Daylight and Sunlight Analysis

Proposed Development at Blackpitts, Dublin 8

Prepared by Model Works Ltd

Date: 7th July 2025

MODEL WORKS

Executive Summary

Model Works was commissioned to carry out a Daylight, Sunlight, and Overshadowing assessment on a proposed Large-Scale Residential Development delivering 217 student bed spaces, within one block. The block ranges in height up to 6 storeys with a basement below.

The report assesses the proposal with respect to daylight and sunlight provision to the proposed development. Also assessed is the potential impact to daylight and sunlight of the proposal on neighbouring properties. The assessment was carried out in accordance with the BRE Site Layout Planning for Daylight and Sunlight: A guide to good practice, 3rd edition 2022, which incorporate the target values as set out in BS EN 17037 National Annex.

Proposed Development

Daylight

89% of all the rooms achieve compliance with BRE target for daylight.

Sunlight

Due to site constraints the main south facing elevation, which would have the greatest potential for sunlight, does not have any windows and one of the long street elevations faces predominantly north. This reduces the overall percentage of rooms meeting the BRE criteria for sunlight to 49%. However, if we exclude the predominantly north facing windows, 92% of the rooms which have the potential to receive 1.5 hrs of sunlight, meet the BRE threshold.

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Sunlight to Amenity Areas

The scheme includes two amenity spaces, totalling circa 628sqm: a courtyard to the rear and a roof top terrace. Both areas achieve compliance with the BRE Guidelines, the roof terrace performs particularly well with 99% of its area meeting the threshold. The ground floor courtyard is surrounded on three side by the proposed building, but the setbacks at the upper floors increase the sun reaching the ground and ensure its compliance (53%). The designers have also positioned the basketball hoop and seating areas to the north of the space, thereby maximising the use of the area with the greatest sunlight.

Neighbouring Impact

Daylight

Four neighbouring buildings were assessed for daylight, two had a Minor impact, one a Moderate and Greenville Place experienced a Major impact. However, the baseline condition currently experienced by the surrounding buildings is very favourable with respect to daylight and sunlight, as the site is currently occupied by a two-story warehouse of only circa 9m in height and a 16m deep surface carpark to the front. Therefore, to reflect a more typical urban environment, we carried out a supplementary assessment where we placed a mirrored of the Greenville Place apartments on the proposal site, equidistant from the boundary. In this scenario 92% of the assessed windows of Grenville Place would meet the BRE criteria, resulting in an impact assessment of Minor.

Sunlight

A total of 77 windows were assessed for sunlight with 75% meeting the Annual Probable Sunlight Hours target and 92% meeting the Winter Probable Sunlight Hours target.

Amenity Areas

Three neighbouring amenity areas required a detailed assessment and all three easily meet the BRE criteria for sunlight on the ground.

Contents

1.0 Introduction

Peachbeach ULC intend to apply for permission for a development at Blackpitts, Dublin 8.

Planning permission is sought for a Large-Scale Residential Development delivering 217 student bed spaces (209no. single rooms and 4no. twin rooms, 213no. rooms in total), within one block. The block ranges in height up to 6 storeys with a basement below. All associated internal and external amenity space, including the provision of restaurant/café, on street carparking, cycle parking, landscaping, bin stores, service provision and all other associated site development works.

Model Works was commissioned to carry out a Daylight, Sunlight, and Overshadowing assessment on the proposed scheme. The report has been compiled by Barry Murphy, Managing Director of Model Works, he holds a B Eng (hons) in Mechanical Engineering, is a member of Institute of Engineers Ireland and has 20 years' experience in the industry.

Specialist 3D software (Waldram Tools for Revit, Version 7) was used to analyse the proposal based on the 3D models, survey information and design details provided to Model Works by the project architects and other qualified professionals on the design team.

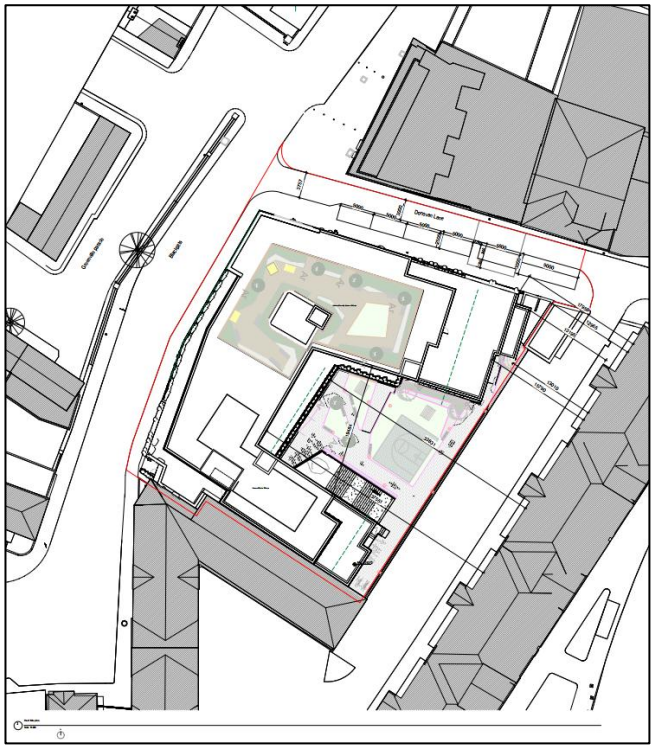


Figure 1 Site Plan

2.0 Standards and Guides Used in the Assessment

The following standards and guides will be used and referenced throughout the report.

- Building Research Establishment - BRE Site Layout Planning for Daylight and Sunlight: A guide to good practice, 3rd edition 2022 (**BRE Guide**)
- British Standard BS EN 17037:2018 – Daylight in Buildings. (**BS EN 17037**)
- Irish Standard EN 17037:2018 – Daylight in Buildings. (**EN 17037**)
- Sustainable Urban Housing: Design Standards for New Apartments (2023). These are guidelines issued under section 28 of the Planning and Development Act 2000. (**Sustainable Urban Housing)**
- Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024) **(Sustainable Residential Development)**
- Urban Development and Building Heights: Guidelines for Planning Authorities (2018). These are guidelines issued under section 28 of the 2000 Planning and Development Act 2000. **(Urban Development and Building Heights)**
- Dublin City Development Plan 2022-2028, (**Dublin City Development Plan**)

2.1. BRE Guide 2022

The BRE (Building Research Establishment) Guide to Daylight and Sunlight was first published in 1991 and has become the primary reference document for local authorities in Ireland and the UK for the assessment of Daylight and Sunlight. The 2022 edition is the third and most recent edition of the guide.

The BRE Guide's summary states:

"This guide gives advice on site layout planning to achieve good sunlighting and daylighting, both within buildings and in the open spaces between them. It is intended to be used in conjunction with the interior daylight recommendations for new buildings in the British Standard Daylight in buildings, BS EN 17037. It contains guidance on site layout to provide good natural lighting within a new development; safeguarding of daylight and sunlight within existing buildings nearby; and the protection of daylighting of adjoining land for future development."[1]

It also notes that it should be interpreted with a degree of flexibility, depending on the specifics of the development being assessed.

"The guide is intended for building designers and their clients, consultants, and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values."[2]

The introduction also states that:
"The guidance here is intended for use in the United Kingdom and in the Republic of Ireland, though recommendations in the Irish Standard IS EN 17037 may vary from those in BS EN 17037."[3]

The BRE Guide will be the primary reference document used in this report.

[1] BRE Guide: Summary
[2] BRE Guide: 1.6
[3] BRE Guide: 1.7

2.2. BS EN 17037:2018+A1:2021 – Daylight in Buildings.

In 2018, a new European wide standard for daylight was introduced, being EN 17037. In the UK, this standard was published as BS EN 17037 and importantly, it contains a national annex. The national annex in BS EN 17037 (2018) attempts to align the guidance and expectations of the new European standard with the now superseded BS 8206-2. It gave daylight illuminance recommendations of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens, which were to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours.

The standard explains it reasoning behind the annex with:
"The UK committee supports the recommendations for daylight in buildings given in BS EN 17037:2018; however, it is the opinion of the UK committee that the recommendations for daylight provision in a space (see Clause A.2) may not be achievable for some buildings, particularly dwellings. The UK committee believes 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. This National Annex therefore provides the UK committee's guidance on minimum daylight provision in all UK dwellings."[4]

2.3. EN 17037:2018+A1:2021 – Daylight in Buildings.

Prior to 2018, Ireland had no standard for daylight. In 2018, the National Standards Authority of Ireland adopted EN 17037 to directly become IS EN 17037 and importantly it was not amended to include an equivalent to the BS National Annex. The Irish standard sets a target daylight illuminance of 300 lux which should be achieved across at least half of the reference plane in a daylit space for at least half of the daylight hours and an illuminance of 100 lux which should also be achieved across 95% of the reference plane for at least half of the daylight hours. These targets apply to all room types, regardless of use; kitchen, living, bedroom, office, commercial are all assessed to the same standard.

2.4. Sustainable Urban Housing: Design Standards for New Apartments July 2023

This document was prepared by the Department of Housing, Local Government and Heritage, and provides guidance to planners in relation to the built environment including Daylight and Sunlight.

"Planning authorities should avail of appropriate expert advice where necessary and have regard to quantitative performance approaches to daylight provision outlined in guides like A New European Standard for Daylighting in Buildings IS EN17037:2018, UK National Annex BS EN17037:2019 and the associated BRE Guide 209 2022 Edition (June 2022), or any relevant future standards or guidance specific to the Irish context, when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision."[5]

And

"Where an applicant cannot fully meet all of the requirements of the daylight provisions above, this must be clearly identified and a rationale for any alternative, compensatory design solutions must be set out, which planning authorities should apply their discretion in accepting taking account of its assessment of specifics. This may arise due to design constraints associated with the site or location and the balancing of that assessment against the desirability of achieving wider planning objectives. Such objectives might include securing comprehensive urban regeneration and or an effective urban design and streetscape solution."

[4] BS EN 17037: NA1

[5] Sustainable Urban Housing: 6.6 & 6.7

2.5. Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)

These guidelines set national planning policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements.

In relation to daylight provision, it states:

"In cases where a technical assessment of daylight performance is considered by the planning authority to be necessary regard should be had to quantitative performance approaches to daylight provision outlined in guides like A New European Standard for Daylighting in Buildings IS EN17037:2018, UK National Annex BS EN17037:2019 and the associated BRE Guide 209 2022 Edition (June 2022), or any relevant future standards or guidance specific to the Irish context."[6]

and

"In drawing conclusions in relation to daylight performance, planning authorities must weigh up the overall quality of the design and layout of the scheme and the measures proposed to maximise daylight provision, against the location of the site and the general presumption in favour of increased scales of urban residential development. Poor performance may arise due to design constraints associated with the site or location and there is a need to balance that assessment against the desirability of achieving wider planning objectives. Such objectives might include securing comprehensive urban regeneration and or an effective urban design and streetscape solution."

2.6. Urban Development and Building Heights: Guidelines for Planning Authorities (2018 version)

This document is intended to set out national planning policy guidelines on building heights in relation to urban areas.

"Appropriate and reasonable regard should be taken of quantitative performance approaches to daylight provision outlined in guides like the Building Research Establishment's 'Site Layout Planning for Daylight and Sunlight' (2nd edition) or BS 8206-2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting'."[7] (Note, this version of the BRE guideline has been superseded by the 2022 edition)

2.7. Dublin City Development Plan 2022-2028

The Dublin City Development Plan 2022-2028 is a plan which sets out how the city will develop to meet the needs of all residents, workers, and visitors. It covers many aspects of how the city should develop over life of the plan and includes Development Standards and how they should be monitored and implemented.

Section 3.0 of Appendix 16 provides guidance on daylight in buildings and acknowledges that there is a lack of clarity in Ireland over the standards and guidance documents that are applicable to daylight and sunlight assessments. This is evidenced by the different targets for daylight in buildings between BS EN 17037 and IS EN 17037 detailed above. In addressing this issue, the plan states in relation to IS EN 17037:

"It offers only a single target for new buildings (there are no space by space targets – e.g. a kitchen would have the same target as a warehouse or office). It does not offer guidance on how new developments will impact on surrounding existing environments. These limitations make it unsuitable for use in planning policy or during planning applications. BR 209 must still be used for this purpose."[8]

[6] Sustainable Residential Development 5.3.7

[7] Urban Development and Building Heights

[8] Dublin City Development Plan: Appendix, 3.4

While previous versions of guides allowed for a representative sample of rooms to be assessed, the Dublin City Development plan is explicit in that all rooms must be assessed.

"When analysing the performance of a proposed development, it is expected that all rooms with an expectation for daylight are assessed. Assessing only a sample of rooms is not permitted"[9]

2.8. Summary of Standards and Guides

IS EN 17037 and BS EN 17037 provides different criteria for the assessment of daylight provision, however both Sustainable Urban Housing: Design Standards for New Apartments (2023), and Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024), explicitly state that planning authorities should have regard to the UK National Annex in BS EN 17037. Therefore, having reviewed all the applicable standards and guidelines it is Model Works professional opinion that the assessment for daylight, sunlight and overshadowing be carried out in accordance with the BRE Guidelines (2022) which incorporate the target values as set out in BS EN 17037 National Annex.

2.9. Impact Assessment

Appendix H of the BRE Guide provides guidance on the classification of environmental impact assessment. It recommends that where a new development affects a number of existing buildings or open spaces, the clearest approach is usually to assess the impact on each one separately. It is also clearer to assess skylight and sunlight impacts separately.

Impact	Description
Negligible	• loss of skylight or sunlight fully meets the BRE guidelines • Where the loss of light is well within the guidelines • only a small number of windows or limited area of open space lose light (within the guidelines)
Minor Adverse	Where loss of light is only just within the guidelines, and: • a larger number of windows or open space area are affected Where the loss of skylight or sunlight does not meet the guidelines, and: • 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 • there are particular reasons why an alternative, less stringent, guideline should be applied, for example an overhang above the window or a window standing unusually close to the boundary.
Major Adverse	• 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 • 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	• 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.

Note: when buildings are assessed to fall between Minor and Major, they are categorised Moderate impact.

[9] Dublin City Development Plan: Appendix, 5.3

3.0 Lighting in Buildings

Understanding Direct and Diffuse Daylight

Daylight is generally taken to be the totality of visible radiation originating from the sky, and when visible, the sun, during the hours of daytime. The source of all daylight is in fact the sun. Scattering of sunlight in the atmosphere by air, water vapour, dust, and so on gives the sky the appearance of a self-luminous hemispherical source of light. Sunlight is commonly referred to as direct light since it appears to originate from a small source and can be highly luminous, casting sharp shadows. The sky, however, is an extended source of illumination that casts only soft shadows, and so skylight is commonly referred to as diffuse light.

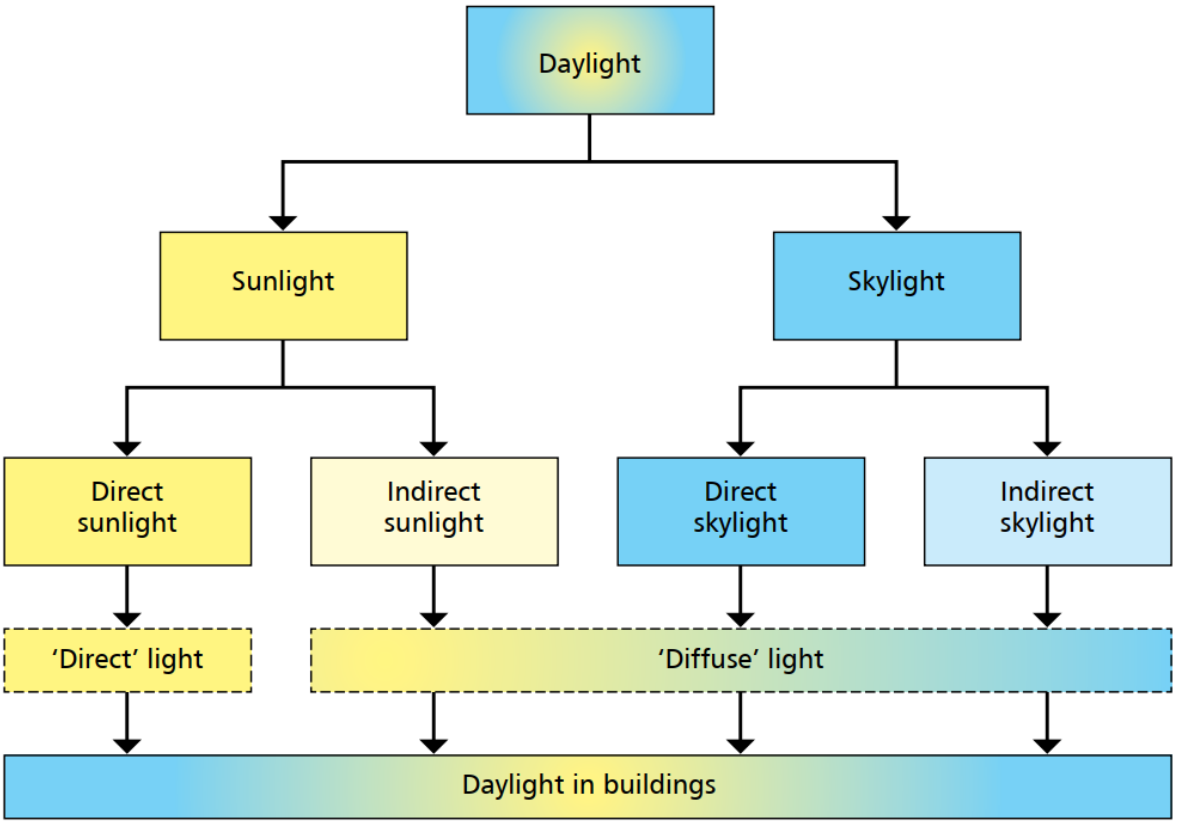


Figure 2 Contributions to Daylight in Buildings

4.0 Glossary

Term	Definition
Lumen	The lumen (symbol: lm) is the unit for luminous flux. It measures the total amount of light emitted by a light source in all directions. For reference, a standard 100-watt incandescent light bulb produces about 1,500-1,700 lumens.
Lux	The lux (symbol: lx), Latin for light, is a unit of illumination: 1 lux is the illuminance produced by 1 candela on a surface perpendicular to the light rays at a distance of 1 meter from the source.
Candela	Brightness is indicated by the candela (symbol: cd). The light intensity indicates how much light is in each piece of a light beam.
Luminance	The amount of light emitted, passing through or reflected from a surface.
Illuminance	A measure of the amount of light falling on a surface, usually measured in lux.
Target illuminance (ET)	Illuminance from daylight that should be achieved for at least half of annual daylight hours across a specified fraction of the reference plane in a daylit space.
Minimum target illuminance (E_{TM})	Illuminance from daylight that should be achieved for at least half of annual daylight hours across 95% of the reference plane in spaces with vertical and/or inclined daylight apertures
Daylight, natural light	Combined skylight and sunlight.
Climate Based Daylight Modelling (CBDM)	Climate-based daylight modelling (CBDM) is the predicted luminous levels within a space using sun and sky conditions that are derived from standard meteorological datasets. CBDM delivers predictions of absolute quantities (e.g. illuminance) that are dependent both on the building location (i.e. geographically-specific climate data is used) and the building orientation (i.e. the illumination effect of the sun and non-overcast sky conditions are included), in addition to the building's composition and configuration.
Spatial Daylight Autonomy (sDA)	Spatial Daylight Autonomy (sDA) uses CBDM to assesses whether a space receives sufficient daylight on a work plane during standard operating hours on an annual basis. The target is a percentage of floor area that exceeds a specified illuminance level (e.g. 200 lux) for a specified amount of annual hours (e.g. 50% of daylight hours).
CIE standard overcast sky	A completely overcast sky, such that light received by north facing windows is similar to that received by south facing windows. A Commission Internationale d'Eclairage (CIE) standard overcast sky is darkest at the horizon and brightest at the zenith (vertically overhead).
Annual Probable Sunlight Hours (APSH)	The probable sunlight hours' means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question (based on sunshine probability data).
Winter Probable Sunlight Hours (WPSH)	Winter probable sunlight hours' means the total number of hours between 21 September and 21 March that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question.
Vertical Sky Component (VSC)	The amount of skylight falling on a vertical wall or window can be quantified as the vertical sky component (VSC). The VSC for existing buildings is the illuminance on the outside of a window, divided by the illuminance falling on an unobstructed horizontal plane, under overcast sky conditions. The standard overcast sky is used, and the ratio is usually expressed as a percentage. The maximum value is almost 40% for a completely unobstructed vertical wall.
No Sky Line	The outline on the working plane of the area from which no sky can be seen.

5.0 Daylight and Sunlight Assessment of the Proposed Development

The are three assessments that must be made to determine daylight and sunlight that the dwellings and amenity space of a new development will enjoy:

1. Daylight provision in new development
2. Sunlight provision in new development
3. Sunlight Provision to amenity spaces in new development

5.1. Daylight Provision in New Development

"Daylight can contribute significantly to the lighting needs of any type of building. This means that daylight openings should have appropriate areas to provide sufficient daylight throughout the year."[10]

5.1.1. Assessment Method

This report will use the Illuminance Method to assess daylight provision. This method uses Climate Based Daylight Modelling (CBDM) with specific climatic data for the location of the site to calculate the illuminance from daylight across a grid on the reference plane at hourly, or sub-hourly, intervals for a typical year. The Perez all-weather sky model for Dublin (IRL_Dublin.039690_IWEC.epw) was used for daylight calculations, Dublin being the location closest to the site for which there was a data set available.

