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MEDIUS HOUSE

Scheme Internal Daylight Amenity Report

Overshadowing

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

Solar Glare • *Daylight Design*

DIRECTOR:	LIAM DUNFORD
CLIENT:	ROYAL LONDON MUTUAL INSURANCE SOCIETY
DATE:	MARCH 2017
VERSION:	FINAL
PROJECT:	P796

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1 Introduction

- 1.1 This report considers the internal daylight amenity of the proposed redevelopment of Medius House. The site is located in the London Borough of Camden.

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 benefit from acceptable levels of internal daylight amenity within BRE Guidelines 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 Guidelines. Consideration will be given to the urban context within which a scheme is located and the internal daylight amenity will be one of a number of planning considerations which the local authority will weigh.

3 Methodology

- 3.1 The internal daylight amenity within proposed residential units has been assessed using the Average Daylight Factor (ADF) test, which is derived from British Standard BS 8026 and set out in the BRE Guidelines. ADF is a complex and representative calculation to determine natural internal luminance (daylight). It is defined in the BRE Guidelines as: *“A ratio of total daylight flux incident on a reference area to the total area of the reference area, expressed as a percentage of outdoor luminance on a horizontal plane, due to an unobstructed sky of assumed or known luminance distribution”*.
- 3.2 This daylight assessment method considers the diffuse visible 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 the angle of visible sky reaching the window/windows in question. It also makes allowance for the average reflectance of the internal surfaces of the room and of external obstruction. The BRE Guidelines and British Standard BS8206 recommend that for a fairly light-coloured room an internal reflectance value of 0.5 can be assumed.
- 3.3 The BRE guidelines / British Standard sets the following recommended ADF levels for habitable room uses:
- 1% Bedroom
 - 1.5% Living Room
 - 2.0% Kitchens

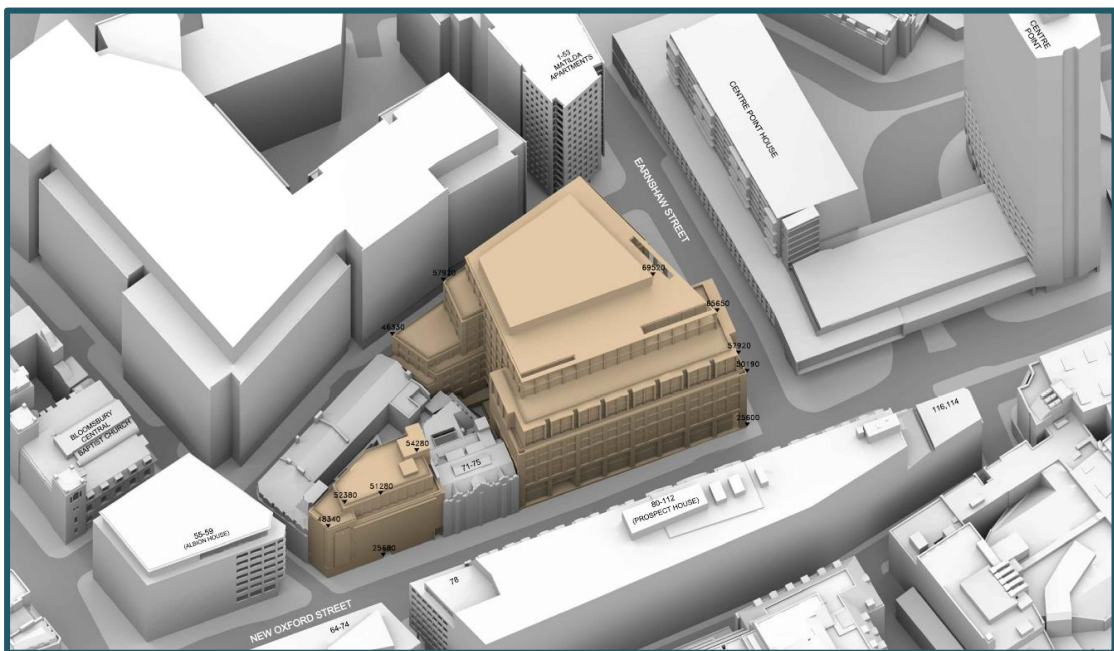


- 3.4 It is important to remember that the BRE Guidelines states that *‘the advice given here is not mandatory and should not be seen as an instrument of planning policy’*. Furthermore, daylight criteria should be *‘interpreted flexibly because natural lighting is only one of many factors’*. Based upon these statements it is important to apply the guidance and target levels sensibly and flexibly taking into account the context of the site as a conversion of an existing building.

4 Sources of Information

Point 2 Surveyors	-	Site Photos
Plowman Craven	-	Site surveys: - 33246E-01A, 33246RoL-01A, 33246RoL-02A, 33246RoL-03A 33246S-01A, 33246S-02A, 33246T-01A
Robin Partington & Partners	-	Proposed scheme AS_--_GA_CW.dwg AS_--_GA_resi_V02_contemporary_Medius.dwg

5 The Proposed Scheme



Drawing Reference: P796/83 – 3D View – Proposed Scheme

- 5.1 Demolition of the existing building, at Castlewood House, and construction of a replacement ten storey mixed use building, plus ground and two basement levels, including the provision of retail (Class A1 and/or A3) and office (Class B1) floor space. External alterations to Medius House including partial demolition, retention of the existing façade and two floor extension to provide 20 affordable housing units (Class C3), together with associated highway improvements, public realm, landscaping, vehicular and cycle parking, bin storage and other associated works.
- 5.2 Our understanding of the proposed scheme is illustrated in drawings P796/82-84 (Appendix 1).

