75-81 George Street, Richmond

Daylight & Sunlight assessment

Colliers International

10/10/2019

Daylight & Sunlight Assessment

For the Proposed Development at:

75-81 George Street, Richmond

Client: Canadian & Arcadia Limited

Prepared by: Cathryn Buckland

Date: 10th July 2019

Our Ref: JOB0211209

Contents

This report has been prepared solely for Canadian & Arcadia Limited and contains confidential information. This report is accurate at the date of publication and does not account for changes since the date of this report.

1.0 Instruction

Colliers International have been instructed by Canadian & Arcadia Limited to undertake a Daylight & Sunlight Assessment for the Proposed Redevelopment of 75-81 George Street, Richmond upon Thames.

The assessment has been carried out in accordance with the BRE Guidelines, 'Site Layout Planning for Daylight & Sunlight Guidance' ("The BRE Guide"). This document is used by Planning Authorities to establish the extent of impact caused to sensitive users (generally residential) as a result of a Proposed Development.

The BRE Guide itself states that the numerical values within the document are to be treated flexibly as strict adherence is often not achievable within an urban context. It is important to be aware that the Guidelines are predicated on a two-storey suburban context, and therefore should not be the only consideration when establishing Daylight & Sunlight values in a built-up urban environment.

The flexibility the Guide promotes is worded in the Introduction 1.0, Paragraph 1.6:

"The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design".

In recognition of this, the Mayor of London published a Supplementary Planning Guidance on Housing ("SPG") in 2016 which set out guidance on how daylight and sunlight impacts should incorporate appropriate degree of flexibility. This is the most recent guidance on daylight and sunlight issues in a London context and makes reference to working space as well as housing.

The guidance provided in the SPG moves away from the rigid application of the numerical values provided in the BRE Guidelines and recognises that they should be 'applied sensitively to higher density development especially in opportunity areas, town centres, large sites and accessible locations'.

The requirement in London boroughs for significantly more living and working spaces necessitates higher density development. As such, consideration must be given to the advice set out in the SPG when reviewing the impact on daylight and sunlight amenity by reference to the BRE Guidance and methodology.

2.0 Introduction

This Report is based upon the Proposed massing supplied to Colliers International by Colman Architects on the 14th June 2019.

The Development Site is located in the Borough of Richmond upon Thames on George Street and is currently comprised of retail use with the proposal seeking to include office space from first-fourth floor level and retain retail at basement and ground levels.

Our study has been undertaken by preparing a three-dimensional computer model of the site and surrounding buildings and analyses the effects of the Proposed Development on the following residential/mixed use properties;

- 1 Paved Court;
- 7 Paved Court;
- 12 Paved Court;
- 13 Paved Court;
- 9 Golden Court & 26 The Green;
- 3 George Street;
- 4 George Street;
- 5 George Street;
- 6 George Street;
- 3 King Street;
- 4-5 King Street;
- 6 King Street;
- 11 King Street;
- 2 Old Palace Terrace;
- 3 Old Palace Terrace;
- 4 Old Palace Terrace;
- 5 Old Palace Terrace;
- 6 Old Palace Terrace; and
- 32 The Green.

Based upon Colliers professional judgement, these properties are the only residential/mixed use receptors with windows within close enough proximity to be affected by the proposals.

The Daylight & Sunlight assessment for the neighbouring properties demonstrates that for VSC (Vertical Sky Component), all windows assessed (100%) will meet the BRE's recommended target values.

For NSL (No Sky Line) all rooms (100%) assessed will exceed the BRE target values.

For APSH (Annual Probable Sunlight Hours) all windows assessed (100%) will exceed the BRE's suggested target values.

3.0 Methodology

Daylight and Sunlight

The following methods of assessment have been used to assess the daylight effects on the surrounding receptors:

- Vertical Sky Component (VSC);
- The No Sky Line (NSL); and
- Annual Probable Sunlight Hours (APSH).

Vertical Sky Component (VSC)

According to the BRE Guidelines, "If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either:

- the VSC measured at the centre of an existing main window is less than 27 %, and less than 0.8 times its former value; or
- the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value."

When an existing level of VSC is below the BRE Guideline suggested level, a small absolute loss of daylight can reflect in greater than 20 % reductions, however, in reality these small losses may not be noticeable.

No Sky Line (NSL)

The NSL is a measure of the distribution of daylight at the working plane within a room. The working plane is set at table top height i.e. 0.85m above finished floor level height. Obtaining room layouts prior to assessing the daylight distribution allows precise analysis of the levels of daylight within each of the rooms. The BRE Guide states that:

"Where room layouts are known, the impact on the daylighting distribution in the existing building can be found by plotting the 'no-sky line' in each of the main rooms. For houses this would include living rooms, dining rooms and kitchens; bedrooms should also be analysed, although they are less important. In non-domestic buildings each main room where daylight is expected should be investigated".

However, where layouts are not available, we have still assessed the daylight distribution considering a standard 4.2m (14 ft) room depth is assumed for residential properties, unless the building dictates otherwise from external observation. This is standard practice where accurate layouts are unavailable.

Sunlight (APSH)

The BRE Guidance advises that new development should respect a neighbouring owners expectation for sunlight to surrounding residential properties and other sensitive users. The report states the following:

"If a living room of an existing dwelling has a main window facing within 90 degrees of due south, and any part of a new development subtends an angle of more than 25 degrees to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if the centre of the window:

- *receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March;*
- *receives less than 0.8 times its former sunlight hours during either period; and*
- *has a reduction in sunlight over the whole year greater than 4% of annual probable sunlight hours".*

3.1 Assumptions

- Internal dimensions have not been taken where we were unable to gain access to surrounding buildings. We have used best endeavours to obtain property information through estate agency websites and the Land Registry, however where this is not available, we have made reasonable assumptions for room layouts.

- Residential buildings have been identified through the Valuation Office Agency (VOA) and through external inspection.

- Floor levels have been assumed to dictate the level of the working plane for the NSL assessment.

3.2 Sources of Information

The following information has been used to compile this Daylight & Sunlight report:

Colman Architects

- DWG's issued 14th June 2019

E57 Land Survey

- Received 20th November 2018

Site Photographs

- Obtained on various dates through November and December 2018

FIND Maps (https://www.findmaps.co.uk/)

- Site map obtained 24th January 2019

Research

- Land Registry;
- VOA Search; and
- Zoopla.

4.0 Proposed Development

It is Colliers International's understanding that the existing building at 75-81 George Street is being refurbished and extended to allow for the provision of a retail use at basement and ground floor level with office space from first to fourth floor levels.

Our understanding of the existing and proposed massing can be seen in figures 01 and 02 below.

Figure 01 – Existing Massing

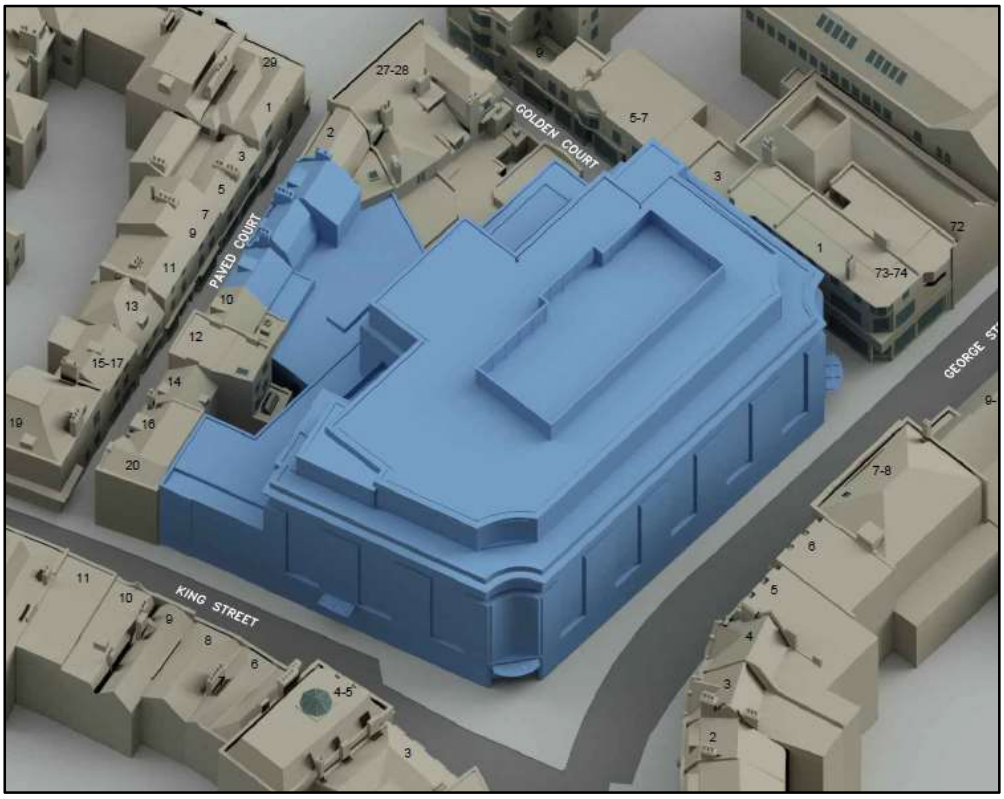


Figure 02 – Proposed Massing

5.0 Surrounding Properties

Using our three-dimensional testing environment, we have assessed the impact to 19 residential/mixed use properties that surround the Site. These properties are the following:

- 1 Paved Court;
- 7 Paved Court;
- 12 Paved Court;
- 13 Paved Court;
- 9 Golden Court & 26 The Green;
- 3 George Street;
- 4 George Street;
- 5 George Street;
- 6 George Street;
- 3 King Street;
- 4-5 King Street;
- 6 King Street;
- 11 King Street;
- 2 Old Palace Terrace;
- 3 Old Palace Terrace;
- 4 Old Palace Terrace;
- 5 Old Palace Terrace;
- 6 Old Palace Terrace; and
- 32 The Green.

The map in Figure 03 below identifies the properties that have been assessed and are residential at the time of compiling this report.

Figure 03 – Risk Map

Upon review of the results it can be seen that all properties assessed will adhere to the BRE's suggested target values for the Daylight & Sunlight methodologies. As such, these properties have not been reported on individually however, the results for all buildings assessed can be found in Appendix C.

6.0 Light Pollution

Light Pollution is considered as light emitting into spaces where it is considered to cause nuisance to neighbouring occupants. Based upon the fact that the proposed scheme serves office space there is the possibility for light spillage on to the neighbouring buildings.

The ILP Guidance (Institution of Lighting Professionals) provides suggested lighting levels to establish the acceptability of Light Pollution onto residential accommodation.

It should be noted that Light Pollution is not a comparative assessment. Therefore, the assessment considers the effect of the Proposed Development in absolute terms, in reference to the relevant guidance levels.

The ILP Guidance classifies the Site as Zone E4. This zone allows for maximum pre-curfew light intrusion levels of 25 lux and a maximum post-curfew intrusion level of 5 lux. The table below sets out the criteria as per the ILP.

Environmental Zone	Light Intrusion (into windows) Ev (Lux) (2)	
	Pre-curfew	Post-curfew
E0 – Dark areas (e.g. UNESCO Starlight Reserves, IDA Dark Sky Parks)	0	0
E1- Intrinsically dark areas (e.g. National Parks, areas of outstanding natural beauty)	2	0 (1*)
E2- Low district brightness (e.g. rural or small village locations)	5	1
E3- Medium district brightness (e.g. small town centres or urban locations)	10	2
E4- High district brightness (e.g. town/city centres with high levels of night time activity)	25	5

Ev = Vertical Illuminance in Lux and is measure flat on the glazing at the centre of the window
Curfew = The time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by the planning authority. If not otherwise stated – 23.00 hrs is suggested.
** = From Public road lighting installations only.*

Light Pollution effects have been considered in respect of the surrounding residential properties to the Proposed Development at George Street. The properties not included within the assessment are considered to be too far away from the Site to be affected by the Proposed Development.

Full detailed drawings confirming the Light Pollution results can be found within Appendix D of this report.

The assessment has been undertaken by preparing a 3D model of the Proposed Development and using specialist lighting software. The light fittings used for this lighting simulation represent typical offices luminaires on the proposed office ceilings as no lighting specification was provided. This assessment assumes that all luminaires are switched on at once and no blinds or curtains are being used. For this reason, it should be considered to represent a worst-case scenario. We have assumed regular spaced lights across the second floor ceiling and adjusted the brightness until we achieved an average illuminance of 300 lux at a series of test points across the working plane. We then used a similar lighting pattern for the other floors..

We have undertaken calculations solely in relation to the proposed office spaces and attached ancillary spaces. In relation to these circulation areas to the rear of the proposal, we have assumed that they will be lit to a similar level as the office spaces they serve.

In consideration of the assumptions made, the lux levels recorded on the facades of the existing receptors have been assessed and are illustrated on the drawings within Appendix D. It is evident that the key elevations will experience lux levels of less than 25 lux and in the majority of instances well under 10 lux when all lights are in operation. Therefore, the level of light spillage from the Proposed Development is within the ILP Guidance for an urban location (Environmental Zone E4) and unlikely to be noticeable to the existing surrounding properties.

The properties located to the north of the site on Paved Court and Old Palace Terrace (elevations E1 and E2 within Appendix D) will experience lux levels of less than 2.5 lux upon implementation of the Proposed Development. As such, they will be well within the ILP Guidance's suggested values and will experience negligible effect.

Golden Court (elevation E3) will experience lux levels of less than 5 lux and in the majority of instances under 2.5 lux and therefore, there will be no harmful effects.

Elevations E4 and E5 within Appendix D relate to those properties to the north of King Street and rear of the Paved Court properties. The drawings clearly show that there will be no harmful effects to these properties with the windows experiencing between 2.5-5 lux upon implementation of the Proposed Development.

The properties within elevation 6 refer to those residential windows to the south of King Street which will experience between 2.5-10 lux with the majority of these windows experiencing lux levels between 2.5-5 lux. We would consider the overall effect to these windows to be minor in significance given they are still well below the pre-curfew guidelines of 25 lux.

The properties identified within elevation 7 are in relation to the residential windows on George Street. As can be seen from the drawings, the majority of windows will experience lux levels between 2.5-10 lux. However, it can be seen that some of the windows will experience levels up to 20 lux. Given these values are still within the pre-curfew guidelines, we would classify the overall significance to be minor.

Furthermore, the Guidance refers to light intrusion to windows within neighbouring properties but does not specify criteria in relation to open spaces. As such, Light Pollution is not a necessary consideration in respect of open spaces as its primary function considers light spillage at night time, when open spaces are unlikely to be used. In addition, there is a requirement for artificial lighting (street lights) in open spaces for the purposes of safety and security.

To be clear, as the IPL Guidance only relates to Light Intrusion (Trespass) into windows of neighbouring properties, there is no requirement for the open space of Richmond Green to be assessed. Given that this space is a significant distance away from the proposed development and is shrouded by trees there will be no notable Light Intrusion onto this space. Furthermore, our northern facing Light Pollution Assessment, shown on sheet W1206/06 in Appendix D, demonstrates de minimus impacts to the elevations of neighbouring properties immediately north of development, with the open space areas reducing to a Light Intrusion value of 0.

7.0 Overshadowing

An overshadowing assessment has not been undertaken as the closest amenity area, Richmond Green, is located to the north of the Site is too far away from the Development to be affected by the proposals. In addition, the area of the Green located closest to the Site is heavily obstructed by trees which will be casting their own shadow. The Guidelines for overshadowing state that the following criteria must be met:

'It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21st March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21st March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable. If a detailed calculation cannot be carried out, it is recommended that the centre of the area should receive at least two hours of sunlight on 21st March'.

Based upon professional judgement, it is evident that this criteria will be met, with at least half of the amenity area receiving at least two hours of sunlight on 21st March (Spring Equinox).

8.0 Conclusion

Colliers International have undertaken a Daylight & Sunlight assessment for the Proposed Development at 75-81 George Street located in the Borough of Richmond Upon Thames.

Based upon the full compliance that is achieved in relation to the Daylight & Sunlight assessments, we do not view Daylight & Sunlight as a constraint to the buildability of the proposals at 75-81 George Street, Richmond upon Thames.

The overall results of the Light Pollution assessment are considered to be negligible to the existing surrounding residential receptors. Overshadowing has been scoped out of this report given the distance between the Site and the closest amenity area, Richmond Green.

Appendix A

Overview of Daylight & Sunlight

It is common for Local Authorities to consider a Daylight Sunlight assessment as part of a Planning Application. Particularly in Cities where, with increased population and development, light is an increasingly valuable commodity.

Dr Paul Littlefair's BRE Guide *'Site Layout Planning for Daylight and Sunlight 2011'*, sets out numerical recommendations to establish if someone's light levels will be suitable following a development. It measures the amount and significance of loss to neighbouring buildings and light levels for future occupiers of new developments.

The figures within the guide are not absolute and are intended as recommendations only. Dr Littlefair says in his report '*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 designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of many factors in site layout design (see Section 5). In special circumstances the developer or Planning Authority may wish to use different target values. For example, in an historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings'.*

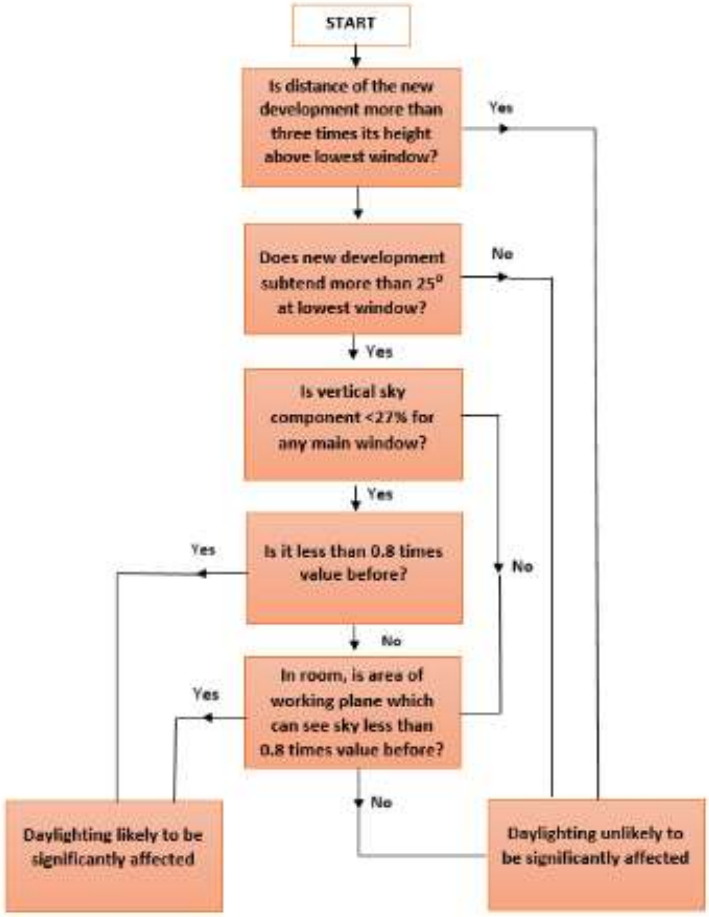
The BRE Guide is national guidance and should be treated as such. The guide states '*In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings… The calculation methods … are entirely flexible in this respect'*

The BRE Guide uses various tests which are detailed below;

1.0 Daylighting

There are initial rules of thumb tests that can give an early indication to whether daylighting is likely to be significantly affected. The three times height test is a measure of the height of the proposed development, compared to the distance from the lowest window of the surrounding building. The initial test is the 25º line, if the development does not protrude over a 25° from the lowest window, it is unlikely to cause a significant alteration in light.

However, as discussed below, if these initial tests are not satisfied there are additional methodologies to assess whether a material impact will be experienced. These can be seen below in the flow chart illustrated in the BRE Guidance;



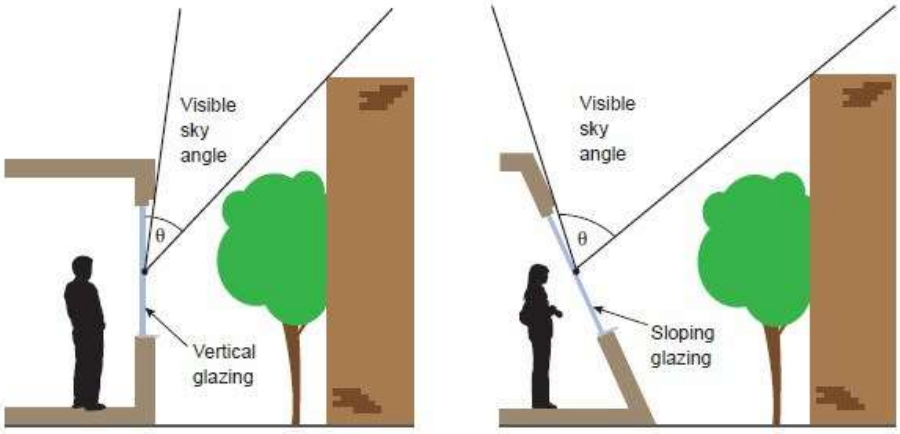
1.1 - Vertical Sky Component (VSC)

In the BRE guide, this is described as a *'Ratio of that part of illuminance, at a point on a given vertical plane, that is received directly from a CIE standard overcast sky, to illuminance on a horizontal plane due to a n unobstructed hemisphere to this sky. Usually the 'given vertical plane' is the outside of a window wall. The VSC does not include reflected light, either from the ground or from other buildings'.*

In simpler terms, this is a ratio of the available skylight compared to the maximum amount of skylight from a sky dome, measured from the external surface of the window.

This is demonstrated as a percentage, the BRE Guide recommends that a minimum figure of 27% should be achieved to the window of a habitable room. For surrounding windows, an important attribute of the development is to prevent any noticeable change to surrounding buildings. The BRE guide suggests that the VSC figure should not be reduced to any less than 0.8 its original value (20% reduction) in order to achieve this. Any more and it may be seen as be a noticeable change and therefore possible grounds for rejection.

A 27% VSC result would indicate a reasonably lit room. This also equates to a 25º clear sky path as discussed above.



1.2 - No-Sky Line (NSL)

In the BRE guide, this is described as a *'the outline on the working plane of the area from which no sky can be seen'.*

This test looks at the depth at which daylight can penetrate into the room, measured from a working plane of 850mm above floor level. Areas within the shade are likely to experience darker illuminance.

The BRE guide suggests that in new developments the rooms should have no more than 20% of its room reduced in daylight. The surrounding habitable rooms can experience some loss, but the guidance states that this should be limited to no less than 0.8 of its original value (20% reduction).

