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BURGHLEY COURT,  
INGESTRE ROAD, CAMDEN

Revised  
Daylight and Sunlight  
Report

*Overshadowing*

• *Daylight & Sunlight* • *Light Pollution* •

*Solar Glare* • *Daylight Design*

DIRECTOR:	LIAM DUNFORD
CLIENT:	MORELANDS ESTATE MANAGEMENT
DATE:	FEBRUARY 2017
VERSION:	V2
PROJECT:	P1106

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## **1 Introduction**

- 1.1 This report relates to the Saunders Partnership Architects Proposed Scheme for the redevelopment of Burghley Court, Ingestre Road, Camden insofar as it affects the daylight and sunlight amenity to the surrounding residential properties. The report will also consider the affects upon the second floor apartments of the existing Burghley Court building.

## **2 Planning Overview**

- 2.1 Through the planning process the local authority will wish to be reassured that the construction of the new scheme will not materially harm the neighbours' daylight and sunlight beyond BRE and British Standard Guidance.
- 2.2 The Local Authority will be informed in this by the BRE document entitled *Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011* (the BRE guidelines). This document is the principal guidance in this area and sets out the methodology for measuring light and recommends what it considers to be permitted or unobtrusive levels of change.
- 2.3 The BRE guidelines are not mandatory, though local planning authorities and planning inspectors will consider the suitability of a proposed scheme for a site within the context of BRE guidance. Consideration will be given to the urban context within which a scheme is located and the daylight and sunlight will be one of a number of planning considerations which the local authority will weigh.

## **3 Methodology**

- 3.1 To quantify the effects of the Proposed Scheme we have constructed a three dimensional computer model of the site and relevant neighbouring properties. We have then undertaken technical analysis to measure the light received by neighbouring properties both before and after the Proposed Scheme is constructed.

### **Daylight**

- 3.2 In accordance with the BRE Guidelines, only residential properties are considered for daylight levels. Living rooms, kitchens and bedrooms are the primary focus of the guideline recommendations.
- 3.3 The initial test proposed by the BRE Guidelines is to establish if the proposed massing subtends above a 25° section line drawn from the centre of the window/room in question. If the angle is breached, it is necessary to undertake more detailed technical calculations such as Vertical Sky Component (VSC) and No Sky Line (NSL).
- 3.4 The Vertical Sky Component (VSC) analysis assesses the amount of sky visibility at the centre of the outside of a window face. The No Sky Line (NSL) analysis assesses the extent of the area of a room which can benefit from sky visibility at working plane height (850mm). These measurements are taken both before and after the construction of the proposed development.
- 3.5 The BRE Guidelines permit a reduction of up to 20% of the existing VSC values in situations where the retained VSC value falls below 27%, which is the BRE recommended VSC level for adequate daylight amenity in a suburban environment. The 20% maximum recommended



reduction is based upon the BRE stating that a change up to this extent would remain unnoticeable. The 20% reduction recommendation is also applicable to the NSL values.

### **Sunlight**

3.6 Sunlight is measured using a sun indicator which contains 100 spots, each representing 1% of Annual Probable Sunlight Hours (APSH). Where no obstruction exists the total Annual Probable Sunlight Hours would amount to 1486 hours and therefore each spot equates to 14.86 hours of the total annual sunlight hours.

3.7 British Standard 8206 part 2 (section 5.3) states that:

*“Interiors in which the occupants have a reasonable expectation of direct sunlight should receive at least 25% of probable sunlight hours. At least 5% of probable sunlight hours should be received during the winter months, between 21 September and 21 March. Sunlight is taken to enter an interior when it reaches one or more window reference points.”*

3.8 When a room has multiple windows, not all may be located southwards and, therefore, they may not meet the target criteria. However, these windows may contribute to the levels of sunlight within the room even if by 1-2% APSH. On this basis the analysis results within this report are presented on a room basis. This is calculated by giving a unique reference to each of the sun spots and totalling the number of unique spots the windows within a room receive for the year and during the winter period. If two windows can see the same sun spot, then this will be counted as one to avoid double counting.

3.9 Only residential properties that face within 90° of due south are taken into account for sunlight analysis, the BRE Guidelines considers that sunlight to main living room windows as the most important.

3.10 For existing residential properties, the BRE Guidelines state in Section 3.2.3 that:

*“all main living rooms of dwellings...should be checked if they have a window facing within 90° of due south, kitchens and bedrooms are less important, although care should be taken not to block too much sun.”*

### **Internal Daylight Amenity - Average Daylight Factor (ADF) Analysis**

3.11 In assessing the daylight to the main habitable spaces within the proposed accommodation, as recommended by the guidelines, we have calculated the ADF. With reference to BS8206 Part 2:2008 and Appendix C of the BRE Report, in calculating the values, we have assumed light internal finishes giving the following reflectances: floors 0.4 (light wood or cream carpet), ceilings 0.85 (white paint), internal walls 0.81 (pale cream paint). We have assumed double glazing with a transmittance of 0.68, and have allowed for a maintenance factor of 8% (appropriate for urban residential properties).

3.12 This daylight assessment method considers the transmittance of the glazing to the room in question (i.e. how much light gets through the window glass); the net glazed area of the window in question; the total area of the room surfaces (ceiling, walls, floor and windows) and their reflectances; and the angle of visible sky reaching the window/windows in question.



3.13 The BRE guidelines / British Standard sets the following recommended ADF levels for habitable room uses:

- 1% Bedroom
- 1.5% Living Room
- 2.0% Kitchens

## 4 Sources of Information

Point 2 Surveyors	-	Site Photos
Point 2 Surveyors	-	3D Laser Scan Survey
Ordnance Survey Ltd	-	Digital O/S Extract
Saunders Partnership Architects	-	Proposed Scheme Drawings 7659_INGESTRE ROAD_Existing.dwg 7659_IngestreRoad_PROPOSED.dwg

## 5 Standard Survey Limitations

Although we have undertaken as detailed an inspection as possible, we are required by our professional indemnity insurers to notify you that our report is based upon the Standard Terms and Conditions provided along with our fee proposal. Our understanding of the existing massing, including the surrounding context was established from a site visit and aerial photography.

In addition to our standard limitations the following limitations and assumptions also apply.

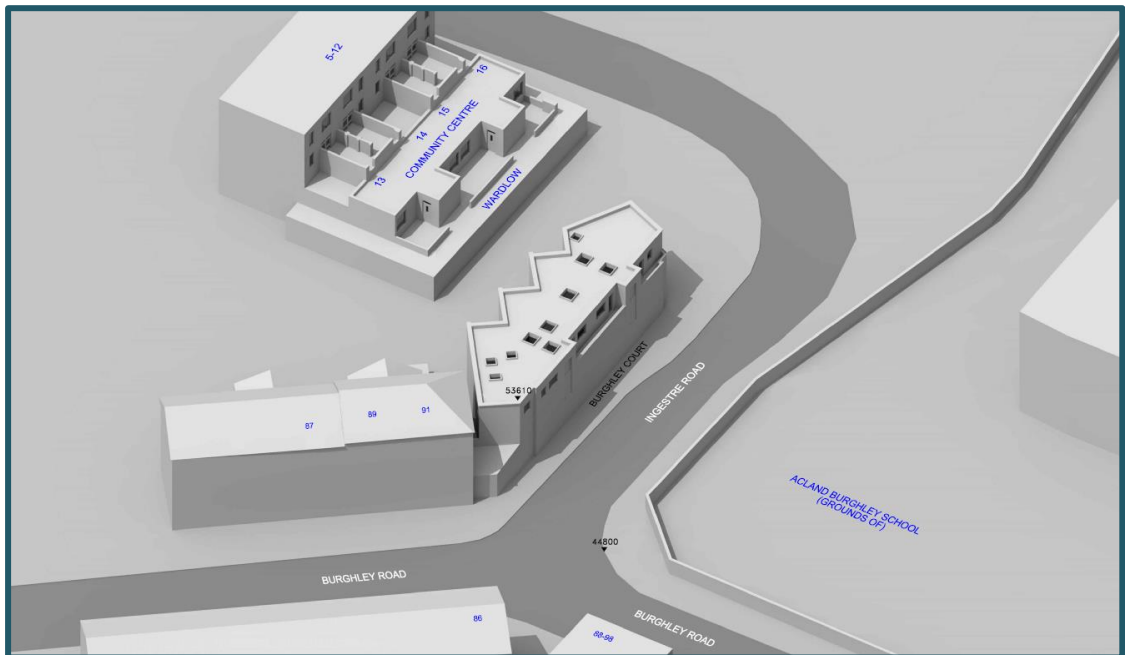
- Best estimates were made in establishing building use (residential or commercial) and room uses; generally, these were made from external observations and recourse to planning records where available.
- When floor plans of surrounding properties were not available, room depths have been assumed from external observations. Where no indicators of room depth were available a standard of 4m, 6m or 8m depths have been used.
- In accordance with BRE Guidelines<sup>1</sup> balconies, where present have been removed from calculations.

