

50 HAVERSTOCK HILL

LONDON

ANALYSIS

of

SITE LAYOUT

for

SUNLIGHT AND DAYLIGHT

for

AS STUDIO ARCHITECTURAL SERVICES

2 MAGDENLEN MEWS

164 FINCHLEY ROAD

LONDON NW3 5HB

OCTOBER 2014

BY

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PLANNING APPLICATION FOR A DEVELOPMENT AT

50 HAVERSTOCK HILL

LONDON

ANALYSIS OF SITE LAYOUT WITH REGARD TO DAYLIGHT AND SUNLIGHT

1. Introduction

A planning application has been for additional accommodation to an existing single storey building.

The site is at the end of the road bounded on one side by an existing terraced house.

This report includes analyses of the daylight and sunlight to existing adjacent properties in accordance with the recommendations of the Building Research Establishment publication 'Site layout and planning for daylight and sunlight, a guide to good practice second edition' published in 2011. This guide is used for planning guidance. The 2011 document is referred to as 'the Guide' in this report.

2. Description of Proposed Development.

50 Haverstock Hill is presently a single storey building on the north side of the main road used as a dentists offices and surgery.

It is proposed that floors are added to parts of the existing building.

To the north west the site abuts an existing terraced house with three floors above ground and a semi basement.

A car park with some single storey garages to a large school are to the south east..

Drawings used for the analyses in this report are by the AS Studio Architectural Services Ltd numbered:

- 7050/FEA/100
- 7050/FEA/101
- 7050/FEA/110
- 7050/FEA/111
- 7050/FEA/200
- 7050/FEA/201
- 7050/FEA/210
- 7050/FEA/211

3. General .

3.1. General Effects of New Development on Light to Adjacent Buildings

The local planning authority will wish to consider the effects of the new development on the availability of daylight and sunlight at the windows of adjacent properties.

Buildings to on the opposite side of Haverstock Hill are too far from the development and will not be adversely affected.

The car park and garage buildings to the south west have no windows to habitable windows and will therefore not be adversely affected.

The adjacent house to the north west is 52 Haverstock Hill. There are windows at basement and ground floor adjacent to the proposed development that will be affected to some extent.

Figure 1: Plan of the site as proposed.

Figure 2: Elevation to the rear showing proposed building

Figure 3: Waldram diagram of Vertical Sky Component for window W1.

Figure 3: Waldram diagram of Vertical Sky Component for basement kitchen.

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The Guide recommends that the following analyses are carried out for properties likely to be affected by the development.

The availability of natural daylight to windows of habitable rooms.

The sunlight availability to windows of habitable rooms.

The affected windows of 52 Haverstock Hill do not face within 90 degrees of due south so it is not necessary to analyse the affect of sunlight on these windows.

Analysis of daylight to the windows are in the following sections of this report.

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4 Analysis of Ground Floor Windows at 52 Haverstock Hill

There is a window to a bedroom at ground floor that is very close to the development. The window is designated W1 on the drawings in the appendices of this report.

4.1 Sunlight Availability Window W1.

The window does not face within 90 degrees of south so analysis of sunlight is not required or recommended by the Guide.

4.2 Skylight Availability. Window W1

Figure 3 is a Waldram Sky Availability diagram for W1 with the proposed development.

The angles plotted on the diagram are derived from the salient points on the roofs of the proposed building as shown in Figures 1 and 2.

The angles are calculated in accordance with the following table:

W1 As Proposed					
	Distance	Height	D/H	Az	Alt Tan-1
A	10.1	1.5	6.7	11.5 R	8
B	10.2	2.45	4.3	16.9 R	14
C	1.99	3.75	0.5	42 L	62
E	9.9	0.5	19.8	5.9 R	3

The proportion of visible sky is calculated from the area of the chart in accordance with the methods described in the Guide.

The proportion of visible sky before development is 28.6% and 26.4% after.

Note that the maximum available sky is 40% for unobstructed vertical window.

The Guide recommends (Paragraph 2.2.7) that the daylight and sunlight is satisfactory provided the Vertical Sky Component is greater than 27% or 80% of the former value.

In this case the VSC after development is 93% of its former value which is much better than the 80% criterion.

This criterion of the Guide will therefore be met for this window after the proposed building is constructed.

5 Analysis of Basement Windows at 52 Haverstock Hill.

The window serves a kitchen. It lies directly below window W1 but it 2.9 metres lower. As for the window W1 sunlight need not be analysed.

Daylight availability is analysed by means of the Waldram diagram in Figure 4

The angles plotted on the diagram are derived from the salient points on the roofs of the proposed building as shown in Figures 1 and 2.

