



6060

SUNLIGHT RECEPTION ANALYSIS

SUNLIGHT RECEPTION IN AMENITY SPACES WITHIN THE PROPOSED DEVELOPMENT
EFFECTS on SUNLIGHT RECEPTION IN EXISTING NEIGHBOURING AMENITY SPACES AS A RESULT OF THE PROPOSED DEVELOPMENT

WYATTVILLE PARK BTR

Loughlinstown
Co. Dublin

Green Urban Living N11 Ltd

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B	6062 One hourly overall site shadow – sunlight status illustrations	Attached

1 Introduction

1.1 Report purpose

This report gives information on the effects of the proposed development on shadow/sunlight in existing neighbouring amenity spaces and also the new amenity spaces within the proposed development.

1.2 Instruction

DKPartnership (DKP) have been commissioned by Green Urban Living N11 Ltd to carry out the analysis and report for the proposed development on lands associated with St. Laurence College, Wyattville Park, Loughlinstown, Co. Dublin.

1.3 Development description

The development will principally consist of the demolition of the existing AstroTurf and hardcourt area and the construction of: 256 no. Build-to-Rent apartments (105 no. 1-bed, 145 no. 2-bed and 6 no. 3-bed) in 4 no. blocks ranging in height from 1 to 8 no. storeys above ground level including and connected by single storey podiums with internal communal amenities and facilities; a crèche with outdoor play area; a café; communal and public open space and play facilities; a permanent multimodal access off Wyattville Park Road; a pedestrian/cycle link from the N11 to Wyattville Park; a temporary construction access off the N11; car, motorcycle and bicycle parking; and a set down area. Furthermore, the school side development will consist of: the provision of a new AstroTurf pitch and associated floodlighting; a bin store/vehicle shed; and a new vehicular and pedestrian entrance off Wyattville Park Road. The development will also include all ancillary site services and works to facilitate the development.

1.4 Statutory requirement

There are no particular building regulations in relation to sunlight/shadow effect standards other than recommendations outlined or referred to in the CIBSE lighting guide 10, BS EN17037/EN17037 and the BRE document "Site layout planning for daylight and sun light". The aforementioned documents do refer to a "right to a sky view" relating to existing buildings facing a new adjacent development in so far that it compares an existing sky view with the sky view when the new development is constructed. The difference, if any, must be within a certain acceptable threshold.

2 Executive summary

2.1 Analysis conducted

This report details the effects on the following:

1. sunlight/shadow status of the new amenity spaces within the proposed development, specifically communal & public amenity spaces and private amenity spaces.
2. sunlight/shadow status of the existing neighbouring amenity spaces. Three separate assessments on the request of the planning authority were conducted.

Scenario 1: neighbouring amenity spaces sunlight/shadow assessed on March 21st

Scenario 2: neighbouring amenity spaces sunlight/shadow assessed on June 21st

Scenario 3: neighbouring amenity spaces sunlight/shadow assessed on December 21st

2.2 Guidelines and standards applied

For this report we applied the recommendations and guideline of the following:

- The Building Research Establishment (BRE) report, site layout planning for daylight and sunlight – a guide to good practice (referred to as the BRE Report).
- British European Standard BS EN17037/EN17037 Day lighting standards and contains guidance on the minimum recommended levels of interior day lighting.
- CIBSE guide 10 Day light and lighting for buildings.

2.3 Technical analysis

Calculations were conducted in accordance with the BRE guidelines to determine the extent to which the proposed development could affect the shadow/sun light reception in any existing amenity spaces and new amenity spaces proposed with the development. For new amenity spaces, in basic terms, the minimum criteria is that at least 50% of the amenity space should receive at least two hours of sunlight on the 21st March and for “existing” amenity spaces there is also the additional criteria that any loss of sunlight should not be greater than 0.8 times its former size.

2.4 New amenity spaces sunlight/shadow assessment conclusion

Communal & public amenity space shadow/sunlight conclusion:

Based on the BRE guidelines at least 50% of the amenity space should receive at least two hours of sunlight on the 21st March. The other scenarios, June 21st and December 21st although carried out as requested have no bearing on the sunlight/shadow compliance assessment under the BRE guide.

- Scenario 1: proposed amenity spaces sunlight/shadow assessed on March 21st
Amenity area outlined in ‘1’ was calculated to have 5.00 hours of sunlight at 50% area
Amenity area outlined in ‘2’ was calculated to have 4.00 hours of sunlight at 50% area
Amenity area outlined in ‘3’ was calculated to have 4.00 hours of sunlight at 50% area.
- Scenario 2: proposed amenity spaces sunlight/shadow assessed on June 21st
Amenity area outlined in ‘1’ was calculated to have 6.00 hours of sunlight at 50% area
Amenity area outlined in ‘2’ was calculated to have 5.00 hours of sunlight at 50% area
Amenity area outlined in ‘3’ was calculated to have 6.00 hours of sunlight at 50% area
- Scenario 3: proposed amenity spaces sunlight/shadow assessed on December 21st
Amenity area outlined in ‘1’ was calculated to have 1.22 hours of sunlight at 50% area
Amenity area outlined in ‘2’ was calculated to have 0.96 hours of sunlight at 50% area
Amenity area outlined in ‘3’ was calculated to have 1.22 hours of sunlight at 50% area

Compliance statement : We conclude based on the March 21st data as directed by the BRE guide that the new amenity spaces receive in excess of 2 hours sunlight on at least 50% of the area on March 21st and therefore the results are in compliance with the BRE guide “ Site Layout and Planning for Daylight and Sunlight”.

Private gardens / balcony amenity space conclusion:

Private amenity areas for the proposed development on the ground floor level are a mix of private garden area or balcony area. Based on the BRE guidelines at least 50% of the amenity space should receive at least two hours of sunlight on the 21st March. Again the other scenarios, June 21st and December 21st although carried out as requested have no bearing on the sunlight/shadow compliance assessment under the BRE guide.

- Scenario 1: proposed amenity spaces sunlight/shadow assessed on March 21st
All private amenity areas were calculated to have 2.00 hours or more of sunlight at 50% area.
- Scenario 2: proposed amenity spaces sunlight/shadow assessed on June 21st
All private amenity areas were calculated to have in excess of 2.00 hours of sunlight at 50% area.
- Scenario 3: proposed amenity spaces sunlight/shadow assessed on December 21st
Some private amenity areas were calculated to have 2.00 hours or more of sunlight at 50% area. Some private amenity areas were calculated to have less than 2.00 hours at 50% area.

