

27-32 MARKET PLACE & 173-175 FRIAR STREET, READING

SHADOW STUDY

MAY 2018



CONTENTS	PAGE
1.0 INTRODUCTION	2
2.0 THE PROPOSAL	2
3.0 POLICY / GUIDELINES	2
4.0 METHODOLOGY	2
<i>Shadowing Standard</i>	
5.0 ASSUMPTIONS MADE	3
6.0 SIGNIFICANCE CRITERIA	3
<i>Shadowing</i>	
7.0 BASELINE CONDITIONS	3
8.0 RESULTS – COMPLETED DEVELOPMENT	4
<i>Neighbouring Amenity Shadow Results</i>	
9.0 CONCLUSIONS	4
APPENDIX A – LOCATION DRAWINGS	
16107/SHD/516	



1.0 INTRODUCTION

Delva Patman Redler LLP have been instructed by Sonic Star Properties Limited to prepare a shadow study to assess the likely impact of the proposed redevelopment of 27-32 Market Place, & 173-175 Friar Street site by Rodic Davidson Architects on the neighbouring public amenity space adjacent to the site.

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).

The template drawings, which are attached, illustrate the results for the shadowing assessments and identify the drawings used in these studies.

2.0 THE PROPOSAL

The proposals comprise the demolition of the main Friar Street buildings and the construction of a ground + seven storey mixed use development to include residential accommodation from fourth floor and above. The Listed Market Place buildings are also to be refurbished to provide additional residential accommodation on first, second and third floors.

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

Sunlight to Amenity Areas

Sunlight should be assessed on the equinox (21 March) to main amenity spaces including back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas, such as in public squares and focal points for views, such as a group of monuments or fountains.

The assessment measures the percentage of each area that can receive at least two hours of sunlight on 21 March - the two-hours sun-on-ground test. Sunlight at an altitude of 10° or less is ignored, because it is likely to be blocked by planting, and fences or walls less than 1.5 metres high can also be ignored. Front gardens, driveways and hard standing for cars are usually omitted. Normally, trees



and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building.

Where a large building is proposed which may affect a number of gardens or open spaces, it can be illustrative to plot shadow plans showing the location of shadows at different times of day and year. The equinox (21 March) is the best assessment date as it shows the average level of shadowing. In addition for the purposes of reporting a second assessment at the winter solstice (21 December) has also been undertaken.

5.0 ASSUMPTIONS MADE

- The Town Hall Square public space to the north of the site has been identified as relevant for inclusion for assessment purposes. The space has not been accurately surveyed and so the positioning and size of this has been taken from digital ground mapping data.
- For the purposes of assessment ground levels have been assumed to be level.

6.0 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
Sunlight to amenity areas	Sunlight to amenity areas may be adversely affected if the area which can receive two hours of direct sunlight on 21 March is reduced to less than 50% of its area and less than 0.8 times its former size.

7.0 BASELINE CONDITIONS

An analysis of the impact of the existing building (the baseline conditions) against which to compare any potential impact arising from the development has been undertaken based on Drawing 16107/SHD/516 in Appendix A.

The site currently comprises of a 4-storey commercial building on the northern part of the site facing Friar Street. The southern part of the development site currently consists of a part constructed concrete frame with empty commercial units on the ground floor.

The results of the baseline conditions can be seen from the technical results in tabular form in Appendix A.

An analysis of the existing shadowing levels enjoyed by the neighbouring residential amenity has been undertaken to provide a baseline against which the impacts arising from the proposed development can be assessed.

8.0 RESULTS – COMPLETED DEVELOPMENT

SUNLIGHT TO AMENITY SPACES

The results of the two-hour sun-on-amenity analyses are shown on the relevant drawings in Appendix A. In summary, in the current condition 93% of the Town Hall Square area currently receives a minimum of two hours of direct sunlight and this will be reduced down to 82% as a result of the proposed building. This represents a reduction of a little less than 12% which sits comfortably within the BRE Guidelines in shadowing terms.

9.0 CONCLUSIONS

The site currently comprises of a 4-storey commercial building on the northern part of the site facing Friar Street. The southern part of the development site currently consists of a part constructed concrete frame with empty commercial units on the ground floor.

To assess the potential impact of the Development on shadowing to the pond area throughout the year a sun on ground assessment have been taken on March 21 representing the spring equinox period.

The shadowing assessments illustrate full and comfortable compliance with the BRE Guidelines.