1.3 - Average Daylight Factors (ADF)

In the BRE guide, this is described as a '*Ratio of total daylight flux incident on the working plane to the area of the working plane, expressed as a percentage of the outdoor illuminance on a horizontal plane due to an unobstructed CIE standard overcast sky. Thus a 1% ADF would mean that the average indoor illuminance would be one hundredth the outdoor unobstructed illuminance'.*

Simply put, this is a measure of the internal illuminance of the room using three main factors, surface reflectance, amount of sky available to the room and the dimensions of the room. This test is typically used as an accurate measure of the adequacy of daylight to proposed developments, however it can, in some circumstances be used for adjoining buildings.

Kitchen – 2%

Living Room – 1.5%

Bedroom – 1%

As mentioned above the ADF test is predominately used for new developments. However, were it is used as an additional daylight test for surrounding buildings, the BRE guide advises that the figure after development should be no less than 0.8 (20% reduction) of their original value.

2.0 Sunlighting

Sunlight is an important commodity to many people and the design and orientation of a building and its windows should be thoroughly considered. The BRE guide puts emphasis on domestic buildings, however it does mention that care should be taken for 'non-domestic buildings where there is a particular requirement for sunlight'.

In new developments the BRE guide suggests that a window to a living room should face within 90º of due south to maximise expose to sunlight. *'A dwelling with no main window wall within 90º of due south is likely to be perceived as insufficiently sunlit'.*

In existing dwellings the BRE guide suggests that '*all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90º of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun'.*

2.1 - Annual Probable Sunlight Hours (APSH)

In the BRE guide, this is described as *'the long-term average of the total number of hours during a year in which direct sunlight reaches the unobstructed ground (when clouds are taken into account).*

In a new development the BRE guide suggests that a dwelling with be reasonably sunlit provided;

- *at least one main window wall faces within 90º of due south and;*
- *the centre of at least one window to a main living room can receive 25% of annual probable sunlight hours, including at least 5% of annual probable sunlight hours in the winter months between 21st September and 21st March.*

In existing buildings, the BRE guide suggests that; *'If a living room or an existing dwelling has a main window facing 90º of due south, and any part of a new development subtends an angle of more than 25º to the horizontal measured from the centre of the window in a vertical section perpendicular to the window., then the sunlighting to the existing dwelling may be adversely affected. This will be the case if the centre of the window;*

- *receives less than 25% of annual probable sunlight hours, or less than 5% or annual probable sunlight hours between 21st September and 21st March and;*
- *receives less than 0.8 times its former sunlight hours during either period and;*
- *has a reduction in sunlight received over the whole year greater than 4% or annual probable sunlight hours.*

Appendix B

Existing and Proposed Drawings

No Sky Line Contour Plots

SOURCES OF INFORMATION:

COLMAN ARCHITECTS
3D LASER SCAN
25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
RECEIVED 19.06.19

SITE PHOTOGRAPHY

EXISTING BUILDINGS IN GREEN

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REV:	DESCRIPTION:	BY:	DATE:
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D			
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A	-	-	-

PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
SITE PLAN
EXISTING BUILDINGS

DATE:	DRAWN:
25/06/2019	MG
DRG NO: 02/01	SCALE: 1:400 @ A3

Colliers INTERNATIONAL

SOURCES OF INFORMATION:

COLMAN ARCHITECTS
3D LASER SCAN
25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
RECEIVED 19.06.19

SITE PHOTOGRAPHY

EXISTING BUILDINGS IN GREEN
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PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
3D VIEW
EXISTING BUILDINGS

DATE:	DRAWN:
25/06/2019	MG
DRG NO: 02/02	SCALE: NTS

Colliers INTERNATIONAL

SOURCES OF INFORMATION:

COLMAN ARCHITECTS
3D LASER SCAN
25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
RECEIVED 19.06.19

SITE PHOTOGRAPHY

EXISTING BUILDINGS IN GREEN
ALL HEIGHTS IN M ETRES AOD

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PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
3D VIEW
EXISTING BUILDINGS

DATE:	DRAWN:
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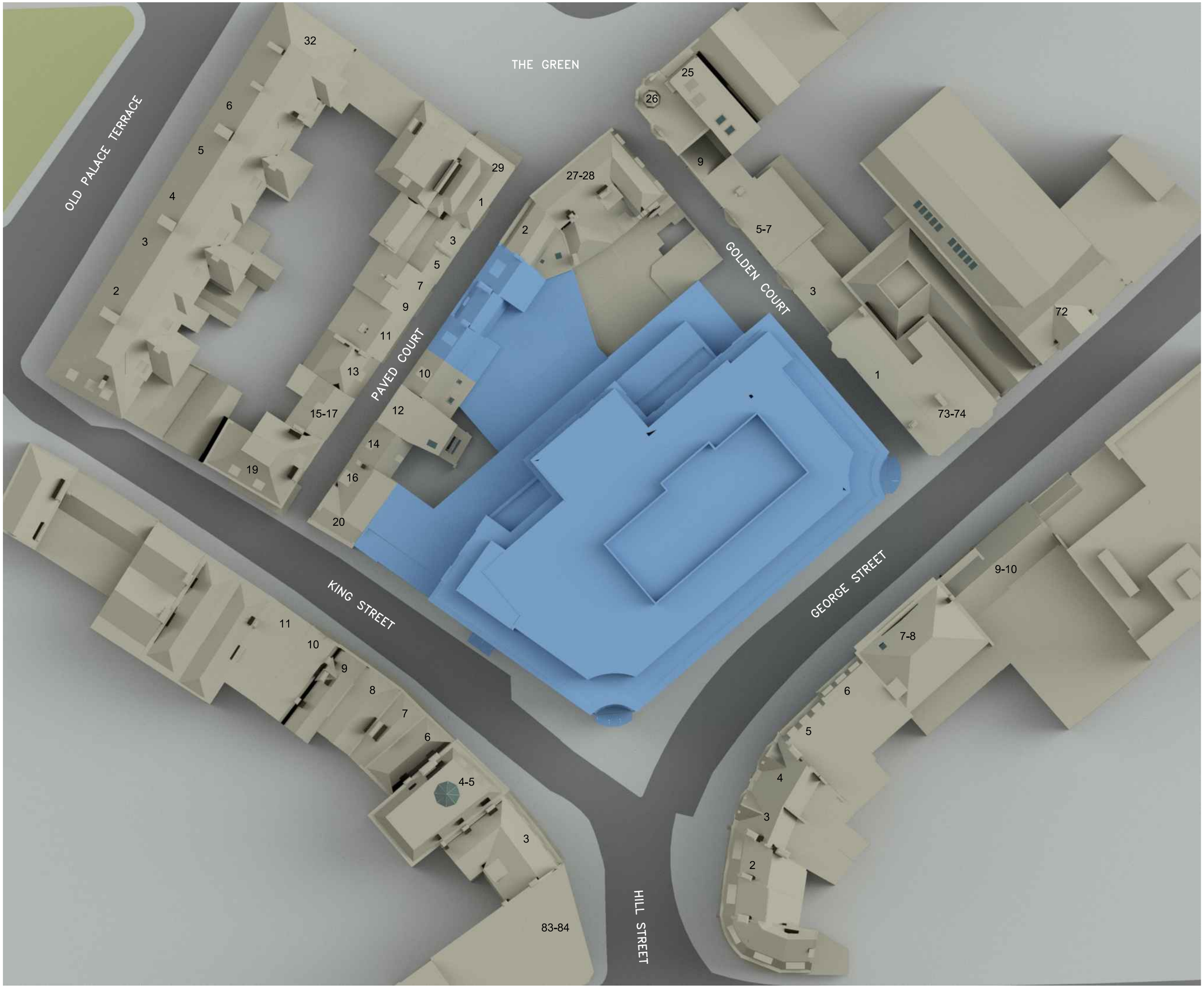
DRG NO: 02/03	SCALE: NTS

Colliers INTERNATIONAL



SOURCES OF INFORMATION:

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3D LASER SCAN
25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
RECEIVED 19.06.19

SITE PHOTOGRAPHY

PROPOSED SCHEME IN BLUE

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PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
SITE PLAN
COLMAN ARCHITECTS SCHEME
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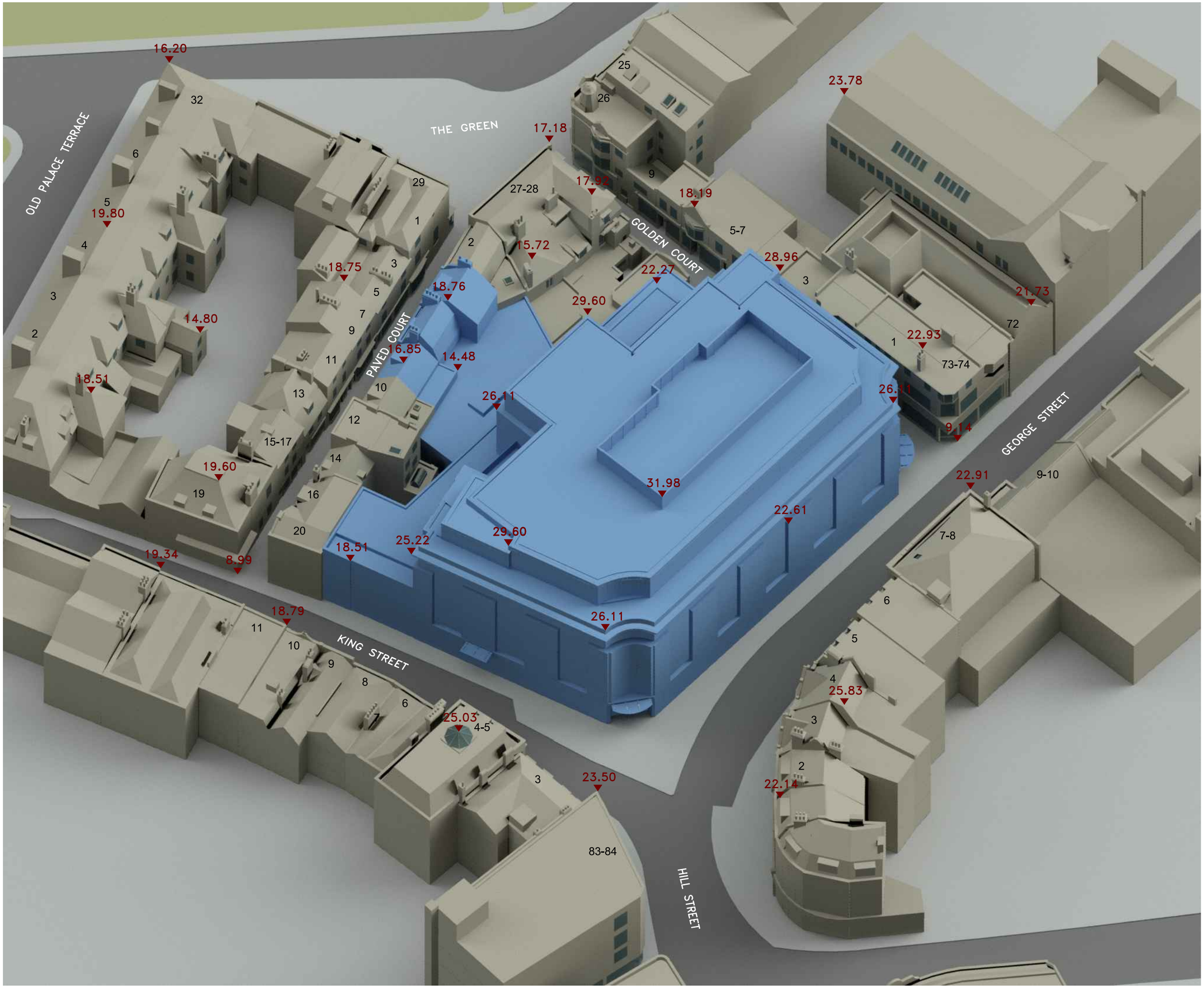
02/04	1:400 @ A3

Colliers INTERNATIONAL



SOURCES OF INFORMATION:

COLMAN ARCHITECTS
3D LASER SCAN
25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
RECEIVED 19.06.19

SITE PHOTOGRAPHY

PROPOSED SCHEME IN BLUE
ALL HEIGHTS IN M ETRES AOD

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PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

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3D VIEW
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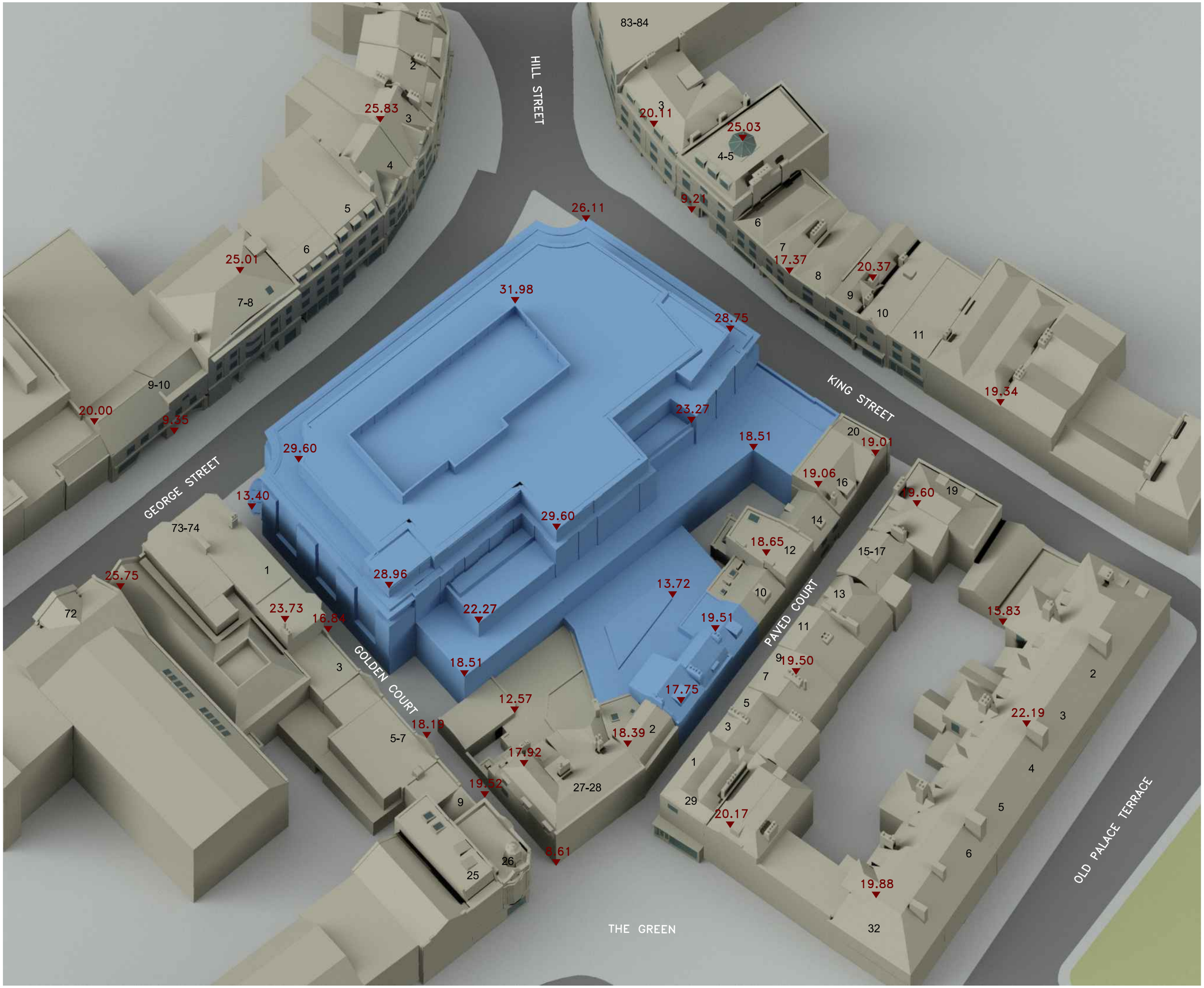

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PROPOSED 3D MODEL
80 George
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SITE PHOTOGRAPHY

PROPOSED SCHEME IN BLUE
ALL HEIGHTS IN M ETRES AOD

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PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
3D VIEW
COLMAN ARCHITECTS SCHEME
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DATE:	DRAWN:
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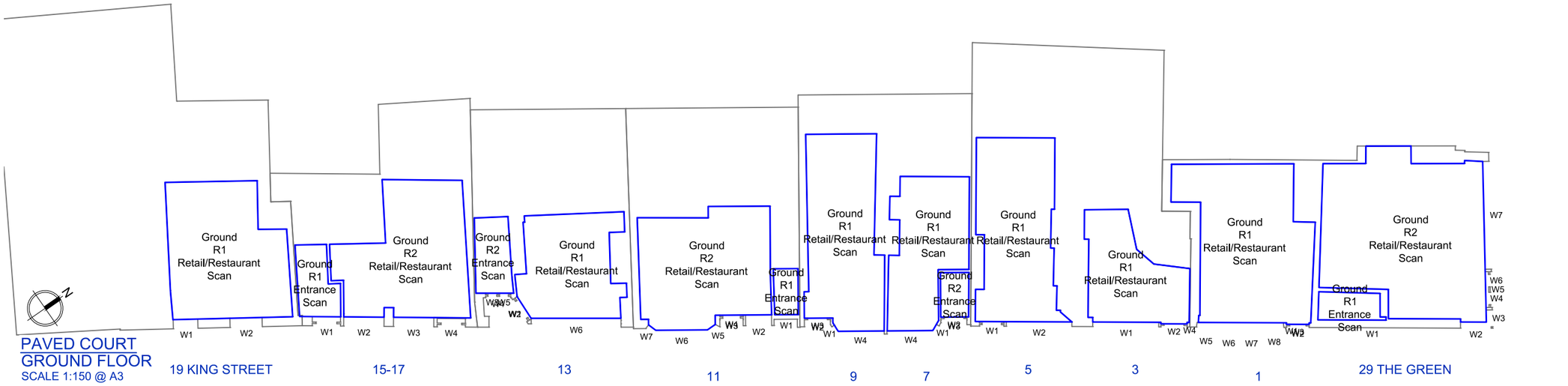
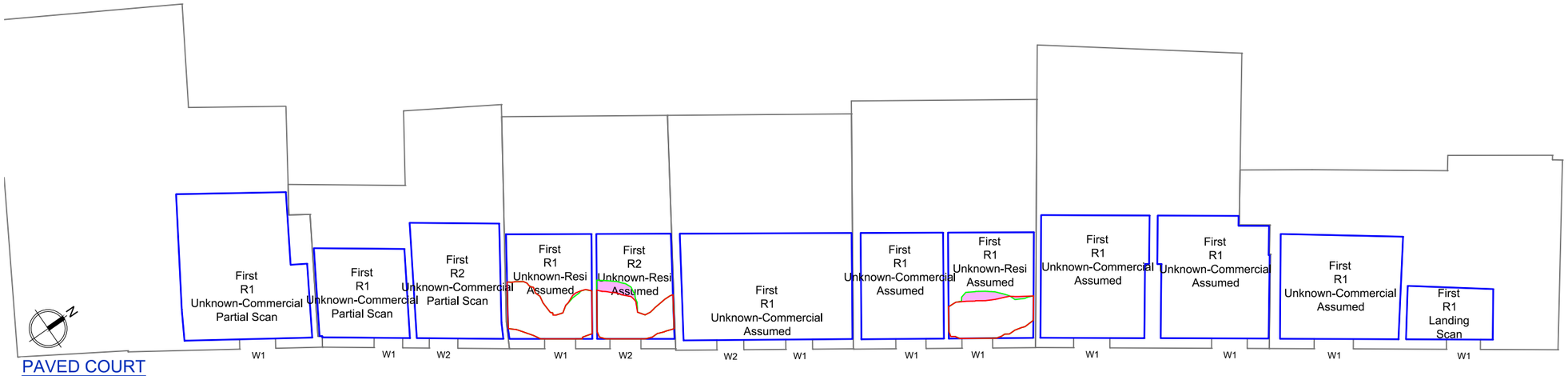
DRG NO: 02/06	SCALE: NTS

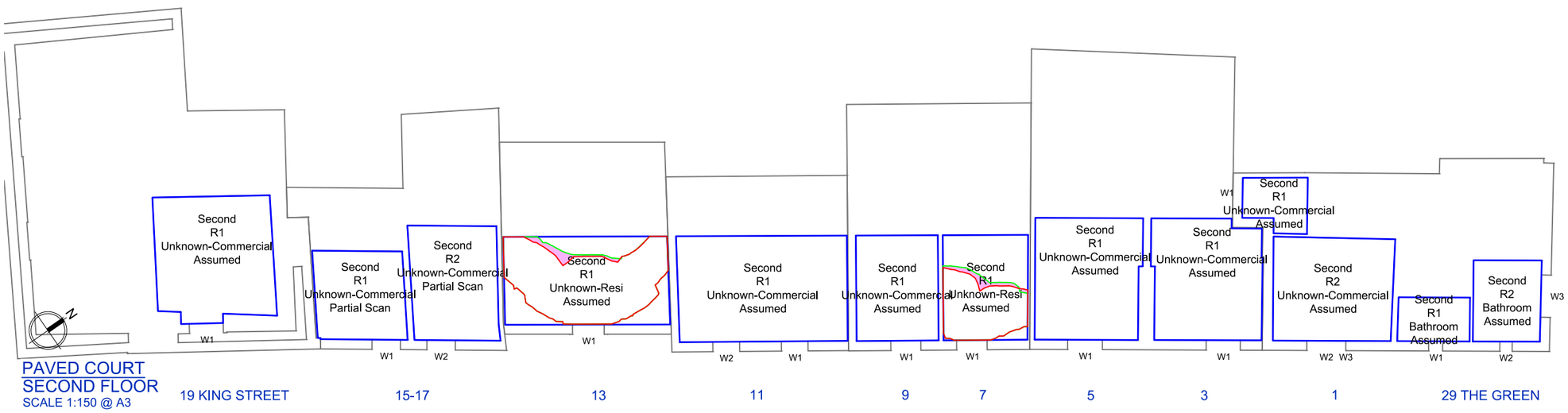
Colliers INTERNATIONAL



PAVED COURT
GROUND FLOOR
SCALE 1:150 @ A3



PAVED COURT
FIRST FLOOR
SCALE 1:150 @ A3



PAVED COURT
SECOND FLOOR
SCALE 1:150 @ A3

SOURCES OF INFORMATION:

COLMAN ARCHITECTS
3D LASER SCAN
25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
RECEIVED 19.06.19

SITE PHOTOGRAPHY

EXISTING NO-SKY CONTOUR

PROPOSED NO-SKY CONTOUR

AREA OF LOSS / GAIN

REV:	DESCRIPTION:	BY:	DATE:
G			
F			
E			
D			
C			
B			
A	-	-	-

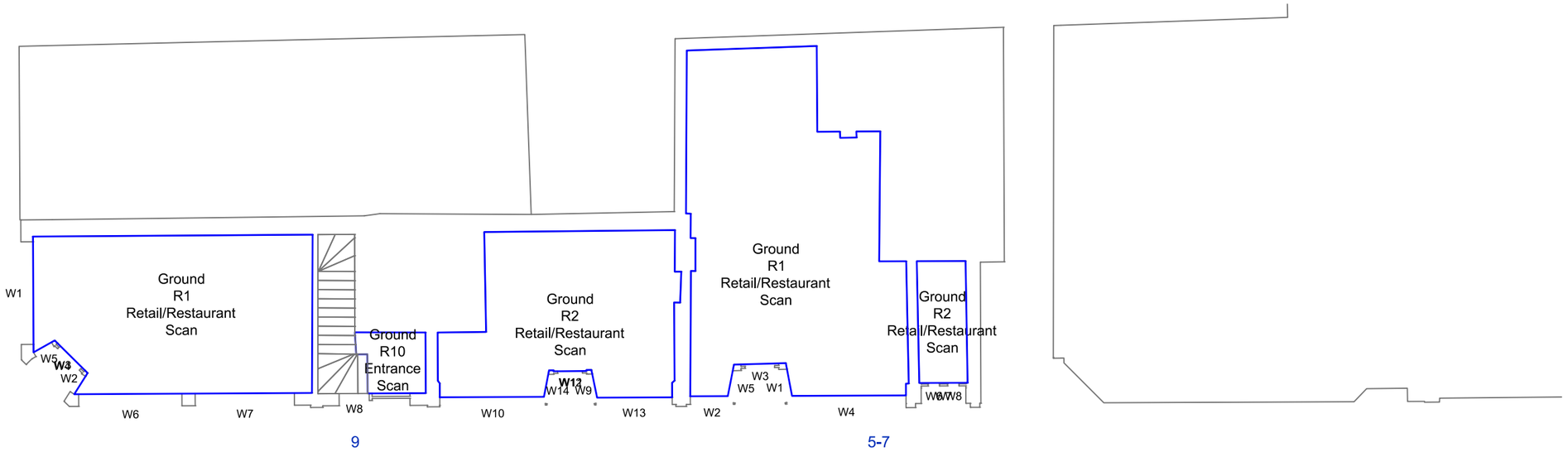
PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
NO-SKY LINE CONTOURS

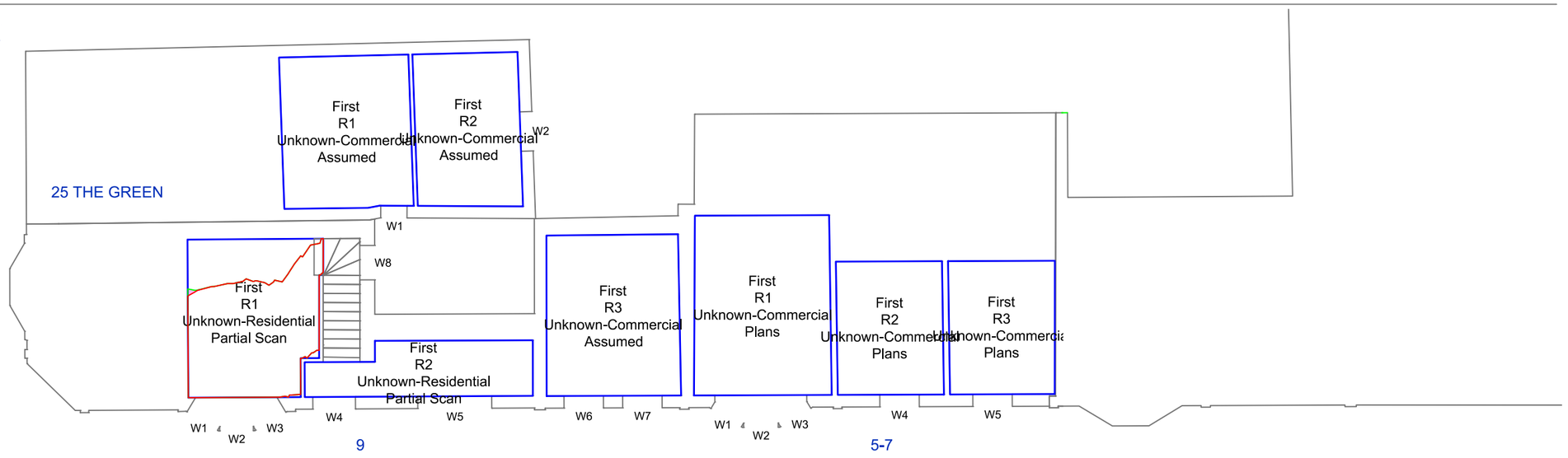
DATE:	DRAWN:
25/06/2019	MG
DRG NO:	SCALE:
02/18	1:150 @ A3

Colliers INTERNATIONAL

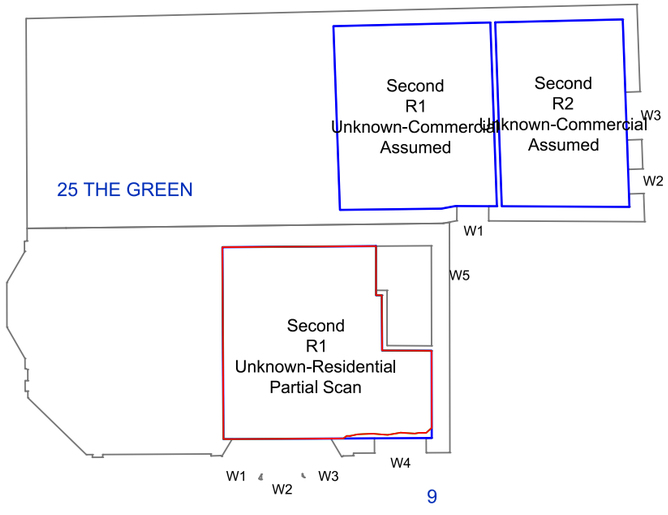
GOLDEN COURT
GROUND FLOOR
SCALE 1:125 @ A3



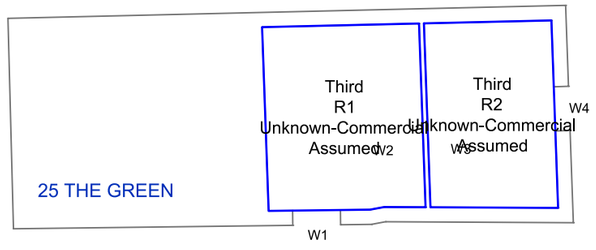
GOLDEN COURT
FIRST FLOOR
SCALE 1:125 @ A3



GOLDEN COURT
SECOND FLOOR
SCALE 1:125 @ A3



GOLDEN COURT
THIRD FLOOR
SCALE 1:125 @ A3



SOURCES OF INFORMATION:

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3D LASER SCAN
25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
RECEIVED 19.06.19

SITE PHOTOGRAPHY

EXISTING NO-SKY CONTOUR

PROPOSED NO-SKY CONTOUR

AREA OF LOSS / GAIN

REV:	DESCRIPTION:	BY:	DATE:
G			
F			
E			
D			
C			
B			
A	-	-	-

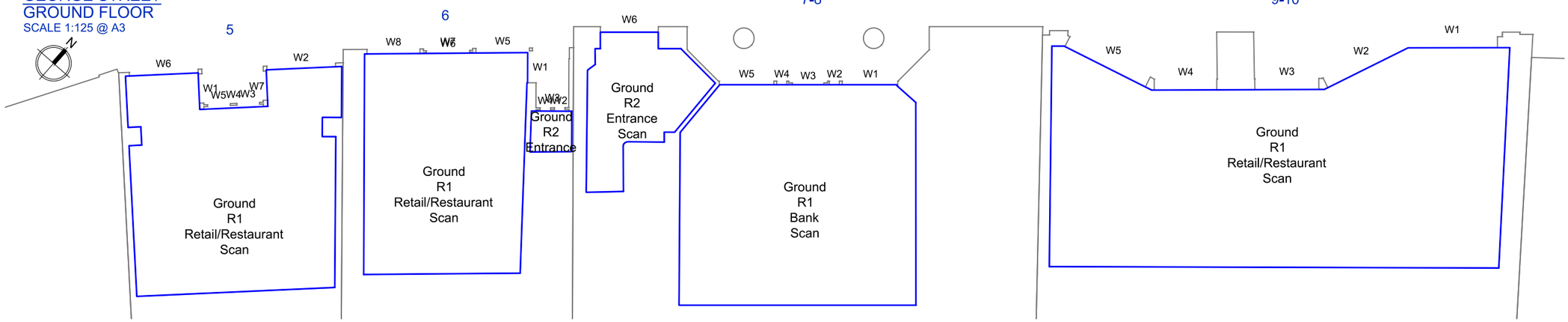
PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
NO-SKY LINE CONTOURS

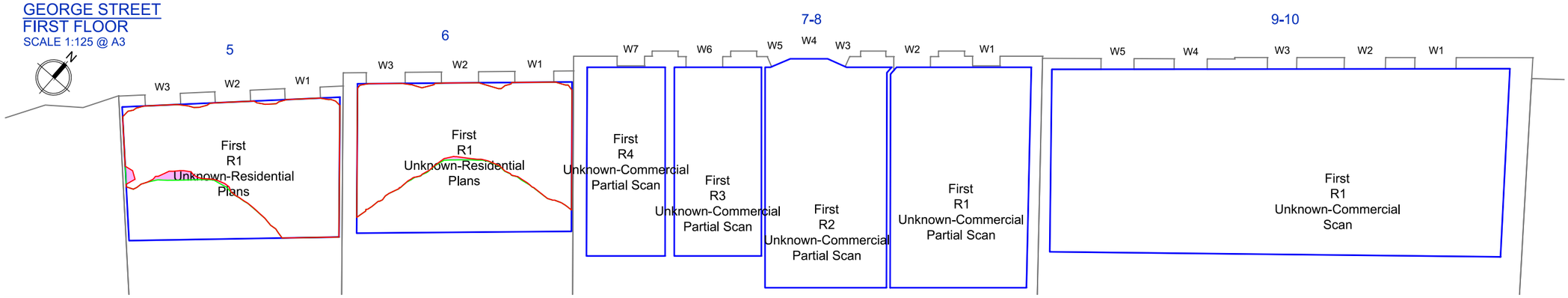
DATE:	DRAWN:
25/06/2019	MG
DRG NO:	SCALE:
02/19	1:125 @ A3

Colliers INTERNATIONAL

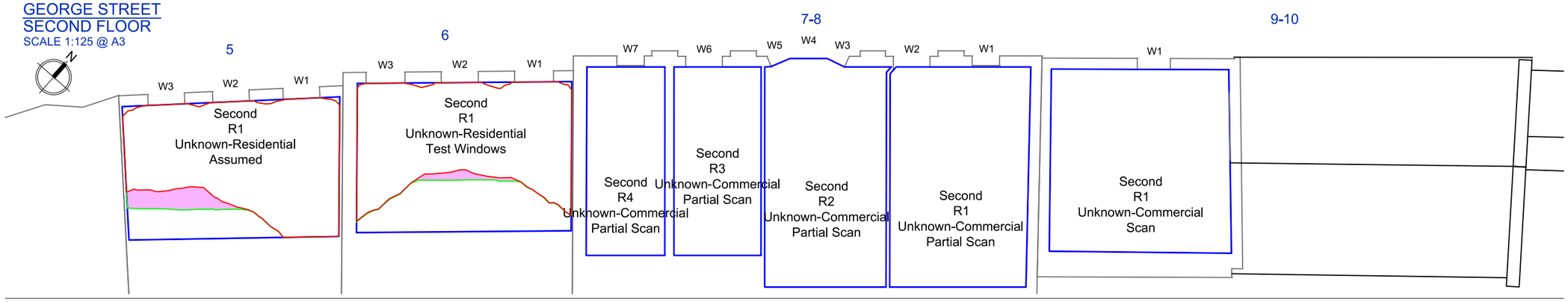
GEORGE STREET
GROUND FLOOR
SCALE 1:125 @ A3



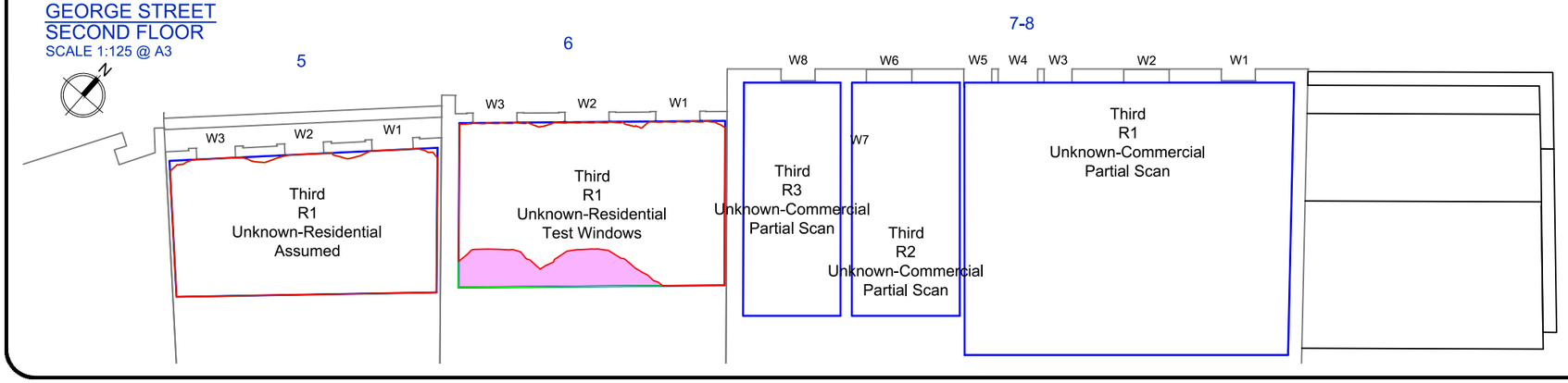
GEORGE STREET
FIRST FLOOR
SCALE 1:125 @ A3



GEORGE STREET
SECOND FLOOR
SCALE 1:125 @ A3



GEORGE STREET
SECOND FLOOR
SCALE 1:125 @ A3



SOURCES OF INFORMATION:

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25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
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SITE PHOTOGRAPHY

EXISTING NO-SKY CONTOUR

PROPOSED NO-SKY CONTOUR

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G			
F			
E			
D			
C			
B			
A	-	-	-

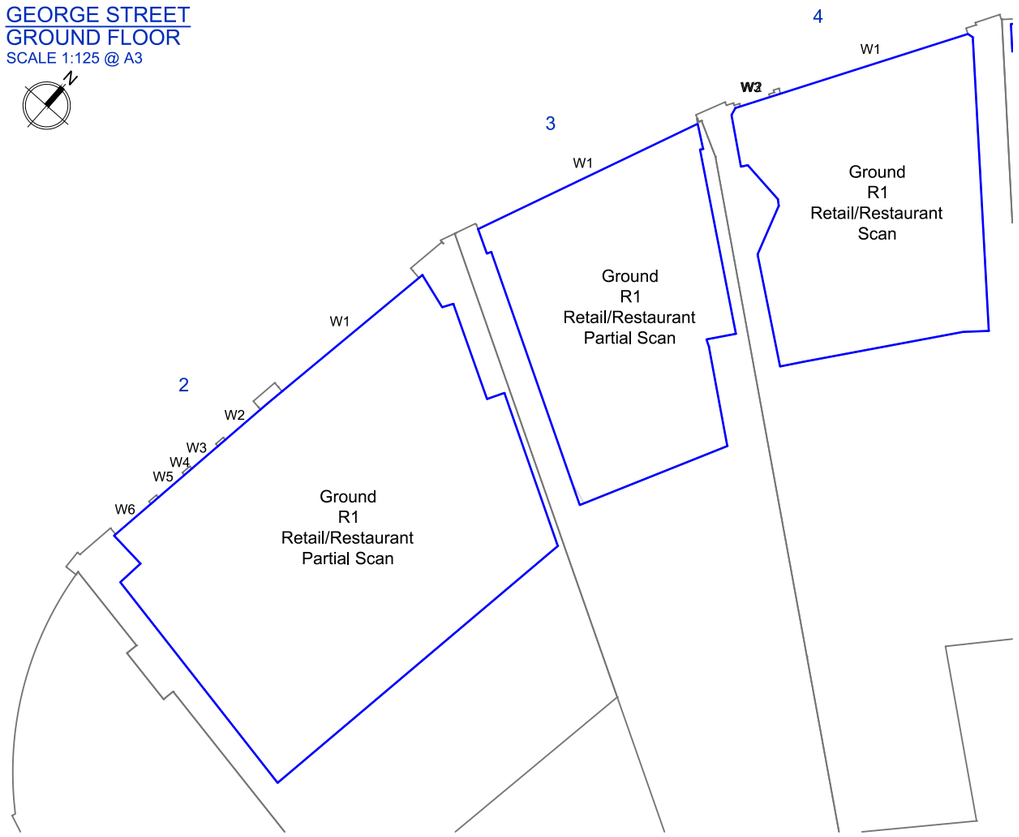
PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
NO-SKY LINE CONTOURS

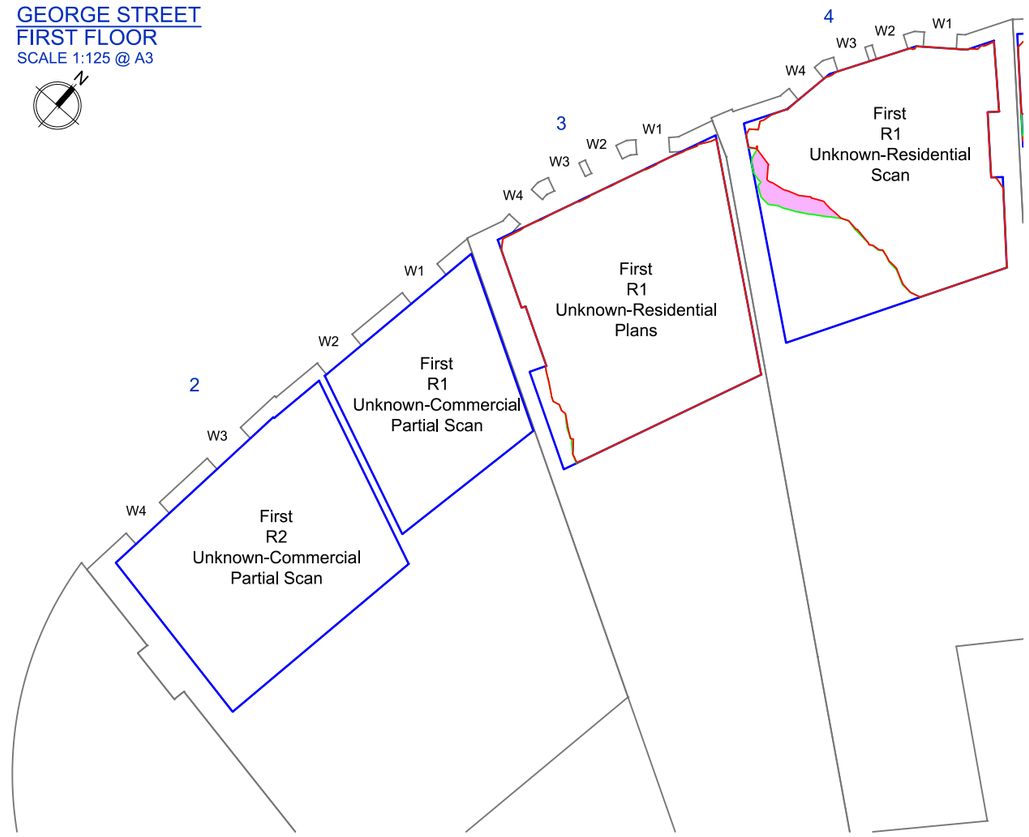
DATE:	DRAWN:
25/06/2019	MG
DRG NO: 02/20	SCALE: 1:125 @ A3

Colliers INTERNATIONAL

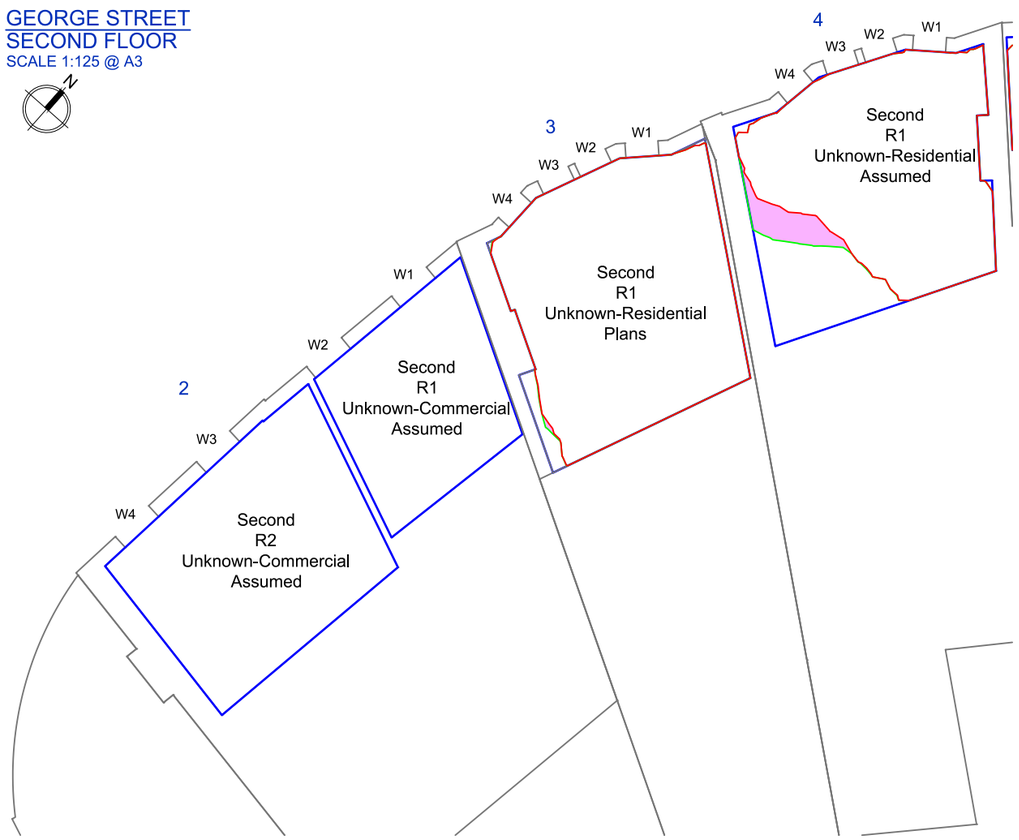
GEORGE STREET
GROUND FLOOR
SCALE 1:125 @ A3



