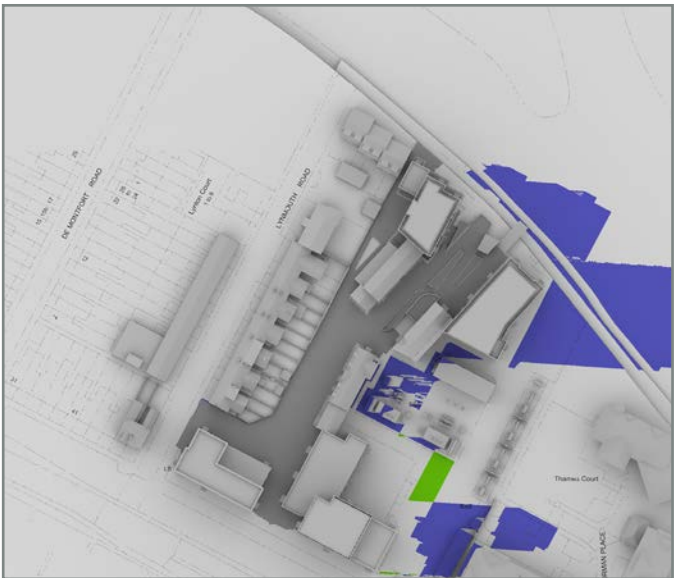
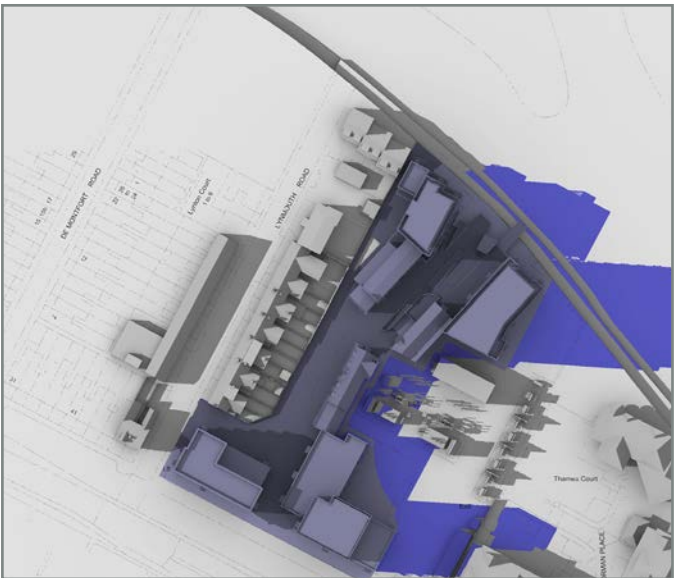
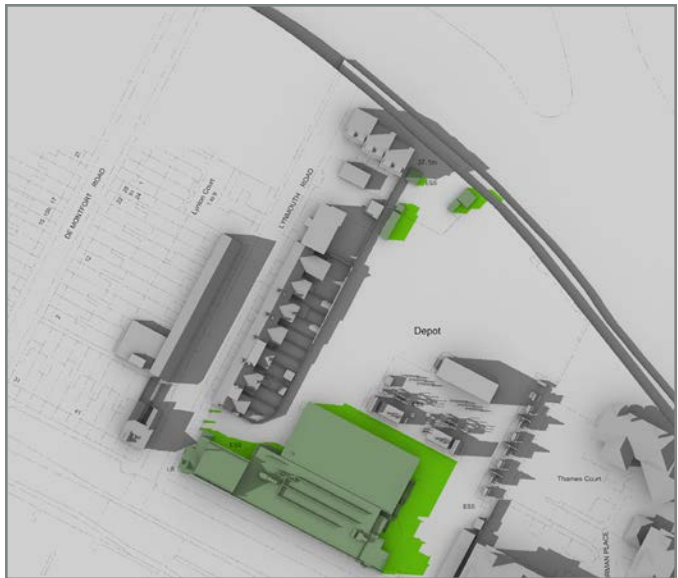
15:00

Existing
Proposed

NORTH
Latitude: 51.4N
Min. solar altitude 10 degrees
(BR209 3.3.8)

