

Thavies Inn House 3-4 Holborn Circus London EC1N 2HA

020 7936 3668 info@delvapatmanredler.co.uk www.delvapatmanredler.co.uk

17-19 CHALTON STREET

LONDON NW1

DAYLIGHT AND SUNLIGHT STUDY

Ref: LT/lt/13222 Date: January 2014

CONTENTS	PAGE
Introduction	2
THE PROPOSAL	2
POLICY / GUIDELINES	2
METHODOLOGY	2
Daylight Standard	
Sunlight Standard	
Source Data	3
SIGNIFICANCE CRITERIA	3
Daylight	
Sunlight	
BASELINE CONDITIONS	3
RESULTS - COMPLETED DEVELOPMENT	3
Vertical Sky Component Results	
Annual Probable Sunlight Results	
Overshadowing Results	3
Conclusions	4
APPENDIX A – LOCATION DRAWINGS	
13222/LOC/800-803	
13222/SPT/800	
APPENDIX B - DAYLIGHT ANALYSIS	
APPENDIX C - SUNLIGHT ANALYSIS	
APPENDIX D- OVERSHADOWING ANALYSIS 13222/SHD/501-506	

INTRODUCTION

Delva Patman Redler LLP have been instructed to prepare a daylight and sunlight study to assess the likely impact of the proposed redevelopment of 17-19 Chalton Street by David Gallagher Associates on the neighbouring residential amenity 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 daylight and sunlight assessments and identify the drawings used in these studies.

THE PROPOSAL

The development proposal is to add an additional storey set back to the rear of the property with minor amendments to the existing main roof.

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 standard specifically identified in the London Borough of Camden Planning Policy by 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.

METHODOLOGY

The Daylight and Sunlight assessments have been undertaken in accordance with the Building Research Establishment (BRE) guidelines.

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.

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 takes into account 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.

This report considers the primary method of assessment which is the VSC assessment on the impact on all neighbouring properties.

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.

Due to orientation and room use not all windows assessed for daylight qualify for sunlight assessment in accordance with BRE Guidance.

Source Data

The studies have been undertaken by calculating the daylight & sunlight based on the template drawings provided within the BRE guidelines. The study was undertaken with plan drawings derived from:

Existing, Proposed and Surrounding:

DGA Architects:

Dwg No's:

3D model received 19/12/2014

131217-1326-RENDERED PROPOSED & amp; EXISTING MODEL.skp

OS Tile

DPR Site Photography

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.
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.

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 based on Drawing 13222/SPT/800 in Appendix A.

The site is in close proximity to the adjacent properties particular Avigail House – 25 Chalton Street, 15 Chalton Street and the annexe which forms part of the Elizabeth Garratt Anderson Hospital.

All neighbouring properties currently receive good levels of light over and above the existing and surrounding buildings.

The windows which were tested are shown on Drawing 13222/LOC/801-803 in Appendix A.

This can be seen from the technical results, both in graphical and tabular form in the Technical Appendices A -C.

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

RESULTS - COMPLETED DEVELOPMENT

DAYLIGHT - VSC

The full results of the daylight analysis are presented in Appendix B in tabular form. A summary of the results of the Vertical Sky Component (VSC) analysis on the relevant overlooking windows are presented in the Table 2 below. This identifies where habitable rooms are left with adequate light.

TABLE 2: NUMBER OF WINDOWS EXPERIENCING DAYLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (VSC METHOD)

Address	Total Number of Windows Tested	Number of Windows Meeting BRE Guidelines for VSC	Number of Windows Experiencing Adverse Impacts
Avigail House, 25 Chalton Street	5	5	0
15 Chalton Street	4	4	0
Elizabeth Garratt Anderson Hospital	9	9	0
Total	9	9	0

Table 2 indicates that all neighbouring rooms assessed will fully comply with BRE Guidance for daylight in VSC terms.

SUNLIGHT - APSH

The full results of the sunlight analysis are presented in Appendix C in tabular form. A summary of the results of the Annual Probable Sunlight Hours (APSH) analysis on the relevant overlooking windows are presented in the Table 3 below. This identifies where habitable rooms are left with adequate light.

TABLE 3: NUMBER OF WINDOWS EXPERIENCING SUNLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (APSH METHOD)

Address	Total Number of Windows Tested	Windows Meeting BRE Guidelines for APSH	Number of Windows Experiencing Minor Adverse Impacts
15 Chalton Street	1	4	0

Table 3 shows that the windows assessed for the sunlight assessment will be fully compliant against the BRE guidelines for sunlight in APSH terms.