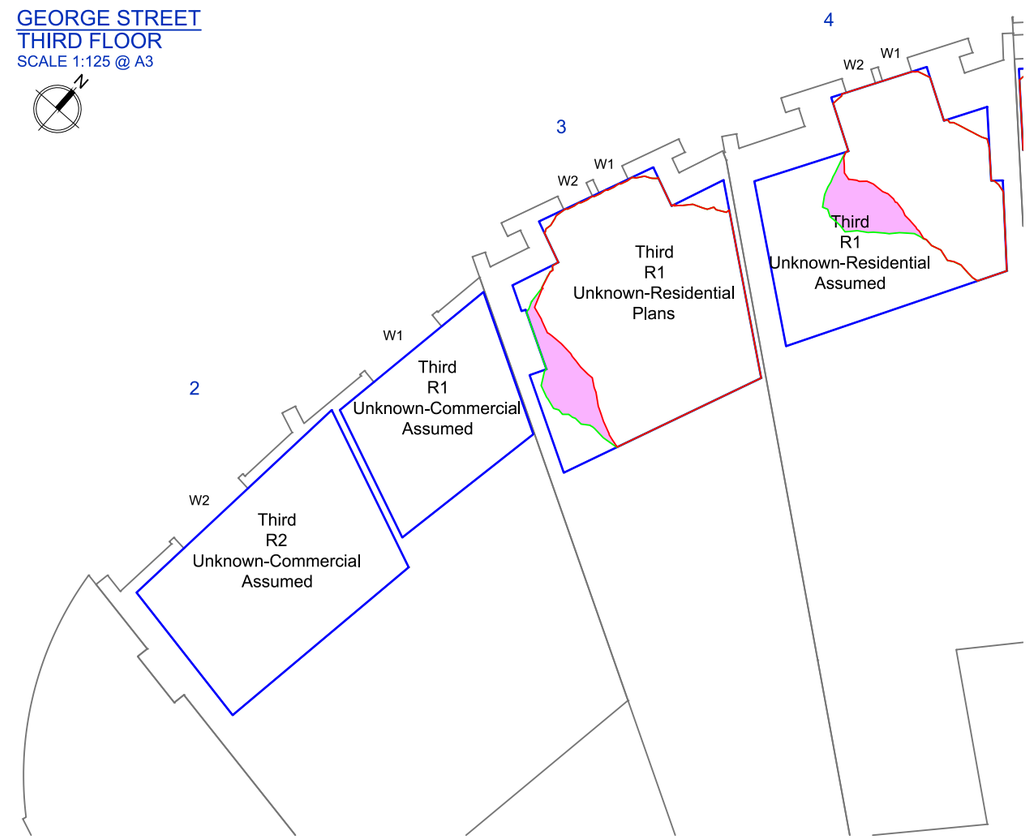
GEORGE STREET
FIRST FLOOR
SCALE 1:125 @ A3



GEORGE STREET
SECOND FLOOR
SCALE 1:125 @ A3



GEORGE STREET
THIRD FLOOR
SCALE 1:125 @ A3



SOURCES OF INFORMATION:

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25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
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SITE PHOTOGRAPHY

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PROPOSED NO-SKY CONTOUR

AREA OF LOSS / GAIN

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F			
E			
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C			
B			
A	-	-	-

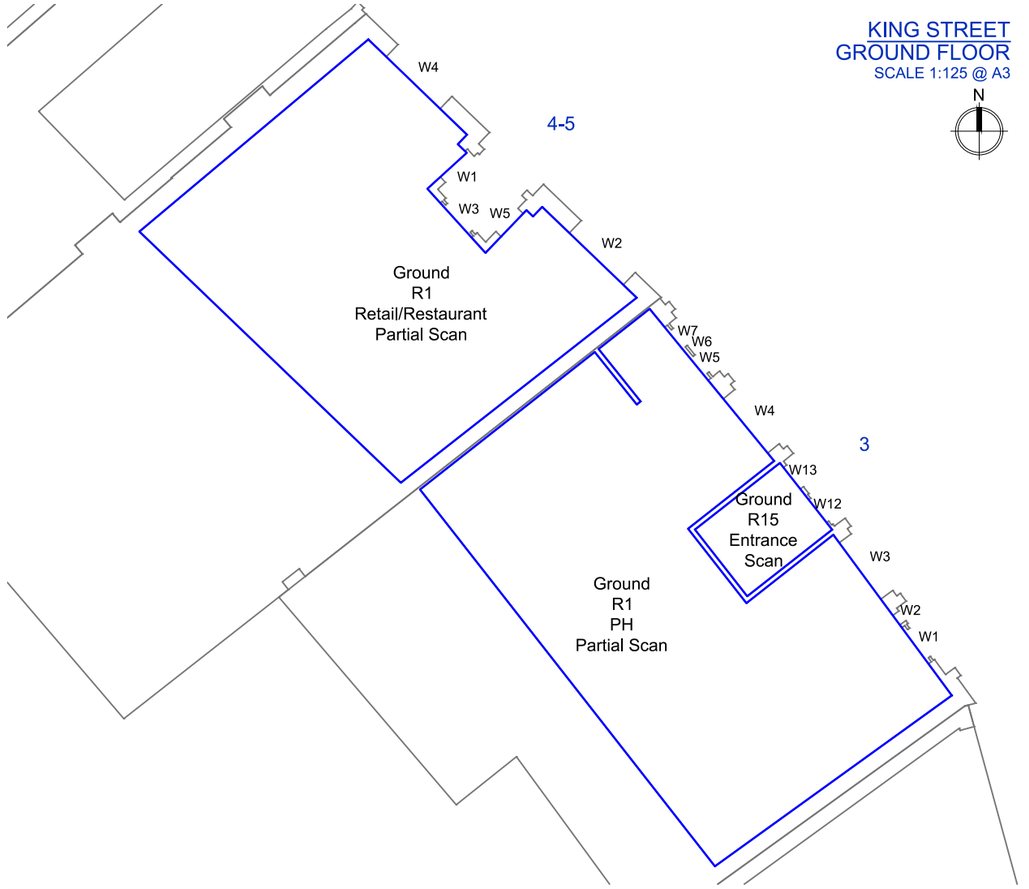
PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
NO-SKY LINE CONTOURS

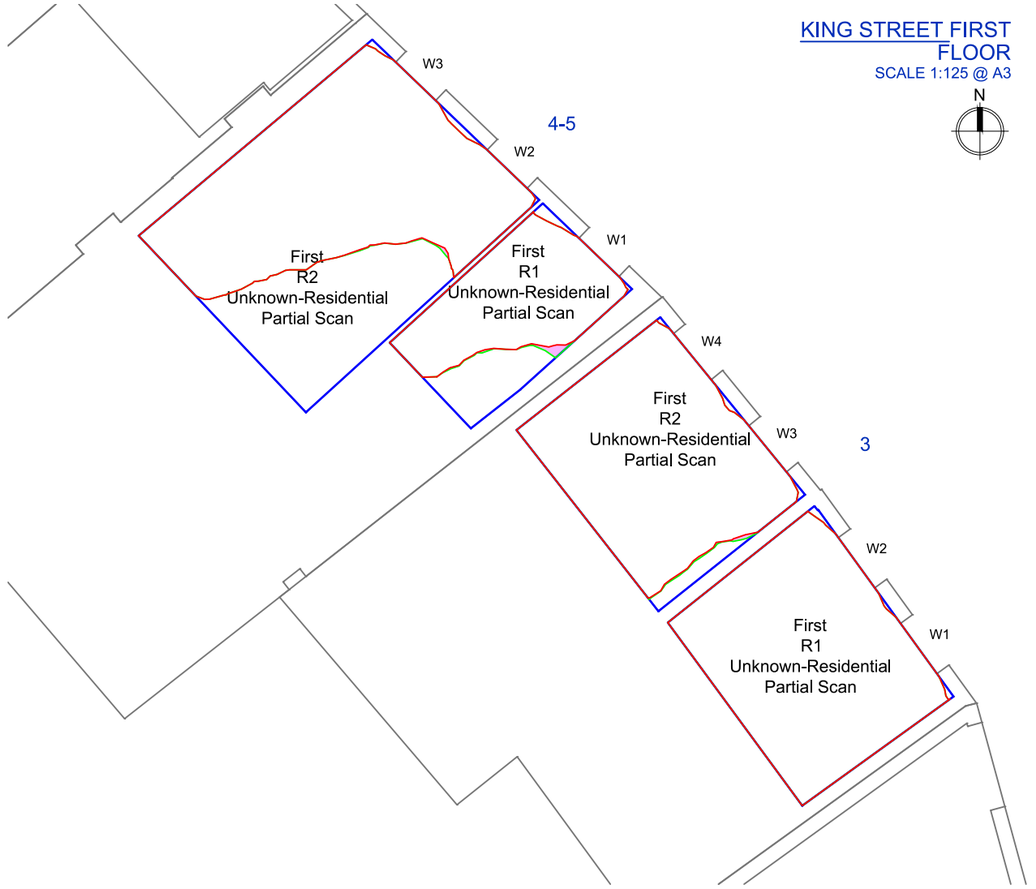
DATE:	DRAWN:
25/06/2019	MG
DRG NO:	SCALE:
02/21	1:125 @ A3

Colliers INTERNATIONAL

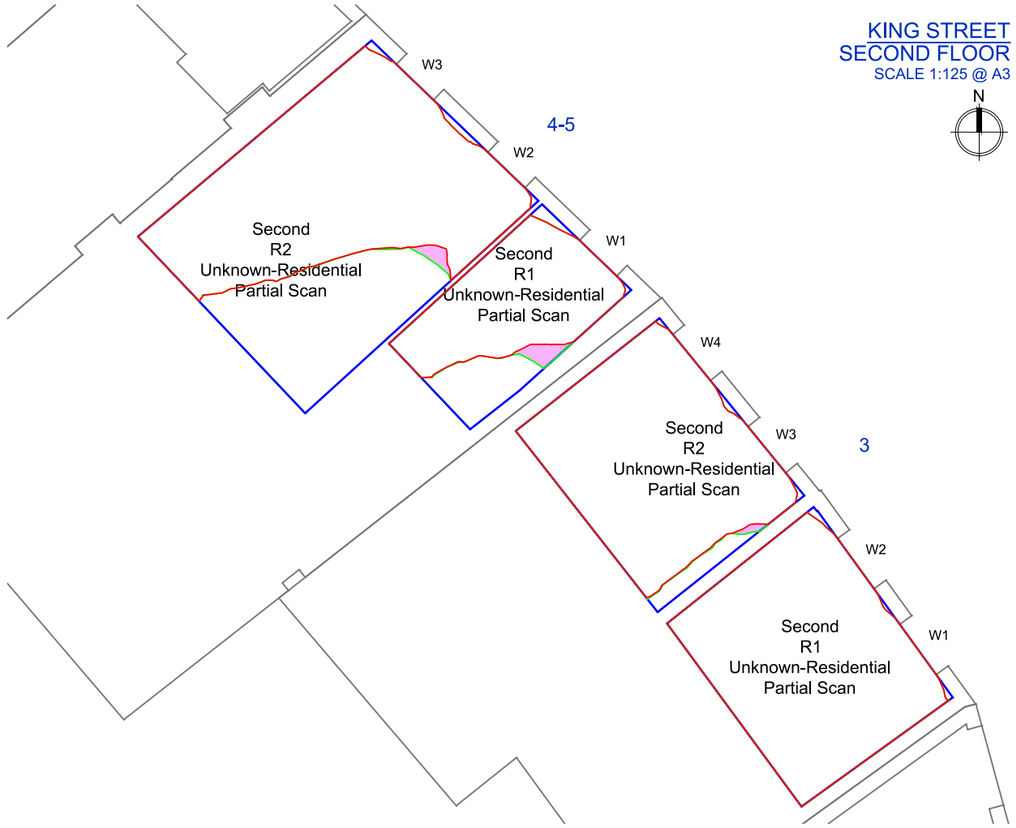
KING STREET GROUND FLOOR
SCALE 1:125 @ A3



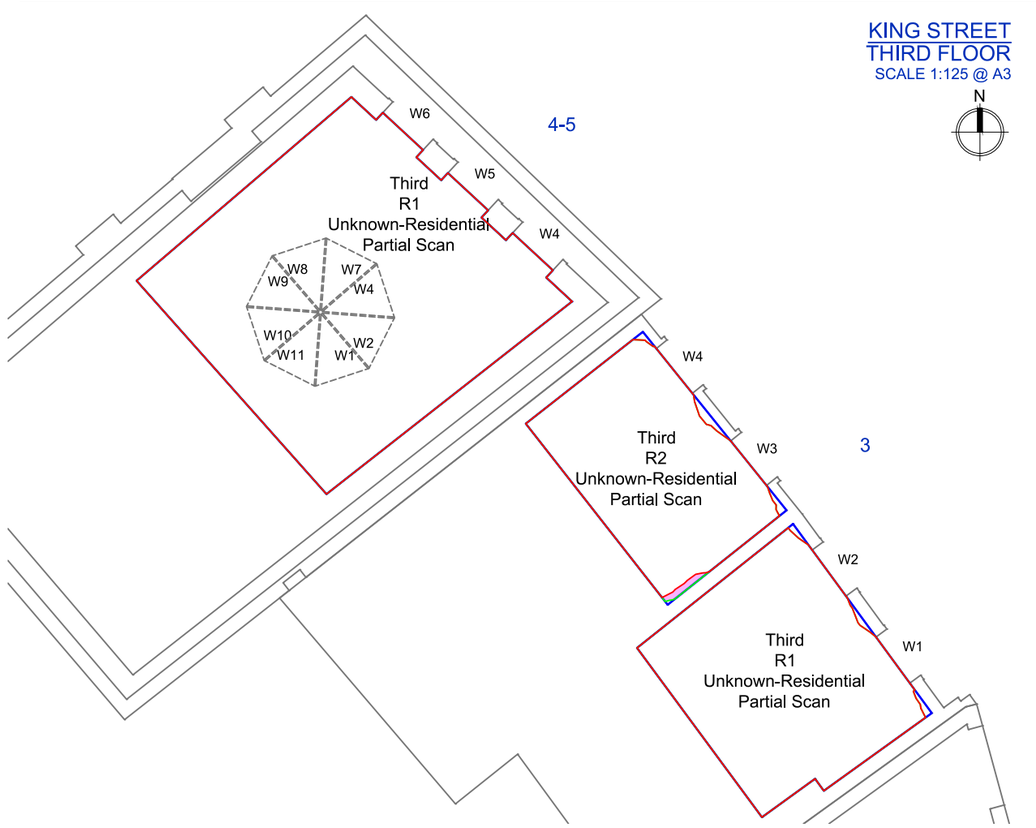
KING STREET FIRST FLOOR
SCALE 1:125 @ A3



KING STREET SECOND FLOOR
SCALE 1:125 @ A3



KING STREET THIRD FLOOR
SCALE 1:125 @ A3



SOURCES OF INFORMATION:

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25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
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RECEIVED 19.06.19

SITE PHOTOGRAPHY

EXISTING NO-SKY CONTOUR

PROPOSED NO-SKY CONTOUR

AREA OF LOSS / GAIN

REV:	DESCRIPTION:	BY:	DATE:
G			
F			
E			
D			
C			
B			
A	-	-	-

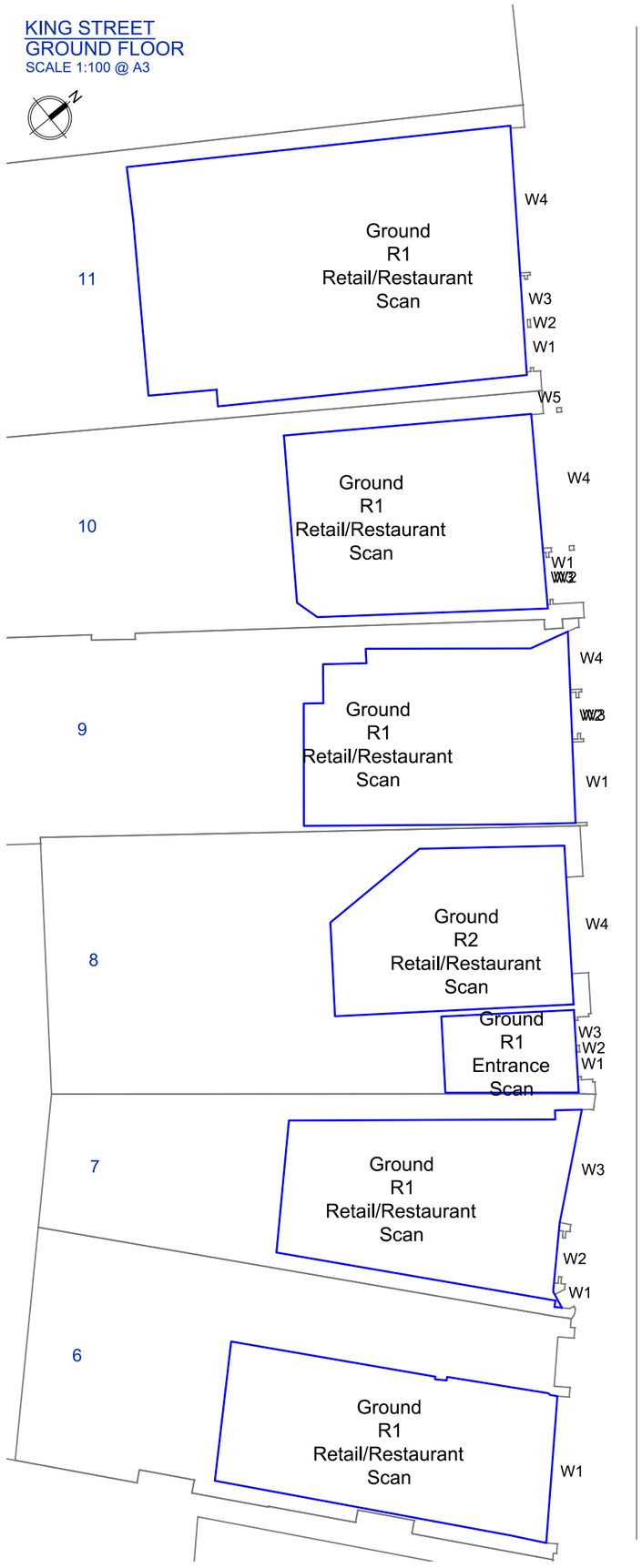
PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
NO-SKY LINE CONTOURS

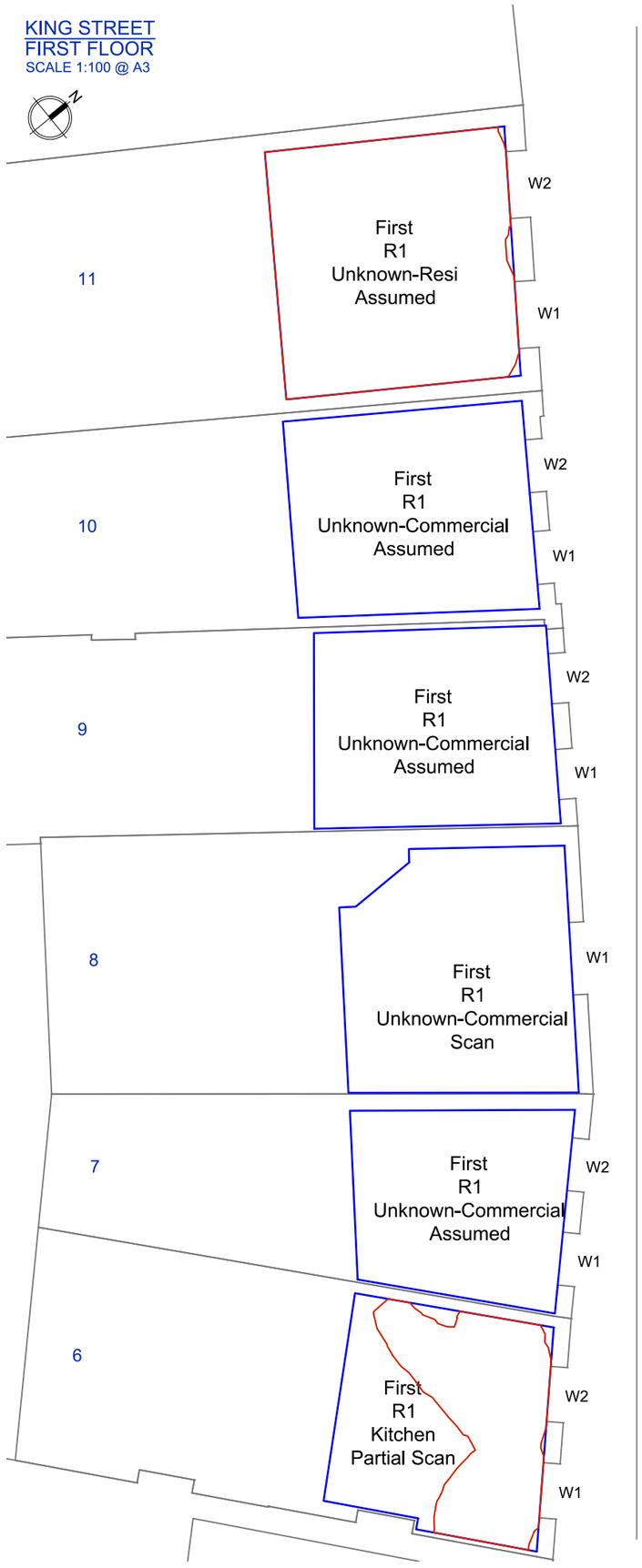
DATE:	DRAWN:
25/06/2019	MG
DRG NO: 02/22	SCALE: 1:125 @ A3