Compliance statement: We conclude based on the March 21st data as directed by the BRE guide that the new proposed balcony's / private gardens all receive 2 hours or more of sunlight at 50% of the area for March 21st and therefore the results are in compliance with the BRE guide " Site Layout and Planning for Daylight and Sunlight".

2.5 Existing neighbouring amenity spaces sunlight/shadow assessment conclusion

Based on the BRE guidelines at least 50% of the amenity space should receive at least two hours of sunlight on the 21st March and that any loss of sunlight should not be greater than 0.8 (20% reduction) times its former size. Again the other scenarios, June 21st and December 21st although carried out as requested have no bearing on the sunlight/shadow compliance assessment under the BRE guide.

- Scenario 1: existing amenity spaces sunlight/shadow assessed on March 21st
All existing amenity areas were calculated to have 2.00 hours or more of sunlight at 50% area before and after the introduction of the new development. Receptor 4 to 13 have a change factor of 1.00 meaning the new proposed build has no effect on these amenity spaces shadow/sunlight. Receptor 14 onwards results in a change to the shadow/sunlight due to the new proposed development. The results range from a change factor of 0.93-0.98, all comfortably within guidelines. St Laurence playing pitch has a change factor of 0.80, we note that the change in shadow/sunlight happens between the hours of 08.00 – 12.00.
- Scenario 2: existing amenity spaces sunlight/shadow assessed on June 21st
All existing amenity areas were calculated to have 2.00 hours or more of sunlight at 50% area before and after the introduction of the new development. The results range from a change factor of 0.87-1.00
- Scenario 3: existing amenity spaces sunlight/shadow assessed on December 21st
All the existing amenity areas were calculated to have less than 2.00 hours of sunlight at 50% area before and after the introduction of the new development. The results range from a change factor of 0.94-1.00. St Laurence playing pitch has a change factor result of 0.69. The change in shadow/sunlight can be seen from the hours of 09.00 to 14.00.

Compliance statement: We conclude based on the March 21st data as directed by the BRE guide that the existing neighbouring amenity spaces all receive at least two hours of sunlight on the 21st March and its loss of sunlight is not greater than 0.8 (20% reduction) times its former size. Therefore, the results are in compliance with the BRE guide " Site Layout and Planning for Daylight and Sunlight".

2.6 Mitigation measures/actions

No mitigation measures anticipated.

3 Geographical overview

3.1 Project overview

Image 3.1, the (google maps) site map below shows the approximate location of the site with proposed development approximately outlined in the area site map.



Image 3.1 Approximate proposed development site

4 Approach and methodology

4.1 General approach

This report covers

- the sunlight reception/shadow status of new proposed amenity spaces within the new development.
- the effects of the new development on the sunlight reception/shadow status of existing neighbouring amenity spaces/gardens.

4.2 The nature and effects of day light and sun light

When assessing the effects of proposed building projects on the potential to cause issues relating to light, it is important to recognise the distinction between daylight and sunlight. Daylight is the combination of all direct and indirect sunlight during the daytime, whereas sunlight (for the purposes of this report) comprises only the direct elements of sunlight. For example, on a cloudy or overcast day diffused daylight still shines through windows, even when sunlight is absent. Any development within a built-up area has the potential to alter the amount of daylight and direct sun received by nearby residential properties.

Care should be taken when designing new buildings in built-up areas, especially when the proposed development is relatively tall or situated to the south of existing buildings, because in the northern hemisphere the majority of the sunlight comes from the south. In Ireland (and other northern hemisphere countries) south-facing facades will in general, receive the most sunlight, while the north facing facades will receive sunlight on only a handful of occasions, specifically early mornings and late evenings during the summer months. It is therefore important to ensure that buildings to the south of any development do not cause over shadowing to existing dwellings and therefore reduce their capacity to receive sunlight.

4.3 Assessment criteria

National Policy/building regulations.

The government does not have an adopted policy on daylight, sunlight and the effects of overshadowing, and does not have targets, criteria or relevant planning guidance in the way it has for other environmental impacts such as noise, landscape or air quality. However, there are a number of guidance documents which are relevant when considering daylight, sunlight and overshadowing in dwellings:

- The Building Research Establishment (BRE) report, "Site layout planning for daylight and sunlight – a guide to good practice (referred to as the BRE Report).
Although not Government guidance, this report is commonly referenced as the main guide in Ireland/UK in determining the minimum standards of daylight and sunlight and for determining the impact of a development.
- British European Standard BS EN17037/EN17037 Day Lighting for buildings.
BS EN17037/EN17037 contains guidance on the minimum recommended levels of interior day lighting and introduces some of the calculation procedures used in the BRE Report.
- CIBSE guide 10 Day light and lighting for buildings.
CIBSE lighting guide 10 like BS EN17037/EN17037 contains guidance on the minimum recommended levels of interior day lighting and introduces recommended day light levels for general buildings.

4.4 The BRE Report – "Site Layout and Planning for Daylight and Sunlight – A Guide to Good Practice"

The BRE report contains guidance on how to design developments, whilst minimising the impacts on existing buildings from overshadowing and reduced levels of daylight and sunlight. The advice provided within the guide is not mandatory and should not be seen as an instrument of planning policy, its aim is to help rather than constrain the designer. Although it gives numerical guidance values, these should be interpreted with flexibility since natural lighting is one of many factors in site layout design. The guidance should be applied appropriately to developments to assist in gaining the best development possible without adverse impacts.

As well as advice, the report contains a methodology to assess levels of daylight, sunlight and over shadowing and contains criteria to determine the potential impacts of a new development on surrounding buildings. The table below summarises the criteria used to assess the overshadowing/sunlight reception in amenity spaces.

In this report we have separated the new and existing amenity spaces as they are assessed slightly differently. BRE sunlight/shadow assessment criteria. Table 4.1 Sunlight reception requirements for amenity spaces within the new proposed development.

Type	Criteria	Acceptable parameters
Overshadowing new amenity spaces	Amenity space prevented from receiving any sunlight on March 21 st	At least 50% of the amenity space should receive at least two hours of sunlight

Table 4.1

Table 4.2 Effects on Sunlight reception requirements for existing neighbouring amenity spaces.

Type	Criteria	Acceptable parameters
Overshadowing existing amenity spaces	Amenity space prevented from receiving any sunlight on March 21 st	Any loss of sunlight should not be greater than 0.8 times its former size.

