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RICS

DAYLIGHT & SUNLIGHT REPORT

relating to the

PROPOSED DEVELOPMENT

Project Ref: 3 AR (Rev -)

Date: August 2017

of

3 AKENSIDE ROAD

on behalf of

AR-ARCHITECTURE

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About CPMC Ltd

CPMC Chartered Surveying Ltd is a multi-disciplinary surveying practice, specialising in rights of light and BRE daylight and sunlight analysis for the planning process, the Party Wall etc Act 1996, access agreements, condition scheduling and crane oversail licences.

We are an industry leading Chartered Surveying practice with considerable experience in relation to resolving 'neighbourly matters' issues and related disputes in all parts of the UK. We have significant experience with regard to the provision of daylight and sunlight assessment criteria and regularly produce comprehensive assessments to aid planning authorities understand the impact of an applicant's site on its neighbours. We are also regularly asked to assess the likely light levels within a proposed developments, so that the likely light levels for future occupants can be better understood.

Our client base is broad and we work with developers, authorities and private individuals in order to effectively manage their neighbourly matters concerns. We are consistently rated 'excellent' by our clients and offer clear and concise advice in relation to this complicated area of surveying practice.

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Section 1: Overview

There is no national planning policy relating to daylight and sunlight and overshadowing impacts. However, general guidance is given on the need to protect existing amenity as set out in the National Planning Policy Framework.

The 2011 (2nd Edition) Building Research Establishment's 'Site Layout Planning for Daylight and Sunlight - A Guide to Good Practice' (The BRE Guide) and BS8206-2:2008 enable an objective assessment to be made as to whether the proposals will adversely affect the daylight and sunlight reaching existing habitable rooms and relevant external amenity spaces.

When considering the BRE Guide's requirements, it is important to remember that the Guide is not a set of planning rules, which are either passed or failed. Numerical values are given and used, not as proscriptive or prescriptive values but as a way of comparing situations and arriving at a balanced judgement. The BRE Guide is conceived as an aid to planning officers and designers by giving objective means of making assessments. The values given as desirable in the BRE Guide may not be obtainable in dense urban areas where the grain of development is tight while higher values might well be desirable in suburban or rural areas where the grain is contrastingly open.

Section 2: Executive Summary

In dense urban locations such as London (NW3), site constraints, including the number, height and proximity of other neighbouring buildings mean that windows, rooms and external amenity space will often fall short of the guidance figures.

Daylight and sunlight is one of a number of considerations when designing a building and should therefore be balanced with other planning issues, such as the appearance of the building, the need for additional local housing, the existing street scene and the commercial viability of the project.

The guidance is clear that the advice is not mandatory, should be used flexibly and that in certain environments (such as this) a higher degree of obstruction may be unavoidable.

However, in this case there is only one habitable window and room that can reasonably be affected by the proposed mass. This is the dining room of number 4 Akenside Road. Our assessment demonstrates that this window comfortably fulfils the BRE Guide's test criteria, despite the urban location of the site. Therefore in our opinion the proposals strongly accord with the intent and context of the planning guidance in this case.

Section 3: Introduction

The purpose of this report is to assess the impact of the proposed extension of 3 Akenside Road, on the daylight and sunlight of 4 Akenside Road.

This report considers the daylight and sunlight criteria set out in the following publications:

- Site Layout Planning for Daylight & Sunlight (SLPDS / BRE Guide), PJ Littlefair 2011 published by the BRE (Building Research Establishment). The tests prescribed by the BRE Guide are approved by the Department of the Environment and provide a clear methodology for comprehensive testing.

- BS 8206-2:2008 Code of practice for skylighting.

Compliance with the BRE Guide is not a planning criterion and the foreword to the Guide is careful to make this point. There are therefore no minimum mandatory requirements for sunlight & skylight in Building Regulations for England & Wales but the guidance set out in BRE Guide is widely accepted as the approved methodology when calculating sunlight & skylight.