Colliers INTERNATIONAL

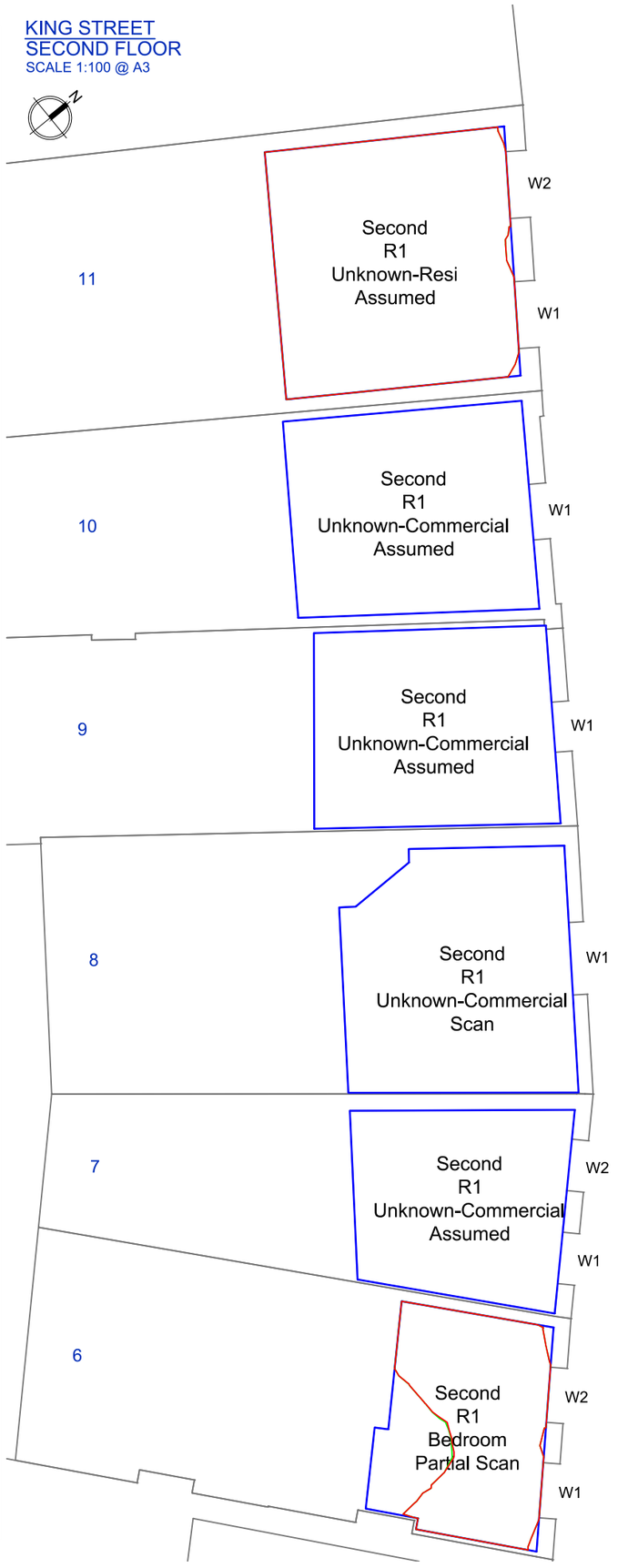
KING STREET
GROUND FLOOR
SCALE 1:100 @ A3



KING STREET
FIRST FLOOR
SCALE 1:100 @ A3



KING STREET
SECOND FLOOR
SCALE 1:100 @ A3



SOURCES OF INFORMATION:

COLMAN ARCHITECTS
3D LASER SCAN
25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
RECEIVED 19.06.19

SITE PHOTOGRAPHY

EXISTING NO-SKY CONTOUR

PROPOSED NO-SKY CONTOUR

AREA OF LOSS / GAIN

REV:	DESCRIPTION:	BY:	DATE:
G			
F			
E			
D			
C			
B			
A	-	-	-

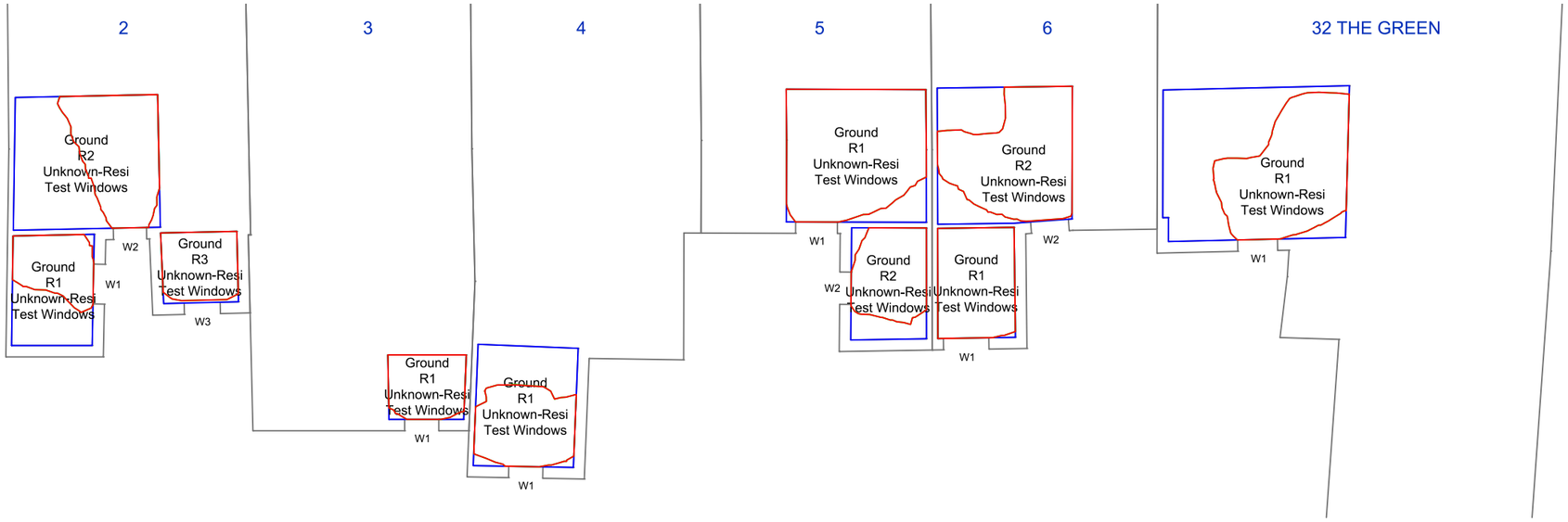
PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
NO-SKY LINE CONTOURS

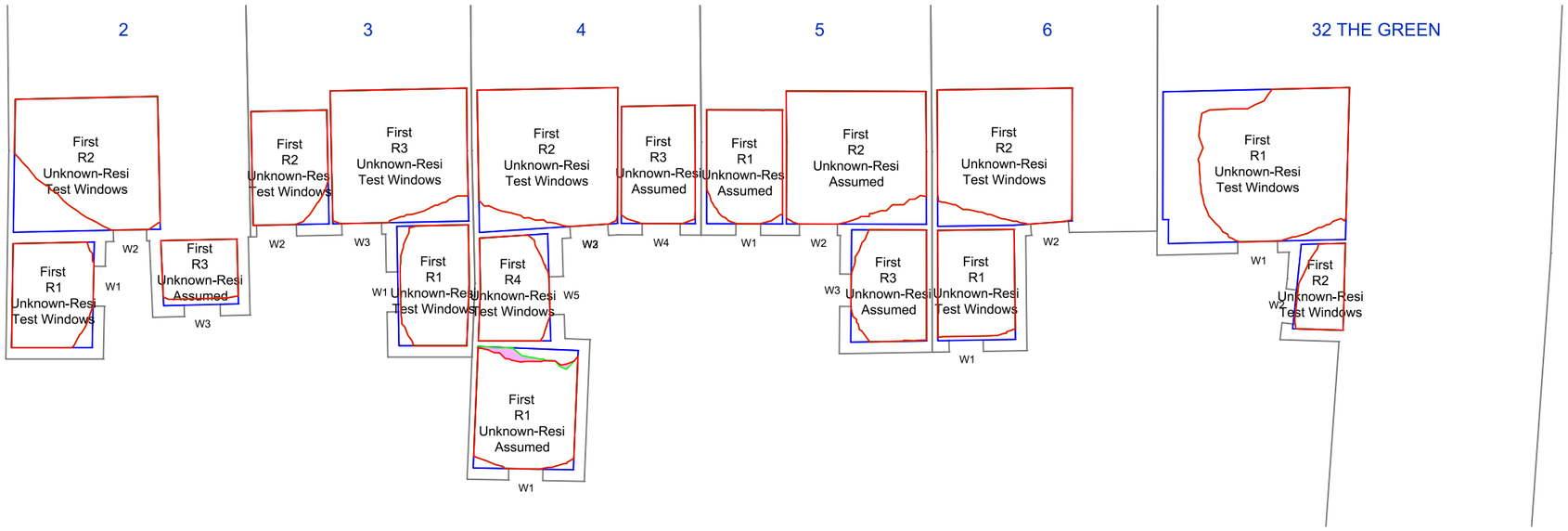
DATE:	DRAWN:
25/06/2019	MG
DRG NO:	SCALE:
02/23	1:100 @ A3

Colliers INTERNATIONAL

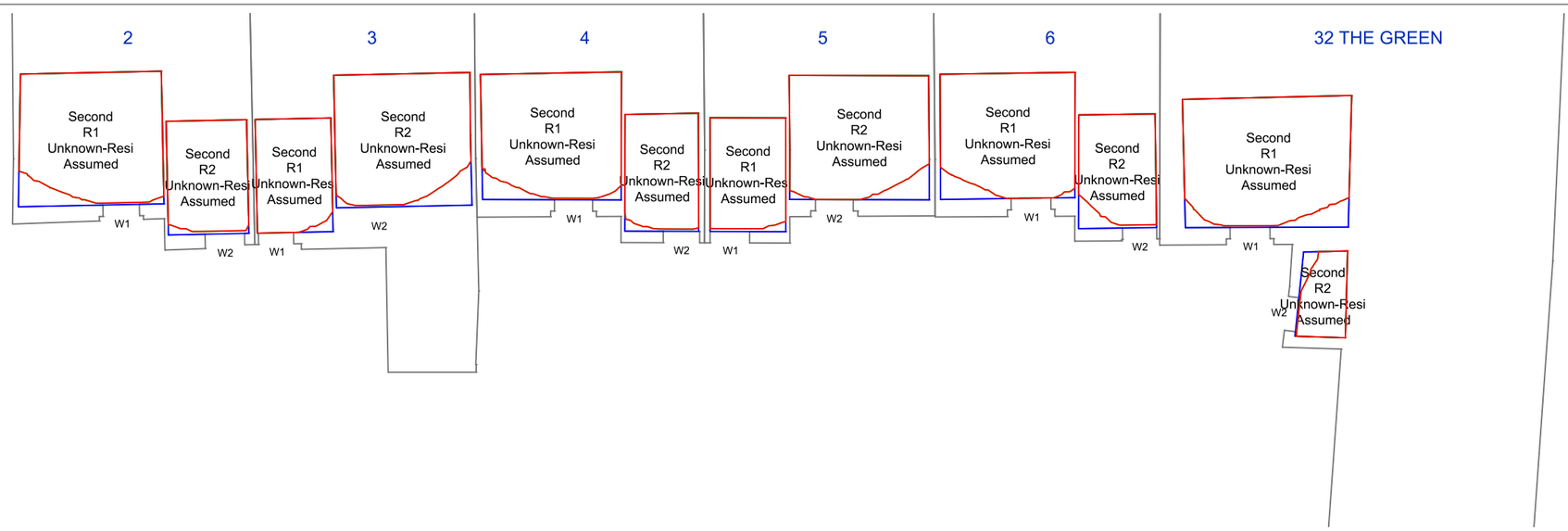
OLD PALACE TERRACE
GROUND FLOOR
SCALE 1:150 @ A3



OLD PALACE TERRACE
FIRST FLOOR
SCALE 1:150 @ A3



OLD PALACE TERRACE
SECOND FLOOR
SCALE 1:150 @ A3



SOURCES OF INFORMATION:

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25918S_HoF-Richmond.e57

PROPOSED 3D MODEL
80 George
Street_RevE1_RevB.skp
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SITE PHOTOGRAPHY

EXISTING NO-SKY CONTOUR

PROPOSED NO-SKY CONTOUR

AREA OF LOSS / GAIN

REV:	DESCRIPTION:	BY:	DATE:
G			
F			
E			
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A	-	-	-

PROJECT:
75-81 GEORGE STREET
RICHMOND, TW9 1HA

TITLE:
NO-SKY LINE CONTOURS

DATE:	DRAWN:
25/06/2019	MG
DRG NO: 02/24	SCALE: 1:150 @ A3

Colliers INTERNATIONAL

Appendix C

Daylight & Sunlight Results

Project Name: 75-82 George Street, Richmond, TW9 1HA
Project No.:
Report Title: Daylight & Sunlight - Neighbour Analysis Existing V Colman Architects Scheme Received 19.06.19
Date of Analysis: 25/06/2019

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
13 Paved Court																					
First	R1	Assumed	Residential	Unknown-Resi	W1		Existing	12.63	1.00	YES	125°	1	1.00	YES	0	1.00	YES				
							Proposed	12.63				1			0						
																		1		0	
																		1	YES	0	YES
	R2	Assumed	Residential	Unknown-Resi	W2		Existing	13.86	0.98	YES	125°	3	0.67	YES	0	1.00	YES				
							Proposed	13.60				2			0						
																		3		0	
																		2	YES	0	YES
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	25.11	0.99	YES	125°	21	0.90	YES	3	1.00	YES				
							Proposed	24.77				19			3						
																		21		3	
																		19	YES	3	YES
7 Paved Court																					
First	R1	Assumed	Residential	Unknown-Resi	W1		Existing	16.86	0.99	YES	124°	11	0.91	YES	0	1.00	YES				
							Proposed	16.61				10			0						
																		11		0	
																		10	YES	0	YES
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	23.38	0.97	YES	124°	19	0.95	YES	2	1.00	YES				
							Proposed	22.74				18			2						
																		19		2	
																		18	YES	2	YES
12 Paved Court																					
Second	R2	Survey	Residential	Kitchen	W2		Existing	16.30	0.91	YES	122°	4	1.25	YES	0	1.00	YES				
							Proposed	14.91				5			0						
																		4		0	
																		5	YES	0	YES
9 Golden Court & 26 The Green																					
First	R1	Partial Scan	Residential	nknown-Residenti	W1		Existing	23.09	1.00	YES	261°	24	1.00	YES	2	1.00	YES				
							Proposed	23.08				24			2						
					W2		Existing	19.45	0.99	YES	230°	31	0.97	YES	4	0.75	YES				
							Proposed	19.18				30			3						
					W3		Existing	18.86	0.97	YES	199°	31	1.00	YES	4	1.00	YES				
							Proposed	18.23				31			4						
					W8		Existing	13.34	0.96	YES	140°	9	0.89	YES	4	0.75	YES				
							Proposed	12.82				8			3						
																		45		6	
																		45	YES	6	YES
Second	R1	Partial Scan	Residential	nknown-Residenti	W1		Existing	33.88	1.00	YES	261°	39	0.97	YES	12	0.92	YES				
							Proposed	33.75				38			11						
					W2		Existing	33.20	0.98	YES	230°	49	0.96	YES	17	0.88	YES				
							Proposed	32.59				47			15						
					W3		Existing	30.03	0.96	YES	199°	49	0.94	YES	15	0.80	YES				

Project Name: 75-82 George Street, Richmond, TW9 1HA
Project No.:
Report Title: Daylight & Sunlight - Neighbour Analysis Existing V Colman Architects Scheme Received 19.06.19
Date of Analysis: 25/06/2019

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
							Proposed	28.96				46			12						
					W4		Existing	33.11	0.98	YES	230°	34	0.97	YES	13	0.92	YES				
							Proposed	32.39				33			12						
					W5		Existing	19.39	0.96	YES	140°	22	0.95	YES	8	0.88	YES				
							Proposed	18.55				21			7						
																		71		22	
																		69	YES	20	YES
6 George Street																					
First	R1	Plans	Residential	nknown-Residenti	W1		Existing	16.90	0.93	YES	318°N		*North*			*North*					
							Proposed	15.70													
					W2		Existing	17.77	0.93	YES	318°N		*North*			*North*					
							Proposed	16.56													
					W3		Existing	17.95	0.93	YES	318°N		*North*			*North*					
							Proposed	16.72													
																		North	*North*	*North*	*North*
Second	R1	Test Windows	Residential	nknown-Residenti	W1		Existing	21.98	0.89	YES	318°N		*North*			*North*					
							Proposed	19.61													
					W2		Existing	22.95	0.90	YES	318°N		*North*			*North*					
							Proposed	20.55													
					W3		Existing	23.16	0.90	YES	318°N		*North*			*North*					
							Proposed	20.75													
																		North	*North*	*North*	*North*
Third	R1	Test Windows	Residential	nknown-Residenti	W1		Existing	25.96	0.86	YES	318°N		*North*			*North*					
							Proposed	22.21													
					W2		Existing	29.39	0.87	YES	318°N		*North*			*North*					
							Proposed	25.59													
					W3		Existing	29.72	0.87	YES	318°N		*North*			*North*					
							Proposed	25.92													
																		North	*North*	*North*	*North*
5 George Street																					
First	R1	Plans	Residential	nknown-Residenti	W1		Existing	17.82	0.93	YES	316°N		*North*			*North*					
							Proposed	16.57													
					W2		Existing	18.83	0.93	YES	316°N		*North*			*North*					
							Proposed	17.59													
					W3		Existing	19.34	0.94	YES	316°N		*North*			*North*					
							Proposed	18.13													
																		North	*North*	*North*	*North*
Second	R1	Assumed	Residential	nknown-Residenti	W1		Existing	23.49	0.89	YES	316°N		*North*			*North*					
							Proposed	21.01													
					W2		Existing	24.45	0.90	YES	316°N		*North*			*North*					
							Proposed	22.03													
					W3		Existing	24.82	0.91	YES	316°N		*North*			*North*					
							Proposed	22.47													

Project Name: 75-82 George Street, Richmond, TW9 1HA
Project No.:
Report Title: Daylight & Sunlight - Neighbour Analysis Existing V Colman Architects Scheme Received 19.06.19
Date of Analysis: 25/06/2019

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
																		North	*North*	*North*	*North*
Third	R1	Assumed	Residential	nknown-Residenti	W1		Existing	29.56	0.88	YES	316°N		*North*			*North*					
							Proposed	25.89													
					W2		Existing	30.86	0.88	YES	316°N		*North*			*North*					
							Proposed	27.27													
					W3		Existing	31.15	0.89	YES	316°N		*North*			*North*					
							Proposed	27.68													
																		North	*North*	*North*	*North*
4 George Street																					
First	R1	Scan	Residential	nknown-Residenti	W1		Existing	20.05	0.94	YES	322°N		*North*			*North*					
							Proposed	18.75													
					W2		Existing	22.21	0.95	YES	301°N		*North*			*North*					
							Proposed	21.14													
					W3		Existing	22.70	0.95	YES	301°N		*North*			*North*					
							Proposed	21.65													
					W4		Existing	24.97	0.97	YES	279°N		*North*			*North*					
							Proposed	24.31													
																		North	*North*	*North*	*North*
Second	R1	Assumed	Residential	nknown-Residenti	W1		Existing	25.02	0.91	YES	322°N		*North*			*North*					
							Proposed	22.69													
					W2		Existing	27.09	0.93	YES	301°N		*North*			*North*					
							Proposed	25.17													
					W3		Existing	27.51	0.93	YES	301°N		*North*			*North*					
							Proposed	25.66													
					W4		Existing	29.30	0.96	YES	279°N		*North*			*North*					
							Proposed	28.12													
																		North	*North*	*North*	*North*
Third	R1	Assumed	Residential	nknown-Residenti	W1		Existing	32.22	0.91	YES	301°N		*North*			*North*					
							Proposed	29.45													
					W2		Existing	32.49	0.92	YES	301°N		*North*			*North*					
							Proposed	29.83													
																		North	*North*	*North*	*North*
3 George Street																					
First	R1	Plans	Residential	nknown-Residenti	W1		Existing	23.79	0.95	YES	315°N		*North*			*North*					
							Proposed	22.64													
					W2		Existing	26.59	0.97	YES	293°N		*North*			*North*					
							Proposed	25.79													
					W3		Existing	27.01	0.97	YES	293°N		*North*			*North*					
							Proposed	26.21													
					W4		Existing	28.61	0.99	YES	271°N		*North*			*North*					
							Proposed	28.21													

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
																		North	*North*	*North*	*North*
Second	R1	Plans	Residential	nknown-Residenti	W1		Existing	28.22	0.94	YES	315°N		*North*			*North*					
							Proposed	26.41													
					W2		Existing	30.83	0.96	YES	293°N		*North*			*North*					
							Proposed	29.54													
					W3		Existing	31.16	0.96	YES	293°N		*North*			*North*					
							Proposed	29.92													
					W4		Existing	32.49	0.98	YES	271°N		*North*			*North*					
							Proposed	31.88													
																		North	*North*	*North*	*North*
Third	R1	Plans	Residential	nknown-Residenti	W1		Existing	34.80	0.95	YES	293°N		*North*			*North*					
							Proposed	33.06													
					W2		Existing	35.01	0.95	YES	293°N		*North*			*North*					
							Proposed	33.35													
																		North	*North*	*North*	*North*
3 King Street																					
First	R1	Partial Scan	Residential	nknown-Residenti	W1		Existing	25.17	0.99	YES	54°N		*North*			*North*					
							Proposed	24.83													
					W2		Existing	24.68	0.99	YES	54°N		*North*			*North*					
							Proposed	24.35													
																		North	*North*	*North*	*North*
	R2	Partial Scan	Residential	nknown-Residenti	W3		Existing	23.47	0.99	YES	51°N		*North*			*North*					
							Proposed	23.16													
					W4		Existing	22.09	0.99	YES	51°N		*North*			*North*					
							Proposed	21.84													
																		North	*North*	*North*	*North*
Second	R1	Partial Scan	Residential	nknown-Residenti	W1		Existing	28.63	0.98	YES	54°N		*North*			*North*					
							Proposed	28.13													
					W2		Existing	28.15	0.98	YES	54°N		*North*			*North*					
							Proposed	27.59													
																		North	*North*	*North*	*North*
	R2	Partial Scan	Residential	nknown-Residenti	W3		Existing	26.94	0.98	YES	51°N		*North*			*North*					
							Proposed	26.35													
					W4		Existing	25.67	0.98	YES	51°N		*North*			*North*					
							Proposed	25.12													
																		North	*North*	*North*	*North*
Third	R1	Partial Scan	Residential	nknown-Residenti	W1		Existing	31.36	0.97	YES	54°N		*North*			*North*					
							Proposed	30.56													
					W2		Existing	31.88	0.97	YES	54°N		*North*			*North*					
							Proposed	31.06													
																		North	*North*	*North*	*North*
	R2	Partial Scan	Residential	nknown-Residenti	W3		Existing	31.02	0.97	YES	51°N		*North*			*North*					

