

DAYLIGHT & SUNGLIGHT REPORT
(APPENDIX A)

Daylight Report

- 3.1 This report has been undertaken using the Building Research Establishment's (BRE) publication "*Site Layout Planning for Daylight and Sunlight: A guide to good practice*". The report has been formulated to determine the effect of the proposal on the amount of daylight and sunlight that existing buildings (Centre Heights, Hickes House, Campden House, Swiss Terrace / Station House) receive adjacent to the subject site. The Sunlight Report is found on page 27. The drawings used to achieve these results are found at the end of this report.
- 3.2 To undertake an initial analysis of daylight, a series of reference points are plotted on the main face of each existing building. The reference point is measured 2 metres above floor level. This measurement corresponds to the top part of ground floor windows in the existing building.

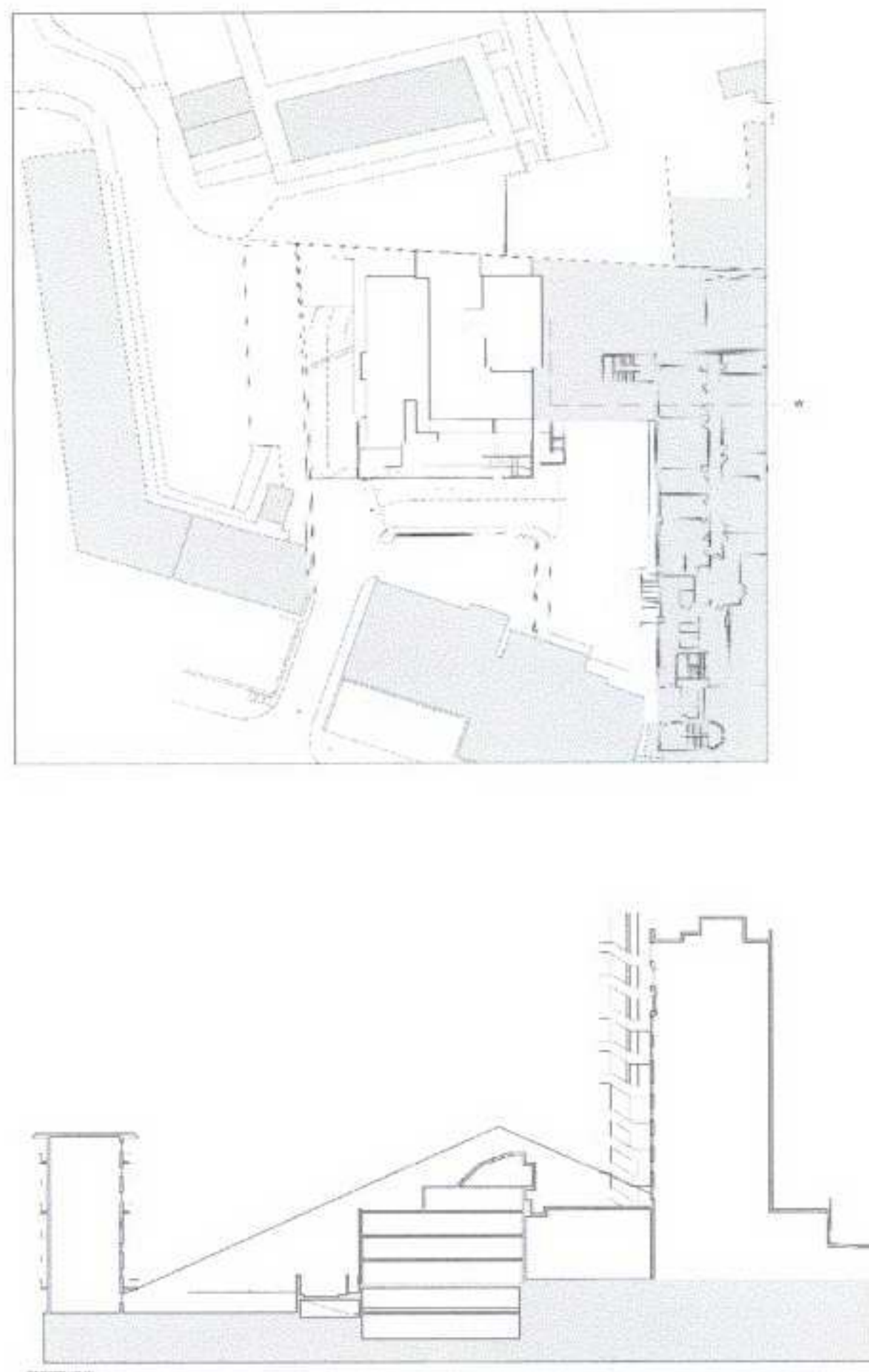


Figure 1: W-W Section of Hickes House and Centre Heights

Next, a section of the existing and proposed building is drawn. A line is then drawn from the reference point (on the existing building) at an angle of 25 degrees. If the proposed building does not break or extend beyond this line then no adverse impact upon the daylight that the existing building receives will occur. Figure 1 illustrates this point. A section has been drawn through the subject site- this section is W-W. The elevational section is also illustrated. Two lines have been drawn from the reference points on Hickes House and Centre Heights at an angle of 25 degrees. As illustrated, the proposed building does not break or extend beyond these lines.

- 3.3 As a result, the proposed building will not have an impact upon Hickes House and Centre Heights. The amount of daylight falling on each existing building is quantified as the "*Vertical Sky Component*" (VSC). From this, we can state that the VSC of Hickes House and Centre Heights will not change if the proposed building is constructed and the residents and occupiers of these buildings will not experience any changes to their current amount of daylight.
- 3.4 The next part of the analysis refers to the existing buildings of Campden House and Swiss Terrace / Station House. As the diagram overleaf illustrates, three individual sections have been drawn, X-X, Y-Y and Z-Z. The proposed building breaks the line that is drawn from the reference points at an angle of 25 degrees on some of the sections. Each section in this instance tells us that the ground floor windows of Campden House may experience some impact upon their current amount of daylight. As regards Swiss Terrace / Station House, Section Z-Z illustrates that an impact may also be experienced to ground floor windows at this location.