Table 4.2

4.5 Overshadowing effects measured

The minimum sunlight requirement in this report measured in sunlight time 2 hours (120 minutes) multiplied by 50% area m² or the minimum requirement = 120 (min) * 0.5a (m²) = [] min·m².

4.6 Existing amenity spaces

The overshadowing/sun light assessment is the effects the proposed development has on existing open amenity spaces. In basic terms, based on the BRE report states that at least 50% of the amenity space should receive at least two hours of sunlight on the 21st March and any loss of sunlight should not be greater than 0.8 times its former size. The overshadowing/sun light assessment is executed in using a 3D model of the project and adjoining buildings with the results illustrated in tabular format showing the hourly status of the shadow/sunlight fraction in the relevant amenity spaces. The impacts of vegetation: It is important to note that according to the BRE Report, calculations do not normally take into account vegetation. The exception is when evergreen vegetation exists that forms a continuous barrier and would be permanent throughout the seasons.

5 Receptor selection and calculation results - Amenity spaces within the proposed development

5.1 Analysis structure

part 1: communal & public amenity spaces sunlight/shadow assessment

part 2: private amenity spaces (balconies and gardens on ground floor level) sunlight/shadow assessment

5.2 Part 1) Selected amenity spaces – Communal & public spaces

Image 5.1 below indicates the different amenity areas that have been selected and analysed on the basis that the shadow casted from the proposed development may effect the amenity areas given its geographical location in relation to the development.



Image 5.1 proposed amenity spaces

Receptor	Description	Area m ²
1	communal open amenity space	1122
2	public open amenity space	4378
3	communal open amenity space	1122

5.3 Assessment approach

The tables below represent the one hourly sunlight/shadow status of the respective new amenity spaces provided within the new development on March 21st to compare against the BRE guidelines for compliance. See appendix B for the predicted shadow/sunlight imaging per hour for the 21st March. Note: The calculation results for March 21st have been given the following colour code guide depending on its level of resulting compliance.

Results colour coding hierarchy for March 21st compliance targets

On target
 Within 5%
 Within 10%
 Outside 10%

5.4 Communal & public amenity spaces calculation results

Scenario 1: proposed amenity spaces sunlight/shadow assessed on March 21st

1 Communal amenity space						2 Public amenity space						3 Communal amenity space					
1,122 m ²						4,378 m ²						1,122 m ²					
March 21st						March 21st						March 21st					
Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area	Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area	Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area
24 Hr	% / %	% / %	min	m ²	min*m ²	24 Hr	% / %	% / %	min	m ²	min*m ²	24 Hr	% / %	% / %	min	m ²	min*m ²
6.00	100%	0%	60	0	0	6.00	100%	0%	60	0	0	6.00	100%	0%	60	0	0
7.00	93%	7%	60	79	4,712	7.00	93%	7%	60	306	18,388	7.00	95%	5%	60	56	3,366
8.00	32%	68%	60	763	45,778	8.00	69%	31%	60	1357	81,431	8.00	39%	61%	60	684	41,065
9.00	0%	100%	60	1122	67,320	9.00	45%	55%	60	2408	144,474	9.00	0%	100%	60	1122	67,320
10.00	0%	100%	60	1122	67,320	10.00	46%	54%	60	2364	141,847	10.00	11%	89%	60	999	59,915
11.00	19%	81%	60	909	54,529	11.00	52%	48%	60	2101	126,086	11.00	26%	74%	60	830	49,817
12.00	44%	56%	60	628	37,699	12.00	60%	40%	60	1751	105,072	12.00	57%	43%	60	482	28,948
13.00	63%	37%	60	415	24,908	13.00	63%	37%	60	1620	97,192	13.00	77%	23%	60	258	15,484
14.00	81%	19%	60	213	12,791	14.00	54%	46%	60	2014	120,833	14.00	85%	15%	60	168	10,098
15.00	100%	0%	60	0	0	15.00	48%	52%	60	2277	136,594	15.00	100%	0%	60	0	0
16.00	100%	0%	60	0	0	16.00	46%	54%	60	2364	141,847	16.00	95%	5%	60	56	3,366
17.00	94%	6%	60	67	4,039	17.00	59%	41%	60	1795	107,699	17.00	100%	0%	60	0	0
18.00	100%	0%	60	0	0	18.00	100%	0%	60	0	0	18.00	100%	0%	60	0	0
19.00	100%	0%	60	0	0	19.00	100%	0%	60	0	0	19.00	100%	0%	60	0	0

Required sun hours @ 50% area	2	Required sun hours @ 50% area	2	Required sun hours @ 50% area	2
Achieved sun hours on @ 50% area	5.00	Achieved sun hours on @ 50% area	4.00	Achieved sun hours on @ 50% area	4.00
Achieved total sun time (hrs)	4.74	Achieved total sun time (hrs)	4.65	Achieved total sun time (hrs)	4.15
Achieved daily sun time * area	319097	Achieved daily sun time * area	1221462	Achieved daily sun time * area	279378

Scenario 2: proposed amenity spaces sunlight/shadow assessed on June 21st

1 Communal amenity space						2 Public amenity space						3 Communal amenity space					
1,122 m ²						4,378 m ²						1,122 m ²					
June 21st						June 21st						June 21st					
Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area	Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area	Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area
24 Hr	% / %	% / %	min	m ²	min*m ²	24 Hr	% / %	% / %	min	m ²	min*m ²	24 Hr	% / %	% / %	min	m ²	min*m ²
6.00	95%	5%	60	56	3,366	6.00	96%	4%	60	175	10,507	6.00	95%	5%	60	56	3,366
7.00	79%	21%	60	236	14,137	7.00	89%	11%	60	482	28,895	7.00	74%	26%	60	292	17,503
8.00	47%	53%	60	595	35,680	8.00	72%	28%	60	1226	73,550	8.00	46%	54%	60	606	36,353
9.00	23%	77%	60	864	51,836	9.00	54%	46%	60	2014	120,833	9.00	9%	91%	60	1021	61,261
10.00	4%	96%	60	1077	64,627	10.00	41%	59%	60	2583	154,981	10.00	5%	95%	60	1066	63,954
11.00	11%	89%	60	999	59,915	11.00	44%	56%	60	2452	147,101	11.00	13%	87%	60	976	58,568
12.00	31%	69%	60	774	46,451	12.00	46%	54%	60	2364	141,847	12.00	36%	64%	60	718	43,085
13.00	45%	55%	60	617	37,026	13.00	46%	54%	60	2364	141,847	13.00	48%	52%	60	583	35,006
14.00	56%	44%	60	494	29,621	14.00	49%	51%	60	2233	133,967	14.00	67%	33%	60	370	22,216
15.00	74%	26%	60	292	17,503	15.00	52%	48%	60	2101	126,086	15.00	74%	26%	60	292	17,503
16.00	73%	27%	60	303	18,176	16.00	53%	47%	60	2058	123,460	16.00	78%	22%	60	247	14,810
17.00	78%	22%	60	247	14,810	17.00	55%	45%	60	1970	118,206	17.00	81%	19%	60	213	12,791
18.00	81%	19%	60	213	12,791	18.00	57%	43%	60	1883	112,952	18.00	81%	19%	60	213	12,791
19.00	76%	24%	60	269	16,157	19.00	57%	43%	60	1883	112,952	19.00	76%	24%	60	269	16,157