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<sup>1</sup> BRE Guideline 209 Site Layout & Planning A Guide to Good Practice (2011) Paragraph 2.2.11

## 6 The Site

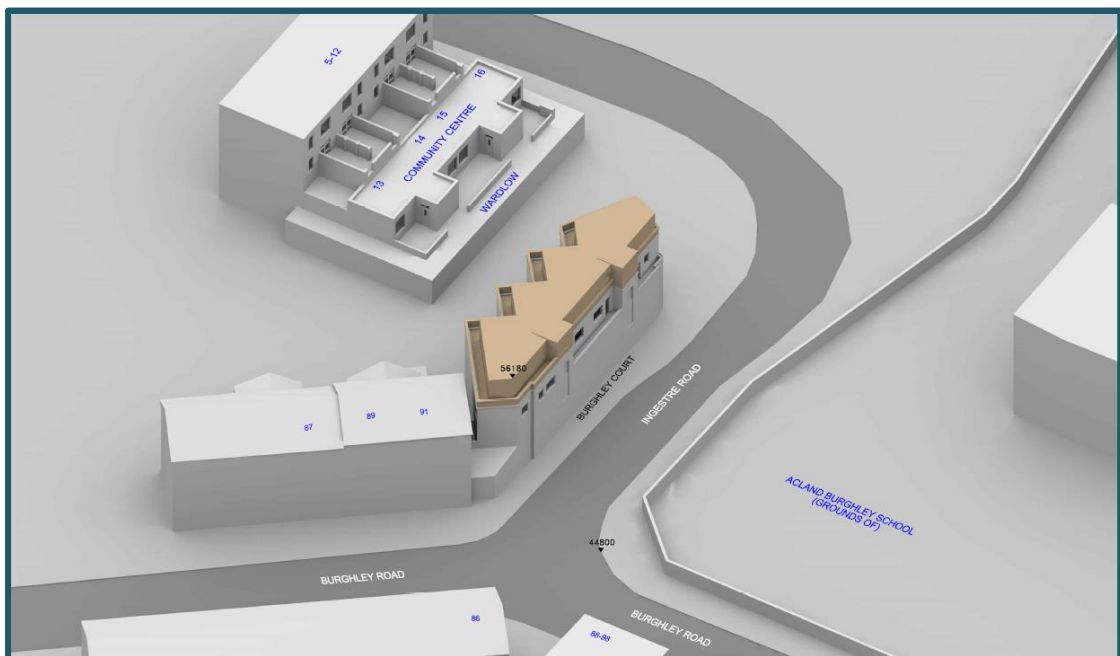
6.1 The site is located in the London Borough of Camden.



Drawing Number: P1106/09 3D View Existing Building

6.2 Our understanding of the site location and existing building that occupies the site can be seen within drawings P1106/9-11 and can be found within Appendix A.

## 7 The Proposed Scheme



Drawing Number: P1106/18 – 3D Drawing – Proposed Extension

7.1 Our understanding of the proposed scheme is illustrated in drawings P1106/17-19 located within Appendix A.

## 8 The Surrounding Properties

8.1 The following surrounding properties contain residential accommodation and, due to their proximity to the development site, have been assessed in terms of the effects of the proposed development upon their daylight and sunlight amenity:

- |                               |                          |
|-------------------------------|--------------------------|
| - Burghley Court Second Floor | - 91 Burghley Road       |
| - 88-98 Burghley Road         | - 87 Burghley Road       |
| - 86 Burghley Road            | - 5-12 and 13-16 Wardlow |

8.2 The location of these properties can be seen in the drawings within Appendix A.

8.3 Detailed results for each window/room assessed can be found in Appendix B and are summarised below.

### **Second Floor, Burghley Court**

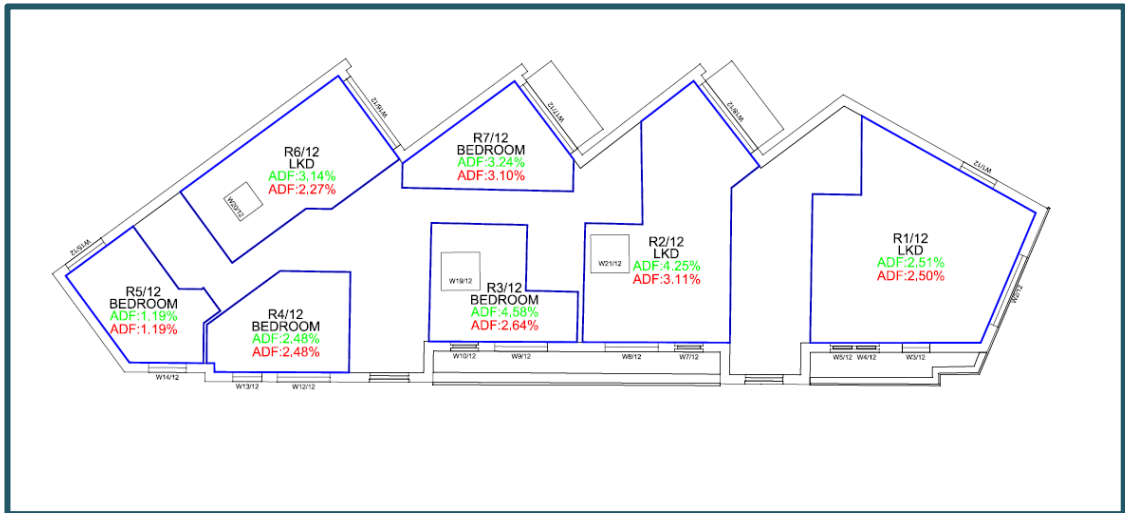
8.4 The second floor of the existing building is comprised of three residential units and communal areas. BRE Guidance provides “...*living rooms, kitchens and bedrooms.*” are material for assessment whilst “...*bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.*” (BRE para 2.2.2). A survey of the roof plan shows there are 10 existing roof lights. We note 7 of these roof lights serve non-habitable space and therefore not material for assessment.

8.5 The remaining three roof lights serve 2 x Living/Kitchen/Dining Rooms and one bedroom. It is normal practice to assess the level of change using the VSC methodology. We cannot, however, use VSC under this situation as a skylight provides an absolute VSC value over 99%, whereas a typical window will provide a maximum VSC of 39%, and therefore creates an unrealistic baseline scenario.

8.6 It is considered Daylight Distribution (NSL) and Average Daylight Factor (ADF) will provide a comparable conclusion, insofar that the change when considering daylight distribution is not noticeable, with a maximum reduction of 2.3%. BRE Guidance provides that only changes in excess of 20% will be noticeable.

8.7 Turning to ADF, the below drawing identifies that each room material for assessment continues to enjoy good levels of daylight after construction of the proposed roof extension. LKDs should ideally be achieving 1.5%-2% ADF, whilst the bedroom should achieve 1%. The ADFs for these rooms all remain over 2.27%. In accordance with British Standard these rooms will “...*have a predominantly daylit appearance.*” (BS 8206-2:2008 para 5.5)





Drawing Reference: P1106/16 – Appendix A

### 88-98 Burghley Road

- 8.8 Located to the south east of the development site this property appears, from external observation and review of the local council tax registry, to contain residential accommodation.

#### *Daylight*

- 8.9 There are 8 windows serving 8 site facing rooms. All windows and associated rooms experience fully BRE compliant alterations in both VSC and NSL; the greatest alteration in VSC being 0.95%.
- 8.10 BRE guidance provides that reductions up to 20% will be unnoticeable.

#### *Sunlight*

- 8.11 All rooms with site facing windows orientated within 90 degrees due south are fully BRE compliant in terms of any alteration in Annual and Winter Probable Sunlight Hours.
- 8.12 In accord with BRE guidance, the occupants will not notice a change in sunlight amenity.

### 86 Burghley Road

- 8.13 Located to the south east of the development site this property appears, from external observation and review of the local council tax registry, to contain residential accommodation.

#### *Daylight*

- 8.14 There are 9 windows serving 5 site facing rooms. All windows and associated rooms experience fully BRE compliant alterations in both VSC and NSL; the greatest alteration in VSC being 1.33%.
- 8.15 BRE guidance provides that reductions up to 20% will be unnoticeable.

