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CONSULTING LIMITED

Client: Hightown Housing Association

Daylight and Sunlight Assessment Provision for the Development at 29 Broadwater Road, Hertfordshire AL7 3BQ

October 2019

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Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Date	Written by	Checked by
0	Draft Issue	30th August 2019	AP	SPH
1	Final Issue	31st October 2019	AP	SPH

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Contents

1 Background and Scope of Appraisal

1.1 Study Objectives

Herrington Consulting has been commissioned by Hightown Housing Association to analyse and quantify the provision of natural daylight and sunlight to a selected number of habitable rooms within the proposed development. These are predominantly located on the internal faces of the courtyard and those on the north side of the building at 29 Broadwater Road, Hertfordshire AL7 3BQ .

1.2 Site Location

The site is situated town of Welwyn Garden City and is located within the County of Hertfordshire. The location of the site is shown in Figure 2.1 and the site plan included in Appendix A.1 of this report gives a more detailed reference to the site location and layout.

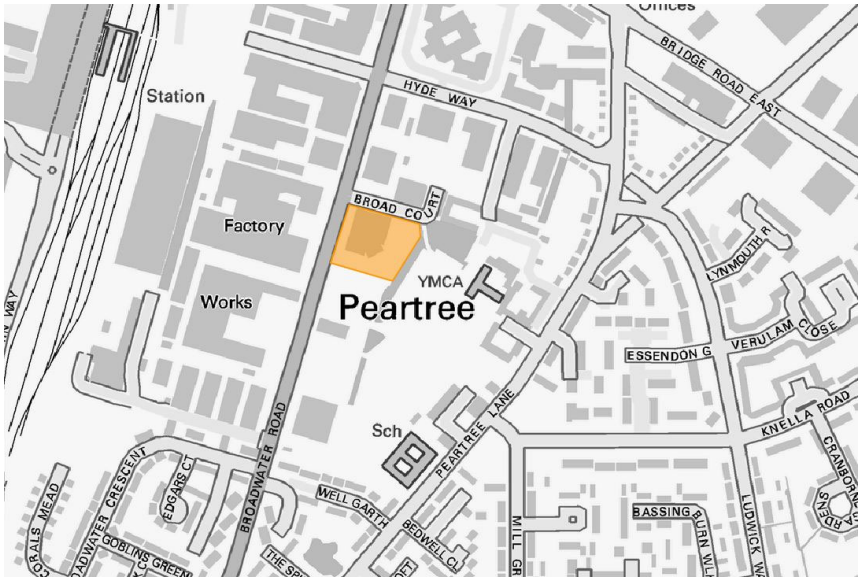


Figure 2.1 – Location map (Contains Ordnance Survey data © Crown copyright and database right 2011)

1.3 The Development

The proposal for development is demolish the existing building and construct a 4-storey building containing residential units. Drawings of the proposed scheme are included in Appendix A.1 of this report.

2 Policy and Guidance

2.1 National Planning Policy

National Planning Policy Framework (Revised February 2019)

Paragraph 123 on 'Achieving appropriate densities' states that *"c) local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)."*

2.2 Regional Planning Policy

Hertfordshire County Council planning documents do not contain any information regarding daylight, sunlight or overshadowing.

2.3 Local Planning Policy

Welwyn Hatfield Supplementary Design Guidance (February 2005)

Paragraph 2.2 under 'Quality of Public Areas and the Public Realm' states that '*The main issues to be taken into account in the quality of public areas and the public realm are: that the design takes into account the micro climate (i.e. the daylight and sunlight, the wind, the temperature and frost pockets), as this will influence both the orientation and design of buildings and the degree of enclosure'.*

Paragraph 3.3 under 'Passive Solar Design (PSD) states that *'This is the design of buildings to make the most of energy available freely from the sun in the form of solar heat, daylight and wind, so minimising the need for artificial means of heating, lighting, ventilation and cooling'.* Further to this, paragraph 3.3 states that *'The key principles of passive solar design are:…Providing adequate access to daylight'.*

Paragraph 3.9 under 'Built Form and PSD' states that '*The form of a building can affect PSD. A building with large or poorly positioned wings, eaves or overly wide eaves, may overshadow itself, reduce solar gain and daylighting. However, well-proportioned eaves can provide welcome shade in the summer…'.* Further to this, paragraph 3.10 states that *'Buildings with a deep floor plan, whilst having a smaller external envelope are only able to achieve natural daylight close to the windows and natural ventilation can be difficult to achieve. One way of overcoming this is to incorporate a central atrium into the development to bring in daylight, natural ventilation and improve amenity'.*

Paragraph 3.18 under 'Sunlight and Daylight' states that '*This section supplements Policy D1 Quality of Design in the District Plan. All new developments should be designed and built to ensure that there is a satisfactory level of sunlight and daylight to both the new development and surrounding developments and/or open spaces… Access to sunlight and daylight not only improves the interior and exterior appearance of a building, it also improves the*

standard of living or workspace for the residents or users of a building. Access to sunlight can help make a building more energy efficient, whilst daylight reduces the need for electric lighting and winter solar gain can meet some of the heating requirements. Advice on site layout planning to achieve good sunlight and daylight within the buildings and the open spaces between them is set out in the Building Research Establishment's document entitled, 'Site Layout Planning for Daylight and Sunlight: a guide to good practice', 1991'.

2.4 Best Practice Guidance

In the absence of official national planning guidance / legislation on daylight and sunlight, the most recognised guidance document is published by the Building Research Establishment and entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice', Second Edition, 2011; herein referred to as the 'BRE Guidelines'.

The BRE Guidelines are not mandatory and themselves state that they should not be used as an instrument of planning policy, however in practice they are heavily relied upon as they provide a good guide to approach, methodology and evaluation of daylight and sunlight impacts.

In conjunction with the BRE Guidelines further guidance is given within the British Standard (BS) 8206-2:2008: 'Lighting for buildings - Part 2: Code of practice for daylighting'.

In this assessment, the BRE Guidelines have been used to establish the extent to which the Proposed Development meets current best practice guidelines. In cases where the Development is likely to reduce light to key windows the study has compared results against the BRE criteria.

Whilst the BRE Guidelines provide numerical guidance for daylight, sunlight and overshadowing, these criteria should not be seen as absolute targets. The document states that the intention of the guide is to aid rather than constrain the designer. The Guide is not an instrument of planning policy, therefore whilst the methods given are technically robust, it is acknowledged that some level of flexibility should be applied where appropriate.

3 Assessment Techniques

3.1 Background

Natural light refers to both daylight and sunlight. However, a distinction between these two concepts is required for the purpose of analysis and quantification of natural light in buildings. In this assessment, the term '*Daylight*' is used for natural light where the source is the sky in overcast conditions, whilst '*Sunlight*' refers specifically to the light coming directly from the sun.

3.2 Average Daylight Factor

The Average Daylight Factor (ADF) method calculates the average illuminance within a room as a proportion of the illuminance available to an unobstructed point outdoors under a sky of known luminance and luminance distribution. This is the most detailed of the daylight calculations and considers the physical nature of the room behind the window, including; window transmittance, and surface reflectivity.

This method of quantifying the availability of daylight within a room does, however, require the internal layout to be known and is generally only used for establishing daylight provision in new rooms. The BRE Guide sets out the following guidelines for the assessment of the ADF:

If a predominantly daylit appearance is required, then the ADF should be 5% or more if there is no supplementary electric lighting, or 2% or more if supplementary electric lighting is provided. In dwellings, the following minimum average daylight factors should be achieved: 1% in bedrooms, 1.5% in living rooms and 2% in kitchens.

3.3 No Sky Line

The No Sky Line, or sometimes referred to as No Sky View method, describes the distribution of daylight within rooms by calculating the area of the 'working plane', which can receive a direct view of the sky. The working plane height is generally set at 850mm above floor level within a residential property and 700mm within a commercial property.

If a significant area of the working plane lies beyond the NSL, i.e. this area of the room has no view of the sky at the working plane height, there is likely to be a poor distribution of daylight within the room. However, this test is relatively simplistic and based purely on geometric parameters. Consequently, no account is taken of the reflectance of light within the room.

The BRE Guidelines do recommend that the NSL test is applied alongside the ADF test, and this is primarily to provide an indication of how well the daylight within the room is distributed. The determination of the level of adequacy of natural daylighting is, however, still predominantly driven by the ADF target values. Notwithstanding this, the NSL test does provide useful information on the way that the daylight is distributed within a room and this is often useful to the designer. The NSL test has therefore been undertaken alongside the ADF analysis and the graphical and numerical outputs are included within the

appendix to this report. These results are, however, only used in a qualitative and informative way, rather than a quantitative pass/fail manner.

3.4 Room Depth Criteria

The BRE Guidelines do include advice for determining recommended room depths to proposed new rooms under specific circumstances using the Room Depth Criteria (RDC). This is more of a rule-of-thumb test that can be used to plan building layouts etc at an early conceptual stage, rather than providing quantitative outputs at the more detailed stage of a development.

This test has numerous limitations when being applied to anything but a simplistic room layout and does not take into account external obstructions. It is therefore not considered to provide any meaningful data on the level or distribution of daylight that is not already provided by the ADF and NSL tests. Consequently, it is only applied in very particular situations.

3.5 Annual Probable Sunlight Hours

It is also possible to quantify the amount of sunlight available to a new development and the recognised methodology for undertaking this analysis is the Annual Probable Sunlight Hours (APSH) method.

For a typical development to be considered as having very good levels of direct sunlight, the centre point of the window would ideally need to receive more than 25% of APSH for the year, including at least 5% in the winter months between 21st September and the 21st March. The BRE Guidelines also recommend having at least one main window of the proposed development facing within 90 degrees of due south, with priority given to living rooms where sunlight is especially appreciated in the afternoon. Bedrooms and kitchens are generally viewed as less important, where occupants normally prefer sunlight in the mornings.

For new development and especially where existing buildings are being re-developed, it is important to acknowledge that these are aspirational targets intended to aid and not constrain the designer.

3.6 Overshadowing

The BRE Guidance suggests that where new development is served by amenity areas, then analysis can be undertaken to quantify the amount of sunlight these amenity areas will enjoy. Typical examples of areas that could be considered as open spaces or amenity areas are main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas, such as in public squares and focal points for views, such as a group of monuments or fountains.

Sun Hours on Ground

The BRE Guidelines recommend that for a garden or amenity area to appear adequately sunlit throughout the year, at least 50% of an amenity area should receive at least 2 hours of sunlight on 21st March.

When undertaking this analysis, sunlight from an altitude of 10° or less has been ignored as this is likely to be obscured by planting and undulations in the surrounding topography. Driveways and hard standing for cars is also usually left

out of the area used for this calculation. Fences or walls less than 1.5 metres high are also ignored. Front gardens which are relatively small and visible from public footpaths are omitted with only main back gardens needing to be analysed.

The Guidelines also state that “normally, trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building”. This is especially the case for deciduous trees, which provide welcome shade in the summer whilst allowing sunlight to penetrate during the winter months.

4 Assessment Methodology

4.1 Method of Baseline Data Collation

The following data and information has been used to inform this study:

- OS Mastermap mapping
- Measured survey data (Norman Stangroome Associates – September 2018)
- Scheme drawings in AutoCAD format (McBains Ltd – April 2019)
- Aerial photography (Google Maps and Bing)

4.2 Numerical Modelling

The numerical analysis used in this assessment has been undertaken using the Waldrum Tools (Version 4.1.0.5) software package.

4.3 Calculation Assumptions

The following assumptions have been made when undertaking the analysis:

- When assessing the ADF for internal rooms and in the absence of specific information, the following parameters are assumed:
  - The glazing type is assumed to be double glazing (Pilkington K Glass 4/16/4 Argon filled) with a light transmittance value of 0.78 (value for double glazed unit not per pane).
  - Correction factor for frames and glazing bars = 0.8
  - Where information from the designer is not available, the following values are used to derive the Maintenance Factor applied to the transmittance values.

Location / setting	**Building type** (Residential – good maintenance)	**Exposure (normal)**	**Special exposure**	**Maintenance Factor**
Urban	8%	x 1.0	x 1.0	0.92
Rural / suburban	4%	x 1.0	x 1.0	0.96

Table 4.1 – Parameters used for deriving Maintenance Factor (refer to BS 8206-2:2008 Tables A3, A4 and A5)

- The reflectance values used in the ADF analysis of the proposed new buildings are shown in table 4.2 below and are used unless specified otherwise by the designer:

Surface	Value
Internal walls (painted pale cream)	81%
Internal ceiling (painted white)	85%
Internal flooring	30%

Table 4.2 – Reflectance values used in ADF analysis

5 Daylight Provision to Proposed New Rooms

5.1 Overview

As discussed in Section 4, the primary test for daylight is the Average Daylight Factor (ADF) test and this is discussed in detail in the following section. The No Sky Line (NSL) analysis has also been carried out to provide supporting information on the distribution of daylight within each of the habitable rooms. The NSL results are processed by the computational model in both graphical and numerical formats and these are included in the appendix to this report.

5.2 Average Daylight Factor

Using the analytical techniques and assumptions discussed in Sections 3 and 4, the daylighting tests have been applied for the habitable rooms within the proposed development.

In accordance with the guidance set out in both the BRE Guidelines and the BS 8206-2:2008 document, rooms that have a dual use, i.e. an open plan kitchen and lounge, are assessed as a single room and assessed against the room use with the highest daylighting requirement. For example, where a room includes both living and kitchen spaces, then the higher daylighting requirement of the kitchen is adopted as the threshold target.

However, where kitchens have a floor area that is less than 13m2 then it is conventional to assume that this is not a habitable room and the daylight tests need not be applied. Notwithstanding this, where kitchens form an integral part of a room, they have been included but the interpretation of the daylighting results reflects the non-habitable status of the kitchen area.

The results of this analysis are included in Appendix A.3 of this report and this shows the calculated ADF values for each room within the 79 flats tested.

From the results it can be seen that the majority of rooms within the proposed development exceed the minimum required ADF target values prescribed by the BRE Guidelines.

There are, however, 6 rooms which are falling short of the target ADF values recommended by the BRE Guidelines. As discussed previously, the aspirational ADF level for a room with mixed use is that with the higher ADF target value. In this case, all rooms which are falling below the target value are LKDs and therefore when taking the higher use (of the kitchen) as the target value, this would be 2.0%. However, further inspection of the floor plans show that the constraints regarding the density of development at this site have influenced the design such that the some of the apartments contain kitchens to the side of a larger room only. These kitchens are not considered to be habitable rooms in their own right due to the small room area assigned to the kitchen as part of the multi-use room.

In situations such as this, it is normal practice to assess the daylighting values for the ‘dominant’ room use, which in this case would be taken as the living space.

A more realistic target ADF value would therefore be taken as 1.5% rather than 2.0%.

This approach is supported by the BRE Guidelines, which advise that this is acceptable so long as the kitchen area is directly linked to a well-lit space. This is the case for all 6 remaining rooms, and therefore working towards a reduced target ADF value is considered acceptable. Given that all rooms exceed 1.5%, it can therefore be concluded that all rooms receive a good level of natural daylight that is commensurate with the predominant room use.

6 Sunlight Provision to Proposed Development

6.1 Annual Probable Sunlight Hours Assessment

The BRE Guidelines provide guidance in respect of sunlight quality for new developments stating: "in housing, the main requirement for sunlight is in living rooms, where it is valued at any time of the day, but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and in kitchens where people prefer it in the morning rather than the afternoon."

The assessment criteria set out within the BRE document are discussed in Section 4.3 of this report, but in general terms the overall objective sought by the guidelines is as follows: "*In general, a dwelling or non-domestic building which has a particular requirement for sunlight, will appear reasonably sunlit provided that at least one main window faces within 90 degrees of due south; and the centre of at least one window to a main living room can receive 25% of annual probable sunlight hours, including at least 5% of annual probable sunlight hours in the winter months between 21st September and 21st March*".

It is also worth noting that in paragraph 3.1.11 of the BRE guidance it is suggested that if a room faces significantly north of due east or west it is unlikely to meet the recommended levels of sunlight. A further observation from paragraph 5.3 of the BS 8206-2 is that with regards to sunlight duration, the degree of satisfaction is related to the expectation of sunlight. Therefore, if a room is north facing or if the building is in a densely-built urban area, the absence of sunlight is more acceptable than when its exclusion seems arbitrary.

It should be noted that where rooms have more than one window, it is acceptable to sum the non-coincident sunlight hours to achieve a 'room total'. This approach is acknowledged by the BRE Guidelines and facilitates a greater understanding of the sunlight received within a room by taking into account the fact that some windows will receive sunlight at different times during the day.

The complete set of results of the APSH analysis are presented in Appendix A.3 of this report.

The results in Appendix A.3 show that for the majority of flats there is a living area which receives sunlight levels above the BRE recommendations of 25% Annual Probable Sunlight hours and 5% Winter Probable Sunlight Hours.

This leaves 10 flats which contain living areas which are not reaching these aspirational target values. For 6 of these flats (Flats 24, 30, 44, 50, 64 & 70) this is due to the windows facing within 90degrees of due north.

An observation from Paragraph 5.3 of the BS 8206-2 on this point is that with regards to sunlight duration, the degree of satisfaction is related to the expectation of sunlight. Therefore, if a room is north facing, then the expectation of sunlight by occupants will be lower.

It is also worth acknowledging at this point that the BRE target levels for sunlight are based on typical dwelling configuration and are not necessarily entirely appropriate for more dense apartment style development. In such cases, it is widely acknowledged that not all units will have south facing aspects.

When examining the results of the 4 remaining flats (Flats 11, 31, 51 and 53), it is clear that in addition to the main living space that has been reported on, with the exception of Flat 11, all flats contains another habitable room which receives in excess of the recommended target sunlight levels. Inspection of the results for Flat 11 show that this unit is only very marginally below the aspirational target values. Therefore, given that the vast majority of the rooms within the proposed development meet or exceed the target sunlight levels, the development as a whole is considered to offer a high level of amenity value that is derived directly from sunlight.

It is important to note that the NPPF states that "*when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site".* Further to this, the Welwyn Hatfield Supplementary Design Guidance (February 2005) states that "*All new development should be designed and built to ensure that there is a satisfactory level of sunlight and daylight".*

Taking into account the high level of compliance with BRE sunlight targets and the recommendations of the NPPF for authorities to take a flexible approach when applying daylight and sunlight guidelines, the overall sunlight levels are considered to represent a respectable achievement for a development of this scale and would be considered to be satisfactory.

6.2 Direct Sunlighting to Amenity Spaces

The BRE Guidelines acknowledge that good site layout planning for daylight and sunlight should not limit itself to providing good natural light inside buildings. Sunlight in the space between buildings has an important effect on the overall appearance and ambiance of a development. The worst situation is to have significant areas on which the sun does not shine for a large part of the year. These areas would, in general, be damp, chilly and uninviting.

The BRE Guidelines set out the following principle benefits of sunlight in the spaces between buildings:

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

The assessment criteria set out within the BRE Guidelines is based on the recommendation that for an amenity space to appear adequately sunlit

throughout the year, at least half of this area should receive at least two hours of sunlight on 21st March.

Inspection of the site plan shows clearly that the residents of the apartments will have access to a large area of amenity space in the centre of the courtyard which is accessible to all. The analysis that has been undertaken as part of this assessment (refer to appendix for detailed graphical and numerical outputs) has demonstrated that this area will receive well in excess of 2 hours of direct sunlight to all of its area on the 21st March. In exceeding the minimum target of 50%, this amenity space will deliver the principle benefits derived from direct sunlight and as a result will help deliver the amenity benefits provided by outdoor spaces.

7 Conclusions

The detailed analysis undertaken as part of this assessment has examined the provision of natural daylight and sunlight to the habitable rooms for the proposed development at 29 Broadwater Road, Hertfordshire. Using detailed numerical modelling applications, the Average Daylight Factor (ADF) and Annual Probable Sunlight Hours (APSH) have been quantified for each room. In line with the assessment criteria prescribed by the BRE Guidelines, it has been shown that for all rooms, the provision of natural daylight will meet or exceed the minimum required threshold set out in both the BRE Guidelines. Consequently, it can be concluded that these habitable spaces will be well lit and will have a reduced reliance on supplementary electric lighting.

Taking into account the factors explored in Section 6, it has also been possible to demonstrate that in the habitable rooms of the proposed development, the LKD and bedroom areas tested will receive satisfactory levels of sunlight throughout the year. There are a number of units that are north facing and as such fall short of the aspirational sunlight targets. However, it is widely acknowledged that for a development of this scale and nature, design constraints prohibit the ability to completely avoid north-facing single aspect units. When considering the results of the daylight analysis for the small number of rooms falling short of the recommended APSH values, it can be seen that they all surpass the ADF daylighting criteria. Consequently, whilst these rooms may not receive high levels of direct sunlight, they will be well lit by natural daylight. The fact that there is only a limited amount of direct sunlight to these rooms does not, in this case, significantly detract from the amenity value of the rooms and consequently, it can be demonstrated that he proposed rooms tested will achieve acceptable living standards.

Furthermore, the assessment of the sunlight available to proposed amenity area indicates that this large amenity space will receive direct sunlight to the whole area for at least 2 hours a day.