The angles are calculated in accordance with the following table:

W1 As Proposed					
	Distance	Height	D/H	Az	Alt Tan-1
A	10.1	4.4	2.3	11.5 R	23.5
B	10.2	5.35	1.9	16.9 R	27.7
C	1.99	6.65	0.3	42 L	73.3
E	9.9	3.4	2.9	5.9 R	19.0

The diagram shows that the sight line of the proposed development when viewed from the window is below the sight line of the existing building. There will therefore be no reduction in availability of daylight to the window.

7. Conclusion

The Building Research Establishment Guide to Good Practice 2011 makes recommendations for the retention of daylight and sunlight in existing buildings adjacent to new developments.

The proposed building will have a limited effect upon the availability sunlight and daylight to rooms in the adjacent house at 52 Haverstock Hill.

The analyses given in this report show that the reductions will be within the limits recommended in the Guide to Good Practice.

Availability of daylight and sunlight to other nearby buildings will not be affected in anyway.

The proposed development is therefore in compliance with the recommendations of the Guide.

Terence A Rook Bsc. C.Eng., MIMechE, FCIBSE
2nd October 2014.

References: Building Research Establishment publication 'Site layout and planning for daylight and sunlight, a guide to good practice' published in 2011.

Attachments:

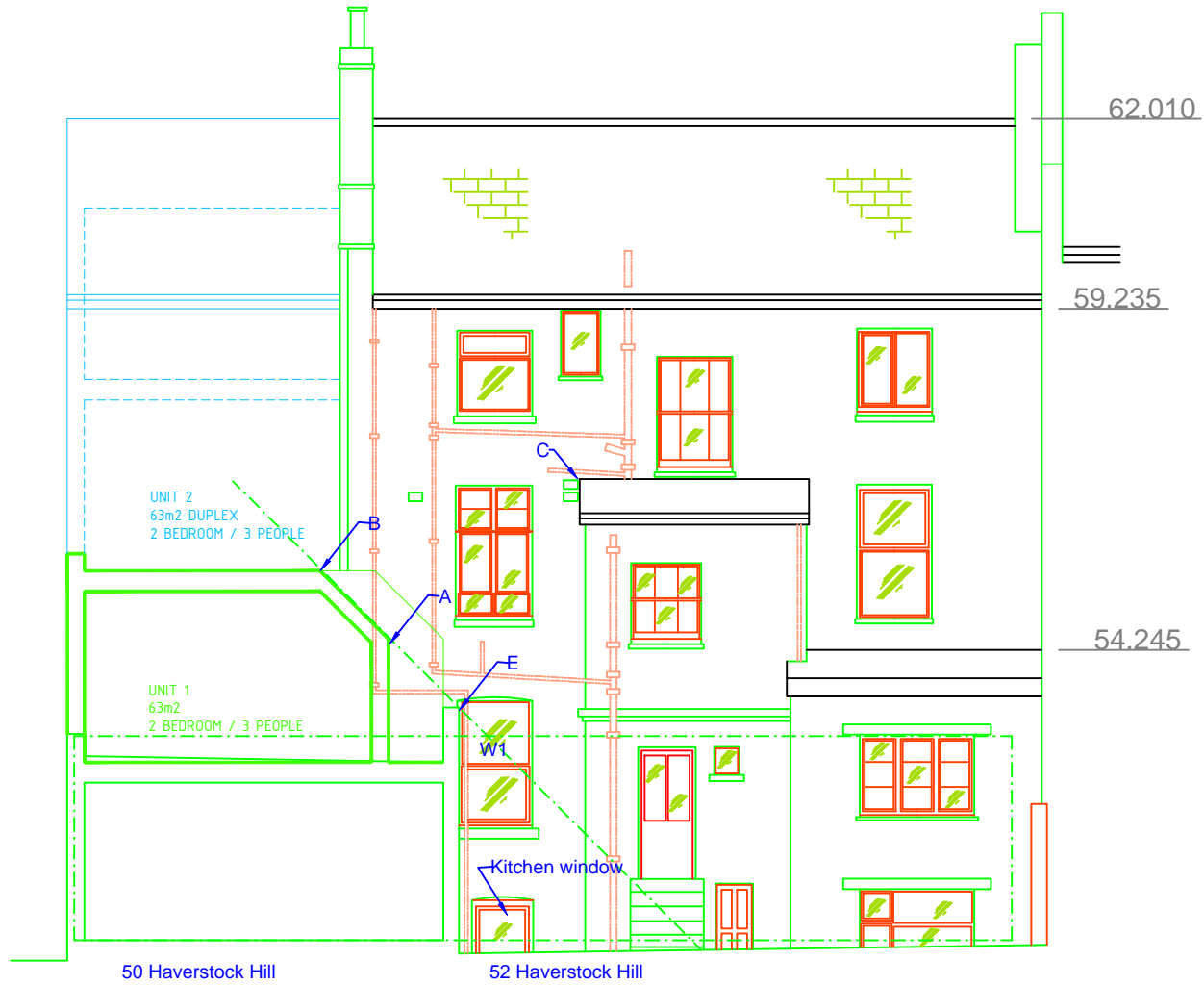
Figure 1: Plan of the site as proposed.