It is worthy of note that BRE Guide was first published in 1991 and BS 8206-2 in 1992. However SLPDS was updated in Oct 2011 and we have therefore undertaken this study on the basis of the new guidance document.

Section 4: Description of the Development

The scheme comprises of a relatively modest residential extension, generally replacing/amending an existing rear extension.

The property is located on the east side of Akenside Road and is situated amongst a number of other similarly sized houses adjoining the road.

Fig. 01 – Image taken from 3 Akenside Road looking towards 4 Akenside Road

Fig. 02 – Excerpt from google maps

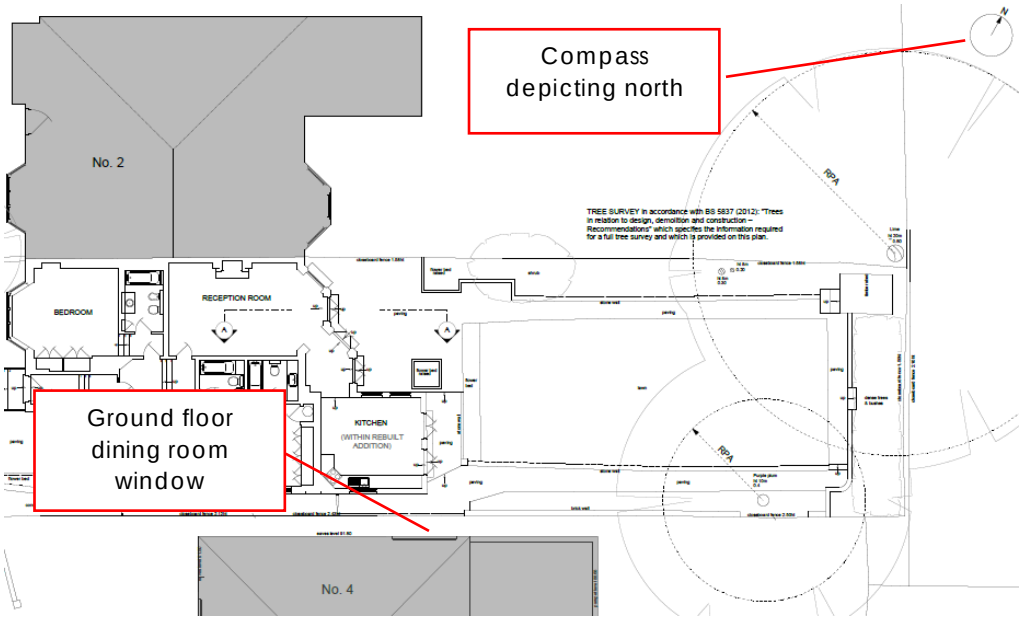


Fig. 03 site plan demonstrating due north orientation of the flank windows within 4 Akenside Road