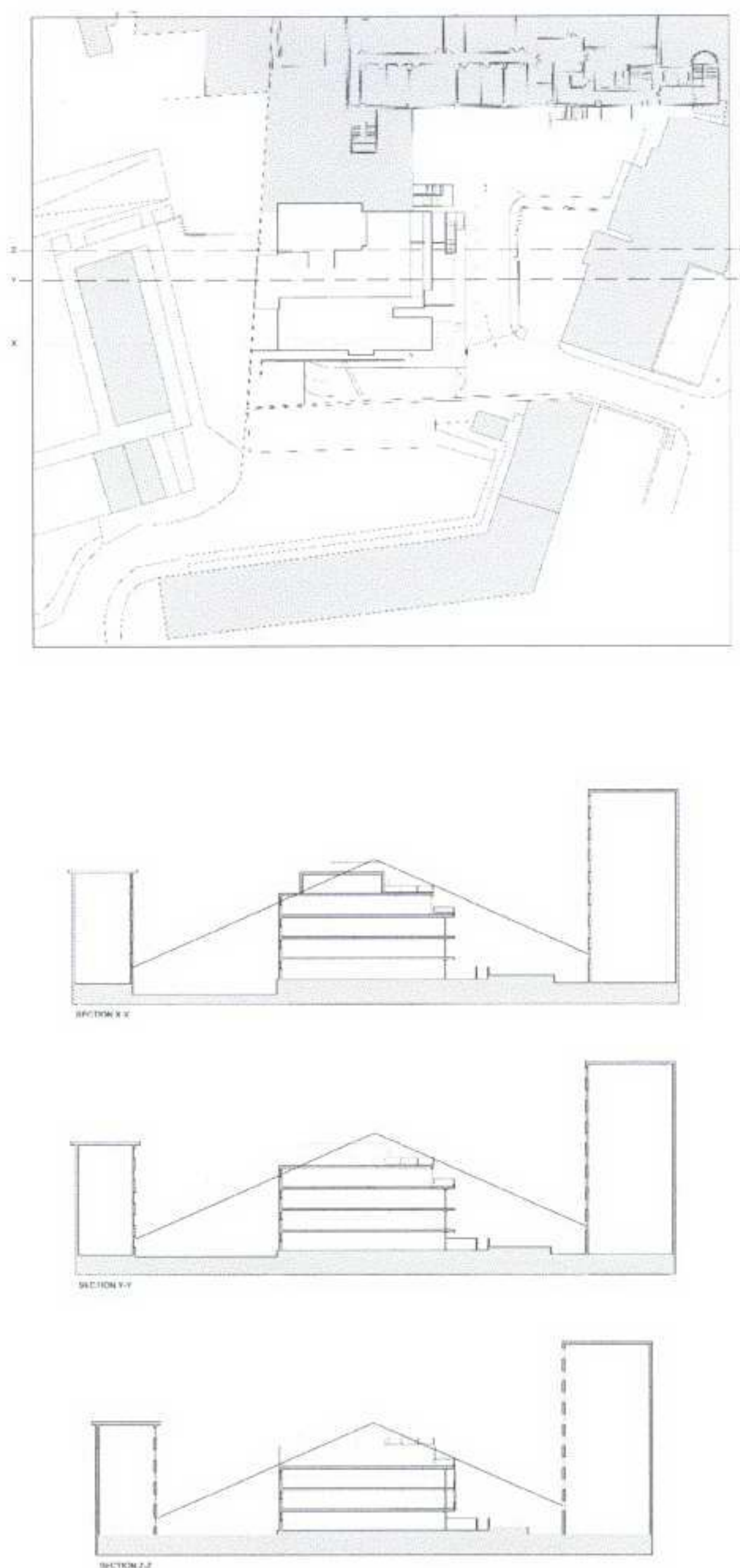


Figure 2: Sections X, Y, Z Campden House and Swiss Terrace/Station House

- 3.5 What we can deduct from these sections is that the VSC of the ground floor windows of the aforementioned buildings may experience some change. When this situation occurs, a further in-depth examination of the VSC of each ground floor window of each existing building is required to determine the impact upon the daylight that these windows may experience. The BRE Guidelines establish that as long as the VSC is above 27% enough daylight will be reaching the window. The VSC figures for

these windows are found on page 25. This analysis technique is outlined in Appendix A of the BRE publication.

- 3.6 As the ground floor windows of Campden House and Swiss Terrace / Station House may experience some impact upon their daylight, it is necessary to undertake an examination of the first floor windows of these buildings also. The diagram below illustrates this.

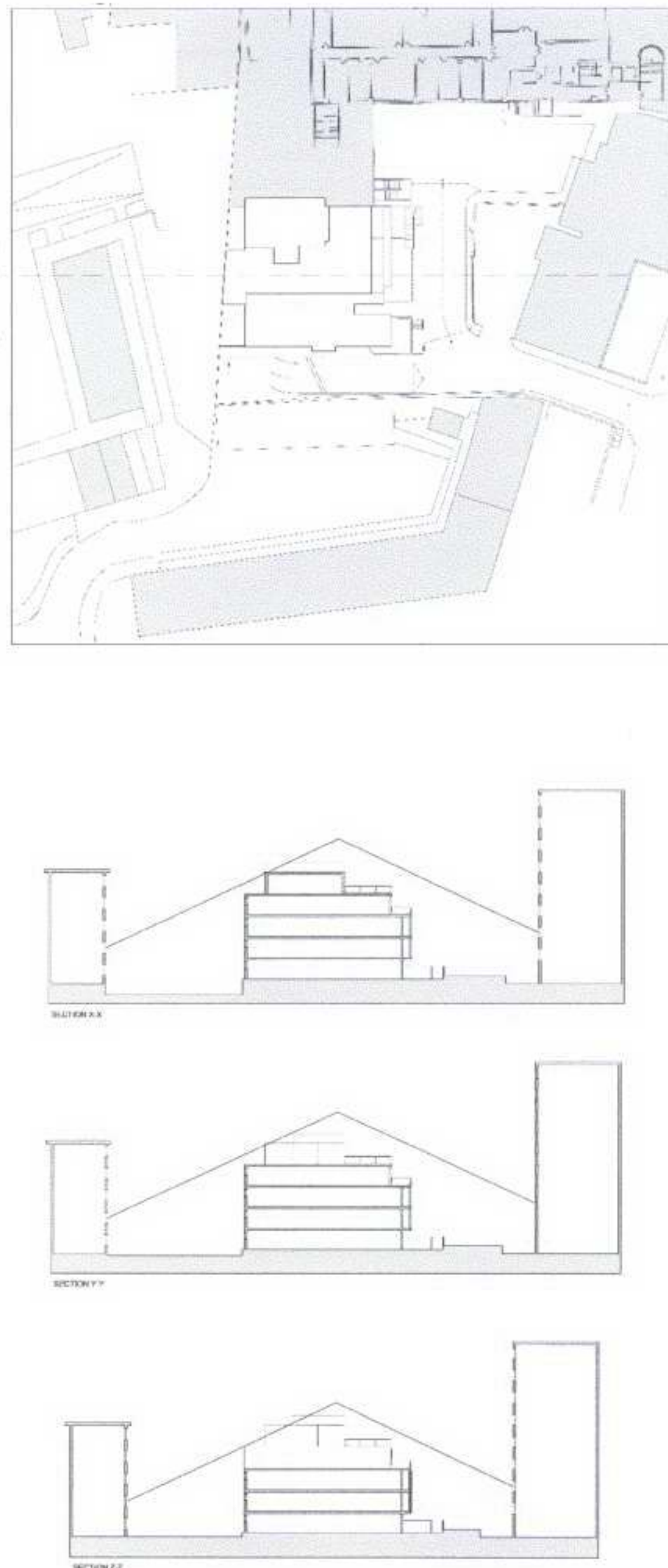


Figure 3: Sections of Campden House, Swiss Terrace and Station House (First Floor Windows)