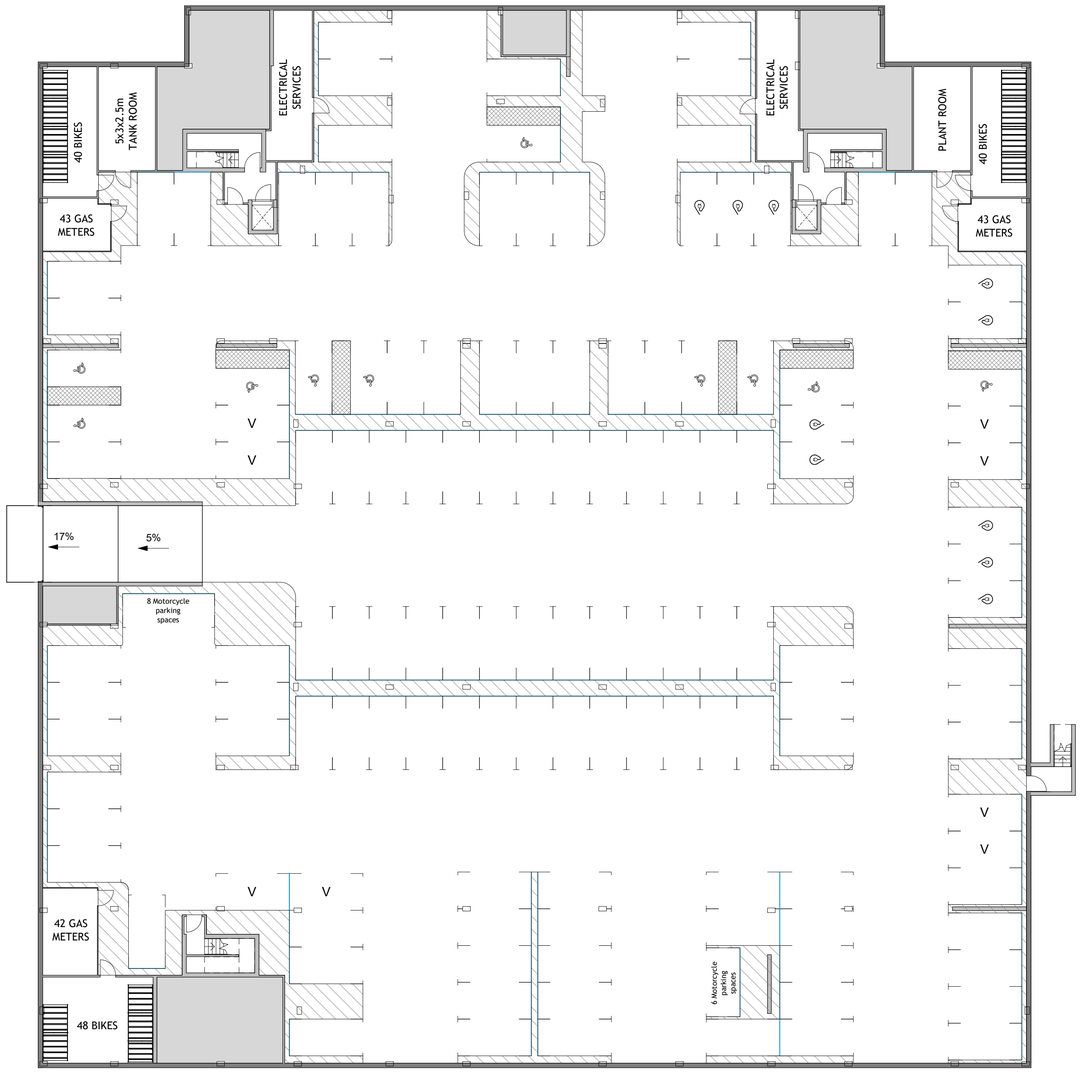
A Appendices

Appendix A.1 – Scheme Drawings

Appendix A.2 – Graphical Model Outputs

Appendix A.3 – Tabulated Results for Daylight & Sunlight Calculations (Provision to New Development)

Appendix A.1 – Scheme Drawings



BASEMENT PLAN KEY

DISEABLE PARKING SPACE

ELECTRIC CAR CHARGING POINT

VISITORS PARKING SPACE V

136 CAR PARKING SPACES

- 126 STANDARD PARKING SPACES 2.4m x 4.8m
- 10 DISEABLE PARKING SPACES 3.0m x 4.8m

14 MOTORCYCLE PARKING SPACES

DRAFT

Basement Floor Plan
1 : 200

2 0 2 4 6 8 10
SCALE 1:200 m

Revision	Amendment	Date
P1.2	Issued for comments	25.10.19
P1.1	Issued for comments	04.10.19

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Project
29 Broadwater Road
Welwyn Garden City

Drawing Title
Basement Floor Plan

ARCHITECTURE

Drawing / Document Reference								Status	
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BROAD COURT

BROADWATER ROAD

DRAFT

Ground Floor Plan
1 : 200

2 0 2 4 6 8 10
SCALE 1:200 m

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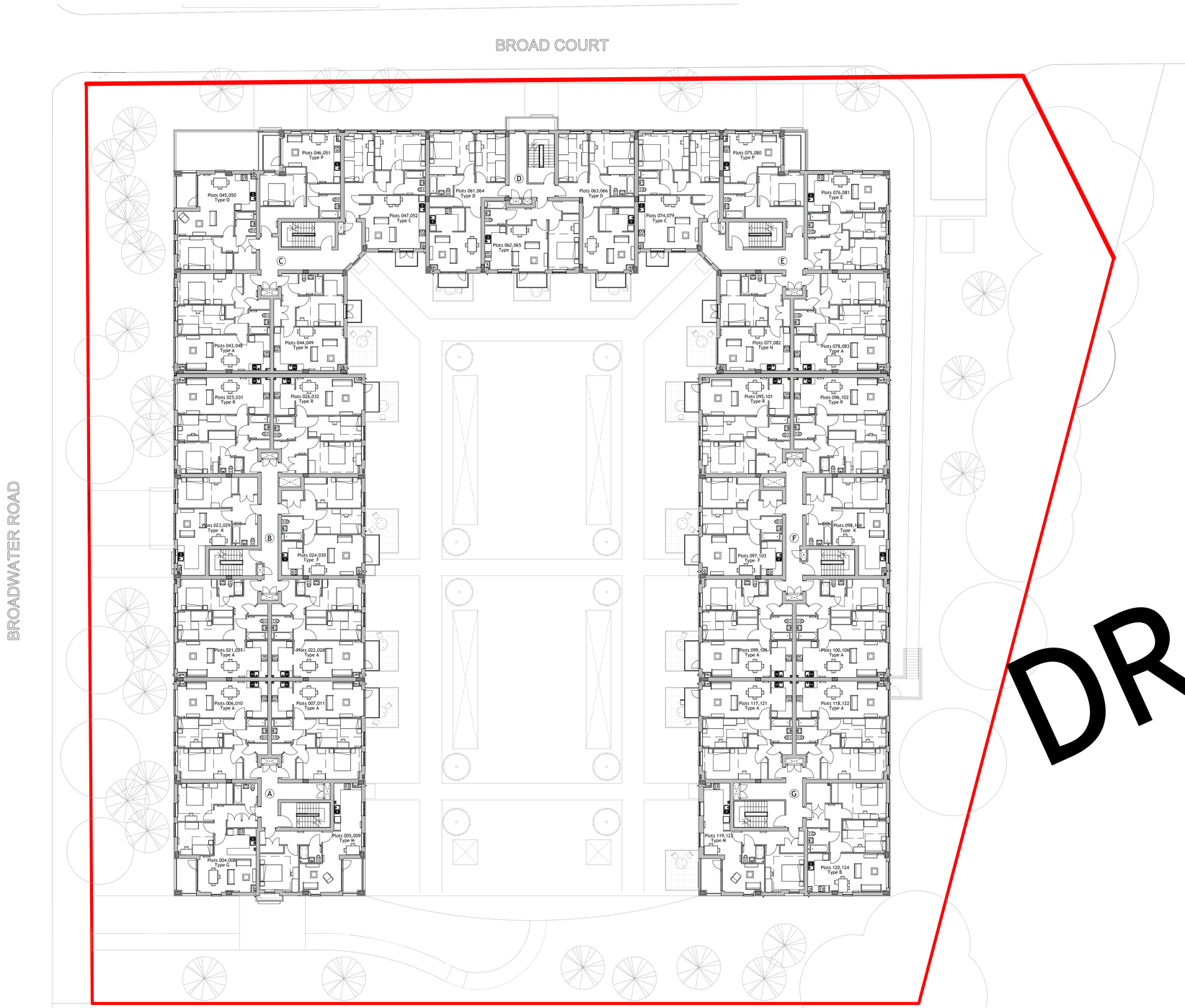

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First & Second Floor Plan
1 : 200

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SCALE 1:200 m

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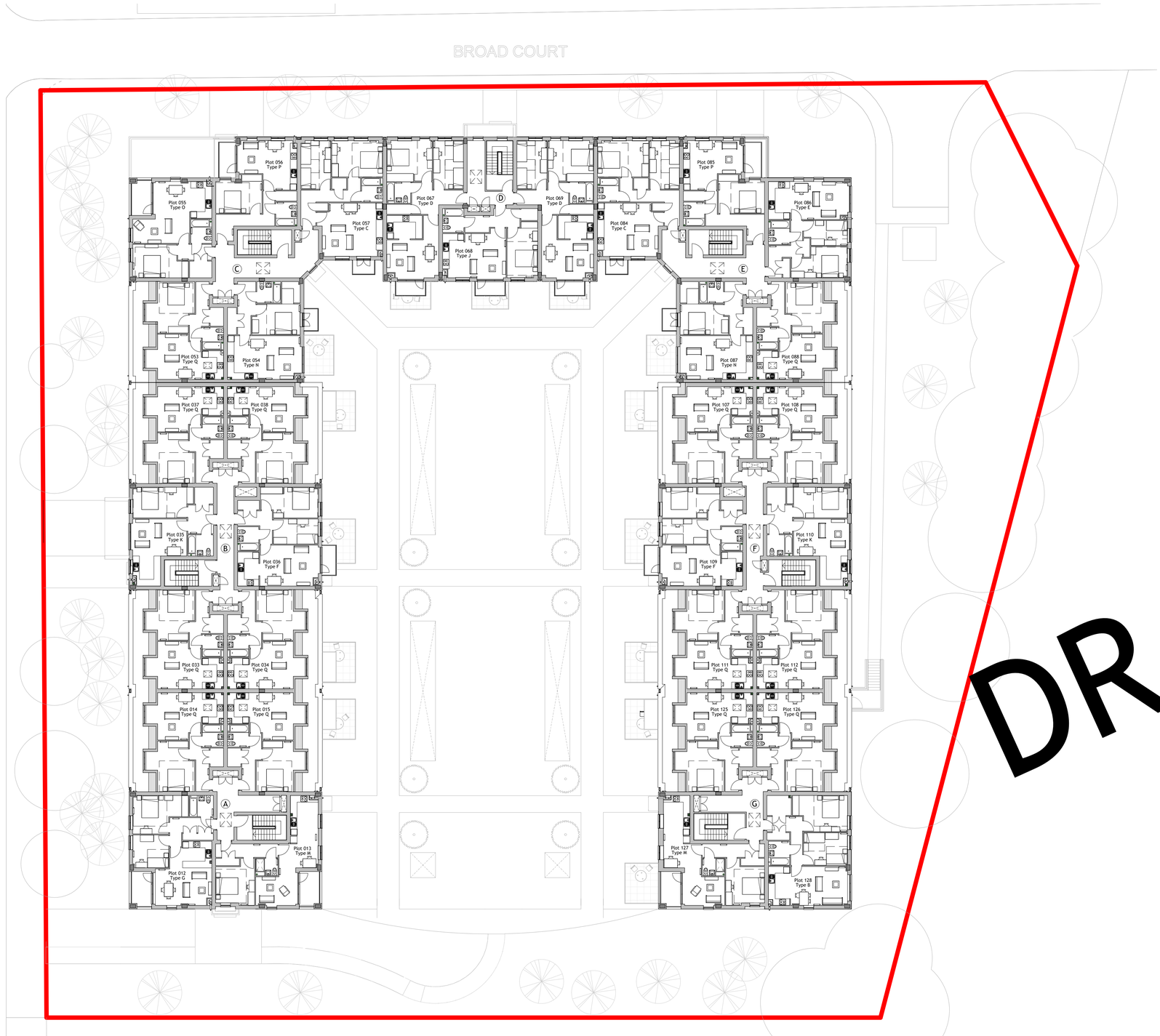

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Third Floor Plan
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Third Floor Plan

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North Elevation
1 : 100

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Drawing Title
North Elevation

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East Elevation
1 : 100

East Elevation - Patio
1 : 100

DRAFT

Revision	Amendment	Date
P1.2	Issued for comments	25.10.19
P1.1	Issued for comments	04.10.19

Drawn by	Reviewed by	Approved by
JP	JD	JD
MCB Number	Date Created	Scale @ A1
60193	SEPT 19	1 : 100 @ A1

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Project
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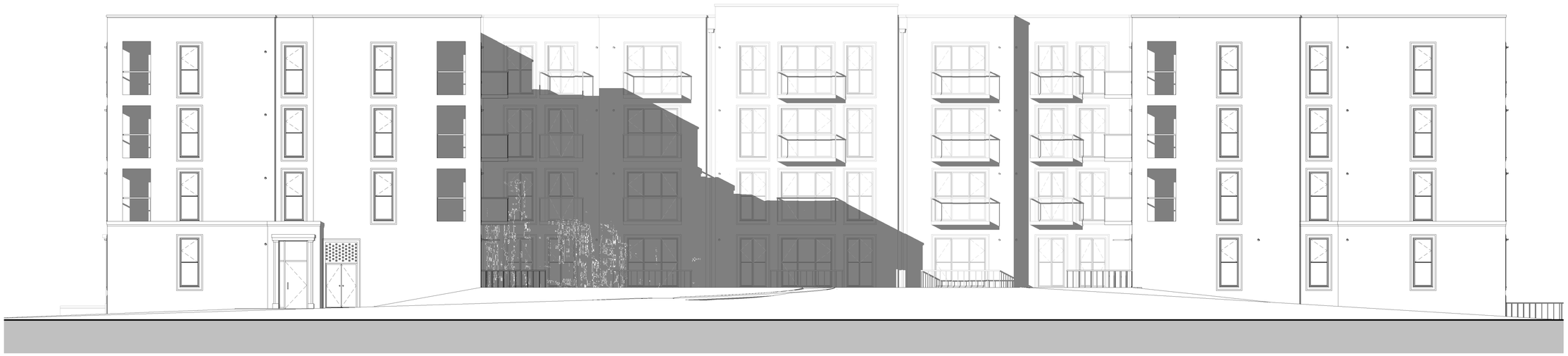
Welwyn Garden City

Drawing Title
East Elevations

ARCHITECTURE

Drawing / Document Reference								Status	
BRW01	MCB	ZZ	ZZ	DR	A	0502		S2	P1.2
Project Iden	Originator	Zone	Level	Type	Discipline	Number		Suitability	Revision



South Elevation
1 : 100

Revision	Amendment	Date
P1.2	Issued for comments	25.10.19
P1.1	Issued for comments	04.10.19

Drawn by	Reviewed by	Approved by
JP	JD	JD
MCB Number	**Date Created**	**Scale @ A1**
60193	SEPT 19	1 : 100 @ A1

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Drawing Title
South Elevation

ARCHITECTURE

Drawing / Document Reference								Status	
BRW01	MCB	ZZ	ZZ	DR	A	0503		S2	P1.2
Project Iden	Originator	Zone	Level	Type	Discipline	Number		Suitability	Revision

West Elevation
1 : 100

West Elevation - Patio
1 : 100

Revision	Amendment	Date
P1.2	Issued for comments	25.10.19
P1.1	Issued for comments	04.10.19

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60193	SEPT 19	1 : 100 @ A1

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West Elevations

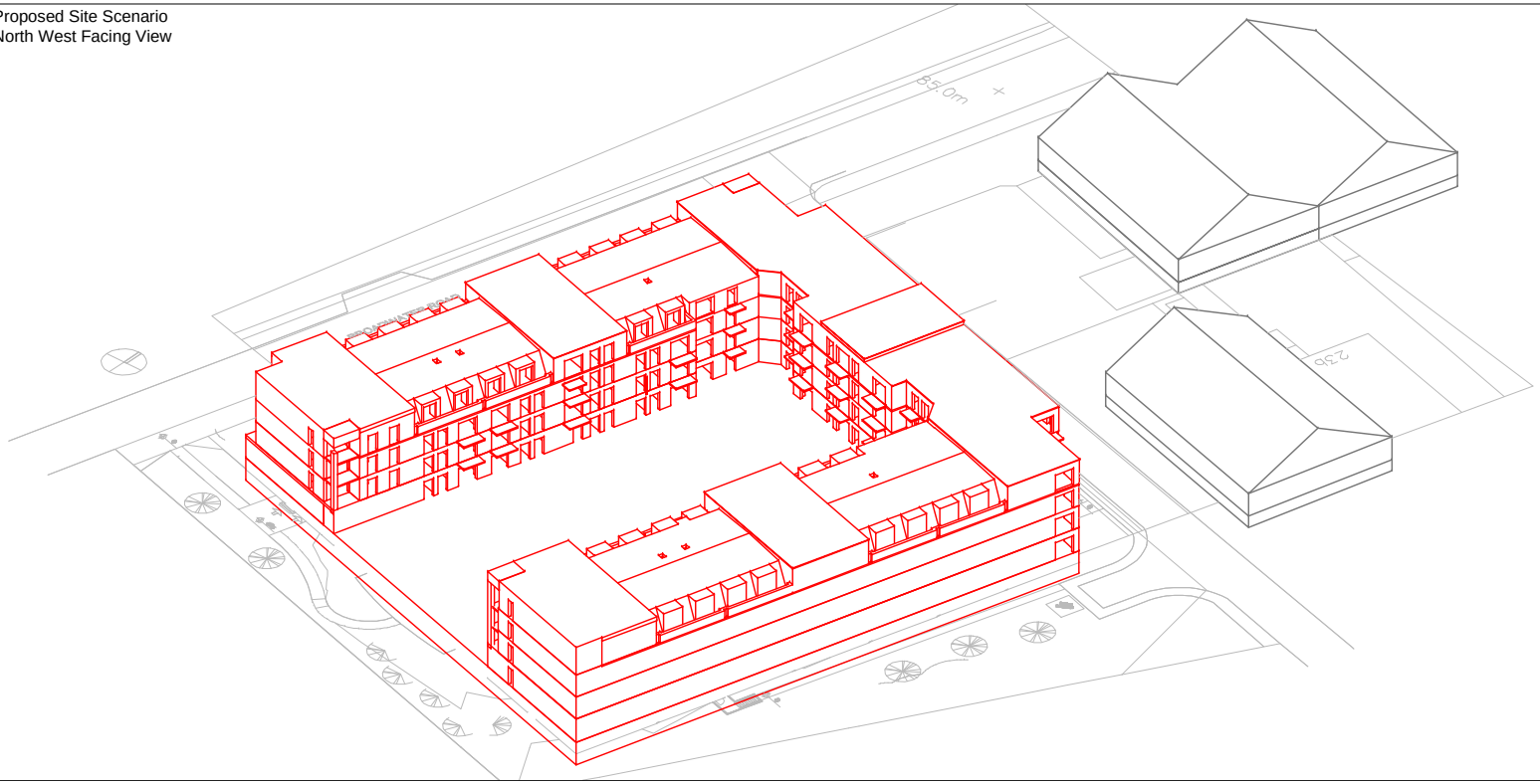
ARCHITECTURE

Drawing / Document Reference								Status	
BRW01	MCB	ZZ	ZZ	DR	A	0500		S2	P1.2
Project Iden	Originator	Zone	Level	Type	Discipline	Number		Suitability	Revision

Appendix A.2 – Graphical Model Outputs

Proposed Site Scenario
North East Facing View

Proposed Site Scenario
North West Facing View



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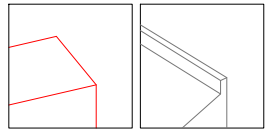
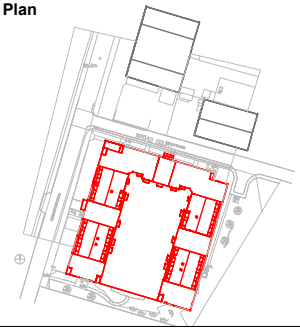


Proposed Buildings Surrounding Buildings

Location Plan



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DWG REF.
3D Model - Existing & Proposed Site Scenarios.

DWG No.
2405_01

Window Receptors
North Elevation

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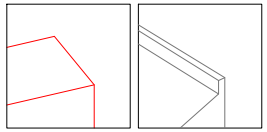
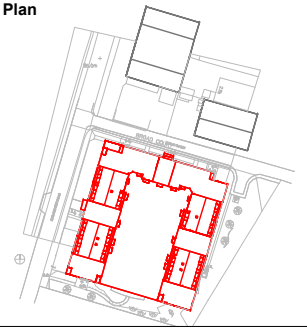


Proposed Buildings Surrounding Buildings

Location Plan



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DWG REF.
Window Receptors.

DWG No.
2405_02

Window Receptors
West Elevation

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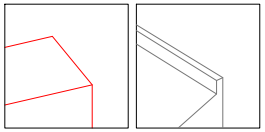
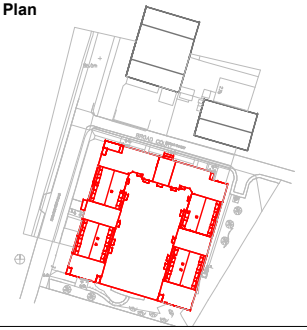


Proposed Buildings Surrounding Buildings

Location Plan



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DWG REF.
Window Receptors.

DWG No.
2405_03

Window Receptors
South Elevation

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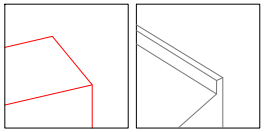
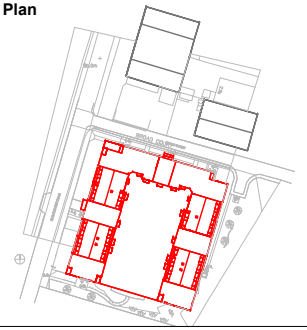


Proposed Buildings Surrounding Buildings

Location Plan



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DWG REF.
Window Receptors.