Figure 2: Elevation to the rear showing proposed building

Figure 3: Waldram diagram of Vertical Sky Component for window W1.

Figure 3: Waldram diagram of Vertical Sky Component for basement kitchen.

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REAR ELEVATION
ADJACENT PROPERTY SHOWN IN FULL DETAIL

Figure 2. Rear View

.Figure 3 Vertical Sky Component for Rear Window Ground Floor

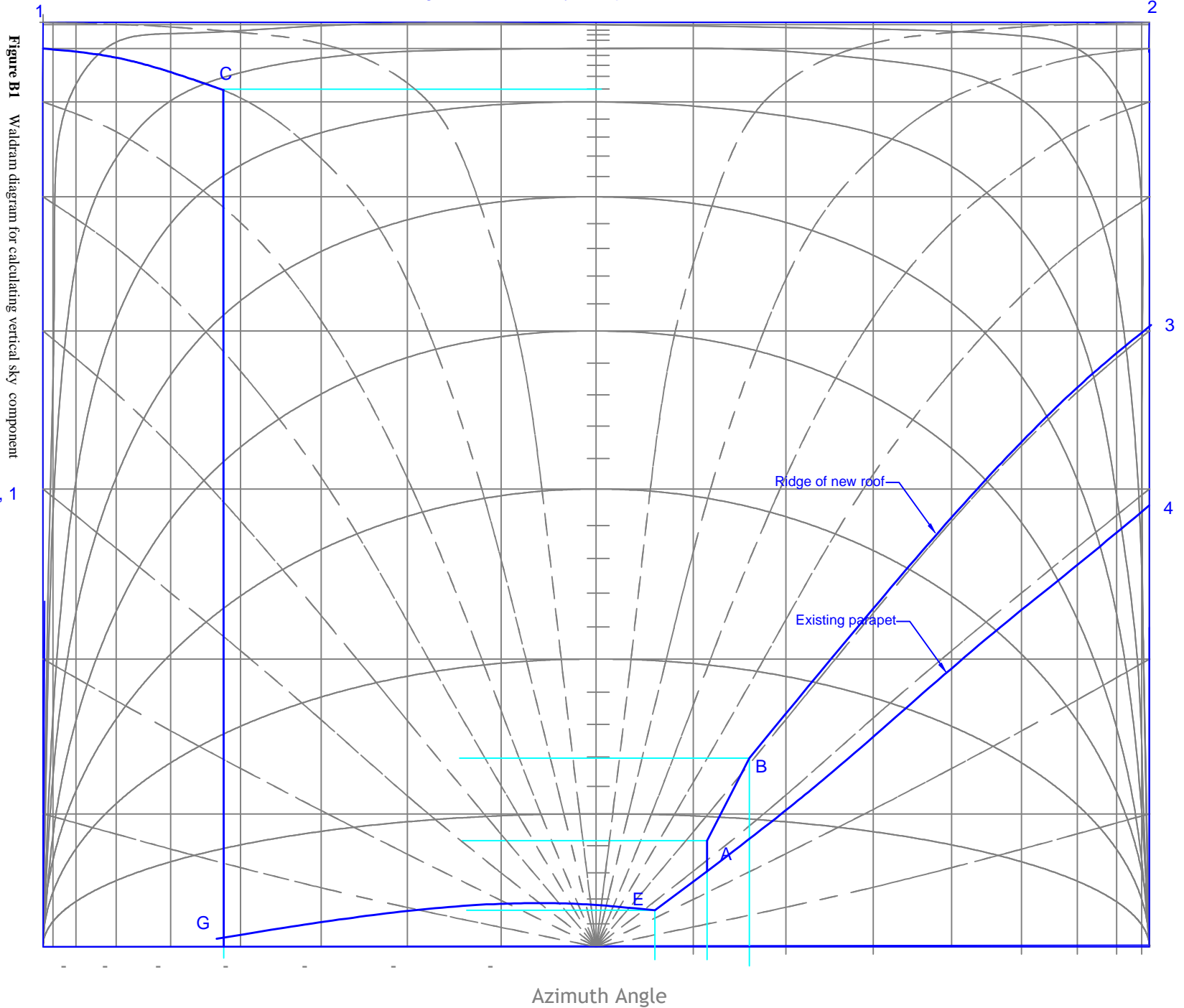


Figure B1 Waldram diagram for calculating vertical sky component

Visible Sky as Existing

Area 1, 2, 4, E, G, C, 1
=286.5sq.cm.