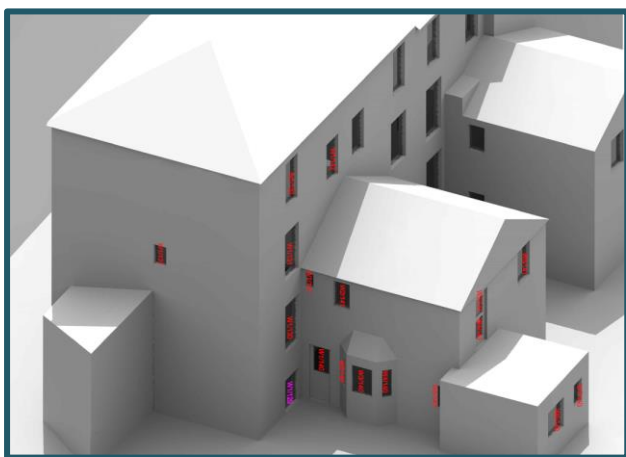


### ***Sunlight***

- 8.16 All rooms with site facing windows orientated within 90 degrees due south are fully BRE compliant in terms of any alteration in Annual and Winter Probable Sunlight Hours.
- 8.17 In accord with BRE guidance, the occupants will not notice a change in sunlight amenity.

### **91 Burghley Road**

- 8.18 Located directly to the south of the development site this property is residential. We copy below a window map of the site facing elevation for ease of reference.



- 8.19 All site facing windows experience fully BRE compliant alterations in VSC; the greatest alteration reduction being 16.51%.
- 8.20 BRE guidance provides reductions up to 20% will be unnoticeable.

### ***Sunlight***

- 8.21 All rooms with site facing windows are not oriented within 90 degrees due south and therefore not material for assessment.

### **89 Burghley Road**

- 8.22 Located to the south of the development site this property appears, from external observation and review of the local council tax registry, to contain residential accommodation.

### ***Daylight***

- 8.23 There are 6 windows serving 6 site facing rooms. All windows and associated rooms experience fully BRE compliant alterations in both VSC and NSL; the greatest alteration in VSC being 1.80%.
- 8.24 BRE guidance provides that reductions up to 20% will be unnoticeable.

### ***Sunlight***

- 8.25 All rooms with site facing windows orientated within 90 degrees due south are fully BRE compliant in terms of any alteration in Annual and Winter Probable Sunlight Hours.
- 8.26 In accord with BRE guidance, the occupants will not notice a change in sunlight amenity.

### **87 Burghley Road**

- 8.27 Located to the south of the development site this property appears, from external observation and review of the local council tax registry, to contain residential accommodation.

### ***Daylight***

- 8.28 There are 8 windows serving 8 site facing rooms. All windows and associated rooms experience fully BRE compliant alterations in both VSC and NSL; the greatest alteration in VSC being 4.77%.
- 8.29 BRE guidance provides that reductions up to 20% will be unnoticeable.

### ***Sunlight***

- 8.30 All rooms with site facing windows orientated within 90 degrees due south are fully BRE compliant in terms of any alteration in Annual and Winter Probable Sunlight Hours.
- 8.31 In accord with BRE guidance, the occupants will not notice a change in sunlight amenity.

### **5-12 and 13-16 Wardlow**

- 8.32 Located to the west of the development site this property contains residential accommodation.

### ***Daylight***

- 8.33 There are 48 site facing windows assumed to serve 20 rooms. All windows experience fully BRE compliant alterations in VSC; the greatest alteration being 6.70%.
- 8.34 BRE Guidance provides reductions up to 20% will be unnoticeable.

### ***Sunlight***

- 8.35 All rooms with site facing windows are not orientated within 90 degrees due south and therefore not material for assessment in accordance with BRE guidance.



## 9 Conclusion

### *Daylight to Surrounding Residential Properties*

- 9.1 Full technical analysis indicates the scheme demonstrates an exceptional level of compliance with BRE guidelines. All site facing windows within surrounding properties experience fully BRE compliant alteration in VSC which BRE stipulates will be unnoticeable.
- 9.2 In relation to the existing Burghley Court building, we have considered whether the habitable rooms served by existing roof lights will continue to receive good levels of daylight after construction of the proposed roof extension. Technical ADF analysis confirms these rooms will continue to receive levels of Average Daylight Factor better than the BRE suggested target value for their given room use. The rooms will remain predominantly daylit. Furthermore, consideration of daylight distribution notes the change in the No Sky Line will be unnoticeable.

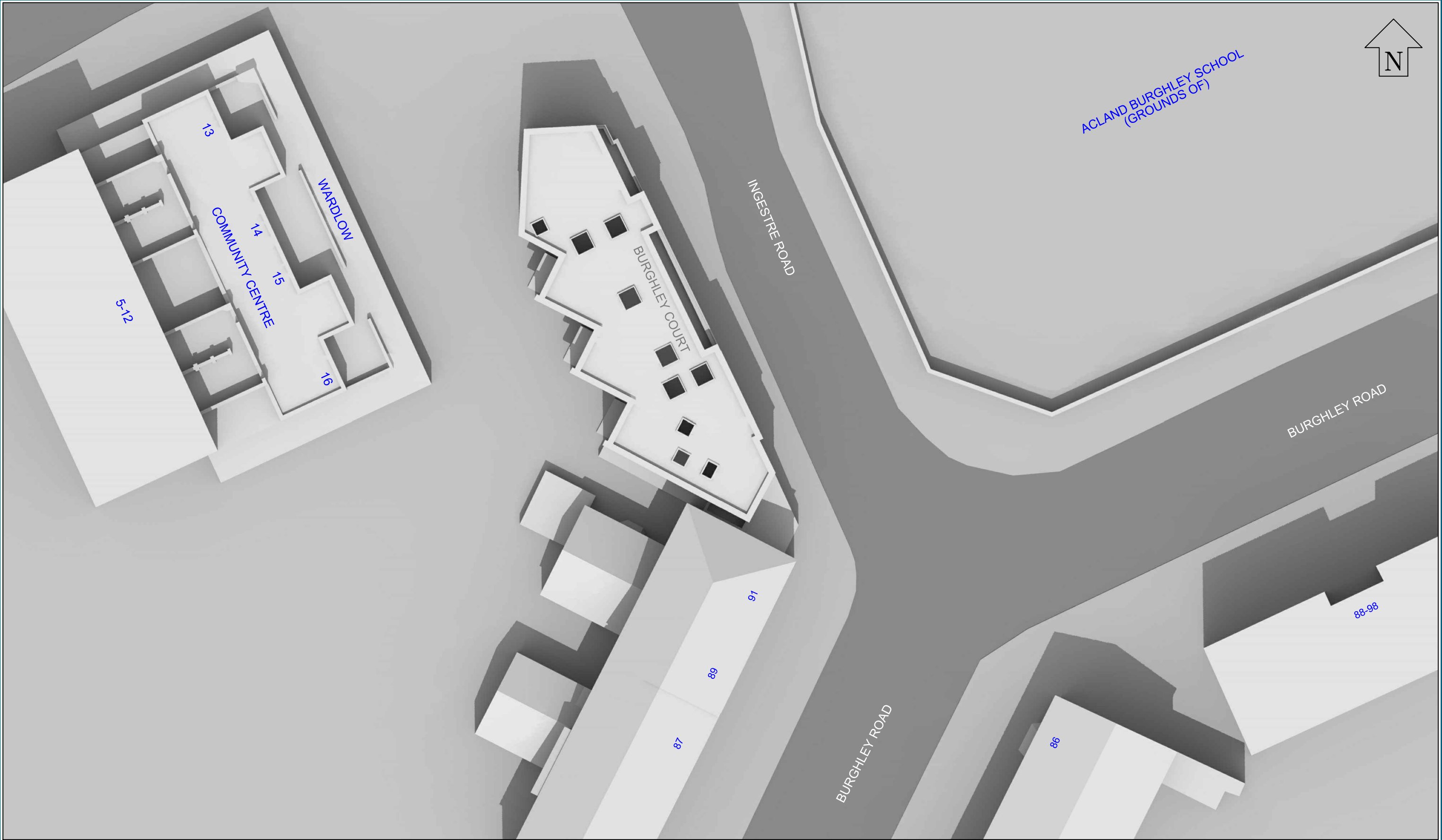
### *Sunlight to Surrounding Residential Properties*

- 9.3 Full technical analysis indicates that all residential properties experience alterations in APSH well-within keeping of the BRE recommendations., meaning the occupants will not notice a change in their existing levels of sunlight.
- 9.4 The proposed scheme demonstrates full compliance with BRE guidance in terms of sunlight amenity.

We fully support this planning application in terms of daylight and sunlight amenity.