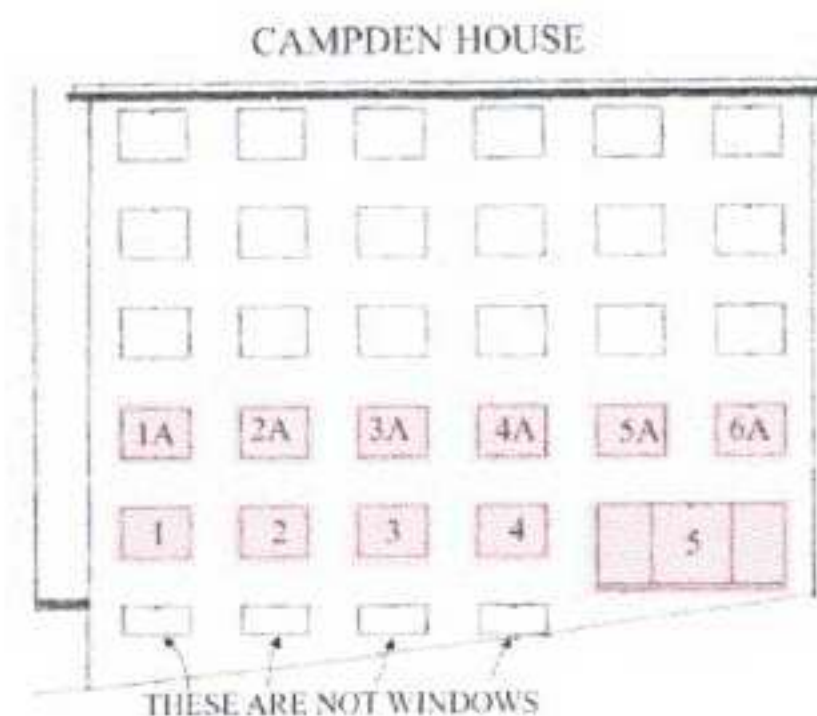
Again, as with the ground floor windows, lines have been drawn at an angle of 25 degrees from the reference points on the existing buildings. From this, Sections X-X and Y-Y tell us that there is no impact upon the VSC of the windows to the first floor of Campden House and Swiss Terrace / Station House. However, Section Z-Z indicates that there may be an impact upon the first floor windows of Campden House. As before, an analysis of these windows is required. The figures relating to the first floor windows of Campden House are found below.

Vertical Sky Component Results

- 3.7 The figures below outline the existing and proposed VSC (in percentage) of each window on the main face of the ground and first floor of Campden House and the ground floor windows of Swiss Terrace / Station House.

(i) Campden House – Ground floor

	Existing VSC %	Proposed VSC %
Window		
1	35	37
2	35	34.5
3	33.5	33.5
4	35	32.5
5	35.5	32

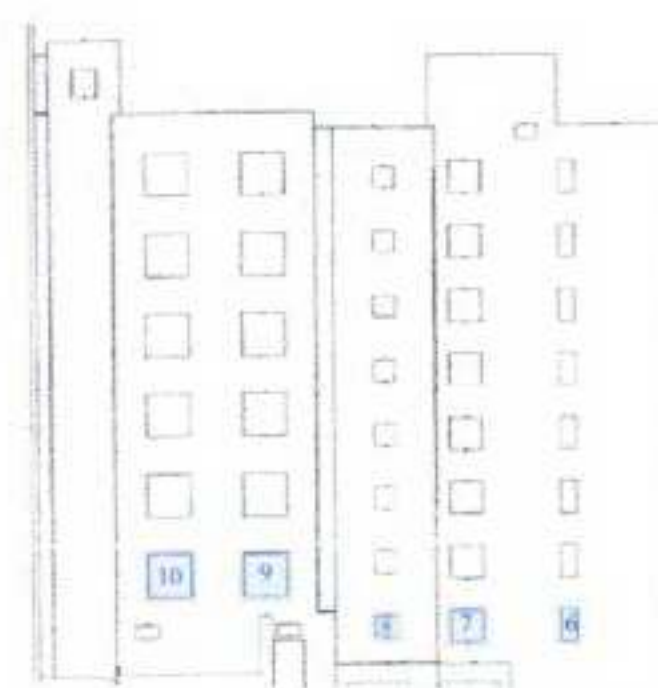


(ii) Campden House – First Floor

	Existing VSC %	Proposed VSC %
Window		
1A	39.5	38.5
2A	39	37
3A	39	35.5
4A	38	35
5A	38.5	35
6A	40	34.5

Swiss Terrace / Station House – Ground floor

	Existing VSC %	Proposed VSC %
Window		
6	35	32
7	35.5	32.5
8	36.5	34
9	38	35
10	39	36.5



SWISS TERRACE / STATION HOUSE

The existing and proposed VSC figures for the first floor of Swiss Terrace / Station House are not required as Figure 3 shows that there is no impact upon the daylight to these windows and as such it is not necessary to determine the VSC in this location.

The BRE publication (page 5) states that *"any reduction in the total amount of skylight can be calculated by finding the vertical sky component at the centre of each main window. If this vertical sky component is greater than 27% then enough skylight should still be reaching the window of the existing building"*.

Conclusion

- 3.8 The figures overleaf illustrate that the proposal will have a minimal impact upon the daylight of the existing buildings. Using the BRE figure of 27% as a threshold, the proposed VSC results illustrate that the windows of the buildings above will not experience major daylight loss and that the proposed building does not have an impact upon these buildings and their occupiers in accordance with Policy SD6 (b) of the UDP.

Sunlight Report

- 3.9 The following contains an analysis of the existing and proposed sunlight hours experienced by the ground floor and first levels of Campden House. Again, the BRE's "*Site Layout Planning for Daylight and Sunlight: A guide to good practice*" has been used. The sunlight assessment is a follow on from the daylight assessment.
- 3.10 Firstly, it is appropriate to state that it is not necessary to undertake an analysis of all windows that are found within 90° of due south. The BRE publication states that the British Criterion for acceptable sunlight is met provided, "*The window wall faces within 90° of due south and no obstruction, measured in the section perpendicular to the window wall, subtends an angle of more than 25° to the horizontal*". The section applicable in this instance is illustrated in "Figure 1: W-W Section of Hickes House and Centre Heights". From this section, it is clear that the obstruction (in this case our proposal) does not extend beyond an angle of 25° and therefore an analysis of the windows of the aforementioned buildings is not required as they adhere to BRE Guidelines.
- 3.11 As a result, it has only been necessary to examine the existing and proposed sunlight hours to the windows of Campden House. As with the Daylight Report, the ground floor and first floor windows have been examined. The results are found below.

Campden House	Ground floor					
	Existing %	APS (hrs)	Equinox %	Proposed %	APS (hrs)	Equinox %
Window 1	72	1069.92	18	74	1099.64	22
Window 2	73	1084.78	17	71	1005.06	22
Window 3	71	1005.06	19	67	995.62	20
Window 4	67	995.62	16	65	965.9	19
Window 5	73	1084.78	21	67	995.62	15

