

17 October 2017

Ms S Dawson
Barton Willmore Partnership
7 Soho Square
LONDON
W1D 3QB

Dear Sarah

**Proposed Development at 52-55 Friar Street & 12 Greyfriars Road, Reading
RG1 (Reading Borough Council Ref: 162210/FUL)**

DAYLIGHT AND SUNLIGHT

I thought it would be useful to recap the current position and why we feel the concerns raised related to Daylight and Sunlight have all been adequately addressed.

Please find at Appendix I a non-technical summary of how GVA has fully addressed all requests/ concerns raised by Reading Borough Council (RBC), their Daylight and Sunlight advisors Building Research Establishment (BRE) and the owners of 20/30 Greyfriars.

Issue 1: Assessment of Proposed Development

December 2016

GVA provided a detailed Daylight and Sunlight report which was submitted as part of the planning application. (Reading Borough Council Ref: 162210/FUL).

Further to a request from RBC to also consider overshadowing matters GVA provided an addendum report in December 2016.

Copies of both reports are attached at Appendix II.

March 2017

Further to the initial BRE review of the GVA Daylight and Sunlight reports, a response statement was issued by GVA, setting out the significant points of agreement in respect of the BRE report's conclusions.

A copy of this is attached at Appendix III

GVA is the trading name of GVA Grimley Limited registered in England and Wales number 6382509. Registered office, 3 Brindleyplace, Birmingham B1 2JB. Regulated by RICS.

Birmingham Bristol Cardiff Dublin
Edinburgh Glasgow Leeds Liverpool
London Manchester Newcastle

April 2017

In response to a concern raised by RBC Case Officers, it was confirmed that there was a typo in respect of the labelling of the first floor level assessment.

June 2017

Further to requests by RBC, GVA provided Average Daylight Factor (ADF) assessments of the proposed mezzanine level and amended units.

A copy of this is attached at Appendix IV

Issue 2: Objection by McKay/ Indigo in Respect of 20/30 Greyfriars

January 2017

Formal objection received on behalf of owners on Daylight and Sunlight grounds.

February 2017

In response to the objection, GVA provided a desktop study which demonstrated that there would be no material impact to the general future development potential of this neighbouring property.

A copy of this is attached at Appendix V

March 2017

GVA provided an updated desktop study, based on a validated change of use Permitted Development ("PD") application (RBC planning ref: 170229) for 20/30 Greyfriars, which further demonstrated no material impact to the permitted development change of use.

A copy of this is attached at Appendix VI

June 2017

In response to a further objection from McKay/ Indigo dated May 2017, GVA issued a detailed technical report setting out the results of the full suite of BRE and British Standard Institute (BSI) tests of the PDR scheme, confirming it would retain excellent natural light amenity with the Proposed Development in place.

A copy of this is attached at Appendix VII

July 2017

A detailed response to BRE's second review of GVA's technical report and case officer's comments was provided.

This also explained why comparative assessments of 20/30 Greyfriars are considered inappropriate.

A copy of this is attached at Appendix IIX

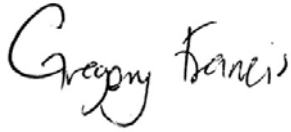
October 2017

A set of "existing" ADF tests of the PDR scheme were conducted, considering amenity provision prior to introduction of the proposed development at 52-55 Friar Street.

This enabled comparison with the post-development, i.e. "proposed" ADF values and confirmed no material differences.

A copy of this is attached at Appendix IX

Yours sincerely

A handwritten signature in black ink that reads "Gregory Francis". The signature is written in a cursive, flowing style.

Gregory Francis MBA RICS Accredited Expert Witness

Associate Director

Rights of Light | Daylight & Sunlight

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Appendix I

16 October 2017

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Dear Sarah

**Proposed Development at 52-55 Friar Street & 12 Greyfriars Road, Reading
RG1 (Reading Borough Council Ref: 162210/FUL)**

DAYLIGHT, SUNLIGHT & OVERSHADOWING

Please find below a non-technical summary of the Daylight, Sunlight and Overshadowing work undertaken in connection with the above proposed development.

*Impact of Proposed Development/ Provision of Natural Light Amenity within
Proposed Development*

It has been accepted by RBC and BRE that the correct approach was undertaken by GVA when considering impacts to existing neighbours and provision of daylight and sunlight amenity for future occupants.

The GVA report concluded that none of the nearby dwellings would experience a negative impact to their existing daylight and sunlight amenity post-development.

Within the proposed development, a high standard of daylight and sunlight amenity would be provided for future occupants.

In response to concerns relating to overshadowing within the proposed internal courtyard, further technical studies were undertaken which confirmed an acceptable amount of sunlight access would be provided for future users.

Additional floor levels within the proposed development were also assessed at the request of BRE/RBC, together with amendments made to the northernmost units which had the potential to affect daylight and sunlight amenity provision.

In overall terms the proposed development was considered to be acceptable on daylight, sunlight and overshadowing grounds, having regard for the BRE guidance.

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Edinburgh Glasgow Leeds Liverpool
London Manchester Newcastle



20/30 Greyfriars

In response to an objection by the owners on daylight/sunlight grounds GVA provided an initial desktop study demonstrating the neighbourliness of the proposed development in terms of not affecting the general future development potential of this neighbouring property.

GVA provided an updated desktop study based on a validated change of use Permitted Development ("PD") application (RBC planning ref: 170229) for Greyfriars House, which demonstrated no material impact to the permitted development change of use.

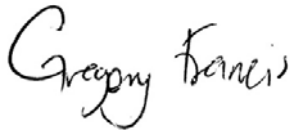
In response to a further objection from the owners in May 2017, GVA issued a report setting out the results of the full suite of BRE and BSi tests of the PD scheme, which confirmed the dwellings would retain excellent natural light amenity with the Proposed Development in place. This assumed clear glazing for the windows.

A second review by BRE recommended the internal amenity assessments of the PD scheme for 20/30 Greyfriars should assume the heavily tinted glazing currently serving the office building would be retained.

GVA sought the correct variables to use in the assessments in order to ensure the results based on heavily tinted glass were as accurate as possible. It was subsequently confirmed by Indigo (planning consultants acting for the owners of 20/30 Greyfriars) that translucent (i.e. clear) glazing should be used.

At the request of RBC, further tests were conducted, showing the "existing" amenity results for the PD scheme i.e. without the proposed development at 52-55 Friar Street. These confirmed no material difference when introducing the proposed development at 52-55 Friar Street.

Yours sincerely



Gregory Francis MBA RICS Accredited Expert Witness

Associate Director

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Appendix II



Detailed Daylight and Sunlight Report

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52-55 Friar Street, Reading, RG1

AIPT

November 2016

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Appendices

Appendix I

Technical Assessment Drawings FR20/05 BRE30 - BRE/33 and FR20/06 BRE34 to BRE/35 inclusive and Associated Results Tables

Prepared By: Gregory Francis

For and on behalf of GVA Grimley Ltd

1. Introduction

- 1.1 GVA Schatunowski Brooks has been instructed by AIPT to provide a detailed Daylight and Sunlight report considering the potential effects to neighbouring dwellings and the quality of natural light amenity which would be provided for future occupants due to their proposed development at 52-55 Friar Street, Reading.
- 1.2 The report has been undertaken based on desktop research and a site inspection, together with drawings of the proposals as provided by LDA Architects, drawing series 1509 PL3, dated March 2016.

2. Executive Summary

- 2.1 There are no nearby dwellings which would be affected by the proposed development.
- 2.2 The student accommodation at Central Studios, Reading would similarly be unaffected by the proposals.
- 2.3 Within the proposed development, given the site constraints, degree of existing obstruction and city centre location, the high degree of compliance with the recommendations set out in the BRE/BS Guidance documents are considered to demonstrate acceptable natural light amenity for future occupants.
- 2.4 Given the above, we are of the opinion that the proposed development is fully acceptable on daylight and sunlight grounds.

3. Daylight/Sunlight Planning Principles

3.1 The Building Research Establishment (BRE) guidelines – Site Layout Planning for Daylight and Sunlight: a guide to good practice (2011) (the guidelines) is the document referred to by most local authorities.

3.2 The Building Research Establishment (BRE) guidelines – Site Layout Planning for Daylight and Sunlight: a guide to good practice (2011) (the guidelines) is the document referred to by most local authorities.

3.3 The introduction to the guidelines states: -

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the developer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design."

Existing Neighbours

Daylighting

3.4 The requirements governing daylighting to existing residential buildings around a development site are set out in Part 2.2 of the guidelines, whereas Part 2.1 deals with the quality and quantity of daylight to residential habitable rooms within new development.

3.5 The amount of light available to any window depends upon the amount of unobstructed sky that can be seen from the centre of the window under consideration. The amount of visible sky and consequently the amount of available skylight is assessed by calculating the Vertical Sky Component (VSC) at the centre of the window. The guidelines advise that bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.

3.6 The guidelines also suggest that distribution of daylight within rooms is reviewed where layouts are known, although bedrooms are considered to be less important.

-
- 3.7 The VSC can be calculated by using the skylight indicator provided as part of the guidelines, by mathematical methods using what is known as a waldram diagram or by 3D CAD modelling.
- 3.8 Paragraph 2.2.7 of the guidelines states the following:-
- 3.9 "If this VSC is greater than 27% then enough skylight should still be reaching the window of the existing building. Any reduction below this level should be kept to a minimum. If the VSC with the new development in place, is both less than 27% and less than 0.8 times its former value, then occupants of the existing building will notice the reduction in the amount of skylight."
- 3.10 It must be interpreted from this criterion that a 27% VSC constitutes adequacy, but where this value cannot be achieved, a reduction of up to 0.8 times its former value (in other words less than 20% reduction of existing VSC) would not be noticeable and would not therefore be considered material.
- 3.11 The VSC calculation only measures light reaching the outside plane of the window under consideration, so this is potential light rather than actual. Depending upon the room and window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.
- 3.12 The NSL (sometimes referred to as Daylight Distribution) contour shows the extent of light penetration into the room at working plane level, 850mm above floor level. If a substantial part of the room falls behind the no sky-line contour, the distribution of light within the room may look poor.

Sunlighting

- 3.13 Recommendations for consideration of sunlight amenity to existing residential buildings neighbouring a development site are set out in Part 3.2 of the guidelines.
- 3.14 There is a requirement to assess windows of surrounding properties where the main windows face within 90 degrees of due south. The calculations are taken at the window reference point at the centre of each window on the plane of the inside surface of the wall.

-
- 3.15 The guidelines further state that kitchens and bedrooms are less important in the context of considering sunlight, although care should be taken not to block too much sun.
- 3.16 Paragraphs 3.2.5 and 3.2.6 of the guidelines sets the following recommendation:-
- 3.17 "If this window reference point can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months of 21st September and 21st March, then the room should still receive enough sunlight. The sunlight availability indicator in Appendix A can be used to check this.
- 3.18 Any reduction in sunlight access below this level should be kept to a minimum. If the available sunlight hours are both less than the amount given and less than 0.8 times their former value, either over the whole year or just during the winter months then the occupants of the existing building will notice the loss of sunlight; if the overall annual loss is greater than 4% of APSH, the room may appear colder and less cheerful and pleasant. "
- 3.19 To summarize the above, a good level of sunlight to a window is 25% annual probable sunlight hours, of which 5% should be in winter months. Where sunlight levels fall below the suggested level, a comparison with the existing condition is reviewed and if the ratio reduction is within 0.8 of its former value (in other words less than 20% reduction of existing APSH) then the sunlight loss will not be noticeable.
- 3.20 Sunlight reductions that fall below a ratio of 0.8 ((in other words a greater than 20% reduction of existing APSH) will be noticed by the occupants. If the overall annual loss is greater than 4% APSH the guidelines state the dwelling may be adversely affected.
- 3.21 The guide further recommends that where window positions are known, the centre of each main living window can be used for the calculation.

Permanent Overshadowing (Time In Sun)

- 3.22 The BRE Guidelines acknowledge that the spaces between buildings have an important impact on their overall appearance and ambience.

3.23 An unfavourable situation would be to have substantial areas on which the sun does not fall for a large part of the year. The BRE Guidelines state that the sunlight reaching these spaces is valuable for a number of reasons, namely to:

- Provide attractive sunlit views (all year);
- Make outdoor activities like sitting out and children's play more pleasant (mainly warmer months);
- Encourage plant growth (mainly spring and summer);
- To dry out the ground, reducing moss and slime (mainly in colder months);
- Melt frost, ice and snow (in winter); and
- Dry clothes (all year).

3.24 As can be seen from the above list, it is important to ensure good sunlight penetration throughout the year for various reasons.

3.25 The BRE Guidelines state that the availability of sunlight should be checked for all open spaces where it will be required. This would normally include:

- Gardens, usually the main back garden of a house;
- Parks and playing fields;
- Children's playground;
- Outdoor swimming pools and paddling pools;
- Sitting out areas such as those between non-domestic buildings and in public squares; and
- Focal points for views such as a group of monuments or fountains.

3.26 The BRE Guidelines state that each of the above spaces will have different sunlighting requirements and therefore it is difficult to suggest a hard and fast rule for all. However, given that there is a need to ensure adequate sunlight penetration throughout the year, the BRE Guidelines state that the Equinox (21 March) can be chosen for a date in terms of conducting an assessment as this date represents average annual conditions.

-
- 3.27 The BRE Guidelines suggest that as a check for adequate sunlight penetration that as a recommendation at least half of the amenity areas listed above should receive at least 2 hours of sunlight on 21 March.
- 3.28 The BRE Guidelines state that it would be instructive to draw the '2 hours sun contour' which marks this area on plan, because the use of specific parts of a site can be planned with sunlight in mind.
- 3.29 The guidance applies both to new gardens and amenity areas as well as existing ones which are affected by new development. If an existing garden or outdoor space is already heavily obstructed then any further loss of sunlight should be kept to a minimum.
- 3.30 In this poorly sunlit case (i.e. where a space is already heavily obstructed), if as a result of new development the area which can receive 2 hours of direct sunlight on 21 March is reduced to less than 0.8 times its former size, this further loss of sunlight would be considered significant. A garden or amenity area would tend to look more heavily overshadowed.

FUTURE OCCUPANTS

- 3.31 The quality of Daylight for New-Build dwellings is measured using the standards set out in the British Standard Code of Practice for Daylighting, BS8206 Part 2. These standards are also referred to in Appendix C of the BRE Guidelines.
- 3.32 For New-Build dwellings, Daylight is measured using Average Daylight Factors (ADF) rather than Vertical Sky Components (VSC) as the Designer has greater control over the various design inputs and variables which dictate the availability of daylight within the room.
- 3.33 VSC is more commonly used for assessing the availability of Daylight to existing neighbouring buildings as it represents the amount of light striking the face of a window. It is a "spot" measurement and equates to the amount of direct light from the sky that is incident on the face of the window. As such, it has its limitations as it does not take account of the size of the window or the size of the room served by the window. It

therefore does not necessarily represent the availability and quality of daylight that will be received within the room itself.

3.34 In the case of New-Build dwellings, it is possible to change aspects of the design in order to achieve good daylighting conditions. The use of ADF is therefore seen as a more appropriate method of measurement during the design process as it is calculated from a number of design variables and co-efficient which provide a more accurate assessment of internal lighting conditions.

3.35 Those input variables comprise:-

- The size of the window serving the room (area of glazing).
- The size of the room being assessed (internal surface area).
- The average reflectance values of the internal finishes.
- The loss of transmittance of Daylight through the glazing.
- A correction factor for maintenance and soiling of the glass finish.
- The amount of daylight actually received by the window (the angle of visible sky) calculated from the VSC.
- The actual use of the room in question.

3.36 In addition, the application of ADF values makes a distinction between the different uses of the rooms being assessed. For example, a higher ADF value should be achieved for a principal living room in comparison to a bedroom.

4. Report

- 4.1 Please refer to Appendix I for the technical assessment drawings upon which the following report has been based, together with 3D views of the existing and proposed site conditions.
- 4.2 As can be seen from the satellite image of this site below, the proposed development site is located within the centre of Reading and does not have any residential dwellings in close proximity likely to be affected by the proposals.



- 4.3 Notwithstanding the above, a conservative assessment was undertaken of the Central Studios student accommodation located directly to the west of the proposed development site, given that the student bedrooms derive their light from the general direction of the development site and are in close proximity to it.
- 4.4 The results for the central studio Reading units are attached, drawings FR20/05 BRE/32 and BRE/33. Consideration of these and the associated results table setting out the

VSC and daylight distribution results confirms that there will be no material impact to existing amenity enjoyed by occupants of the studio rooms, by reference to the BRE guidance.

Internal Amenity within New Dwellings

- 4.5 Please refer to Appendix 1, which contains assessment drawings considering the daylight distribution within the newly proposed dwellings. The associated results tables set out the Average Daylight Factor (ADF), Daylight Distribution (DD) and Annual Probable Sunlight Hours (APSH) results for the rooms analysed.

Daylight

- 4.6 The ADF assessment confirms that a high level of compliance with the British Standard Recommendations would be achieved with the vast majority of rooms achieving the recommended targets for their room use.
- 4.7 Of the 39 living areas assessed, 27 would achieve 1.5%ADF, the recommended target for Living Rooms.
- 4.8 18 of these would have in excess of 80% of their area covered by the no-sky line, which is considered very challenging to achieve in a central location such as this.
- 4.9 As it common in contemporary developments of this type, the proposed dwellings feature a food preparation/ kitchenette area at the rear of the open plan living area, which is not intended to be directly naturally lit.
- 4.10 Whilst the default recommendation in the BRE Guidance is that the higher target of 2%ADF should typically be applied where living areas also feature kitchens, this is intended to be applied flexibly.
- 4.11 This target is not considered to be appropriate in this situation, in which the kitchen areas are located so far from the window. These kitchenettes are not designed to be naturally lit but rather by direct artificial task lighting.
- 4.12 Of the 54 bedrooms analysed, 51 would achieve the recommended ADF value of 1.0% for their use.