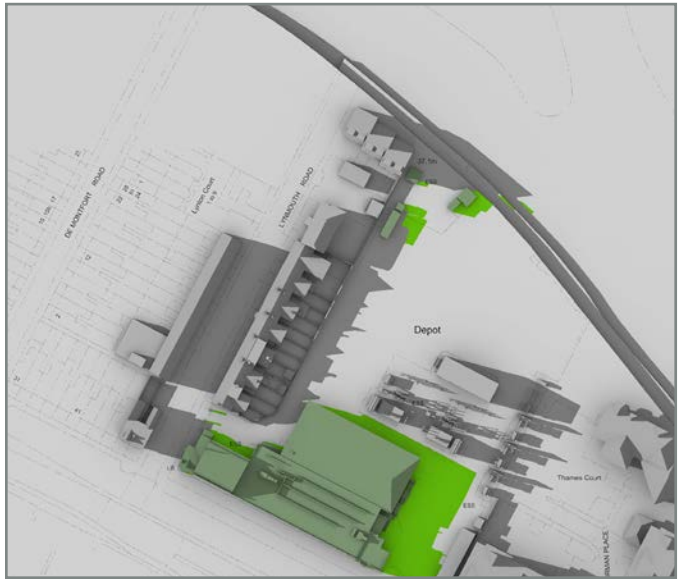


16:00

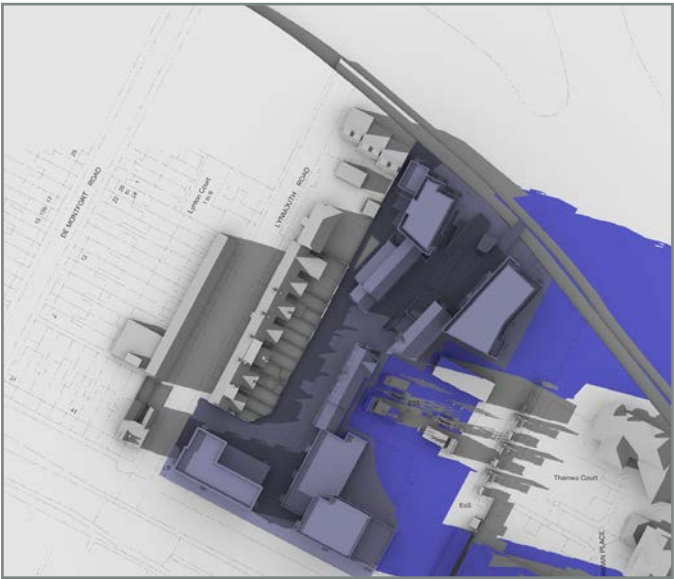


17:00

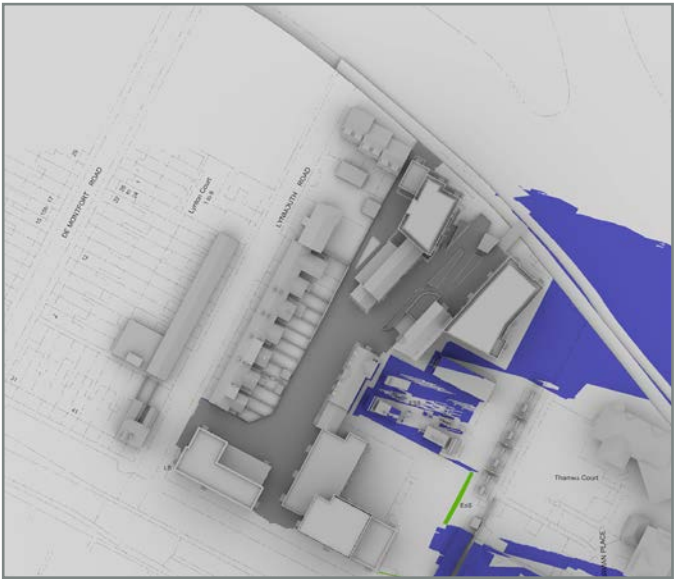
Existing Scenario



Proposed Scenario