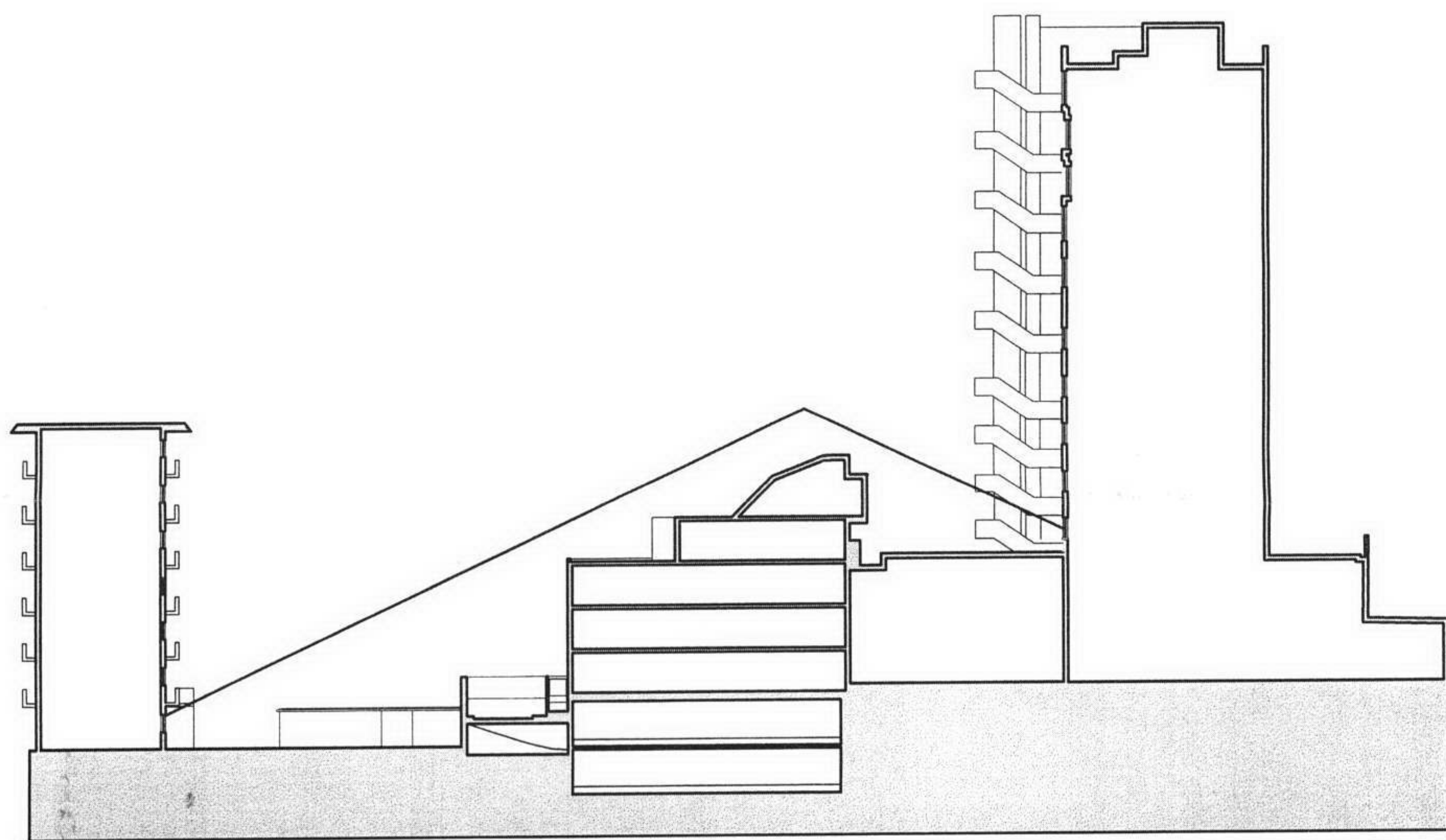
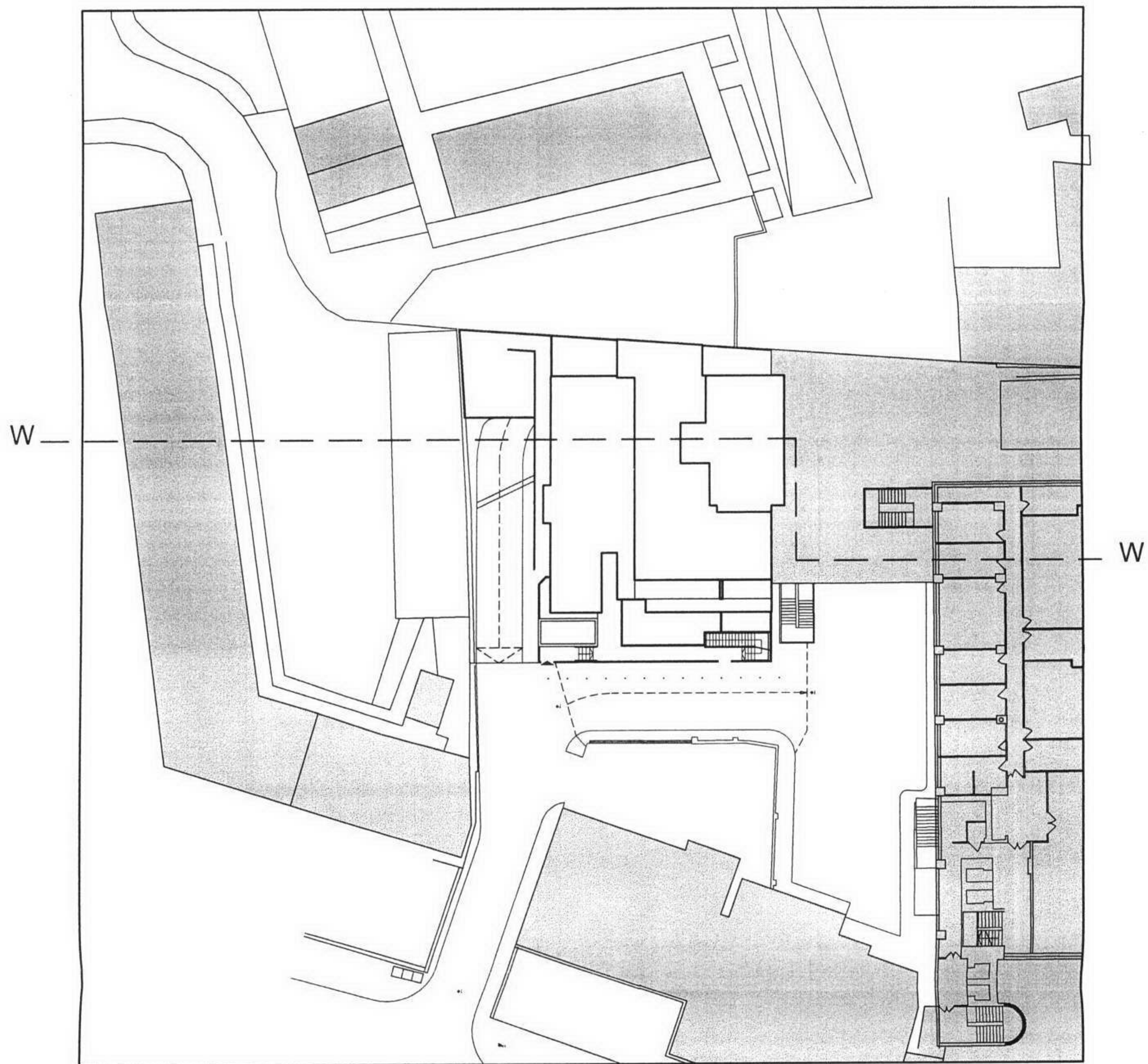
Campden House	1st floor					
	Existing %	APS (hrs)	Equinox %	Proposed %	APS (hrs)	Equinox %
Window 1A	79	1173.94	24	81	1203.66	24
Window 2A	82	1218.52	27	79	1173.94	23
Window 3A	77	1144.22	27	76	1129.36	21
Window 4A	79	1173.94	26	76	1129.36	18
Window 5A	78	1159.08	26	75	1114.5	18
Window 6A	88	1307.68	28	77	1144.22	15

The tables on page 6 illustrate the existing and proposed sunlight experienced in percentage and in Annual Probable Sunlight (APS) terms (in hours) and during the Equinox period (21st September to 21st March). The annual unobstructed total of sunlight hours for London, whose latitude is 51.5 ° N, is 1486 hrs. The BRE publications states that windows should receive more than one quarter of APS hours, in this instance 371.5 hrs and at least 5% of APS hours during the winter months of 21st September and 21st March.