Required sun hours @ 50% area	2	Required sun hours @ 50% area	2	Required sun hours @ 50% area	2
Achieved sun hours on @ 50% area	6.00	Achieved sun hours on @ 50% area	5.00	Achieved sun hours on @ 50% area	6.00
Achieved total sun time (hrs)	6.27	Achieved total sun time (hrs)	5.89	Achieved total sun time (hrs)	6.17
Achieved daily sun time * area	422096	Achieved daily sun time * area	1547185	Achieved daily sun time * area	415364

Scenario 3: proposed amenity spaces sunlight/shadow assessed on December 21st

1 Communal amenity space						2 Public amenity space						3 Communal amenity space					
1,122 m ²						4,378 m ²						1,122 m ²					
Dec 21st						Dec 21st						Dec 21st					
Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area	Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area	Time	Shadow	Sunlight	Sun time	Sun area	Sun time.area
24 Hr	% / %	% / %	min	m ²	min*m ²	24 Hr	% / %	% / %	min	m ²	min*m ²	24 Hr	% / %	% / %	min	m ²	min*m ²
6.00	100%	0%	60	0	0	6.00	100%	0%	60	0	0	6.00	100%	0%	60	0	0
7.00	100%	0%	60	0	0	7.00	100%	0%	60	0	0	7.00	100%	0%	60	0	0
8.00	91%	9%	60	101	6,059	8.00	96%	4%	60	175	10,507	8.00	91%	9%	60	101	6,059
9.00	74%	26%	60	292	17,503	9.00	85%	15%	60	657	39,402	9.00	74%	26%	60	292	17,503
10.00	39%	61%	60	684	41,065	10.00	59%	41%	60	1795	107,699	10.00	39%	61%	60	684	41,065
11.00	61%	39%	60	438	26,255	11.00	69%	31%	60	1357	81,431	11.00	61%	39%	60	438	26,255
12.00	65%	35%	60	393	23,562	12.00	66%	34%	60	1489	89,311	12.00	65%	35%	60	393	23,562
13.00	67%	33%	60	370	22,216	13.00	65%	35%	60	1532	91,938	13.00	67%	33%	60	370	22,216
14.00	72%	28%	60	314	18,850	14.00	60%	40%	60	1751	105,072	14.00	72%	28%	60	314	18,850
15.00	77%	23%	60	258	15,484	15.00	52%	48%	60	2101	126,086	15.00	77%	23%	60	258	15,484
16.00	82%	18%	60	202	12,118	16.00	68%	32%	60	1401	84,058	16.00	82%	18%	60	202	12,118
17.00	91%	9%	60	101	6,059	17.00	96%	4%	60	175	10,507	17.00	91%	9%	60	101	6,059
18.00	100%	0%	60	0	0	18.00	100%	0%	60	0	0	18.00	100%	0%	60	0	0
19.00	100%	0%	60	0	0	19.00	100%	0%	60	0	0	19.00	100%	0%	60	0	0

Required sun hours @ 50% area	2	Required sun hours @ 50% area	2	Required sun hours @ 50% area	2
Achieved sun hours on @ 50% area	1.22	Achieved sun hours on @ 50% area	0.96	Achieved sun hours on @ 50% area	1.22
Achieved total sun time (hrs)	2.81	Achieved total sun time (hrs)	2.84	Achieved total sun time (hrs)	2.81
Achieved daily sun time * area	189169	Achieved daily sun time * area	746011	Achieved daily sun time * area	189169



5.5 Communal and public amenity spaces shadow/sunlight assessment conclusion

Based on the BRE guidelines at least 50% of the amenity space should receive at least two hours of sunlight on the 21st March.

- Scenario 1: proposed amenity spaces sunlight/shadow assessed on March 21st
Amenity area outlined in '1' was calculated to have 5.00 hours of sunlight at 50% area
Amenity area outlined in '2' was calculated to have 4.00 hours of sunlight at 50% area
Amenity area outlined in '3' was calculated to have 4.00 hours of sunlight at 50% area.
- Scenario 2: proposed amenity spaces sunlight/shadow assessed on June 21st
Amenity area outlined in '1' was calculated to have 6.00 hours of sunlight at 50% area
Amenity area outlined in '2' was calculated to have 5.00 hours of sunlight at 50% area
Amenity area outlined in '3' was calculated to have 6.00 hours of sunlight at 50% area
- Scenario 3: proposed amenity spaces sunlight/shadow assessed on December 21st
Amenity area outlined in '1' was calculated to have 1.22 hours of sunlight at 50% area
Amenity area outlined in '2' was calculated to have 0.96 hours of sunlight at 50% area
Amenity area outlined in '3' was calculated to have 1.22 hours of sunlight at 50% area

Compliance statement : We conclude based on the March 21st data as directed by the BRE guide that the new amenity spaces receive in excess of 2 hours sunlight on at least 50% of the area on March 21st and therefore the results are in compliance with the BRE guide " Site Layout and Planning for Daylight and Sunlight".

5.6 Part 2) Selected amenity spaces - Private spaces

Table 5.1 below indicates all the selected private amenity areas on ground floor level.