Specialist 3D software is used to carry out a Spatial Daylight Autonomy (sDA) assessment which uses CBDM to assesses whether a space receives sufficient daylight on a work plane during standard operating hours on an annual basis. The target is a percentage of the reference plane area that exceeds a specified illuminance level (e.g. 200 lux) for a specified number of annual hours, normally 50% of daylight hours.

"Internal and exterior surfaces and obstructions need to be modelled including appropriate surface reflectances. Fixtures and fittings need not be included. If trees would impact the daylight to the new development, they should be taken into account."[11]

The surface reflectance and glazing transmissibility values used in the calculations are shown in the table below.

Table 1 Reflectance & Transmittance Values

Surface Type	Reflectance
Interior walls	0.7
Ceilings	0.8
Floors	0.3
Exterior walls and obstructions	0.2
Exterior ground	0.2
Glazing	
Transmittance	0.68
Maintenance Factor	0.96

Trees

Trees can have an impact on the daylight received by new developments and must be considered when making the assessment. However, no trees are present close to the proposal and therefore none were included in the assessment.

[10] EN 17037 : 5.1.1

[11] BRE Guide : C22

5.1.2. Assessment Criteria

The assessment will be carried out in line with the guidance in BRE 209 and BS EN17037 National Annex: *"The UK National Annex gives illuminance recommendations of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens. These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours. The recommended levels over 95% of a reference plane need not apply to dwellings in the UK."*[12]

Table 2 Daylight Provision Target Illuminance (BRE/BS EN 17037)

Room Type	Target Illuminance E_T (lx)
Bedroom	100
Living Room	150
Kitchen (or LKD)	200

The reference plane is at a height of 0.85m above the floor and offset from the perimeter of the room by 300mm.[13] This plane is then divided into grid points, at 250mm spacings, at which the lux levels are calculated, the median level is then used for assessment.

- In a room with a corridor, or annex entrance, this space need not be included in the assessment.
- Floor to ceiling cupboards can be excluded from the assessment area, but not kitchen units incorporating worktops.

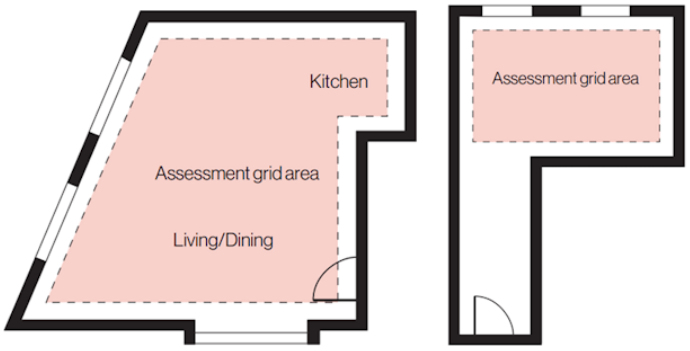


Figure 3 Assessment area examples for various room shapes

5.1.3. Summary of Results

Daylight Provision summary of results based on BRE Guidelines/BS EN 17037: rooms meeting minimum target of 100 lux for bedrooms, 150 lux for living rooms and 200 lux for kitchens or LKD over 50% of the reference plane for at least half of the daylight hours.

The Dublin City Development Plan and the National Planning Framework both share a goal to promote compact growth in urban areas. The NPF states: *"To enable brownfield development, planning policies and standards need to be flexible, focusing on design led and performance-based outcomes… Although sometimes necessary to safeguard against poor quality design, planning standards should be flexibly applied in response to well-designed development proposals that can achieve urban infill and brownfield development objectives in settlements of all sizes".*

[12] BRE Guide: C16

[13] BRE Guide: C28

The student rooms were assessed as bedrooms with a target of 100 Lux and the kitchen/common rooms were assessed as kitchens with a target of 200 Lux over 50% of their area. All 245 habitable rooms were assessed and 89% achieved compliance with the BRE guidelines. This is an excellent result for a higher density scheme on a compact brownfield site.

Table 3 Daylight Provision Results Summary (BRE/BS EN 17037)

Room Type	Habitable Rooms	Rooms Meeting Criteria	Achieved Target (%)
All Rooms	245	218	89%

Refer to **Appendix C** for a full schedule of results.

5.2. Sunlight Exposure in the Proposed Development

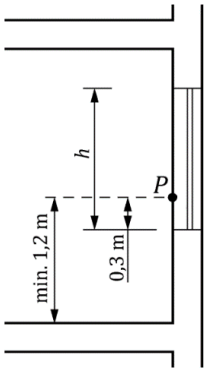
The BRE Guide states:

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

- *at least one main window wall faces within 90° 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."*[14]

5.2.1. Assessment Method

The assessment for **Sunlight Exposure** (SE) should be conducted for each opening of a space for a reference point P located on the inner surface of the aperture. Reference point P is located at the centre of the opening width and a minimum of 1.2m above the floor and 0.3m above the sill of the daylight opening. Where there is multiple opening of a space, it is possible to cumulate the time of sunlight availability if not occurring at the same time.



Trees

There are no trees close to the proposal and therefore none were included in the assessment.

5.2.2. Assessment Criteria

The BRE Guide recommends that a space should receive possible sunlight for a duration of a minimum of 1.5 hours on a selected date between February 1st and March 21st. When applying the recommendation to a hotel, the assessment will be carried out on the hotel rooms to determine if they have an exposure to sunlight of at least 1.5 hours. The normal date used for the assessment is March 21st.

[14] BRE Guide: 3.1.15

Table 4 Sunlight Exposure Recommendations Values

Level of Recommendation for Exposure to Sunlight	Sunlight Exposure
Minium	1.5 hrs
Medium	3.0 hrs
High	4.0 hrs

5.2.3. Summary of Results

The proposed scheme comprises a "U" shaped block, around a central courtyard. The exterior southern elevation abuts one wing of Grenville Place, so that south facing windows on the lower floors are impossible, and the designer have not included windows on the upper floors to avoid the issue of overlooking. Thus, the scheme cannot benefit from the elevation with the greatest potential for sunlight. Instead, the rooms on this wing of the building have their windows facing predominantly north and when combined with the rooms on the other north facing elevation, along Donovan Lane, it represents almost half the rooms (47%). This reduces the number of rooms which have the potential to achieve 1.5hours of sunlight on 21st March, and thus 49% of all the rooms achieve compliance with the BRE criteria. If we exclude the predominantly north facing windows, 92% of the rooms which have the potential to receive 1.5 hrs of sunlight, meet the BRE threshold.

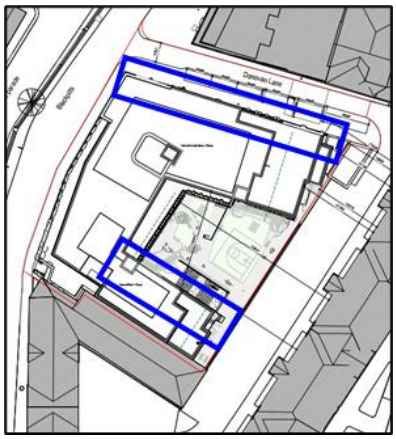


Figure 4 North Facing Rooms

Table 5 Sunlight Exposure Results Summary

Room Type	Habitable Rooms	Rooms Meeting Criteria	Achieved Target (%)
All Rooms	245	120	49%
All Rooms -Nth Facing Excluded	131	120	92%

Refer to **Appendix D** for a full schedule of results.

5.3. Sunlight Provision to Amenity Spaces in the Proposed Development

5.3.1. Assessment Method

BRE Guidelines recommend that for an external garden or amenity area to appear adequately sunlit throughout the year, at least half of the space should receive at least 2 hours of sunlight on 21st March, the equinox.

Trees

In general, trees do not need to be considered when assessing potential loss of light to gardens and amenity spaces.

*"In assessing the impact of buildings on sunlight in gardens …, **trees and shrubs are not normally included in the calculation** unless a dense belt or group of evergreens is specifically planned as a windbreak or for privacy purposes. This is partly because the dappled shade of a tree is more pleasant than the deep shadow of a building (this applies especially to deciduous trees)."*[15] [Emphasis added.]

[15] BRE Guide 2022 : G4.1

5.3.2. Summary of Results

The scheme includes two amenity spaces, totalling circa 628sqm: a courtyard to the rear and a roof top terrace. Both areas achieve compliance with the BRE Guidelines, the roof terrace performs particularly well with 99% of its area meeting the threshold. The ground floor courtyard is surrounded on three side by the proposed building, but the setbacks at the upper floors increase the sun reaching the ground and ensure its compliance (53%). The designers have also positioned the basketball hoop and seating areas to the north of the space, thereby maximising the use of the area with the greatest sunlight.

Table 6 Sunlight Provision to Amenity Spaces Results Summary

Amenity Area	Area m²	Area Receiving 2 Hrs of Sunlight - Proposed %	Meets BRE Criteria
Total Amenity Areas	628	75%	Yes
Individual Areas			
Courtyard	331	53%	Yes
Roof Top Terrace	297	99%	Yes

Refer to **Appendix E** for schedule of results.

6.0 Daylight and Sunlight Impacts on Existing Buildings

There are three assessments that must be made to determine if a proposal adversely affects the daylight and sunlight to existing buildings.

1. Daylight access to existing buildings
2. Sunlight access to existing buildings
3. Sunlight access to neighbouring amenity areas

6.1. Loss of daylight to existing buildings

6.1.1. Assessment Method

The amount of skylight falling on a vertical wall or window can be quantified as the **Vertical Sky Component** (VSC). The VSC for existing buildings is the illuminance on the outside of a window, divided by the illuminance falling on an unobstructed horizontal plane, under overcast sky conditions. The standard Commission Internationale d'Eclairage (CIE) overcast sky is used, and the ratio is usually expressed as a percentage. The maximum value is almost 40% for a completely unobstructed vertical wall and the reference point is in the external plane of the window wall.

"Loss of light to existing windows need not be analysed if the distance of each part of the new development from the existing window is three or more times its height above the centre of the existing window. In these cases the loss of light will be small." [16] Refer to Figure 6 below.

"Measure the angle to the horizontal subtended by the new development at the level of the centre of the lowest window. If this angle is less than 25° for the whole of the development then it is unlikely to have a substantial effect on the diffuse skylight enjoyed by the existing building. If, for any part of the new development, this angle is more than 25°, a more detailed check is needed to find the loss of skylight to the existing building."[17] Refer to Figure 7 *below.*

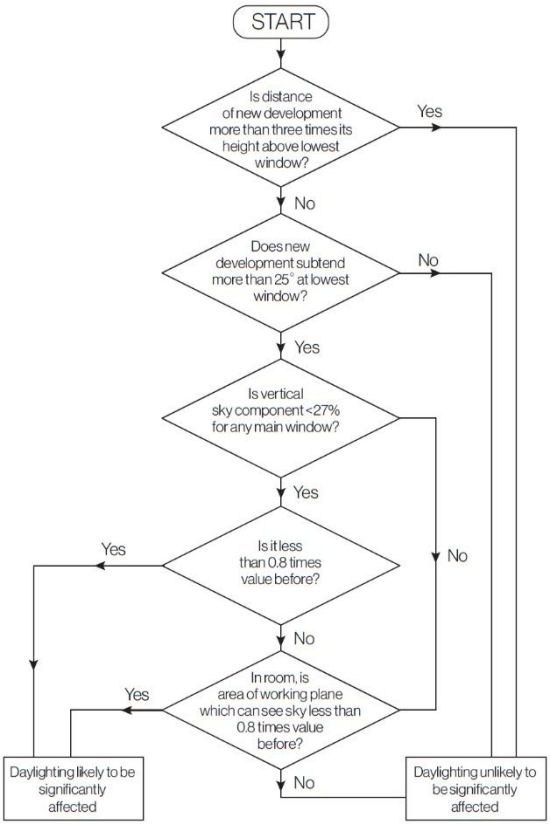


Figure 5 Decision chart: diffuse daylight in existing buildings

[16] BRE Guide: 2.2.4

[17] BRE Guide: 2.2.5

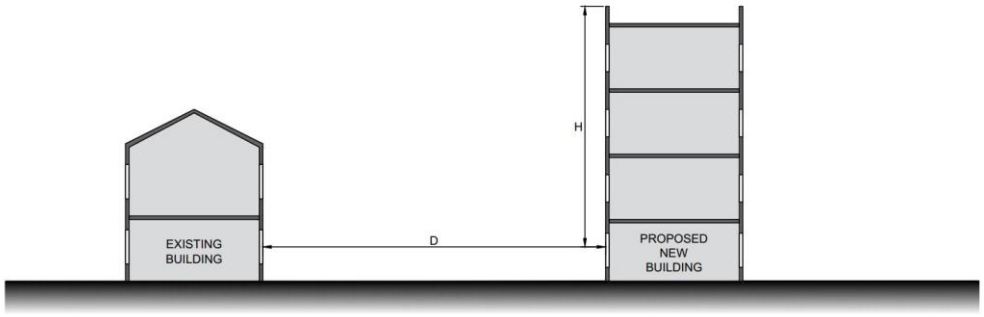


Figure 6 Distance test for Daylight Impact to Existing Buildings (Is D > 3xH)

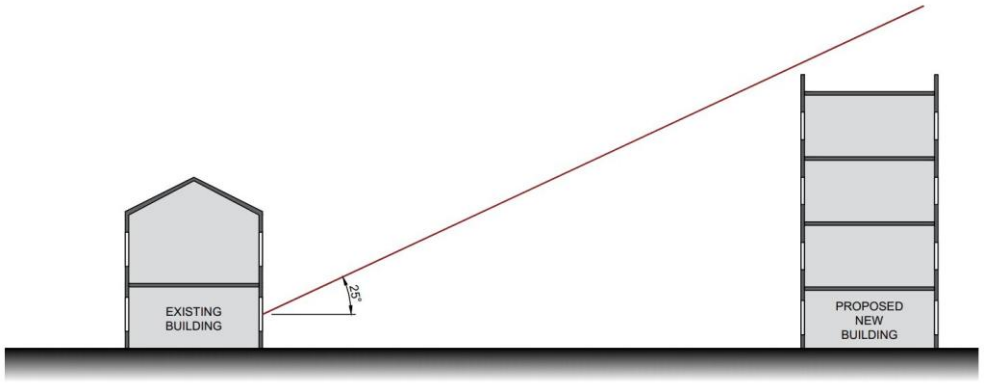


Figure 7 25° Angle test for Daylight Impact to Existing Buildings

Weighted Average VSC

"If there would be a significant loss of light to the main window but the room also has one or more smaller windows, an overall VSC may be derived by weighting each VSC element in accordance with the proportion of the total glazing area represented by its window. For example, a room has a main window of area 2 m2 whose VSC would drop from 24% to 18%, 0.75 times the value before. However, it also has a smaller window, area 1 m2, for which the VSC would be unchanged at 30%. The area weighted VSC 'before' would be (24x2+30)/3 = 26%. 'After' it would be (18x2+30)/3 = 22%, 0.85 times the value 'before'. Thus, loss of VSC to the room as a whole would meet the guideline."[18]

Trees

Trees are not included in the proposal and therefore were excluded from any assessment.

6.1.2. Assessment Criteria

The daylight to an existing building may be adversely affected if:

- the VSC measured at the centre of an existing main window is less than 27%, and less than 0.80 times its former value.
- the area of the working plane, 0.85m high, in a room which can receive direct skylight is reduced to less than 0.80 times its former value.

The line that divides the points on the working plane which can and cannot see the sky is known as the No Sky Line (NSL). The NSL test can only be carried out when the internal room layout is known, which is seldom the case when assessing existing buildings.

6.1.3. Summary of Results

The neighbouring buildings in the vicinity of the proposal were reviewed using the Decision Chart referenced in Figure 5 above to determine which ones required a more detailed assessment for potential loss of daylight.

[18] BRE Guide: 2.2.8

The following buildings were included in the detailed assessment:

- 1 Hammond Street
- St Kevin's Place
- Greenville Parade
- Greenville Place

Table 7 Daylight Provision to Existing Buildings

Buildings	No of Windows Assessed	Meets BRE Criteria	Meets BRE Criteria %	Building Use	Impact Assessment
All Buildings	75	37	49%		
Individual Buildings					
1 Hammond Street	3	1	33%	Residential	Minor
Greenville Parade	10	2	20%	Residential	Moderate
St Kevin's Place	2	1	50%	Residential	Minor
Greenville Place	60	33	55%	Residential	Major

Table 8 Daylight Provision to Existing Buildings - Adjusted to include Typical Urban Block

Buildings	No of Windows Assessed	Meets BRE Criteria	Meets BRE Criteria %	Building Use	Impact Assessment
All Buildings	75	60	80%		
Individual Buildings					
1 Hammond Street	3	1	33%	Residential	Minor
Greenville Parade	10	3	30%	Residential	Moderate
St Kevin's Place	2	1	50%	Residential	Minor
Greenville Place	60	55	92%	Residential	Minor

Despite the urban location, the baseline condition experienced by the surrounding buildings is very favourable with respect to daylight and sunlight, as the site is currently occupied by a two-story warehouse of only circa 9m in height and has a substantial surface carpark to the front. It is an objective of the Dublin City Development Plan 2022-2028 to increase densification, particularly in urban brownfield sites and therefore any proposed development of relative scale and mass on this site would impact on the surrounding buildings.

1 Hammond Street

Three windows required assessment, and two fell below the BRE criteria. All three windows had second windows which serve the same rooms so that the impact of the loss of daylight was reduced; as recommended by the BRE guide a Weighted Average VSC was calculated for these windows. The two windows which failed still achieved a VSC proposed v's existing of 0.7 and 0.71, close to the BRE criteria of 0.8. The impact is assessed as **Minor**.

Greenville Parade

Greenville Parade is located directly in front of the development site, across Blackpitts road. Due to the presence of the carpark at the front on the site, there is circa 37m between these houses and the existing warehouse, giving the houses very favour conditions for daylight and sunlight. Ten windows facing the proposal were assessed and two meet the BRE criteria. However, they narrowly fell below the targets, having an average VSC of 24%, the BRE target being 27%, and VSC proposed v's existing of 0.75, versus a BRE target of 0.8. The impact is assessed as **Moderate**.

The Environmental Protection Agency's *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (2022) is also a helpful reference document when assessing the impact of a

proposal on the receiving environment. In this document in Table 3.4 Description of Effects, it defines Moderate Effect as "*An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.*"

4 & 7 St Kevin's Place
Three windows required assessment. Two window of 7 Kevin's Pl related to an LKD which had two other windows, and all four windows were combined using the Weighted Average calculation. Due to the building's proximity to the proposal, across a narrow street, it failed to meet the BRE criteria.
The other window requiring assessment, from 4 Kevin's St, meets the BRE criteria. The other units in the 7-unit Kevin's Place development are unaffected by the proposal. The impact is assessed as **Minor**.

Greenville Place
This is a multi-unit residential scheme to the rear of the proposal. Sixty windows facing the proposal required a detailed assessment and 55% meet the BRE criteria. The impact is assessed as **Major**.

As mentioned above, the baseline condition experienced by the apartments is very favourable, therefore, to reflect a more typical urban environment, we carried out a supplementary assessment where we placed a mirrored of the Greenville Place apartments on the proposal site, equidistant from the boundary. The BRE Guide refers to this approach in Appendix F5 where is states:

"To ensure that new development matches the height and proportions of existing buildings, the VSC, daylight distribution, and APSH targets for these windows could be set to those for a 'mirror-image' building of the same height and size, an equal distance away on the other side of the boundary."

The summary results of this simulation are include in Table 8 above and Appendix G (page 56) includes the detailed results. In this scenario 92% of the assessed windows of Grenville Place would meet the BRE criteria, resulting in an impact assessment of **Minor**.

Given the urban setting and Dublin City Development Plan's objective to increase densification, the impacts would be considered consistent with the change expected in an urban environment over time.

Refer to **Appendix G** for a full schedule of results.

6.2. Loss of sunlight to existing buildings

6.2.1. Assessment Method

To determine the possible loss of sunlight to existing buildings the **Annual Probable Sunlight Hours** (APSH) is calculated. *"Here 'probable sunlight hours' means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question (based on sunshine probability data). The sunlight reaching a window is quantified as a percentage of this unobstructed annual total."*[19]

It is recommended that all living rooms and conservatory windows of existing dwellings be assessed if the new development is positioned within 90° of due south and it subtends an angle greater than 25° to the horizontal, measured from the centre of the window. The reference point is the centre of the window, or 1.6m above the floor for floor to ceiling windows or patio doors, on the plane of the outside surface of the wall.

Trees

[19] BRE Guide: 3.2.4

Trees are not included in the proposal and therefore were excluded from any assessment.