6 **Internal Daylight Study**

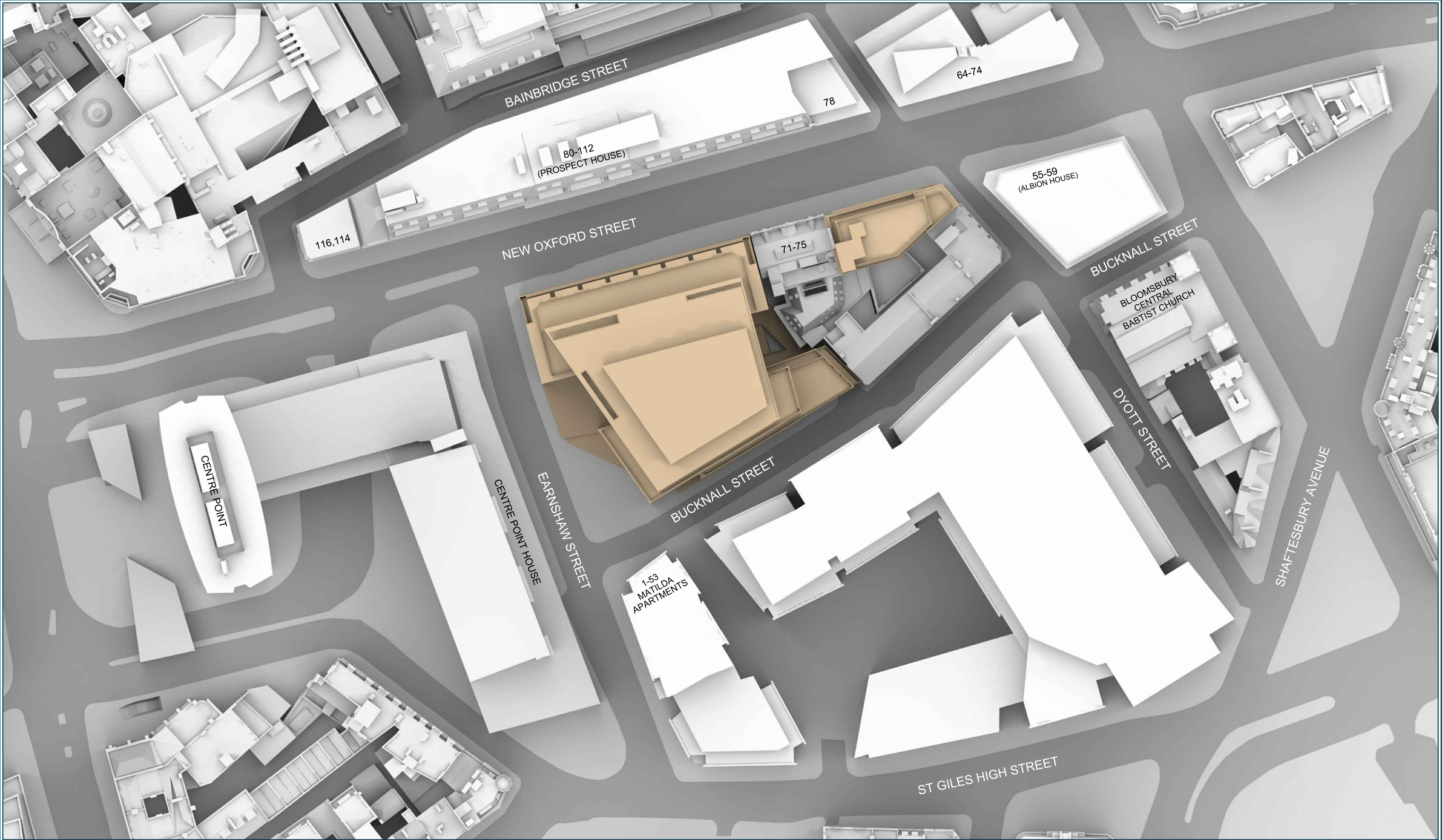
- 6.1 The results of our internal daylighting study of the proposed rooms, including drawings showing the layouts, window positions and orientation of the units can be found appended to this report under drawing references P796/I/01-07.
- 6.2 The analysis identifies a high degree of compliance with current BRE Guidelines with many daylight values exceeding the target Average Daylight Factor.
- 6.3 With the exception of 2 east-facing Living Dining Rooms (R7/802 and R8/804 – second and fourth floors), all habitable facing rooms are fully BRE compliant, meeting and in most cases greatly improving upon BRE target values. These rooms achieve 1.3% and 1.4% ADF, and therefore only marginally derogate from their target value of 1.5% ADF.
- 6.4 The levels of internal daylight are considered wholly acceptable, especially in consideration of the urban setting of the scheme and given the size of the existing apertures are being retained.

7 **Conclusion**

- 7.1 Section 6 above, and the appended drawings to this report (P796/I/01-07), show that the scheme demonstrates good levels of compliance with BRE Guidelines in terms of internal daylight amenity, with the majority of rooms meeting and improving upon BRE target values.
- 7.2 All retained ADF values which marginally derogate from BRE Guidelines are commensurate with that of a local, modern high-rise urban area.
- 7.3 We fully support this application in terms of internal daylight amenity.



Appendix A – Drawings



Sources: PLOWMAN CRAVEN
Site surveys :-
33246E-01A, 33246RoL-01A, 33246RoL-02A, 33246RoL-03A
33246S-01A, 33246S-02A, 33246T-01A

ROBIN PARTINGTON & PARTNERS
Proposed Scheme received 03/11/16
AS_-_GA_CW.dwg

Key:

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N

Project: CASTLEWOOD HOUSE

Title: SITE PLAN
PROPOSED SCHEME 03/11/16

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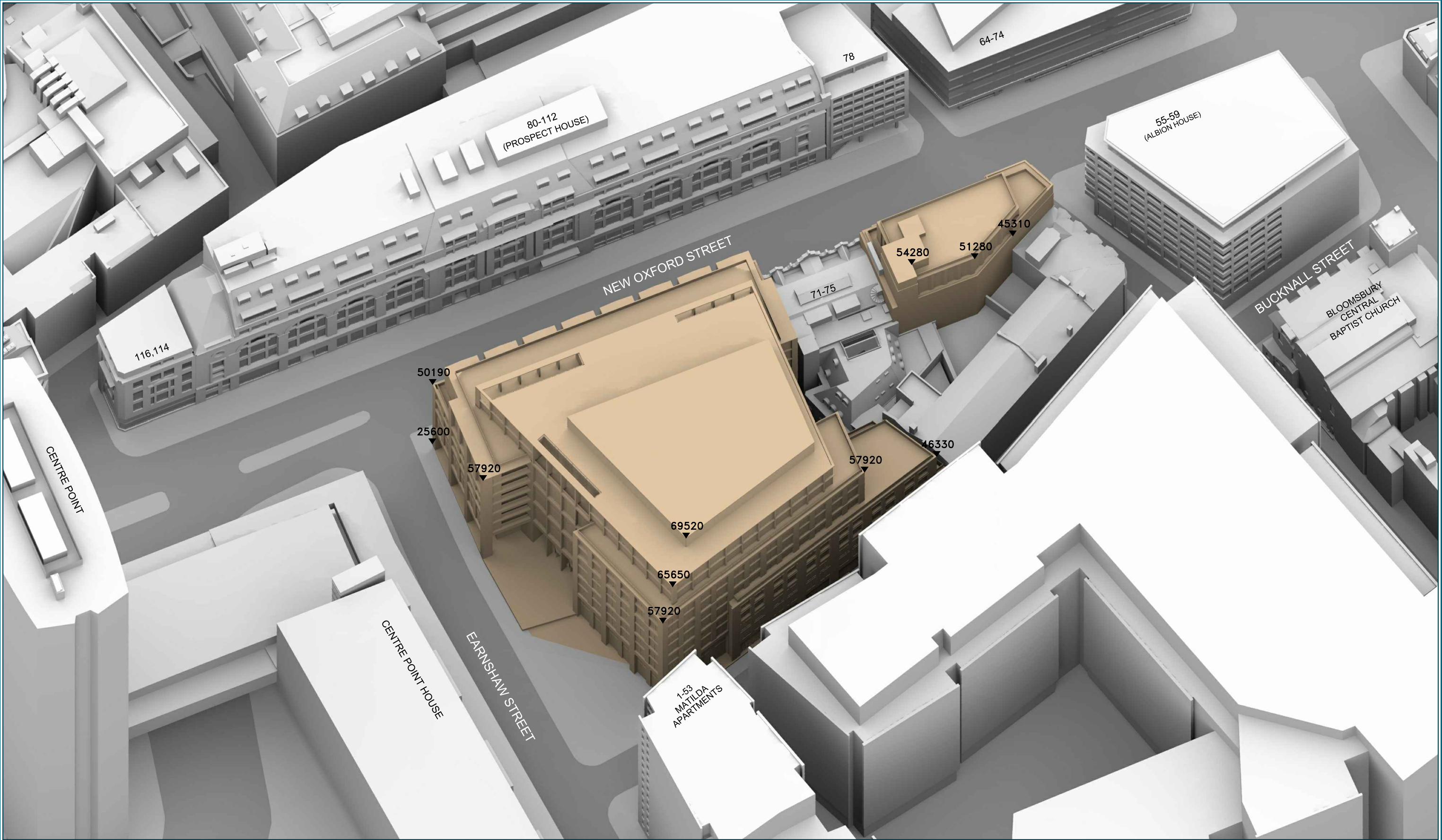


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Scale: 1:750

Date: NOV 16

Dwg No: **P796/82**



Sources: PLOWMAN CRAVEN
Site surveys :-
33246E-01A, 33246RoL-01A, 33246RoL-02A, 33246RoL-03A
33246S-01A, 33246S-02A, 33246T-01A

ROBIN PARTINGTON & PARTNERS
Proposed Scheme received 03/11/16
AS_-_GA_CW.dwg

Key: ALL HEIGHTS IN MM AOD

Project: CASTLEWOOD HOUSE

Title: 3D VIEW
PROPOSED SCHEME 03/11/16

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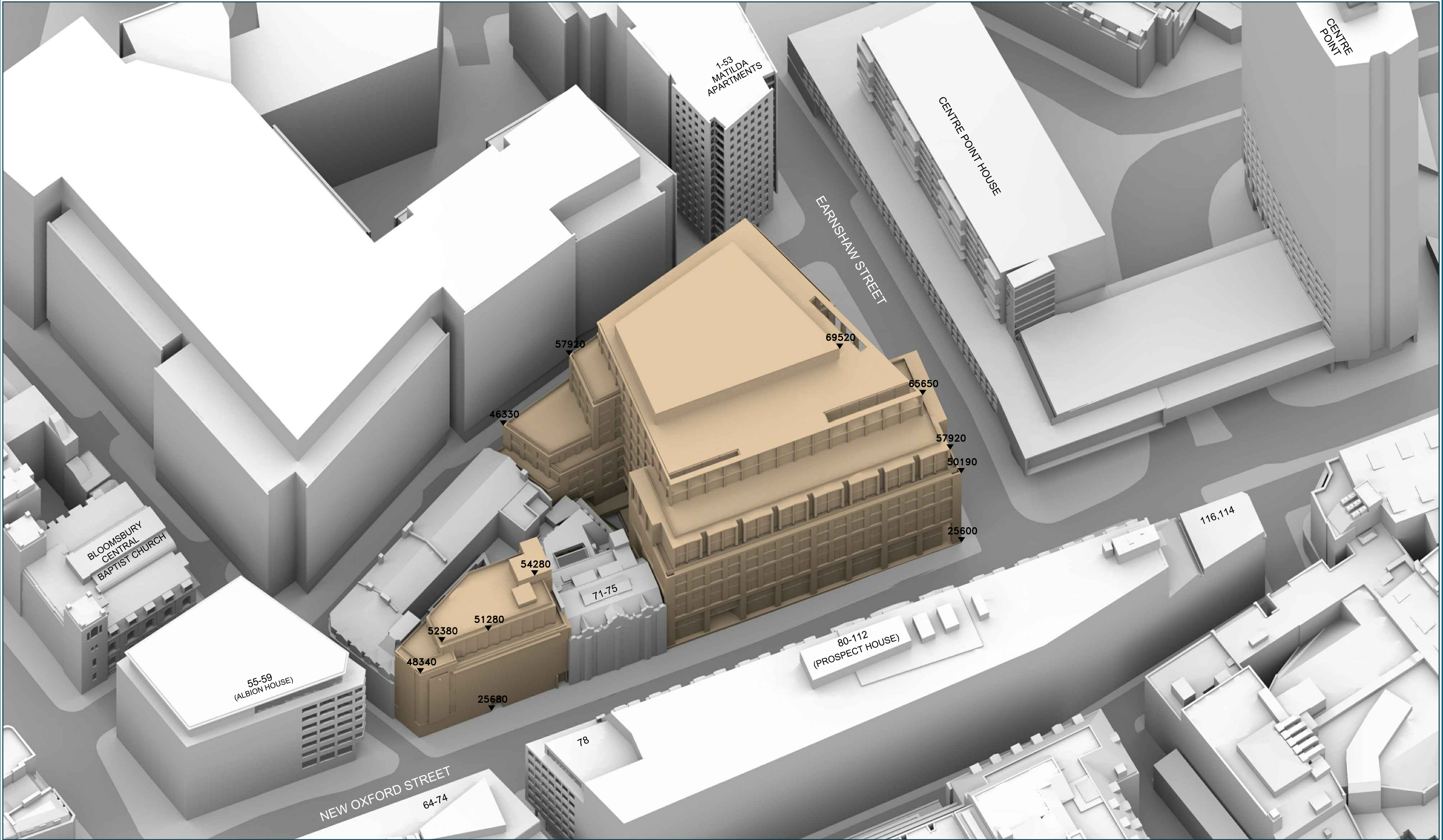
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Dwg No:

P796/83





Sources: PLOWMAN CRAVEN
Site surveys :-
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33246S-01A, 33246S-02A, 33246T-01A

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Key: ALL HEIGHTS IN MM AOD

Project: CASTLEWOOD HOUSE

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PROPOSED SCHEME 03/11/16

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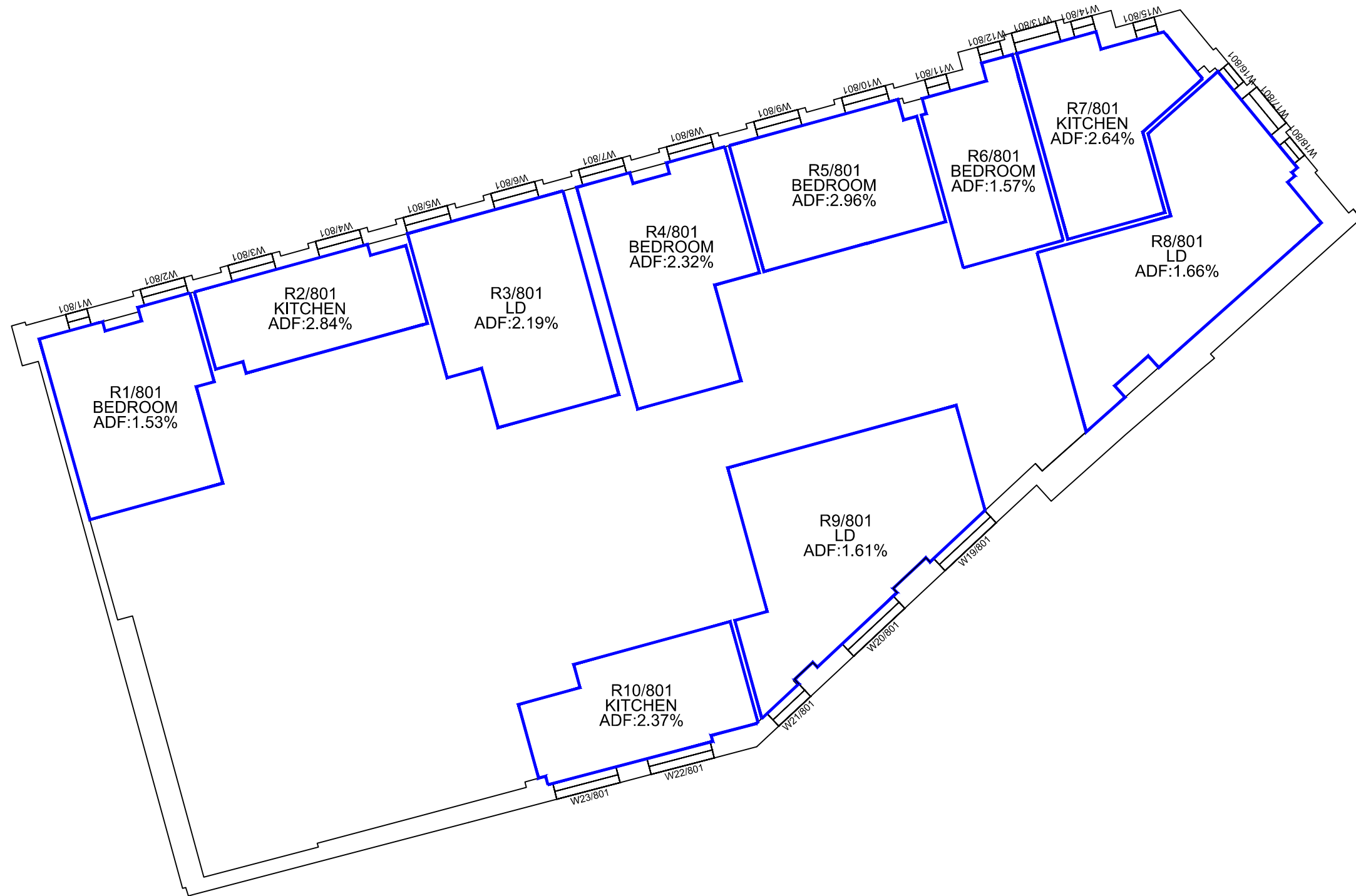
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Date: NOV 16

Dwg No:

P796/84



Sources: PLOWMAN CRAVEN
Site surveys :-
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33246S-01A, 33246S-02A, 33246T-01A

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Proposed scheme received 28/03/17
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Key:

Project: CASTLEWOOD HOUSE

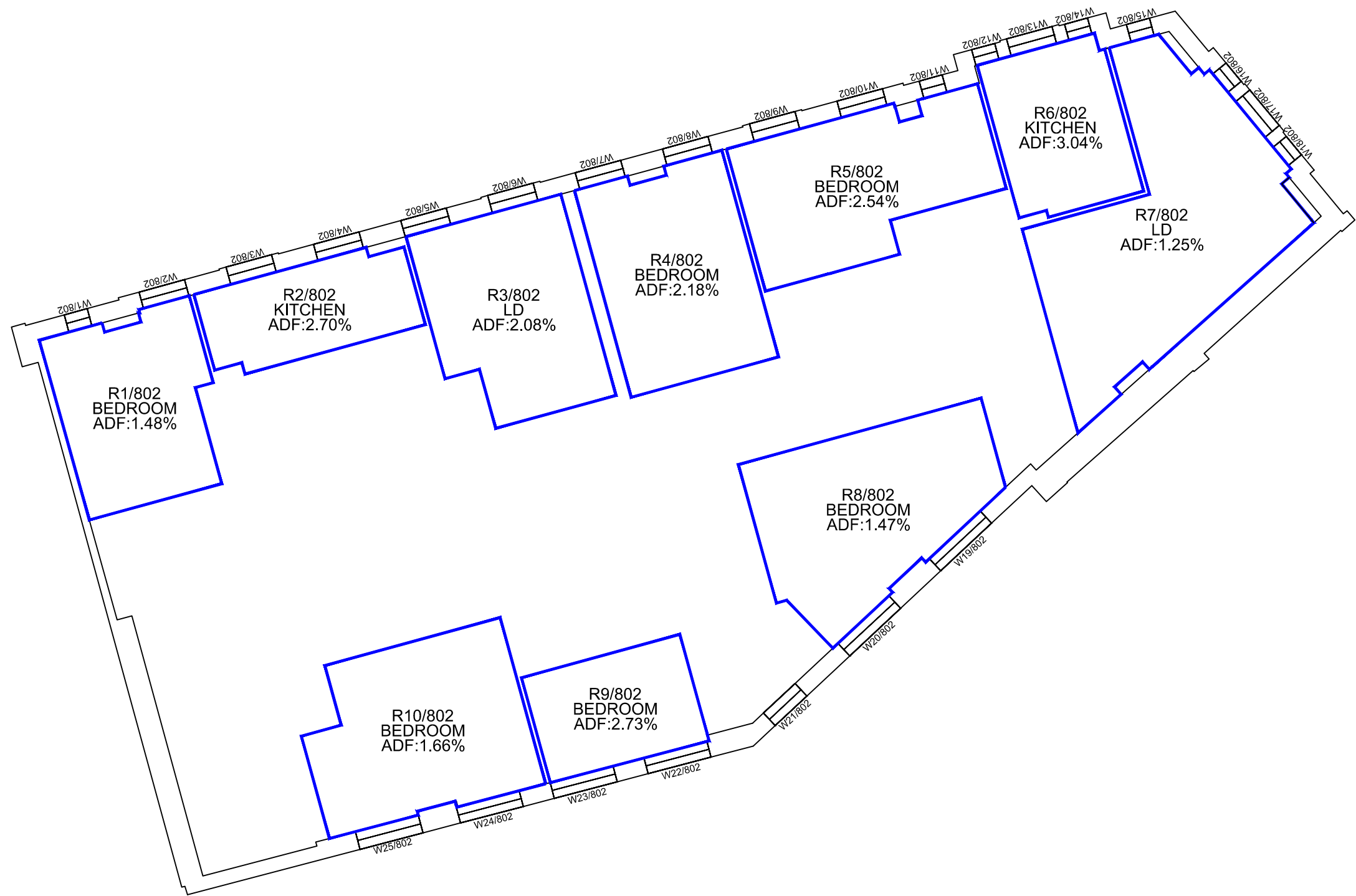
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PROPOSED SCHEME 28/03/17

FIRST FLOOR

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Drawn By: BZW	Scale: 1:100	Date: Mar 17	Dwg No: P796/I/01
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Sources: PLOWMAN CRAVEN
Site surveys :-
33246E-01A, 33246RoL-01A, 33246RoL-02A, 33246RoL-03A
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Key:

Project: CASTLEWOOD HOUSE

Drawn By: BZW Scale: 1:100 Date: Mar 17

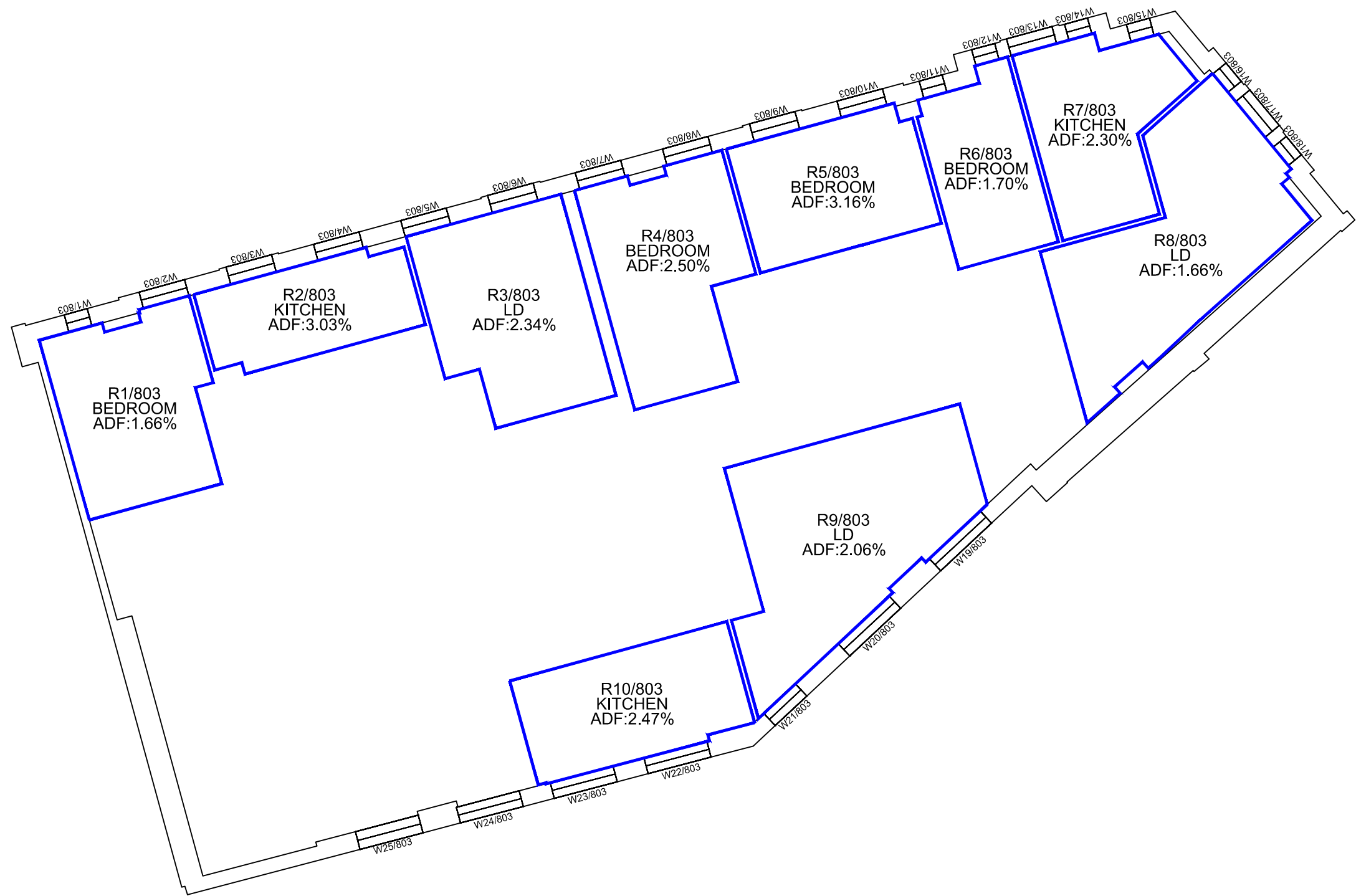
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PROPOSED SCHEME 28/03/17

