

Interior Daylight Analysis

Land adjacent to 2 Alroy Road



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Document information

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Executive Summary

Overview

An analysis of the daylight conditions of the development located on the land adjacent to 2 Alroy Road has been carried out.

The daylighting analysis has been calculated and assessed according to the BRE guidance "Site layout planning for daylight and sunlight – A guide to good practice" revised third edition published in 2022.

The daylighting analysis as per BR209 3rd edition (2022) shows that:

- 100% of the rooms meet the median daylight factor recommendations.
- 100% of the living spaces have windows that can receive a total of at least 1.5 hours of sunlight on 21st March.

Please note that the BRE report is a guide for good practice and not an assessment of "Pass" and "Fail". Therefore, the failure to meet the recommended values do not indicate that the development is unsuitable.

Interior Daylight Analysis

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Introduction

The aim of this assessment report is to analyse the interior daylight and sunlight conditions experienced within habitable spaces within the proposed development at the land adjacent to 2 Alroy Road, in the London Borough of Haringey. The proposal is to develop a three-storey single family dwelling on an empty car park site.

The daylighting analysis has been calculated and assessed according to the BRE guidance "Site layout planning for daylight and sunlight – A guide to good practice" third edition 2022. The calculations are based on plans of the proposed development provided by GPAD, issued in March 2023.

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BRE Guidelines (2022)

Daylight Factor (DT)

The daylight factor is the illuminance at a point on the reference plane in a space, divided by the illuminance on an unobstructed horizontal surface outdoors. The CIE standard overcast sky is used, and the ratio is usually expressed as a percentage.

Table C3 of the guidance shows the daylight factor targets to be achieved over at least 50% of the assessment grid in domestic habitable rooms with vertical and/or inclined daylight apertures.

For London, recommendations are as follows:

Location	DT for 100 lx Bedroom	DT for 150 lx Living Room	DT for 200 lx Kitchen
London (Gatwick Airport)	0.7%	1.1%	1.4%

Sunlight

A dwelling, or habitable space that has a particular requirement for sunlight, will appear reasonably sunlit provided that at least one main window wall faces within 90° of due south and a habitable room, preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March. This is assessed at the inside centre of the window(s); sunlight received by different windows can be added provided they occur at different times and sunlight hours are not double counted.

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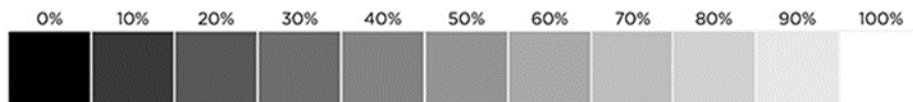
Methodology

Basis for calculations

The daylight conditions of the dwelling has been calculated using a daylight simulation software. The following values have been used for the daylight calculations

- Area weighted reflectance of the room surface (ceiling, floor walls and windows) of 0.55*
- Correction factor for dirt of 1, which corresponds to vertical glazing that can be cleaned easily
- Glass transmission factor of 0.65 (double glazing with low emissivity coating)
- Working Plane of 0.85m above the floor
- The assessment grid excluded a band of 0.3m from the walls in line with BR209

*0.55 surface reflectance refers to a grey colour (see image below). Painting the wall and ceiling surface white can achieve an average reflectance of more than 0.55.



Assessed areas

The scheme consists of a three-storey single family dwelling. As recommended by the BRE, the daylight conditions of the kitchen, living room and bedrooms will be analysed.

Assessed criteria

As described in the previous section, assessment factors demonstrating compliance with the third (2022) edition of the BR209 document will be demonstrated. Therefore, the following criteria have been assessed:

- Median Daylight Factor (DT)
- Sunlight

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Results

Interior daylight results.

The Daylight Factor (DT) and sunlight results are shown in Appendix B.

Illustrations of the Daylight Factor are presented in Appendix A.

The following number of rooms meet the BRE recommendations.

DF criteria	Total No. of rooms analysed	Rooms meeting the DF criteria.		Rooms below DF threshold	
		No.	%	No.	%
Bedrooms	3	3	100.0%	0	0.0%
Kitchen	1	1	100.0%	0	0.0%
Living	1	1	100.0%	0	0.0%
Total	5	5	100.0%	0	0.0%

Sunlight criteria	Total No. of dwellings analysed	Dwellings meeting the Sunlight criteria.		Dwellings below Sunlight threshold	
		No.	%	No.	%
Dwelling	1	1	100.0%	0	0.0%

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Conclusions

The daylighting analysis as per BR209 3rd edition (2022) shows that:

- 100% of the rooms meet the median daylight factor recommendations.
- 100% of the living spaces have windows that can receive a total of at least 1.5 hours of sunlight on 21st March.