6.2.2. Assessment Criteria

The sun lighting of an existing dwelling may be adversely affected, if the centre of the window:

- receives less than 25% of annual probable sunlight hours (APSH) and less than 0.8 times its former annual value; or less than 5% of winter probable sunlight hours (WPSH) between 21 September and 21 March and less than 0.80 times its former value during that period;
- and also has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

`

"It is not always necessary to do a full calculation to check sunlight potential. The guideline above is met provided either of the following is true:

- *If the distance of each part of the new development from the existing window is three or more times its height above the centre of the existing window (note: obstructions within 90° of due north of the existing window need not count here).*
- *The window wall faces within 90° of due south and no obstruction, measured in the section perpendicular to the window wall, subtends an angle of more than 25° to the horizontal. Again, obstructions within 90° of due north of the existing window need not be counted.*
- *The window wall faces within 20° of due south and the reference point has a VSC of 27% or more."*[20]

6.2.3. Summary of Results

The following buildings were included in the detailed assessment:

- 1 Hammond Street
- St Kevin's Place
- Greenville Parade
- Greenville Place

A total of 76 windows were assessed for sunlight with 75% meeting the Annual Probable Sunlight Hours target and 92% meeting the Winter Probable Sunlight Hours target. The assessed impacts are Minor or Negligible, with Greenville Place assessed as Moderate. As referenced in the Daylight assessment, we also conducted a supplementary test where we replaced the existing building with a typical urban block to simulate a more typical urban environment. In this scenario, 88% of the windows meet the APSH and 94% meet the WPSH BRE targets.

Table 9 Sunlight Provision to Existing Buildings

Buildings	No. of Windows	Meet APSH Criteria	Meet WPSH Criteria	Meet Both Criteria	Building Use	Impact Assessment
All Buildings	76	75%	92%	73%		
Individual Buildings						
1 Hammond Street	3	33%	33%	33%	Residential	Minor
Greenville Parade	10	100%	100%	100%	Residential	Negligible
St Kevin's Place	3	100%	33%	33%	Residential	Minor
Greenville Place	60	72%	95%	72%	Residential	Moderate

[20] BRE Guide: 3.2.9

Table 10 Sunlight Provision to Existing Buildings - Adjusted to include Typical Urban Block

Buildings	No. of Windows	Meet APSH Criteria	Meet WPSH Criteria	Meet Both Criteria	Building Use	Impact Assessment
All Buildings	76	90%	93%	86%		
Individual Buildings						
1 Hammond Street	3	33%	100%	33%	Residential	Minor
Greenville Parade	10	100%	100%	100%	Residential	Negligible
St Kevin's Place	3	100%	33%	33%	Residential	Minor
Greenville Place	60	88%	95%	88%	Residential	Minor

Refer to **Appendix H** for a full schedule of results.

6.3. Loss of sunlight to existing gardens and amenity areas

6.3.1. Assessment Method

BRE Guidelines recommend that for an existing garden or amenity area to appear adequately sunlit throughout the year, at least half of the space should receive at least 2 hours of sunlight on 21 March, the equinox.

Trees

In general, trees do not need to be considered when assessing potential loss of light to existing gardens and amenity spaces.

*"In assessing the impact of buildings on sunlight in gardens …, **trees and shrubs are not normally included in the calculation** unless a dense belt or group of evergreens is specifically planned as a windbreak or for privacy purposes. This is partly because the dappled shade of a tree is more pleasant than the deep shadow of a building (this applies especially to deciduous trees)."*[21] [Emphasis added.]

6.3.2. Assessment Criteria

"If as a result of a 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."[22]

6.3.3. Summary of Results

Three neighbouring amenity areas required a detailed assessment and all three easily meet the BRE criteria for sunlight on the ground, refer to below.

[21] BRE Guide 2022 : G4.1

[22] BRE Guide 2022 : 3.3.17

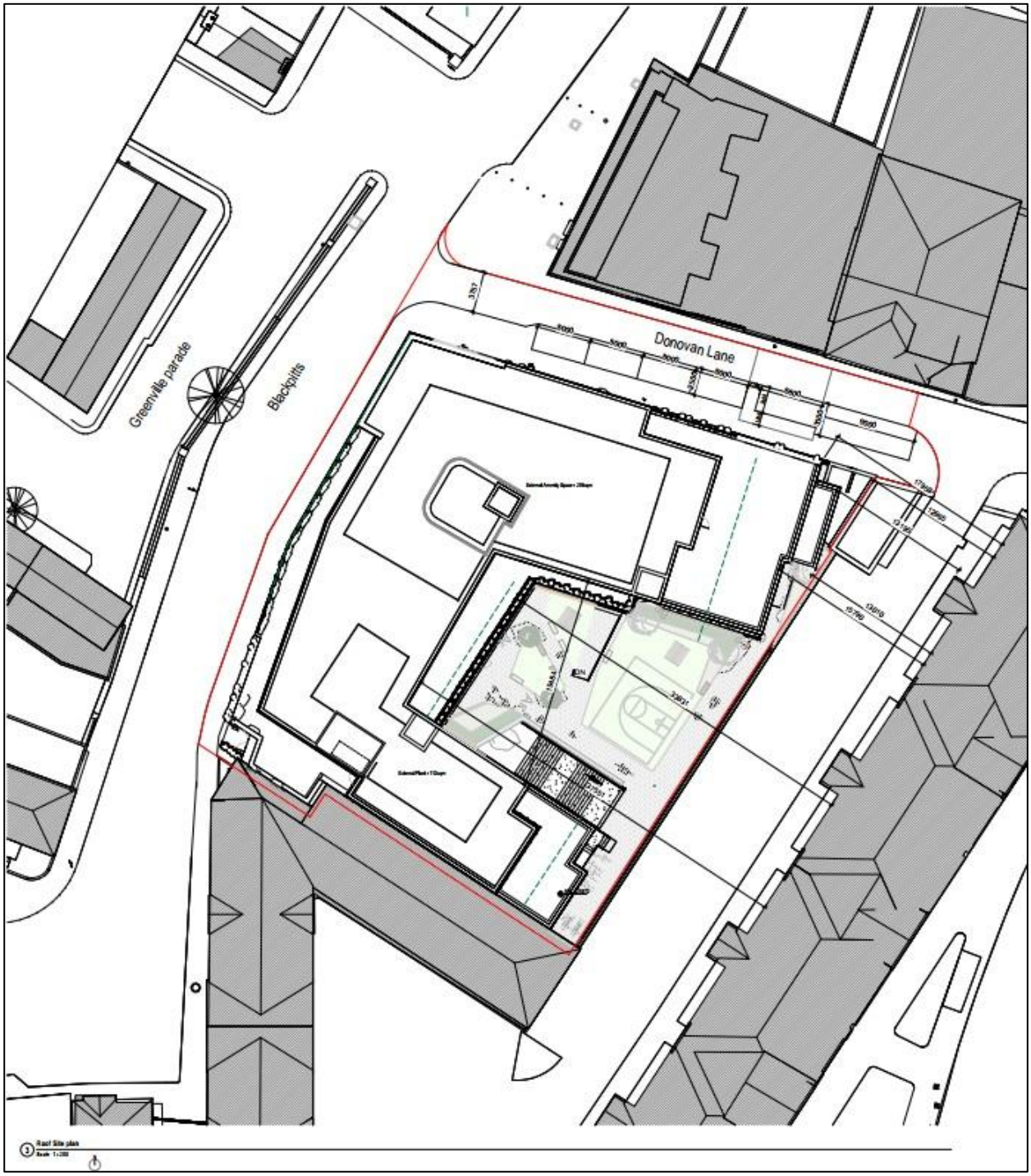
Table 11 Sunlight to Existing Amenity Areas Results Summary.

Amenity Area	Area m²	Area Receiving 2 Hrs of Sunlight - Existing %	Area Receiving 2 Hrs of Sunlight - Proposed %	Existing Vs Proposed	Meets BRE Criteria
01 Hammond St	59	12%	10%	86%	Yes
66A Clarence Mangan Rd	26	0%	0%	0%	Yes
St Kevin's Terrace	72	100%	100%	100%	Yes
Total Areas Meeting Criteria			**Yes**	**3**	**100%**
			No	**0**	**0%**
Total Amenity Areas Tested				**3**	

Refer to **Appendix I** for a full schedule of results.

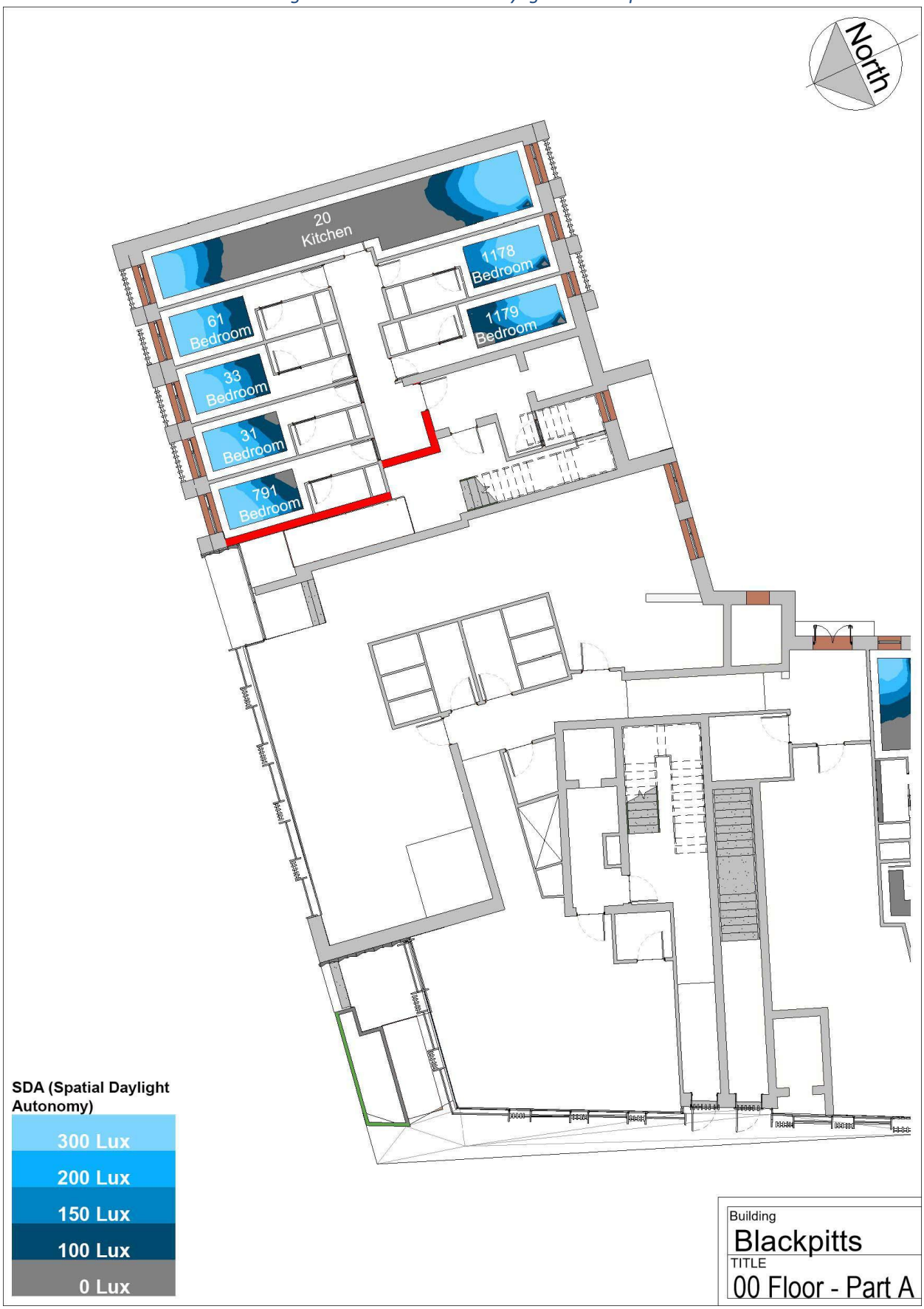
Appendix A – Site Plan

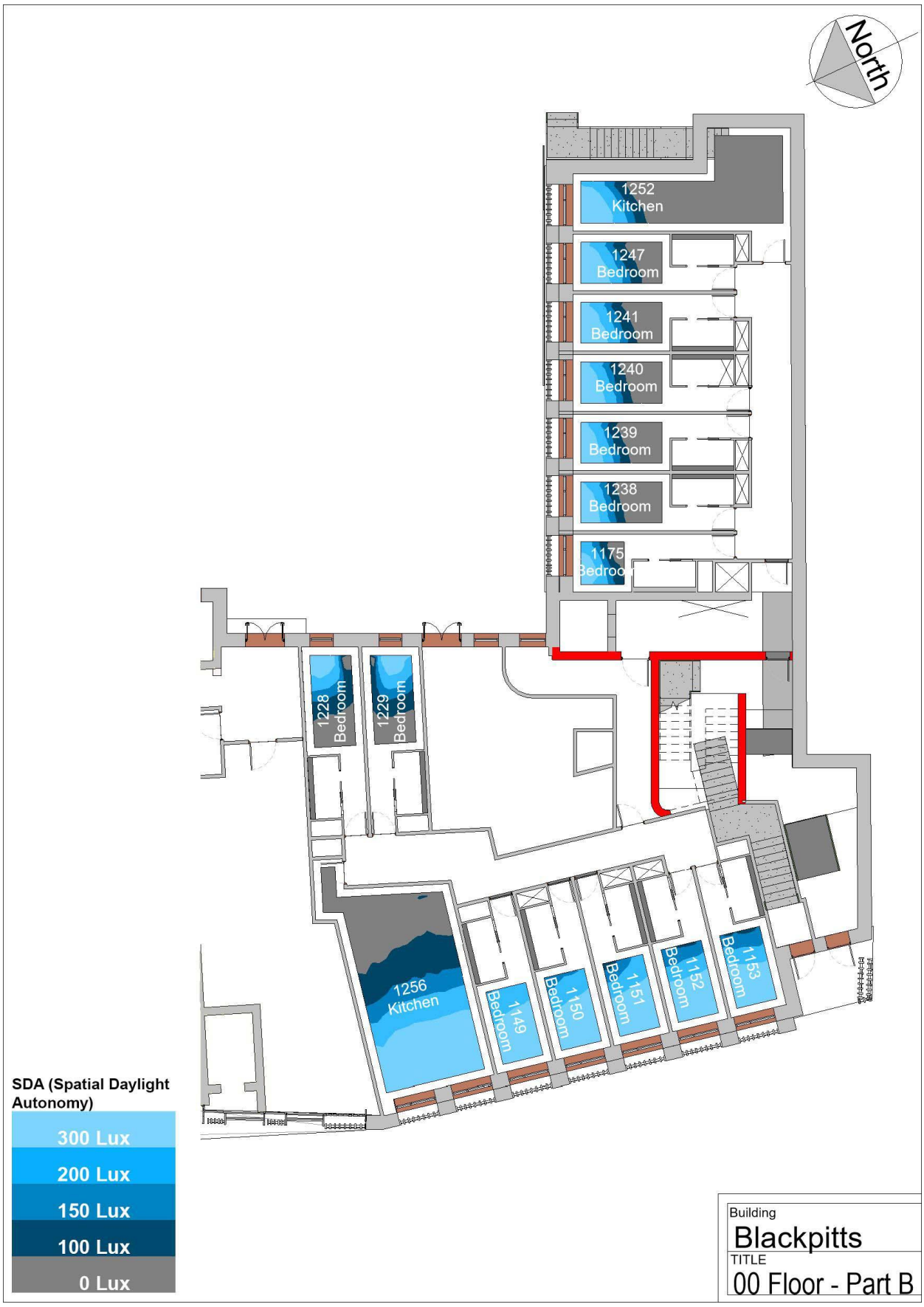
Figure 8 Site Plan



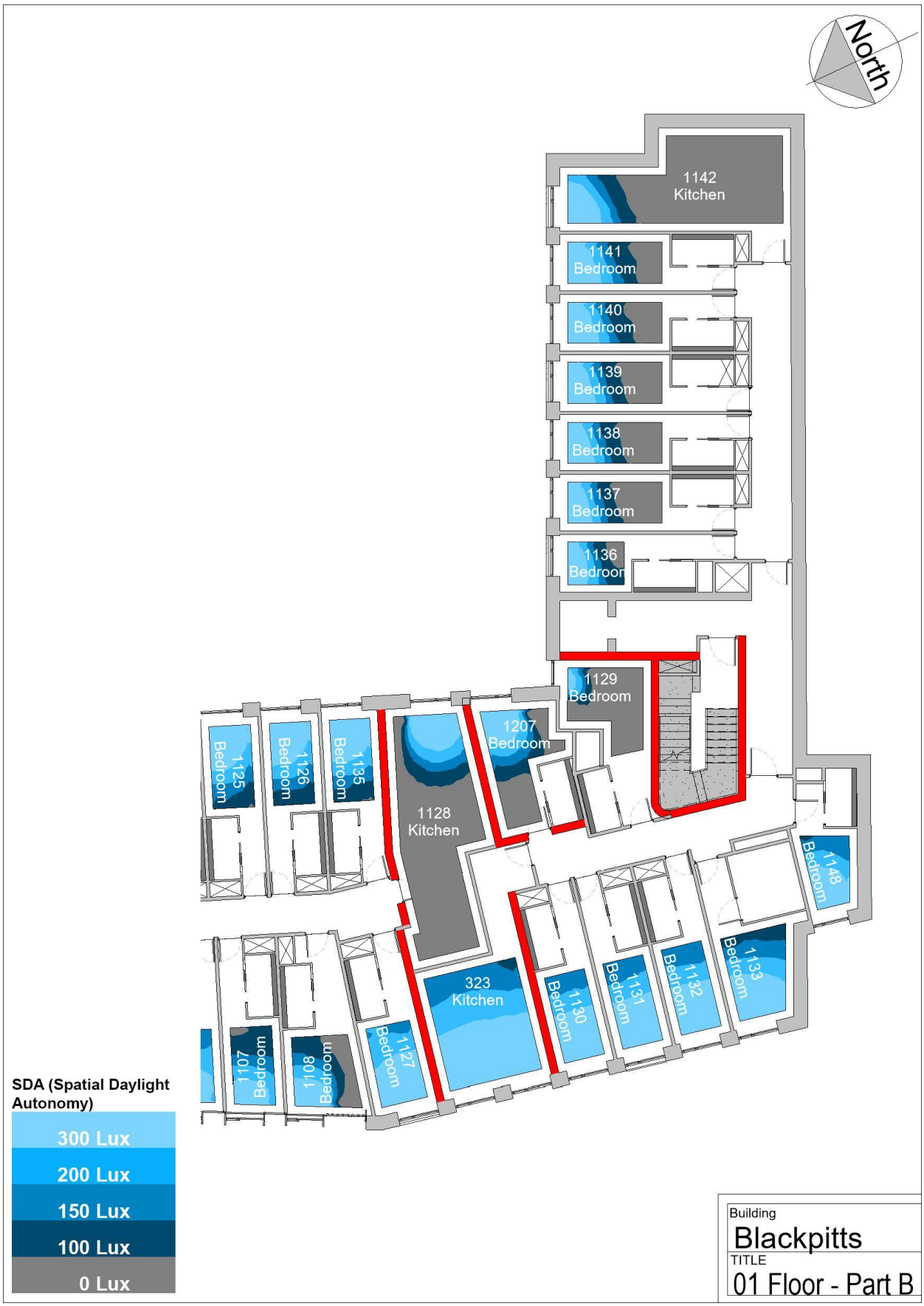
Appendix B –Floor Plans with Room and Window Reference Numbers