-
- 4.13 In overall terms this level of daylight provision is considered to be high given the site constraints and central location.

Sunlight

- 4.14 Although the site is constrained by its location and orientation, the majority of the living areas have a southerly aspect, demonstrating the effort which was made to achieve a high level of sunlight amenity for future occupants.
- 4.15 The BRE recognises that due to existing factors outside the control of the designer it is not always possible to provide a southerly aspect to all living areas, and this development is no exception.
- 4.16 There has however been an effort to ensure that most living areas have a southerly orientation, which provides sunlight amenity.

Non Compliance

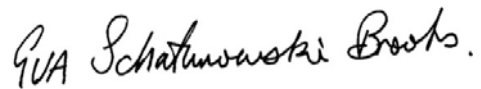
- 4.17 As would be expected in a development of this nature there are limited areas in which the proposed habitable rooms would not meet the default recommendations.
- 4.18 In overall terms this is a very small number of the proposed habitable rooms and would be considered a typical level of compliance in a town or city centre environment, where full compliance with the default recommendations is usually unachievable and a degree of flexibility needs to be applied.
- 4.19 These habitable rooms are located either in the corner junctions of the blocks and/or below projecting balconies above, which will provide highly valuable private amenity space for occupants.
- 4.20 This is a common scenario in town centre developments such as this, whereby there is an inevitable tension between the provision of private amenity space and the inevitable impact to natural light amenity for units placed directly beneath.
- 4.21 Reducing the limited number of habitable rooms not achieving the default recommendations would be aided by removing balconies above windows; however this would remove private amenity space for future occupants.

4.22 As such, we would consider that the set of results reported on here represent a pragmatic compromise between the demands for private amenity space versus daylight and sunlight amenity.

5. Conclusion

- 5.1 The proposed development would have no adverse effect to the student accommodation directly adjacent to the proposed developments.
- 5.2 Within the proposed development, a high level of daylight and sunlight amenity would be achieved for future occupants. The degree of compliance is considered consistent with the site location and orientation, having regard for the need to provide private amenity space.
- 5.3 We therefore consider the proposed development to be acceptable on daylight and sunlight grounds.

Yours faithfully

A handwritten signature in black ink that reads "GVA Schatunowski Brooks." The signature is written in a cursive, flowing style.

GVA Schatunowski Brooks



Appendix I

Technical Assessment
Drawings FR20/05 BRE30
- BRE/33 and FR20/06
BRE34 to BRE/35
inclusive and
Associated Results
Tables

Addendum Report

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Addendum Daylight & Sunlight Report

52-55 Friar Street, Reading RG1

AIPT

December 2016

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Appendix I
Drawings FR20/07 BRE37 and BRE38

1. Introduction

- 1.1 GVA Schatunowski Brooks has been instructed by AIPT to provide an addendum report in follow up to our previous detailed Daylight and Sunlight Report dated November 2016.
- 1.2 The following Addendum Report is in response to the request from Reading Borough Council to address overshadowing matters in addition to Daylight and Sunlight.
- 1.3 A set of the Building Research Establishment's suggested assessments, commonly termed "two-hour time in sun" studies, were conducted.
- 1.4 All other assessments relating to Daylight and Sunlight remain unchanged from the previous report.

3. Daylight/Sunlight Planning Principles

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Permanent Overshadowing (Time In Sun)

3.4 The BRE Guidelines acknowledge that the spaces between buildings have an important impact on their overall appearance and ambience.

3.5 An unfavourable situation would be to have substantial areas on which the sun does not fall for a large part of the year. The BRE Guidelines state that the sunlight reaching these spaces is valuable for a number of reasons, namely to:

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- 3.8 The BRE Guidelines state that each of the above spaces will have different sunlighting requirements and therefore it is difficult to suggest a hard and fast rule for all. However, given that there is a need to ensure adequate sunlight penetration throughout the year, the BRE Guidelines state that the Equinox (21 March) can be chosen for a date in terms of conducting an assessment as this date represents average annual conditions.
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- 3.10 The BRE Guidelines state that it would be instructive to draw the '2 hours sun contour' which marks this area on plan, because the use of specific parts of a site can be planned with sunlight in mind.
- 3.11 The guidance applies both to new gardens and amenity areas as well as existing ones which are affected by new development. If an existing garden or outdoor space is already heavily obstructed then any further loss of sunlight should be kept to a minimum.
- 3.12 In this poorly sunlit case (i.e. where a space is already heavily obstructed), if as a result of new development the area which can receive 2 hours of direct sunlight on 21 March
-

is reduced to less than 0.8 times its former size, this further loss of sunlight would be considered significant. A garden or amenity area would tend to look more heavily overshadowed.

4. Report

- 4.1 Please refer to Appendix I for the detailed assessment drawings upon which the following report is based.
- 4.2 The BRE assessment was undertaken on the average annual conditions day of March 21st and also on the optimal annual conditions day of June 21st.
- 4.3 Drawing BRE37 shows the study for the proposed amenity space on March 21st and BRE38 on June 21st. There are no immediately adjacent existing amenity spaces which require assessment and therefore studies of this type were not conducted.
- 4.4 As can be seen from the study, the entire external space was assessed.

Results

- 4.5 The study for March 21st indicated that 15.74% of the proposed amenity area would achieve in excess of the default BRE recommendation of at least two hours of sun.
- 4.6 On June 21st, 91.27% of the amenity area would achieve at least two hours of sun.
- 4.7 As set out in the BRE guidance, when considering sunlight availability the two most influential factors are outside the control of the designer, namely the site orientation and degree of existing obstruction.
- 4.8 In this circumstance the site is roughly rectangular in shape, with a general north-south orientation. Directly to the south of the site is the busy Friar Street and the general context would be considered as dense and urban.
- 4.9 Whilst in ideal circumstances the southern part of the site would not be built upon in order to allow more sunlight into the courtyard, we understand that this was not possible as this forms an important noise barrier for future residents.
- 4.10 The March 21st results are below the default BRE recommendations, however given the prevailing weather conditions expected on this date the space would typically not be used for significant lengths of time. The June 21st results confirm that in the warmer

summer months the courtyard area would achieve excellent access to available sunlight.

- 4.11 By interpolating between the two results, it is clear that for the majority of the year and furthermore in the most important months i.e. late spring through to late summer there would be adequate sunlight availability.
- 4.12 The main reason for not achieving the BRE default target recommendation is due to the existing constraints and as set out in the BRE guidance the default targets cannot be met. The results are therefore considered commensurate with the BRE guidance.
- 4.13 When considering the overall annual conditions within the proposed courtyard as opposed to the arbitrary day chosen to represent average conditions it is considered on balance that given the context and existing site constraints that the sunlight availability in the proposed courtyard will be adequate.

5. Conclusion

- 5.1 Given the existing site constraints i.e. degree of existing obstructions and site shape/ orientation the sunlight availability to the proposed courtyard would be concluded as commensurate with the BRE guidance and therefore acceptable.

GVA Schatunowski Brooks.

GVA Schatunowski Brooks

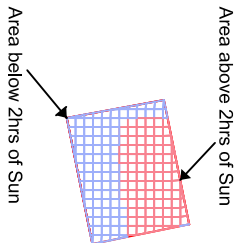


Appendix I

Drawings FR20/07 BRE37
and BRE38

Legend

Time in Sun



Sources of Information

SURROUNDING
The Gordon Tomalin Partnership,
Consultant Land Surveyors,
10010.01
10010.02
10010.03
10010.04
10010.05
10010.06
10010.07
10010.08
10010.09
10010.10
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PROPOSED
LDA Architects
1509-PL3-21 Rev A
1509 LDA Issue 2016-10-11 3d Model
1509-PL3-11
1509-PL3-12
1509-PL3-13
1509-PL3-14



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Project Name
52-55 Friar Street
Reading

Client
Aviva Investors Property Trust

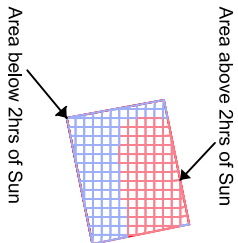
Drawing Title
Time in Sun Analysis for
March 21

Drawn By	Chkd By	Scale @ A3	Date
AH		N/A	11 NOV 2016

Project No.	Drawing No.	Revision
FR20-07	BRE37	

Legend

Time in Sun



Sources of Information

SURROUNDING
The Gordon Tomalin Partnership,
Consultant Land Surveyors,
10010.01
10010.02
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PROPOSED
LDA Architects
1509-PL3-21 Rev A
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Project Name
52-55 Friar Street
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Client
Aviva Investors Property Trust

Drawing Title
Time in Sun Analysis for
June 21

Drawn By	Chkd By	Scale @ A3	Date
AH		N/A	11 NOV 2016

Project No.	Drawing No.	Revision
FR20-07	BRE38	

Appendix III

Our Ref:
Your Ref:

23 March 2017

Ms S Dawson
Barton Willmore
7 Soho Square
London
W1D 3QB

Dear Sarah

**Proposed Development at 52-55 Friar Street and 12 Greyfriars Road,
Reading RG1 (RBC planning ref: 162210)**

Daylight, Sunlight & Overshadowing

Thank you for forwarding the review by Building Research Establishment (BRE) of the GVA Schatunowski Brooks Daylight and Sunlight report submitted in support of the above application.

Methodology/ Approach

BRE is satisfied that the correct methodologies have been applied when considering impacts to existing neighbours and future occupants (section 2).

The BRE guidance states it is intended to be applied to habitable rooms in dwellings. It is accepted by BRE in their review (para 4.2.4) that skylight to student accommodation is treated differently, given the very different mode of occupation and tenure when compared to standard dwellings.

Scope of Assessment

Existing Neighbours

It is accepted by BRE that there are no standard dwellings in the vicinity of the proposed development which require assessment (para 4.1.1, 4.1.2 & 4.1.4).

The BRE agree the only existing neighbour which may be considered is the student accommodation at 60-62 Friar Street and 6-10 Greyfriars Road (para 4.1.3).

BRE have accepted the correct windows/rooms were assessed in our report (para 4.2.2) and agreed that impacts to sunlight amenity did not require consideration (para 4.2.5).

BRE have accepted that a worst case scenario has been modelled, by including the consented Station Hill scheme directly adjacent the proposed development at 52-55 Friar St in the technical assessments (para 4.2.3).

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The impact of the consented Station Hill scheme would be considered to have a moderate to major adverse impact to the student accommodation (para 4.2.3) whereas the development at 52-55 Friar Street would have a negligible to minor adverse impact (para 4.2.2, 4.2.3 (b)).

The Local Planning Authority has recently considered the impact of the Station Hill development to the student accommodation in great detail during the process of the planning application by way of Environmental Impact Assessment and concluded this as acceptable, with no requirement to address the impacts by way of Reserved Matters.

The BRE agree that there would be no material impact to the student accommodation due to the development at 52-55 Friar Street when including the consented Station Hill development (para 4.2.3 (a)).

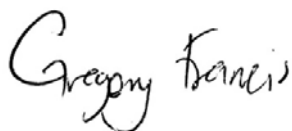
Future Occupants

The BRE agree the vast majority of the new dwellings in the overall would be expected to have adequate Daylight and Sunlight (para 5.1.4).

It is also agreed that a fair approach has been undertaken by assessing the lowest floors, where skylight access would inevitably be expected to be poor. Even in this worst case scenario 27 of 39 living rooms achieve the recommendation for living rooms.

The BRE have suggested useful design amendments to improve these results, including the removal of balconies and increasing glazing. Whilst in a strict Daylight and Sunlight sense these would be ideal, these cannot be practically implemented as they would unacceptably reduce private amenity space provision and Part L energy requirements.

Yours sincerely



Gregory Francis MBA
020 7911 2705
gregory.francis@gvasb.co.uk
For and on behalf of GVA Grimley Limited

Appendix IV

29 June 2017

Ms S Dawson
Barton Willmore
7 Soho Square
London
W1D 3QB

Dear Sarah

**Proposed Development at 52-55 Friar Street and 12 Greyfriars Road,
Reading RG1 (RBC planning ref: 162210)**

Daylight, Sunlight & Overshadowing

Thank you for forwarding the recent commentary from Reading Borough Council with regard to the above.

In response please find attached the following:

- 3D views showing the existing and proposed scenarios in the current and cumulative scenarios; and
- ADF assessment of mezzanine level to block B, including northernmost units subject to design amendment to prevent overlooking.

Assessment of mezzanine level and northernmost units, block B

Please refer to attached drawings BRE/74 and BRE/75 plus associated results tables.

These show the no-sky line assessments of the ground, mezzanine and first floor levels within block B.

The design of the northernmost units, i.e. the ones fitted with anti-overlooking features, have been analysed in order to consider the effect of introducing these.

It is clear that if seeking to obstruct views in / out that as a consequence the available skylight will also be similarly obstructed.

The complexities of these features are such that they cannot be accurately modelled to exactly replicate the resultant ADF, given the relative simplicity and inflexibility of the variables used in the formula.

The issue lies in the fins, which from one direction will allow an unobstructed view of sky but from another will not. The ADF formula cannot handle such a situation robustly.

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We have therefore modelled two extremes: i.e. with no fins in the opening and solid fins.

For the unit assessed, the value with solid fins would be 1.30%ADF, whereas without it would be 1.63%ADF.

This is considered entirely commensurate and in keeping with the results for the overall block and proves no detrimental effect.

The entire mezzanine level has also been assessed and again as can be seen would be considered commensurate and in keeping with the results for the wider block.

The overall conclusion with these amendments and additional floor would therefore be unaltered from our previous advice.

Comparative/ Absolute Assessments of 20/30 Greyfriars

In addition to the above, a query was also raised in respect of the analysis of the Permitted Development Rights (PDR) consented dwellings at 20/30 Greyfriars. Specifically, this queried the lack of existing and proposed VSC values and daylight factors.

The BRE states that the comparative VSC assessments are intended to be used to assess the impact to existing amenity in situations where potentially affected existing dwellings are occupied.

It states elsewhere in the guidance that in order to check that adequate daylight is provided in new rooms, the ADF may be calculated and compared with the recommendations in BS 8206-2 *Code of practice for daylighting*.

When applied to the current situation, clearly the PDR dwellings are consented but not yet built or indeed occupied.

As such there are no occupants to experience differences in light, hence undertaking ADF assessments which confirm the new units would be more than fit for purpose.

In any case, the VSC analysis is simply a spot measurement at the centre point of a window, with no regard to its glazing area or the use/ layout of the room behind.

There is also no regard to whether the room is served by one window or several.

These factors have a material influence on the amount of light within a room and indeed the requirements based on use.

For example circulation areas or bathrooms would have limited requirement for daylight, whereas in a living room it is highly prized, less so in a bedroom given it's mainly night time use.

As such, at best the VSC assessment is a consideration of the potential for good daylighting to a single window in isolation when there are occupants likely to experience an impact or difference in that potential.

In contrast, a thoroughly considered set of layouts of the property have been provided and a much more detailed ADF analysis has been conducted, which takes into account many more factors which the VSC, by its simplified nature, simply cannot address.

As advised by the BRE, this has been applied to consider whether these new dwellings would achieve adequate natural light for future occupants.

Ms S Dawson
29 June 2017
Page 3

As advised previously, the new units at 20/30 Greyfriars would continue to provide exemplary levels of natural light for an urban environment with our client's proposed development in place, either with or without the large outline consent for the adjacent Station hill development.