DWG No.
2405_04

Window Receptors
East Elevation

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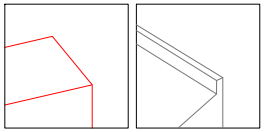
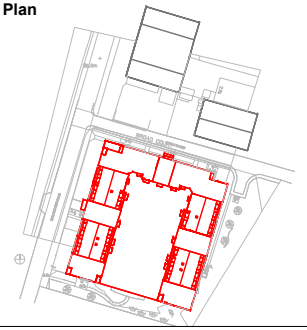


Proposed Buildings | Surrounding Buildings

Location Plan



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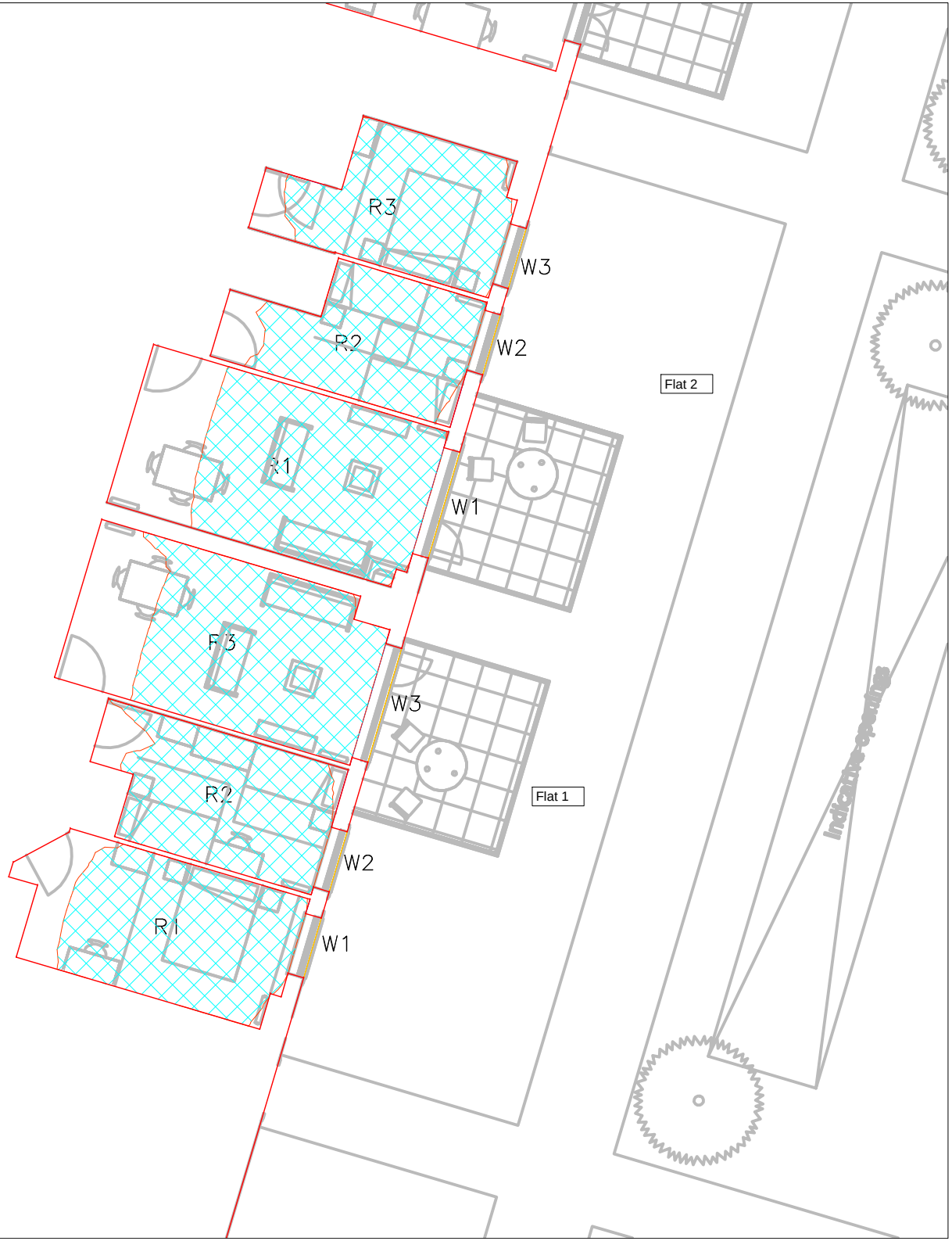
DWG REF.	DWG No.
Window Receptors.	2405_05

Ground Floor
Flats 1-2



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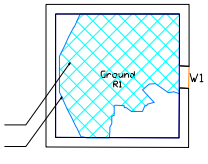

Location Plan

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DWG REF.	DWG No.
NSL contours.	2405_06

Ground Floor
Flats 3-5

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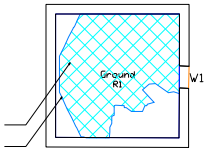

Location Plan

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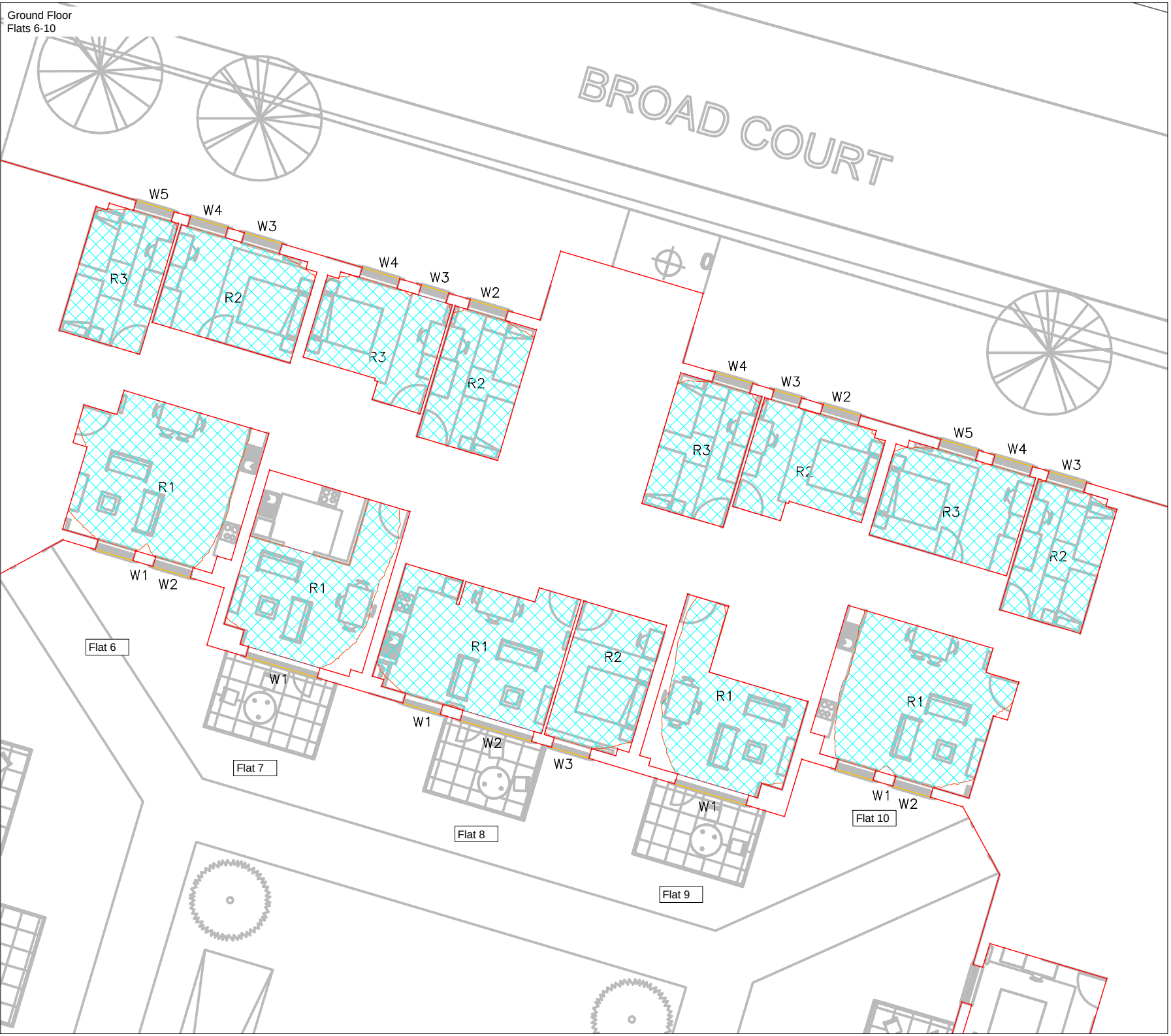
Not to scale	2405	AP	YS

DWG REF.
NSL contours.

DWG No.
2405_07

Ground Floor
Flats 6-10



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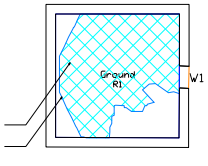

Location Plan

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DWG REF.
NSL contours.

DWG No.
2405_08

Ground Floor
Flats 10a-13

Flat 10a
W3
W2
R1
W1

Flat 11
W1
R1
W2
R2

Flat 12
W1
R
W2
R2
W3
R3

Flat 13
W1
R1
W2
R2
W3

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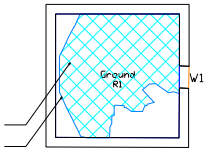

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DWG REF.
3D Model - Existing & Proposed Site Scenarios.
NSL contours.
2hr SoG amenity contours.

DWG No.
2405_09

Ground Floor
Flats 14-16

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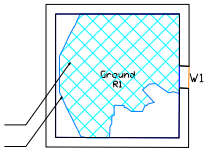

Lit area
NSL contour
(post development)

Location Plan

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DWG REF.
NSL contours.

DWG No.
2405_10

First Floor
Flats 17-19

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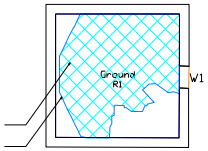

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DWG REF.	DWG No.
NSL contours.	2405_11

First Floor
Flats 20-22

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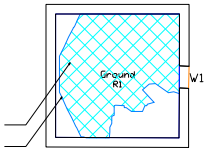

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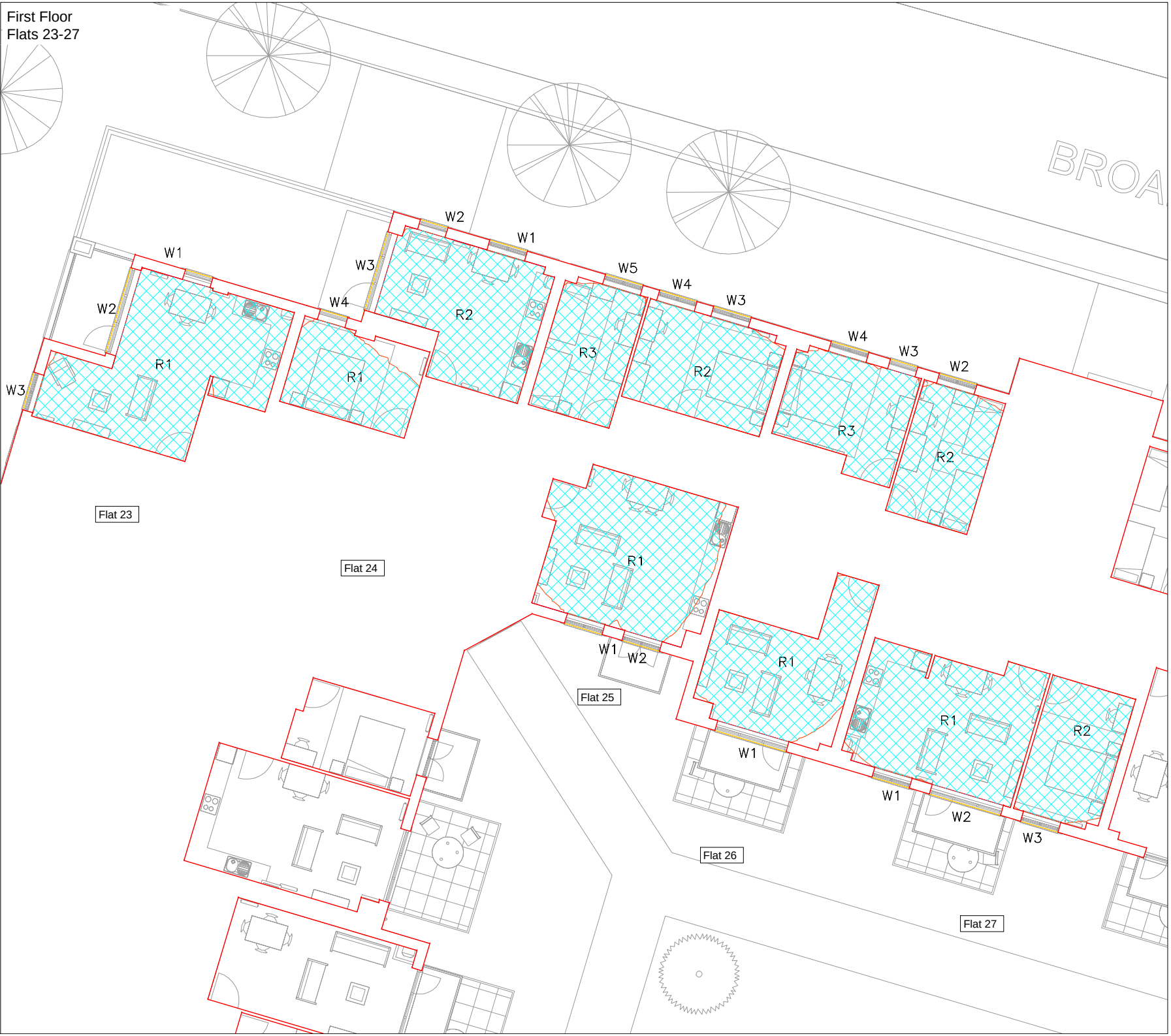
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_12

First Floor
Flats 23-27



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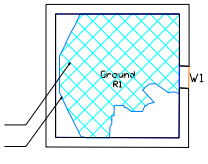

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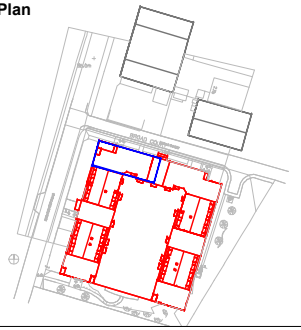

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DWG REF.	DWG No.
NSL contours.	2405_13

First Floor
Flats 28-30

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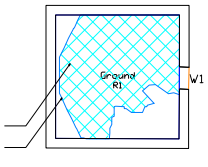

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DWG REF.	DWG No.
NSL contours.	2405_14

First Floor
Flats 31-33

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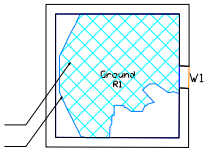

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DWG REF.	DWG No.
NSL contours.	2405_15

First Floor
Flats 34-36

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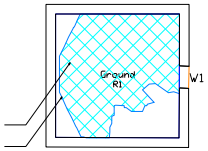

Lit area
NSL contour
(post development)

Location Plan

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DWG REF.	DWG No.
NSL contours.	2405_16

Second Floor
Flats 37-39

R3
W3
R2
W2
R1
W1
Flat 39
R3
W3
R2
W2
R1
W1
Flat 38
R1
W4
W3
W2
W1
Flat 37

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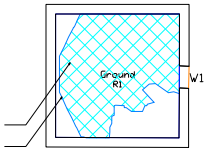

Location Plan

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DWG REF.	DWG No.
NSL contours.	2405_17

Second Floor
Flats 40-42

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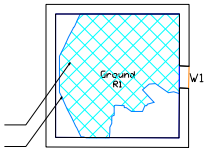
Legend



Location Plan

Rev	Description	Date
00	First issue	30/08/2019

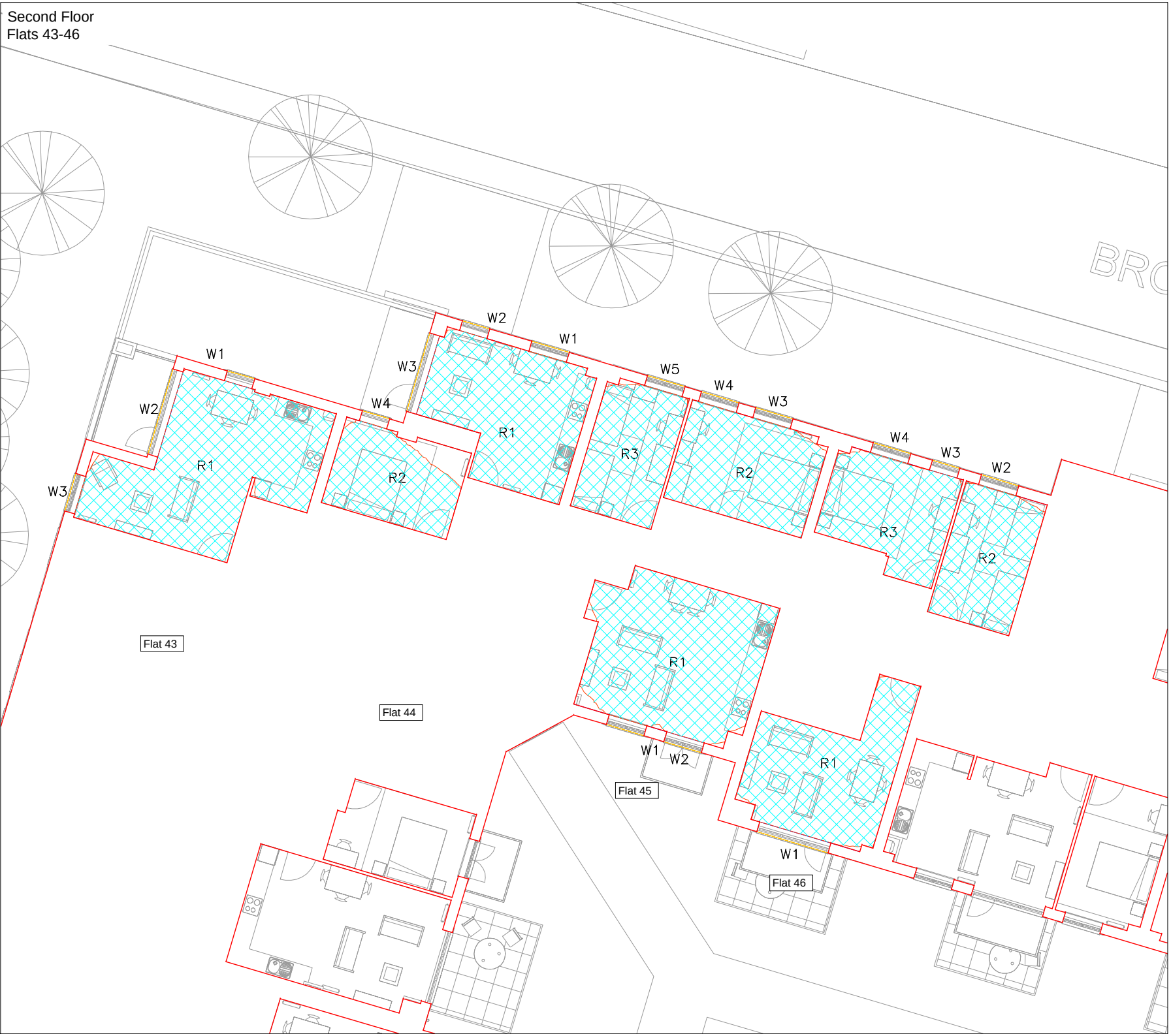
CLIENT
Hightown Housing Association

PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_18

Second Floor
Flats 43-46



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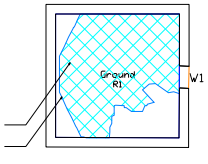
Legend



Location Plan

Rev	Description	Date
00	First issue	30/08/2019

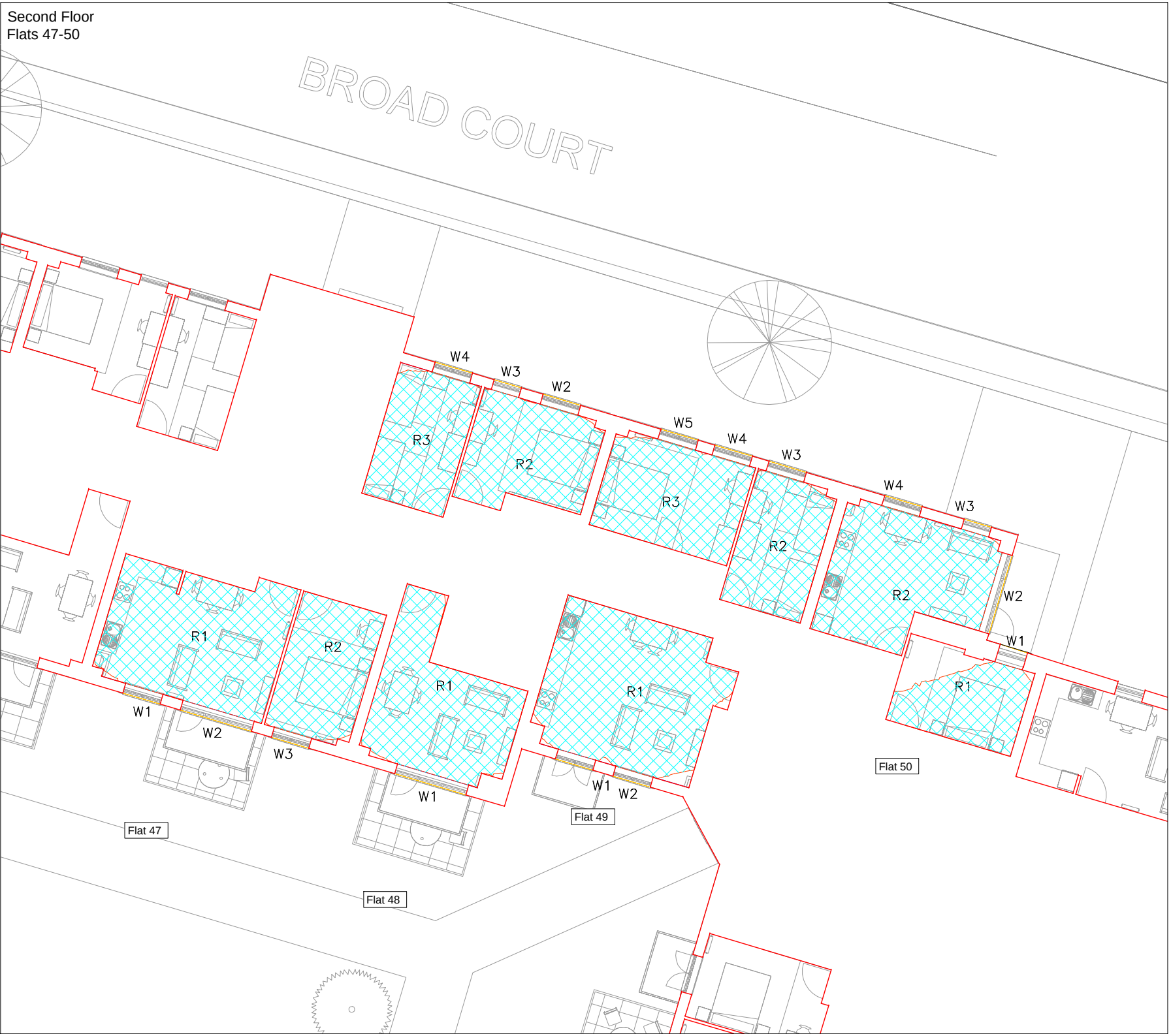
CLIENT
Hightown Housing Association

PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_19

Second Floor
Flats 47-50



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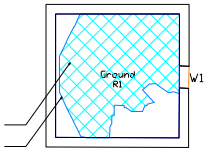
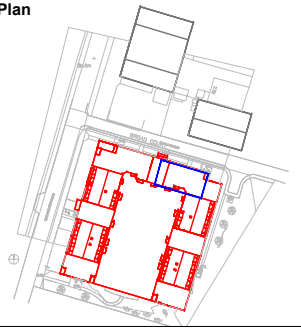


Location Plan



Rev	Description	Date
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CLIENT
Hightown Housing Association

PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_20

Second Floor
Flats 50a-53

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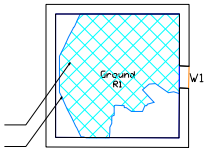

Location Plan

Rev	Description	Date
00	First issue	30/08/2019

CLIENT
Hightown Housing Association

PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_21

Second Floor
Flats 54-56

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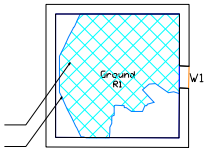

Location Plan

Rev	Description	Date
00	First issue	30/08/2019

CLIENT
Hightown Housing Association

PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_22

Third Floor
Flats 57-59

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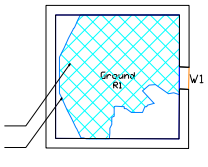

Location Plan

Rev	Description	Date
00	First issue	30/08/2019

CLIENT
Hightown Housing Association

PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_23

Third Floor
Flats 60-62

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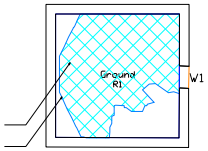