Difference

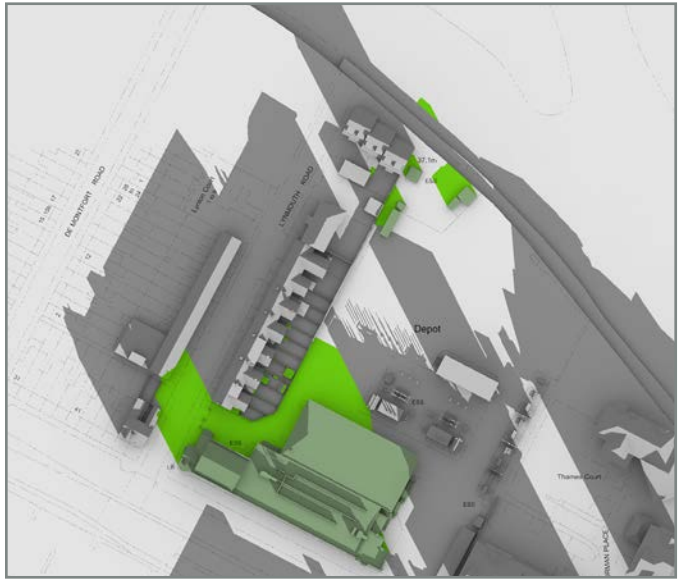


18:00

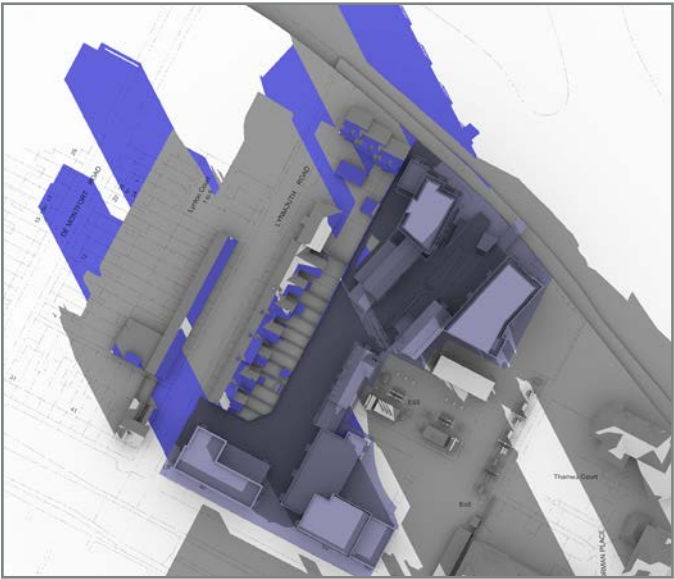
- Existing
- Proposed

NORTH
Latitude: 51.4N
Min. solar altitude 10 degrees
(BR209 3.3.8)