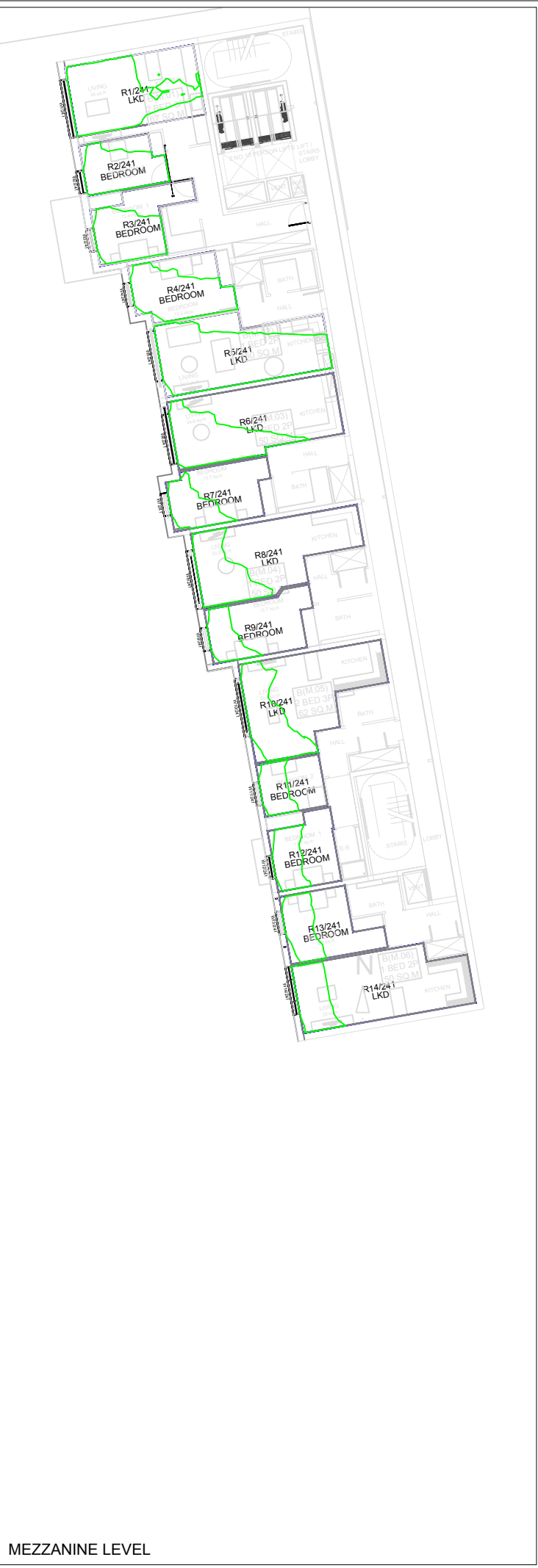
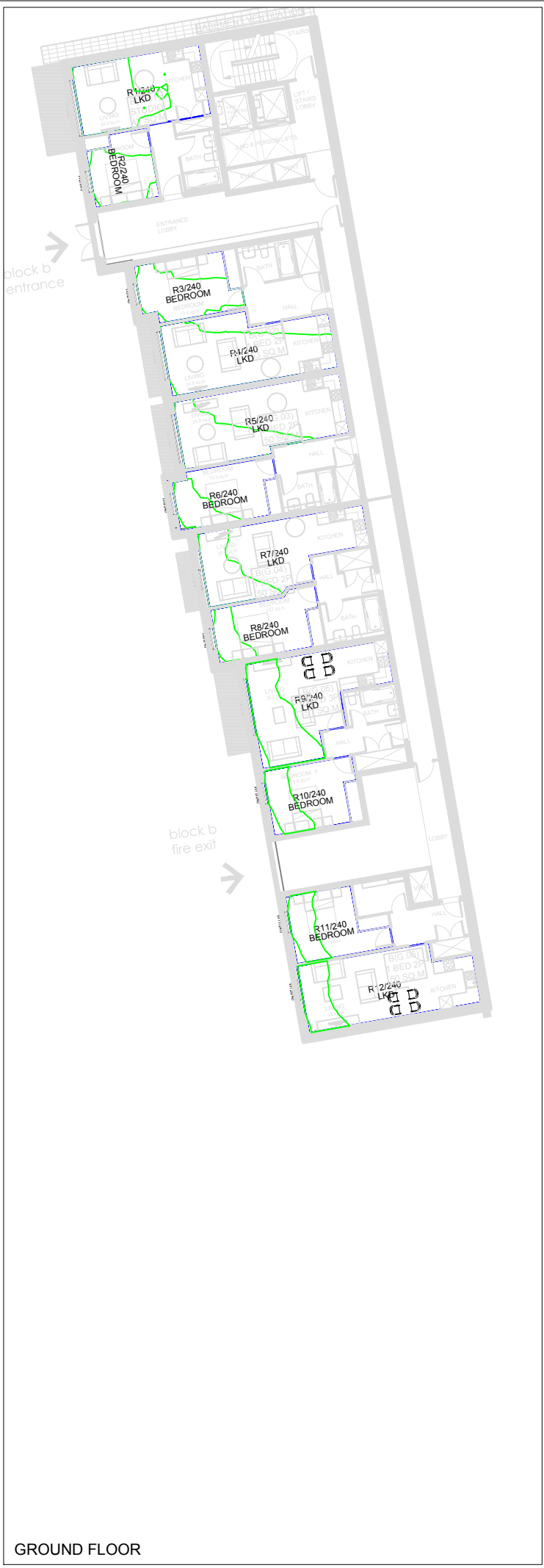
I trust the above is sufficient, however please do not hesitate to contact me should you require anything further.

Yours sincerely

A handwritten signature in black ink that reads "Gregory Francis". The signature is written in a cursive style with a large, stylized 'G'.

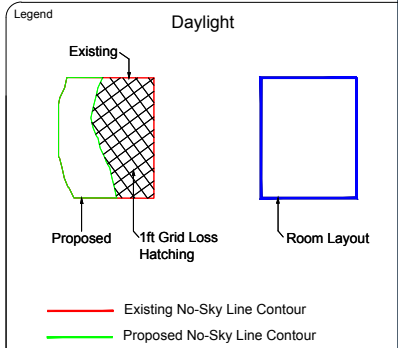
Gregory Francis MBA RICS Accredited Expert Witness
Associate Director
020 7911 2705
gregory.francis@gvasb.co.uk
For and on behalf of GVA Grimley Limited

Encs.



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Sources of Information

SURROUNDING

The Gordon Tomalin Partnership.
Consultant Land Surveyors,
10010.01
10010.02
10010.03
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PROPOSED

LDA Architects
1509-PL3-21 Rev A
1509 LDA Issue 2016-10-11 3d Model
1509-PL3-11
1509-PL3-12
1509-PL3-13
1509-PL3-14

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GVA Schatunowski Brooks
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Project Name

52-55 Friar Street
Reading

Client

Aviva Investors Property Trust

Drawing Title

NO SKYLINE CONTOUR FOR
STUDENT ACCOMMODATION VERSION 2

Drawn By

CH/d By

Scale @ A3

Date

AH

N/A

28 June 2017

Project No.

Drawing No.

Revision

FR20-17

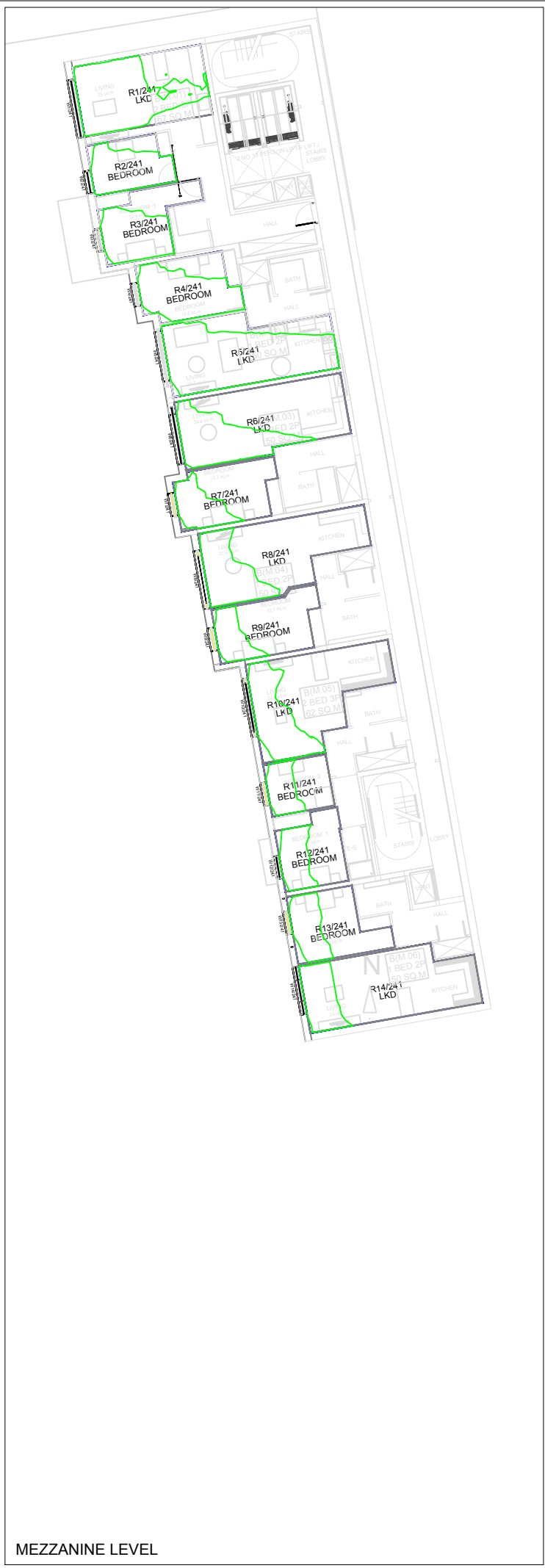
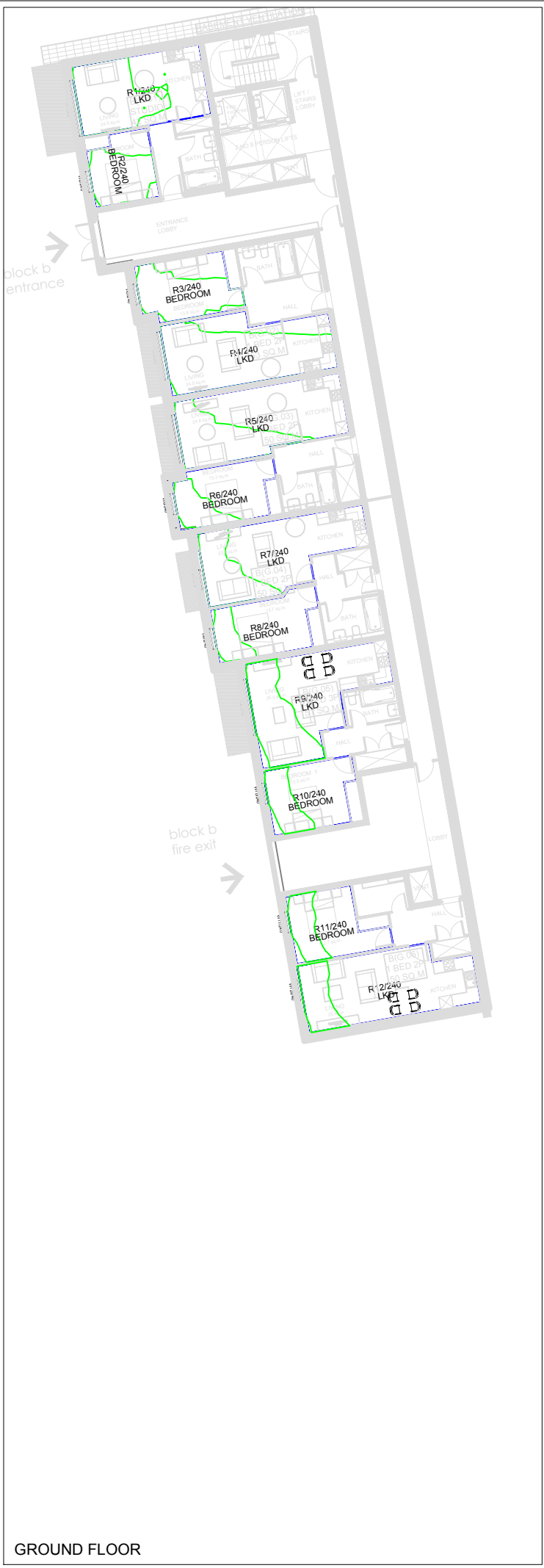
BRE75

52-55 Friar Street

Daylight and Sunlight Analysis Results Job 17 (Version 2) 29-Jun-17

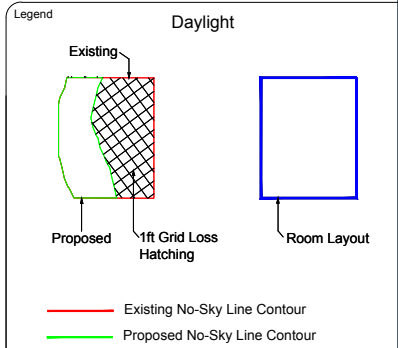
Room/Floor	Room Use	Window			No Sky	%Sun		
			%VSC	%ADF	% of Room	Summer	Winter	Total
52-55 Friar Street - BRE/75								
Gnd Floor								
R1/240	LKD	W1/240	14.37	2.52	52.23%	14.00	2.00	16.00
R2/240	BEDROOM	W2/240	15.39	1.75	70.35%	11.00	0.00	11.00
R3/240	BEDROOM	W3/240	14.71	1.40	68.79%	7.00	0.00	7.00
R4/240	LKD	W4/240	15.61	1.93	80.69%	9.00	3.00	12.00
R5/240	LKD	W5/240	14.64	1.84	39.51%	8.00	0.00	8.00
R6/240	BEDROOM	W6/240	14.71	1.29	29.88%	4.00	0.00	4.00
R7/240	LKD	W7/240	13.63	2.07	29.60%	9.00	2.00	11.00
R8/240	BEDROOM	W8/240	13.68	1.19	23.40%	6.00	0.00	6.00
R9/240	LKD	W9/240	11.86	1.96	38.83%	11.00	3.00	14.00
R10/240	BEDROOM	W10/240	13.14	1.34	31.98%	9.00	1.00	10.00
R11/240	BEDROOM	W11/240	12.49	1.28	32.26%	9.00	0.00	9.00
R12/240	LKD	W12/240	11.41	1.54	18.24%	6.00	0.00	6.00
Mezzanine								
R1/241	LKD	W1/241	5.25	1.10	65.36%	6.00	3.00	9.00
R2/241	BEDROOM	W2/241	16.82	2.09	80.78%	16.00	0.00	16.00
R3/241	BEDROOM	W3/241	23.49	1.69	62.80%	0.00	0.00	0.00
R4/241	BEDROOM	W4/241	16.77	1.58	75.82%	12.00	0.00	12.00
R5/241	LKD	W5/241	14.11	1.45	82.41%	9.00	1.00	10.00
R6/241	LKD	W6/241	12.95	1.30	38.88%	5.00	0.00	5.00
R7/241	BEDROOM	W7/241	17.37	1.51	34.95%	6.00	0.00	6.00
R8/241	LKD	W8/241	10.93	1.34	31.10%	5.00	3.00	8.00
R9/241	BEDROOM	W9/241	15.49	1.38	27.37%	7.00	0.00	7.00
R10/241	LKD	W10/241	4.75	0.72	33.17%	0.00	2.00	2.00
R11/241	BEDROOM	W11/241	14.48	2.24	43.96%	10.00	2.00	12.00
R12/241	BEDROOM	W12/241	15.21	1.81	40.13%	10.00	1.00	11.00
R13/241	BEDROOM	W13/241	14.75	1.49	37.07%	11.00	0.00	11.00
R14/241	LKD	W14/241	11.91	1.63	19.91%	1.00	0.00	1.00
1st Floor								
R1/242	LKD	W1/242	4.04	1.30	85.78%	3.00	4.00	7.00
		W29/242	13.10			#N/A	#N/A	#N/A

Room/Floor	Room Use	Window			No Sky	%Sun		
			%VSC	%ADF	% of Room	Summer	Winter	Total
R2/242	BEDROOM	W2/242	21.78	1.98	92.60%	18.00	1.00	19.00
R3/242	BEDROOM	W3/242	23.49	2.01	74.27%	18.00	0.00	18.00
R4/242	BEDROOM	W4/242	20.87	1.76	82.44%	19.00	1.00	20.00
R5/242	LKD	W5/242	17.44	1.72	87.69%	15.00	4.00	19.00
R6/242	LKD	W6/242	16.06	1.56	43.56%	8.00	1.00	9.00
R7/242	BEDROOM	W7/242	20.41	1.64	43.19%	8.00	1.00	9.00
R8/242	LKD	W8/242	13.74	1.58	35.65%	7.00	4.00	11.00
R9/242	BEDROOM	W9/242	18.41	1.50	32.50%	9.00	1.00	10.00
R10/242	LKD	W10/242	6.40	0.83	40.03%	3.00	2.00	5.00
R11/242	BEDROOM	W11/242	17.36	2.40	50.48%	14.00	2.00	16.00
R12/242	BEDROOM	W12/242	18.02	1.69	41.62%	14.00	2.00	16.00
R13/242	BEDROOM	W13/242	17.47	1.70	43.22%	14.00	1.00	15.00
R14/242	BEDROOM	W14/242	15.39	1.89	47.55%	9.00	0.00	9.00
R15/242	LKD	W15/242	2.07	0.57	15.74%	1.00	0.00	1.00
R16/242	BEDROOM	W16/242	12.19	1.45	34.64%	10.00	0.00	10.00
R17/242	BEDROOM	W17/242	13.53	1.52	38.90%	6.00	0.00	6.00
R18/242	LKD	W18/242	7.96	0.91	17.27%	3.00	0.00	3.00
R19/242	LKD	W19/242	6.36	0.60	13.49%	0.00	0.00	0.00
R20/242	BEDROOM	W20/242	7.88	1.02	23.56%	0.00	0.00	0.00
R21/242	BEDROOM	W21/242	11.91	1.38	73.48%	#N/A	#N/A	#N/A
R22/242	BEDROOM	W22/242	11.50	1.69	52.17%	#N/A	#N/A	#N/A
R23/242	BEDROOM	W23/242	8.85	1.34	67.46%	#N/A	#N/A	#N/A
R24/242	LKD	W24/242	29.15	3.32	99.59%	21.00	24.00	45.00
R25/242	BEDROOM	W28/242	35.51	2.90	97.39%	35.00	27.00	62.00
R26/242	LKD	W25/242	28.76	3.33	98.64%	21.00	24.00	45.00
R27/242	BEDROOM	W26/242	35.55	2.87	97.37%	35.00	28.00	63.00
R28/242	LKD	W27/242	28.93	3.29	99.09%	21.00	24.00	45.00



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Sources of Information

SURROUNDING

The Gordon Tomalin Partnership.
Consultant Land Surveyors,
10010.01
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LDA Architects
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1509-PL3-14



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65 Gresham Street, London, EC2V 7NQ
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Project Name