## Appendix A – Drawings



Sources: Point2 Surveyors  
3D Laser Scan Survey

BCA Architects  
Original planning drawings for Burghley Court  
SO/0471/PL101 to 107

Saunders Partnership Architects  
7659\_INGESTRE ROAD\_Existing.dwg  
7659\_IngestreRoad\_PROPOSED.dwg

Key: Existing Buildings  
Proposed Scheme

Project: Burghley Court  
Ingestre Road  
Camden  
London

Title: Plan View  
As Existing

Point 2 Surveyors Ltd,  
3rd Floor,  
17 Slingsby Place,  
London WC2E 9AB  
0207 836 5828  
www.point2surveyors.com

Scheme Confirmed: -

Date : -

Drawn By: JB

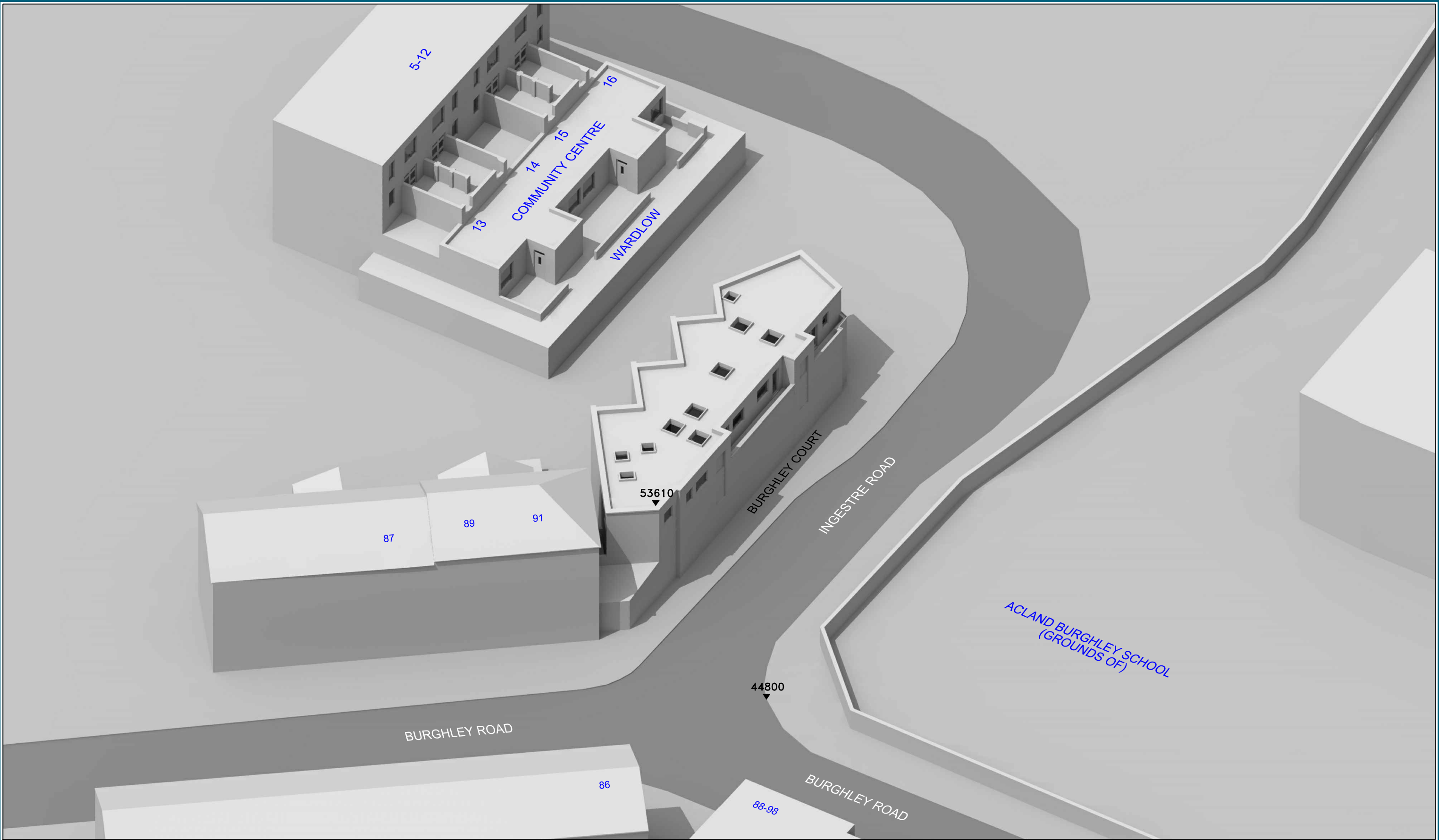
Scale: 1:250 @ A3

Date: FEB 17

Dwg No: **P1106/09**

Rel: 004





Sources: Point2 Surveyors  
3D Laser Scan Survey

BCA Architects  
Original planning drawings for Burghley Court  
SO/0471/PL101 to 107

Saunders Partnership Architects  
7659\_INGESTRE ROAD\_Existing.dwg  
7659\_IngestreRoad\_PROPOSED.dwg

Key: Existing Buildings  
Proposed Scheme  
All Heights in mm AOD

Project: Burghley Court  
Ingestre Road  
Camden  
London

Title: 3D View  
As Existing

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London WC2E 9AB  
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Scheme Confirmed: -

Date : -

Drawn By: JB

Scale: NTS @ A3

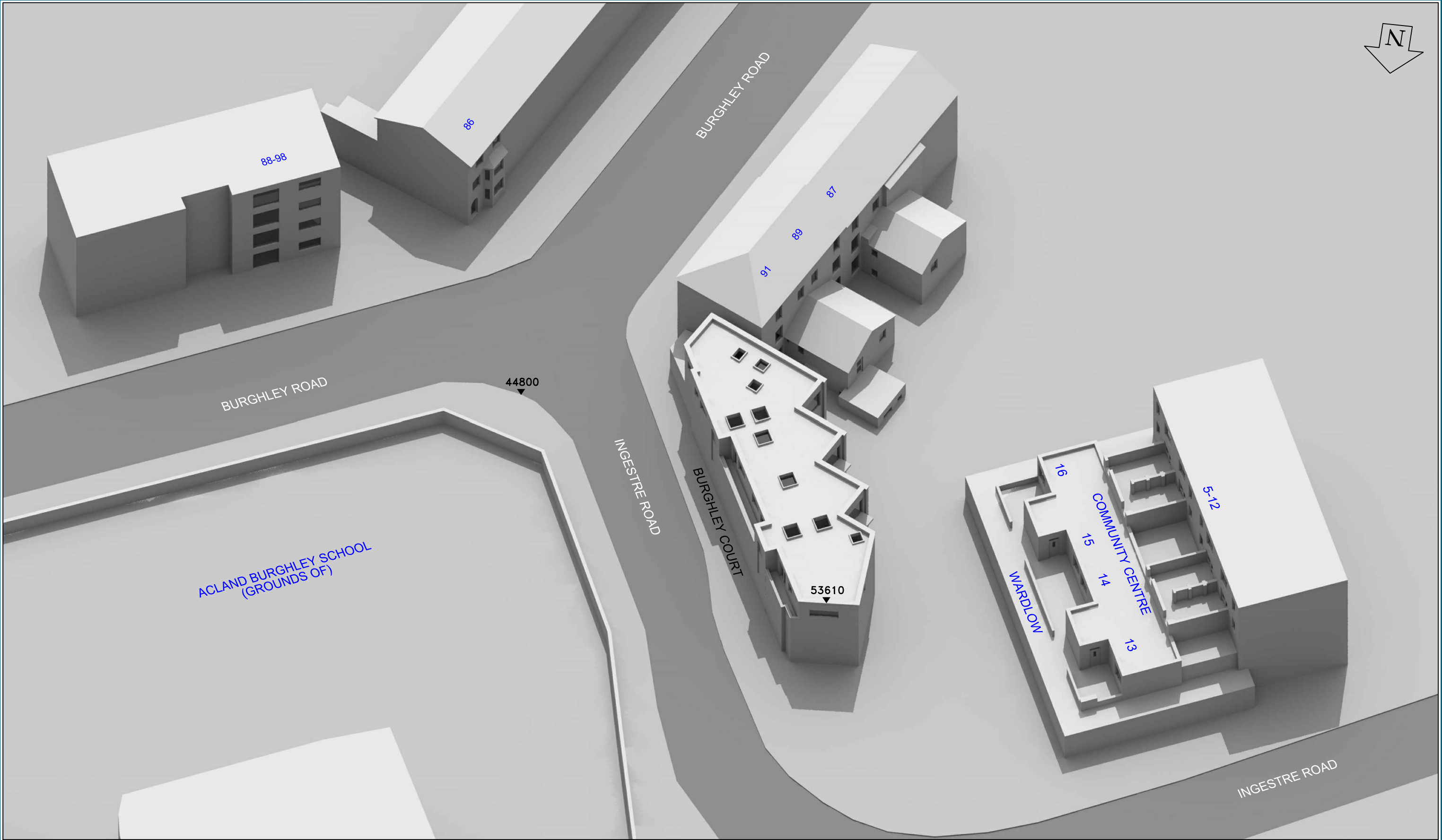
Date: FEB 17

Dwg No: P1106/10

Rel: 004







Sources: Point2 Surveyors  
3D Laser Scan Survey

BCA Architects  
Original planning drawings for Burghley Court  
SO/0471/PL101 to 107