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
							Proposed	30.06													
					W4		Existing	29.05	0.97	YES	51°N		*North*			*North*					
							Proposed	28.05													
																		North	*North*	*North*	*North*
											4-5 King Street										
First	R1	Partial Scan	Residential	nknown-Residenti	W1		Existing	22.37	0.98	YES	44°N		*North*			*North*					
							Proposed	21.92													
																		North	*North*	*North*	*North*
	R2	Partial Scan	Residential	nknown-Residenti	W2		Existing	21.04	0.98	YES	44°N		*North*			*North*					
							Proposed	20.62													
					W3		Existing	20.04	0.98	YES	44°N		*North*			*North*					
							Proposed	19.72													
																		North	*North*	*North*	*North*
Second	R1	Partial Scan	Residential	nknown-Residenti	W1		Existing	25.99	0.96	YES	44°N		*North*			*North*					
							Proposed	24.99													
																		North	*North*	*North*	*North*
	R2	Partial Scan	Residential	nknown-Residenti	W2		Existing	24.70	0.96	YES	44°N		*North*			*North*					
							Proposed	23.73													
					W3		Existing	23.83	0.96	YES	44°N		*North*			*North*					
							Proposed	22.97													
																		North	*North*	*North*	*North*
Third	R1	Partial Scan	Residential	nknown-Residenti	W1		Existing	86.83	1.00	YES	162° Inc	95	1.00	YES	30	1.00	YES				
							Proposed	86.83				95			30						
					W2		Existing	86.70	1.00	YES	117° Inc	87	1.00	YES	27	1.00	YES				
							Proposed	86.36				87			27						
					W3		Existing	85.59	0.99	YES	72°N		*North*			*North*					
							Proposed	84.90													
					W4		Existing	32.97	0.96	YES	43°N		*North*			*North*					
							Proposed	31.53													
					W5		Existing	32.48	0.96	YES	43°N		*North*			*North*					
							Proposed	31.05													
					W6		Existing	32.06	0.96	YES	43°N		*North*			*North*					
							Proposed	30.70													
					W7		Existing	84.98	0.99	YES	27°N		*North*			*North*					
							Proposed	84.32													
					W8		Existing	85.52	1.00	YES	342°N		*North*			*North*					
							Proposed	85.27													
					W9		Existing	86.62	1.00	YES	297°N		*North*			*North*					
							Proposed	86.70													
					W10		Existing	86.99	1.00	YES	252° Inc	86	1.00	YES	27	1.00	YES				
							Proposed	86.99				86			27						
					W11		Existing	86.84	1.00	YES	207° Inc	95	1.00	YES	30	1.00	YES				
							Proposed	86.84				95			30						
																		100		30	

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																		100	YES	30	YES
6 King Street																					
First	R1	Partial Scan	Residential	Kitchen	W1		Existing	16.17	1.00	YES	44°N		*North*			*North*					
							Proposed	16.16													
					W2		Existing	15.98	1.00	YES	44°N		*North*			*North*					
							Proposed	16.02													
																		North	*North*	*North*	*North*
Second	R1	Partial Scan	Residential	Bedroom	W1		Existing	19.46	0.99	YES	44°N		*North*			*North*					
							Proposed	19.25													
					W2		Existing	19.28	0.99	YES	44°N		*North*			*North*					
							Proposed	19.16													
																		North	*North*	*North*	*North*
11 King Street																					
First	R1	Assumed	Residential	Unknown-Resi	W1		Existing	25.87	1.00	YES	35°N		*North*			*North*					
							Proposed	25.85													
					W2		Existing	26.82	1.00	YES	35°N		*North*			*North*					
							Proposed	26.78													
																		North	*North*	*North*	*North*
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	32.24	1.00	YES	35°N		*North*			*North*					
							Proposed	32.21													
					W2		Existing	32.93	1.00	YES	35°N		*North*			*North*					
							Proposed	32.87													
																		North	*North*	*North*	*North*
2 Old Palace Terrace																					
Ground	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	7.00	1.00	YES	34°N		*North*			*North*					
							Proposed	6.98													
																		North	*North*	*North*	*North*
	R2	Test Windows	Residential	Unknown-Resi	W2		Existing	6.64	0.99	YES	121°	10	1.00	YES	1	1.00	YES				
							Proposed	6.60				10			1						
																		10		1	
																		10	YES	1	YES
	R3	Test Windows	Residential	Unknown-Resi	W3		Existing	18.96	1.00	YES	121°	12	1.08	YES	1	2.00	YES				
							Proposed	19.01				13			2						
																		12		1	
																		13	YES	2	YES
First	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	22.18	1.00	YES	34°N		*North*			*North*					
							Proposed	22.08													
																		North	*North*	*North*	*North*
	R2	Test Windows	Residential	Unknown-Resi	W2		Existing	13.18	0.99	YES	121°	14	1.00	YES	0	1.00	YES				

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							Proposed	13.06				14			0						
																		14		0	
																		14	YES	0	YES
	R3	Assumed	Residential	Unknown-Resi	W3		Existing	24.29	0.99	YES	121°	9	0.89	YES	2	1.00	YES				
							Proposed	24.14				8			2						
																		9		2	
																		8	YES	2	YES
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	33.31	0.99	YES	121°	29	1.00	YES	8	1.00	YES				
							Proposed	33.11				29			8						
																		29		8	
																		29	YES	8	YES
	R2	Assumed	Residential	Unknown-Resi	W2		Existing	32.04	0.99	YES	121°	28	1.00	YES	7	1.00	YES				
							Proposed	31.83				28			7						
																		28		7	
																		28	YES	7	YES
3 Old Palace Terrace																					
Ground	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	18.45	1.00	YES	122°	19	1.00	YES	2	1.00	YES				
							Proposed	18.45				19			2						
																		19		2	
																		19	YES	2	YES
First	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	23.86	1.00	YES	211°	28	1.00	YES	12	1.00	YES				
							Proposed	23.88				28			12						
																		28		12	
																		28	YES	12	YES
	R2	Test Windows	Residential	Unknown-Resi	W2		Existing	18.44	0.99	YES	121°	21	1.05	YES	1	2.00	YES				
							Proposed	18.24				22			2						
																		21		1	
																		22	YES	2	YES
	R3	Test Windows	Residential	Unknown-Resi	W3		Existing	20.06	1.00	YES	121°	26	1.00	YES	6	1.00	YES				
							Proposed	20.02				26			6						
																		26		6	
																		26	YES	6	YES
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	32.21	0.99	YES	121°	33	1.00	YES	7	1.00	YES				
							Proposed	31.98				33			7						
																		33		7	
																		33	YES	7	YES
	R2	Assumed	Residential	Unknown-Resi	W2		Existing	32.87	0.99	YES	121°	30	0.97	YES	8	0.88	YES				
							Proposed	32.62				29			7						
																		30		8	
																		29	YES	7	YES
4 Old Palace Terrace																					
Ground	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	20.14	1.00	YES	124°	15	1.00	YES	2	1.00	YES				
							Proposed	20.14				15			2						
																		15		2	
																		15	YES	2	YES
First	R1	Assumed	Residential	Unknown-Resi	W1		Existing	26.28	0.99	YES	124°	22	1.00	YES	3	1.00	YES				
							Proposed	26.08				22			3						

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																		22		3	
																		22	YES	3	YES
	R2	Test Windows	Residential	Unknown-Resi	W2		Existing	21.91	0.99	YES	119°	26	0.96	YES	1	0.00	YES				
							Proposed	21.64				25			0						
					W3		Existing	21.91	0.99	YES	119°	26	0.96	YES	1	0.00	YES				
							Proposed	21.64				25			0						
																		26		1	
																		25	YES	0	YES
	R3	Assumed	Residential	Unknown-Resi	W4		Existing	23.73	0.99	YES	123°	30	1.00	YES	5	1.00	YES				
							Proposed	23.59				30			5						
																		30		5	
																		30	YES	5	YES
	R4	Test Windows	Residential	Unknown-Resi	W5		Existing	23.08	1.00	YES	31°N		*North*			*North*					
							Proposed	23.06													
																		North	*North*	*North*	*North*
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	32.50	0.99	YES	123°	31	1.00	YES	8	1.00	YES				
							Proposed	32.21				31			8						
																		31		8	
																		31	YES	8	YES
	R2	Assumed	Residential	Unknown-Resi	W2		Existing	32.36	0.99	YES	123°	29	1.00	YES	8	1.00	YES				
							Proposed	32.05				29			8						
																		29		8	
																		29	YES	8	YES
										5 Old Palace Terrace											
Ground	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	14.91	1.00	YES	123°	24	0.96	YES	5	0.80	YES				
							Proposed	14.91				23			4						
																		24		5	
																		23	YES	4	YES
	R2	Test Windows	Residential	Unknown-Resi	W2		Existing	14.04	1.00	YES	213°	13	1.00	YES	3	1.00	YES				
							Proposed	14.04				13			3						
																		13		3	
																		13	YES	3	YES
First	R1	Assumed	Residential	Unknown-Resi	W1		Existing	23.28	0.99	YES	123°	20	1.00	YES	4	1.00	YES				
							Proposed	23.16				20			4						
																		20		4	
																		20	YES	4	YES
	R2	Assumed	Residential	Unknown-Resi	W2		Existing	20.45	0.99	YES	123°	26	1.04	YES	6	1.17	YES				
							Proposed	20.25				27			7						
																		26		6	
																		27	YES	7	YES
	R3	Assumed	Residential	Unknown-Resi	W3		Existing	21.76	1.00	YES	213°	26	1.00	YES	9	1.00	YES				
							Proposed	21.77				26			9						
																		26		9	
																		26	YES	9	YES
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	32.40	0.99	YES	123°	30	1.00	YES	9	1.00	YES				
							Proposed	32.08				30			9						
																		30		9	
																		30	YES	9	YES

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	R2	Assumed	Residential	Unknown-Resi	W2		Existing	32.87	0.99	YES	123°	29	1.00	YES	8	1.00	YES				
							Proposed	32.55				29			8						
																		29		8	
																		29	YES	8	YES
6 Old Palace Terrace																					
Ground	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	20.31	1.00	YES	122°	24	1.00	YES	3	1.00	YES				
							Proposed	20.32				24			3						
																		24		3	
																		24	YES	3	YES
	R2	Test Windows	Residential	Unknown-Resi	W2		Existing	11.46	1.00	YES	118°	9	1.00	YES	0	1.00	YES				
							Proposed	11.46				9			0						
																		9		0	
																		9	YES	0	YES
First	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	27.54	1.00	YES	122°	27	1.00	YES	5	1.00	YES				
							Proposed	27.46				27			5						
																		27		5	
																		27	YES	5	YES
	R2	Test Windows	Residential	Unknown-Resi	W2		Existing	19.93	0.99	YES	118°	22	1.00	YES	2	1.00	YES				
							Proposed	19.75				22			2						
																		22		2	
																		22	YES	2	YES
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	31.23	0.99	YES	122°	28	1.00	YES	8	1.00	YES				
							Proposed	30.88				28			8						
																		28		8	
																		28	YES	8	YES
	R2	Assumed	Residential	Unknown-Resi	W2		Existing	29.13	0.99	YES	122°	25	1.00	YES	7	1.00	YES				
							Proposed	28.85				25			7						
																		25		7	
																		25	YES	7	YES
32 The Green																					
Ground	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	12.03	1.00	YES	121°	16	1.00	YES	2	1.00	YES				
							Proposed	12.03				16			2						
																		16		2	
																		16	YES	2	YES
First	R1	Test Windows	Residential	Unknown-Resi	W1		Existing	17.31	1.00	YES	121°	22	1.00	YES	4	1.00	YES				
							Proposed	17.27				22			4						
																		22		4	
																		22	YES	4	YES
	R2	Test Windows	Residential	Unknown-Resi	W2		Existing	16.61	1.00	YES	219°	14	1.00	YES	8	1.00	YES				
							Proposed	16.62				14			8						
																		14		8	
																		14	YES	8	YES
Second	R1	Assumed	Residential	Unknown-Resi	W1		Existing	31.26	1.00	YES	122° Inc	32	1.00	YES	9	1.00	YES				
							Proposed	31.17				32			9						
																		32		9	
																		32	YES	9	YES
	R2	Assumed	Residential	Unknown-Resi	W2		Existing	23.52	1.00	YES	219°	17	1.00	YES	9	1.00	YES				

Project Name: 75-82 George Street, Richmond, TW9 1HA
Project No.:
Report Title: Daylight & Sunlight - Neighbour Analysis Existing V Colman Architects Scheme Received 19.06.19
Date of Analysis: 25/06/2019

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
							Proposed	23.54				17			9						
																		17		9	
																		17	YES	9	YES

Project Name: 75-82 George Street, Richmond, TW9 1HA
Project No.:
Report Title: Daylight Distribution Analysis - Neighbour Existing V Colman Architects Scheme Received 19.06.19
Date of Analysis: 25/06/2019

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
13 Paved Court										
First	R1	Assumed	Residential	Unknown-Resi	Area m2	8.30	3.19	3.21		
					% of room		38%	39%	1.01	YES
	R2	Assumed	Residential	Unknown-Resi	Area m2	7.47	3.03	2.64		
					% of room		41%	35%	0.87	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	13.72	9.95	9.54		
					% of room		72%	70%	0.96	YES
7 Paved Court										
First	R1	Assumed	Residential	Unknown-Resi	Area m2	8.43	3.08	2.79		
					% of room		37%	33%	0.90	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	8.43	4.76	4.45		
					% of room		57%	53%	0.93	YES
12 Paved Court										
Second	R2	Survey	Residential	Kitchen	Area m2	6.96	2.34	2.11		
					% of room		34%	30%	0.90	YES
9 Golden Court & 26 The Green										
First	R1	Partial Scan	Residential	Unknown-Residential	Area m2	12.35	9.24	9.21		
					% of room		75%	75%	1.00	YES
Second	R1	Partial Scan	Residential	Unknown-Residential	Area m2	14.38	14.21	14.21		
					% of room		99%	99%	1.00	YES
6 George Street										
First	R1	Plans	Residential	Unknown-Residential	Area m2	23.79	15.47	15.38		
					% of room		65%	65%	0.99	YES
Second	R1	Test Windows	Residential	Unknown-Residential	Area m2	23.79	17.08	16.61		
					% of room		72%	70%	0.97	YES
Third	R1	Test Windows	Residential	Unknown-Residential	Area m2	21.21	21.05	18.15		
					% of room		99%	86%	0.86	YES
5 George Street										
First	R1	Plans	Residential	Unknown-Residential	Area m2	21.71	16.09	15.72		
					% of room		74%	72%	0.98	YES
Second	R1	Assumed	Residential	Unknown-Residential	Area m2	21.71	18.47	17.07		
					% of room		85%	79%	0.92	YES
Third	R1	Assumed	Residential	Unknown-Residential	Area m2	17.97	17.74	17.74		
					% of room		99%	99%	1.00	YES
4 George Street										
First	R1	Scan	Residential	Unknown-Residential	Area m2	23.62	18.16	17.45		
					% of room		77%	74%	0.96	YES
Second	R1	Assumed	Residential	Unknown-Residential	Area m2	23.62	19.50	18.31		
					% of room		83%	78%	0.94	YES
Third	R1	Assumed	Residential	Unknown-Residential	Area m2	18.70	10.03	8.49		
					% of room		54%	45%	0.85	YES
3 George Street										
First	R1	Plans	Residential	Unknown-Residential	Area m2	22.33	21.60	21.58		
					% of room		97%	97%	1.00	YES
Second	R1	Plans	Residential	Unknown-Residential	Area m2	23.47	22.88	22.83		
					% of room		97%	97%	1.00	YES
Third	R1	Plans	Residential	Unknown-Residential	Area m2	20.43	18.49	16.84		
					% of room		90%	82%	0.91	YES
3 King Street										
First	R1	Partial Scan	Residential	Unknown-Residential	Area m2	18.01	17.90	17.90		
					% of room		99%	99%	1.00	YES
	R2	Partial Scan	Residential	Unknown-Residential	Area m2	17.65	16.88	16.81		
					% of room		96%	95%	1.00	YES
Second	R1	Partial Scan	Residential	Unknown-Residential	Area m2	18.01	17.90	17.90		
					% of room		99%	99%	1.00	YES
	R2	Partial Scan	Residential	Unknown-Residential	Area m2	17.65	16.72	16.62		
					% of room		95%	94%	0.99	YES

Project Name: 75-82 George Street, Richmond, TW9 1HA
Project No.:
Report Title: Daylight Distribution Analysis - Neighbour Existing V Colman Architects Scheme Received 19.06.19
Date of Analysis: 25/06/2019

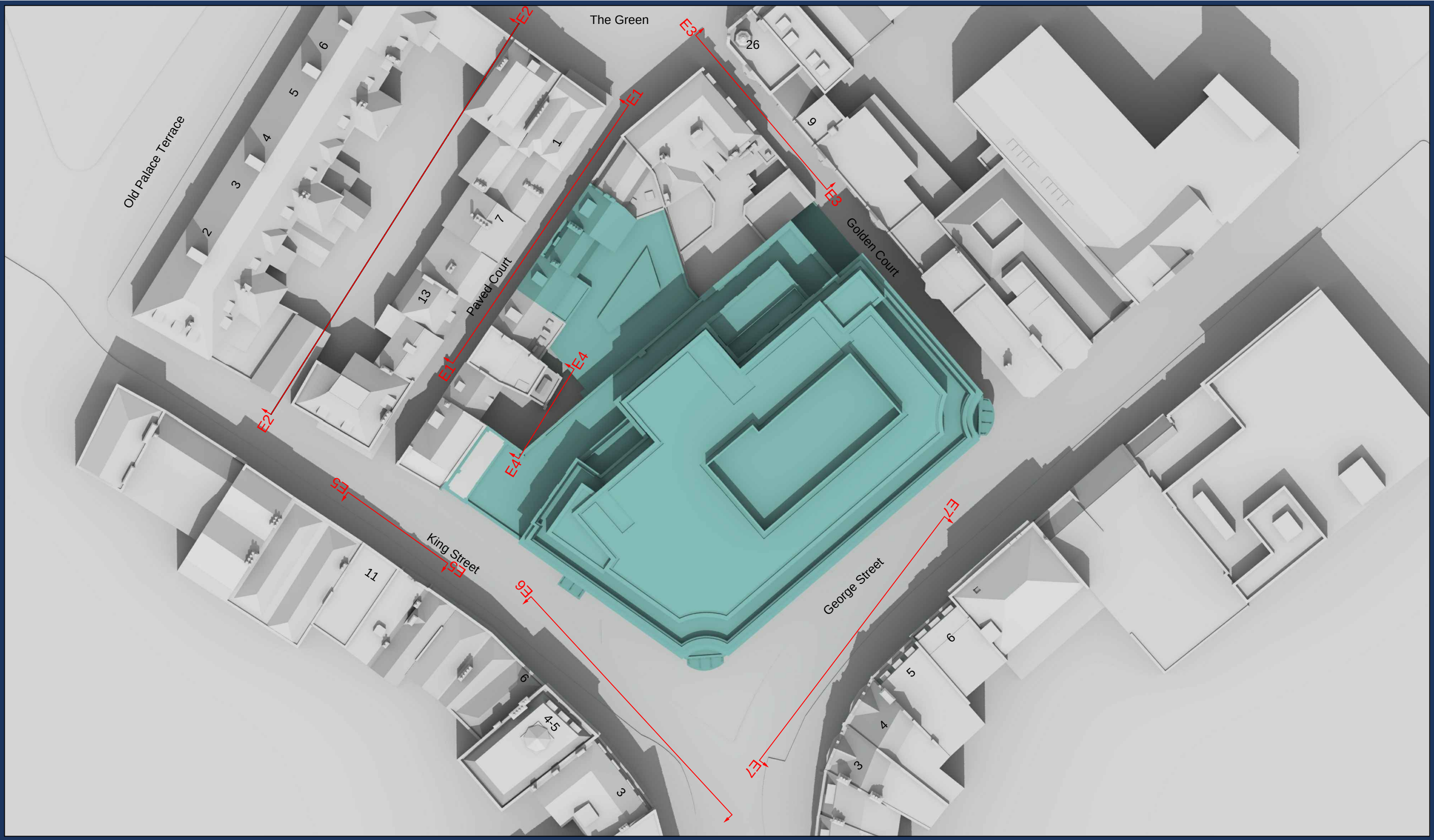
Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
Third	R1	Partial Scan	Residential	Unknown-Residential	Area m2	18.58	18.42	18.42		
					% of room		99%	99%	1.00	YES
	R2	Partial Scan	Residential	Unknown-Residential	Area m2	14.34	14.11	13.98		
					% of room		98%	98%	0.99	YES
4-5 King Street										
First	R1	Partial Scan	Residential	Unknown-Residential	Area m2	10.66	8.28	8.16		
					% of room		78%	77%	0.99	YES
	R2	Partial Scan	Residential	Unknown-Residential	Area m2	30.53	21.36	21.32		
					% of room		70%	70%	1.00	YES
Second	R1	Partial Scan	Residential	Unknown-Residential	Area m2	10.66	8.50	8.19		
					% of room		80%	77%	0.96	YES
	R2	Partial Scan	Residential	Unknown-Residential	Area m2	30.53	21.66	21.42		
					% of room		71%	70%	0.99	YES
Third	R1	Partial Scan	Residential	Unknown-Residential	Area m2	36.71	36.71	36.71		
					% of room		100%	100%	1.00	YES
6 King Street										
First	R1	Partial Scan	Residential	Kitchen	Area m2	14.64	8.31	8.31		
					% of room		57%	57%	1.00	YES
Second	R1	Partial Scan	Residential	Bedroom	Area m2	11.48	8.93	8.90		
					% of room		78%	78%	1.00	YES
11 King Street										
First	R1	Assumed	Residential	Unknown-Resi	Area m2	19.02	18.88	18.88		
					% of room		99%	99%	1.00	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	19.02	18.88	18.88		
					% of room		99%	99%	1.00	YES
2 Old Palace Terrace										
Ground	R1	Test Windows	Residential	Unknown-Resi	Area m2	6.21	3.34	3.34		
					% of room		54%	54%	1.00	YES
	R2	Test Windows	Residential	Unknown-Resi	Area m2	13.36	6.83	6.83		
					% of room		51%	51%	1.00	YES
	R3	Test Windows	Residential	Unknown-Resi	Area m2	3.71	3.52	3.52		
					% of room		95%	95%	1.00	YES
First	R1	Test Windows	Residential	Unknown-Resi	Area m2	5.89	5.59	5.59		
					% of room		95%	95%	1.00	YES
	R2	Test Windows	Residential	Unknown-Resi	Area m2	13.36	11.01	11.01		
					% of room		82%	82%	1.00	YES
	R3	Assumed	Residential	Unknown-Resi	Area m2	3.41	3.07	3.07		
					% of room		90%	90%	1.00	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	13.24	12.21	12.21		
					% of room		92%	92%	1.00	YES
	R2	Assumed	Residential	Unknown-Resi	Area m2	6.38	6.15	6.15		
					% of room		96%	96%	1.00	YES
3 Old Palace Terrace										
Ground	R1	Test Windows	Residential	Unknown-Resi	Area m2	3.43	3.30	3.30		
					% of room		96%	96%	1.00	YES
First	R1	Test Windows	Residential	Unknown-Resi	Area m2	5.88	5.43	5.43		
					% of room		92%	92%	1.00	YES
	R2	Test Windows	Residential	Unknown-Resi	Area m2	6.00	5.64	5.64		
					% of room		94%	94%	1.00	YES
	R3	Test Windows	Residential	Unknown-Resi	Area m2	12.55	11.76	11.76		
					% of room		94%	94%	1.00	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	6.00	5.83	5.83		
					% of room		97%	97%	1.00	YES
	R2	Assumed	Residential	Unknown-Resi	Area m2	12.55	11.52	11.52		
					% of room		92%	92%	1.00	YES
4 Old Palace Terrace										
Ground	R1	Test Windows	Residential	Unknown-Resi	Area m2	8.38	5.06	5.06		
					% of room		60%	60%	1.00	YES
First	R1	Assumed	Residential	Unknown-Resi	Area m2	8.38	7.66	7.43		
					% of room		91%	89%	0.97	YES
	R2	Test Windows	Residential	Unknown-Resi	Area m2	13.47	12.61	12.61		
					% of room		94%	94%	1.00	YES
	R3	Assumed	Residential	Unknown-Resi	Area m2	6.02	5.95	5.95		