Figure 9 Floor Plans with Daylight Heatmaps

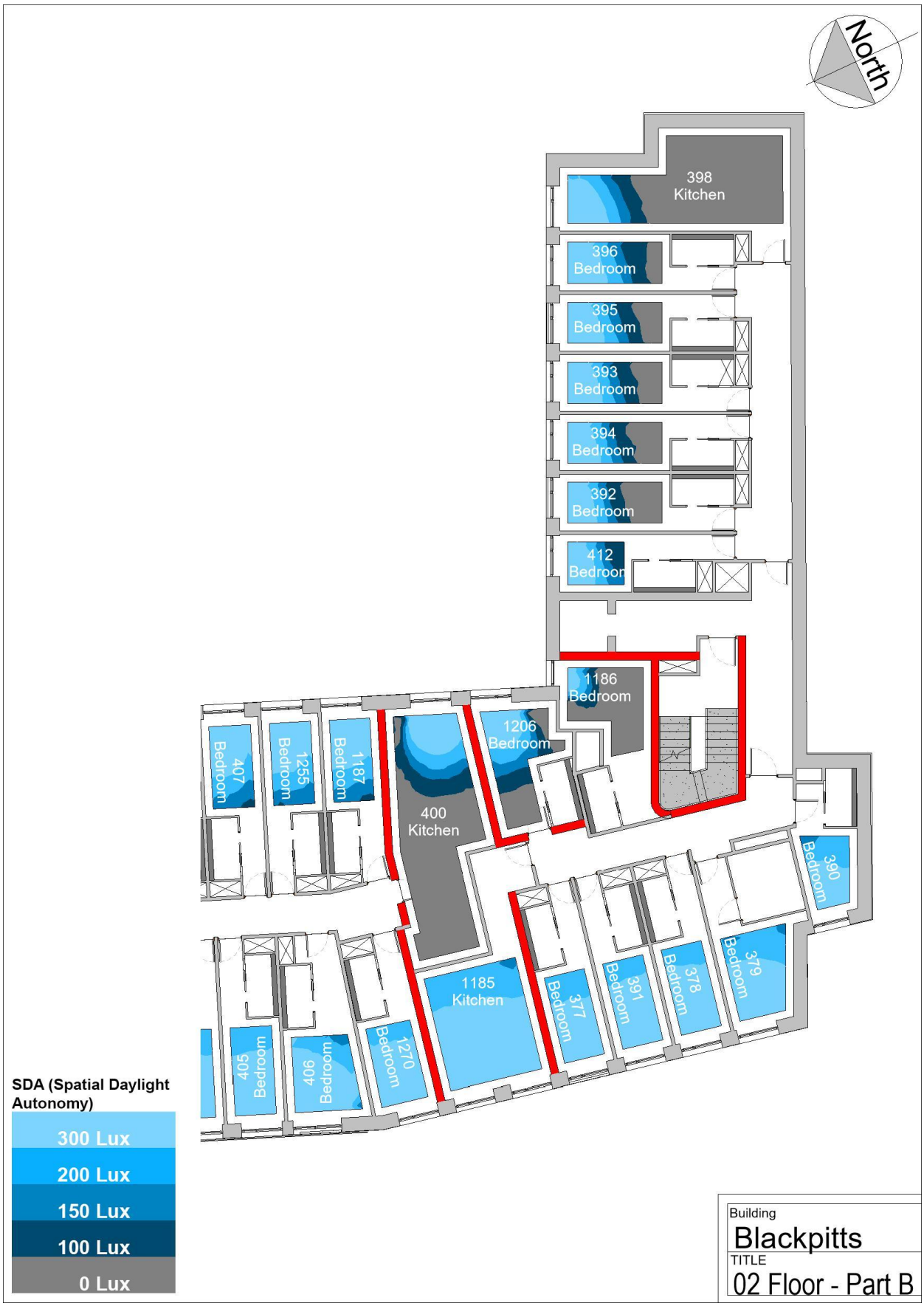



North
1252 Kitchen
1247 Bedroom
1241 Bedroom
1240 Bedroom
1239 Bedroom
1238 Bedroom
1175 Bedroo
1228 Bedroom
1229 Bedroom
1256 Kitchen
1149 Bedroom
1150 Bedroom
1151 Bedroom
1152 Bedroom
1153 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
00 Floor - Part B

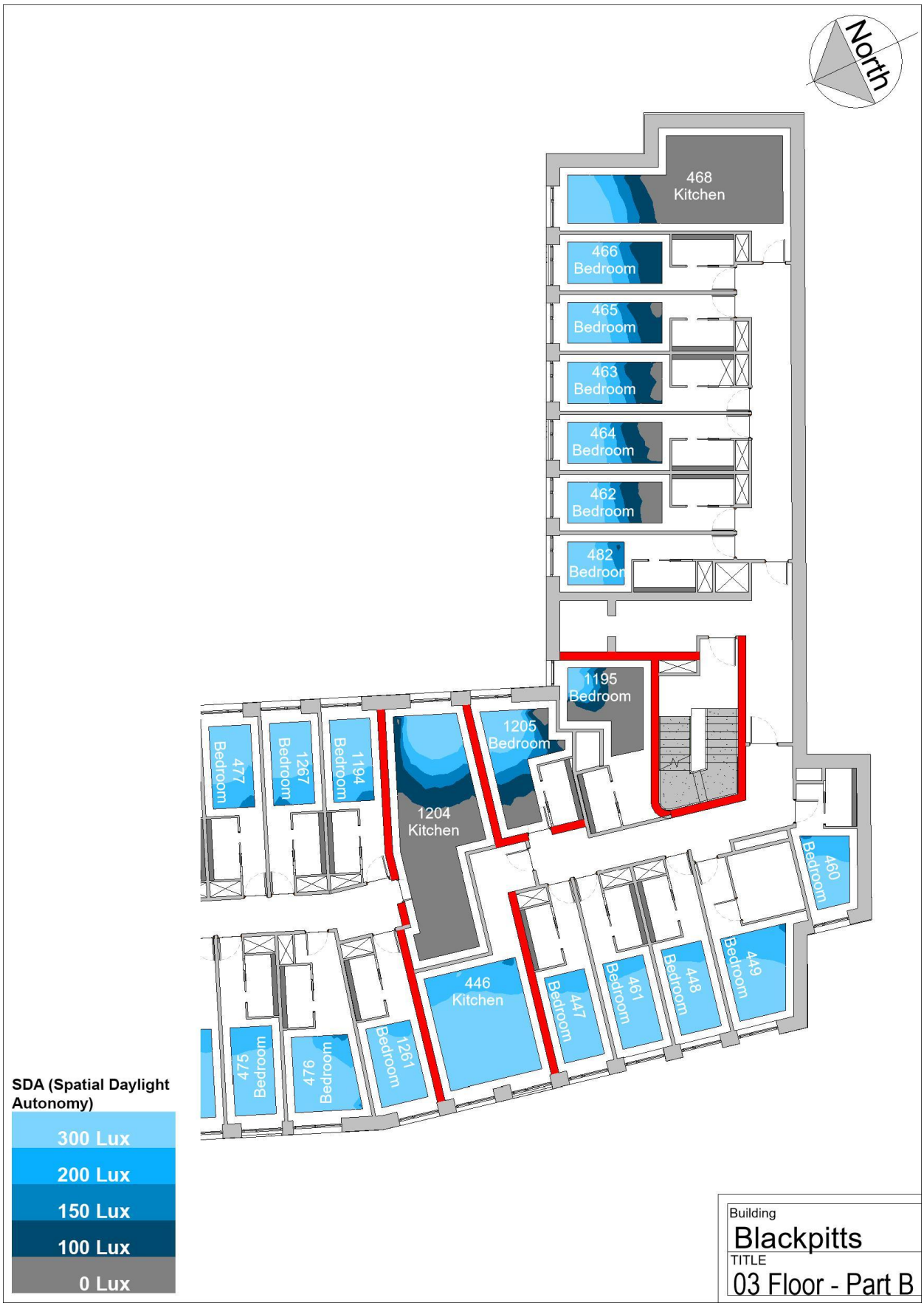

North
1111 Kitchen
1110 Bedroom
1109 Bedroom
1181 Bedroom
1180 Bedroom
1113 Bedroom
1114 Bedroom
1115 Bedroom
1116 Bedroom
1117 Bedroom
1118 Bedroom
79 Bedroom
1119 Bedroom
1120 Bedroom
1121 Bedroom
1122 Bedroom
1123 Bedroom
1146 Bedroom
1145 Bedroom
1144 Kitchen
1124 Bedroom
1147 Bedroom
1184 Bedroom
1103 Bedroom
1105 Kitchen
1106 Bedroom
1107 Bedroom
1108 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
01 Floor - Part A


North
1142 Kitchen
1141 Bedroom
1140 Bedroom
1139 Bedroom
1138 Bedroom
1137 Bedroom
1136 Bedroom
1129 Bedroom
1207 Bedroom
1125 Bedroom
1126 Bedroom
1135 Bedroom
1128 Kitchen
1148 Bedroom
323 Kitchen
1133 Bedroom
1132 Bedroom
1131 Bedroom
1130 Bedroom
1127 Bedroom
1108 Bedroom
1107 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
01 Floor - Part B

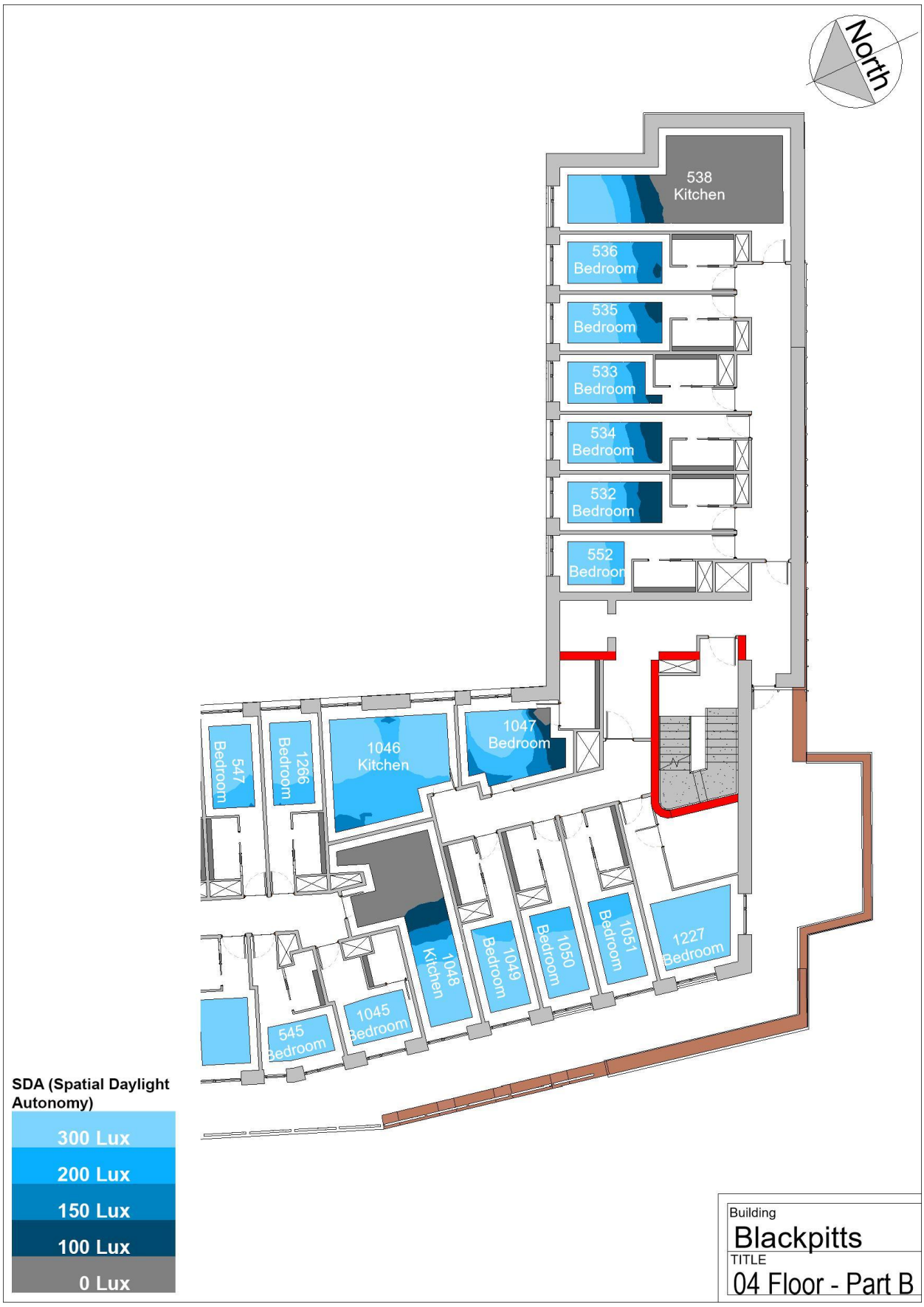

North
1268 Kitchen
1253 Bedroom
966 Bedroom
381 Bedroom
1191 Bedroom
386 Bedroom
1192 Bedroom
372 Bedroom
363 Bedroom
359 Bedroom
408 Bedroom
388 Bedroom
380 Bedroom
367 Bedroom
761 Kitchen
1263 Bedroom
1264 Bedroom
1269 Bedroom
407 Bedroom
1255 Bedroom
375 Bedroom
1265 Bedroom
365 Bedroom
357 Bedroom
411 Bedroom
1188 Kitchen
404 Bedroom
405 Bedroom
406 Bedroom
1189 Bedroom
1190 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
02 Floor - Part A

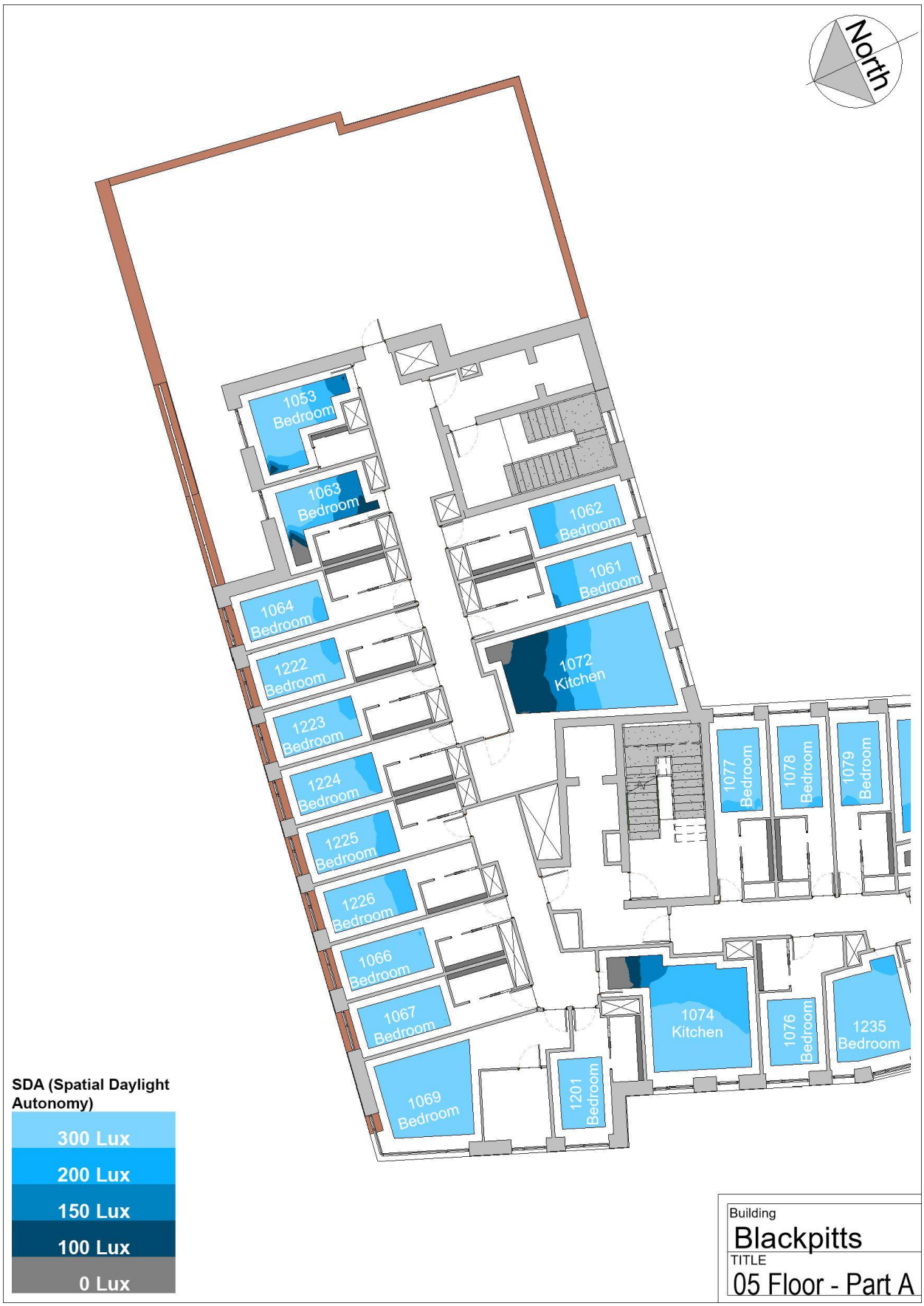

North
398
Kitchen
396
Bedroom
395
Bedroom
393
Bedroom
394
Bedroom
392
Bedroom
412
Bedroom
1186
Bedroom
1206
Bedroom
407
Bedroom
1255
Bedroom
1187
Bedroom
400
Kitchen
390
Bedroom
379
Bedroom
378
Bedroom
391
Bedroom
377
Bedroom
1185
Kitchen
1270
Bedroom
406
Bedroom
405
Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
02 Floor - Part B

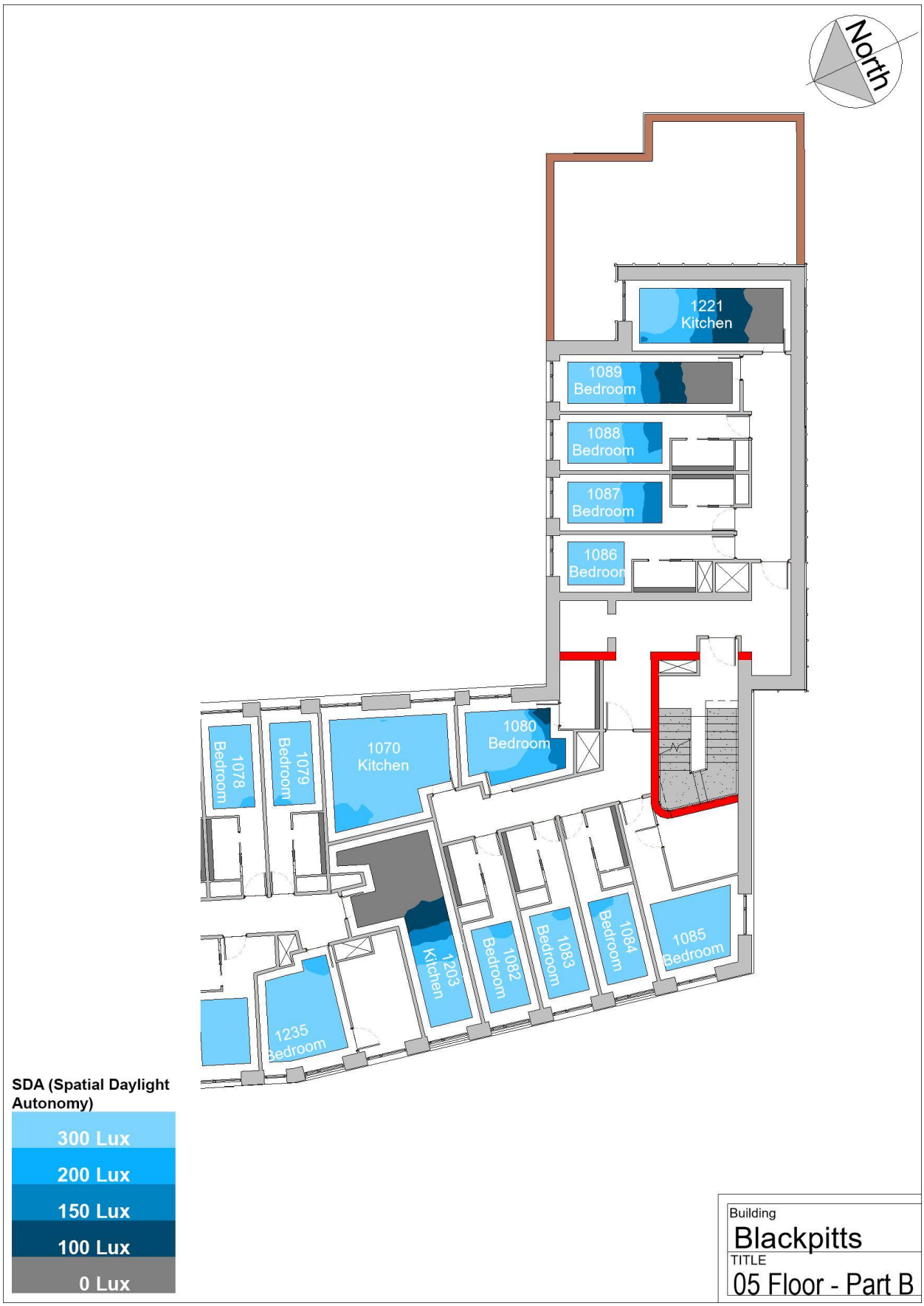

North
1257 Kitchen
1251 Bedroom
1254 Bedroom
443 Bedroom
1198 Bedroom
451 Bedroom
456 Bedroom
442 Bedroom
457 Bedroom
441 Bedroom
458 Bedroom
437 Bedroom
1258 Bedroom
1259 Bedroom
445 Bedroom
1260 Bedroom
459 Bedroom
438 Bedroom
481 Bedroom
1196 Bedroom
1197 Bedroom
478 Bedroom
450 Bedroom
479 Kitchen
1262 Bedroom
477 Bedroom
1267 Bedroom
472 Kitchen
474 Bedroom
475 Bedroom
476 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
03 Floor - Part A


North
468 Kitchen
466 Bedroom
465 Bedroom
463 Bedroom
464 Bedroom
462 Bedroom
482 Bedroom
1195 Bedroom
1205 Bedroom
477 Bedroom
1267 Bedroom
1194 Bedroom
1204 Kitchen
460 Bedroom
449 Bedroom
448 Bedroom
461 Bedroom
447 Bedroom
446 Kitchen
1261 Bedroom
476 Bedroom
475 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
03 Floor - Part B


North
557 Kitchen
509 Bedroom
521 Bedroom
1199 Bedroom
526 Bedroom
1200 Bedroom
512 Bedroom
527 Bedroom
511 Bedroom
548 Bedroom
528 Bedroom
520 Bedroom
507 Bedroom
549 Kitchen
568 Bedroom
569 Bedroom
570 Bedroom
547 Bedroom
1266 Bedroom
515 Bedroom
571 Bedroom
529 Bedroom
508 Bedroom
551 Bedroom
543 Kitchen
1234 Bedroom
545 Bedroom
542 Bedroom
987 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
04 Floor - Part A