Saunders Partnership Architects  
7659\_INGESTRE ROAD\_Existing.dwg  
7659\_IngestreRoad\_PROPOSED.dwg

Key: Existing Buildings  
Proposed Scheme  
All Heights in mm AOD

Project: Burghley Court  
Ingestre Road  
Camden  
London

Title: 3D View  
As Existing

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Scheme Confirmed: -

Date : -

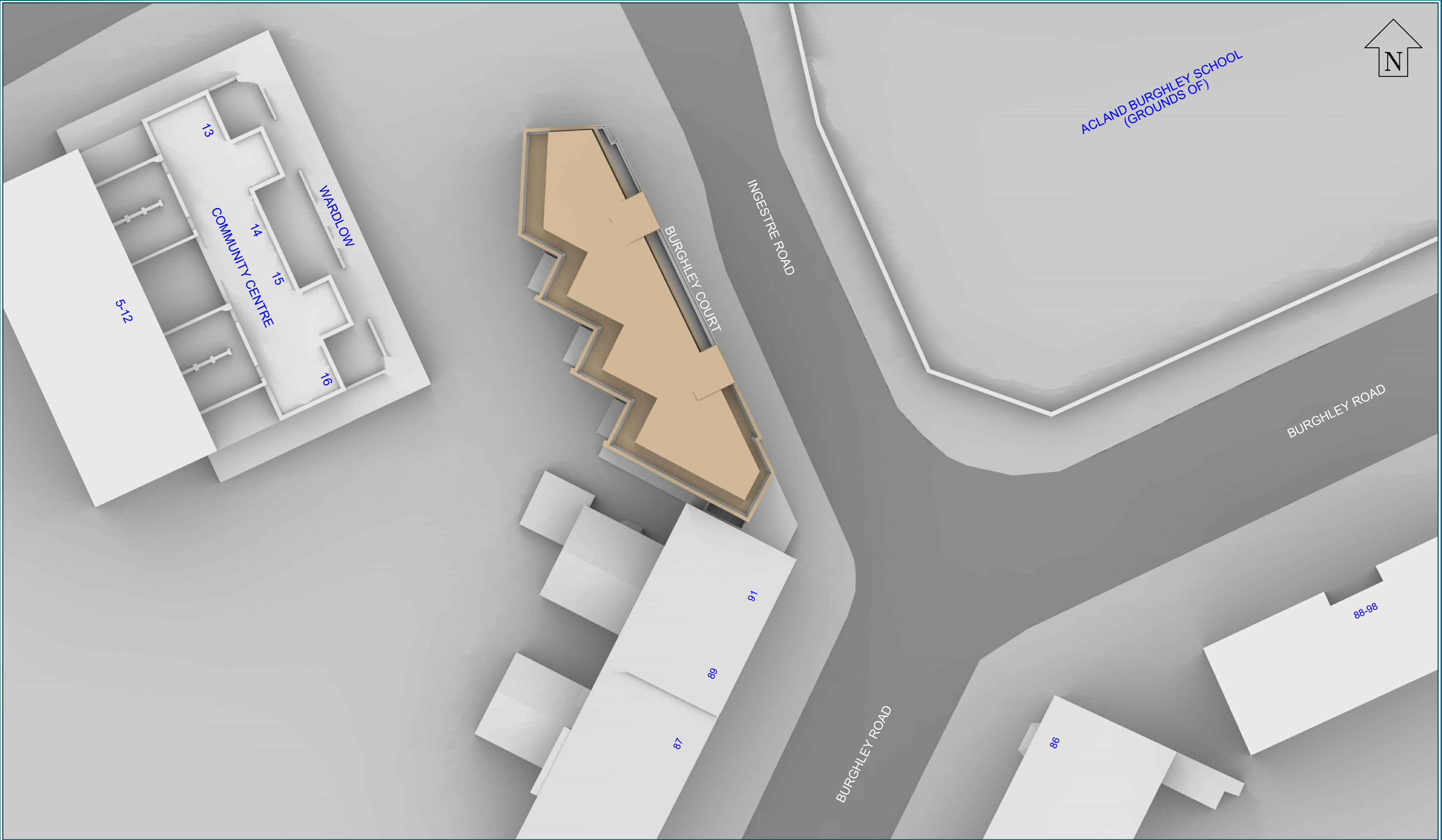
Drawn By: JB

Scale: NTS @ A3

Date: FEB 17

Dwg No: P1106/11

Rel: 004



Sources: Point2 Surveyors  
3D Laser Scan Survey

BCA Architects  
Original planning drawings for Burghley Court  
SO/0471/PL101 to 107

Saunders Partnership Architects  
7659\_INGESTRE ROAD\_Existing.dwg  
7659\_IngestreRoad\_PROPOSED.dwg

Key: — Existing Buildings  
— Proposed Scheme

Project: Burghley Court  
Ingestre Road  
Camden  
London

Title: Plan View  
Proposed Scheme 20/02/17

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Scheme Confirmed: -

Date : -

Drawn By: JB

Scale: 1:250 @ A3

Date: FEB 17

Dwg No: **P1106/17**

Rel: 004





Sources: Point2 Surveyors  
3D Laser Scan Survey

BCA Architects  
Original planning drawings for Burghley Court  
SO/0471/PL101 to 107

Saunders Partnership Architects  
7659\_INGESTRE ROAD\_Existing.dwg  
7659\_IngestreRoad\_PROPOSED.dwg

Key: — Existing Buildings  
— Proposed Scheme  
All Heights in mm AOD

Project: Burghley Court  
Ingestre Road  
Camden  
London

Title: 3D View  
Proposed Scheme 20/02/17

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Scheme Confirmed: -

Date : -

Drawn By: JB

Scale: NTS @ A3

Date: FEB 17

Dwg No: **P1106/18**

Rel: 004



Sources: Point2 Surveyors  
3D Laser Scan Survey

BCA Architects  
Original planning drawings for Burghley Court  
SO/0471/PL101 to 107

Saunders Partnership Architects  
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Key: Existing Buildings  
Proposed Scheme  
All Heights in mm AOD

Project: Burghley Court  
Ingestre Road  
Camden  
London

Title: 3D View  
Proposed Scheme 20/02/17

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Scheme Confirmed: -

Date : -

Drawn By: JB

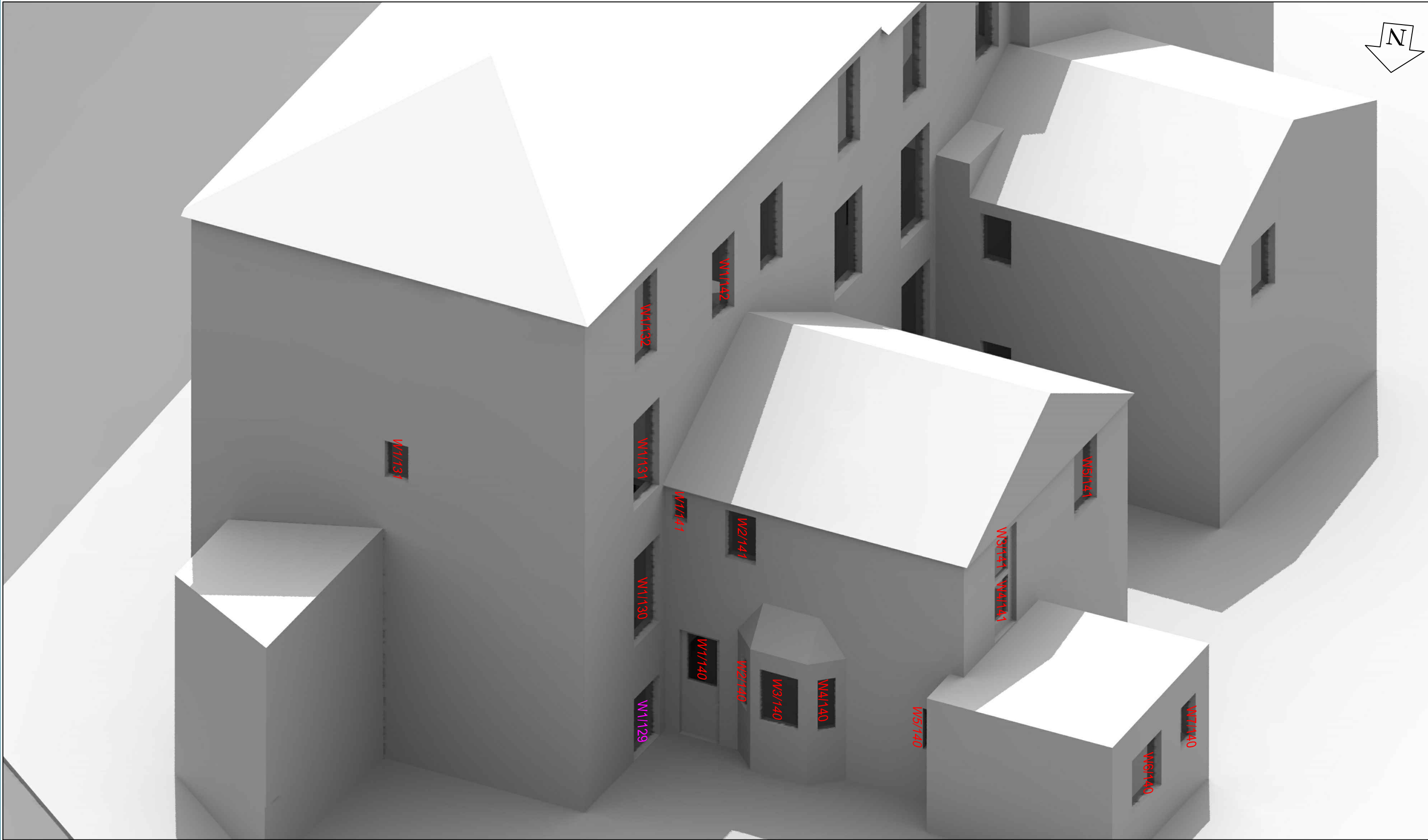
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Date: FEB 17