Therefore vertical sky
component=28.6%

Visible Sky as proposed

Area 1, 2, 3, B, A, E, G, C, 1
=264.1sq.cm.

Therefore vertical sky
component=26.4%

.Figure 4 Vertical Sky Component for Rear Window Basement

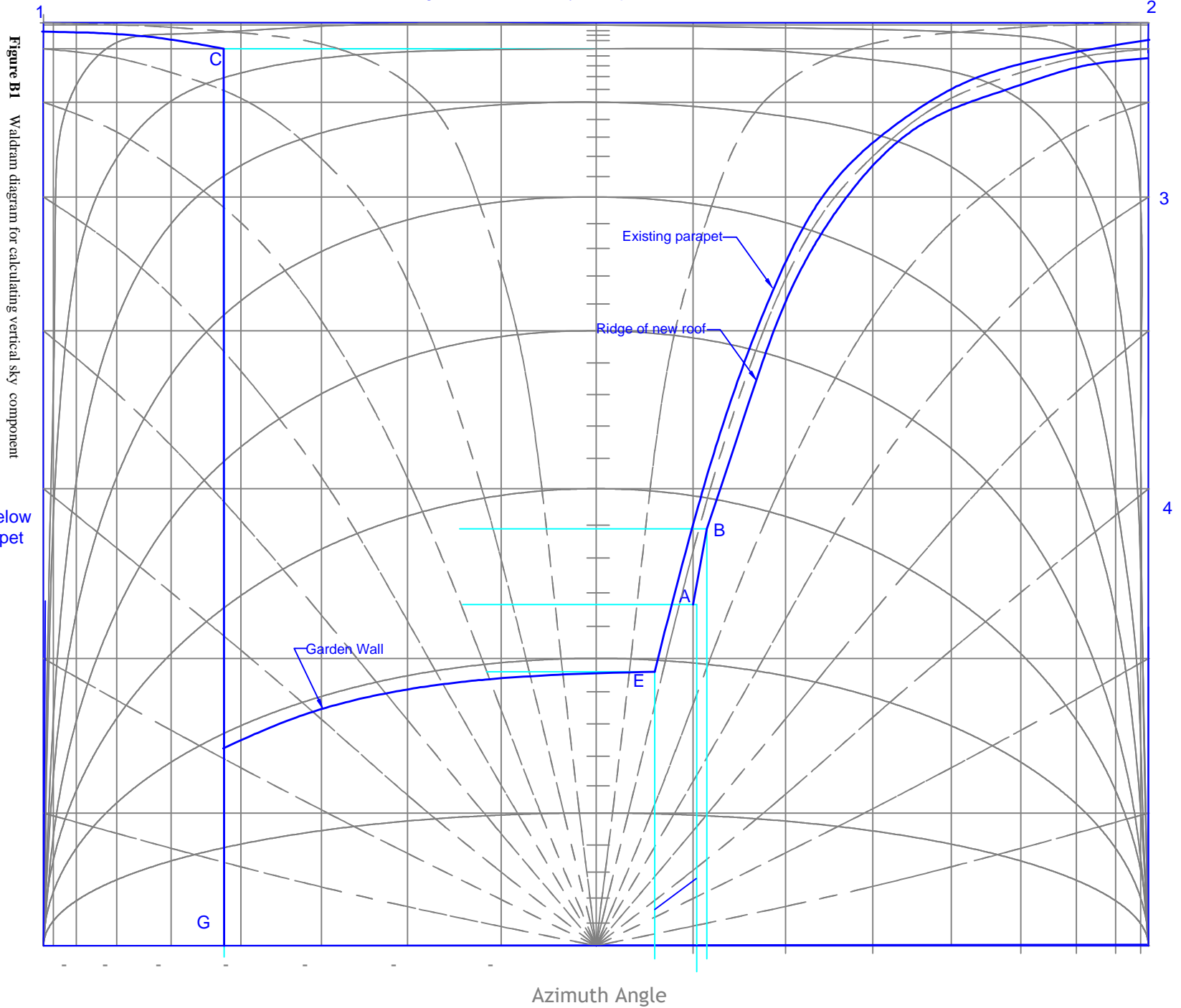


Figure B1 Waldram diagram for calculating vertical sky component

The roof of extension is below sight line to existing parapet