North
538 Kitchen
536 Bedroom
535 Bedroom
533 Bedroom
534 Bedroom
532 Bedroom
552 Bedroom
547 Bedroom
1266 Bedroom
1046 Kitchen
1047 Bedroom
1048 Kitchen
1049 Bedroom
1050 Bedroom
1051 Bedroom
1227 Bedroom
1045 Bedroom
545 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
04 Floor - Part B


North
1053 Bedroom
1063 Bedroom
1062 Bedroom
1061 Bedroom
1064 Bedroom
1222 Bedroom
1072 Kitchen
1223 Bedroom
1224 Bedroom
1225 Bedroom
1226 Bedroom
1066 Bedroom
1067 Bedroom
1069 Bedroom
1201 Bedroom
1077 Bedroom
1078 Bedroom
1079 Bedroom
1074 Kitchen
1076 Bedroom
1235 Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
05 Floor - Part A


North
1221
Kitchen
1089
Bedroom
1088
Bedroom
1087
Bedroom
1086
Bedroom
1080
Bedroom
1070
Kitchen
1078
Bedroom
1079
Bedroom
1203
Kitchen
1082
Bedroom
1083
Bedroom
1084
Bedroom
1085
Bedroom
1235
Bedroom
SDA (Spatial Daylight Autonomy)
300 Lux
200 Lux
150 Lux
100 Lux
0 Lux
Building
Blackpitts
TITLE
05 Floor - Part B

Appendix C – Daylight Provision in New Development Detailed Results

Table 12 Daylight Provision Results

Unit Ref.	Room Ref. No.	Floor	Type Use	Req Lux	Meets BRE Criteria	
					% of Area Meeting Req Lux	Meets BRE Criteria
Blackpitts Building	20	00 Floor	Kitchen	200	25%	No
Blackpitts Building	31	00 Floor	Bedroom	100	94%	Yes
Blackpitts Building	33	00 Floor	Bedroom	100	100%	Yes
Blackpitts Building	61	00 Floor	Bedroom	100	98%	Yes
Blackpitts Building	791	00 Floor	Bedroom	100	88%	Yes
Blackpitts Building	1149	00 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1150	00 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1151	00 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1152	00 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1153	00 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1175	00 Floor	Bedroom	100	75%	Yes
Blackpitts Building	1178	00 Floor	Bedroom	100	98%	Yes
Blackpitts Building	1179	00 Floor	Bedroom	100	90%	Yes
Blackpitts Building	1228	00 Floor	Bedroom	100	59%	Yes
Blackpitts Building	1229	00 Floor	Bedroom	100	66%	Yes
Blackpitts Building	1238	00 Floor	Bedroom	100	47%	No
Blackpitts Building	1239	00 Floor	Bedroom	100	49%	No
Blackpitts Building	1240	00 Floor	Bedroom	100	55%	Yes
Blackpitts Building	1241	00 Floor	Bedroom	100	56%	Yes
Blackpitts Building	1247	00 Floor	Bedroom	100	62%	Yes
Blackpitts Building	1252	00 Floor	Kitchen	200	13%	No
Blackpitts Building	1256	00 Floor	Kitchen	200	41%	No
Blackpitts Building	79	01 Floor	Bedroom	100	89%	Yes
Blackpitts Building	323	01 Floor	Kitchen	200	77%	Yes
Blackpitts Building	1103	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1105	01 Floor	Kitchen	200	45%	No
Blackpitts Building	1106	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1107	01 Floor	Bedroom	100	96%	Yes
Blackpitts Building	1108	01 Floor	Bedroom	100	72%	Yes
Blackpitts Building	1109	01 Floor	Bedroom	100	98%	Yes
Blackpitts Building	1110	01 Floor	Bedroom	100	98%	Yes
Blackpitts Building	1111	01 Floor	Kitchen	200	26%	No
Blackpitts Building	1113	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1114	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1115	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1116	01 Floor	Bedroom	100	98%	Yes
Blackpitts Building	1117	01 Floor	Bedroom	100	96%	Yes
Blackpitts Building	1118	01 Floor	Bedroom	100	96%	Yes
Blackpitts Building	1119	01 Floor	Bedroom	100	89%	Yes
Blackpitts Building	1120	01 Floor	Bedroom	100	93%	Yes
Blackpitts Building	1121	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1122	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1123	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1124	01 Floor	Bedroom	100	98%	Yes
Blackpitts Building	1125	01 Floor	Bedroom	100	98%	Yes
Blackpitts Building	1126	01 Floor	Bedroom	100	98%	Yes
Blackpitts Building	1127	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1128	01 Floor	Kitchen	200	14%	No
Blackpitts Building	1129	01 Floor	Bedroom	100	15%	No
Blackpitts Building	1130	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1131	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1132	01 Floor	Bedroom	100	100%	Yes

Unit Ref.	Room Ref. No.	Floor	Type Use	Req Lux	Meets BRE Criteria	
					% of Area Meeting Req Lux	Meets BRE Criteria
Blackpitts Building	1133	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1135	01 Floor	Bedroom	100	96%	Yes
Blackpitts Building	1136	01 Floor	Bedroom	100	88%	Yes
Blackpitts Building	1137	01 Floor	Bedroom	100	50%	Yes
Blackpitts Building	1138	01 Floor	Bedroom	100	57%	Yes
Blackpitts Building	1139	01 Floor	Bedroom	100	57%	Yes
Blackpitts Building	1140	01 Floor	Bedroom	100	65%	Yes
Blackpitts Building	1141	01 Floor	Bedroom	100	72%	Yes
Blackpitts Building	1142	01 Floor	Kitchen	200	10%	No
Blackpitts Building	1144	01 Floor	Kitchen	200	20%	No
Blackpitts Building	1145	01 Floor	Bedroom	100	44%	No
Blackpitts Building	1146	01 Floor	Bedroom	100	56%	Yes
Blackpitts Building	1147	01 Floor	Bedroom	100	94%	Yes
Blackpitts Building	1148	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1180	01 Floor	Bedroom	100	96%	Yes
Blackpitts Building	1181	01 Floor	Bedroom	100	95%	Yes
Blackpitts Building	1184	01 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1207	01 Floor	Bedroom	100	55%	Yes
Blackpitts Building	357	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	359	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	363	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	365	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	367	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	372	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	375	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	377	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	378	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	379	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	380	02 Floor	Bedroom	100	64%	Yes
Blackpitts Building	381	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	386	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	388	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	390	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	391	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	392	02 Floor	Bedroom	100	60%	Yes
Blackpitts Building	393	02 Floor	Bedroom	100	72%	Yes
Blackpitts Building	394	02 Floor	Bedroom	100	70%	Yes
Blackpitts Building	395	02 Floor	Bedroom	100	75%	Yes
Blackpitts Building	396	02 Floor	Bedroom	100	83%	Yes
Blackpitts Building	398	02 Floor	Kitchen	200	14%	No
Blackpitts Building	400	02 Floor	Kitchen	200	17%	No
Blackpitts Building	404	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	405	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	406	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	407	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	408	02 Floor	Bedroom	100	53%	Yes
Blackpitts Building	411	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	412	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	761	02 Floor	Kitchen	200	27%	No
Blackpitts Building	966	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1185	02 Floor	Kitchen	200	98%	Yes
Blackpitts Building	1186	02 Floor	Bedroom	100	21%	No
Blackpitts Building	1187	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1188	02 Floor	Kitchen	200	70%	Yes
Blackpitts Building	1189	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1190	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1191	02 Floor	Bedroom	100	100%	Yes

Unit Ref.	Room Ref. No.	Floor	Type Use	Req Lux	Meets BRE Criteria	
					% of Area Meeting Req Lux	Meets BRE Criteria
Blackpitts Building	1192	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1206	02 Floor	Bedroom	100	66%	Yes
Blackpitts Building	1253	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1255	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1263	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1264	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1265	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1268	02 Floor	Kitchen	200	37%	No
Blackpitts Building	1269	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1270	02 Floor	Bedroom	100	100%	Yes
Blackpitts Building	437	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	438	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	441	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	442	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	443	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	445	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	446	03 Floor	Kitchen	200	99%	Yes
Blackpitts Building	447	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	448	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	449	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	450	03 Floor	Bedroom	100	88%	Yes
Blackpitts Building	451	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	456	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	457	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	458	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	459	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	460	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	461	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	462	03 Floor	Bedroom	100	77%	Yes
Blackpitts Building	463	03 Floor	Bedroom	100	93%	Yes
Blackpitts Building	464	03 Floor	Bedroom	100	82%	Yes
Blackpitts Building	465	03 Floor	Bedroom	100	97%	Yes
Blackpitts Building	466	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	468	03 Floor	Kitchen	200	17%	No
Blackpitts Building	472	03 Floor	Kitchen	200	73%	Yes
Blackpitts Building	474	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	475	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	476	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	477	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	478	03 Floor	Bedroom	100	97%	Yes
Blackpitts Building	479	03 Floor	Kitchen	200	36%	No
Blackpitts Building	481	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	482	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1194	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1195	03 Floor	Bedroom	100	29%	No
Blackpitts Building	1196	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1197	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1198	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1204	03 Floor	Kitchen	200	21%	No
Blackpitts Building	1205	03 Floor	Bedroom	100	78%	Yes
Blackpitts Building	1251	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1254	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1257	03 Floor	Kitchen	200	48%	No
Blackpitts Building	1258	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1259	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1260	03 Floor	Bedroom	100	100%	Yes

Unit Ref.	Room Ref. No.	Floor	Type Use	Req Lux	Meets BRE Criteria	
					% of Area Meeting Req Lux	Meets BRE Criteria
Blackpitts Building	1261	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1262	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1267	03 Floor	Bedroom	100	100%	Yes
Blackpitts Building	507	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	508	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	509	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	511	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	512	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	515	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	520	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	521	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	526	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	527	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	528	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	529	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	532	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	533	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	534	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	535	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	536	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	538	04 Floor	Kitchen	200	19%	No
Blackpitts Building	542	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	543	04 Floor	Kitchen	200	90%	Yes
Blackpitts Building	545	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	547	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	548	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	549	04 Floor	Kitchen	200	49%	No
Blackpitts Building	551	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	552	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	557	04 Floor	Kitchen	200	97%	Yes
Blackpitts Building	568	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	569	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	570	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	571	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	987	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1045	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1046	04 Floor	Kitchen	200	95%	Yes
Blackpitts Building	1047	04 Floor	Bedroom	100	97%	Yes
Blackpitts Building	1048	04 Floor	Kitchen	200	31%	No
Blackpitts Building	1049	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1050	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1051	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1199	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1200	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1227	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1234	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1266	04 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1053	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1061	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1062	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1063	05 Floor	Bedroom	100	91%	Yes
Blackpitts Building	1064	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1066	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1067	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1069	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1070	05 Floor	Kitchen	200	100%	Yes

Unit Ref.	Room Ref. No.	Floor	Type Use	Req Lux	Meets BRE Criteria	
					% of Area Meeting Req Lux	Meets BRE Criteria
Blackpitts Building	1072	05 Floor	Kitchen	200	65%	Yes
Blackpitts Building	1074	05 Floor	Kitchen	200	87%	Yes
Blackpitts Building	1076	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1077	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1078	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1079	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1080	05 Floor	Bedroom	100	99%	Yes
Blackpitts Building	1082	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1083	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1084	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1085	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1086	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1087	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1088	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1089	05 Floor	Bedroom	100	71%	Yes
Blackpitts Building	1201	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1203	05 Floor	Kitchen	200	31%	No
Blackpitts Building	1221	05 Floor	Kitchen	200	36%	No
Blackpitts Building	1222	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1223	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1224	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1225	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1226	05 Floor	Bedroom	100	100%	Yes
Blackpitts Building	1235	05 Floor	Bedroom	100	100%	Yes
Total Meeting Criteria				**Yes**	**218**	**89%**
				No	**27**	**11%**
Total Rooms Analysed					**245**	

Appendix D – Sunlight Provision in New Development Detailed Results

Table 13 Sunlight Provision Results

Unit. Ref.	Room Ref. No.	Floor	Type Use	Meets BRE Criteria		
				Sunlight Exposure (Hours)	Rating	Compliance
Blackpitts Building	1230	00 Floor	Kitchen	3.1	Medium	Yes
Blackpitts Building	1240	00 Floor	Kitchen	0	Failed	No
Blackpitts Building	1241	00 Floor	Kitchen	1	Failed	No
Blackpitts Building	323	01 Floor	Kitchen	2.9	Minimum	Yes
Blackpitts Building	1105	01 Floor	Kitchen	1.7	Minimum	Yes
Blackpitts Building	1111	01 Floor	Kitchen	0	Failed	No
Blackpitts Building	1128	01 Floor	Kitchen	1.7	Minimum	Yes
Blackpitts Building	1142	01 Floor	Kitchen	0	Failed	No
Blackpitts Building	1144	01 Floor	Kitchen	3.9	Medium	Yes
Blackpitts Building	398	02 Floor	Kitchen	0	Failed	No
Blackpitts Building	400	02 Floor	Kitchen	2.6	Minimum	Yes
Blackpitts Building	417	02 Floor	Kitchen	0	Failed	No
Blackpitts Building	761	02 Floor	Kitchen	5	High	Yes
Blackpitts Building	1185	02 Floor	Kitchen	2.9	Minimum	Yes
Blackpitts Building	1188	02 Floor	Kitchen	2.5	Minimum	Yes
Blackpitts Building	444	03 Floor	Kitchen	0	Failed	No
Blackpitts Building	446	03 Floor	Kitchen	2.9	Minimum	Yes
Blackpitts Building	468	03 Floor	Kitchen	0.4	Failed	No
Blackpitts Building	472	03 Floor	Kitchen	2.5	Minimum	Yes
Blackpitts Building	479	03 Floor	Kitchen	6.4	High	Yes
Blackpitts Building	1204	03 Floor	Kitchen	2.6	Minimum	Yes
Blackpitts Building	538	04 Floor	Kitchen	0.4	Failed	No
Blackpitts Building	543	04 Floor	Kitchen	2.2	Minimum	Yes
Blackpitts Building	549	04 Floor	Kitchen	6.8	High	Yes
Blackpitts Building	557	04 Floor	Kitchen	9.3	High	Yes
Blackpitts Building	1046	04 Floor	Kitchen	5.5	High	Yes
Blackpitts Building	1048	04 Floor	Kitchen	2.9	Minimum	Yes
Blackpitts Building	1070	05 Floor	Kitchen	5.6	High	Yes
Blackpitts Building	1072	05 Floor	Kitchen	7.8	High	Yes
Blackpitts Building	1074	05 Floor	Kitchen	2.2	Minimum	Yes
Blackpitts Building	1203	05 Floor	Kitchen	2.9	Minimum	Yes
Blackpitts Building	1221	05 Floor	Kitchen	0	Failed	No
Blackpitts Building	1231	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1232	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1233	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1234	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1235	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1236	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1237	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1238	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1239	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1242	00 Floor	Bedroom	1.2	Failed	No
Blackpitts Building	1243	00 Floor	Bedroom	1.6	Minimum	Yes
Blackpitts Building	1244	00 Floor	Bedroom	1	Failed	No
Blackpitts Building	1245	00 Floor	Bedroom	0.9	Failed	No
Blackpitts Building	1246	00 Floor	Bedroom	0.9	Failed	No
Blackpitts Building	1247	00 Floor	Bedroom	0	Failed	No
Blackpitts Building	1248	00 Floor	Bedroom	3.1	Medium	Yes
Blackpitts Building	1249	00 Floor	Bedroom	3.1	Medium	Yes
Blackpitts Building	1250	00 Floor	Bedroom	1.7	Minimum	Yes
Blackpitts Building	1251	00 Floor	Bedroom	1.3	Failed	No
Blackpitts Building	79	01 Floor	Bedroom	0	Failed	No

Unit. Ref.	Room Ref. No.	Floor	Type Use	Meets BRE Criteria		
				Sunlight Exposure (Hours)	Rating	Compliance
Blackpitts Building	1103	01 Floor	Bedroom	1.5	Minimum	Yes
Blackpitts Building	1106	01 Floor	Bedroom	1.4	Failed	No
Blackpitts Building	1107	01 Floor	Bedroom	1.8	Minimum	Yes
Blackpitts Building	1108	01 Floor	Bedroom	1.7	Minimum	Yes
Blackpitts Building	1109	01 Floor	Bedroom	4.5	High	Yes
Blackpitts Building	1110	01 Floor	Bedroom	4.3	High	Yes
Blackpitts Building	1113	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1114	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1115	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1116	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1117	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1118	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1119	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1120	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1121	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1122	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1123	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1124	01 Floor	Bedroom	3.9	Medium	Yes
Blackpitts Building	1125	01 Floor	Bedroom	3.5	Medium	Yes
Blackpitts Building	1126	01 Floor	Bedroom	3.2	Medium	Yes
Blackpitts Building	1127	01 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1129	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1130	01 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1131	01 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1132	01 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1133	01 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1135	01 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	1136	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1137	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1138	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1139	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1140	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1141	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1145	01 Floor	Bedroom	4.3	High	Yes
Blackpitts Building	1146	01 Floor	Bedroom	4.6	High	Yes
Blackpitts Building	1147	01 Floor	Bedroom	0	Failed	No
Blackpitts Building	1148	01 Floor	Bedroom	1.8	Minimum	Yes
Blackpitts Building	1180	01 Floor	Bedroom	5	High	Yes
Blackpitts Building	1181	01 Floor	Bedroom	4.9	High	Yes
Blackpitts Building	1184	01 Floor	Bedroom	1.2	Failed	No
Blackpitts Building	1207	01 Floor	Bedroom	1.4	Failed	No
Blackpitts Building	357	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	359	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	363	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	365	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	367	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	372	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	375	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	377	02 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	378	02 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	379	02 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	380	02 Floor	Bedroom	5.2	High	Yes
Blackpitts Building	381	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	386	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	388	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	391	02 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	392	02 Floor	Bedroom	0.4	Failed	No

Unit. Ref.	Room Ref. No.	Floor	Type Use	Meets BRE Criteria		
				Sunlight Exposure (Hours)	Rating	Compliance
Blackpitts Building	393	02 Floor	Bedroom	0.1	Failed	No
Blackpitts Building	394	02 Floor	Bedroom	0.2	Failed	No
Blackpitts Building	395	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	396	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	404	02 Floor	Bedroom	2.2	Minimum	Yes
Blackpitts Building	405	02 Floor	Bedroom	2.2	Minimum	Yes
Blackpitts Building	406	02 Floor	Bedroom	2.5	Minimum	Yes
Blackpitts Building	407	02 Floor	Bedroom	4.5	High	Yes
Blackpitts Building	408	02 Floor	Bedroom	5.3	High	Yes
Blackpitts Building	411	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	412	02 Floor	Bedroom	0.4	Failed	No
Blackpitts Building	426	02 Floor	Bedroom	3.8	Medium	Yes
Blackpitts Building	428	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	429	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	430	02 Floor	Bedroom	5.2	High	Yes
Blackpitts Building	431	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	974	02 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1186	02 Floor	Bedroom	0	Failed	No
Blackpitts Building	1187	02 Floor	Bedroom	3.3	Medium	Yes
Blackpitts Building	1189	02 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	1190	02 Floor	Bedroom	2.5	Minimum	Yes
Blackpitts Building	1191	02 Floor	Bedroom	6.3	High	Yes
Blackpitts Building	1192	02 Floor	Bedroom	6.3	High	Yes
Blackpitts Building	1206	02 Floor	Bedroom	1.9	Minimum	Yes
Blackpitts Building	1252	02 Floor	Bedroom	1.7	Minimum	Yes
Blackpitts Building	1255	02 Floor	Bedroom	6.4	High	Yes
Blackpitts Building	1256	02 Floor	Bedroom	6.3	High	Yes
Blackpitts Building	437	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	438	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	441	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	442	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	443	03 Floor	Bedroom	7.4	High	Yes
Blackpitts Building	445	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	447	03 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	448	03 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	449	03 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	450	03 Floor	Bedroom	6.5	High	Yes
Blackpitts Building	451	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	456	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	457	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	458	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	459	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	460	03 Floor	Bedroom	2.3	Minimum	Yes
Blackpitts Building	461	03 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	462	03 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	463	03 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	464	03 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	465	03 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	466	03 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	474	03 Floor	Bedroom	2.2	Minimum	Yes
Blackpitts Building	475	03 Floor	Bedroom	2.2	Minimum	Yes
Blackpitts Building	476	03 Floor	Bedroom	2.4	Minimum	Yes
Blackpitts Building	477	03 Floor	Bedroom	5.6	High	Yes
Blackpitts Building	478	03 Floor	Bedroom	6.7	High	Yes
Blackpitts Building	481	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	482	03 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	496	03 Floor	Bedroom	5	High	Yes