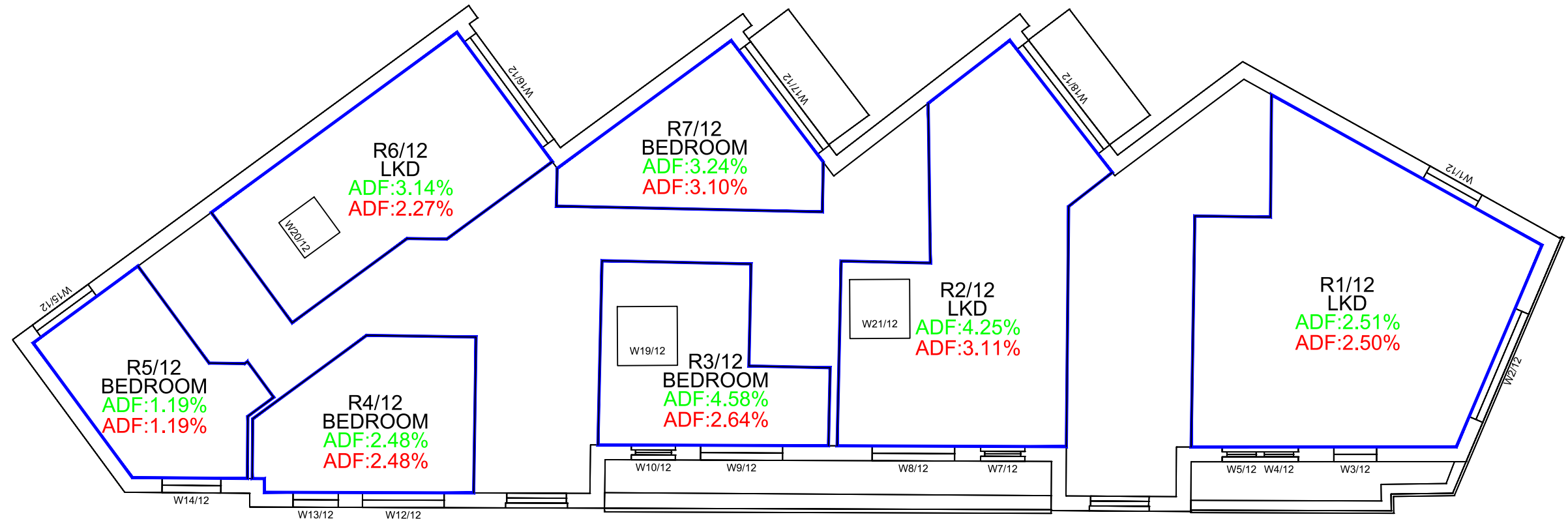
Dwg No: P1106/19

Rel: 004





<b>Sources:</b> Point2 Surveyors 3D Laser Scan Survey  BCA Architects Original planning drawings for Burghley Court SO/0471/PL101 to 107  Saunders Partnership Architects 7659_INGESTRE ROAD_Existing.dwg 7659_IngestreRoad_PROPOSED.dwg	<b>Key:</b> <div>Existing Buildings</div> <div>Proposed Scheme</div> <div>Assumed Window</div>	<b>Project:</b> Burghley Court Ingestre Road Camden London			<b>Title:</b> Window Locations 91 Burghley Road		Point 2 Surveyors Ltd, 3rd Floor, 17 Slingsby Place, London WC2E 9AB 0207 836 5828 www.point2surveyors.com	
Scheme Confirmed: -		Date : -	Drawn By: JB	Scale: NTS @ A3	Date: FEB 17	Dwg No: <b>P1106/15</b>	Rel: 004	



<p>Sources: Point2 Surveyors 3D Laser Scan Survey</p> <p>BCA Architects Original planning drawings for Burghley Court SO/0471/PL101 to 107</p> <p>Saunders Partnership Architects 7659_INGESTRE ROAD_Existing.dwg 7659_IngestreRoad_PROPOSED.dwg</p>		<p>Key:    ADF Results as Existing          ADF Results as Proposed</p>		<p>Project: Burghley Court Ingestre Road Camden London</p>		<p>Title: Room Layouts and ADF Results Proposed Scheme 14/02/17</p>		<p>Point 2 Surveyors Ltd, 3rd Floor, 17 Slingsby Place, London WC2E 9AB 0207 836 5828 www.point2surveyors.com</p>	
Scheme Confirmed: -		Date : -		Drawn By: JB	Scale: 1:100 @ A3	Date: FEB 17	Dwg No: P1106/16	Rel: 004	



## Appendix B – Technical Analysis

Room	Room Use	Window	EXISTING VSC	PROPOSED VSC	LOSS VSC	%LOSS VSC	Room	Room Use	Window	EXISTING ADF	TOTAL	PROPOSED ADF	TOTAL	TOTAL LOSS	%LOSS ADF
88-98 BURGHLEY ROAD							88-98 BURGHLEY ROAD								
R1/100		W1/100	35.58	35.29	0.29	0.82	R1/100		W1/100	2.33	2.33	2.31	2.31	0.02	0.77
R2/100		W2/100	35.68	35.34	0.34	0.95	R2/100		W2/100	1.54	1.54	1.52	1.52	0.01	0.85
R1/101		W1/101	37.04	36.75	0.29	0.78	R1/101		W1/101	2.41	2.41	2.39	2.39	0.02	0.75
R2/101		W2/101	37.04	36.71	0.33	0.89	R2/101		W2/101	1.59	1.59	1.57	1.57	0.01	0.82
R1/102		W1/102	38.11	37.86	0.25	0.66	R1/102		W1/102	2.47	2.47	2.46	2.46	0.02	0.61
R2/102		W2/102	38.18	37.90	0.28	0.73	R2/102		W2/102	1.63	1.63	1.62	1.62	0.01	0.74
R1/103		W1/103	38.96	38.83	0.13	0.33	R1/103		W1/103	2.52	2.52	2.52	2.52	0.01	0.28
R2/103		W2/103	39.02	38.90	0.12	0.31	R2/103		W2/103	1.66	1.66	1.66	1.66	0.01	0.30
86 BURGHLEY ROAD							86 BURGHLEY ROAD								
R2/110		W6/110	27.29	26.99	0.30	1.10	R2/110		W6/110	0.32		0.32			
R2/110		W7/110	32.04	31.68	0.36	1.12	R2/110		W7/110	1.32		1.30			
R2/110		W8/110	23.54	23.52	0.02	0.08	R2/110		W8/110	0.28	1.91	0.28	1.90	0.01	0.68
R1/111		W1/111	33.04	32.60	0.44	1.33	R1/111		W1/111	1.75	1.75	1.73	1.73	0.02	1.09
R2/111		W2/111	28.13	27.82	0.31	1.10	R2/111		W2/111	0.34		0.34			
R2/111		W3/111	33.81	33.43	0.38	1.12	R2/111		W3/111	1.47		1.45			
R2/111		W4/111	24.45	24.43	0.02	0.08	R2/111		W4/111	0.29	2.10	0.29	2.08	0.02	0.72
R1/112		W1/112	35.45	35.04	0.41	1.16	R1/112		W1/112	1.46	1.46	1.45	1.45	0.02	1.03
R2/112		W2/112	35.22	34.87	0.35	0.99	R2/112		W2/112	1.59	1.59	1.57	1.57	0.01	0.88
91 BURGHLEY ROAD							91 BURGHLEY ROAD								
R1/129		W1/129	9.94	9.80	0.14	1.41	R1/129		W1/129	0.43	0.43	0.43	0.43	0.00	0.23