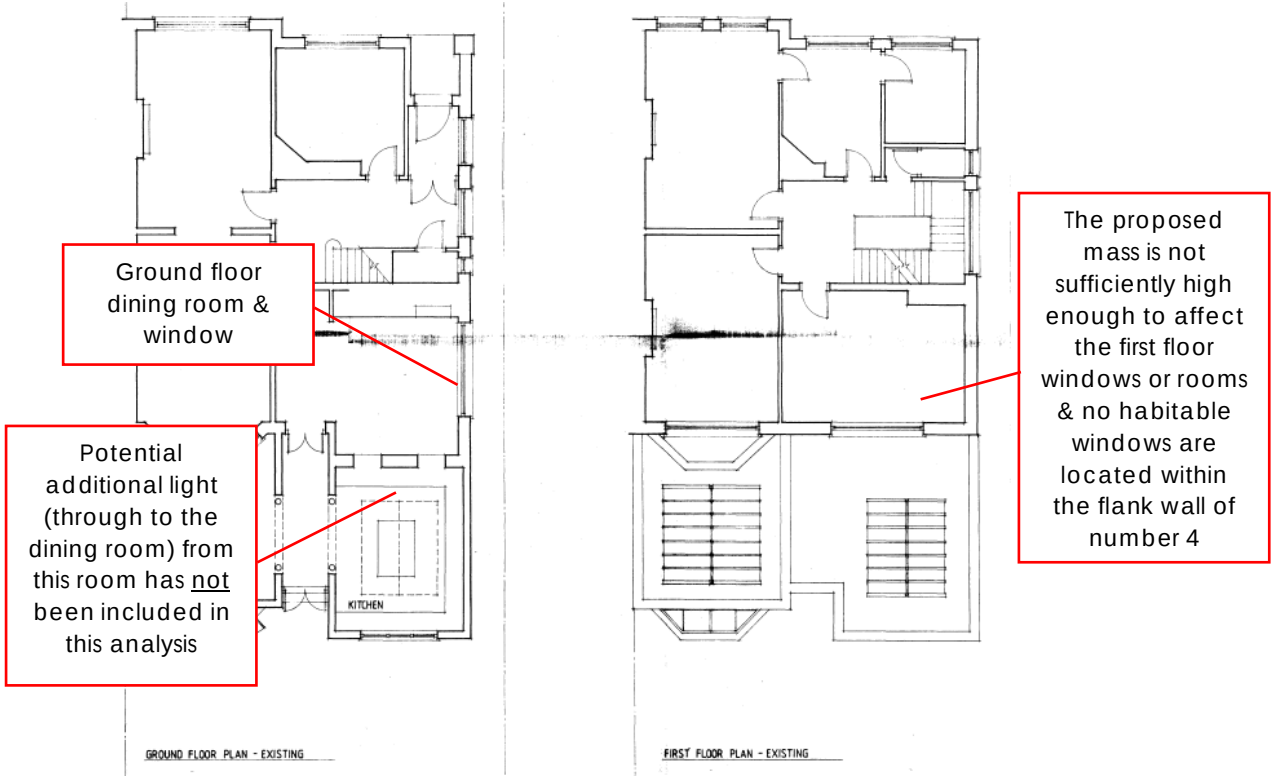


Fig. 04 – Layout of 4 Akenside Road (from planning archive)

Section 5: Assessment Process

The effect on neighbouring properties:

The SLPDS describes three parameters to be assessed in order to measure the impact of the proposed new building on Daylight/Sunlight availability to the key adjacent properties. The three parameters to be assessed are as follows:

1) Daylight:

Vertical Sky Component (VSC)

Daylight Distribution (DD)

2) Sunlight:

Annual Probable Sunlight Hours (APSH)

3) Overshadowing (Amenity Space)

Sun on the ground (sunlight and external amenity spaces)

The guidance states that rooms to be assessed should be living rooms, kitchens and bedrooms in residential properties. In non-domestic buildings rooms where occupants 'have a reasonable expectation of daylight' should be assessed. Although these spaces are not defined, examples are given of the type of non-domestic buildings that would normally fall into this category. These include schools, hospitals, hotels and hostels, small workshops and *some* offices.

As it is difficult to be sure of the specific use of neighbouring spaces we have taken a view on the relevance of the spaces adjacent to the proposed development. If we have been in any doubt we have carried out the assessment. However it should be noted some of the spaces we have assessed could fall outside the test requirement criteria.

It is important to note that the numerical values in the guidance are advisory and different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints.

The neighbouring properties we have assessed are as follows:

- 4 Akenside Road

We have considered number 2 Akenside Road but do not believe that the proposed extension could have an adverse effect on the light within this property, which is being extended to mirror the proposed extension at the applicant's property.