Location Plan

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00	First issue	30/08/2019

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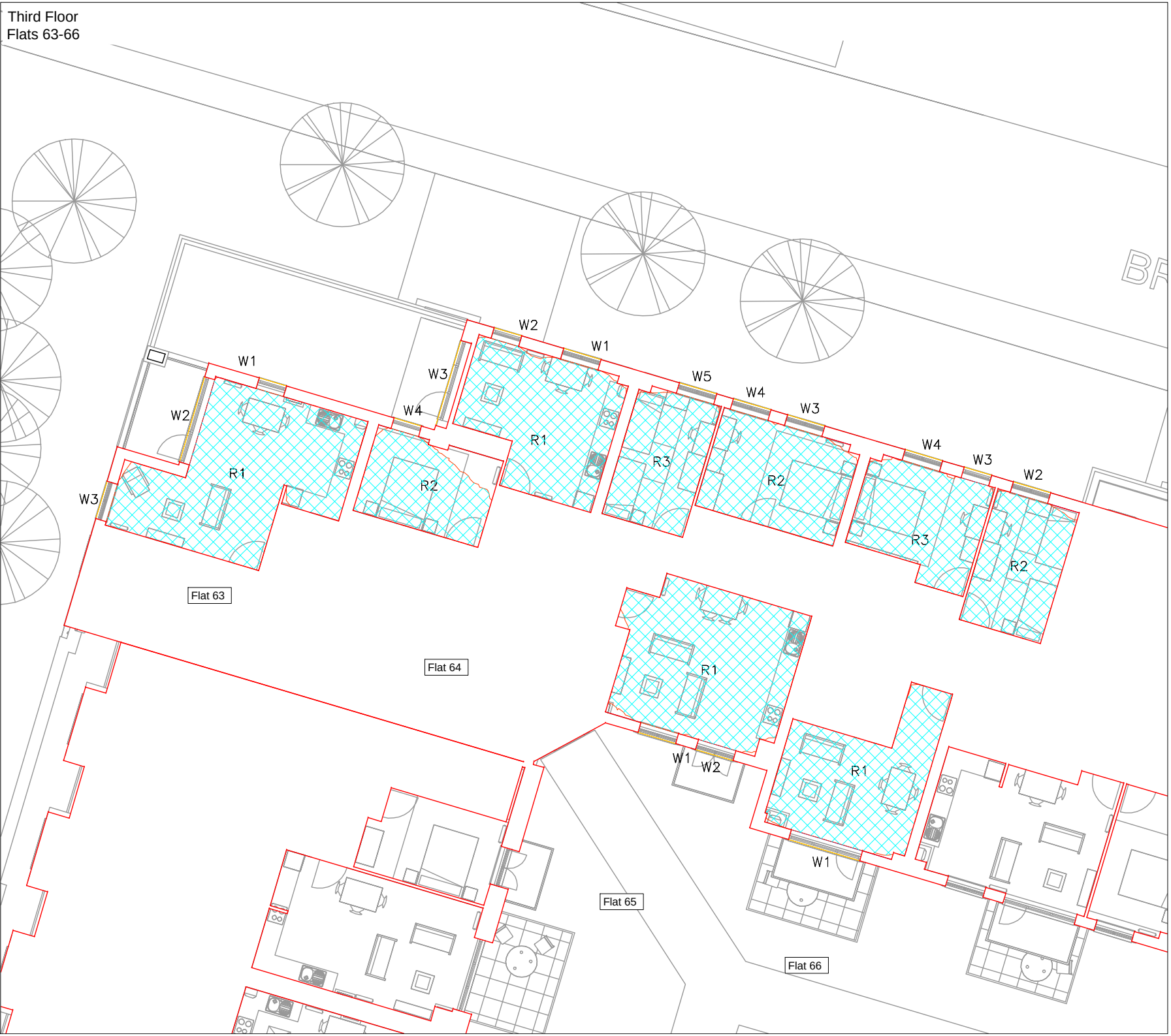
PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_24

Third Floor
Flats 63-66



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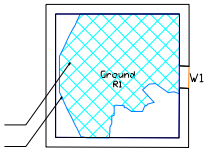

Location Plan

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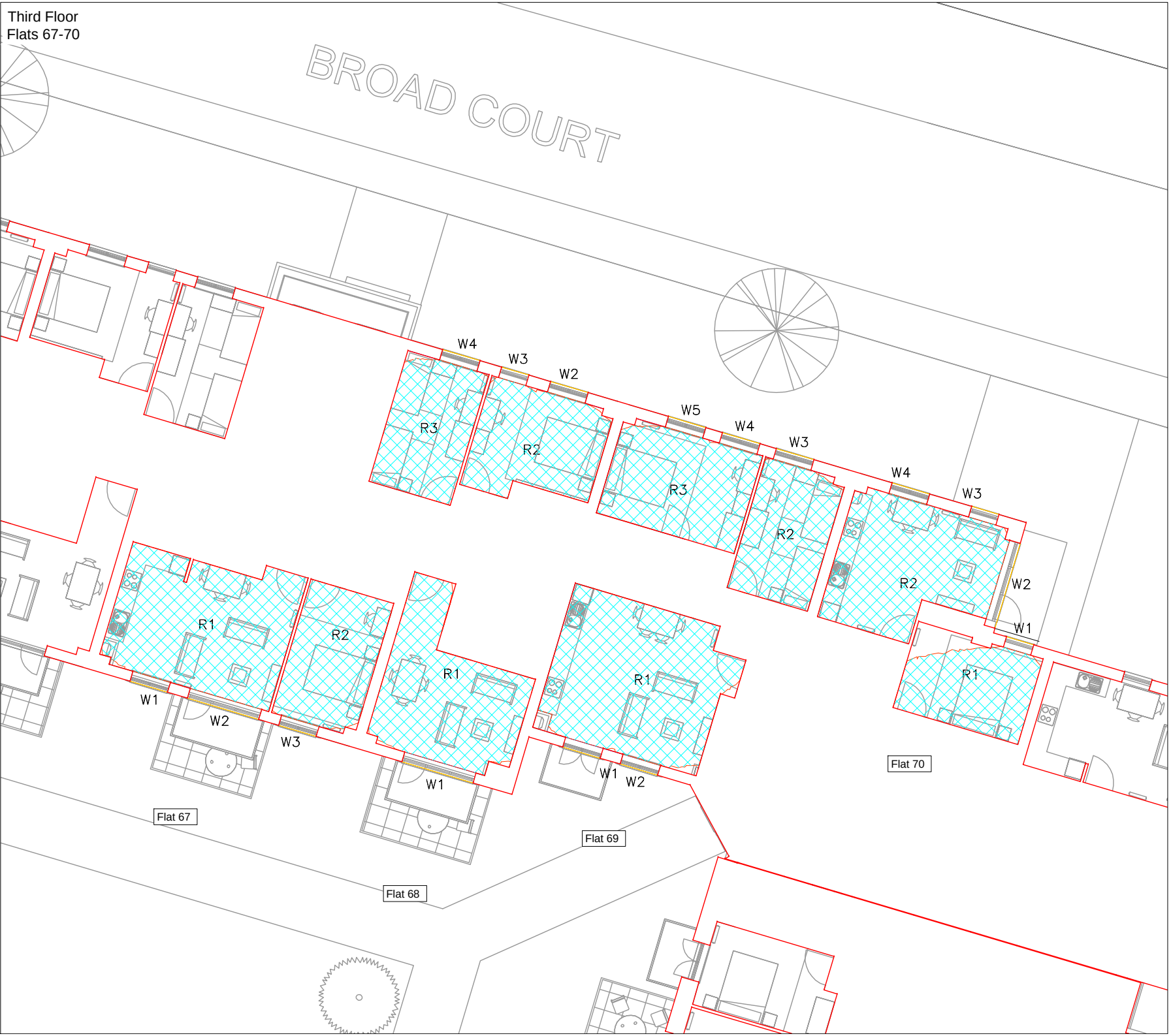
PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_25

Third Floor
Flats 67-70



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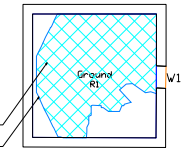

Location Plan

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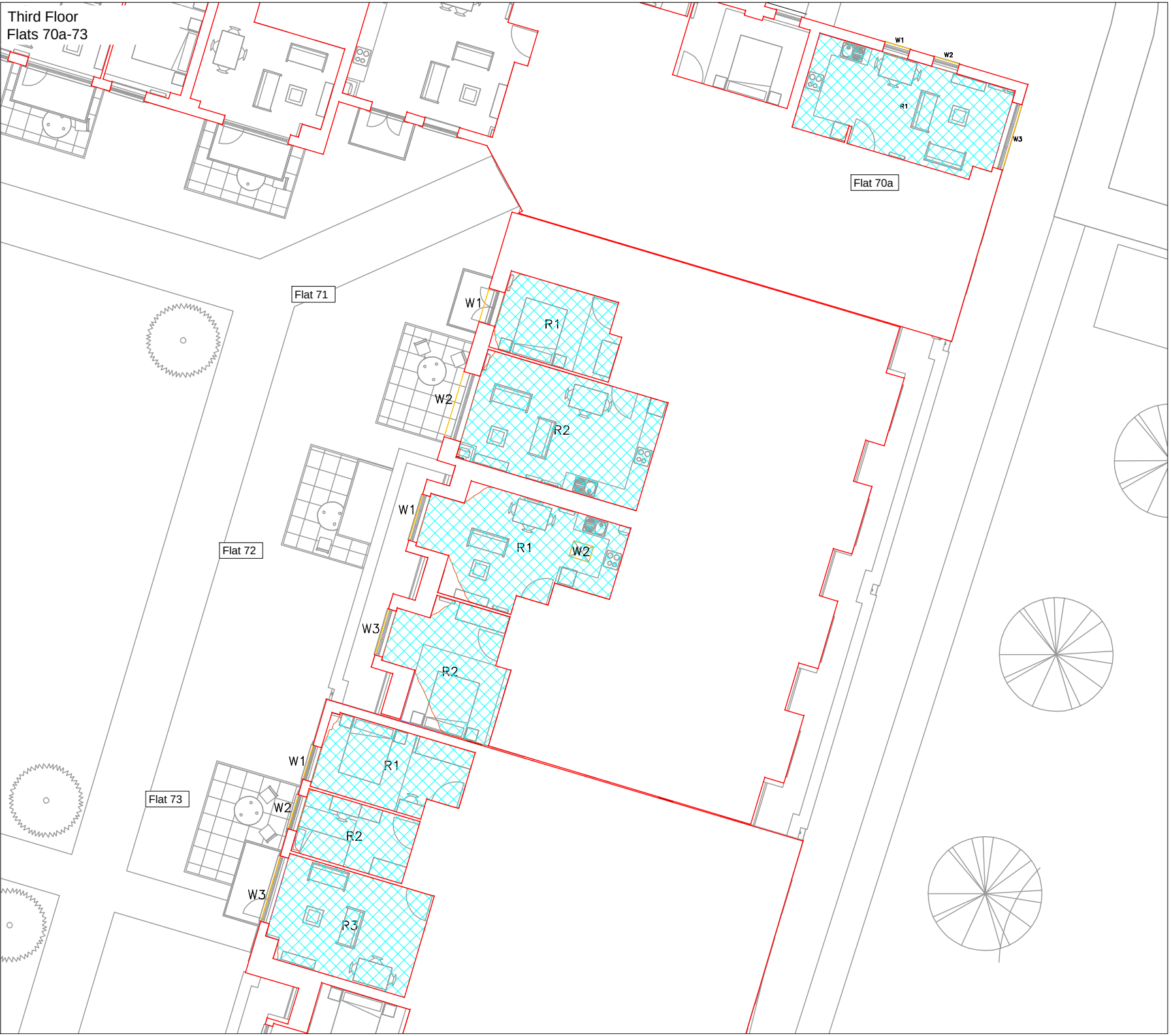
Not to scale	2405	AP	YS

DWG REF.
NSL contours.

DWG No.
2405_26

Third Floor
Flats 70a-73



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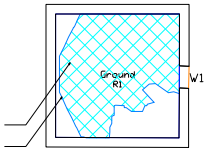

Location Plan

Rev	Description	Date
00	First issue	30/08/2019

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Not to scale	2405	AP	YS

DWG REF.	DWG No.
NSL contours.	2405_27

Third Floor
Flats 74-76

Flat 74
Flat 75
Flat 76
W1
W2
W3
W4
R1
R2

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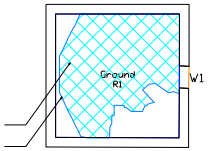


Location Plan

Rev	Description	Date
00	First issue	30/08/2019

CLIENT: Hightown Housing Association

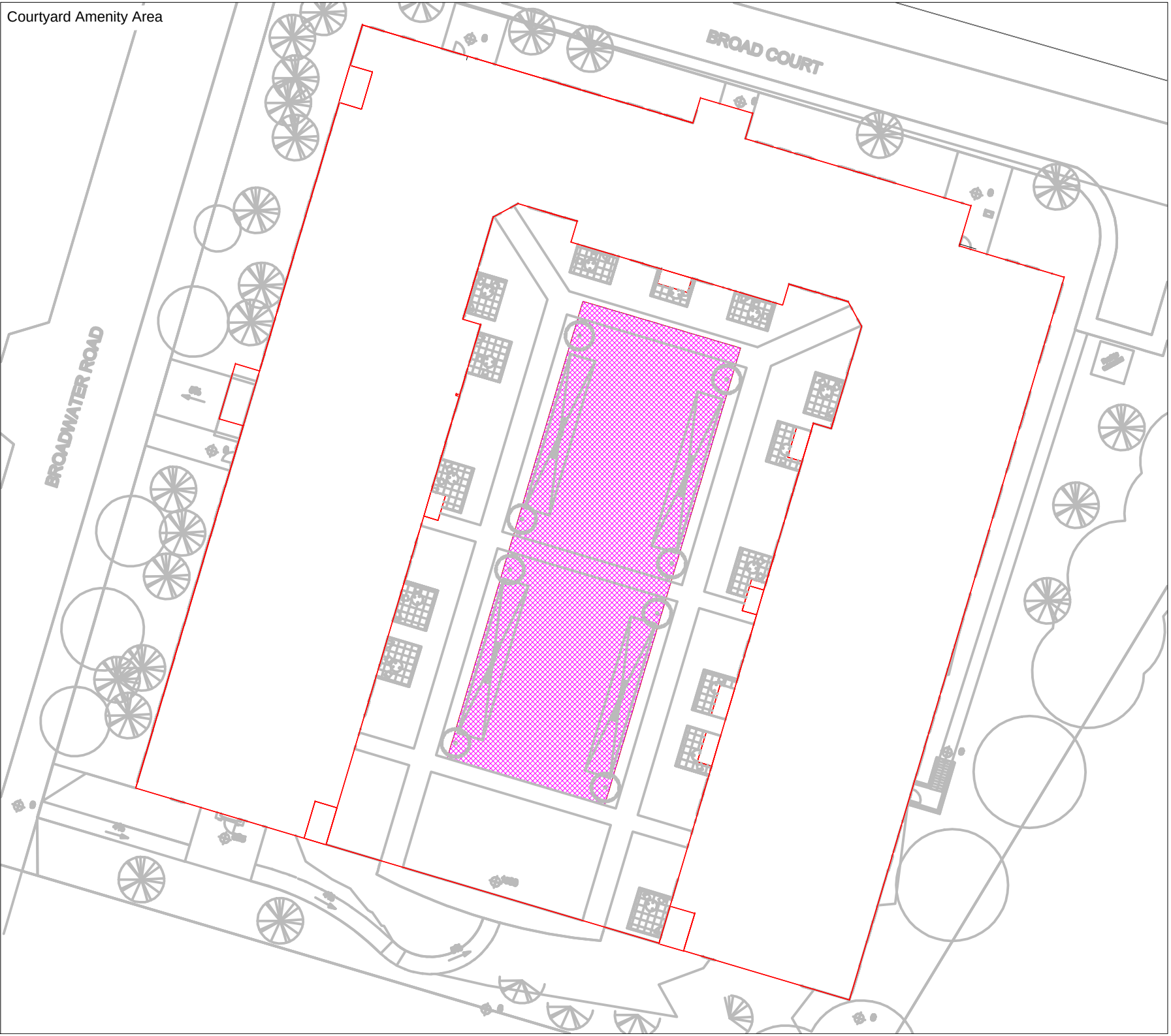
PROJECT: Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.: NSL contours.

DWG No.: 2405_28

Courtyard Amenity Area



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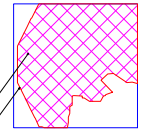
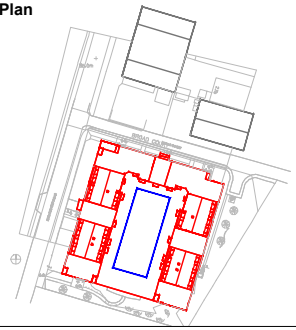


Location Plan



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PROJECT
Broadwater Road, Hertfordshire

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	2405	AP	YS

DWG REF.	DWG No.
2hr SoG amenity contours.	2405_29

Appendix A.3 – Tabulated Results for Daylight and Sunlight Calculations (Provision to New Development)

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
Report Title: Average Daylight Analysis - Proposed Scheme Test
Date: 27/08/2019

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Maintenance Factor	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
						Flat 1								
Ground	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	71.25	73.02	0.65	0.15	0.16		
				W1-U	0.78	0.92	1.45	71.48	73.02	0.65	1.00	1.77		
												1.93	1.00	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	69.39	62.94	0.65	0.15	0.18		
				W2-U	0.78	0.92	1.45	69.38	62.94	0.65	1.00	2.00		
												2.17	1.00	YES
Ground	R3	Residential	LD	W3-L	0.78	0.92	1.61	62.70	88.61	0.65	0.15	0.21		
				W3-U	0.78	0.92	2.75	49.78	88.61	0.65	1.00	1.94		
												2.15	1.50	YES
						Flat 2								
Ground	R1	Residential	LD	W1-L	0.78	0.92	1.50	61.63	89.15	0.65	0.15	0.20		
				W1-U	0.78	0.92	2.56	48.85	89.15	0.65	1.00	1.76		
												1.95	1.50	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	66.94	60.63	0.65	0.15	0.18		
				W2-U	0.78	0.92	1.45	67.22	60.63	0.65	1.00	2.01		
												2.18	1.00	YES
Ground	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	67.34	63.13	0.65	0.15	0.17		
				W3-U	0.78	0.92	1.45	68.07	63.13	0.65	1.00	1.95		
												2.12	1.00	YES
						Flat 3								
Ground	R1	Residential	LKD	W1-L	0.78	0.92	0.85	60.11	108.79	0.65	0.15	0.09		
				W1-U	0.78	0.92	1.45	48.47	108.79	0.65	1.00	0.81		
				W2-L	0.78	0.92	0.85	64.25	108.79	0.65	0.15	0.09		
				W2-U	0.78	0.92	1.45	64.09	108.79	0.65	1.00	1.07		
												2.06	2.00	YES

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
Report Title: Average Daylight Analysis - Proposed Scheme Test
Date: 27/08/2019

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Maintenance Factor	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
Ground	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	65.47	72.47	0.65	0.15	0.14		
				W3-U	0.78	0.92	1.45	66.26	72.47	0.65	1.00	1.66		
												1.80	1.00	YES
							Flat 4							
Ground	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	64.23	69.46	0.65	0.15	0.15		
				W1-U	0.78	0.92	1.45	65.10	69.46	0.65	1.00	1.70		
												1.85	1.00	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	62.05	56.67	0.65	0.15	0.17		
				W2-U	0.78	0.92	1.45	63.52	56.67	0.65	1.00	2.03		
												2.21	1.00	YES
Ground	R3	Residential	LD	W3-L	0.78	0.92	1.61	54.66	87.92	0.65	0.15	0.19		
				W3-U	0.78	0.92	2.75	41.84	87.92	0.65	1.00	1.64		
												1.83	1.50	YES
							Flat 5							
Ground	R1	Residential	LKD	W1-L	0.78	0.92	1.61	50.66	92.22	0.65	0.15	0.17		
				W1-U	0.78	0.92	2.75	51.93	92.22	0.65	1.00	1.94		
												2.11	2.00	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	45.44	62.71	0.65	0.15	0.12		
				W2-U	0.78	0.92	1.45	37.01	62.71	0.65	1.00	1.07		
												1.18	1.00	YES
							Flat 6							
Ground	R1	Residential	LKD	W1-L	0.78	0.92	0.85	49.07	107.16	0.65	0.15	0.07		
				W1-U	0.78	0.92	1.45	48.35	107.16	0.65	1.00	0.82		
				W2-L	0.78	0.92	0.85	44.46	107.16	0.65	0.15	0.07		
				W2-U	0.78	0.92	1.45	36.26	107.16	0.65	1.00	0.61		
												1.57	2.00	**NO**
Ground	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	79.91	69.99	0.65	0.15	0.18		
				W3-U	0.78	0.92	1.45	79.71	69.99	0.65	1.00	2.06		

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
Report Title: Average Daylight Analysis - Proposed Scheme Test
Date: 27/08/2019

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Maintenance Factor	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
				W4-L	0.78	0.92	0.85	80.15	69.99	0.65	0.15	0.18		
				W4-U	0.78	0.92	1.45	79.89	69.99	0.65	1.00	2.07		
												4.50	1.00	YES
Ground	R3	Residential	Bedroom	W5-L	0.78	0.92	0.85	80.31	59.35	0.65	0.15	0.22		
				W5-U	0.78	0.92	1.45	80.02	59.35	0.65	1.00	2.44		
												2.66	1.00	YES
Flat 7														
Ground	R1	Residential	LD	W1-L	0.78	0.92	1.61	55.83	89.96	0.65	0.15	0.19		
				W1-U	0.78	0.92	2.75	43.55	89.96	0.65	1.00	1.67		
												1.86	1.50	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	68.15	59.83	0.65	0.15	0.18		
				W2-U	0.78	0.92	1.45	69.99	59.83	0.65	1.00	2.12		
												2.30	1.00	YES
Ground	R3	Residential	Bedroom	W3-L	0.78	0.92	0.62	74.99	65.91	0.65	0.15	0.13		
				W3-U	0.78	0.92	1.06	76.09	65.91	0.65	1.00	1.53		
				W4-L	0.78	0.92	0.85	78.55	65.91	0.65	0.15	0.19		
				W4-U	0.78	0.92	1.45	78.82	65.91	0.65	1.00	2.17		
												4.01	1.00	YES
Flat 8														
Ground	R1	Residential	LKD	W1-L	0.78	0.92	0.85	62.54	102.32	0.65	0.15	0.10		
				W1-U	0.78	0.92	1.45	62.11	102.32	0.65	1.00	1.10		
				W2-L	0.78	0.92	1.61	58.85	102.32	0.65	0.15	0.17		
				W2-U	0.78	0.92	2.75	46.27	102.32	0.65	1.00	1.56		
												2.93	2.00	YES
Ground	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	62.55	61.42	0.65	0.15	0.16		
				W3-U	0.78	0.92	1.45	62.12	61.42	0.65	1.00	1.83		
												1.99	1.00	YES

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
Report Title: Average Daylight Analysis - Proposed Scheme Test
Date: 27/08/2019