Room	Room Use	Window	EXISTING VSC	PROPOSED VSC	LOSS VSC	%LOSS VSC	Room	Room Use	Window	EXISTING ADF	TOTAL	PROPOSED ADF	TOTAL	TOTAL LOSS	%LOSS ADF
R1/130		W1/130	14.71	14.37	0.34	2.31	R1/130		W1/130	1.05	1.05	1.04	1.04	0.01	1.15
R1/131		W1/131	14.79	14.51	0.28	1.89	R1/131		W1/131	0.22	0.22	0.22	0.22	0.00	0.00
R2/131		W2/131	29.98	29.06	0.92	3.07	R2/131		W2/131	1.60	1.60	1.56	1.56	0.03	2.07
R1/132		W1/132	36.89	34.21	2.68	7.26	R1/132		W1/132	1.46	1.46	1.40	1.40	0.06	4.18
R1/140		W1/140	3.62	3.28	0.34	9.39	R1/140		W1/140	0.39	0.39	0.36	0.36	0.03	7.44
R2/140		W2/140	1.09	0.91	0.18	16.51	R2/140		W2/140	0.03		0.03			
R2/140		W3/140	6.00	5.63	0.37	6.17	R2/140		W3/140	0.22		0.21			
R2/140		W4/140	13.45	13.10	0.35	2.60	R2/140		W4/140	0.17		0.17			
R2/140		W5/140	3.04	2.65	0.39	12.83	R2/140		W5/140	0.01	0.44	0.01	0.42	0.02	3.91
R3/140		W6/140	31.47	31.35	0.12	0.38	R3/140		W6/140	1.60	1.60	1.60	1.60	0.00	0.06
R4/140		W7/140	31.78	31.67	0.11	0.35	R4/140		W7/140	0.72	0.72	0.72	0.72	0.00	0.00
R1/141		W1/141	6.61	5.69	0.92	13.92	R1/141		W1/141	0.00		0.00			
R1/141		W2/141	8.69	7.63	1.06	12.20	R1/141		W2/141	0.31	0.31	0.23	0.23	0.08	24.60
R2/141		W3/141	32.76	32.55	0.21	0.64	R2/141		W3/141	0.46		0.46			
R2/141		W4/141	32.94	32.74	0.20	0.61	R2/141		W4/141	0.31	0.78	0.31	0.78	0.00	0.13
R1/142		W1/142	37.30	36.27	1.03	2.76	R1/142		W1/142	2.16	2.16	2.14	2.14	0.02	0.74
89 BURGHLEY ROAD							89 BURGHLEY ROAD								
R2/130		W2/130	20.20	20.20	0.00	0.00	R2/130		W2/130	1.56	1.56	1.56	1.56	0.00	0.00
R3/31		W3/131	36.02	35.67	0.35	0.97	R3/31		W3/131	2.27	2.27	2.27	2.27	0.01	0.26
R2/132		W2/132	38.23	37.79	0.44	1.15	R2/132		W2/132	1.70	1.70	1.70	1.70	0.00	0.18
R3/141		W5/141	34.85	34.67	0.18	0.52	R3/141		W5/141	1.21	1.21	1.21	1.21	0.00	0.00
R2/142		W2/142	37.70	37.02	0.68	1.80	R2/142		W2/142	2.50	2.50	2.49	2.49	0.01	0.44

Room	Room Use	Window	EXISTING VSC	PROPOSED VSC	LOSS VSC	%LOSS VSC	Room	Room Use	Window	EXISTING ADF	TOTAL	PROPOSED ADF	TOTAL	TOTAL LOSS	%LOSS ADF
<b>87 BURGHLEY ROAD</b>							<b>87 BURGHLEY ROAD</b>								
R1/120		W1/120	18.80	18.80	0.00	0.00	R1/120		W1/120	1.53	1.53	1.53	1.53	0.00	0.00
R1/121		W1/121	35.26	34.99	0.27	0.77	R1/121		W1/121	2.28	2.28	2.27	2.27	0.01	0.22
R1/122		W1/122	38.15	37.83	0.32	0.84	R1/122		W1/122	1.58	1.58	1.58	1.58	0.00	0.13
R5/140		W8/140	12.29	12.29	0.00	0.00	R5/140		W8/140	0.31	0.31	0.31	0.31	0.00	0.00
R4/141		W7/141	36.33	36.24	0.09	0.25	R4/141		W7/141	1.34	1.34	1.34	1.34	0.00	0.00
R5/141		W6/141	18.85	17.95	0.90	4.77	R5/141		W6/141	0.55	0.55	0.52	0.52	0.02	4.38
<b>5-12 WARDLOW</b>							<b>5-12 WARDLOW</b>								
R1/151		W28/151	36.61	35.61	1.00	2.73	R1/151		W28/151	1.17	1.17	1.14	1.14	0.03	2.47
R2/151		W22/151	23.92	23.66	0.26	1.09	R2/151		W22/151	0.10		0.10			
R2/151		W23/151	32.61	32.22	0.39	1.20	R2/151		W23/151	0.42		0.42			
R2/151		W24/151	35.70	34.82	0.88	2.46	R2/151		W24/151	0.11		0.10			
R2/151		W25/151	20.44	20.17	0.27	1.32	R2/151		W25/151	0.10		0.10			
R2/151		W26/151	28.83	28.52	0.31	1.08	R2/151		W26/151	0.43		0.42			
R2/151		W27/151	35.76	34.87	0.89	2.49	R2/151		W27/151	0.12	1.26	0.11	1.25	0.02	1.35
R3/151		W16/151	19.95	19.69	0.26	1.30	R3/151		W16/151	0.09		0.09			
R3/151		W17/151	28.13	27.72	0.41	1.46	R3/151		W17/151	0.38		0.37			
R3/151		W18/151	35.75	34.94	0.81	2.27	R3/151		W18/151	0.10		0.10			
R3/151		W19/151	23.68	23.59	0.09	0.38	R3/151		W19/151	0.10		0.10			
R3/151		W20/151	32.46	32.23	0.23	0.71	R3/151		W20/151	0.46		0.45			
R3/151		W21/151	35.84	35.01	0.83	2.32	R3/151		W21/151	0.12	1.24	0.11	1.23	0.02	1.21
R4/151		W3/151	36.00	35.64	0.36	1.00	R4/151		W3/151	1.20	1.20	1.18	1.18	0.02	1.67
R5/151		W2/151	36.20	35.48	0.72	1.99	R5/151		W2/151	1.19	1.19	1.17	1.17	0.02	1.85
R6/151		W10/151	24.07	23.99	0.08	0.33	R6/151		W10/151	0.10		0.10			