The assessment is based on the following drawings, provided by AR-Architecture

- A-3.200.100 (R1) – Proposed Level_00
- 1234 AP 01 – Existing Plan
- 17004-ARA-ZZ-XX-M3-A-3D-S0-R0-Akenside_existing (model)
- 17004-ARA-ZZ-XX-M3-A-3D-S0-R0-Akenside_proposed (model)

Section 6: Daylight

Vertical Sky Component:

Daylight is the light received from the sun which is diffused through the sky's clouds. Even on a cloudy day when the sun is not visible a room will continue to be lit with light from the sky. This is also known as 'diffuse light'. Any reduction in the total amount of daylight can be calculated by finding the 'Vertical Sky Component'.

The Vertical Sky Component (VSC) is the ratio of the direct skylight illuminance falling on a vertical face at a reference point (usually the centre of a window), to the simultaneous horizontal illuminance under an unobstructed sky.

The Guide recommends that where the VSC value as proposed is below 27 percent, then the amount by which it is reduced (if any) should be checked and if the reduction is greater than 20 percent or one fifth of its former value, then the reduction is likely to be "noticeable" to the average occupant.

If the VSC is more than 27 percent then enough light would still reach the window of the neighbouring building. However if the VSC is less than 27 percent as well as less than 0.8 times (one fifth) its former value the occupants will notice the reduction in the amount of skylight.

VSC Results

Our assessment was undertaken in accordance with the guidance and methodology contained in the 2011 BRE Guide.

Detailed results are in Appendix A.

The result from our VSC assessment is:

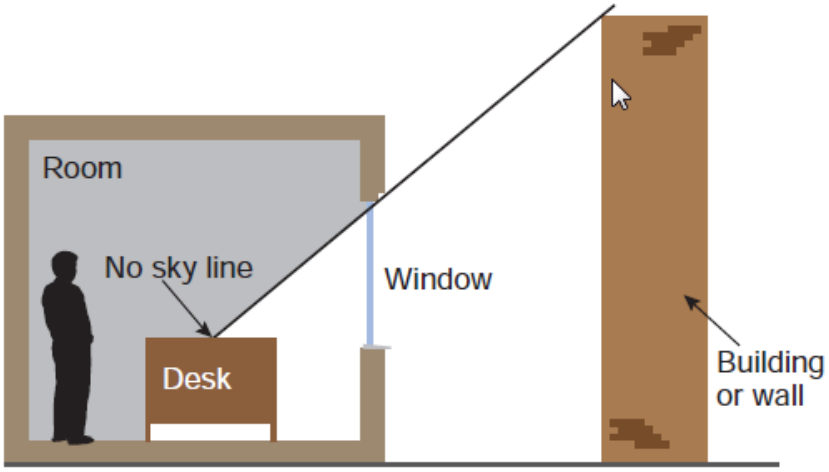
- 4 Akenside Road – the dining room window is the only habitable room that can reasonably be affected by the proposed massing. The effect on this window remains comfortably above the pass criteria prescribed by the BRE Guide.

It should further be noted that the guidance would regard this particular neighbouring window as being built unreasonably close to the boundary and therefore it should not be considered in the same way as a window built a reasonable distance from the boundary. Where this occurs, Appendix 'F' of the BRE guide recommends benchmark 'mirror massing', whereby the existing envelope of number 4 Akenside Road is mirrored across the boundary and the results compared to the proposed mass. In this scenario, the results would be significantly worse than the proposed reduction as a consequence of the applicant's extension, which we would like to reiterate is already a comfortable VSC pass.

Daylight Distribution:

Where room layouts are known (or estimated) the impact on daylighting distribution can be found by plotting what is known as the 'no sky line' in each of the main rooms. These are the same rooms as used for the VSC test.

The no sky line effectively divides the points on the working plane (0.85m high for residential properties and 0.7m high for offices) that cannot see the sky. Therefore areas beyond the no sky line will receive no direct daylight but will instead be lit from reflected light.