52-55 Friar Street
Reading

Client

Aviva Investors Property Trust

Drawing Title

NO SKYLINE CONTOUR FOR
STUDENT ACCOMMODATION VERSION 3

Drawn By	Chk'd By	Scale @ A3	Date
AH		N/A	28 June 2017

Project No.	Drawing No.	Revision
FR20-17	BRE76	

52-55 Friar Street

Daylight and Sunlight Analysis Results Job 17 (Version 3) 29-Jun-17

Room/Floor	Room Use	Window			No Sky	%Sun		
			%VSC	%ADF	% of Room	Summer	Winter	Total
52-55 Friar Street - BRE/76								
Gnd Floor								
R1/240	LKD	W1/240	14.37	2.52	52.23%	14.00	2.00	16.00
R2/240	BEDROOM	W2/240	15.39	1.75	70.35%	11.00	0.00	11.00
R3/240	BEDROOM	W3/240	14.71	1.40	68.79%	7.00	0.00	7.00
R4/240	LKD	W4/240	15.61	1.93	80.69%	9.00	3.00	12.00
R5/240	LKD	W5/240	14.64	1.84	39.51%	8.00	0.00	8.00
R6/240	BEDROOM	W6/240	14.71	1.29	29.88%	4.00	0.00	4.00
R7/240	LKD	W7/240	13.63	2.07	29.60%	9.00	2.00	11.00
R8/240	BEDROOM	W8/240	13.68	1.19	23.40%	6.00	0.00	6.00
R9/240	LKD	W9/240	11.86	1.96	38.83%	11.00	3.00	14.00
R10/240	BEDROOM	W10/240	13.14	1.34	31.98%	9.00	1.00	10.00
R11/240	BEDROOM	W11/240	12.49	1.28	32.26%	9.00	0.00	9.00
R12/240	LKD	W12/240	11.41	1.54	18.24%	6.00	0.00	6.00
Mezzanine								
R1/241	LKD	W1/241	5.25	1.10	65.36%	6.00	3.00	9.00
R2/241	BEDROOM	W2/241	16.82	2.09	80.78%	16.00	0.00	16.00
R3/241	BEDROOM	W3/241	23.49	1.69	62.80%	0.00	0.00	0.00
R4/241	BEDROOM	W4/241	16.77	1.58	75.82%	12.00	0.00	12.00
R5/241	LKD	W5/241	14.11	1.45	82.41%	9.00	1.00	10.00
R6/241	LKD	W6/241	12.95	1.30	38.88%	5.00	0.00	5.00
R7/241	BEDROOM	W7/241	17.37	1.51	34.95%	6.00	0.00	6.00
R8/241	LKD	W8/241	10.93	1.34	31.10%	5.00	3.00	8.00
R9/241	BEDROOM	W9/241	15.49	1.38	27.37%	7.00	0.00	7.00
R10/241	LKD	W10/241	4.75	0.72	33.17%	0.00	2.00	2.00
R11/241	BEDROOM	W11/241	14.48	2.24	43.96%	10.00	2.00	12.00
R12/241	BEDROOM	W12/241	15.21	1.81	40.13%	10.00	1.00	11.00
R13/241	BEDROOM	W13/241	14.75	1.49	37.07%	11.00	0.00	11.00
R14/241	LKD	W14/241	11.91	1.63	19.91%	1.00	0.00	1.00
1st Floor								
R1/242	LKD	W1/242	8.59	1.63	86.43%	8.00	4.00	12.00
		W29/242	13.10			#N/A	#N/A	#N/A
R2/242	BEDROOM	W2/242	21.78	1.98	92.60%	18.00	1.00	19.00

Room/Floor	Room Use	Window			No Sky	%Sun		
			%VSC	%ADF	% of Room	Summer	Winter	Total
R3/242	BEDROOM	W3/242	23.49	2.01	74.27%	18.00	0.00	18.00
R4/242	BEDROOM	W4/242	20.87	1.76	82.44%	19.00	1.00	20.00
R5/242	LKD	W5/242	17.44	1.72	87.69%	15.00	4.00	19.00
R6/242	LKD	W6/242	16.06	1.56	43.56%	8.00	1.00	9.00
R7/242	BEDROOM	W7/242	20.41	1.64	43.19%	8.00	1.00	9.00
R8/242	LKD	W8/242	13.74	1.58	35.65%	7.00	4.00	11.00
R9/242	BEDROOM	W9/242	18.41	1.50	32.50%	9.00	1.00	10.00
R10/242	LKD	W10/242	6.40	0.83	40.03%	3.00	2.00	5.00
R11/242	BEDROOM	W11/242	17.36	2.40	50.48%	14.00	2.00	16.00
R12/242	BEDROOM	W12/242	18.02	1.69	41.62%	14.00	2.00	16.00
R13/242	BEDROOM	W13/242	17.47	1.70	43.22%	14.00	1.00	15.00
R14/242	BEDROOM	W14/242	15.39	1.89	47.55%	9.00	0.00	9.00
R15/242	LKD	W15/242	2.07	0.57	15.74%	1.00	0.00	1.00
R16/242	BEDROOM	W16/242	12.19	1.45	34.64%	10.00	0.00	10.00
R17/242	BEDROOM	W17/242	13.53	1.52	38.90%	6.00	0.00	6.00
R18/242	LKD	W18/242	7.96	0.91	17.27%	3.00	0.00	3.00
R19/242	LKD	W19/242	6.36	0.60	13.49%	0.00	0.00	0.00
R20/242	BEDROOM	W20/242	7.88	1.02	23.56%	0.00	0.00	0.00
R21/242	BEDROOM	W21/242	11.91	1.38	73.48%	#N/A	#N/A	#N/A
R22/242	BEDROOM	W22/242	11.50	1.69	52.17%	#N/A	#N/A	#N/A
R23/242	BEDROOM	W23/242	8.85	1.34	67.46%	#N/A	#N/A	#N/A
R24/242	LKD	W24/242	29.15	3.32	99.59%	21.00	24.00	45.00
R25/242	BEDROOM	W28/242	35.51	2.90	97.39%	35.00	27.00	62.00
R26/242	LKD	W25/242	28.76	3.33	98.64%	21.00	24.00	45.00
R27/242	BEDROOM	W26/242	35.55	2.87	97.37%	35.00	28.00	63.00
R28/242	LKD	W27/242	28.93	3.29	99.09%	21.00	24.00	45.00

20-30 Greyfriars Road

1-7 Greyfriars Road

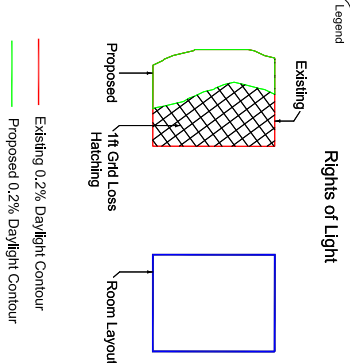
Student Accommodation

Existing

102-109 Friar Street

This drawing is Copyright © of GVA Grintley Limited.

All drawings to be checked on completion by the Client in conjunction with any specifications, schedules and Consultants drawings and details.



- Sources of Information
- SURROUNDING**
- The Gordon Tomalin Partnership,
Consultant Land Surveyors,
10010.01
10010.02
10010.03
10010.04
10010.05
10010.06
10010.07
10010.08
10010.09
10010.10
10010.12
10010.13

- PROPOSED**
- LDA Architects
1509-PL-3-21 Rev A
1509 LDA Issue 2016-10-11 3d Model
- Greyfriars House Reading
EPR Architects
10593-EPR-00-01-DR-A-0211 rev 2 to 0217 rev2

GVA

An APPLECONIA company

08449 02 03 04

GVA Schatunowski Brooks
65 Gresham Street, London, EC2V 7NQ
www.gva.co.uk

Project Name
52-55 Friar Street
Reading

Client
Aviva Investors Property Trust

Drawing Title
Existing Site Plan

Drawn By
AC

Checked By
-

Scale @ A3
1:500

Date
12 May 2017

Project No.
FR20-09

Drawing No.
ROL_44

Revision
-

20-30 Greyfriars Road

1-7 Greyfriars Road

102-109 Friar Street

Student Accommodation

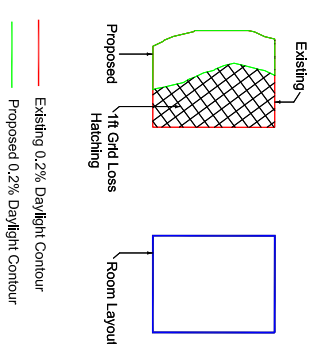
Proposed

This drawing is Copyright © of GVA Grinley Limited.

All dimensions to be checked on site. Do not scale this drawing. Do not use this drawing for construction without the written confirmation with any specifications, schedules and Consultants drawings and details.

Legend

Rights of Light



Sources of Information

SURROUNDING

The Gordon Tomalin Partnership,
Consultant Land Surveyors,
10010.01
10010.02
10010.03
10010.04
10010.05
10010.06
10010.07
10010.08
10010.09
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10010.12
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PROPOSED

LDA Architects
1509-PL-3-21 Rev A
1508 LDA Issue 2016-10-11 3d Model

Greyfriars House Reading

EPR Architects
10593-EPR-00-01-DR-A-0211 rev 2 to 0217 rev2


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65 Gresham Street, London, EC2V 7NQ
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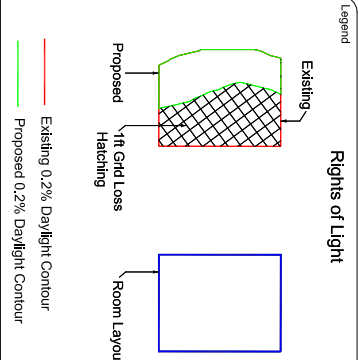
Project Name
52-55 Friar Street
Reading

Client
Aviva Investors Property Trust

Drawing Title
Proposed Site Plan

Drawn By	Chk'd By	Scale @ A3	Date
AC	-	1:500	12 May 2017

Project No.	Drawing No.	Revision
FR20-09	ROL_45	-



Sources of Information

SURROUNDING
The Gordon Tomalin Partnership,
Consultant Land Surveyors,
10010.01
10010.02
10010.03
10010.04
10010.05
10010.06
10010.07
10010.08
10010.09
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10010.13

PROPOSED
LDA Architects
1509-PL-3-21 Rev A
1508 LDA Issue 2016-10-11 3d Model

Greyfriars House Reading
EPR Architects
10593-EPR-00-01-DR-A-0211 rev 2 to 0217 rev2

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08449 02 03 04

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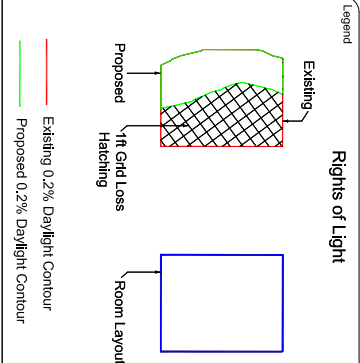
Project Name
52-55 Friar Street
Reading

Client
Aviva Investors Property Trust

Drawing Title
Proposed 3D view

Drawn By	Chk'd By	Scale @ A3	Date
AC	-	N/A	12 May 2017

Project No.	Drawing No.	Revision
FR20-09	ROL_47	-



SURROUNDING

The Gordon Tomlin Partnership,
Consultant Land Surveyors.

10010.01	10010.02	10010.03	10010.04	10010.05	10010.06	10010.07	10010.08	10010.09	10010.10	10010.12	10010.13
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PROPOSED

LDA Architects
1509-PL-3-21 Rev A
1508 LDA Issue 2016-10-11 3d Model

Greyfriars House Reading

EPR Architects
10593-EPR-00-01-DR-A-0211 rev 2 to 0217 rev2



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An **APLEONA** company

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GVA Schatunowski Brooks
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www.gva.co.uk

Project Name 52-55 Friar Street Reading
--

Client Aviva Investors Property Trust

Drawing Title Proposed 3D view with Station Hill
--

Drawn By AC	Checked By N/A	Date 12 May 2017
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Project No. FR20-10	Drawing No. ROL_59	Revision -
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Appendix V

2 February 2017

Mr A Monsalve
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Email: gregory.francis@gvasb.co.uk

Dear Andrés

Proposed Development at 52-55 Friar Street: Objections Relating to Daylight and Sunlight

Thank you for forwarding the objections in relation to our mutual client's proposed development of 52/55 Friar Street, Reading, RG1.

These were prepared by Indigo Planning on behalf of McKay Securities, focusing on an alleged loss of future development potential in relation to their neighbouring property at 20/30 Greyfriars Road.



This property is shown above, which Indigo have confirmed as being in commercial use, hence not being considered for Daylight and Sunlight impacts as part of our planning application, which focussed on dwellings only.

In certain situations neighbouring commercial properties can have detailed consent for change to residential use which has not yet been implemented and in such circumstances would typically be assessed.

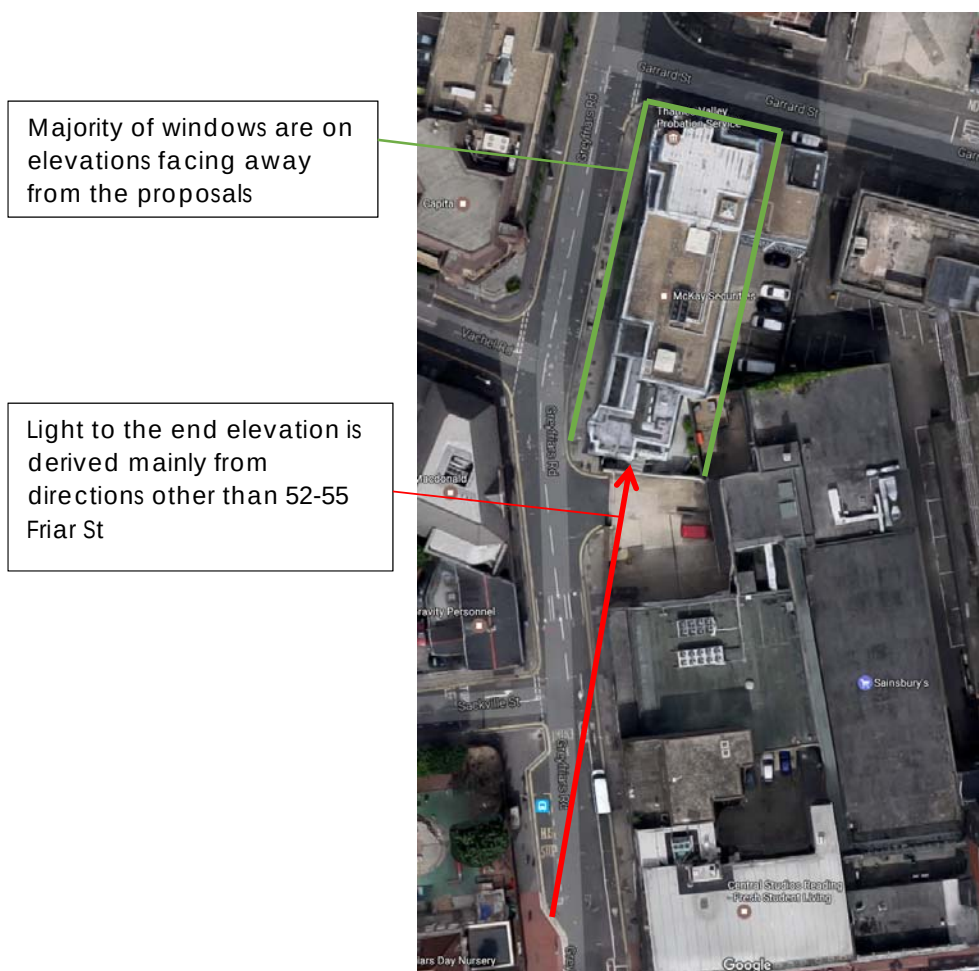
However, based on our desktop research, we understand McKay have not submitted an application to Reading Borough Council for such a change of use to date.

Indeed, the objection is based on an application to convert to residential use which apparently will shortly be submitted to RBC. This description is clearly very general and therefore it is impossible to establish with any certainty important relevant details such as the location of habitable rooms and windows in order to robustly consider the objection raised.

One fact that can be established with confidence is that the main elevations and windows serving this neighbouring property face away from the proposals, with only a very small section of the overall building facing 52-55 Friar St.

Given its configuration, a design for change of use would presumably place most if not all of its habitable rooms along the main elevations, with the small end elevation facing 52-55 Friar St most likely used to place non-habitable rooms, circulation areas and the like.

It is also apparent from consideration of the plan form of the building (below) that this small end elevation does not face directly toward the site at 52-55 Friar St, therefore does not have a significant demand for natural light from this direction.



The BRE Guidance contains a small section with recommendations regarding adjoining development land (section 2.3).

However, in practice, this guidance is not applied as it is impractical to apply in dense urban environments given the close proximity of neighbouring sites. In other words the vast majority of dense urban development would not meet these recommendations.

From consideration of the proposed development plans it is apparent that a meaningful effort has been made to alleviate the impact to future development of this adjacent site by introducing a series of significant setbacks of the massing adjacent the northern boundary.

In our experience this is a rare concession and our view is that it is a generous and considerate gesture.

Furthermore, the objection does not make reference to the careful design of the proposals adjacent the boundary, whereby ground to 4th floor levels do not feature windows facing Greyfriars House.

Consequently, contrary to the assertions made in the objection, the proposed dwellings therefore cannot be considered to *"borrow their daylight/sunlight and outlook to a considerable degree from the airspace above 20-30 Greyfriars Road"*.

The proposed floor plates then step back significantly from the northern boundary with Greyfriars House at 5th floor level, only introducing a small number of north facing windows at this level.

At this level, two of the three rooms served by these windows are open-plan living/kitchen/dining spaces and due to careful design are located at the corners of the proposed block, meaning they are both dual aspect.

Consequently most of their glazing faces west and east, i.e. away from Greyfriars House.