- 3.12 The results of the analysis of windows to the ground and first floors of Campden House provide us with a number of outcomes. Firstly, it illustrates that these windows currently receive and will continue to receive an acceptable allowance of sunlight over and above the minimum target advocated by the BRE Guidelines. Secondly, it also illustrates that these windows experience and will continue to experience an acceptable allowance of sunlight during winter months.

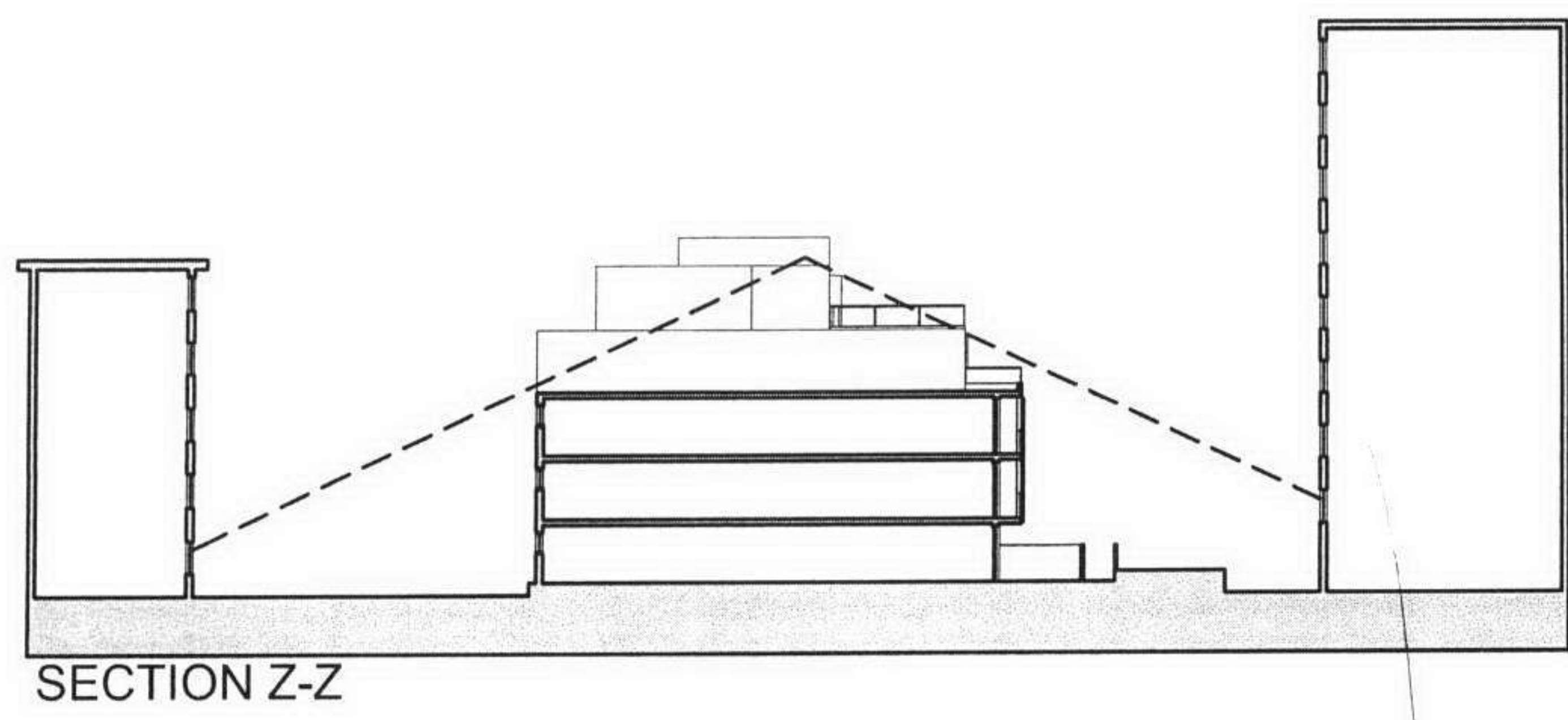
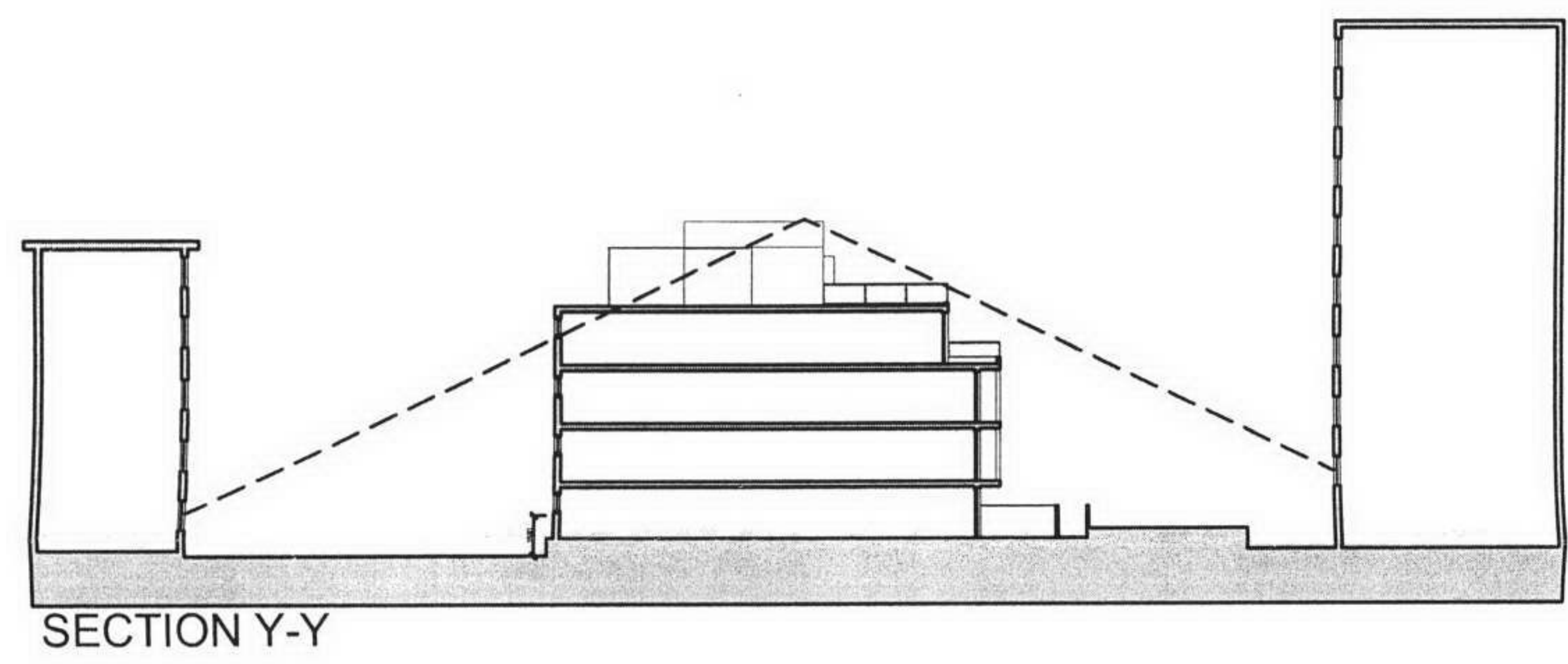