OVERSHADOWING

The drawings 13222/SHD/501 - 506 in Appendix D show the hourly images of the transient shadow on March 21st for the existing buildings as well as the site itself.

The only amenity area adjacent to the site at 17-19 Chalton Street is a small playground to the rear of the site. There is only a small sliver of the playground between 1pm and 2pm where light reaches this area.

The transient images also demonstrate that this does not change as a result of the new scheme proposals.

Therefore the scheme proposals will not result in any additional overshadowing effect upon the playground and will fully comply with the BRE criteria.

CONCLUSIONS

The site is in close proximity to the adjacent properties particular Avigail House – 25 Chalton Street, 15 Chalton Street and the annexe which forms part of the Elizabeth Garratt Anderson Hospital.

Considering the site is set in an urban environment, the neighbouring residential properties generally receive good levels of light over and above the existing and surrounding buildings due to their relative height and proximity.

To assess the potential impact of the Development on daylight and sunlight on neighbouring properties a baseline assessment was undertaken. The methods of assessment used were Vertical Sky Component (VSC) for daylight and Annual Probable Sunlight Hours (ASPH) for sunlight.

The daylight analysis demonstrates that the all neighbouring windows tested adjacent to the development site will fully comply with the BRE Guidelines for daylight.

The sunlight analysis demonstrates that the living room windows will fully comply with the BRE Guidelines set out for sunlight.

The scheme proposals will not result in any overshadowing effect upon the playground when compared against the baseline condition.

The development proposals by David Gallagher Associates are fully compliant and therefore should be considered to address the requirements of the London Borough of Camden Planning Guidance in daylight and sunlight terms.