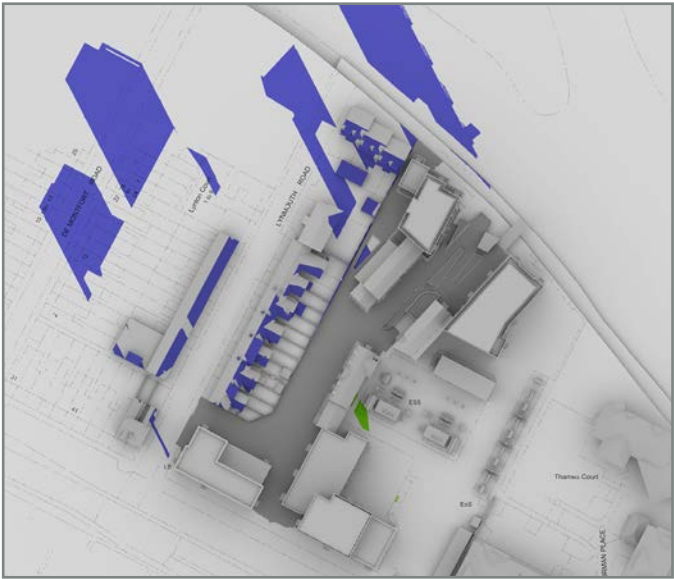
Existing Scenario



Proposed Scenario



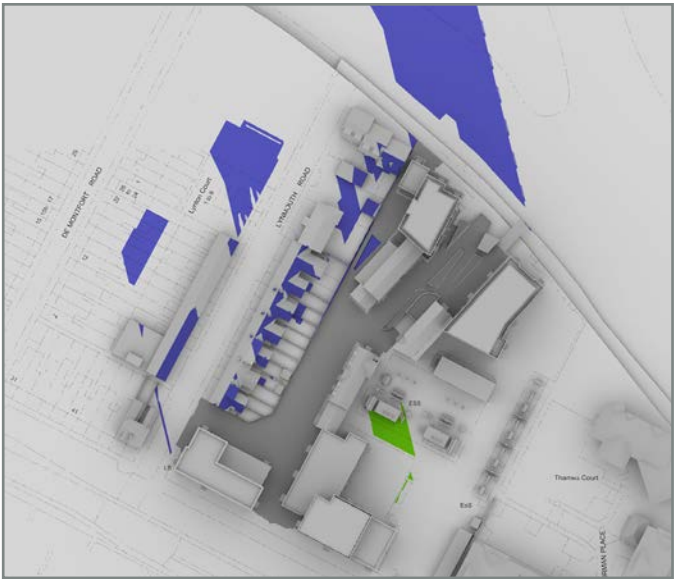
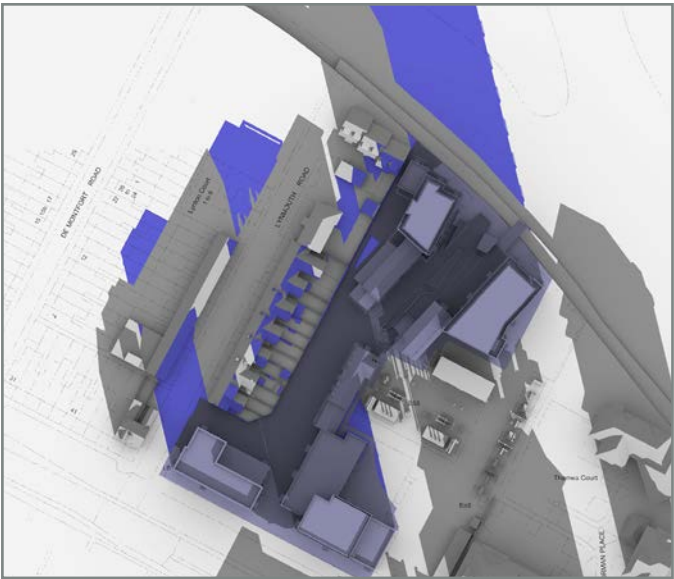
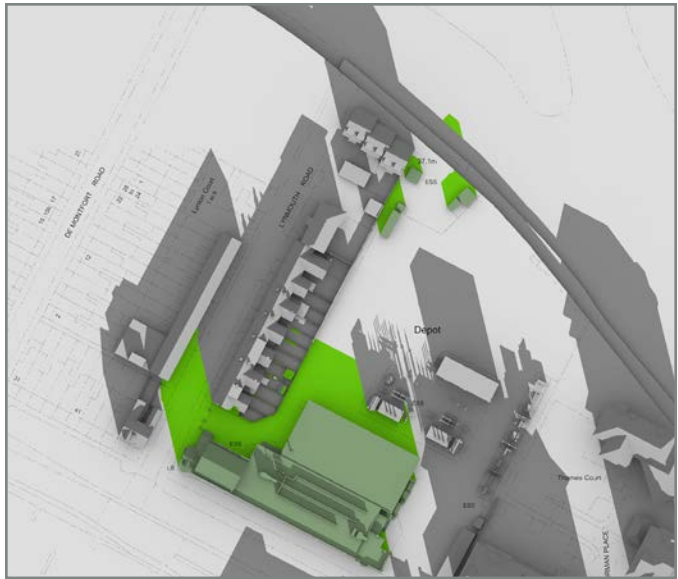
Difference