Unit. Ref.	Room Ref. No.	Floor	Type Use	Meets BRE Criteria		
				Sunlight Exposure (Hours)	Rating	Compliance
Blackpitts Building	497	03 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	498	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	499	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	500	03 Floor	Bedroom	5.5	High	Yes
Blackpitts Building	501	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	1194	03 Floor	Bedroom	4	Medium	Yes
Blackpitts Building	1195	03 Floor	Bedroom	0	Failed	No
Blackpitts Building	1196	03 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	1197	03 Floor	Bedroom	2.5	Minimum	Yes
Blackpitts Building	1198	03 Floor	Bedroom	7.3	High	Yes
Blackpitts Building	1205	03 Floor	Bedroom	2	Minimum	Yes
Blackpitts Building	1253	03 Floor	Bedroom	7.5	High	Yes
Blackpitts Building	1254	03 Floor	Bedroom	7.7	High	Yes
Blackpitts Building	507	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	508	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	509	04 Floor	Bedroom	8.5	High	Yes
Blackpitts Building	511	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	512	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	515	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	520	04 Floor	Bedroom	7.2	High	Yes
Blackpitts Building	521	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	526	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	527	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	528	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	529	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	532	04 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	533	04 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	534	04 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	535	04 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	536	04 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	542	04 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	545	04 Floor	Bedroom	2.2	Minimum	Yes
Blackpitts Building	547	04 Floor	Bedroom	5.6	High	Yes
Blackpitts Building	548	04 Floor	Bedroom	7.5	High	Yes
Blackpitts Building	551	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	552	04 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	566	04 Floor	Bedroom	5.5	High	Yes
Blackpitts Building	568	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	569	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	570	04 Floor	Bedroom	5.5	High	Yes
Blackpitts Building	571	04 Floor	Bedroom	0	Failed	No
Blackpitts Building	987	04 Floor	Bedroom	2.5	Minimum	Yes
Blackpitts Building	1045	04 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1047	04 Floor	Bedroom	2.2	Minimum	Yes
Blackpitts Building	1049	04 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1050	04 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1051	04 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1199	04 Floor	Bedroom	8.5	High	Yes
Blackpitts Building	1200	04 Floor	Bedroom	8.4	High	Yes
Blackpitts Building	1227	04 Floor	Bedroom	7.1	High	Yes
Blackpitts Building	1257	04 Floor	Bedroom	2.1	Minimum	Yes
Blackpitts Building	1053	05 Floor	Bedroom	0	Failed	No
Blackpitts Building	1061	05 Floor	Bedroom	8.2	High	Yes
Blackpitts Building	1062	05 Floor	Bedroom	8.5	High	Yes
Blackpitts Building	1063	05 Floor	Bedroom	0	Failed	No
Blackpitts Building	1064	05 Floor	Bedroom	0	Failed	No
Blackpitts Building	1066	05 Floor	Bedroom	0	Failed	No

Unit. Ref.	Room Ref. No.	Floor	Type Use	Meets BRE Criteria		
				Sunlight Exposure (Hours)	Rating	Compliance
Blackpitts Building	1067	05 Floor	Bedroom	0	Failed	No
Blackpitts Building	1069	05 Floor	Bedroom	2.7	Minimum	Yes
Blackpitts Building	1076	05 Floor	Bedroom	2.2	Minimum	Yes
Blackpitts Building	1077	05 Floor	Bedroom	5.5	High	Yes
Blackpitts Building	1078	05 Floor	Bedroom	5.6	High	Yes
Blackpitts Building	1079	05 Floor	Bedroom	5.5	High	Yes
Blackpitts Building	1080	05 Floor	Bedroom	4.1	High	Yes
Blackpitts Building	1082	05 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1083	05 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1084	05 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1085	05 Floor	Bedroom	7.3	High	Yes
Blackpitts Building	1086	05 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	1087	05 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	1088	05 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	1089	05 Floor	Bedroom	0.5	Failed	No
Blackpitts Building	1201	05 Floor	Bedroom	2.5	Minimum	Yes
Blackpitts Building	1202	05 Floor	Bedroom	2.9	Minimum	Yes
Blackpitts Building	1222	05 Floor	Bedroom	0	Failed	No
Blackpitts Building	1223	05 Floor	Bedroom	0	Failed	No
Blackpitts Building	1224	05 Floor	Bedroom	0	Failed	No
Blackpitts Building	1225	05 Floor	Bedroom	0	Failed	No
Blackpitts Building	1226	05 Floor	Bedroom	0	Failed	No
					Total Units Assessed	245
					Units Compliant	121
					Units Compliant (%)	49%

Appendix E – Sunlight to Amenity Areas within New Development

Table 14 Sunlight to Amenity areas Results

Amenity Area	Area m²	Area Receiving 2 Hrs of Sunlight - Proposed %	Meets BRE Criteria
Courtyard	331	53%	Yes
Roof Amenity Space	297	99%	Yes

Figure 10 Sunlight to Courtyard

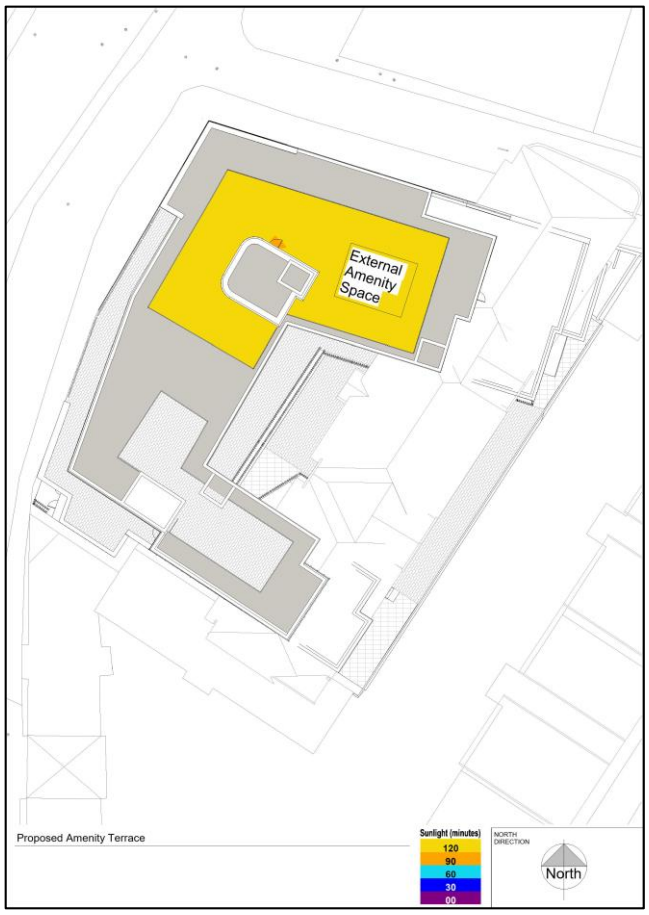
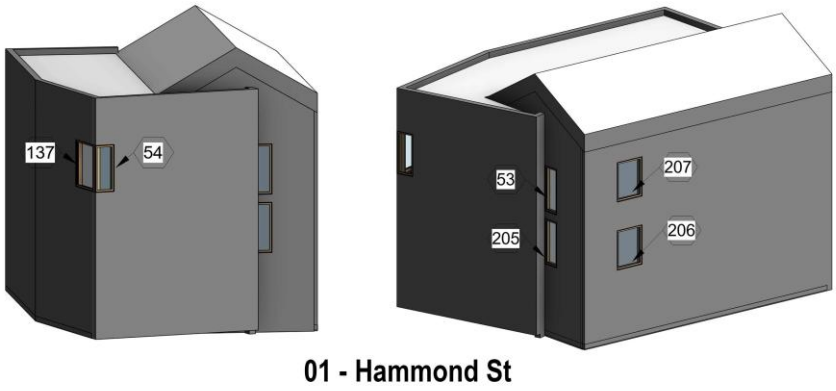


Figure 11 Sunlight to Roof Terraces

Appendix F – Neighbouring Buildings Assessed



01 - Hammond St

Figure 12 – 1 Hammond St

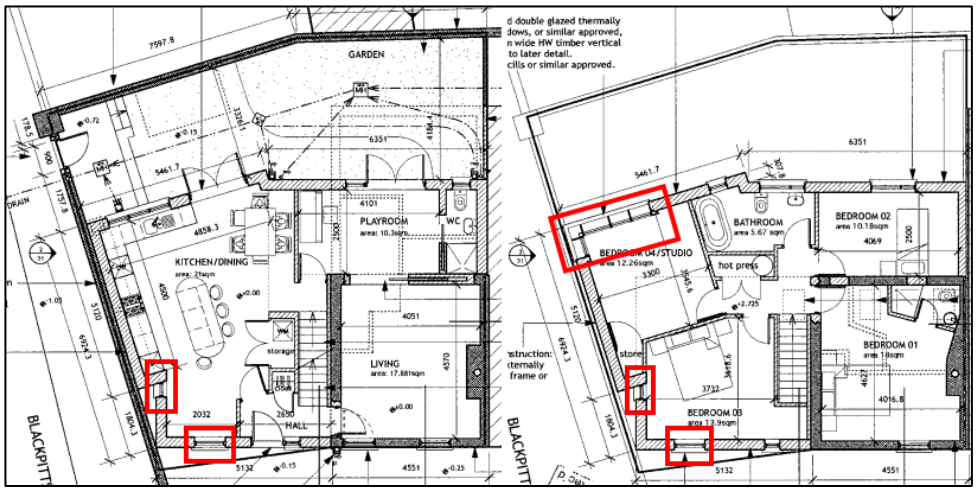
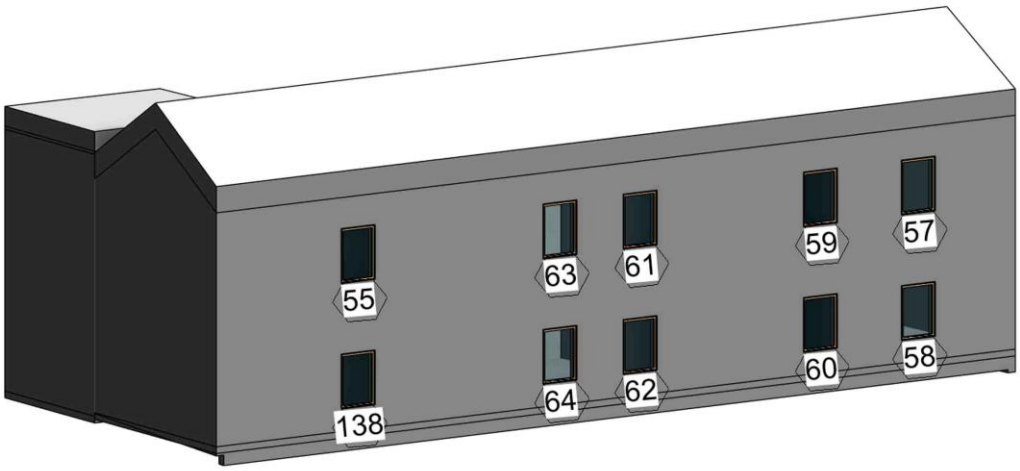
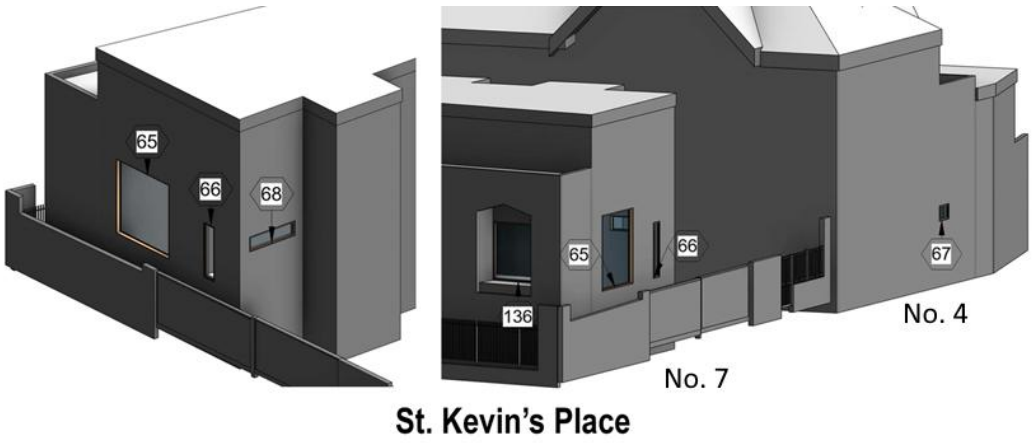