Apartment	Description	Area m2	Apartment	Description	Area m2
AG01	Private garden	27.6	BG05	Private garden	31.0
AG02	Private garden	27.6	BG06	Private garden	31.0
AG03	Private garden	27.6	CG01	Private garden	27.6
AG04	Private garden	27.6	CG02	Private garden	27.6
AG05	Private balcony	5.0	CG03	Private garden	27.6
AG06	Private balcony	5.0	CG04	Private garden	27.6
AG07	Private balcony	10.5	CG05	Private garden	27.6
AG08	Private balcony	10.5	CG06	Private balcony	7.9
AG09	Private balcony	5.0	CG07	Private balcony	7.9
AG10	Private balcony	5.0	DG01	Private garden	41.5
AG11	Private balcony	7.9	DG02	Private garden	31.0
AG12	Private balcony	7.9	DG03	Private garden	31.0
BG01	Private garden	41.5	DG04	Private garden	41.5
BG02	Private garden	31.0	DG05	Private garden	31.0
BG03	Private garden	31.0	DG06	Private garden	31.0
BG04	Private garden	41.5			

Table 5.2 proposed private amenity spaces on the ground floor.

5.7 Private amenity spaces calculation results

As there are a large number of amenity spaces assessed in this report we have shown the full calculation result tables in appendix A. Tables below summarises the relevant sunlight and shadow calculation data.

Column 1: The amenity space ID

Column 2: The amenity space area

Column 3: The status sun hours * amenity space area (hr*m2)

Column 4: The status total sun hours

Column 5: The existing status sun hours on 50% of the area

Column 6: Comment

Scenario 1: Summary table of results – March 21st

Area ID	m ²	SunHr*m ²	March 21 st		COMMENT
			SunHr	SunHr 50%	
AG01	27.6	5915.2	3.572	2.00	BRE guideline achieved
AG02	27.6	6542.9	3.951	2.00	BRE guideline achieved
AG03	27.6	6542.9	3.951	2.00	BRE guideline achieved
AG04	27.6	6840.9	4.131	2.00	BRE guideline achieved
AG05	5	1218.0	4.06	3.00	BRE guideline achieved
AG06	5	1032.0	3.44	2.00	BRE guideline achieved
AG07	10.5	1877.4	2.98	2.00	BRE guideline achieved
AG08	10.5	1877.4	2.98	2.00	BRE guideline achieved
AG09	5	1035.0	3.45	2.00	BRE guideline achieved
AG10	5	1035.0	3.45	2.00	BRE guideline achieved
AG11	7.9	2536.8	5.352	5.00	BRE guideline achieved
AG12	7.9	2536.8	5.352	5.00	BRE guideline achieved
BG01	41.5	8595.5	3.452	3.00	BRE guideline achieved
BG02	31	7871.5	4.232	4.00	BRE guideline achieved
BG03	31	9508.3	5.112	5.00	BRE guideline achieved
BG04	41.5	12853.4	5.162	5.00	BRE guideline achieved
BG05	31	9601.3	5.162	5.00	BRE guideline achieved
BG06	31	10066.3	5.412	5.00	BRE guideline achieved
CG01	27.6	6097.4	3.682	2.00	BRE guideline achieved
CG02	27.6	6362.4	3.842	3.00	BRE guideline achieved
CG03	27.6	6445.2	3.892	3.00	BRE guideline achieved
CG04	27.6	6494.8	3.922	3.00	BRE guideline achieved
CG05	27.6	4388.4	2.65	2.00	BRE guideline achieved
CG06	7.9	2408.9	5.082	6.00	BRE guideline achieved
CG07	7.9	2408.9	5.082	6.00	BRE guideline achieved
DG01	41.5	13052.6	5.242	5.00	BRE guideline achieved
DG02	31	9824.5	5.282	5.00	BRE guideline achieved
DG03	31	8076.1	4.342	4.00	BRE guideline achieved
DG04	41.5	14920.1	5.992	6.00	BRE guideline achieved
DG05	31	11442.7	6.152	6.00	BRE guideline achieved
DG06	31	11944.9	6.422	7.00	BRE guideline achieved

Table 5.3: Scenario 1: Summary table of results – March 21st

Scenario 2: Summary table of results – June 21st

Area ID	m ²	SunHr*m ²	June 21st	
			SunHr	SunHr 50%
AG01	27.6	8859.6	5.35	5.00
AG02	27.6	8892.7	5.37	5.00
AG03	27.6	9058.3	5.47	5.00
AG04	27.6	9058.3	5.47	5.00
AG05	5	1803.0	6.01	6.00
AG06	5	1617.0	5.39	5.00
AG07	10.5	3263.4	5.18	4.00
AG08	10.5	3263.4	5.18	4.00
AG09	5	1554.0	5.18	4.00
AG10	5	1554.0	5.18	4.00
AG11	7.9	3488.6	7.36	7.00
AG12	7.9	3488.6	7.36	7.00
BG01	41.5	20766.6	8.34	10.00
BG02	31	13894.2	7.47	8.00
BG03	31	10397.4	5.59	6.00
BG04	41.5	17629.2	7.08	7.00
BG05	31	14340.6	7.71	8.00
BG06	31	14340.6	7.71	8.00
CG01	27.6	9422.6	5.69	5.00
CG02	27.6	9505.4	5.74	5.00
CG03	27.6	9505.4	5.74	5.00
CG04	27.6	9505.4	5.74	5.00
CG05	27.6	8213.8	4.96	4.00
CG06	7.9	3848.9	8.12	9.00
CG07	7.9	3848.9	8.12	9.00
DG01	41.5	19347.3	7.77	8.00
DG02	31	14675.4	7.89	8.00
DG03	31	12666.6	6.81	7.00
DG04	41.5	20169.0	8.1	8.00
DG05	31	15066.0	8.1	8.00
DG06	31	15066.0	8.1	8.00

Table 5.4: Scenario 2: Summary table of results–June 21stScenario 3: Summary table of results – December 21st