Once again this does not reflect a design which depends on an unreasonable amount of light from the airspace above Greyfriars House.

There is a small second bedroom proposed in the centre of the proposed 5th floor elevation, which would not have the benefit of these additional aspects.

However, given the significant stepping back from the boundary it is clear that adequate light would be retained given its low demand for daylight due to use and urban setting.

The setting back means a very open aspect to receive daylight from other directions other than the air space above Greyfriars House. The Average Daylight Factor for this proposed bedroom was found to be ...%ADF, greatly in excess of the minimum recommended target values. This demonstrates that even if a significant additional massing were placed opposite, adequate internal daylight would be retained.

Furthermore, given that this window is north facing, clearly it will pose no sunlight constraints, given that it is not possible to obtain any meaningful amount of sunlight from a northerly direction.

A similar situation occurs at the proposed 6th floor, whereby there are even greater glazing areas serving the corner living/kitchen/dining spaces, meaning even less dependence on light from the direction of Greyfriars House.

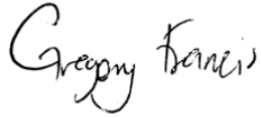
The proposed 7th floor then makes another significant step back, thereby introducing an even greater separation distance between the proposed north facing windows and the air space above Greyfriars House.

It should also be noted that the design changes at this level, such that there are only two living/kitchen/dining rooms proposed i.e. no bedroom. Both of these living areas would again be located at the corners of the proposed new block, with most skylight received from directions other than the adjacent site.

This is the uppermost level on this western block, i.e. there are no further levels above.

In overall conclusion it is our view that the proposals have been sympathetically designed not to heavily depend on light from the direction of Greyfriars House, precisely to avoid what has been alluded to in the objection, notwithstanding the absence of any formal application for change of use by the owners.

Yours sincerely

A handwritten signature in black ink that reads "Gregory Francis". The signature is written in a cursive style with a large initial 'G'.

Gregory Francis MBA
For and on behalf of GVA Grimley Limited

Enc

Appendix VI

Our Ref: GF05/02B625241
Your Ref: Ref

8 March 2017

Mr A Monsalve
Leslie Clark Construction Consultants
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Dear Andrés

**Adjacent Proposed Developments at 52-55 Friar Street & Greyfriars House
20/30 Greyfriars, Reading**

Daylight and Sunlight Objection

Further to our letter dated 2 February 2017 in respect of the above matter, we have been made aware of a change of use Permitted Development ("PD") application (RBC planning ref: 170229, validated 14 February 2017) for Greyfriars House.

The plan below shows the relationship between these proposed units at Greyfriars House and the submitted application for the site at 52-55 Friar Street. The floor plans have also been appended to this letter.

As can be seen, the submitted floor plans show overall unit sizes only and therefore still do not provide details of internal arrangements, such as room layouts and location of habitable rooms.

It is however clear that the majority of the new units will receive their skylight from directions other than 52-55 Friar Street, given the orientation of their glazing.

Of the 43 new units being proposed at Greyfriars House the vast majority, i.e. 39, cannot be significantly affected by the proposals at 52-55 Friar Street as their windows will face away from this adjacent site.

This leaves only 4 units which will have windows facing towards and located close to the proposed development at 52-55 Friar Street.

These 4 potentially affected proposed units will be located behind the southern end elevation and arranged directly above one another, from First to Fourth floor level.

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Birmingham Bristol Cardiff Dublin
Edinburgh Glasgow Leeds Liverpool
London Manchester Newcastle

The southern end elevation closest 52-55 Friar St receives the majority of skylight from the direction of Greyfriars Road directly ahead, which will remain undeveloped. Skylight from this direction will therefore be unaffected.



Fig 1: plan showing relationship between adjacent proposals

All 4 potentially affected units are triple aspect, i.e. have three elevations featuring glazing which all face in different directions.

A typical layout of these units is shown below (the example shown is taken at the proposed second floor level). The orientation of this typical layout is approximately the same as the building itself (i.e. north is towards the top of the page).

I have highlighted the glazing which faces away from the proposed development at 52-55 Friar Street. Any habitable rooms deriving light from these windows will therefore be unaffected.

I have also highlighted the window which faces directly down Greyfriars Road which is discussed above.

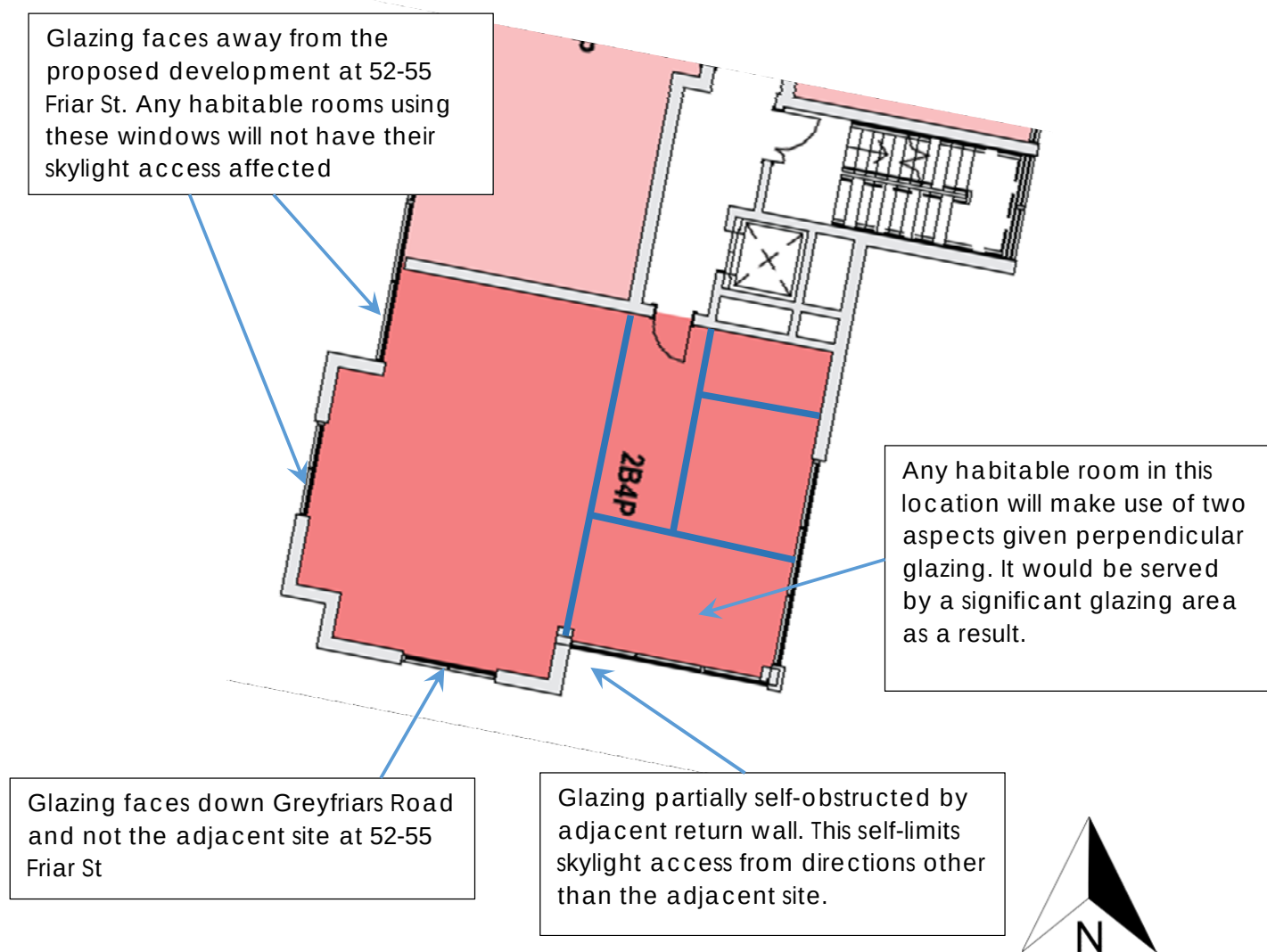


Fig 2: typical end unit showing possible internal configuration and use of glazing facing away from the adjacent proposal

I have also highlighted a section of south facing glazing which is self-obstructed in terms of access to available skylight, due to its location directly adjacent a return wall. This places greater dependence on skylight access to these windows from the adjacent site at 52-55 Friar Street.

These windows will inevitably experience reduced skylight access with the proposed massing at 52-55 Friar Street in place.

They are however located on an external corner, with a perpendicular return glazed elevation directly adjacent.

Given this arrangement, it is clear that any habitable room in this location will most likely make use of this second aspect, therefore having much less dependence on the self-obstructed glazing in the south facing end elevation.

In the absence of any detailed layouts I have added a possible internal configuration to better demonstrate this.

Leslie Clark Construction Consultants
March 8, 2017
Page 4

This second aspect and the significant amounts of available glazing means dwelling can be designed in all 4 units which have adequate skylight access with the adjacent proposal at 52-55 Friar Street in place.

Yours sincerely

Gregory Francis MBA
020 7911 2705
gregory.francis@gvasb.co.uk
For and on behalf of GVA Grimley Limited

Encs

Appendix VII

09 June 2017

Ms S Dawson
Barton Willmore
7 Soho Square
London
W1D 3QB

Dear Sarah

**Proposed Development at 52-55 Friar Street and 12 Greyfriars Road,
Reading RG1 (RBC planning ref: 162210)**

Daylight, Sunlight & Overshadowing

Thank you for forwarding the second representation to the above proposed development submitted by Indigo on behalf of the owners, McKay securities PLC.

The letter, dated 12 May 2017, concludes that the proposed development would have an unacceptable and detrimental impact to natural light access to the South and East elevations of their client's property, to an extent whereby they consider an appropriate and proportionate response would be to refuse consent.

We have provided several responses to these assertions, each time robustly demonstrating that the proposed development has been designed in a neighbourly and considerate manner whereby it would not constrain the development of the adjacent site, whether by change of use or detailed planning application.

As you are aware, the situation is complicated by the fact that Indigo's client has not undertaken any detailed Daylight and Sunlight amenity assessments of their own consented residential units, nor have they confirmed their internal arrangement/ precisely where the habitable rooms will be located.

Given the lack of consensus, the only fair way to robustly confirm the situation would be to undertake detailed amenity assessments, based on the recommendations set out by the British Research Establishment (BRE) and British Standards Institute (BSi).

Due to the aforementioned lack of information regarding the internal arrangements of the PDR consent at 20-30 Greyfriars and in the interests of transparency, we have liaised with a competent local market valuer and architect to undertake detailed design of the dwellings within 20-30 Greyfriars, based on the PDR consent.

We consider the layouts to be a fair and realistic reflection of how these units would be arranged.

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London Manchester Newcastle

We have undertaken the full suite of studies recommended by the BRE and BSi, namely Vertical Sky Component (VSC), Average Daylight Factor (ADF), Daylight Distribution (DD) and Average Probable Sunlight Hours (APSH). These are attached, drawing references FR20-14 BRE/70 & BRE/71 plus associated results tables.

As can be seen, all habitable rooms would achieve materially in excess of the minimum target recommendations for daylight. Unusually for a dense town centre environment, all living rooms would achieve in excess of 90% of their area covered by the no-sky line.

All living areas would also have excellent access to available sunlight amenity.

In overall conclusion the PDR scheme would, as has been consistently demonstrated, provide excellent natural light amenity for future occupants throughout, despite the self-obstructed features of the building. This further demonstrates that close attention was paid to this potential issue throughout the design process, which has resulted in a proposal which performs in a very neighbourly way.

That is to say it balances efficient use of its own site whilst also leaving the neighbouring site perfectly capable of being designed in a similar way and not posing any material constraint to its delivery by virtue of natural light amenity considerations.

In order to be as fully transparent as possible, we have also considered the potential effect of the large outline consented parameter plans for the Station Hill site. It should be noted that the final form of this site is yet to be decided and we understand that issues of how it would affect the Daylight and Sunlight amenity of neighbours would be considered as part of a detailed planning application.

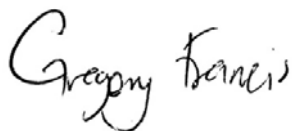
We have therefore used a very much worst case scenario, whereby the full parameter plans are included as a background obstruction.

Even in this extreme scenario, all the PDR habitable rooms would achieve adequate amenity, albeit clearly less than they would without such a large obstruction in such close proximity.

In overall conclusion we would maintain that the PDR development of the adjacent site is in no way compromised by the proposed development, nor would it create any material constraint were a detailed application to be made to demolish and rebuild the property.

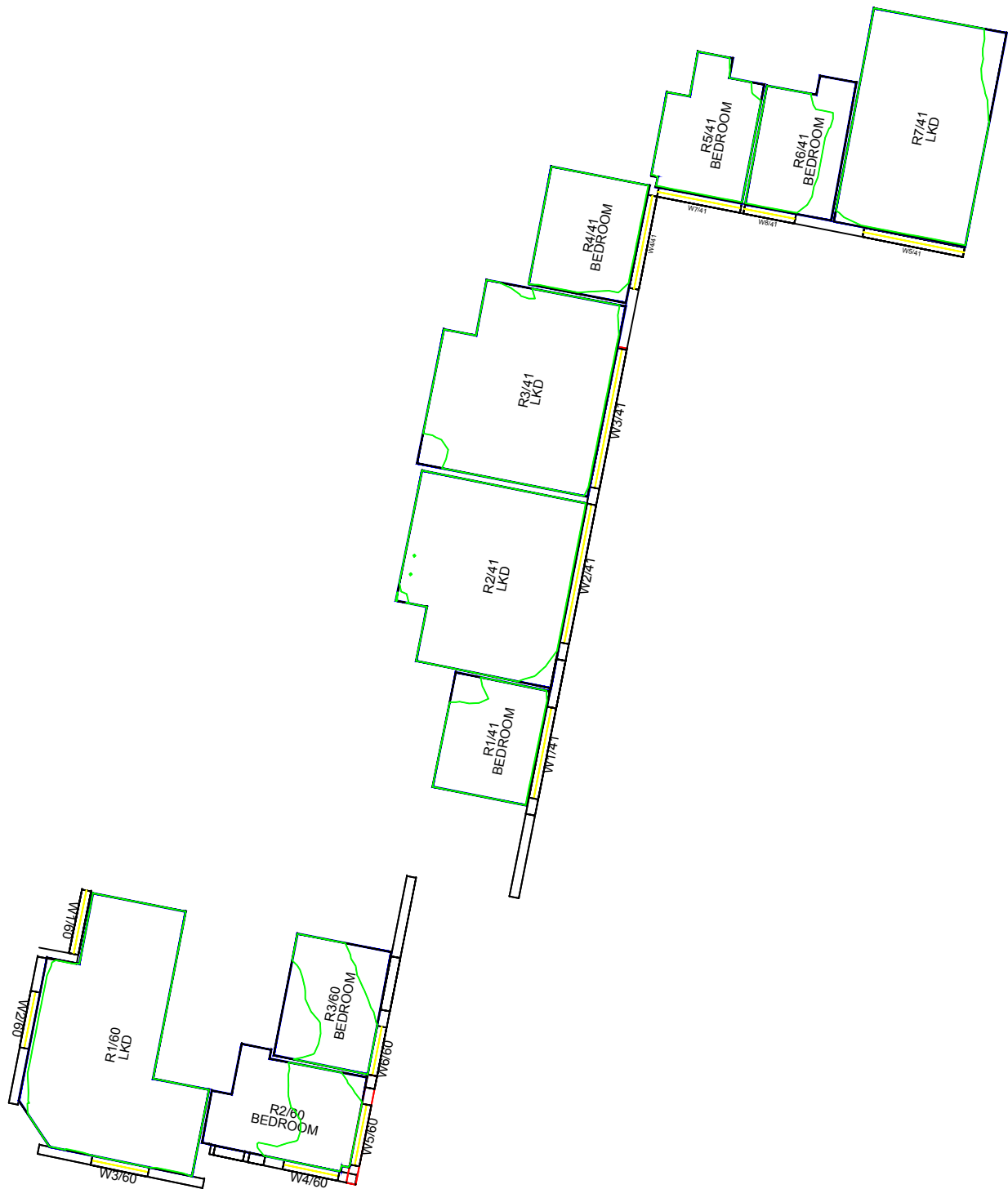
Our client has evidently designed in a neighbourly manner, which we consider apparent from this report and preceding earlier responses.

Yours sincerely



Gregory Francis MBA RICS Accredited Expert Witness
Associate Director
020 7911 2705
gregory.francis@gvasb.co.uk
For and on behalf of GVA Grimley Limited

Encs.