Delva Patman Redler LLP

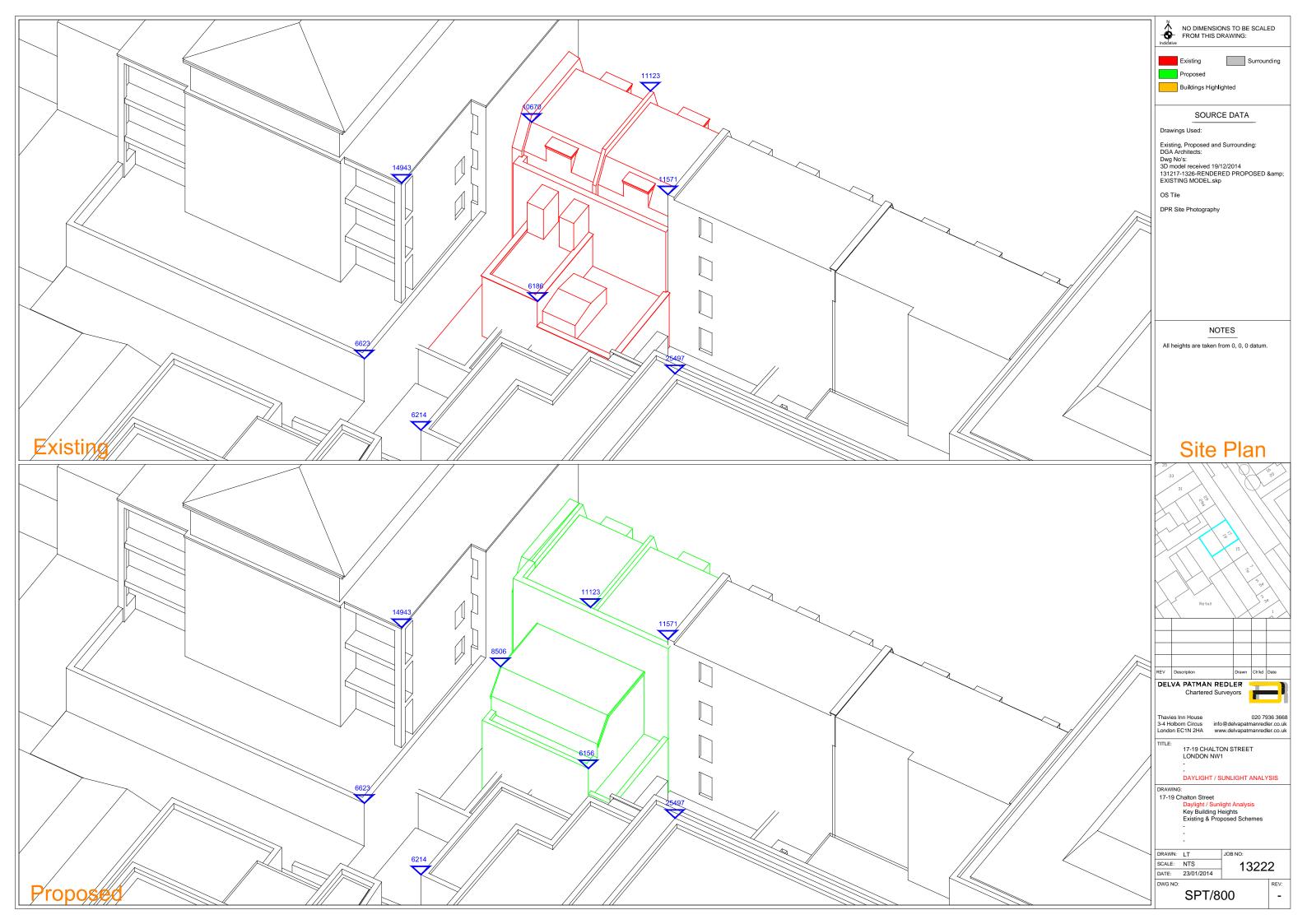
APPENDIX A

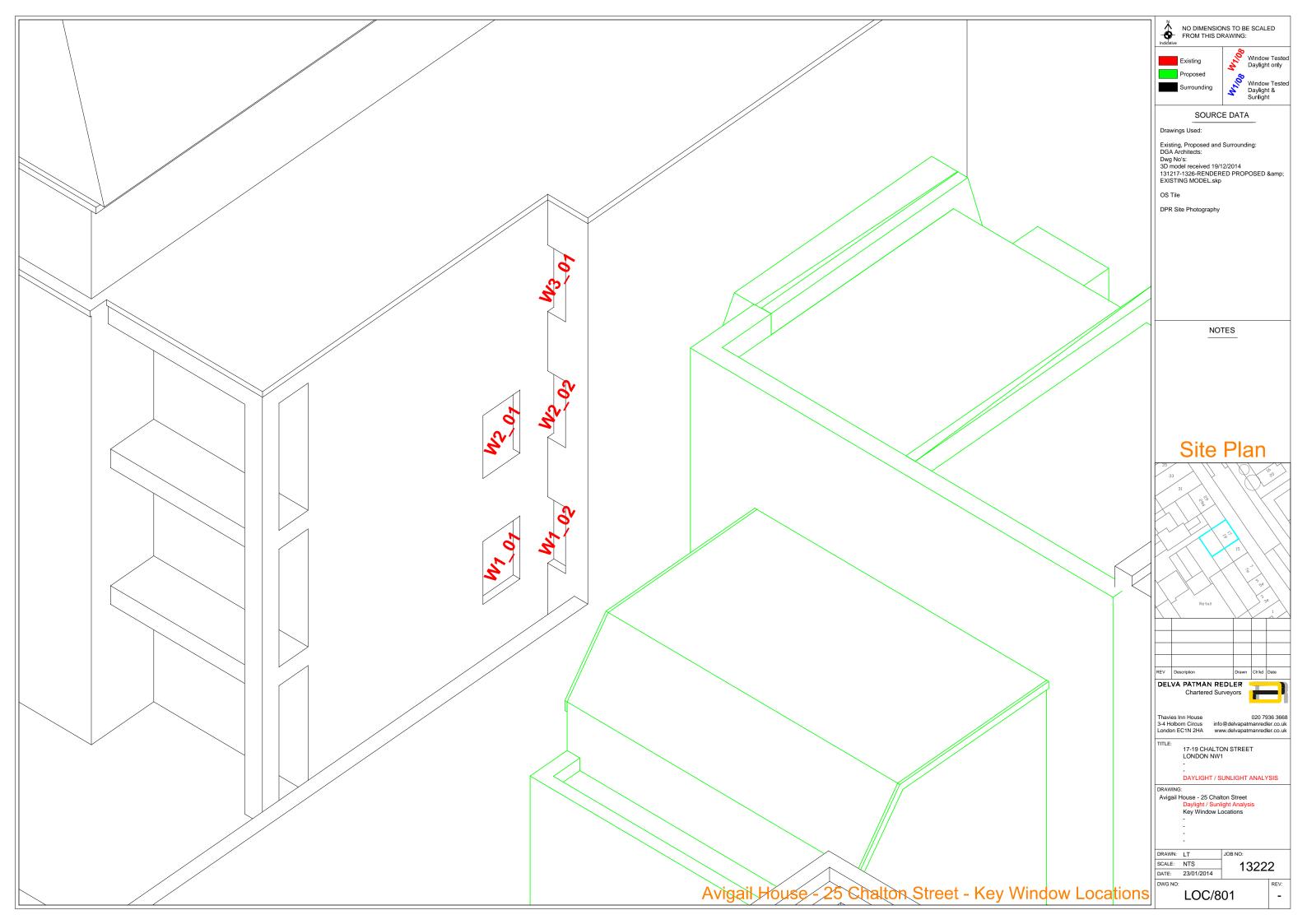