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Maintenance Factor	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
						Flat 9								
Ground	R1	Residential	LD	W1-L	0.78	0.92	1.61	55.83	89.98	0.65	0.15	0.19		
				W1-U	0.78	0.92	2.75	43.54	89.98	0.65	1.00	1.67		
												1.86	1.50	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	75.32	65.91	0.65	0.15	0.18		
				W2-U	0.78	0.92	1.45	76.09	65.91	0.65	1.00	2.09		
				W3-L	0.78	0.92	0.62	72.16	65.91	0.65	0.15	0.13		
				W3-U	0.78	0.92	1.06	73.65	65.91	0.65	1.00	1.48		
												3.88	1.00	YES
Ground	R3	Residential	Bedroom	W4-L	0.78	0.92	0.85	65.10	59.83	0.65	0.15	0.17		
				W4-U	0.78	0.92	1.45	67.37	59.83	0.65	1.00	2.04		
												2.21	1.00	YES
						Flat 10								
Ground	R1	Residential	LKD	W1-L	0.78	0.92	0.85	44.49	107.16	0.65	0.15	0.07		
				W1-U	0.78	0.92	1.45	36.27	107.16	0.65	1.00	0.61		
				W2-L	0.78	0.92	0.85	49.09	107.16	0.65	0.15	0.07		
				W2-U	0.78	0.92	1.45	48.37	107.16	0.65	1.00	0.82		
												1.57	2.00	NO
Ground	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	73.78	59.35	0.65	0.15	0.20		
				W3-U	0.78	0.92	1.45	74.61	59.35	0.65	1.00	2.28		
												2.48	1.00	YES
Ground	R3	Residential	Bedroom	W4-L	0.78	0.92	0.85	74.19	69.99	0.65	0.15	0.17		
				W4-U	0.78	0.92	1.45	74.93	69.99	0.65	1.00	1.94		
				W5-L	0.78	0.92	0.85	74.91	69.99	0.65	0.15	0.17		
				W5-U	0.78	0.92	1.45	75.52	69.99	0.65	1.00	1.95		
												4.23	1.00	YES
						Flat 10a								
Ground	R1	Residential	LKD	W1-L	0.78	0.92	1.61	88.46	104.75	0.65	0.15	0.26		

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				W1-U	0.78	0.92	2.75	86.33	104.75	0.65	1.00	2.84		
				W2-L	0.78	0.92	0.62	72.32	104.75	0.65	0.15	0.08		
				W2-U	0.78	0.92	1.06	72.89	104.75	0.65	1.00	0.92		
				W3-L	0.78	0.92	0.62	68.73	104.75	0.65	0.15	0.08		
				W3-U	0.78	0.92	1.06	69.41	104.75	0.65	1.00	0.88		
												5.05	2.00	YES
						Flat 11								
Ground	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	45.52	62.85	0.65	0.15	0.12		
				W1-U	0.78	0.92	1.45	37.21	62.85	0.65	1.00	1.07		
												1.19	1.00	YES
Ground	R2	Residential	LKD	W2-L	0.78	0.92	1.61	50.63	92.79	0.65	0.15	0.17		
				W2-U	0.78	0.92	2.75	51.90	92.79	0.65	1.00	1.93		
												2.09	2.00	YES
						Flat 12								
Ground	R1	Residential	LD	W1-L	0.78	0.92	1.61	54.77	87.92	0.65	0.15	0.19		
				W1-U	0.78	0.92	2.75	42.14	87.92	0.65	1.00	1.65		
												1.84	1.50	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	62.08	56.67	0.65	0.15	0.17		
				W2-U	0.78	0.92	1.45	63.55	56.67	0.65	1.00	2.03		
												2.21	1.00	YES
Ground	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	64.25	69.45	0.65	0.15	0.15		
				W3-U	0.78	0.92	1.45	65.12	69.45	0.65	1.00	1.70		
												1.85	1.00	YES
						Flat 13								
Ground	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	65.51	71.08	0.65	0.15	0.15		
				W1-U	0.78	0.92	1.45	66.29	71.08	0.65	1.00	1.69		
												1.84	1.00	YES
Ground	R2	Residential	LKD	W2-L	0.78	0.92	0.85	64.30	108.79	0.65	0.15	0.09		

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				W2-U	0.78	0.92	1.45	64.15	108.79	0.65	1.00	1.07		
				W3-L	0.78	0.92	0.85	60.22	108.79	0.65	0.15	0.09		
				W3-U	0.78	0.92	1.45	48.75	108.79	0.65	1.00	0.81		
												2.06	2.00	YES
Flat 14														
Ground	R1	Residential	Bedroom	W1-L	0.78	0.92	0.84	67.38	63.13	0.65	0.15	0.17		
				W1-U	0.78	0.92	1.44	68.10	63.13	0.65	1.00	1.95		
												2.12	1.00	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	66.99	60.63	0.65	0.15	0.18		
				W2-U	0.78	0.92	1.45	67.28	60.63	0.65	1.00	2.01		
												2.19	1.00	YES
Ground	R3	Residential	LD	W3-L	0.78	0.92	1.61	61.86	89.15	0.65	0.15	0.21		
				W3-U	0.78	0.92	2.75	49.20	89.15	0.65	1.00	1.90		
												2.11	1.50	YES
Flat 15														
Ground	R1	Residential	LD	W1-L	0.78	0.92	1.61	62.80	88.61	0.65	0.15	0.21		
				W1-U	0.78	0.92	2.75	50.06	88.61	0.65	1.00	1.95		
												2.16	1.50	YES
Ground	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	69.43	62.94	0.65	0.15	0.18		
				W2-U	0.78	0.92	1.45	69.43	62.94	0.65	1.00	2.00		
												2.17	1.00	YES
Ground	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	71.28	74.82	0.65	0.15	0.15		
				W3-U	0.78	0.92	1.45	71.51	74.82	0.65	1.00	1.73		
												1.88	1.00	YES
Flat 16														
Ground	R1	Residential	LKD	W1-L	0.78	0.92	0.85	73.96	103.23	0.65	0.15	0.11		
				W1-U	0.78	0.92	1.45	73.92	103.23	0.65	1.00	1.30		
				W2-L	0.78	0.92	1.61	76.55	103.23	0.65	0.15	0.22		

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				W2-U	0.78	0.92	2.75	75.97	103.23	0.65	1.00	2.54		
				W3-L	0.78	0.92	0.62	84.63	103.23	0.65	0.15	0.10		
				W3-U	0.78	0.92	1.06	83.44	103.23	0.65	1.00	1.07		
												5.34	2.00	YES
							Flat 17							
First	R1	Residential	LKD	W1-L	0.78	0.92	0.62	84.63	135.91	0.65	0.15	0.07		
				W1-U	0.78	0.92	1.06	83.44	135.91	0.65	1.00	0.81		
				W2-L	0.78	0.92	1.94	50.20	135.91	0.65	0.15	0.13		
				W2-U	0.78	0.92	3.31	37.08	135.91	0.65	1.00	1.13		
				W3-L	0.78	0.92	0.85	77.27	135.91	0.65	0.15	0.09		
				W3-U	0.78	0.92	1.45	77.21	135.91	0.65	1.00	1.03		
				W4-L	0.78	0.92	0.85	76.54	135.91	0.65	0.15	0.09		
				W4-U	0.78	0.92	1.45	76.58	135.91	0.65	1.00	1.02		
												4.38	2.00	YES
							Flat 18							
First	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	75.28	70.49	0.65	0.15	0.17		
				W1-U	0.78	0.92	1.45	75.54	70.49	0.65	1.00	1.94		
												2.11	1.00	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	73.71	60.65	0.65	0.15	0.19		
				W2-U	0.78	0.92	1.45	73.94	60.65	0.65	1.00	2.21		
												2.40	1.00	YES
First	R3	Residential	LD	W3-L	0.78	0.92	1.61	65.90	85.77	0.65	0.15	0.23		
				W3-U	0.78	0.92	2.75	50.18	85.77	0.65	1.00	2.02		
												2.25	1.50	YES
							Flat 19							
First	R1	Residential	LD	W1-L	0.78	0.92	1.61	65.20	86.32	0.65	0.15	0.23		
				W1-U	0.78	0.92	2.75	49.62	86.32	0.65	1.00	1.98		
												2.21	1.50	YES

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First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	71.87	58.34	0.65	0.15	0.20		
				W2-U	0.78	0.92	1.45	72.38	58.34	0.65	1.00	2.25		
												2.44	1.00	YES
First	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	72.19	60.79	0.65	0.15	0.19		
				W3-U	0.78	0.92	1.45	72.84	60.79	0.65	1.00	2.17		
												2.36	1.00	YES
						Flat 20								
First	R1	Residential	LD	W1-L	0.78	0.92	1.61	64.40	81.11	0.65	0.15	0.24		
				W1-U	0.78	0.92	2.75	48.89	81.11	0.65	1.00	2.08		
												2.32	1.50	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	69.32	48.60	0.65	0.15	0.23		
				W2-U	0.78	0.92	1.45	69.13	48.60	0.65	1.00	2.58		
												2.80	1.00	YES
First	R3	Residential	Bedroom	W3-L	0.78	0.92	0.86	70.77	62.83	0.65	0.15	0.18		
				W3-U	0.78	0.92	1.47	71.62	62.83	0.65	1.00	2.10		
												2.28	1.00	YES
						Flat 21								
First	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	69.70	65.60	0.65	0.15	0.17		
				W1-U	0.78	0.92	1.45	70.83	65.60	0.65	1.00	1.96		
												2.13	1.00	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.88	67.79	54.56	0.65	0.15	0.21		
				W2-U	0.78	0.92	1.50	69.22	54.56	0.65	1.00	2.38		
												2.59	1.00	YES
First	R3	Residential	LD	W3-L	0.78	0.92	1.61	59.32	85.87	0.65	0.15	0.21		
				W3-U	0.78	0.92	2.75	44.35	85.87	0.65	1.00	1.78		
												1.99	1.50	YES
						Flat 22								
First	R1	Residential	LKD	W1-L	0.78	0.92	1.61	56.54	98.97	0.65	0.15	0.17		

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				W1-U	0.78	0.92	2.75	58.03	98.97	0.65	1.00	2.02		
												2.19	2.00	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	50.19	57.23	0.65	0.15	0.14		
				W2-U	0.78	0.92	1.45	38.49	57.23	0.65	1.00	1.22		
												1.36	1.00	YES
						Flat 23								
First	R1	Residential	LKD	W1-L	0.78	0.92	0.62	77.45	120.64	0.65	0.15	0.07		
				W1-U	0.78	0.92	0.95	76.77	120.64	0.65	1.00	0.76		
				W2-L	0.78	0.92	1.93	53.14	120.64	0.65	0.15	0.16		
				W2-U	0.78	0.92	2.97	41.28	120.64	0.65	1.00	1.27		
				W3-L	0.78	0.92	0.85	86.71	120.64	0.65	0.15	0.11		
				W3-U	0.78	0.92	1.45	85.15	120.64	0.65	1.00	1.28		
												3.66	2.00	YES
						Flat 24								
First	R1	Residential	Bedroom	W4-L	0.78	0.92	0.62	50.76	58.28	0.65	0.15	0.10		
				W4-U	0.78	0.92	1.06	41.61	58.28	0.65	1.00	0.94		
												1.04	1.00	YES
First	R2	Residential	LKD	W1-L	0.78	0.92	0.85	83.45	85.99	0.65	0.15	0.15		
				W1-U	0.78	0.92	1.45	82.92	85.99	0.65	1.00	1.75		
				W2-L	0.78	0.92	0.62	81.66	85.99	0.65	0.15	0.11		
				W2-U	0.78	0.92	1.06	81.38	85.99	0.65	1.00	1.25		
				W3-L	0.78	0.92	1.93	51.05	85.99	0.65	0.15	0.21		
				W3-U	0.78	0.92	3.29	39.79	85.99	0.65	1.00	1.90		
												5.38	2.00	YES
						Flat 25								
First	R1	Residential	LKD	W1-L	0.78	0.92	0.85	52.73	103.97	0.65	0.15	0.08		
				W1-U	0.78	0.92	1.45	52.36	103.97	0.65	1.00	0.91		
				W2-L	0.78	0.92	0.85	47.54	103.97	0.65	0.15	0.07		

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				W2-U	0.78	0.92	1.45	36.48	103.97	0.65	1.00	0.64		
												1.70	2.00	NO
First	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	83.03	67.66	0.65	0.15	0.20		
				W3-U	0.78	0.92	1.45	82.62	67.66	0.65	1.00	2.21		
				W4-L	0.78	0.92	0.85	83.13	67.66	0.65	0.15	0.20		
				W4-U	0.78	0.92	1.45	82.70	67.66	0.65	1.00	2.21		
												4.82	1.00	YES
First	R3	Residential	Bedroom	W5-L	0.78	0.92	0.85	83.24	57.24	0.65	0.15	0.23		
				W5-U	0.78	0.92	1.45	82.77	57.24	0.65	1.00	2.62		
												2.85	1.00	YES
						Flat 26								
First	R1	Residential	LD	W1-L	0.78	0.92	1.61	59.86	86.87	0.65	0.15	0.21		
				W1-U	0.78	0.92	2.75	44.86	86.87	0.65	1.00	1.78		
												1.99	1.50	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	75.37	57.68	0.65	0.15	0.21		
				W2-U	0.78	0.92	1.45	75.38	57.68	0.65	1.00	2.37		
												2.58	1.00	YES
First	R3	Residential	Bedroom	W3-L	0.78	0.92	0.62	80.19	63.92	0.65	0.15	0.15		
				W3-U	0.78	0.92	1.06	80.22	63.92	0.65	1.00	1.66		
				W4-L	0.78	0.92	0.85	82.70	63.92	0.65	0.15	0.21		
				W4-U	0.78	0.92	1.45	82.38	63.92	0.65	1.00	2.33		
												4.35	1.00	YES
						Flat 27								
First	R1	Residential	LKD	W1-L	0.78	0.92	0.85	67.20	99.06	0.65	0.15	0.11		
				W1-U	0.78	0.92	1.45	66.71	99.06	0.65	1.00	1.22		
				W2-L	0.78	0.92	1.61	62.87	99.06	0.65	0.15	0.19		
				W2-U	0.78	0.92	2.75	47.80	99.06	0.65	1.00	1.66		
												3.18	2.00	YES
First	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	67.21	59.26	0.65	0.15	0.18		
				W3-U	0.78	0.92	1.45	66.71	59.26	0.65	1.00	2.04		

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												2.22	1.00	YES
						Flat 28								
First	R1	Residential	LD	W1-L	0.78	0.92	1.61	59.95	86.87	0.65	0.15	0.21		
				W1-U	0.78	0.92	2.75	45.16	86.87	0.65	1.00	1.79		
												2.00	1.50	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	80.72	63.92	0.65	0.15	0.20		
				W2-U	0.78	0.92	1.45	80.93	63.92	0.65	1.00	2.29		
				W3-L	0.78	0.92	0.62	78.61	63.92	0.65	0.15	0.14		
				W3-U	0.78	0.92	1.06	79.04	63.92	0.65	1.00	1.63		
												4.27	1.00	YES
First	R3	Residential	Bedroom	W4-L	0.78	0.92	0.85	73.96	57.71	0.65	0.15	0.20		
				W4-U	0.78	0.92	1.45	74.34	57.71	0.65	1.00	2.33		
												2.54	1.00	YES
						Flat 29								
First	R1	Residential	LKD	W1-L	0.78	0.92	0.85	47.64	103.96	0.65	0.15	0.07		
				W1-U	0.78	0.92	1.45	36.69	103.96	0.65	1.00	0.64		
				W2-L	0.78	0.92	0.85	52.81	103.96	0.65	0.15	0.08		
				W2-U	0.78	0.92	1.45	52.47	103.96	0.65	1.00	0.91		
												1.71	2.00	**NO**
First	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	79.38	57.26	0.65	0.15	0.22		
				W3-U	0.78	0.92	1.45	80.01	57.26	0.65	1.00	2.53		
												2.75	1.00	YES
First	R3	Residential	Bedroom	W4-L	0.78	0.92	0.85	79.64	67.66	0.65	0.15	0.19		
				W4-U	0.78	0.92	1.45	80.21	67.66	0.65	1.00	2.15		
				W5-L	0.78	0.92	0.85	80.03	67.66	0.65	0.15	0.19		
				W5-U	0.78	0.92	1.45	80.47	67.66	0.65	1.00	2.15		
												4.68	1.00	YES

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						Flat 30								
First	R1	Residential	Bedroom	W1-L	0.78	0.92	0.62	49.84	58.27	0.65	0.15	0.10		
				W1-U	0.78	0.92	1.06	41.38	58.27	0.65	1.00	0.94		
												1.04	1.00	YES
First	R2	Residential	LKD	W2-L	0.78	0.92	1.77	50.94	85.98	0.65	0.15	0.20		
				W2-U	0.78	0.92	3.02	39.82	85.98	0.65	1.00	1.75		
				W3-L	0.78	0.92	0.62	77.37	85.98	0.65	0.15	0.10		
				W3-U	0.78	0.92	1.06	78.31	85.98	0.65	1.00	1.20		
				W4-L	0.78	0.92	0.85	79.15	85.98	0.65	0.15	0.15		
				W4-U	0.78	0.92	1.45	79.86	85.98	0.65	1.00	1.68		
												5.09	2.00	YES
						Flat 31								
First	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	50.28	57.22	0.65	0.15	0.14		
				W1-U	0.78	0.92	1.45	38.71	57.22	0.65	1.00	1.23		
												1.37	1.00	YES
First	R2	Residential	LKD	W2-L	0.78	0.92	1.61	56.50	98.97	0.65	0.15	0.17		
				W2-U	0.78	0.92	2.75	57.99	98.97	0.65	1.00	2.02		
												2.19	2.00	YES
						Flat 31a								
First	R1	Residential	LKD	W1-L	0.78	0.92	1.61	88.54	101.42	0.65	0.15	0.26		
				W1-U	0.78	0.92	2.75	86.40	101.42	0.65	1.00	2.94		
				W2-L	0.78	0.92	0.62	76.99	101.42	0.65	0.15	0.09		
				W2-U	0.78	0.92	1.06	77.46	101.42	0.65	1.00	1.01		
				W3-L	0.78	0.92	0.62	73.69	101.42	0.65	0.15	0.08		
				W3-U	0.78	0.92	1.06	74.24	101.42	0.65	1.00	0.97		
												5.35	2.00	YES

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						Flat 32								
First	R1	Residential	LD	W1-L	0.78	0.92	1.61	59.43	85.27	0.65	0.15	0.21		
				W1-U	0.78	0.92	2.75	44.67	85.27	0.65	1.00	1.80		
												2.02	1.50	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	67.79	54.56	0.65	0.15	0.20		
				W2-U	0.78	0.92	1.45	69.25	54.56	0.65	1.00	2.30		
												2.50	1.00	YES
First	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	69.73	67.04	0.65	0.15	0.17		
				W3-U	0.78	0.92	1.45	70.85	67.04	0.65	1.00	1.91		
												2.08	1.00	YES
						Flat 33								
First	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	70.81	62.83	0.65	0.15	0.18		
				W1-U	0.78	0.92	1.45	71.65	62.83	0.65	1.00	2.07		
												2.25	1.00	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	69.37	48.60	0.65	0.15	0.23		
				W2-U	0.78	0.92	1.45	69.18	48.60	0.65	1.00	2.58		
												2.81	1.00	YES
First	R3	Residential	LD	W3-L	0.78	0.92	1.61	64.52	81.19	0.65	0.15	0.24		
				W3-U	0.78	0.92	2.75	49.21	81.19	0.65	1.00	2.09		
												2.33	1.50	YES
						Flat 34								
First	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	72.23	60.79	0.65	0.15	0.19		
				W1-U	0.78	0.92	1.45	72.87	60.79	0.65	1.00	2.17		
												2.36	1.00	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	71.93	58.34	0.65	0.15	0.20		
				W2-U	0.78	0.92	1.45	72.44	58.34	0.65	1.00	2.25		
												2.45	1.00	YES

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First	R3	Residential	LD	W3-L	0.78	0.92	1.61	65.32	86.32	0.65	0.15	0.23		
				W3-U	0.78	0.92	2.75	49.95	86.32	0.65	1.00	1.99		
												2.22	1.50	YES
						Flat 35								
First	R1	Residential	LD	W1-L	0.78	0.92	1.61	66.02	85.77	0.65	0.15	0.23		
				W1-U	0.78	0.92	2.75	50.50	85.77	0.65	1.00	2.03		
												2.26	1.50	YES
First	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	73.75	60.65	0.65	0.15	0.19		
				W2-U	0.78	0.92	1.45	73.98	60.65	0.65	1.00	2.21		
												2.40	1.00	YES
First	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	75.30	72.30	0.65	0.15	0.17		
				W3-U	0.78	0.92	1.45	75.57	72.30	0.65	1.00	1.89		
												2.06	1.00	YES
						Flat 36								
First	R1	Residential	LKD	W1-L	0.78	0.92	0.85	76.55	136.53	0.65	0.15	0.09		
				W1-U	0.78	0.92	1.45	76.60	136.53	0.65	1.00	1.02		
				W2-L	0.78	0.92	0.85	77.28	136.53	0.65	0.15	0.09		
				W2-U	0.78	0.92	1.45	77.23	136.53	0.65	1.00	1.02		
				W3-L	0.78	0.92	1.93	45.71	136.53	0.65	0.15	0.12		
				W3-U	0.78	0.92	3.29	26.31	136.53	0.65	1.00	0.79		
				W4-L	0.78	0.92	0.62	84.63	136.53	0.65	0.15	0.07		
				W4-U	0.78	0.92	1.06	83.44	136.53	0.65	1.00	0.81		
												4.01	2.00	YES
						Flat 37								
Second	R1	Residential	LKD	W1-L	0.78	0.92	0.62	84.63	135.91	0.65	0.15	0.07		
				W1-U	0.78	0.92	1.06	83.44	135.91	0.65	1.00	0.81		
				W2-L	0.78	0.92	1.94	51.73	135.91	0.65	0.15	0.14		
				W2-U	0.78	0.92	3.31	38.78	135.91	0.65	1.00	1.18		

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				W3-L	0.78	0.92	0.85	80.53	135.91	0.65	0.15	0.09		
				W3-U	0.78	0.92	1.45	80.40	135.91	0.65	1.00	1.07		
				W4-L	0.78	0.92	0.85	80.04	135.91	0.65	0.15	0.09		
				W4-U	0.78	0.92	1.45	80.03	135.91	0.65	1.00	1.07		
												4.53	2.00	YES
						Flat 38								
Second	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	79.34	70.49	0.65	0.15	0.18		
				W1-U	0.78	0.92	1.45	79.50	70.49	0.65	1.00	2.04		
												2.22	1.00	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	79.10	60.65	0.65	0.15	0.21		
				W2-U	0.78	0.92	1.45	79.32	60.65	0.65	1.00	2.37		
												2.58	1.00	YES
Second	R3	Residential	LD	W3-L	0.78	0.92	1.61	80.19	85.77	0.65	0.15	0.28		
				W3-U	0.78	0.92	2.75	80.06	85.77	0.65	1.00	3.22		
												3.50	1.50	YES
						Flat 39								
Second	R1	Residential	LD	W1-L	0.78	0.92	1.61	79.67	86.32	0.65	0.15	0.28		
				W1-U	0.78	0.92	2.75	79.68	86.32	0.65	1.00	3.18		
												3.46	1.50	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	77.86	58.34	0.65	0.15	0.21		
				W2-U	0.78	0.92	1.45	78.37	58.34	0.65	1.00	2.43		
												2.65	1.00	YES
Second	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	77.31	60.79	0.65	0.15	0.20		
				W3-U	0.78	0.92	1.45	78.08	60.79	0.65	1.00	2.33		
												2.53	1.00	YES
						Flat 40								
Second	R1	Residential	LD	W1-L	0.78	0.92	1.61	63.53	81.19	0.65	0.15	0.24		
				W1-U	0.78	0.92	2.75	33.51	81.19	0.65	1.00	1.42		