First Floor



Second Floor

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Do not scale this drawing.
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Legend

Daylight

Existing
Proposed
1ft Grid Loss Hatching
Room Layout

Existing No-Sky Line Contour
Proposed No-Sky Line Contour

Sources of Information

SURROUNDING
The Gordon Tomalin Partnership.
Consultant Land Surveyors,
10010.01
10010.02
10010.03
10010.04
10010.05
10010.06
10010.07
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PROPOSED

LDA Architects
1509-PL3-21 Rev A
1509 LDA Issue 2016-10-11 3d Model

Greyfriars House Readding

EPR Architects
10593-EPR-00-01-DR-A-0211 rev 2 to 0217 rev2

LDA Architects pdf floors plans received
24 May 2017 1509-PL3-13E,14E,15E

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GVA Schatunowski Brooks
65 Gresham Street, London, EC2V 7NQ
www.gva.co.uk

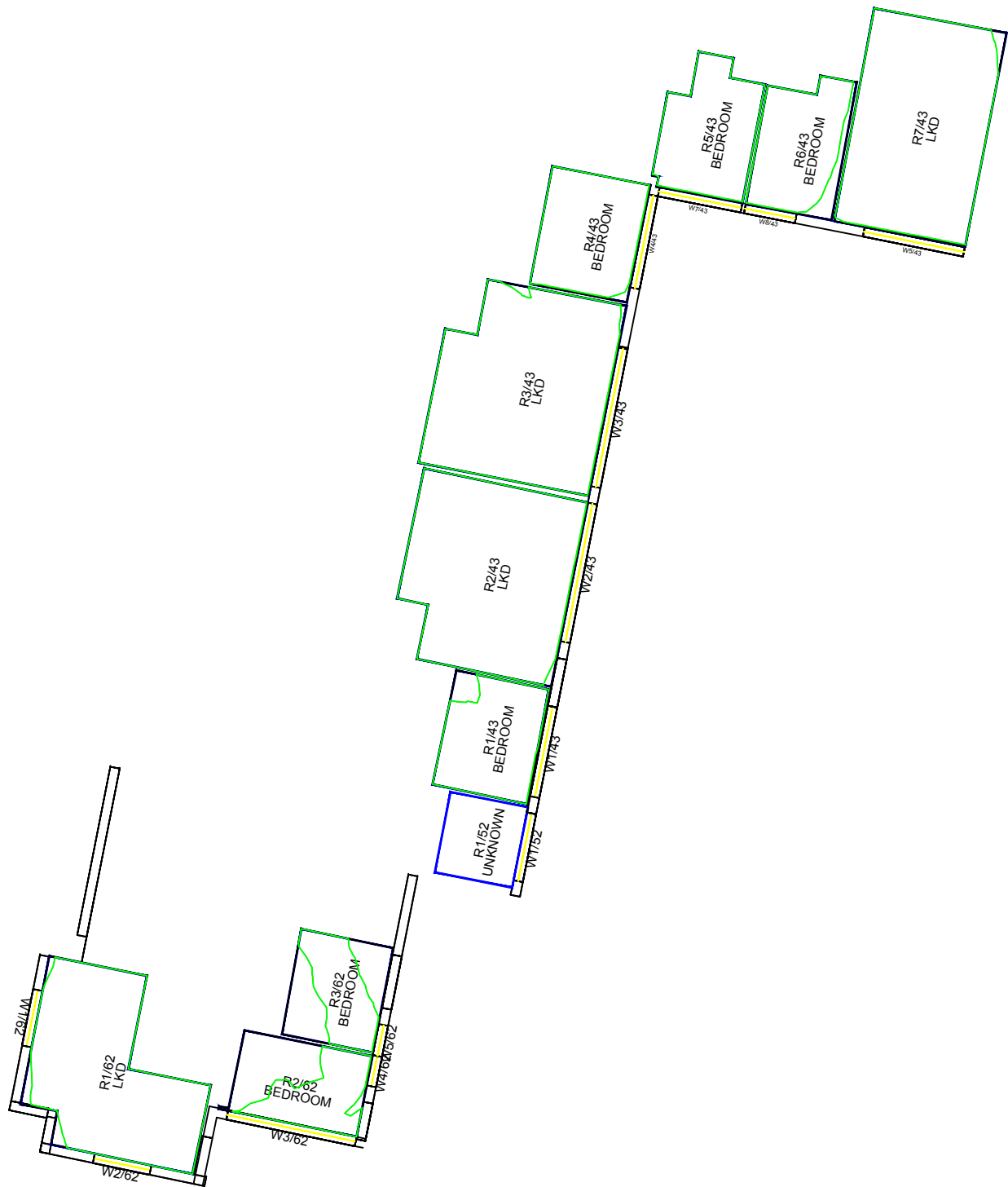
Project Name
52-55 Friar Street
Reading

Client
Aviva Investors Property Trust

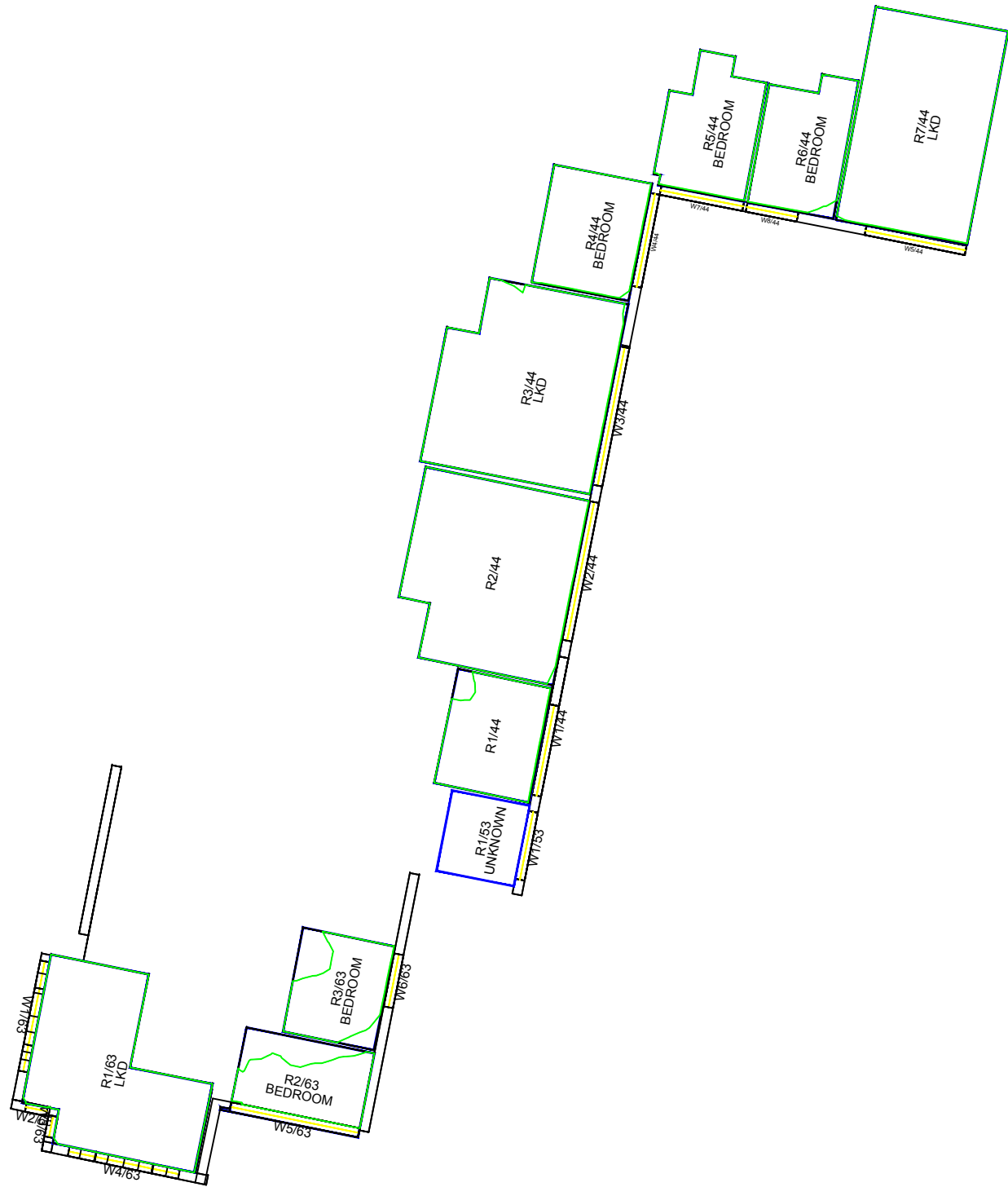
Drawing Title
No-Sky Line Contours for
20-30 Greyfriars Road (without Station Hill)

Drawn By AC	Chk'd By -	Scale @ A3 1:200	Date 07 June 2017
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Project No. FR20-14	Drawing No. BRE_70	Revision -
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Third Floor



Fourth Floor

Legend

Daylight

Existing

Proposed

1ft Grid Loss Hatching

Room Layout

Existing No-Sky Line Contour

Proposed No-Sky Line Contour

Sources of Information

SURROUNDING

The Gordon Tomalin Partnership.
Consultant Land Surveyors,
10010.01
10010.02
10010.03
10010.04
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PROPOSED

LDA Architects
1509-PL3-21 Rev A
1509 LDA Issue 2016-10-11 3d Model

Greyfriars House Readding

EPR Architects
10593-EPR-00-01-DR-A-0211 rev 2 to 0217 rev2

LDA Architects pdf floors plans received
24 May 2017 1509-PL3-13E,14E,15E

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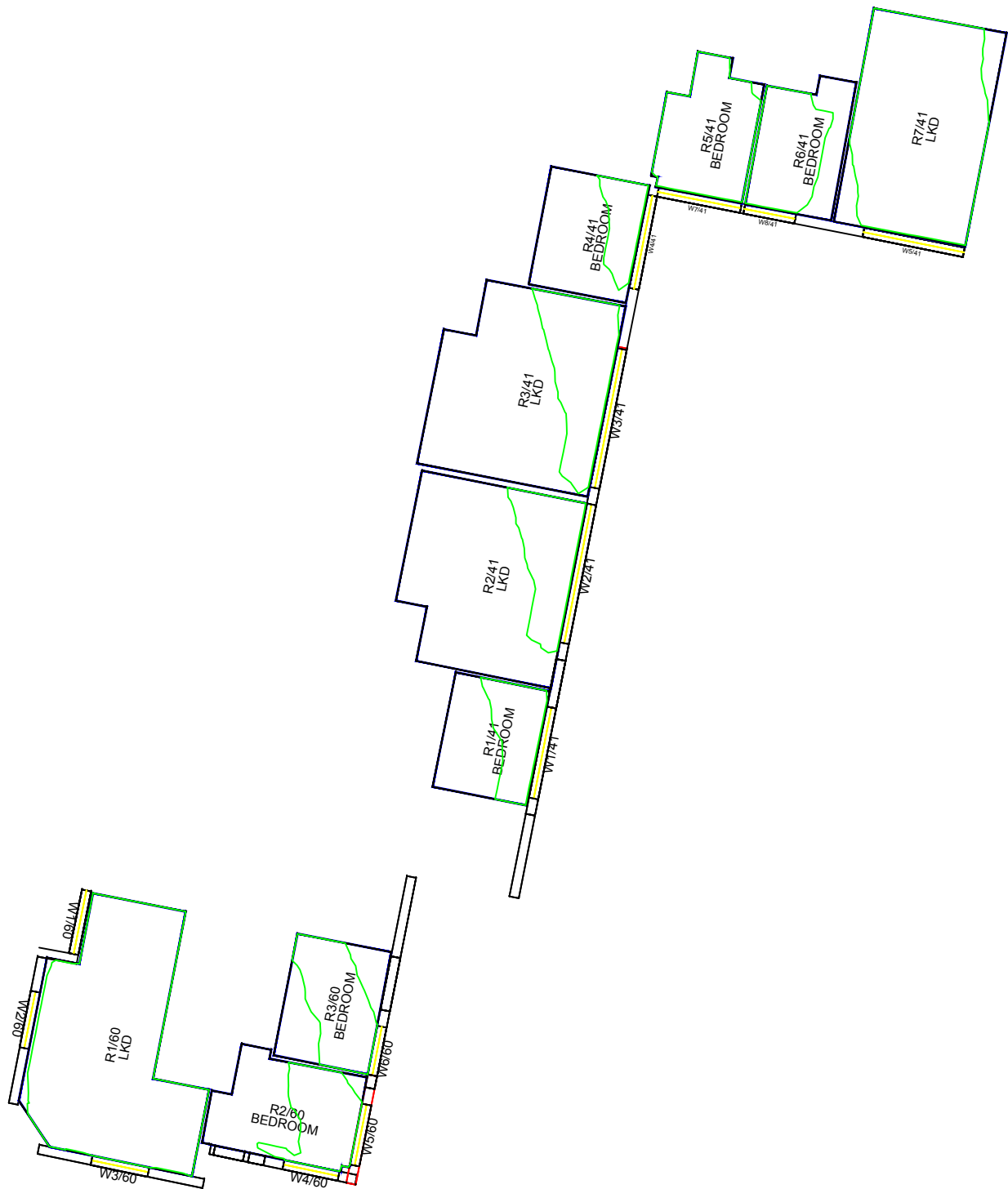
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65 Gresham Street, London, EC2V 7NQ
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Project Name			
52-55 Friar Street Reading			
Client			
Aviva Investors Property Trust			
Drawing Title			
No-Sky Line Contours for 20-30 Greyfriars Road (without Station Hill)			
Drawn By	Chk'd By	Scale @ A3	Date
AC	-	1:200	07 June 2017
Project No.	Drawing No.	Revision	
FR20-14	BRE_71	-	

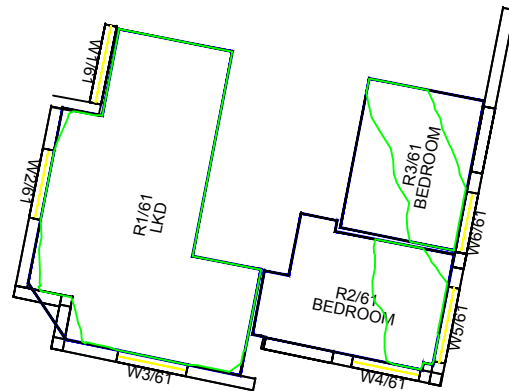
52-55 Friar Street, Reading
Sunlight & Daylight results for proposal (without Station Hill)
07 June 2017

Room/Floor	Room Use	Window			No Sky	%Sun		
			%VSC	%ADF	% of Room	Summer	Winter	Total
20 TO 30 Greyfriars Road BRE_70,71								
1st Floor								
R1/41	BEDROOM	W1/41	15.12	4.25	90.87%	6.00	4.00	10.00
R2/41	LKD	W2/41	15.49	3.00	97.40%	10.00	4.00	14.00
R3/41	LKD	W3/41	14.44	2.75	95.88%	13.00	5.00	18.00
R4/41	BEDROOM	W4/41	10.37	3.39	95.32%	14.00	5.00	19.00
R5/41	BEDROOM	W7/41	10.55	3.05	97.32%	13.00	6.00	19.00
R6/41	BEDROOM	W8/41	11.97	2.04	67.44%	14.00	8.00	22.00
R7/41	LKD	W5/41	13.38	2.01	94.81%	17.00	6.00	23.00
2nd Floor								
R1/42	BEDROOM	W1/42	17.66	5.44	95.93%	11.00	7.00	18.00
R2/42	LKD	W2/42	18.49	3.36	96.96%	14.00	7.00	21.00
R3/42	LKD	W3/42	17.66	3.12	98.42%	16.00	6.00	22.00
R4/42	BEDROOM	W4/42	12.49	3.80	95.87%	18.00	5.00	23.00
R5/42	BEDROOM	W7/42	11.86	3.27	98.78%	16.00	7.00	23.00
R6/42	BEDROOM	W8/42	13.84	2.22	75.68%	16.00	8.00	24.00
R7/42	LKD	W5/42	16.01	2.24	96.43%	23.00	7.00	30.00
3rd Floor								
R1/43	BEDROOM	W1/43	20.04	5.11	92.69%	13.00	7.00	20.00
R2/43	LKD	W2/43	21.60	3.73	98.95%	18.00	7.00	25.00
R3/43	LKD	W3/43	21.10	3.50	98.54%	20.00	8.00	28.00
R4/43	BEDROOM	W4/43	14.61	4.18	96.96%	19.00	6.00	25.00
R5/43	BEDROOM	W7/43	13.48	3.53	98.94%	18.00	8.00	26.00
R6/43	BEDROOM	W8/43	16.37	2.44	88.87%	21.00	9.00	30.00
R7/43	LKD	W5/43	19.62	2.56	98.44%	30.00	9.00	39.00
4th Floor								
R1/44		W1/44	22.43	5.50	93.65%	14.00	7.00	21.00
R2/44		W2/44	24.65	4.09	99.13%	18.00	7.00	25.00
R3/44	LKD	W3/44	24.99	3.93	98.89%	21.00	8.00	29.00
R4/44	BEDROOM	W4/44	17.37	4.65	97.50%	21.00	8.00	29.00
R5/44	BEDROOM	W7/44	15.91	3.89	98.94%	21.00	10.00	31.00
R6/44	BEDROOM	W8/44	20.29	2.79	97.20%	26.00	13.00	39.00
R7/44	LKD	W5/44	23.68	2.91	99.43%	36.00	11.00	47.00