Figure 13 – 1 Hammond St Floor Plans



Greenville Parade Houses

Figure 14 – Greenville Place



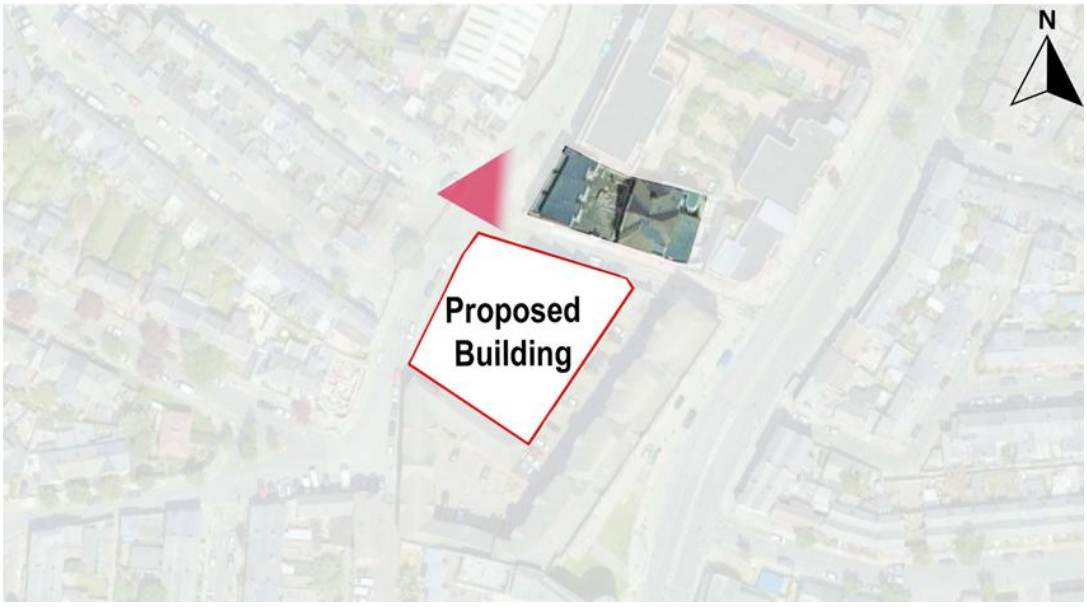


Figure 15 – St. Kevin's Place

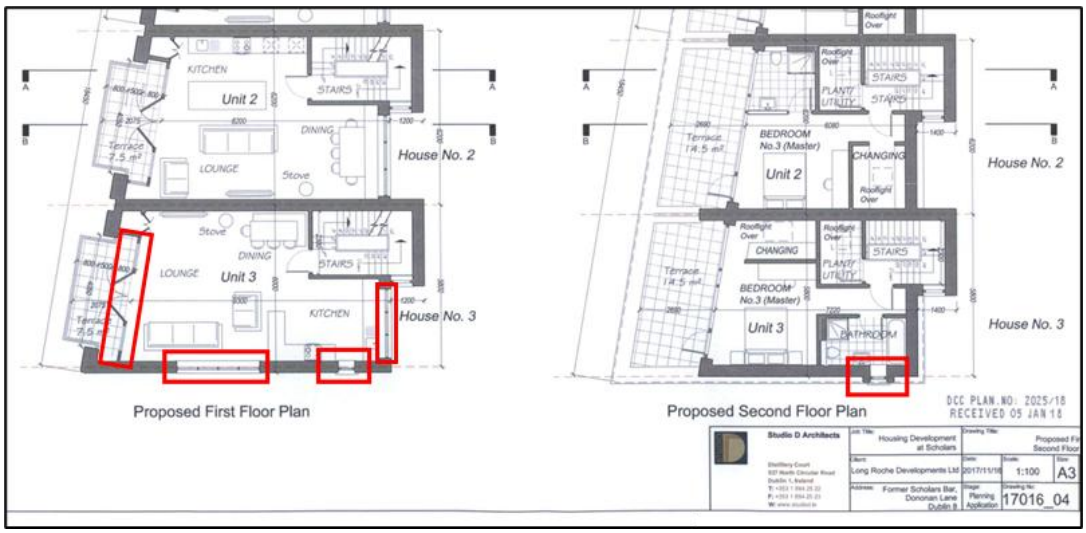


Figure 16 - 7 St Kevin's Place Floor Plans

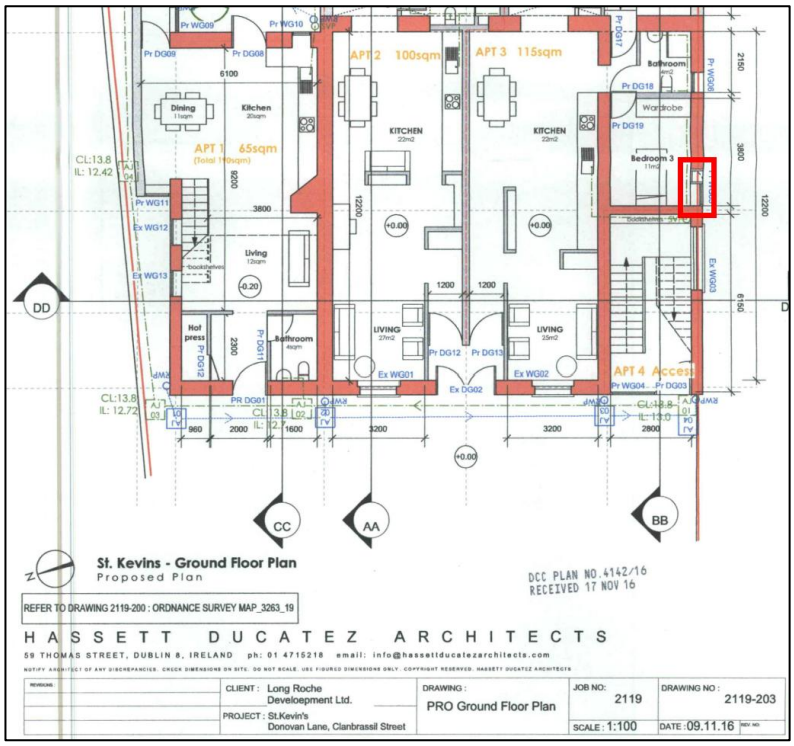


Figure 17 - 4 St Kevin's Place Floor Plans

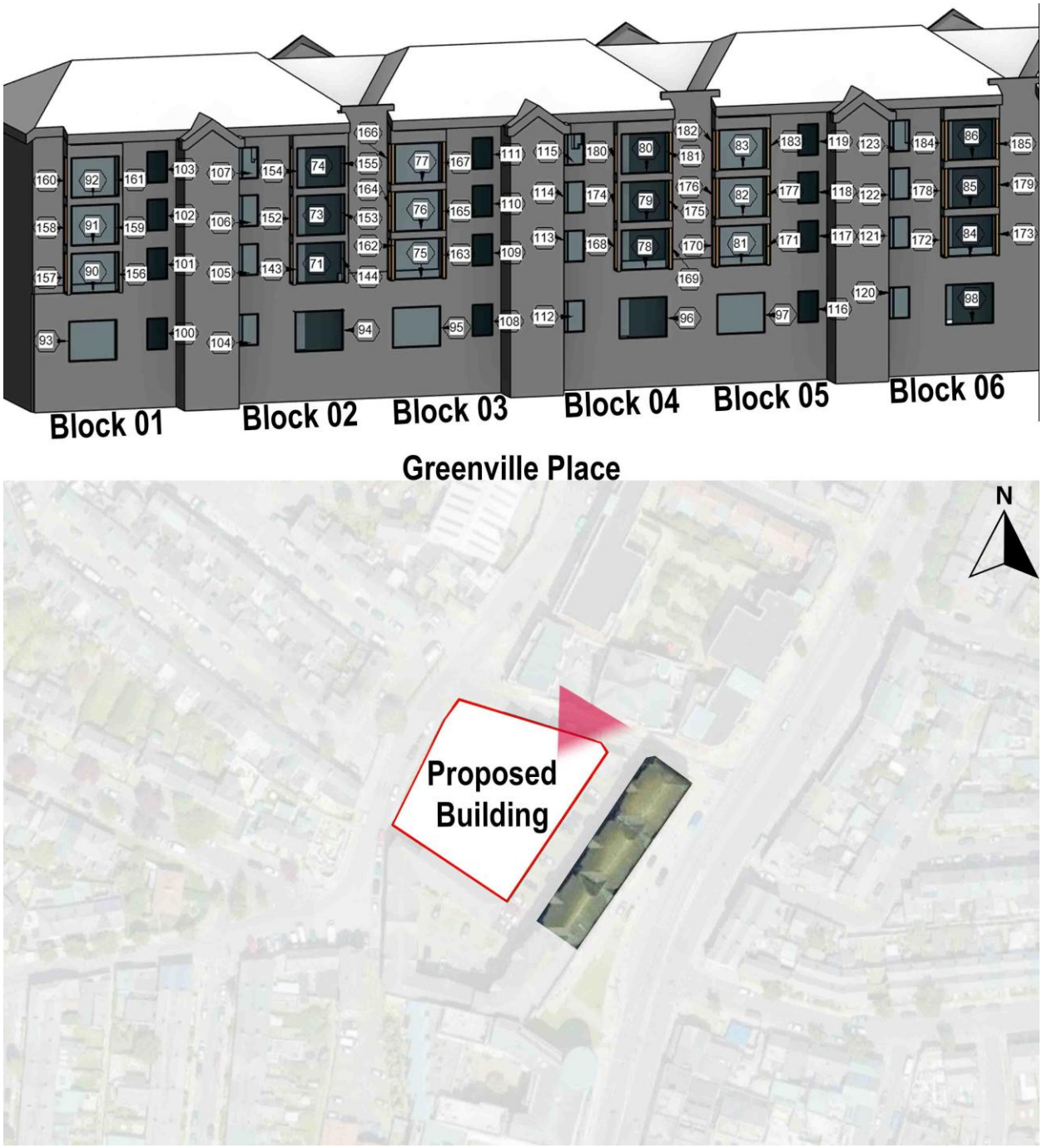


Figure 18 – Greenville Place

Figure 19 – Greenville Place South

Appendix G – Daylight Access to Existing Buildings Results

Figure 20 – Existing Massing

Figure 21 – Proposed Massing

Table 15 Daylight Access to Existing Buildings

Building Refer	Window Ref	VSC Existing	VSC Proposed	Ratio of VSC Proposed to VSC Existing	Meets BRE Criteria
01 Greenville Parade	58	33%	26%	0.80	Yes
01 Greenville Parade	57	34%	28%	0.83	Yes
01 Hammond St	205/206/	28%	20%	0.72	No
01 Hammond St	53/207/	29%	21%	0.73	No
01 Hammond St	137/54/	31%	28%	0.91	Yes
02 Greenville Parade	60	33%	26%	0.79	No
02 Greenville Parade	59	34%	28%	0.82	Yes
03 Greenville Parade	62	32%	24%	0.75	No
03 Greenville Parade	61	34%	26%	0.78	No
04 Greenville Parade	64	32%	23%	0.74	No
04 Greenville Parade	63	34%	26%	0.77	No
05 Greenville Parade	138	31%	23%	0.73	No
05 Greenville Parade	55	33%	25%	0.76	No
G. Place-Block 01	93	23%	19%	0.84	Yes
G. Place-Block 01	100	21%	18%	0.85	Yes
G. Place-Block 01	101	26%	22%	0.84	Yes
G. Place-Block 01	102	28%	24%	0.86	Yes
G. Place-Block 01	103	25%	22%	0.90	Yes
G. Place-Block 01	90/156/157	28%	25%	0.88	Yes
G. Place-Block 01	91/158/159	31%	27%	0.89	Yes
G. Place-Block 01	92/160/161	32%	29%	0.93	Yes
G. Place-Block 02	94	26%	19%	0.75	No
G. Place-Block 02	104	20%	14%	0.69	No
G. Place-Block 02	105	25%	17%	0.69	No
G. Place-Block 02	106	27%	20%	0.72	No
G. Place-Block 02	107	23%	18%	0.78	No
G. Place-Block 02	71/143/144	27%	20%	0.75	No
G. Place-Block 02	73/152/153	30%	23%	0.77	No
G. Place-Block 02	74/154/155	30%	26%	0.85	Yes
G. Place-Block 03	95	25%	19%	0.75	No
G. Place-Block 03	108	20%	15%	0.75	No
G. Place-Block 03	109	25%	18%	0.71	No
G. Place-Block 03	110	27%	20%	0.73	No
G. Place-Block 03	111	23%	18%	0.79	No
G. Place-Block 03	75/162/163	27%	20%	0.74	No
G. Place-Block 03	76/164/165	30%	22%	0.76	No
G. Place-Block 03	77/166/167	30%	25%	0.83	Yes
G. Place-Block 04	97	25%	20%	0.80	Yes
G. Place-Block 04	116	20%	15%	0.77	No
G. Place-Block 04	117	25%	18%	0.72	No

Building Refer	Window Ref	VSC Existing	VSC Proposed	Ratio of VSC Proposed to VSC Existing	Meets BRE Criteria
G. Place-Block 04	118	28%	20%	0.73	No
G. Place-Block 04	119	24%	18%	0.76	No
G. Place-Block 04	78/168/169	26%	20%	0.76	No
G. Place-Block 04	79/174/175	30%	23%	0.77	No
G. Place-Block 04	80/180/181	30%	25%	0.83	Yes
G. Place-Block 05	96	25%	20%	0.80	Yes
G. Place-Block 05	112	20%	16%	0.81	Yes
G. Place-Block 05	113	25%	19%	0.74	No
G. Place-Block 05	114	27%	20%	0.74	No
G. Place-Block 05	115	24%	18%	0.77	No
G. Place-Block 05	81/170/171	26%	20%	0.77	No
G. Place-Block 05	82/176/177	30%	23%	0.78	No
G. Place-Block 05	83/182/183	30%	25%	0.83	Yes
G. Place-Block 06	98	25%	20%	0.83	Yes
G. Place-Block 06	120	19%	16%	0.82	Yes
G. Place-Block 06	121	25%	19%	0.79	No
G. Place-Block 06	122	27%	22%	0.80	Yes
G. Place-Block 06	123	24%	20%	0.83	Yes
G. Place-Block 06	84/172/173	26%	21%	0.83	Yes
G. Place-Block 06	85/178/179	29%	25%	0.84	Yes
G. Place-Block 06	86/184/185	30%	27%	0.89	Yes
Greenville South	125	22%	20%	0.91	Yes
Greenville South	131	19%	17%	0.89	Yes
Greenville South	127	25%	22%	0.91	Yes
Greenville South	129	19%	17%	0.87	Yes
Greenville South	133	21%	19%	0.89	Yes
Greenville South	135	15%	13%	0.83	Yes
Greenville South	124/186/189	18%	17%	0.93	Yes
Greenville South	126/187/190	21%	20%	0.93	Yes
Greenville South	128/188/191	23%	22%	0.92	Yes
Greenville South	130/193/192	14%	13%	0.90	Yes
Greenville South	132/195/194	17%	15%	0.90	Yes
Greenville South	134/196/197	20%	18%	0.90	Yes
St. Kevin's Place	67	22%	18%	0.82	Yes
St. Kevin's Place	136/65/66/68	25%	15%	0.61	No
Total meets criteria			Yes	39	52%
			No	36	48%
Total Windows Analysed				75	

***Note**: Where multiple window reference numbers are grouped together, these are bay windows and a weighted average VSC has been calculated.*

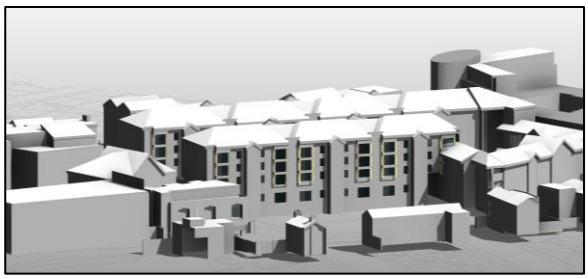


Figure 22 – Existing Massing + Greenville Pl Mirrored

Figure 23 – Proposed Massing

Table 16 Daylight Access to Existing Buildings - Greenville Pl Mirrored

Building Refer	Window Ref	VSC Existing	VSC Proposed	Ratio of VSC Proposed to VSC Existing	Meets BRE Criteria
01 Greenville Parade	57	34%	29%	0.84	Yes
01 Greenville Parade	58	32%	27%	0.82	Yes
01 Hammond St	54	31%	21%	0.69	No
01 Hammond St	205/206/	28%	20%	0.71	No
01 Hammond St	53/207/	30%	22%	0.73	No
01 Hammond St	137/54/	31%	28%	0.91	Yes
02 Greenville Parade	59	34%	28%	0.83	Yes
02 Greenville Parade	60	32%	26%	0.81	Yes
03 Greenville Parade	61	34%	27%	0.80	Yes
03 Greenville Parade	62	32%	25%	0.77	No
04 Greenville Parade	63	34%	27%	0.79	Yes
04 Greenville Parade	64	32%	24%	0.76	No
05 Greenville Parade	55	34%	26%	0.78	No
05 Greenville Parade	138	31%	23%	0.74	No
G. Place-Block 01	93	22%	19%	0.86	Yes
G. Place-Block 01	100	20%	18%	0.87	Yes
G. Place-Block 01	101	24%	22%	0.89	Yes
G. Place-Block 01	156	10%	8%	0.79	No
G. Place-Block 01	157	20%	20%	1.00	Yes
G. Place-Block 01	90/156/157	27%	25%	0.91	Yes
G. Place-Block 01	91/158/159	29%	27%	0.94	Yes
G. Place-Block 01	92/160/161	31%	29%	0.96	Yes
G. Place-Block 02	94	25%	19%	0.78	No
G. Place-Block 02	104	19%	14%	0.73	No
G. Place-Block 02	105	22%	17%	0.77	No
G. Place-Block 02	106	24%	20%	0.82	Yes
G. Place-Block 02	73	34%	28%	0.84	Yes
G. Place-Block 02	71/143/144	24%	20%	0.82	Yes
G. Place-Block 02	73/152/153	27%	23%	0.86	Yes
G. Place-Block 02	74/154/155	28%	26%	0.90	Yes
G. Place-Block 03	95	24%	19%	0.79	No
G. Place-Block 03	108	18%	15%	0.80	Yes
G. Place-Block 03	109	22%	18%	0.82	Yes
G. Place-Block 03	162	15%	13%	0.91	Yes
G. Place-Block 03	163	9%	8%	0.87	Yes
G. Place-Block 03	75/162/163	24%	20%	0.82	Yes
G. Place-Block 03	76/164/165	26%	23%	0.86	Yes
G. Place-Block 03	77/166/167	28%	25%	0.90	Yes
G. Place-Block 04	97	24%	20%	0.85	Yes
G. Place-Block 04	116	19%	15%	0.83	Yes
G. Place-Block 04	117	22%	18%	0.84	Yes

Building Refer	Window Ref	VSC Existing	VSC Proposed	Ratio of VSC Proposed to VSC Existing	Meets BRE Criteria
G. Place-Block 05	171	10%	9%	0.87	Yes
G. Place-Block 04	118	24%	20%	0.85	Yes
G. Place-Block 04	78/168/169	24%	20%	0.85	Yes
G. Place-Block 04	79/174/175	26%	23%	0.87	Yes
G. Place-Block 04	80/180/181	28%	25%	0.90	Yes
G. Place-Block 05	96	24%	20%	0.84	Yes
G. Place-Block 05	112	18%	16%	0.87	Yes
G. Place-Block 05	113	22%	19%	0.86	Yes
G. Place-Block 04	169	14%	13%	0.89	Yes
G. Place-Block 05	114	23%	21%	0.87	Yes
G. Place-Block 05	81/170/171	24%	20%	0.86	Yes
G. Place-Block 05	82/176/177	26%	23%	0.88	Yes
G. Place-Block 05	83/182/183	28%	25%	0.90	Yes
G. Place-Block 06	98	24%	20%	0.86	Yes
G. Place-Block 06	120	18%	16%	0.85	Yes
G. Place-Block 06	121	23%	19%	0.86	Yes
G. Place-Block 06	173	15%	15%	1.00	Yes
G. Place-Block 06	122	25%	22%	0.88	Yes
G. Place-Block 06	84/172/173	24%	21%	0.89	Yes
G. Place-Block 06	85/178/179	27%	25%	0.91	Yes
G. Place-Block 06	86/184/185	29%	27%	0.93	Yes
Greenville South	125	22%	20%	0.91	Yes
Greenville South	127	25%	22%	0.91	Yes
Greenville South	134	28%	25%	0.91	Yes
Greenville South	135	15%	13%	0.85	Yes
Greenville South	187	5%	5%	0.99	Yes
Greenville South	188	5%	5%	0.99	Yes
Greenville South	124/186/189	19%	17%	0.93	Yes
Greenville South	126/187/190	21%	20%	0.93	Yes
Greenville South	128/188/191	23%	22%	0.93	Yes
Greenville South	130/193/192	14%	13%	0.90	Yes
Greenville South	132/195/194	17%	15%	0.91	Yes
Greenville South	134/196/197	20%	18%	0.92	Yes
St. Kevin's Place	67	21%	18%	0.85	Yes
St. Kevin's Place	136/65/66/68	23%	15%	0.66	No
Total meets criteria			Yes	63	83%
			No	13	17%
Total Windows Analysed				76	

***Note**: Where multiple window reference numbers are grouped together, these are bay windows and a weighted average VSC has been calculated.*

Appendix H – Sunlight Access to Existing Buildings Results

Table 17 Sunlight Access to Existing Buildings

Building Ref	Window Ref	APSH Existing	APSH Proposed	APSH Existing/ Proposed	APSH Meets BRE Criteria	WPSH Existing	WPSH Proposed	WPSH Existing/ Proposed	WPSH Meets BRE Criteria	Meets APSH & WPSH Criteria
01 Greenville Parade	58	60%	49%	0.82	Yes	20%	11%	0.55	Yes	Yes
01 Greenville Parade	57	61%	52%	0.85	Yes	19%	12%	0.63	Yes	Yes
01 Hammond St	205	20%	5%	0.25	No	2%	1%	0.50	No	No
01 Hammond St	53	22%	5%	0.23	No	3%	1%	0.33	No	No
01 Hammond St	54	50%	38%	0.76	Yes	14%	13%	0.93	Yes	Yes
02 Greenville Parade	60	60%	48%	0.80	Yes	20%	11%	0.55	Yes	Yes
02 Greenville Parade	59	60%	52%	0.87	Yes	19%	12%	0.63	Yes	Yes
03 Greenville Parade	62	59%	44%	0.75	Yes	19%	11%	0.58	Yes	Yes
03 Greenville Parade	61	62%	50%	0.81	Yes	20%	12%	0.60	Yes	Yes
04 Greenville Parade	64	58%	45%	0.78	Yes	18%	11%	0.61	Yes	Yes
04 Greenville Parade	63	61%	50%	0.82	Yes	20%	13%	0.65	Yes	Yes
05 Greenville Parade	55	59%	48%	0.81	Yes	19%	15%	0.79	Yes	Yes
05 Greenville Parade	138	55%	40%	0.73	Yes	16%	10%	0.63	Yes	Yes
G. Place-Block 01	100	2%	0%	0.00	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 01	93	14%	8%	0.57	No	1%	0%	0.00	No	No
G. Place-Block 01	101	5%	0%	0.00	No	0%	0%	1.00	Yes	No
G. Place-Block 01	90	25%	17%	0.68	No	4%	3%	0.75	No	No
G. Place-Block 01	103	6%	2%	0.33	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 01	91	27%	21%	0.78	No	4%	4%	1.00	Yes	No
G. Place-Block 01	102	5%	2%	0.40	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 01	92	30%	27%	0.90	Yes	4%	4%	1.00	Yes	Yes
G. Place-Block 02	106	21%	16%	0.76	No	2%	2%	1.00	Yes	No
G. Place-Block 02	71	28%	23%	0.82	Yes	5%	5%	1.00	Yes	Yes
G. Place-Block 02	104	18%	11%	0.61	No	2%	1%	0.50	No	No
G. Place-Block 02	73	31%	26%	0.84	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 02	107	18%	15%	0.83	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 02	105	22%	13%	0.59	No	2%	2%	1.00	Yes	No
G. Place-Block 02	94	19%	17%	0.89	Yes	3%	2%	0.67	Yes	Yes
G. Place-Block 02	74	31%	28%	0.90	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 03	95	15%	13%	0.87	Yes	1%	0%	0.00	Yes	Yes
G. Place-Block 03	75	23%	18%	0.78	No	3%	3%	1.00	Yes	No
G. Place-Block 03	108	1%	1%	1.00	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 03	76	25%	21%	0.84	Yes	3%	3%	1.00	Yes	Yes
G. Place-Block 03	111	5%	3%	0.60	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 03	110	5%	2%	0.40	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 03	77	27%	24%	0.89	Yes	4%	4%	1.00	Yes	Yes
G. Place-Block 03	109	5%	2%	0.40	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 04	119	6%	2%	0.33	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 04	118	6%	1%	0.17	No	0%	0%	1.00	Yes	No
G. Place-Block 04	97	15%	10%	0.67	No	1%	1%	1.00	Yes	No
G. Place-Block 04	81	25%	15%	0.60	No	3%	3%	1.00	Yes	No
G. Place-Block 04	116	2%	0%	0.00	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 04	117	5%	0%	0.00	No	0%	0%	1.00	Yes	No
G. Place-Block 04	82	27%	18%	0.67	No	3%	3%	1.00	Yes	No
G. Place-Block 04	83	28%	24%	0.86	Yes	4%	4%	1.00	Yes	Yes
G. Place-Block 05	96	20%	13%	0.65	No	3%	3%	1.00	Yes	No
G. Place-Block 05	78	27%	19%	0.70	No	4%	4%	1.00	Yes	No
G. Place-Block 05	112	18%	13%	0.72	No	3%	3%	1.00	Yes	No
G. Place-Block 05	113	22%	16%	0.73	No	2%	2%	1.00	Yes	No
G. Place-Block 05	115	18%	16%	0.89	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 05	114	22%	16%	0.73	No	2%	2%	1.00	Yes	No

Building Ref	Window Ref	APSH Existing	APSH Proposed	APSH Existing/ Proposed	APSH Meets BRE Criteria	WPSH Existing	WPSH Proposed	WPSH Existing/ Proposed	WPSH Meets BRE Criteria	Meets APSH & WPSH Criteria
G. Place-Block 05	80	29%	26%	0.90	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 05	79	32%	24%	0.75	No	6%	6%	1.00	Yes	No
G. Place-Block 06	98	17%	17%	1.00	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 06	120	16%	16%	1.00	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 06	121	23%	21%	0.91	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 06	84	24%	24%	1.00	Yes	3%	3%	1.00	Yes	Yes
G. Place-Block 06	85	31%	31%	1.00	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 06	122	23%	20%	0.87	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 06	86	31%	31%	1.00	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 06	123	19%	16%	0.84	Yes	2%	2%	1.00	Yes	Yes
Greenville South	134	4%	4%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	130	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	129	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	125	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	126	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	131	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	133	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	127	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	132	2%	2%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	135	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	128	2%	2%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	124	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
St. Kevin's Place	65	65%	29%	0.45	Yes	14%	2%	0.14	No	No
St. Kevin's Place	66	64%	28%	0.44	Yes	10%	1%	0.10	No	No
St. Kevin's Place	67	57%	45%	0.79	Yes	7%	6%	0.86	Yes	Yes
								Total Meeting Annual Criteria	Yes	55	72%
								Total Meeting Winter Criteria	Yes	69	91%
								Total Meeting Both Criteria	Yes	53	70%
								Total Windows Analysed		76	

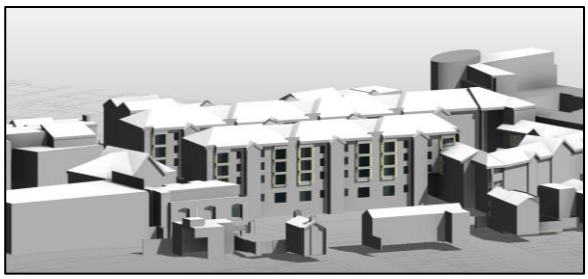


Figure 24 – Existing Massing + Greenville Pl Mirrored

Figure 25 – Proposed Massing

Table 18 Sunlight Access to Existing Buildings - Greenville Pl Mirrored

Building Ref	Window Ref	APSH Existing	APSH Proposed	APSH Existing/ Proposed	APSH Meets BRE Criteria	WPSH Existing	WPSH Proposed	WPSH Existing/ Proposed	WPSH Meets BRE Criteria	Meets APSH & WPSH Criteria
01 Greenville Parade	58	60%	49%	0.82	Yes	20%	11%	0.55	Yes	Yes
01 Greenville Parade	57	61%	52%	0.85	Yes	19%	12%	0.63	Yes	Yes
01 Hammond St	205	20%	5%	0.25	No	2%	1%	0.50	No	No
01 Hammond St	53	22%	5%	0.23	No	3%	1%	0.33	No	No
01 Hammond St	54	50%	38%	0.76	Yes	14%	13%	0.93	Yes	Yes
02 Greenville Parade	60	60%	48%	0.80	Yes	20%	11%	0.55	Yes	Yes
02 Greenville Parade	59	60%	52%	0.87	Yes	19%	12%	0.63	Yes	Yes
03 Greenville Parade	62	59%	44%	0.75	Yes	19%	11%	0.58	Yes	Yes
03 Greenville Parade	61	62%	50%	0.81	Yes	20%	12%	0.60	Yes	Yes
04 Greenville Parade	64	58%	45%	0.78	Yes	18%	11%	0.61	Yes	Yes
04 Greenville Parade	63	61%	50%	0.82	Yes	20%	13%	0.65	Yes	Yes
05 Greenville Parade	55	59%	48%	0.81	Yes	19%	15%	0.79	Yes	Yes
05 Greenville Parade	138	55%	40%	0.73	Yes	16%	10%	0.63	Yes	Yes
G. Place-Block 01	100	2%	0%	0.00	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 01	93	14%	8%	0.57	No	1%	0%	0.00	No	No
G. Place-Block 01	101	5%	0%	0.00	No	0%	0%	1.00	Yes	No
G. Place-Block 01	90	25%	17%	0.68	No	4%	3%	0.75	No	No
G. Place-Block 01	103	6%	2%	0.33	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 01	91	27%	21%	0.78	No	4%	4%	1.00	Yes	No
G. Place-Block 01	102	5%	2%	0.40	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 01	92	30%	27%	0.90	Yes	4%	4%	1.00	Yes	Yes
G. Place-Block 02	106	21%	16%	0.76	No	2%	2%	1.00	Yes	No
G. Place-Block 02	71	28%	23%	0.82	Yes	5%	5%	1.00	Yes	Yes
G. Place-Block 02	104	18%	11%	0.61	No	2%	1%	0.50	No	No
G. Place-Block 02	73	31%	26%	0.84	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 02	107	18%	15%	0.83	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 02	105	22%	13%	0.59	No	2%	2%	1.00	Yes	No
G. Place-Block 02	94	19%	17%	0.89	Yes	3%	2%	0.67	Yes	Yes
G. Place-Block 02	74	31%	28%	0.90	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 03	95	15%	13%	0.87	Yes	1%	0%	0.00	Yes	Yes
G. Place-Block 03	75	23%	18%	0.78	No	3%	3%	1.00	Yes	No
G. Place-Block 03	108	1%	1%	1.00	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 03	76	25%	21%	0.84	Yes	3%	3%	1.00	Yes	Yes
G. Place-Block 03	111	5%	3%	0.60	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 03	110	5%	2%	0.40	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 03	77	27%	24%	0.89	Yes	4%	4%	1.00	Yes	Yes
G. Place-Block 03	109	5%	2%	0.40	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 04	119	6%	2%	0.33	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 04	118	6%	1%	0.17	No	0%	0%	1.00	Yes	No