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												1.66	1.50	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	75.44	48.60	0.65	0.15	0.25		
				W2-U	0.78	0.92	1.45	76.67	48.60	0.65	1.00	2.86		
												3.11	1.00	YES
Second	R3	Residential	Bedroom	W3-L	0.78	0.92	0.86	76.29	62.83	0.65	0.15	0.20		
				W3-U	0.78	0.92	1.47	77.14	62.83	0.65	1.00	2.26		
												2.46	1.00	YES
Flat 41														
Second	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	75.45	65.60	0.65	0.15	0.18		
				W1-U	0.78	0.92	1.45	76.42	65.60	0.65	1.00	2.11		
												2.29	1.00	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	74.83	54.56	0.65	0.15	0.22		
				W2-U	0.78	0.92	1.45	75.92	54.56	0.65	1.00	2.52		
												2.74	1.00	YES
Second	R3	Residential	LD	W3-L	0.78	0.92	1.61	74.40	85.87	0.65	0.15	0.26		
				W3-U	0.78	0.92	2.75	75.44	85.87	0.65	1.00	3.03		
												3.29	1.50	YES
Flat 42														
Second	R1	Residential	LKD	W1-L	0.78	0.92	1.61	63.37	98.97	0.65	0.15	0.19		
				W1-U	0.78	0.92	2.75	66.35	98.97	0.65	1.00	2.31		
												2.50	2.00	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	57.44	57.23	0.65	0.15	0.16		
				W2-U	0.78	0.92	1.45	46.61	57.23	0.65	1.00	1.48		
												1.64	1.00	YES
Flat 43														
Second	R1	Residential	LKD	W1-L	0.78	0.92	0.62	79.66	120.64	0.65	0.15	0.08		
				W1-U	0.78	0.92	0.95	79.11	120.64	0.65	1.00	0.78		
				W2-L	0.78	0.92	1.93	52.36	120.64	0.65	0.15	0.16		

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				W2-U	0.78	0.92	2.97	39.87	120.64	0.65	1.00	1.23		
				W3-L	0.78	0.92	0.85	86.71	120.64	0.65	0.15	0.11		
				W3-U	0.78	0.92	1.45	85.15	120.64	0.65	1.00	1.28		
												3.64	2.00	YES
						Flat 44								
Second	R1	Residential	LKD	W1-L	0.78	0.92	0.85	85.70	85.99	0.65	0.15	0.16		
				W1-U	0.78	0.92	1.45	84.88	85.99	0.65	1.00	1.79		
				W2-L	0.78	0.92	0.62	83.73	85.99	0.65	0.15	0.11		
				W2-U	0.78	0.92	1.06	83.19	85.99	0.65	1.00	1.28		
				W3-L	0.78	0.92	1.77	52.26	85.99	0.65	0.15	0.20		
				W3-U	0.78	0.92	3.02	40.50	85.99	0.65	1.00	1.78		
												5.33	2.00	YES
Second	R2	Residential	Bedroom	W4-L	0.78	0.92	0.62	51.52	58.31	0.65	0.15	0.10		
				W4-U	0.78	0.92	1.06	42.36	58.31	0.65	1.00	0.96		
												1.06	1.00	YES
						Flat 45								
Second	R1	Residential	LKD	W1-L	0.78	0.92	0.85	58.43	103.97	0.65	0.15	0.09		
				W1-U	0.78	0.92	1.45	59.49	103.97	0.65	1.00	1.04		
				W2-L	0.78	0.92	0.85	52.97	103.97	0.65	0.15	0.08		
				W2-U	0.78	0.92	1.45	42.47	103.97	0.65	1.00	0.74		
												1.95	2.00	**NO**
Second	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	85.57	67.72	0.65	0.15	0.20		
				W3-U	0.78	0.92	1.45	84.85	67.72	0.65	1.00	2.27		
				W4-L	0.78	0.92	0.85	85.60	67.72	0.65	0.15	0.20		
				W4-U	0.78	0.92	1.45	84.85	67.72	0.65	1.00	2.27		
												4.94	1.00	YES
Second	R3	Residential	Bedroom	W5-L	0.78	0.92	0.85	85.63	57.24	0.65	0.15	0.24		
				W5-U	0.78	0.92	1.45	84.86	57.24	0.65	1.00	2.69		
												2.92	1.00	YES

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						Flat 46								
Second	R1	Residential	LD	W1-L	0.78	0.92	1.61	65.81	86.87	0.65	0.15	0.23		
				W1-U	0.78	0.92	2.75	51.12	86.87	0.65	1.00	2.03		
												2.26	1.50	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	78.70	57.68	0.65	0.15	0.22		
				W2-U	0.78	0.92	1.45	80.10	57.68	0.65	1.00	2.52		
												2.73	1.00	YES
Second	R3	Residential	Bedroom	W3-L	0.78	0.92	0.62	83.05	63.56	0.65	0.15	0.15		
				W3-U	0.78	0.92	1.06	82.91	63.56	0.65	1.00	1.72		
				W4-L	0.78	0.92	0.85	85.44	63.56	0.65	0.15	0.21		
				W4-U	0.78	0.92	1.45	84.81	63.56	0.65	1.00	2.42		
												4.51	1.00	YES
						Flat 47								
Second	R1	Residential	LKD	W1-L	0.78	0.92	0.85	72.92	99.05	0.65	0.15	0.12		
				W1-U	0.78	0.92	1.45	72.62	99.05	0.65	1.00	1.33		
				W2-L	0.78	0.92	1.61	68.00	99.05	0.65	0.15	0.21		
				W2-U	0.78	0.92	2.75	52.81	99.05	0.65	1.00	1.84		
												3.49	2.00	YES
Second	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	72.92	59.26	0.65	0.15	0.20		
				W3-U	0.78	0.92	1.45	72.62	59.26	0.65	1.00	2.22		
												2.42	1.00	YES
						Flat 48								
Second	R1	Residential	LD	W1-L	0.78	0.92	1.61	65.81	86.87	0.65	0.15	0.23		
				W1-U	0.78	0.92	2.75	51.12	86.87	0.65	1.00	2.03		
												2.26	1.50	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	84.72	63.92	0.65	0.15	0.21		
				W2-U	0.78	0.92	1.45	84.61	63.92	0.65	1.00	2.40		
				W3-L	0.78	0.92	0.62	82.46	63.92	0.65	0.15	0.15		

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				W3-U	0.78	0.92	1.06	82.74	63.92	0.65	1.00	1.71		
												4.47	1.00	YES
Second	R3	Residential	Bedroom	W4-L	0.78	0.92	0.85	78.14	57.71	0.65	0.15	0.22		
				W4-U	0.78	0.92	1.45	79.88	57.71	0.65	1.00	2.51		
												2.72	1.00	YES
Flat 49														
Second	R1	Residential	LKD	W1-L	0.78	0.92	0.85	52.99	103.96	0.65	0.15	0.08		
				W1-U	0.78	0.92	1.45	42.49	103.96	0.65	1.00	0.74		
				W2-L	0.78	0.92	0.85	58.49	103.96	0.65	0.15	0.09		
				W2-U	0.78	0.92	1.45	59.54	103.96	0.65	1.00	1.04		
												1.95	2.00	NO
Second	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	84.33	57.26	0.65	0.15	0.23		
				W3-U	0.78	0.92	1.45	84.53	57.26	0.65	1.00	2.67		
												2.91	1.00	YES
Second	R3	Residential	Bedroom	W4-L	0.78	0.92	0.85	84.42	67.66	0.65	0.15	0.20		
				W4-U	0.78	0.92	1.45	84.55	67.66	0.65	1.00	2.26		
				W5-L	0.78	0.92	0.85	84.52	67.66	0.65	0.15	0.20		
				W5-U	0.78	0.92	1.45	84.58	67.66	0.65	1.00	2.26		
												4.93	1.00	YES
Flat 50														
Second	R1	Residential	Bedroom	W1-L	0.78	0.92	0.62	51.85	57.52	0.65	0.15	0.10		
				W1-U	0.78	0.92	1.06	42.96	57.52	0.65	1.00	0.99		
												1.09	1.00	YES
Second	R2	Residential	LKD	W2-L	0.78	0.92	1.77	52.06	85.99	0.65	0.15	0.20		
				W2-U	0.78	0.92	3.02	40.42	85.99	0.65	1.00	1.78		
				W3-L	0.78	0.92	0.62	82.29	85.99	0.65	0.15	0.11		
				W3-U	0.78	0.92	1.06	82.83	85.99	0.65	1.00	1.27		
				W4-L	0.78	0.92	0.85	84.24	85.99	0.65	0.15	0.16		
				W4-U	0.78	0.92	1.45	84.51	85.99	0.65	1.00	1.78		
												5.30	2.00	YES

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Flat 50a														
Second	R1	Residential	LKD	W1-L	0.78	0.92	0.62	77.93	101.55	0.65	0.15	0.09		
				W1-U	0.78	0.92	1.06	78.64	101.55	0.65	1.00	1.02		
				W2-L	0.78	0.92	0.62	80.87	101.55	0.65	0.15	0.09		
				W2-U	0.78	0.92	1.06	81.24	101.55	0.65	1.00	1.06		
				W3-L	0.78	0.92	1.61	88.59	101.55	0.65	0.15	0.26		
				W3-U	0.78	0.92	2.75	86.43	101.55	0.65	1.00	2.93		
												5.46	2.00	YES
Flat 51														
Second	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	57.41	57.22	0.65	0.15	0.16		
				W1-U	0.78	0.92	1.45	46.34	57.22	0.65	1.00	1.47		
												1.63	1.00	YES
Second	R2	Residential	LKD	W2-L	0.78	0.92	1.61	63.36	98.97	0.65	0.15	0.19		
				W2-U	0.78	0.92	2.75	66.37	98.97	0.65	1.00	2.31		
												2.50	2.00	YES
Flat 52														
Second	R1	Residential	LD	W1-L	0.78	0.92	1.61	74.41	85.26	0.65	0.15	0.26		
				W1-U	0.78	0.92	2.75	75.45	85.26	0.65	1.00	3.05		
												3.31	1.50	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	74.84	54.56	0.65	0.15	0.22		
				W2-U	0.78	0.92	1.45	75.93	54.56	0.65	1.00	2.52		
												2.74	1.00	YES
Second	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	75.47	67.04	0.65	0.15	0.18		
				W3-U	0.78	0.92	1.45	76.43	67.04	0.65	1.00	2.07		
												2.24	1.00	YES

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						Flat 53								
Second	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	76.31	62.83	0.65	0.15	0.19		
				W1-U	0.78	0.92	1.45	77.15	62.83	0.65	1.00	2.23		
												2.42	1.00	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	75.46	48.60	0.65	0.15	0.25		
				W2-U	0.78	0.92	1.45	76.69	48.60	0.65	1.00	2.86		
												3.11	1.00	YES
Second	R3	Residential	LD	W3-L	0.78	0.92	1.61	63.55	81.19	0.65	0.15	0.24		
				W3-U	0.78	0.92	2.75	33.53	81.19	0.65	1.00	1.42		
												1.66	1.50	YES
						Flat 54								
Second	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	77.33	60.79	0.65	0.15	0.20		
				W1-U	0.78	0.92	1.45	78.11	60.79	0.65	1.00	2.33		
												2.53	1.00	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	77.89	58.34	0.65	0.15	0.21		
				W2-U	0.78	0.92	1.45	78.40	58.34	0.65	1.00	2.43		
												2.65	1.00	YES
Second	R3	Residential	LD	W3-L	0.78	0.92	1.61	79.70	86.32	0.65	0.15	0.28		
				W3-U	0.78	0.92	2.75	79.71	86.32	0.65	1.00	3.18		
												3.46	1.50	YES
						Flat 55								
Second	R1	Residential	LD	W1-L	0.78	0.92	1.61	80.21	85.77	0.65	0.15	0.28		
				W1-U	0.78	0.92	2.75	80.09	85.77	0.65	1.00	3.22		
												3.50	1.50	YES
Second	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	79.12	60.65	0.65	0.15	0.21		
				W2-U	0.78	0.92	1.45	79.34	60.65	0.65	1.00	2.37		
												2.58	1.00	YES

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Second	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	79.37	72.30	0.65	0.15	0.17		
				W3-U	0.78	0.92	1.45	79.52	72.30	0.65	1.00	1.99		
												2.17	1.00	YES
							Flat 56							
Second	R1	Residential	LKD	W1-L	0.78	0.92	0.85	80.06	136.53	0.65	0.15	0.09		
				W1-U	0.78	0.92	1.45	80.05	136.53	0.65	1.00	1.06		
				W2-L	0.78	0.92	0.85	80.55	136.53	0.65	0.15	0.09		
				W2-U	0.78	0.92	1.45	80.42	136.53	0.65	1.00	1.07		
				W3-L	0.78	0.92	1.93	45.34	136.53	0.65	0.15	0.12		
				W3-U	0.78	0.92	3.29	22.65	136.53	0.65	1.00	0.68		
				W4-L	0.78	0.92	0.62	84.63	136.53	0.65	0.15	0.07		
				W4-U	0.78	0.92	1.06	83.44	136.53	0.65	1.00	0.81		
												4.00	2.00	YES
							Flat 57							
Third	R1	Residential	LKD	W1-L	0.78	0.92	0.62	84.63	136.10	0.65	0.15	0.07		
				W1-U	0.78	0.92	1.06	83.44	136.10	0.65	1.00	0.81		
				W2-L	0.78	0.92	1.93	50.51	136.10	0.65	0.15	0.13		
				W2-U	0.78	0.92	3.29	35.09	136.10	0.65	1.00	1.06		
				W3-L	0.78	0.92	0.85	83.74	136.10	0.65	0.15	0.10		
				W3-U	0.78	0.92	1.45	83.46	136.10	0.65	1.00	1.11		
				W4-L	0.78	0.92	0.85	83.52	136.10	0.65	0.15	0.10		
				W4-U	0.78	0.92	1.45	83.35	136.10	0.65	1.00	1.11		
												4.49	2.00	YES
							Flat 58							
Third	R1	Residential	Bedroom	W1-L	0.78	0.92	1.14	54.15	75.50	0.65	0.15	0.15		
				W1-U	0.78	0.92	1.94	81.72	75.50	0.65	1.00	2.63		
												2.78	1.00	YES

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Third	R2	Residential	LKD	W2-L	0.78	0.92	1.14	55.68	101.42	0.65	0.15	0.12		
				W2-U	0.78	0.92	1.94	83.86	101.42	0.65	1.00	2.01		
				W3	0.78	0.84	0.32	N/A	101.42	0.70	1.00	0.67		
												2.79	2.00	YES
							Flat 59							
Third	R1	Residential	LKD	W1-L	0.78	0.92	1.14	55.69	104.24	0.65	0.15	0.11		
				W1-U	0.78	0.92	1.94	83.75	104.24	0.65	1.00	1.95		
				W2	0.78	0.84	0.32	N/A	104.24	0.71	1.00	0.66		
												2.72	2.00	YES
Third	R2	Residential	Bedroom	W3-L	0.78	0.92	1.14	54.36	75.63	0.65	0.15	0.15		
				W3-U	0.78	0.92	1.94	81.97	75.63	0.65	1.00	2.63		
												2.78	1.00	YES
							Flat 60							
Third	R1	Residential	LD	W1-L	0.78	0.92	1.61	83.75	82.06	0.65	0.15	0.31		
				W1-U	0.78	0.92	2.75	83.75	82.06	0.65	1.00	3.52		
												3.83	1.50	YES
Third	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	81.95	48.79	0.65	0.15	0.27		
				W2-U	0.78	0.92	1.45	82.47	48.79	0.65	1.00	3.06		
												3.33	1.00	YES
Third	R3	Residential	Bedroom	W3-L	0.78	0.92	0.85	81.78	65.58	0.65	0.15	0.20		
				W3-U	0.78	0.92	1.45	82.37	65.58	0.65	1.00	2.28		
												2.47	1.00	YES
							Flat 61							
Third	R1	Residential	Bedroom	W1-L	0.78	0.92	1.14	54.35	75.50	0.65	0.15	0.15		
				W1-U	0.78	0.92	1.94	80.97	75.50	0.65	1.00	2.60		
												2.75	1.00	YES
Third	R2	Residential	LKD	W2-L	0.78	0.92	1.14	55.51	98.33	0.65	0.15	0.12		
				W2-U	0.78	0.92	1.94	82.15	98.33	0.65	1.00	2.03		

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				W3	0.78	0.84	0.32	N/A	98.33	0.70	1.00	0.70		
												2.84	2.00	YES
						Flat 62								
Third	R1	Residential	LKD	W1-L	0.78	0.92	1.61	77.82	101.83	0.65	0.15	0.23		
				W1-U	0.78	0.92	2.75	81.29	101.83	0.65	1.00	2.75		
												2.98	2.00	YES
Third	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	74.26	57.52	0.65	0.15	0.21		
				W2-U	0.78	0.92	1.45	77.89	57.52	0.65	1.00	2.45		
												2.66	1.00	YES
						Flat 63								
Third	R1	Residential	LKD	W1-L	0.78	0.92	0.62	82.22	131.75	0.65	0.15	0.07		
				W1-U	0.78	0.92	1.06	82.06	131.75	0.65	1.00	0.82		
				W2-L	0.78	0.92	1.93	49.81	131.75	0.65	0.15	0.14		
				W2-U	0.78	0.92	3.29	33.10	131.75	0.65	1.00	1.03		
				W3-L	0.78	0.92	0.85	86.71	131.75	0.65	0.15	0.10		
				W3-U	0.78	0.92	1.45	85.15	131.75	0.65	1.00	1.17		
												3.34	2.00	YES
						Flat 64								
Third	R1	Residential	LKD	W1-L	0.78	0.92	0.85	86.71	92.61	0.65	0.15	0.15		
				W1-U	0.78	0.92	1.45	85.15	92.61	0.65	1.00	1.67		
				W2-L	0.78	0.92	0.62	84.60	92.61	0.65	0.15	0.11		
				W2-U	0.78	0.92	1.06	83.44	92.61	0.65	1.00	1.20		
				W3-L	0.78	0.92	1.93	65.41	92.61	0.65	0.15	0.26		
				W3-U	0.78	0.92	3.29	69.58	92.61	0.65	1.00	3.09		
												6.47	2.00	YES
Third	R2	Residential	Bedroom	W4-L	0.78	0.92	0.62	60.46	64.48	0.65	0.15	0.11		
				W4-U	0.78	0.92	1.06	63.02	64.48	0.65	1.00	1.29		
												1.40	1.00	YES

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						Flat 65								
Third	R1	Residential	LKD	W1-L	0.78	0.92	0.85	71.08	113.16	0.65	0.15	0.10		
				W1-U	0.78	0.92	1.45	76.37	113.16	0.65	1.00	1.22		
				W2-L	0.78	0.92	0.85	68.25	113.16	0.65	0.15	0.10		
				W2-U	0.78	0.92	1.45	72.95	113.16	0.65	1.00	1.17		
												2.59	2.00	YES
Third	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	86.71	74.43	0.65	0.15	0.19		
				W3-U	0.78	0.92	1.45	85.15	74.43	0.65	1.00	2.07		
				W4-L	0.78	0.92	0.85	86.71	74.43	0.65	0.15	0.19		
				W4-U	0.78	0.92	1.45	85.15	74.43	0.65	1.00	2.07		
												4.52	1.00	YES
Third	R3	Residential	Bedroom	W5-L	0.78	0.92	0.85	86.71	63.30	0.65	0.15	0.22		
				W5-U	0.78	0.92	1.45	85.15	63.30	0.65	1.00	2.44		
												2.66	1.00	YES
						Flat 66								
Third	R1	Residential	LD	W1-L	0.78	0.92	1.61	82.30	96.30	0.65	0.15	0.26		
				W1-U	0.78	0.92	2.75	83.20	96.30	0.65	1.00	2.98		
												3.24	1.50	YES
Third	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	86.71	63.74	0.65	0.15	0.22		
				W2-U	0.78	0.92	1.45	85.15	63.74	0.65	1.00	2.42		
												2.64	1.00	YES
Third	R3	Residential	Bedroom	W3-L	0.78	0.92	0.62	84.63	70.59	0.65	0.15	0.14		
				W3-U	0.78	0.92	1.06	83.44	70.59	0.65	1.00	1.56		
				W4-L	0.78	0.92	0.85	86.71	70.59	0.65	0.15	0.20		
				W4-U	0.78	0.92	1.45	85.15	70.59	0.65	1.00	2.19		
												4.08	1.00	YES
						Flat 67								
Third	R1	Residential	LKD	W1-L	0.78	0.92	0.85	81.85	108.42	0.65	0.15	0.12		

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				W1-U	0.78	0.92	1.45	82.51	108.42	0.65	1.00	1.38		
				W2-L	0.78	0.92	1.61	83.44	108.42	0.65	0.15	0.23		
				W2-U	0.78	0.92	2.75	83.67	108.42	0.65	1.00	2.66		
												4.39	2.00	YES
Third	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	81.85	65.46	0.65	0.15	0.20		
				W3-U	0.78	0.92	1.45	82.51	65.46	0.65	1.00	2.28		
												2.48	1.00	YES
						Flat 68								
Third	R1	Residential	LD	W1-L	0.78	0.92	1.61	82.30	95.71	0.65	0.15	0.26		
				W1-U	0.78	0.92	2.75	83.20	95.71	0.65	1.00	3.00		
												3.26	1.50	YES
Third	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	86.71	70.59	0.65	0.15	0.20		
				W2-U	0.78	0.92	1.45	85.15	70.59	0.65	1.00	2.19		
				W3-L	0.78	0.92	0.62	84.63	70.59	0.65	0.15	0.14		
				W3-U	0.78	0.92	1.06	83.44	70.59	0.65	1.00	1.56		
												4.08	1.00	YES
Third	R3	Residential	Bedroom	W4-L	0.78	0.92	0.85	86.71	63.78	0.65	0.15	0.22		
				W4-U	0.78	0.92	1.45	85.15	63.78	0.65	1.00	2.42		
												2.64	1.00	YES
						Flat 69								
Third	R1	Residential	LKD	W1-L	0.78	0.92	0.85	68.21	113.16	0.65	0.15	0.10		
				W1-U	0.78	0.92	1.45	72.86	113.16	0.65	1.00	1.17		
				W2-L	0.78	0.92	0.85	71.09	113.16	0.65	0.15	0.10		
				W2-U	0.78	0.92	1.45	76.34	113.16	0.65	1.00	1.22		
												2.58	2.00	YES
Third	R2	Residential	Bedroom	W3-L	0.78	0.92	0.85	86.71	63.32	0.65	0.15	0.22		
				W3-U	0.78	0.92	1.45	85.15	63.32	0.65	1.00	2.44		
												2.65	1.00	YES
Third	R3	Residential	Bedroom	W4-L	0.78	0.92	0.85	86.71	74.37	0.65	0.15	0.19		
				W4-U	0.78	0.92	1.45	85.15	74.37	0.65	1.00	2.07		