Room/Floor	Room Use	Window			No Sky	%Sun		
			%VSC	%ADF	% of Room	Summer	Winter	Total
5th Floor								
R3/45	LKD	W3/45	29.18	4.41	98.89%	22.00	10.00	32.00
R4/45	BEDROOM	W4/45	23.86	5.67	97.50%	24.00	9.00	33.00
R5/45	BEDROOM	W7/45	22.11	4.76	98.94%	29.00	14.00	43.00
R6/45	BEDROOM	W8/45	27.34	3.41	98.43%	37.00	17.00	54.00
R7/45	LKD	W5/45	28.28	3.32	99.43%	40.00	19.00	59.00
1st Floor								
R1/60	LKD	W1/60	29.42	6.16	97.75%	#N/A	#N/A	#N/A
		W2/60	30.76			#N/A	#N/A	#N/A
		W3/60	14.66			22.00	8.00	30.00
R2/60	BEDROOM	W4/60	1.19	3.52	46.91%	3.00	0.00	3.00
		W5/60	9.22			3.00	0.00	3.00
R3/60	BEDROOM	W6/60	11.18	2.91	63.44%	7.00	2.00	9.00
2nd Floor								
R1/61	LKD	W1/61	30.94	5.94	95.98%	#N/A	#N/A	#N/A
		W2/61	33.54			#N/A	#N/A	#N/A
		W3/61	18.44			24.00	11.00	35.00
R2/61	BEDROOM	W4/61	1.59	2.40	39.72%	3.00	0.00	3.00
		W5/61	10.86			5.00	0.00	5.00
R3/61	BEDROOM	W6/61	13.01	2.01	57.42%	7.00	3.00	10.00
3rd Floor								
R1/62	LKD	W1/62	36.82	5.44	97.06%	#N/A	#N/A	#N/A
		W2/62	20.66			25.00	14.00	39.00
R2/62	BEDROOM	W3/62	0.01	1.53	55.25%	0.00	0.00	0.00
		W4/62	14.73			9.00	1.00	10.00
R3/62	BEDROOM	W5/62	15.14	1.57	55.99%	11.00	3.00	14.00
4th Floor								
R1/63	LKD	W1/63	39.46	10.42	99.89%	#N/A	#N/A	#N/A
		W2/63	26.15			21.00	14.00	35.00
		W3/63	24.75			#N/A	#N/A	#N/A
		W4/63	22.66			25.00	15.00	40.00
R2/63	BEDROOM	W5/63	6.89	3.44	65.65%	14.00	0.00	14.00
R3/63	BEDROOM	W6/63	16.50	2.87	78.91%	14.00	4.00	18.00



First Floor



Second Floor

Legend

Daylight

Existing

Proposed

1ft Grid Loss Hatching

Room Layout

Existing No-Sky Line Contour

Proposed No-Sky Line Contour

Sources of Information

SURROUNDING

The Gordon Tomalin Partnership.
Consultant Land Surveyors,
10010.01
10010.02
10010.03
10010.04
10010.05
10010.06
10010.07
10010.08
10010.09
10010.10
10010.12
10010.13

PROPOSED

LDA Architects
1509-PL3-21 Rev A
1509 LDA Issue 2016-10-11 3d Model

Greyfriars House Readding

EPR Architects
10593-EPR-00-01-DR-A-0211 rev 2 to 0217 rev2

LDA Architects pdf floors plans received
24 May 2017 1509-PL3-13E,14E,15E

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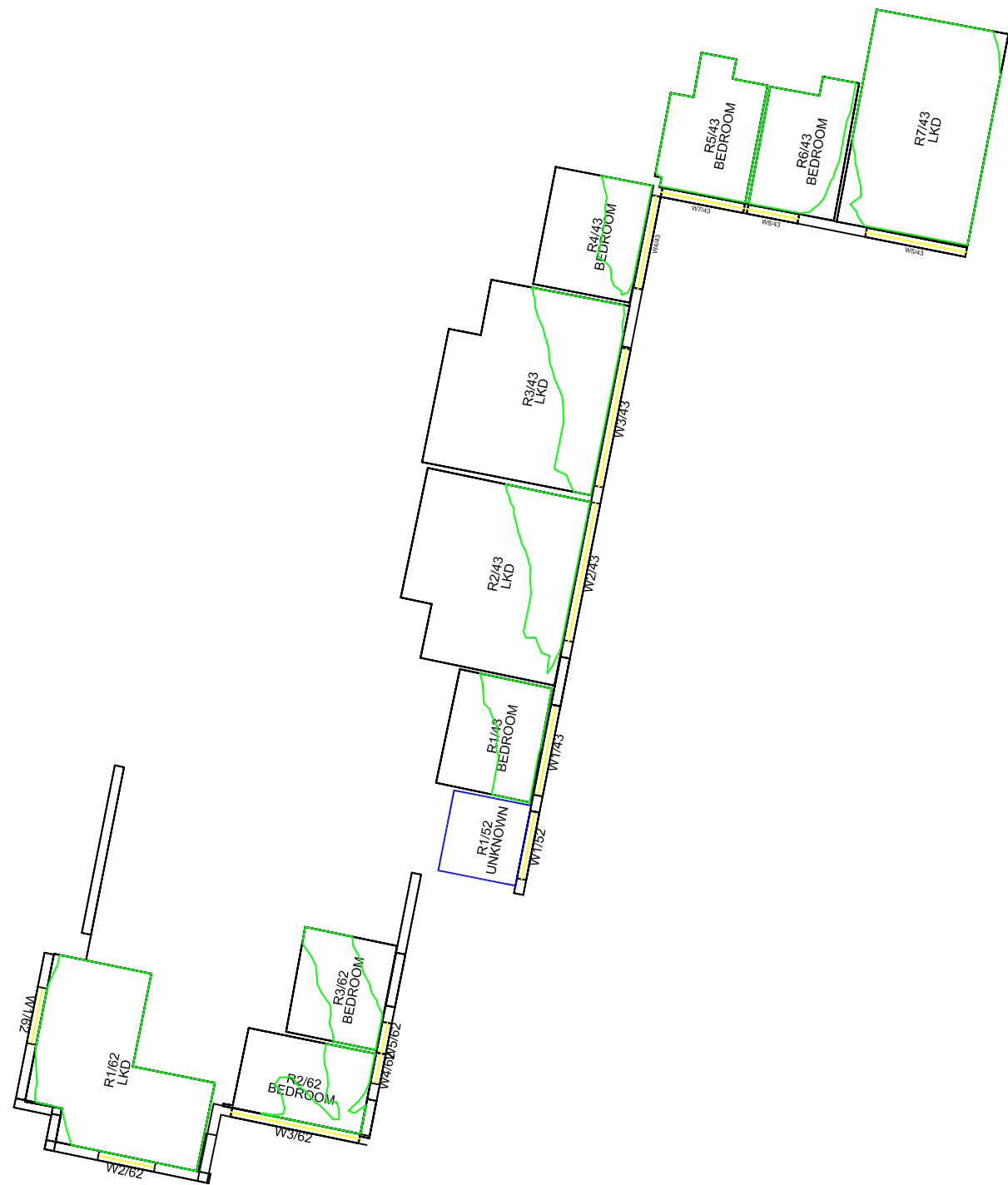
Project Name
52-55 Friar Street
Reading

Client
Aviva Investors Property Trust

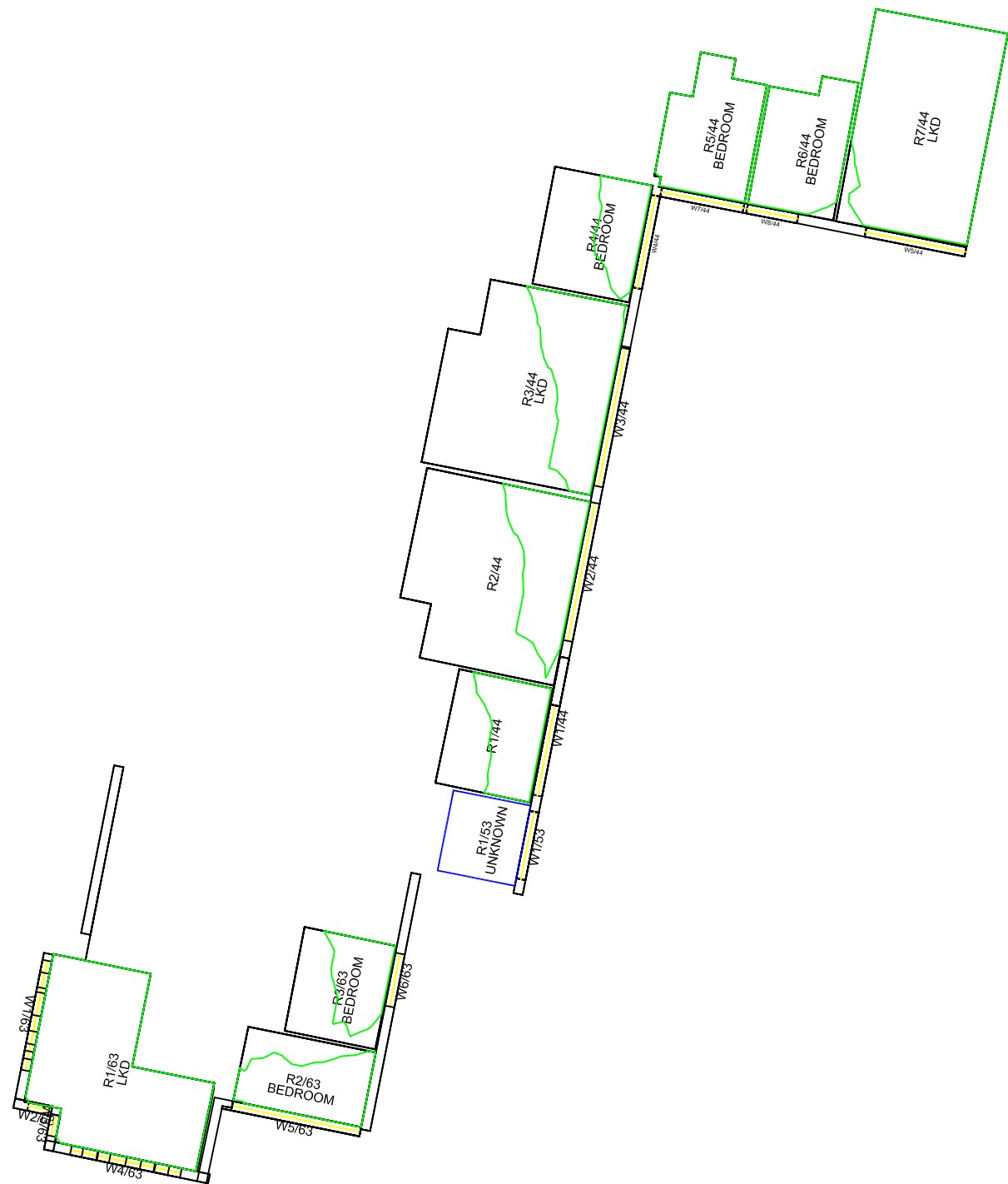
Drawing Title
No-Sky Line Contours for
20-30 Greyfriars Road (with Station Hill)

Drawn By AC	Chk'd By -	Scale @ A3 1:200	Date 07 June 2017
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Project No. FR20-15	Drawing No. BRE_72	Revision -
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Third Floor



Fourth Floor

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Do not scale this drawing.
All dimensions to be checked on site. Drawing to be read in conjunction with any specifications, schedules and Consultants drawings and details.

Legend

Daylight

Existing

Proposed

1ft Grid Loss Hatching

Room Layout

Existing No-Sky Line Contour

Proposed No-Sky Line Contour

Sources of Information

SURROUNDING

The Gordon Tomalin Partnership,
Consultant Land Surveyors,
10010.01
10010.02
10010.03
10010.04
10010.05
10010.06
10010.07
10010.08
10010.09
10010.10
10010.12
10010.13

PROPOSED

LDA Architects
1509-PL3-21 Rev A
1509 LDA Issue 2016-10-11 3d Model

Greyfriars House Reading

EPR Architects
10593-EPR-00-01-DR-A-0211 rev 2 to 0217 rev2

LDA Architects pdf floors plans received
24 May 2017 1509-PL3-13E,14E,15E

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Project Name

52-55 Friar Street
Reading

Client

Aviva Investors Property Trust

Drawing Title

No-Sky Line Contours for
20-30 Greyfriars Road (with Station Hill)

Drawn By	Chk'd By	Scale @ A3	Date
AC	-	1:200	07 June 2017

Project No.	Drawing No.	Revision
FR20-15	BRE_73	-

52-55 Friar Street, Reading
Sunlight & Daylight results for proposal (with Staion Hill)
07 June 2017

Room/Floor	Room Use	Window			No Sky	%Sun		
			%VSC	%ADF	% of Room	Summer	Winter	Total
20 TO 30 Greyfriars Road BRE_72,73								
1st Floor								
R1/41	BEDROOM	W1/41	6.51	2.31	44.56%	6.00	4.00	10.00
R2/41	LKD	W2/41	5.66	1.43	23.78%	5.00	4.00	9.00
R3/41	LKD	W3/41	4.83	1.23	30.65%	4.00	5.00	9.00
R4/41	BEDROOM	W4/41	3.81	1.63	28.08%	4.00	5.00	9.00
R5/41	BEDROOM	W7/41	8.93	2.86	97.32%	9.00	6.00	15.00
R6/41	BEDROOM	W8/41	10.20	1.93	67.44%	10.00	7.00	17.00
R7/41	LKD	W5/41	11.26	1.88	91.27%	12.00	4.00	16.00
2nd Floor								
R1/42	BEDROOM	W1/42	7.48	2.95	48.55%	9.00	7.00	16.00
R2/42	LKD	W2/42	6.56	1.59	24.81%	5.00	7.00	12.00
R3/42	LKD	W3/42	5.61	1.37	32.55%	5.00	5.00	10.00
R4/42	BEDROOM	W4/42	4.34	1.81	30.11%	5.00	5.00	10.00
R5/42	BEDROOM	W7/42	9.96	3.04	98.78%	11.00	7.00	18.00
R6/42	BEDROOM	W8/42	11.71	2.08	75.68%	12.00	7.00	19.00
R7/42	LKD	W5/42	13.25	2.07	92.83%	16.00	5.00	21.00
3rd Floor								
R1/43	BEDROOM	W1/43	8.68	2.84	52.33%	9.00	7.00	16.00
R2/43	LKD	W2/43	7.63	1.77	27.77%	7.00	7.00	14.00
R3/43	LKD	W3/43	6.62	1.53	34.83%	5.00	6.00	11.00
R4/43	BEDROOM	W4/43	5.03	2.01	34.09%	5.00	5.00	10.00
R5/43	BEDROOM	W7/43	11.36	3.27	98.94%	13.00	8.00	21.00
R6/43	BEDROOM	W8/43	13.91	2.30	88.87%	17.00	8.00	25.00
R7/43	LKD	W5/43	15.95	2.31	94.90%	20.00	7.00	27.00
4th Floor								
R1/44		W1/44	10.13	3.16	57.51%	9.00	7.00	16.00
R2/44		W2/44	8.91	1.98	31.02%	7.00	7.00	14.00
R3/44	LKD	W3/44	7.86	1.71	37.20%	6.00	6.00	12.00
R4/44	BEDROOM	W4/44	6.00	2.24	38.77%	7.00	5.00	12.00
R5/44	BEDROOM	W7/44	13.61	3.62	98.94%	15.00	8.00	23.00
R6/44	BEDROOM	W8/44	17.59	2.63	97.20%	21.00	11.00	32.00
R7/44	LKD	W5/44	19.55	2.63	96.34%	26.00	8.00	34.00

Room/Floor	Room Use	Window			No Sky	%Sun		
			%VSC	%ADF	% of Room	Summer	Winter	Total
5th Floor								
R3/45	LKD	W3/45	9.30	1.95	40.04%	7.00	8.00	15.00
R4/45	BEDROOM	W4/45	7.79	2.56	43.99%	9.00	6.00	15.00
R5/45	BEDROOM	W7/45	19.72	4.48	98.94%	23.00	12.00	35.00
R6/45	BEDROOM	W8/45	24.51	3.24	98.43%	32.00	15.00	47.00
R7/45	LKD	W5/45	23.85	3.01	96.78%	30.00	14.00	44.00
1st Floor								
R1/60	LKD	W1/60	29.40	6.16	97.75%	#N/A	#N/A	#N/A
		W2/60	30.75			#N/A	#N/A	#N/A
		W3/60	14.66			22.00	8.00	30.00
R2/60	BEDROOM	W4/60	1.19	2.76	45.23%	3.00	0.00	3.00
		W5/60	5.42			3.00	0.00	3.00
R3/60	BEDROOM	W6/60	7.17	2.26	62.03%	7.00	2.00	9.00
2nd Floor								
R1/61	LKD	W1/61	30.92	5.94	95.98%	#N/A	#N/A	#N/A
		W2/61	33.53			#N/A	#N/A	#N/A
		W3/61	18.44			24.00	11.00	35.00
R2/61	BEDROOM	W4/61	1.59	1.86	34.27%	3.00	0.00	3.00
		W5/61	6.74			5.00	0.00	5.00
R3/61	BEDROOM	W6/61	8.61	1.54	54.61%	7.00	3.00	10.00
3rd Floor								
R1/62	LKD	W1/62	36.82	5.44	97.06%	#N/A	#N/A	#N/A
		W2/62	20.66			25.00	14.00	39.00
R2/62	BEDROOM	W3/62	0.01	1.21	42.86%	0.00	0.00	0.00
		W4/62	10.13			9.00	1.00	10.00
R3/62	BEDROOM	W5/62	10.41	1.24	55.99%	11.00	3.00	14.00
4th Floor								
R1/63	LKD	W1/63	39.45	10.42	99.89%	#N/A	#N/A	#N/A
		W2/63	26.15			21.00	14.00	35.00
		W3/63	24.75			#N/A	#N/A	#N/A
		W4/63	22.66			25.00	15.00	40.00
R2/63	BEDROOM	W5/63	6.89	3.44	65.65%	14.00	0.00	14.00
R3/63	BEDROOM	W6/63	12.55	2.42	48.64%	13.00	4.00	17.00

Appendix VIII

Our Ref: GF05
Your Ref:

31 July 2017

Miss S Dawson
Barton Willmore
7 Soho Square
LONDON
W1D 3QB

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Dear Sarah

**Proposed Development at 52-55 Friar Street & 12 Greyfriars Road, Reading
RG1 (Reading Borough Council Ref: 162210/FUL)**

Daylight and Sunlight

Thank you for forwarding recent further correspondence from the case officer in respect of the above matter, please find below our response on the points of concern raised.