SECOND FLOOR

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Sources: PLOWMAN CRAVEN
Site surveys :-
33246E-01A, 33246RoL-01A, 33246RoL-02A, 33246RoL-03A
33246S-01A, 33246S-02A, 33246T-01A

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Project: CASTLEWOOD HOUSE

Drawn By: BZW

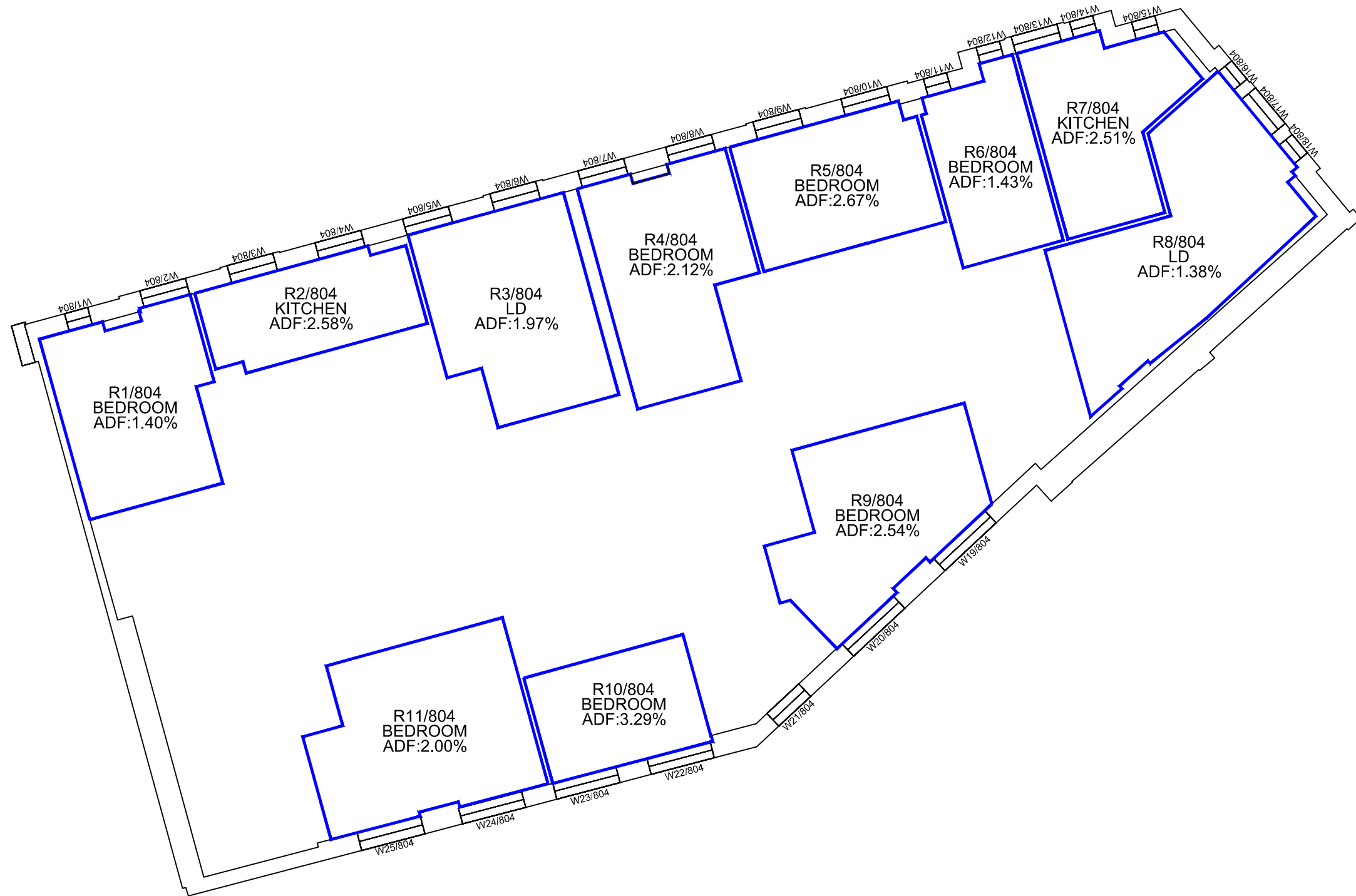
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Sources: PLOWMAN CRAVEN
Site surveys :-
33246E-01A, 33246RoL-01A, 33246RoL-02A, 33246RoL-03A
33246S-01A, 33246S-02A, 33246T-01A

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Key:

Project: CASTLEWOOD HOUSE

Title: INTERNAL ADF RESULTS
PROPOSED SCHEME 28/03/17

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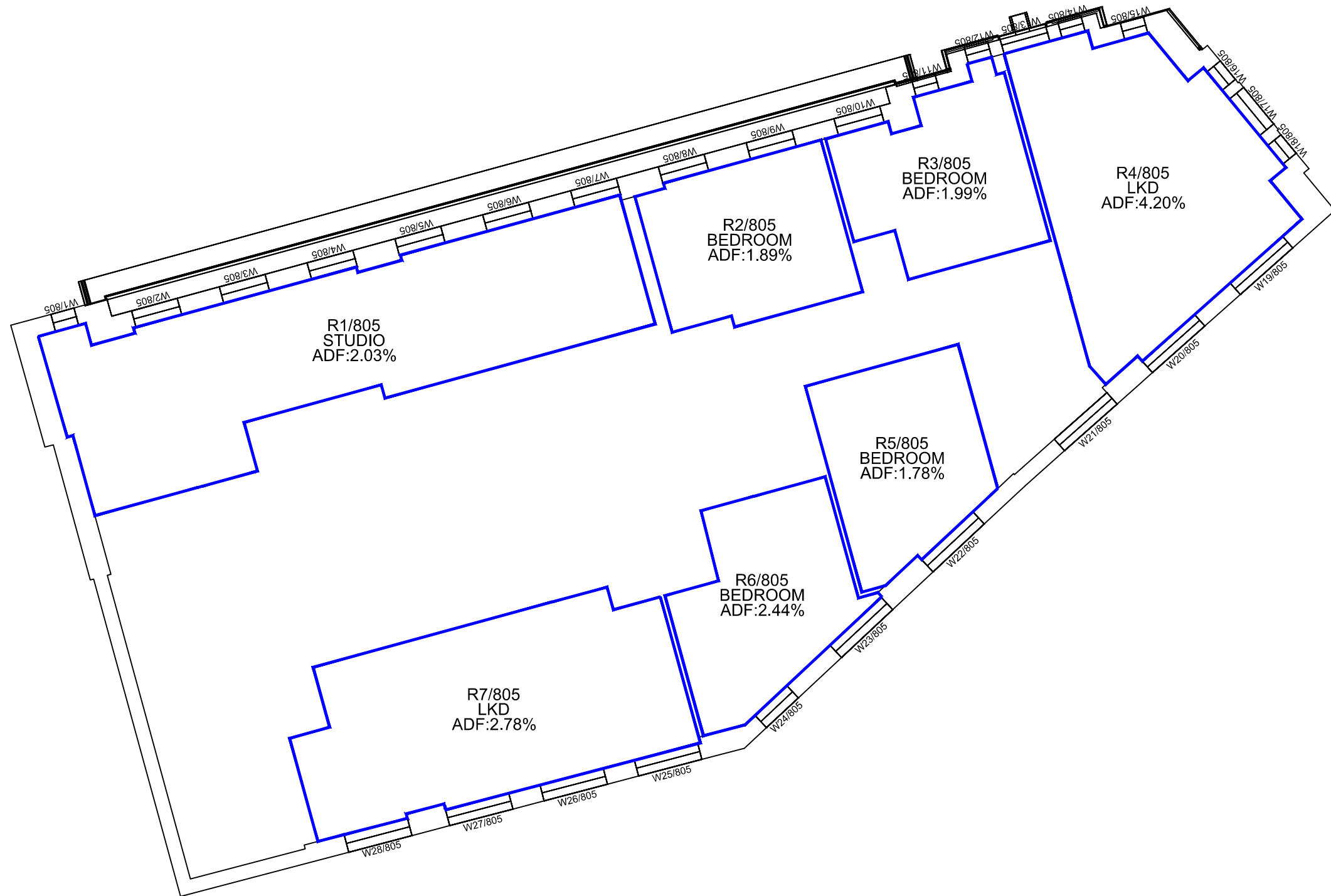


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Date: Mar 17

Dwg No: **P796/I/04**



Sources: PLOWMAN CRAVEN
Site surveys :-
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33246S-01A, 33246S-02A, 33246T-01A

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Key:

Project: CASTLEWOOD HOUSE

Drawn By: BZW

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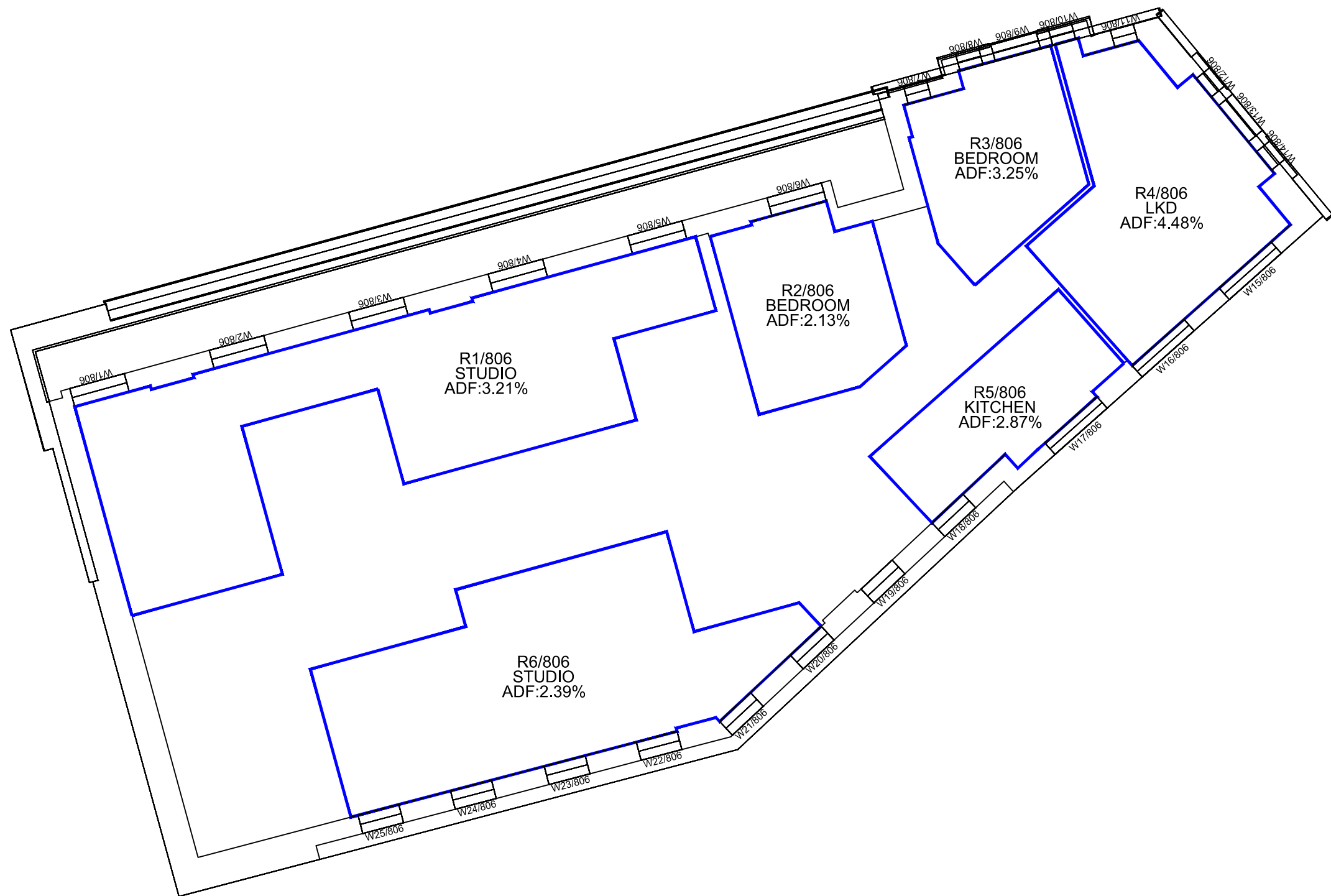
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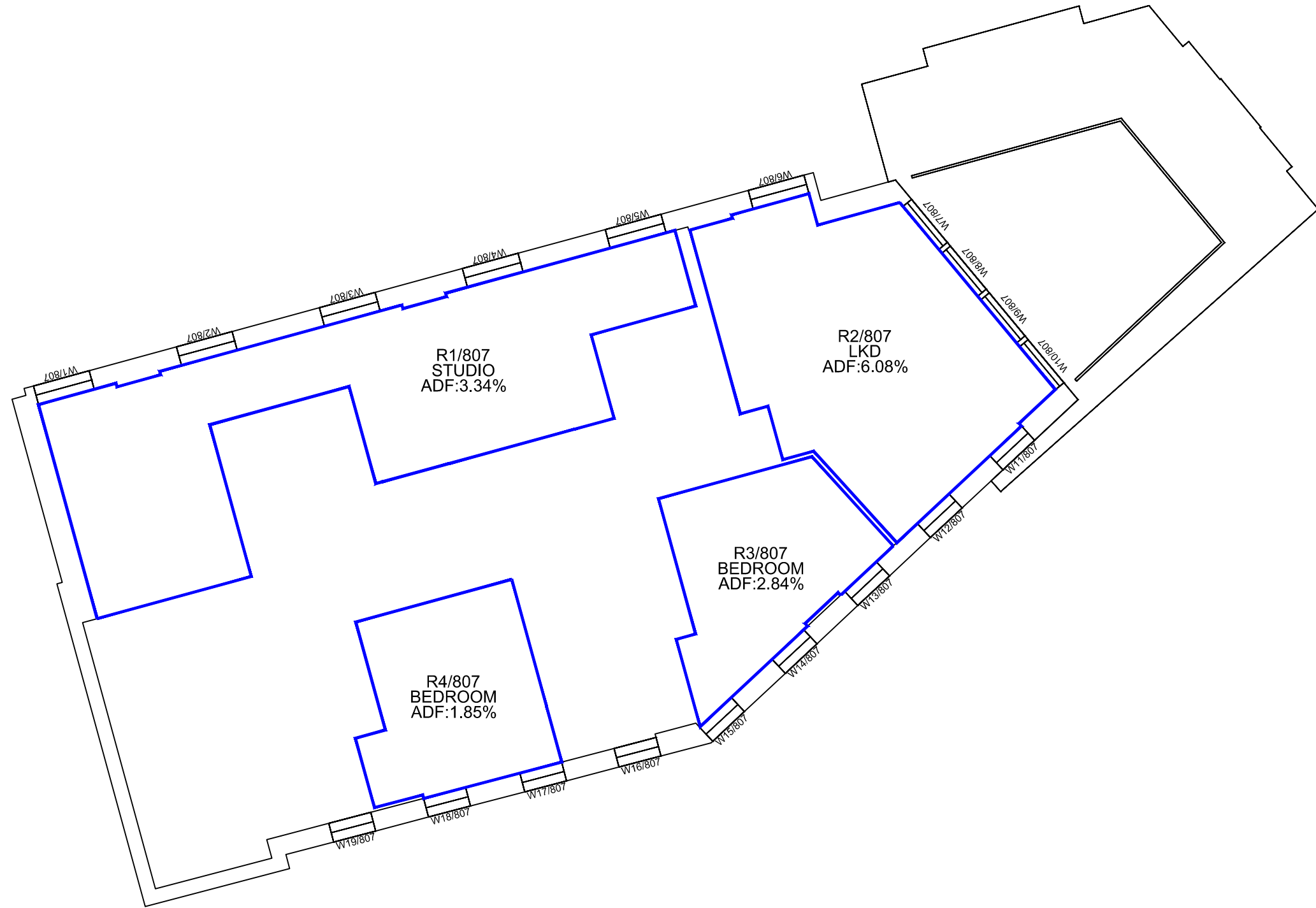
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Sources: PLOWMAN CRAVEN
Site surveys :-
33246E-01A, 33246RoL-01A, 33246RoL-02A, 33246RoL-03A
33246S-01A, 33246S-02A, 33246T-01A

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Key:

Project: CASTLEWOOD HOUSE

Drawn By: BZW Scale: 1:100 Date: Mar 17

Title: INTERNAL ADF RESULTS
PROPOSED SCHEME 28/03/17

SEVENTH FLOOR

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