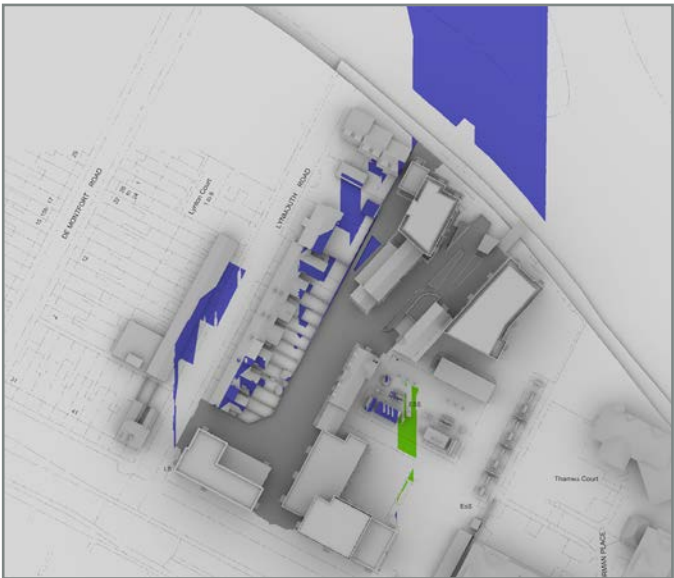
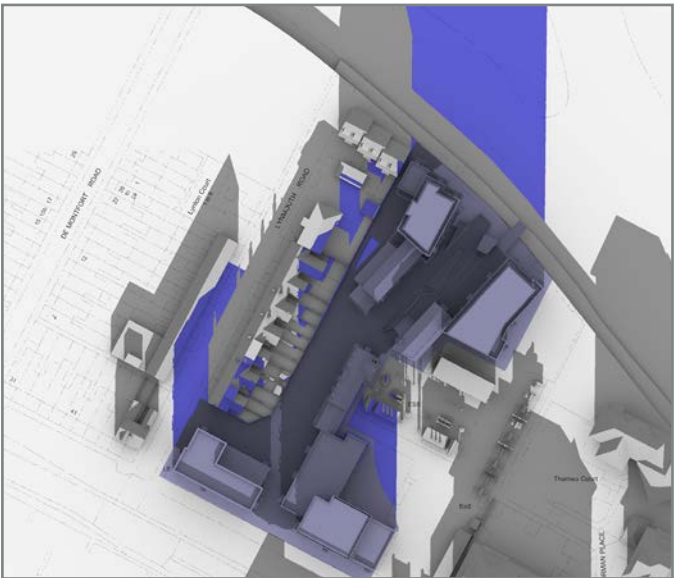
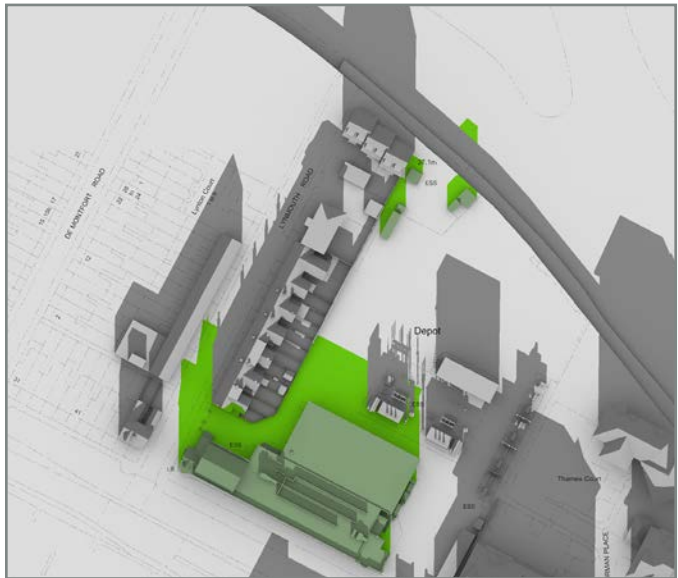
10:00

Existing
Proposed

NORTH
Latitude: 51.4N
Min. solar altitude 10 degrees
(BR209 3.3.8)