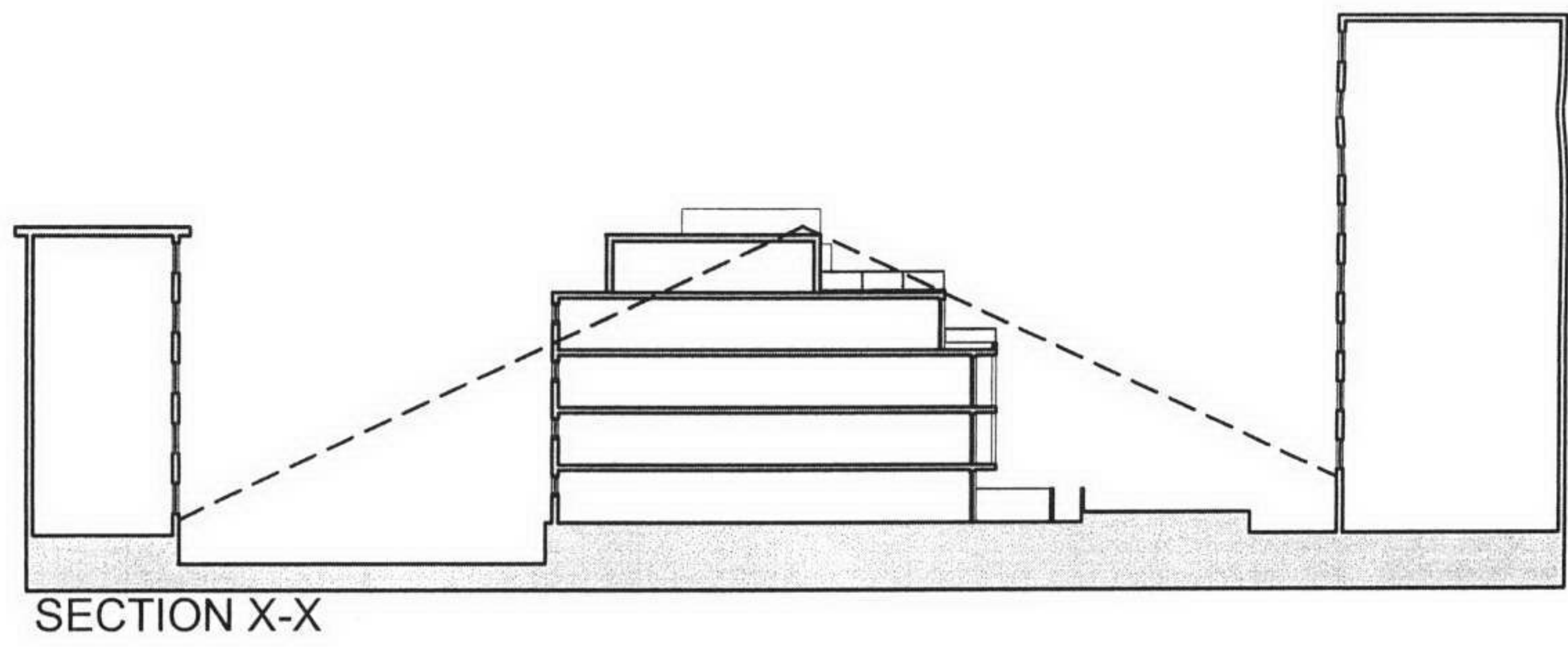
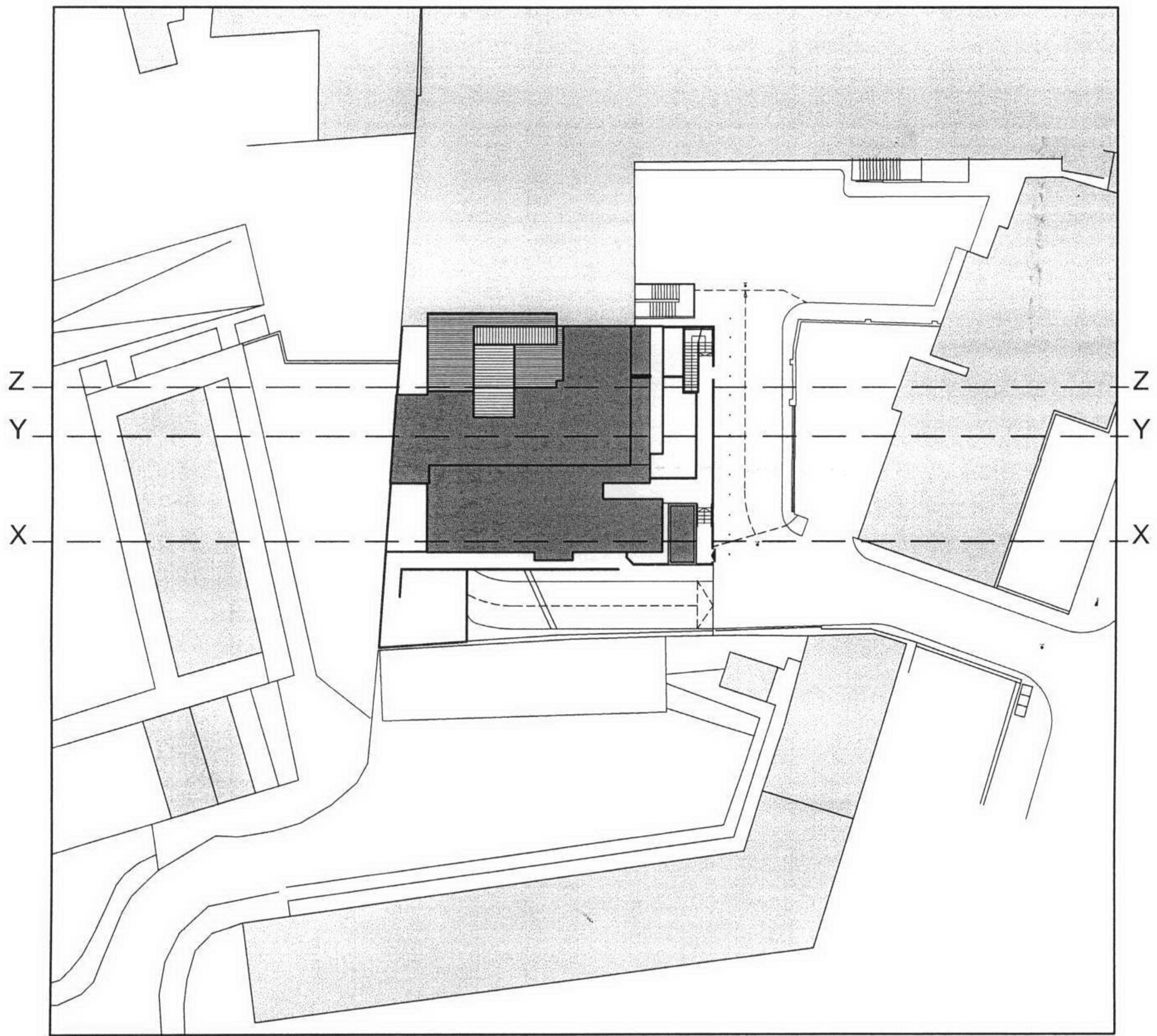
Conclusion

- 3.13 The analysis undertaken and subsequent results illustrate no noticeable effect upon the proposed sunlight hours for occupiers of the ground and first floor levels of Campden House. As a result, it has not been necessary to examine the additional floor levels of Campden House for obvious reasons. The orientation, design and varying ridge heights of the proposal has meant that no impacts will be experienced by occupiers of any other adjacent buildings.