Project Name: 75-82 George Street, Richmond, TW9 1HA
Project No.:
Report Title: Daylight Distribution Analysis - Neighbour Existing V Colman Architects Scheme Received 19.06.19
Date of Analysis: 25/06/2019

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
					% of room		99%	99%	1.00	YES
	R4	Test Windows	Residential	Unknown-Resi	Area m2	5.07	4.75	4.75		
					% of room		94%	94%	1.00	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	12.33	11.55	11.55		
					% of room		94%	94%	1.00	YES
	R2	Assumed	Residential	Unknown-Resi	Area m2	6.02	5.81	5.81		
					% of room		96%	96%	1.00	YES
5 Old Palace Terrace										
Ground	R1	Test Windows	Residential	Unknown-Resi	Area m2	12.90	11.77	11.77		
					% of room		91%	91%	1.00	YES
	R2	Test Windows	Residential	Unknown-Resi	Area m2	5.84	4.42	4.42		
					% of room		76%	76%	1.00	YES
First	R1	Assumed	Residential	Unknown-Resi	Area m2	6.00	5.70	5.70		
					% of room		95%	95%	1.00	YES
	R2	Assumed	Residential	Unknown-Resi	Area m2	12.90	12.02	12.02		
					% of room		93%	93%	1.00	YES
	R3	Assumed	Residential	Unknown-Resi	Area m2	5.84	5.40	5.40		
					% of room		93%	93%	1.00	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	6.00	5.79	5.79		
					% of room		96%	96%	1.00	YES
	R2	Assumed	Residential	Unknown-Resi	Area m2	12.06	11.24	11.24		
					% of room		93%	93%	1.00	YES
6 Old Palace Terrace										
Ground	R1	Test Windows	Residential	Unknown-Resi	Area m2	5.89	5.85	5.85		
					% of room		99%	99%	1.00	YES
	R2	Test Windows	Residential	Unknown-Resi	Area m2	12.69	9.32	9.32		
					% of room		73%	73%	1.00	YES
First	R1	Test Windows	Residential	Unknown-Resi	Area m2	5.89	5.64	5.64		
					% of room		96%	96%	1.00	YES
	R2	Test Windows	Residential	Unknown-Resi	Area m2	12.69	11.89	11.89		
					% of room		94%	94%	1.00	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	11.76	11.01	11.01		
					% of room		94%	94%	1.00	YES
	R2	Assumed	Residential	Unknown-Resi	Area m2	6.12	5.57	5.57		
					% of room		91%	91%	1.00	YES
32 The Green										
Ground	R1	Test Windows	Residential	Unknown-Resi	Area m2	19.38	9.82	9.82		
					% of room		51%	51%	1.00	YES
First	R1	Test Windows	Residential	Unknown-Resi	Area m2	19.38	13.76	13.76		
					% of room		71%	71%	1.00	YES
	R2	Test Windows	Residential	Unknown-Resi	Area m2	2.82	2.51	2.51		
					% of room		89%	89%	1.00	YES
Second	R1	Assumed	Residential	Unknown-Resi	Area m2	15.04	13.93	13.93		
					% of room		93%	93%	1.00	YES
	R2	Assumed	Residential	Unknown-Resi	Area m2	2.82	2.53	2.53		
					% of room		90%	90%	1.00	YES

Appendix D

Light Pollution Assessment



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: Proposal Site Plan
Showing Elevation Locations

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	1:400	July 2019	W1206/01	01

Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: 3d Visualisation

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/02	01

Point 2 Surveyors Limited, 17 Slingsby Place, London, WC2E 9AB | 0207 836 5828 | point2.co.uk

Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

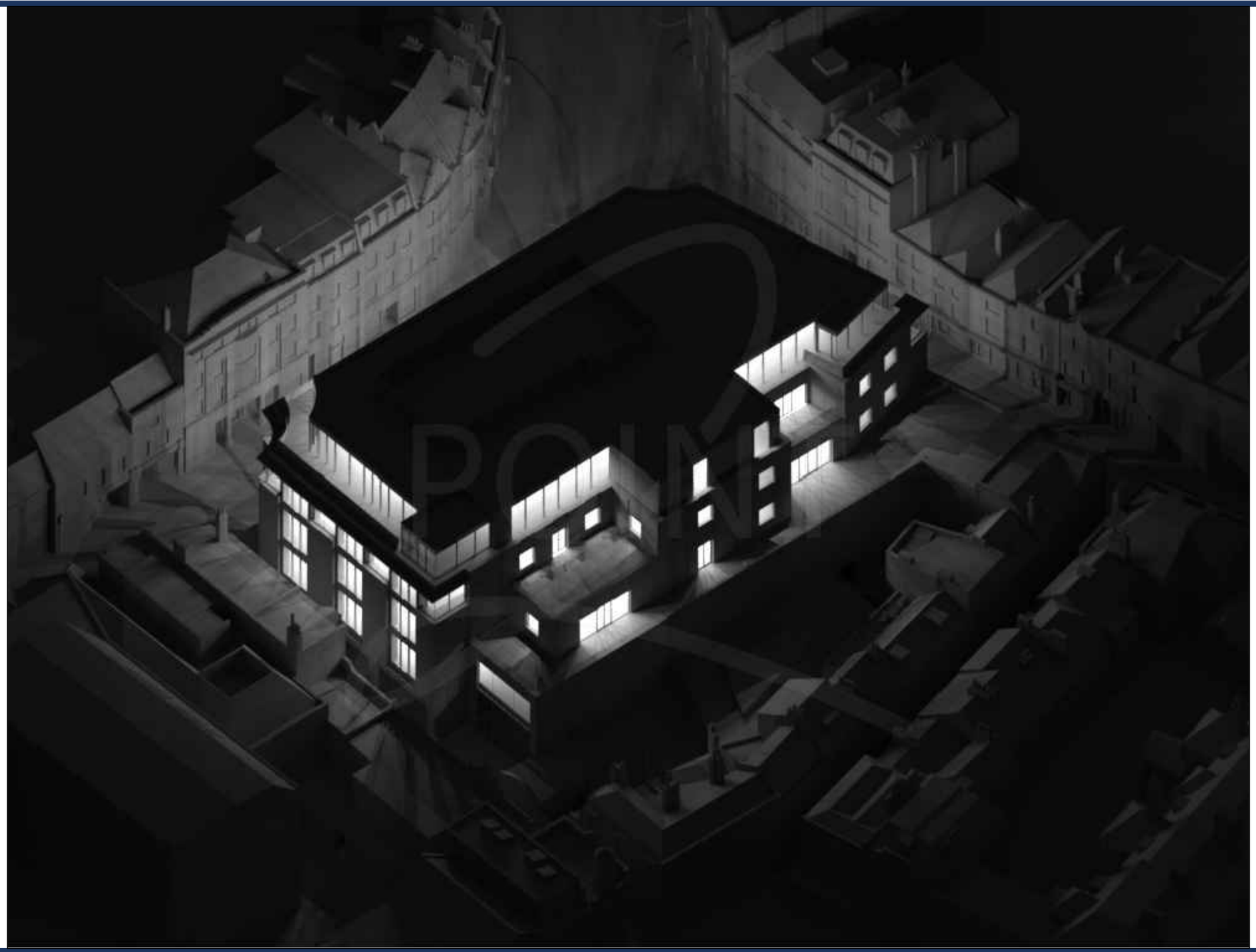
Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: 3d Visualisation

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/03	01

Point 2 Surveyors Limited, 17 Slingsby Place, London, WC2E 9AB | 0207 836 5828 | point2.co.uk



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

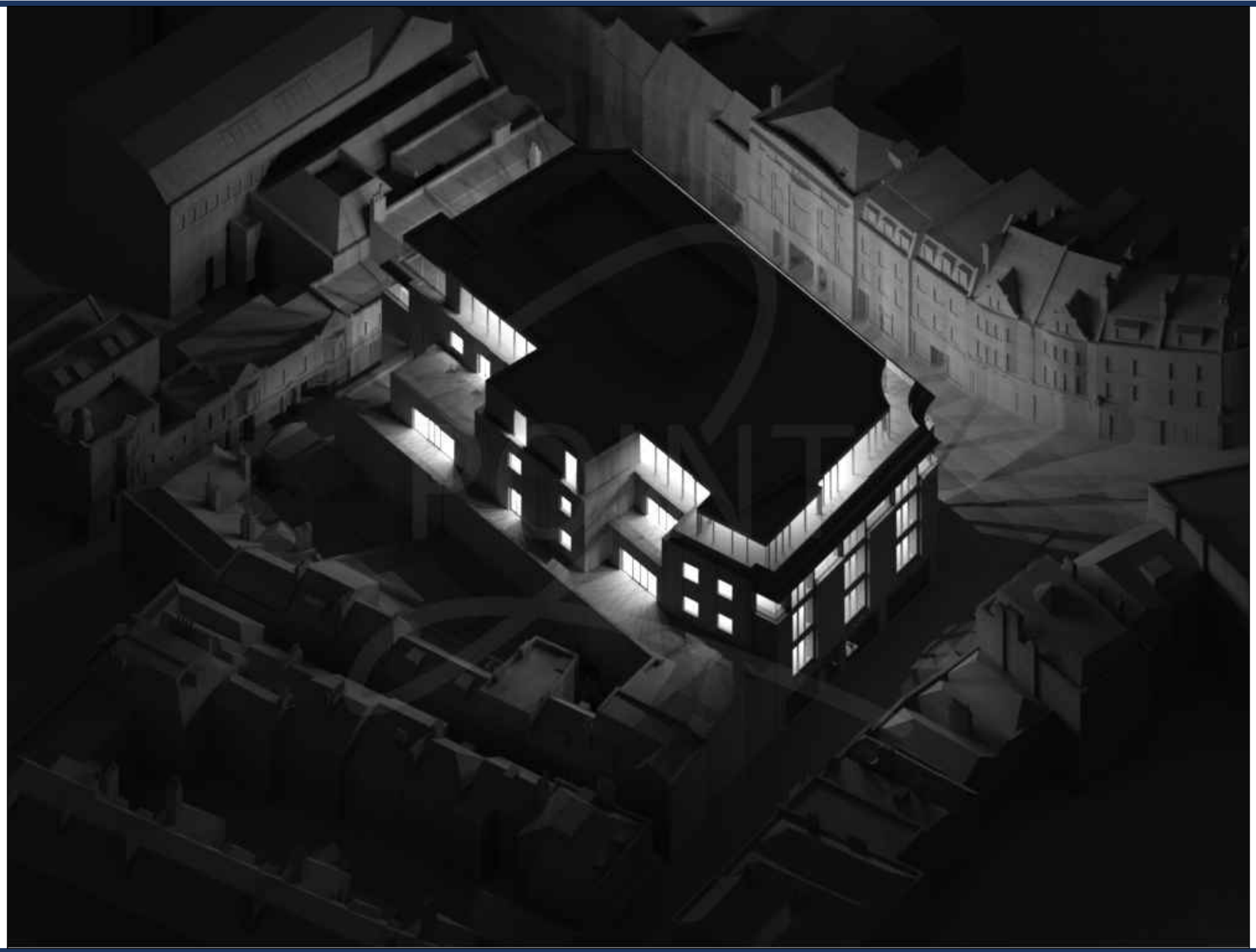
Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: 3d Visualisation

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/04	01



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: 3d Visualisation

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/05	01

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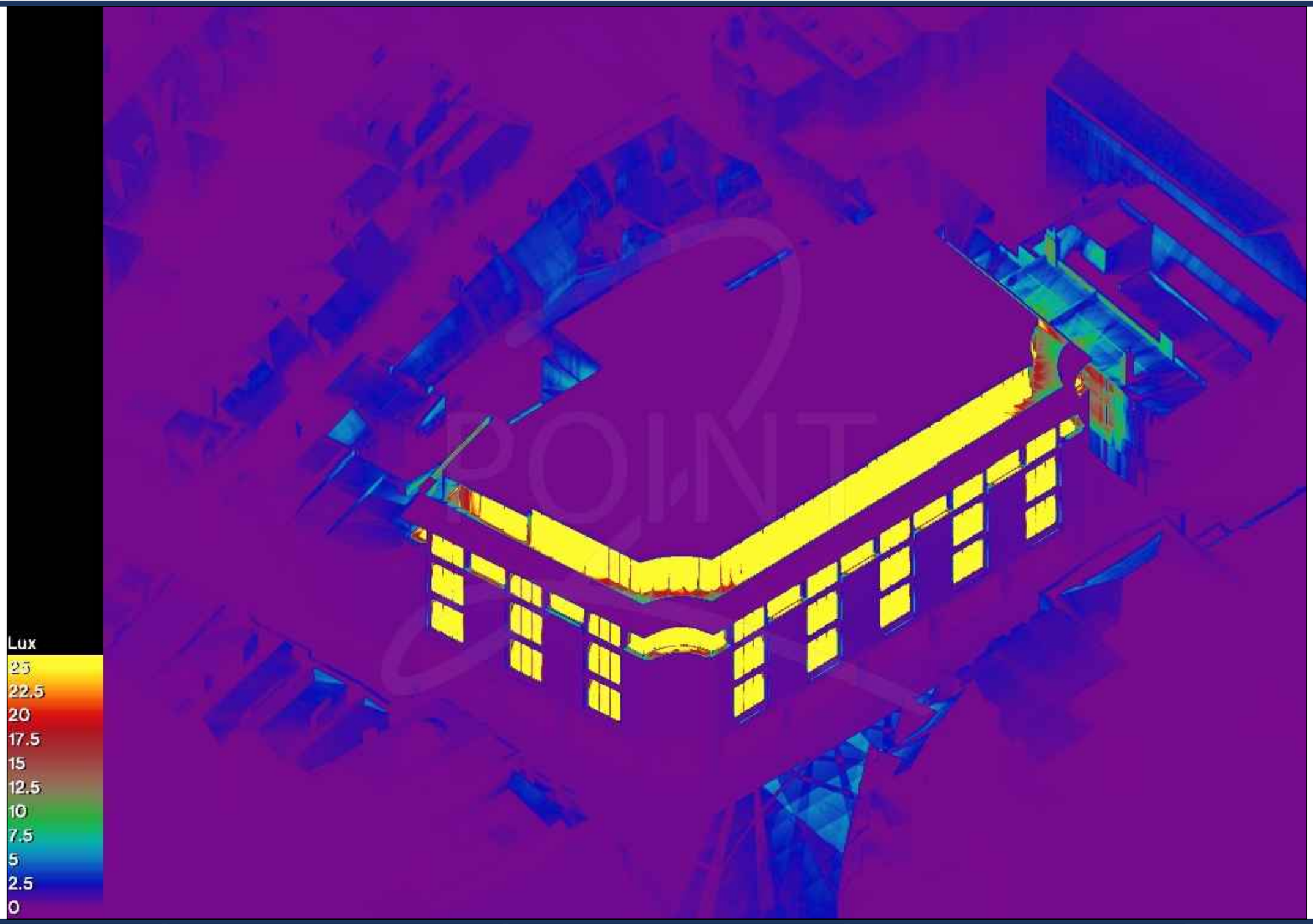


Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

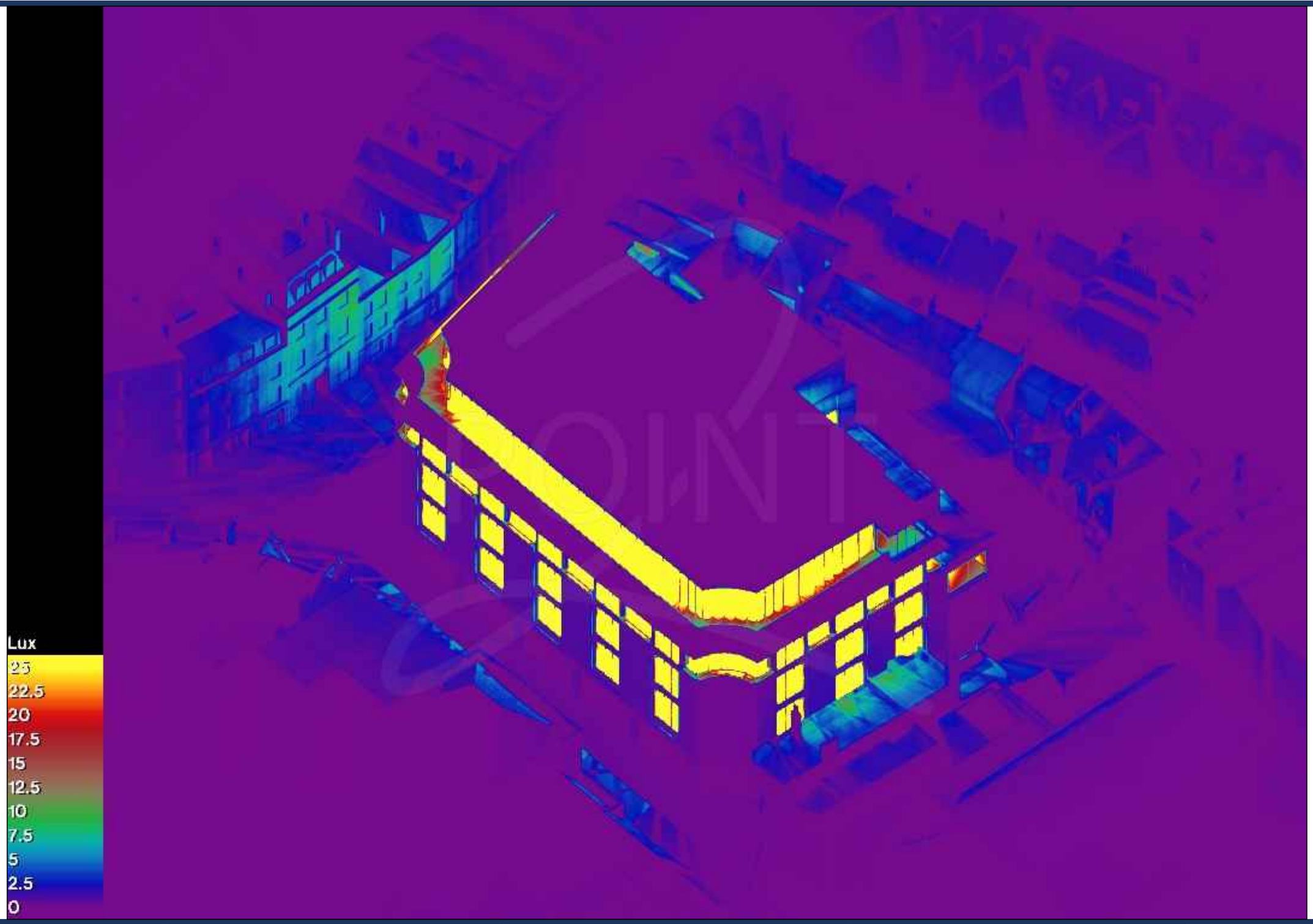
Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: 3d View showing Illuminance