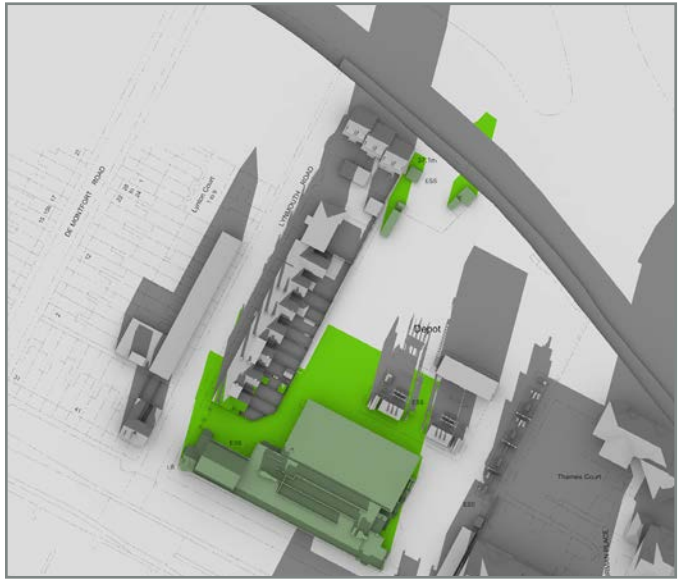


11:00

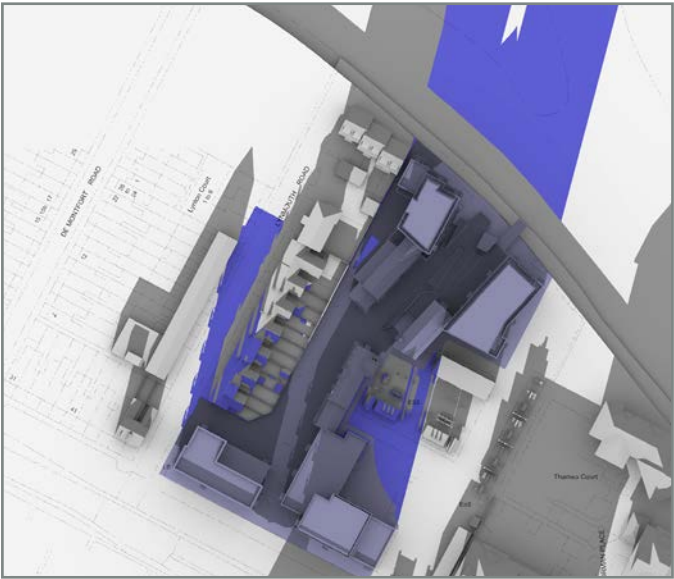


12:00

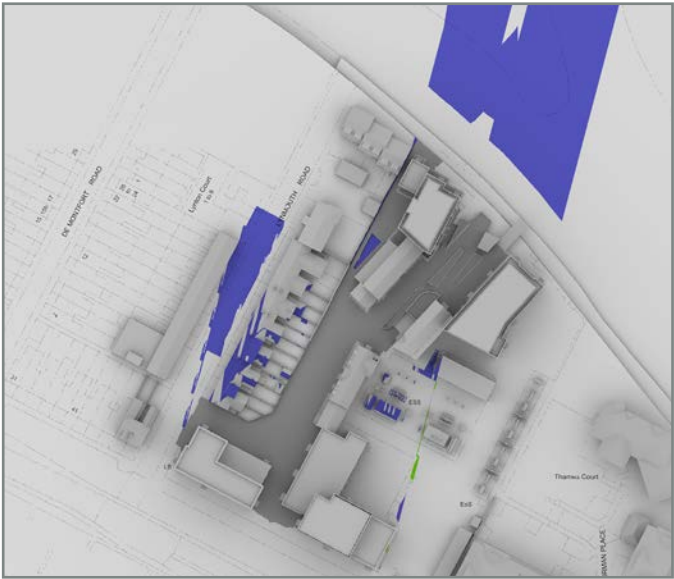
Existing Scenario



Proposed Scenario



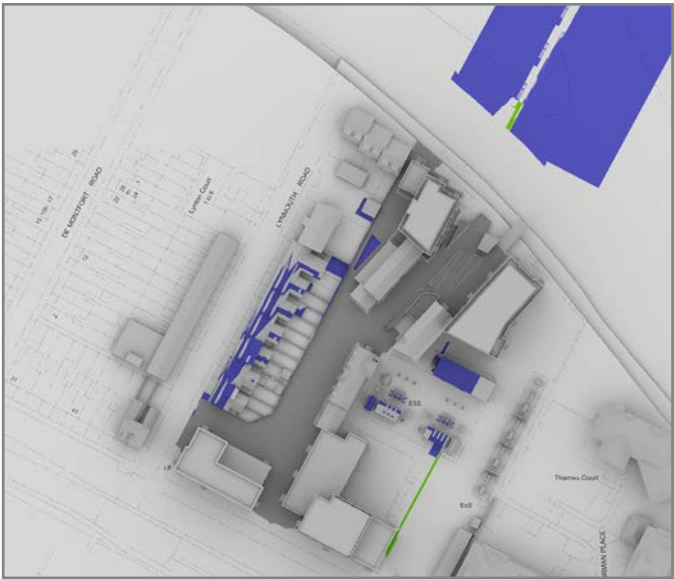