Building Ref	Window Ref	APSH Existing	APSH Proposed	APSH Existing/ Proposed	APSH Meets BRE Criteria	WPSH Existing	WPSH Proposed	WPSH Existing/ Proposed	WPSH Meets BRE Criteria	Meets APSH & WPSH Criteria
G. Place-Block 04	97	15%	10%	0.67	No	1%	1%	1.00	Yes	No
G. Place-Block 04	81	25%	15%	0.60	No	3%	3%	1.00	Yes	No
G. Place-Block 04	116	2%	0%	0.00	Yes	0%	0%	1.00	Yes	Yes
G. Place-Block 04	117	5%	0%	0.00	No	0%	0%	1.00	Yes	No
G. Place-Block 04	82	27%	18%	0.67	No	3%	3%	1.00	Yes	No
G. Place-Block 04	83	28%	24%	0.86	Yes	4%	4%	1.00	Yes	Yes
G. Place-Block 05	96	20%	13%	0.65	No	3%	3%	1.00	Yes	No
G. Place-Block 05	78	27%	19%	0.70	No	4%	4%	1.00	Yes	No
G. Place-Block 05	112	18%	13%	0.72	No	3%	3%	1.00	Yes	No
G. Place-Block 05	113	22%	16%	0.73	No	2%	2%	1.00	Yes	No
G. Place-Block 05	115	18%	16%	0.89	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 05	114	22%	16%	0.73	No	2%	2%	1.00	Yes	No
G. Place-Block 05	80	29%	26%	0.90	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 05	79	32%	24%	0.75	No	6%	6%	1.00	Yes	No
G. Place-Block 06	98	17%	17%	1.00	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 06	120	16%	16%	1.00	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 06	121	23%	21%	0.91	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 06	84	24%	24%	1.00	Yes	3%	3%	1.00	Yes	Yes
G. Place-Block 06	85	31%	31%	1.00	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 06	122	23%	20%	0.87	Yes	2%	2%	1.00	Yes	Yes
G. Place-Block 06	86	31%	31%	1.00	Yes	6%	6%	1.00	Yes	Yes
G. Place-Block 06	123	19%	16%	0.84	Yes	2%	2%	1.00	Yes	Yes
Greenville South	134	4%	4%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	130	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	129	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	125	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	126	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	131	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	133	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	127	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	132	2%	2%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	135	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	128	2%	2%	1.00	Yes	0%	0%	1.00	Yes	Yes
Greenville South	124	0%	0%	1.00	Yes	0%	0%	1.00	Yes	Yes
St. Kevin's Place	65	65%	29%	0.45	Yes	14%	2%	0.14	No	No
St. Kevin's Place	66	64%	28%	0.44	Yes	10%	1%	0.10	No	No
St. Kevin's Place	67	57%	45%	0.79	Yes	7%	6%	0.86	Yes	Yes
								Total Meeting Annual Criteria	Yes	55	72%
								Total Meeting Winter Criteria	Yes	69	91%
								Total Meeting Both Criteria	Yes	53	70%
								Total Windows Analysed		76	

Appendix I – Sunlight Access to Neighbouring Amenity Areas Results

Table 19 Sunlight Access to Neighbouring Amenity Areas

Amenity Area	Area m²	Area Receiving 2 Hrs of Sunlight - Existing %	Area Receiving 2 Hrs of Sunlight - Proposed %	Existing Vs Proposed	Meets BRE Criteria
01 Hammond St	59	11%	10%	86%	Yes
66A Clarence Mangan Rd	26	0%	0%	0%	Yes
St Kevin's Terrace	72	100%	100%	100%	Yes
Total Areas Meeting Criteria			**Yes**	**3**	**100%**
			No	**0**	**0%**
Total Amenity Areas Tested				**3**	

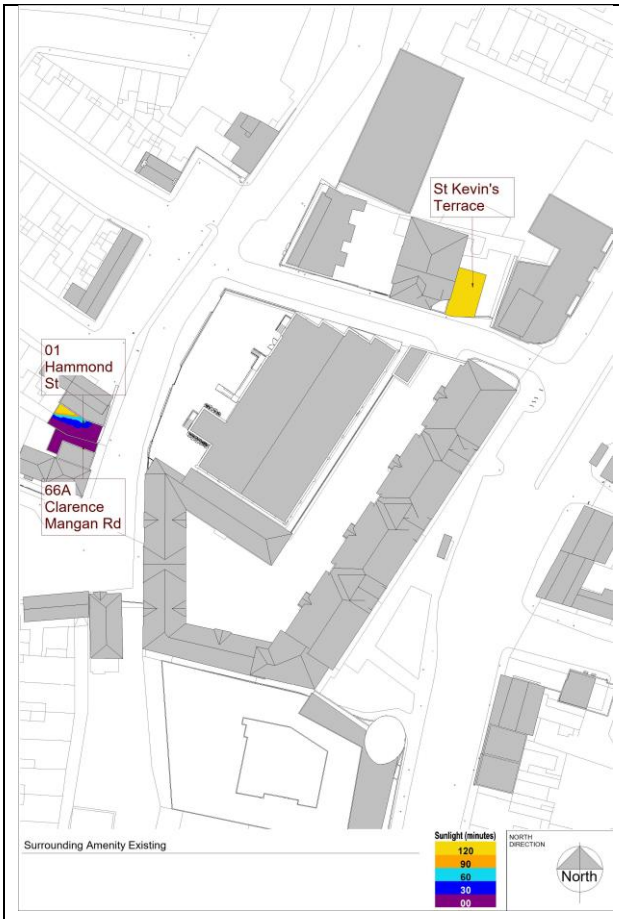


Figure 26 Amenity Area - Existing

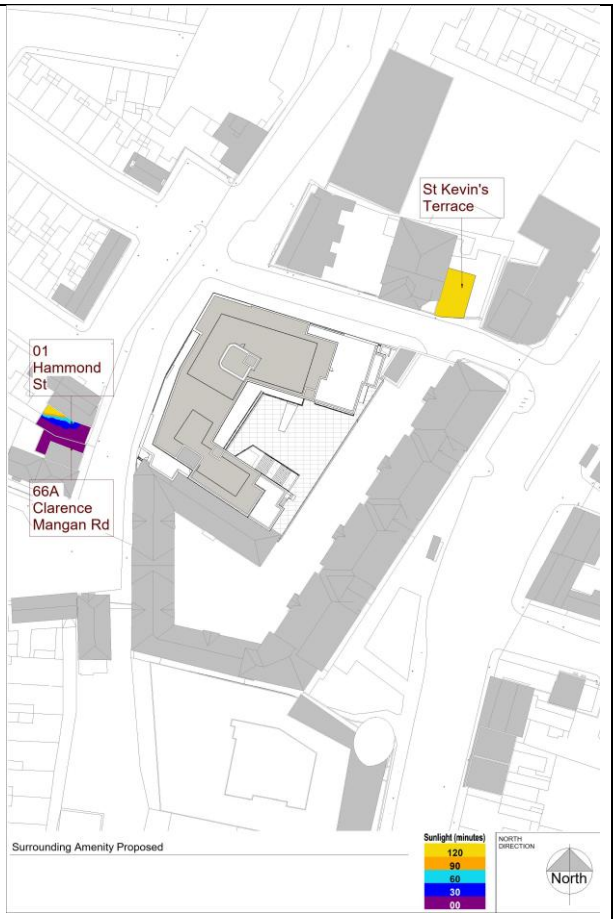


Figure 27 Amenity Area - Proposed

Appendix J – Site Shadow Diagrams

A shadow study was conducted to indicate the shadows cast by the proposal throughout the year. The analysis was run at hourly intervals during daylight hours on:

- 21st March – Spring Equinox
- 21st June – Summer Solstice
- 21st December – Winter Solstice

The BRE Guide recommends:

"If a space is used all year round, the equinox (21 March) is the best date for which to prepare shadow plots as it gives an average level of shadowing. Lengths of shadows at the autumn equinox (21 September) will be the same as those for 21 March, so a separate set of plots for September is not required."[23]

And

"As an optional addition, plots for summertime (for example 21 June) may be helpful as they will show the reduced shadowing then, although it should be borne in mind that 21 June represents the best case of minimum shadow, and that shadows for the rest of the year will be longer. Conversely if winter shadows (e.g. 21 December) are plotted, even low buildings will cast long shadows. In a built-up area, it is common for large areas of the ground to be in shadow in December."[24]

See Next Page.

[23] BRE Guide: 3.3.14

[24] BRE Guide: 3.3.15

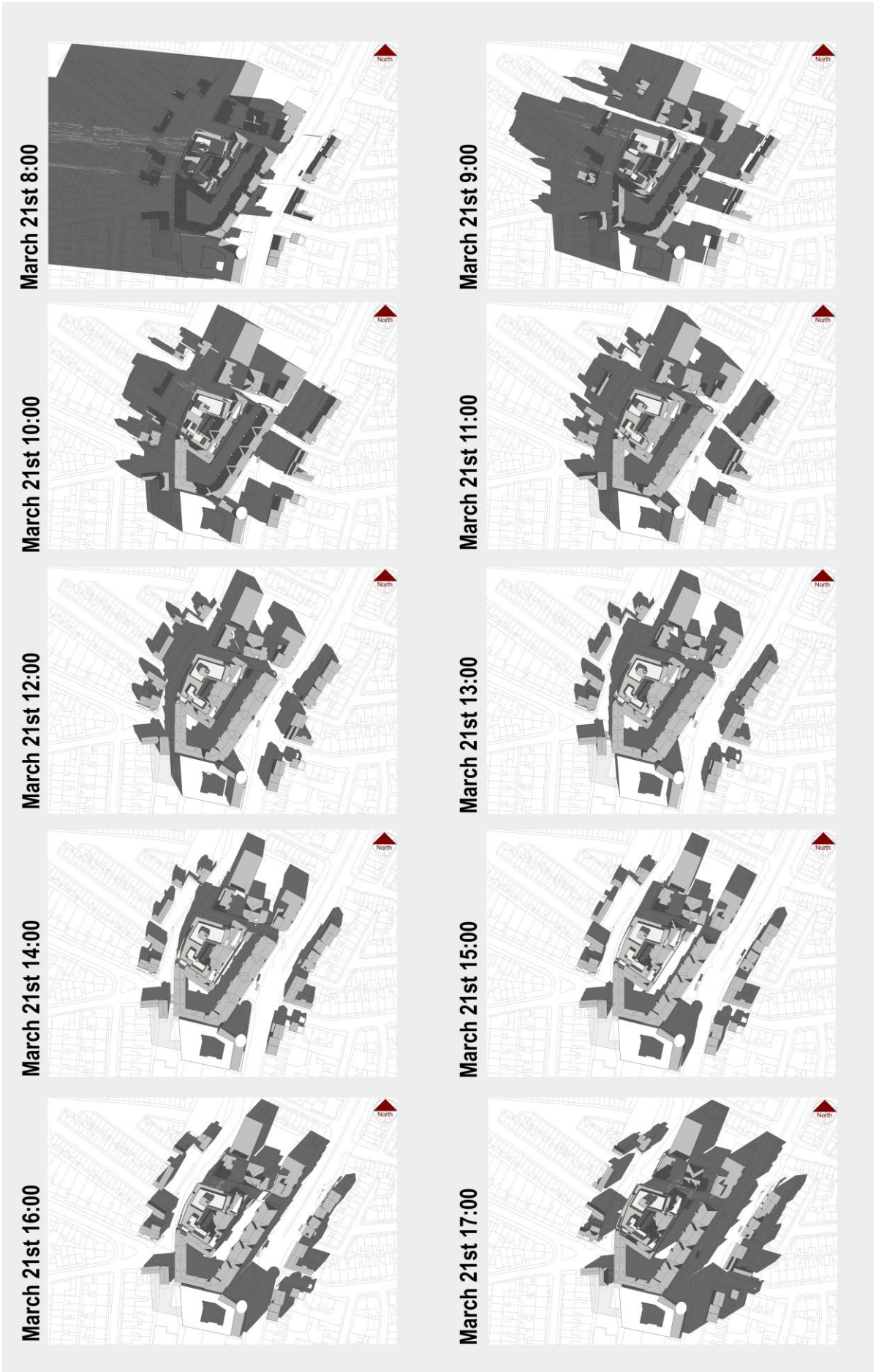


Figure 28 Shadow Diagrams - March 21st Spring Equinox

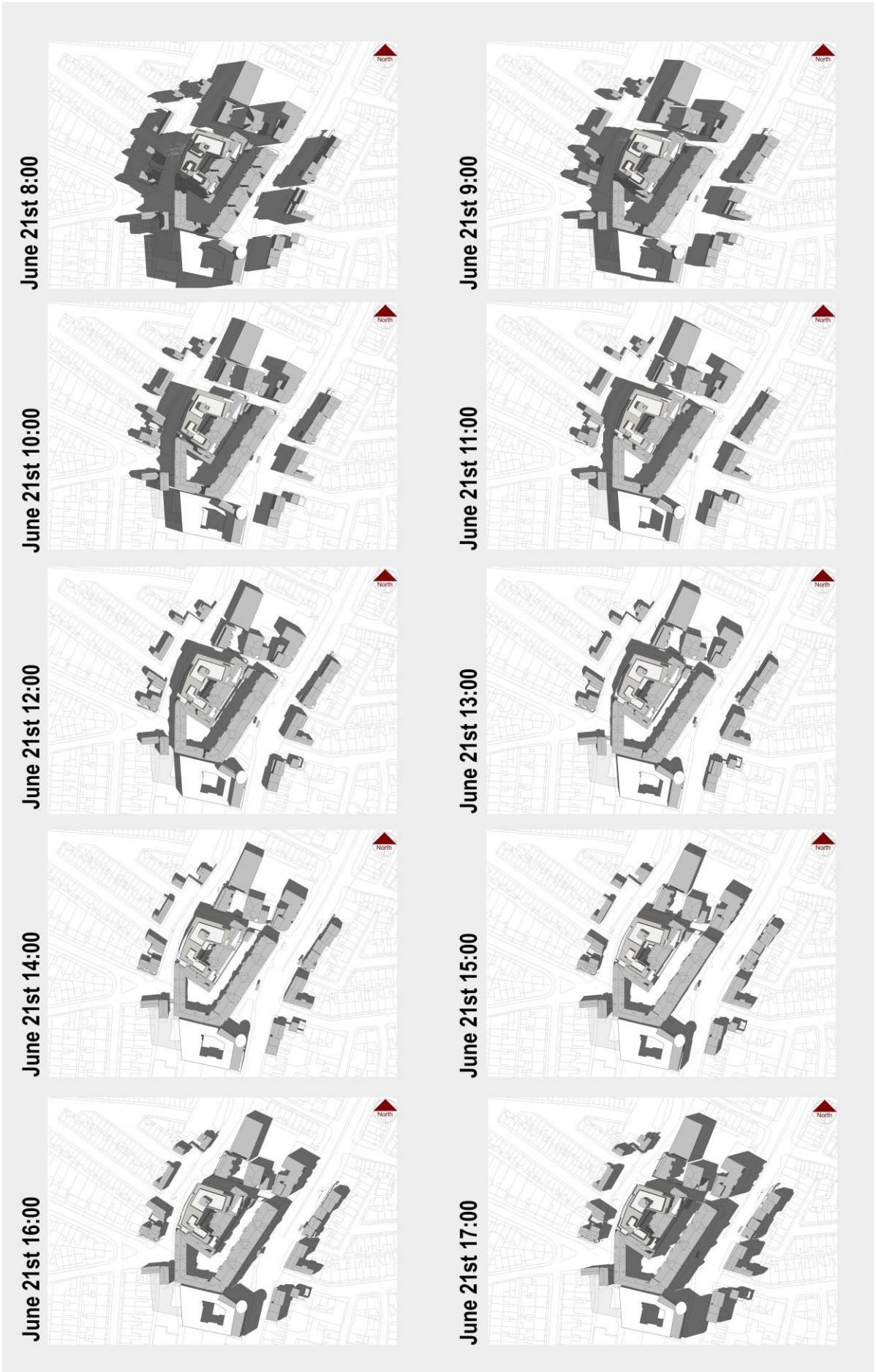


Figure 29 Shadow Diagrams - June 21st Summer Solstice

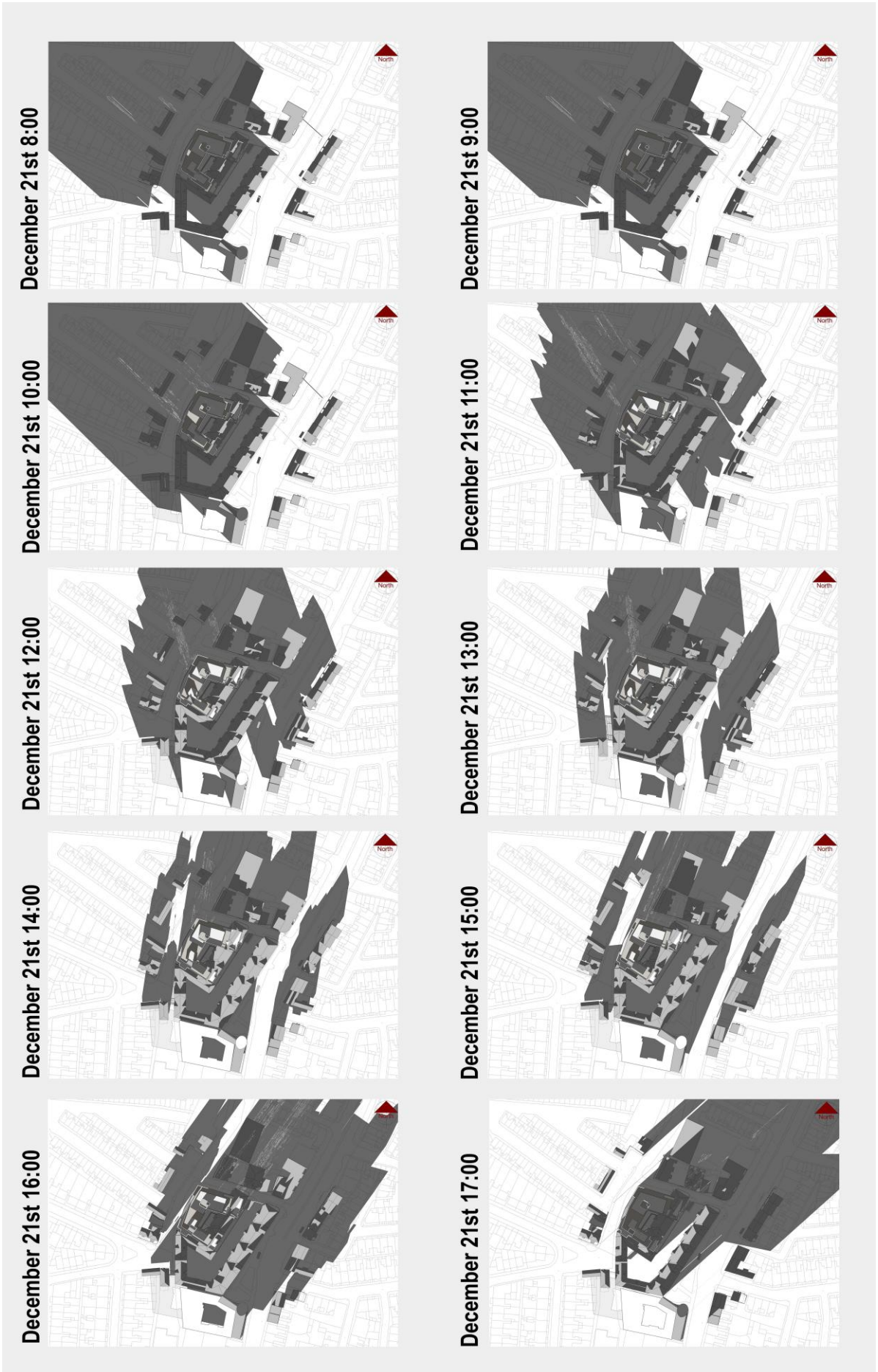


Figure 30 Shadow Diagrams – December 21st Winter Solstice

End of Report