Please note that the BRE report is a guide for good practice and not an assessment of “Pass” and “Fail”. Therefore, the failure to meet the recommended values do not indicate that the development is unsuitable.

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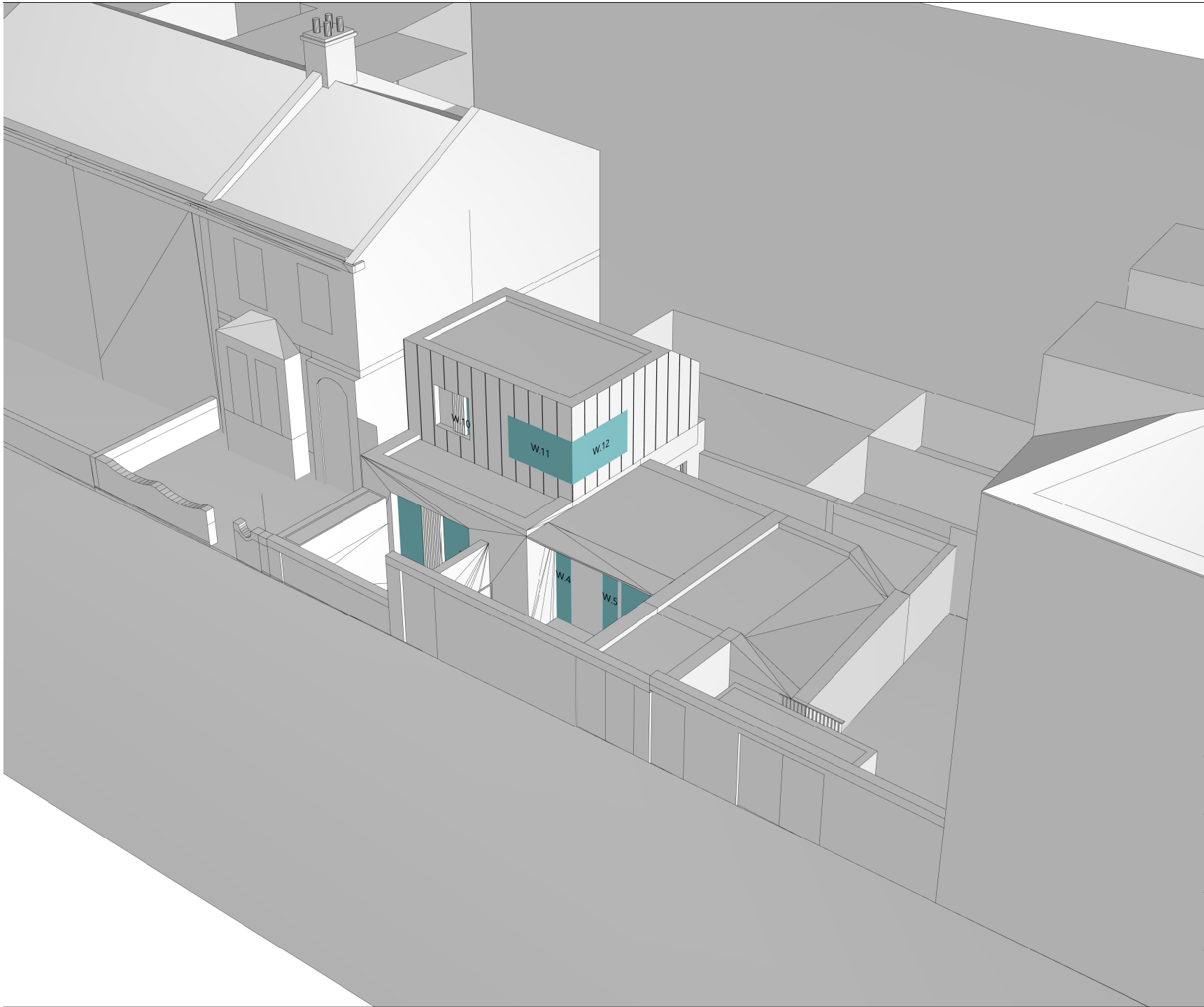
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Appendix A

Appendix A - Illustrations



Project Name:

Land adjacent to 2 Alroy Road

Drawing Name

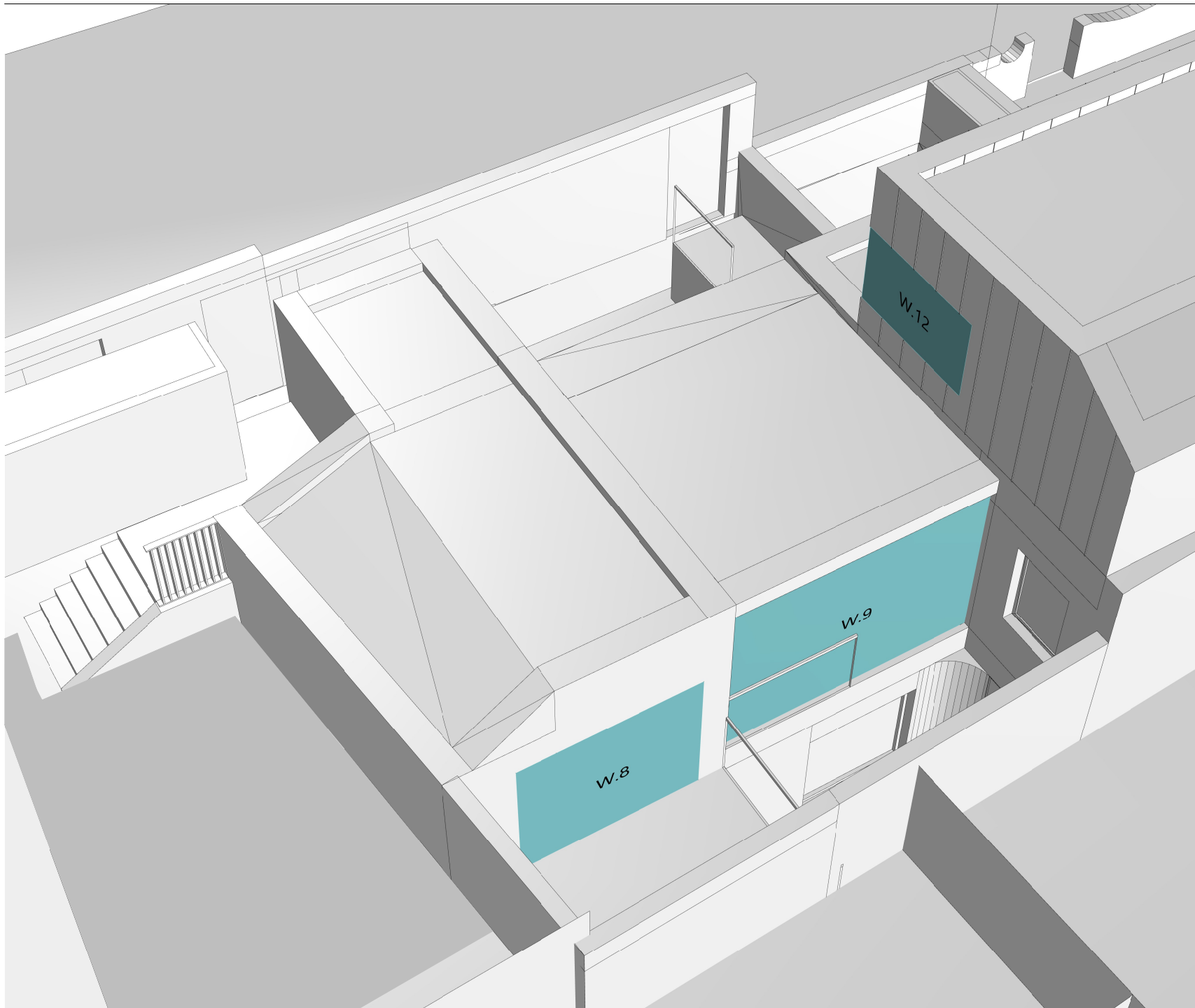
Proposed development

Date:

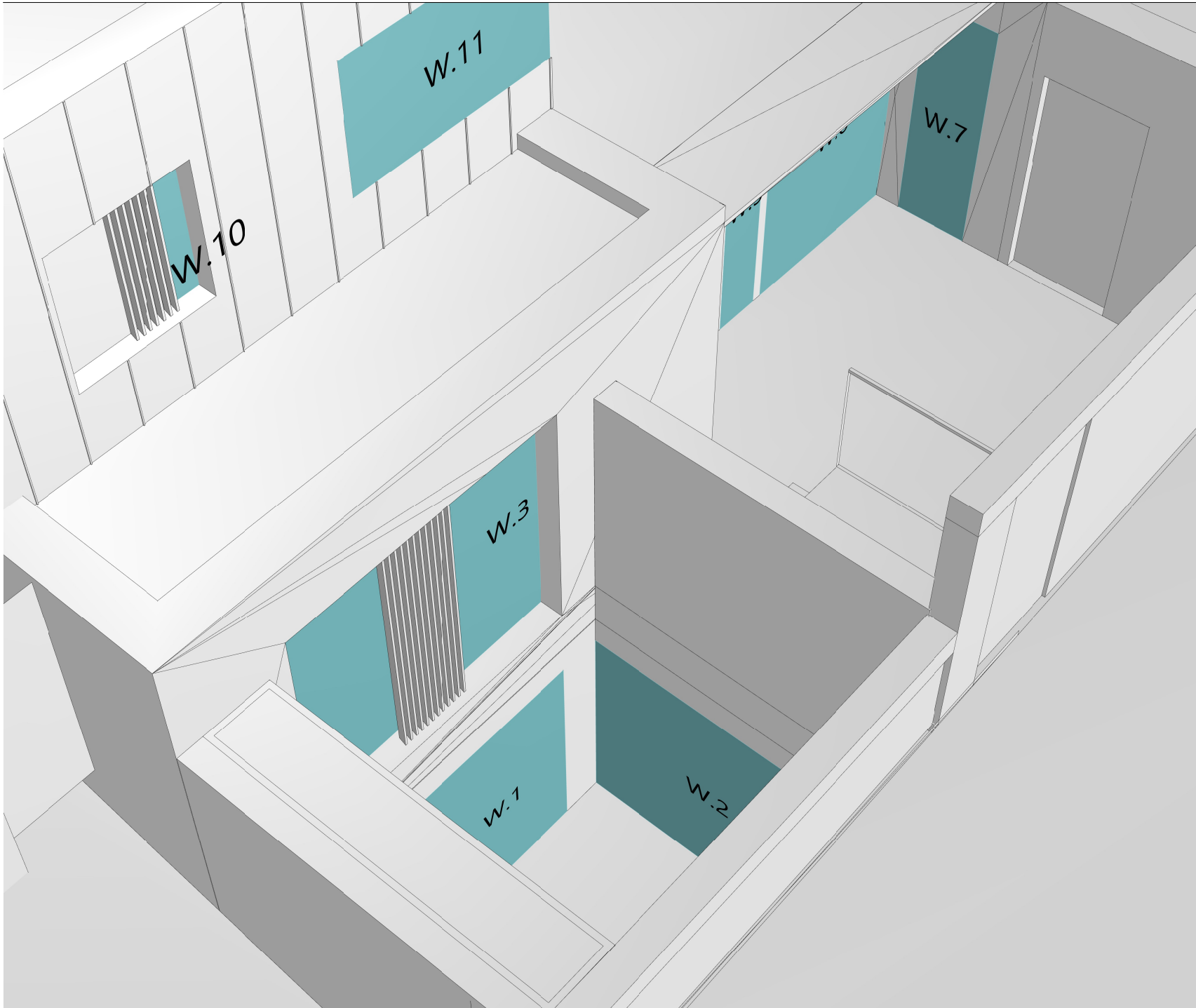
05/05/2023

Drawing Number:

10298_A_01



Project Name:	Land adjacent to 2 Alroy Road
Drawing Name	Proposed development
Date:	05/05/2023
Drawing Number:	10298_A_02