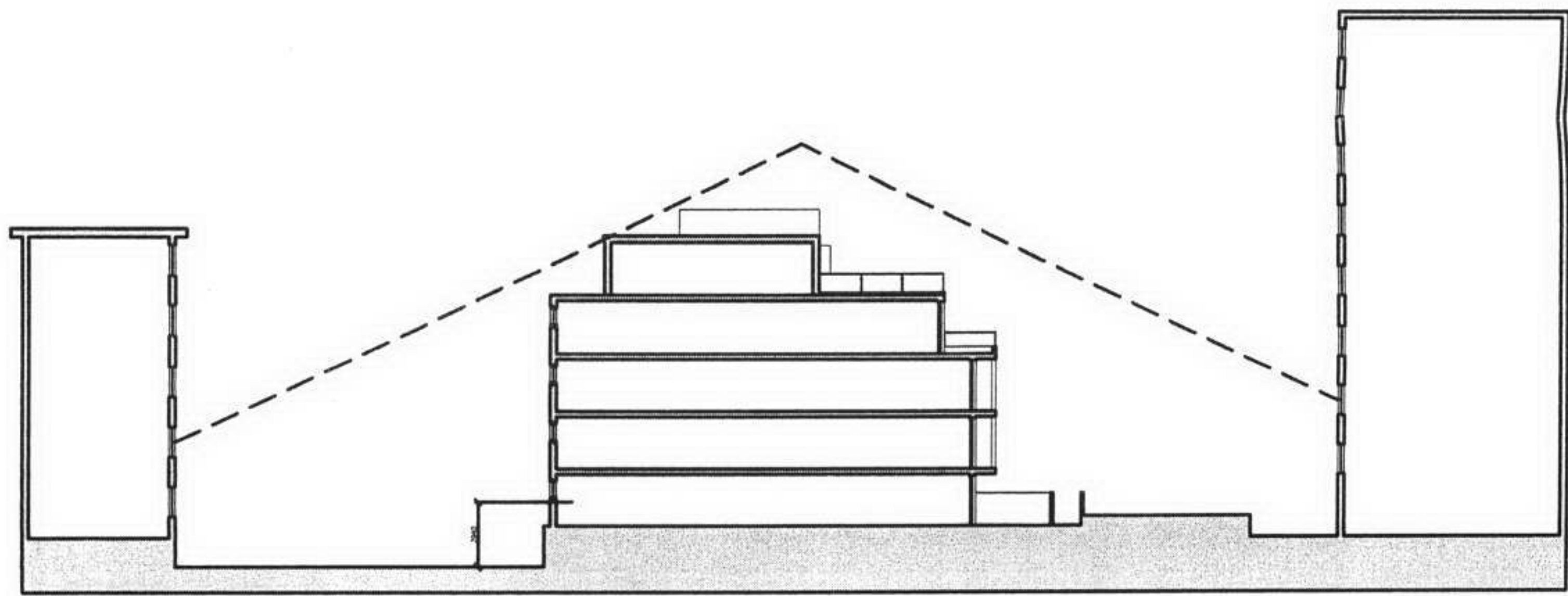
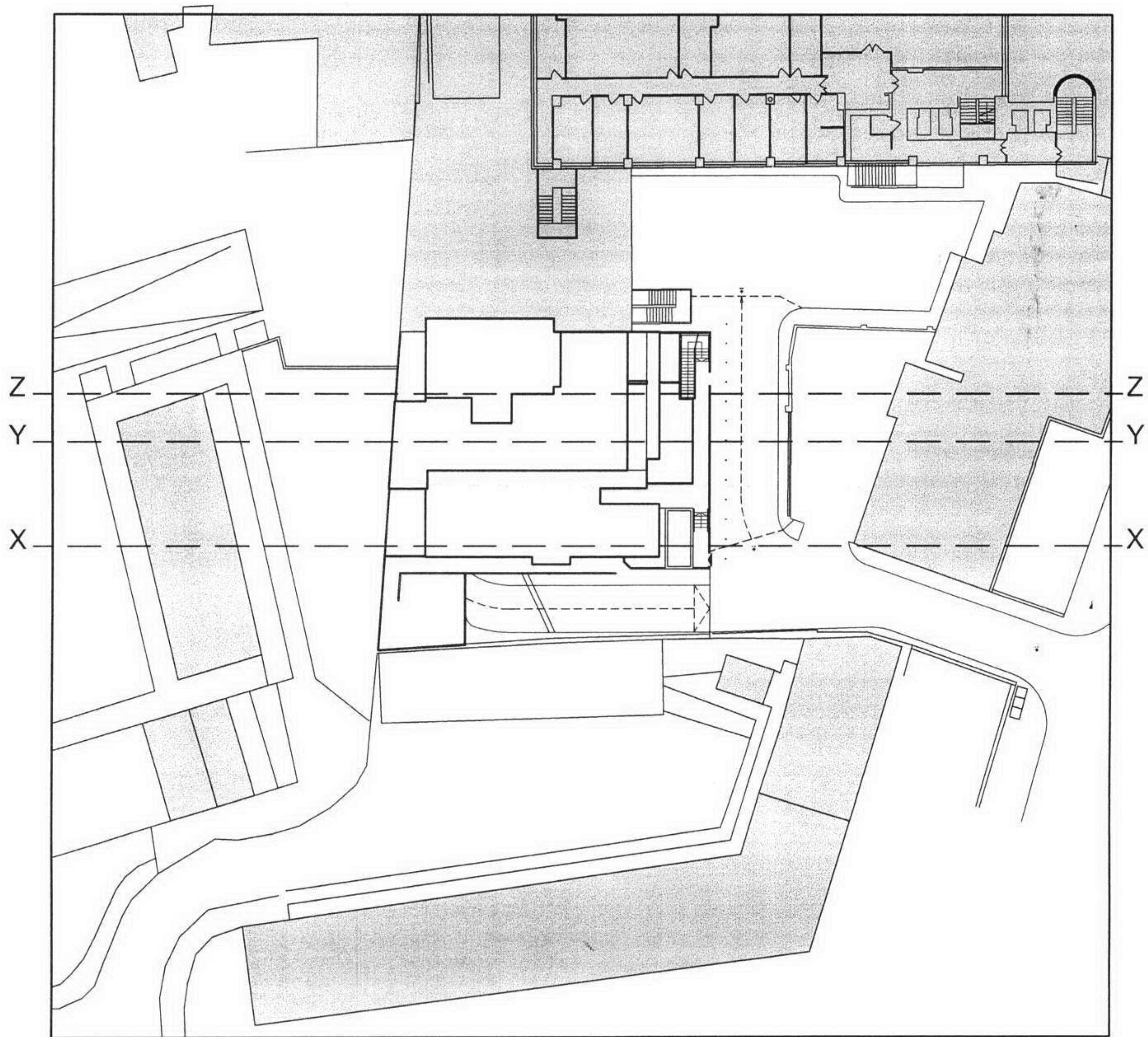