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/06	01



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

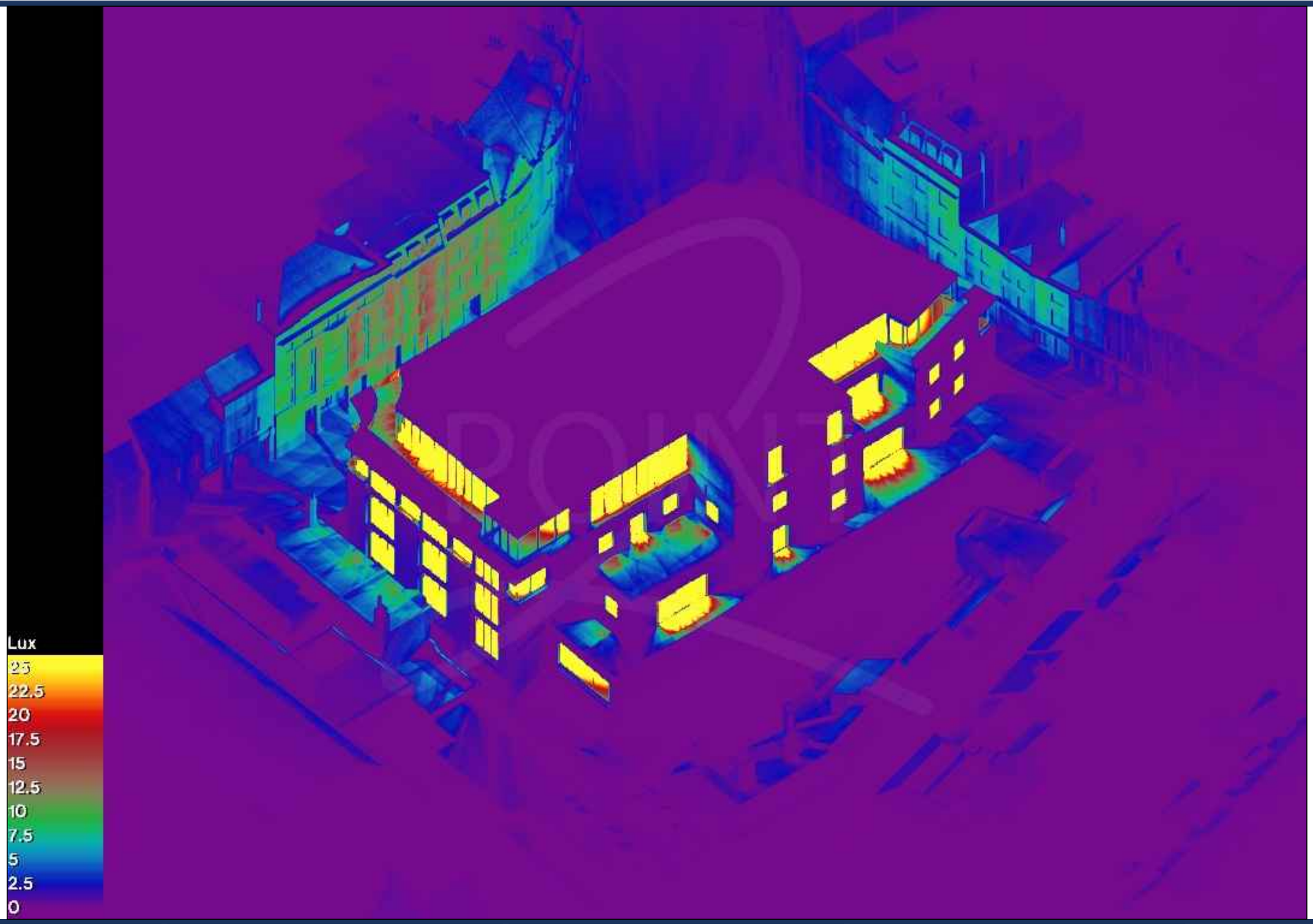
Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: 3d View showing Illuminance

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/07	01



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

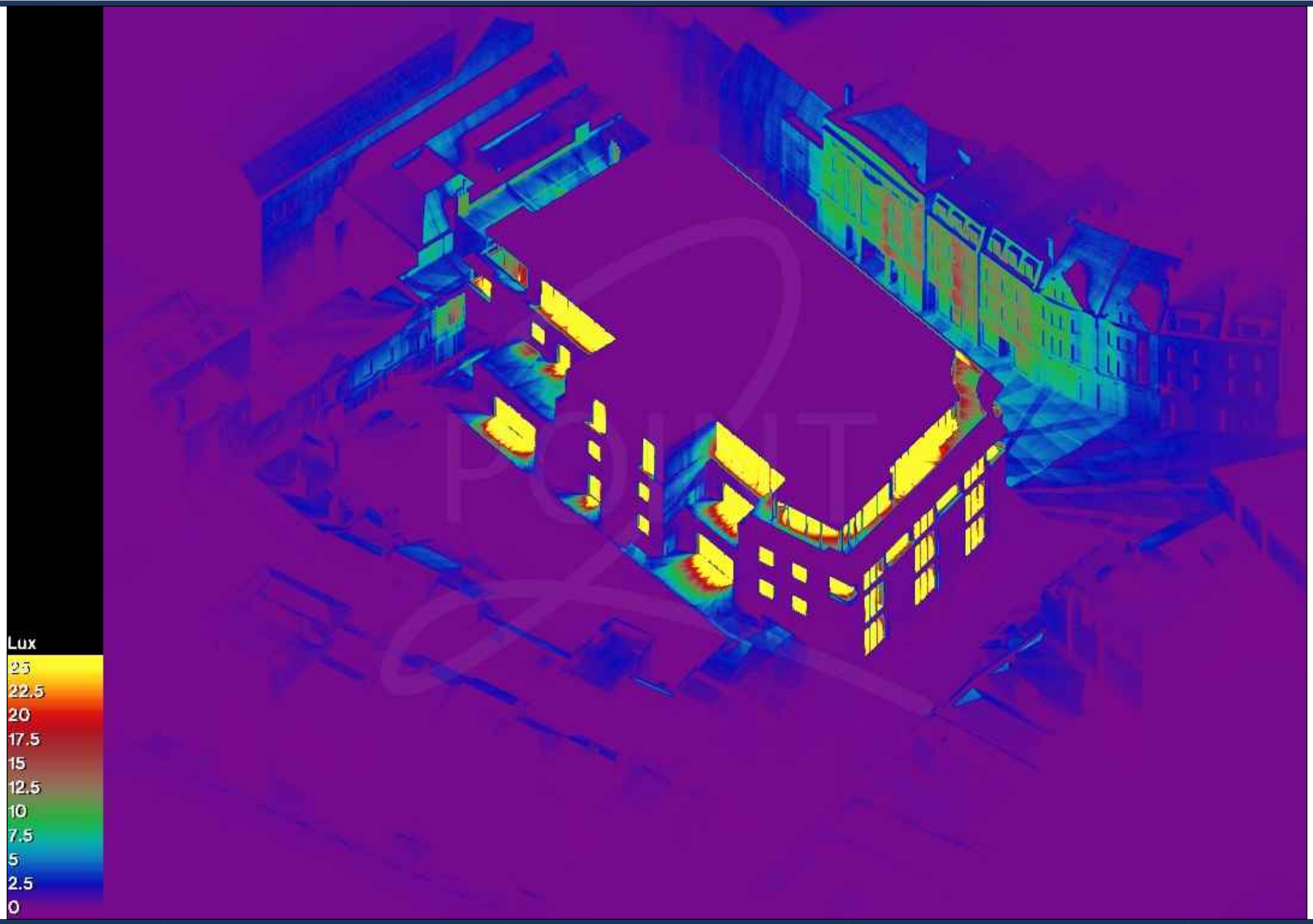
Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: 3d View showing Illuminance

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/08	01



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: 3d View showing Illuminance

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/09	01

Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: Illuminance Distribution on Elevation 1

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/10	01

Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: Illuminance Distribution on Elevation 2

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/11	01

Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

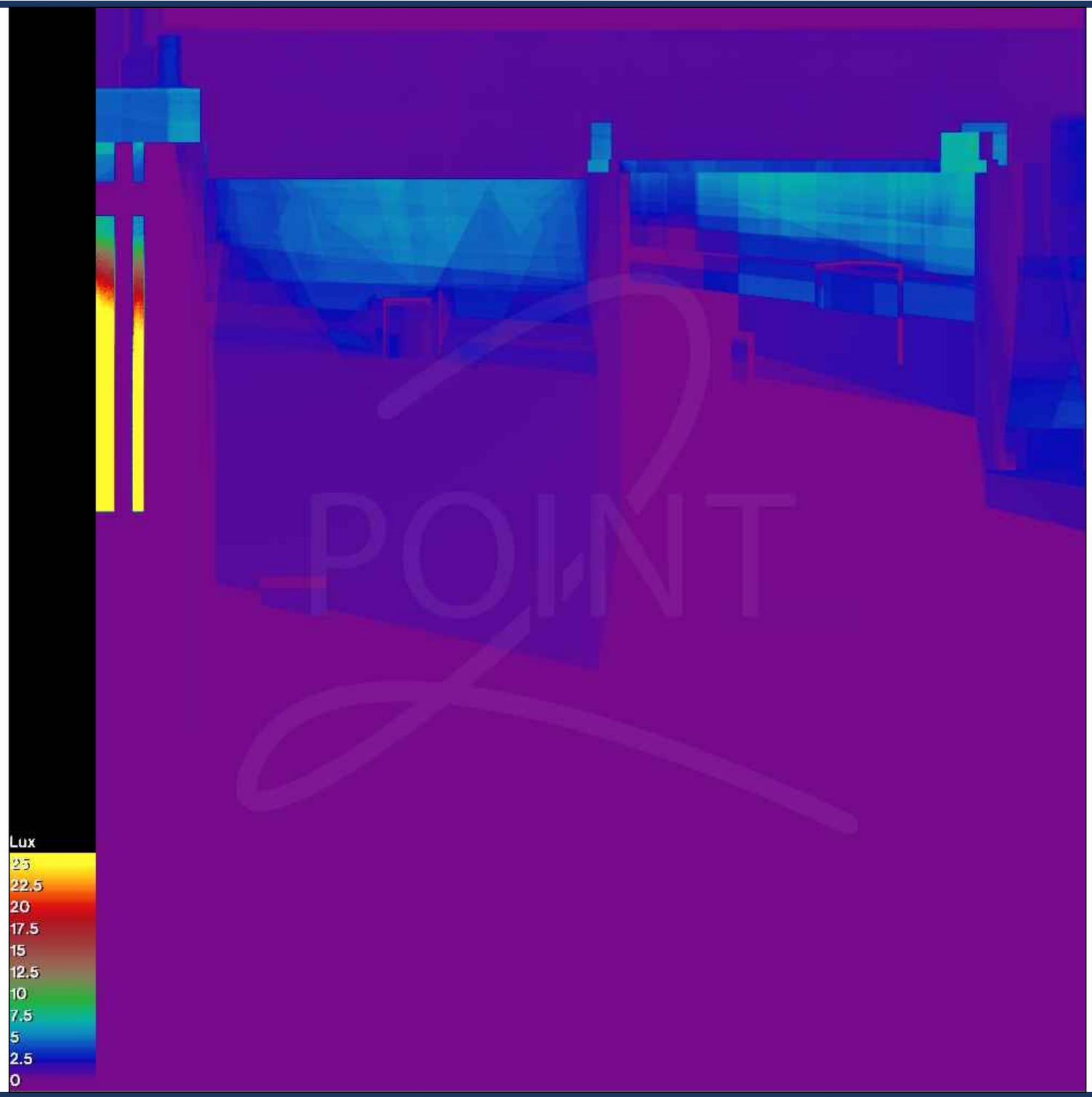
Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: Illuminance Distribution on Elevation 3

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/12	01



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

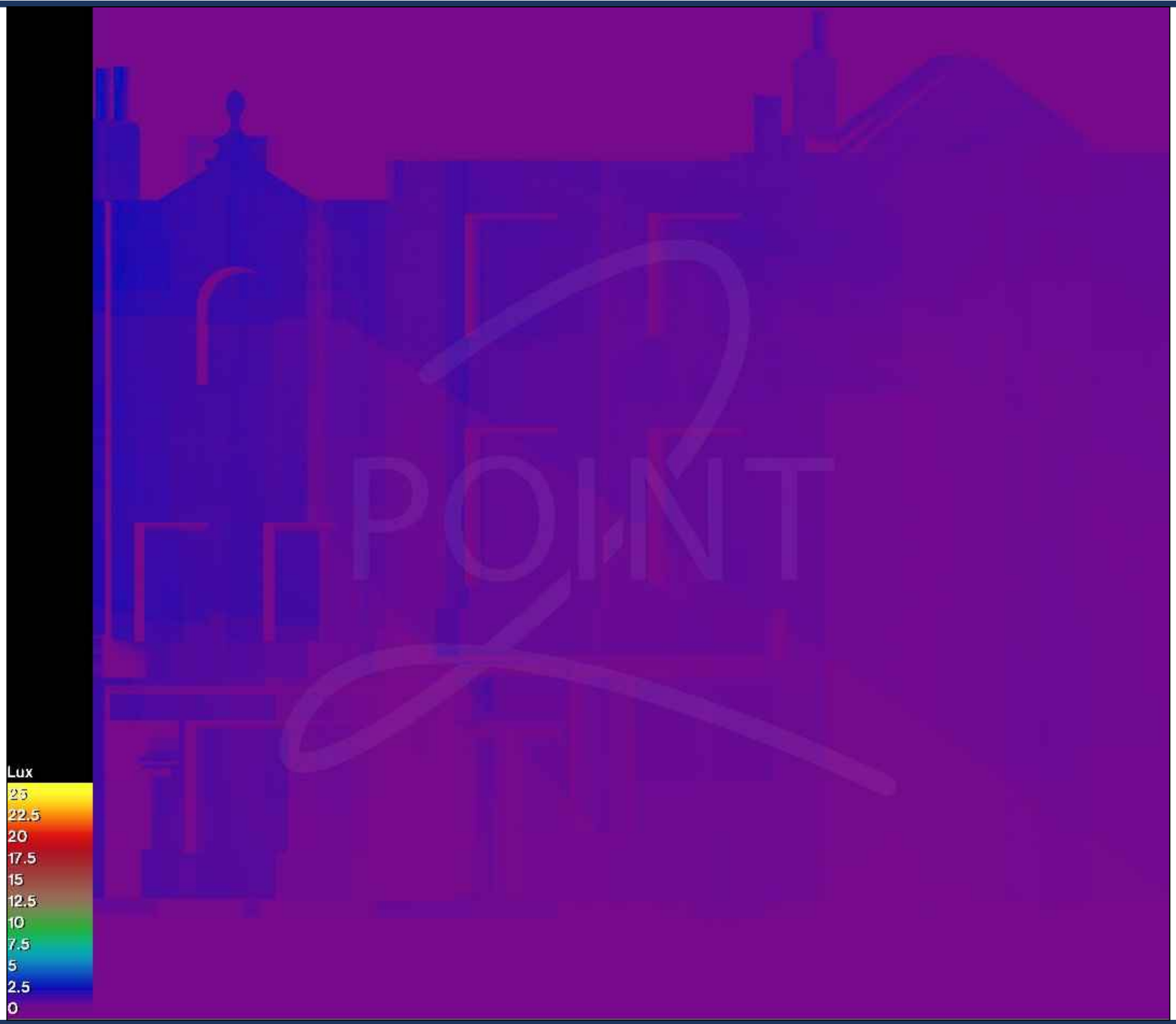
Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: Illuminance Distribution on Elevation 4

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/13	01



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

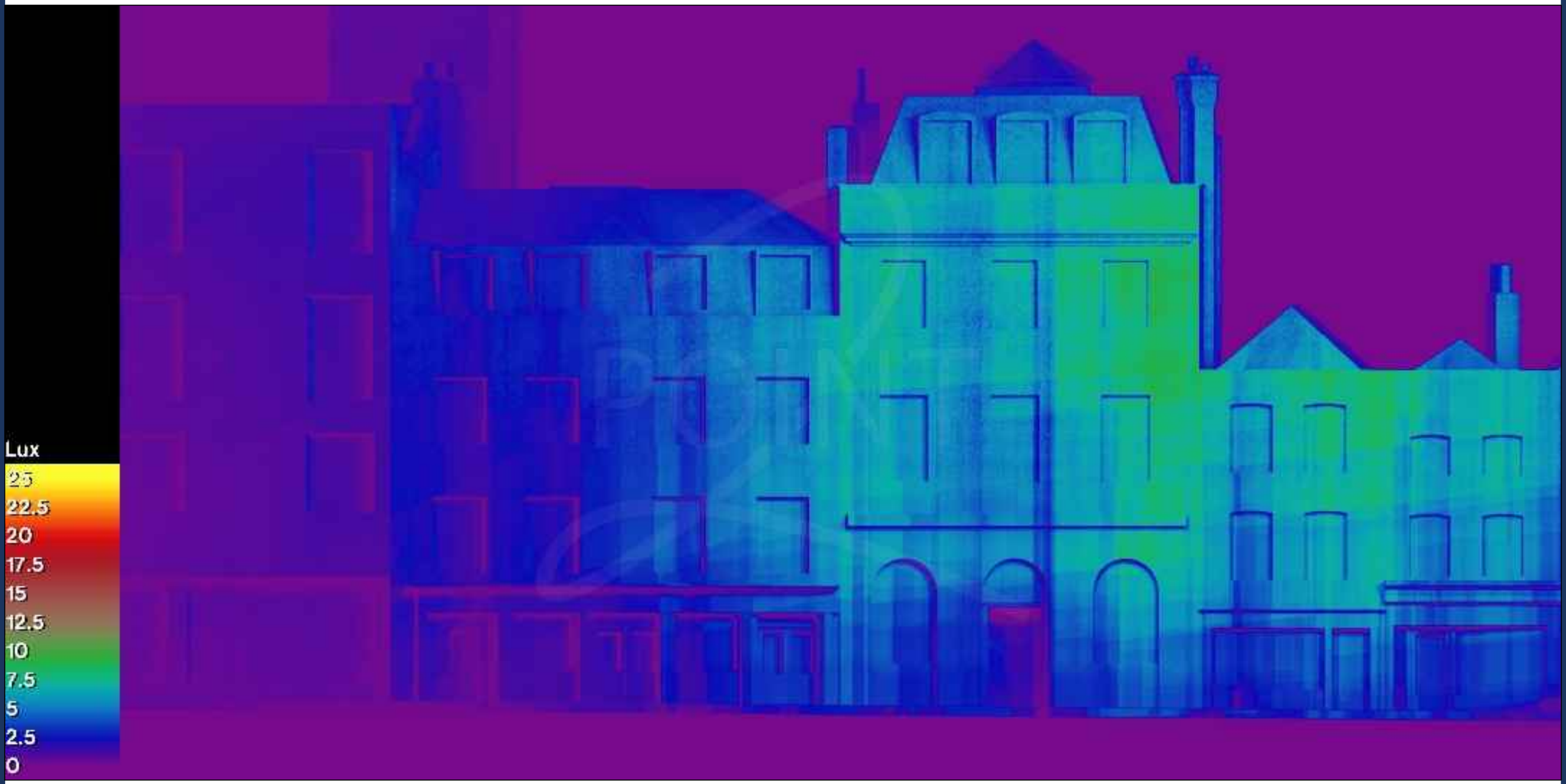
Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: Illuminance Distribution on Elevation 5

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/14	01



Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: Illuminance Distribution on Elevation 6

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/15	01

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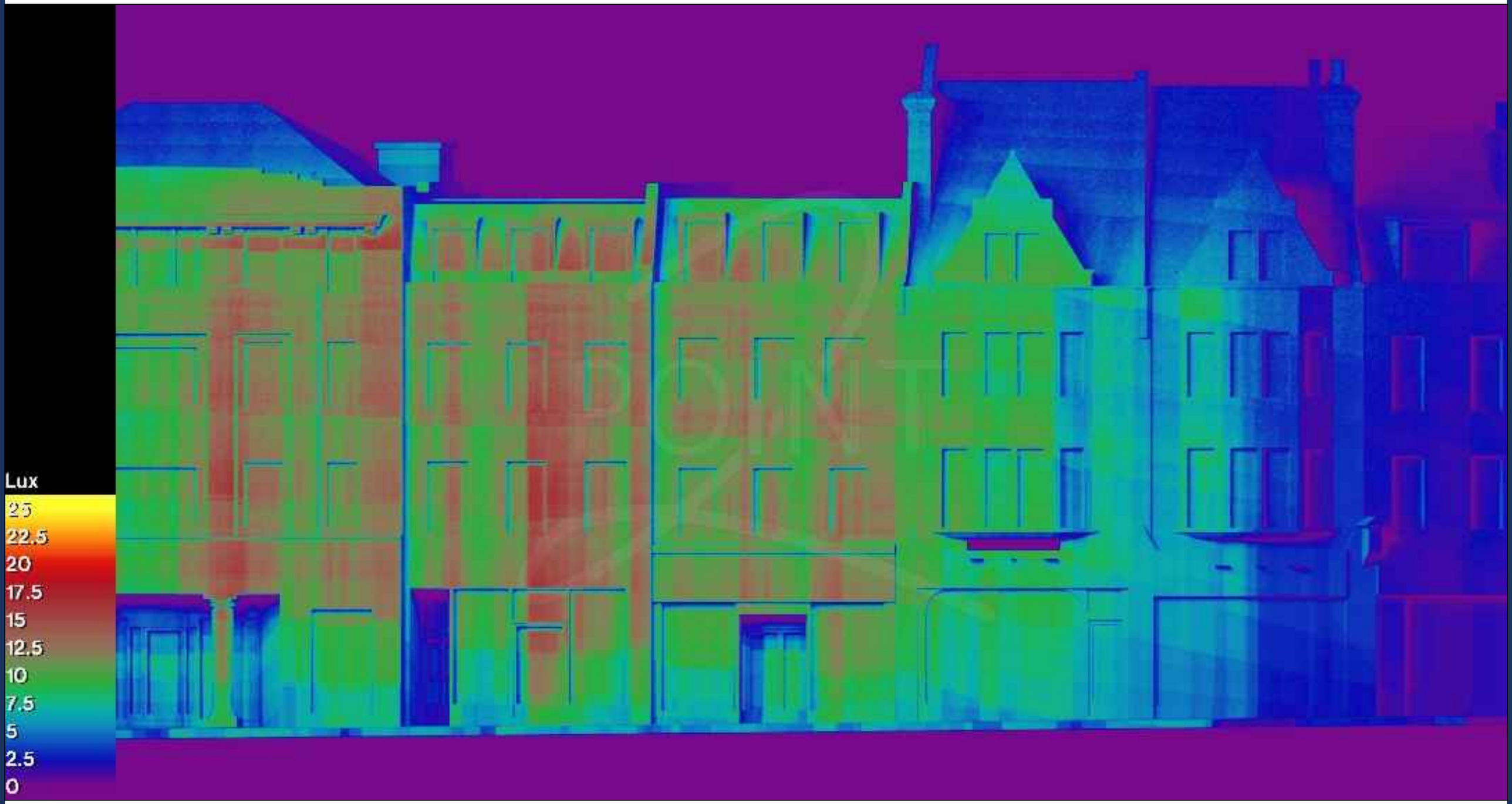

Sources: Colliers International
3d Context Model - 75-81 George Street, Richmond_M01.dwg

Colman Architects
Proposed 3d Model - 80 George Street_RevF.skp

Key:

Project: 75-81 George Street
Richmond
Light Pollution

Title: Illuminance Distribution on Elevation 7

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
-	-	TB	NTS	July 2019	W1206/16	01

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