LOCATION DRAWINGS

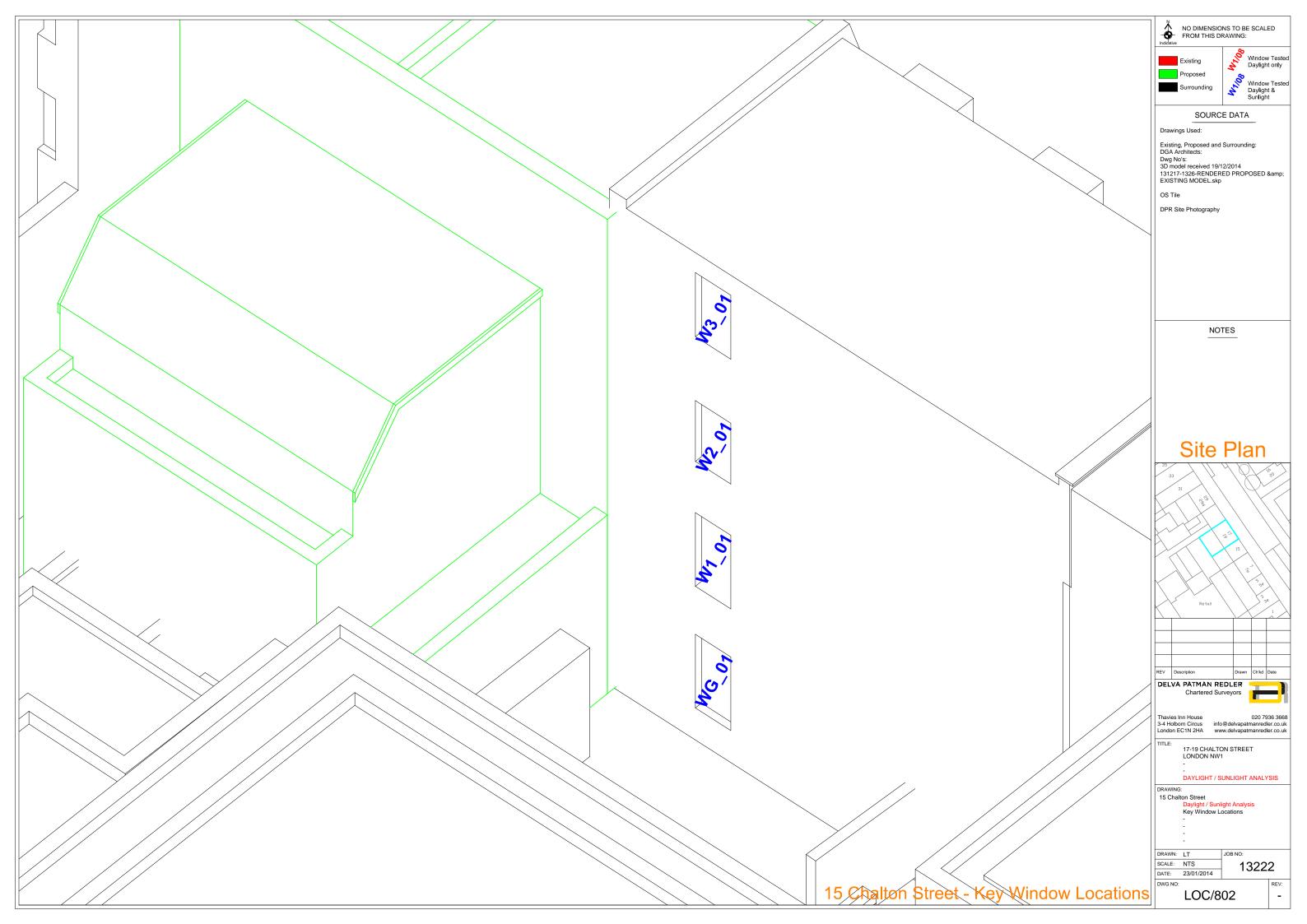