SECTION W-W

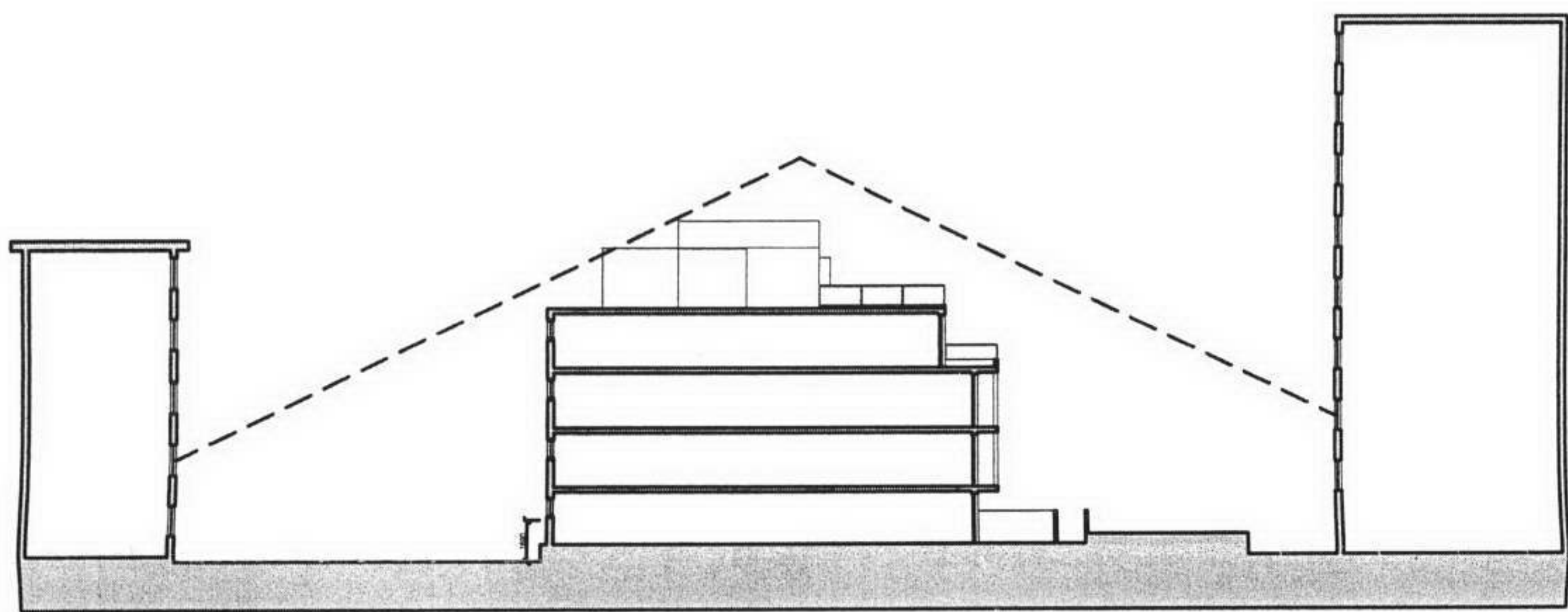
0 10m



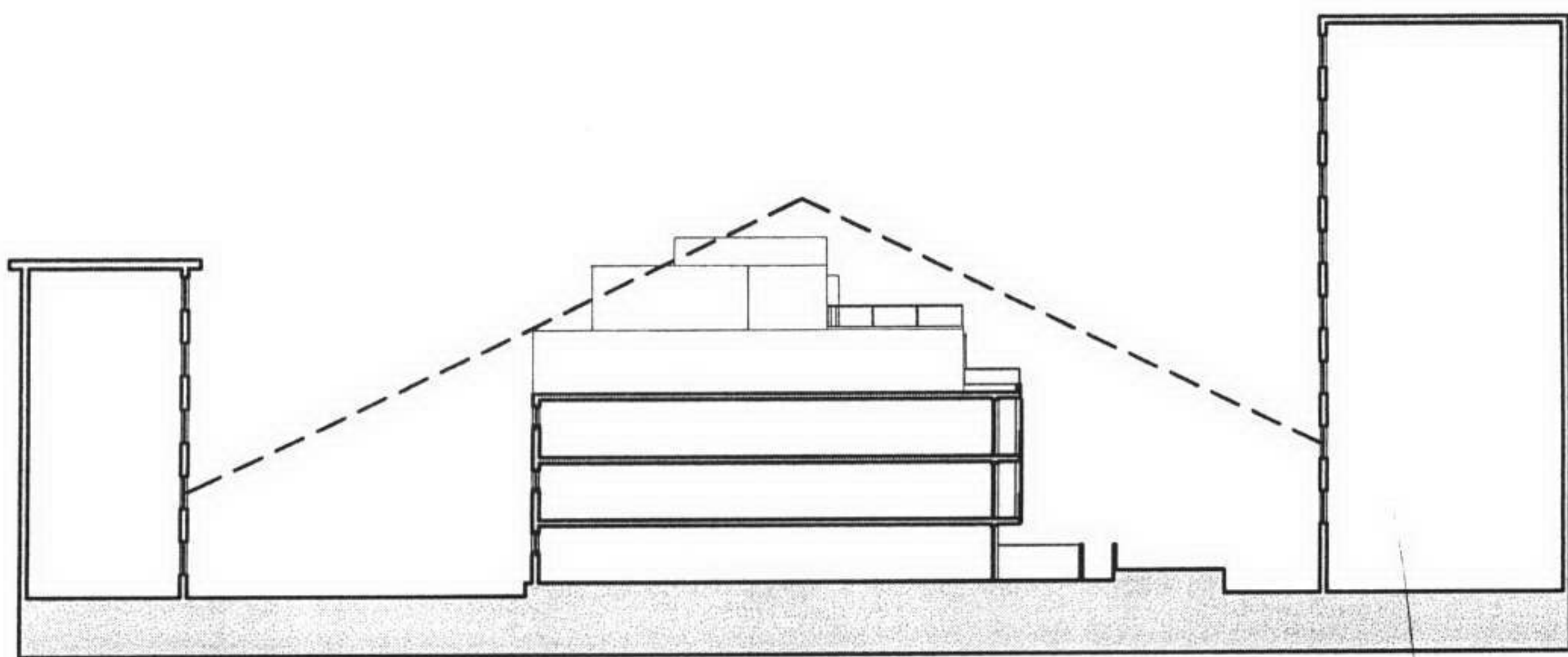
0 10m



SECTION X-X



SECTION Y-Y



SECTION Z-Z