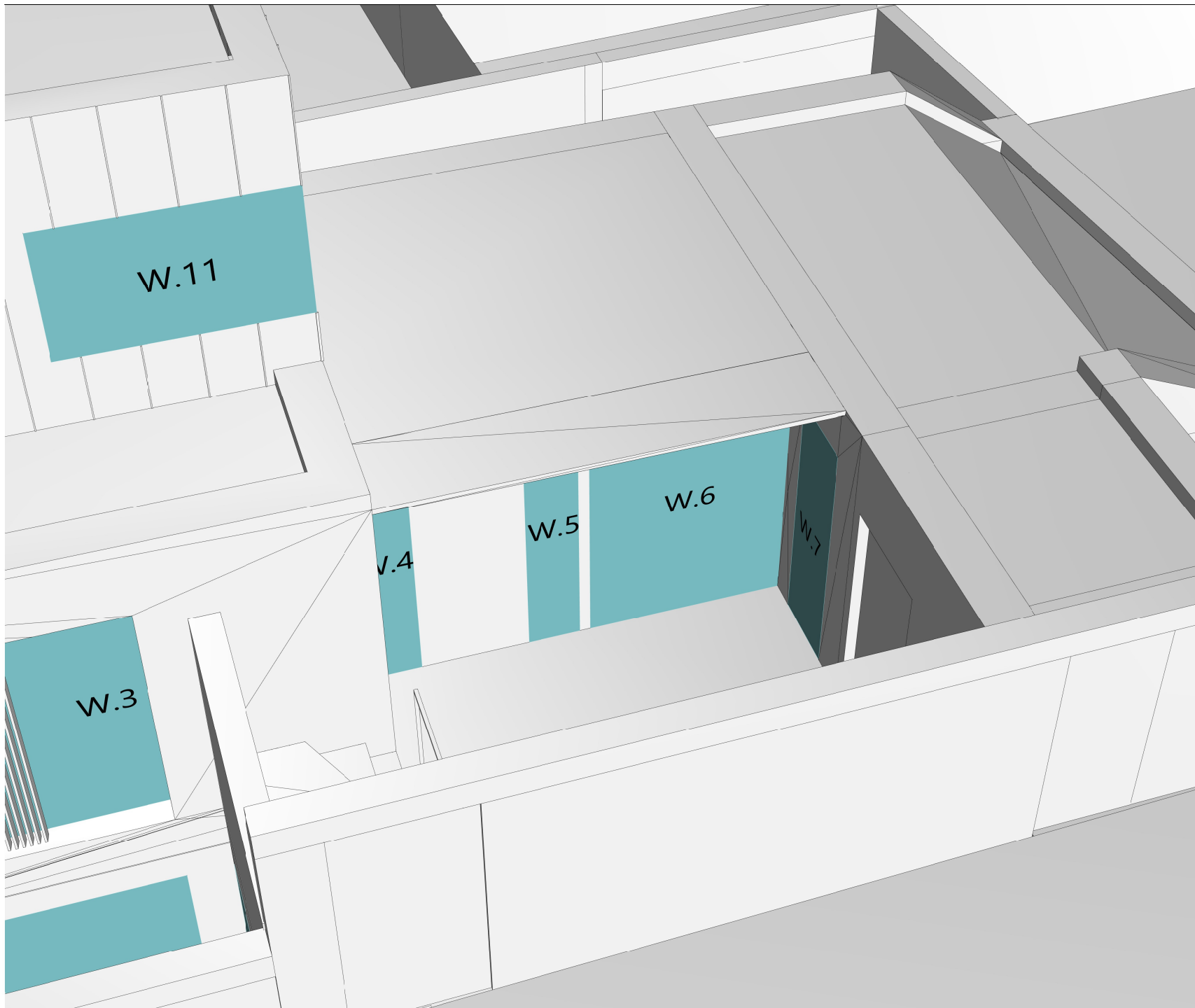


Project Name:
Land adjacent to 2 Alroy Road

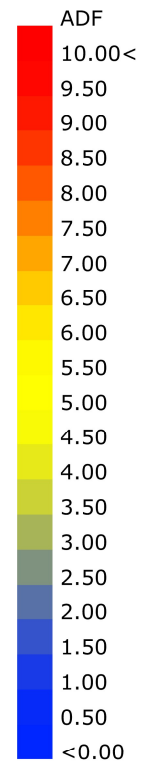
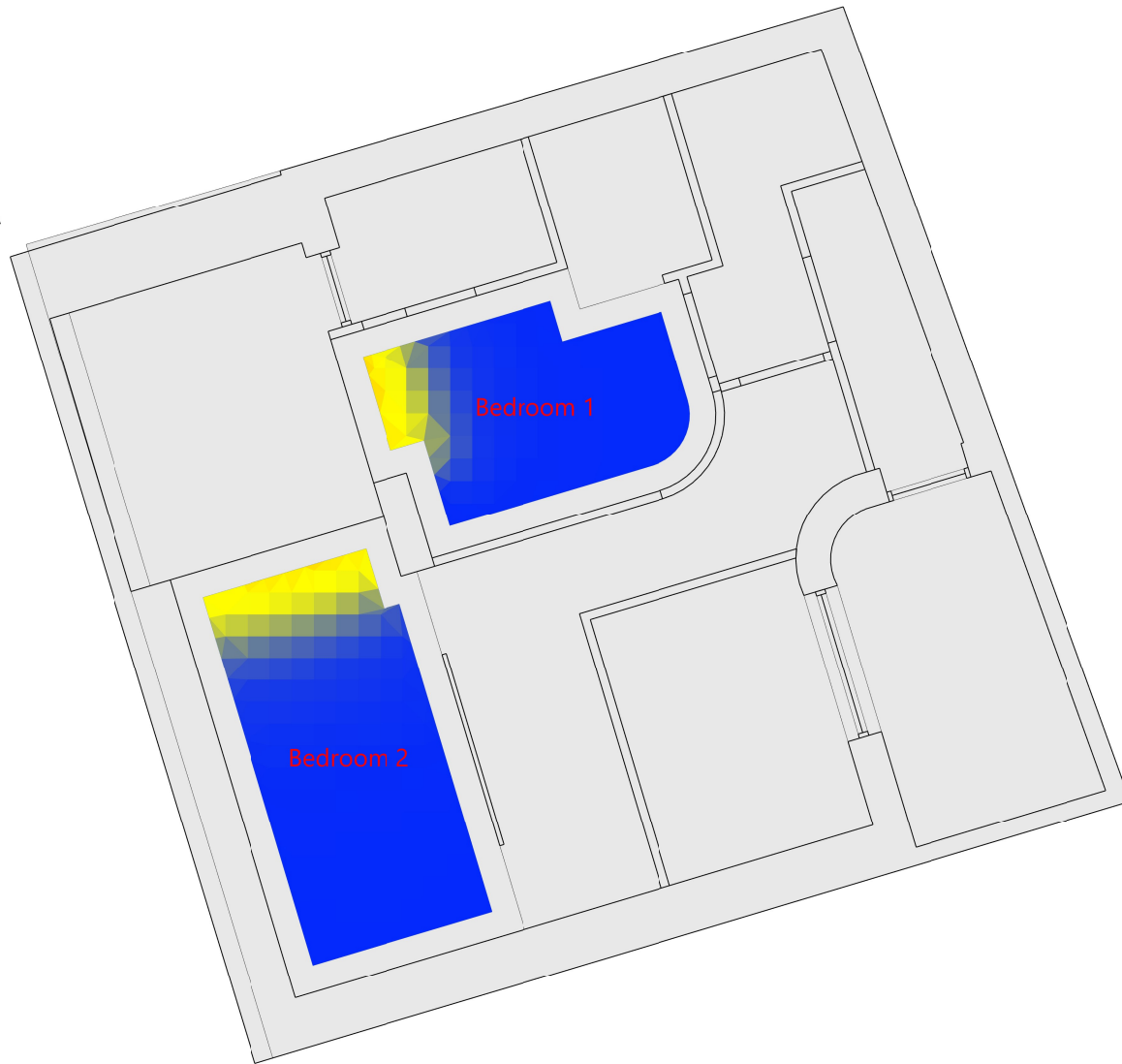
Drawing Name
Proposed development

Date:
05/05/2023

Drawing Number:
10298_A_03



Project Name:	Land adjacent to 2 Alroy Road
Drawing Name	Proposed development
Date:	05/05/2023
Drawing Number:	10298_A_04



Project Name:

Land adjacent to 2 Alroy Road

Drawing Name

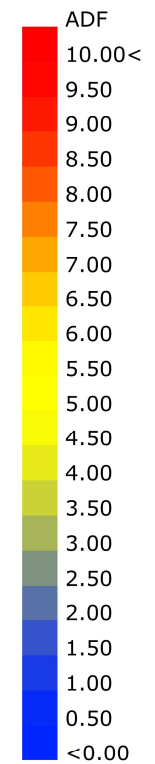
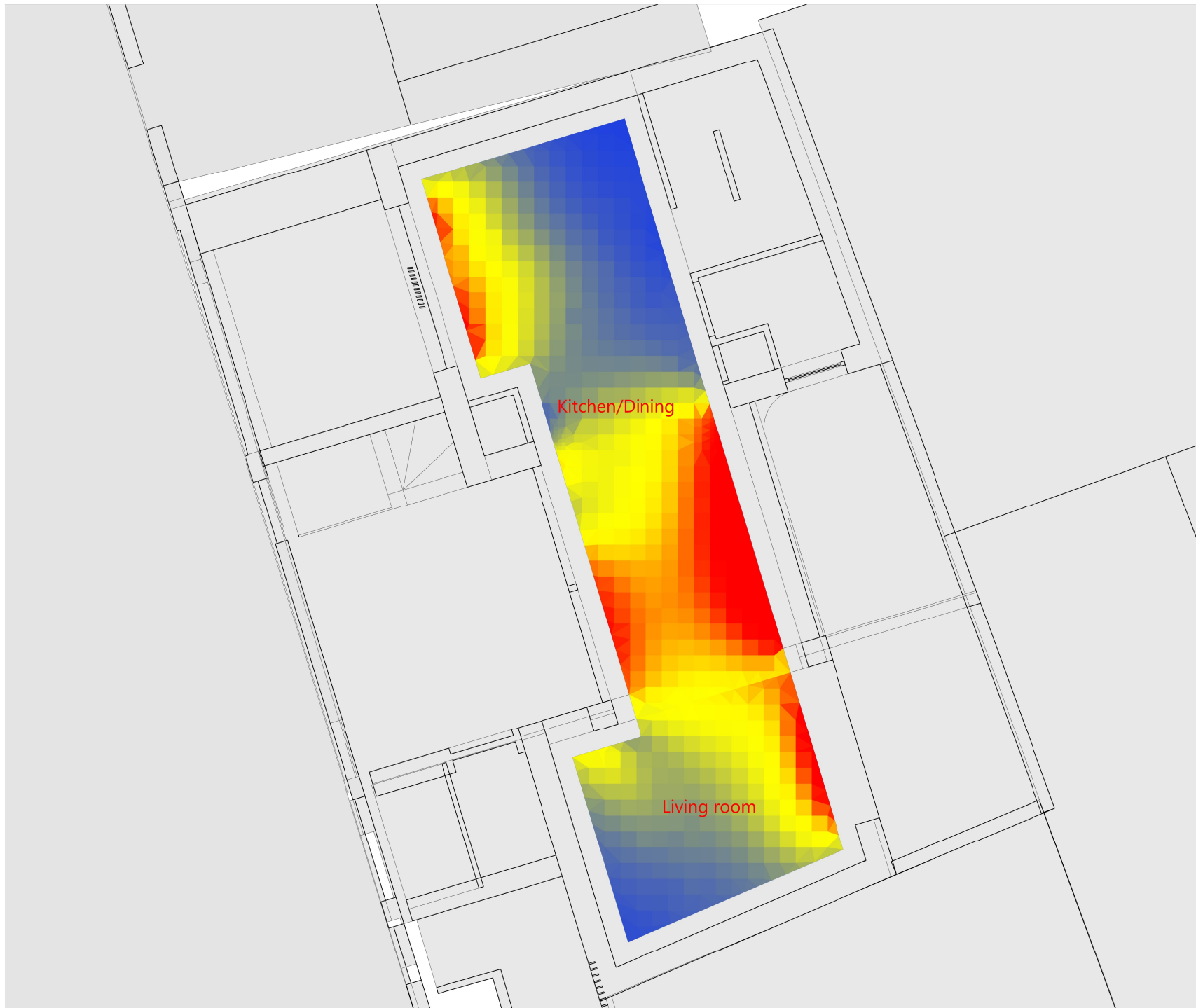
ADF - Basement Floor

Date:

05/05/2023

Drawing Number:

10298_B_01



Project Name:

Land adjacent to 2 Alroy Road

Drawing Name

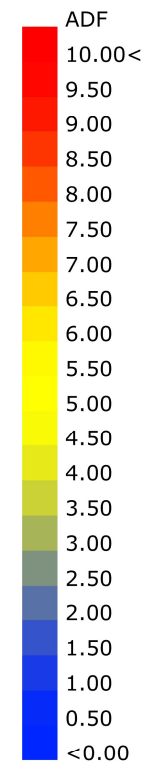
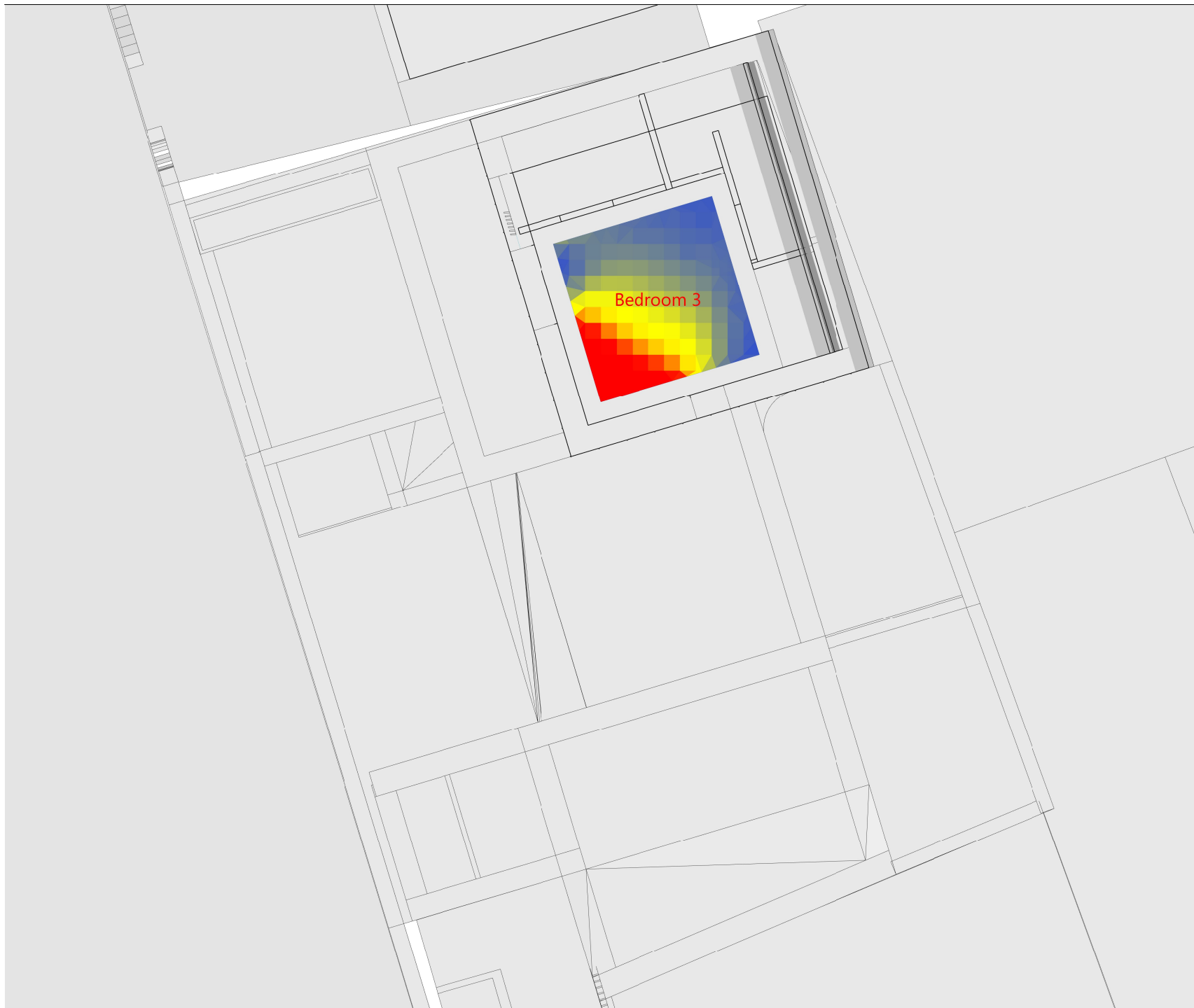
ADF - Ground Floor

Date:

05/05/2023

Drawing Number:

10298_B_02



Project Name:
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Drawing Name
ADF - First Floor

Date:
05/05/2023

Drawing Number:
10298_B_03

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Appendix B

Appendix B- Results (as per third edition 2022)

Interior Daylight

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Property			Daylight Factor			Sunlight Hours			
Floor	Room	No.	Target Daylight Factors (%)	Median Daylight Factors (%)	Compliance	Windows	Required Sunlight (No of hrs)	Calculated Sunlight (No of hrs)	Compliance
Basement	Bedroom 1	R.1	0.7	1.04	Pass	W1	-	-	N/A
	Bedroom2	R.2	0.7	1.13	Pass	W2	-	-	N/A
Ground floor	Kitchen/Dining	R.3	1.4	4.84	Pass	W3, W4, W5, W6, W7, W8, W9	1.50	3.00	Pass
	Living room	R.4	1.1	3.72	Pass				
First floor	Bedroom 3	R.5	0.7	4.42	Pass	W10, W11, W12	-	-	N/A
			Total number of rooms		5		Total number of rooms		1
			Pass		5		Pass		1
					100.0%				100.0%
			Fail		0		Fail		0
					0.0%				0.0%