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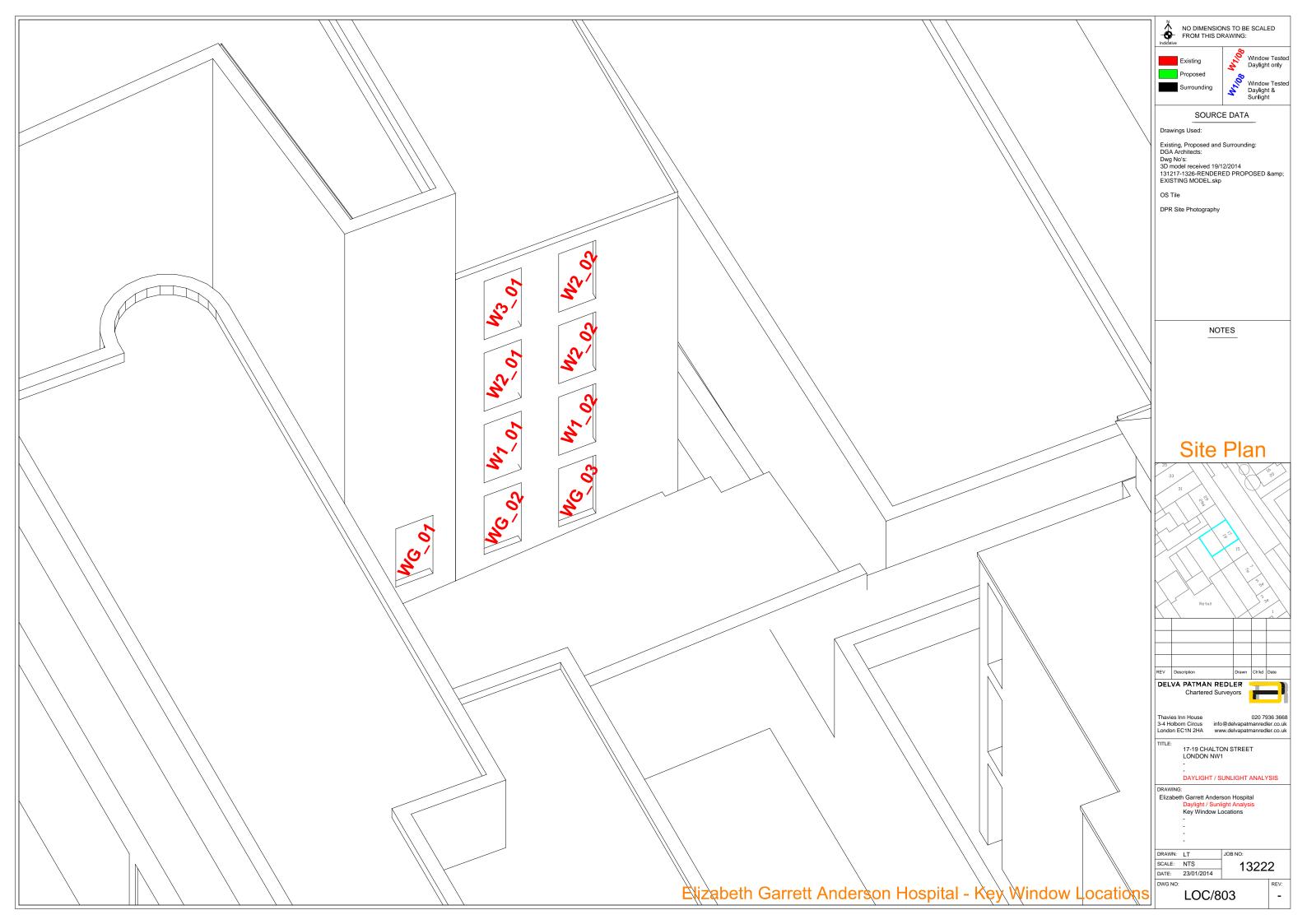
13222/SPT /800