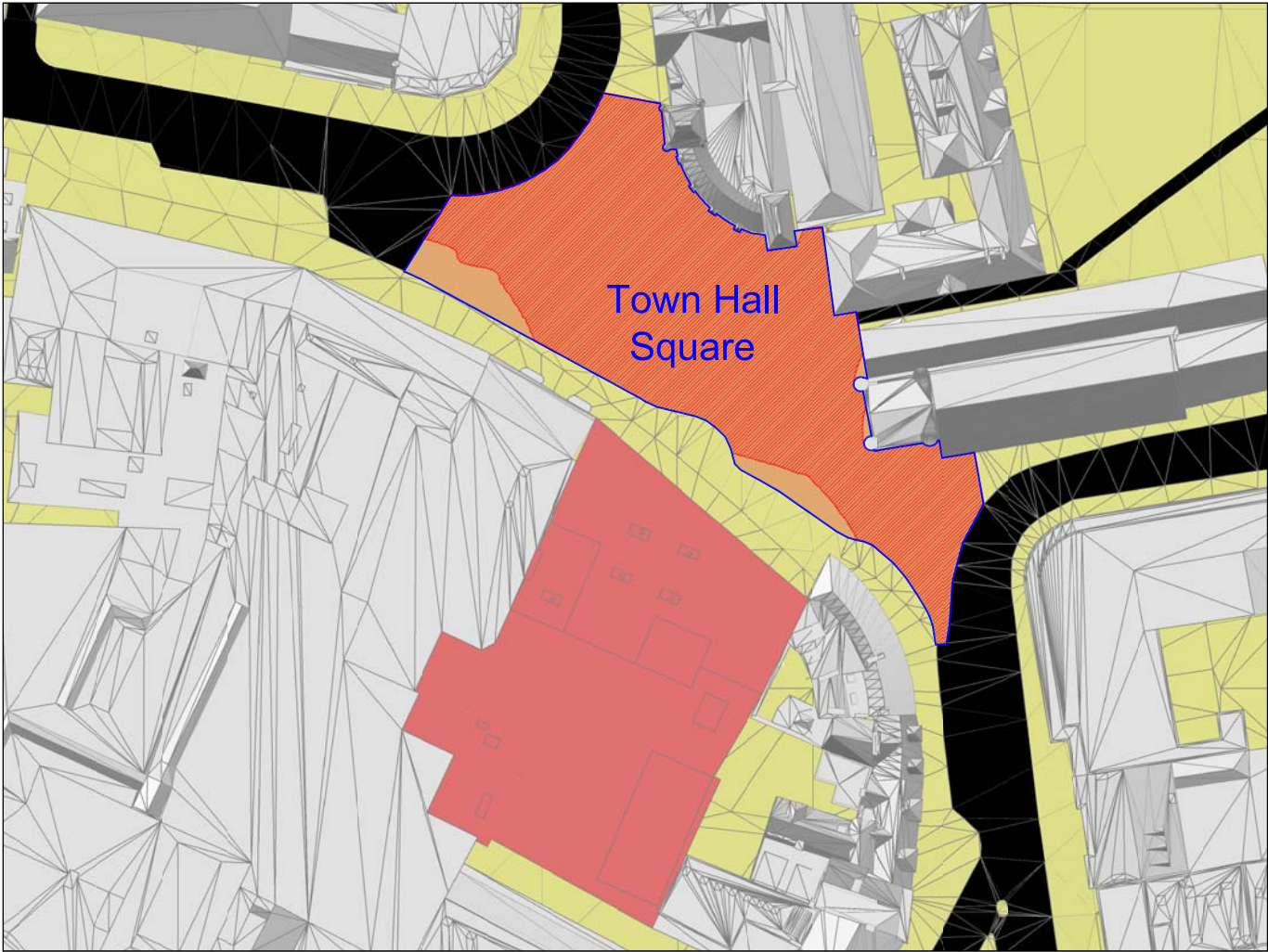
Overall therefore, the scheme proposals by Rodic Davidson Architects will fully recognise and observe the intentions of Planning Policy and BRE Guidance 209 in shadowing terms when considered against the neighbouring Town Hall Square public space to the north of the development site.

