

79 SILVER STREET, READING

DESKTOP DAYLIGHT & SUNLIGHT REVIEW

MARCH 2017

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1.0 INTRODUCTION

Delva Patman Redler LLP have been instructed by Chamberwell Investment Services Ltd to undertake a desk top review of the development proposals by O'Connell East Architects for 79 Silver Street, Reading and the potential effects on neighbouring residential amenity adjacent to the site in daylight and sunlight terms.

This study has been carried out in accordance with the recommendations of the Building Research Establishment Report "Site Layout Planning for Daylight & Sunlight 2011" (BRE209).

This desk top review includes a site visit undertaken on 29 March 2017.

2.0 THE PROPOSAL

There are two proposals that we have been asked to review that I have described as the 'Refused Application' and the 'Amended Scheme' for the purposes of this review.

The Refused Application

The development proposals include the demolition of the existing building and the construction of a new block of residential studio apartments to include lower ground, ground plus three upper floors constructed around a central south facing courtyard at lower ground floor level.

The second floor terraces back from the main building line along the street frontage and the third floor sets back from the street frontage and to the rear of the site.

The scheme is set back from the eastern, northern and western boundaries and in part to the south but does enclose on the boundary wall for No.1 Mount Pleasant.

The Amended Scheme

The development proposals include the demolition of the existing building and the construction of a new block of residential studio apartments to include lower ground, ground plus three upper floors constructed around a central south facing courtyard at lower ground floor level.

The second floor terraces back from the main building line to the rear of the site and around the eastern end of the courtyard and also along the street frontage. The third floor is further reduced in size fronting Silver Street.

The scheme is set back from the eastern, northern and western boundaries and in part to the south but does enclose on the boundary wall for No.1 Mount Pleasant.

3.0 POLICY / GUIDELINES

This study has been carried out in accordance with the recommendations of the Building Research Establishment report "Site Layout Planning for Daylight & Sunlight 2011". This is the recognised standard against which daylight and sunlight should be assessed.

The BRE guide is intended for building designers and their clients, consultants and planning officials. The advice given is not mandatory and the report should not be seen as a part of planning policy. Its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design. In certain circumstances the developer or planning authority may wish to use alternative target values.



Whilst technical analysis can be carried out in accordance with numerical guidelines and reported factually by comparison with those guidelines, the final assessment as to whether affected dwellings are left with acceptable amounts of daylight and sunlight in an inner-city context where the findings are to be interpreted in a flexible manner is a matter of subjective opinion.

4.0 METHODOLOGY

The Daylight and Sunlight assessments have been undertaken in accordance with the Building Research Establishment (BRE) guidelines "Site Layout Planning for Daylight & Sunlight. A Guide to Good Practice".

The BRE Report advises that daylight levels should be assessed for the main habitable rooms of neighbouring residential properties. Habitable rooms in residential properties are defined as kitchens, living rooms and dining rooms. Bedrooms are less important as they are mainly occupied at night time. The report also refers to other property types, which may be regarded as 'sensitive receptors' such as schools, hospitals, hotels and hostels, small workshops and most offices.

Daylight

The BRE Guide states that:

"If, for any part of the new development, the angle from the centre of the lowest affected window to the head of the new development is more than 25°, then a more detailed check is needed to find the loss of skylight to the existing buildings."

The BRE guidelines propose several methods for calculating daylight.

The two main methods predominantly used are those involving the measurement of the total amount of skylight available (the vertical sky component (VSC)) and its distribution within the building (the No-Sky line or daylight distribution).

The VSC calculation is a general test of potential for daylight to a building, measuring the light available on the outside plane of windows.

The "No-Sky" Line divides those areas of the working plane which can receive direct skylight, from those which cannot. It provides an indication of how good the daylight distribution is within a room.

The third recognised method of assessment for daylight is the Average Daylight Factor (ADF) calculation which assesses the quality and distribution of light within a room served by a window and considers the VSC value, the size and number of the windows and room and the use to which the room is put. ADF assesses actual light distribution within a defined room area whereas the VSC considers potential light. British Standard 8206, Code of Practice for Daylighting recommends ADF values of 1% in bedrooms, 1.5% in living rooms and 2% in kitchens. For other uses, where it is expected that supplementary electric lighting will be used throughout the daytime, such as in offices, the ADF value should be 2%. There is no general requirement within the BRE guidelines to assess ADF values, other than for neighbouring residential buildings.

For the purposes of this report all three methods of assessment have been considered.

Sunlight

The BRE have produced sunlight templates for London, Manchester and Edinburgh indicating the Annual Probable Sunlight Hours (APSH) for these regions. The London template has been selected for this study as the London indicator template is the closest of the three available from BRE in terms of latitude.



Sunlight analysis is undertaken by measuring annual probable sunlight hours (APSH) for the main windows of rooms which face within 90° of due south. The maximum number of annual probable sunlight hours for the London orientation is 1,486 hours. The BRE guidelines propose that the appropriate date for undertaking a sunlight assessment is on 21st March, being the spring equinox. Calculations of both summer and winter availability are made with the winter analysis covering the period from the 21st September to 21st March. For residential accommodation, the main requirement for sunlight is in living rooms and it is regarded as less important in bedrooms and kitchens.