Area ID	m ²	SunHr*m ²	Dec 21st	
			SunHr	SunHr 50%
AG01	27.6	3278.9	1.98	1.40
AG02	27.6	3278.9	1.98	1.40
AG03	27.6	3278.9	1.98	1.40
AG04	27.6	3278.9	1.98	1.40
AG05	5	756.0	2.52	1.34
AG06	5	756.0	2.52	1.34
AG07	10.5	1612.8	2.56	1.22
AG08	10.5	1612.8	2.56	1.22
AG09	5	768.0	2.56	1.22
AG10	5	768.0	2.56	1.22
AG11	7.9	1474.1	3.11	2.00
AG12	7.9	1474.1	3.11	2.00
BG01	41.5	4482.0	1.8	1.40
BG02	31	3348.0	1.8	1.40
BG03	31	3348.0	1.8	1.40
BG04	41.5	4482.0	1.8	1.40
BG05	31	3348.0	1.8	1.40
BG06	31	3348.0	1.8	1.40
CG01	27.6	3427.9	2.07	1.60
CG02	27.6	3427.9	2.07	1.60
CG03	27.6	3427.9	2.07	1.60
CG04	27.6	3427.9	2.07	1.60
CG05	27.6	4057.2	2.45	1.60
CG06	7.9	1701.7	3.59	3.00
CG07	7.9	1701.7	3.59	3.00
DG01	41.5	6648.3	2.67	1.80
DG02	31	4966.2	2.67	1.80
DG03	31	4966.2	2.67	1.80
DG04	41.5	6648.3	2.67	1.80
DG05	31	4966.2	2.67	1.80
DG06	31	4966.2	2.67	1.80

Table 5.5: Scenario 3: Summary table of results–Dec 21st

5.8 Private amenity spaces shadow/sunlight assessment conclusion

Private amenity areas for the proposed development on the ground floor level are a mix of private garden area or balcony area. Based on the BRE guidelines at least 50% of the amenity space should receive at least two hours of sunlight on the 21st March.

- Scenario 1: proposed amenity spaces sunlight/shadow assessed on March 21st
All private amenity areas were calculated to have 2.00 hours or more of sunlight at 50% area.
- Scenario 2: proposed amenity spaces sunlight/shadow assessed on June 21st
All private amenity areas were calculated to have in excess of 2.00 hours of sunlight at 50% area.
- Scenario 3: proposed amenity spaces sunlight/shadow assessed on December 21st
Some private amenity areas were calculated to have 2.00 hours or more of sunlight at 50% area. Some private amenity areas were calculated to have less than 2.00 hours at 50% area.

Compliance statement: We conclude based on the March 21st data as directed by the BRE guide that the new proposed balcony's / private gardens all receive 2 hours or more of sunlight at 50% of the area for March 21st and therefore the results are in compliance with the BRE guide " Site Layout and Planning for Daylight and Sunlight".

6 Receptor selection and calculation results – Existing neighbouring amenity spaces

6.1 Selected existing amenity spaces

Image 6.1 below indicates the neighbouring amenity areas that have been selected and analysed on the basis that the shadow casted from the new development may effect these amenity areas given its geographical location in relation to the proposed development.



Image 6.1

Receptor	Description	Receptor	Description
4	9A Wyattville park back garden	17	33 Wyattville park back garden
5	10A Wyattville park back garden	18	35 Wyattville park back garden
6	11 Wyattville park back garden	19	37 Wyattville park back garden
7	13 Wyattville park back garden	20	39 Wyattville park back garden
8	15 Wyattville park back garden	21	41 Wyattville park back garden
9	17 Wyattville park back garden	22	43 Wyattville park back garden
10	19 Wyattville park back garden	23	45 Wyattville park back garden
11	21 Wyattville park back garden	24	47 Wyattville park back garden
12	23 Wyattville park back garden	25	47A Wyattville park back garden
13	25 Wyattville park back garden	26	49 Wyattville park back garden
14	27 Wyattville park back garden	27	103A Wyattville park back garden
15	29 Wyattville park back garden	28	102 Wyattville park back garden
16	31 Wyattville park back garden	29	St Laurence playing pitch

6.2 Analysis structure

The following three different analysis were conducted

- Scenario 1: neighbouring amenity spaces sunlight/shadow assessed on March 21st
- Scenario 2: neighbouring amenity spaces sunlight/shadow assessed on June 21st
- Scenario 3: neighbouring amenity spaces sunlight/shadow assessed on December 21st

6.3 Assessment approach

The left hand side calculation tables below represent the one hourly sunlight/shadow status of the respective existing amenity space before the introduction of the new development and the right hand side tables below represent the one hourly sunlight/shadow status of the respective existing amenity space after the introduction of the new development. See appendix B for the predicted sunlight/shadow imaging per hour. Note: The calculation results have been given the following colour code guide depending on its level of resulting compliance.

Results colour coding hierarchy for March 21st compliance target



6.4 Existing amenity spaces calculation results

As there are a large number of amenity spaces assessed in this report we have only shown the result tables of 2 no. amenity spaces (20&29) together with an overall summary table covering the main BRE compliance criteria of all the selected amenity spaces. The result tables of remainder amenity spaces can be found in appendix A.

20 39 Wyattville park back garden 180 m²

EXISTING STATUS						March 21st
Time	Shadow	Sunlight	Sun time	Sun area	time * area	
24 Hr	% / %		min	m ²	min*m ²	
6.00	100%	0%	60	0	0	
7.00	100%	0%	60	0	0	
8.00	100%	0%	60	0	0	
9.00	71%	29%	60	52	3,132	
10.00	44%	56%	60	101	6,048	
11.00	25%	75%	60	135	8,100	
12.00	34%	66%	60	119	7,128	
13.00	10%	90%	60	162	9,720	
14.00	10%	90%	60	162	9,720	
15.00	25%	75%	60	135	8,100	
16.00	26%	74%	60	133	7,992	
17.00	55%	45%	60	81	4,860	
18.00	100%	0%	60	0	0	
19.00	100%	0%	60	0	0	

Required sun hours @ 50% area (hr)	2
Achieved sun hours on (hrs) @ 50% area	7.00
Achieved total sun time (hrs)	6
Achieved daily sun time * area	64,800

NEW STATUS						March 21st	change
Time	Shadow	Sunlight	Sun time	Sun area	time * area	time * area	
24 Hr	% / %		min	m ²	min*m ²	min*m ²	min*m ²
6.00	100%	0%	60	0	0	0	0
7.00	100%	0%	60	0	0	0	0
8.00	100%	0%	60	0	0	0	0
9.00	71%	29%	60	52	3,132	0	0
10.00	44%	56%	60	101	6,048	0	0
11.00	25%	75%	60	135	8,100	0	0
12.00	34%	66%	60	119	7,128	0	0
13.00	10%	90%	60	162	9,720	0	0
14.00	10%	90%	60	162	9,720	0	0
15.00	25%	75%	60	135	8,100	0	0
16.00	26%	74%	60	133	7,992	0	0
17.00	96%	4%	60	7	432	-4,428	-4,428
18.00	100%	0%	60	0	0	0	0
19.00	100%	0%	60	0	0	0	0