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				W5-L	0.78	0.92	0.85	86.71	74.37	0.65	0.15	0.19		
				W5-U	0.78	0.92	1.45	85.15	74.37	0.65	1.00	2.07		
												4.52	1.00	YES
						Flat 70								
Third	R1	Residential	Bedroom	W1-L	0.78	0.92	0.62	62.23	64.44	0.65	0.15	0.11		
				W1-U	0.78	0.92	1.06	63.60	64.44	0.65	1.00	1.30		
												1.42	1.00	YES
Third	R2	Residential	LKD	W2-L	0.78	0.92	1.93	65.38	94.26	0.65	0.15	0.25		
				W2-U	0.78	0.92	3.29	69.56	94.26	0.65	1.00	3.04		
				W3-L	0.78	0.92	0.62	84.63	94.26	0.65	0.15	0.10		
				W3-U	0.78	0.92	1.06	83.44	94.26	0.65	1.00	1.17		
				W4-L	0.78	0.92	0.85	86.71	94.26	0.65	0.15	0.15		
				W4-U	0.78	0.92	1.45	85.15	94.26	0.65	1.00	1.64		
												6.34	2.00	YES
						Flat 70a								
Third	R1	Residential	LKD	W1-L	0.78	0.92	0.62	81.51	111.11	0.65	0.15	0.09		
				W1-U	0.78	0.92	1.06	81.61	111.11	0.65	1.00	0.97		
				W2-L	0.78	0.92	0.62	83.37	111.11	0.65	0.15	0.09		
				W2-U	0.78	0.92	1.06	82.73	111.11	0.65	1.00	0.98		
				W3-L	0.78	0.92	1.51	88.59	111.11	0.65	0.15	0.23		
				W3-U	0.78	0.92	2.75	86.43	111.11	0.65	1.00	2.68		
												5.03	2.00	YES
						Flat 71								
Third	R1	Residential	Bedroom	W1-L	0.78	0.92	0.83	74.11	63.41	0.65	0.15	0.18		
				W1-U	0.78	0.92	1.42	77.75	63.41	0.65	1.00	2.19		
												2.37	1.00	YES
Third	R2	Residential	LKD	W2-L	0.78	0.92	1.61	77.82	111.06	0.65	0.15	0.21		
				W2-U	0.78	0.92	2.75	81.29	111.06	0.65	1.00	2.52		

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Maintenance Factor	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
												2.73	2.00	YES
						Flat 72								
Third	R1	Residential	LKD	W1-L	0.78	0.92	1.13	55.51	107.52	0.65	0.15	0.11		
				W1-U	0.78	0.92	1.93	82.16	107.52	0.65	1.00	1.85		
				W2	0.78	0.84	0.32	N/A	107.52	0.71	1.00	0.70		
												2.66	2.00	YES
Third	R2	Residential	Bedroom	W3-L	0.78	0.92	1.14	54.43	82.67	0.65	0.15	0.14		
				W3-U	0.78	0.92	1.93	81.10	82.67	0.65	1.00	2.37		
												2.51	1.00	YES
						Flat 73								
Third	R1	Residential	Bedroom	W1-L	0.78	0.92	0.85	81.80	72.17	0.65	0.15	0.18		
				W1-U	0.78	0.92	1.44	82.38	72.17	0.65	1.00	2.06		
												2.24	1.00	YES
Third	R2	Residential	Bedroom	W2-L	0.78	0.92	0.85	81.97	54.00	0.65	0.15	0.24		
				W2-U	0.78	0.92	1.44	82.48	54.00	0.65	1.00	2.76		
												3.00	1.00	YES
Third	R3	Residential	LD	W3-L	0.78	0.92	1.61	83.78	88.86	0.65	0.15	0.29		
				W3-U	0.78	0.92	2.75	83.76	88.86	0.65	1.00	3.24		
												3.53	1.50	YES
						Flat 74								
Third	R1	Residential	Bedroom	W1-L	0.78	0.92	1.14	53.71	82.80	0.65	0.15	0.14		
				W1-U	0.78	0.92	1.93	81.12	82.80	0.65	1.00	2.37		
												2.51	1.00	YES
Third	R2	Residential	LKD	W2-L	0.78	0.92	1.14	55.67	114.08	0.65	0.15	0.10		
				W2-U	0.78	0.92	1.93	83.75	114.08	0.65	1.00	1.78		
				W3	0.78	0.84	0.32	N/A	114.08	0.71	1.00	0.66		
												2.54	2.00	YES

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Maintenance Factor	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
Flat 75														
Third	R1	Residential	LKD	W1-L	0.78	0.92	1.14	55.69	114.08	0.65	0.15	0.10		
				W1-U	0.78	0.92	1.93	83.89	114.08	0.65	1.00	1.78		
				W2	0.78	0.84	0.32	N/A	114.08	0.71	1.00	0.66		
												2.54	2.00	YES
Third	R2	Residential	Bedroom	W3-L	0.78	0.92	1.14	54.11	82.94	0.65	0.15	0.14		
				W3-U	0.78	0.92	1.93	81.78	82.94	0.65	1.00	2.39		
												2.53	1.00	YES
Flat 76														
Third	R1	Residential	LKD	W1	0.78	0.92	2.30	83.37	147.18	0.65	1.00	1.63		
				W2	0.78	0.92	2.30	83.47	147.18	0.65	1.00	1.63		
				W3-L	0.78	0.92	1.92	46.95	147.18	0.65	0.15	0.11		
				W3-U	0.78	0.92	3.27	30.85	147.18	0.65	1.00	0.86		
				W4-L	0.78	0.92	0.62	84.63	147.18	0.65	0.15	0.07		
				W4-U	0.78	0.92	1.06	83.44	147.18	0.65	1.00	0.75		
												5.05	2.00	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 1								
Ground	R1		Residential	Bedroom	Area m2	14.84	12.20	
					% of room		82%	YES
	R2		Residential	Bedroom	Area m2	11.88	10.76	
					% of room		91%	YES
	R3		Residential	LD	Area m2	19.96	15.01	
					% of room		75%	NO
Flat 2								
Ground	R1		Residential	LD	Area m2	20.23	15.02	
					% of room		74%	NO
	R2		Residential	Bedroom	Area m2	10.72	9.40	
					% of room		88%	YES
	R3		Residential	Bedroom	Area m2	11.48	10.48	
					% of room		91%	YES
Flat 3								
Ground	R1		Residential	LKD	Area m2	23.45	17.15	
					% of room		73%	NO
	R2		Residential	Bedroom	Area m2	15.17	12.94	
					% of room		85%	YES
Flat 4								
Ground	R1		Residential	Bedroom	Area m2	14.01	12.63	
					% of room		90%	YES
	R2		Residential	Bedroom	Area m2	10.26	9.41	
					% of room		92%	YES
	R3		Residential	LD	Area m2	19.87	15.07	
					% of room		76%	NO
Flat 5								
Ground	R1		Residential	LKD	Area m2	21.10	15.60	
					% of room		74%	NO
	R2		Residential	Bedroom	Area m2	12.84	9.21	
					% of room		72%	NO
Flat 6								
Ground	R1		Residential	LKD	Area m2	25.97	22.55	
					% of room		87%	YES
	R2		Residential	Bedroom	Area m2	14.82	14.68	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	11.57	11.46	
					% of room		99%	YES
Flat 7								
Ground	R1		Residential	LD	Area m2	18.53	16.47	
					% of room		89%	YES
	R2		Residential	Bedroom	Area m2	11.75	11.58	
					% of room		98%	YES
	R3		Residential	Bedroom	Area m2	13.08	12.98	
					% of room		99%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 8								
Ground	R1		Residential	LKD	Area m2	23.09	22.84	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	12.17	11.94	
					% of room		98%	YES
Flat 9								
Ground	R1		Residential	LD	Area m2	18.53	16.44	
					% of room		89%	YES
	R2		Residential	Bedroom	Area m2	13.08	13.00	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	11.75	11.56	
					% of room		98%	YES
Flat 10								
Ground	R1		Residential	LKD	Area m2	25.97	22.61	
					% of room		87%	YES
	R2		Residential	Bedroom	Area m2	11.57	11.46	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	14.82	14.66	
					% of room		99%	YES
Flat 10a								
Ground	R1		Residential	LKD	Area m2	23.77	23.74	
					% of room		100%	YES
Flat 11								
Ground	R1		Residential	Bedroom	Area m2	12.88	9.20	
					% of room		71%	NO
	R2		Residential	LKD	Area m2	21.38	16.02	
					% of room		75%	NO
Flat 12								
Ground	R1		Residential	LD	Area m2	19.87	15.11	
					% of room		76%	NO
	R2		Residential	Bedroom	Area m2	10.26	9.44	
					% of room		92%	YES
	R3		Residential	Bedroom	Area m2	14.01	12.62	
					% of room		90%	YES
Flat 13								
Ground	R1		Residential	Bedroom	Area m2	14.96	13.03	
					% of room		87%	YES
	R2		Residential	LKD	Area m2	23.45	17.15	
					% of room		73%	NO
Flat 14								
Ground	R1		Residential	Bedroom	Area m2	11.48	10.64	
					% of room		93%	YES
	R2		Residential	Bedroom	Area m2	10.72	9.46	
					% of room		88%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
	R3		Residential	LD	Area m2	20.23	15.08	
					% of room		75%	NO
				Flat 15				
Ground	R1		Residential	LD	Area m2	19.96	15.02	
					% of room		75%	NO
	R2		Residential	Bedroom	Area m2	11.88	10.48	
					% of room		88%	YES
	R3		Residential	Bedroom	Area m2	15.74	12.24	
					% of room		78%	NO
				Flat 16				
Ground	R1		Residential	LKD	Area m2	23.25	23.10	
					% of room		99%	YES
				Flat 17				
First	R1		Residential	LKD	Area m2	28.75	28.57	
					% of room		99%	YES
				Flat 18				
First	R1		Residential	Bedroom	Area m2	14.84	14.73	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.88	11.69	
					% of room		98%	YES
	R3		Residential	LD	Area m2	19.96	19.92	
					% of room		100%	YES
				Flat 19				
First	R1		Residential	LD	Area m2	20.23	20.22	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	10.72	10.54	
					% of room		98%	YES
	R3		Residential	Bedroom	Area m2	11.48	11.38	
					% of room		99%	YES
				Flat 20				
First	R1		Residential	LD	Area m2	18.92	18.83	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	9.07	9.00	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	12.16	11.96	
					% of room		98%	YES
				Flat 21				
First	R1		Residential	Bedroom	Area m2	13.29	13.00	
					% of room		98%	YES
	R2		Residential	Bedroom	Area m2	10.26	10.16	
					% of room		99%	YES
	R3		Residential	LD	Area m2	20.25	20.21	
					% of room		100%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 22								
First	R1		Residential	LKD	Area m2	24.60	24.27	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.54	10.37	
					% of room		90%	YES
Flat 23								
First	R1		Residential	LKD	Area m2	28.00	27.89	
					% of room		100%	YES
Flat 24								
First	R1		Residential	Bedroom	Area m2	11.76	10.25	
					% of room		87%	YES
	R2		Residential	LKD	Area m2	19.68	19.66	
					% of room		100%	YES
Flat 25								
First	R1		Residential	LKD	Area m2	25.98	23.73	
					% of room		91%	YES
	R2		Residential	Bedroom	Area m2	14.83	14.69	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	11.57	11.47	
					% of room		99%	YES
Flat 26								
First	R1		Residential	LD	Area m2	18.52	17.69	
					% of room		96%	YES
	R2		Residential	Bedroom	Area m2	11.74	11.57	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	13.25	13.16	
					% of room		99%	YES
Flat 27								
First	R1		Residential	LKD	Area m2	23.09	22.91	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	12.17	11.99	
					% of room		99%	YES
Flat 28								
First	R1		Residential	LD	Area m2	18.52	17.69	
					% of room		96%	YES
	R2		Residential	Bedroom	Area m2	13.25	13.18	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	11.75	11.56	
					% of room		98%	YES
Flat 29								
First	R1		Residential	LKD	Area m2	25.97	23.77	
					% of room		92%	YES
	R2		Residential	Bedroom	Area m2	11.58	11.47	
					% of room		99%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
	R3		Residential	Bedroom	Area m2	14.83	14.69	
					% of room		99%	YES
				Flat 30				
First	R1		Residential	Bedroom	Area m2	11.76	9.63	
					% of room		82%	YES
	R2		Residential	LKD	Area m2	19.68	19.66	
					% of room		100%	YES
				Flat 31				
First	R1		Residential	Bedroom	Area m2	11.53	10.37	
					% of room		90%	YES
	R2		Residential	LKD	Area m2	24.60	24.27	
					% of room		99%	YES
				Flat 31a				
First	R1		Residential	LKD	Area m2	23.77	23.73	
					% of room		100%	YES
				Flat 32				
First	R1		Residential	LD	Area m2	19.95	19.87	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	10.26	10.17	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	14.01	13.73	
					% of room		98%	YES
				Flat 33				
First	R1		Residential	Bedroom	Area m2	12.16	11.96	
					% of room		98%	YES
	R2		Residential	Bedroom	Area m2	9.07	8.98	
					% of room		99%	YES
	R3		Residential	LD	Area m2	18.96	18.90	
					% of room		100%	YES
				Flat 34				
First	R1		Residential	Bedroom	Area m2	11.48	11.37	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	10.72	10.52	
					% of room		98%	YES
	R3		Residential	LD	Area m2	20.23	20.21	
					% of room		100%	YES
				Flat 35				
First	R1		Residential	LD	Area m2	19.96	19.91	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	11.88	11.71	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	15.74	15.65	
					% of room		99%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 36								
First	R1		Residential	LKD	Area m2	27.91	27.56	
					% of room		99%	YES
Flat 37								
Second	R1		Residential	LKD	Area m2	28.75	28.57	
					% of room		99%	YES
Flat 38								
Second	R1		Residential	Bedroom	Area m2	14.84	14.73	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.88	11.69	
					% of room		98%	YES
	R3		Residential	LD	Area m2	19.96	19.92	
					% of room		100%	YES
Flat 39								
Second	R1		Residential	LD	Area m2	20.23	20.22	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	10.72	10.55	
					% of room		98%	YES
	R3		Residential	Bedroom	Area m2	11.48	11.39	
					% of room		99%	YES
Flat 40								
Second	R1		Residential	LD	Area m2	18.96	18.90	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	9.07	9.00	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	12.16	11.96	
					% of room		98%	YES
Flat 41								
Second	R1		Residential	Bedroom	Area m2	13.29	13.02	
					% of room		98%	YES
	R2		Residential	Bedroom	Area m2	10.26	10.17	
					% of room		99%	YES
	R3		Residential	LD	Area m2	20.25	20.23	
					% of room		100%	YES
Flat 42								
Second	R1		Residential	LKD	Area m2	24.60	24.41	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.54	11.39	
					% of room		99%	YES
Flat 43								
Second	R1		Residential	LKD	Area m2	28.00	27.87	
					% of room		100%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 44								
Second	R1		Residential	LKD	Area m2	19.68	19.66	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	11.77	10.26	
					% of room		87%	YES
Flat 45								
Second	R1		Residential	LKD	Area m2	25.98	25.37	
					% of room		98%	YES
	R2		Residential	Bedroom	Area m2	14.85	14.71	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	11.57	11.46	
					% of room		99%	YES
Flat 46								
Second	R1		Residential	LD	Area m2	18.52	18.39	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.74	11.60	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	13.07	12.99	
					% of room		99%	YES
Flat 47								
Second	R1		Residential	LKD	Area m2	23.09	23.00	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	12.17	12.05	
					% of room		99%	YES
Flat 48								
Second	R1		Residential	LD	Area m2	18.52	18.35	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	13.25	13.18	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	11.75	11.60	
					% of room		99%	YES
Flat 49								
Second	R1		Residential	LKD	Area m2	25.97	25.36	
					% of room		98%	YES
	R2		Residential	Bedroom	Area m2	11.58	11.47	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	14.83	14.69	
					% of room		99%	YES
Flat 50								
Second	R1		Residential	Bedroom	Area m2	11.61	8.84	
					% of room		76%	NO
	R2		Residential	LKD	Area m2	19.68	19.66	
					% of room		100%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 50a								
Second	R1		Residential	LKD	Area m2	23.81	23.79	
					% of room		100%	YES
Flat 51								
Second	R1		Residential	Bedroom	Area m2	11.53	11.37	
					% of room		99%	YES
	R2		Residential	LKD	Area m2	24.60	24.41	
					% of room		99%	YES
Flat 52								
Second	R1		Residential	LD	Area m2	19.95	19.90	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	10.26	10.17	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	14.01	13.74	
					% of room		98%	YES
Flat 53								
Second	R1		Residential	Bedroom	Area m2	12.16	11.95	
					% of room		98%	YES
	R2		Residential	Bedroom	Area m2	9.07	8.98	
					% of room		99%	YES
	R3		Residential	LD	Area m2	18.96	18.90	
					% of room		100%	YES
Flat 54								
Second	R1		Residential	Bedroom	Area m2	11.48	11.37	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	10.72	10.53	
					% of room		98%	YES
	R3		Residential	LD	Area m2	20.23	20.21	
					% of room		100%	YES
Flat 55								
Second	R1		Residential	LD	Area m2	19.96	19.92	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	11.88	11.72	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	15.74	15.65	
					% of room		99%	YES
Flat 56								
Second	R1		Residential	LKD	Area m2	27.91	27.56	
					% of room		99%	YES
Flat 57								
Third	R1		Residential	LKD	Area m2	28.79	28.59	
					% of room		99%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 58								
Third	R1		Residential	Bedroom	Area m2	15.89	14.26	
					% of room		90%	YES
	R2		Residential	LKD	Area m2	23.24	22.11	
					% of room		95%	YES
Flat 59								
Third	R1		Residential	LKD	Area m2	23.18	22.06	
					% of room		95%	YES
	R2		Residential	Bedroom	Area m2	15.93	14.28	
					% of room		90%	YES
Flat 60								
Third	R1		Residential	LD	Area m2	19.26	19.20	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	9.07	9.00	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	13.42	13.21	
					% of room		98%	YES
Flat 61								
Third	R1		Residential	Bedroom	Area m2	15.89	14.25	
					% of room		90%	YES
	R2		Residential	LKD	Area m2	22.15	21.17	
					% of room		96%	YES
Flat 62								
Third	R1		Residential	LKD	Area m2	25.39	25.22	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.46	11.21	
					% of room		98%	YES
Flat 63								
Third	R1		Residential	LKD	Area m2	28.04	27.90	
					% of room		99%	YES
Flat 64								
Third	R1		Residential	LKD	Area m2	19.29	19.08	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.77	10.18	
					% of room		86%	YES
Flat 65								
Third	R1		Residential	LKD	Area m2	25.97	25.58	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	14.84	14.68	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	11.58	11.47	
					% of room		99%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 66								
Third	R1		Residential	LD	Area m2	18.83	18.72	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.74	11.58	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	13.26	13.16	
					% of room		99%	YES
Flat 67								
Third	R1		Residential	LKD	Area m2	23.09	23.02	
					% of room		100%	YES
	R2		Residential	Bedroom	Area m2	12.17	12.06	
					% of room		99%	YES
Flat 68								
Third	R1		Residential	LD	Area m2	18.53	18.37	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	13.26	13.16	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	11.75	11.59	
					% of room		99%	YES
Flat 69								
Third	R1		Residential	LKD	Area m2	25.97	25.63	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	11.58	11.48	
					% of room		99%	YES
	R3		Residential	Bedroom	Area m2	14.82	14.65	
					% of room		99%	YES
Flat 70								
Third	R1		Residential	Bedroom	Area m2	11.76	10.19	
					% of room		87%	YES
	R2		Residential	LKD	Area m2	19.68	19.67	
					% of room		100%	YES
Flat 70a								
Third	R1		Residential	LKD	Area m2	23.84	23.80	
					% of room		100%	YES
Flat 71								
Third	R1		Residential	Bedroom	Area m2	11.46	11.23	
					% of room		98%	YES
	R2		Residential	LKD	Area m2	25.66	25.52	
					% of room		99%	YES
Flat 72								
Third	R1		Residential	LKD	Area m2	22.15	21.15	
					% of room		95%	YES
	R2		Residential	Bedroom	Area m2	15.79	14.23	
					% of room		90%	YES

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Flat 73								
Third	R1		Residential	Bedroom	Area m2	13.42	13.24	
					% of room		99%	YES
	R2		Residential	Bedroom	Area m2	9.07	9.00	
					% of room		99%	YES
	R3		Residential	LD	Area m2	18.96	18.90	
					% of room		100%	YES
Flat 74								
Third	R1		Residential	Bedroom	Area m2	15.86	14.27	
					% of room		90%	YES
	R2		Residential	LKD	Area m2	23.18	22.06	
					% of room		95%	YES
Flat 75								
Third	R1		Residential	LKD	Area m2	23.18	22.05	
					% of room		95%	YES
	R2		Residential	Bedroom	Area m2	15.89	14.24	
					% of room		90%	YES
Flat 76								
Third	R1		Residential	LKD	Area m2	28.01	27.66	
					% of room		99%	YES

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
Flat 1													
Ground	R1	Residential	Bedroom	W1	107°	53	YES	17	YES	53	YES	17	YES
	R2	Residential	Bedroom	W2	107°	52	YES	17	YES	52	YES	17	YES
	R3	Residential	LD	W3	107°	44	YES	17	YES	44	YES	17	YES
Flat 2													
Ground	R1	Residential	LD	W1	107°	40	YES	13	YES	40	YES	13	YES
	R2	Residential	Bedroom	W2	107°	39	YES	10	YES	39	YES	10	YES
	R3	Residential	Bedroom	W3	107°	47	YES	14	YES	47	YES	14	YES
Flat 3													
Ground	R1	Residential	LKD	W1	107°	40	YES	16	YES				
				W2	107°	39	YES	12	YES	44	YES	16	YES
	R2	Residential	Bedroom	W3	107°	45	YES	13	YES	45	YES	13	YES
Flat 4													
Ground	R1	Residential	Bedroom	W1	107°	50	YES	15	YES	50	YES	15	YES
	R2	Residential	Bedroom	W2	107°	50	YES	15	YES	50	YES	15	YES
	R3	Residential	LD	W3	107°	43	YES	17	YES	43	YES	17	YES
Flat 5													
Ground	R1	Residential	LKD	W1	107°	30	YES	6	YES	30	YES	6	YES
	R2	Residential	Bedroom	W2	107°	35	YES	12	YES	35	YES	12	YES
Flat 6													
Ground	R1	Residential	LKD	W1	197°	31	YES	15	YES				
				W2	197°	28	YES	15	YES	37	YES	18	YES
	R2	Residential	Bedroom	W3	17°N	10	NO	0	NO				
				W4	17°N	12	NO	0	NO	12	NO	0	NO
	R3	Residential	Bedroom	W5	17°N	12	NO	0	NO	12	NO	0	NO
Flat 7													
Ground	R1	Residential	LD	W1	197°	47	YES	17	YES	47	YES	17	YES
	R2	Residential	Bedroom	W2	17°N	2	NO	0	NO	2	NO	0	NO
	R3	Residential	Bedroom	W3	17°N	2	NO	0	NO				
				W4	17°N	7	NO	0	NO	7	NO	0	NO
Flat 8													
Ground	R1	Residential	LKD	W1	197°	48	YES	16	YES				
				W2	197°	51	YES	17	YES	60	YES	18	YES
	R2	Residential	Bedroom	W3	197°	58	YES	17	YES	58	YES	17	YES
Flat 9													
Ground	R1	Residential	LD	W1	197°	42	YES	14	YES	42	YES	14	YES
	R2	Residential	Bedroom	W2	17°N	11	NO	0	NO				
				W3	17°N	11	NO	0	NO	11	NO	0	NO
	R3	Residential	Bedroom	W4	17°N	11	NO	0	NO	11	NO	0	NO