Excerpt taken from the BRE 209 Guide

Following the construction of a new development, if the no sky line moves so that the area of the existing room, which does not receive direct skylight, is reduced to less than 0.8 times its former value, this will be noticeable to the average occupant.

We have estimated internal layouts to assess the Daylight Distribution in rooms adjacent to the development.

Daylight Distribution Results

Our assessment was undertaken in accordance with the guidance and methodology contained in the 2011 BRE Guide.

Detailed results are in Appendix A:

- 4 Akenside Road – there is little discernible effect on the dining room, which comfortably passes the daylight distribution test. The room potentially benefits from more than one light source, but herein we have only included window R1, which increases the burden on the applicant in this case.

It should be noted further that the window serving this room has been placed very close to the own boundary. The guidance is clear in this respect in that there should be significant flexibility 'when an existing building has windows close to the site boundary and taking more than their fair share of light'.

Section 7: Sunlight

Available Sunlight Hours

Guidance for minimum sunlight values can be found in Section 3 of Site Layout Planning for Daylight and Sunlight (SLPDS).

Habitable rooms in domestic buildings that face within 90 degrees of due south are tested, as are rooms in non-domestic buildings that have a particular requirement for sunlight.

The recommendations are that applicable windows should receive a minimum of 25 percent of the total annual probable sunshine hours, to include a minimum of 5 percent of that which is available during the winter months between 21st September to the 21st March (the approximate dates of the autumn and spring equinoxes).

However if this is not possible (or the amount of sunlight is already reduced because of the effect of existing obstructions) then a further reduction in sunlight availability will be noticeable to an occupier if the total number of sunlight hours is below the target 25 percent of the total annual probable sunshine hours, to include a minimum of 5 percent of that which is available during the winter months, *and* is less than 0.8 times its former value prior to the development.

There is no requirement for windows that face within 90 degrees of due north so windows that fall into this category have not been considered for sunlight calculations.

Available Sunlight Hours Results

Our assessment was undertaken in accordance with the guidance and methodology contained in the 2011 BRE Guide.

- 4 Akenside Road – the ground floor habitable room window positioned within the flank wall of this property is orientated within 90 degrees of due north (see Fig. 03) and therefore does not warrant sunlight assessment.

Section 8: Amenity Space

The BRE guidance suggests that at least 50 percent of any garden or open space should receive no less than 2 hours of direct sun on the spring equinox (approximately March 21st).

Open spaces would normally include:

- Residential gardens, usually the main back garden of a house
- Parks and playing fields
- Children's playgrounds
- Outdoor swimming pools
- Sitting out areas such as those between non-domestic buildings and in public squares
- Focal points for views such as a group of monuments or fountains

Where the sun on the ground on the 21st March is less than 0.8 times (one fifth) its value before the proposed mass was introduced, the BRE guide considers this a transgression.

Amenity Space Results

- In this instance there are no amenity spaces that we believe could be adversely affected by the proposed mass.

Appendix A

Results:

Vertical Sky Component

Available Sunlight Hours

Vertical Sky Component (VSC) & Average Probable Sunlight Hours (APSH)													
Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex
					4 Akenside Road								
Ground	R1	Residential	Dining Room	W1	Existing Proposed	21.22 18.52	0.87	YES		*North*			*North*

Daylight Distribution

Daylight Distribution (DD)

Floor Ref.	Room Ref.	Property Type	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
4 Akenside Road									
Ground	R1	Residential	Dining Room	Area m2	26.88	26.57	24.95		
				% of room		99%	93%	0.94	YES

Appendix B

Window & Room References

4 Akenside Road:

Notes

Where access was not available we have made reasonable estimations of internal layouts, floor areas, window sizes and positions etc.

Our calculations model has been built from a combination of architect's plans, partial site survey, site and aerial photographs.

We are not aware of any conflicts of interest between ourselves and any neighbouring owners or their consultants concerning this project**.**

This report has been prepared for the sole use of the Client. No representation or warranty (expressed or implied) is given to any other parties.