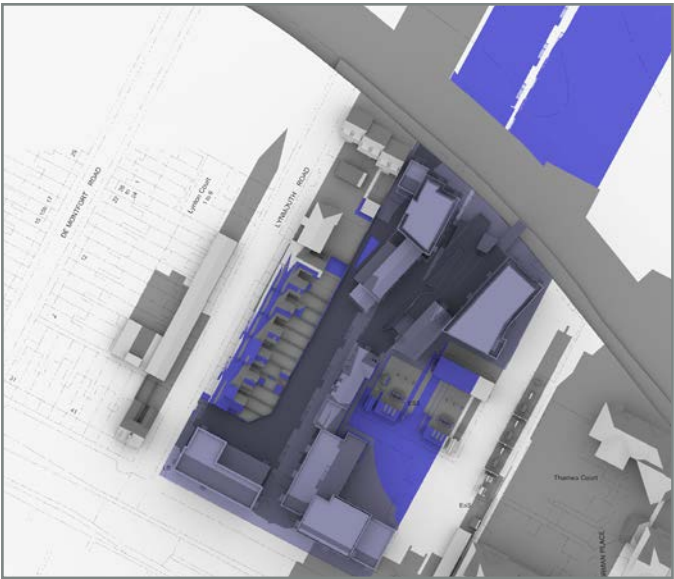
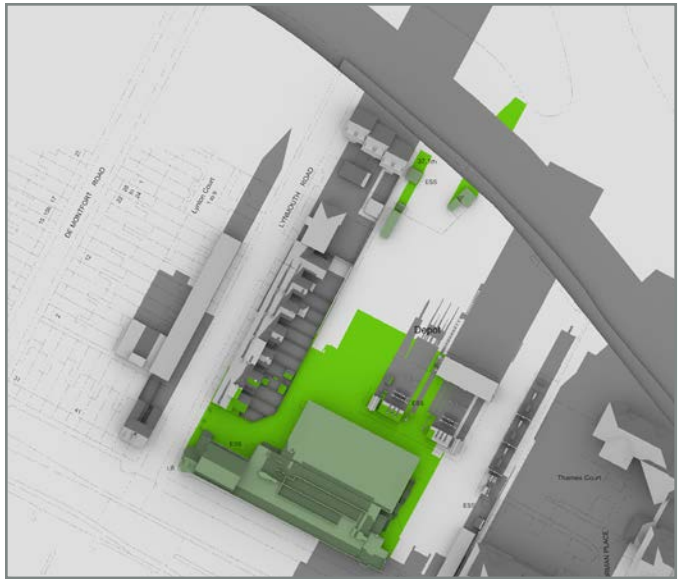
Difference



13:00

Existing
Proposed

NORTH
Latitude: 51.4N
Min. solar altitude 10 degrees
(BR209 3.3.8)



14:00