Amenity within the Proposed Development

It has been accepted that whilst the proposal would not fully meet the default recommendations set out by BRE and British Standard, given the nature of the site and surroundings, these are outweighed by the benefits of the proposals.

Therefore, as agreed by the Planning Officer no further information is required in respect of these aspects.

20/30 Greyfriars PDR Prior Approval Consent

Status of 20/30 Greyfriars

BRE has referred to the Permitted Development Rights (PDR) prior approval consent for the change of use of 20-30 Greyfriars inconsistently throughout their letter, intermittently as a "proposal", a "consented development" and "being built but not yet occupied".

The building has secured through permitted development rights to use the building for residential use. It is not in residential use presently, nor the subject of any redevelopment development proposals in the public domain.

It should be noted that under the permitted development approach, no assessments considering the provision of natural light amenity for future occupants are required and consequently none were submitted by the

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Birmingham Bristol Cardiff Dublin
Edinburgh Glasgow Leeds Liverpool
London Manchester Newcastle

Applicants. This is despite an assertion from McKay Securities that the CIP Property (AIPT) Ltd, scheme may have an unacceptable impact on the amenity through reductions in sunlight and daylight for any future residents.

Since there is no internal layout for the permitted development residential conversion, and none forthcoming from McKay Securities, CIP Property (AIPT) Ltd has instructed a local surveyor, Haslams, to work with their architects, LDA, to determine the likely internal configuration of 20-30 Greyfriars Road, were it to be converted into residential use.

Haslams and LDA have sought to put forward the most valuable conversion on the basis that this is what a property developer is likely to do in order to assess the implications for sunlight and daylight.

Having devised a layout for the McKay building, CIP Property (AIPT) Ltd., GVA then tested the impact of both the maximised Station Hill development alongside the CIP Property (AIPT) Ltd scheme and just the CIP Property (AIPT) Ltd scheme on a residentially converted 20-30 Greyfriars Road building on all levels of that building.

These assessments are in accordance with the BRE methodology, which we explain in more detail below in response to their letter dated 12th July 2017. The conclusion GVA reached is that the CIP Property (AIPT) Ltd planning application proposal will not have an unacceptable impact on the provision of sunlight and daylight for future occupants of 20-30 Greyfriars Road, following the most likely layout for a future conversion to residential.

Under permitted development (PD) rights, the building can now be used for residential purposes, although is not presently in that use. Changes required to facilitate the conversion to be implementable will require planning permission. Amongst many things, this will also include all external changes and additions to the building, expected with a residential development such as, alterations to glazing, to the fenestration, inclusion of balconies, plant housing and other associated equipment.

Whilst there may inevitably be some minor alterations or deviations from the layouts assessed, these are unlikely to be significant given the constraints posed by the existing building. To reconfirm, the layouts drawn up are all in keeping with the units sizes proposed by McKay but have been refined so that they adhere to realistic design standards and market demand.

Therefore, the work that GVA has undertaken on behalf of CIP Property (AIPT) Ltd is the most detailed picture of daylighting for future occupants, which clearly show all would retain adequate daylight levels.

We do not therefore consider that it is reasonable to request any further assessment to be completed. We consider that the CIP Property (AIPT) Ltd application proposal does not need to be redesigned nor should it be refused on the basis on sunlight and daylight impact on a potential residential conversion of 20-30 Greyfriars Road.

Assessment Approach

For reasons previously discussed in detail in our earlier submissions, the Average Daylight Factor (ADF) has been concluded by GVA as being the most appropriate methodology to address daylight provision for future residential occupants of this building. This approach appears to be accepted as a valid one by both BRE and RBC.

In the most recent correspondence from BRE to Reading Borough Council in their letter dated 12 July 2017 reference is made to the importance of adequate Daylight and Sunlight provision for any future residential occupants of 20/30 Greyfriars.

This was illustrated in an earlier letter setting out the significant and purposeful design decisions made with the intention of being as neighbourly as possible to 20/30 Greyfriars whilst making most efficient use of the site.

This neighbourly aim also guided consideration of retained levels of daylight within 20/30 Greyfriars, which is what future occupants would actually experience, as opposed to undertaking a theoretical assessment of a difference in ADF (or worse, VSC) which nobody would actually experience.

The ADF also gives the opportunity to more fully consider the uses of rooms and whether they would be fit for their intended purpose, as opposed to the highly simplified VSC measure.

The oversimplified nature of the VSC approach is apparent from the reference in BRE's letter to the following extract from their guidance:

"For VSCs in the 5-15% range it is very difficult to provide adequate daylighting unless very large windows are used."

In contrast, our ADF assessments have proven that with the size of glazing at 20/30 Greyfriars (which is fixed, given the PD consent) that indeed the British Standards recommendations would be met despite VSC values in the range stated above.

Comparing Existing and Proposed ADFs

We understand that BRE discourages the use of ADFs to compare existing and proposed daylight provision in most circumstances.

The recent letter refers to Appendix F of their guidance, which states:

*"...there are some situations where **meeting a set ADF target value with the new development in place** could be appropriate as a criterion for loss of light:*

*(ii) where the existing building is proposed but not yet built. A typical situation might be **where the neighbouring building has received planning permission but not yet been constructed.**" (Emphasis added)*

We consider that the above circumstance, in Appendix F is considered to precisely reflect and describe the matter at hand and helped guide the approach taken to assessing 20-30 Greyfriars Road permitted development approval.

Furthermore, throughout the BRE guidance in respect of the other assessments of Vertical Sky Component (VSC), Daylight Distribution/ No-Sky Line (NSL) and Annual Probable Sunlight Hours (APSH), one looks to see whether the minimum recommended target is met. If it is then the BRE considers no further analysis is required.

The approach of assessing existing ADFs in 20-30 Greyfriars Road when they already meet the British Standard recommendations would therefore seem inconsistent with the BRE guidance.

The ADF assessments confirm that the scale and proximity of the Station Hill maximum parameter plans to 20-30 Greyfriars would inevitably further reduce ADF values, however not unacceptably so.

In any case, as has been highlighted by BRE in their review, this is highly unlikely to be built to its maximum parameters and therefore our client has again been as transparent as possible given the information in the public realm by using this worst case scenario.

Tinted Glazing

The BRE make reference to the tinted nature of the windows serving 20/30 Greyfriars and it is accepted that this was part of the original office design. As mentioned earlier it is just the building which has secured the residential use and all other external requirements/changes will require a separate planning application.

It would however be hard to imagine a situation in which the windows would not be changed to clear glazing when used as residential accommodation given market expectations.

Such heavily tinted glazing would self-impose a significant diminishing of internal daylighting, in contrast with market and environmental demands. We understand that it is nearly always the case with PDR rights that subsequent agreement of external details such as cladding, balconies and glazing are always subject to a follow up detailed planning application.

Indeed as can be seen from the current consent, this is very basic, simply setting out overall unit sizes with no details regarding how the internal spaces will be divided and other details such as circulation through the building. It is therefore, highly unlikely that the permitted development approval for the building would be capable of implementation in its current format without further detail or a planning application submission.

For these reasons, we believe that whilst the BRE are technically correct in respect of there being tinted glazing and there being no mention of changing this in the PDR consent, that for many different reasons the development would never be implemented with this glazing in place. This and numerous other details would be subject to a follow up application given the basic nature of the current consent.

On that basis, we are confident that the inclusion of tinted glazing in any ADF assessment would be unrealistic and instead our approach, which we consider to be entirely reasonable, was to use standard transmission values for glazing, which we apply on a daily basis across thousands of residential new build projects across the country. GVA cannot recall a single residential development which used tinted glazing as is currently used in the office building at 20/30 Greyfriars and therefore are of the view that this would be a highly unrealistic variable to adopt in our ADF analyses.

APSH

For the above reasons, it is clear to GVA that the PD consent for 20/30 Greyfriars should be assessed with regard to what would be actually experienced by future occupants, and not a theoretical comparison with an "existing" condition.

The APSH (measuring potential access to likely available sunlight) was therefore conducted on this basis, i.e. providing 'absolute' as opposed to 'comparative' values.

This is the standard approach when assessing the provision of natural light for future occupants of newly proposed/consented but not yet implemented/built buildings and was accepted as the valid approach when assessing natural light amenity for the future occupants of the proposed development at 52-55 Friar Street.

Just to recap, the APSH figures with the proposed development at 52-55 Friar Street showed the vast majority would receive the BRE default recommendations, intended predominantly for suburban environments. It should also be noted that only the potentially affected areas have been assessed.

There are numerous other rooms facing away from 52-55 Friar Street which would not be affected by it but have not been assessed and therefore considered by BRE.

Of the 17 living areas assessed, 12 (70%) would achieve between 25% and 59% Total APSH. The five not achieving the default suburban targets would record 14%, 18%, 23%, 21% and 22% total APSH. These are all at the lowest two floor levels, where it is entirely expected to have lowered APSH values. It can be seen that these are in most cases very close to 25%.

It should also be noted that in addition to being located at the lowest floor levels, they are also either nearly directly East facing or are self-obstructed, being located in corners of the building where the return elevation self-limits access to available sunlight.

For these reasons the impact of 52-55 Friar Street in terms of sunlight access for future occupants at 20/30 Greyfriars was considered entirely acceptable.

Unsurprisingly, with the large and very close maximum parameter plans for the adjacent Station Hill site there would be an impact to the APSH values for the windows at 20/30 Greyfriars.

In this scenario a further 5 living areas would not achieve the default suburban targets. These would achieve between 9% and 15% total APSH.

Once again, these are all self-obstructed or face nearly directly due East. In both scenarios the windows which face closer to due South and are not self-obstructed easily meet the default recommendations.

Indeed the BRE make reference to this in their guidance at para 3.1.6 in the section entitled 'new development':

"A south-facing wall will, in general, receive most sunlight... East- and west-facing windows will receive sunlight only at certain times of the day."

It is therefore clear from the results that the areas of non-compliance with the default APSH recommendations are due to the orientation of the windows, a large degree of self-obstruction and furthermore their location at the lower levels of the building.

In respect of the proposed development at 52-55 Friar Street a similar degree of APSH access has been concluded as acceptable.

We would therefore reiterate that the APSH provision is entirely adequate for the location and indeed consistent with the BRE guidance.

Notwithstanding the above, our client is clearly seeking to resolve this outstanding matter and in the interests of providing everything requested has instructed us to include the existing APSH values for the five windows not meeting the default recommendations, as requested by BRE.

The attached mark up drawing shows these five windows and also demonstrates their near due East orientation and self-obstruction.

The results would be summarised as follows:

Window Reference	APSH without 52-55 FS and Station Hill	APSH with 52-55 FS only	Difference expressed as percentage reduction
W2/41	32%(T), 5%(WM)	15%(T), 4%(WM)	53%, 20%
W3/41	35%(T), 8%(WM)	18%(T), 5%(WM)	49%, 38%
W5/41	44%(T), 16%(WM)	23%(T), 6%(WM)	48%, 63%
W2/42	43%(T), 11%(WM)	21%(T), 7%(WM)	51%, 36%
W3/42	42%(T), 13%(WM)	22%(T), 6%(WM)	48%, 54%

The difference in APSH would be noticeable if there were occupants to experience them, by reference to the percentage changes. As discussed however this is not considered to represent a realistic scenario and the retained values (i.e. with 52-55 Friar St in place) are concluded as acceptable for the dense location. These also represent the worst case scenarios, with all other living areas unaffected.

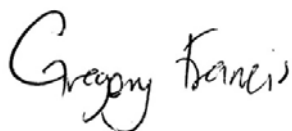
I hope that the foregoing is clear and adequately addresses the residual concerns in respect of the impact to 20-30 Greyfriars Road.

We consider there to have been a number of inaccuracies in the consistency of the assessment by BRE. We are disappointed that their response does not accurately reflect the individual circumstances of the nature of the relationship between these buildings, the limited nature of information submitted that the provision for the permitted development consent allows for.

We do not consider that it is reasonable to request any further assessment to be completed. We consider that the CIP Property (AIPT) Ltd application proposal does not need to be redesigned nor should it be refused on the basis of creating a sunlight and daylight constraint to the potential residential conversion of 20-30 Greyfriars Road, as it has been proven conclusively that there will be none.

Please do not hesitate to contact me should you require anything further to the above.

Yours sincerely



Gregory Francis MBA RICS Accredited Expert Witness
Associate Director, Rights of Light and Daylight/Sunlight

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Encs.

Appendix IX

13 October 2017

Ms S Dawson
Barton Willmore Partnership
7 Soho Square
LONDON
W1D 3QB

Dear Sarah

**Proposed Development at 52-55 Friar Street & 12 Greyfriars Road, Reading
RG1 (Reading Borough Council Ref: 162210/FUL)**

DAYLIGHT

Further to our previous letter dated 15 September 2017, as requested we have undertaken a set of Average Daylight Factor (ADF) assessments for 20/30 Greyfriars Road across various scenarios.

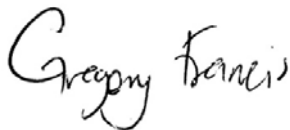
Please find attached a comparison table setting the results out. For ease of reference, the three scenarios are:

1. Existing Station Hill site, existing 52-55 Friar Street site,
2. Proposed Station Hill site, existing 52-55 Friar Street site, and
3. Existing Station Hill site, proposed 52-55 Friar Street site.

In overall terms, the results confirm that whilst there would inevitably be differences when introducing the proposals for 52-55 Friar Street, these would not be material.

As previously reported the retained ADF values for 20/30 Friar Street are significantly in excess of the British Standards guidance and confirm that the proposals for 52-55 Friar Street have been designed to be neighbourly.

Yours sincerely



Gregory Francis MBA
Associate Director
RICS Accredited Expert Witness

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GVA is the trading name of GVA Grimley Limited registered in England and Wales number 6382509. Registered office, 3 Brindleyplace, Birmingham B1 2JB. Regulated by RICS.

Birmingham Bristol Cardiff Dublin
Edinburgh Glasgow Leeds Liverpool
London Manchester Newcastle

Room/Floor	Room Use	Window	%ADF		
			Existing	Existing + Station Hill	Proposed (52-55 Friar St)
20 TO 30 Greyfriars Road					
1st Floor					
R1/41	BEDROOM	W1/41	5.39	2.82	4.25
R2/41	LKD	W2/41	3.94	1.80	3.00
R3/41	LKD	W3/41	3.58	1.61	2.75
R4/41	BEDROOM	W4/41	4.46	2.17	3.39
R5/41	BEDROOM	W7/41	3.98	3.34	3.05
R6/41	BEDROOM	W8/41	2.70	2.30	2.04
R7/41	LKD	W5/41	2.81	2.43	2.01
2nd Floor					
R1/42	BEDROOM	W1/42	7.79	3.71	5.44
R2/42	LKD	W2/42	4.63	2.05	3.36
R3/42	LKD	W3/42	4.08	1.79	3.12
R4/42	BEDROOM	W4/42	4.91	2.37	3.80
R5/42	BEDROOM	W7/42	4.26	3.57	3.27
R6/42	BEDROOM	W8/42	2.93	2.50	2.22
R7/42	LKD	W5/42	3.11	2.67	2.24
3rd Floor					
R1/43	BEDROOM	W1/43	7.65	3.58	5.11
R2/43	LKD	W2/43	5.12	2.26	3.73
R3/43	LKD	W3/43	4.51	1.95	3.50
R4/43	BEDROOM	W4/43	5.29	2.56	4.18
R5/43	BEDROOM	W7/43	4.49	3.78	3.53
R6/43	BEDROOM	W8/43	3.14	2.69	2.44
R7/43	LKD	W5/43	3.41	2.88	2.56
4th Floor					
R1/44		W1/44	8.18	3.87	5.50
R2/44		W2/44	5.56	2.45	4.09
R3/44	LKD	W3/44	4.98	2.11	3.93
R4/44	BEDROOM	W4/44	5.72	2.75	4.65
R5/44	BEDROOM	W7/44	4.81	4.09	3.89
R6/44	BEDROOM	W8/44	3.45	3.00	2.79
R7/44	LKD	W5/44	3.75	3.16	2.91

Room/Floor	Room Use	Window	%ADF		
			Existing	Existing + Station Hill	Proposed (52-55 Friar St)
5th Floor					
R3/45	LKD	W3/45	5.48	2.31	4.41
R4/45	BEDROOM	W4/45	6.69	3.01	5.67
R5/45	BEDROOM	W7/45	5.62	4.92	4.76
R6/45	BEDROOM	W8/45	4.06	3.59	3.41
R7/45	LKD	W5/45	4.15	3.51	3.32
1st Floor					
R1/60	LKD	W1/60	6.82	6.79	6.16
		W2/60			
		W3/60			
R2/60	BEDROOM	W4/60	9.01	7.83	3.52
		W5/60			
R3/60	BEDROOM	W6/60	3.94	2.77	2.91
2nd Floor					
R1/61	LKD	W1/61	6.57	6.53	5.94
		W2/61			
		W3/61			
R2/61	BEDROOM	W4/61	6.87	5.54	2.40
		W5/61			
R3/61	BEDROOM	W6/61	3.23	1.98	2.01
3rd Floor					
R1/62	LKD	W1/62	6.35	6.28	5.44
		W2/62			
R2/62	BEDROOM	W3/62	13.27	11.78	1.53
		W4/62			
R3/62	BEDROOM	W5/62	2.68	1.57	1.57
4th Floor					
R1/63	LKD	W1/63	11.93	11.79	10.42
		W2/63			
		W3/63			
		W4/63			
R2/63	BEDROOM	W5/63	9.98	9.59	3.44
R3/63	BEDROOM	W6/63	4.68	2.83	2.87