Delva Patman Redler LLP

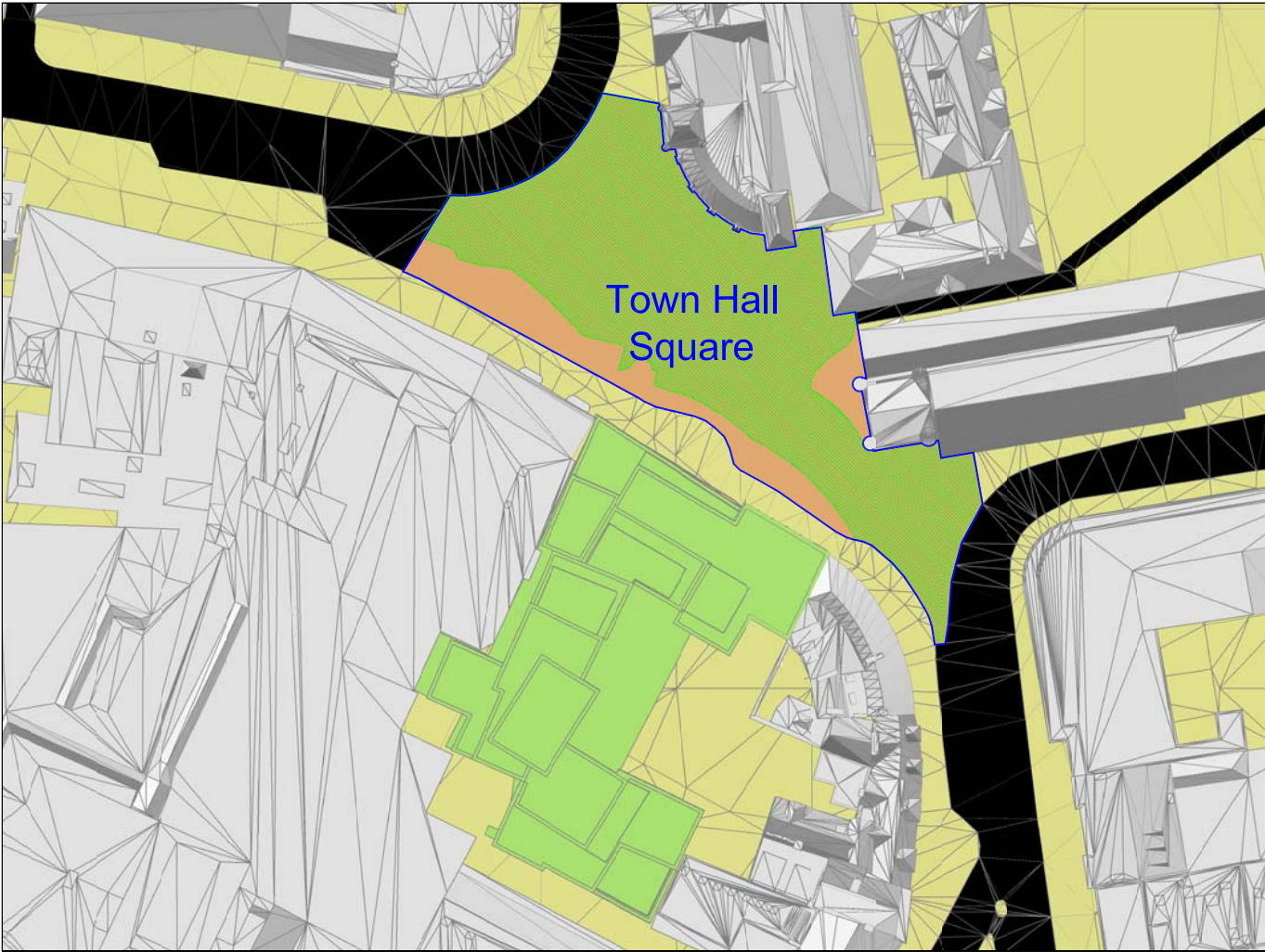


APPENDIX A
LOCATION DRAWINGS
16107/SHD/516





Existing Shadow Contour



Proposed Shadow Contour

Amenity Area	Area (m²)	BRE Recommendations (At least 50% of Amenity Area)	Existing Area	Existing %age of Area	Proposed Area	Proposed %age of Area	%age Change	Condition
Town Hall Square	1506.83	753.41	1397.45	93%	1237.88	82%	11.40%	Pass

Indicative

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING:

Existing

Proposed

Surrounding

Roads

Ground

Amenity

SOURCE DATA

Drawings Used:

Existing:

Surveyors:

Dwg no's:

- Friar Street Draft A

Surrounding buildings:

Rodic Davidson Architects:

Model:

- Model Showing

Existing(Received:12.04.16):

Rodic Davidson Architects:

Dwg No's: 2017_0810 Height Reduced

(Received 10.08.2017)

- Section AA

2017_0804_Plans

Proposed Scheme:

Rodic Davidson Architects:

Dwg No's: 0899 - SK.413 Rev.D

0899 - SK.414 Rev. B

0899 - SK.415 Rev.B

NOTES

For It to appear adequately sunlit throughout the year at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of light is likely to be noticeable.

Site Plan

REV	Description	Drawn	Ch'kd	Date

DELVA PATMAN REDLER

Chartered Surveyors

Thavies Inn House

3-4 Holborn Circus

London EC1N 2HA

020 7936 3668

www.delvapatmanredler.co.uk

The Plaza

100 Old Hall Street

Liverpool L3 9QU

0151 242 0980

Info@delvapatmanredler.co.uk

TITLE:

27-32 MARKET PLACE & 173-175 FRIAR STREET,

READING, RG1 2EF.

-

SHADOW ANALYSIS

DRAWING:

27-32 Market Place & 173-175 Friar Street

Shadow Analysis

Existing Vs Proposed Schemes

-

BRE Compliance Shadow Area

-

-

DRAWN: MJ

SCALE: NTS

DATE: 11/05/2018

JOB NBR:

16107

DWG NO:

SHD/516

REV:

-