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
Flat 10													
Ground	R1	Residential	LKD	W1	197°	28	YES	11	YES				
				W2	196°	33	YES	8	YES				
										37	YES	11	YES
	R2	Residential	Bedroom	W3	17°N	12	NO	0	NO				
										12	NO	0	NO
	R3	Residential	Bedroom	W4	17°N	11	NO	0	NO				
				W5	17°N	11	NO	0	NO				
										11	NO	0	NO
Flat 10a													
Ground	R1	Residential	LKD	W1	107°	60	YES	20	YES				
				W2	17°N	12	NO	0	NO				
				W3	17°N	12	NO	0	NO				
										60	YES	20	YES
Flat 11													
Ground	R1	Residential	Bedroom	W1	287°N	24	NO	4	NO				
										24	NO	4	NO
	R2	Residential	LKD	W2	287°N	12	NO	0	NO				
										12	NO	0	NO
Flat 12													
Ground	R1	Residential	LD	W1	287°N	28	YES	6	YES				
										28	YES	6	YES
	R2	Residential	Bedroom	W2	287°N	31	YES	8	YES				
										31	YES	8	YES
	R3	Residential	Bedroom	W3	287°N	31	YES	8	YES				
										31	YES	8	YES
Flat 13													
Ground	R1	Residential	Bedroom	W1	287°N	26	YES	6	YES				
										26	YES	6	YES
	R2	Residential	LKD	W2	287°N	21	NO	6	YES				
				W3	287°N	22	NO	7	YES				
										25	YES	8	YES
Flat 14													
Ground	R1	Residential	Bedroom	W1	287°N	27	YES	7	YES				
										27	YES	7	YES
	R2	Residential	Bedroom	W2	287°N	26	YES	7	YES				
										26	YES	7	YES
	R3	Residential	LD	W3	287°N	27	YES	7	YES				
										27	YES	7	YES
Flat 15													
Ground	R1	Residential	LD	W1	287°N	32	YES	10	YES				
										32	YES	10	YES
	R2	Residential	Bedroom	W2	287°N	33	YES	10	YES				
										33	YES	10	YES
	R3	Residential	Bedroom	W3	287°N	33	YES	10	YES				
										33	YES	10	YES
Flat 16													
Ground	R1	Residential	LKD	W1	287°N	38	YES	10	YES				
				W2	287°N	38	YES	10	YES				
				W3	197°	86	YES	30	YES				
										86	YES	30	YES
Flat 17													
First	R1	Residential	LKD	W1	197°	86	YES	30	YES				
				W2	107°	38	YES	16	YES				
				W3	107°	57	YES	18	YES				
				W4	107°	57	YES	18	YES				
										97	YES	30	YES
Flat 18													
First	R1	Residential	Bedroom	W1	107°	56	YES	17	YES				
										56	YES	17	YES
	R2	Residential	Bedroom	W2	107°	55	YES	17	YES				
										55	YES	17	YES

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
	R3	Residential	LD	W3	107°	45	YES	18	YES	45	YES	18	YES
Flat 19													
First	R1	Residential	LD	W1	107°	41	YES	14	YES	41	YES	14	YES
	R2	Residential	Bedroom	W2	107°	50	YES	12	YES	50	YES	12	YES
	R3	Residential	Bedroom	W3	107°	54	YES	15	YES	54	YES	15	YES
Flat 20													
First	R1	Residential	LD	W1	107°	46	YES	18	YES	46	YES	18	YES
	R2	Residential	Bedroom	W2	107°	44	YES	13	YES	44	YES	13	YES
	R3	Residential	Bedroom	W3	107°	52	YES	15	YES	52	YES	15	YES
Flat 21													
First	R1	Residential	Bedroom	W1	107°	56	YES	17	YES	56	YES	17	YES
	R2	Residential	Bedroom	W2	107°	56	YES	18	YES	56	YES	18	YES
	R3	Residential	LD	W3	107°	43	YES	17	YES	43	YES	17	YES
Flat 22													
First	R1	Residential	LKD	W1	107°	33	YES	7	YES	33	YES	7	YES
	R2	Residential	Bedroom	W2	107°	37	YES	13	YES	37	YES	13	YES
Flat 23													
First	R1	Residential	LKD	W1	17°N	3	NO	0	NO				
				W2	287°N	12	NO	1	NO				
				W3	287°N	38	YES	10	YES	39	YES	10	YES
Flat 24													
First	R1	Residential	Bedroom	W4	17°N	2	NO	0	NO	2	NO	0	NO
	R2	Residential	LKD	W1	17°N	14	NO	0	NO				
				W2	17°N	14	NO	0	NO				
				W3	287°N	3	NO	0	NO	15	NO	0	NO
Flat 25													
First	R1	Residential	LKD	W1	197°	37	YES	18	YES				
				W2	197°	28	YES	15	YES	43	YES	19	YES
	R2	Residential	Bedroom	W3	17°N	11	NO	0	NO				
				W4	17°N	13	NO	0	NO	13	NO	0	NO
	R3	Residential	Bedroom	W5	17°N	13	NO	0	NO	13	NO	0	NO
Flat 26													
First	R1	Residential	LD	W1	197°	49	YES	21	YES	49	YES	21	YES
	R2	Residential	Bedroom	W2	17°N	1	NO	0	NO	1	NO	0	NO
	R3	Residential	Bedroom	W3	17°N	6	NO	0	NO				
				W4	17°N	7	NO	0	NO	7	NO	0	NO
Flat 27													
First	R1	Residential	LKD	W1	197°	59	YES	23	YES				
				W2	197°	55	YES	19	YES	70	YES	23	YES
	R2	Residential	Bedroom	W3	197°	63	YES	18	YES	63	YES	18	YES

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Flat 28													
First	R1	Residential	LD	W1	197°	52	YES	18	YES	52	YES	18	YES
	R2	Residential	Bedroom	W2	17°N	11	NO	0	NO				
				W3	17°N	11	NO	0	NO	11	NO	0	NO
	R3	Residential	Bedroom	W4	17°N	11	NO	0	NO	11	NO	0	NO
Flat 29													
First	R1	Residential	LKD	W1	197°	29	YES	12	YES				
				W2	197°	37	YES	12	YES	41	YES	13	YES
	R2	Residential	Bedroom	W3	17°N	12	NO	0	NO	12	NO	0	NO
	R3	Residential	Bedroom	W4	17°N	12	NO	0	NO				
				W5	17°N	12	NO	0	NO	12	NO	0	NO
Flat 30													
First	R1	Residential	Bedroom	W1	18°N	13	NO	0	NO	13	NO	0	NO
	R2	Residential	LKD	W2	107°	18	NO	2	NO				
				W3	17°N	13	NO	0	NO				
				W4	17°N	13	NO	0	NO	19	NO	2	NO
Flat 31													
First	R1	Residential	Bedroom	W1	287°N	29	YES	5	YES	29	YES	5	YES
	R2	Residential	LKD	W2	287°N	16	NO	1	NO	16	NO	1	NO
Flat 31a													
First	R1	Residential	LKD	W1	107°	60	YES	20	YES				
				W2	18°N	13	NO	0	NO				
				W3	18°N	13	NO	0	NO	60	YES	20	YES
Flat 32													
First	R1	Residential	LD	W1	287°N	31	YES	8	YES	31	YES	8	YES
	R2	Residential	Bedroom	W2	287°N	35	YES	9	YES	35	YES	9	YES
	R3	Residential	Bedroom	W3	287°N	36	YES	9	YES	36	YES	9	YES
Flat 33													
First	R1	Residential	Bedroom	W1	287°N	31	YES	7	YES	31	YES	7	YES
	R2	Residential	Bedroom	W2	287°N	22	NO	7	YES	22	NO	7	YES
	R3	Residential	LD	W3	287°N	31	YES	9	YES	31	YES	9	YES
Flat 34													
First	R1	Residential	Bedroom	W1	287°N	34	YES	8	YES	34	YES	8	YES
	R2	Residential	Bedroom	W2	287°N	30	YES	7	YES	30	YES	7	YES
	R3	Residential	LD	W3	287°N	31	YES	8	YES	31	YES	8	YES
Flat 35													
First	R1	Residential	LD	W1	287°N	33	YES	10	YES	33	YES	10	YES
	R2	Residential	Bedroom	W2	287°N	35	YES	10	YES	35	YES	10	YES
	R3	Residential	Bedroom	W3	287°N	35	YES	10	YES	35	YES	10	YES

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Flat 36													
First	R1	Residential	LKD	W1	287°N	36	YES	10	YES				
				W2	287°N	38	YES	10	YES				
				W3	287°N	15	NO	8	YES				
				W4	197°	86	YES	30	YES				
										86	YES	30	YES
Flat 37													
Second	R1	Residential	LKD	W1	197°	86	YES	30	YES				
				W2	107°	38	YES	16	YES				
				W3	107°	59	YES	19	YES				
				W4	107°	59	YES	19	YES				
										98	YES	30	YES
Flat 38													
Second	R1	Residential	Bedroom	W1	107°	58	YES	18	YES				
										58	YES	18	YES
	R2	Residential	Bedroom	W2	107°	58	YES	18	YES				
										58	YES	18	YES
	R3	Residential	LD	W3	107°	59	YES	19	YES				
										59	YES	19	YES
Flat 39													
Second	R1	Residential	LD	W1	107°	58	YES	19	YES				
										58	YES	19	YES
	R2	Residential	Bedroom	W2	107°	58	YES	19	YES				
										58	YES	19	YES
	R3	Residential	Bedroom	W3	107°	58	YES	19	YES				
										58	YES	19	YES
Flat 40													
Second	R1	Residential	LD	W1	107°	30	YES	15	YES				
										30	YES	15	YES
	R2	Residential	Bedroom	W2	107°	52	YES	13	YES				
										52	YES	13	YES
	R3	Residential	Bedroom	W3	107°	56	YES	17	YES				
										56	YES	17	YES
Flat 41													
Second	R1	Residential	Bedroom	W1	107°	57	YES	18	YES				
										57	YES	18	YES
	R2	Residential	Bedroom	W2	107°	57	YES	18	YES				
										57	YES	18	YES
	R3	Residential	LD	W3	107°	58	YES	19	YES				
										58	YES	19	YES
Flat 42													
Second	R1	Residential	LKD	W1	107°	36	YES	8	YES				
										36	YES	8	YES
	R2	Residential	Bedroom	W2	107°	42	YES	16	YES				
										42	YES	16	YES
Flat 43													
Second	R1	Residential	LKD	W1	17°N	3	NO	0	NO				
				W2	287°N	12	NO	1	NO				
				W3	287°N	38	YES	10	YES				
										39	YES	10	YES
Flat 44													
Second	R1	Residential	LKD	W1	17°N	14	NO	0	NO				
				W2	17°N	14	NO	0	NO				
				W3	287°N	4	NO	0	NO				
										16	NO	0	NO
	R2	Residential	Bedroom	W4	17°N	1	NO	0	NO				
										1	NO	0	NO
Flat 45													
Second	R1	Residential	LKD	W1	197°	45	YES	19	YES				
				W2	197°	35	YES	16	YES				
										52	YES	20	YES
	R2	Residential	Bedroom	W3	17°N	13	NO	0	NO				

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
Report Title: Daylight & Sunlight Analysis - Proposed Scheme Test
Date of Analysis: 27/08/2019

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
				W4	17°N	13	NO	0	NO				
										13	NO	0	NO
	R3	Residential	Bedroom	W5	17°N	13	NO	0	NO				
										13	NO	0	NO
Flat 46													
Second	R1	Residential	LD	W1	197°	58	YES	23	YES				
										58	YES	23	YES
	R2	Residential	Bedroom	W2	17°N	2	NO	0	NO				
										2	NO	0	NO
	R3	Residential	Bedroom	W3	17°N	10	NO	0	NO				
				W4	17°N	12	NO	0	NO				
										12	NO	0	NO
Flat 47													
Second	R1	Residential	LKD	W1	197°	62	YES	25	YES				
				W2	197°	65	YES	25	YES				
										77	YES	26	YES
	R2	Residential	Bedroom	W3	197°	75	YES	25	YES				
										75	YES	25	YES
Flat 48													
Second	R1	Residential	LD	W1	197°	62	YES	22	YES				
										62	YES	22	YES
	R2	Residential	Bedroom	W2	17°N	12	NO	0	NO				
				W3	17°N	12	NO	0	NO				
										12	NO	0	NO
	R3	Residential	Bedroom	W4	17°N	12	NO	0	NO				
										12	NO	0	NO
Flat 49													
Second	R1	Residential	LKD	W1	197°	41	YES	18	YES				
				W2	197°	46	YES	16	YES				
										56	YES	19	YES
	R2	Residential	Bedroom	W3	17°N	13	NO	0	NO				
										13	NO	0	NO
	R3	Residential	Bedroom	W4	17°N	13	NO	0	NO				
				W5	17°N	13	NO	0	NO				
										13	NO	0	NO
Flat 50													
Second	R1	Residential	Bedroom	W1	18°N	13	NO	0	NO				
										13	NO	0	NO
	R2	Residential	LKD	W2	107°	19	NO	2	NO				
				W3	17°N	13	NO	0	NO				
				W4	17°N	13	NO	0	NO				
										20	NO	2	NO
Flat 50a													
Second	R1	Residential	LKD	W1	18°N	13	NO	0	NO				
				W2	18°N	13	NO	0	NO				
				W3	107°	60	YES	20	YES				
										60	YES	20	YES
Flat 51													
Second	R1	Residential	Bedroom	W1	287°N	34	YES	8	YES				
										34	YES	8	YES
	R2	Residential	LKD	W2	287°N	19	NO	1	NO				
										19	NO	1	NO
Flat 52													
Second	R1	Residential	LD	W1	287°N	35	YES	8	YES				
										35	YES	8	YES
	R2	Residential	Bedroom	W2	287°N	36	YES	9	YES				
										36	YES	9	YES
	R3	Residential	Bedroom	W3	287°N	36	YES	9	YES				
										36	YES	9	YES
Flat 53													
Second	R1	Residential	Bedroom	W1	287°N	36	YES	9	YES				
										36	YES	9	YES
	R2	Residential	Bedroom	W2	287°N	33	YES	5	YES				
										33	YES	5	YES

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
	R3	Residential	LD	W3	287°N	20	NO	9	YES	20	NO	9	YES
Flat 54													
Second	R1	Residential	Bedroom	W1	287°N	36	YES	9	YES	36	YES	9	YES
	R2	Residential	Bedroom	W2	287°N	36	YES	9	YES	36	YES	9	YES
	R3	Residential	LD	W3	287°N	38	YES	10	YES	38	YES	10	YES
Flat 55													
Second	R1	Residential	LD	W1	287°N	37	YES	10	YES	37	YES	10	YES
	R2	Residential	Bedroom	W2	287°N	37	YES	10	YES	37	YES	10	YES
	R3	Residential	Bedroom	W3	287°N	37	YES	10	YES	37	YES	10	YES
Flat 56													
Second	R1	Residential	LKD	W1	287°N	37	YES	10	YES				
				W2	287°N	39	YES	10	YES				
				W3	287°N	12	NO	7	YES				
				W4	197°	86	YES	30	YES	88	YES	30	YES
Flat 57													
Third	R1	Residential	LKD	W1	196°	85	YES	30	YES				
				W2	107°	30	YES	17	YES				
				W3	107°	60	YES	20	YES				
				W4	107°	60	YES	20	YES	98	YES	30	YES
Flat 58													
Third	R1	Residential	Bedroom	W1	107°	53	YES	14	YES	53	YES	14	YES
	R2	Residential	LKD	W2	107°	58	YES	18	YES				
				W3	106° Inc	100	YES	30	YES	100	YES	30	YES
Flat 59													
Third	R1	Residential	LKD	W1	107°	60	YES	20	YES				
				W2	106° Inc	100	YES	30	YES	100	YES	30	YES
	R2	Residential	Bedroom	W3	107°	60	YES	20	YES	60	YES	20	YES
Flat 60													
Third	R1	Residential	LD	W1	107°	60	YES	20	YES	60	YES	20	YES
	R2	Residential	Bedroom	W2	107°	60	YES	20	YES	60	YES	20	YES
	R3	Residential	Bedroom	W3	107°	60	YES	20	YES	60	YES	20	YES
Flat 61													
Third	R1	Residential	Bedroom	W1	107°	53	YES	14	YES	53	YES	14	YES
	R2	Residential	LKD	W2	107°	57	YES	18	YES				
				W3	106° Inc	100	YES	30	YES	100	YES	30	YES
Flat 62													
Third	R1	Residential	LKD	W1	106°	57	YES	18	YES	57	YES	18	YES
	R2	Residential	Bedroom	W2	106°	58	YES	20	YES	58	YES	20	YES
Flat 63													
Third	R1	Residential	LKD	W1	17°N	9	NO	0	NO				
				W2	287°N	10	NO	1	NO				
				W3	286°N	38	YES	10	YES				

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
Report Title: Daylight & Sunlight Analysis - Proposed Scheme Test
Date of Analysis: 27/08/2019

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
										45	YES	10	YES
Flat 64													
Third	R1	Residential	LKD	W1	17°N	14	NO	0	NO				
				W2	17°N	14	NO	0	NO				
				W3	287°N	10	NO	0	NO				
										22	NO	0	NO
	R2	Residential	Bedroom	W4	17°N	2	NO	0	NO				
										2	NO	0	NO
Flat 65													
Third	R1	Residential	LKD	W1	197°	68	YES	23	YES				
				W2	197°	58	YES	19	YES				
										71	YES	23	YES
	R2	Residential	Bedroom	W3	17°N	13	NO	0	NO				
				W4	17°N	13	NO	0	NO				
										13	NO	0	NO
	R3	Residential	Bedroom	W5	17°N	14	NO	0	NO				
										14	NO	0	NO
Flat 66													
Third	R1	Residential	LD	W1	197°	83	YES	29	YES				
										83	YES	29	YES
	R2	Residential	Bedroom	W2	17°N	13	NO	0	NO				
										13	NO	0	NO
	R3	Residential	Bedroom	W3	17°N	13	NO	0	NO				
				W4	17°N	13	NO	0	NO				
										13	NO	0	NO
Flat 67													
Third	R1	Residential	LKD	W1	197°	84	YES	30	YES				
				W2	197°	84	YES	30	YES				
										84	YES	30	YES
	R2	Residential	Bedroom	W3	197°	85	YES	29	YES				
										85	YES	29	YES
Flat 68													
Third	R1	Residential	LD	W1	197°	84	YES	28	YES				
										84	YES	28	YES
	R2	Residential	Bedroom	W2	17°N	13	NO	0	NO				
				W3	17°N	13	NO	0	NO				
										13	NO	0	NO
	R3	Residential	Bedroom	W4	17°N	13	NO	0	NO				
										13	NO	0	NO
Flat 69													
Third	R1	Residential	LKD	W1	197°	66	YES	25	YES				
				W2	197°	67	YES	23	YES				
										76	YES	27	YES
	R2	Residential	Bedroom	W3	17°N	13	NO	0	NO				
										13	NO	0	NO
	R3	Residential	Bedroom	W4	17°N	13	NO	0	NO				
				W5	17°N	13	NO	0	NO				
										13	NO	0	NO
Flat 70													
Third	R1	Residential	Bedroom	W1	17°N	12	NO	0	NO				
										12	NO	0	NO
	R2	Residential	LKD	W2	107°	33	YES	2	NO				
				W3	17°N	13	NO	0	NO				
				W4	17°N	13	NO	0	NO				
										34	YES	2	NO
Flat 70a													
Third	R1	Residential	LKD	W1	17°N	12	NO	0	NO				
				W2	17°N	12	NO	0	NO				
				W3	107°	60	YES	20	YES				
										60	YES	20	YES
Flat 71													
Third	R1	Residential	Bedroom	W1	287°N	40	YES	10	YES				
										40	YES	10	YES
	R2	Residential	LKD	W2	287°N	40	YES	10	YES				

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
Report Title: Daylight & Sunlight Analysis - Proposed Scheme Test
Date of Analysis: 27/08/2019

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
										40	YES	10	YES
Flat 72													
Third	R1	Residential	LKD	W1	287°N	40	YES	10	YES				
				W2	287°N	100	YES	30	YES				
										100	YES	30	YES
	R2	Residential	Bedroom	W3	287°N	36	YES	6	YES				
										36	YES	6	YES
Flat 73													
Third	R1	Residential	Bedroom	W1	287°N	38	YES	10	YES				
										38	YES	10	YES
	R2	Residential	Bedroom	W2	287°N	38	YES	10	YES				
										38	YES	10	YES
	R3	Residential	LD	W3	287°N	38	YES	10	YES				
										38	YES	10	YES
Flat 74													
Third	R1	Residential	Bedroom	W1	287°N	40	YES	10	YES				
										40	YES	10	YES
	R2	Residential	LKD	W2	287°N	40	YES	10	YES				
				W3	287°N	100	YES	30	YES				
										100	YES	30	YES
Flat 75													
Third	R1	Residential	LKD	W1	287°N	39	YES	9	YES				
				W2	287°N	100	YES	30	YES				
										100	YES	30	YES
	R2	Residential	Bedroom	W3	287°N	34	YES	6	YES				
										34	YES	6	YES
Flat 76													
Third	R1	Residential	LKD	W1	287°N	38	YES	10	YES				
				W2	287°N	38	YES	10	YES				
				W3	287°N	17	NO	8	YES				
				W4	197°	86	YES	30	YES				
										88	YES	30	YES

Project Name: Broadwater Road, Hertfordshire
Project No.: 2405
Report Title: Two hours Sunlight to Amenity Analysis - Proposed Scheme Test
Date: 27/08/2019

Floor Ref.	Amenity Ref.		Amenity Area	Lit Area Proposed	Meets BRE Criteria
Proposed Development					
Ground	Amenity Area	Area m2	594.73	594.73	YES
		Percentage		100%	