Required sun hours @ 50% area (hr)	2	
Achieved sun hours on (hrs) @ 50% area	7.00	
Achieved total sun time (hrs)	5.59	0.94
Achieved daily sun time * area	60372	0.94

29 St Laurence playing pitch 5,000 m²

EXISTING STATUS						March 21st
Time	Shadow	Sunlight	Sun time	Sun area	time * area	
24 Hr	% / %		min	m ²	min*m ²	
6.00	100%	0%	60	0	0	
7.00	100%	0%	60	0	0	
8.00	2%	98%	60	4900	294,000	
9.00	0%	100%	60	5000	300,000	
10.00	0%	100%	60	5000	300,000	
11.00	0%	100%	60	5000	300,000	
12.00	0%	100%	60	5000	300,000	
13.00	0%	100%	60	5000	300,000	
14.00	0%	100%	60	5000	300,000	
15.00	0%	100%	60	5000	300,000	
16.00	3%	97%	60	4850	291,000	
17.00	5%	95%	60	4750	285,000	
18.00	100%	0%	60	0	0	
19.00	100%	0%	60	0	0	

Required sun hours @ 50% area (hr)	2
Achieved sun hours on (hrs) @ 50% area	10.00
Achieved total sun time (hrs)	9.9
Achieved daily sun time * area	2970000

NEW STATUS						March 21st	change
Time	Shadow	Sunlight	Sun time	Sun area	time * area	time * area	time * area
24 Hr	% / %		min	m ²	min*m ²	min*m ²	min*m ²
6.00	100%	0%	60	0	0	0	0
7.00	100%	0%	60	0	0	0	0
8.00	84%	16%	60	800	48,000	-246,000	-246,000
9.00	48%	52%	60	2600	156,000	-144,000	-144,000
10.00	36%	64%	60	3200	192,000	-108,000	-108,000
11.00	25%	75%	60	3750	225,000	-75,000	-75,000
12.00	9%	91%	60	4550	273,000	-27,000	-27,000
13.00	0%	100%	60	5000	300,000	0	0
14.00	0%	100%	60	5000	300,000	0	0
15.00	0%	100%	60	5000	300,000	0	0
16.00	3%	97%	60	4850	291,000	0	0
17.00	5%	95%	60	4750	285,000	0	0
18.00	100%	0%	60	0	0	0	0
19.00	100%	0%	60	0	0	0	0

Required sun hours @ 50% area (hr)	2	
Achieved sun hours on (hrs) @ 50% area	9.00	
Achieved total sun time (hrs)	7.9	0.80
Achieved daily sun time * area	2370000	0.80



6.5 Scenario 1: Summary table of results – March 21st

The calculation results of the one hourly sunlight & shadow status of each dwelling before and after the introduction of the new development are all detailed in Appendix A however to limit the listing of the large number of calculation tables in this report we have summarised the relevant sunlight & shadow calculation data in the table 6.2 below.

Column 1: The amenity space ID

Column 2: The amenity space area

Column 3: The existing status sun hours * amenity space area (hr*m2)

Column 4: The existing status total sun hours

Column 5: The existing status sun hours on 50% of the area

Column 6: The new status sun hours * amenity space area (hr*m2)

Column 7: The new status total sun hours

Column 8: The new status sun hours on 50% of the area

Column 9: The change factor

Column 10: Comment.

Area ID	m ²	EXISTING STATUS			NEW STATUS			Change	COMMENT
		SunHr*m ²	SunHr	SunHr 50%	SunHr*m ²	SunHr	SunHr 50%		
4	180	66852	6.19	7.00	66852	6.19	7.00	1.00	no change in shadow/sunlight
5	180	54216	5.02	5.00	54216	5.02	5.00	1.00	no change in shadow/sunlight
6	180	64800	6.00	7.00	64800	6.00	7.00	1.00	no change in shadow/sunlight
7	180	55728	5.16	5.00	55728	5.16	5.00	1.00	no change in shadow/sunlight
8	180	64800	6.00	7.00	64800	6.00	7.00	1.00	no change in shadow/sunlight
9	180	55728	5.16	5.00	55728	5.16	5.00	1.00	no change in shadow/sunlight
10	180	64800	6.00	7.00	64800	6.00	7.00	1.00	no change in shadow/sunlight
11	180	55728	5.16	5.00	55728	5.16	5.00	1.00	no change in shadow/sunlight
12	180	64800	6.00	7.00	64800	6.00	7.00	1.00	no change in shadow/sunlight
13	180	55728	5.16	5.00	55728	5.16	5.00	1.00	no change in shadow/sunlight
14	180	64800	6.00	7.00	61236	5.67	7.00	0.95	change factor well within acceptable guidelines
15	180	56160	5.20	5.00	55296	5.12	5.00	0.98	change factor well within acceptable guidelines
16	180	64800	6.00	7.00	60588	5.61	7.00	0.94	change factor well within acceptable guidelines
17	180	56160	5.20	5.00	55188	5.11	5.00	0.98	change factor well within acceptable guidelines
18	180	64800	6.00	7.00	60480	5.60	7.00	0.93	change factor well within acceptable guidelines
19	180	56484	5.23	5.00	55404	5.13	5.00	0.98	change factor well within acceptable guidelines
20	180	64800	6.00	7.00	60372	5.59	7.00	0.93	change factor well within acceptable guidelines
21	180	47088	4.36	4.00	46116	4.27	4.00	0.98	change factor well within acceptable guidelines
22	180	64800	6.00	7.00	59940	5.55	7.00	0.93	change factor well within acceptable guidelines
23	180	47412	4.39	4.00	46116	4.27	4.00	0.97	change factor well within acceptable guidelines
24	180	64800	6.00	7.00	59940	5.55	7.00	0.93	change factor well within acceptable guidelines
25	180	64800	6.00	7.00	59940	5.55	7.00	0.93	change factor well within acceptable guidelines
26	180	57024	5.28	7.00	54756	5.07	7.00	0.96	change factor well within acceptable guidelines
27	180	63072	5.84	8.00	60804	5.63	8.00	0.96	change factor well within acceptable guidelines
28	180	52272	4.84	6.00	52272	4.84	6.00	1.00	no change in shadow/sunlight
29	5000	2970000	9.90	10.00	2370000	7.90	9.00	0.80	change factor well within acceptable guidelines