5.0 SIGNIFICANCE CRITERIA

The guidance given by BRE has been used as a basis for the criteria to assess the Development's potential effects.

In describing the significance criteria as set out below, it should be noted that they have been developed to protect residential properties, which are the most sensitive receptors.

TABLE 1: BRE DAYLIGHT GUIDANCE USED IN THE ASSESSMENT

Issue	Criteria
Daylight	A window may be affected if the vertical sky component (VSC) measured at the centre of the window is less than 27% and less than 0.8 times its former value.
	A room may be adversely affected if a significant area of the room is beyond the No-Sky Line and is less than 0.8 times its former value.
	A room may be adversely affected if the average daylight factor (ADF) is less than 1% for a bedroom, 1.5% for a living room or 2% for a kitchen. For offices a minimum figure of 2% is required.
Sunlight	A window may be adversely affected if a point at the centre of the window receives in the year less than 25% of the annual probable sunlight hours including at least 5% of the annual probable sunlight hours (APSH) during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period.

6.0 BASELINE CONDITIONS

An analysis of the impact of the existing buildings (the baseline conditions) against which to compare any potential impact arising from the development has been undertaken so a comparison of the proposed massing effects can be taken.

The existing building is three stories fronting Silver Street stepping down to two stories towards the rear. the front half of the building has a flat roof with stair core and lift overrun along the northern side. The rear half of the building has a very shallow pitched roof estimated to be less than 5°. The existing building is set back from its southern boundary to allow vehicular access to the rear where there is parking for around 8 cars. The building line to the north of the site is around 750mm set inside the property boundary. based on Drawing 15463/SPT/807 in Appendix A.

The site is in an urban location with residential properties to the south and also to the west across Silver Street. To the north is are commercial offices and to the east are residential properties but these are set well back from the property boundary.



7.0 REVIEW – REFUSED APPLICATION

The full extent of the original proposal will reduce the light to the rear facing windows of No.1 Mount Pleasant immediately adjacent to the south of the development site and to those neighbouring residential properties within Hieatt Close across Silver Street.

Whilst the proposed massing may create some isolated reductions to neighbouring rooms beyond the BRE Guidelines the reductions are not anticipated to be so detrimental so as to make the neighbouring habitable rooms unfit for purpose as the light levels remaining are likely to generally be sufficient for their intended purposes.

In terms of overshadowing the rear gardens for No.1 Mount Pleasant will remain unaffected as the development site is to the north of this neighbour and so as the sun passes from east to west via the south there will be no shadows cast on the rear garden as a result of the development proposals. There is no other private or public garden amenity within the vicinity of the site which could be affected.

The proposed courtyard within the site is south facing with a relatively open aspect to the south and so it is anticipated that this central amenity area will also receive its fair share of light to remain BRE compliant in shadow terms.

8.0 REVIEW – AMENDED PROPOSALS

The massing for this scheme is greatly reduced at second and third floors and as such will have lesser impact on neighbouring residential amenity in daylight and sunlight terms than the original application.

It is anticipated that this scheme will perform very well against the BRE criteria in daylight and sunlight terms and should provide little concern or reason for refusal to the Planning Officer in daylight and sunlight terms.

In terms of overshadowing the rear gardens for No.1 Mount Pleasant will remain unaffected as the development site is to the north of this neighbour and so as the sun passes from east to west via the south there will be no shadows cast on the rear garden as a result of the development proposals. There is no other private or public garden amenity within the vicinity of the site which could be affected.

The proposed courtyard within the site is south facing with a relatively open aspect to the south and so it is anticipated that this central amenity area will also receive its fair share of light to remain BRE compliant in shadow terms.

9.0 CONCLUSIONS

The site is in an urban location with residential properties to the south and also to the west across Silver Street. To the north is are commercial offices and to the east are residential properties but these are set well back from the property boundary.

To assess the potential impact of the Development on daylight and sunlight on neighbouring properties a site visit and desk top review has been undertaken.

Whilst it is anticipated that the original application will reduce the light levels to neighbouring habitable rooms which may be beyond the BRE Guidelines the reductions are not anticipated to be so detrimental so as to make the neighbouring habitable rooms unfit for purpose as the light levels remaining are likely to generally be sufficient for their intended purposes.

The massing for the amended scheme is greatly reduced at second and third floors and as such will have lesser impact on neighbouring residential amenity than the original application. To the extent



that it is anticipated that this scheme will perform very well against the BRE criteria in daylight and sunlight terms and should provide little concern or reason for refusal to the Planning Officer in daylight and sunlight terms.

Neither scheme is anticipated to have any material effect in shadow of private or public amenity spaces within or adjacent to the development site.

I trust this desk top review is sufficient for your current purposes.

Should you require further detailed computer modelling assessments for the purposes of planning submission or appeal we can certainly undertake these studies but will require sufficient survey and 3D modelling data in order to complete such studies.

Delva Patman Redler LLP