APPENDIX B

DAYLIGHT ANALYSIS

DAYLIGHT TABLES

Dwg No	Address	Floor Level	Room Name	Window ID	Existing VSC%	Proposed VSC%	Percentage Difference	Condition	
-				WG_01	14.15	14.15	0.00%	Pass	
-		Ground	Room 1	WG_02	15.80	15.80	0.00%	Pass	
-				WG_03	15.92	15.92	0.00%	Pass	
-		First	Room 1	W1_01	22.94	22.73	-0.92%	Pass	
-	Elizabeth Garrett Anderson Hospital	1 1150	KOOIII I	W1_02	23.71	23.49	-0.93%	Pass	
-		Second	Room 1	W2_01	28.30	28.13	-0.60%	Pass	
-		Second	ROOM	W2_02	28.30	28.13	-0.60%	Pass	
-		Third	Room 1	W3_01	32.24	32.12	-0.37%	Pass	
-		mila	TIIIG	ROOM	W3_02	31.81	31.70	-0.35%	Pass
-		First	Kitchen or Bathroom*	W1_01	22.91	20.73	-9.52%	Pass	
-		FIISI	Bedroom 1	W1_02	12.59	12.55	-0.32%	Pass	
-	25 Chalton Street	Second	Kitchen or Bathroom*	W2_01	26.95	26.70	-0.93%	Pass	
-		Second	Bedroom 1	W2_02	13.90	13.90	0.00%	Pass	
-		Third	Bedroom 1	W3_01	15.69	15.69	0.00%	Pass	
-		Ground	Living/Dining 1	WG_01	14.26	13.29	-6.80%	Pass	
-	15 Chalton Street	First	Living/Dining 1	W1_01	21.74	18.90	-13.06%	Pass	
-	15 Chailon Street	Second	Living/Dining 1	W2_01	25.27	24.42	-3.36%	Pass	
-		Third	Living/Dining 1	W3_01	27.92	27.92	0.00%	Pass	

*room is a kitchen or bathroom but has been tested as a kitchen for the purposes of this assessment.

Dwg No	Address	Floor Level	Room Name	Window ID	Existing VSC%	Proposed VSC%	Percentage Difference	Condition

APPENDIX C

SUNLIGHT ANALYSIS

SUNLIGHT TABLES

Dwg No
-
-
-
-

Dwg No	Address	Floor Level	Room Name	Window ID		APS	Н %		Winter %				
					Existing	Proposed	% Diff	Pass/Fail	Existing	Proposed	% Diff	Pass/Fail	

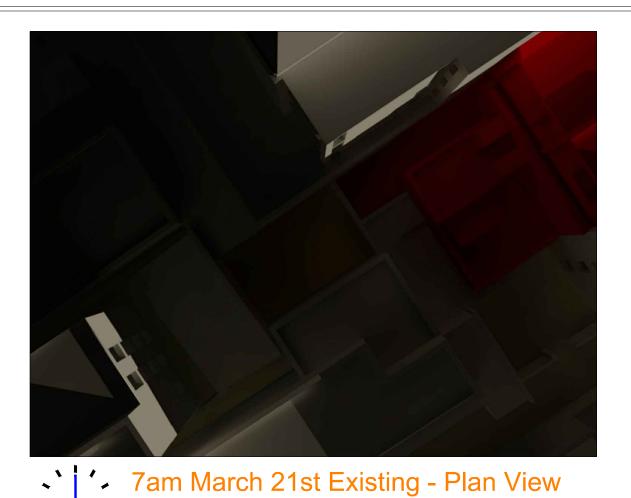
APPENDIX D

OVERSHADOWING ANALYSIS

13222/SHD/501-506

17-19 Chalton Street, London NW1 **Existing V's Proposed Analysis** Plan Views 1pm Shadow

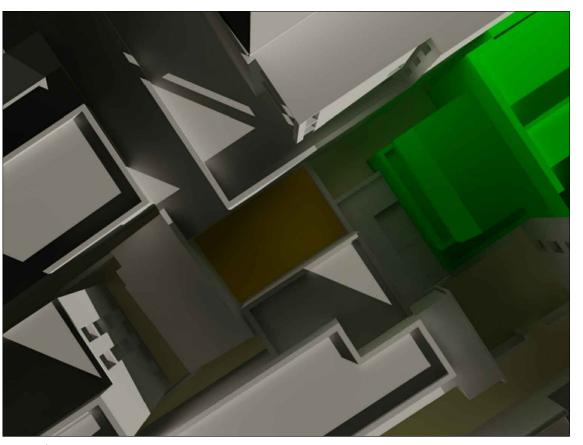
March 21st (Spring Equinox) Transient Shadow Analysis: 7am - 5pm hourly







7am March 21st Proposed - Plan View



8am March 21st Proposed - Plan View



DRAWN: LT JOB NBR:

SCALE: NTS
DATE: 23/01/2014

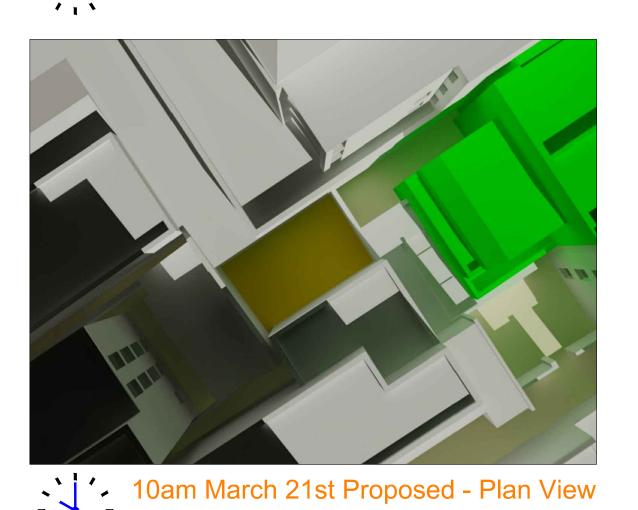
DWG NO: RE

SHD/501







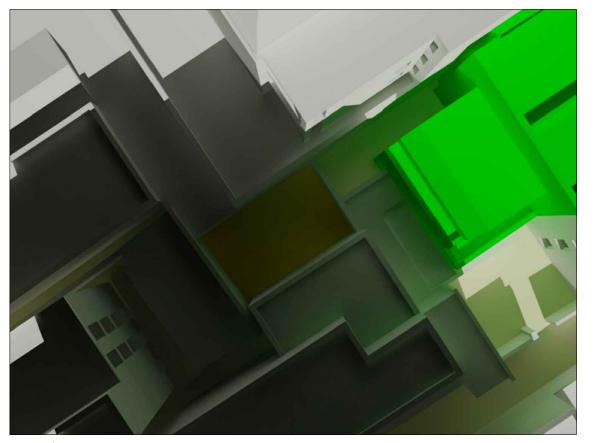




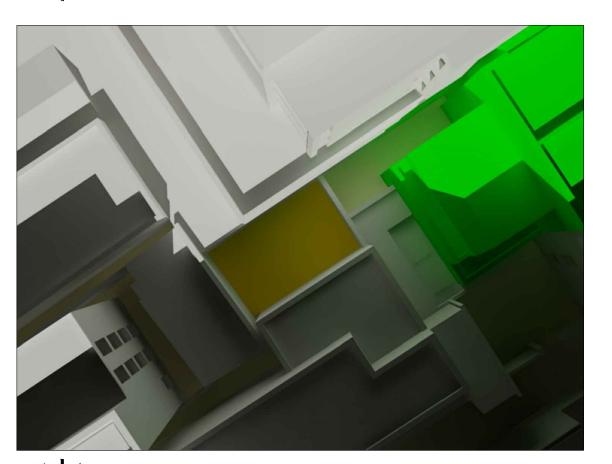
SHD/502







11am March 21st Proposed - Plan View



12pm March 21st Proposed - Plan View



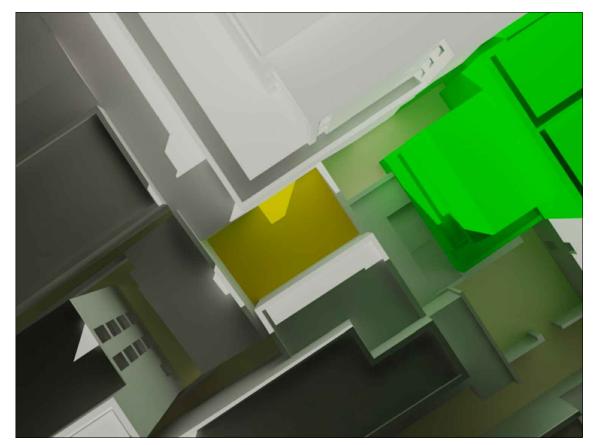
SHD/503



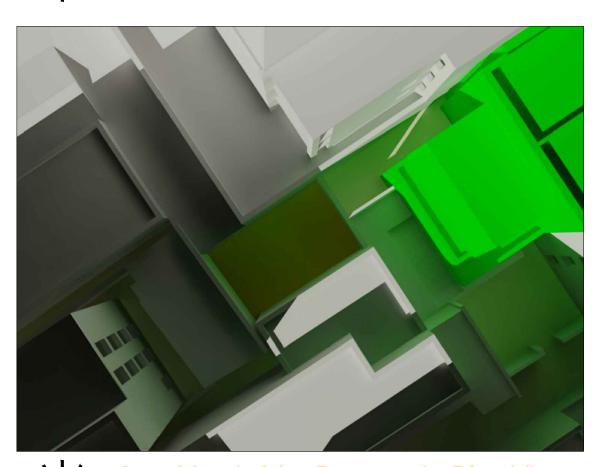




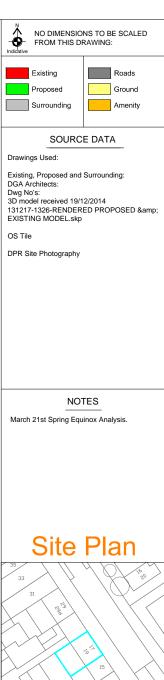
2pm March 21st Existing - Plan View

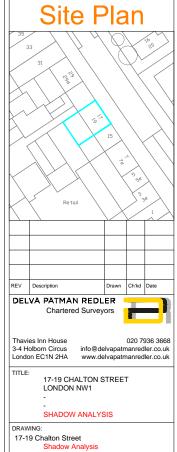


1pm March 21st Proposed - Plan View