Table 6.2: Scenario 1: Summary table of results – March 21st

6.6 Scenario 2: Summary table of results – June 21st

Area ID	m ²	EXISTING STATUS			NEW STATUS			Change
		SunHr*m ²	SunHr	SunHr 50%	SunHr*m ²	SunHr	SunHr 50%	
4	180	111240	10.3	11.00	111240	10.3	11.00	1.00
5	180	111780	10.35	12.00	108000	10	11.00	0.97
6	180	111780	10.35	12.00	106164	9.83	11.00	0.95
7	180	111780	10.35	12.00	106164	9.83	11.00	0.95
8	180	111564	10.33	11.00	106164	9.83	11.00	0.95
9	180	112968	10.46	12.00	107352	9.94	11.00	0.95
10	180	112968	10.46	12.00	107244	9.93	11.00	0.95
11	180	112968	10.46	12.00	103572	9.59	10.00	0.92
12	180	113508	10.51	12.00	104760	9.7	11.00	0.92
13	180	114048	10.56	12.00	109404	10.13	11.00	0.96
14	180	114048	10.56	12.00	111672	10.34	11.00	0.98
15	180	114048	10.56	12.00	107784	9.98	11.00	0.95
16	180	115020	10.65	12.00	105408	9.76	11.00	0.92
17	180	117396	10.87	13.00	108864	10.08	12.00	0.93
18	180	117396	10.87	13.00	111456	10.32	12.00	0.95
19	180	109728	10.16	12.00	104436	9.67	11.00	0.95
20	180	108216	10.02	11.00	96984	8.98	9.00	0.90
21	180	107028	9.91	11.00	93420	8.65	9.00	0.87
22	180	111240	10.3	11.00	97092	8.99	9.00	0.87
23	180	111240	10.3	11.00	105516	9.77	10.00	0.95
24	180	117612	10.89	12.00	116856	10.82	12.00	0.99
25	180	127764	11.83	13.00	127764	11.83	13.00	1.00
26	180	112752	10.44	11.00	112752	10.44	11.00	1.00
27	180	113832	10.54	12.00	113832	10.54	12.00	1.00
28	180	109836	10.17	12.00	109836	10.17	12.00	1.00
29	5000	3960000	13.2	13.00	3750000	12.5	13.00	0.95

Table 6.3: Scenario 2: Summary table of results – June 21st

6.7 Scenario 3: Summary table of results – December 21st

Area ID	m ²	EXISTING STATUS			NEW STATUS			Change
		SunHr*m ²	SunHr	SunHr 50%	SunHr*m ²	SunHr	SunHr 50%	
4	180	11340	1.05	0.40	11340	1.05	0.40	1.00
5	180	10260	0.95	0.60	10260	0.95	0.60	1.00
6	180	10260	0.95	0.60	10260	0.95	0.60	1.00
7	180	9828	0.91	0.30	9828	0.91	0.30	1.00
8	180	9828	0.91	0.30	9828	0.91	0.30	1.00
9	180	10584	0.98	0.40	10584	0.98	0.40	1.00
10	180	10908	1.01	0.40	10908	1.01	0.40	1.00
11	180	11772	1.09	0.44	11772	1.09	0.44	1.00
12	180	12744	1.18	0.46	12744	1.18	0.46	1.00
13	180	12744	1.18	0.46	12744	1.18	0.46	1.00
14	180	12744	1.18	0.46	12204	1.13	0.46	0.96
15	180	11664	1.08	0.40	11232	1.04	0.40	0.96
16	180	11664	1.08	0.40	11232	1.04	0.40	0.96
17	180	12528	1.16	0.44	11772	1.09	0.44	0.94
18	180	12528	1.16	0.44	11772	1.09	0.44	0.94
19	180	11556	1.07	0.80	11016	1.02	0.80	0.95
20	180	11556	1.07	0.80	11016	1.02	0.80	0.95
21	180	11988	1.11	0.84	11448	1.06	0.84	0.96
22	180	11988	1.11	0.84	11556	1.07	0.84	0.96
23	180	12420	1.15	0.60	11880	1.1	0.60	0.96
24	180	14364	1.33	0.70	13824	1.28	0.70	0.96
25	180	14364	1.33	0.70	13932	1.29	0.70	0.97
26	180	14472	1.34	0.44	13932	1.29	0.44	0.96
27	180	14364	1.33	0.50	13824	1.28	0.50	0.96
28	180	13392	1.24	0.42	12960	1.2	0.42	0.97
29	5000	1722000	5.74	6.00	1185000	3.95	4.00	0.69

Table 6.4: Scenario 3: Summary table of results – December 21st

6.8 Existing neighbouring amenity spaces shadow/sunlight assessment conclusion

Based on the BRE guidelines at least 50% of the amenity space should receive at least two hours of sunlight on the 21st March and that any loss of sunlight should not be greater than 0.8 (20% reduction) times its former size.

- Scenario 1: existing amenity spaces sunlight/shadow assessed on March 21st
All existing amenity areas were calculated to have 2.00 hours or more of sunlight at 50% area before and after the introduction of the new development. Receptor 4 to 13 have a change factor of 1.00 meaning the new proposed build has no effect on these amenity spaces shadow/sunlight. Receptor 14 onwards results in a change to the shadow/sunlight due to the new proposed development. The results range from a change factor of 0.93-0.98, all comfortably within guidelines. St Laurence playing pitch has a change factor of 0.80, we note that the change in shadow/sunlight happens between the hours of 08.00 – 12.00.
- Scenario 2: existing amenity spaces sunlight/shadow assessed on June 21st
All existing amenity areas were calculated to have 2.00 hours or more of sunlight at 50% area before and after the introduction of the new development. The results range from a change factor of 0.87-1.00
- Scenario 3: existing amenity spaces sunlight/shadow assessed on December 21st
All the existing amenity areas were calculated to have less than 2.00 hours of sunlight at 50% area before and after the introduction of the new development. The results range from a change factor of 0.94-1.00. St Laurence playing pitch has a change factor result of 0.69. The change in shadow/sunlight can be seen from the hours of 09.00 to 14.00.

Compliance statement: We conclude based on the March 21st data as directed by the BRE guide that the existing neighbouring amenity spaces all receive at least two hours of sunlight on the 21st March and its loss of sunlight is not greater than 0.8 (20% reduction) times its former size. Therefore, the results are in compliance with the BRE guide “Site Layout and Planning for Daylight and Sunlight”.