Room	Room Use	Window	EXISTING VSC	PROPOSED VSC	LOSS VSC	%LOSS VSC	Room	Room Use	Window	EXISTING ADF	TOTAL	PROPOSED ADF	TOTAL	TOTAL LOSS	%LOSS ADF
R6/151		W11/151	32.65	32.54	0.11	0.34	R6/151		W11/151	0.42		0.42			
R6/151		W12/151	35.88	35.27	0.61	1.70	R6/151		W12/151	0.11		0.10			
R6/151		W13/151	20.60	20.60	0.00	0.00	R6/151		W13/151	0.10		0.10			
R6/151		W14/151	28.91	28.91	0.00	0.00	R6/151		W14/151	0.43		0.43			
R6/151		W15/151	35.94	35.30	0.64	1.78	R6/151		W15/151	0.12	1.26	0.11	1.25	0.01	0.48
R7/151		W4/151	19.93	19.93	0.00	0.00	R7/151		W4/151	0.09		0.09			
R7/151		W5/151	28.04	27.97	0.07	0.25	R7/151		W5/151	0.38		0.38			
R7/151		W6/151	35.91	35.41	0.50	1.39	R7/151		W6/151	0.11		0.10			
R7/151		W7/151	23.65	23.65	0.00	0.00	R7/151		W7/151	0.10		0.10			
R7/151		W8/151	32.43	32.41	0.02	0.06	R7/151		W8/151	0.46		0.46			
R7/151		W9/151	35.98	35.47	0.51	1.42	R7/151		W9/151	0.12	1.25	0.11	1.24	0.01	0.48
R8/151		W1/151	36.95	36.93	0.02	0.05	R8/151		W1/151	1.16	1.16	1.15	1.15	0.01	0.78
R1/152		W7/152	38.56	38.33	0.23	0.60	R1/152		W7/152	1.86		1.85			
R1/152		W8/152	39.05	38.82	0.23	0.59	R1/152		W8/152	0.74	2.60	0.74	2.59	0.02	0.58
R2/152		W3/152	39.08	38.86	0.22	0.56	R2/152		W3/152	0.74		0.74			
R2/152		W6/152	38.57	38.33	0.24	0.62	R2/152		W6/152	1.86	2.60	1.85	2.59	0.01	0.54
R3/152		W2/152	39.09	38.88	0.21	0.54	R3/152		W2/152	0.74		0.74			
R3/152		W5/152	38.59	38.39	0.20	0.52	R3/152		W5/152	1.86	2.60	1.85	2.59	0.01	0.46
R4/152		W1/152	39.10	38.97	0.13	0.33	R4/152		W1/152	0.74		0.74			
R4/152		W4/152	38.60	38.44	0.16	0.41	R4/152		W4/152	1.86	2.61	1.86	2.60	0.01	0.38
16 WARDLOW							16 WARDLOW								
R1/150		W1/150	31.80	29.67	2.13	6.70	R1/150		W1/150	1.93	1.93	1.83	1.83	0.10	5.39
R2/150		W2/150	24.48	23.92	0.56	2.29	R2/150		W2/150	0.24		0.24			
R2/150		W3/150	24.72	24.17	0.55	2.22	R2/150		W3/150	0.24	0.48	0.24	0.48	0.01	1.04
15 WARDLOW							15 WARDLOW								
R3/150		W4/150	25.49	25.49	0.00	0.00	R3/150		W4/150	0.25		0.25			
R3/150		W5/150	25.28	25.28	0.00	0.00	R3/150		W5/150	0.24	0.50	0.24	0.50	0.00	0.00

Room	Room Use	Window	EXISTING VSC	PROPOSED VSC	LOSS VSC	%LOSS VSC	Room	Room Use	Window	EXISTING ADF	TOTAL	PROPOSED ADF	TOTAL	TOTAL LOSS	%LOSS ADF
R4/150		W6/150	32.84	31.44	1.40	4.26	R4/150		W6/150	1.88	1.88	1.82	1.82	0.07	3.46
14 WARDLOW							14 WARDLOW								
R5/150		W7/150	32.98	31.65	1.33	4.03	R5/150		W7/150	1.90	1.90	1.84	1.84	0.06	3.31
R6/150		W8/150	24.65	23.85	0.80	3.25	R6/150		W8/150	0.24		0.24			
R6/150		W9/150	24.19	23.42	0.77	3.18	R6/150		W9/150	0.24	0.48	0.23	0.47	0.01	1.88
13 WARDLOW							13 WARDLOW								
R7/150		W10/150	27.24	27.24	0.00	0.00	R7/150		W10/150	0.26		0.26			
R7/150		W11/150	28.05	28.05	0.00	0.00	R7/150		W11/150	0.26	0.52	0.26	0.52	0.00	0.00
R8/150		W12/150	34.89	34.46	0.43	1.23	R8/150		W12/150	2.04	2.04	2.02	2.02	0.02	0.98

Room/ Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
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**BURGHLEY COURT**

R1/12	LKD	374.0	374.0	374.0	0.0	0.0
R2/12	LKD	310.7	310.6	310.5	0.0	0.0
R3/12	BEDROOM	149.2	149.2	145.7	3.5	2.3
R4/12	BEDROOM	132.6	130.2	130.2	0.0	0.0
R5/12	BEDROOM	125.0	123.0	123.0	0.0	0.0
R6/12	LKD	200.2	198.5	198.4	0.1	0.1
R7/12	BEDROOM	124.4	124.0	124.0	0.0	0.0

**88-98 BURGHLEY ROAD**

R1/100		205.8	203.0	203.0	0.0	0.0
R2/100		188.9	186.4	186.4	0.0	0.0
R1/101		205.8	203.0	203.0	0.0	0.0
R2/101		188.9	186.4	186.4	0.0	0.0
R1/102		205.8	203.0	203.0	0.0	0.0
R2/102		188.9	186.4	186.4	0.0	0.0
R1/103		205.8	203.0	203.0	0.0	0.0
R2/103		188.9	186.4	186.4	0.0	0.0

**86 BURGHLEY ROAD**

R2/110		168.9	156.5	154.2	2.3	1.5
R1/111		82.7	82.4	82.4	0.0	0.0
R2/111		156.2	155.3	155.3	0.0	0.0
R1/112		121.4	119.5	119.5	0.0	0.0
R2/112		105.4	104.0	104.0	0.0	0.0

**91 BURGHLEY ROAD**

R1/129		117.9	56.4	56.4	0.0	0.0
R1/130		117.9	94.2	92.5	1.7	1.8
R1/131		64.7	22.7	22.7	0.0	0.0
R2/131		117.9	111.5	110.9	0.6	0.5
R1/132		117.9	110.0	110.0	0.0	0.0
R1/140		28.3	4.0	3.4	0.6	15.0
R2/140		144.1	33.2	32.1	1.1	3.3
R3/140		78.5	75.2	75.2	0.0	0.0
R4/140		44.2	39.3	39.3	0.0	0.0
R1/141		39.1	16.3	13.0	3.3	20.2
R2/141		111.9	107.0	106.9	0.1	0.1
R1/142		54.5	52.5	52.5	0.0	0.0

**89 BURGHLEY ROAD**

R2/130		99.6	95.3	95.3	0.0	0.0
R3/31		99.6	95.8	95.8	0.0	0.0
R2/132		99.6	94.1	94.1	0.0	0.0
R3/141		112.1	108.2	108.2	0.0	0.0
R2/142		45.7	44.9	44.9	0.0	0.0

Room/ Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
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#### 87 BURGHLEY ROAD

R1/120		106.7	101.6	101.6	0.0	0.0
R1/121		106.7	102.3	102.3	0.0	0.0
R1/122		106.7	100.3	100.3	0.0	0.0
R5/140		80.2	38.2	38.2	0.0	0.0
R4/141		94.5	91.3	91.3	0.0	0.0
R5/141		58.4	43.3	43.3	0.0	0.0

#### 5-12 WARDLOW

R1/151		86.5	84.3	84.3	0.0	0.0
R2/151		115.0	113.4	113.4	0.0	0.0
R3/151		116.1	114.5	114.5	0.0	0.0
R4/151		84.4	82.4	82.4	0.0	0.0
R5/151		84.4	82.3	82.3	0.0	0.0
R6/151		114.7	113.2	113.2	0.0	0.0
R7/151		114.8	113.3	113.3	0.0	0.0
R8/151		86.4	84.2	84.2	0.0	0.0
R1/152		188.5	185.8	185.8	0.0	0.0
R2/152		188.5	184.9	184.9	0.0	0.0
R3/152		188.5	185.2	185.2	0.0	0.0
R4/152		188.3	185.4	185.4	0.0	0.0

#### 16 WARDLOW

R1/150		182.1	177.2	177.2	0.0	0.0
R2/150		53.2	43.2	43.2	0.0	0.0

#### 15 WARDLOW

R3/150		52.4	42.2	42.2	0.0	0.0
R4/150		186.0	179.1	179.1	0.0	0.0

#### 14 WARDLOW

R5/150		183.4	178.3	178.3	0.0	0.0
R6/150		52.8	42.5	42.5	0.0	0.0

#### 13 WARDLOW

R7/150		53.3	43.7	43.7	0.0	0.0
R8/150		179.9	174.9	174.9	0.0	0.0

Room	Window	Room Use	Window		Room		Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH
			Existing	Proposed	Existing	Proposed								
			Winter APSH	Annual APSH	Winter APSH	Annual APSH								
<b>86 BURGHLEY ROAD</b>														
R2/110	W6/110		0	2	0	2	-	0.0						
R2/110	W7/110		6	27	6	27	0.0	0.0						
R2/110	W8/110		6	27	6	27	0.0	0.0	6	27	6	27	0.0	0.0
R2/111	W2/111		0	4	0	4	-	0.0						
R2/111	W3/111		7	30	7	30	0.0	0.0						
R2/111	W4/111		7	30	7	30	0.0	0.0	7	30	7	30	0.0	0.0
<b>16 WARDLOW</b>														
R2/150	W2/150		16	57	16	56	0.0	1.8						
R2/150	W3/150		13	51	12	48	7.7	5.9	16	58	16	57	0.0	1.7
<b>14 WARDLOW</b>														
R6/150	W8/150		16	58	15	56	6.3	3.4						
R6/150	W9/150		11	50	11	48	0.0	4.0	16	59	15	57	6.3	3.4