13222 DATE: 23/01/2014 SHD/504

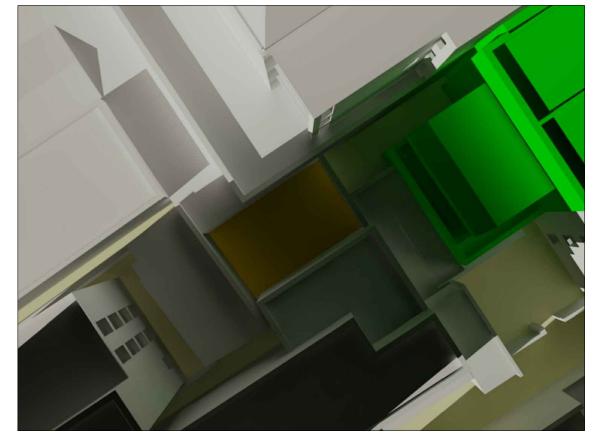
SCALE: NTS

Existing v's Proposed Schemes 1pm & 2pm March 21st

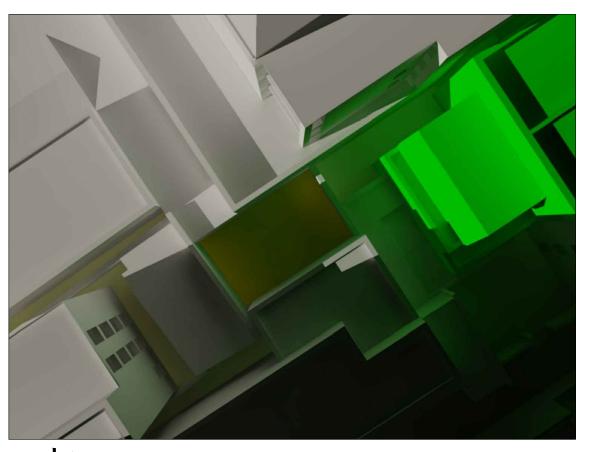




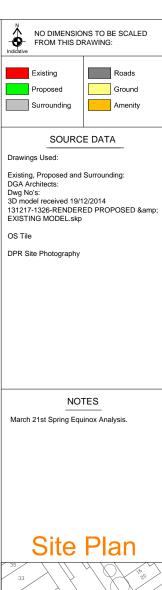


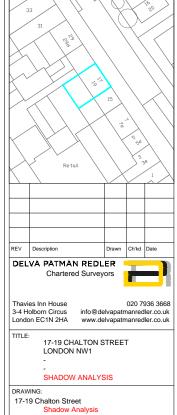


3pm March 21st Proposed - Plan View



4pm March 21st Proposed - Plan View





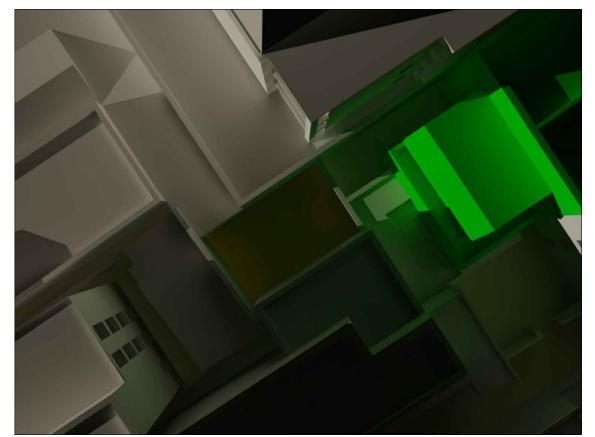
13222 DATE: 23/01/2014 SHD/505

Existing v's Proposed Schemes 3pm & 4pm March 21st

SCALE: NTS



5pm March 21st Existing - Plan View



5pm March 21st Proposed - Plan View

